





Tellure Rôta S.p.A.

Via Quattro Passi 15

41043 Formigine (MO)

Tel. 0039.059.410231-253

Fax 0039.059 572859

comm.estero@tellurerota.com

www.tellurerota.com



Product categories index	PAGE 02
Company presentation	PAGE 04
Test & Research Laboratory	PAGE 10
Tellure Rôta products	PAGE 12
Tellure Rôta brackets	PAGE 14
Tellure Rôta locking devices	PAGE 28
Tellure Rôta hubs and axle sets	PAGE 34
Choosing the right wheel	PAGE 36
Standards and tests	PAGE 46
Product categories	PAGE 48
Industrial - Light duty loads	PAGE 48
Industrial - Medium duty loads	PAGE 90
Industrial - Heavy duty loads and mechanical handling	PAGE 136
High temperatures	PAGE 264
Pallet truck rollers	PAGE 282
Scaffoldings	PAGE 302
Waste bin containers	PAGE 308
Institutional	PAGE 312
Furniture	PAGE 338
Antistatic and statically conductive solutions	PAGE 350
Customised solutions	PAGE 356
Accessories	PAGE 360
Use guide	PAGE 370
General terms of sale	PAGE 374
Product index code	PAGE 376



INDUSTRIAL LIGHT DUTY LOADS



INOX
SERIES 22
PAGE 50

SERIES 23
PAGE 56

SERIES 52
PAGE 62

SERIES 53
PAGE 70

INOX
SERIES 71
PAGE 78

SERIES 82
PAGE 86

SERIES 82 AF
PAGE 88



INDUSTRIAL MEDIUM DUTY LOADS



INOX
SERIES 60
PAGE 92

INOX
SERIES 61
PAGE 102

INOX
SERIES 68
PAGE 110

INOX
SERIES 73
PAGE 122

SERIES 73AE
PAGE 130



INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING



SERIES 62BS
PAGE 138

SERIES 62AL
PAGE 144

ERGO
SERIES 62ER
PAGE 152

SERIES 62GH
PAGE 160

ERGO
INOX
SERIES 62NY
PAGE 166

SERIES 63AC
PAGE 172

SERIES 63GH
PAGE 178

SERIES 64
PAGE 188

SERIES 65AL
PAGE 200

SERIES 65GH
PAGE 208

SERIES 65HT
PAGE 214

ERGO
SERIES 65ER
PAGE 220

INOX
SERIES 66
PAGE 226

INOX
SERIES 68P
PAGE 236

SERIES 69
PAGE 242

SERIES 72AL
PAGE 248

SERIES 72GH
PAGE 256



HIGH TEMPERATURE



INOX
SERIES 67
PAGE 266

INOX
SERIES 68FV
PAGE 274

INOX
SERIES 72GS
PAGE 278



PALLET TRUCK ROLLERS



SERIES 74
PAGE 284

SERIES 75
PAGE 288

SERIES 7
PAGE 294

SERIES 77
PAGE 296

SERIES 78
PAGE 298

SERIES 79
PAGE 300

SCAFFOLDINGS



SERIES 60
PAGE 303



SERIES 68
PAG 305



302

WASTE BIN CONTAINERS



SERIES 52
PAGE 309



SERIES 53
PAGE 310



SERIES 72
PAGE 311



PAGE
308

INSTITUTIONAL



SERIES 32
PAGE 314



SERIES 36
PAGE 320



SERIES 37
PAGE 324



SERIES 38
PAGE 330



SERIES 51
PAGE 334



PAGE
312

FURNITURE



SERIES 33
PAGE 340



SERIES 34
PAGE 342



SERIES 35
PAGE 346



SERIES 39
PAGE 348



PAGE
340

ANTISTATIC AND STATICALLY CONDUCTIVE



SERIES 53AS
PAGE 352

PAGE
350

CUSTOMISED SOLUTIONS



PAGE
356

ACCESSORIES

PAGE
360



MILESTONES

- | | | | |
|------|--|------|--|
| 1950 | Company was set up as a craft business | 1980 | The company moved to the current 10,000 square metre plant |
| 1953 | Brand registration and conversion to a joint stock company (SpA) | 1995 | Production of 30,000 wheels a day with 104 employees |
| 1961 | First foreign customer for wheels with polyurethane coating | 1996 | ISO 9001 certification |
| 1972 | Production of 2,000 wheels a day with 100 employees | 2000 | Tellure Rôta do Brasil incorporated |
| | | 2002 | ISO 9001:2000 certification |

"We are working to improve, always"

This is how Roberto Lancellotti - founder and current president of Tellure Rôta - summarises the mission of the company, which works every day to satisfy its customers' movement and handling needs for industry and home applications, through the design, manufacture and sale of wheels and brackets.



Specific design for every sector

Every day, our designers study innovative movement solutions for multiple application sectors. The result is an offer of over 8,000 catalogue items and the development of special products upon customer requests

From large industries to private homes, from office canteens to every environment of use, there is a specific solution that has been studied, developed and tested within the company, thanks to the know-how of materials and the use of the most modern conception, design and testing software.

In Tellure Rôta, technology and competence are at the customer's service.

2004	ISO 14001 Environmental Certification	2012	Production expansion for thermoplastic moulding with the purchase of a third 1,500 square metre facility next to the main plant
2005	Production expansion for automatic assembly with the purchase of a 3,000 square metre facility next to the main plant	2013	Achievement of sixty years in the business
2006	Start of the Lean production project	2016	Expansion of robotic and automated production lines for the manufacture of polyurethane wheels and rollers.
2009	OHSAS 18001:2007 Workplace Health and Safety Certification	2016	ISO 9001:2015 Quality certification and ISO 14001:2015 Environmental Certification
2011	Qualification and accreditation of the "Test & Research" lab by the Emilia-Romagna High Technology Network		



Tellure Rôta, more than 60 years of guaranteed Made in Italy quality

The wheels and brackets are manufactured in three plants in Formigine, on a covered surface of 15,000 square metres.

Here, the skills of our people combine with technology to manufacture products which are built following certificated standards, which guarantee quality.

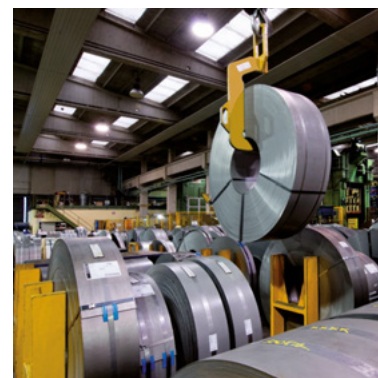
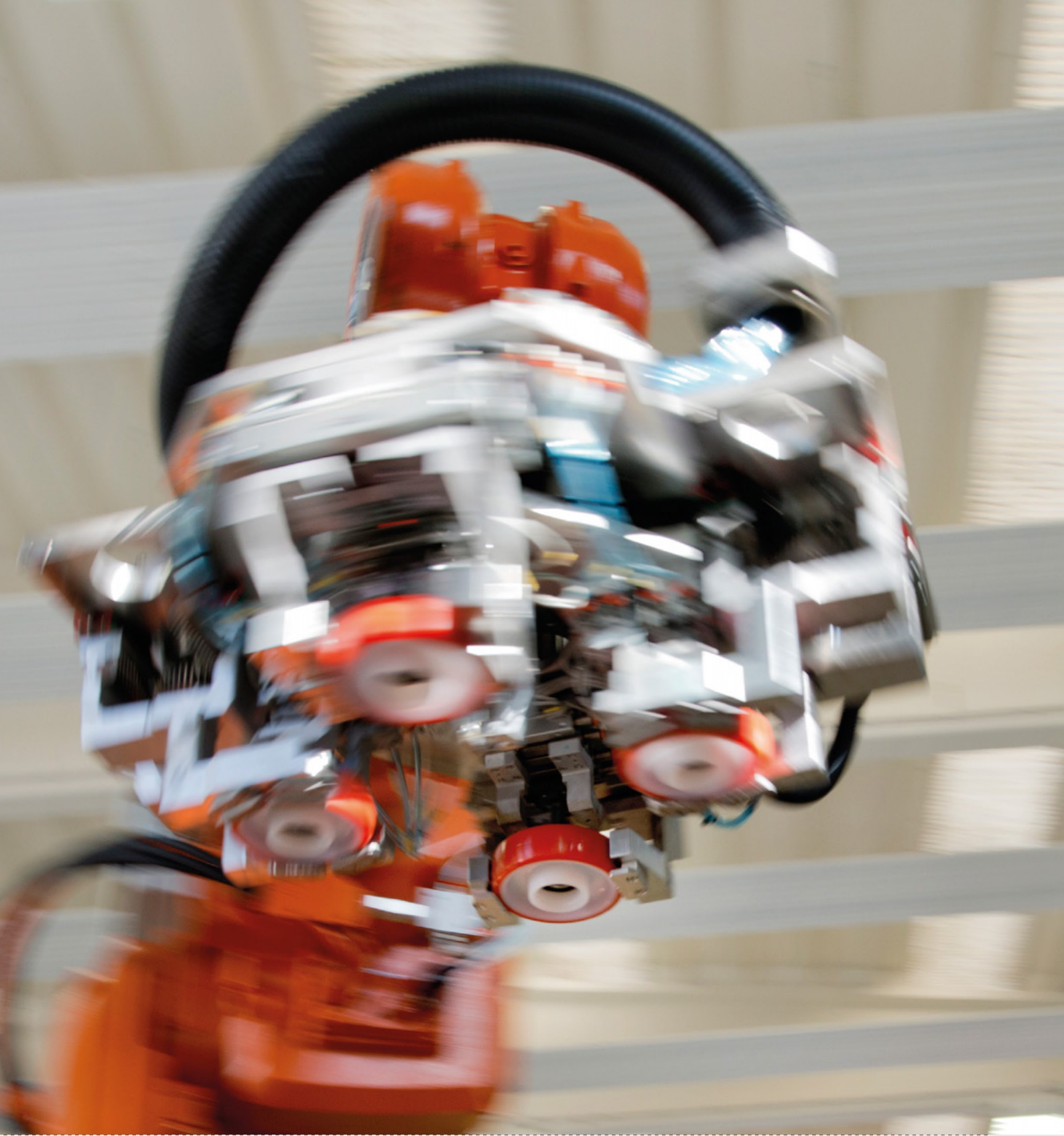
The steel sheets are moulded with automatic presses rated up to 630 Tonnes and pitch moulds. Strict and continuous checks made on the steel sheet and on the moulded components guarantee precise processing tolerances.

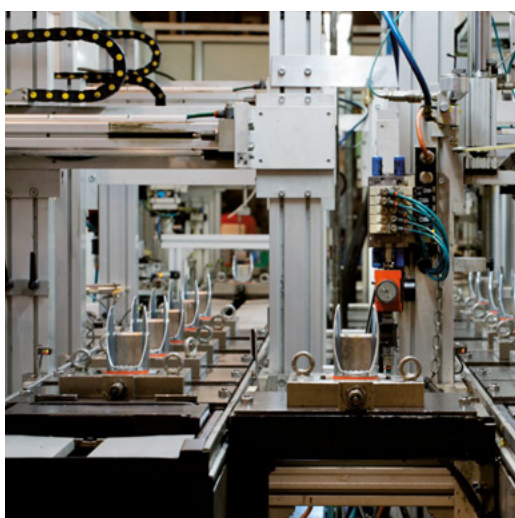
The preparation of hubs for coating and casting polyurethane wheels and rollers takes place according to in-house created formulas and by using high quality raw materials. The entire process is strictly controlled to obtain the highest performance of the Tellure Rôta polyurethanes.

The thermoplastic wheels are moulded in a specific plant with state-of-the-art presses, in a controlled environment and starting from certified materials. The process ends with the assembly of the wheels and brackets on automatic lines that guarantee high production volumes and constant high quality.

OVERVIEWS







Tellure Rôta production process is based on lean production principles, which allows a flexible response to customer requests, ensuring reliable service and rapid delivery.

Established in Italy, competitive in the world

Thanks to the commitment to product quality and innovative solutions to the different movement and handling requirements, Tellure Rôta is internationally recognised as one of the most important industrial companies in the sector. Tellure Rôta do Brasil was set-up in 2000 to strengthen the presence in South America.

CERTIFICATIONS

ISO 9001:2015 certification, that guarantee management of all company processes even more focused on complete and constant customer satisfaction;

2005: ISO 14001:2015 environmental certification, demonstrating Tellure Rôta's ability to combine management which focuses on continuous improvement and customer satisfaction with environmental protection and prevention of pollution;

OHSAS 18001:2007 health and safety certification, thanks to the implementation of an internal system which guarantees regulations are respected, constant checks are performed and proactive management is done on all risks which can be found in the workplace.



A sales network with over 2,000 customers serves today 70 countries. Tellure Rôta is based in Formigine (Modena) in the north of Italy, on a site consisting of three production plants and the research and development laboratory.





An in-house laboratory for continuous innovation

In order to guarantee to its customers excellence in designing projects, Tellure Rôta has chosen to qualify and support its production departments with the Test & Research lab, a research laboratory with operational autonomy and accredited since 2011.

Since the laboratory belongs to a network of excellence, it is constantly updated and can expand its know-how to guarantee customers with on-going innovative projects.



EQUIPMENT

The supplied equipment consists of machinery and modern and updated technologies; it is divided into:

- test machines and benches for finished products according to the Standards of reference
- measuring instruments for the dimensional control and the physical-mechanical-electrical characterisation of the materials
- FEM design and analysis software workstations

All equipment is integrated with sensors and software for the collection and processing of data and the tests are video-recorded in real time.

Where research becomes solution

The laboratory guarantees the necessary skills to develop and test new solutions for materials, products and constructive and process technologies.

In particular, it develops and characterises polyurethane mixes and thermoplastic materials able to meet the specific application requirements of wheel users and the right quality/price ratio.

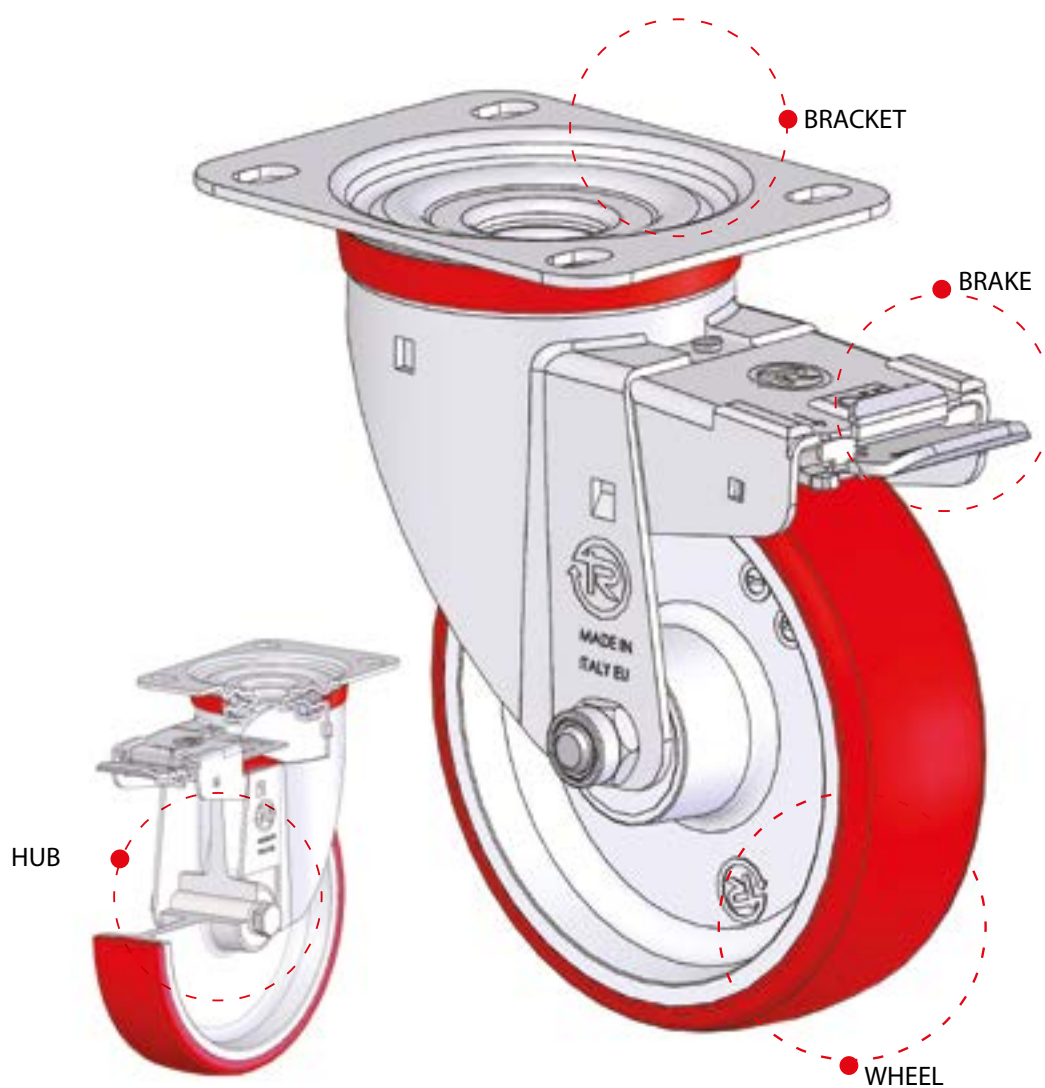
All of the chosen materials and treatments have a low environmental impact and are conform with the RoHS and Reach Directives.

TRLab also researches metal components to make brackets with optimised performance even under heavy-duty uses, and it also experiments with surface treatments that resist external chemical agents.



SERVICES

- Tests on wheels and brackets according to the wheels and brackets standards
- Tests on wheels and brackets according to standards relating to different applications (waste collection bins, mobile scaffoldings and others)
- Tests on elastomer, thermoplastic and metal materials
- Physical-mechanical characterisation tests of elastomers and vulcanised rubbers (traction, tear, abrasion, resilience, density, hysteresis)
- Electrical resistance tests on antistatic or conductive components
- Specific tests on customer projects



WHEEL

Round mechanical part allowing the transformation, by rotating around its own axis, of a sliding motion into a rolling motion.

The elements composing the wheel are: the tread, the cover, the centre, the hub and the swivel actions.

In this catalogue the wheels are divided into main usage categories. Each series contains specific information and individual codes.

Industrial - Light duty loads	
Industrial - Medium duty loads	
Industrial - Heavy duty loads and mechanical handling	
High temperatures	
Pallet truck rollers	
Scaffoldings	from page 48 to page 369
Waste bin containers	
Institutional	
Furniture	
Antistatic and statically conductive solutions	
Customised solutions	
Accessories	

BRACKET

Connecting element between a wheel and a trolley. All wheels normally require the use of a bracket to be fitted to a trolley; the wheels which have an axis integrated in the trolley itself are an exception.

Swivel bracket: turns on its own vertical axis as the direction of movement changes; it can be swivel with top plate, swivel with bolt hole, swivel with stem. It can be fitted with a lock.

Fixed bracket: it cannot rotate; it has the task of maintaining the wheel along a guideline.

Brackets	from page 14 to page 27
----------	----------------------------

BRAKE

Device to brake the rotation of the bracket around its own axis, the rotation of the wheel or the rotation of the complete castor. Front, rear, centralised, total or directional brakes can be fitted onto the swivel brackets.

Brakes	from page 28 to page 33
--------	----------------------------

HUB

Central part of the wheel intended to house the axle or the bearings, making rotation easier (ball bearing, roller bearing, plain bores,...).

Hubs	from page 34 to page 35
------	----------------------------

TELLURE RÔTA BRACKETS

Light-duty SL



Carrying capacity: 130 daN
Diameters: 80-125 mm
Fitting: with top plate,
with bolt hole
Brake: front

Page 15

Standard-duty NL-NLX



Carrying capacity: 400 daN
Diameters: 65-280 mm
Fitting: with top plate, with
bolt hole, with threaded
stem, with Zamak stem
Brake: front, rear,
centralised

Page 16

Medium-duty M



Carrying capacity: 500 daN
Diameters: 150-200 mm
Fitting: with top plate
Brake: adjustable front

Page 18

Medium-Heavy duty P-PX



Carrying capacity: 750 daN
Diameters: 80-250 mm
Fitting: with top plate
Brake: front, adjustable rear

Page 19

Heavy-duty with hardened ball race grooves PT



Carrying capacity: 900 daN
Diameters: 150-200 mm
Fitting: with top plate
Brake: adjustable rear

Page 20

Extra heavy-duty EP



Carrying capacity: 1600daN
Diameters: 100-250 mm
Fitting: with top plate
Brake: adjustable rear

Page 21

Electrowelded EE MHD



Carrying capacity: 1000 daN
Diameters: 100-250 mm
Fitting: with top plate
Brake: adjustable rear

Page 22

Electrowelded EE HD-EE EHD



Carrying capacity: 3500 daN
Diameters: 150-400 mm
Fitting: with top plate
Brake: adjustable rear
(EE HD only)

Page 23

Twin electrowelded EEG MHD



Carrying capacity: 1000 daN
Diameters: 100-125 mm
Fitting: with top plate

Page 24

Twin electrowelded EEG HD - EEG EHD



Carrying capacity: 4300 daN
Diameters: 125-300 mm
Fitting: with top plate

Page 25

Sprung loaded electrowelded EES MHD



Carrying capacity: 4300 daN
Diameters: 125-300 mm
Fitting: with top plate
Brake: adjustable front

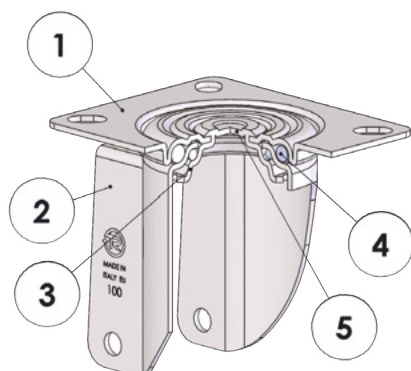
Page 26

Scaffolding TRAB



Carrying capacity: 750 daN
(according to EN 1004:2005)
Diameters: 125-200 mm
Fitting: with top plate,
with solid stem, with
threaded stem with leveller

Page 27



- 1) Plate in electrolytically galvanised steel plate
- 2) Fork in electrolytically galvanised steel plate
- 3) Ball race ring in electrolytically galvanised steel plate
- 4) Swivel actions: on two ball race rings lubricated with grease
- 5) King pin: integrated with ball race ring

Light-duty SL - max carrying capacity 130 daN

The bracket is made of electrolytically galvanised steel plate.

The swivel action is composed of two roller ball race rings in calibrated tracks obtained on pressed components. The bracket assembly is made by means of cold forming the pin integrated in the lower ring, thus guaranteeing good manoeuvrability and reduced side play.

The shaping of the fixing plate that protects the upper ball race ring and their lubrication using industrial multi-purpose grease reduce maintenance during the normal conditions of use of the bracket.

Brake: front

Fittings with wheels



SERIES 52

SERIES 53

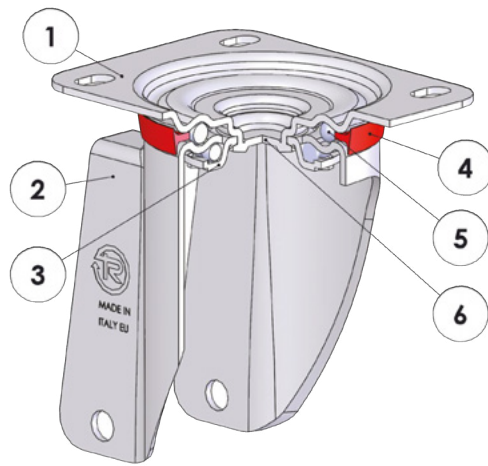
SERIES 71

Fitting with top plate

SL								
	80	40	110	95x80	80x60	8.8	33	130
	100	40	127	95x80	80x60	8.8	29	130
	125	40	154	95x80	80x60	8.8	32	130

Fitting with bolt hole

SL								
	80	40	110	12	63	33	130	4 km/h
	100	40	127	12	63	29	130	
	125	40	154	12	63	32	130	



- 1) Top Plate: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 2) Fork: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 3) Ball Race Ring: electrolytically galvanised steel plate or in AISI 304 stainless steel
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

Standard-duty NL and NLX - max carrying capacity 400 daN

Bracket made of printed steel plate with excellent swivel guaranteed by two ball race rings.

Precise assembly by means of cold-mechanical forming of the top plate integrated pin. The lubrication and adequate protection of the ball race rings against dust, together with the electrolytic galvanisation (NL) or the realisation in AISI 304 stainless steel (NLX) guarantee a long duration and a reduced request for maintenance in normal conditions of use. A specific model intended for uses with a temperature above 100°C is also available.

Brake: front, rear, centralised.
Directional lock available

Fittings with wheels

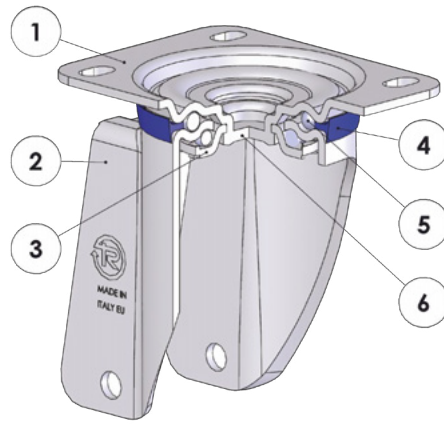


Fitting with top plate

NL-NLX									
	65	40	100	100x85	80x60	9	37	8	200
	80	40	107	100x85	80x60	9	37	8	200
	100	45	128	100x85	80x60	9	35	8	200
	125	45	156	100x85	80x60	9	37	8	220
	125	45	156	140x110	105x80	11	37	8	220
	125	60	166	140x110	105x80	11	57	12	300
	140	45	176	100x85	80x60	9	34	8	220
	150	45	182	100x85	80x60	9	34	8	220
	150	45	182	140x110	105x80	11	34	8	220
	150	60	194	140x110	105x80	11	56	12	300
	160	60	187	100x85	80x60	9	50	12	220
	160	60	198	140x110	105x80	11	56	12	300
	175	60	217	140x110	105x80	11	56	12	300
	180	60	219	140x110	105x80	11	56	12	300
	200	60	240	140x110	105x80	11	56	12	300
NL	225	60	263	140x110	105x80	11	56	12	300
	250	90	296	200x160	160x120	14	86	12	350
	260	90	300	200x160	160x120	14	86	12	350
	280	90	311	200x160	160x120	14	86	12	400

Fitting with bolt hole

NL-NLX								
	65	40	100	12	73	37	8	200
	80	40	107	12	73	37	8	200
	100	45	128	12	73	35	8	200
	125	45	156	12	73	37	8	220
	140	45	176	12	73	34	8	220
	150	45	182	12	73	34	8	220
	150	60	188	20	102	56	12	300
	160	60	193	20	102	50	12	300
	175	60	212	20	102	56	12	300
	180	60	214	20	102	56	12	300
	200	60	236	20	102	56	12	300



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: blue polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

Medium-duty M - max carrying capacity 500 daN

Bracket made of pressed steel plate thicker than the NL model. Excellent swivelling guaranteed by the two ball race ring. Precise assembly by means of cold-mechanical forming of the top plate integrated pin, the lubrication and adequate protection of the ball race rings against dust, together with the electrolytic galvanisation guarantee long duration and a reduced request for maintenance in normal conditions of use.

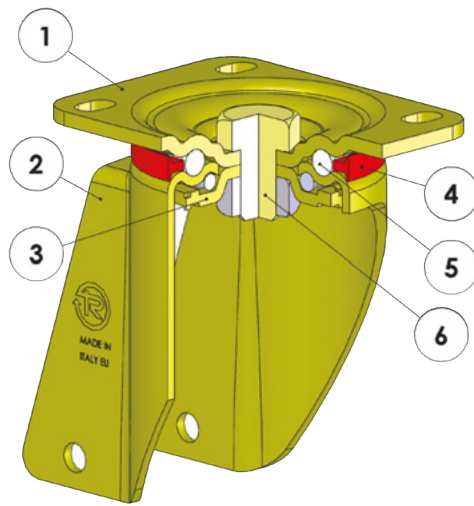
Brake: adjustable front

Fittings with wheels



Fitting with top plate

M									
150	60	194	140x110	105x80	11	58	12	500	
160	60	199	140x110	105x80	11	58	12	500	
200	60	240	140x110	105x80	11	50	12	500	



- 1) Top Plate: electrolytically colonial galvanised steel plate or AISI 304 stainless steel plate
- 2) Fork: electrolytically colonial galvanised steel plate or AISI 304 stainless steel plate
- 3) Ball Race Ring: electrolytically galvanised steel plate or AISI 304 stainless steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel screw, class 8.8 and nut or A2 stainless steel screw and nut

Heavy-duty P-PX - max carrying capacity 750 daN

Bracket made of thick pressed steel plate with excellent swivelling guaranteed by two ball race rings.

Precise assembly by means of highly mechanically resistant bolt and locknut anti-loosening system. The lubrication and adequate protection of the ball race rings against dust, together with the highly resistant to corrosion electrolytic galvanisation or the realisation in AISI 304 stainless steel guarantee a long duration and a reduced request for maintenance in normal conditions of use.

Brake: front in diameters 80-125 and adjustable rear in diameters 125-200

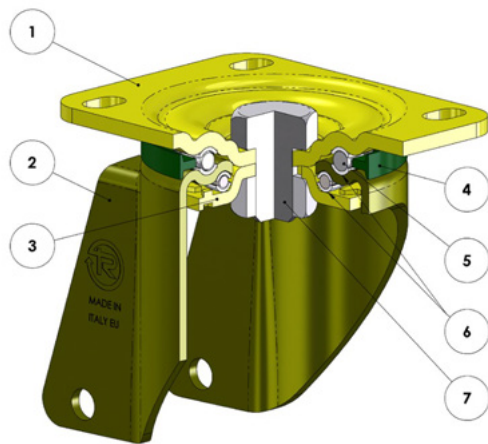
Directional lock available.

Fittings with wheels



Fitting with top plate

P										
	80	100	125	125	150	160	175	180	200	250
P	45	45	45	60	60	60	60	60	60	60
P-PX	128	138	161	170	200	205	225	228	250	298
P	100x85	100x85	100x85	140x110	140x110	140x110	140x110	140x110	140x110	140x110
P	80x60	80x60	80x60	105x80	105x80	105x80	105x80	105x80	105x80	105x80
P	9	9	9	11	11	11	11	11	11	11
P	46	46	44	70	70	70	70	70	70	66
P	8	8	8	12	12	12	12	12	12	12
P	350	350	350	750	750	750	750	750	750	750



- 1) Top Plate: electrolytically colonial galvanised steel plate
- 2) Fork: electrolytically colonial galvanised steel plate
- 3) Ball Race Ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) Ball race: tempered carbon steel
- 7) King pin: steel screw, class 8.8 and nut or A2 stainless steel screw and nut

Heavy duty PT with hardened ball race- max carrying capacity 900 daN

Bracket made of thick pressed steel plate with excellent swivelling guaranteed by two ball race rings; unlike the standard heavy-duty P, those ball race rings are made of tempered carbon steel.

Precise assembly by means of highly mechanically resistant bolt and locknut anti-loosening system. The lubrication and adequate protection of the ball race rings against dust, together with the highly resistant to corrosion electrolytic galvanisation.

The lubrication and adequate protection of the ball race rings against dust, together with the highly resistant to corrosion electrolytic galvanisation guarantee a long duration and a reduced request for maintenance in normal conditions of use.

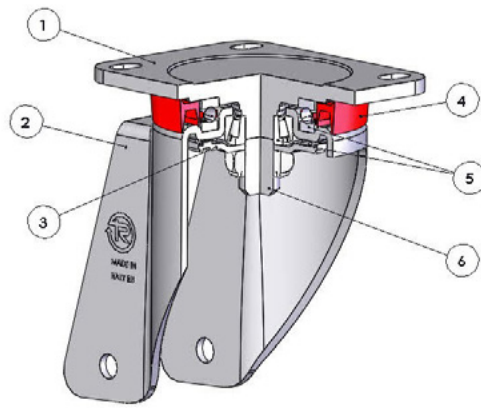
Brake: adjustable rear

Directional lock available.



Attacco a piastra

PT	Attacco a piastra								
									4-6 km/h
	150	60	200	140x110	105x80	11	70	12	900
	160	60	205	140x110	105x80	11	70	12	900
	175	60	225	140x110	105x80	11	70	12	900
	180	60	228	140x110	105x80	11	70	12	900
	200	60	250	140x110	105x80	11	70	12	900



- 1) Plate: white galvanised forged steel
- 2) Fork: white galvanised steel plate
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate

Extra-heavy duty EP - max carrying capacity 1600 daN

Heavy-duty load brackets equipped with fixing plate made of forged steel and integrated pin; fork in thick pressed steel plate; excellent swivelling thanks to the use of an axial bearing that guarantees vertical load and tapered bearing to compensate the oblique forces.

Low-maintenance and long-duration bracket thanks to the use of purposely shaped dust seal, lubrication of the bearings (option with grease nipple available) and highly resistant electrolytic galvanising against corrosion.

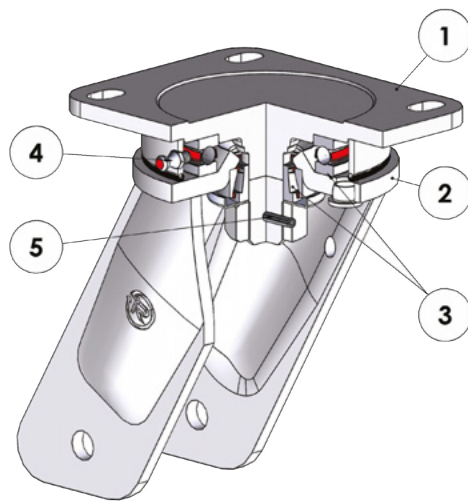
Brake: adjustable rear

Fittings with wheels



Fitting with top plate

EP									
100	45	140	100x85	80x60	9	46	8	350	
125	45	164	100x85	80x60	9	48	8	350	
125	60	188	135x110	105x80	11	70	12	1100	
150	60	200	135x110	105x80	11	70	12	1100	
160	60	205	135x110	105x80	11	70	12	1100	
175	60	225	135x110	105x80	11	70	12	1100	
180	60	227	135x110	105x80	11	70	12	1100	
200	60	250	135x110	105x80	11	70	12	1100	
250	90	300	175x140	140x105	14	66	18	1600	



- 1) Plate: forged steel with electrolytically galvanized integrated pin
- 2) Fork: deep-drawn legs electro-welded to the electrolytically galvanized flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Electrowelded EE MHD - max carrying capacity 1000 daN

Bracket suitable for applications with loads up to 1000 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of forged steel with integrated pin, fork with legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket.

Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and zinc electroplating guarantee its extremely long duration and simple maintenance.

Brake: adjustable rear

Directional lock available.

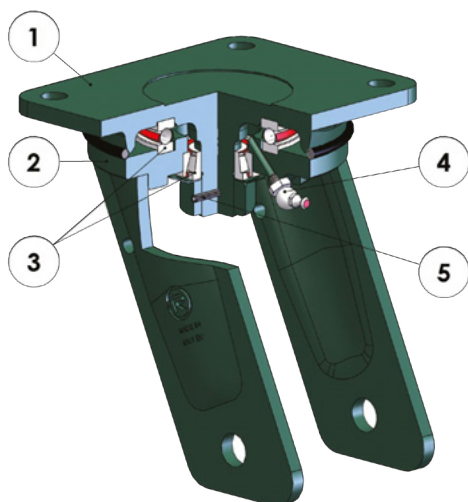
Fittings with wheels



Fitting with top plate

EE MHD

100	60	170	135x110	105x80	11	51	12	1000	4-6 km/h
125	60	182	135x110	105x80	11	51	12	1000	
150	60	210	135x110	105x80	11	60	12	1000	
160	60	215	135x110	105x80	11	60	12	1000	
180	60	242	135x110	105x80	11	70	12	1000	
200	60	252	135x110	105x80	11	70	12	1000	
250	60	300	135x110	105x80	11	83	12	1000	



- 1) Top plate: forged steel with integrated pin painted with dark green powder
- 2) Fork: drawn legs electrowelded to the flange painted with dark green powder
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Electrowelded EE HD and EHD - max carrying capacity 3500 daN

Bracket suitable for applications with loads up to 3500 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of thick forged steel with integrated pin, fork with thick legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and green powder painting guarantee its extremely long duration and simple maintenance.

Brake: adjustable rear (EE HD model only)

Directional lock available (EE HD model only)

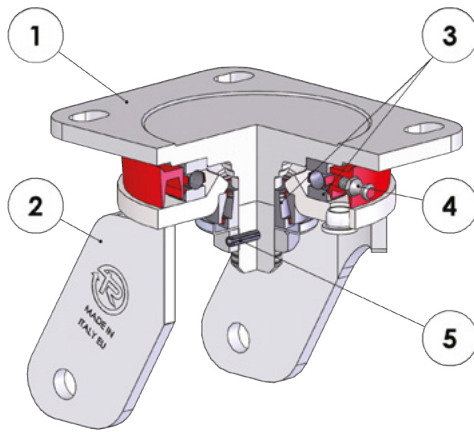
Fittings with wheels



SERIES 62GH SERIES 63GH SERIES 64 SERIES 68 SERIES 72GH

Fitting with top plate

EE HD										4-6 km/h
150	90	218	175x140	140x105	14.5	50	18	1600		
200	90	275	175x140	140x105	14.5	65	18	1600		
250	90	320	175x140	140x105	14.5	74	18	1600		
250	90	325	200x160	160x120	17	74	18	2500		
300	90	360	175x140	140x105	14.5	81	18	1600		
300	90	365	200x160	160x120	17	81	18	2500		
EE EHD	300	130	384	250x200	210x160	19	78	24	3500	
400	130	475	250x200	210x160	19	95	24	3500		



- 1) Plate: forged steel with electrolytically galvanised integrated pin
- 2) Fork: deep-drawn legs electro-welded to the electrolytically galvanised flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Twin electrowelded EEG MHD - max carrying capacity 1000 daN

Bracket suitable for applications with loads up to 1000 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of forged steel with integrated pin, fork with legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and zinc electroplating guarantee its extremely long duration and simple maintenance.

Directional lock available.

Fittings with wheels

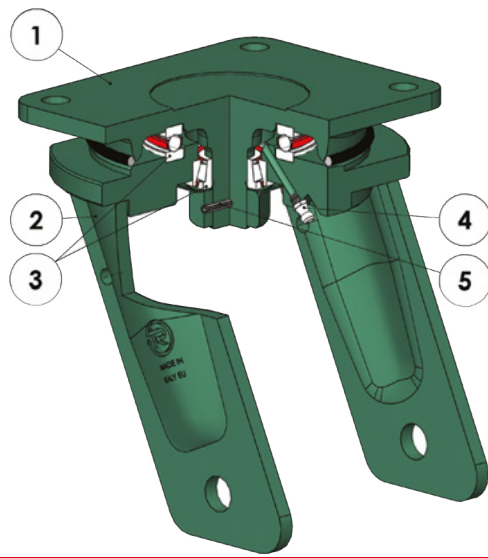


SERIES 62 SERIES 63GH SERIES 64 SERIES 72AL SERIES 72GH

Fitting with top plate

EEG MHD

100	90	140	135x110	105x80	11	55	12	1000
125	90	175	135x110	105x80	11	55	12	1000



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

Twin electrowelded EEG HD and EHD - max carrying capacity 4300 daN

Bracket suitable for applications with loads up to 4300 daN, even under heavy-duty conditions (mechanised towing and high speeds). Fixing plate made of thick forged steel with integrated pin, fork with thick legs shaped by means of deep-drawing process and welded to the flange; the axial and taper bearing guarantee excellent manoeuvrability also at full load and increase the side impact resistance of the bracket. Bracket grease nipple, locknut anti-loosening system, protective o-ring against dust and green powder painting guarantee its extremely long duration and simple maintenance.

The top plate's longer side of fixed brackets is parallel to the axle of the wheel.

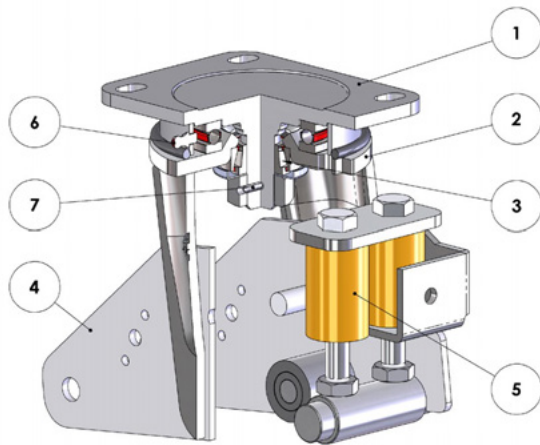
Fittings with wheels



SERIES 62 SERIES 63GH SERIES 64 SERIES 68P SERIES 72AL SERIES 72GH

Fitting with top plate

EEG HD									
	125	130	210	175x140	140x105	14	50	18	1600
	150	130	223	175x140	140x105	14	50	18	1600
	160	130	228	175x140	140x105	14	50	18	1600
	200	130	280	175x140	140x105	14	65	18	1600
	200	130	285	200x160	160x120	17	62	18	2000
EEG EHD	200	190	280	250x200	210x160	19	62	24	3500
	250	190	330	250x200	210x160	19	62	24	3500
	300	190	385	250x200	210x160	19	75	30	4300
									4-6 km/h



- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
- 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) spring-hinged plates: plates electrowelded to the axle
- 5) Polyurethane springs
- 6) Grease nipple

Electrowelded sprung-loaded bracket EES MHD - max load capacity 1000 daN (tension up to 400 daN)

Bracket suitable for applications with loads up to 1000 daN, even under heavy-duty conditions (powered towing and high speeds). The polyurethane springs ensure a great vibration damping effect in presence of obstacles or uneven surfaces.

Fixing plate made of forged steel with integrated pin. Main fork with legs shaped by means of deep-drawing process and welded to the flange; spring-hinged plates electrowelded to the axle. The axial and taper bearings guarantee excellent manoeuvrability also at full load and increase the side-impact resistance of the bracket. The grease nipple, the anti-loosening locknut system, the dust-protective o-ring and the zinc-electroplating guarantee an extremely long duration and a simple maintenance of the bracket.

Brake: front adjustable brake which locks the wheel only.

Directional lock available (not suitable for models with brake)

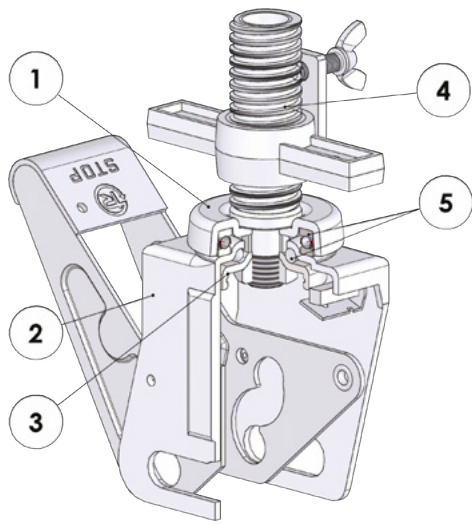
Fittings with wheels



Fitting with top plate

EES MHD

mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN
150	65	243	135x110	105x80	11	100	12	25	50	400	1000	4-6 km/h
160	65	248	135x110	105x80	11	100	12	25	50	400	1000	
200	65	268	135x110	105x80	11	100	12	25	50	400	1000	
250	65	316	135x110	105x80	11	110	12	25	50	400	1000	



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electroplated galvanised steel
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation (different for top plate and solid stem models)
- 5) Swivel actions: for brackets diam. 125 and 150 mm: 125 and 150 mm: grease-lubricated double ball raceways; for brackets diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

Scaffolding - max carrying capacity 750 daN according to UNI EN 1004:2005

Bracket designed for the specific requirements of the scaffolding sector, regulated by Standard EN 1004:2005.

When the brake is actioned, its construction allows eliminating the offset of the wheel by aligning the bracket's swivel axis and the wheel's swivel axis on the same vertical, thus significantly increasing the set's resistance to static loads.

Also available with double pedal (one pedal to lock and one to release)



Fitting with top plate

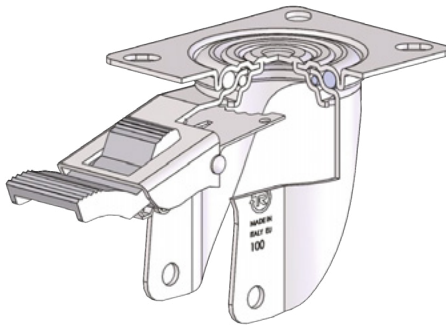
TRAB								
	150	192	140x110	105x80	19	40	300	700
	200	243	140x110	105x80	19	40	400	750

Fitting with threaded stem

TRAB								
	150	192	83	M38x6	500	40	300	700
	200	243	81	M38x6	500	40	400	750

Fitting with solid stem

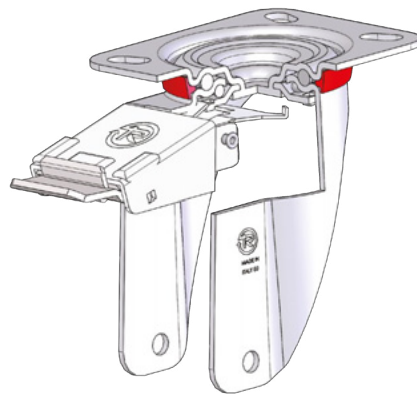
TRAB								
	125	150	89	38	57	30	250	500
	150	192	83	38	57	40	300	700
	200	243	81	38	57	40	400	750



Front brake for SL bracket diameters 80-125 mm

Total brake, it locks both wheel and bracket rotation.

The braking device is integral with the fork. The plastic brake pedal is used for locking and releasing the device. The extremely low position of the pedal makes it easier to use even when fitting to particularly bulky structures. The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.



Front brake for NL - NLX - P brackets diameters 80-150 mm

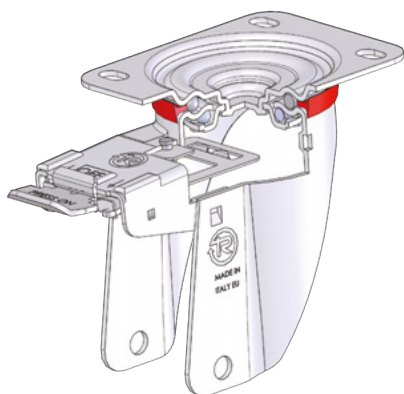
Total brake, it locks both wheel and bracket rotation

The front brake remains within the operator's reach while pushing the trolley. This brake has double lock/release pedal to improve accessibility. The fold-away braking release pedal reduces clearances.

The shape of the wheel's braking spring optimises wheel locking in both rotation directions.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

For NLX brackets, this brake is available in a completely STAINLESS STEEL version.



Front brake for NL - NLX brackets diameters 150-200 mm

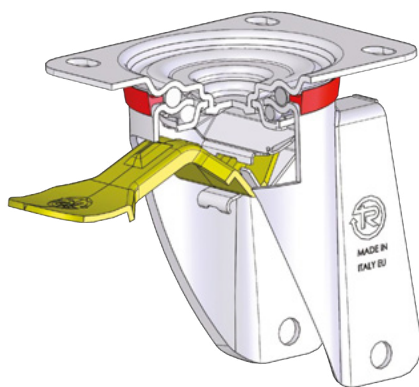
Total brake, it locks both wheel and bracket rotation.

The front brake remains within the operator's reach while pushing the trolley. This brake has a double lock/release pedal to improve its accessibility. The fold-away braking release pedal reduces clearances.

The shape of the wheel's braking spring optimises wheel locking in both rotation directions.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

For brackets NLX, this brake is available in a completely STAINLESS STEEL version.



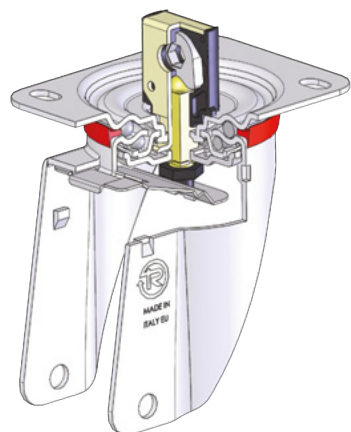
Rear brake for NL brackets diameters 160-200 mm

Total brake, it locks both wheel and bracket rotation.

The rear type brake conceived for maximum simplicity of use, has a single lock and release pedal, specially ribbed to ensure optimal strength.

The position of the lock pedal is within the operator's reach when towing the trolley.

The hardened carbon steel springs coated with thin zinc sheets and the steel braking pedal coated with yellow electrolytic galvanising, are highly resistant to corrosion.

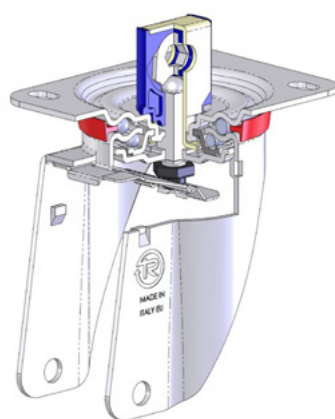


Adjustable centralised brake for NL brackets diameters 150-200 mm

The cam system is designed so that the brake can be engaged on two brackets at the same time, using a connection rod and just one lock pedal.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance. This brake is equipped with an adjustment system to compensate for normal wheel wear during use.

Brake set-up for use with 11 mm hexagonal bar spanner.



Adjustable central braking system for brackets NL diameters 150-200 mm

Total brake with locking / unlocking position.

The locking takes place by means of a 11 mm hexagonal bar which rotates until the brake is on.

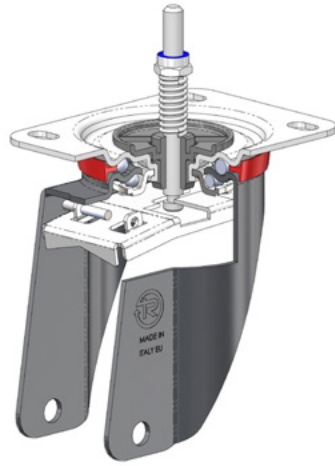
The brake will be on until it is voluntarily released.

This braking system is usually fitted in pairs, allowing the activation of both brakes with a single operating shaft.

This a total breaking system blocking both the swivel head and the wheel rotation.

The hardened carbon steel spring, coated with thin zinc sheets, ensures very high corrosion resistance

This brake is equipped with an adjustment system to compensate for normal wheel wear during use



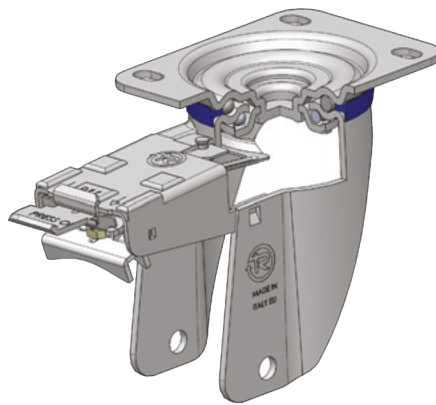
Dead man brake for brackets NL diameters 150-200 mm

Dead man brake is normally on during non-operating conditions.

A vertical pressure on the M10 threaded stem, placed at the center of the top plate, releases the brake and unlocks the wheel and bracket, allowing the movement of the structure to which it is fitted.

Once the M10 threaded stem is released, the locking of the castor is restored.

The braking efficiency can be adjusted by increasing or decreasing the pressure applied on the wire spring assembled to the M10 stem.



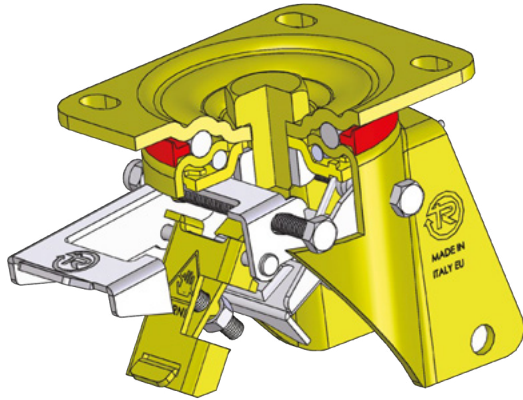
Adjustable front brake for M brackets diam. 150-200 mm

Total brake, it locks both wheel and bracket rotation

The front brake remains within the operator's reach while pushing the trolley. This brake has double lock/release pedal to improve accessibility. The fold-away braking release pedal reduces clearances.

The hardened carbon steel spring, coated with thin zinc sheets, has very high corrosion resistance.

Locking force can be adjusted using an M8 socket screw and 13 mm spanner. This system has been designed to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use. Make sure that the braking setting obtained (by means of adjustment) is suitable for the specific operating requirements.

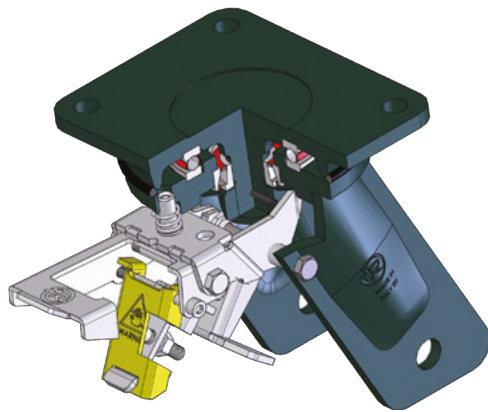


Adjustable rear brake for P-PX-PT-EP brackets diameters 150-200 mm

Total brake, it locks both wheel and bracket rotation.

The rear type brake remains within the operator's reach while towing the trolley. This brake is made to obtain optimal braking values, while maintaining maximum simplicity of use.

A top-to-bottom movement using the tip of the foot on two independent pedals is all that's needed to engage and release the brake quickly and smoothly. Locking force can be adjusted using an M8 socket screw, in order to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use; before use, we suggest making sure that the brake setting obtained (by means of adjustment) is suitable for the specific operating requirements.

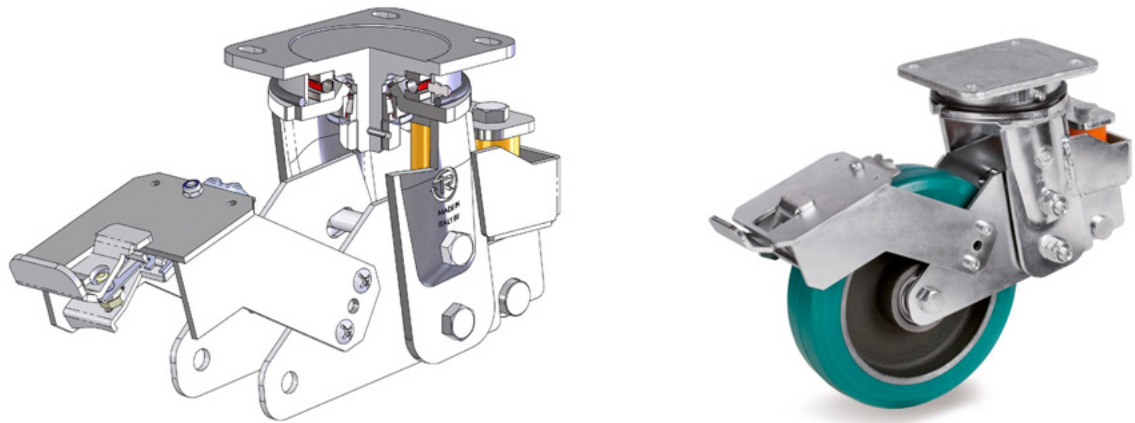


Rear brake for EE MHD and EE HD brackets diam. 125-300

Total brake, it locks both wheel and bracket rotation.

The rear type brake remains within the operator's reach while towing the trolley. This brake is made to obtain optimal braking values, while maintaining maximum simplicity of use and the necessary strength.

A top-to-bottom movement using the tip of the foot on two independent pedals is all that's needed to engage and release the brake quickly and smoothly. Locking force can be adjusted using an M8 socket screw, in order to optimise braking based on the hardness of the wheel tread, its wear and the conditions of use; before use, we suggest making sure that the braking setting obtained (by means of adjustment) is suitable for the specific operating requirements. The brake for electrowelded brackets is a parking brake suitable for flat floors.



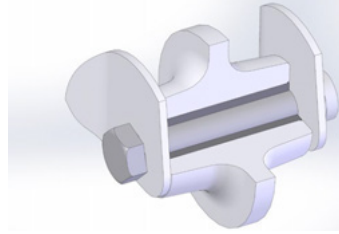
Adjustable front brake for sprung-loaded brackets EES MHD - diam. 150-250 mm

Front locking system, it locks only the wheel.

Single lock /unlock pedal, with top-down activation for maximum reduction of encumbrance.

The hardened carbon steel spring, coated with thin zinc sheets, ensures very high corrosion resistance.

Locking force can be adjusted using an M8 hexagonal head screw and a 13 mm spanner; this system has been designed to optimize braking operations according to the hardness of the wheel tread, to the wheel wear level and to the environment of use. It is recommended to check that the braking setting obtained by means of adjustment is suitable for the specific operating requirements.



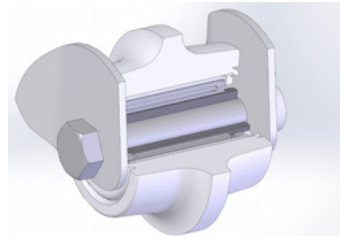
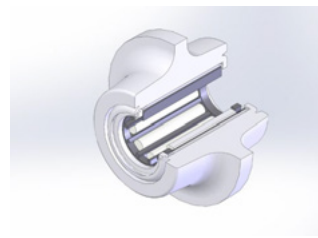
Hub with plain bore



Suitable for applications involving non-continuous movements and limited loads.

The relative sliding friction coefficient range is $b= 0.003-0.005$.

The plain bearing can be joined directly to the wheel bore. The axle set is made with a calibrated and machined tube to create a homogeneous and precision bearing coupling surface. Acting like a spacer, the tube is inserted into the bearing and tightened to the bracket using a screw and nut up to the predefined torque setting. The bearing slides freely on the tube. Axle sets can be supplied in the galvanised steel or stainless steel version. The centre of model P64 C/B is specifically dimensioned to obtain the variations for spline and key housing in the precision hole, in order to make this a drive wheel.



Hub with roller bearings

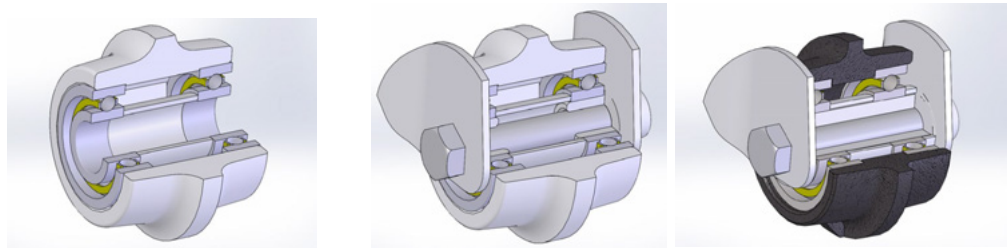


Suitable for applications involving non-continuous movements and heavier loads respect to wheels with hub with plain bore, as it guarantees low friction coefficients even in the presence of heavy loads.

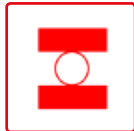
The indicative sliding friction coefficient is $b=0.0025$.

The bearing with steel cylindrical rollers or stainless steel rollers, with plastic cage is assembled in the seat specifically obtained on the hub. The axle set is made with a calibrated and machined tube to create a homogeneous and precision roller bearing coupling surface.

Acting like a spacer, the tube is inserted into the roller bearing and tightened to the bracket using a screw and nut up to the predefined torque setting. The roller bearing slides freely on the tube. Axle sets can be supplied in the galvanised steel or stainless steel version.



Hub with ball bearings



This is the ideal solution for heavier loads and continuous movements.

The indicative sliding friction coefficient is $b=0.0015$.

The shielded ball bearings are placed inside the seats of the wheel hub. The tolerance of the seats ensures a proper coupling with the ball bearings. An internal spacer is also inserted between the ball bearings for a proper functioning of the ball bearings once the axle material has been fitted.

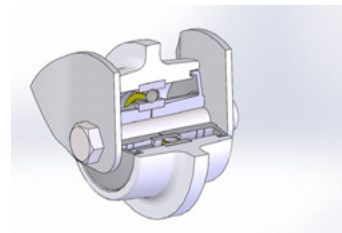
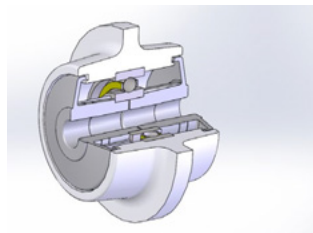
The axle material can comprise the following components:

Solution a): a machined axle bushing (to be inserted inside the ball bearings), two side spacers, a bolt and a nut. The axle material is tightened up by locking the nut on the bolt with a proper torque force.

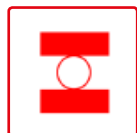
Solution b): two top hats (t-bushes), a bolt and a self locking nut. Each top hat is inserted inside each ball bearing bore. The side collar of the top hat works as a side spacer. The axle material is then tightened up by locking the nut on the bolt with a proper torque force.

The axle components can be made of standard steel or stainless steel.

The loose wheels and rollers can be ordered with bearing facilities only (please note that the internal spacer is not supplied along with the wheel without ball bearings).



Hub with single ball bearing



Solution for applications involving continuous movements and non-heavy loads.

The indicative sliding friction coefficient is $b=0.0015$.

The hub of the thermoplastic wheel is overprinted on a radial type ball bearing with double shield, making them permanently integral.

Two polyamide plain bores loaded with fibreglass with internal labyrinth protect the bearing against dirt, processing residues and aggressive agents.

Stainless steel ball bearing model is also available.

The wheel is directly fitted by means of partially threaded screw and self-locking nut.

The safety and easy handling of a trolley depends on choosing the most suitable wheel, therefore, it is recommended to consider the following factors:

1. NATURE AND CONDITION OF THE FLOOR

The type of floor and the presence of any obstacles will have an influence on the thrust/traction force required to move the trolley, on the transmission of vibrations and wear of the wheel:

- Extremely thick wheels with soft tread and large diameter are normally chosen for uneven floors or with obstacles;
- Wheels with a more sturdy tread are normally chosen for smooth floors and heavy loads.

For each series, the catalogue shows the floor for which a wheel is suitable:

					
TILES	ASPHALT	RESIN-CEMENT	NOT PAVED	EXPANDED METAL	WITH CHIPS
↓	↓	↓	↓	↓	↓
PLASTIC MATERIALS, POLYURETHANE, RUBBER	RUBBER OR ELASTIC POLYURETHANE	PLASTIC MATERIALS, POLYURETHANE, RUBBER	RUBBER OR ELASTIC POLYURETHANE	RUBBER OR ELASTIC POLYURETHANE	RUBBER OR ELASTIC POLYURETHANE

2. ENVIRONMENT OF USE

The wheel and bracket materials may or may not be suitable for use in aggressive environments: extreme temperatures, humidity, acids, solvents, bases and hydrocarbons.

The table on page 40 shows the compatibility with a detailed list of chemical substances. The table on page 42 shows the carrying capacity reduction upon temperature variation.

3. MAGNITUDE AND NATURE OF THE LOAD

The weight of the load, its nature (solid or liquid) and the tare of the trolley determine the minimum carrying capacity the wheel must have to guarantee safe handling.

GLOSSARY

Static load



Static

Maximum load (expressed in daN) that a motionless (stationary) wheel can support without generating any permanent deformation that may reduce operating efficiency.

Dynamic carrying capacity



4 km/h

Maximum load value (expressed in daN) that can be supported by a moving wheel. This value is determined in compliance with Standard ISO 22883-22884 for industrial use and ISO 22879-22880 for civil and domestic use. See page 42-43 for the test conditions.

With a 4-wheel trolley, calculate the minimum carrying capacity required using the following formula:

Solid load:

MINIMUM CARRYING CAPACITY REQUIRED = (SOLID LOAD WEIGHT + TROLLEY TARE): 3
(3 out of 4 wheels are always in contact with the ground)

Liquid load:

MINIMUM CARRYING CAPACITY REQUIRED = (LIQUID LOAD WEIGHT + TROLLEY TARE): 2
(2 out of 4 wheels are always in contact with the ground)

For each series, the catalogue shows the static, dynamic carrying capacity values and rolling resistance of each wheel.

4. MEANS OF TRACTION AND SPEED

For a static use (trolley handled only occasionally and stopped for most of the time), it is recommended to check:

STATIC CARRYING CAPACITY OF THE WHEEL > MINIMUM CARRYING CAPACITY REQUIRED

Whereas, if the trolley is intended for frequent use or for long distances, assess the type of handling: manual, with towed mechanical means or applied to a driving mechanism.

Manual handling

The trolley speed is generally less than 4 km/h; it is recommended to check:

DYNAMIC CARRYING CAPACITY OF THE WHEEL > MINIMUM CARRYING CAPACITY REQUIRED

ROLLING RESISTANCE > (SOLID/LIQUID LOAD WEIGHT + TROLLEY TARE):4

The smoother the wheel, the less effort is required.

For each wheel, Tellure Rôta catalogue shows the ROLLING RESISTANCE value: it is the maximum applicable load in correspondence of which the traction/thrust effort remains below 5 daN.

Rolling resistance



The rolling resistance is the value (expressed in daN) of the maximum load that can be supported by each single wheel at a constant speed of 4 km/h with application of a tractive force or thrust equal to 5 daN (excluding the initial pickup).

The 20 daN of traction/thrust force (corresponding to a 4-wheeled trolley) is the recommended limit for most of the adult working population. The tables in the introductory notes to each series highlight the traction force required for keeping a wheel, burdened by a certain weight, moving.

The values are detected on the TRLab laboratory test bench that detects the rolling resistance on a 1 metre long metal surface. They represent the average traction/thrust force value.

The force required for starting a wheel, defined starting point, significantly depends on the alignment position of the brackets and is always higher than indicated on the table.

The necessary force decreases if the wheel diameter increases: we recommend increasing the diameter down to traction/thrust values below 3 daN, for high movement frequency or movement along long sections.

For each series, the catalogue shows a table with the traction/thrust force at different load values, upon varying the diameter.

Towed mechanical movement

The dynamic carrying capacity of the wheels refers to a speed not higher than 4 km/h (1.1 m/s); the carrying capacity decreases if speed exceeds this value. Use the correction factor of the carrying capacity shown in the table on page 39 and we recommend to check:

WHEEL DYNAMIC CARRYING CAPACITY x CORRECTION FACTOR (%) > MINIMUM CARRYING CAPACITY REQUIRED

On-board mechanical movement

In this case the wheels are subjected to particular stress and strain, different case by case.

We recommend contacting Tellure Rôta Technical Service to choose the most suitable product for your application.

Based on the above information, the path provides:

- Choice of recommended wheels for the environmental conditions defined by the application (temperature, humidity, any aggressive chemicals and type of floor), based on the material compatibility tables and geometry of the product respect to its use.
- Choice of strap diameter and width to meet the carrying capacity, speed requirements and the product's easy movement.
- Choice of suitable bracket for the environment of use and for the requested speed and carrying capacity features.

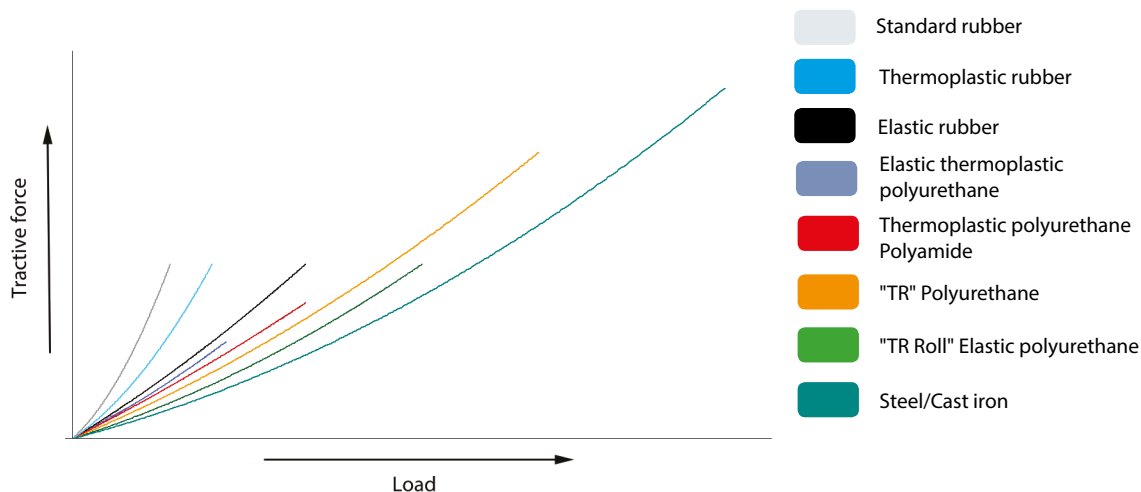
Tellure Rôta provides its experience and know-how in the movement solutions sector so that choosing a wheel becomes the most satisfying process for the final user.

FURTHER DETAILS AND INFORMATION

AVAILABLE TABLES

• AGGRESSIVE CHEMICAL AGENTS COMPATIBILITY	PAGE 40
• CARRYING CAPACITY ADJUSTMENTS BASED ON TEMPERATURE	PAGE 42
• CARRYING CAPACITY ADJUSTMENTS BASED ON SPEED	PAGE 43
• TABLE FOR CHOICE OF WHEEL	PAGE 44

Comparison chart of the rolling resistance between the different materials



Comparison table of the hardness between the different materials

	Elastic rubber	"TR Roll" Elastic polyurethane	Standard rubber	Thermoplastic rubber Elastic thermoplastic polyurethane		"TR" Polyurethane	Thermoplastic polyurethane		Polyamide	
Shore A	70	75	80	85	90	95				
Shore D						45	55	65	70	75

For further information on choosing the right wheel:

- see Internet site www.tellurerota.com
- contact Tellure Rôta Sales Department:
Tel. Export: 0039 059.410231-253 - Tel Italian Sales Dept.: 059.410300-306
E-mail: comm.estero@tellurerota.com - comm.italia@tellurerota.com

COMPATIBILITY WITH AGGRESSIVE CHEMICAL AGENTS

Materials		Steel	Stainless steel	Aluminium alloys	Cast iron	Standard rubber
%						
WEAK ACIDS	Fatty acids	●	●	●	●	●
	Acetic acid	●	●	●	●	●
	Boric acid in solution	30	●	●	●	●
	Oleic acid	●	●	●	●	●
	Oxalic acid in solution	10	●	●	●	●
STRONG ACIDS	Sulphuric acid	●	●	●	●	●
	Hydrochloric acid in sol.	30	●	●	●	●
	Chromic acid in solution	10	●	●	●	●
	Phosphoric acid in sol.	10	●	●	●	●
	Nitric acid in solution	10	●	●	●	●
	Sulphuric acid in sol.	10	●	●	●	●
WEAK BASES	Aluminium acetate	●	●	●	●	●
	Ammonium carbonate	●	●	●	●	●
	Ammonium sulphate	●	●	●	●	●
	Sodium cyanide in sol.	10	●	●	●	●
	Alkaline solutions at 80°C	●	●	●	●	●
STRONG BASES	Ammonium hydrate	●	●	●	●	●
	Sodium carbonate in sol.	10	●	●	●	●
	Sodium phosphate in sol.	10	●	●	●	●
	Sodium hydroxide in sol.	●	●	●	●	●
	Sodium silicate in sol.	10	●	●	●	●
ALCOHOL	Alkybenzols	●	●	●	●	●
	Amyl alcohol	●	●	●	●	●
	Ethyl alcohol	●	●	●	●	●
	Methyl alcohol	●	●	●	●	●
	Propyl alcohol	●	●	●	●	●
HYDRO CARBONS	Acetone	●	●	●	●	●
	Turpentine	●	●	●	●	●
	Amyl acetate	●	●	●	●	●
HYDRO CARBONS	Petrol	●	●	●	●	●
	Diesel oil	●	●	●	●	●
	Mineral oils	●	●	●	●	●
OTHERS	Sea Water	●	●	●	●	●
	Water at 80°C	●	●	●	●	●
	Cold water	●	●	●	●	●
	Sodium Chloride in sol.	●	●	●	●	●
	Saturated steam	10	●	●	●	●

● recommended ● partially resistant ● not suitable

CARRYING CAPACITY ADJUSTMENT CHART BASED ON TEMPERATURE FOR USE WITH MANUAL HANDLING

Temperature		Carrying capacity %							
		-40/-20°C	-20/0°C	0/20°C	20/40°C	40/ 60°C	60/ 80°C	80/ 130°C	>130°C
INDUSTRIAL - LIGHT DUTY LOADS	22	-	80	100	100	85	50	-	-
	23	40	100	100	100	85	60	-	-
	52	-	80	100	100	85	50	-	-
	53	40	100	100	100	85	60	-	-
	71	-	80	100	100	85	50	-	-
	82	-	100	100	100	100	-	-	-
	82AF	-	100	100	100	100	-	-	-
INDUSTRIAL - MEDIUM DUTY LOADS	60	-	100	100	100	90	70	40	-
	61	-	100	100	100	85	60	-	-
	68	50	100	100	100	90	70	60	-
	73	40	100	100	100	85	60	50	-
	73AE	-	100	100	100	85	60	-	-
INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING	62BS	-	100	100	100	90	80	-	-
	62AL	-	100	100	100	90	80	-	-
	62ER	-	100	100	100	90	80	-	-
	62GH	-	100	100	100	90	80	-	-
	62NY	-	100	100	100	90	80	-	-
	63AC	-	100	100	100	90	80	50	-
	63GH	-	100	100	100	90	80	50	-
	64	-	100	100	100	90	80	40	-
	65AL	-	100	100	100	90	80	40	-
	65GH	-	100	100	100	90	80	40	-
	65HT	-	100	100	100	90	80	40	-
	65ER	-	100	100	100	90	80	40	-
	66	-	100	100	100	90	80	40	-
	68P	50	100	100	100	90	70	60	-
	69	100	100	100	100	100	100	100*	100*
72AL	40	100	100	100	85	60	40	-	
72GH	40	100	100	100	85	60	40	-	
HIGH TEMPERATURE	67	50	100	100	100	100	100	100	100
	68FV	70	100	100	100	100	100	100	-
	72GS	50	50	100	100	100	100	100	50
PALLET TRUCK ROLLERS	74	-	100	100	100	90	80	50	-
	75	-	100	100	100	90	80	40	-
	76	50	100	100	100	90	70	60	-
	77	-	100	100	100	90	80	40	-
	78	-	100	100	100	90	70	40	-
	79	-	100	100	100	90	80	-	-

- = not suitable

* = not suitable in ball bearing hub model

CARRYING CAPACITY ADJUSTMENT CHART BASED ON SPEED

Speed		Carrying capacity %					
		< 4 km/h	6 km/h	10 km/h	12 km/h	16 km/h	> 16 km/h
INDUSTRIAL - MEDIUM DUTY LOADS	60	100	60	-	-	-	-
	61	100	60	-	-	-	-
INDUSTRIAL - HEAVY DUTY LOADS AND MECHANICAL HANDLING	62AL	100	100	80	70	60	-
	62ER	100	100	80	70	60	-
	62GH	100	100	80	70	60	-
	62NY	100	80	-	-	-	-
	63AC	100	80	65	60	50	Contact Tellure Rôta
	63GH	100	80	65	60	50	Contact Tellure Rôta
	64	100	80	60	50	40	-
	65AL	100	80	-	-	-	-
	65GH	100	80	60	50	40	-
	65HT	100	80	60	50	-	-
	65ER	100	80	60	50	-	-
	66	100	80	-	-	-	-
	72AL	100	80	-	-	-	-
72GH	100	80	-	-	-	-	
PALLET TRUCK ROLLERS	74	100	80	65	60	50	Contact Tellure Rôta
	75	100	80	60	50	40	-
	77	100	80	-	-	-	-
	79	100	80	65	60	-	-

This table only shows references to the types of wheels that Tellure Rôta recommends for use at speeds above 4 km/h.

For the products not found in this table, use with mechanical handling and at speeds above 4 km/h is not recommended.

For use at speeds above 4 km/h, we recommend using wheels with ball bearing hub, combined with Medium-heavy duty brackets P-PX, heavy-duty brackets with hardened ball race PT, extra-heavy duty EP, electrowelded EE MHD, EE HD, EE EHD, twin electrowelded EEG MHD, EEG HD, EEG EHD, sprung loaded electrowelded EES MHD.

The light-duty SL, NL, NLX and medium-duty M brackets are not recommended for use at high speeds.

SUMMARY TABLE FOR CHOOSING THE RIGHT WHEEL

		Carrying capacity daN			Rolling resistance daN		Means of traction	
		< 250	250 / 500	> 500	< 125	> 125	Manual	Mechanical
INDUSTRIAL - LIGHT DUTY LOADS	22	●	●	●	●	●	●	●
	23	●	●	●	●	●	●	●
	52	●	●	●	●	●	●	●
	53	●	●	●	●	●	●	●
	71	●	●	●	●	●	●	●
	82	●	●	●	●	●	●	●
	82AF	●	●	●	●	●	●	●
INDUSTRIAL - MEDIUM DUTY LOADS	60	●	●	●	●	●	●	●
	61	●	●	●	●	●	●	●
	68	●	●	●	●	●	●	●
	73	●	●	●	●	●	●	●
	73AE	●	●	●	●	●	●	●
INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING	62BS	●	●	●	●	●	●	●
	62AL	●	●	●	●	●	●	●
	62ER	●	●	●	●	●	●	●
	62GH	●	●	●	●	●	●	●
	62NY	●	●	●	●	●	●	●
	63AC	●	●	●	●	●	●	●
	63GH	●	●	●	●	●	●	●
	64	●	●	●	●	●	●	●
	65AL	●	●	●	●	●	●	●
	65GH	●	●	●	●	●	●	●
	65HT	●	●	●	●	●	●	●
	65ER	●	●	●	●	●	●	●
	66	●	●	●	●	●	●	●
	68P	●	●	●	●	●	●	●
	69	●	●	●	●	●	●	●
	72AL	●	●	●	●	●	●	●
72GH	●	●	●	●	●	●	●	
HIGH TEMPERATURE	67	●	●	●	●	●	●	●
	68FV	●	●	●	●	●	●	●
	72GS	●	●	●	●	●	●	●
PALLET TRUCK ROLLERS	74	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●
	76	●	●	●	●	●	●	●
	77	●	●	●	●	●	●	●
	78	●	●	●	●	●	●	●
	79	●	●	●	●	●	●	●

● recommended

● partially resistant

● not suitable

Tellure Rôta products are produced in conformity with the international standards for wheels and brackets sector.

The following table summarises the main international standards, with references to Tellure Rôta series designed and tested in accordance with the specifications of each standard.

Standard	Title	TR Series to which it applies
ISO 22877:2004 UNI EN 12526:2002	Vocabulary, recommended symbols and multilingual dictionary	All series
ISO 22878:2004 UNI EN 12527:2001	Wheels and brackets, test methods and equipment	All series
ISO 22879:2004 UNI EN 12528:2001	Wheels and brackets, wheels for furniture	33, 34, 35, 39
ISO 22880:2004 UNI EN 12529:2001	Wheels and brackets, wheels for furniture, wheels for swivel chairs	34
ISO 22881:2004 UNI EN 12530:2001	Wheels and brackets, wheels and brackets for manually propelled institutional equipment	32, 36, 37, 38
ISO 22883:2004 UNI EN 12532:2001	Wheels and brackets, wheels and brackets for applications up to 1.1 m/s	22, 23, 52, 53, 60, 61, 62, 63, 64, 65, 66, 67, 68, 68P, 68FV, 69, 71, 72, 72GS, 73, 73AE, 74, 75, 76, 77, 78, 79, 82
ISO 22884:2004 UNI EN 12533:2001	Wheels and brackets, wheels and brackets for applications over 1.1 m/s and up to 4.4 m/s	62AL, 62ER, 62GH, 62NY, 63GH, 63AL, 64, 65AL, 65GH, 65HT, 65ER, 66, 68P, 72AL, 72GH, 74, 75, 77, 79

Tellure Rôta also guarantees that:



- the catalogue products are all conform with the European Directive 2015/863/EC (RoHS III) specifications; Tellure Rôta commits to maintaining product conformity, even after the upgrading of Directive.



- the products respect specifications stated under regulation 1907/06/EC (REACH) and, together with its suppliers, commits to working in respect of subsequent upgrades.



- a wide range of products is compatible for each category regulated by the Decision of AfPS (Assembly for Product Security), with regard to the PAH (Polycyclic aromatic hydrocarbons) content limits in GS certified products.

THE TRLAB TESTS



The quality of the Tellure Rôta products is guaranteed by in-house testing procedures that include acceptance tests on raw materials and of all other purchased components, tests on semi-finished products in various stages of the process and tests on the finished product.

The “Test & Research” laboratory is equipped with testing machines and benches for in-house testing as provided by the international standards in the wheels and brackets sector and of specific application sectors.

Specifically:

- Dynamic load test on wheels and brackets for the industrial sector in accordance with Standard ISO 22883:2004 or ISO 22884:2004
- Dynamic load test on wheels and brackets for the waste collection container sector in accordance with UNI EN 840-5:2013
- Dynamic load test on wheels and brackets for the institutional sector in accordance with ISO 22881:2004
- Conformity tests on wheels and brackets for the mobile scaffolding sector in accordance with Standard UNI EN 1004:2005;
- Rolling resistance tests on wheels and brackets for the industrial sector in accordance with UNI 11330:2009;
- Braking efficiency and engagement tests of the braking device in accordance with ISO 22883:2004 or ISO 22884:2004;
- Static load tests on wheels for the institutional sector in accordance with ISO 22881:2004

The following layout describes the tests made in accordance with the sector standards, in order to determine the industrial wheels' carrying capacity stated in the catalogue.

	Industrial wheels manual handling	Industrial wheels mechanical handling
Standard	ISO 22883	ISO 22884
Test load	Rated carrying capacity	
Test speed	4 km/h	A= 6 km/h; B= 10 km/h; C= 16 km/h
Env. temperature	Between 15 and 28 °C	
Floor	Hard floor with obstacles	
Height of obstacles	5% of the wheel diameter for soft rolling strip (hardness \leq 90 ShA); 2.5% of the wheel diameter for hard rolling strip (hardness $>$ 90 ShA)	
Layout of obstacles	width 100 mm, rounded corners with radius between 1.5 and 5 mm and arranged 45 degrees with respect to the translation axis and in an alternating pattern to the right and to the left	
Quantity of obstacles	500 obstacles separated from each other between 1 and 3 m	5 times the wheel diameter in mm (e.g. one wheel diam. 200 mm must pass 1,000 obstacles); the obstacles are spaced out: \geq 1 m; B \geq 1.5 m; \geq 3 m
Duration	Sequence of cycles with a maximum duration of 3 min., with a maximum pause time of 1 min.. The wheel must pass the foreseen obstacles, and complete 15,000 revs without obstacles.	Sequence of cycles with a maximum duration of 3 min., with a maximum pause time of 1 min.. The wheel must pass the foreseen obstacles, and complete 15,000 revs without obstacles.

For any further details or explanations contact Tellure Rôta Sales Department.

**INDUSTRIAL
LIGHT DUTY LOADS**





SERIES **22**

GREY RUBBER WHEELS
WITH POLYPROPYLENE CENTRE

80-200 mm	4 km/h 65-225 daN	50-140 daN
-20/+60 °C	INOX	

PAGE 50



SERIES **23**

GREY RUBBER WHEELS
PRESSED STEEL DISCS

80-200 mm	4 km/h 65-230 daN	50-140 daN
-20/+60 °C		

PAGE 56



SERIES **52**

BLACK RUBBER WHEELS
WITH POLYPROPYLENE CENTRE

80-250 mm	4 km/h 65-300 daN	50-175 daN
-20/+60 °C		

PAGE 62



SERIES **53**

BLACK RUBBER WHEELS
PRESSED STEEL DISCS

80-280 mm	4 km/h 65-390 daN	50-200 daN
-20/+60 °C		

PAGE 70



SERIES **71**

THERMOPLASTIC RUBBER WHEELS
WITH POLYPROPYLENE CENTRE

80-200 mm	4 km/h 70-225 daN	70-225 daN
-20/+70 °C	INOX	

PAGE 78



SERIES **82**

PNEUMATIC WHEELS
WITH POLYPROPYLENE CENTRE

260 mm	4 km/h 150 daN	-20/+60 °C
--------	----------------	------------

PAGE 86



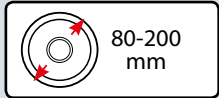
SERIES **82^{AF}**

PUNCTURE-PROOF PNEUMATIC WHEELS
WITH POLYPROPYLENE CENTRE

260 mm	Static 70 daN	-20/+60 °C
--------	---------------	------------

PAGE 88

GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE



80-200 mm



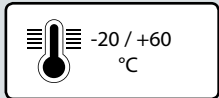
80 Shore A



65-225 daN
4 km/h



50-140 daN



-20 / +60 °C

INOX



Description

Tyre: grey non-marking standard rubber, hardness 80 Shore A

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

The grey non-marking rubber tyre makes them suitable for use on fragile floors as well as in domestic/institutional environments.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in the presence of humidity and weak acids. Not suitable in presence of strong acids, bases and solvents.

Fitted with stainless steel brackets, they are also suitable in presence of medium-harsh chemical agents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40

Floors



Suitable for all types of floors, even outdoors.

They facilitate overcoming of obstacles.

They do not damage or mark floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	225 kg
80 mm	5	----	----	----	----
100 mm	2.5	----	----	----	----
125 mm	2.2	6	----	----	----
140 mm	2	5.5	----	----	----
150 mm	2	5	----	----	----
160 mm	1.5	3.5	7.5	----	----
180 mm	1	3.2	6	----	----
200 mm	1	3	5.5	8.5	10

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX










Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:










The series 22 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE

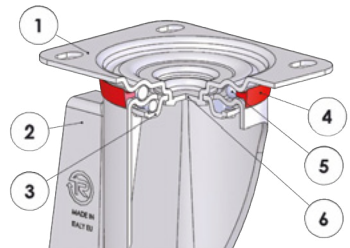


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.11	222101	12	39	150	50	65										
100	30	0.21	222102	12	44	200	75	80										
125	37.5	0.41	221103	15	44	225	85	110										
140	37.5	0.60	221104	15	44	250	95	120										
150	40	0.67	221111	15	44	275	100	130										
160	40	0.73	221110	20	59	300	120	150										
180	45	1.02	221105	20	59	350	130	180										
200	50	1.51	221106	20	59	400	140	225										



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.14	224101	12	39	150	50	65										
100	30	0.24	224102	12	44	200	75	80										
125	37.5	0.44	223103	15	44	225	85	110										
140	37.5	0.63	223104	15	44	250	95	120										
150	40	0.70	223111	15	44	275	100	130										
160	40	0.75	223110	20	59	300	120	150										
200	50	1.84	223106	20	59	400	140	225										

Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						4 km/h	daN
80	25	0.64	224401	0.36	225701	0.82	225201	107	100x85	80x60	9	37	120	65	
100	30	0.73	224402	0.48	225702	0.88	225202	128	100x85	80x60	9	35	120	80	
125	37.5	1.06	224403	0.71	225703	1.20	225203	156	100x85	80x60	9	37	120	110	
140	37.5	1.18	224404	0.80	225704	1.32	225204	177	100x85	80x60	9	34	120	120	
150	40	1.31	224411	0.93	225711	1.45	225211	182	100x85	80x60	9	34	120	130	
160	40	2.10	224410	1.73	225710	2.38	225210	199	140x110	105x80	11	56	156	150	
180	45	2.40	224405	2.11	225705	2.69	225205	219	140x110	105x80	11	56	156	180	
200	50	2.72	224406	2.50	225706	3.00	225206	240	140x110	105x80	11	56	156	225	

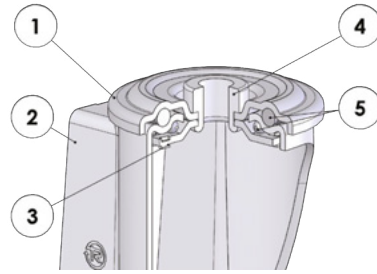
80	25	0.69	224601	0.39	225901	0.86	225221	107	100x85	80x60	9	37	120	65	
100	30	0.78	224602	0.51	225902	0.93	225222	128	100x85	80x60	9	35	120	80	
125	37.5	1.09	224603	0.73	225903	1.24	225223	156	100x85	80x60	9	37	120	110	
140	37.5	1.20	224604	0.82	225904	1.35	225224	177	100x85	80x60	9	34	120	120	
150	40	1.31	224611	0.93	225911	1.45	225231	182	100x85	80x60	9	34	120	130	
160	40	2.18	224610	1.75	225910	2.47	225230	199	140x110	105x80	11	56	156	150	
200	50	2.76	224606	2.67	225906	3.04	225226	240	140x110	105x80	11	56	156	225	

Options available to order



GREY NON-MARKING RUBBER WHEELS WITH POLYPROPYLENE CENTRE

Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
80	25	0.55	227701	0.68	225601	107	73	12	37	120	65						
100	30	0.68	227702	0.75	225602	128	73	12	35	120	80						
125	37.5	0.96	227703	1.10	225603	156	73	12	37	120	110						
140	37.5	1.12	227704	1.26	225604	177	73	12	34	120	120						
150	40	1.25	227711	1.39	225611	182	73	12	34	120	130						
160	40	1.44	227710	1.73	225610	193	102	20	56	156	150						
180	45	2.28	227705	2.57	225605	214	102	20	56	156	180						
200	50	2.62	227706	2.91	225606	236	102	20	56	156	225						
80	25	0.58	227901	0.70	225621	107	73	12	37	120	65						
100	30	0.71	227902	0.78	225622	128	73	12	35	120	80						
125	37.5	1.08	227903	1.23	225623	156	73	12	37	120	110						
140	37.5	1.19	227904	1.34	225624	177	73	12	34	120	120						
150	40	1.35	227911	1.50	225631	182	73	12	34	120	130						
160	40	1.47	227910	1.75	225630	193	102	20	56	156	150						
200	50	2.80	227906	3.08	225626	236	102	20	56	156	225						

Options available to order



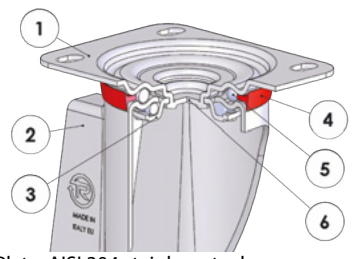
Fitting with stem in Zamak alloy d. 80-125 mm



Fitting with threaded stem d. 80-200 mm

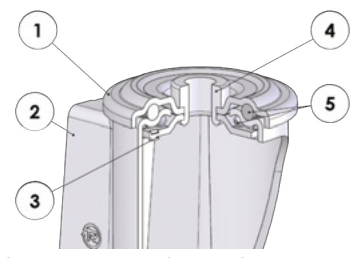
Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	25	0.59	224801	0.33	226101	0.76	225401	107	100x85	80x60	9	37	120	65
100	30	0.70	224802	0.45	226102	0.88	225402	128	100x85	80x60	9	35	120	80
125	37.5	0.96	224803	0.80	226103	1.10	225403	156	100x85	80x60	9	37	120	110
140	37.5	1.10	224804	0.88	226104	1.25	225404	177	100x85	80x60	9	34	120	120
150	40	1.24	224811	1.02	226111	1.38	225411	182	100x85	80x60	9	34	120	130
160	40	2.04	224810	1.60	226110	2.31	225410	199	140x110	105x80	11	56	156	150
180	45	2.34	224805	1.90	226105	2.63	225405	219	140x110	105x80	11	56	156	180
200	50	2.69	224806	2.24	226106	2.98	225406	240	140x110	105x80	11	56	156	225








- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

INOX

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.53	227801	0.70	225501	107	73	12	37	120	65
100	30	0.66	227802	0.86	225502	128	73	12	35	120	80
125	37.5	0.94	227803	1.09	225503	156	73	12	37	120	110
140	37.5	1.10	227804	1.18	225504	177	73	12	34	120	120
150	40	1.17	227811	1.31	225511	182	73	12	34	120	130
160	40	1.83	227810	2.14	225510	193	102	20	56	156	150
180	45	2.15	227805	2.44	225505	214	102	20	56	156	180
200	50	2.61	227806	2.89	225506	236	102	20	56	156	225

**GREY NON-MARKING RUBBER WHEELS
WITH PRESSED STEEL DISCS**

-  80-200 mm
-  80 Shore A
-  65-230 daN
4 km/h
-  50-140 daN
-  -20 / +60 °C



Description

Tyre: grey non-marking standard rubber, hardness 80 Shore A

Centre: electrolytically galvanised steel plate, made of two riveted discs.

Hub with polyamide self-lubricating plain bore.

Cylindrical roller bearing hub with plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in presence of obstacles and for indoor-outdoor use.

The grey non-marking rubber tyre makes them suitable for use on fragile floors as well as in domestic/institutional environments.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and oils. Not suitable in presence of aggressive chemical agents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors



Suitable for all types of floors, even outdoors.

They facilitate the overcoming of obstacles.

They do not damage or mark floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	230 kg
80 mm	5	----	----	----	----
100 mm	3	----	----	----	----
125 mm	2.5	6	----	----	----
140 mm	2.2	5.5	9	----	----
150 mm	2	5	8.5	----	----
160 mm	1.5	3.5	7.5	----	----
200 mm	1	3	5.5	8.5	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 230 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:

The series 23 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.












Wheels with SL brackets d. 80-125 mm










SERIES **23**

**GREY NON-MARKING RUBBER WHEELS
WITH PRESSED STEEL DISCS**

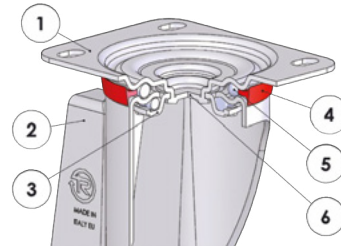


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.17	231121	12	39	260	50	65										
100	30	0.28	231122	12	44	300	75	80										
125	37.5	0.51	231103	15	44	330	85	130										
140	37.5	0.64	231104	15	44	340	95	150										
150	40	0.73	231111	15	44	350	100	170										
160	40	1.00	231110	20	58	370	120	180										
200	50	1.75	231106	20	58	410	140	230										



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.19	233121	12	39	260	50	65										
100	30	0.31	233122	12	44	300	75	80										
125	37.5	0.54	233103	15	44	330	85	130										
140	37.5	0.66	233104	15	44	340	95	150										
150	40	0.76	233111	15	44	350	100	170										
160	40	1.07	233110	20	58	370	120	180										
200	50	1.81	233106	20	58	410	140	230										

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	25	0.69	234401	0.49	235701	0.87	235201	107	100x85	80x60	9	37	120	65
100	30	0.82	234402	0.62	235702	1.00	235202	128	100x85	80x60	9	35	120	80
125	37.5	1.18	234403	0.92	235703	1.30	235203	156	100x85	80x60	9	37	120	130
140	37.5	1.31	234404	0.93	235704	1.46	235204	177	100x85	80x60	9	34	120	150
150	40	1.42	234411	1.04	235711	1.57	235211	182	100x85	80x60	9	34	120	170
160	40	2.44	234410	2.07	235710	2.69	235210	199	140x110	105x80	11	56	156	180
200	50	3.25	234406	2.89	235706	3.39	235206	240	140x110	105x80	11	56	156	230

80	25	0.70	234601	0.51	235901	0.89	235221	107	100x85	80x60	9	37	120	65
100	30	0.84	234602	0.65	235902	1.03	235222	128	100x85	80x60	9	35	120	80
125	37.5	1.21	234603	0.95	235903	1.33	235223	156	100x85	80x60	9	34	120	130
140	37.5	1.34	234604	0.96	235904	1.49	235224	177	100x85	80x60	9	34	120	150
150	40	1.45	234611	1.07	235911	1.60	235231	182	100x85	80x60	9	37	120	170
160	40	2.50	234610	2.13	235910	2.75	235230	199	140x110	105x80	11	56	156	180
200	50	3.31	234606	3.05	235906	3.45	235226	240	140x110	105x80	11	56	156	230

Options available to order:



Bracket with rear brake
d. 150-200 mm

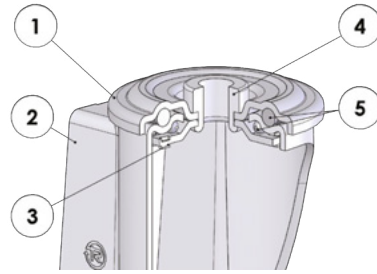


Bracket with directional lock
d. 80-125 mm
















Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

																		
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN							
80	25	0.61	237701	0.79	235601	107	73	12	37	120	65							
100	30	0.74	237702	0.94	235602	128	73	12	35	120	80							
125	37.5	1.09	237703	1.24	235603	156	73	12	37	120	130							
140	37.5	1.23	237704	1.38	235604	177	73	12	34	120	150							
150	40	1.35	237711	1.49	235611	182	73	12	34	120	170							
160	40	1.78	237710	2.04	235610	193	102	20	56	156	180							
200	50	3.16	237706	3.29	235606	236	102	20	56	156	230							
80	25	0.63	237901	0.80	235621	107	73	12	37	120	65							
100	30	0.76	237902	0.96	235622	128	73	12	35	120	80							
125	37.5	1.12	237903	1.27	235623	156	73	12	37	120	130							
140	37.5	1.26	237904	1.41	235624	177	73	12	34	120	150							
150	40	1.38	237911	1.52	235631	182	73	12	34	120	170							
160	40	1.85	237910	2.10	235630	193	102	20	56	156	180							
200	50	3.22	237906	3.35	235626	236	102	20	56	156	230							

Options available to order:








Fitting
with stem
in Zamak
alloy



Experience and innovation

BLACK RUBBER WHEELS WITH POLYPROPYLENE CENTRE

	80-250 mm
	80 Shore A
	65-300 daN 4 km/h
	50-175 daN
	-20 / +60 °C



Description

Tyre: black standard rubber, hardness 80 Shore A.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

Examples of recommended applications: luggage trolleys, tool trolleys, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and weak acids. Not suitable in presence of strong acids, bases and solvents.

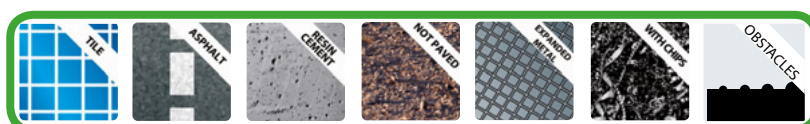
WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.


Floors

Suitable for all types of floors, even outdoors.

They easily overcome obstacles, do not damage fragile floors, but they may mark the floor.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	5	----	----	----	----	----
100 mm	2.5	----	----	----	----	----
125 mm	2.2	6	----	----	----	----
140 mm	2	5.5	----	----	----	----
150 mm	2	5	----	----	----	----
160 mm	1.5	3.5	7.5	----	----	----
180 mm	1	3.2	6	----	----	----
200 mm	1	3	5.5	8.5	----	----
250 mm	1	2.2	4	6	8.2	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 110 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL










Maximum carrying capacity 300 daN - available diameters 80-250 mm
Top plate, bolt hole, solid stem fittings. Available with front brake.

Options available to order:










The series 52 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

BLACK RUBBER WHEELS WITH POLYPROPYLENE CENTRE

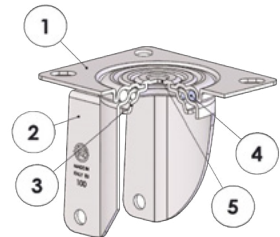


																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.11	522101	12	39	150	50	65										
100	30	0.21	522102	12	44	200	75	80										
100	30	0.19	521132	12	39	200	75	80										
125	37.5	0.41	521103	15	44	225	85	110										
125	37.5	0.35	521133	12	39	225	85	110										
140	37.5	0.48	521104	15	44	250	95	120										
150	40	0.61	521111	15	44	275	100	130										
160	40	0.73	521110	20	59	300	120	150										
180	45	1.02	521105	20	59	350	130	180										
200	50	1.31	521106	20	59	400	140	225										
200	50	1.28	521206	25	59	400	140	225										
250	60	2.59	521108	25	75	500	175	300										



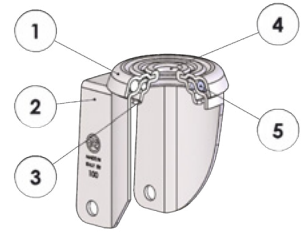
																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.14	524101	12	39	150	50	65										
100	30	0.24	524102	12	44	200	75	80										
125	37.5	0.44	523103	15	44	225	85	110										
140	37.5	0.51	523104	15	44	250	95	120										
150	40	0.61	523111	15	44	275	100	130										
160	40	0.75	523110	20	59	300	120	150										
180	45	1.18	523105	20	59	350	130	180										
200	50	1.48	523106	20	59	400	140	225										
200	50	1.45	523206	25	59	400	140	225										
250	60	2.78	523108	25	75	500	175	300										

Light-duty brackets SL - max carrying capacity 110 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

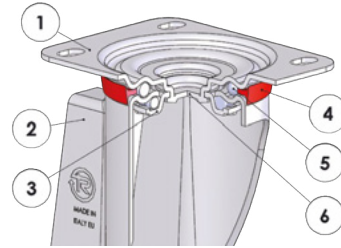
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.45	525801	0.44	526001	0.57	526301	110	95x80	100x85	80x60	8.8	33	120	65	
100	30	0.54	525802	0.53	526002	0.68	526302	127	95x80	100x85	80x60	8.8	29	120	80	
125	37.5	0.78	525803	0.76	526003	0.89	526303	154	95x80	100x85	80x60	8.8	32	120	110	



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.40	526101	0.50	526201	110	63	12	33	120	65
100	30	0.49	526102	0.60	526202	127	63	12	29	120	80
125	37.5	0.72	526103	0.82	526203	154	63	12	32	120	110

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	25	0.64	524401	0.36	525701	0.82	525201	107	100x85	80x60	9	37	120	65
100	30	0.73	524402	0.48	525702	0.88	525202	128	100x85	80x60	9	35	120	80
125	37.5	1.06	524403	0.71	525703	1.20	525203	156	100x85	80x60	9	37	120	110
140	37.5	1.18	524404	0.80	525704	1.32	525204	177	100x85	80x60	9	34	120	120
150	40	1.31	524411	0.93	525711	1.45	525211	182	100x85	80x60	9	34	120	130
160B	40	1.41	524412	1.25	525712			187	100x85	80x60	9	50		150
160	40	2.10	524410	1.73	525710	2.38	525210	199	140x110	105x80	11	56	156	150
180	45	2.40	524405	2.11	525705	2.69	525205	219	140x110	105x80	11	56	156	180
200	50	2.72	524406	2.50	525706	3.00	525206	240	140x110	105x80	11	56	156	225
250	60	6.02	524708	4.52	525708			296	200x160	160x120	14	87		300

80	25	0.69	524601	0.39	525901	0.86	525221	107	100x85	80x60	9	37	120	65
100	30	0.78	524602	0.51	525902	0.93	525222	128	100x85	80x60	9	35	120	80
125	37.5	1.09	524603	0.73	525903	1.24	525223	156	100x85	80x60	9	37	120	110
140	37.5	1.20	524604	0.82	525904	1.35	525224	177	100x85	80x60	9	34	120	120
150	40	1.31	524611	0.93	525911	1.45	525231	182	100x85	80x60	9	34	120	130
160B	40	1.43	524612	1.23	525912			187	100x85	80x60	9	50		150
160	40	2.18	524610	1.75	525910	2.47	525230	199	140x110	105x80	11	56	156	150
180	45	2.40	524605	2.27	525905	2.68	525225	219	140x110	105x80	11	56	156	180
200	50	2.76	524606	2.67	525906	3.04	525226	240	140x110	105x80	11	56	156	225
250	60	6.12	524908	4.70	525908			296	200x160	160x120	14	87		300

Options available to order:



Bracket with rear brake
d. 150-200 mm

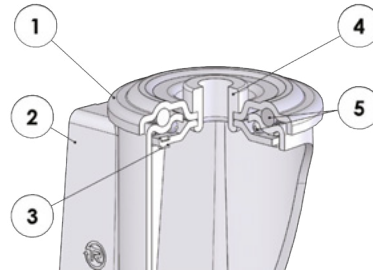


Bracket with directional lock
d. 80-125 mm



Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



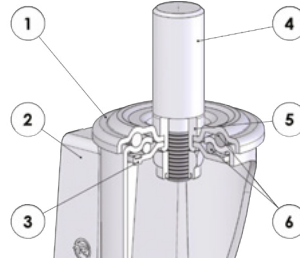
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	25	0.55	527701	0.68	525601	107	73	12	37	120	65				
100	30	0.68	527702	0.75	525602	128	73	12	35	120	80				
125	37.5	0.96	527703	1.10	525603	156	73	12	37	120	110				
140	37.5	1.12	527704	1.26	525604	177	73	12	34	120	120				
150	40	1.25	527711	1.39	525611	182	73	12	34	120	130				
160	40	1.44	527710	1.73	525610	193	102	20	56	156	150				
180	45	2.28	527705	2.57	525605	214	102	20	56	156	180				
200	50	2.62	527706	2.91	525606	236	102	20	56	156	225				
4 km/h															
80	25	0.58	527901	0.70	525621	107	73	12	37	120	65				
100	30	0.71	527902	0.78	525622	128	73	12	35	120	80				
125	37.5	1.08	527903	1.23	525623	156	73	12	37	120	110				
140	37.5	1.19	527904	1.34	525624	177	73	12	34	120	120				
150	40	1.35	527911	1.50	525631	182	73	12	34	120	130				
160	40	1.47	527910	1.75	525630	193	102	20	56	156	150				
180	45	2.44	527905	2.73	525625	214	102	20	56	156	180				
200	50	2.80	527906	3.08	525626	236	102	20	56	156	225				














SERIES **52**

**BLACK RUBBER WHEELS
WITH POLYPROPYLENE CENTRE**

Standard-duty brackets NL - max carrying capacity 300 daN



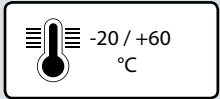
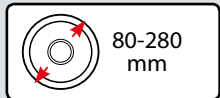
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

																
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN				
100	30	1.68	529202	1.75	529302	128	73	22	47	35	120	80				
125	37.5	1.96	529203	2.10	529303	156	73	22	47	37	120	110				
150	40	2.25	529211	2.39	529311	182	73	22	47	34	120	130				
160	40	1.81	529210	2.01	529310	193	102	26	56	56	156	150				
160	40	2.44	525520	2.73	525620	193	102	40	86	56	156	150				
200	50	2.99	529206	3.28	529306	236	102	26	56	56	156	225				
200	50	3.62	525516	3.91	525616	236	102	40	86	56	156	225				



Products made in Italy

BLACK RUBBER WHEELS WITH PRESSED STEEL DISCS



Description

Tyre: black standard rubber, hardness 80 Shore A.

Centre: electrolytically galvanised steel plate, made of two riveted discs.

Hub with polyamide self-lubricating plain bore.

Cylindrical roller bearing hub in plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in the presence of obstacles and for indoor-outdoor use.

Examples of recommended applications: tool trolleys, trolleys for industrial indoor handling, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and oils. Not suitable in presence of aggressive chemical agents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

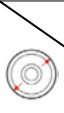

Floors

Suitable for all types of floors, even outdoors.

They easily overcome obstacles, do not damage fragile floors, but they may mark the floor.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	5	---	---	---	---	---
100 mm	3	---	---	---	---	---
125 mm	2.5	6	---	---	---	---
140 mm	2.2	5.5	9	---	---	---
150 mm	2	5	8	---	---	---
160 mm	1.5	3.5	7.5	---	---	---
180 mm	1	3	6.1	---	---	---
200 mm	1	3	5.5	8.5	---	---
225 mm	< 1	2.1	4.8	7.5	11	---
250 mm	< 1	2	4	6	9	12
280 mm	< 1	2	3.5	5	7	9

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 130 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL

Maximum carrying capacity 390 daN - available diameters 80-280 mm
Top plate, bolt hole and solid stem fittings. Available with front brake.

Options available to order:










The series 53 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.












Wheel with antistatic rubber tread (roller bearing hub only)

**BLACK RUBBER WHEELS
WITH PRESSED STEEL DISCS**



																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.17	531121	12	39	260	50	65										
100	30	0.28	531122	12	44	300	75	80										
100	30	0.25	531132	12	39	300	75	80										
125	37.5	0.51	531103	15	44	330	85	130										
125	37.5	0.44	531133	12	39	330	85	130										
140	37.5	0.64	531104	15	44	340	95	150										
150	40	0.73	531111	15	44	350	100	170										
160	40	1.00	531110	20	58	370	120	180										
180	45	1.33	531105	20	58	390	130	200										
200	50	1.75	531106	20	58	410	140	230										
200	50	1.74	531206	25	58	410	140	230										
225	50	2.16	531107	20	58	420	160	250										
250	60	3.24	531108	25	73	500	175	300										
280	60	3.92	531109	25	73	550	200	390										



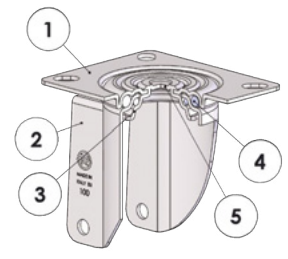
																		
mm	mm	kg	CODE	mm	mm	daN	daN	daN										
80	25	0.19	533121	12	39	260	50	65										
100	30	0.31	533122	12	44	300	75	80										
125	37.5	0.54	533103	15	44	330	85	130										
140	37.5	0.66	533104	15	44	340	95	150										
150	40	0.76	533111	15	44	350	100	170										
160	40	1.07	533110	20	58	370	120	180										
180	45	1.39	533105	20	58	390	130	200										
200	50	1.81	533106	20	58	410	140	230										
200	50	1.78	533206	25	58	410	140	230										
225	50	2.42	533107	20	58	420	160	250										
250	60	3.14	533108	25	73	500	175	300										
280	60	3.84	533109	25	73	550	200	390										

Options available to order:



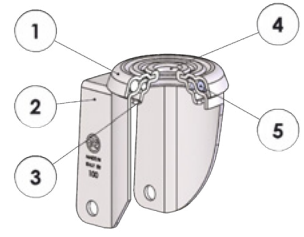
Wheel with antistatic
rubber tread
(pages 352-355)

Light-duty brackets SL - max carrying capacity 130 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

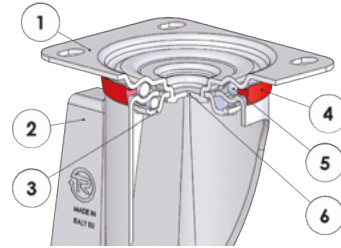
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.51	535801	0.50	536001	0.63	536301	110	95x80	100x85	80x60	8.8	33	120	65	
100	30	0.60	535802	0.59	536002	0.74	536302	127	95x80	100x85	80x60	8.8	29	120	80	
125	37.5	0.87	535803	0.85	536003	0.98	536303	154	95x80	100x85	80x60	8.8	32	120	130	



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
80	25	0.46	536101	0.56	536201	110	63	12	33	120	65
100	30	0.55	536102	0.66	536202	127	63	12	29	120	80
125	37.5	0.81	536103	0.91	536203	154	63	12	32	120	130

Standard-duty brackets NL - max carrying capacity 390 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

Wheel		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket		Bracket	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.69	535001	0.49	535701	0.87	535401	107	100x85	80x60	9	37	120				65
100	30	0.82	535002	0.62	535702	1.00	535402	128	100x85	80x60	9	35	120				80
125	37.5	1.18	535003	0.92	535703	1.30	535403	156	100x85	80x60	9	37	120				130
140	37.5	1.27	535004	1.09	535704	1.46	535404	177	100x85	80x60	9	34	120				150
150	40	1.40	535011	1.22	535711	1.57	535411	182	100x85	80x60	9	34	120				170
160B	40	1.75	535012	1.55	535712			187	100x85	80x60	9	50					180
160	40	2.44	535010	2.07	535710	2.69	535410	199	140x110	105x80	11	56	156				180
180	45	2.78	535005	2.49	535705	3.07	535405	219	140x110	105x80	11	56	156				200
200	50	3.25	535006	2.89	535706	3.39	535406	240	140x110	105x80	11	56	156				230
225	50	3.67	535007	3.18	535707	3.95	535407	263	140x110	105x80	11	56	156				250
250	60	6.66	534708	5.16	535708			296	200x160	160x120	14	87					300
280	60	7.35	534709	5.84	535709			311	200x160	160x120	14	87					390
80	25	0.70	535101	0.51	535901	0.89	535421	107	100x85	80x60	9	37	120				65
100	30	0.84	535102	0.65	535902	1.03	535422	128	100x85	80x60	9	35	120				80
125	37.5	1.21	535103	0.95	535903	1.33	535423	156	100x85	80x60	9	37	120				130
140	37.5	1.34	535104	0.96	535904	1.49	535424	177	100x85	80x60	9	34	120				150
150	40	1.45	535111	1.07	535911	1.60	535431	182	100x85	80x60	9	34	120				170
160B	40	1.81	535112	1.61	535912			187	100x85	80x60	9	50					180
160	40	2.50	535110	2.13	535910	2.75	535430	199	140x110	105x80	11	56	156				180
180	45	2.85	535105	2.56	535905	3.13	535425	219	140x110	105x80	11	56	156				200
200	50	3.31	535106	3.05	535906	3.45	535426	240	140x110	105x80	11	56	156				230
225	50	3.93	535107	3.45	535907	4.22	535427	263	140x110	105x80	11	56	156				250
250	60	6.56	534908	5.06	535908			296	200x160	160x120	14	87					300
280	60	7.27	534909	5.76	535909			311	200x160	160x120	14	87					390

Options available to order:



Wheel with antistatic rubber tread (pages 352-355)



Bracket with rear brake d. 150-200 mm

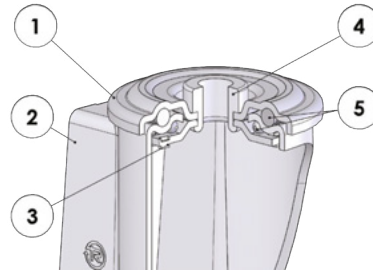


Bracket with directional lock d. 80-125 mm



Directional lock for brackets d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

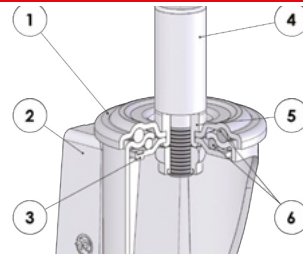
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	
80	25	0.61	537701	0.78	538201	107	73	12	37	120	65	
100	30	0.74	537702	0.94	538202	128	73	12	35	120	80	
125	37.5	1.09	537703	1.24	538203	156	73	12	37	120	130	
140	37.5	1.23	537704	1.38	538204	177	73	12	34	120	150	
150	40	1.35	537711	1.49	538211	182	73	12	34	120	170	
160	40	1.78	537710	2.04	538210	193	102	20	56	156	180	
180	45	2.66	537705	3.95	538205	214	102	20	56	156	200	
200	50	3.16	537706	3.29	538206	236	102	20	56	156	230	
80	25	0.63	537901	0.80	538221	107	73	12	37	120	65	
100	30	0.76	537902	0.96	538222	128	73	12	35	120	80	
125	37.5	1.12	537903	1.27	538223	156	73	12	37	120	130	
140	37.5	1.26	537904	1.41	538224	177	73	12	34	120	150	
150	40	1.38	537911	1.52	538231	182	73	12	34	120	170	
160	40	1.85	537910	2.10	538230	193	102	20	56	156	180	
180	45	2.73	537905	3.01	538225	214	102	20	56	156	200	
200	50	3.22	537906	3.35	538226	236	102	20	56	156	230	

Options available to order:



Wheel with antistatic rubber tread (pages 352-355)

Standard-duty brackets NL - max carrying capacity 230 daN



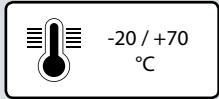
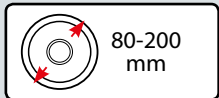
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN				
100	30	1.74	539202	2.24	538802	128	73	22	47	35	120	80					
125	37.5	2.09	539203	2.24	538803	156	73	22	47	37	120	130					
150	40	2.35	539211	2.49	538811	182	73	22	47	34	120	170					
160	40	2.15	539210	2.41	538810	193	102	26	56	56	156	180					
160	40	3.20	535520	3.50	535620	193	102	40	86	56	156	180					
180	45	3.75	535515	3.95	535615	214	102	40	86	56	156	200					
200	50	3.53	539206	3.66	538806	236	102	26	56	56	156	230					
200	50	4.16	535516	4.29	535616	236	102	40	86	56	156	230					



Technology at work

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: grey non-marking thermoplastic rubber, hardness 85 Shore A, excellent rolling resistance and elasticity.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearing. Hub with double shielding ball bearing, coprinted in the centre of the wheel: diam. 80-125 mm. Hub with double shielding ball bearings: diam. 150-200 mm.

The bearings are protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal.

Also available with stainless steel ball bearings.

Uses

Indicated for trolleys with light-duty loads, mainly for indoor use; the grey non-marking rubber tyre makes it suitable for use on fragile floors and also in domestic/institutional environments.

Excellent rolling resistance guarantees minimum effort in manual handling.

Examples of recommended applications: luggage trolleys, tool trolleys, institutional and catering trolleys, trolleys for industrial indoor use, tubular trolleys.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity. Fitted with stainless steel brackets, they are also recommended for environments with presence of aggressive chemical agents. Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

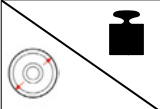

Floors

It does not stain or damage fragile floors. Suitable for tiles and cement-resin.

Not recommended on abrasive, unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	225 kg
80 mm	3,5	----	----	----	----
100 mm	2,2	5	----	----	----
125 mm	1,5	3,5	----	----	----
150x35 mm	1	2,5	4,7	----	----
150x45 mm	< 1	2	3,8	----	----
160 mm	< 1	1,3	2,5	3,2	----
200 mm	< 1	1,3	2,5	2,8	4,2

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Light-duty brackets SL

Maximum carrying capacity 120 daN - available diameters 80-125 mm
Top plate and bolt hole fittings. Available with front brake.



Standard-duty brackets NL

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate, bolt hole and Zamak expander stem fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 225 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.

Options available to order:










The series 71 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.














Wheel for large commercial kitchens (conforms to Standard DIN 18867-8)
d. 160 and 200 mm

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE














															
mm	mm	kg	COD.	mm	mm	daN	daN	daN							
80	30	0,09	711101	12	39	100	70	70							
100	30	0,12	711102	12	44	150	100	100							
100	30	0,11	711132	12	39	150	100	100							
125	35	0,20	711103	15	44	180	120	120							
125	35	0,20	711133	12	39	180	120	120							
150	35	0,27	711105	15	44	210	140	140							
150	45	0,36	711104	20	59	270	180	180							
200	50	0,70	711106	20	59	330	225	225							

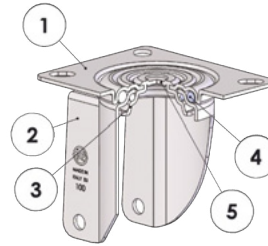


															
mm	mm	kg	COD.	kg	COD.	mm	mm	daN	daN	daN					
80	30	0,11	713101	0,11	713201	12	39	100	70	70					
100	30	0,14	713102	0,14	713202	12	44	150	100	100					
125	35	0,22	713103	0,22	713203	15	44	180	120	120					
150	35	0,30	713105	0,30	713205	15	44	210	140	140					
150	45	0,41	713104	0,41	713204	20	59	270	180	180					
200	50	0,74	713106	0,74	713206	20	59	330	225	225					



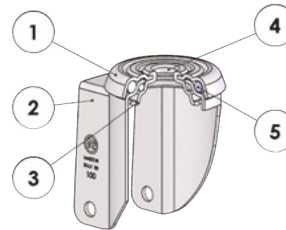
															
mm	mm	kg	COD.	kg	COD.	mm	mm	daN	daN	daN					
80	30	0,14	712201			8	40	100	70	70					
100	30	0,18	712202			8	45	150	100	100					
125	35	0,25	712203			8	45	180	120	120					
150	45	0,62	712204	0,62	712404	12	60	270	180	180					
160	50	0,71	712210	0,71	712410	12	60	300	200	200					
200	50	0,92	712206	0,92	712406	12	60	330	225	225					

Light-duty brackets SL - max carrying capacity 120 daN



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel plate
 - 4) Swivel actions: on two ball race rings lubricated with grease
 - 5) Bracket closing king pin integrated with ball race ring
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0,43	715801	0,42	716001	0,55	716301	110	95x80	100x85	80x60	8,8	33	120	70	
100	30	0,46	715802	0,45	716002	0,60	716302	127	95x80	100x85	80x60	8,8	29	120	100	
125	35	0,63	715803	0,61	716003	0,74	716303	154	95x80	100x85	80x60	8,8	32	120	120	



- 1) Plate in electrolytically galvanised printed steel plate
 - 2) Fork in electrolytically galvanised printed steel plate
 - 3) Ball Race Ring in electrolytically galvanised printed steel
 - 4) Bracket closing king pin integrated with ball race ring
 - 5) Swivel actions: on two ball race rings lubricated with grease
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
80	30	0,38	716101	0,48	716201	110	63	12	33	120	70
100	30	0,41	716102	0,52	716202	127	63	12	29	120	100
125	30	0,57	716103	0,67	716203	154	63	12	32	120	120

Options available to order:



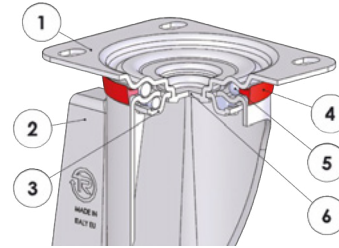
Wheel for large commercial kitchens (conforms to Standard DIN 18867-8)
d. 160 and 200 mm



Wheel with single stainless steel ball bearing
d. 80-125 mm

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

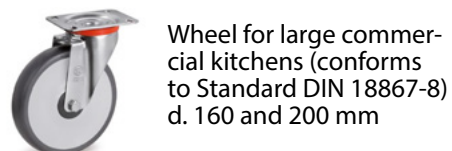
Standard-duty brackets NL - max carrying capacity 225 daN



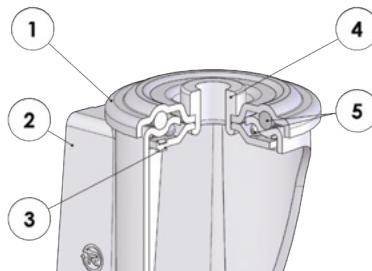
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		mm		daN	
80	30	0,60	714201	0,36	715701	0,79	716601	107	100x85	80x60	9	37	120	70							
100	30	0,70	714202	0,39	715702	0,85	716602	128	100x85	80x60	9	35	120	100							
125	35	0,86	714203	0,61	715703	1,00	716603	156	100x85	80x60	9	37	120	120							
150	35	0,96	714204	0,76	715704	1,14	716604	182	100x85	80x60	9	34	120	140							
150	45	1,72	714211	1,35	715711	2,00	716611	194	140x110	105x80	11	56	156	180							
200	50	2,07	714206	1,86	715706	2,35	716606	240	140x110	105x80	11	56	156	225							
80	30	0,61	714501	0,38	715901	0,82	716621	107	100x85	80x60	9	37	120	70							
100	30	0,71	714502	0,39	715902	0,86	716622	128	100x85	80x60	9	35	120	100							
125	35	0,87	714503	0,62	715903	1,03	716623	156	100x85	80x60	9	37	120	120							
150	35	1,11	714504	0,81	715904	1,16	716624	182	100x85	80x60	9	34	120	140							
150	45	1,87	714511	1,40	715911	2,05	716631	194	140x110	105x80	11	56	156	180							
200	50	2,10	714506	2,02	715906	2,34	716626	240	140x110	105x80	11	56	156	225							
80	30	0,58	714701	0,45	714801	0,75	714901	107	100x85	80x60	9	37	120	70							
100	30	0,64	714702	0,50	714802	0,81	714902	128	100x85	80x60	9	35	120	100							
125	35	0,81	714703	0,61	714803	0,97	714903	156	100x85	80x60	9	37	120	120							
150	45	1,86	714731	1,68	714811	2,15	714911	194	140x110	105x80	11	56	156	180							
160	50	1,95	714710	1,77	714810	2,24	714910	199	140x110	105x80	11	56	156	200							
200	50	2,22	714736	2,13	714806	2,51	714906	240	140x110	105x80	11	56	156	225							

Options available to order:



Standard-duty brackets NL - max carrying capacity 225 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN					
80	30	0,53	717401	0,71	716501	107	73	12	37	120	70					
100	30	0,63	717402	0,84	716502	128	73	12	35	120	100					
125	35	0,80	717403	0,95	716503	156	73	12	37	120	120					
150	35	0,90	717404	1,04	716504	182	73	12	34	120	140					
150	45	1,58	717411	1,87	716511	188	102	20	56	156	180					
200	50	1,97	717406	2,26	716506	236	102	20	56	156	225					
80	30	0,55	717801	0,73	716521	107	73	12	37	120	70					
100	30	0,64	717802	0,84	716522	128	73	12	35	120	100					
125	35	0,82	717803	0,98	716523	156	73	12	37	120	120					
150	35	0,93	717804	1,00	716524	182	73	12	34	120	140					
150	45	1,85	717811	1,92	716531	188	102	20	56	156	180					
200	50	2,02	717806	2,29	716526	236	102	20	56	156	225					
80	30	0,53	714301	0,70	715501	107	73	12	37	120	70					
100	30	0,58	714302	0,75	715502	128	73	12	35	120	100					
125	35	0,74	714303	0,94	715503	156	73	12	37	120	120					
150	45	1,74	714331	2,06	715511	188	102	20	56	156	180					
160	50	1,83	714310	2,15	715510	193	102	20	56	156	200					
200	50	2,11	714336	2,41	715506	236	102	20	56	156	225					

Options available to order:



Wheel for large commercial kitchens (conforms to Standard DIN 18867-8) d. 160 and 200 mm



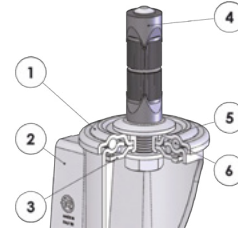
Fitting with threaded stem



Fitting with unthreaded stem with dimensions that can be customised

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

Standard-duty brackets NL - max carrying capacity 225 daN

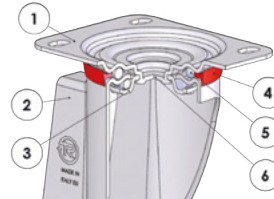


- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
80	30	0,65	719201	0,83	719301	109	20	65	20-24	37	120	70
100	30	0,75	719202	0,96	719302	130	20	65	20-24	35	120	100
125	35	1,02	719203	1,07	719303	158	20	65	20-24	37	120	120

Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX

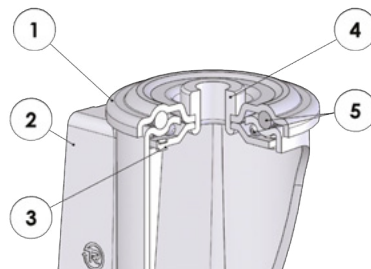


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
80	30	0,59	714401	0,33	715301	0,76	716701	107	100x85	80x60	9	37	120	70
100	30	0,61	714402	0,36	715302	0,79	716702	128	100x85	80x60	9	35	120	100
125	35	0,76	714403	0,59	715303	0,90	716703	156	100x85	80x60	9	37	120	120
150	35	0,99	714404	0,76	715304	1,01	716704	182	100x85	80x60	9	34	120	140
150	45	1,63	714411	1,22	715311	1,95	716711	194	140x110	105x80	11	56	156	180
200	50	2,04	714406	1,59	715306	2,33	716706	240	140x110	105x80	11	56	156	225
80	30	0,61	714601	0,36	715601	0,79	716721	107	100x85	80x60	9	37	120	70
100	30	0,64	714602	0,37	715602	0,80	716722	128	100x85	80x60	9	35	120	100
125	35	0,78	714603	0,62	715603	0,93	716723	156	100x85	80x60	9	37	120	120
150	35	1,03	714604	0,81	715604	1,03	716724	182	100x85	80x60	9	34	120	140
150	45	1,71	714611	1,27	715611	2,00	716731	194	140x110	105x80	11	56	156	180
200	50	2,09	714606	1,62	715606	2,36	716726	240	140x110	105x80	11	56	156	225
150	45	1,85	715411	1,55	715011	2,14	716911	194	140x110	105x80	11	56	156	180
160	50	1,94	715410	1,64	715010	2,23	716910	199	140x110	105x80	11	56	156	200
200	50	2,22	715406	1,97	715036	2,51	716906	240	140x110	105x80	11	56	156	225

Stainless steel standard-duty brackets NLX - max carrying capacity 225 daN

INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN			
80	30	0,53	717901	0,70	718801	107	73	12	37	120	70			
100	30	0,57	717902	0,78	718802	128	73	12	35	120	100			
125	35	0,74	717903	0,89	718803	156	73	12	37	120	120			
150	35	0,95	717904	0,97	718804	182	73	12	34	120	140			
150	45	1,46	717911	1,74	718811	188	102	20	56	156	180			
200	50	1,99	717906	2,25	718806	236	102	20	56	156	225			
80	30	0,56	718001	0,73	718821	107	73	12	37	120	70			
100	30	0,58	718002	0,78	718822	128	73	12	35	120	100			
125	35	0,77	718003	0,92	718823	156	73	12	37	120	120			
150	35	1,00	718004	0,99	718824	182	73	12	34	120	140			
150	45	1,51	718011	1,79	718831	188	102	20	56	156	180			
200	50	2,02	718006	2,28	718826	236	102	20	56	156	225			
150	45	1,71	716311	2,06	716541	188	102	20	56	156	180			
160	50	1,80	716310	2,15	716510	193	102	20	56	156	200			
200	50	2,11	716336	2,41	716546	236	102	20	56	156	225			

Options available to order:






Wheel with single stainless steel ball bearing d. 80-125 mm



Wheel for large commercial kitchens (conforms to Standard DIN 18867-8) d. 160 and 200 mm

PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE

	260 mm
	150 daN 4 km/h
	-20 / +60 °C



Description

Tyre: four plies ribbed or country profiled tyre; working pressure 2 bar.

Centre: polypropylene.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for use with light and medium-duty loads, on any type of flooring, also for mixed indoor and outdoor use.




Also suitable on sandy base.

Examples of recommended applications: wheelbarrows, box charts.

Environments of use

Suitable for industrial and outdoor environments, also in presence of humidity and medium-harsh chemical agents.

Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

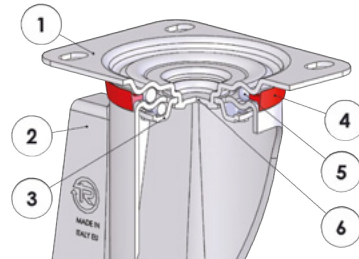
It is functional on all type of floors and especially on uneven floors and soft floor surfaces such as grass, as well as on floor with obstacles and with chips.





mm		kg		CODE		mm		mm		daN		
260	85	0.91	821601	1.03	823601	20	74	150				ribbed profile
260	85	0.90	821602	1.00	823602	25	74	150				ribbed profile
260	85	0.96	822601	1.08	824601	20	74	150				country profile
260	85	0.95	822602	1.05	824602	25	74	150				country profile

Standard-duty brackets NL - max carrying capacity 150 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm		kg		CODE		mm		mm		mm		mm		daN	
260	85	4.33	825601	2.83	826601	300	200x160	160x120	14	86	150				
260	85	4.43	825701	2.93	826701	300	200x160	160x120	14	86	150				



mm		kg		CODE		mm		mm		mm		mm		daN	
260	85	4.38	825602	2.89	826602	300	200x160	160x120	14	86	150				
260	85	4.48	825702	2.98	826702	300	200x160	160x120	14	86	150				

PUNCTURE-PROOF PNEUMATIC WHEELS WITH POLYPROPYLENE CENTRE

	260 mm
	70 daN
	-20 / +60 °C



Description

Tyre: expanded polyurethane foam, without inner tube.

Centre: polypropylene.

Hub with cylindrical roller bearing with plastic cage.

Uses

Suitable for use with light and medium-duty loads, on any type of flooring, also for mixed indoor and outdoor use. The expanded polyurethane foam tyre eliminates wheel failure as a consequence of a puncture that can occur with traditional pneumatic (air filled) wheels.

Also suitable on sandy base.

Examples of recommended applications: wheelbarrows, box charts.

Environments of use

Suitable for industrial and outdoor environments, also in presence of humidity and medium-harsh chemical agents. Not suitable in presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40

Floors

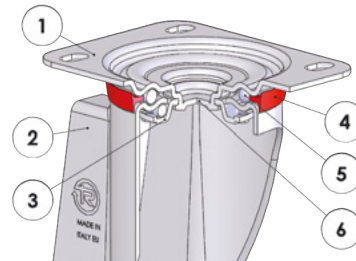
It is functional on all type of floors and especially on uneven floors and soft floor surfaces such as grass, as well as on floor with obstacles and with chips.





mm	mm	kg	COD.	mm	mm	daN								
260	75	1,03	823701	20	77	70	country profile							

Standard-duty brackets NL - max carrying capacity 70 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN			
260	75	4,48	827601	2,98	828601	300	200x160	160x120	14	86	70			

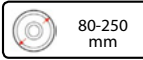
**INDUSTRIAL
MEDIUM DUTY LOADS**



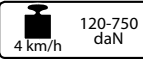


SERIES **60**

THERMOPLASTIC POLYURETHANE
WHEELS WITH POLYAMIDE 6 CENTRE



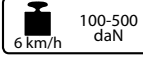
80-250
mm



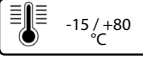
4 km/h
120-750
daN



120-450
daN



6 km/h
100-500
daN



-15 / +80
°C

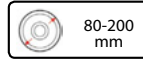
INOX

PAGE 92



SERIES **61**

THERMOPLASTIC POLYURETHANE
WHEELS WITH POLYAMIDE 6 CENTRE



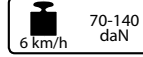
80-200
mm



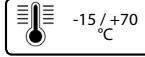
4 km/h
75-300
daN



75-300
daN



6 km/h
70-140
daN



-15 / +70
°C

INOX

PAGE 102

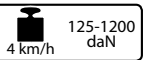


SERIES **68**

SOLID WHEELS
IN POLYAMIDE 6



65-250
mm



4 km/h
125-1200
daN



90-450
daN



-30 / +80
°C

INOX

PAGE 110

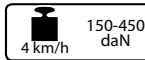


SERIES **73**

WHEELS IN SIGMA ELASTIC RUBBER
WITH POLYAMIDE 6 CENTRE



100-200
mm



4 km/h
150-450
daN



100-350
daN



-20 / +70
°C

INOX

PAGE 122

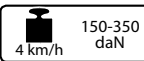


SERIES **73^{EE}_A**

ELASTIC RUBBER WHEELS
WITH POLYAMIDE CENTRE



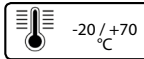
100-200
mm



4 km/h
150-350
daN









100-235
daN



-20 / +70
°C

PAGE 130

THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

-  80-250 mm
-  55 Shore D
-  120-750 daN
4 km/h
-  100-500 daN
6 km/h
-  120-450 daN
-  -15 / +80 °C

INOX



Description

Tyre: red thermoplastic polyurethane, hardness 55 Shore D, excellent rolling resistance and elasticity features, good resistance to wear and tearing.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.
 Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearing.
 Hub with double shielding ball bearing, co-printed in centre (diam. 80-125 mm). Hub with double shielding ball bearings (diam. 150-200 mm). The bearings are protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal. Diam. 250 mm: hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. Also available with stainless steel ball bearing.

Uses






Suitable for trolleys and machinery with medium-duty loads, also in case of continuous handling.

Suitable for indoor and outdoor use with frequent washing and sterilisation.

Examples of recommended applications: trolleys for industrial use, tubular trolleys, trolleys for food and chemical industry, mobile scaffoldings (fitted with suitable brackets, they meet Standard UNI EN 1004:2005).

Environments of use

Suitable for industrial environments, also in presence of water and saturated vapour, alcohol and glycol, mineral and organic acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for tiles and cement-resin.


Not recommended unpaved floors or in presence of processing residues.

Not suitable in presence of obstacles, even if small.

They do not mark fragile floors.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg	400 kg	450 kg	750 kg
80 mm	4,5	----	----	----	----	----	----	----	----
100 mm	2,2	4,5	----	----	----	----	----	----	----
125 mm	1,2	2,2	4	----	----	----	----	----	----
150x35 mm	< 1	2	3,2	5	----	----	----	----	----
150x45 mm	< 1	1,8	2,6	3,5	5	5,3	----	----	----
160 mm	< 1	1,6	2,2	3	3,9	5,1	6	---	---
200 mm	< 1	1,5	2	2,8	3,7	4,8	5,5	6,5	----
250 mm	< 1	< 1	< 1	2	2,8	3,7	4,8	5	7

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate, bolt hole, solid stem, Zama expander fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 450 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Medium-heavy duty brackets PX in stainless steel

Maximum carrying capacity 450 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Mobile scaffolding brackets (See Scaffolding section on page 275)

Maximum carrying capacity 400 daN - maximum capacity according to UNI EN 1004:2005 750 daN
Available diameters 125-200 mm. Top plate, unthreaded stem, threaded stem with leveller fittings. Available with brake and double brake pedal.

Options available to order

The series 60 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

SERIES **60**

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**



mm	mm	kg	COD.	mm	mm.	daN	daN	daN
80	30	0,11	601101	12	39	220	120	120
100	30	0,15	601102	12	44	300	170	170
125	35	0,25	601103	15	44	350	230	230
150	35	0,38	601105	15	44	500	250	250
150	45	0,47	601104	20	59	700	280	350
200	50	0,82	601106	20	59	750	320	450

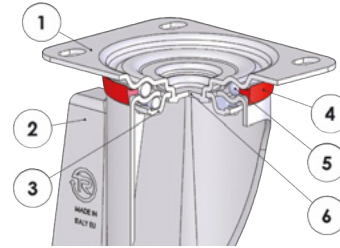


mm	mm	kg	COD.	kg	COD.	mm	mm	daN	daN	daN
80	30	0,13	603101	0,13	603201	12	39	220	120	120
100	30	0,16	603102	0,16	603202	12	44	300	170	170
125	35	0,27	603103	0,27	603203	15	44	350	230	230
150	35	0,40	603105	0,40	603205	15	44	500	250	250
150	45	0,52	603104	0,52	603204	20	59	700	280	350
200	50	0,87	603106	0,87	603206	20	59	750	320	450



mm	mm	kg	COD.	kg	COD.	mm	mm.	daN	daN	daN	daN
80	30	0,17	602201	0,17	602401	8	40	220	130	130	100
100	30	0,21	602202	0,21	602402	8	45	300	200	200	160
125	35	0,30	602203	0,30	602403	8	45	350	250	250	200
150	45	0,76	602204	0,76	602404	12	60	700	300	350	280
160	50	0,87	602210	0,87	602410	12	60	720	320	400	320
200	50	1,16	602206	1,16	602406	12	60	750	360	450	360
250	50	1,50	602208			20	58	1000	450	750	500

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm						daN
80	30	0,62	604201	0,38	605701	0,81	606601	107	100x85	80x60	9	37	120	120
100	30	0,74	604202	0,43	605702	0,89	606602	128	100x85	80x60	9	35	120	170
125	35	0,91	604203	0,66	605703	1,05	606603	156	100x85	80x60	9	37	120	220
150	35	1,08	604204	0,8	605704	1,21	606604	182	100x85	80x60	9	34	120	220
150	45	1,83	604211	1,46	605711	2,11	606611	194	140x110	105x80	11	56	156	300
200	50	2,23	604206	2,01	605706	2,49	606606	240	140x110	105x80	11	56	156	300
80	30	0,63	604501	0,41	605901	0,84	606621	107	100x85	80x60	9	37	120	120
100	30	0,75	604502	0,43	605902	0,9	606622	128	100x85	80x60	9	35	120	170
125	35	0,92	604503	0,67	605903	1,07	606623	156	100x85	80x60	9	37	120	220
150	35	1,11	604504	0,82	605904	1,23	606624	182	100x85	80x60	9	34	120	220
150	45	1,98	604511	1,51	605911	2,16	606631	194	140x110	105x80	11	56	156	300
200	50	2,27	604506	2,06	605906	2,56	606626	240	140x110	105x80	11	56	156	300
80	30	0,60	604701	0,48	604801	0,77	604901	107	100x85	80x60	9	37	120	130
100	30	0,67	604702	0,53	604802	0,84	604902	128	100x85	80x60	9	35	120	200
125	35	0,86	604703	0,66	604803	1,02	604903	156	100x85	80x60	9	37	120	220
150	45	2,01	604731	1,82	604811	2,29	604911	194	140x110	105x80	11	56	156	300
160	50	2,11	604710	1,93	604810	2,39	604910	199	140x110	105x80	11	56	156	300
200	50	2,46	604736	2,37	604806	2,75	604906	240	140x110	105x80	11	56	156	300

Options available to order

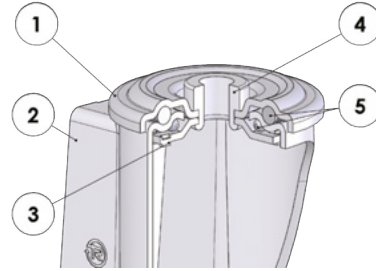


Bracket with directional lock
d. 80-125 mm
















Directional lock for brackets
d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

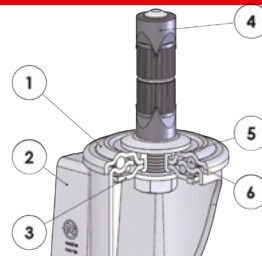
																
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	daN				
80	30	0,55	607701	0,73	606401	107	73	12	37	120	120					
100	30	0,67	607702	0,88	606402	128	73	12	35	120	170					
125	35	0,85	607703	1,00	606403	156	73	12	37	120	220					
150	35	1,01	607704	1,14	606404	182	73	12	34	120	220					
150	45	1,69	607711	1,98	606411	188	102	20	56	156	300					
200	50	2,13	607706	2,41	606406	236	102	20	56	156	300					
80	30	0,57	607801	0,75	606421	107	73	12	37	120	120					
100	30	0,68	607802	0,88	606422	128	73	12	35	120	170					
125	35	0,87	607803	1,02	606423	156	73	12	37	120	220					
150	35	1,03	607804	1,16	606424	182	73	12	34	120	220					
150	45	1,74	607811	2,03	606431	188	102	20	56	156	300					
200	50	2,18	607806	2,46	606426	236	102	20	56	156	300					
80	30	0,56	604301	0,72	605501	107	73	12	37	120	130					
100	30	0,61	604302	0,78	605502	128	73	12	35	120	200					
125	35	0,79	604303	0,96	605503	156	73	12	37	120	220					
150	45	1,89	604331	2,21	605511	188	102	20	56	156	300					
160	50	1,99	604310	2,31	605510	193	102	20	56	156	300					
200	50	2,34	604336	2,65	605506	236	102	20	56	156	300					

Options available to order



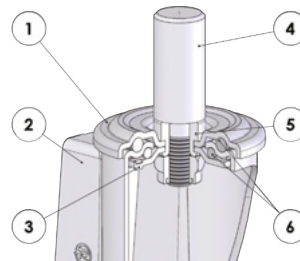
Fastening with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0,67	609201	0,85	609301	109	73	20	65	20-24	37	120	120
100	30	0,79	609202	1,00	609302	130	73	20	65	20-24	35	120	130
125	35	0,97	609203	1,12	609303	158	73	20	65	20-24	37	120	130



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
100	30	1,67	606102	1,88	606202	128	73	22	47	35	120	170
125	35	1,85	606103	2,00	606203	156	73	22	47	37	120	220
150	35	2,01	606104	2,14	606204	182	73	22	47	34	120	220
150	45	2,69	606111	2,98	606211	188	102	26	56	56	156	300
200	50	3,13	606106	3,41	606206	236	102	26	56	56	156	300

Options available to order



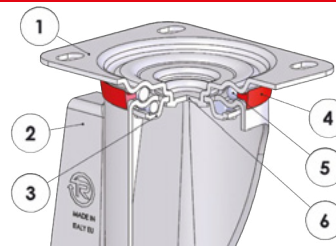
Bracket with Zama stem fitted with wheels with roller bearings and single ball bearing
d. 80-125 mm



Connection with solid stem with dimensions that can be customised

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX

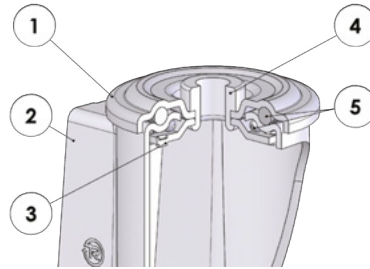


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake













mm		kg		kg		kg		mm						daN	
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
80	30	0,61	604401	0,35	605101	0,78	606701	107	100x85	80x60	9	37	120	120	
100	30	0,65	604402	0,40	605102	0,83	606702	128	100x85	80x60	9	35	120	170	
125	35	0,81	604403	0,64	605103	0,95	606703	156	100x85	80x60	9	37	120	220	
150	35	0,97	604404	0,81	605104	1,10	606704	182	100x85	80x60	9	34	120	220	
150	45	1,77	604411	1,33	605111	2,06	606711	194	140x110	105x80	11	56	156	300	
200	50	2,20	604406	1,74	605106	2,48	606706	240	140x110	105x80	11	56	156	300	
80	30	0,64	604601	0,38	605601	0,81	606721	107	100x85	80x60	9	37	120	120	
100	30	0,65	604602	0,41	605602	0,84	606722	128	100x85	80x60	9	35	120	170	
125	35	0,83	604603	0,66	605603	0,97	606723	156	100x85	80x60	9	37	120	220	
150	35	0,99	604604	0,83	605604	1,12	606724	182	100x85	80x60	9	34	120	220	
150	45	1,82	604611	1,38	605611	2,03	606731	194	140x110	105x80	11	56	156	300	
200	50	2,25	604606	1,74	605606	2,53	606726	240	140x110	105x80	11	56	156	300	
80	30	0,60	605401	0,48	605001	0,77	606901	107	100x85	80x60	9	37	120	130	
100	30	0,67	605402	0,53	605002	0,84	606902	128	100x85	80x60	9	35	120	200	
125	35	0,78	605403	0,66	605003	0,95	606903	156	100x85	80x60	9	37	120	220	
150	45	2,00	605411	1,69	605011	2,29	606911	194	140x110	105x80	11	56	156	300	
160	50	2,10	605410	1,79	605010	2,39	606910	199	140x110	105x80	11	56	156	300	
200	50	2,46	605406	2,21	605006	2,74	606906	240	140x110	105x80	11	56	156	300	

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

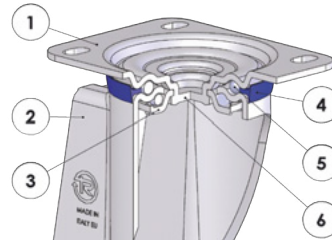
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

															
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN				
80	30	0,55	607901	0,61	608801	107	73	12	37	120	120				
100	30	0,61	607902	0,82	608802	128	73	12	35	120	170				
125	35	0,79	607903	0,94	608803	156	73	12	37	120	220				
150	35	0,90	607904	1,03	608804	182	73	12	34	120	220				
150	45	1,57	607911	1,85	608811	188	102	20	56	156	300				
200	50	2,14	607906	2,40	608806	236	102	20	56	156	300				
80	30	0,58	608001	0,62	608821	107	73	12	37	120	120				
100	30	0,62	608002	0,82	608822	128	73	12	35	120	170				
125	35	0,81	608003	0,96	608823	156	73	12	37	120	220				
150	35	0,92	608004	1,25	608824	182	73	12	34	120	220				
150	45	1,62	608011	1,90	608831	188	102	20	56	156	300				
200	50	2,19	608006	2,45	608826	236	102	20	56	156	300				
80	30	0,56	606301	0,72	606501	107	73	12	37	120	130				
100	30	0,61	606302	0,78	606502	128	73	12	35	120	200				
125	35	0,73	606303	0,88	606503	156	73	12	37	120	220				
150	45	1,89	606311	2,21	606511	188	102	20	56	156	300				
160	50	1,99	606310	2,31	606510	193	102	20	56	156	300				
200	50	2,34	606306	2,65	606506	236	102	20	56	156	300				

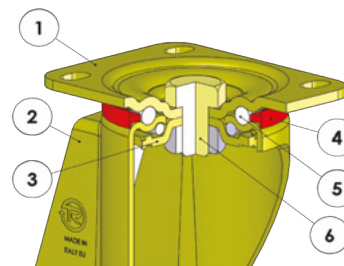
Medium-duty brackets M - max carrying capacity 450 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electroplated galvanised steel
- 4) Dust seal: blue polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted
Available with adjustable total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
150	45	2,17	604311	1,46	605711	2,64	606811	194	140x110	105x80	11	58	178	350
200	50	2,62	604306	2,01	605706	3,04	606806	240	140x110	105x80	11	50	178	450
150	45	2,32	604711	1,51	605911	2,68	606831	194	140x110	105x80	11	58	178	350
200	50	2,66	604706	2,06	605906	3,11	606826	240	140x110	105x80	11	50	178	450
150	45	2,31	608411	1,82	604811	2,75	608911	194	140x110	105x80	11	58	178	350
160	50	2,42	608410	1,93	604810	2,86	608910	199	140x110	105x80	11	58	178	400
200	50	2,82	608406	2,37	604806	2,68	608906	240	140x110	105x80	11	50	178	450

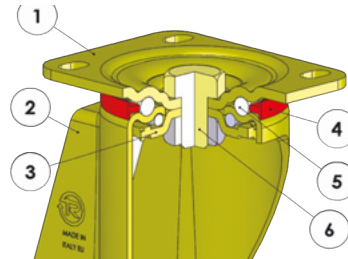
Medium-heavy duty brackets P - max carrying capacity 450 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1,03	607102	0,54	608102	1,18	609002	138	100x85	80x60	9	46	123	170	
125	35	1,17	607103	0,75	608103	1,31	609003	161	100x85	80x60	9	44	123	230	
100	30	1,05	607302	0,55	608302	1,19	609102	138	100x85	80x60	9	46	123	170	
125	35	1,19	607303	0,77	608303	1,33	609103	161	100x85	80x60	9	44	123	230	
100	30	1,08	608202	0,67	608222	1,24	608242	138	100x85	80x60	9	46	123	200	160
125	35	1,22	608203	0,76	608223	1,36	608243	161	100x85	80x60	9	44	123	250	200

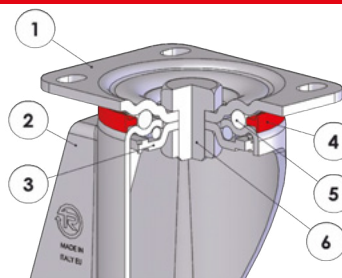
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN	
150	45	2,81	607604	1,39	608604	3,38	609004	200	140x110	105x80	11	70	126	350	4 km/h	6 km/h			
200	50	3,20	607606	1,83	608606	3,77	609006	250	140x110	105x80	11	70	126	450					
150	45	2,87	607504	1,44	608504	3,44	609104	200	140x110	105x80	11	70	126	350					
200	50	3,34	607506	1,88	608506	3,91	609106	250	140x110	105x80	11	70	126	450					
150	45	2,92	608211	1,98	608231	3,48	608251	200	140x110	105x80	11	70	126	350					
160	50	3,02	608210	2,08	608230	3,58	608250	205	140x110	105x80	11	70	126	400					
200	50	3,40	608206	2,59	608226	3,99	608246	250	140x110	105x80	11	70	126	450					
250	50	4,40	608208	3,30	608228	5,10	608248	298	140x110	105x80	11	66	126	750					

Stainless steel medium-heavy duty brackets PX - max carrying capacity 450 daN

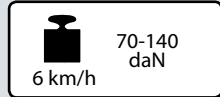
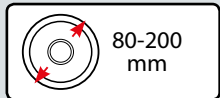


INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN	
150	45	2,77	607004	1,53	607114	3,34	607214	200	140x110	105x80	11	70	126	350	4 km/h	6 km/h			
200	50	3,24	607006	1,80	607116	3,81	607216	250	140x110	105x80	11	70	126	450					
150	45	2,75	607314	1,53	607414	3,32	607514	200	140x110	105x80	11	70	126	350					
200	50	3,28	607316	1,85	607416	3,85	607516	250	140x110	105x80	11	70	126	450					
150	45	2,90	609411	2,03	609811	3,47	609911	200	140x110	105x80	11	70	126	350					
160	50	3,00	609410	2,13	609810	3,57	609910	205	140x110	105x80	11	70	126	400					
200	50	3,40	609406	2,58	609806	3,95	609906	250	140x110	105x80	11	70	126	450					

THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



INOX



Description

Tyre: blue non-marking thermoplastic polyurethane, hardness 85 Shore A, excellent rolling resistance and elasticity, good resistance to wear and tearing.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in a plastic cage. Also available with stainless steel roller bearings.

Hub with double shielding ball bearing, co-printed in centre. The bearing is protected from dirt, machining residue and corrosive substances by a glass-fibre reinforced polyamide installation bushing with internal labyrinth seal.

Uses

Suitable for trolleys and machinery with medium-duty loads, also in case of continuous handling. The model with ball bearing hub can also be used for mechanical handling or manual-mechanical handling and speed up to 6 km/h.

Suitable for indoor and outdoor use for frequent washing and sterilisation.

Excellent rolling resistance guarantees minimum effort in manual handling.

Examples of recommended applications: trolleys for industrial indoor use, tubular trolleys, trolleys for food and chemical industry, mobile scaffoldings (fitted with suitable brackets, they meet Standard UNI EN 1004:2005).

Environments of use

Suitable for industrial environments, also in presence of water and saturated vapour, alcohol and glycol, mineral and organic acids.

WEAK ACIDS				WEAK BASES		
STRONG ACIDS				STRONG BASES		
WATER				HYDROCARBONS		
ALCOHOL				SOLVENTS		



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for tiles and cement-resin. Not recommended on unpaved floors or in presence of processing residues. They facilitate overcoming small obstacles along the path. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	3.4	----	----	----	----	----
100 mm	1.5	4	----	----	----	----
125 mm	1	2.5	4	----	----	----
150x35 mm	< 1	1.8	3	4.5	----	----
150x45 mm	< 1	1.5	2.5	3.9	----	----
200 mm	< 1	< 1	1.6	2.5	3.7	5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate, bolt hole, solid stem, Zamak expander fittings. Available with front brake..



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings Available with front brake.

Options available to order:

The series 61 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

SERIES **61**

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**



mm	mm	kg	CODE	mm	mm	daN	daN	daN							
80	30	0.11	611101	12	39	160	75	75							
100	30	0.16	611102	12	44	200	120	120							
125	35	0.25	611103	15	44	350	180	180							
150	35	0.38	611105	15	44	400	220	230							
150	45	0.39	611104	20	59	450	240	250							
200	50	0.86	611106	20	59	500	300	300							

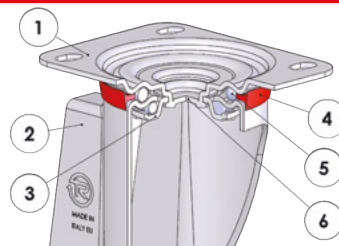


mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN					
80	30	0.13	613101	0.13	613201	12	39	160	75	75					
100	30	0.18	613102	0.18	613202	12	44	200	120	120					
125	35	0.27	613103	0.27	613203	15	44	350	180	180					
150	35	0.40	613105	0.40	613205	15	44	400	220	230					
150	45	0.43	613104	0.43	613204	20	59	450	240	250					
200	50	0.92	613106	0.92	613206	20	59	500	300	300					



mm	mm	kg	CODE	kg	CODE	mm	mm.	daN	daN	daN	daN						
80	30	0.17	612201	0.17	612401	8	40	160	85	85	70						
100	30	0.21	612202	0.21	612402	8	45	200	120	120	100						
125	35	0.30	612203	0.30	612403	8	45	350	180	180	140						

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	
80	30	0.62	614201	0.38	615701	0.81	616601	107	100x85	80x60	9	37	120		75		
100	30	0.74	614202	0.43	615702	0.89	616602	128	100x85	80x60	9	35	120		120		
125	35	0.91	614203	0.66	615703	1.05	616603	156	100x85	80x60	9	37	120		180		
150	35	1.08	614204	0.80	615704	1.21	616604	182	100x85	80x60	9	34	120		220		
150	45	1.83	614211	1.46	615711	2.11	616611	194	140x110	105x80	11	56	156		250		
200	50	2.23	614206	1.81	615706	2.49	616606	240	140x110	105x80	11	56	156		300		
80	30	0.63	614501	0.41	615901	0.84	616621	107	100x85	80x60	9	37	120		75		
100	30	0.75	614502	0.43	615902	0.90	616622	128	100x85	80x60	9	35	120		120		
125	35	0.92	614503	0.67	615903	1.07	616623	156	100x85	80x60	9	37	120		180		
150	35	1.11	614504	0.82	615904	1.23	616624	182	100x85	80x60	9	34	120		220		
150	45	1.98	614511	1.51	615911	2.16	616631	194	140x110	105x80	11	56	156		250		
200	50	2.27	614506	1.86	615906	2.51	616626	240	140x110	105x80	11	56	156		300		
80	30	0.60	614701	0.48	614801	0.77	614901	107	100x85	80x60	9	37	120		85		
100	30	0.67	614702	0.53	614802	0.84	614902	128	100x85	80x60	9	35	120		120		
125	35	0.82	614703	0.66	614803	1.02	614903	156	100x85	80x60	9	37	120		180		

Options available to order:



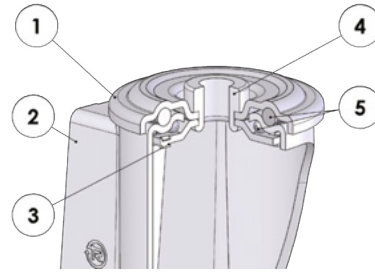
Bracket with directional lock
d. 80-125 mm



Directional lock for brackets
d. 150-200 mm

**THERMOPLASTIC POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

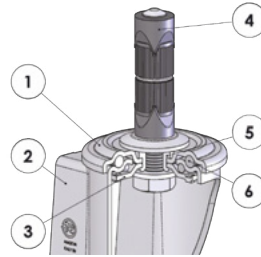
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	617701	0.73	616401	107	73	12	37	120	75				
100	30	0.67	617702	0.88	616402	128	73	12	35	120	120				
125	35	0.85	617703	1.00	616403	156	73	12	37	120	180				
150	35	1.01	617704	1.14	616404	182	73	12	34	120	220				
150	45	1.69	617711	1.98	616411	188	102	20	56	156	250				
200	50	2.13	617706	2.41	616406	236	102	20	56	156	300				
80	30	0.57	617801	0.75	616421	107	73	12	37	120	75				
100	30	0.68	617802	0.88	616422	128	73	12	35	120	120				
125	35	0.87	617803	1.02	616423	156	73	12	37	120	180				
150	35	1.03	617804	1.16	616424	182	73	12	34	120	220				
150	45	1.74	617811	2.03	616431	188	102	20	56	156	250				
200	50	2.18	617806	2.46	616426	236	102	20	56	156	300				
80	30	0.56	614301	0.72	615501	107	73	12	37	120	85				
100	30	0.61	614302	0.78	615502	128	73	12	35	120	120				
125	35	0.79	614303	0.96	615503	156	73	12	37	120	180				

Options available to order:



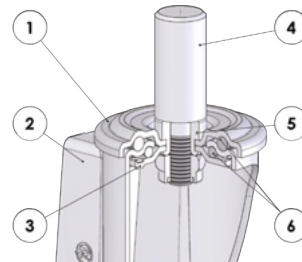
Fitting with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Stem: zamak expander
 - 5) King pin: bushing in electrolytically galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	30	0.67	619201	0.85	619301	109	20	65	20-24	37	120	75
100	30	0.79	619202	1.00	619302	130	20	65	20-24	35	120	120
125	35	0.97	619203	1.12	619303	158	20	65	20-24	37	120	130



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	1.67	616102	1.88	616202	128	73	22	47	35	120	120
125	35	1.85	616103	2.00	616203	156	73	22	47	37	120	180
150	35	2.01	616104	2.14	616204	182	73	22	47	34	120	220
150	45	2.69	616111	2.98	616211	188	102	26	56	56	156	250
200	50	3.13	616106	3.41	616206	236	102	26	56	56	156	300

Options available to order:



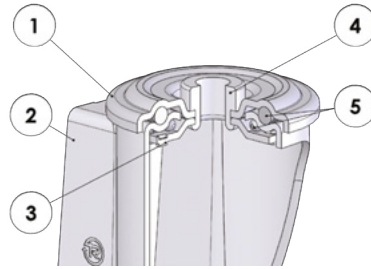
Bracket with Zamak stem fitted with wheels with roller bearings and single ball bearing d. 80-125 mm



Fitting with solid stem with customised dimensions

Standard-duty brackets NLX in stainless steel - max carrying capacity 300 daN

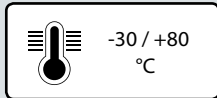
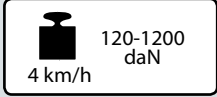
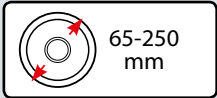
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	30	0.55	617901	0.72	618801	107	73	12	37	120	75				
100	30	0.61	617902	0.82	618802	128	73	12	35	120	120				
125	35	0.79	617903	0.94	618803	156	73	12	37	120	180				
150	35	0.90	617904	1.03	618804	182	73	12	34	120	220				
150	45	1.57	617911	1.85	618811	188	102	20	56	156	250				
200	50	2.14	617906	2.40	618806	236	102	20	56	156	300				
80	30	0.58	618001	0.75	618821	107	73	12	37	120	75				
100	30	0.62	618002	0.82	618822	128	73	12	35	120	120				
125	35	0.81	618003	0.96	618823	156	73	12	37	120	180				
150	35	0.92	618004	1.05	618824	182	73	12	34	120	220				
150	45	1.62	618011	1.90	618831	188	102	20	56	156	250				
200	50	2.46	618006	2.45	618826	236	102	20	56	156	300				
80	30	0.56	616301	0.72	616501	107	73	12	37	120	85				
100	30	0.61	616302	0.78	616502	128	73	12	35	120	120				
125	35	0.73	616303	0.88	616503	156	73	12	37	120	180				

POLYAMIDE 6 SOLID WHEELS



INOX



Description

Polyamide 6 solid wheels 6, hardness 70 Shore D.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage. Also available with stainless steel roller bearings.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Intended mainly for static uses, for medium-heavy capacities.

The excellent rolling resistance ensures that minimum manual effort is needed in handling, but only on smooth floors.

Examples of recommended applications: trolleys for internal use in the food and canning industries, tannery equipment, flower trolleys, manual pallet trucks, mobile scaffoldings (fitted with adequate brackets, they meet UNI EN 1004:2005 Standards).

Environments of use

Designed for industrial environments, even in presence of aggressive chemical substances. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

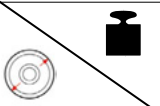
Floors

Suitable only for smooth and compact floors.

Not suited for areas with obstacles.



Force required to push or tow a wheel

 100 kg	200 kg	300 kg	400 kg	500 kg	700 kg	1000 kg	1200 kg
65 mm	5.5	----	----	----	----	----	----
80 mm	4	----	----	----	----	----	----
100 mm	3.5	6	9	----	----	----	----
125 mm	2.5	5	6	8	----	----	----
150 mm	1	2.5	6	8	10	----	----
175 mm	< 1	2	5.5	7	9	----	----
200 mm	< 1	1.8	4.7	5.8	6.5	7.8	----
250 mm	< 1	1.5	4	4.5	6	8	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 350 daN - available diameters 65-250 mm
Top plate, bolt hole, solid stem fittings. Available with front brake.



Standard-duty brackets NLX in stainless steel

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fittings. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 730 daN - available diameters 100-200 mm
Top plate fittings. Available with front brake and adjustable rear brake.



Heavy supports in PX stainless steel

Maximum carrying capacity 730 daN - available diameters 150-200 mm
Top plate fittings. Available with adjustable rear brake.



Electrowelded brackets EE HD

Maximum carrying capacity 1200 daN - available diameters 250 mm
Top plate fittings. Available with adjustable rear brake.



Mobile scaffolding brackets (See Scaffolding section on page 275)

Maximum carrying capacity 400 daN - maximum capacity according to UNI EN 1004:2005 750 daN
Available diameters 125-200 mm. Top plate, solid stem and threaded stem with leveller fittings. Available with single brake and double pedal.










Options available to order:

The series 68 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.














Black polypropylene wheels (only version with hub with plain bore)
















																
mm	mm	kg	CODE	mm	mm.	daN	daN	daN								
65	30	0.06	681100	12	34	125	90	120								
80	30	0.08	681111	12	39	200	150	180								
100	30	0.13	681112	12	44	350	175	300								
125	38	0.23	681103	15	44	450	200	400								
150	45	0.34	681104	20	59	600	250	500								
175	45	0.48	681105	20	59	700	275	630								
200	50	0.64	681106	20	59	800	315	730								
250	60	1.30	681108	25	88	1300	450	1200								

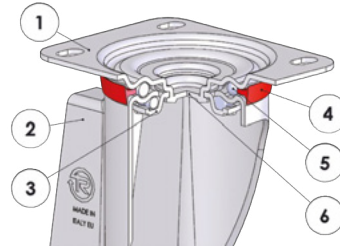


																
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN						
80	30	0.10	683111	0.10	683211	12	39	200	150	180						
100	30	0.15	683112	0.15	683212	12	44	350	175	300						
125	38	0.25	683103	0.25	683203	15	44	450	200	400						
150	45	0.51	683104	0.51	683204	20	59	600	250	500						
175	45	0.60	683105	0.60	683205	20	59	700	275	630						
200	50	0.82	683106	0.82	683206	20	59	800	315	730						
200	50	0.81	683116	0.81	683216	25	59	800	315	730						
250	60	1.38	683108			25	88	1300	450	1200						



																
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN				
200	50	0.82	683306	0.63	682106	20	60	47	14	800	315	730				
200	50	0.81	683316	0.63	682106	25	60	47	14	800	315	730				

Standard-duty brackets NL - max carrying capacity 350 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

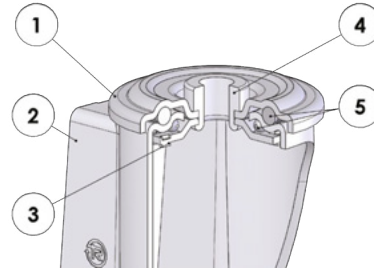
mm		kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h
65	30	0.57	684500	0.37	685100			100	100x85	80x60	9	37		120	
80	30	0.58	684501	0.39	685101	0.78	686801	107	100x85	80x60	9	37	120	180	
100	30	0.65	684502	0.46	685102	0.85	686802	128	100x85	80x60	9	35	120	200	
125	38	0.89	684503	0.64	685103	1.04	686803	156	100x85	80x60	9	37	120	220	
125PG	38	1.10	684513	0.91	685143	1.30	686843	156	140x110	105x80	11	37	120	220	
150B	45	1.02	684512	0.85	685142			182	100x85	80x60	9	50		220	
150	45	1.77	684504	1.45	685104	1.99	686804	194	140x110	105x80	11	56	156	300	
175	45	1.90	684505	1.56	685105	2.13	686805	217	140x110	105x80	11	56	156	300	
200	50	2.14	684506	1.92	685106	2.33	686806	240	140x110	105x80	11	56	156	300	
250	60	4.62	684108	3.19	685108			296	200x160	160x120	14	86		350	
80	30	0.61	684801	0.41	685301	0.80	686821	107	100x85	80x60	9	37	120	180	
100	30	0.68	684802	0.49	685302	0.88	686822	128	100x85	80x60	9	35	120	200	
125	38	0.91	684803	0.66	685303	1.07	686823	156	100x85	80x60	9	37	120	220	
125PG	38	1.12	684813	0.94	685323	1.33	686853	156	140x110	105x80	11	37	120	220	
150B	45	1.20	684812	1.03	685322			182	100x85	80x60	9	50		220	
150	45	1.94	684804	1.63	685304	2.17	686824	194	140x110	105x80	11	56	156	300	
175	45	2.02	684805	1.68	685305	2.27	686825	217	140x110	105x80	11	56	156	300	
200	50	2.32	684806	2.10	685306	2.46	686826	240	140x110	105x80	11	56	156	300	
200	50	2.50	684866	2.30	685166	2.67	686846	240	140x110	105x80	11	56	156	300	

Options available to order:



Black polypropylene wheels (only version with hub with plain bore)

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

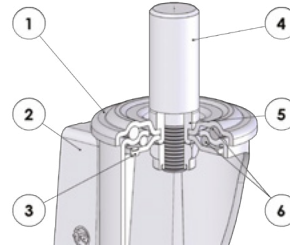
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN								
65	30	0.51	687700			100	73	12	37		120								
80	30	0.52	687701	0.70	686701	107	73	12	37	120	180								
100	30	0.55	687702	0.80	686702	128	73	12	35	120	200								
125	38	0.85	687703	0.99	686703	156	73	12	37	120	220								
150	45	1.57	687704	1.86	686704	188	102	20	56	156	300								
175	45	1.73	687705	2.02	686705	212	102	20	56	156	300								
200	50	1.95	687706	2.24	686706	236	102	20	56	156	300								
80	30	0.54	687901	0.73	686721	107	73	12	37	120	180								
100	30	0.62	687902	0.83	686722	128	73	12	35	120	200								
125	38	0.87	687903	1.02	686723	156	73	12	37	120	220								
150	45	1.75	687904	2.03	686724	188	102	20	56	156	300								
175	45	1.85	687905	2.14	686725	212	102	20	56	156	300								
200	50	2.13	687906	2.42	686726	236	102	20	56	156	300								
200	50	2.19	688006	2.48	686606	236	102	20	56	156	300								

Options available to order:



Fitting with threaded stem

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN		
100	30	1.55	686102	1.80	687102	128	73	22	47	35	120	200		
125	38	1.85	686103	1.99	687103	156	73	22	47	37	120	220		
150	45	2.57	686104	2.86	687104	188	102	26	56	56	156	300		
200	50	2.95	686106	3.24	687106	236	102	26	56	56	156	300		

Options available to order:



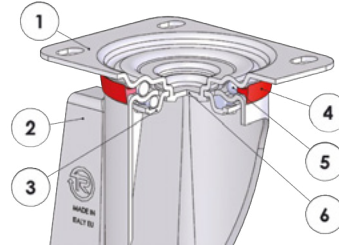
Fitting with expansion stem in polyamide d. 80-125 mm



















Fitting with solid stem with dimensions that can be customised

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX

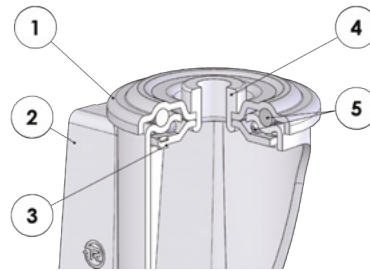


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

															
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	
80	30	0.55	684401	0.29	685401	0.73	689001	107	100x85	80x60	9	37	120	180	
100	30	0.61	684402	0.36	685402	0.76	689002	128	100x85	80x60	9	35	120	200	
125	38	0.78	684403	0.63	685403	0.95	689003	156	100x85	80x60	9	37	120	220	
150B	45	1.03	684408	0.83	685408			182	100x85	80x60	9	50		220	
150	45	1.65	684404	1.20	685404	1.94	689004	194	140x110	105x80	11	56	156	300	
175	45	1.79	684405	1.35	685405	2.08	689005	217	140x110	105x80	11	56	156	300	
200	50	2.02	684406	1.56	685406	2.30	689006	240	140x110	105x80	11	56	156	300	
80	30	0.56	684601	0.31	685601	0.75	689101	107	100x85	80x60	9	37	120	180	
100	30	0.64	684602	0.39	685602	0.79	689102	128	100x85	80x60	9	35	120	200	
125	38	0.80	684603	0.65	685603	0.97	689103	156	100x85	80x60	9	37	120	220	
150B	45	1.21	684608	1.00	685608			182	100x85	80x60	9	50		220	
150	45	1.83	684604	1.39	685604	2.11	689104	194	140x110	105x80	11	56	156	300	
175	45	1.91	684605	1.47	685605	2.20	689105	217	140x110	105x80	11	56	156	300	
200	50	2.20	684606	1.75	685606	2.48	689106	240	140x110	105x80	11	56	156	300	

Stainless steel standard-duty brackets NLX -- max carrying capacity 300 daN

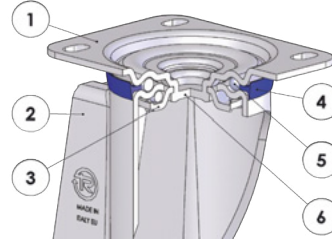
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN			
80	30	0.50	685801	0.68	686001	107	73	12	37	120	180			
100	30	0.61	685802	0.79	686002	128	73	12	35	120	200			
125	38	0.79	685803	0.93	686003	156	73	12	37	120	220			
150	45	1.45	685804	1.75	686004	188	102	20	56	156	300			
175	45	1.61	685805	1.89	686005	212	102	20	56	156	300			
200	50	1.93	685806	2.22	686006	236	102	20	56	156	300			
80	30	0.52	685901	0.73	686021	107	73	12	37	120	180			
100	30	0.63	685902	0.81	686022	128	73	12	35	120	200			
125	38	0.81	685903	0.96	686023	156	73	12	37	120	220			
150	45	1.63	685904	1.93	686024	188	102	20	56	156	300			
175	45	1.73	685905	2.01	686025	212	102	20	56	156	300			
200	50	2.11	685906	2.40	686026	236	102	20	56	156	300			

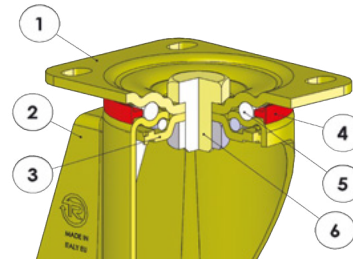
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: blue polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-rieveted
Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	45	2.12	684704	1.45	685104	2.52	688204	194	140x110	105x80	11	58	178	500
200	50	2.53	684706	1.92	685106	2.89	688206	240	140x110	105x80	11	50	178	500
150	45	2.29	685004	1.63	685304	2.70	689204	194	140x110	105x80	11	58	178	500
200	50	2.71	685006	2.10	685306	3.01	689206	240	140x110	105x80	11	50	178	500
200	50	2.69	684206	2.10	685166	3.22	684306	240	140x110	105x80	11	50	178	500

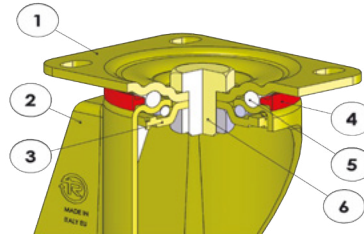
Medium-heavy duty brackets P - max carrying capacity 730 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	0.99	687502	0.60	688502	1.14	686902	138	100x85	80x60	9	46	123	300
125	38	1.16	687503	0.64	688503	1.27	686903	161	100x85	80x60	9	44	123	350
100	30	1.02	687602	0.63	688602	1.17	686922	138	100x85	80x60	9	46	123	300
125	38	1.18	687603	0.66	688603	1.29	686923	161	100x85	80x60	9	44	123	350

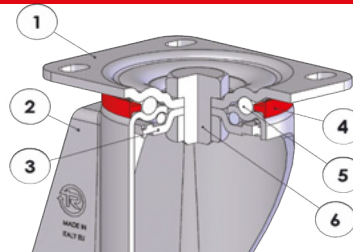
Medium-heavy duty brackets P - max carrying capacity 730 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
150	45	2.80	687504	1.67	688504	2.98	686904	200	140x110	105x80	11	70	156	500			
175	45	2.86	687505	1.45	688505	3.43	686905	225	140x110	105x80	11	70	156	630			
200	50	3.11	687506	1.65	688506	3.39	686906	250	140x110	105x80	11	70	156	730			
150	45	2.97	687604	1.57	688604	3.54	686924	200	140x110	105x80	11	70	156	500			
175	45	2.98	687605	1.69	688605	3.55	686925	225	140x110	105x80	11	70	156	630			
200	50	3.28	687606	1.83	688606	3.85	686926	250	140x110	105x80	11	70	156	730			
200	50	3.35	684966	1.89	685366	3.63	686946	250	140x110	105x80	11	70	156	730			

Stainless steel medium-heavy duty brackets PX - max carrying capacity 730 daN

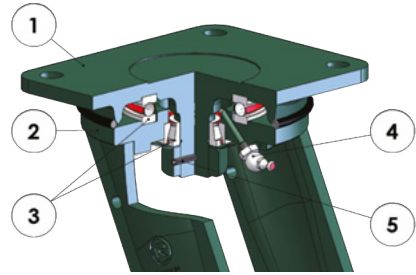


INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: red polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
150	45	2.66	687004	1.23	687114	3.23	687214	200	140x110	105x80	11	70	156	500			
175	45	2.86	687005	1.42	687115	3.43	687215	225	140x110	105x80	11	70	156	630			
200	50	3.06	687006	1.62	687116	3.63	687216	250	140x110	105x80	11	70	156	730			
150	45	2.86	687314	1.41	687414	3.40	687514	200	140x110	105x80	11	70	156	500			
175	45	2.94	687315	1.54	687415	3.51	687515	225	140x110	105x80	11	70	156	630			
200	50	3.24	687316	1.80	687416	3.81	687516	250	140x110	105x80	11	70	156	730			

Electrowelded brackets EE HD - max carrying capacity 1200 daN



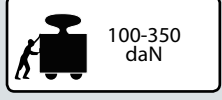
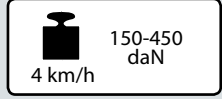
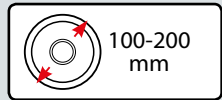
- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn tips electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable rear drive brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
250	60	7.99	688307	6.40	688407	8.87	688707	320	175x140	140x105	14	74	166	1200	



Our work, our passion

SIGMA ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: blue non-marking Sigma Elastic rubber, hardness 70 Shore A, good resistance to tear and wear.

Centre: polyamide 6.

Hub with plain bore which directly houses the axle.

Hub with cylindrical roller bearing in plastic cage. Also available with stainless steel roller bearings.

Hub with ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Wheels with excellent elasticity features, they are particularly suitable for use on uneven surfaces, in presence of obstacles or for mixed indoor/outdoor uses with medium-duty loads.

The good elasticity and rolling resistance guarantee minimum effort, particularly on uneven surfaces.

Examples of recommended applications: trolleys for industrial indoor and outdoor handling, manual pallet trucks, flight cases for transporting musical instruments.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

They are suitable for use on all types of floors, even in presence of obstacles. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	300 kg	400 kg
100 mm	2	5	8	---	---	---
125 mm	1.8	3	5	7	---	---
160 mm	1	2	3	5	8.5	---
180 mm	< 1	1	2	3	5.5	---
200 mm	< 1	< 1	1	1.7	3.5	6.5

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate, bolt hole and solid stem fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 450 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 450 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX










Maximum carrying capacity 450 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.

Options available to order:












The series 73 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.

SIGMA ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE
















															
mm	mm	kg	CODE	mm	mm.	daN	daN	daN							
100	40	0.31	731102	12	44	200	100	150							
125	40	0.38	731103	15	44	270	150	230							
160	50	0.83	731104	20	59	350	200	300							
180	50	0.90	731105	20	59	400	280	350							
200	50	1.04	731106	20	59	510	350	450							

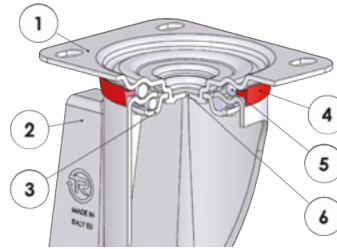


															
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN					
100	40	0.36	733102	0,36	733202	12	44	200	100	150					
125	40	0.58	733103	0,58	733203	20	44	270	150	230					
160	50	1.04	733104	1.04	733204	20	59	350	200	300					
180	50	1.10	733105	1.10	733205	20	59	400	280	350					
200	50	1.25	733106	1.25	733206	20	59	510	350	450					



															
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN			
100	40	0.36	732102	0.29	734102	12	40	32	11.5	200	120	150			
125	40	0.58	732103	0.38	734103	20	44	47	17	270	200	230			
160	50	0.99	732104	0.79	734104	20	58	47	17	350	250	300			
160	50	0.94	732114	0.79	734104	25	58	47	17	350	250	300			
180	50	1.05	732105	0.85	734105	20	58	47	17	400	320	350			
180	50	1.00	732115	0.85	734105	25	58	47	17	400	320	350			
200	50	1.12	732106	0.92	734106	20	58	47	17	510	350	450			
200	50	1.07	732116	0.92	734106	25	58	47	17	510	350	450			

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
100	40	0.85	735002	0.65	735102	0.97	735202	128	100x85	80x60	9	35	120	150			
125	40	1.08	735003	0.81	735103	1.19	735203	156	100x85	80x60	9	37	120	220			
160	50	2.11	735004	1.74	735104	2.36	735204	198	140x110	105x80	11	56	156	300			
180	50	2.22	735005	1.81	735105	2.46	735205	219	140x110	105x80	11	56	156	300			
200	50	2.44	735006	1.98	735106	2.69	735206	240	140x110	105x80	11	56	156	300			
100	40	0.91	735302	0.70	735402	1.02	735502	128	100x85	80x60	9	35	120	150			
125	40	1.23	735303	0.96	735403	1.34	735503	156	100x85	80x60	9	37	120	220			
160	50	2.32	735304	1.89	735404	2.51	735504	198	140x110	105x80	11	56	156	300			
180	50	2.42	735305	1.96	735405	2.61	735505	219	140x110	105x80	11	56	156	300			
200	50	2.65	735306	2.06	735406	2.77	735506	240	140x110	105x80	11	56	156	300			
100	40	0.91	735602	0.70	735702	1.02	735802	128	100x85	80x60	9	35	120	150			
125	40	1.23	735603	0.96	735703	1.34	735803	156	100x85	80x60	9	37	120	220			
160	50	2.32	735604	1.94	735704	2.56	735804	198	140x110	105x80	11	56	156	300			
180	50	2.42	735605	2.01	735705	2.66	735805	219	140x110	105x80	11	56	156	300			
200	50	2.65	735606	2.19	735706	2.89	735806	240	140x110	105x80	11	56	156	300			

Options available to order:



Bracket with directional lock
d. 80-125 mm

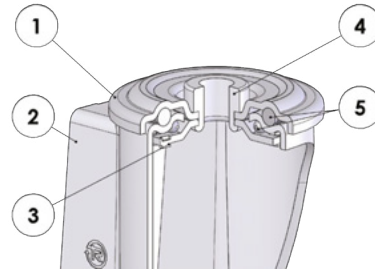


Directional lock for brackets
d. 150-200 mm



Bracket with active centralised brake
d. 160-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

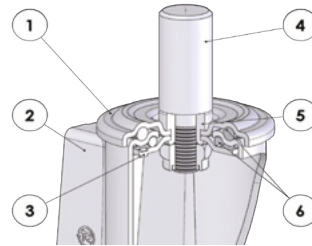
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
100	40	0.75	737702	0.93	738202	128	73	12	35	120	150				
125	40	0.90	737703	1.11	738203	156	73	12	37	120	220				
160	50	1.43	737704	1.56	738204	193	102	20	56	156	300				
180	50	2.21	737705	2.49	738205	214	102	20	56	156	300				
200	50	2.35	737706	2.63	738206	236	102	20	56	156	300				
100	40	0.81	737802	0.98	738302	128	73	12	35	120	150				
125	40	1.05	737803	1.26	738303	156	73	12	37	120	220				
160	50	1.64	737804	1.77	738304	193	102	20	56	156	300				
180	50	2.41	737805	2.69	738305	214	102	20	56	156	300				
200	50	2.56	737806	2.84	738306	236	102	20	56	156	300				
100	40	0.81	735902	0.98	738402	128	73	12	35	120	150				
125	40	1.05	735903	1.26	738403	156	73	12	37	120	220				
160	50	1.64	735904	1.77	738404	193	102	20	56	156	300				
180	50	2.41	735905	2.69	738405	214	102	20	56	156	300				
200	50	2.56	735906	2.84	738406	236	102	20	56	156	300				

Options available to order:



Bracket with Zamak stem fitted
d. 80-125 mm

Standard-duty brackets NL - max carrying capacity 300 daN

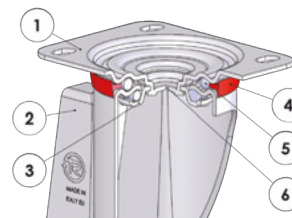


- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Solid stem: galvanised steel
 - 5) King pin: bushing in galvanised steel
 - 6) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h
100	40	1.75	738702	1.93	738802	128	73	22	47	35	120	150	
125	40	1.90	738703	2.11	738803	156	73	22	47	37	120	220	
160	50	2.43	738704	2.56	738804	193	102	26	56	56	156	300	
180	50	3.21	738705	3.49	738805	214	102	26	56	56	156	300	
200	50	3.35	738706	3.63	738806	236	102	26	56	56	156	300	

Stainless steel - standard duty brackets NLX - max carrying capacity 300 daN

INOX

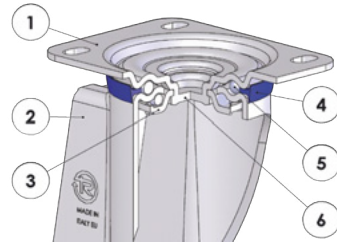


- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h
100	40	0.85	739402	0.65	739502	0.97	739602	128	100x85	80x60	9	35	120	150	
125	40	1.08	739403	0.81	739503	1.19	739603	156	100x85	80x60	9	37	120	220	
160	50	2.11	739404	1.74	739504	2.36	739604	198	140x110	105x80	11	56	156	300	
200	50	2.44	739406	1.98	739506	2.69	739606	240	140x110	105x80	11	56	156	300	
100	40	0.91	739702	0.70	739802	1.02	739902	128	100x85	80x60	9	35	120	150	
125	40	1.23	739703	0.96	739803	1.34	739903	156	100x85	80x60	9	37	120	220	
160	50	2.32	739704	1.89	739804	2.51	739904	198	140x110	105x80	11	56	156	300	
200	50	2.65	739706	2.06	739806	2.77	739906	240	140x110	105x80	11	56	156	300	

SIGMA ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE

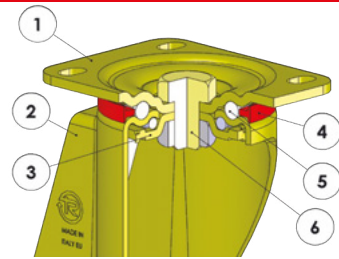
Medium-duty brackets M - max carrying capacity 450 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	50	2.46	736904	1.74	735104	2.89	737604	198	140x110	105x80	11	58	178	300
200	50	2.83	736906	1.98	735106	3.24	737606	240	140x110	105x80	11	50	178	450
160	50	2.67	738904	1.94	735404	3.09	739004	198	140x110	105x80	11	58	178	300
200	50	3.04	738906	2.19	735406	3.44	739006	240	140x110	105x80	11	50	178	450
160	50	2.62	739104	1.89	735704	3.04	739204	198	140x110	105x80	11	58	178	300
200	50	2.91	739106	2.06	735706	3.32	739206	240	140x110	105x80	11	50	178	450

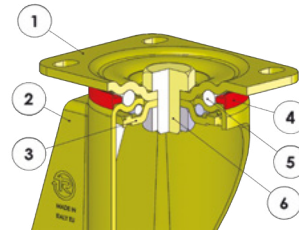
Medium-heavy duty brackets P - max carrying capacity 450 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	40	1,18	736002	0,69	736102	1,33	736202	138	100x85	80x60	9	46	123	150
125	40	1,34	736003	0,82	736103	1,48	736203	161	100x85	80x60	9	44	123	230
100	40	1,23	736302	0,73	736402	1,37	736502	138	100x85	80x60	9	46	123	150
125	40	1,49	736303	0,97	736403	1,63	736503	161	100x85	80x60	9	44	123	230
100	40	1,23	736602	0,73	736702	1,37	736802	138	100x85	80x60	9	46	123	150
125	40	1,49	736603	0,97	736703	1,63	736803	161	100x85	80x60	9	44	123	230

Medium-heavy duty brackets P - max carrying capacity 450 daN

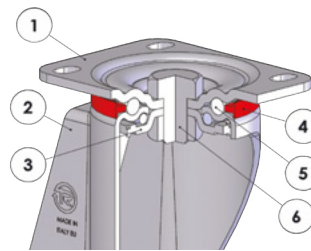


- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
160	50	3,18	736004	1,79	736104	3,75	736204	205	140x110	105x80	11	70	126	300			
180	50	3,29	736005	1,89	736105	3,86	736205	225	140x110	105x80	11	70	126	350			
200	50	3,54	736006	2,05	736106	4,11	736206	250	140x110	105x80	11	70	126	450			
160	50	3,39	736304	1,99	736404	3,91	736504	205	140x110	105x80	11	70	126	300			
180	50	3,49	736305	2,09	736405	4,06	736505	225	140x110	105x80	11	70	126	350			
200	50	3,74	736306	2,26	736406	4,31	736506	250	140x110	105x80	11	70	126	450			
160	50	3,34	736604	1,99	736704	3,91	736804	205	140x110	105x80	11	70	126	300			
180	50	3,44	736605	2,04	736705	4,01	736805	225	140x110	105x80	11	70	126	350			
200	50	3,62	736606	2,13	736706	4,19	736806	250	140x110	105x80	11	70	126	450			

Stainless steel medium-heavy duty brackets PX - max carrying capacity 450 daN

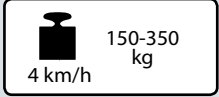
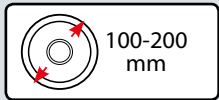
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
160	50	3,19	737004	1,74	737104	3,76	737204	205	140x110	105x80	11	70	126	300			
180	50	3,36	737005	1,81	737105	3,93	737205	225	140x110	105x80	11	70	126	350			
200	50	3,58	737006	1,98	737106	4,15	737206	250	140x110	105x80	11	70	126	450			
160	50	3,40	737304	1,94	737404	3,97	737504	205	140x110	105x80	11	70	126	300			
180	50	3,56	737305	2,01	737405	4,13	737505	225	140x110	105x80	11	70	126	350			
200	50	3,78	737306	2,19	737406	4,35	737506	250	140x110	105x80	11	70	126	450			

ELASTIC RUBBER WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: blue non-marking elastic rubber, hardness 70 Shore A

Centre: in polyamide 6.

Hub with plain bore hole which directly houses the axle.

Hub with ball bearings with interference assembly in the seats obtained by centre moulding.

Uses

Wheels with good elasticity, they are particularly suitable for use on uneven surfaces, in presence of obstacles or for mixed indoor/outdoor uses with medium-duty loads. Examples of recommended applications: trolleys for industrial indoor and outdoor handling, manual transpallet, flight cases for transporting musical instruments.

Environments of use

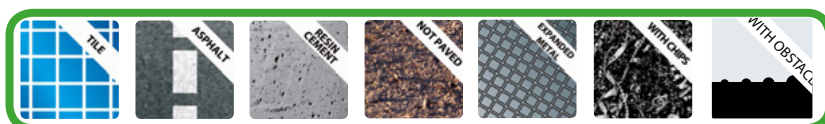
Designed for industrial environments, even in presence of medium-harsh chemical agents. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

They are suitable for use on all types of floors, even in the presence of obstacles. They do not mark or damage fragile floors.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	300 kg	400 kg
100 mm	2	5	8	----	----	----
125 mm	1.8	3	5	7	----	----
160 mm	1	2	3	6	8.5	----
200 mm	< 1	1.7	2.5	3.8	6.5	----

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and centralised brake.












Medium-heavy duty brackets P

Maximum carrying capacity 350 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.












SERIES **73AE**

ELASTIC RUBBER WHEELS
WITH POLYAMIDE 6 CENTRE

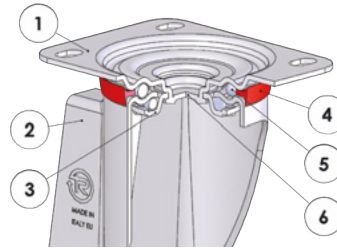


																
mm	mm	kg	CODE	mm	mm	daN	daN	daN								
100	36	0.22	731102AE	12	44	200	100	150								
125	36	0.33	731103AE	12	44	270	150	200								
160	48	0.76	731104AE	20	59	350	175	300								
200	48	1.06	731106AE	20	59	510	235	350								



																
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN						
100	36	0.32	732102AE	12	40	32	10	200	100	150						
125	36	0.41	732103AE	12	40	32	10	270	150	200						
160	48	0.98	732104AE	20	55	47	14	350	175	300						
200	48	1.28	732106AE	20	55	47	14	510	235	350						

Standard-duty brackets NL - max carrying capacity 300 daN



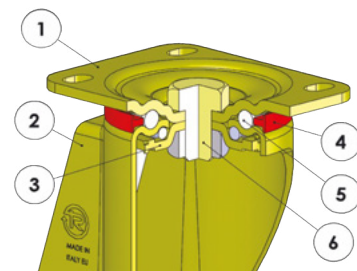
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	36	0.76	735002AE	0.56	735102AE	0.88	735202AE	128	100x85	80x60	9	35	120	150	
125	36	1.03	735003AE	0.76	735103AE	1.14	735203AE	156	100x85	80x60	9	37	120	200	
160	48	2.04	735004AE	1.67	735104AE	2.29	735204AE	198	140x110	105x80	11	56	156	300	
200	48	2.46	735006AE	2.00	735106AE	2.71	735206AE	240	140x110	105x80	11	56	156	300	
100	36	0.87	735602AE	0.66	735702AE	0.93	735802AE	128	100x85	80x60	9	35	120	150	
125	36	1.06	735603AE	0.79	735703AE	1.12	735803AE	156	100x85	80x60	9	37	120	200	
160	48	2.26	735604AE	1.88	735704AE	2.50	735804AE	198	140x110	105x80	11	56	156	300	
200	48	2.68	735606AE	2.22	735706AE	2.93	735806AE	240	140x110	105x80	11	56	156	300	



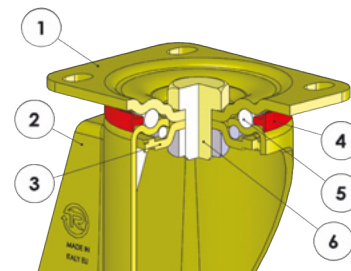
mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,47	734804AE	199	140x110	105x80	11	56	M10x1,5	65	300
200	50	2,87	734806AE	240	140x110	105x80	11	56	M10x1,5	65	300

Medium-heavy duty brackets P - max carrying capacity 350 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	36	1.09	736002AE	0.60	736102AE	1.24	736202AE	138	100x85	80x60	9	46	123	150
125	36	1.29	736003AE	0.77	736103AE	1.28	736203AE	161	100x85	80x60	9	44	123	200
100	36	1.19	736602AE	0.69	736702AE	1.33	736802AE	138	100x85	80x60	9	46	123	150
125	36	1.32	736603AE	0.80	736703AE	1.46	736803AE	161	100x85	80x60	9	44	123	200



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	48	3.11	736004AE	1.72	736104AE	3.68	736204AE	205	140x110	105x80	11	70	126	300
200	48	3.56	736006AE	2.07	736106AE	4.13	736206AE	250	140x110	105x80	11	70	126	350
160	48	3.33	736604AE	1.98	736704AE	3.90	736804AE	205	140x110	105x80	11	70	126	300
200	48	3.78	736606AE	2.29	736706AE	4.35	736806AE	250	140x110	105x80	11	70	126	350



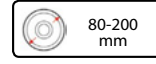
Details make the difference

INDUSTRIAL HEAVY DUTY LOADS AND MECHANICAL HANDLING

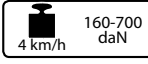


SERIES **62BS**

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE



80-200
mm



160-700
daN



4 km/h



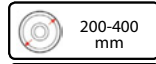
-20 / +70
°C

PAGE 138

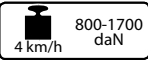


SERIES **62TG**

"TR-ROLL" POLYURETHANE WHEELS WITH CAST IRON CENTRE



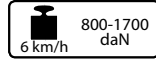
200-400
mm



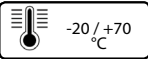
800-1700
daN



4 km/h



700-900
daN



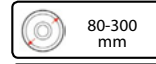
-20 / +70
°C

PAGE 160

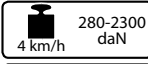


SERIES **63TG**

VULKOLLAN® WHEELS WITH CAST IRON CENTRE



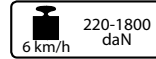
80-300
mm



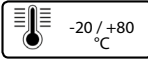
280-2300
daN



4 km/h



190-600
daN



-20 / +80
°C

PAGE 178



SERIES **65TG**

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



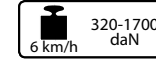
150-300
mm



400-2200
daN



4 km/h



280-550
daN



-20 / +80
°C

PAGE 208

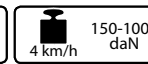


SERIES **66**

"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



80-250
mm



150-1000
daN



4 km/h



100-400
daN



-20 / +80
°C

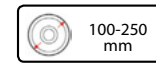
INOX

PAGE 226

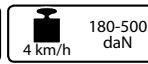


SERIES **72AL**

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE



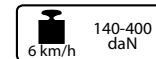
100-250
mm



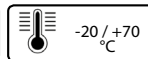
180-500
daN



4 km/h



180-300
daN



-20 / +70
°C

PAGE 248



SERIES 62^{AL}

THICK "TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

100-250 mm	300-800 daN 4 km/h	300-700 daN
300-800 daN 6 km/h	-20/+70 °C	

PAGE 144



SERIES 62^E

"TR-ROLL" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

100-250 mm	200-800 daN 4 km/h	200-800 daN
200-700 daN 6 km/h	-20/+70 °C	ERGO WORKPLACE

PAGE 152



SERIES 62^E

"TR-ROLL" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

100-200 mm	230-500 daN 4 km/h	230-500 daN
230-450 daN 6 km/h	-20/+70 °C	ERGO WORKPLACE

PAGE 166



SERIES 63^{AC}

VULKOLLAN® WHEELS WITH STEEL CENTRE

100-250 mm	250-1500 daN 4 km/h	190-550 daN
200-1200 daN 6 km/h	-20/+80 °C	

PAGE 172



SERIES 64

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

80-400 mm	150-3500 daN 4 km/h	150-750 daN
120-2800 daN 6 km/h	-20/+80 °C	

PAGE 188



SERIES 65^{AL}

"TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

80-200 mm	220-850 daN 4 km/h	150-360 daN
170-680 daN 6 km/h	-20/+80 °C	

PAGE 200



SERIES 65^E

THICK "TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

100-250 mm	350-1000 daN 4 km/h	270-380 daN
280-800 daN 6 km/h	-20/+80 °C	

PAGE 214



SERIES 65^E

"TR" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

100-250 mm	450-800 daN 4 km/h	250-330 daN
360-800 daN 6 km/h	-20/+80 °C	ERGO WORKPLACE

PAGE 220



SERIES 68^A

POLYAMIDE 6 SOLID WHEELS FOR HEAVY-DUTY LOADS

100-200 mm	350-900 daN 4 km/h	200-650 daN
-30/+80 °C	INOX	

PAGE 236



SERIES 69

CAST IRON SOLID WHEELS

100-200 mm	500-1400 daN 4 km/h	260-800 daN
-40/+400 °C		

PAGE 242








SERIES 72^E

SIGMA ELASTIC RUBBER WHEELS CAST IRON CENTRE

120-300 mm	300-950 daN 4 km/h	250-500 daN
240-760 daN 6 km/h	-20/+70 °C	

PAGE 256

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

-  80-200 mm
-  75 Shore A
-  160-700 daN
4 km/h
-  160-700 daN
-  -20 / +70 °C



Description

Tyre: TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses


They show excellent rolling resistance and ability to damp noise when manually handling medium/heavy-duty loads, for mostly indoor use, on regular floors or slightly uneven surfaces with small obstacles.

Not suitable for mechanical handling.

Examples of applications: trolleys for indoor industrial handling, containers, manual pallet trucks, tilt trucks.

Environments of use

Industrial environments, even in presence of humidity and oils. Not suitable in presence of strong acids and solvents.

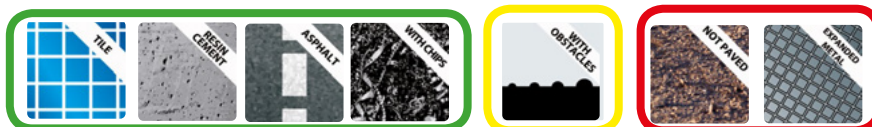
WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles, cement-resin, asphalt and expanded metal.

Not suitable on unpaved floors and/or in case large obstacles are present.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg
80 mm	2,5	---	---	---	---	---
100 mm	2,2	---	---	---	---	---
125 mm	1	2,3	---	---	---	---
150 mm	<1	1,7	2,7	3,8	---	---
160 mm	<1	1,4	2,3	3,5	4,9	---
200 mm	<1	1,2	1,8	2,6	3,4	4,6

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



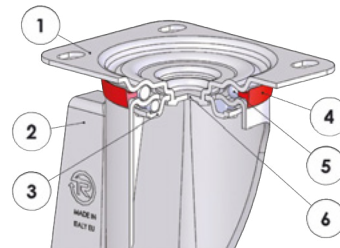
Medium-heavy duty brackets P

Maximum carrying capacity 700 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



mm		kg		COD.		mm		mm		daN		daN		daN	
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN	daN	daN
80	25	0,20	622181	0,15	624181	12	30	28	8	230	160	160			
100	30	0,34	622182	0,25	624182	12	40	32	10	300	200	200			
125	35	0,50	622183	0,41	624183	12	40	32	10	400	250	250			
150	40	0,83	622184	0,59	624184	20	50	47	14	750	450	450			
160	50	1,23	622185	0,99	624185	20	58	47	14	850	550	550			
200	50	1,47	622186	1,16	624186	20	55	52	15	1000	700	700			

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN	
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN	4 km/h
80	25	0,72	625951	0,52	626751	0,91	627151	107	100x85	80x60	9	37	120					160	
100	30	0,81	625952	0,67	626752	1,08	627152	128	100x85	80x60	9	35	120					200	
125	35	1,05	625953	0,83	626753	1,28	627153	156	100x85	80x60	9	37	120					220	
150	40	2,19	625954	2,00	626754	2,63	627154	194	140x110	105x80	11	56	156					300	
160	50	2,40	625960	2,29	626760	2,97	627160	198	140x110	105x80	11	56	156					300	
200	50	2,86	625956	2,90	626756	3,12	627156	240	140x110	105x80	11	56	156					300	

Options available to order:

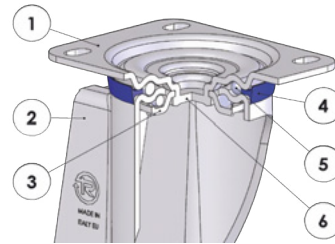


Directional lock for brackets d. 150-200 mm



Footguards for brackets NL-M-P-PT

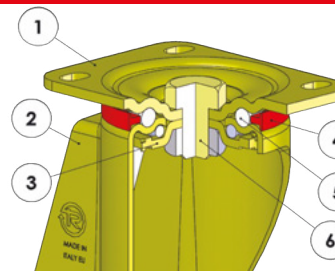
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
150	40	2,47	624514	2,00	626754	2,91	627414	194	140x110	105x80	11	58	178	450
160	50	2,71	624510	2,29	626760	3,15	627410	199	140x110	105x80	11	58	178	500
200	50	3,30	624516	2,90	626756	3,74	627416	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

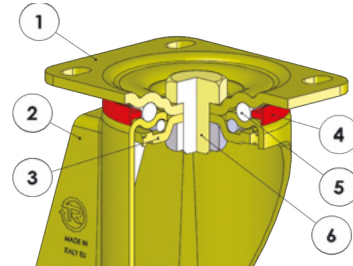
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
100	30	1,20	627612	0,78	628542	1,35	627212	138	100x85	80x60	9	46	123	200
125	35	1,60	627633	0,98	628543	1,52	627233	161	100x85	80x60	9	44	123	250

Options available to order:



Footguards for brackets NL-M-P-PT

Medium-heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
150	40	3,18	627614	2,19	628544	3,75	627244	200	140x110	105x80	11	70	126	450
160	50	3,52	627620	2,53	628550	4,09	627220	205	140x110	105x80	11	70	126	550
200	50	3,94	627616	2,48	628546	4,51	627216	250	140x110	105x80	11	70	126	700

Options available to order:



Directional lock for brackets P d. 150-200 mm

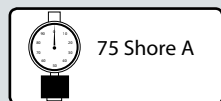
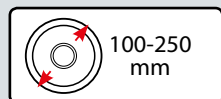


Footguards for brackets NL-M-P-PT



Flexibility you need

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Innovative product that combines the load capacity and the resistance to wear and tear of the polyurethane with the ability to overcome obstacles and to damp noise, vibrations and impacts of the elastic rubber. Combined with appropriate brackets, they guarantee excellent performance for mechanical handling up to 16 km/h. The excellent rolling resistance guarantees an easy handling of heavy loads even with wheels of small diameter.

Examples of application: trolleys for the automotive industry, towing applications.

Environments of use

Industrial environments, even in presence of humidity and oils. Not suitable in presence of strong acids and solvents.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg
100 mm	2	---	---	---	---	---
125x40 mm	< 1	1,5	5	---	---	---
125x50 mm	< 1	1	2	3	---	---
160 mm	< 1	1	2	3	3,5	---
200 mm	< 1	< 1	1	2	3	4
250 mm	< 1	< 1	1	2	3	4

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-125 mm
Top plate fitting. Available with front brake and centralised brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 700 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD

Maximum carrying capacity 1400 daN - available diameters 100-200 mm
Top plate fitting.



Supporti molleggiati EES MHD

Maximum carrying capacity 800 daN - available diameters 160-250 mm
Top plate fitting. Available with adjustable front brake.

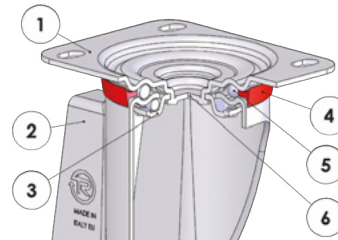
62^{AL}

"TR-ROLL" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE



mm		kg		kg		mm				Static	4 km/h	6 km/h	
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0,45	622102	0,37	624102	15	40	32	10	400	300	300	300
125	40	0,79	622113	0,54	624113	20	40	47	14	500	350	350	350
125	40	0,75	622103	0,53	624103	20	50	47	14	500	350	350	350
160	50	1,20	622104	0,95	624104	20	58	47	14,5	800	550	550	550
160	50	1,24	622114	0,95	624104	25	58	47	14,5	800	550	550	550
180	50	1,37	622105	1,15	624105	20	58	47	14	900	600	600	600
200	50	1,74	622106	1,52	624106	20	58	47	14	1000	700	700	700
200	50	1,84	622116	1,60	624106	25	58	47	14	1000	700	700	700
250	50	2,40	622108	2,10	624108	20	55	52	15	1000	700	800	800

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg		kg		kg		mm						4 km/h	
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
100	40	0,86	624402	0,83	626202	1,05	627302	128	100x85	80x60	9	37	120	200	
125	40	1,35	624413	1,17	626213	1,51	627313	156	100x85	80x60	9	35	120	220	
125	40	1,46	624403	1,11	626203	2,34	627303	166	140x110	105x80	11	57	156	300	
160	50	2,88	624410	2,24	627704	3,42	627304	199	140x110	105x80	11	57	156	300	
200	50	3,18	624406	3,04	627706	3,70	627306	240	140x110	105x80	11	57	156	300	

Options available to order:



Footguard for brackets NL-M-P

Standard-duty brackets NL - max carrying capacity 300 daN

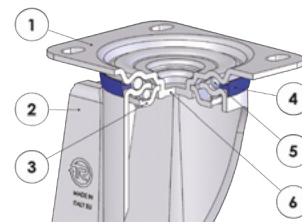


mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,74	624804	199	140x110	105x80	11	56	M10x1,5	65	300	
200	50	3,32	624806	240	140x110	105x80	11	56	M10x1,5	65	300	



mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
125	40	2,44	624903	165	140x110	105x80	11	46	40	17,5	35	18,5	300	
160	50	2,86	624910	199	140x110	105x80	11	56	40	17,5	35	18,5	300	
200	50	3,38	624916	240	140x110	105x80	11	56	40	17,5	35	18,5	300	

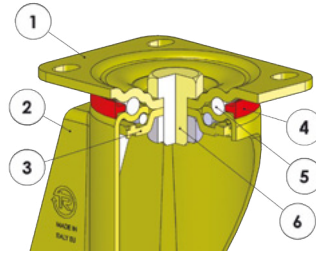
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

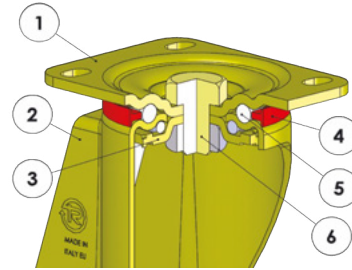
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2.95	624504	2.24	627704	3.42	627404	199	140x110	105x80	11	58	178	500	
200	50	3.69	624506	3.04	627706	4.07	627406	240	140x110	105x80	11	50	178	500	

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1,35	627602	0,85	628512	1,52	627202	138	100x85	80x60	9	46	123	300	300	
125	40	1,70	627613	1,26	628513	1,87	627213	161	100x85	80x60	9	44	123	350	350	



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN
125	40	2,33	627603	1,69	628503	2,86	627203	170	140x110	105x80	11	70	126	350	350	
160	50	3,60	627610	2,11	628514	4,17	627204	205	140x110	105x80	11	70	126	550	550	
180	50	3,84	627605	2,42	628515	4,41	627205	228	140x110	105x80	11	70	126	600	600	
200	50	4,31	627516	2,85	628516	4,91	627206	250	140x110	105x80	11	70	126	700	700	
250	50	4,84	627608	3,74	628518	5,54	627208	298	140x110	105x80	11	70	173	750	750	

Options available to order:

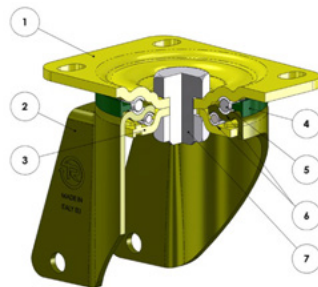


Footguard for brackets NL-M-P-PT



Directional lock for brackets P-PT diam. 160-200 mm

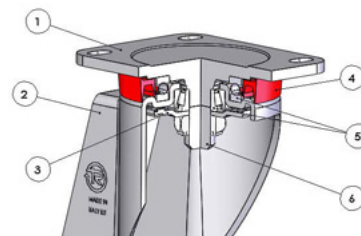
Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 700 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,52	625010	2,11	628514	4,12	629904	205	140x110	105x80	11	70	126	550	550	
180	50	3,91	625005	2,42	628515	4,38	629905	228	140x110	105x80	11	70	126	600	600	
200	50	4,10	625016	2,85	628516	4,66	629906	250	140x110	105x80	11	70	126	700	700	

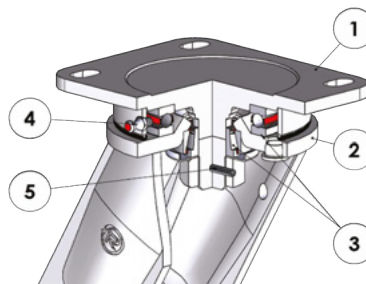
Extra-heavy duty brackets EP - max carrying capacity 700 daN



- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,76	627824	3,35	628824	4,28	626664	205	135x110	105x80	11	70	126	550	550	
200	50	4,57	627826	4,13	628826	5,14	626656	250	135x110	105x80	11	70	126	700	700	

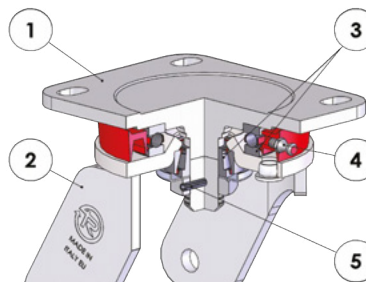
Electrowelded brackets EE MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
100	40	3,38	628302	2,40	628402	4,26	628602	170	135x110	105x80	11	51	157	300	300
125	40	3,71	628303	2,73	628403	4,59	628603	182	135x110	105x80	11	51	157	350	350
160	50	4,25	628314	3,26	628414	5,13	628614	215	135x110	105x80	11	60	157	550	550
180	50	4,62	628305	3,64	628405	5,51	628605	242	135x110	105x80	11	70	157	600	600
200	50	4,97	628306	3,99	628406	6,31	628606	252	135x110	105x80	11	70	157	700	700

Twin electrowelded brackets EEG MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn tips electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
100	40+40	3.45	628062	2.65	628162	140	135x110	105x80	11	55	600	600
125	40+40	4.20	628063	3.40	628163	170	135x110	105x80	11	55	700	700

Options available to order:

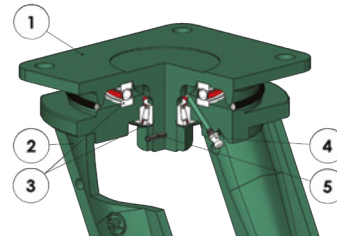


Wheels EE MHD with steering system



Directional lock for brackets EE MHD
- EE HD - EED MHD: - EES MHD
see page 365-367

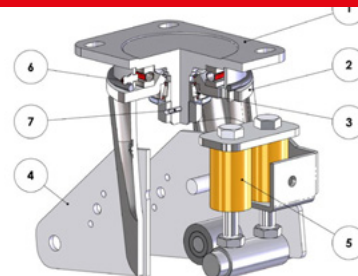
Twin electrowelded brackets EEG HD - max carrying capacity 1400 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut


mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
160	50+50	10,60	628084	6,20	628184	228	175x140	140x105	14	50	1100	1100
200	50+50	12,30	628086	7,70	628166	280	175x140	140x105	14	65	1400	1400


Electrowelded sprung-loaded bracket EES MHD - max load capacity 800 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

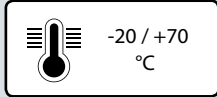
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN	4 km/h	6 km/h
160	50	7,07	626304	5,82	626404	8,13	626504	248	135x110	105x80	11	100	240	25	50	400	550	550
200	50	7,67	626306	6,42	626406	8,78	626506	268	135x110	105x80	11	100	265	25	50	400	700	700
250	50	8,75	626308	7,54	626408	9,99	626508	316	135x110	105x80	11	110	315	25	50	400	800	800

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

"TR-ROLL" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane with ergonomic round profile, hardness 75 Shore A, excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

The round profile reduces the start-up coefficient when the castors are positioned at 90° from the line of movement and therefore greatly reduces the amount of effort required by the operators when handling trolleys.

Combined with appropriate brackets, they guarantee excellent performance for mechanical handling up to 16 km/h.

Examples of application: trolleys for the automotive industry, lean manufacturing trolleys and whenever a combination of manual/powerd handling is involved.

Environments of use

Industrial environments, even in presence of humidity and oils. Not suitable in presence of strong acids and solvents.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg
100 mm	2	---	---	---	---	---
125x40 mm	< 1	1,5	5	---	---	---
125x50 mm	< 1	1	2	3	---	---
160 mm	< 1	1	2	3	3,5	---
200 mm	< 1	< 1	1	2	3	4
250 mm	< 1	< 1	1	2	3	4

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 700 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 700 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



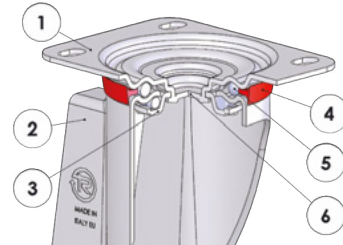
Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 700 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0,57	622142	0,52	624142	20	40	47	14	500	200	200	200
125	40	0,68	622163	0,45	624143	20	40	47	14	500	350	350	350
125	40	0,73	622143	0,51	624143	20	50	47	14	500	350	350	350
125	50	0,88	622153	0,65	624153	20	58	47	14	500	450	450	450
160	50	1,11	622144	0,89	624144	20	58	47	14,5	800	550	550	550
200	50	1,68	622146	1,44	624146	20	58	47	14	1000	700	700	700
250	50	2,40	622148	2,10	624148	20	55	52	15	1000	700	800	800

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	40	0.96	628702	0.80	628802	1.06	628902	156	100x85	80x60	9	35	120	200	
125	40	1.35	628703	1.11	628803	1.51	628903	156	100x85	80x60	9	35	120	220	
125	40	1.46	628713	1,17	628813	2,34	628913	166	140x110	105x80	11	57	156	300	
160	50	2,95	628704	2,24	628204	3,42	628904	199	140x110	105x80	11	56	156	300	
200	50	3,69	628716	3,04	628206	4,07	628916	240	140x110	105x80	11	56	156	300	

Options available to order:

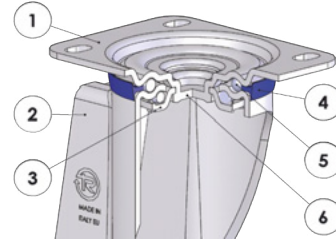


Footguard for brackets NL-M-P-PT



Directional lock for brackets NL diam. 160-200 mm

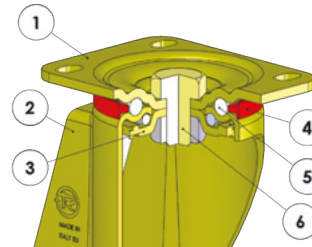
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
160	50	2,81	624604	2,10	628204	3,28	627904	199	140x110	105x80	11	58	178	500
200	50	3,52	624606	2,87	628206	3,90	627906	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	2,27	629023	1,63	629123	2,83	629523	161	100x85	80x60	9	44	123	350	350

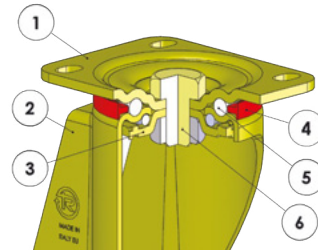
Options available to order:



Footguard
for brackets NL-
M-P-PT

"TR-ROLL" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

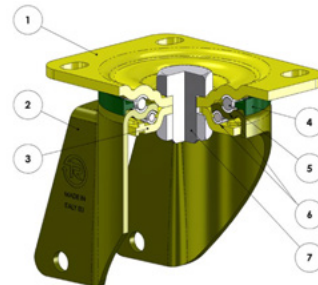
Heavy duty brackets P - max carrying capacity 700 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
125	40	2,27	629003	1,63	629103	2,83	629203	170	140x110	105x80	11	70	126	350	350						
125	50	2,42	629013	2,78	629113	2,95	629213	170	140x110	105x80	11	70	126	450	400						
160	50	3,46	629004	2,28	629104	4,27	629204	205	140x110	105x80	11	70	126	550	550						
200	50	4,14	629006	2,68	629106	4,74	629206	250	140x110	105x80	11	70	126	700	700						

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 700 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
160	50	3,52	629034	2,28	629104	4,12	629234	205	140x110	105x80	11	70	126	550	550						
200	50	4,10	629036	2,68	629106	4,66	629236	250	140x110	105x80	11	70	126	700	700						

Options available to order:

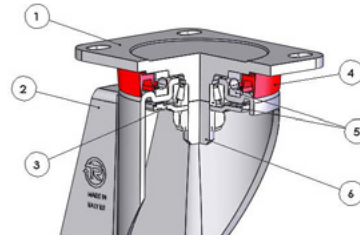


Footguard for brackets NL-M-P-PT



Directional lock for brackets P-PT diam. 160-200 mm

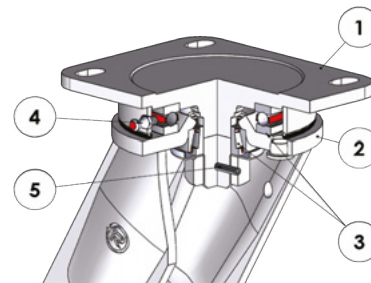
Extra-heavy duty brackets EP - max carrying capacity 700 daN



- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,62	629304	3,21	629404	4,14	629504	205	135x110	105x80	11	70	126	550	550
200	50	4,40	629306	3,96	629406	4,97	629506	250	135x110	105x80	11	70	126	700	700

Electrowelded brackets EE MHD - max carrying capacity 700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

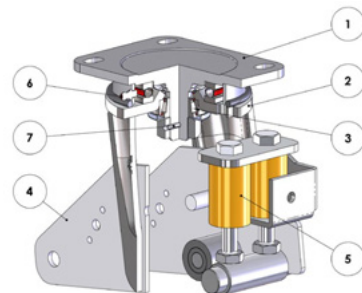
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	3,65	629603	2,67	629703	4,53	629803	182	135x110	105x80	11	51	157	350	350
125	50	3,80	629613	2,82	629713	4,68	629813	182	135x110	105x80	11	51	157	450	400
160	50	4,11	629604	3,12	629704	4,99	629804	215	135x110	105x80	11	60	157	550	550
200	50	4,80	629606	3,82	629706	6,14	629806	252	135x110	105x80	11	70	157	700	700

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES MHD:
see page 365-367


Electrowelded sprung-loaded bracket EES MHD - max load capacity 700 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
160	50	7,07	626804	5,82	626904	8,13	627004	248	135x110	105x80	11	100	240	25	50	400	550	550
200	50	7,67	626806	6,42	626906	8,78	627006	268	135x110	105x80	11	100	265	25	50	400	700	700

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order:

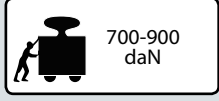
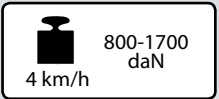


Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367



Technology at work

"TR-ROLL" POLYURETHANE WHEELS WITH CAST IRON CENTRE



Technical features

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: cast iron.

Hub with shielded ball bearing press-fitted in the seats obtained by precision turning on the centre; also available without bearings.

Uses

Innovative product, which combines an excellent rolling resistance with the ability to damp down vibrations and overcoming obstacles and very good performance and durability in case of heavy usages and mechanical handling at speeds up to 16 km/h. Examples of applications: mechanically handled trolleys in automotive industries, logistics, carpentries; AGV trolleys; electrical pallet trucks.

Environments of use

Designed for industrial environments, even in the presence of alcohols, glycols, hydrocarbons.

Not recommended in areas with organic acids and mineral acids, base solutions and saturated steam. In case of use in particularly aggressive environments, it is possible to use a protective lacker available on request.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

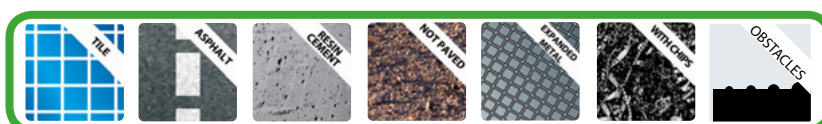
WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	200 kg	400 kg	600 kg	800 kg	1000 kg	1200 kg	1400 kg	1600 kg
200x50 mm	<1	2,5	4	6	---	---	---	---
200x80 mm	<1	2	3,5	5,5	---	---	---	---
250 mm	<1	1,5	3	5	7	9	---	---
300 mm	<1	1	2,5	4,5	6	8	10	---
400 mm	<1	<1	1	3	5,5	7	8	10

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Heavy-duty PT brackets with hardened ball race grooves
 Maximum carrying capacity 800 daN - available diameters 200 mm
 Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD
 Maximum carrying capacity 800 daN – available diameters 200 mm
 Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE HD
 Maximum carrying capacity 1400 daN – available diameters 200-300 mm
 Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE EHD
 Maximum carrying capacity 1700 daN – available diameters 400 mm
 Top plate fitting.



Electrowelded sprung loaded brackets EES MHD
 Maximum carrying capacity 800 daN - available diameter 200 mm
 Top plate fitting. Available with adjustable front brake.

Options available to order:

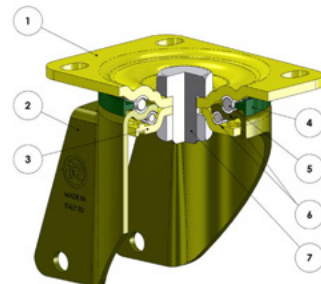


Wheel with key housing



										Static			
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
200	50	3,40	622126	3,17	624126	20	55	47	14	1000	700	800	800
200	80	6,63	622136	6,14	624136	25	88	62	18	1200	750	900	900
250	80	8,50	622127	8,00	624127	25	86	62	17	1600	800	1200	1200
300	80	11,50	622128	11,00	624128	30	86	62	17	1900	850	1400	1400
400	100	33,50	622109	32,70	624109	40	100	80	18	2000	900	1700	1700

Heavy-duty PT brackets with hardened ball race grooves - Max. carrying capacity 800 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

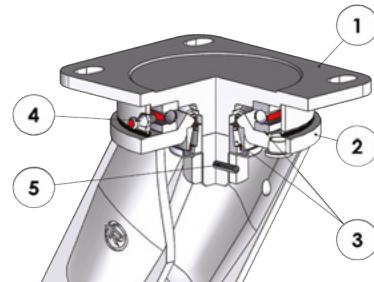
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	daN	
200	50	5,80	627646	5,42	628656	6,35	627246	250	140x110	105x80	11	70	126	800	800

Options available to order:



Wheel with key housing

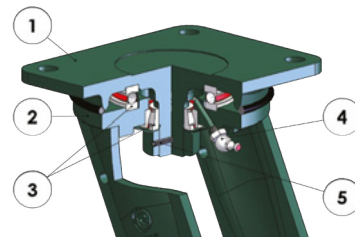
Electrowelded brackets EE MHD - Max. carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
200	50	6,54	628316	5,56	628416	7,42	628616	252	135x110	105x80	11	70	157	800	800

Electrowelded brackets EE HD - Max. carrying capacity 1400 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
200	80	13,10	628706	11,56	628806	13,98	628906	275	175x140	140x105	14,5	65	166	900	900
250	80	15,19	628708	13,60	628808	16,07	628908	320	175x140	140x105	14,5	74	166	1200	1200
300	80	18,31	628718	16,69	628818	19,19	628918	360	175x140	140x105	14,5	81	166	1400	1400

Options available to order:

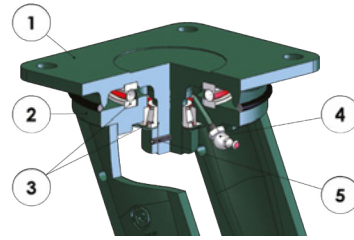


Wheel with key housing



Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367

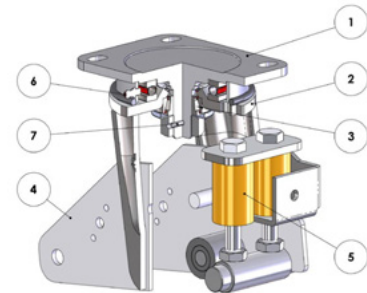
Electrowelded brackets EE EHD - Max. carrying capacity 1700 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	6 km/h
400	100	49,55	628729	44,85	628829	475	250x200	210x160	19	95	1700	1700

Electrowelded sprung-loaded brackets EES MHD - max carrying capacity 800 daN - damping up to 400 daN



- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN	4 km/h	6 km/h	
200	50	9,22	625706	7,97	625806	10,33	626006	268	135x110	105x80	11	100	265	25	50	400	800	800



Spring travel (mm): maximum difference in the total height of the group wheel + support depending on the spring tension



Initial tension (daN): in case of lighter loads than indicated, the bracket works with no damping



Spring tension (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order:



Directional lock for brackets EE MHD
- EE HD - EEG MHD - EES MHD:
see page 365-367



Details make the difference

"TR-ROLL" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

-  100-200 mm
-  75 Shore A
-  230-500 daN
4 km/h
-  230-400 daN
6 km/h
-  230-500 daN
-  -20 / +70 °C



Description

Tyre: very thick TR-Roll polyurethane, hardness 75 Shore A, with excellent rolling resistance and elasticity and good resistance to wear and tear.

Available also with ergonomic round profile (wheel diam. 125-160-200 mm).

Centre: polyamide 6.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Excellent for trolleys and equipments handling medium-heavy and heavy duty loads, also suitable for continuous handling, even in presence of humidity and aggressive chemicals.

Suitable for towing applications and manual/mechanical handling up to 6 km/h.

They offer a higher load capacity and rolling resistance in comparison to standard elastic rubber wheels, whilst maintaining the same specifications of elasticity, vibrations absorption and obstacle overcoming.

The ergonomic round profile variant also enables to reduce the start-up coefficient when pushing/pulling a trolley from a still position.

Examples of applications are: automotive industry, lean manufacturing, cash& carry, trolleys and dollies for the chemical and food processing industry.

Environments of use

Suitable for indoor industrial environments, also in presence of medium-harsh chemical agents, alcohol, glycol and water.

Not suitable in presence of strong acids and solvents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg	400 kg	500 kg
100 mm	< 1	1	2	---	---	---	---	---
125 mm	< 1	< 1	1,5	2	2,5	---	---	---
125 ER mm	< 1	< 1	1,5	2	---	---	---	---
160 mm	< 1	< 1	1	1,5	1,8	2,2	2,6	---
160 ER mm	< 1	< 1	1	1,5	1,8	2,2	2,6	---
200 mm	< 1	< 1	1	1,4	1,7	2	2,4	3,2
200 ER mm	< 1	< 1	1	1,4	1,7	2	2,4	3,2

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Abbinamento ai supporti



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm.
Top plate fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 100-200 mm.
Top plate fittings. Available with front brake.



Medium duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with front adjustable brake.



Medium-heavy duty brackets P

Maximum carrying capacity 500 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX

Maximum carrying capacity 500 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



												Static			
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0,34	622302	0,34	622402	0,27	624302	15	40	32	9	300	230	230	230
125	40	0,45	622303	0,45	622403	0,37	624303	15	40	32	9	350	280	280	280
160	50	1,06	622304	1,06	622404	0,97	624304	20	55	47	14	450	400	400	360
200	50	1,36	622306	1,36	622406	1,27	624306	20	55	47	14	600	500	500	450

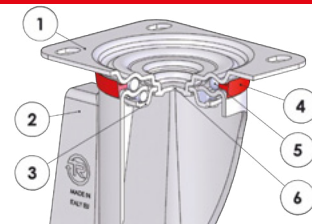


Ergonomic round profile



												Static			
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
125ER	40	0,40	622603	0,40	622503	0,32	624603	15	40	32	9	300	250	250	250
160ER	50	1,00	622604	1,00	622504	0,91	624704	20	55	47	14	450	400	400	360
200ER	50	1,27	622606	1,27	622506	1,18	624706	20	55	47	14	600	500	500	450

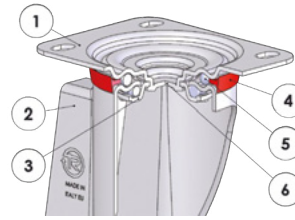
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	
100	40	0,94	624422	0,69	626222	1,08	627322	128	100x85	80x60	9	35	120	200
125	40	1,10	624423	0,85	626223	1,24	627323	156	100x85	80x60	9	37	120	220
125ER	40	1,05	629303	0,80	629403	1,19	629503	156	100x85	80x60	9	37	120	220
160	50	2,49	624434	2,19	627724	2,78	627334	199	140x110	105x80	11	56	156	300
160ER	50	2,43	624424	2,13	627734	2,72	627324	199	140x110	105x80	11	56	156	300
200	50	2,87	624436	2,63	627726	3,07	627336	240	140x110	105x80	11	56	156	300
200ER	50	2,78	624426	2,54	627736	2,98	627326	240	140x110	105x80	11	56	156	300

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

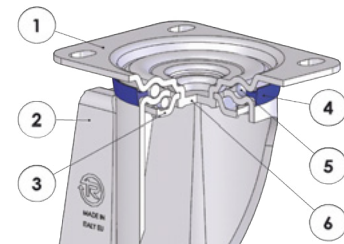


INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN
100	40	0,94	625122	0,69	625222	1,08	625322	128	100x85	80x60	9	35	120	200	
125	40	1,10	625123	0,85	625223	1,24	625323	156	100x85	80x60	9	37	120	220	
125ER	40	1,05	625103	0,80	625203	1,19	625303	156	100x85	80x60	9	37	120	220	
160	50	2,49	625134	2,19	625234	2,78	625334	198	140x110	105x80	11	56	156	300	
160ER	50	2,43	625124	2,13	625224	2,72	625324	198	140x110	105x80	11	56	156	300	
200	50	2,87	625136	2,63	625236	3,07	625336	240	140x110	105x80	11	56	156	300	
200ER	50	2,78	625126	2,54	625226	2,98	625326	240	140x110	105x80	11	56	156	300	

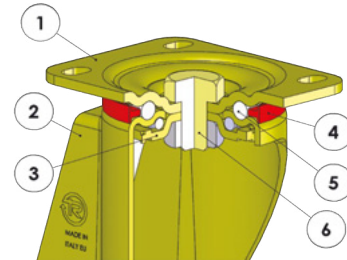
Medium duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

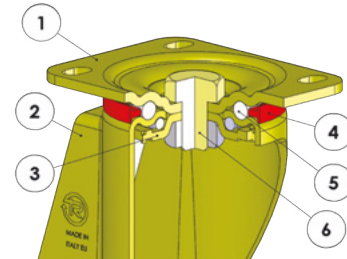
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,49	624544	2,19	627724	2,78	627444	199	140x110	105x80	11	58	178	400	
160ER	50	2,43	624534	2,13	627734	2,72	627434	199	140x110	105x80	11	50	178	400	
200	50	3,20	624546	2,55	627726	3,58	627446	240	140x110	105x80	11	50	178	500	
200ER	50	3,11	624536	2,40	627736	3,49	627436	240	140x110	105x80	11	50	178	500	

Medium-heavy duty brackets P - max carrying capacity 500 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

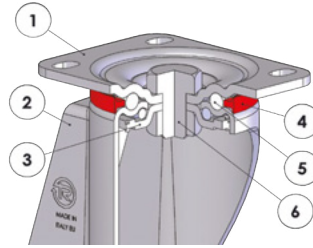
mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
100	40	1,20	627622	0,82	628522	1,35	627222	138	100x85	80x60	9	46	123	230	230	4 km/h	6 km/h				
125	40	1,35	627623	0,93	628523	1,50	627223	161	100x85	80x60	9	44	123	280	280						
125ER	40	1,30	629313	0,88	629413	1,45	629513	161	100x85	80x60	9	44	123	250	250						



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
160	50	3,33	627634	2,00	628534	5,03	627234	205	140x110	105x80	11	70	126	400	360	4 km/h	6 km/h				
160ER	50	3,27	627624	1,94	628524	4,96	627224	205	140x110	105x80	11	70	126	400	360						
200	50	3,82	627636	2,36	628536	4,42	627236	250	140x110	105x80	11	70	126	500	450						
200ER	50	3,73	627626	2,27	628526	4,33	627226	250	140x110	105x80	11	70	126	500	450						

Stainless steel medium-heavy duty brackets PX - max carrying capacity 500 daN



INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

160		160ER		200		200ER		205		250		250		4 km/h		6 km/h	
mm	mm	kg	COD.	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	daN	
160	50	3,33	625434	2,00	625534	5,03	625634	205	140x110	105x80	11	70	126	400	360		
160ER	50	3,27	625424	1,94	625524	4,96	625624	205	140x110	105x80	11	70	126	400	360		
200	50	3,82	625436	2,36	625536	4,42	625636	250	140x110	105x80	11	70	126	500	450		
200ER	50	3,73	625426	2,27	625526	4,33	625626	250	140x110	105x80	11	70	126	500	450		

VULKOLLAN® WHEELS WITH FORGED STEEL CENTRE

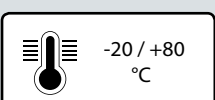
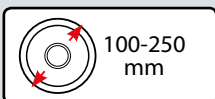


Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: forged steel.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.



Uses

Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Fitted with appropriate brackets, they guarantee excellent performance up to 16 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of a small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, forklift trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg
100 mm	4	---	---	---	---	---
125 mm	3.3	6.7	---	---	---	---
150 mm	2.4	4.8	7.2	9.6	---	---
175 mm	2.2	4.5	6.8	9	---	---
200 mm	1.7	3.5	5.5	7.6	14.2	---
250 mm	1.2	2.5	4	5.6	10.5	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 900 daN - available diameters 150-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1500 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.

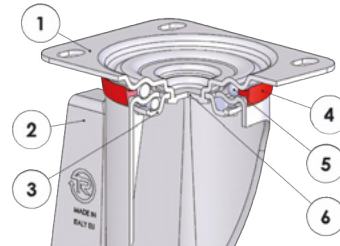
Options available to order:

The series 63AC wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.



mm		kg		COD.		mm		mm		mm		daN		daN		daN		daN	
100	30	0,74	632122	0,67	634122	12	30	32	10	375	190	250	200						
125	40	1,38	632123	1,31	634123	12	40	32	10	500	230	350	280						
150	40	1,84	632124	1,66	634124	17	40	40	12	900	320	750	600						
150	40	1,76	632224	1,60	634224	20	40	42	12	900	320	750	600						
175	40	2,80	632125	2,56	634125	20	40	47	14	1200	340	850	680						
200	50	4,03	632126	3,79	634126	20	50	47	14	1800	420	1100	880						
200	50	4,00	632226	3,72	634226	25	50	52	15	1800	420	1100	880						
250	60	8,03	632128	7,75	634128	25	60	52	15	2200	550	1500	1200						

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-rieveted

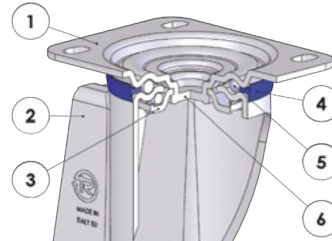
mm		kg		CODE		mm		mm		mm		mm		daN	
100	30	1.26	637322	1.01	638222	128	100x85	80x60	9	35	200				
125	40	2.03	637323	1.68	638223	156	100x85	80x60	9	37	220				
150	40	2.54	637304	2.15	638214	182	100x85	80x60	9	34	220				
150	40	3.21	637324	2.84	638224	194	140x110	105x80	11	56	300				
175	40	4.18	637325	3.89	638225	217	140x110	105x80	11	56	300				
200	50	5.43	637326	5.21	638226	240	140x110	105x80	11	56	300				

Options available to order:



Footguard
for brackets NL-
M-P-PT

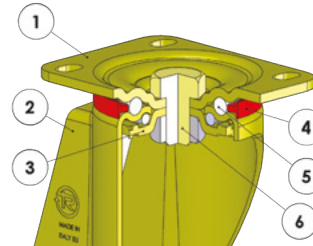
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	3.56	637404	2.84	638224	4.13	636704	194	140x110	105x80	11	58	178	500
200	50	5.82	637406	5.21	638226	6.18	636706	240	140x110	105x80	11	50	178	500

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

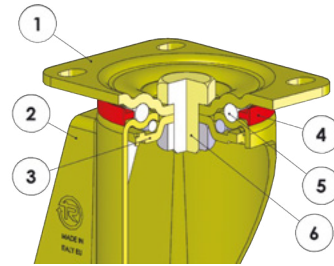
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.61	637622	1.11	638622	1.75	636302	138	100x85	80x60	9	46	123	250	200
125	40	2.29	637623	1.76	638623	2.43	636303	161	100x85	80x60	9	44	123	350	280

Options available to order:



Footguard
for brackets NL-
M-P-PT

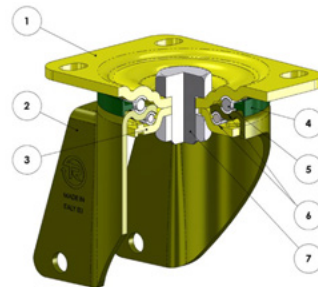
Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
150	40	4.19	637624	2.70	638624	4.76	636304	200	140x110	105x80	11	70	126	750	600
175	40	5.14	637625	3.72	638625	5.71	636305	225	140x110	105x80	11	70	126	750	600
200	50	6.44	637626	4.98	638626	7.01	636306	250	140x110	105x80	11	70	126	750	600

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 900 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

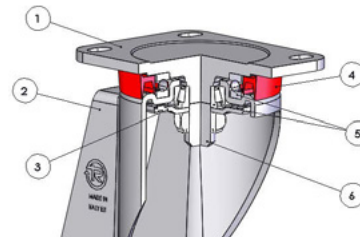
mm		kg	COD.	kg	COD.	kg	COD.	mm						4 km/h	6 km/h
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
150	40	4,19	635604	2,70	638624	4,76	635304	200	140x110	105x80	11	70	126	750	600
175	40	5,14	635605	3,72	638625	5,71	635305	225	140x110	105x80	11	70	126	850	680
200	50	6,44	635606	4,98	638626	7,01	635306	250	140x110	105x80	11	70	126	900	800

Options available to order:



Footguard for brackets NL-M-P-PT

Extra-heavy duty brackets EP - max carrying capacity 1500 daN



- 1) Plate: white galvanised forged steel
- 2) Fork: white galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate
Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.85	637822	1.61	638822			140	100x85	80x60	9	46		250	200
125	40	2.56	637823	1.70	638823			164	100x85	80x60	9	48		350	280
150	40	4.46	637824	3.97	638824	5.03	636504	200	135x110	105x80	11	70	126	750	600
175	40	5.44	637825	5.02	638825	6.01	636505	225	135x110	105x80	11	70	126	850	680
200	50	6.75	637826	6.30	638826	7.32	636506	250	135x110	105x80	11	70	126	1100	880
250	60	13.58	637828	11.74	638828			300	175x140	140x105	14	66		1500	1200

VULKOLLAN® WHEELS WITH CAST IRON CENTRE



-  80-300 mm
-  93 Shore A
-  280-2300 daN
4 km/h
-  220-1800 daN
6 km/h
-  190-600 daN
-  -20 / +80 °C

Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses









Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Combined with appropriate brackets, they guarantee excellent performance up to 16 km/h.

The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, forklift trucks.

Environments for use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for tiles and cement-resin.
Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg	2000 kg
80 mm	4,5	11	----	----	----	----	----
100 mm	3,8	7,7	----	----	----	----	----
125x38 mm	3,5	7	11,5	----	----	----	----
125x50 mm	3,3	6,5	11	----	----	----	----
150x50 mm	2,5	5,2	8,6	12,6	----	----	----
160x50 mm	2,3	5	8,3	12	----	----	----
180x50 mm	2	4,1	6,8	9,7	----	----	----
200x50 mm	1,7	3,8	6	8,5	16	----	----
200x80 mm	1,3	3,5	5,0	6,7	11,5	17	----
250x60 mm	1	3	4,7	6,3	10,9	16	----
250x80 mm	< 1	2,5	4,5	6	10,3	15,5	----
300x60 mm	< 1	2	4	5,5	9,6	15	----
300x80 mm	< 1	1,5	3,5	5	8,6	13	16

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 900 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1600 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD - EE EHD.

Maximum carrying capacity 2300 daN - available diameters 125-400 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD - EEG EHD

Maximum carrying capacity 3500 daN - available diameters 100-250 mm
Top plate fitting.



Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 1000 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.

Options available to order:

















Wheel with key housing



Wheel with very thick tyre

SERIES **63G** VULKOLLAN® WHEELS WITH CAST IRON CENTRE



															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
80	28	0,51	632151	0,46	634151	12	32	28	8	370	190	280	220		
100	38	1,02	632152	0,91	634152	15	40	35	11	500	220	380	300		
125	38	1,45	632153	1,34	634153	15	40	35	11	600	240	450	360		
125	50	1,98	632163	1,76	634163	20	55	47	14	800	270	600	440		
125	50	1,96	632363	1,76	634163	25	55	47	14	800	270	600	440		
150	50	2,50	632154	2,28	634154	20	55	47	14	910	290	700	560		
150	50	2,48	632354	2,28	634154	25	55	47	14	910	290	700	560		
160	50	2,65	632164	2,43	634164	20	55	47	14	1000	300	750	600		
160	50	2,63	632364	2,43	634164	25	55	47	14	1000	300	750	600		
180	50	3,02	632155	2,80	634155	20	55	47	14	1100	350	900	720		
200	50	3,65	632156	3,43	634156	20	55	47	14	1500	380	1000	800		
200	50	3,63	632356	3,43	634156	25	55	47	14	1500	380	1000	800		
200	78	7,26	632166	6,74	634166	25	86	62	17	2000	450	1600	1300		
200	78	7,24	632366	6,74	634166	30	86	62	17	2000	450	1600	1300		
250	60	8,13	632157	7,61	634157	25	65	62	17	2500	480	1500	1200		
250	60	8,10	632357	7,61	634157	30	65	62	17	2500	480	1500	1200		
250	78	9,81	632167	9,29	634167	25	86	62	17	2800	500	1900	1500		
250	78	9,80	632367	9,29	634167	30	86	62	17	2800	500	1900	1500		
300	60	11,43	632158	10,96	634158	30	65	62	17	3200	550	1750	1400		
300	78	13,80	632168	13,33	634168	30	86	62	17	3400	600	2300	1800		

Options available to order:

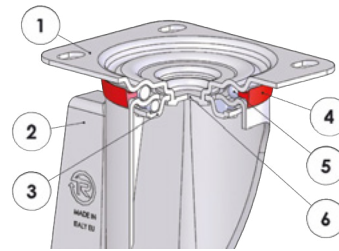


Wheel with key housing



Wheel with very thick tyre

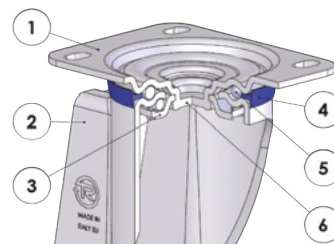
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	28	0.95	634551	0.82	634651	1.11	635451	107	100x85	80x60	9	37	120	200
100	38	1.51	634552	1.40	634652	1.67	635452	128	100x85	80x60	9	35	120	200
125	38	1.97	634553	1.86	634653	2.13	635453	156	100x85	80x60	9	37	120	220
125	50	3.38	634563	2.89	634663	3.58	635463	166	140x110	105x80	11	57	156	300
150	50	3.87	634554	3.59	634654			194	140x110	105x80	11	56		300
160	50	3.98	634564	3.71	634664	4.23	635474	199	140x110	105x80	11	56	156	300
180	50	4.48	634555	4.21	634655	4.68	635465	220	140x110	105x80	11	56	156	300
200	50	5.16	634556	4.92	634656	5.36	635466	240	140x110	105x80	11	56	156	300

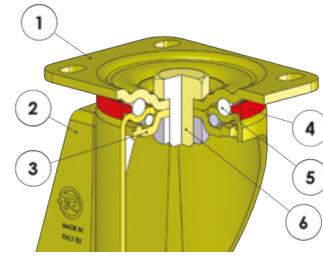
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

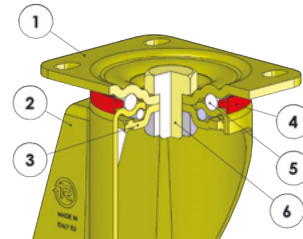
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	50	4.21	637424	3.59	634654	4.65	636724	194	140x110	105x80	11	58	178	500
160	50	4.33	637434	3.71	634664	4.78	636734	199	140x110	105x80	11	58	178	500
200	50	5.55	637426	4.92	634656	5.91	636726	240	140x110	105x80	11	50	178	500

Heavy-duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
80	28	1.38	635851	0.96	636851			128	100x85	80x60	9	46		280	220
100	38	1.93	635852	1.52	636852	2.06	634852	138	100x85	80x60	9	46	123	350	300
125	38	2.37	635853	2.04	636853	2.50	634853	161	100x85	80x60	9	44	123	350	300



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

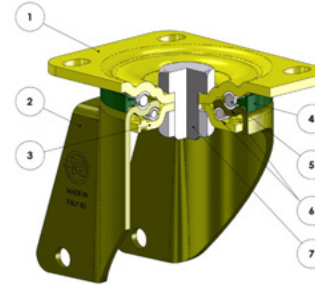
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3.66	635863	2.65	636863	4.24	634863	170	140x110	105x80	11	70	126	550	440
150	50	4.81	635854	3.55	636854	5.33	634854	200	140x110	105x80	11	70	126	700	560
160	50	4.93	635864	4.08	636864	5.45	634864	205	140x110	105x80	11	70	126	750	600
180	50	5.30	635855	4.45	636855	5.90	634855	228	140x110	105x80	11	70	126	750	600
200	50	6.06	635856	5.15	636856	6.66	634856	250	140x110	105x80	11	70	126	750	600

Options available to order:



Footguard
for brackets
NL-M-P-PT

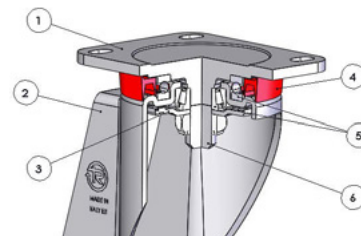
Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 900 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg	COD.	kg	COD.	kg	COD.	mm				mm	daN	daN	
150	50	4,81	635004	3,55	636854	5,33	639904	200	140x110	105x80	11	70	126	700	560
160	50	4,93	635014	4,08	636864	5,45	639914	205	140x110	105x80	11	70	126	750	600
180	50	5,30	635005	4,45	636855	5,90	639905	228	140x110	105x80	11	70	126	900	720
200	50	6,06	635006	5,15	636856	6,66	639906	250	140x110	105x80	11	70	126	900	800

Extra-heavy duty brackets EP - max carrying capacity 1600 daN



- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

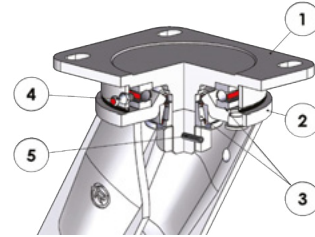
mm		kg	CODE	kg	CODE	kg	CODE	mm				mm	daN	daN	
100	38	2.15	637852	1.92	638852			140	100x85	80x60	9	46	350	300	
125	38	2.64	637853	2.44	638853			164	100x85	80x60	9	48	350	300	
150	50	5.04	637854	4.63	638854	5.56	636654	200	135x110	105x80	11	70	126	700	560
160	50	5.16	637864	4.75	638864	5.68	636664	205	135x110	105x80	11	70	126	750	560
180	50	5.60	637855	5.20	638855	6.20	636655	228	135x110	105x80	11	70	126	900	720
200	50	6.35	637856	6.06	638856	6.95	636656	250	135x110	105x80	11	70	126	1000	800
200	80	12.30	637866	10.46	638866			275	175x140	140x105	14	66		1600	1300
250	60	13.16	637857	11.32	638857			300	175x140	140x105	14	66		1500	1200

Options available to order:



Footguard for brackets
NL-M-P-PT

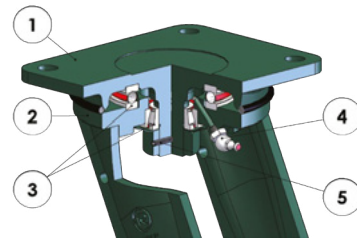
Electrowelded brackets EE MHD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm						daN		
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
125	50	4.88	638303	3.90	638403	5.76	638903	182	135x110	105x80	11	51	157	600	440	
150	50	5.50	638304	4.51	638404	6.38	638904	210	135x110	105x80	11	60	157	700	560	
160	50	5.65	638314	4.66	638414	6.53	638914	215	135x110	105x80	11	60	157	750	600	
180	50	6.14	638305	5.16	638405	7.02	638905	242	135x110	105x80	11	70	157	900	720	
200	50	6.77	638306	5.79	638406	7.65	638906	252	135x110	105x80	11	70	157	1000	800	

Electrowelded brackets EE HD - max carrying capacity 2300 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm						daN		
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
200	80	13.72	638316	12.18	638416	14.60	638916	275	175x140	140x105	14	65	166	1600	1300	
250	60	14.82	638307	13.23	638407	15.70	638907	320	175x140	140x105	14	74	166	1500	1200	
250	80	16.50	638317	14.91	638417	17.38	638917	320	175x140	140x105	14	74	166	1600	1300	
250	80	17.56	638327	15.23	638427	18.44	638927	325	200x160	160x120	17	74	166	1900	1500	
300	60	18.24	638308	16.62	638408	19.12	638908	360	175x140	140x105	14	81	166	1600	1300	
300	60	19.30	638328	16.95	638428	20.18	638928	365	200x160	160x120	17	81	166	1750	1400	
300	80	20.61	638318	18.99	638418	21.49	638918	360	175x140	140x105	14	81	166	1600	1300	
300	80	21.67	638338	19.32	638438	22.55	638938	365	200x160	160x120	17	81	166	2300	1800	

Options available to order:

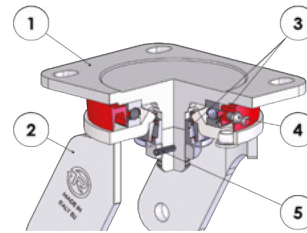


Directional lock
for brackets EE MHD
- EE HD - EED MHD - EES
MHD: see page 365-367



Bracket
EE MHD
with steering
system

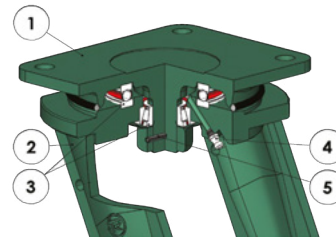
Twin electrowelded brackets EEG MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
100	38+38	4.50	638062	3.75	638162	140	135x110	105x80	11	55	700	600
125	38+38	5.45	638063	4.70	638163	170	135x110	105x80	11	55	900	720

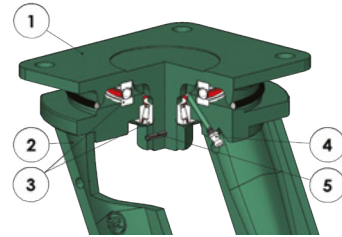
Twin electrowelded brackets EEG HD - max carrying capacity 2000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
125	50+50	11.00	638072	7.70	638172	210	175x140	140x105	14	50	1200	880
150	50+50	13.10	638074	8.70	638174	223	175x140	140x105	14	50	1400	1100
160	50+50	13.40	638084	9.00	638184	228	175x140	140x105	14	50	1500	1200
200	50+50	15.90	638066	11.30	638166	280	175x140	140x105	14	65	1600	1300
200	50+50	17.55	638076	12.70	638176	285	200x160	160x120	17	65	2000	1600

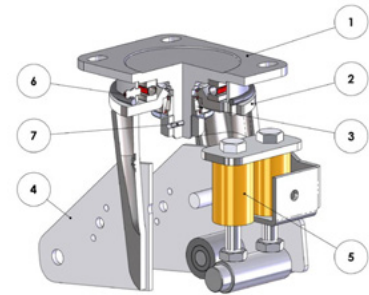
Twin electrowelded brackets EEG MHD - max carrying capacity 3500 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut


mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h daN	6 km/h daN
200	80+80	34.80	638086	25.05	638186	280	250x200	210x160	19	52	3200	2500
250	60+60	36.95	638067	27.20	638167	330	250x200	210x160	19	62	3000	2400
250	80+80	40.30	638077	30.55	638177	330	250x200	210x160	19	62	3500	2800


Electrowelded sprung-loaded brackets EES MHD - max carrying capacity 1000 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
- 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Spring-hinged plates: plates electrowelded to the axle
- 5) Polyurethane springs
- 6) Grease nipple
- 7) Anti-loosening system nut

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN	4 km/h daN	6 km/h daN
160	50	8,47	639304	7,22	639404	9,53	639504	248	135x110	105x80	11	100	240	25	50	400	750	600
200	50	9,47	639306	7,82	639406	10,18	639506	268	135x110	105x80	11	100	265	25	50	400	1000	800

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EED MHD - EES
MHD: see page 365-367

TR SAFETY



TR LEAN MANUFACTURING

Value
Identifica il valore per il cliente

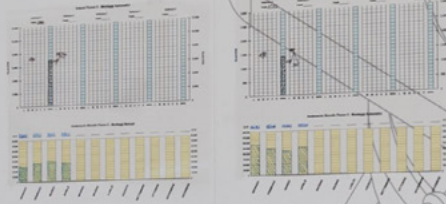
Value stream
Identifica il flusso del valore e combatti le attività che non generano valore

Crea il flusso d in modo che

Pull
Fai in modo che il flusso del valore sia tirato dal cliente

Perfection
Inseguì la perfezione tramite il miglioramento continuo

Prodotto e Processo



Miglioramento



Lean manufacturing

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

	80-400 mm
	95 Shore A
	150-3500 daN 4 km/h
	120-3500 daN 6 km/h
	150-750 daN
	-20 / +80 °C



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear.

Centre: cast iron.

Hub with plain bore so that it can easily be re-worked to achieve a spline. Also available with key housing.

Hub with shielded ball bearing press-fitted in the seats obtained by precision machining the centre; also available without bearings.

Uses

Ideal for applications with heavy duty loads, even with mechanical handling at high speeds. Combined with appropriate brackets, they guarantee excellent performance up to 16 km/h.









The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

The plain bore version, with key way or spline, is suitable for use as a drive wheel.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated steam.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	300 kg	450 kg	600 kg	1000 kg	1500 kg	2000 kg	2800 kg
80 mm	4,5	11	---	---	---	---	---	---
100 mm	3,8	7,7	---	---	---	---	---	---
125x38 mm	3,5	7	11,5	---	---	---	---	---
125x50 mm	3,3	6,5	11	---	---	---	---	---
125x60 mm	3,3	6,5	11	14	---	---	---	---
150x50 mm	2,5	5,2	8,6	12,6	---	---	---	---
150x60 mm	2	4	8	11	---	---	---	---
150x80 mm	1,8	3,5	6	10,5	18	---	---	---
160x50 mm	2,3	5	8,3	12	---	---	---	---
180x50 mm	2	4,1	6,8	9,7	---	---	---	---
200x50 mm	1,7	3,8	6	8,5	16	---	---	---
200x80 mm	1,3	3,5	5,0	6,7	11,5	17	---	---
250x60 mm	1	3	4,7	6,3	10,9	16	---	---
250x80 mm	< 1	2,5	4,5	6	10,3	15,5	---	---
300x60 mm	< 1	2	4	5,5	9,6	15	---	---
300x80 mm	< 1	1,5	3,5	5	8,6	13	16	---
400x100 mm	< 1	< 1	2	3,2	6,8	11	13	21

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 80-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 900 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 1600 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD - EE EHD.

Maximum carrying capacity 2800 daN - available diameters 125-400 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD - EEG HD - EEG EHD












Maximum carrying capacity 4300 daN - available diameters 100-300 mm
Top plate fitting



Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 1000 daN - available diameters 160-250 mm
Top plate fitting. Available with adjustable front brake.














													
mm	mm	kg	COD.	mm	mm.	mm.	mm.	daN	daN	daN			
100	40	1,50	641102	15 H7	45	55	30	500	300	300			
125	40	2,10	641103	20 H7	60	60	30	600	400	400			
150	40	2,90	641104	20 H7	60	70	40	730	500	500			
150	50	3,70	641114	20 H7	60	70	40	910	700	700			
180	50	4,40	641105	20 H7	60	70	40	1100	800	800			
200	50	4,60	641106	20 H7	60	70	40	1500	950	950			
200	60	6,00	641116	25 H7	60	70	40	1700	1000	1000			
200	80	8,40	641126	40 H7	80	95	60	2000	1400	1400			
250	50	6,60	641107	20 H7	60	75	45	1800	1100	1100			
250	80	11,00	641117	40 H7	80	95	60	2800	1600	1600			
250	80	10,10	641127	60 H7	80	95	60	2800	1600	1600			
300	80	14,40	641108	50 H7	80	100	65	3400	2000	2000			
300	100	21,20	641118	50 H7	100	120	80	4200	2500	2500			
350	100	26,10	641109	50 H7	100	120	80	4700	2800	2800			
400	100	31,60	641110	50 H7	100	120	80	5000	3500	3500			

These wheels can also be used as drive wheels: the wheel hub is manufactured so that it can easily be reworked to achieve a spline or key housing. The carrying capacity given is valid for movements at a maximum speed of 6 km/h also if used as a drive wheel on mainly straight routes.

To use as a steering drive wheel or at speeds higher than 6 km/h it is advisable to contact Tellure Rôta to assess any reduction of the maximum applicable loads that may be necessary. To prevent the polyurethane tyre from deteriorating, any reworking on the wheel must be done keeping the temperature under 80°C (which is recommended as the maximum limit during normal use of the product).



													
mm	mm	kg	COD.	mm	mm.	mm.	mm.	daN	daN	daN			
100	40	1,50	641202	15 H7	45	5x5	17,3	500	300	300			
125	40	2,10	641203	20 H7	60	6x6	22,8	600	400	400			
150	40	2,90	641204	20 H7	60	6x6	22,8	730	500	500			
150	50	3,70	641214	20 H7	60	6x6	22,8	910	700	700			
180	50	4,40	641205	20 H7	60	6x6	22,8	1100	800	800			
200	50	4,60	641206	20 H7	60	6x6	22,8	1500	950	950			
200	60	6,00	641216	25 H7	60	8x7	28,3	1700	1000	1000			
200	80	8,40	641226	40 H7	80	12x8	43,3	2000	1400	1400			
250	50	6,60	641207	20 H7	60	6x6	22,8	1800	1100	1100			
250	80	11,00	641217	40 H7	80	12x8	43,3	2800	1600	1600			
250	80	10,10	641227	60 H7	80	18x11	64,4	2800	1600	1600			
300	80	14,40	641208	50 H7	80	14x9	53,8	3400	2000	2000			
300	100	21,20	641218	50 H7	100	14x9	53,8	4200	2500	2500			
350	100	26,10	641209	50 H7	100	14x9	53,8	4700	2800	2800			
400	100	31,60	641210	50 H7	100	14x9	53,8	5000	3500	3500			

The standard reference used by Tellure Rôta for the construction of the key housing is UNI EN 6604-69; therefore, the tolerance on the width of the key housing is JS9.

Tellure Rôta is at your disposal to customise the product, modifying the bore with a groove for a key housing of different dimensions or a groove for a tongue according to the specifications of the Italian (UNI 6604 and UNI 6607) and European (DIN 6885) regulations in force. The maximum applicable diameter for each wheel, guaranteeing the carrying capacity values, is given in the product dimensions column

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



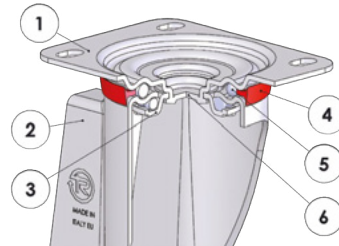
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN												
80	20	0,45	642181	0,40	644181	12	18	32	14	200	150	150	120												
80	28	0,51	642151	0,46	644151	12	32	28	8	370	190	280	220												
100	38	1,02	642152	0,91	644152	15	40	35	11	500	220	380	300												
125	38	1,45	642153	1,34	644153	15	40	35	11	600	240	450	360												
125	50	1,98	642163	1,76	644163	20	55	47	14	800	270	550	440												
125	50	1,96	642363	1,76	644163	25	55	47	14	800	270	550	440												
125	58	2,86	642103	2,62	644103	20	58	47	15	800	250	600	480												
150	50	2,50	642154	2,28	644154	20	55	47	14	910	290	700	560												
150	50	2,48	642354	2,28	644154	25	55	47	14	910	290	700	560												
150	58	2,83	642104	2,59	644104	20	58	47	15	1400	350	850	680												
150	78	5,69	642124	5,19	644124	25	88	62	18	1700	400	1000	800												
160	50	2,65	642164	2,43	644164	20	55	47	14	1000	300	750	600												
160	50	2,63	642364	2,43	644164	25	55	47	14	1000	300	750	600												
180	50	3,02	642155	2,80	644155	20	55	47	14	1100	350	900	720												
200	50	3,65	642156	3,43	644156	20	55	47	14	1500	380	1000	800												
200	50	3,63	642356	3,43	644156	25	55	47	14	1500	380	1000	800												
200	78	7,26	642166	6,74	644166	25	86	62	17	2000	450	1600	1300												
200	78	7,24	642366	6,74	644166	30	86	62	17	2000	450	1600	1300												
250	50	7,00	642147	6,92	644147	20	55	52	15	1750	400	1000	960												
250	60	8,13	642157	7,61	644157	25	65	62	17	2500	480	1500	1200												
250	60	8,10	642357	7,61	644157	30	65	62	17	2500	480	1500	1200												
250	78	9,81	642167	9,81	644167	25	86	62	17	2800	500	1900	1500												
250	78	9,80	642367	9,81	644167	30	86	62	17	2800	500	1900	1500												
300	60	11,43	642158	10,96	644158	30	65	62	17	3200	550	1750	1400												
300	78	13,80	642168	13,33	644168	30	86	62	17	3400	600	2300	1800												
360	120	31,63	642139	30,50	644139	40	120	90	23	3800	750	2800	2200												
400	100	28,86	642129	26,30	644129	50	120	110	28	4500	750	2800	2200												

Options available to order:



Wheel with very thick tyre

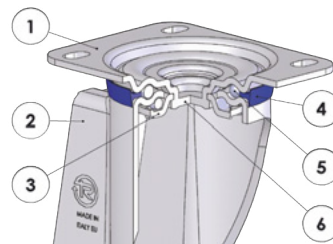
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
80	28	0.95	644551	0.82	644651	1.11	645451	107	100x85	80x60	9	37	120	200
100	38	1.51	644552	1.40	644652	1.67	645452	128	100x85	80x60	9	35	120	200
125	38	1.97	644553	1.86	644653	2.13	645453	156	100x85	80x60	9	37	120	220
125	50	3.38	644563	2.89	644663	3.58	645463	166	140x110	105x80	11	56	156	300
150	50	3.87	644554	3.59	644654	4.12	645464	194	140x110	105x80	11	56	156	300
160	50	3.98	644564	3.71	644664	4.23	645474	199	140x110	105x80	11	56	156	300
180	50	4.48	644555	4.21	644655	4.68	645465	220	140x110	105x80	11	56	156	300
200	50	5.16	644556	4.92	644656	5.36	645466	240	140x110	105x80	11	56	156	300

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	50	4.21	644954	3.59	644654	4.65	645564	194	140x110	105x80	11	58	178	500
160	50	4.33	644964	3.71	644664	4.78	645574	199	140x110	105x80	11	58	178	500
200	50	5.55	644956	4.92	644656	5.91	645566	240	140x110	105x80	11	50	178	500

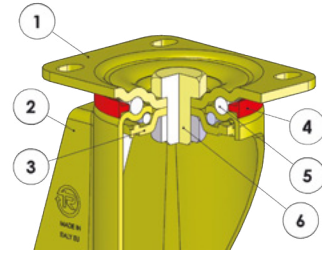
Options available to order:



Footguard
for brackets NL-
M-P-PT

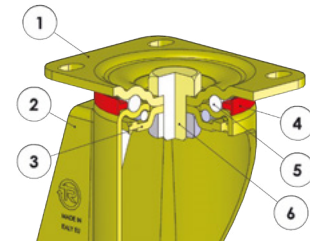
**"TR" POLYURETHANE WHEELS
WITH CAST IRON CENTRE**

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN		daN	
80	28	1.38	645851	0.96	646851	2.06	644852	128	100x85	80x60	9	46	123	280	220	4 km/h	6 km/h				
100	38	1.93	645852	1.52	646852	2.50	644853	138	100x85	80x60	9	46	123	350	300						
125	38	2.37	645853	2.04	646853			161	100x85	80x60	9	48	123	350	300						



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total adjustable rear foot brake

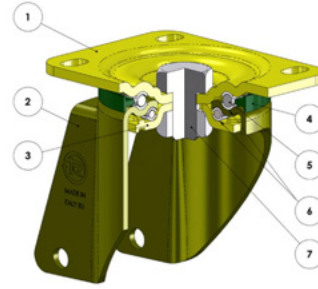
mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN		daN	
125	50	3.66	645863	2.65	646863	4.24	644863	170	140x110	105x80	11	70	126	550	440	4 km/h	6 km/h				
150	50	4.81	645854	3.55	646854	5.33	644854	200	140x110	105x80	11	70	126	700	560						
160	50	4.93	645864	4.08	646864	5.45	644864	205	140x110	105x80	11	70	126	750	600						
180	50	5.30	645855	4.45	646855	5.90	644855	228	140x110	105x80	11	70	126	750	600						
200	50	6.06	645856	5.15	646856	6.66	644856	250	140x110	105x80	11	70	126	750	600						

Options available to order:



Footguard
for brackets NL-
M-P-PT

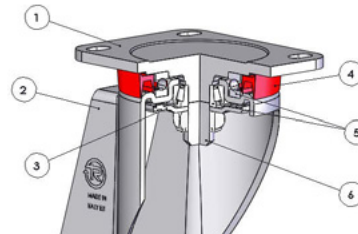
Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 900 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg	COD.	kg	COD.	kg	COD.	mm						4 km/h	6 km/h
150	50	4,67	645004	3,55	646854	5,33	649904	200	140x110	105x80	11	70	126	700	560
160	50	4,93	645014	4,08	646864	5,45	649914	205	140x110	105x80	11	70	126	750	600
180	50	5,30	645005	4,45	646855	5,90	649905	228	140x110	105x80	11	70	126	900	720
200	50	6,06	645006	5,15	646856	6,66	649906	250	140x110	105x80	11	70	126	900	800

Extra-heavy duty brackets EP - max carrying capacity 1600 daN

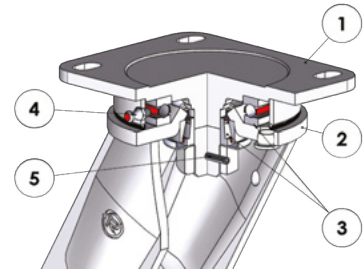


- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						4 km/h	6 km/h
100	38	2.15	647852	1.92	648852			140	100x85	80x60	9	46		350	300
125	38	2.64	647853	2.44	648853			164	100x85	80x60	9	48		350	300
125	50	4.61	647863	4.16	648863			188	135x110	105x80	11	70		550	440
150	50	5.04	647854	4.63	648854	5.56	646654	200	135x110	105x80	11	70	126	700	560
150	58	5.44	647824	4.96	648824			200	135x110	105x80	11	70		850	680
160	50	5.16	647864	4.75	648864	5.68	646664	205	135x110	105x80	11	70	126	750	600
180	50	5.60	647855	5.20	648855	6.20	646655	228	135x110	105x80	11	70	126	900	720
200	50	6.35	647856	6.06	648856	6.95	646656	250	135x110	105x80	11	70	126	1000	800
200	78	12.30	647866	10.46	648866			275	175x140	140x105	14	66		1600	1300
250	60	13.16	647857	11.32	648857			300	175x140	140x105	14	66		1500	1200

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

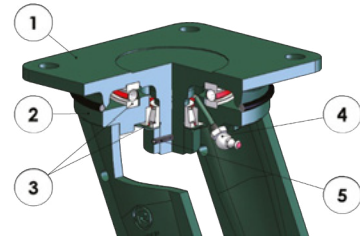
Electrowelded brackets EE MHD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm						daN		
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
125	50	4.88	648303	3.90	648403	5.76	648503	182	135x110	105x80	11	51	157	550	440	
150	50	5.50	648304	4.51	648404	6.38	648504	210	135x110	105x80	11	60	157	700	560	
160	50	5.65	648314	4.66	648414	6.53	648514	215	135x110	105x80	11	60	157	750	600	
180	50	6.14	648305	5.16	648405	7.02	648505	242	135x110	105x80	11	70	157	900	720	
200	50	6.77	648306	5.79	648406	7.65	648506	252	135x110	105x80	11	70	157	1000	800	

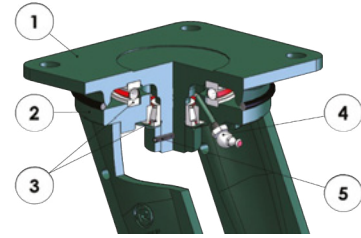
Electrowelded brackets EE HD - max carrying capacity 2300 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm						daN		
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
150	78	12.15	648315	10.61	648415	13.03	648515	218	175x140	140x105	14	50	166	1000	800	
150	78	12.15	648324	10.61	648424			223	200x160	160x120	17	50	166	1000	800	
200	78	13.72	648316	12.18	648416	14.60	648516	275	175x140	140x105	14	65	166	1600	1300	
250	60	14.82	648307	13.23	648407	15.70	648507	320	175x140	140x105	14	74	166	1500	1200	
250	78	16.50	648317	14.91	648417	17.38	648517	320	175x140	140x105	14	74	166	1600	1300	
250	78	17.56	648327	15.23	648427	18.44	648527	325	200x160	160x120	17	74	166	1900	1500	
300	60	18.24	648308	16.62	648408	19.12	648508	360	175x140	140x105	14	81	166	1600	1300	
300	60	19.30	648328	16.95	648428	20.18	648528	365	200x160	160x120	17	81	166	1750	1400	
300	78	20.61	648318	18.99	648418	21.49	648518	360	175x140	140x105	14	81	166	1600	1300	
300	78	21.67	648338	19.32	648438	22.55	648538	365	200x160	160x120	17	81	166	2300	1800	

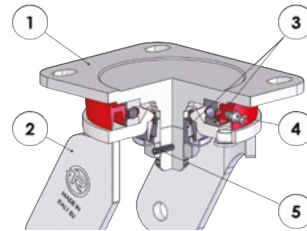
Electrowelded bracket EE EHD - max carrying capacity 2800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
300	100	29.80	648309	25.10	648409	384	250x200	210x160	19	78	2500	2000
400	100	44.91	648310	40.21	648410	475	250x200	210x160	19	95	2800	2200

Twin electrowelded brackets EEG MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
100	38+38	4.50	648062	3.75	648162	140	135x110	105x80	11	55	700	600
125	38+38	5.45	648063	4.70	648163	170	135x110	105x80	11	55	900	720

Options available to order:



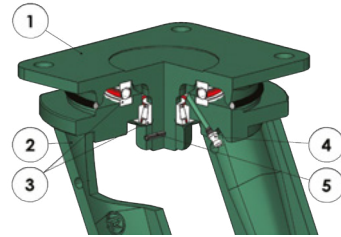
Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367



Bracket EE MHD with steering system

**"TR" POLYURETHANE WHEELS
WITH CAST IRON CENTRE**

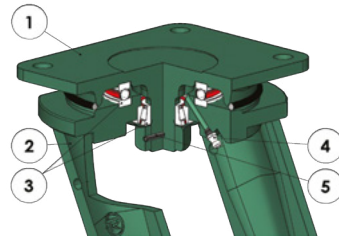
Twin electrowelded brackets EEG HD - max carrying capacity 2000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
125	50+50	11.00	648072	7.70	648172	210	175x140	140x105	14	50	1100	880
150	50+50	13.10	648074	8.70	648174	223	175x140	140x105	14	50	1400	1100
160	50+50	13.40	648084	9.00	648184	228	175x140	140x105	14	50	1500	1200
200	50+50	15.90	648066	11.30	648166	280	175x140	140x105	14	65	1600	1300
200	50+50	17.55	648076	12.70	648176	285	200x160	160x120	17	65	2000	1600

Twin electrowelded brackets EEG MHD - max carrying capacity 4300 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

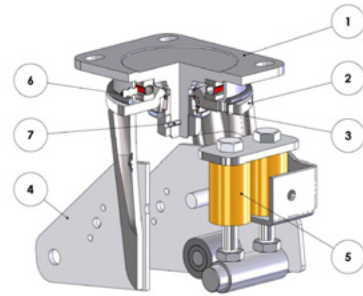
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
200	78+78	34.80	648086	25.05	648186	280	250x200	210x160	19	52	3200	2500
250	60+60	36.95	648067	27.20	648167	330	250x200	210x160	19	62	3000	2400
250	78+78	40.30	648077	30.55	648177	330	250x200	210x160	19	62	3500	2800
300	78+78	50.00	648078	40.00	648178	385	250x200	210x160	19	75	4300	3500

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES
MHD: see page 365-367


Electrowelded sprung-loaded brackets EES HD - max carrying capacity 1000 daN - damping up to 400 daN




- 1) Piastra: acciaio forgiato con perno integrato zincata elettroliticamente
 - 2) Forcella esterna fissa: orecchie imbutite elettrosaldade alla flangia, sagoma a U elettrosaldada alle orecchie, zincatura elettrolitica
 - 3) Organi di rotazione: cuscinetto assiale a sfere e cuscinetto a rulli conici
 - 4) Forcella interna mobile: orecchie elettrosaldade al tubetto
 - 5) Molle in poliuretano
 - 6) Ingrassatore
 - 7) Sistema anti allentamento dado
- Abbinabile a freno registrabile ad azionamento anteriore

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
160	50	8,47	649304	7,22	649404	9,53	649504	248	135x110	105x80	11	100	240	25	50	400	750	600	
200	50	9,47	649306	7,82	649406	10,18	649506	268	135x110	105x80	11	100	265	25	50	400	1000	800	
250	50	11,85	649308	10,64	649408	13,09	649508	316	135x110	105x80	11	110	315	25	50	400	1000	960	

 **Spring travel (mm):** maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension (daN):** in case of lighter loads than indicated, the bracket works with no damping

 **Spring tension (daN):** in case of heavier loads than indicated, the bracket works with no damping

Options available to order:



Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367

"TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

-  80-200 mm
-  95 Shore A
-  220-850 daN
4 km/h
-  170-680 daN
6 km/h
-  150-360 daN
-  -20 / +80 °C



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for applications with medium/heavy-duty loads, also with mechanical handling, with speed up to 6 km/h.


The excellent rolling resistance allows an easy handling of heavy loads even with wheels of small diameter.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, tilt trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons.

Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	150 kg	250 kg	350 kg	450 kg	550 kg	700 kg	850 kg
80 mm	3,2	---	---	---	---	---	
100 mm	2,3	5,2	---	---	---	---	
125 mm	1,7	4,5	6,5	---	---	---	
150 mm	1,2	3,8	6	7	8	---	
160 mm	<1	3,3	5	6,5	8	11,2	
200 mm	<1	3	4,9	6	7,8	10,5	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets :



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with the front brake and centralised brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 850 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 850 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.

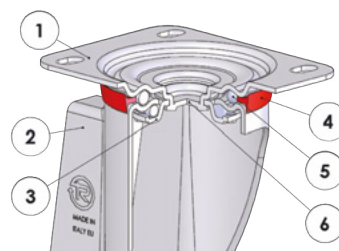
Options available to order:

The series 65AL wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.



mm		kg		COD.		mm		mm		daN		daN		daN		daN	
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	Static	4 km/h	4 km/h	6 km/h	6 km/h	6 km/h	6 km/h	6 km/h
80	25	0,20	652101	0,15	654101	12	30	28	8	280	150	220	170				
100	30	0,34	652102	0,25	654102	12	40	32	10	350	225	250	200				
125	35	0,50	652103	0,41	654103	12	40	32	10	500	280	400	320				
150	40	0,91	651104	0,66	653104	20	50	47	14	850	330	600	480				
160	50	1,25	652114	0,99	654114	20	58	47	14	950	350	800	640				
200	50	1,47	651106	1,16	653106	20	55	52	15	1000	360	850	680				
200	50	1,45	651206	1,16	653106	25	55	52	15	1000	360	850	680				

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.72	659301	0.52	658201	0.91	656501	107	100x85	80x60	9	37	120								200
100	30	0.94	659302	0.69	658202	1.08	656502	128	100x85	80x60	9	35	120								200
125	35	1.14	659303	0.89	658203	1.28	656503	156	100x85	80x60	9	37	120								220
150	40	1.66	659312	1.52	658112			182	100x85	80x60	9	50									220
150	40	2.34	659304	2.04	658104	2.63	656504	194	140x110	105x80	11	56	156								300
160	50	2.68	659514	2.38	658114	2.97	656514	198	140x110	105x80	11	56	156								300
200	50	3.05	659306	2.76	658106	3.25	656506	240	140x110	105x80	11	56	156								300

Options available to order:



Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

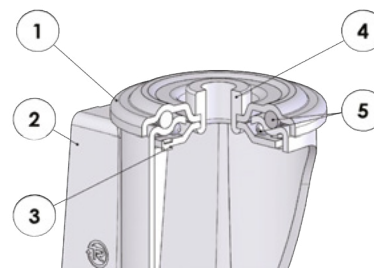
Standard-duty brackets NL - max carrying capacity 300 daN



mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2,61	654804	199	140x110	105x80	11	56	M10x1,5	65	300	
200	50	3,96	654806	240	140x110	105x80	11	56	M10x1,5	65	300	



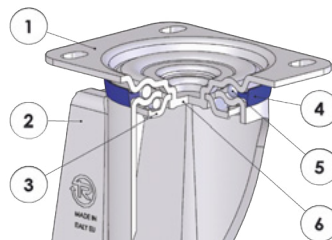
mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
160	50	2.84	654710	199	140x110	105x80	11	56	40	17,5	35	18,5	300
200	50	3.05	654716	240	140x110	105x80	11	56	40	17,5	35	18,5	300



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
80	25	0,65	656401	0,78	656801	107	73	12	37	120	200
100	30	0,88	656402	1,02	656802	128	73	12	35	120	200
125	35	1,08	656403	1,23	656803	156	73	12	37	120	220
150	40	2,20	656404	2,49	656804	188	102	20	56	156	300
160	50	2,54	656414	2,96	656814	193	102	20	56	156	300
200	50	2,95	656406	3,24	656806	236	102	20	56	156	300

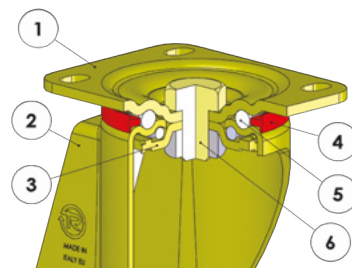
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
150	40	2.68	659604	2.04	658104	3.16	659704	194	140x110	105x80	11	58	178	500	
160	50	3.03	659614	2.38	658114	3.49	659714	199	140x110	105x80	11	58	178	500	
200	50	3.44	659606	2.76	658106	3.80	659706	240	140x110	105x80	11	50	178	500	

Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.20	657602	0.82	658602	1.35	656602	138	100x85	80x60	9	46	123	250	200
125	35	1.39	657603	0.97	658603	1.54	656603	161	100x85	80x60	9	44	123	350	280

Options available to order:

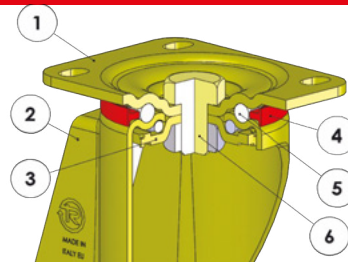


Directional lock for P-PT brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

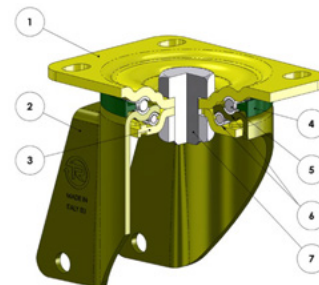
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		CODE		kg		CODE		mm		mm		mm		mm		daN		daN	
150	40	3.18	657604	2.19	658604	3.75	656604	200	140x110	105x80	11	70	126	600	480						
160	50	3.52	657514	2.53	658614	4.09	656614	205	140x110	105x80	11	70	126	750	600						
200	50	3.94	657606	2.48	658606	4.51	656606	250	140x110	105x80	11	70	126	750	600						

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 850 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
150	50	3,18	657544	2,19	658604	3,66	656674	200	140x110	105x80	11	70	126	600	480						
160	50	3,52	657554	2,53	658614	4,09	656684	205	140x110	105x80	11	70	126	800	640						
200	50	3,94	657546	2,48	658606	4,41	656676	250	140x110	105x80	11	70	126	850	680						

Options available to order:

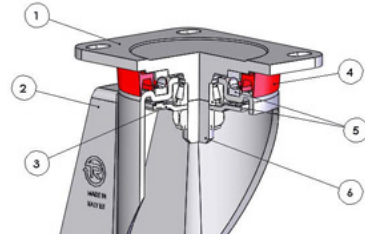


Directional lock for P-PT brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

Extra-heavy duty brackets EP - max carrying capacity 850 daN



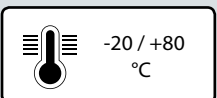
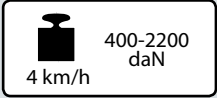
- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	30	1.44	657802	1.31	658802			140	100x85	80x60	9	46		250	200
125	35	1.79	657803	1.45	658803			164	100x85	80x60	9	48		350	280
150	40	3.44	657704	2.96	658704	4.01	656904	200	135x110	105x80	11	70	126	600	480
160	50	3.78	657714	3.30	658714	4.35	657014	205	135x110	105x80	11	70	126	800	640
200	50	4.19	657706	3.75	658706	4.76	656906	250	135x110	105x80	11	70	126	850	680



Technology at work

"TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity features, highly resistant to wear and tear.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses

Suitable for applications with medium/heavy-duty loads, also with mechanical handling, with speed up to 6 km/h.

The excellent rolling resistance allows a manually handling of heavy loads.

Examples of recommended applications: trolleys for indoor industrial handling, AGV trolleys, containers, electrical pallet trucks, tilt trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if large obstacles are present.



Force required to push or tow a wheel

 	100 kg	300 kg	500 kg	700 kg	1000 kg	2000 kg
150x30 mm	1.4	5.7	----	----	----	----
150x35 mm	1.9	5	----	----	----	----
175 mm	1	3.9	11.6	----	----	----
200 mm	< 1	2.2	6	10.4	19	----
250 mm	< 1	2	5.8	8.4	14.8	----
300 mm	< 1	1.7	4.5	7	10	19.3

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Combination with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 150-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 150-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 900 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.

















Extra-heavy duty brackets EP

Maximum carrying capacity 1200 daN - available diameters 150-250 mm
Top plate fitting. Available with adjustable rear brake.

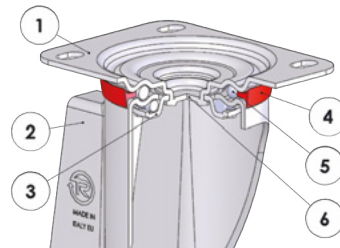
Options available to order:

The series 65GH wheels are also available with assembled thread guards. To order them add the "PF" suffix to the product code. To order loose thread guards see the Accessories section.


















													
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
150	30	1,45	652104	0,96	654104	17	30	40	12	700	280	400	320
150	35	1,60	652224	1,36	654224	20	35	47	14	825	290	490	390
175	35	2,03	652105	1,79	654105	20	35	47	14	900	350	650	520
200	45	3,51	652106	3,27	654106	20	45	47	14	1125	380	1000	800
200	45	3,42	652206	3,14	654206	25	45	52	15	1125	380	1000	800
250	50	5,50	652208	5,31	654108	20	50	52	15	1750	400	1200	960
250	50	5,59	652108	5,31	654108	25	50	52	15	1750	400	1200	960
300	70	12,31	652109	11,85	654109	30	70	62	16	3000	550	2200	1700

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel sheet
 - 2) Fork: electrolytically galvanised steel sheet
 - 3) Ball race ring: electrolytically galvanised steel sheet
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

														
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	30	2.81	656204	2.45	658204	3.10	656524	192	140x110	105x80	11	56	156	300
150	35	2.96	656214	2.60	658214	3.25	656534	192	140x110	105x80	11	56	156	300
175	35	3.41	656205	3.12	658205	3.69	656525	217	140x110	105x80	11	56	156	300
200	45	4.92	656206	4.70	658206	4.70	656526	240	140x110	105x80	11	56	156	300

Options available to order:

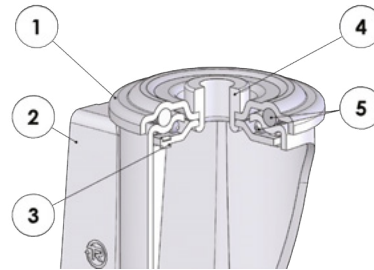


Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

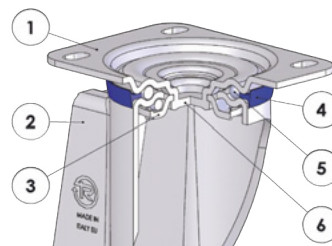
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel sheet
 - 2) Fork: electrolytically galvanised steel sheet
 - 3) Ball race ring: electrolytically galvanised steel sheet
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
150	30	2,68	656424	2,96	656824	188	102	20	56	156	300
150	35	2,83	656434	3,11	656834	188	102	20	56	156	300
175	35	3,29	656425	3,57	656825	212	102	20	56	156	300
200	45	4,77	656426	5,06	656826	236	102	20	56	156	300

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel sheet
 - 2) Fork: electrolytically galvanised steel sheet
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

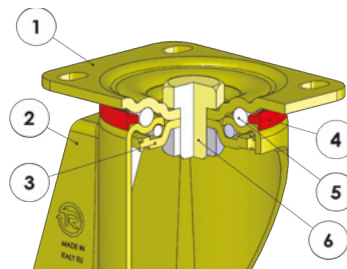
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	35	3.31	657214	2.60	658214	3.78	657334	194	140x110	105x80	11	58	178	490
200	45	5.31	657206	4.70	658206	5.25	657326	240	140x110	105x80	11	50	178	500

Options available to order:



Footguard
for brackets NL-
M-P-PT

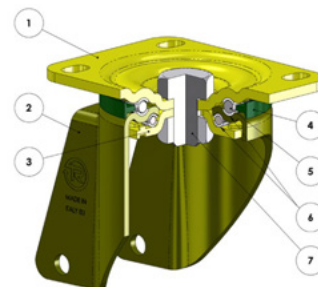
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
150	30	3,80	657404		2,36	658404		4,08	656624	200	140x110	105x80	11	70	126	400	320				
150	35	3,95	657414		2,51	658414		4,52	656634	200	140x110	105x80	11	70	126	490	390				
175	35	4,42	657405		3,00	658405		4,99	656625	225	140x110	105x80	11	70	126	650	520				
200	45	5,89	657406		4,43	658406		6,46	656626	250	140x110	105x80	11	70	126	750	600				
250	50	8,10	657408		7,00	658408		8,80	656628	298	140x110	105x80	11	66	173	750	600				

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 900 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
150	35	3,95	657444		2,51	658414		4,52	658314	200	140x110	105x80	11	70	126	490	390				
175	35	4,42	657435		3,00	658405		4,99	658305	225	140x110	105x80	11	70	126	650	520				
200	45	5,89	657436		4,43	658406		6,20	658306	250	140x110	105x80	11	70	126	900	800				

Options available to order:

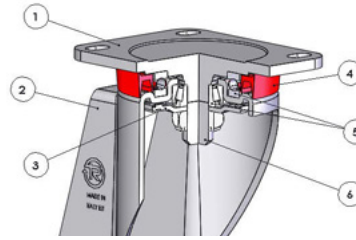


Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

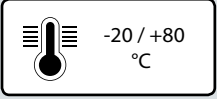
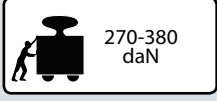
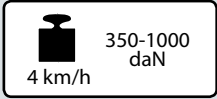
Extra-heavy duty brackets EP - max carrying capacity 1200 daN



- 1) Plate: white galvanised forged steel
- 2) Fork: white galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate
Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
150	30	4.06	657804	2.32	658804			200	135x110	105x80	11	70				400	320
150	35	4.21	657814	3.73	658814	4.78	656914	200	135x110	105x80	11	70	126			490	390
175	35	4.66	657805	4.24	658805	5.23	656915	225	135x110	105x80	11	70	126			650	520
200	45	6.14	657806	5.70	658806	6.71	656916	250	135x110	105x80	11	70	126			1000	800
250	50	11.14	657808	9.30	658808			300	175x140	140x105	14	66				1200	960

WHEELS WITH THICK "TR" POLYURETHANE AND ALUMINIUM CENTRE



Technical features

Tyre: very thick "TR" polyurethane, hardness 95 Shore A; excellent rolling resistance and elasticity, highly resistant to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Designed to improve trolleys' handling under heavy loads on uneven surfaces. The thick tread guarantees: excellent ability to overcome obstacles, reduced fatigue when pushing the trolley, excellent performance in presence of mechanical handling or mixed manual-mechanical handling, excellent performance over time, even at high speeds (up to 12 km/h).

Examples of recommended applications: trolleys for indoor handling in the logistics and automotive industry, electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for all types of industrial floors, except unpaved; it easily overcomes obstacles.



Force required to push or tow a wheel

 	100 kg	300 kg	400 kg	500 kg	650 kg	800 kg
100 mm	2.5	5.5	----	----	----	----
125 mm	2.4	5.3	----	----	----	----
160 mm	1.8	4.7	5.8	7	11	----
180 mm	1.5	4.4	5.6	6.5	10	----
200 mm	1.2	4	5.4	6.2	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-250 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 800 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 800 daN - available diameters 100-200 mm
Top plate fitting. Available with adjustable rear brake.



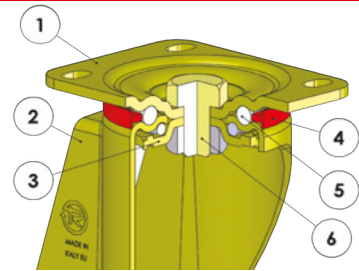
Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 1000 daN - available diameters 160-250 mm
Top plate fitting. Available with adjustable front brake.



mm		kg		kg		mm				daN	daN	daN	daN
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	Static	4 km/h	4 km/h	6 km/h
100	40	0,45	652302	0,37	654302	15	40	32	9	500	270	350	280
125	40	0,76	652303	0,53	654303	20	50	47	14	650	280	450	360
160	50	1,18	652304	0,95	654304	20	58	47	14,5	900	320	700	560
180	50	1,37	652305	1,15	654305	20	58	47	14	950	335	750	600
200	50	1,70	652306	1,47	654306	20	58	47	14	1000	350	800	640
250	50	2,40	652308	2,10	654308	20	55	52	15	1200	380	1000	800

Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial platesteel
 - 2) Fork: galvanised colonial platesteel
 - 3) Ball race ring: galvanised colonial platesteel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

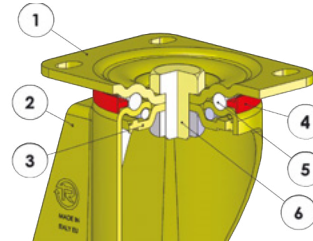
mm		kg		kg		kg		mm				daN			
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
100	40	1.33	655302	0.83	655412	1.50	655502	138	100x85	80x60	9	46	123	350	280

Options available to order:



Footguard
for brackets M-
P-PT

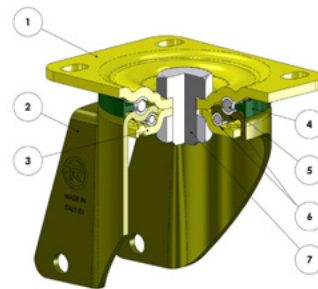
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
125	40	2.30	655303	1.63	655403	2.83	655503	170	140x110	105x80	11	70	126	450	360		
160	50	3.53	655310	2.04	655414	4.10	655504	205	140x110	105x80	11	70	126	700	560		
180	50	3.78	655305	2.36	655415	4.35	655505	228	140x110	105x80	11	70	126	750	600		
200	50	4.22	655316	2.76	655416	4.82	655506	250	140x110	105x80	11	70	126	750	600		
250	50	4.84	655318	3.74	655418	5.54	655508	298	140x110	105x80	11	66	126	750	600		

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 800 daN



- 1) Top Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball Race Ring: electrolytically galvanised steel plate
- 4) Dust Seal: dark green polyamide 6
- 5) Swivel actions: double ball ring with grease lubrication
- 6) Ball race: hardened carbon steel grooves
- 7) King pin: steel screw, class 8.8 and stainless steel nut
Available with rear adjustable brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
160	50	3,34	655344	2,04	655414	3,97	655544	205	140x110	105x80	11	70	126	700	560		
180	50	3,71	655335	2,36	655415	4,35	655535	228	140x110	105x80	11	70	126	750	600		
200	50	4,36	655336	2,76	655416	4,89	655536	250	140x110	105x80	11	70	126	800	640		

Options available to order:

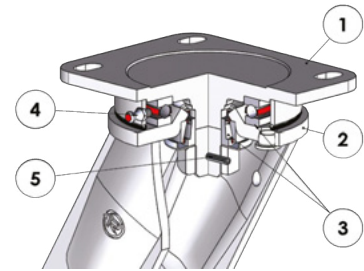


Directional lock for P brackets d. 150-200 mm



Footguard for brackets M-P-PT

Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

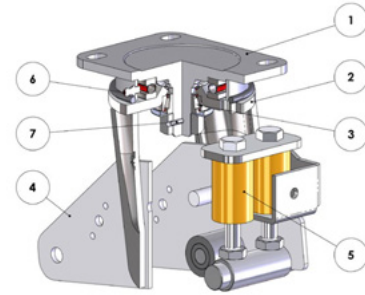
mm		kg		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
100	40	3.36	655602	2.38	655702	4.24	655802	170	135x110	105x80	11	51	157			350	280
125	40	3.68	655603	2.70	655703	4.56	655803	182	135x110	105x80	11	51	157			450	360
160	50	4.18	655614	3.19	655714	5.06	655814	215	135x110	105x80	11	60	157			700	560
180	50	4.56	655605	3.58	655705	5.45	655805	242	135x110	105x80	11	70	157			750	600
200	50	4.88	655606	3.90	655706	6.22	655806	252	135x110	105x80	11	70	157			800	640

Options available to order:



Directional lock for brackets EE MHD
 - EE HD - EEG MHD - EES MHD:
 see page 365-367


Electrowelded sprung-loaded brackets EES MHD - max carrying capacity 1000 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
160	50	7,07	655004	5,82	657104	8,13	654904	248	135x110	105x80	11	100	240	25	50	400	700	560	
200	50	7,67	655006	6,42	657106	8,78	654906	268	135x110	105x80	11	100	265	25	50	400	800	640	
250	50	8,75	655008	7,54	657108	9,99	654908	316	135x110	105x80	11	110	315	25	50	400	1000	800	

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

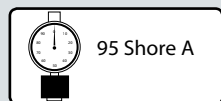
 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order:



Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367

"TR" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE



Description

Tyre: very thick TR-Roll polyurethane with ergonomic round profile; hardness 95 Shore A; excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Designed to improve trolleys' manual handling under heavy loads. The round profile reduces the start-up coefficient when the castors are positioned at 90° from the line of movement and therefore greatly reduces the amount of effort required by the operators when handling trolleys.

Combined with appropriate brackets they guarantee excellent performance for mechanical handling up to 12 km/h.

Examples of application: trolleys for the automotive industry, lean manufacturing trolleys and electrical pallet trucks.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for all types of industrial floors, except unpaved; it easily overcomes obstacles.



Force required to push or tow a wheel

 	100 kg	250 kg	400 kg	500 kg	650 kg	800 kg
125 mm	2,5	5	7	---	---	---
160 mm	1,8	4,7	6	7	11	---
200 mm	1,2	4,5	5,4	6,2	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Fittings with brackets



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 800 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 800 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD















Maximum carrying capacity 800 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



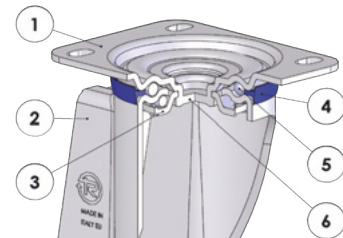
Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 800 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.


















													
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN
125	40	0,73	652503	0,51	654503	20	50	47	14	650	250	450	360
160	50	1,11	652504	0,89	654504	20	58	47	14,5	900	280	700	560
200	50	1,68	652506	1,44	654506	20	58	47	14	1000	300	800	640
250	50	2,40	652508	2,10	654508	20	55	52	15	1200	330	1000	800

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electroplated galvanised steel
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with adjustable total front foot brake

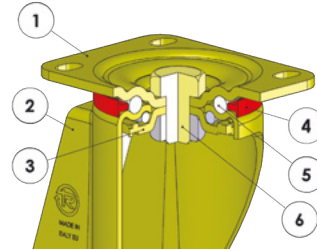
														
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
160	50	2,81	655904	2,10	656004	3,28	656304	199	140x110	105x80	11	58	178	500
200	50	3,52	655906	2,87	656006	3,90	656306	240	140x110	105x80	11	50	178	500

Options available to order:



Footguard
for brackets NL-
M-P-PT

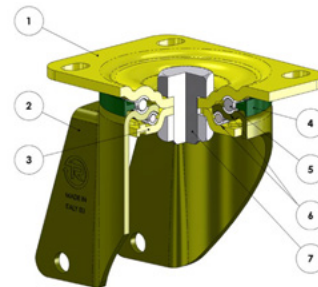
Heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
125	40	2,27	655913	1,63	656013	2,83	656313	170	140x110	105x80	11	70	126	450	360						
160	50	3,46	655914	2,28	656014	4,27	656314	205	140x110	105x80	11	70	126	700	560						
200	50	4,14	655916	2,68	656016	4,74	656316	250	140x110	105x80	11	70	126	750	640						

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 900 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm		kg		COD.		kg		COD.		mm		mm		mm		mm		daN		daN	
160	50	3,34	655954	2,28	656014	3,97	656354	205	140x110	105x80	11	70	126	700	560						
200	50	4,36	655956	2,68	656016	4,89	656356	250	140x110	105x80	11	70	126	800	640						

Options available to order:



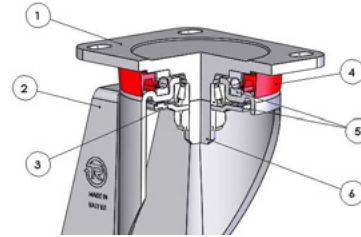
Footguard for brackets NL M-P-PT



Directional lock for brackets P-PT diam. 160-200 mm

"TR" POLYURETHANE WHEELS WITH ERGONOMIC ROUND PROFILE AND ALUMINIUM CENTRE

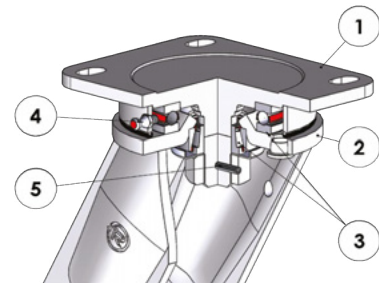
Extra-heavy duty brackets EP - max carrying capacity 800 daN



- 1) Plate: white galvanised forged steel
 - 2) Fork: white galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,62	655924	3,21	656024	4,14	656324	205	135x110	105x80	11	70	126	700	560
200	50	4,40	655926	3,96	656026	4,97	656326	250	135x110	105x80	11	70	126	800	640

Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

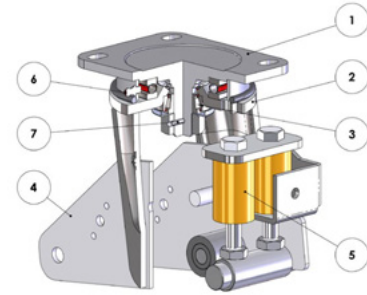
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	40	3,65	655933	2,67	656033	4,53	656333	182	135x110	105x80	11	51	157	450	360
160	50	4,11	655934	3,12	656034	4,99	656334	215	135x110	105x80	11	60	157	700	560
200	50	4,80	655936	3,82	656036	6,14	656336	252	135x110	105x80	11	70	157	800	640

Options available to order:



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES MHD:
see page 365-367


Electrowelded sprung-loaded bracket EES MHD - max load capacity 800 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
160	50	7,07	657904	5,82	658504	8,13	659904	248	135x110	105x80	11	100	240	25	50	400	700	560
200	50	7,67	657906	6,42	658506	8,78	659906	268	135x110	105x80	11	100	265	25	50	400	800	640

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

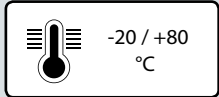
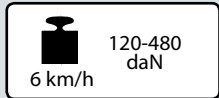
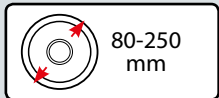
 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order:



Directional lock for brackets EE MHD
- EE HD - EEG MHD - EES MHD:
see page 365-367

"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent rolling resistance and elasticity, highly resistant to wear.

Centre: polyamide 6.

Hub with plain bore hole which directly houses the axle.

Hub with cylindrical roller bearing with plastic cage. Also available with stainless steel roller bearings.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Excellent for trolleys and machinery with medium/heavy-duty loads, also in presence of continuous handling.

Also suitable for mechanical or mixed manual-mechanical handling, up to 6 km/h.

Its excellent rolling resistance guarantees minimum effort by manual handling.

Examples of recommended applications: trolleys for indoor industrial handling, trolleys for the food and chemical industry, manual and electric pallet trucks, equipment for dry cleaner's, slaughterhouses, meat factories.

Environments of use

Suitable for indoor environments, also in presence of medium-harsh chemical agents, alcohol, glycol and water. They are suitable for industrial environments.

Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors



They do not mark or damage delicate floors.

Suitable on tiles, resin-cement, asphalt even in presence of small obstacles on the path.

Not recommended on unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg	800 kg	1000 kg
80 mm	5	---	---	---	---	---	---	---
100 mm	4.5	8	---	---	---	---	---	---
125 mm	4.2	7	---	---	---	---	---	---
150 mm	2.5	4	6	8				
175 mm	1.5	3.7	5.5	7.5	---	---	---	---
200 mm	< 1	3.5	5	8.5	11	17	---	---
250 mm	< 1	3	4	5	10	13	16	22

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings. Available with front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 600 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX

Maximum carrying capacity 600 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.










Options available to order

The series 66 wheels are also available with assembled thread guards. To order them add the "PF" suffix to the wheel+bracket code. To order loose thread guards see the Accessories section.












SERIES **66**

**"TR" POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**

















														
mm	mm	kg	COD.	mm	mm.	daN	daN	daN						
80	25	0,10	661101	12	39	225	100	150						
100	30	0,16	661102	12	44	300	135	200						
125	30	0,25	661103	15	44	400	150	250						
150	40	0,45	661104	20	59	600	240	400						
175	40	0,62	661105	20	59	680	270	470						
200	50	0,78	661106	20	59	800	300	600						
200	50	0,75	661206	25	59	800	300	600						
250	60	1,41	661108	25	88	1200	400	1000						

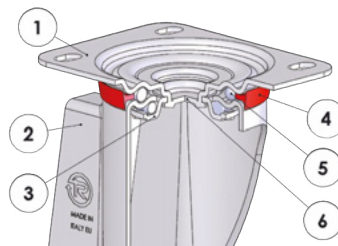


															
mm	mm	kg	COD.	kg	COD.	mm	mm	daN	daN	daN					
80	25	0,13	663101	0,13	663201	12	39	225	100	150					
100	30	0,19	663102	0,19	663202	12	44	300	135	200					
125	30	0,28	663103	0,28	663203	15	44	400	150	250					
150	40	0,54	663104	0,54	663204	20	59	600	240	400					
175	40	0,73	663105	0,73	663205	20	59	680	270	470					
200	50	0,89	663106	0,89	663206	20	59	800	300	600					
200	50	0,85	663116			25	59	800	300	600					
250	60	1,52	663108	1,52	663208	25	88	1200	400	1000					



															
mm	mm	kg	COD.	kg	COD.	mm	mm.	mm	mm	daN	daN	daN	daN		
80	25	0,15	662101	0,10	664101	12	32	28	10	225	100	150	120		
100	30	0,25	662102	0,15	664102	12	40	32	11,5	300	135	200	160		
125	30	0,33	662103	0,25	664103	15	40	35	13,5	400	150	250	200		
175	40	0,85	662105	0,60	664105	20	55	47	14	680	270	470	380		
200	50	1,07	662106	0,76	664106	20	55	52	15	800	300	600	480		
200	50	1,06	662126	0,76	664106	25	55	52	15	800	300	600	480		

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
80	25	0,61	664201	0,37	665701	0,80	666601	107	100x85	80x60	9	37	120	150
100	30	0,75	664202	0,44	665702	0,90	666602	128	100x85	80x60	9	35	120	200
125	30	0,91	664203	0,66	665703	1,05	666603	156	100x85	80x60	9	37	120	220
125PG	30	1,10	664213	0,86	665713	1,30	666643	156	140x110	105x80	11	37	120	220
150	40	1,81	664204	1,44	665704	2,09	666604	194	140x110	105x80	11	56	156	300
175	40	1,99	664205	1,70	665705	2,27	666605	217	140x110	105x80	11	56	156	300
200	50	2,19	664206	1,97	665706	2,45	666606	240	140x110	105x80	11	56	156	300
80	25	0,63	664501	0,41	665901	0,84	666621	107	100x85	80x60	9	37	120	150
100	30	0,78	664502	0,46	665902	0,93	666622	128	100x85	80x60	9	35	120	200
125	30	0,93	664503	0,68	665903	1,08	666623	156	100x85	80x60	9	37	120	220
125PG	30	1,13	664513	0,89	665913	1,33	666653	156	140x110	105x80	11	37	120	220
150	40	2,00	664504	1,53	665904	2,18	666624	194	140x110	105x80	11	56	156	300
175	40	2,12	664505	1,79	665905	2,38	666625	217	140x110	105x80	11	56	156	300
200	50	2,29	604506	2,08	665906	2,53	666626	240	140x110	105x80	11	56	156	300

Options available to order



Wheel with ball bearings fitted with NL bracket



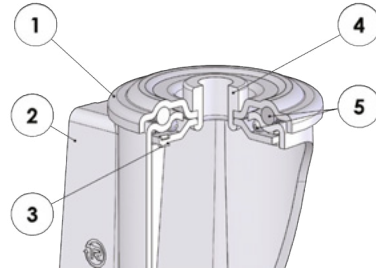
Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

**"TR" POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
80	25	0.54	667701	0.72	666401	107	73	12	37	120	150				
100	30	0.68	667702	0.89	666402	128	73	12	35	120	200				
125	30	0.85	667703	1.00	666403	156	73	12	37	120	220				
150	40	1.67	667704	1.96	666404	188	102	20	56	156	300				
175	40	1.86	667705	2.15	666405	212	102	20	56	156	300				
200	50	2.09	667706	2.37	666406	236	102	20	56	156	300				
80	25	0.57	667801	0.75	666421	107	73	12	37	120	150				
100	30	0.71	667802	0.91	666422	128	73	12	35	120	200				
125	30	0.88	667803	1.03	666423	156	73	12	37	120	220				
150	40	1.76	667804	2.05	666424	188	102	20	56	156	300				
175	40	1.97	667805	2.26	666425	212	102	20	56	156	300				
200	50	2.20	667806	2.48	666426	236	102	20	56	156	300				

Options available to order

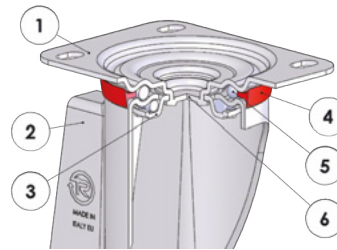


Wheel with ball bearings fitted with NL bracket



Footguard for brackets NL-M-P-PT

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN



INOX

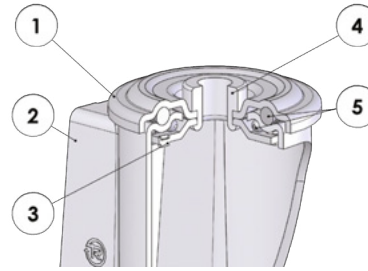
- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
80	25	0.60	664401	0.34	665401	0.77	666701	107	100x85	80x60	9	37	120	150	
100	30	0.66	664402	0.41	665402	0.84	666702	128	100x85	80x60	9	35	120	200	
125	30	0.81	664403	0.64	665403	0.95	666703	156	100x85	80x60	9	37	120	220	
150	40	1.75	664404	1.31	665404	2.04	666704	194	140x110	105x80	11	56	156	300	
175	40	1.93	664405	1.49	665405	2.21	666705	215	140x110	105x80	11	56	156	300	
200	50	2.16	664406	1.70	665406	2.44	666706	240	140x110	105x80	11	56	156	300	
80	25	0.64	664601	0.38	665601	0.81	666721	107	100x85	80x60	9	37	120	150	
100	30	0.68	664602	0.44	665602	0.87	666722	128	100x85	80x60	9	35	120	200	
125	30	0.84	664603	0.67	665603	0.98	666723	156	100x85	80x60	9	37	120	220	
150	40	1.84	664604	1.40	665604	2.13	666724	194	140x110	105x80	11	56	156	300	
175	40	2.04	664605	1.60	665605	2.32	666725	215	140x110	105x80	11	56	156	300	
200	50	2.27	664606	1.81	665606	2.55	666726	240	140x110	105x80	11	56	156	300	

"TR" POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

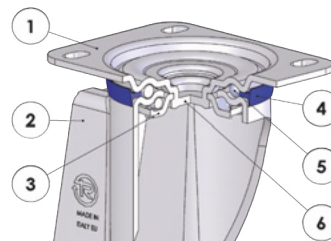
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN						
80	25	0.54	667901	0.71	668801	107	73	12	37	120	150						
100	30	0.62	667902	0.83	668802	128	73	12	35	120	200						
125	30	0.79	667903	0.94	668803	156	73	12	37	120	220						
150	40	1.55	667904	1.83	668804	188	102	20	56	156	300						
175	40	1.74	667905	2.02	668805	212	102	20	56	156	300						
200	50	2.10	667906	2.36	668806	236	102	20	56	156	300						
80	25	0.58	668001	0.75	668821	107	73	12	37	120	150						
100	30	0.65	668002	0.85	668822	128	73	12	35	120	200						
125	30	0.82	668003	0.97	668823	156	73	12	37	120	220						
150	40	1.64	668004	1.32	668824	188	102	20	56	156	300						
175	40	1.85	668005	2.13	668825	212	102	20	56	156	300						
200	50	2.21	668006	2.47	668826	236	102	20	56	156	300						

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	2.16	664304	1.44	665704	2.62	668704	194	140x110	105x80	11	58	178	400
200	50	2.58	664306	1.97	665706	3.00	668706	240	140x110	105x80	11	50	178	500
150	40	2.35	664804	1.53	665904	2.71	668904	194	140x110	105x80	11	58	178	400
200	50	2.68	664806	2.08	665906	3.08	668906	240	140x110	105x80	11	50	178	500
200	50	2.93	665306	2.32	665806	3.35	669206	240	140x110	105x80	11	50	178	500

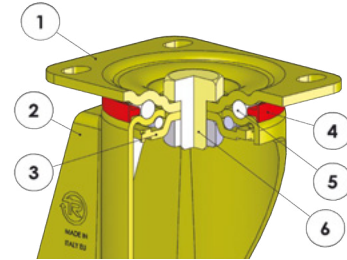
Options available to order



Footguard for brackets NL-M-P-PT

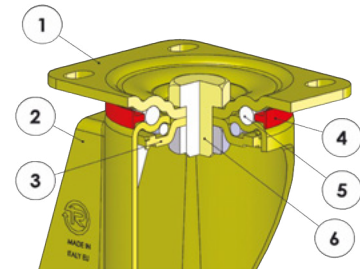
**"TR" POLYURETHANE WHEELS
WITH POLYAMIDE 6 CENTRE**

Medium-heavy duty brackets P - max carrying capacity 600 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
100	30	1.04	667102	0.55	668102	1.19	669002	138	100x85	80x60	9	46	123	200
125	30	1.17	667103	0.75	668103	1.31	669003	161	100x85	80x60	9	44	123	250
100	30	1.08	667302	0.58	668302	1.22	669102	138	100x85	80x60	9	46	123	200
125	30	1.20	667303	0.78	668303	1.34	669103	161	100x85	80x60	9	44	123	250



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
150	40	2.79	667604	1.37	668604	3.36	669004	200	140x110	105x80	11	70	126	400
175	40	3.01	667605	1.58	668605	3.57	669005	225	140x110	105x80	11	70	126	470
200	50	3.25	667606	1.79	668606	3.82	669006	250	140x110	105x80	11	70	126	600
150	40	2.89	667504	1.46	668504	3.46	669104	200	140x110	105x80	11	70	126	400
175	40	3.11	667505	1.69	668505	3.68	669105	225	140x110	105x80	11	70	126	470
200	50	3.36	667506	1.90	668506	3.93	669106	250	140x110	105x80	11	70	126	600

Options available to order



Wheel with ball bearings fitted with P bracket



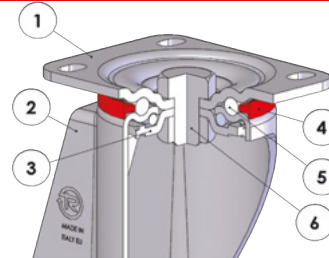
Directional lock for brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

Stainless steel medium-heavy duty brackets PX - max carrying capacity 600 daN

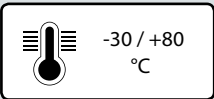
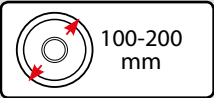
INOX



- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: screw and nut in stainless steel
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
150	40	2.75	667004	1.36	667114	3.32	667214	200	140x110	105x80	11	70	126	400			
175	40	2.95	667005	1.56	667115	3.52	667215	225	140x110	105x80	11	70	126	470			
200	50	3.20	667006	1.76	667116	3.77	667216	250	140x110	105x80	11	70	126	600			
150	40	2.77	667314	1.55	667414	3.34	667514	200	140x110	105x80	11	70	126	400			
175	40	3.09	667315	1.69	667415	3.66	667515	225	140x110	105x80	11	70	126	470			
200	50	3.30	667316	1.87	667416	3.87	667516	250	140x110	105x80	11	70	126	600			

POLYAMIDE 6 SOLID WHEELS FOR HEAVY LOADS



INOX

Description

Polyamide 6 solid wheels for heavy-duty loads, hardness 70 Shore D.

Hub with plain bore hole which directly houses the axle.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding. The wheel is also available without bearings.

Uses

Intended mainly for static uses, for high carrying capacities.

The excellent rolling resistance ensures that a minimum manual effort is needed when handling, but only on smooth floors.

Examples of recommended applications: trolley for internal use in the food and canning industries, tannery equipment, flower trolley, manual pallet trucks, mobile scaffolding.

Environments of use

Designed for industrial environments, even in presence of aggressive chemical substances. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable only for smooth and compact floors.

Not suited for areas with obstacles.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	700 kg	900 kg
100 mm	2.5	3.5	4.5	---	---	---
125x35 mm	2	2.8	3.8	---	---	---
125x45 mm	2.2	3.2	4	6.5	---	---
150 mm	1.8	2.3	3.5	5.5	7	---
200 mm	1.2	1.8	2.7	3.4	5.5	8

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 125 mm
Top plate fitting. Available with front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Stainless steel medium-heavy duty brackets PX

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 900 daN - available diameters 125-200 mm
Top plate fitting. Available with front brake and adjustable rear brake.



Twin electrowelded brackets EEG HD

Maximum carrying capacity 1800 daN - available diameters 125-200 mm
Top plate fitting.

Options available to order



Wheel in solid polyamide 6 for extremely heavy loads












Polyamide 6 wheel for heavy loads with customised colours














68^P

POLYAMIDE 6 SOLID WHEELS FOR HEAVY-DUTY LOADS

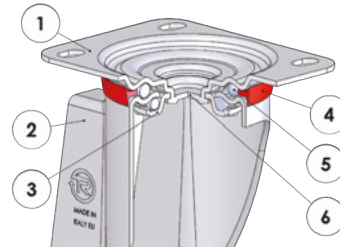


															
mm	mm	kg	CODE	mm	mm	daN	daN	daN							
100	35	0.26	681202	20	44	450	200	400							
125	45	0.36	681203	20	58	700	200	650							
150	45	0.50	681204	20	58	800	300	750							
200	50	0.90	681206	20	58	1000	400	900							



															
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN			
100	35	0.33	683402	0.20	682202	15	40	35	11	450	350	350			
125	35	0.42	683403	0.29	682203	15	40	35	11	500	450	450			
125	45	0.61	683413	0.39	682213	20	56	47	13	700	400	650			
125	45	0.60	683423	0.39	682213	25	56	47	13	700	400	650			
150	45	0.74	683404	0.52	682204	20	56	47	13	800	455	750			
150	45	0.73	683424	0.52	682204	25	56	47	13	800	455	750			
200	50	1.10	683406	0.89	682206	20	56	47	13	1000	650	900			
200	50	1.08	683426	0.89	682206	25	56	47	13	1000	650	900			

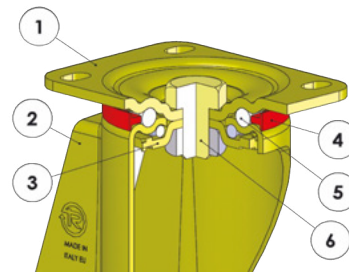
Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
125	45	1.48	684523	1.44	685113	1.70	686813	166	140x110	105x80	11	57	156	300	
125	45	1.73	684873	1.69	685173	1.95	686863	166	140x110	105x80	11	57	156	300	

Medium-heavy duty brackets P - max carrying capacity 350 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with total front foot brake

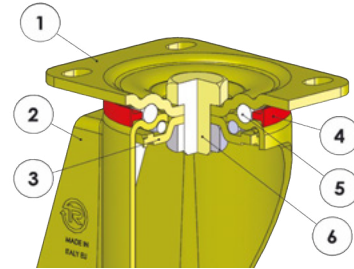
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	35	1.13	687522	0.74	688522	1.28	686912	138	100x85	80x60	9	46	123	350	
100	35	1.20	684972	0.81	685372	1.35	686952	138	100x85	80x60	9	46	123	350	
125	35	1.35	684973	0.83	685373	1.46	686953	161	100x85	80x60	9	48	123	350	

Options available to order



Directional lock for brackets d. 150-200 mm

Medium-heavy duty brackets P - max carrying capacity 750 daN

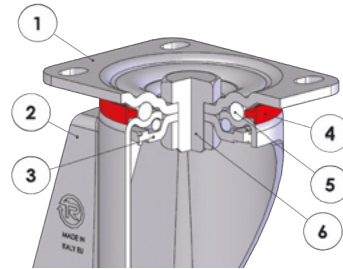


- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut
Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
125	45	2.28	687533	1.49	688533	2.83	686913	170	140x110	105x80	11	70	156	650
150	45	2.96	687524	1.83	688524	3.14	686914	200	140x110	105x80	11	70	156	750
200	50	3.37	687526	1.91	688526	3.68	686916	250	140x110	105x80	11	70	156	750
125	45	2.53	684993	1.74	685393	3.08	686933	170	140x110	105x80	11	70	156	650
150	45	3.20	684974	2.07	685374	3.77	686954	200	140x110	105x80	11	70	156	750
200	50	3.64	684976	2.18	685376	3.92	686956	250	140x110	105x80	11	70	156	750

Stainless steel medium-heavy duty brackets PX- max carrying capacity 750 daN

INOX



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: screw and nut in stainless steel A
Available with adjustable total rear foot brake

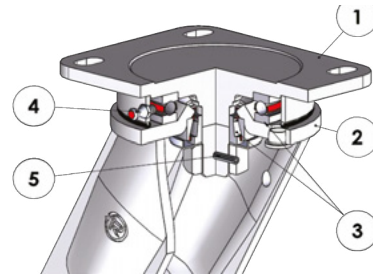
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
125	45	2.52	687033	1.10	687133	3.07	687233	170	140x110	105x80	11	70	156	650
150	45	2.86	687014	1.42	687124	3.43	687224	200	140x110	105x80	11	70	156	750
200	50	3.32	687016	1.88	687126	3.88	687226	250	140x110	105x80	11	70	156	750

Options available to order



Directional lock
for brackets P
d. 150-200 mm

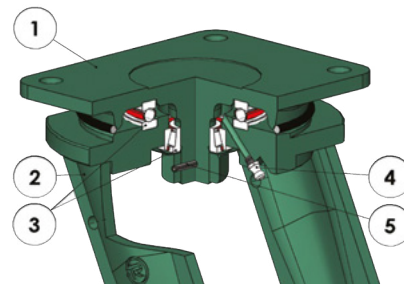
Electrowelded brackets EE MHD - max carrying capacity 900 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	
125	45	3.26	688303	2.03	688403	4.14	688703	182	135x110	105x80	11	51	157			650	
150	45	3.50	688304	2.51	688404	4.38	688704	210	135x110	105x80	11	60	157			750	
200	50	4.02	688306	3.04	688406	4.90	688706	252	135x110	105x80	11	70	157			900	
125	45	3.51	689303	2.28	689403	4.39	689803	182	135x110	105x80	11	51	157			650	
150	45	3.74	689304	2.75	689404	4.62	689804	210	135x110	105x80	11	60	157			750	
200	50	4.22	689306	3.24	689406	5.10	689806	252	135x110	105x80	11	70	157			900	

Twin electrowelded brackets EEG HD - max carrying capacity 1800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

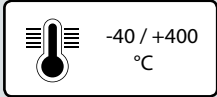
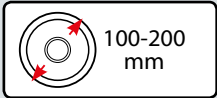
mm		kg		kg		mm		mm		mm		mm		daN	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	
125	45+45	9.35	688072	4.90	688172	210	175x140	140x105	14	50				1300	
150	45+45	9.62	688074	5.20	688174	223	175x140	140x105	14	50				1500	
200	50+50	12.40	688066	7.60	688166	285	200x160	160x120	17	65				1800	

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EED MHD - EES
MHD: see page 365-367

CAST IRON SOLID WHEELS



Description

Cast iron solid wheels.

Hub with plain bore which directly houses the axle.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre. The wheel is also available without bearings.

Uses

Intended mainly for static uses and for high carrying capacities.

The model with plain bore is resistant to temperatures from -40 C to +400°C and is, therefore, particularly suitable for oven applications. To use a castor at temperatures above 100 °C, the wheel needs to be fitted with a specific bracket for high-temperature use.

Examples of recommended applications: trolleys for workshops, industrial ovens.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not recommended in humid environments and in presence of strong organic acids and concentrated mineral acids.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors



Suitable only for smooth and compact floors.

Not suited for areas with obstacles.

They may damage fragile floors.



Force required to push or tow a wheel

 	100 kg	300 kg	500 kg	700 kg	1000 kg	1400 kg
100x30 mm	< 1	5.6	15	----	----	----
100x40 mm	< 1	4.3	11.2	----	----	----
125 mm	< 1	3.2	7.6	14	----	----
150 mm	< 1	2.5	4.7	7.4	12.2	----
200 mm	< 1	1.7	3.5	5.8	10.3	18

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-150 mm
Top plate fitting.



Medium-heavy duty brackets P

Maximum carrying capacity 750 daN - available diameters 125-200 mm
Top plate fitting.



Extra-heavy duty brackets EP

Maximum carrying capacity 1100 daN - available diameters 150-200 mm
Top plate fitting.

Options available to order












Steel wheel for extremely heavy loads















Wheel with brackets NL and P for high temperatures

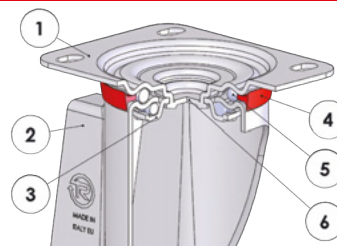


																
mm	mm	kg	CODE	mm	mm	daN	daN	daN								
100	30	0.62	691102	15	34	800	260	500								
100	30	0.70	691112	15	44	800	260	500								
100	40	0.92	691202	20	44	900	300	600								
125	40	1.09	691103	15	44	1200	350	700								
125	40	1.12	691203	20	44	1200	350	700								
150	45	1.81	691104	20	59	1500	500	1200								
200	45	3.34	691106	20	59	1900	600	1400								
200	45	3.19	691206	25	59	1900	800	1400								



																
mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN				
100	38	1.33	692122	1.14	694102	15	40	42	13	900	300	600				
100	38	1.28	692102	1.14	694102	20	40	42	13	900	300	600				
125	40	1.67	692103	1.43	694103	20	40	47	14	1200	350	700				
150	50	2.46	692104	2.18	694104	20	55	47	14	1500	500	1200				
200	50	3.64	692106	3.29	694106	20	55	52	15	1900	600	1400				
200	50	3.57	692126	3.57	694106	25	56	52	15	1900	600	1400				

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

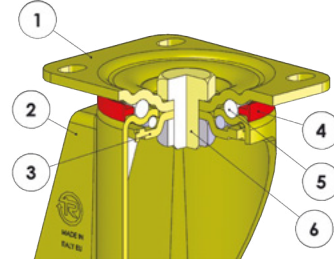
mm		kg		kg		mm					daN		
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN		
100	30	1.16	694802	0.89	695702	128	100x85	80x60	9	35	200		
100	40	1.50	694812	1.16	695712	128	100x85	80x60	9	35	200		
125	40	1.73	694803	1.38	695703	156	100x85	80x60	9	37	220		
150	45	3.24	694804	2.87	695704	194	140x110	105x80	11	56	300		
100	40	1.91	694902	1.57	695802	128	100x85	80x60	9	35	200		
125	40	2.31	694903	1.96	695803	156	100x85	80x60	9	37	220		
150	50	3.89	694904	3.52	695804	194	140x110	105x80	11	56	300		

Options available to order



Wheel with NL and P brackets for high temperatures

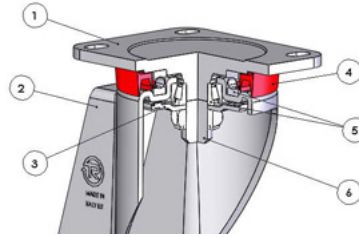
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: galvanised colonial steel plate
- 2) Fork: galvanised colonial steel plate
- 3) Ball race ring: galvanised colonial steel plate
- 4) Dust seal: orange polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: steel bolt in grade 8.8 steel and steel nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN									
125	40	1.96	697603	1.46	698603	161	100x85	80x60	9	48	350												
150	45	4.16	697504	2.73	698504	200	140x110	105x80	11	70	750												
200	45	5.81	697506	4.35	698506	250	140x110	105x80	11	70	750												
125	40	2.75	696203	2.05	696303	161	100x85	80x60	9	48	350												
150	50	4.81	696204	3.38	696304	200	140x110	105x80	11	70	750												
200	50	6.11	696206	4.65	696306	250	140x110	105x80	11	70	750												

Extra-heavy duty brackets EP - max carrying capacity 1100 daN



- 1) Plate: white galvanised forged steel
- 2) Fork: white galvanised forged steel
- 3) Lower bearing protection ring
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: axial ball bearing and tapered roller bearing
- 6) King pin: integrated with the machine-processed plate

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN										
150	45	4.43	697804	3.94	698804	200	135x110	105x80	11	70	1100										
200	45	6.03	697806	5.62	698806	250	135x110	105x80	11	70	1100										
150	50	5.08	697604	4.59	697704	200	135x110	105x80	11	70	1100										
200	50	6.30	697606	5.92	697706	250	135x110	105x80	11	70	1100										

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE

-  100-250 mm
-  70 Shore A
-  180-500 daN
4 km/h
-  140-400 daN
6 km/h
-  180-300 daN
-  -20 / +70 °C



Description

Tyre: Sigma Elastic rubber, hardness 70 Shore A, excellent elasticity and good resistance to tear and wear.

Centre: made of cast aluminium.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses


The excellent elasticity guarantees an easy overcoming of obstacles, vibration damping and noise reduction during use.

Combined with appropriate brackets, they are also suitable for mechanical handling up to 6 km/h.

Good rolling resistance means less fatigue for the operator handling the equipment. Examples of recommended applications: trolleys for indoor and outdoor industrial-handling, manual pallet trucks, heavy waste collection bins.

Environments of use

Industrial environments, even in presence of humidity. Not suitable in presence of strong acids and solvents.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floor, even outdoors.

Allows easily overcoming the obstacles and does not damage floors.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg
100 mm	3	---	---	---	---
125x40 mm	2.5	5	---	---	---
160 mm	1.8	3.5	5	---	---
180 mm	2.3	4	6	---	---
200 mm	1	2.4	5	6.5	9
250 mm	1	2.4	5	6.5	9

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets :



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 100-200 mm
Top plate fitting. Available with front brake. and centralised brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 160-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 500 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Heavy-duty PT brackets with hardened ball race grooves

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD

Maximum carrying capacity 500 daN - available diameters 100-250 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG MHD

Maximum carrying capacity 400 daN - available diameters 100-125 mm
Top plate fitting.



Twin electrowelded brackets EEG MHD - EEG HD

Maximum carrying capacity 1000 daN - available diameters 160-200 mm
Top plate fitting.



Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 500 daN - available diameters 160-250 mm
Top plate fitting. Available with adjustable front brake.

Options available to order

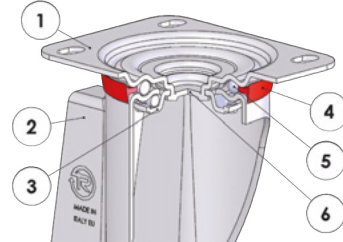


Wheel with grey rubber tyre



mm	mm	kg	CODE	kg	CODE	mm	mm.	mm	mm	daN	daN	daN	daN
100	40	0.44	721202	0.39	723102	15	40	32	9	250	180	180	140
125	40	0.76	721103	0.50	723003	20	40	47	14	280	200	200	160
125	40	0.78	721203	0.52	723103	20	50	47	14	280	200	200	160
125	50	0.84	721213	0.62	723113	20	59	47	14	320	230	230	180
160	50	1.22	721210	0.96	723104	20	58	47	14	420	300	300	240
160	50	1.20	721110	0.96	723104	25	58	47	14	420	300	300	240
180	50	1.47	721205	1.21	723105	20	60	47	14	490	250	350	280
200	50	2.00	721306	1.71	723126	20	58	47	14	1000	300	500	400
200	50	2.00	721206	1.71	723106	20	58	52	16,5	1000	300	500	400
200	50	1.99	721106	1.71	723106	25	58	52	16,5	1000	300	500	400
250	50	2.30	721208	1.97	723108	20	60	52	15	1000	300	500	400

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
100	40	0.96	724402	0.71	726202	1.17	727302	128	100x85	80x60	9	37	120	180	
125	50	1.49	724413	1.14	726213	2.37	727313	166	140x110	105x80	11	57	156	230	
160	50	2.59	724410	2.22	726210	2.80	727310	199	140x110	105x80	11	56	156	300	
180	50	2.85	724405	2.56	726205	3.06	727305	219	140x110	105x80	11	56	156	300	
200	50	3.40	724306	3.18	725206	3.66	727106	240	140x110	105x80	11	56	156	300	

Options available to order



Wheel with grey rubber tyre



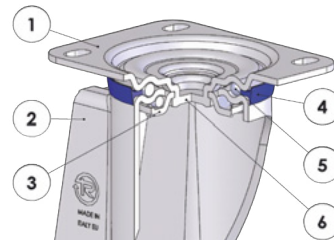
Directional lock for brackets d. 150-200 mm

Standard-duty brackets NL - max carrying capacity 300 daN



mm	mm	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
125	40	2,41	724703	165	140x110	105x80	11	46	40	17,5	35	18,5		230
160	50	2,81	724710	199	140x110	105x80	11	56	40	17,5	35	18,5		300
200	50	3,45	724706	240	140x110	105x80	11	56	40	17,5	35	18,5		300

Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

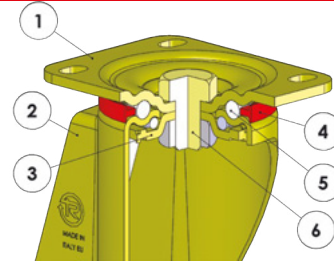
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	50	2.94	724610	2.22	726210	3.33	727910	199	140x110	105x80	11	58	178	300
200	50	3.79	724506	3.18	725206	4.21	727706	240	140x110	105x80	11	50	178	500

Options available to order



Wheel with grey rubber tyre

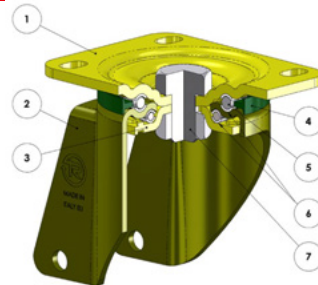
Medium-heavy duty brackets P - max carrying capacity 500 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
100	40	1.31	727602	0.81	728512			138	100x85	80x60	9	46		180	140
125	50	2.30	727613	1.66	728523			170	140x110	105x80	11	70		230	180
160	50	3.57	727610	2.08	728514	4.14	727204	205	140x110	105x80	11	70	126	300	240
180	50	3.81	727605	2.39	728515	4.38	727205	228	140x110	105x80	11	70	126	350	280
200	50	4.46	727516	3.00	728516	5.06	727206	250	140x110	105x80	11	70	126	500	400
250	50	4.74	727518	3.64	728518	5.44	727208	298	140x110	105x80	11	66	173	500	400

Heavy-duty PT brackets with hardened ball race grooves - max carrying capacity 500 daN



- 1) Top Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball Race Ring: electrolytically galvanised steel plate
 - 4) Dust Seal: dark green polyamide 6
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) Ball race: hardened carbon steel grooves
 - 7) King pin: steel screw, class 8.8 and stainless steel nut
- Available with rear adjustable brake

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
160	50	3,59	725510	2,08	728514	4,14	728204	205	140x110	105x80	11	70	126	300	240
180	50	3,90	725505	2,39	728515	4,38	728205	228	140x110	105x80	11	70	126	350	280
200	50	4,46	725516	3,00	728516	5,03	728206	250	140x110	105x80	11	70	126	500	400

Options available to order

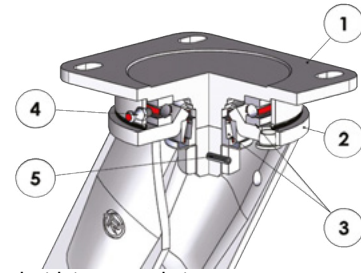


Wheel with grey rubber tyre



Directional lock for brackets P-PT d. 150-200 mm

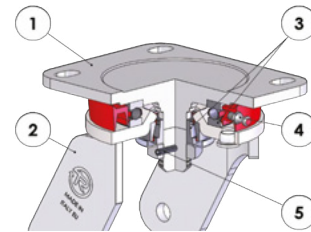
Electrowelded brackets EE MHD - max carrying capacity 500 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Anti-loosening system nut
- Available with adjustable total rear foot brake

mm		kg	CODE	kg	CODE	kg	CODE	mm						4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3.74	728303	2.76	728403	4.62	728603	182	135x110	105x80	11	51	157	230	180
160	50	4.22	728314	3.23	728414	5.10	728614	215	135x110	105x80	11	60	157	300	240
180	50	4.59	728305	3.61	728405	5.47	728605	242	135x110	105x80	11	70	157	350	280
200	50	5.12	728306	4.14	728406	6.00	728606	252	135x110	105x80	11	70	157	500	400
250	50	5.58	728307	4.55	728407	6.46	728607	300	135x110	105x80	11	83	157	500	400

Twin electrowelded brackets EEG MHD - max carrying capacity 400 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm		kg	CODE	kg	CODE	mm						4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	
100	40+40	3.35	728062	2.60	728162	140	135x110	105x80	11	55	360	280	
125	40+40	4.10	728063	3.35	728163	170	135x110	105x80	11	55	400	320	

Options available to order



Wheel with grey rubber tyre

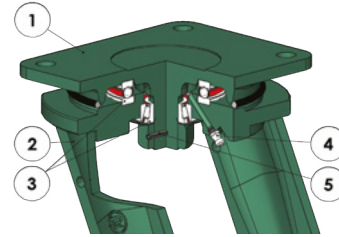


Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367

72^{AL}

SIGMA ELASTIC RUBBER WHEELS WITH ALUMINIUM CENTRE

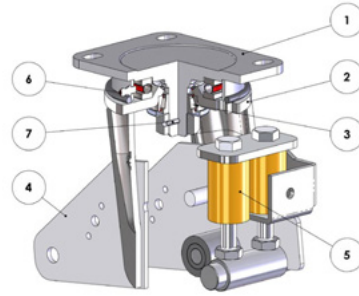
Twin electrowelded brackets EEG HD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN
160	50+50	10.60	728084	6.15	728184	228	175x140	140x105	14	50	600	480
200	50+50	12.55	728086	8.00	728186	280	175x140	140x105	14	65	1000	800


Electrowelded brackets EE MHD - max carrying capacity 500 daN - damping up to 400 daN




- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
160	50	7,04	726304	5,79	726404	8,10	726504	248	135x110	105x80	11	100	240	25	50	300	300	240	
200	50	7,82	726306	6,57	726406	8,93	726506	268	135x110	105x80	11	100	265	25	50	400	500	400	
250	50	8,65	726308	7,44	726408	9,89	726508	316	135x110	105x80	11	110	315	25	50	400	500	400	

 **Spring travel** (mm): maximum difference in the total height of the group wheel + support depending on the spring tension

 **Initial tension** (daN): in case of lighter loads than indicated, the bracket works with no damping

 **Spring tension** (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order



Directional lock for brackets EE MHD - EE HD - EEG MHD - EES MHD: see page 365-367

SIGMA ELASTIC RUBBER WHEELS WITH CAST IRON CENTRE

-  125-300 mm
-  70 Shore A
-  300-950 daN
4 km/h
-  240-760 daN
6 km/h
-  250-500 daN
-  -20 / +70 °C



Description

Tyre: Sigma Elastic rubber, hardness 70 Shore A, excellent elasticity and good resistance to tear and wear.

Centre: cast iron.

Hub with shielded ball bearings with interference assembly in the seats obtained by machining the centre; also available without bearings.

Uses

The excellent elasticity guarantees an easy overcoming of obstacles, vibration damping and noise reduction during use.




Combined with appropriate brackets, they are also suitable for mechanical handling up to 6 km/h.

Also suitable for mixed indoor-outdoor uses.

Examples of recommended applications: trolleys for indoor and outdoor industrial handling, manual pallet trucks, heavy waste collection bins.

Environments of use

Industrial environments, even in presence of humidity. Not suitable in presence of organic, aromatic solvents, chlorinated substances and hydrocarbons.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floor, even outdoors.

Allows easily overcoming the obstacles and does not damage floors.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	700 kg	900 kg
125 mm	1,4	3,7	7	---	---		
150 mm	1	3	5,8	9,5	---		
200x50 mm	< 1	1,8	4	7,1	11		
200x75 mm	< 1	1,8	3,3	5	7	12	
250 mm	< 1	1,5	2,7	4,1	6	10,3	
300 mm	< 1	1,4	2,4	3,6	5	8,5	12,8

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth floors. For manual handling of a 4-wheel trolley choose diameters that have values < 5 daN, for frequent handling choose values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 125-200 mm
Top plate fitting. Available with the front brake.



Medium-duty brackets M

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake.



Medium-heavy duty brackets P

Maximum carrying capacity 500 daN - available diameters 125-200 mm
Top plate fitting. Available with adjustable rear brake.



Extra-heavy duty brackets EP

Maximum carrying capacity 800 daN - available diameters 150-250 mm
Top plate fitting. Available with adjustable rear brake.



Electrowelded brackets EE MHD - EE HD

Maximum carrying capacity 950 daN - available diameters 125-300 mm
Top plate fitting. Available with adjustable rear brake.



Twin electrowelded brackets EEG HD

Maximum carrying capacity 1000 daN - available diameters 150-200 mm
Top plate fitting.



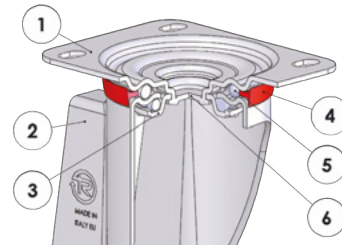
Electrowelded sprung-loaded brackets EES MHD

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting. Available with adjustable front brake



mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
125	50	1.88	722103	1.64	724103	20	55	47	14	450	250	300	240
150	50	2.30	722104	2.06	724104	20	55	47	14	600	275	400	320
150	50	2.28	722124	2.06	724104	25	55	47	14	600	275	400	320
200	50	3.15	722106	2.87	724106	25	55	52	17	1000	335	500	400
200	75	5.35	722126	5.07	724126	25	85	52	17	1200	400	700	560
250	75	7.17	722108	6.67	724108	25	88	52	17.5	1500	450	800	640
300	85	8.51	722109	8.05	724109	30	90	62	16	1800	500	950	760
300	85	8.49	722129	8.05	724109	35	90	62	16	1800	500	950	760

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

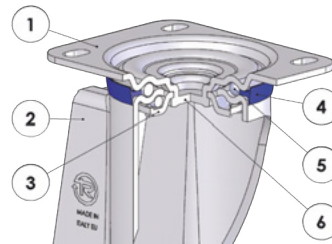
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
125	50	3.00	724313	2.63	725213	3.22	727113	166	140x110	105x80	11	57	156	300	
150	50	3.67	724304	3.30	725204	3.96	727124	194	140x110	105x80	11	56	156	300	
200	50	4.56	724336	4.34	725236	4.86	727126	240	140x110	105x80	11	56	156	300	

Options available to order



Directional lock
for brackets
d. 150-200 mm

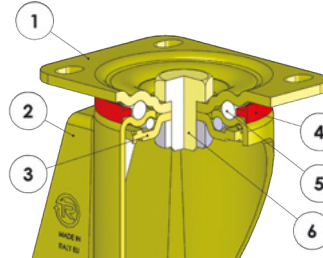
Medium-duty brackets M - max carrying capacity 500 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: blue polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with adjustable total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
150	50	4.02	724504	3.30	725204	4.49	727724	194	140x110	105x80	11	58	178	400	
200	50	4.95	724536	4.34	725236	5.11	727726	240	140x110	105x80	11	50	178	500	

Medium-heavy duty brackets P - max carrying capacity 500 daN



- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

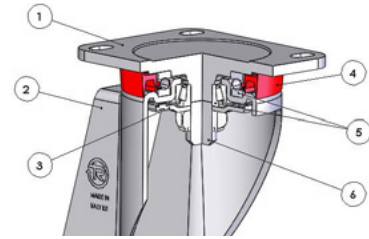
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN	daN
125	50	3,80	727513	3,24	728513			170	140x110	105x80	11	70		300	240
150	50	4,65	727504	3,42	728504	5,22	727224	200	140x110	105x80	11	70	126	400	320
200	50	5,62	727506	4,16	728506	6,19	727226	250	140x110	105x80	11	70	126	500	400

Options available to order



Directional lock for P brackets d. 150-200 mm

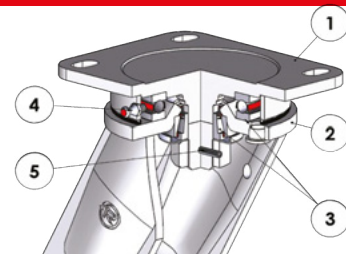
Extra-heavy duty brackets EP - max carrying capacity 800 daN



- 1) Plate: green galvanised forged steel
 - 2) Fork: green galvanised forged steel
 - 3) Lower bearing protection ring
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: axial ball bearing and tapered roller bearing
 - 6) King pin: integrated with the machine-processed plate
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN
150	50	4.92	727814	4.43	728814	5.49	727324	200	135x110	105x80	11	70	126	400	320	
200	50	5.87	727816	5.43	728816	6.44	727326	250	135x110	105x80	11	70	126	500	400	
200	75	10.90	727806	9.06	728806			275	175x140	140x105	14	66		700	560	
250	75	12.71	727808	10.88	728808			300	175x140	140x105	14	66		800	640	

Electrowelded brackets EE MHD - max carrying capacity 500 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Nut anti-loosening system
- Available with adjustable total rear foot brake

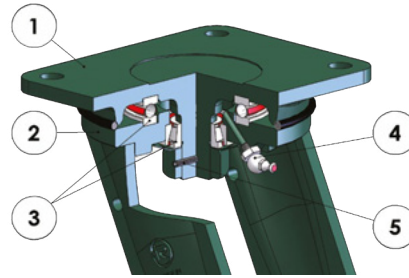
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN
125	50	4.78	729303	3.80	729403	5.66	729603	182	135x110	105x80	11	51	157	300	180	
150	50	5.30	729304	4.31	729404	6.18	729604	210	135x110	105x80	11	60	157	400	320	
200	50	6.27	729306	5.29	729406	7.15	729606	252	135x110	105x80	11	70	157	500	400	

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES
MHD see page 365-367

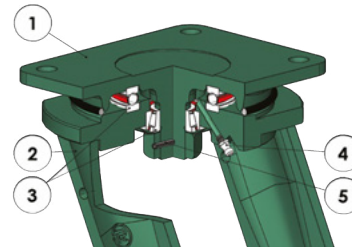
Electrowelded brackets EE HD - max carrying capacity 950 daN



- 1) Plate: forged steel with integrated pin
 - 2) Fork: deep-drawn legs electro-welded to the flange
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) Grease nipple
 - 5) Nut anti-loosening system
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	4 km/h	6 km/h
200	75	11.81	729316	10.27	729416	12.69	729616	275	175x140	140x105	14	65	166	700	560
250	75	13.86	729307	12.27	729407	14.74	729607	320	175x140	140x105	14	74	166	800	640
300	85	15.32	729308	13.70	729408	16.20	729608	360	175x140	140x105	14	81	166	950	760

Twin electrowelded brackets EEG HD - max carrying capacity 1000 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Nut anti-loosening system

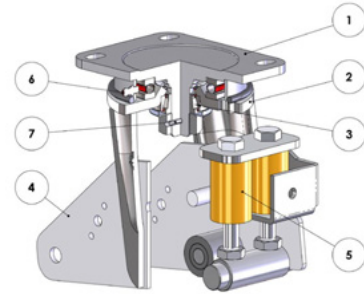
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	4 km/h	6 km/h		
150	50+50	12.75	728074	8.30	728174	228	175x140	140x105	14	50	800	640		
200	50+50	14.90	728066	10.35	728166	280	175x140	140x105	14	65	1000	800		
200	50+50	16.55	728076	11.75	728176	285	200x160	160x120	17	65	1000	800		

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES
MHD see page 365-367

Electrowelded sprung-loaded brackets EES HD - max carrying capacity 500 daN - damping up to 400 daN



- 1) Top plate: electrolytically galvanised forged steel with integrated pin.
 - 2) Main fork: deep-drawn legs electrowelded to the flange and electrolytically galvanised U-shaped component electrowelded to the legs.
 - 3) Swivel actions: axial ball bearing and tapered roller bearing
 - 4) spring-hinged plates: plates electrowelded to the axle
 - 5) Polyurethane springs
 - 6) Grease nipple
 - 7) Anti-loosening locknut system
- Available with adjustable front lock

mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN
150	50	8,12	725704	6,87	725804	9,18	726004	243	135x110	105x80	11	100	240	25	50	400	400	320
200	50	8,97	725706	7,72	725806	10,08	726006	268	135x110	105x80	11	100	265	25	50	400	500	400



Spring travel (mm): maximum difference in the total height of the group wheel + support depending on the spring tension



Initial tension (daN): in case of lighter loads than indicated, the bracket works with no damping



Spring tension (daN): in case of heavier loads than indicated, the bracket works with no damping

Options available to order



Directional lock
for brackets EE MHD
- EE HD - EEG MHD - EES
MHD see page 365-367



Experience and innovation

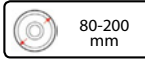
HIGH TEMPERATURE



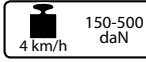


SERIES **67**

SOLID THERMOSETTING RESIN WHEELS



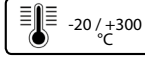
80-200 mm



4 km/h



125-240 daN



-20 / +300 °C



PAGE 266

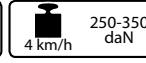


SERIES **68F**

POLYAMIDE 6 SOLID WHEELS CHARGED WITH GLASS FIBER



100-125 mm



4 km/h



250-350 daN



-30 / +130 °C

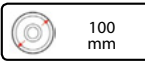


PAGE 274



SERIES **72G**

SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



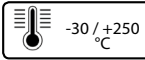
100 mm



4 km/h



80 daN

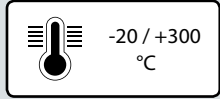
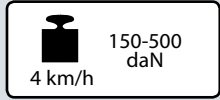
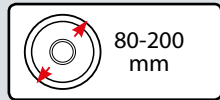


-30 / +250 °C



PAGE 278

THERMOSETTING RESIN SOLID WHEELS



Description

Thermosetting resin solid wheels, resistant to temperature from -20°C up to 300°C.

Hub with plain bore hole which directly houses the axle.

Hub with shielded ball bearings lubricated with a grease for high temperatures; steel thread-guards to protect the ball bearings from external agents and dirt. Also available with stainless steel ball bearings.

Uses

Their resistance to high temperature makes them particularly suitable for use in the food industry and in cooking ovens, particularly in the bakeries.

They are fitted with brackets and axle components, which are specific for high temperatures.

The ball bearings version ensures an excellent performance and the absence of squeaking over long cycle time applications, even in presence of heavy loads.

They are resistant to medium-harsh chemical agents.

Not suitable in presence of obstacles along the path or on delicate flooring.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

Not suitable on fragile floor or with obstacles along the path.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg
80 mm	4	----	----	----	----
100 mm	3.7	8.2	----	----	----
125 mm	3	7	11	----	----
150 mm	2	5.5	9	----	----
200 mm	1	4	6.5	9	12

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets:



Standard-duty brackets NL

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings.



Stainless steel standard-duty brackets NLX

Maximum carrying capacity 300 daN - available diameters 80-200 mm
Top plate and bolt hole fittings.



Stainless steel medium-heavy brackets PX

Maximum carrying capacity 500 daN - available diameters 150-200 mm
Top plate fitting.



mm	mm	kg	COD.	mm	mm	daN	daN	daN
80	35	0,18	672201	12	39	250	125	150
100	35	0,30	671102	12	44	300	130	200
100	35	0,29	672202	15	44	300	130	200
125	35	0,43	672203	15	44	400	180	300
150	50	0,90	672104	20	58	500	190	300
200	50	1,68	672106	20	58	700	240	500

Axle sets



Low tickness PTFE-coated steel axle tubes.

Available for fitting with 80,100 and 125mm standard duty NL brackets. Suitable also for heavy usages over short cycle time applications.



Standard steel and stainless steel axle tubes for 150 and 200mm wheels fitted with standard duty NL and NLX brackets, as well as with PX medium-heavy duty brackets. Suitable also for heavy usages over short cycle time applications.



High tickness PTFE-coated stainless steel axle tube for assembly with 80,100 and 125mm standard duty NLX brackets. Available to order for fitting with other brackets. Suitable for medium-heavy duty loads over long cycle time applications.



Low friction innovative PTFE bushings over a steel or stainless steel axle tube. Available for fitting with 80 and 100mm NL and NLX brackets. Suitable for situations of heavier duty and long cycle time applications.

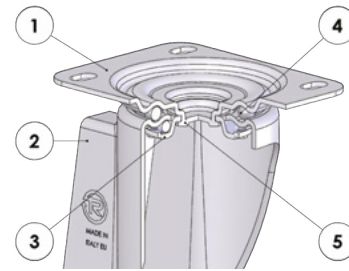


mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm.	daN	daN	daN
80	35	0,27	672501	0,27	672601	0,21	674101	15	35	32	9	250	160	160
100	38	0,44	672502	0,44	672602	0,37	674102	15	38	32	9	300	240	240



Ball bearings protection kit composed of:
 - n° 2 galvanised steel/stainless steel threadguards
 - n° 2 galvanised steel/stainless steel spacers
 Item nr. 924610VE (galvanised) - nr. 924609VE (stainless steel)

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication for high temperatures
- 5) King pin: integrated with the plate and cold-rieveted

												Axle set	
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN		
80	35	0,71	677101	0,43	678101	107	100x85	80x60	9	37	150		
100	35	0,85	677102	0,53	678102	128	100x85	80x60	9	35	200		
125	35	1,07	677103	0,73	678103	156	100x85	80x60	9	37	220		
150	50	2,23	677314	1,90	678304	194	140x110	105x80	11	56	300		
200	50	3,08	677316	2,87	678306	240	140x110	105x80	11	56	300		
80	35	0,77	677201	0,49	677401	107	100x85	80x60	9	37	150		
100	35	0,91	677202	0,59	677402	128	100x85	80x60	9	35	200		



												Axle set	
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN		
80	35	0,75	677111	0,63	678111	107	100x85	80x60	9	37	160		
100	38	0,95	677112	0,80	678112	128	100x85	80x60	9	35	200		

Options available to order (plain bore)



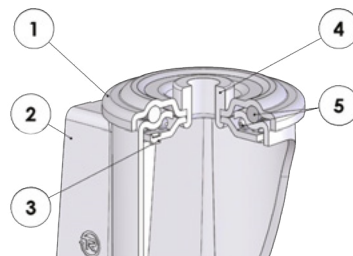
Axle components with stainless steel tube coated with hi-thickness PTFE



Axle components with stainless steel tube coated with hi-thickness PTFE and spacers

SERIES **67** THERMOSETTING RESIN SOLID WHEELS

Standard-duty brackets NL - max carrying capacity 300 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: bushing in electrolytically galvanised steel
- 5) Swivel actions: double ball ring with grease lubrication for high temperatures

										Axle set
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN	
80	35	0,62	676101	107	73	12	37	150		
100	35	0,72	676102	128	73	12	35	200		
125	35	1,05	676103	156	73	12	37	220		
80	35	0,68	677501	107	73	12	37	150		
100	35	0,78	677502	128	73	12	35	200		



										Axle set
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN	
80	35	0,70	676111	107	73	12	37	160		
100	38	0,87	676112	128	73	12	35	200		

Options available to order (plain bore)

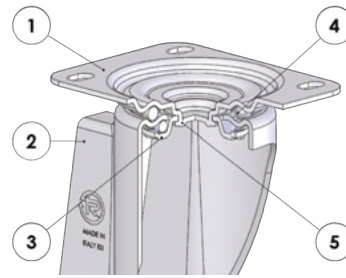


Axle components with stainless steel tube coated with hi-thickness PTFE



Axle components with stainless steel tube coated with hi-thickness PTFE and spacers

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN



INOX

- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- 5) King pin: integrated with the plate and cold-rieveted

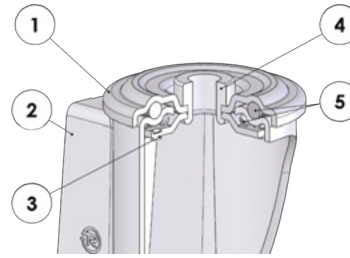
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	Axle set		
80	35	0,71	677701	0,40	678701	107	100x85	80x60	9	37	150			
100	35	0,79	677702	0,52	678702	128	100x85	80x60	9	35	200			
125	35	0,92	677713	0,80	678713	156	100x85	80x60	9	37	220			
150	50	2,21	677704	1,77	678704	194	140x110	105x80	11	56	300			
200	50	3,06	677706	2,60	678706	240	140x110	105x80	11	56	300			
80	35	0,78	677901	0,47	678001	107	100x85	80x60	9	37	150			
100	35	0,86	677902	0,59	678002	128	100x85	80x60	9	35	200			



mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN	Axle set		
80	35	0,75	678801	0,63	678901	107	100x85	80x60	9	37	160			
100	38	0,95	678802	0,80	678902	128	100x85	80x60	9	35	200			

Stainless steel standard-duty brackets NLX - max carrying capacity 300 daN

INOX



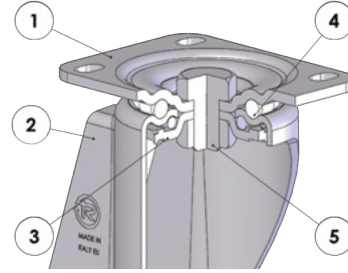
- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) King pin: bushing in stainless steel
- 5) Swivel actions: double ball ring with grease lubrication

MM	MM	КГ	КОД.	MM	MM	MM	MM	даН	Axle set
80	35	0,62	676701	107	73	12	37	150	
100	35	0,72	676702	128	73	12	35	200	
125	35	1,05	676703	156	73	12	37	220	
80	35	0,69	678201	107	73	12	37	150	
100	35	0,79	678202	128	73	12	35	200	



MM	MM	КГ	КОД.	MM	MM	MM	MM	даН	Axle set
80	35	0,70	676711	107	73	12	37	160	
100	38	0,87	676712	128	73	12	35	200	

Stainless steel medium-heavy duty brackets PX - max carrying capacity 500 daN

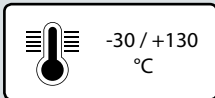
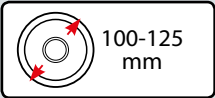


INOX

- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- 5) King pin: screw and nut in stainless steel

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	Axle set		
150	50	3.25	677004	1.90	677104	200	140x110	105x80	11	70	300			
200	50	4.25	677006	2.74	677106	250	140x110	105x80	11	70	500			

POLYAMIDE 6 SOLID WHEELS CHARGED WITH GLASS FIBER



INOX



Description

Polyamide 6 solid wheels charged with glass fiber, to increase the resistance to temperature from -30°C up to +130°C. Hardness 80 Shore D.

Hub with ball bearings with interference assembly in the seats obtained by moulding. The bearing is protected against external agents by polyamide plain bore caps charged with glass fiber with internal labyrinth. Also available with stainless steel ball bearings.

Uses

Mainly suitable for static uses on smooth and compact flooring, for medium-duty carrying capacities. Resistant to temperatures between -30°C and +130°C, suitable for use on equipment that has to be frequently washed and sterilised, especially in autoclaves.

The excellent rolling resistance ensures that minimum effort is needed when manual handling, but only on smooth floors.

They are combined with brackets and axle components which are specific for high temperature environments.

Examples of recommended applications: trolleys for internal use in the food and canning industries, tannery equipments.

Environments of use

Resistant to medium-harsh chemical agents, they are suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors



Only suitable on smooth and compact tile and resin-cement flooring. Not suitable in presence of obstacles.

They may damage fragile floors.

Not recommended on abrasive, unpaved floors or in presence of processing residues.



Force required to push or tow a wheel

 	100 kg	150 kg	200 kg	250 kg	300 kg	350 kg
100 mm	<1	1.2	1.5	2	---	---
125 mm	<1	<1	1.1	1.5	1.8	2.2

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Combination with brackets



Standard-duty brackets NL

Maximum carrying capacity 220 daN - available diameters 100-125 mm
Top plate and bolt hole fittings.



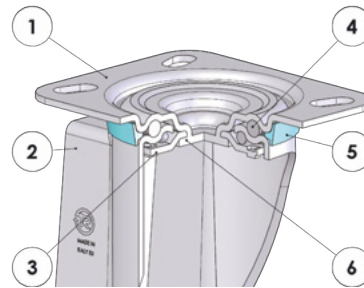
Stainless steel standard-duty brackets NLX

Maximum carrying capacity 220 daN - available diameters 100-125 mm
Top plate and bolt hole fittings.



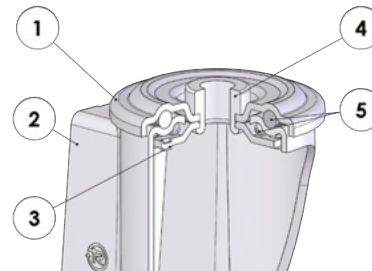
mm	mm	kg	CODE	kg	CODE	mm	mm	daN	daN	daN
100	30	0.27	683502	0.27	683602	12	45	250	250	250
125	30	0.33	683503	0.33	683603	12	45	350	350	350

Standard-duty brackets NL - max carrying capacity 220 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Dust seal: blue polyamide
- 4) Ball race ring: electrolytically galvanised steel plate
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
100	30	0.74	684882	0.63	685182	128	100x85	80x60	9	35	220
125	30	0.83	684883	0.72	685183	156	100x85	80x60	9	37	220

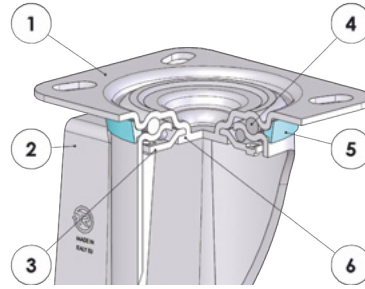


- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: bushing in electrolytically galvanised steel
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	daN
100	30	0.69	688082	128	73	12	35	220
125	30	0.78	688083	156	73	12	37	220

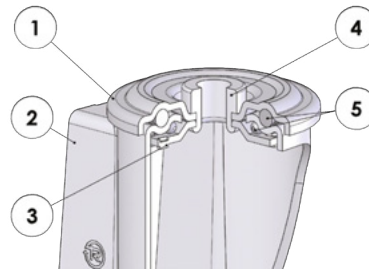
Stainless steel standard-duty brackets NLX - max carrying capacity 220 daN

INOX



- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) Dust seal: blue polyamide
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

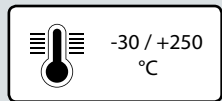
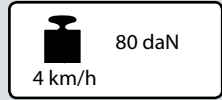
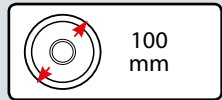
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
100	30	0.74	684682 I	0.63	685682 I	128	100x85	80x60	9	35	220
125	30	0.83	684683 I	0.72	685683 I	156	100x85	80x60	9	37	220



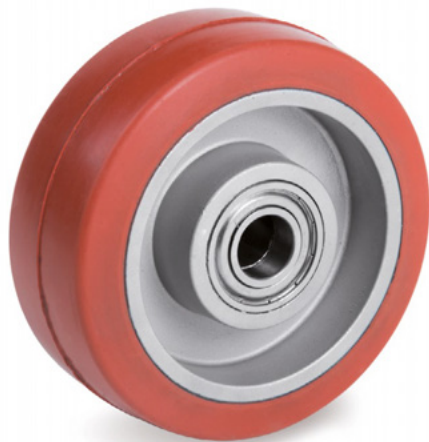
- 1) Plate: AISI 304 stainless steel
- 2) Fork: AISI 304 stainless steel
- 3) Ball race ring: AISI 304 stainless steel
- 4) King pin: bushing in stainless steel
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	daN
100	30	0.69	685982 I	128	73	12	35	220
125	30	0.78	685983 I	156	73	12	37	220

SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



INOX



Description

Tyre: red non-marking silicone rubber, hardness 80 Shore A, resistant to temperatures up to 250°C.

Centre: aluminium.

Hub with ball bearings with silicone grease for high temperatures, interference assembly in the seats obtained by moulding.

Uses

Suitable for use at temperatures from -30 up to +250°C. Particularly suitable for intermittent use in baking ovens (maximum permanence at 250°C is of 30 minutes, with subsequent period of resting of at least 30 minutes, at room temperature). They have excellent elasticity features and guarantee an easy overcoming of obstacles on uneven flooring also; compared to high temperature solid wheels, they allow a significant noise reduction. They are combined with brackets and axle components specific for high temperatures; all wheels are also fitted with threadguards. Not suitable in presence of obstacles along the path or on delicate flooring.

Environments of use

Suitable for industrial and institutional environments. They are resistant to medium-harsh chemical agents and humidity. Not recommended in areas with strong acids and oils.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for use on tiles, resin-cement; not recommended on abrasive, unpaved floors or in the presence of processing residues. Not suitable on delicate floor or with obstacles along the path. They do not mark the floor.



Force required to push or tow a wheel

 	50 kg	75 kg	100 kg
100 mm	<1	4	----

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Standard-duty brackets NL

Maximum carrying capacity 80 daN - available diameters 100 mm
Top plate and bolt hole fittings. Available with front brake.



Stainless steel standard-duty brackets NLX

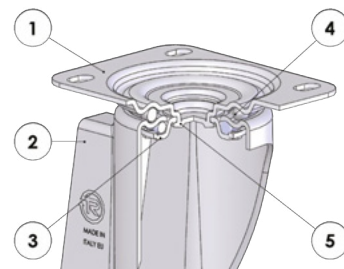
Maximum carrying capacity 80 daN - available diameters 100 mm
Top plate and bolt hole fittings. Available with front brake.

SERIES **72G** SILICONE RUBBER WHEELS WITH ALUMINIUM CENTRE



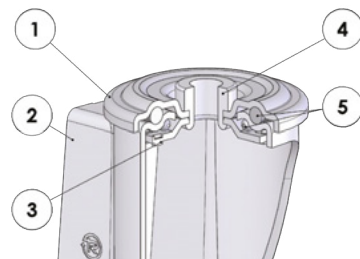
mm	mm	kg	CODE	mm	mm	Static	4 km/h	4 km/h	250 °C	250 °C	250 °C
mm	mm	kg	CODE	mm	mm	daN	daN	daN	daN	daN	daN
100	40	0.43	722152	15	40	100	80	80	40	40	40

Standard-duty brackets NL - max carrying capacity 80 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication for high temperatures
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

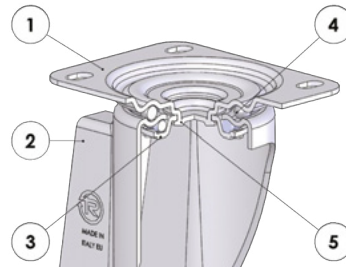
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	250 °C
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN	250 °C
100	40	0.96	724452PF	0.71	726252PF	1.17	727152PF	128	100x85	80x60	9	35	120	80	40	250 °C



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication for high temperatures
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C
100	40	0.86	727352PF	1.07	727452PF	128	73	12	35	120	80	40	250 °C

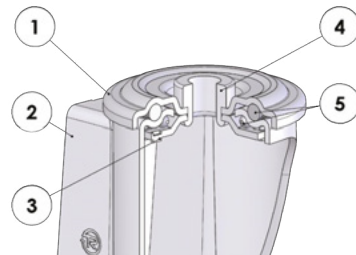
Stainless steel standard-duty brackets NLX - max carrying capacity 80 daN



INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	250 °C	
100	40	0.96	724462PF	0.71	726262PF	1.17	727162PF	128	100x85	80x60	9	35	120	80	40	4 km/h	4 km/h	



INOX

- 1) Plate: AISI 304 stainless steel
 - 2) Fork: AISI 304 stainless steel
 - 3) Ball race ring: AISI 304 stainless steel
 - 4) King pin: bushing in stainless steel
 - 5) Swivel actions: double stainless steel ball ring with grease lubrication for high temperatures
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN	daN	250 °C				
100	40	0.86	727362PF	1.07	727462PF	128	73	12	35	120	80	40					

PALLET TRUCK ROLLERS





SERIES **74**

VULKOLLAN® ROLLERS WITH STEEL CENTRE

80-85 mm	400-1000 daN 4 km/h	180-450 daN
320-800 daN 6 km/h	-20 / +80 °C	

PAGE 284



SERIES **75**

"TR" POLYURETHANE ROLLERS WITH STEEL CENTRE

35-85 mm	350-1000 daN 4 km/h	145-400 daN
240-800 daN 6 km/h	-20 / +80 °C	

PAGE 290



SERIES **76**

POLYAMIDE 6 SOLID ROLLERS

40-85 mm	700-1200 daN 4 km/h	335-500 daN
-30 / +80 °C		

PAGE 294



SERIES **77**

"TR" POLYURETHANE ROLLERS WITH POLYAMIDE 6 CENTRE

82-85 mm	450-600 daN 4 km/h	300-380 daN
360-480 daN 6 km/h	-20 / +80 °C	

PAGE 296



SERIES **78**

THERMOPLASTIC POLYURETHANE ROLLERS WITH POLYAMIDE 6 CENTRE

82 mm	450-750 daN 4 km/h	390-530 daN
-15 / +80 °C		

PAGE 298



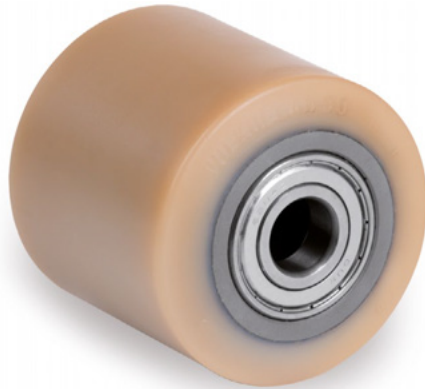
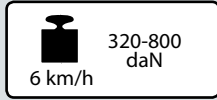
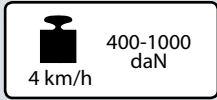
SERIES **79**

"TR-ROLL" POLYURETHANE ROLLERS WITH STEEL CENTRE

80-85 mm	400-650 daN 4 km/h	400-650 daN
320-520 daN 6 km/h	-20 / +70 °C	

PAGE 300

VULKOLLAN® PALLET TRUCK ROLLERS WITH STEEL CENTRE



Description

Tyre: Vulkollan®, hardness 93 Shore A: excellent values of rolling resistance and elasticity, highly resistant to wear, tear and deformations.

Centre: obtained from a steel tube.

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.

Model with labyrinth seals: protective plastic-rings, with interference assembly into the ball bearings. They ensure longer life, by preventing entry of dust and foreign bodies.

Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 16 km/h).

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
80x70 mm	1	2.6	5	12	16.7	----	----
80x90 mm	< 1	< 1	2.3	7.1	10.6	19.5	----
85x40 mm	1.4	5.3	10.4	----	----	----	----
85x70 mm	< 1	1.9	4	10.9	15.5	----	----
85x80 mm	< 1	1.6	3.5	9.5	13.6	24	----
85x90 mm	< 1	< 1	2.3	7.9	11.4	20.5	----
85x100 mm	< 1	< 1	2	5.8	9.3	17	27

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.














Options available to order



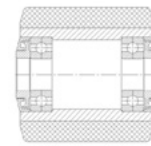
Rollers fitted with electrowelded brackets EE MHD

VULKOLLAN® PALLET TRUCK ROLLERS WITH STEEL CENTRE














															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN		
80	70	1.07	742202	0.83	744202	20	70	47	14	1000	300	700	560		
80	90	1.38	742105	1.14	744105	20	90	47	14	1200	385	900	720		
85	40	0.72	742121	0.48	744121	20	40	47	14	575	180	400	320		
85	70	1.13	742122	0.89	744122	20	70	47	14	1000	315	700	560		
85	80	1.26	742123	1.02	744123	20	80	47	14	1050	360	800	640		
85	80	1.19	742224	0.91	744224	25	80	52	15	1050	360	800	640		
85	90	1.41	742125	1.17	744125	20	90	47	14	1200	400	900	720		
85	100	1.54	742127	1.30	744127	20	100	47	14	1300	450	1000	800		

With labyrinths



Labyrinths: protective plastic-rings, with interference assembly in front of the ball bearings. They ensure longer life, protecting them from dust and foreign bodies that may limit the roller's free rotation.

															
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN				
80	65	0.98	743201	20	70	47	20.5	930	280	650	520				
80	85	1.32	743202	20	90	47	20.5	1130	360	850	680				
85	65	1.07	743203	20	70	47	20.5	930	290	750	600				
85	75	1.20	743204	20	70	47	20.5	980	335	750	600				
85	75	1.13	743224	25	80	47	20.5	980	335	750	600				
85	85	1.35	743205	20	90	47	20.5	1130	375	850	680				
85	95	1.48	743206	20	100	47	20.5	1230	425	950	760				

Options available to order



Rollers fitted with electrowelded brackets EE MHD



Rollers with customised dimensions



TR Lab, we work for the future

"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH STEEL CENTRE



-  80-85 mm
-  95 Shore A
-  350-1000 daN
4 km/h
-  240-800 daN
6 km/h
-  145-400 daN
-  -20 / +80 °C

Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent values of rolling resistance and elasticity, highly resistant to wear.

Centre: obtained from a steel tube:

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.

Model with labyrinth seals: protective plastic-rings, with interference assembly into the ball bearings. They ensure longer life, by preventing entry of dust and foreign bodies.

Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 16 km/h).





Their excellent values of rolling resistance make the manual handling of heavy loads easier.

The model with electrowelded brackets allows handling heavy loads while maintaining a low centre of gravity. It is a common solution to move set design in the show business sector.

Environments of use

Designed for industrial environments, even in presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS	
STRONG ACIDS	
WATER	
ALCOHOL	

WEAK BASES	
STRONG BASES	
HYDROCARBONS	
SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.



Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
80x70 mm	1.3	3	5.5	10.3	13.5	----	----
80x90 mm	1.3	2.7	4.4	8.2	10.4	15.3	----
82x70 mm	1	2.6	5.4	11.2	15.3	----	----
82x85 mm	1	2.6	5	10.5	13.9	22	----
82x90 mm	< 1	2.3	4.2	9	12.2	20	----
82x100 mm	< 1	< 1	2.3	6.7	9.8	17.8	28
85x40 mm	1.4	5.3	10.4	----	----	----	----
85x70 mm	< 1	1.9	5.2	10.9	15.5	----	----
85x80 mm	< 1	1.6	4.5	9.5	13.6	24	----
85x90 mm	< 1	< 1	3.5	7.9	11.4	20.5	----
85x100 mm	< 1	< 1	2	5.8	9.3	17	27

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.

Available with brackets



Electrowelded brackets EE MHD

Maximum carrying capacity 800 daN - available diameters 80-85 mm
Top plate fitting.



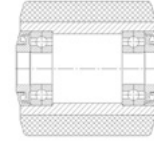
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	daN	daN	daN	daN	daN
35	27	0,09	752099			6	30	22	7			100		
50	40	0,10	752100	0,04	754100	15	40	35	11			150		
80	40	0,82	752101	0,62	754101	20	40	47	14	450	145		350	240
80	70	1,06	752102	0,82	754102	20	70	47	14	800	250		700	560
80	90	1,35	752105	1,11	754105	20	90	47	14	1000	335		900	720
82	60	0,95	752131	0,75	754131	20	67	47	14	700	310		600	480
82	70	1,09	752132	0,85	754132	20	70	47	14	800	255		700	560
82	70	1,04	752232	0,84	754232	20	70	47	16	800	255		700	560
82	75	1,05	752143	0,85	754143	20	75	47	14	880	300		780	624
82	85	1,27	752134	1,03	754134	20	85	47	14	900	300		800	640
82	90	1,33	752135	1,09	754135	20	90	47	14	1000	340		900	720
82	100	1,45	752137	1,21	754137	20	100	47	14	1100	390		1000	800
85	40	0,72	752121	0,48	754121	20	40	47	14	450	150		400	320
85	70	1,12	752122	0,88	754122	20	70	47	14	800	265		700	560
85	75	1,17	752129	0,93	754129	20	75	47	14	850	285		750	600
85	80	1,25	752123	1,01	754123	20	80	47	14	900	310		800	640
85	80	1,18	752223	0,90	754223	25	80	52	15	900	310		800	640
85	90	1,39	752125	1,15	754125	20	90	47	14	1000	350		900	720
85	100	1,52	752127	1,28	754127	20	100	47	14	1100	400		1000	800

Options available to order














Rollers with customised dimensions

With labyrinths

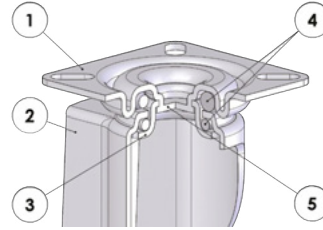


Labyrinths: protective plastic-rings, with interference assembly in front of the ball bearings. They ensure longer life, protecting them from dust and foreign bodies that may limit the roller's free rotation.

															
mm	mm	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN				
80	65	0.97	753101	20	70	47	20.5	750	230	650	520				
80	85	1.29	753102	20	90	47	20.5	950	310	850	680				
82	65	1.03	753103	20	70	47	20.5	750	235	650	520				
82	80	1.21	753104	20	85	47	20.5	900	280	800	640				
82	85	1.27	753105	20	90	47	20.5	950	320	850	680				
82	95	1.39	753106	20	100	47	20.5	1050	365	950	760				
85	65	1.06	753107	20	70	47	20.5	750	245	650	520				
85	75	1.19	753108	20	80	47	20.5	850	285	750	600				
85	75	1.12	753223	25	80	47	20.5	850	285	750	600				
85	85	1.33	753109	20	90	47	20.5	950	330	850	680				
85	95	1.46	753110	20	100	47	20.5	1050	375	950	760				

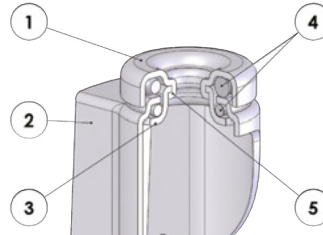
"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH STEEL CENTRE

Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

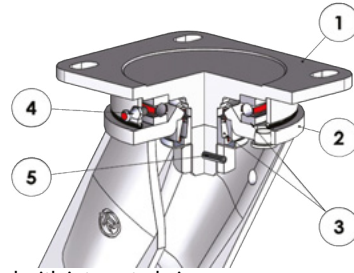
mm	mm		CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
35	27	0,25	757300	0,27	757400	53	60x60	45x45	6	17	70	100
50	40	0,57	757301	0,63	757401	71,5	60x60	45x45	6	25,5	83	150



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm		CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
35	27	0,21	757500	0,24	757600	56	55	10	17	70		100
50	40	0,56	757501	0,61	757601	71	55	10	25,5	83		150






Electrowelded brackets EE MHD - max carrying capacity 800 daN



- 1) Plate: forged steel with integrated pin
- 2) Fork: deep-drawn legs electro-welded to the flange
- 3) Swivel actions: axial ball bearing and tapered roller bearing
- 4) Grease nipple
- 5) Anti-loosening system nut

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	4 km/h	6 km/h	
80	70	3,96	758301	2,98	758401	130	135x110	108x80	11	55	700	560	
85	70	4,02	758311	3,04	758411	132,5	135x110	105x80	11	55	700	560	
85	80	4,15	758321	3,17	758421	132,5	135x110	105x80	11	55	800	640	

POLYAMIDE 6 PALLET TRUCK ROLLERS

-  40-85 mm
-  70 Shore D
-  700-1200 daN
4 km/h
-  335-500 daN
-  -30 / +80 °C



Description

Solid polyamide 6 pallet truck rollers, hardness 70 Shore D; excellent values of rolling and impact resistance. Reduced deformation under load.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings. Hub with plain bore hole which directly houses the axle.



Uses

Suitable for use on manual pallet trucks, also with humidity and highly aggressive chemical agents.

Their excellent values of rolling resistance make the manual handling of heavy loads easier. It is specifically recommended for use in the food and canning industries.

Environments of use

Suitable for industrial environments, also in presence of humidity and chemical agents. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			


For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for tiles and cement-resin.
Not recommended in presence of obstacles.
They may damage fragile flooring.

















Force required to push or tow a wheel







 	100 kg	200 kg	300 kg	500 kg	600 kg	800 kg	1000 kg
82x60 mm	1.2	2.6	4.5	7	8.7	---	---
82x70 mm	1.2	2.5	3.8	6.5	7.9	10.8	---
82x90 mm	< 1	1.9	2.9	5.5	6	8.4	10.8
82x100 mm	< 1	1.7	2.6	5	5.5	7.5	9.7

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.








 			 	 	 	 	Static			4 km/h		
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN
82	60	0.47	763011	0.23	761011	20	60	47	14	1000	335	700
82	70	0.49	763012	0.25	761012	20	70	47	14	1100	350	850
82	90	0.57	763014	0.33	761014	20	90	47	14	1300	450	1100
82	100	0.65	763015	0.41	761015	20	100	47	14	1400	500	1200



 			 
mm	mm	kg	CODE
50	55	0.12	760002



 		 	
mm	mm	kg	CODE
40	43	0.05	760001

Options available to order



Rollers fitted with 25 mm bore ball bearings

"TR" POLYURETHANE PALLET TRUCK ROLLERS WITH POLYAMIDE CENTRE 6



-  82-85 mm
-  95 Shore A
-  450-600 daN
4 km/h
-  360-480 daN
6 km/h
-  300-380 daN
-  -20 / +80 °C

Description

Tyre: "TR" polyurethane, hardness 95 Shore A, excellent values of rolling resistance and elasticity, highly resistant to wear.

Centre: polyamide 6.



Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for use on manual and electric pallet trucks, with speed up to 6 km/h. Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in presence of medium-harsh chemical agents. Not recommended in areas with strong organic acids and mineral acids.

WEAK ACIDS				WEAK BASES			
STRONG ACIDS				STRONG BASES			
WATER				HYDROCARBONS			
ALCOHOL				SOLVENTS			



For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable for tiles and cement-resin.
Not suitable if voluminous obstacles are present.















Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg
82x70 mm	1.1	2.7	5	7.8	----	----
82x90 mm	< 1	2.1	4	6.6	9.7	----
82x100 mm	< 1	1.9	3.5	5.4	7.8	10.5
85x70 mm	< 1	2.5	4.7	7.6	11	----
85x90 mm	< 1	2.3	4	6	8	11

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single roller at the constant speed of 4 km/h on smooth floor. For manual handling of a trolley choose diameters that have values < 5 daN, for frequent handling choose values < 3 da N.



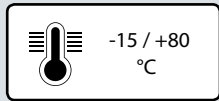
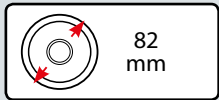
													
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN	daN
82	70	0.60	772132	0.36	774132	20	70	47	14	550	300	450	360
82	90	0.70	772135	0.46	774135	20	90	47	14	610	340	510	400
82	100	0.76	772137	0.52	774137	20	100	47	14	700	380	600	480
85	70	0.65	772122	0.41	774122	20	70	47	14	600	310	500	400
85	90	0.76	772125	0.52	774125	20	90	47	14	700	350	600	480

Options available to order



Rollers fitted with 25 mm bore ball bearings

THERMOPLASTIC POLYURETHANE PALLET TRUCK ROLLERS WITH POLYAMIDE CENTRE 6



Description

Tyre: thermoplastic polyurethane, hardness 60 Shore D, excellent values of rolling resistance and elasticity, highly resistant to wear and tear.

Centre: polyamide 6.

Hub with shielded ball bearings with interference assembly in the seats obtained by centre moulding; also available without bearings.

Uses

Suitable for use on manual pallet trucks, also with humidity and highly aggressive chemical agents.

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

It is specifically recommended for use in the food and canning industries.

Environments of use

Suitable for industrial environments, also in presence of humidity and chemical agents. Not recommended in areas with strong organic acids and concentrated mineral acids.

WEAK ACIDS			
STRONG ACIDS			
WATER			
ALCOHOL			

WEAK BASES			
STRONG BASES			
HYDROCARBONS			
SOLVENTS			

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for tiles and cement-resin.

Not suitable if voluminous obstacles are present.














Force required to push or tow a wheel

 	100 kg	200 kg	300 kg	400 kg	500 kg	600 kg	700 kg
82x60 mm	1.2	2.4	3.8	5.2	---	---	---
82x70 mm	< 1	2	3.3	4.8	6.5	---	---
82x80 mm	< 1	1.5	2.4	3.7	5.2	7	---
82x90 mm	< 1	1.5	2.4	3.6	4.8	6.1	7.5
82x100 mm	< 1	1.5	2.4	3.5	4.7	5.9	7.3

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.



															
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN	daN			
82	60	0.47	782101	0.27	784101	20	60	47	14	450	390	450			
82	70	0.53	782102	0.32	784102	20	70	47	14	500	410	500			
82	80	0.59	782103	0.38	784103	20	80	47	14	600	500	600			
82	90	0.64	782104	0.43	784104	20	90	47	14	700	525	700			
82	100	0.69	782105	0.49	784105	20	100	47	14	750	530	750			

Options available to order



Rollers fitted with 25 mm bore ball bearings

“TR-ROLL” PALLET TRUCK ROLLERS WITH STEEL CENTRE

-  82-85 mm
-  75 Shore A
-  400-650 daN
4 km/h
-  320-520 daN
6 km/h
-  400-650 daN
-  -20 / +70 °C



Description

Tyre: TR-Roll polyurethane; hardness 75 Shore A; excellent rolling resistance and elasticity and good resistance to wear and tear.

Centre: obtained from a steel tube.

Hub with shielded ball bearing with interference assembly in the seats obtained by precision machining of the centre; also available without bearings.


Uses

Excellent for use on electric pallet trucks, also in case of heavy loads and high speed handling (up to 12 km/h; for applications at higher speeds please contact Tellure Rôta). They guarantee silent running and vibration damping and are suitable also on uneven surfaces and in presence of obstacles.

Their excellent values of rolling resistance make the manual handling of heavy loads easier.

Environments of use

Designed for industrial environments, even in the presence of alcohols, glycols, hydrocarbons. Not recommended in areas with organic acids and mineral acids, base solutions and saturated vapour.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.



Floors

Suitable for all types of industrial floors, even outdoors. Facilitates the overcoming of obstacles.

It does not damage the floors.














Force required to push or tow a wheel

 	100 kg	200 kg	400 kg	500 kg	600 kg	700 kg
80x90 mm	<1	1,5	3,5	4,5	5,5	
82x60 mm	1	2	3,5			
82x70 mm	<1	1,5	2,5	4		
82x90 mm	<1	1	2,5	3,5	4,5	
82x100 mm	<1	1,5	2,5	3	3,5	4,5
85x70 mm	<1	1,5	2,8	5		
85x80 mm	<1	1,5	2,5	3,5		
85x90mm	<1	1	2,5	3,5	4,5	
85x100 mm	<1	1	2	3	3,5	

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.



													
mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	daN	daN	daN	daN
80	90	1,25	792105	1,06	794105	20	90	47	14	750	490	580	460
82	60	0,87	792121	0,67	794121	20	60	47	14	500	400	400	320
82	70	0,98	792122	0,79	794122	20	70	47	14	550	450	450	360
82	90	1,21	792125	1,03	794125	20	90	47	14	750	580	580	460
82	100	1,34	792127	1,15	794127	20	100	47	14	850	620	650	520
85	70	1,04	792132	0,84	794132	20	70	47	14	550	450	450	360
85	80	1,16	792133	0,96	794133	20	80	47	14	600	520	520	400
85	90	1,28	792135	1,08	794135	20	90	47	16	750	580	580	460
85	100	1,40	792137	1,20	794137	20	100	47	14	850	650	650	520

Options available to order



Rollers fitted with 25 mm bore ball bearings



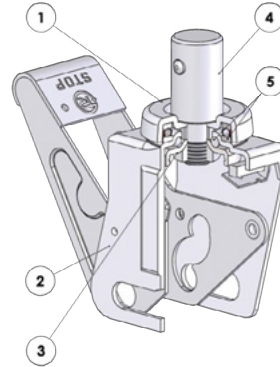
Rollers with labyrinths

SCAFFOLDINGS



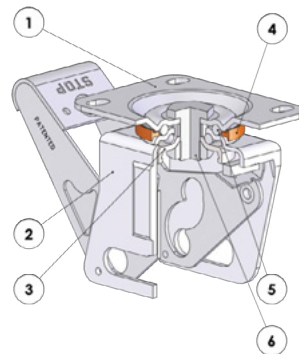
Thermoplastic polyurethane wheels with polyamide 6 centre

Wheel description on page 92-94




- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: diam. 150-200 mm: solid stem in steel and nut locked by mechanical deformation; diam.125 mm: cold-headed solid stem
- 5) Swivel actions: diam. 125-150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

1 PEDAL		2 PEDALS													
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN		
125	35	1.72	609553	1.94	609563	150	89	38	57	30	130	250	600		
150	45	3.16	609554	3.58	609564	192	83	38	57	40	150	300	700		
200	50	3.86	609576	4.21	609586	243	81	38	57	40	165	400	750		



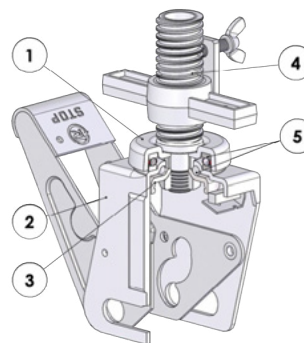
- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyamide
- 5) King pin: steel pin and nut locked through mechanical deformation
- 6) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	daN	daN				
150	45	3.01	609654	192	140x110	105x80	12	40	150	300	700				
200	50	3.61	609676	243	140x110	105x80	12	40	165	400	750				

 This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Thermoplastic polyurethane wheels with polyamide 6 centre

Wheel description on page 92-94



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation
- 5) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

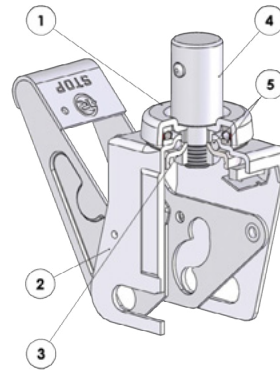
		1 PEDAL		2 PEDALS							4 km/h		EN 1004		
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	daN		
150	45	3.86	609704	5.37	609714	192	83	M38x6	500	40	150	300	700		
200	50	4.56	609726	5.67	609736	243	81	M38x6	500	40	165	400	750		



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

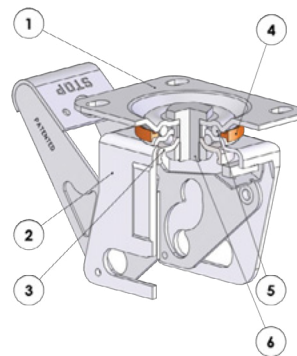
Polyamide 6 solid wheels

Wheel description on page 110-112



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: diam. 150-200 mm: solid stem in steel and nut locked by mechanical deformation; diam. 125 mm: cold-headed solid stem
- 5) Swivel actions: diam. 125-150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

1 PEDAL		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN	daN
125	38	1.69	689503	1.91	689513	150	89	38	57	30	130	250	500		
150	45	3.06	689504	3.37	689514	192	83	38	57	40	150	300	700		
200	50	3.68	689506	3.99	689516	243	81	38	57	40	165	400	750		



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyamide
- 5) King pin: steel pin and nut locked through mechanical deformation
- 6) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

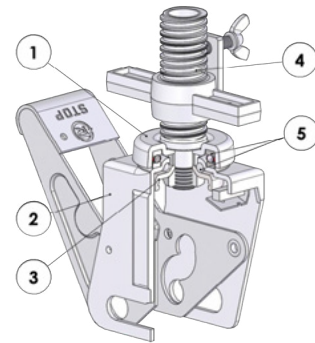
1 PEDAL		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS		2 PEDALS	
mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	daN	daN	daN
150	45	3.76	689604	192	140x110	105x80	12	40	150	300	700				
200	50	4.38	689606	243	140x110	105x80	12	40	165	400	750				



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Polyamide 6 solid wheels

Description on page 110-112



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) King pin: stem with acme thread manufactured steel from tube, nut locked by mechanical deformation
- 5) Swivel actions: diam. 150 mm: grease-lubricated double ball raceways; diam. 200 mm: single direction axial bearing and a grease-lubricated single ball raceway

150		150		200		200		200		200		200		200	
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN	daN	
150	45	3.76	689704	4.07	689714	192	83	M38x6	500	40	150	165	300	700	
200	50	4.38	689706	5.49	689716	243	81	M38x6	500	40	165	165	400	750	



This symbol indicates the castor carrying capacity according to UNI EN 1004:2005, par. 7.5 (Castor Wheels), that is guaranteed when the brake is engaged, without bracket offset and when the wheel is in a static position. With the brake released and the wheel free to rotate, the maximum load capacity is indicated in the "Dynamic carrying capacity" column at 4 km/h, defined in accordance with ISO 22883:2004

Customisations for scaffolding castors

Customised products are made upon customer's specific request for:

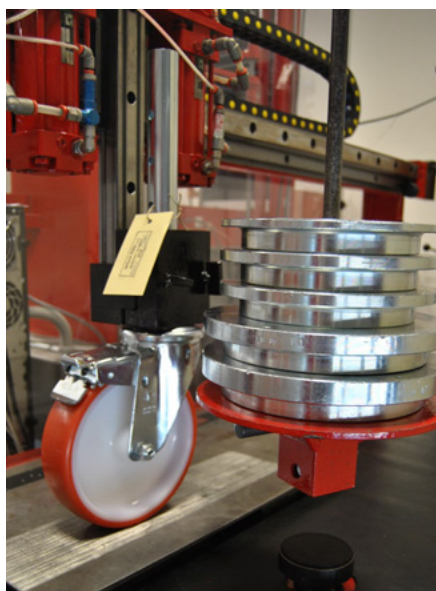
- NL brackets and Scaffolding brackets with stems of different dimensions and sizes
- assembly with different wheels.



TEST REPORT ACCORDING TO UNI EN 1004:2005

The TR Lab, Test & Research laboratory of Tellure Rôta, has the necessary equipment for conformity testing on wheel and castor according to **UNI EN 1004:2005, par. 7.5**; the test is carried out under static load and also measures the braking efficiency. The conformity requires carrying out 2 tests on 5 equal products.

The laboratory releases a test report with the results of the tests.



WASTE BIN CONTAINERS

and Paper Only

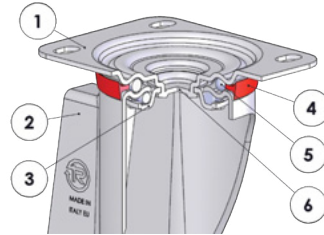


CONTINENTAL 1100



Black rubber wheels with polypropylene centre

Wheel description on page 62-64



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake, total rear foot brake, centralised brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	40	2.10	524410	2.38	525210	2.60	524010	199	140x110	105x80	11	56	156	150
200	50	2.72	524406	3.00	525206	3.22	524006	240	140x110	105x80	11	56	156	225



mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	mm	daN
200	50	3.45	524206	240	140x110	105x80	11	56	40	34	16.5	225	

Options available to order



Directional lock for brackets d. 150-200 mm



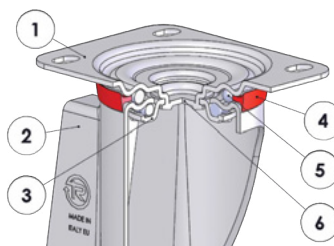
Wheel with roller bearings



Wheel with grey rubber tyre

Black rubber wheels with pressed steel discs

Wheel description on page 70-72



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake, total rear foot brake, centralised brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
160	40	2.44	535010	2.69	535410	2.97	534010	199	140x110	105x80	11	56	156	180
200	50	3.25	535006	3.39	535406	3.67	534006	240	140x110	105x80	11	56	156	230



mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	mm	daN
200	50	3.45	534806	240	140x110	105x80	11	56	40	34	16.5	230

Options available to order



Directional lock for brackets
d. 150-200 mm



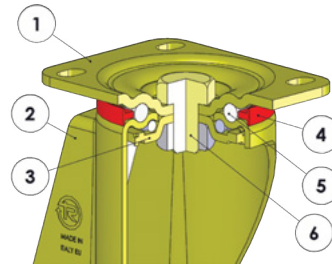
Wheel with roller bearings



Wheel with grey rubber tyre

Sigma Elastic rubber wheels with aluminium centre

Wheel description on page 230-232

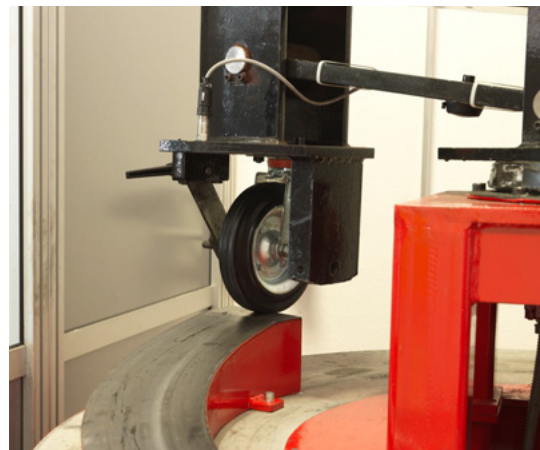
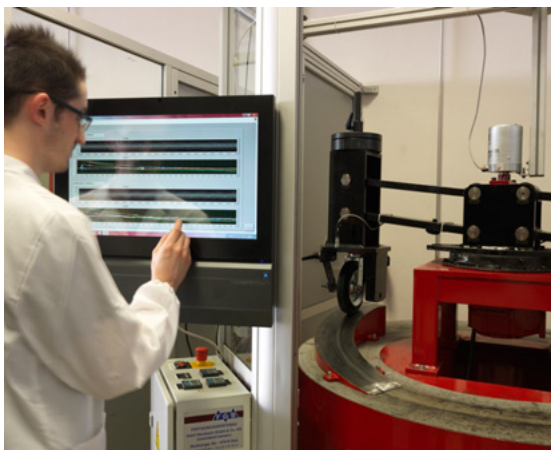


- 1) Plate: galvanised colonial steel plate
 - 2) Fork: galvanised colonial steel plate
 - 3) Ball race ring: galvanised colonial steel plate
 - 4) Dust seal: orange polyamide
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: steel bolt in grade 8.8 steel and steel nut
- Available with adjustable total rear foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
200	50	4.46	727516	3.00	728516	5.06	727206	250	140x110	105x80	11	56	126	500

TEST REPORT ACCORDING TO UNI EN 840-5: 2013

The TR Lab, Test & Research laboratory of Tellure Rôta has the necessary equipment for Dynamic testing on wheel and castor according to **UNI EN 840-5:2013, par. 4.9.3**. The laboratory issues a test report with the results of the tests.



INSTITUTIONAL





SERIES **32**

POLYAMIDE 6 WHEELS

40-60 mm
 -5 / +40 °C

30-90 daN
3 km/h

PAGE 314



SERIES **36**

THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE

30-75 mm
 -5 / +40 °C

30-140 daN
3 km/h

PAGE 320



SERIES **37**

GREY RUBBER WHEELS WITH POLYPROPYLENE CENTRE

40-125 mm
 -5 / +40 °C

30-80 daN
3 km/h

PAGE 324



SERIES **38**

THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

40-80 mm
 -5 / +40 °C

30-70 daN
3 km/h

PAGE 330



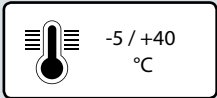
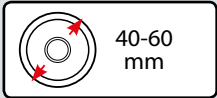
SERIES **51**

THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

80-250 mm
 -15 / +70 °C

30-120 daN
Static

PAGE 334



Description

Polyamide 6 solid wheels.

Hub with plain bore hole which directly houses the axle.

Uses

Recommended for use on catering and institutional trolleys having light carrying capacities.

Good resistance to chemical agents: not suitable on uneven flooring.

Examples of recommended applications: shop display units, trolleys for restaurants, furniture with light loads.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WEAK BASES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

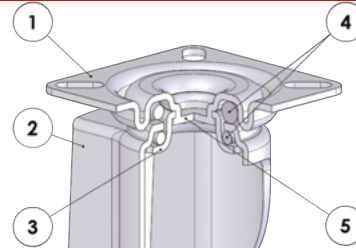
Not suitable on fragile floor or with obstacles along the path.





mm	mm	kg	CODE	mm	mm	daN
40	17	0.02	321102	8	21	30
50	17	0.02	321104	8	22	40
50	22	0.03	321105	8	28	50
60	22	0.03	321106	8	28	60

Institutional brackets



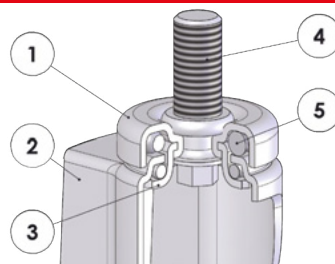
- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-rieveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
40	17	0.12	324101	0.29	324001	61	42x42	30x30	5	24	30
50	17	0.12	324102	0.31	324002	66	42x42	30x30	5	24	40
60	22	0.22	324103	0.56	324003	82	60x60	45x45	6	21	60



mm	mm	kg	CODE	mm	mm	mm	mm	daN
40	17	0.10	325101	61	55x25	42	5	30
50	17	0.10	325102	66	55x25	42	5	40
60	22	0.20	325103	82	60x60	45x45	6	60

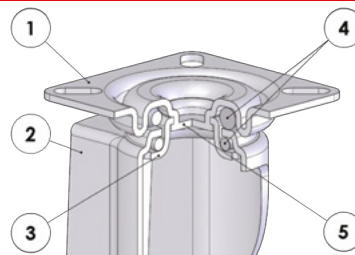
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Galvanised steel threaded stem
- 5) Swivel actions: double ball ring with grease lubrication

mm		kg	CODE	2 pc package		mm		mm	mm	mm	mm	daN		
40	17	0.12	326101	0.26	326001	61	35	M10	20	24	30			
50	17	0.14	326102	0.28	326002	66	35	M10	20	24	40			
60	22	0.23	326103	0.47	326003	82	41	M12	24	21	60			

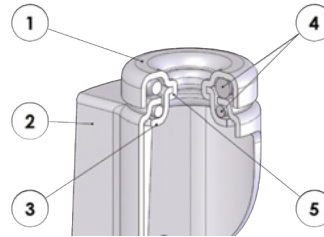
Institutional twin brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-rieveted
- Available with total front foot brake

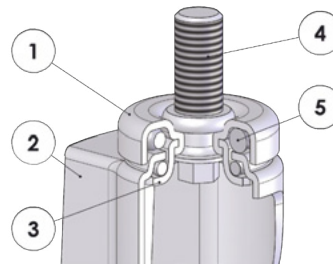
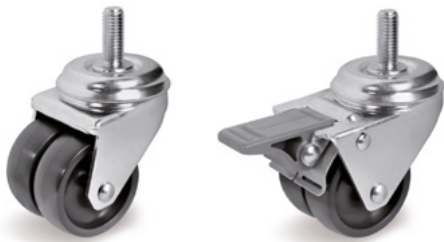
mm		kg	CODE	kg		mm	mm	mm	mm	mm	mm	daN		
50	18+18	0.28	324302	0.33	328202	71	60x60	45x45	6	25.5	83	90		

Institutional twin brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

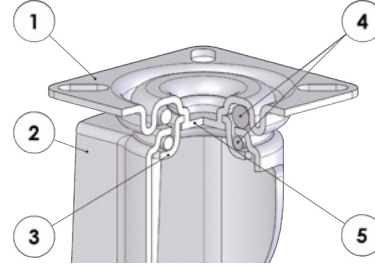
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	18+18	0.26	323202	0.31	327202	71	55	10	25.5	83	90



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

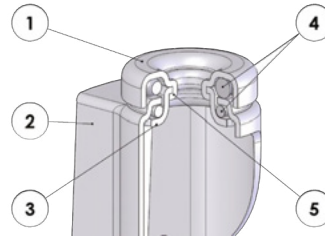
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
50	18+18	0.29	326202	0.34	329202	71	52	M10	25	25.5	90

Institutional brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

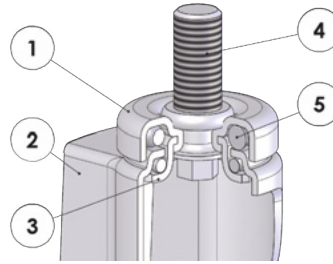
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN				
50	30	0.27	324402	0.32	328302	71	60x60	45x45	6	25.5	83	80				



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN				
50	30	0.24	323302	0.29	327302	71	55	10	25.5	83	80					

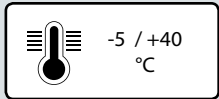
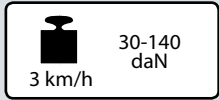
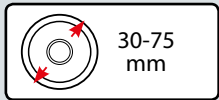
Institutional brackets for high carrying capacity



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	
50	30	0.28	326302	0.33	329302	71	52	M10	25	25.5	83	80	

THERMOPLASTIC POLYURETHANE WHEELS WITH POLYAMIDE 6 CENTRE



Description

Tyre: thermoplastic polyurethane.

Centre: polyamide 6.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for use on different types of trolleys within the institutional sector, particularly in catering.

Good load carrying capacity in relation to small diameter wheels.

Resist well to frequent washing, making them suitable in environments where hygiene must be guaranteed.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and chemical agents.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in the presence of processing residues.

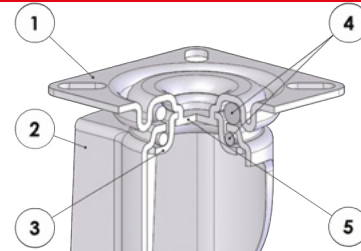
They do not damage fragile flooring and are also suitable in presence of small obstacles.





mm	mm	kg	CODE	mm	mm	daN
30	18	0,02	361100	6	21	30
40	18	0,02	361101	8	21	40
50	18	0,02	361102	8	22	55
60	25	0,06	361103	8	28	70
75	24	0,07	361104	8	28	90

Institutional brackets



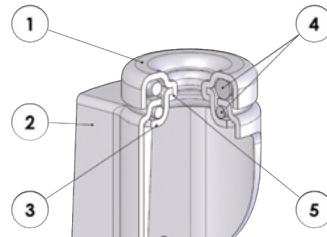
- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
30	18	0,08	364300	0,08	365100			47,5	42x42	32x32	5	14,5		30
40	18	0,11	364301	0,11	365101	0,13	368101	59	42x42	32x32	5	23	76	40
50	18	0,13	364302	0,12	365102	0,16	368102	66	55x55	40x40	6	24	76	55
60	25	0,24	364303	0,21	365103	0,28	368103	82	60x60	45x45	6	21	84	70
75	24	0,28	364304	0,24	365104	0,33	368104	101	60x60	45x45	6	30	91	90



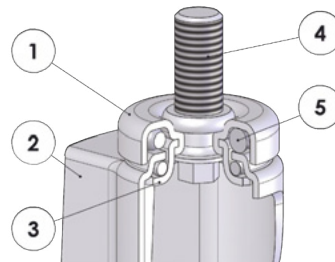
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN
40	18	0,30	324001	59	42x42	32x32	5	23	40
50	18	0,34	324002	66	55x55	40x40	6	24	55
60	25	0,56	324003	82	60x60	45x45	6	21	70

Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN
30	18	0,07	363100			47,5	35	10	14,5		30
40	18	0.10	363101	0.12	367101	59	35	10	23	76	40
50	18	0.13	363102	0.13	367102	66	35	10	24	76	55
60	25	0.24	363103	0.25	367103	82	41	12	21	84	70
75	24	0,24	363104	0,29	367104	101	41	12	30	91	90



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

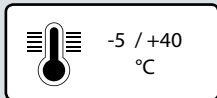
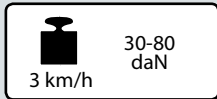
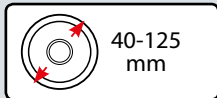
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
30	18	0,09	366300					47,5	35	M10	20	14,5		30
40	18	0,12	366301	0,14	369101	0,34	366001	59	35	M10	20	23	76	40
50	18	0,13	366302	0,16	369102	0,38	366002	66	35	M10	20	24	76	55
60	25	0,24	366303	0,28	369103	0,62	366003	82	42	M12	25	21	84	70
75	24	0,28	366314	0,33	369114			101	41	M12	25	30	91	90

Options available to order



Different stem dimensions

GREY RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: non-marking grey rubber, good elasticity.

Centre: polypropylene with metal thread-guards.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for use on different types of trolleys within the furniture and institutional sector.

They can also be used on fragile floors and in presence of small obstacles.

Example of recommended applications: shop display units and windows, low carrying capacity tool trolleys, supermarket trolleys.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and medium-harsh chemical agents. Not suitable in the presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.








Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

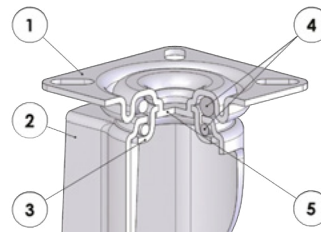
They do not damage fragile floors and are also suitable in the presence of small obstacles.




















																	
mm	mm	kg	CODE	mm	mm	daN											
40	18	0.03	371100	8	21	30											
50	20	0.06	371101	8	22	35											
60	24	0.10	371102	8	28	50											
75	24	0.14	371203	8	28	55											
80	24	0.17	371103	8	28	55											
100	24	0.22	371104	8	28	60											
125	30	0.46	371105	10	35	80											

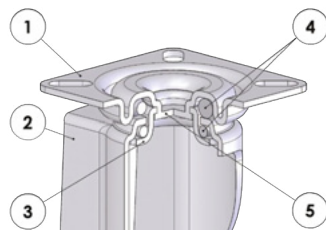
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

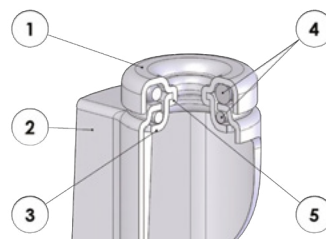
																																							
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN																									
40	18	0.12	374100	0.11	375100	0.15	378100	59	42x42	30x30	5	24	78	30																									
50	18	0.20	374101	0.20	375101	0.24	378101	66	55x55	40x40	6	24	76	35																									
60	24	0.28	374102	0.26	375102	0.40	378102	82	60x60	45x45	6	21	83	50																									
75	24	0.40	374303	0.31	375303	0.48	378303	101	60x60	45x45	6	25	91	55																									
80	24	0.43	374103	0.34	375103	0.50	378103	104	60x60	45x45	6	25	91	55																									
100	24	0.48	374104	0.40	375104	0.57	378104	121	60x60	45x45	6	32	95	55																									
125	30	0.87	374105	0.80	375105	0.97	378105	152	77x67	55x45	8	40	115	80																									

Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-riveted

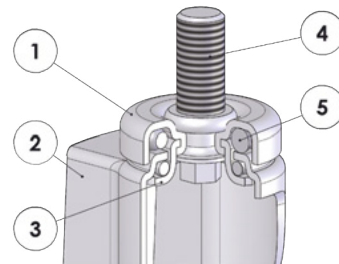
mm		kg		CODE		mm		mm		mm		mm		daN	
50	18	0.39	374001	66	55x55	40x40	6	24	3 km/h						
60	24	0.68	374002	82	60x60	45x45	6	21	50						



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg		CODE		mm		mm		mm		mm		daN	
40	18	0.11	373100	0.14	377100	59	35	10	24	78	3 km/h		30		
50	18	0.16	373101	0.19	377101	66	35	10	24	76			35		
60	24	0.25	373102	0.32	377102	82	41	12	21	83			50		
75	24	0.31	373303	0.40	377303	101	41	12	25	91			55		
80	24	0.34	373103	0.43	377103	104	41	12	25	91			55		
100	24	0.40	373104	0.49	377104	121	41	12	32	91			55		
125	30	0.76	373105	0.87	377105	149	55	12	40	115			80		

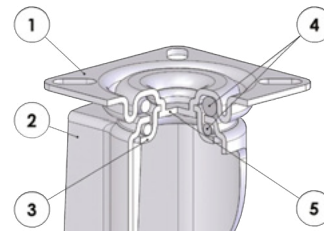
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

mm		kg	CODE	kg	CODE	2 pc package							3 km/h	daN
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
40	18	0.13	376100	0.18	379100			59	35	M8	15	24	78	30
50	18	0.18	376101	0.21	379101	0.34	376001	66	35	M8	15	24	76	35
60	24	0.29	376102	0.36	379102	0.60	376002	82	41	M12	25	21	83	50
75	24	0.36	376303	0.43	379303			101	41	M12	25	25	91	55
80	24	0.39	376103	0.46	379103			104	41	M12	25	25	91	55
100	24	0.44	376104	0.53	379104			121	41	M12	25	32	95	55
125	30	0.79	376105	0.89	379105			149	52	M12	25	40	115	80

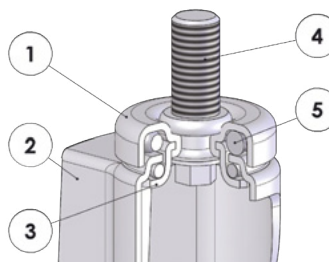
Institutional twin brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

mm		kg	CODE	kg	CODE						3 km/h	daN
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN
50	18+18	0.35	374201	0.40	378201	70	60x60	45x45	6	30	82	60
75	24+24	0.64	374203	0.72	378203	100	60x60	45x45	6	33	95	80

Twin brackets for institutional



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

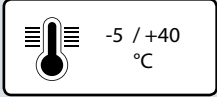
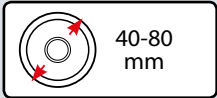
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN		
50	18+18	0.30	376201	0.37	379201	70	42	M10	15	30	82	60		
75	24+24	0.50	376203	0.68	379203	100	52	M12	25	33	95	80		



Quality You need

 **tellure Rôta**

GREY NON-MARKING THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: grey non-marking thermoplastic rubber.

Centre: polypropylene.

Hub with plain bore which houses the axle.

Uses

Suitable for institutional trolleys, especially for catering. The grey non-marking thermoplastic rubber tyre makes them also suitable on delicate floorings. They can resist frequent washings and are therefore a good option in those environments where cleanliness must be guaranteed.

Environments of use

Suitable for industrial and institutional environments, also in the presence of humidity. Not suitable in the presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils. Not recommended in presence of strong organic and mineral acids.

WEAK ACIDS				
STRONG ACIDS				
WATER				
ALCOHOL				

WEAK BASES				
STRONG BASES				
HYDROCARBONS				
SOLVENTS				

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

Floors

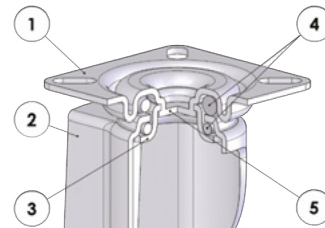
It does not stain or damage fragile floors. Suitable for tiles and cement-resin. Not recommended on abrasive, unpaved floors or in the presence of processing residues.





mm	mm	kg	COD.	mm	mm	daN
40	18	0,01	381100	8	21	30
50	20	0,02	381101	8	22	40
60	24	0,04	381102	8	28	60
75	24	0,05	381203	8	28	70
80	24	0,07	381103	8	28	70

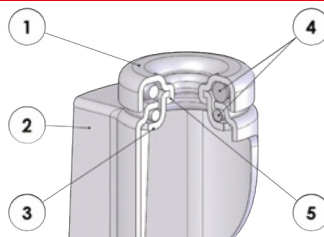
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with front locking brakes

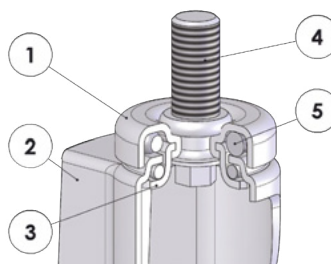
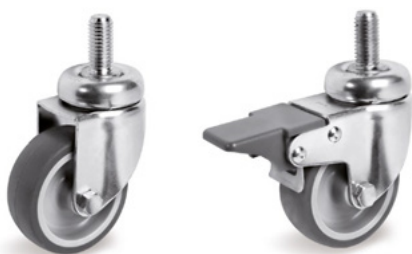
mm	mm	kg	COD.	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
40	18	0,09	384200	0,10	385200	0,12	388200	59	42x42	30x30	5	24	78	30
50	18	0,13	384201	0,14	385201	0,15	388201	66	55x55	40x40	6	24	78	40
60	24	0,22	384202	0,19	385202	0,26	388202	82	60x60	45x45	6	21	83	60
75	24	0,26	384303	0,22	385303	0,32	388303	101	60x60	45x45	6	25	91	70
80	24	0,28	384203	0,24	385203	0,33	388203	104	60x60	45x45	6	25	91	70

Supporti per collettività



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Swivel actions: double ball ring with grease lubrication
 - 5) King pin: integrated with the plate and cold-riveted
- Available with front locking brakes

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	daN
40	18	0,08	383200	0,11	387200	59	35	10	24	78	30
50	18	0,10	383201	0,12	387201	66	35	10	24	78	40
60	24	0,19	383202	0,22	387202	82	41	12	21	83	60
75	24	0,23	383303	0,28	387303	101	41	12	25	91	70
80	24	0,24	383203	0,29	387203	104	41	12	25	91	70



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Galvanised steel threaded stem
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with front locking brakes

mm	mm	kg	COD.	kg	COD.	mm	mm	mm	mm	mm	mm	daN
40	18	0,09	386200	0,12	389200	59	35	M8	15	24	78	30
50	18	0,11	386201	0,14	389201	66	35	M8	15	24	78	40
60	24	0,22	386202	0,26	389202	82	41	M12	25	21	83	60
75	24	0,26	386303	0,32	389303	101	41	M12	25	25	91	70
80	24	0,28	386203	0,33	389203	104	41	M12	25	25	91	70

Options available to order

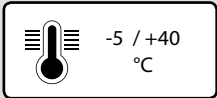
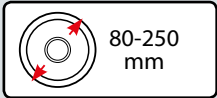


Various dimensions stems



People make the difference

BLACK THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE



Description

Tyre: black thermoplastic rubber.

Centre: polypropylene.

Hub with plain bore hole which directly houses the axle.

Uses

Mainly suitable for static applications, on even flooring and for light carrying capacities.

Example of recommended applications: compressors, welding machines.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity. Not suitable in the presence of organic solvents, chlorinated substances, hydrocarbons and mineral oils.

WEAK ACIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

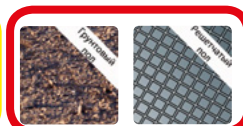
WEAK BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STRONG BASES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SOLVENTS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.








Floors

Suitable on tiles and resin-cement; not recommended on abrasive, unpaved floors or in presence of processing residues.

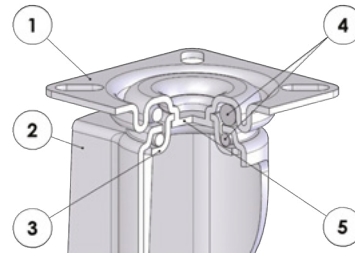
Not suitable for uneven surfaces.














													
mm	mm	kg	CODE	mm	mm	daN							
80	26	0.09	511101	10	34	30							
100	30	0.11	511112	8	35	35							
100	30	0.11	511122	12	35	35							
125	35	0.18	511103	15	44	50							
150	35	0.23	511104	15	44	90							
175	45	0.33	511105	20	59	100							
200	50	0.72	511106	20	59	120							
250	50	0.89	511108	20	59	120							

Institutional brackets

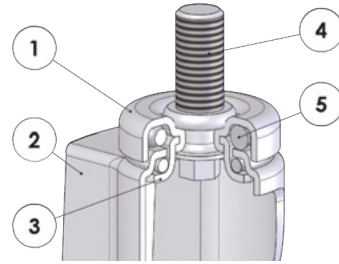


- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Swivel actions: double ball ring with grease lubrication
- 5) King pin: integrated with the plate and cold-riveted

													
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN				
80	26	0.43	514411	106	60x60	45x45	6	28	30				
100	30	0.48	514412	128	60x60	45x45	6	32	35				

BLACK THERMOPLASTIC RUBBER WHEELS WITH POLYPROPYLENE CENTRE

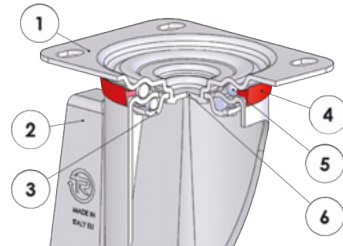
Institutional brackets



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Galvanised steel threaded stem
- 5) Swivel actions: double ball ring with grease lubrication

mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN					
80	26	0.35	516801	103	41	M12	25	28	30					
100	30	0.40	516802	126	41	M12	25	32	35					

Standard-duty brackets NL - max carrying capacity 90 daN



- 1) Plate: electrolytically galvanised steel plate
- 2) Fork: electrolytically galvanised steel plate
- 3) Ball race ring: electrolytically galvanised steel plate
- 4) Dust seal: orange polyethylene
- 5) Swivel actions: double ball ring with grease lubrication
- 6) King pin: integrated with the plate and cold-riveted

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	kg			
80	26	0.62	514401	0.34	515701	107	100x85	80x60	9	37	30			
100	30	0.63	514402	0.37	515702	128	100x85	80x60	9	35	35			
125	35	0.82	514403	0.48	515703	156	100x85	80x60	9	37	50			
150	35	0.91	514404	0.54	515704	182	100x85	80x60	9	42	90			



Sixty years of reliability

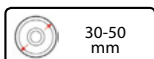
FURNITURE



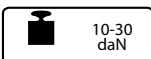


SERIES **33**

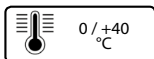
RUBBER BALL WHEELS



30-50
mm



10-30
daN



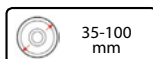
0 / +40
°C

PAGE 340



SERIES **34**

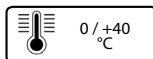
PAIRED POLYAMIDE 6 OR POLYPROPYLENE WHEELS



35-100
mm



10-40
daN



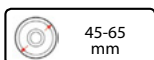
0 / +40
°C

PAGE 342



SERIES **35**

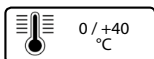
RUBBER HALF-BALL WHEELS



45-65
mm



20-40
daN



0 / +40
°C

PAGE 346



SERIES **39**

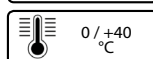
TRANSPARENT POLYURETHANE WHEELS WITH METHACRYLATE CENTRE



50-75
mm



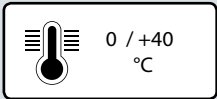
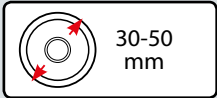
20-40
daN



0 / +40
°C

PAGE 348

RUBBER BALL WHEELS



Description

Black rubber ball wheels with zinc-plated brackets.

Hub with plain bore hole which directly houses the axle.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile flooring, even carpet.

Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and delicate flooring; not recommended on abrasive, unpaved floors or in presence of processing residues.

Not recommended in presence of obstacles.





mm	kg	CODE	2 pc package		mm	mm	mm	mm	daN				
			kg	CODE									
30	0.11	334101	0.26	334001	48	40x40	27x27	5	10				
40	0.15	334102	0.34	334002	59	40x40	27x27	5	20				
50	0.23	334103	0.51	334003	69	47x47	35x35	6	30				



mm	kg	CODE	2 pc package		mm	mm	mm	daN				
			kg	CODE								
30	0.09	333101	0.21	333001	46	32	9	10				
40	0.13	333102	0.30	333002	57	32	9	20				
50	0.20	333103	0.43	333003	66	36	10	30				



mm	kg	CODE	2 pc package		mm	mm	mm	mm	daN				
			kg	CODE									
30	0.10	336101	0.25	336001	51	SPANNER 13	M8	15	10				
40	0.14	336102	0.33	336002	63	SPANNER 13	M8	15	20				
50	0.22	336103	0.47	336003	73	SPANNER 13	M8	15	30				

PAIRED POLYAMIDE 6 AND POLYPROPYLENE WHEELS

35-100 mm

10-40 daN

0 / +40 °C



Description

Paired wheels in black or grey polyamide 6.
Steel stems and plates



Paired wheels in transparent or blue polypropylene.
Steel stems and plates.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile flooring, even carpet.

Examples of recommended applications: chairs with low carrying capacity for home and office.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	WEAK BASES	<input type="checkbox"/>	<input type="checkbox"/>		
STRONG ACIDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	STRONG BASES	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WATER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HYDROCARBONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ALCOHOL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SOLVENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and fragile floors not recommended on abrasive, unpaved floors or in presence of processing residues.

Not recommended in presence of obstacles.





Black polyamide 6 wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
35	39	0.05	344100	50	28x28	19x19	5	10
50	59	0.09	344101	68	38x38	27x27	5	30



Black polyamide 6 wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
35	39	0.04	346200	44.5	SPANNER 12	M8	15	10
50	59	0.07	346201	62	SPANNER 12	M10	15	30



Black polyamide 6 wheels
Package with 2 pieces and 4 fittings

mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
35	39	0.22	340000	50/44,5	28x28	19x19	5	SPANNER 12	M8	15	10
50	59	0.30	340001	68/62	38x38	27x27	5	SPANNER 12	M10	15	30



Grey polyamide 6 wheels

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
60	42	0.13	347403	0.14	342103	86	48x48	34x34	6	74	30				
75	48	0.16	347404	0.19	342104	106	48x48	34x34	6	87	30				
100	57	0.51	347405	0.53	342105	124	60x60	42x42	6	115	40				



Grey polyamide 6 wheels

mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN				
60	42	0.09	342203	0.10	342303	77	SPANNER 12	M10	15	74	30				
75	48	0.12	342204	0.13	342304	95	SPANNER 12	M10	15	87	30				
100	57	0.54	342205	0.57	342305	114	SPANNER 12	M10	15	115	40				



Transparent polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN						
50	54	0.09	347002	66	35x35	26x26	4		20						



Transparent polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.08	347102	61	SPANNER 12	M10	15	20



Blue polypropylene wheels

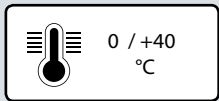
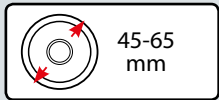
mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.09	347202	66	35x35	26x26	4	20



Blue polypropylene wheels

mm	mm	kg	CODE	mm	mm	mm	mm	daN
50	54	0.08	347302	61	SPANNER 12	M10	15	20

RUBBER SPHERICAL WHEELS



Description

Black rubber spherical wheels with chrome-plated brackets and electrolytically galvanised Zamak alloy fittings. The wheels are supplied in pair only (one right and one left wheels).

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on fragile floors, even carpet. Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.

Floors

Suitable on tiles and delicate flooring; not recommended on abrasive, unpaved floors or in presence of processing residues. Not recommended in presence of obstacles.





mm	RH		LH		mm	mm	mm	mm	daN
	kg	CODE	kg	CODE					
45	0.09	354101	0.09	354201	56	28x28	19x19	5	20
55	0.14	354102	0.14	354202	66	38x38	27x27	5	30
65	0.19	354103	0.19	354203	76	38x38	27x27	5	40



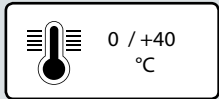
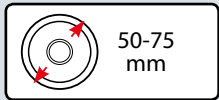
mm	RH		LH		mm	mm	mm	mm	daN
	kg	CODE	kg	CODE					
45	0.09	356101	0.09	356201	52	SPANNER 12	M8	15	20
55	0.13	356102	0.13	356202	62	SPANNER 12	M8	15	30
65	0.18	356103	0.18	356203	72	SPANNER 12	M10	15	40



Package with 2 wheels and 4 fittings

mm	kg	CODE	mm	mm	mm	mm	mm	mm	mm	daN
55	0.35	350002	62	38x38	27x27	5	SPANNER 12	M8	15	30

TRANSPARENT POLYURETHANE WHEELS WITH METHACRYLATE CENTRE



Description

Tyre: transparent polyurethane.

Centre: methacrylate.

Hub with plain bore hole which directly houses the axle.

Zinc-plated brackets.

Uses

Suitable for indoor applications, without aggressive chemicals. They can be used on delicate flooring, even carpet.

Examples of recommended applications: house and office furniture with low carrying capacity.

Environments of use

Suitable for domestic environments without aggressive chemicals.

WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 36.















Floors

Suitable on tiles and fragile flooring; not recommended on abrasive, unpaved floors or in presence of processing residues.














Not recommended in presence of obstacles.





																	
mm	mm	kg	CODE	mm	mm	mm	mm	mm	mm	daN							
50	20	0.14	392002  	71	42x42	32x32	4.5	19	20								
75	22	0.33	392004  	103	60x60	43x43	6.5	28	40								



																	
mm	mm	kg	CODE	mm	mm	mm	mm	mm	daN								
50	20	0.14	392102  	71	M8	15	19	20									
75	22	0.31	392104  	103	M10	25	28	40									

Options available to order



Wheels with thread bracket d. 78 mm



Wheels with thread bracket d. 78 mm

SOLUTIONS WITH SPECIFIC CONDUCTIVE ELECTRICAL RESISTANCE

Plastic materials, rubbers and elastomers commonly used in the wheels and castors sector are generally isolating and therefore nonconducting. Therefore, they do not allow the static possibly built up on the trolley or equipment to be conducted to the ground.

The built up static can potentially compromise the functionality of sensible electrical equipment transported on the trolley and potentially trigger explosions in environments at risk.

Hence, wheels and castors made of those materials may not be fit for potentially explosive areas and for ESD sensible environments.

Tellure Rôta propose customised castor solutions with modified electrical resistance to comply with the guidelines of ESD conductive electrical resistance applications, whose specifications are shown on the following page.

Tellure Rôta do recommend to thoroughly assess the requirements of the final user and to compare them with the castor specifications in order to prevent any risk of damage.

As the electrical resistance can be altered by the conditions of the tread or by the environment, we also recommend a maintenance of the castors to inspect the electrical resistance at a regular intervals (depending on the environment of use) not to exceed a 3 months period.

The main norms of reference for wheels and castors with specific electrical resistance are:

- *ISO 22878:2004* which defines the methods of measuring the electrical resistance of wheels;
- *ISO 22883:2004* which defines the range of the electrical resistance;
- *IEC 61340-5-1:2007* which includes the general guidelines for protection of electrical devices from electrostatic events.



BLACK RUBBER WHEELS WITH $R < 10^5$ OHM

Series 53 wheel with diam. 80 to 200mm and roller bearing hub fitted with rubber rings with electrical resistance below 10^5 Ohm ("conductive" according to ISO 22883:2004): see pages 340-343.



POLYAMIDE 6 WHEELS WITH $R < 10^5$ OHM

Polyamide 6 wheel with electrical resistance below 10^5 Ohm ("conductive" according to ISO 22883:2004) are available upon request.

Please contact Tellure Rôta to define the dimensional specs. and for a customised offer.








POLYURETHANE WHEELS WITH $R < 10^9$ OHM

Wheels with TR and TR-Roll tread (series 62AL, 62ER, 62GH, 64, 65AL, 65GH, 65HT, 65ER) are available upon request with electrical resistance $< 10^9$ Ohm.

Please contact Tellure Rôta to define the dimensional specs. and for a customised offer.

ELECTRICAL CONDUCTIVE RUBBER WHEELS WITH PRESSED STEEL DISCS

-  80-200 mm
-  80 Shore A
-  65-230 daN
4 km/h
-  50-140 daN
-  -20 / +60 °C



Description

Tyre: electrical conductive rubber (electrical resistance below 10^5 Ohm), hardness 80 Shore A.

Centre: electrolytically galvanised steel plate, made of two riveted discs.

Cylindrical roller bearing hub in plastic cage.

Uses

Suitable for trolleys with light-duty loads, also in potentially explosive areas and for ESD sensible environments. Suitable in the presence of obstacles and for indoor-outdoor use.

Examples of recommended applications: tool trolleys, trolleys for industrial indoor handling, small mobile scaffoldings, waste bin containers.

Environments of use

Suitable for industrial and institutional environments, also in presence of humidity and oils. Not suitable in presence of aggressive chemical agents.

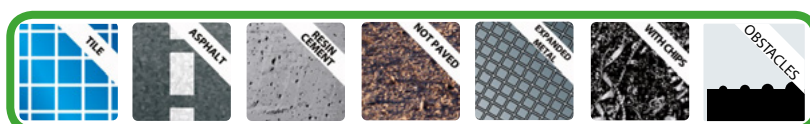
WEAK ACIDS		WEAK BASES	
STRONG ACIDS		STRONG BASES	
WATER		HYDROCARBONS	
ALCOHOL		SOLVENTS	

For information on the compatibility of the component wheel materials with specific aggressive chemical substances, see table at page 40.

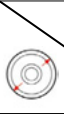

Floors

Suitable for all types of floors, even outdoors.

They easily overcome obstacles, do not damage fragile floors, but they may mark the floor.



Force required to push or tow a wheel

 	50 kg	100 kg	150 kg	200 kg	250 kg	300 kg
80 mm	5	----	----	----	----	----
100 mm	3	----	----	----	----	----
125 mm	2.5	6	----	----	----	----
140 mm	2.2	5.5	9	----	----	----
150 mm	2	5	8	----	----	----
160 mm	1.5	3.5	7.5	----	----	----
180 mm	1	3	6.1	----	----	----
200 mm	1	3	5.5	8.5	----	----

For each load and diameter, the table indicates the force (in daN) needed to push or tow a single wheel at the constant speed of 4 km/h on smooth flooring. For manual handling of a 4-wheeled trolley we recommend diameters that have values < 5 daN, for frequent handling we recommend diameters with values < 3 daN.










Fittings with brackets



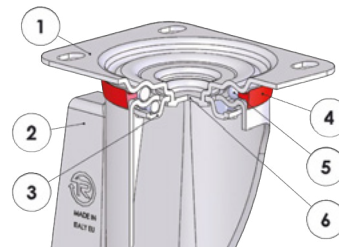
Standard-duty brackets NL

Maximum carrying capacity 230 daN - available diameters 80-200 mm
 Top plate, bolt hole and solid stem fittings. Available with front brake.



















																	
mm	mm	kg	CODE	mm	mm	daN	daN	daN									
80	25	0.19	533121AS	12	39	260	50	65									
100	30	0.31	533122AS	12	44	300	75	80									
125	37.5	0.54	533103AS	15	44	330	85	130									
150	40	0.76	533111AS	15	44	350	100	170									
160	40	1.07	533110AS	20	58	370	120	180									
180	45	1.39	533105AS	20	58	390	130	200									
200	50	1.81	533106AS	20	58	410	140	230									

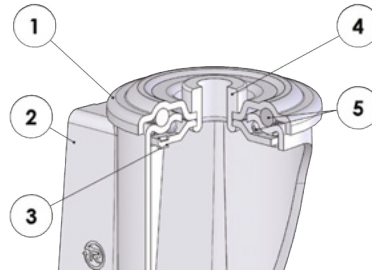
Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) Dust seal: orange polyethylene
 - 5) Swivel actions: double ball ring with grease lubrication
 - 6) King pin: integrated with the plate and cold-riveted
- Available with total front foot brake

																					
mm	mm	kg	CODE	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	mm	daN	4 km/h						
80	25	0.70	535101AS	0.51	535901AS	0.89	535421AS	107	100x85	80x60	9	37	120	65							
100	30	0.84	535102AS	0.65	535902AS	1.03	535422AS	128	100x85	80x60	9	35	120	80							
125	37.5	1.21	535103AS	0.95	535903AS	1.33	535423AS	156	100x85	80x60	9	37	120	130							
150	40	1.45	535111AS	1.07	535911AS	1.60	535431AS	182	100x85	80x60	9	34	120	170							
160	40	2.50	535110AS	2.13	535910AS	2.75	535430AS	199	140x110	105x80	11	56	156	180							
180	45	2.85	535105AS	2.56	535905AS	3.13	535425AS	219	140x110	105x80	11	56	156	200							
200	50	3.31	535106AS	3.05	535906AS	3.45	535426AS	240	140x110	105x80	11	56	156	230							

Standard-duty brackets NL - max carrying capacity 230 daN



- 1) Plate: electrolytically galvanised steel plate
 - 2) Fork: electrolytically galvanised steel plate
 - 3) Ball race ring: electrolytically galvanised steel plate
 - 4) King pin: bushing in electrolytically galvanised steel
 - 5) Swivel actions: double ball ring with grease lubrication
- Available with total front foot brake

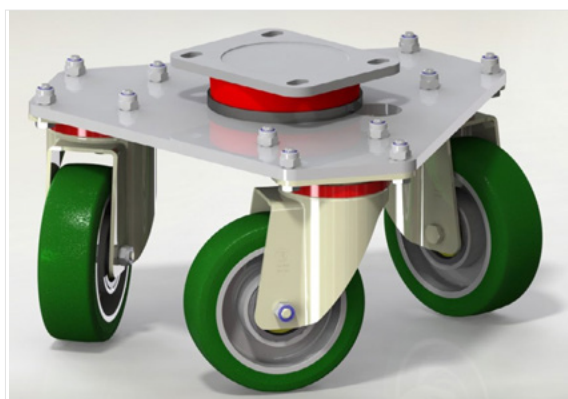
mm	mm	kg	CODE	kg	CODE	mm	mm	mm	mm	mm	daN								
80	25	0.63	537901AS	0.80	538221AS	107	73	12	37	120	65								
100	30	0.76	537902AS	0.96	538222AS	128	73	12	35	120	80								
125	37.5	1.12	537903AS	1.27	538223AS	156	73	12	37	120	130								
150	40	1.38	537911AS	1.52	538231AS	182	73	12	34	120	170								
160	40	1.85	537910AS	2.10	538230AS	193	102	20	56	156	180								
180	45	2.73	537905AS	3.01	538225AS	214	102	20	56	156	200								
200	50	3.22	537906AS	3.35	538226AS	236	102	20	56	156	230								

TRIPODS















Originally designed to move theatre stage sets, Tellure Rôta tripods are ideally suited to **transporting heavy loads in a tight space** with minimal effort by operators as well as very little noise and few vibrations. Using “TR” and “TR-Roll” polyurethane wheels ensures a long lifespan together with low starting and rolling resistance.













TRIPODS WITH WHEELS FROM SERIES 62AL



Available with NL brackets (standard duty)

									
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN
100	40	8.47	062074 	170	135x110	105x80	11	416	600
125	40	10.20	062140 	198	135x110	105x80	11	466	660

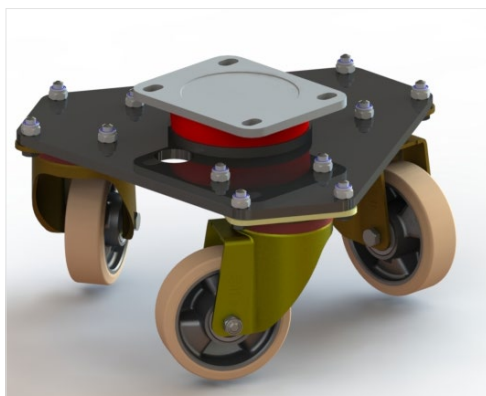
Available with P brackets (medium-heavy duty)

									
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN
100	40	9.63	062141 	179	135x110	105x80	11	440	900
125	40	11.20	062199 	202	135x110	105x80	11	480	1000

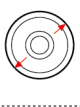
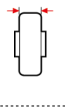

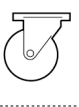

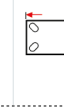


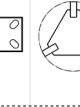





The loading capacity refers to manual handling (up to 4 km/h), on regular surfaces and in the absence of obstacles.

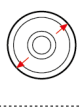
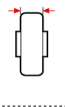

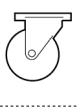
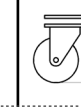

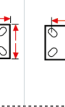
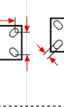
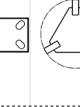



TRIPODS WITH WHEELS FROM SERIES 65AL



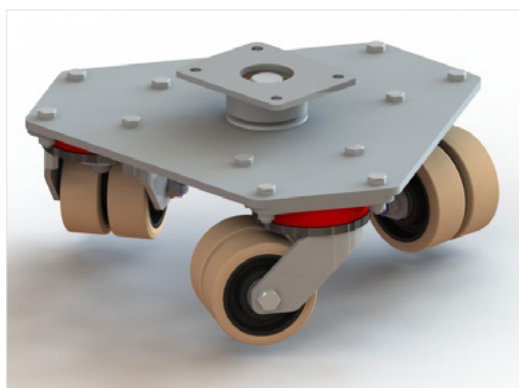
Available with NL brackets (standard duty)


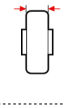



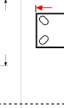
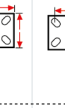




										
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN	
100	30	7.92	065016 	170	135x110	105x80	11	416	600	
125	35	9.54	065017 	198	135x110	105x80	11	466	660	

Available with P brackets (medium-heavy duty)

										
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN	
100	30	8.82	065123 	179	135x110	105x80	11	440	750	
125	35	10.40	065134 	202	135x110	105x80	11	480	1000	

TRIPODS WITH WHEELS FROM SERIES 64



										
mm	mm	kg	COD.	mm	mm	mm	mm	mm	daN	
100	38+38	23.60	064328 	190	135x110	105x80	11	540	1000	



The loading capacity refers to manual handling (up to 4 km/h), on regular surfaces and in the absence of obstacles.

PRODUCTS FOR SPECIFIC CUSTOMER REQUIREMENTS

Tellure Rôta designs and implements customised solutions, manufactured according to the specific requirements of customers.

Thanks to its flexible production system and a specific prototyping department, Tellure Rôta can make customised products which are then tested in TR Lab to verify their performance.

The manufacturing of special solutions is subject to minimum quantities, which can vary according to the type of product.

The designing of a Tellure Rôta customised goes through the following phases:

- MEETING THE CUSTOMER TO ACQUIRE THE SPECIFIC REQUIREMENTS
- CREATING A DEDICATED PROJECT
- SHARING THE RESULTS WITH THE CUSTOMER
- IMPLEMENTING THE WHEEL PROTOTYPE
- QUALITY TEST
- CUSTOMER VALIDATION
- PRODUCTION START

Some examples of customised projects



THERMOPLASTIC MATERIAL WHEEL WITH CUSTOMISED COLOURS



THERMOPLASTIC MATERIAL WHEEL FOR THE PALLET TRUCK SECTOR



ELECTROWELDED CASTORS WITH STEERING SYSTEM



POLYURETHANE WHEELS WITH INCREASED THICKNESS TO BETTER OVERCOME OBSTACLES



BRACKETS WITH CUSTOMISED STEM



BRACKETS WITH CUSTOMISED STEM



WHEEL WITH TWIN ELECTROWELDED BRACKET
DIAM. 400 MM FOR HEAVY-DUTY LOADS



POLYAMIDE 6 WHEEL FOR EXTRA-HEAVY LOADS



"TR" POLYURETHANE DRIVE WHEEL



"TR-ROLL" POLYURETHANE DRIVE WHEEL



POLYURETHANE COATING



COATING FOR MOTORWHEELS

ACCESSORIES FOR WHEELS AND CASTORS: THREADGUARDS AND COUNTER-PLATES

Threadguards

Threadguards in galvanised steel for series 22-52

		GALVANISED	
mm	mm	CODE	
80	25	100027	
100	30	100027	
125	37.5	100010	
140	37.5	100010	
150 - 22	40	100028	
150 - 52	40	100005	
200	50	100007	

Threadguards in galvanised steel for series 23-53

		GALVANISED	
mm	mm	CODE	
80	25	100010	
100	30	100009	
125	37.5	100012	
140	37.5	100014	
150	40	100014	
160	40	100015	
180	50	100016	
200	50	100017	

Polyamide 6 threadguards and galva- nised steel series 60-61-71 (models with plain bore and ball bearing)

		POL 6	GALVANISED
mm	mm	CODE	CODE
80	30	100501	100461
100	30	100502	100462
125	35	100503	100463
150	35	100504	
150	45	100514	
200	50	100506	

Threadguards in galvanised steel for series 63AC

		GALVANISED	
mm	mm	CODE	
100	30	100031	
125	40	100032	
150	40	100033	
200	50	100035	

Threadguards in galvanised steel for series 65AL

		GALVANISED	
mm	mm	CODE	
80	25	100461	
100	30	100462	
125	35	100463	
150	40	100464	
200	50	100466	

Threadguards in galvanised steel for series 65GH

		GALVANISED	
mm	mm	CODE	
150	30	100033	
150	35	100033	
175	35	100034	
200	45	100035	

Threadguards

Threadguards in galvanised steel and stainless steel for series 66

		GALVANISED	STAINLESS
mm	mm	CODE	CODE
80	25	100461	
100	30	100031	100231
125	30	100032	100232
150	40	100033	100234
175	40	100034	
200	50	100035	

Threadguards in galvanised steel and in stainless steel for series 68

		GALVANISED	STAINLESS
mm	mm	CODE	CODE
80	30	100491	
100	30	100498	
125	38	100493	
150	45	100494	100234
175	45	100495	
200	50	100496	

Threadguards in galvanised steel and stainless steel for series 73

		ZINCATI	INOX
mm	mm	COD.	COD.
100	40	100012	
125	40	100040	
180	50	100034	
200	50	100495	100237

Counter-plates

Counter-plates for brackets NL

mm	mm	mm	CODE
100x85	80x60	3.0	110401
140x110	105x80	3.5	110105

Counter-plates for brackets NLX

mm	mm	mm	CODE
100x85	80x60	2.5	110402
140x110	105x80	3.0	110106

Counter-plates for brackets P

mm	mm	mm	CODE
100x85	80x60	4.0	110403
135x110	105x80	6.0	110204








Counter-plates for brackets EP

mm	mm	mm	CODE
100x85	80x60	5.0	110202
135x110	105x80	6.0	110204
135x110	105x80	6.0	110204
175x140	140x105	8.0	110208

All counter-plates are supplied raw (not treated on the surface) to favour their welding to the trolley.

ACCESSORIES FOR WHEELS AND CASTORS: STEMS

Solid stems and nuts for assembly


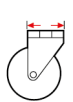
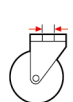






																
mm	mm	mm	mm	mm	CODE	CODE										
80	73	12	22	47	926044	921079										
100	73	12	22	47	926044	921079										
125	73	12	22	47	926044	921079										
140/150	73	12	22	47	926044	921079										
150/160	102	20	26	56	926006	921070										
175/180	102	20	26	56	926006	921070										
200	102	20	26	56	926006	921070										

Solid stems assembly layout



Threaded stems, bolts, nuts

Threaded stems

																
mm	mm	mm	mm	mm	CODE	CODE	CODE	CODE								
80	73	12	10x1.5	25	925005	922028										
100	73	12	10x1.5	25	925005	922028										
125	73	12	12x1.75	45	925006	922112										
140/150	73	12	12x1.75	45	925006	922112										
150/160	102	20	16x2	35	925007	922108	929324	947015								
175/180	102	20	16x2	35	925007	922108	929324	947015								
200	102	20	16x2	35	925007	922108	929324	947015								

Threaded stems assembly layout



Expander in Zamak alloy

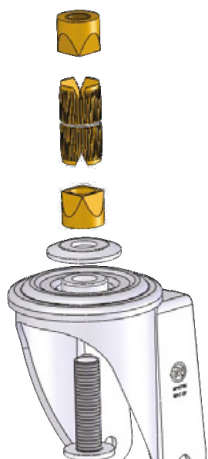


Designed to optimise the handling of tubular trolleys and perfect for use on modular trolleys.

It can be combined with bolt hole swivel castors with diameter from 80 to 125 mm and it is suitable for assembly on tubes having a diameter from 20 to 24 mm.

Standard fitting with series 60, 61, 71.

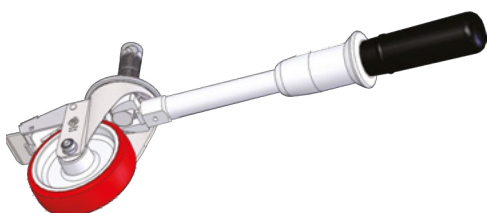
Assembly and maintenance recommendations



We recommend fastening the castor with expansion stem to the tubular structures by using adequate tightening torques. Insufficient tightening torques can jeopardise the overall carrying capacity and/or the stability of the product.

The torques must be compatible with the thickness and mechanical resistance of the tube in which the product is used. The recommended carrying capacities and maintenance cycles relate to brackets with expanders secured with fastening torque of 40 N/m.

Expander fitting are subject to adjustment during use: we recommend to periodically check its proper fastening. The stem is subject to an initial adjustment during the first days of use; following control cycles may be planned according on the intervals indicated on the Use and Maintenance Guide.

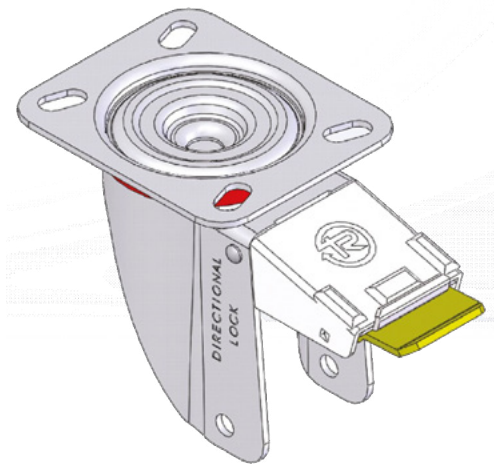


ACCESSORIES FOR WHEELS AND BRACKETS: DIRECTIONAL LOCK

Directional lock for brackets NL-P

Directional lock is an accessory that can be fitted to the top plate of a swivel bracket plate by using the same fixing bolts to the trolley. When engaged, it locks the bracket rotation in a precise direction, turning it into a fixed castor. The device is used on at least two of the four swivel brackets fitted on a trolley, thus allowing the simultaneous towing of more trolleys.

Directional lock for NL brackets, diam. up to 150 mm

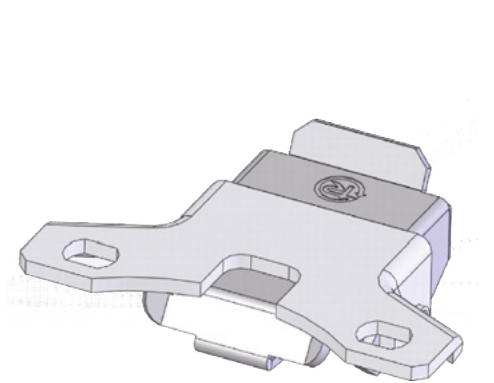


The directional lock is integrated in the swivel bracket. It is suitable for manually handled trolleys or mechanically towed trolleys at low speed (max. 6 km/h) on good condition floors.

It offers a simple engagement by self-inserting into position after pushing the front pedal.

Applicable to NL brackets diameter 80-100-125-140/150 upon request.

Directional lock for NL- P -PT brackets, diam. from 150 to 200 mm (Item nr 401215)



Designed for assembly on the top plate's shorter side.

It consists of galvanised steel plate parts and is suitable for manually handled or mechanically towed trolleys at low speed (max 6 km/h) on good condition floors.

It offers a simple engagement by self-inserting into position after pushing the front pedal.

It can be purchased as an accessory and combined with the NL, P and PT series swivel brackets for wheels diameters 150, 160, 175, 180 and 200 mm.

It can be used with swivel NL-P-PT brackets with rear brake and central brake.

It cannot be combined to NL-P brackets with front foot brake.

Directional lock for electrowelded brackets

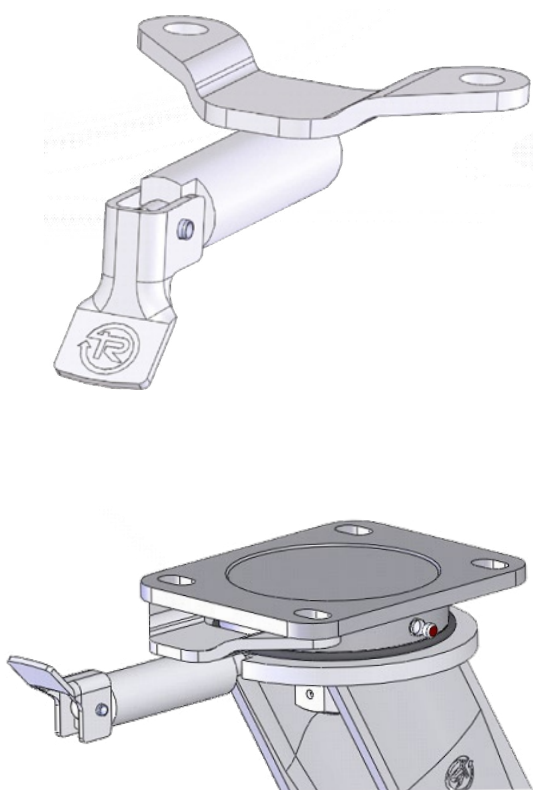
Directional lock for EE MHD-EEG MHD- EE HD brackets (Item nr 401216-401217)

Designed for assembly on the top plate's short side, it consists of galvanised steel parts and is suitable for trolleys subject to mechanical towing at speeds up to 16 km/h on indoor and outdoor floors (asphalt, cement).

Easy to engage by self-clicking into position.

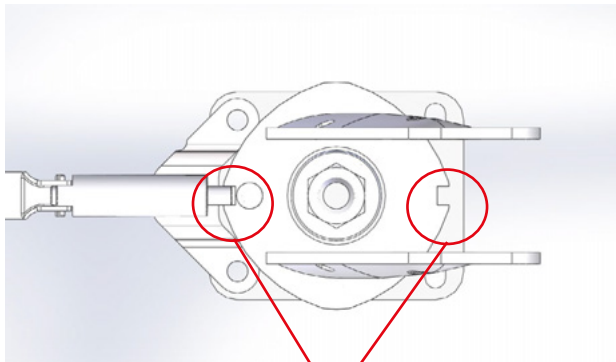
Specifications:

- it is fitted to the top plate of a castor by using the same fixing bolts which secure the castor to the trolley
- it can be fitted with EE MHD and EE HD electrowelded castors, to EEG MHD twin electrowelded castors, to EES MHD sprung-loaded electrowelded castors (please see the table on the following page for details)
- it can be fitted to Tellure Rôta brackets which have the appropriate slots

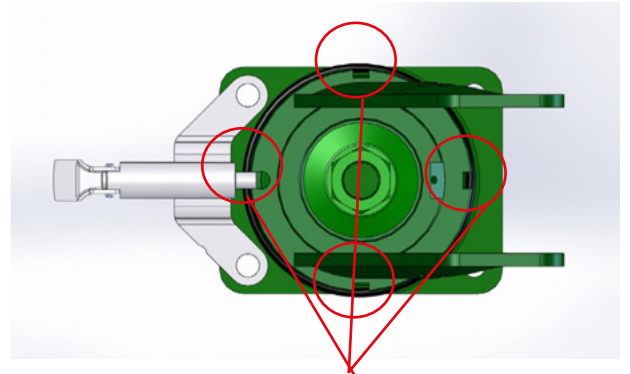


ACCESSORIES FOR WHEELS AND BRACKETS: DIRECTIONAL LOCK

Directional lock for electrowelded brackets







Bracket with 2 slots at 180°



Bracket with 4 slots at 90°

Fittings

EE	MHD					Directional lock part number	Suffix 2x180° slots	Dir. lock to be fitted on the side of the top plate with dimension:	Suffix 4x90° slots	
		4-6 km/h								
		100	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		125	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		150	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		160	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		180	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		200	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
		250	135x110	1000	Si	Si	401216	-B2	110 mm	-B4
EE	EES									
	MHD	150	135x110	1000	Si	No	401216	-	110 mm	
		160	135x110	1000	Si	No	401216	-	110 mm	
		200	135x110	1000	Si	No	401216	-	110 mm	
		250	135x110	1000	Si	No	401216	-	110 mm	
EE	EEG									
	MHD	100	135x110	1000	Si	N.d.	401216	-B2	110 mm	-B4
		125	135x110	1000	Si	N.d.	401216	-B2	110 mm	-B4
EE	HD									
		150	175x140	1600	Si	No	401217	-D2	140 mm	-D4
		200	175x140	1600	Si	No	401217	-D2	140 mm	-D4
		250	175x140	1600	Si	No	401217	-D2	140 mm	-D4
		300	175x140	1600	Si	No	401217	-D2	140 mm	-D4

The directional lock for electrowelded castors can be assembled **with brackets with appropriate slots**. To order castors configured with slots, please add the above specified suffix to the part number of the complete castor.

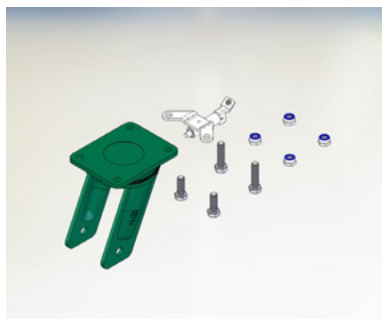
Example: to order the part number 628314 with 2 slots, it is necessary to show the part number 628314B2.

Sprung electrowelded castors EES MHD are an exception, since they are realised in standard version with 2 slots.

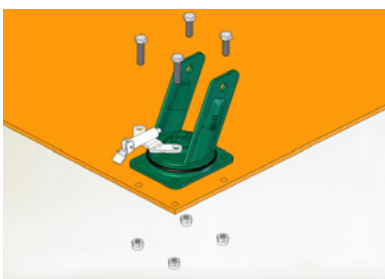
Directional lock for electrowelded brackets

Scheme of assembly

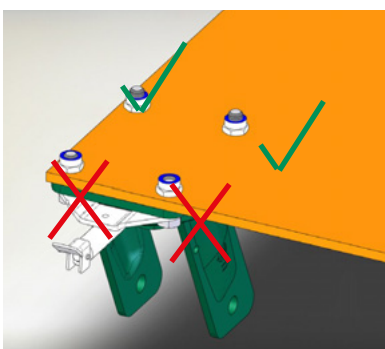
1. Four M10 bolt and four M10 nuts are required for directional lock 401216 (MHD type); M14 bolt and nuts are instead required for directional lock 401217 (HD type). Self-locking nuts and 8.8 bolt strength are recommended. The length of the bolt depends on the characteristics of the trolley the castors have to be fitted onto (it should be usually longer than 40mm).



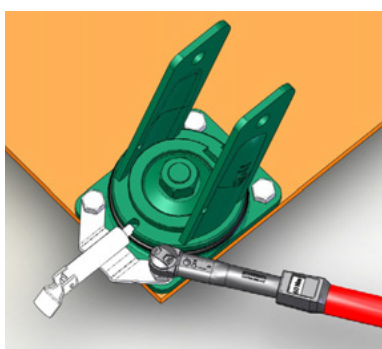
2. The directional lock and the castor have to be positioned and subsequently fastened as per the exemplification in the adjacent picture (note: the picture shows the bracket without the wheel for handiness of the image only).



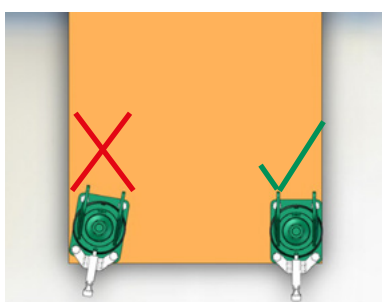
3. The bolt has to protrude through the nut by at least 3 threads.



4. The proper tightening of the bolts has to be verified by a torque wrench. The recommended tightening torque of a self-locking nut is of 25Nm for dir. lock 401216 (M10 bolts) and of 60NM for dir. lock 401217 (M14 bolts).



5. Make sure that the directional lock engages properly into the slots of the bracket and that the castors are aligned to the direction of movement of the trolley once the directional lock is applied.



↑
Direction of movement

ACCESSORIES FOR WHEELS AND BRACKETS: FOOTGUARDS

Footguards for brackets NL - M - P - PT

Tellure Rôta's footguard is specifically designed to prevent the operator's foot crushing when handling trolleys or machines.

Due to the fixed nature of this device, in fact, safety while manoeuvring carts is ensured at all times.



Features:




- it must be fitted to the forks of the bracket by means of the axle's screw, which, for this reason, must be longer than usual;
- can be fitted to Standard-duty (NL), Medium-duty (M), Medium-heavy duty (P), as well as Heavy Duty with hardened ball race (PT) brackets

For details on the available fittings please have a look at the tables on page 369.

For fittings different than the one shown in the tables please contact our Sales Department to check availability.

Footguards for brackets NL - M - P - PT

Fittings

NL				Footguard item nr. for swivel castor	Footguard item nr. for fixed castor
	125	100x85	45	094635VE	094630VE
125	140x110	60	094744VE	094688VE	
150	140x110	60	094781VE	094761VE	
160	140x110	60	094781VE	094761VE	
200	140x110	60	094782VE	094762VE	
M	150	140x110	60	094641VE	094761VE
	160	140x110	60	094641VE	094761VE
	200	140x110	60	094783VE	094762VE
P	125	100x85	45	094689VE	094630VE
	150	140x110	60	094641VE	094641VE
	160	140x110	60	094641VE	094641VE
	175-180	140x110	60	094784VE	094784VE
	200	140x110	60	094784VE	094784VE
PT	150	140x110	60	094641VE	094641VE
	160	140x110	60	094641VE	094641VE
	175-180	140x110	60	094784VE	094784VE
	200	140x110	60	094784VE	094784VE

CORRECT PRODUCT USE

Italy has implemented EEC directive no. 83/374 concerning the manufacturer's responsibility with Italian DPR no. 224 of 24/05/1988.

Subsequent to that directive, the user must comply with and apply all the recommendations provided by the manufacturer regarding use, assembly as well as preventive and periodic maintenance of its products.

Such recommendations are summarised in the following paragraphs.

For further information, please ask Tellure Rôta for the Technical Handbook or for the "Use guide" booklet prepared by the Union of Italian Wheel Manufacturers (UCIR).

Wheel maximum load and carrying capacity

The carrying capacity declared by the manufacturer is the maximum value, expressed in daN, that a wheel or a bracket can be subjected to without reducing its operating efficiency.

The user must check the suitability of the carrying capacity declared by the manufacturer in relation to the load, the wheel and bracket layout on the trolley to be moved, the number of them actually in contact with the ground and any other conditions (type of surface on which the trolley moves, temperature, humidity, presence of aggressive chemical agents in the operating environment) that may affect the operating conditions of the mechanical moving parts.

Tractive force

The user must check that the force needed to move the trolley with the foreseen load is compatible with current provisions. To make it easier to choose the right wheel, and based on the force required to move the trolley, the rolling resistance value of each wheel is indicated in Tellure Rôta catalogue.

Speed

The maximum speed for which Tellure Rôta refers to the rated carrying capacity is 4 km/h (1.1 m/s). For applications at higher speeds, please contact Tellure Rôta.

Floor

The rated load capacity declared in this catalogue refers to use on smooth and compact floors in good condition. Uneven floors, obstacles and different levels require wheels with a larger diameter and a covering with greater elasticity.

Means of traction and moving intensity

The rated carrying capacity declared in this catalogue refers to manual handling with interruptions during use. For continuous operation or motorised handling, please contact Tellure Rôta.

Environment

The user must check that the materials used to make the selected product are compatible with physical-chemical conditions of the operating environment. The catalogue indicates the "normal" operating conditions for each type of wheel.

Electrical conductivity

If it is necessary to guarantee the electric conductivity from the connecting part to the tread, please contact Tellure Rôta.

Braking and/or locking device

Tellure Rôta produces brackets equipped with brakes and/or locks. They are designed to park

the trolley on slopes of generally no more than 3% under the condition that at least two wheels of the trolley equipped with such devices are in contact with the ground. In case of use on steeper gradients, to ensure the trolley remains at a standstill in these conditions, either the load must be reduced or the number of braking devices must be increased. Tellure Rôta is available for any further details or explanations.

Storage

Products must be stored in a well-ventilated area, without excessive humidity, with a thermal excursion ranging between -10 and +40 C and protected from dust. Never expose products to direct sunlight for extended periods of time and, in general, avoid extended storage. To store the product more efficiently and to protect it against dust, Tellure Rôta items are supplied in standard shrink-wrapped packages.

INCORRECT ACTIONS

To use wheels and brackets correctly, avoid the following:

- overloads, non-uniform load distribution, violent application of the load
- extended stationary periods under load
- impacts, collisions and falling from different heights
- activation of locks and/or brakes while the trolley is moving
- moving the trolley with locks and/or brakes engaged
- parking the trolley with the locks and/or brakes engaged on slopes of more than 3%
- washing with chemically aggressive cleaners
- replacing the wheel and/or bracket with spare parts that do not comply with the Tellure Rôta specifications.

INSTALLATION

For efficient production operation and extended service life, follow the assembly instructions listed below.

Wheel assembly

- Check the mechanical strength of the attachment parts (axle sets, nuts, washers) used for the type of assembling (projecting or fork) and the load to which they are subjected
- House the axle set horizontally, perpendicular to the operating direction, and prevent it from rotating
- Check that the nut is tightened on the axle set; Check that the wheel rotates freely once the installation has been completed.

Bracket assembly

The trolley structure must be sized to withstand the stress exerted on it and to guarantee that attachment surfaces are level. They must be flat, horizontal and sized to guarantee that the corresponding bracket attachment surfaces are perfectly coplanar in the attachment point.

Connecting through welding is not recommended. It is recommended:

- To mount the bracket with a plate using screws, nuts and washers with the sizes and quantity indicated by the manufacturer
- To tighten the nuts or screws with the appropriate torque
- To guarantee that the axle set, for fixed castors, is perpendicular to the operating direction
- To guarantee that brackets with a solid stem are attached to tubular structures with precise

tolerances

- To attach the stems with the cross hole with screws that have an adequate diameter and length
- To guarantee that the tubular structure of the trolley rests completely on the bracket attachment surface
- To guarantee, for brackets with a threaded stem or bolt hole, that the bracket connection surface adheres completely to the surface equipment without interpositions. The brackets with a bolt hole must be attached using screws with the diameter indicated by the manufacturer.

MAINTENANCE

The user must carry out scheduled maintenance that includes the inspections listed below at the intervals that vary according to operating conditions.

Trolley structure check and maintenance

- Check damage to the trolley frame that may have reduced product connection efficiency;
- Check that the product connection parts are correctly tightened on the trolley structure.

Wheels and brackets checks and maintenance

- Check that the product is undamaged, fully operational and that there is no excessive clearance, wear, deformation or tearing
- Check that any locks and/or brakes, if present, are working efficiently
- Check that the environmental conditions have not changed the product (oxidation, corrosion, foreign bodies etc.), thus reducing its operating efficiency
- For products that ensure electrical conductivity, clean the rolling strip and periodically check the electrical conductivity
- Check that the wheel axle set is correctly tightened, reapplying the necessary torque
- Lubricate the moving parts with a lubricant suitable for the specific applications.

Frequency of checks and maintenance

The maximum time interval between two successive checks is as follows:

- damage to the trolley's frame: 12 months
- tightening of connection parts: 6 months
- product condition: 6 months
- brake efficiency: 3 months
- product alteration: 6 months
- electrical conductivity: 3 months
- wheel axle set tightness: 6 months
- lubrication top-up: 6 months (but the top-up lubrication has to be done every time the product is washed).

PROCEDURES FOR DISPOSING AND RECYCLING PRODUCTS

To dispose of and/or recycle the products after use, first, separate the wheel+bracket assemblies from the equipment on which they are fitted. It is best to split the wheel+bracket assemblies down into the following component parts:

- bracket
- axle unit (screw, tube, nut)
- wheel

In particular, the dismantling of the wheel from the bracket is crucial if these are prevalently made from plastic material or aluminium alloy.

Below are details of disposal and recycling of the main materials making up the Tellure Rôta wheels and brackets. In any case, we suggest comparing and supplementing these details with the procedures and rules established by the company in charge of waste disposal in the area or locality where the products are used.

Brackets and axle components

Steel and stainless steel can be recycled as ferrous scrap.

Wheels

We suggest that product recycling procedures include preliminary treatments that involve sorting the different materials in the wheels so as to ensure the correct disposal and/or recycling of each type.

- Steel and engineering cast iron can be recycled as ferrous scrap
- Aluminium alloy can be recycled as non-ferrous metal
- Plastic, thermoplastic rubber and vulcanised rubber parts can be recycled once they have been separated from the ferrous and non-ferrous metals
- Thermosetting resin can be disposed of in waste dumps
- The polyurethane parts can be disposed of in waste dumps, once separated from ferrous and non-ferrous metals.

Shrink-wrap packaging is recyclable as low density polyethylene (PE-LD).

Wooden pallets can be reused or recycled. Any paper or cardboard packaging can be returned to the paper production cycle.

As regards recycling procedures, please refer to the production consortia in the countries where the parts are disposed of.

1. General terms

The contractual relationship, further to the conclusion of each single order, is regulated by these general terms of sale and by specific terms which may be indicated in the order, where specifically undersigned. Orders passed on to commercial assistants and intermediaries are accepted subject to the approval of Tellure Rôta S.p.A.

2. Offer

The documents forming part of the offer, such as illustrations, drawings, indications of weight and size, are only determinant in approximate terms to the extent that they have not been expressly indicated as binding. Tellure Rôta S.p.A. reserves the right of ownership and copyright with regards to the cost estimates, drawings and other documents, which must not be made accessible to third parties. The purchaser assumes full responsibility for the documents it has sent to Tellure Rôta S.p.A. in the event of breach of third party industrial protection rights, also in relation with Tellure Rôta S.p.A. The latter is obliged to make projects, indicated by the purchaser as confidential, accessible to third parties only upon the purchaser's approval.

3. Orders

Except in the event of different written terms, orders of less than Euro 500.00 are not accepted.

4. Variation in the confirmed order

Tellure Rôta reserves the right to refuse or accept, also only partially, any subsequent changes in the order and proposals by the purchaser. In the event of acceptance of these variations, the new price, methods of payment and new delivery dates shall be established by Tellure Rôta, with all other terms remaining unchanged.

5. Cancellation of a confirmed order

The purchaser that cancels a confirmed order, for any cause or motive, is bound to pay in full the amount relating to materials and to supplies already ordered by Tellure Rôta S.p.A. In any case, Tellure Rôta S.p.A. has the right to a minimum compensation equal to 25% of the agreed price, with the right to withdraw this amount even from possible sums received as advance payment for the supply.

6. Prices

Prices are considered as applying to material delivered ex works from Tellure Rôta S.p.A., except in the event of different written terms. The prices of products are those shown by Tellure Rôta S.p.A. in its price list or in its offers; these prices, if not yet agreed, may however be changed at any moment and will be absolutely applied at the date fixed by Tellure Rôta S.p.A.

7. Payments

Payment of supplies must be made within the period and the terms agreed to in the order. In all events, Tellure Rôta S.p.A. is authorised to issue drafts on the customer for the sums and at the due dates. The relative costs are to be borne by the customer. Every shipment is considered as independent of others for the purpose of payment. Delays in payments or any other breach give right to the suspension of the remaining supplies and to the rescission of the contract in progress, besides giving rise to default action against the purchaser with the immediate application of interests on arrears. On sums falling due and not paid, without prejudice to Tellure Rôta S.p.A.'s right to demand payment, interests on arrears will apply, with full right, from the day after the due date, at the legal rate of interest on arrears plus eight points, in compliance with the rate set by the ECB in respect of Italian Legislative Decree no. 192/2012. Requests for reimbursement of payments or for compensations by virtue of any possible counter-claim on the part of the purchaser are not accepted.

8. Delivery terms

The agreed and confirmed shipment and/or delivery terms are expressed in working days and are only indicative and as such are not legally binding, except in the event of a definite undertak-

ing on the part of Tellure Rôta S.p.A., which must be expressly indicated on the order confirmation, and except in cases of force majeure. Any delays may not therefore, in any event, give rise to compensation for damages or the rescission, even partial, of the contract, except where such consequences are expressly accepted by Tellure Rôta S.p.A. in the order confirmation.

9. Shipment and transport

With the exception of a contrary agreement, which must be indicated in the order confirmation, the sale takes place Ex-Works. Partial shipments by Tellure Rôta S.p.A. are also accepted. Also in the event that Tellure Rôta S.p.A. is obliged to pay the relative transport cost for the goods as far as the agreed destination, the risk of loss or damage to the goods, as well as any additional costs due to events occurring after the goods have been consigned to the carrier, is transferred from Tellure Rôta S.p.A. to the purchaser at the moment in which the goods are consigned to the carrier. Any reserves, claims, or actions deriving from or in any case connected with the transport and consequent operations, must be raised by the purchaser, and exclusively against the carrier, with the absolute term of eight days from receipt of the goods, since Tellure Rôta S.p.A. is not responsible for events occurring after the consignment of the material to the carrier. Tellure Rôta S.p.A. will take care of the packaging according to experience and common practice, remaining explicitly exonerated from any responsibility for loss and/or damage. The use of special packaging, including the exclusion of packaging in the case of goods for which this is normal practice must be agreed to between Tellure Rôta S.p.A. and the purchaser upon making the order. With regards to matters not provided for, reference should be made to articles 1678 and 1702 of the Civil Code if, and to the extent, they are compatible with this clause. Samples are made available by Tellure Rôta S.p.A.'s only upon the application of a supplementary charge to be agreed from time to time on the relative price in force.

10. Faults and defects

Any claims for materials not corresponding, both in terms of quantity and of quality, to the conditions agreed to in the order, must be raised in writing within the maximum term of eight days from receipt of the goods on penalty of forfeiture. In the event of a prompt and justified claim, Tellure Rôta S.p.A.'s obligation is limited to the replacement of the goods acknowledged as not corresponding (in any case at supply conditions), to the same delivery destination as the initial supply, subject to the restitution of this initial supply, excluding any right on the part of the purchaser to request the rescission of the contract and compensation for direct or indirect damages and the reimbursement of any costs sustained for any reason. Tellure Rôta S.p.A. will not accept claims and will not be liable for damages suffered by third parties upon the occurrence of any of the following conditions: inappropriate or incorrect use, defective assembly on the part of the purchaser or of a third party, natural wear and tear, incorrect or negligent handling, electric or chemical effects, to the extent that these are not attributable to the fault of Tellure Rôta S.p.A. The purchaser loses every right of claim, and therefore the replacement of the goods, in the event that it fails to immediately suspend the use of the materials to which the claim refers.

11. Returns of materials

In the event of errors by the purchaser during the ordering phase, the material may be returned exclusively carriage free, against Tellure Rôta S.p.A.'s written authorisation, and only if perfectly integral and unused.

12. Changes in the construction

Tellure Rôta S.p.A. may make any changes in its construction without the obligation to inform the purchaser. Changes made subsequent to the order cannot give rise to compensation of any kind.

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
0.....		11.....		225222	53	226110	55	235206	59
062174	358	110105	361	225223	53	226111	55	235210	59
062140	358	110106	361	225224	53	227701	54	235211	59
062141	358	110202	361	225226	53	227702	54	235221	59
062199	358	110204	361	225230	53	227703	54	235222	59
064328	359	110208	361	225231	53	227704	54	235223	59
065016	359	110401	361	225401	55	227705	54	235224	59
065017	359	110402	361	225402	55	227706	54	235226	59
065523	359	110403	361	225403	55	227710	54	235230	59
065534	359	22.....		225404	55	227711	54	235231	59
094630VE	369	221103	52	225405	55	227801	55	236001	60
094635VE	369	221104	52	225406	55	227802	55	236002	60
094641VE	369	221105	52	225410	55	227803	55	236003	60
094744VE	369	221106	52	225411	55	227804	55	236004	60
094761VE	369	221106	52	225501	55	227805	55	236006	60
094762VE	369	221110	52	225502	55	227806	55	236010	60
094781VE	369	221111	52	225503	55	227810	55	236011	60
094783VE	369	222101	52	225504	55	227811	55	236021	60
094784VE	369	222102	52	225505	55	227901	54	236022	60
10.....		223103	52	225506	55	227902	54	236023	60
100005	360	223104	52	225550	55	227903	54	236024	60
100007	360	223106	52	225551	55	227904	54	236026	60
100009	360	223110	52	225601	50	227906	54	236030	60
100010	360	223111	52	225602	50	227910	54	236031	60
100012	360	224101	52	225603	50	227911	54	235701	59
100014	360	224102	52	225604	50	23.....		235702	59
100015	360	224401	53	225605	50	231103	58	235703	59
100016	360	224402	53	225606	50	231104	58	235704	59
100017	360	224403	53	225610	50	231106	58	235706	59
100027	360	224404	53	225611	50	231106	58	235710	59
100028	360	224405	53	225621	50	231110	58	235711	59
100031	360/361	224406	53	225622	50	231111	58	235901	59
100032	360/361	224410	53	225623	50	231121	58	235902	59
100033	360/361	224411	53	225624	50	231122	58	235903	59
100034	360/361	225801	53	225626	50	233103	58	235904	59
100035	360/361	225802	53	225630	50	233104	58	235906	59
100036	361	225803	53	225631	50	233106	58	235910	59
100231	361	225804	53	225701	53	233110	58	235911	59
100232	361	225806	53	225702	53	233111	58	237701	60
100234	361	225810	53	225703	53	233121	58	237702	60
100461	360/361	225811	53	225704	53	233122	58	237703	60
100462	368	226001	55	225705	53	234401	59	237704	60
100463	368	226002	55	225706	53	234402	59	237706	60
100464	368	226003	55	225710	53	234403	59	237710	60
100466	368	226004	55	225711	53	234404	59	237711	60
100491	361	226005	55	225901	53	234406	59	237901	60
100493	361	226006	55	225902	53	234410	59	237902	60
100494	361	226010	55	225903	53	234411	59	237903	60
100495	361	226011	55	225904	53	234601	59	237904	60
100496	361	225201	53	225906	53	234602	59	237906	60
100498	361	225202	53	225910	53	234603	59	237910	60
100501	360	225203	53	225911	53	234604	59	237911	60
100502	360	225204	53	226101	55	234606	59	32.....	
100503	360	225205	53	226102	55	234610	59	321102	315
100504	360	225206	53	226103	55	234611	59	321104	315
100506	360	225210	53	226104	55	235201	59	321105	315
100554	360	225211	53	226105	55	235202	59	321106	315
		225221	53	226106	55	235203	59		
						235204	59		

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
323202	317	342316	344	366003	322	376002	327	385315	319
323302	318	342305	344	366300	322	376100	327	386200	332
324001	315	344100	343	366301	322	376101	327	386201	332
324002	315	344101	343	366302	322	376102	327	386202	332
324003	315	346200	343	366315	322	376103	327	386203	332
324101	315	346201	343	366314	322	376104	327	386315	332
324102	315	347002	344	366402	323	376105	327	387200	332
324103	315	347102	345	367101	322	376201	328	387201	332
324302	316	347202	345	367102	322	376203	328	387202	332
324402	318	347302	345	367103	322	376327	327	387203	332
325501	315	347403	344	367104	322	377100	326	387315	332
325502	315	347404	344	367202	323	377101	326	388200	319
325503	315	347405	344	368101	309	377102	326	388201	319
326001	316			368102	309	377103	326	388202	319
326002	316	35		368103	309	377104	326	388203	319
326003	316	350001	347	368104	309	377105	326	388315	319
326101	316	350002	347	368202	323	377327	326	389200	332
326102	316	354101	347	369101	322	378100	325	389201	332
326103	316	354102	347	369102	322	378101	325	389202	332
326202	317	354103	347	369103	322	378102	325	389203	332
326302	319	354201	347	369114	322	378103	325	389315	332
327202	317	354202	347	369202	323	378104	325		
327302	318	354203	347			378105	325	39	
328202	316	356101	347			378201	327	392002	349
328302	318	356102	347	37		378203	327	392004	349
323302	317	356103	347	371100	325	378327	325	392102	349
329302	319	356201	347	371101	325	379100	327	392104	349
		356202	347	371102	325	379101	327		
33		356203	347	371103	325	379102	327	40	
333001	341			371104	325	379103	327	401215	364
333002	341	36		371105	325	379104	327	401216	366
333003	341	361100	321	371203	325	379105	327	401217	366
333101	341	361101	321	373100	326	379201	328		
333102	341	361102	321	373101	326	379203	328	51	
333103	341	361103	321	373102	326	379327	327	511101	335
334001	341	361104	321	373103	326			511103	335
334002	341	363220	322	373104	326			511104	335
334003	341	363221	322	373105	326			511105	335
334101	341	363222	322	373327	326	381100	331	511106	335
334102	341	363223	322	374001	326	381101	331	511108	335
334103	341	363224	322	374002	326	381102	331	511112	335
336001	341	363202	323	374100	325	381103	331	511122	335
336002	341	364001	321	374101	325	381203	331	514401	336
336003	341	364002	321	374102	325	383320	332	514402	336
336101	341	364003	321	374103	325	383321	332	514403	336
336102	341	364300	321	374104	325	383322	332	514404	336
336103	341	364301	321	374105	325	383323	332	514411	335
		364302	321	374201	328	383315	332	514412	335
34		364315	321	374203	328	384200	331	515701	336
340000	343	364316	321	374327	325	384201	331	515702	336
340001	343	364402	323	375500	325	384202	331	515703	336
342103	332	365500	321	375501	325	384203	331	515704	336
342104	332	365501	321	375502	325	384315	331	516801	336
342105	332	365502	321	375503	325	384315	331	516802	336
342203	332	365503	321	375504	325	385200	331		
342204	332	365504	321	375505	325	385201	331	52	
342205	332	366001	322	375327	325	385202	331	521103	64
342315	332	366002	322	376001	327	385203	331	521104	64

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
521105	64	525520	68	527710	67	534908	74	535741	74
521106	64	525641	67	527711	67	534909	74	535742	74
521108	64	525642	67	527901	67	535001	74	535743	74
521110	64	525643	67	527902	67	535002	74	535744	74
521111	64	525644	67	527903	67	535003	74	535745	74
521132	64	525645	67	527904	67	535004	74	535746	74
521133	64	525646	67	527905	67	535005	74	535747	74
521206	64	525650	67	527906	67	535006	74/310	535748	74
522101	64	525651	67	527910	67	535007	74	535749	74
522102	64	525656	64	527911	67	535010	74/310	535750	74
523103	64	525664	64	529202	68	535011	74	535751	74
523104	64	525665	67	529203	68	535012	74	535752	74
523105	64	525662	67	529206	68	535101	74	535801	73
523106	64	525667	67	529210	68	535101AS	354	535802	73
523108	64	525664	67	529211	68	535102	74	535803	73
523110	64	525665	67	529302	68	535102AS	354	535901	74
523111	64	525666	67	529315	68	535103	74	535901AS	354
523206	64	525670	67	529306	68	535103AS	354	535902	74
524006	293	525671	67	529310	68	535104	74	535902AS	354
524010	293	525701	66	529311	68	535105	74	535903	74
524101	64	525702	66			535105AS	354	535903AS	354
524102	64	525703	66	53.....		535106	74	535904	74
524206	293	525704	66	531103	72	535106AS	354	535905	74
524401	66	525705	66	531104	72	535107	74	535905AS	354
524402	66	525706	66	531105	72	535110	74	535906	74
524403	66	525708	66	531106	72	535110AS	354	535906AS	354
524404	66	525710	66	531107	72	535111	74	535907	74
524405	66	525711	66	531108	72	535111AS	354	535908	74
524406	66/305	525712	66	531109	72	535112	74	535909	74
524410	66/305	525801	65	531110	72	535401	74	535910	74
524411	66	525802	65	531111	72	535402	74	535910AS	354
524412	66	525803	65	531121	72	535403	74	535911	74
525841	66	525901	66	531122	72	535404	74	535911AS	354
525842	66	525902	66	531132	72	535405	74	535912	74
525843	66	525903	66	531133	72	535406	74/310	536001	73
525844	66	525904	66	531206	72	535407	74	536002	73
525845	66	525905	66	533103	72	535410	74/310	536003	73
525846	66	525906	66	533103AS	354	535411	74	536101	73
525850	66	525908	66	533104	72	535421	74	536102	73
525851	66	525910	66	533105	72	535421AS	354	536103	73
525852	66	525911	66	533105AS	354	535422	74	536201	73
525908	66	525912	66	533106	72	535422AS	354	536202	73
524908	66	526401	65	533106AS	354	535423	74	536203	73
525201	66	526402	65	533107	72	535423AS	354	536301	73
525202	66	526403	65	533108	72	535424	74	536302	73
525203	66	526501	65	533109	72	535425	74	536315	73
525204	66	526502	65	533110	72	535425AS	354	537741	75
525205	66	526503	65	533110AS	354	535426	74	537742	75
525206	66/305	526641	65	533111	72	535426AS	354	537743	75
525210	66/305	526642	65	533111AS	354	535427	74	537744	75
525211	66	526643	65	533121	72	535430	74	537745	75
525221	66	526701	65	533121AS	354	535430AS	342	537706	75
525222	66	526702	65	533122	72	535431	74	537750	75
525223	66	526703	65	533122AS	354	535431AS	354	537751	75
525224	66	527701	67	533206	72	535515	76	537901	75
525225	66	527702	67	534006	292	535516	76	537901AS	355
525226	66	527703	67	534010	292	535520	76	537902	75
525230	66	527704	67	534748	74	535615	76	537902AS	355
525231	66	527705	67	534749	74	535616	76	537903	75
525516	68	527706	67	534806	292	535620	76	537903AS	355

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
537904	75	602404	94	604806	95/96	606302	99	607103	100
537905	75	602406	94	604941	95	606315	99	607114	101
537905AS	355	602410	94	604942	95	606306	99	607116	101
537906	75	603101	94	604943	95	606310	99	607214	101
537906AS	355	603102	94	604950	95	606311	99	607216	101
537910	75	603103	94	604951	95	606401	96	607302	100
537910AS	355	603104	94	604946	95	606402	96	607315	100
537911	75	603105	94	605001	94	606403	96	607314	101
537911AS	355	603106	94	605002	94	606404	96	607316	101
538201	75	603201	94	605003	94	606406	96	607414	101
538202	75	603202	94	605010	94	606411	96	607416	101
538203	75	603203	94	605011	94	606421	96	607504	101
538204	75	603204	94	605006	94	606422	96	607506	101
538205	75	603205	94	605101	98	606423	96	607514	101
538206	75	603206	94	605102	98	606424	96	607516	101
538210	75	604201	95	605103	98	606426	96	607604	101
538211	75	604202	95	605104	98	606431	96	607606	101
538221	75	604203	95	605106	98	606501	99	607701	96
538221AS	355	604204	95	605111	98	606502	99	607702	96
538222	75	604206	95	605401	98	606503	99	607703	96
538222AS	355	604211	95	605402	98	606506	99	607704	96
538223	75	604301	96	605403	98	606510	99	607706	96
538223AS	355	604302	96	605406	98	606511	99	607711	96
538224	75	604315	96	605410	98	606601	95	607801	96
538225	75	604310	96	605411	98	606602	95	607802	96
538225AS	355	604306	96	605501	96	606603	95	607803	96
538226	75	604311	96	605502	96	606604	95	607804	96
538226AS	355	604331	96	605503	96	606606	95	607806	96
538230	75	604336	96	605510	96	606611	95	607811	96
538230AS	355	604401	94	605511	96	606621	95	607901	99
538231	75	604402	94	605506	96	606622	95	607902	99
538231AS	355	604403	94	605601	94	606623	95	607903	99
538802	76	604404	94	605602	94	606624	95	607904	99
538803	76	604406	94	605603	94	606626	95	607906	99
538806	76	604411	94	605604	94	606631	95	607911	99
538810	76	604501	95	605606	94	606701	98	608001	99
538811	76	604502	95	605611	94	606702	98	608002	99
539202	76	604503	95	605701	95	606703	98	608003	99
539203	76	604504	95	605702	95	606704	98	608004	99
539206	76	604506	95	605703	95	606706	98	608006	99
539210	76	604511	95	605704	95	606711	98	608011	99
539211	76	604601	94	605706	95/96	606721	98	608102	100
		604602	94	605711	95/96	606722	98	608103	100
		604603	94	605941	95	606723	98	608202	100
		604604	94	605942	95	606724	98	608203	100
		604606	94	605943	95	606726	98	608206	101
		604611	94	605944	95	606731	98	608208	101
		604701	95	605946	95/96	606806	100	608210	101
		604702	95	605951	95/96	606811	100	608211	101
		604703	95	606102	97	606826	100	608222	100
		604706	96	606103	97	606831	100	608223	100
		604710	96	606104	97	606901	98	608226	101
		604731	95	606106	97	606902	98	608228	101
		604736	95	606111	97	606903	98	608230	101
		604711	95	606202	97	606906	98	608231	101
		604801	95	606203	97	606910	98	608242	100
		604802	95	606204	97	606911	98	608243	100
		604803	95	606206	97	607004	101	608258	101
		604810	95/96	606211	97	607006	101	608250	101
		604811	95/96	606301	99	607102	100	608251	101

60.....

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE		
608260	101	61	611101	104	614903	105	616503	109	618824	109	
608302	100		611102	104	615001	108	616601	105	618826	109	
608315	100		611103	104	615002	108	616602	105	618831	109	
608406	100		611104	104	615003	108	616603	105	619201	107	
608410	100		611105	104	615101	108	616604	105	619202	107	
608406	100		611106	104	615102	108	616606	105	619203	107	
608504	101		612201	104	615103	108	616611	105	620301	107	
608506	101		612202	104	615108	108	616621	105	620302	107	
608604	101		612203	104	615106	108	616622	105	620315	107	
608606	101		612401	104	615111	108	616623	105	62		
608801	99		612402	104	616201	108	616624	105		622102	146
608802	99		612403	104	616202	108	616626	105		622103	146
608803	99		613101	104	616203	108	616631	105		622104	146
608804	99		613102	104	615501	106	616701	108		622105	146
608806	99		613103	104	615502	106	616702	108		622106	146
608811	99		613104	104	615503	106	616703	108		622108	146
608821	99		613105	104	615601	108	616704	108		622109	162
608822	99		613106	104	615602	108	616706	108		622113	146
608823	99		613201	104	615603	108	616711	108		622114	146
608824	99		613202	104	615604	108	616721	108		622116	146
608826	99		613203	104	615606	108	616722	108		622126	162
608831	99		613204	104	615611	108	616723	108		622127	162
608906	100		613205	104	615701	105	616724	108		622128	162
608910	100		613206	104	615702	105	616726	108		622136	162
608911	100		614201	105	615703	105	616731	108		622142	162
609002	100		614202	105	615704	105	616901	108		622143	162
609003	100		614203	105	615706	105	616902	108		622144	162
609004	101		614204	105	615711	105	616903	108		622146	162
609006	101		614206	105	615901	105	617701	106		622148	162
609102	100		614211	105	615902	105	617702	106		622153	162
609103	100		614301	106	615903	105	617703	106		622181	140
609104	101		614302	106	615904	105	617704	106	622182	140	
609106	101		614315	106	615906	105	617706	106	622183	140	
609601	97		614401	108	615911	105	617711	106	622184	140	
609602	97		614402	108	616106	107	617801	106	622185	140	
609603	97		614403	108	616107	107	617802	106	622186	140	
609701	97		614404	108	616108	107	617803	106	622188	140	
609702	97		614406	108	616106	107	617804	106	622302	168	
609703	97		614411	108	616111	107	617806	106	622303	168	
609806	101		614501	101	616202	107	617811	106	622304	168	
609810	101		614502	101	616203	107	617901	109	622306	168	
609811	101		614503	105	616204	107	617902	109	622402	168	
609553	291	614504	105	616206	107	617903	109	622403	168		
609554	291	614506	105	616211	107	617904	109	622404	168		
609563	291	614511	105	616301	109	617906	109	622406	168		
609564	291	614601	108	616302	109	617911	109	622503	168		
609576	291	614602	108	616315	109	618001	109	622504	168		
609586	291	614603	108	616401	106	618002	109	622506	168		
609654	291	614604	108	616402	106	618003	107	622603	168		
609676	291	614606	108	616403	106	618004	109	622604	168		
609704	290	614611	108	616404	106	618006	109	622606	168		
609714	290	614701	105	616406	106	618011	109	624102	146		
609726	290	614702	105	616411	106	618801	109	624103	146		
609736	290	614703	105	616421	106	618802	109	624104	146		
609806	101	614801	105	616422	106	618803	109	624105	146		
609810	101	614802	105	616423	106	618804	109	624106	146		
609811	101	614803	105	616424	106	618806	109	624108	146		
609906	101	614901	105	616426	106	618811	109	624109	162		
609910	101	614902	105	616431	106	618821	109	624113	146		
609911	101			616501	109	618822	109	624126	162		
				616502	109	618823	109	624127	162		

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
624128	162	625626	171	627258	162	628302	150	628913	162
624136	162	625706	164	627302	146	628303	150	628916	162
624142	162	625806	164	627303	146	628305	150	628906	163
624143	162	625951	140	627304	146	628306	150	628908	163
624144	162	625952	140	627306	146	628314	150	628918	163
624146	162	625953	140	627313	146	628305	150	629003	156
624148	162	625954	140	627322	168	628306	150	629004	156
624153	162	625956	140	627323	168	628314	150	629006	156
624181	140	625960	140	627324	168	628316	163	629013	156
624182	140	626006	164	627326	168	628402	150	629023	155
624183	140	626202	146	627334	168	628403	150	629034	156
624184	140	626203	146	627336	168	628405	150	629036	156
624185	140	626213	146	627404	147	628406	150	629103	156
624186	140	626222	168	627406	147	628414	150	629123	155
624302	168	626223	168	627410	141	628416	163	629104	156
624303	168	626304	151	627414	141	628503	148	629106	156
624304	168	626306	151	627416	141	628512	148	629113	156
624306	168	626308	151	627434	169	628513	148	629203	156
624402	146	626404	151	627436	169	628514	148/149	629204	156
624403	146	626406	151	627444	169	628515	148/149	629206	156
624406	146	626408	151	627446	169	628516	148/149	629213	156
624410	146	626504	151	627516	148	628518	148	629234	156
624413	146	626506	151	627602	148	628522	169	629236	156
624422	168	626508	151	627603	148	628523	169	629304	157
624423	168	626656	149	627605	148	628524	170	629306	157
624424	168	626664	149	627608	148	628526	170	629315	158
624426	168	626751	140	627610	148	628534	170	629316	150
624434	168	626752	140	627612	141	628536	170	629306	150
624436	168	626753	140	627614	142	628542	141	629313	161
624504	147	626754	140/141	627620	142	628543	141	629403	160
624506	147	626756	140/141	627616	142	628544	142	629404	157
624510	141	626760	140/141	627633	141	628546	142	629406	157
624514	141	626804	157	627613	148	628550	142	629413	159
624516	141	626806	157	627624	169	628602	150	629503	158
624534	169	626904	157	627634	169	628602	150	629504	157
624536	169	626906	157	627704	146/147	628603	150	629506	157
624546	169	627004	157	627706	146/147	628605	150	629513	159
624544	169	627006	157	627622	169	628606	150	629523	155
625803	168	627151	140	627623	169	628614	150	629603	157
625804	155	627152	140	627626	169	628616	163	629604	157
625806	155	627153	140	627636	169	628656	162	629606	157
625904	168	627162	140	627646	162	628702	154	629613	157
625906	168	627156	140	627704	146/147	628703	154	629703	157
626004	147	627160	140	627706	146/147	628704	154	629704	157
626006	147	627202	148	627724	168	628713	154	629706	157
624903	147	627203	148	627726	168	628716	154	629713	157
624910	147	627204	148	627734	168	628706	163	629803	157
624916	147	627205	148	627736	168	628708	163	629804	157
625005	149	627206	148	627824	149	628718	163	629806	157
625010	149	627208	148	627826	149	628729	164	629813	157
625016	149	627212	141	627904	155	628802	154	629904	149
625136	169	627216	142	627906	155	628803	154	629905	149
625126	169	627220	142	628062	150	628806	163	629906	149
625236	169	627233	141	628063	150	628808	163		
625226	169	627213	148	628066	151	628813	162	63....	
625336	169	627222	169	628084	151	628818	163	632122	174
625326	169	627223	169	628162	150	628824	149	632123	174
625436	171	627224	170	628163	150	628826	149	632124	174
625426	171	627226	170	628166	151	628829	164	632125	174
625536	171	627234	170	628184	151	628902	162	632126	174
625526	171	627236	170	628204	162/155	628903	162	632128	174
625636	171	627244	142	628206	162/155	628904	162		

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
642181	192	645452	203	648178	198	648864	195	654308	216
642354	192	645453	203	648184	198	648866	195	654503	222
642356	192	645463	203	648186	198	649304	199	654504	222
642357	192	645464	203	648315	196	649306	199	654506	222
642363	192	645465	203	648316	196	649308	199	654508	222
642364	192	645466	203	648305	196	649404	199	654710	203
642366	192	645474	203	648306	196	649406	199	654716	203
642367	192	645564	203	648307	196	649408	199	654804	203
644103	192	645566	203	648308	196	649504	199	654806	203
644104	192	645574	203	648309	197	649506	199	654904	219
644124	192	645851	194	648310	197	649606	199	654906	219
644129	192	645852	194	648314	196	649904	195	654908	219
644139	192	645853	194	648315	196	649905	195	655004	219
644147	192	645854	194	648316	196	649906	195	655006	219
644151	192	645855	194	648317	196	649914	195	655008	219
644152	192	645856	194	648318	196			655302	216
644153	192	645863	194	648324	196			655303	217
644162	192	645864	194	648327	196	651104	202	655305	217
644155	192	646654	195	648328	196	651106	202	655310	217
644156	192	646655	195	648338	196	651206	202	655316	217
644157	192	646656	195	648403	196	652101	202	655318	217
644158	192	646664	195	648404	196	652102	202	655335	217
644163	192	646851	194	648405	196	652103	202	655336	217
644164	192	646852	194	648406	196	652104	210	655344	217
644166	192	646853	194	648407	196	652105	210	655403	217
644167	192	646854	194/195	648408	196	652106	210	655412	216
644168	192	646855	194/195	648409	197	652108	210	655414	217
644181	192	646856	194/195	648410	197	652108	210	655415	217
644551	203	646863	194	648414	196	652114	202	655416	217
644552	203	646864	194/195	648415	196	652206	210	655418	217
644553	203	647824	195	648416	196	652208	210	655502	216
644554	203	647852	195	648417	196	652224	210	655503	217
644555	203	647853	195	648418	196	652302	216	655504	217
644556	203	647854	195	648424	196	652315	216	655505	217
644563	203	647855	195	648427	196	652316	216	655506	217
644564	203	647856	195	648428	196	652305	216	655508	217
644651	203	647857	195	648438	196	652306	216	655535	217
644652	203	647863	195	648503	196	652308	216	655536	217
644653	203	647864	195	648504	196	652503	222	655544	217
644654	203	647866	195	648505	196	652504	222	655602	218
644655	203	648062	197	648506	196	652506	222	655603	218
644656	203	648063	197	648507	196	652508	222	655605	218
644663	203	648066	197	648508	196	653104	202	655606	218
644664	203	648067	198	648514	196	653106	202	655614	218
644852	194	648072	198	648515	196	654101	202	655702	218
644853	194	648074	198	648516	196	654102	202	655703	218
644854	194	648076	198	648517	196	654103	202	655705	218
644855	194	648077	198	648518	196	654104	210	655706	218
644856	194	648078	198	648527	196	654105	210	655714	218
644863	194	648084	198	648528	196	654106	210	655802	218
644864	194	648086	198	648538	196	654108	210	655803	218
644954	203	648162	197	648824	195	654114	202	655805	218
644956	203	648163	197	648852	195	654206	210	655806	218
644964	203	648166	197	648853	195	654224	210	655814	218
645004	195	648167	198	648854	195	654302	216	655904	222
645005	195	648172	198	648855	195	654303	216	655906	222
645006	195	648174	198	648856	195	654304	216	655913	223
645014	195	648176	198	648857	195	654305	216	655914	223
645451	203	648177	198	648863	195	654306	216	655916	223

65

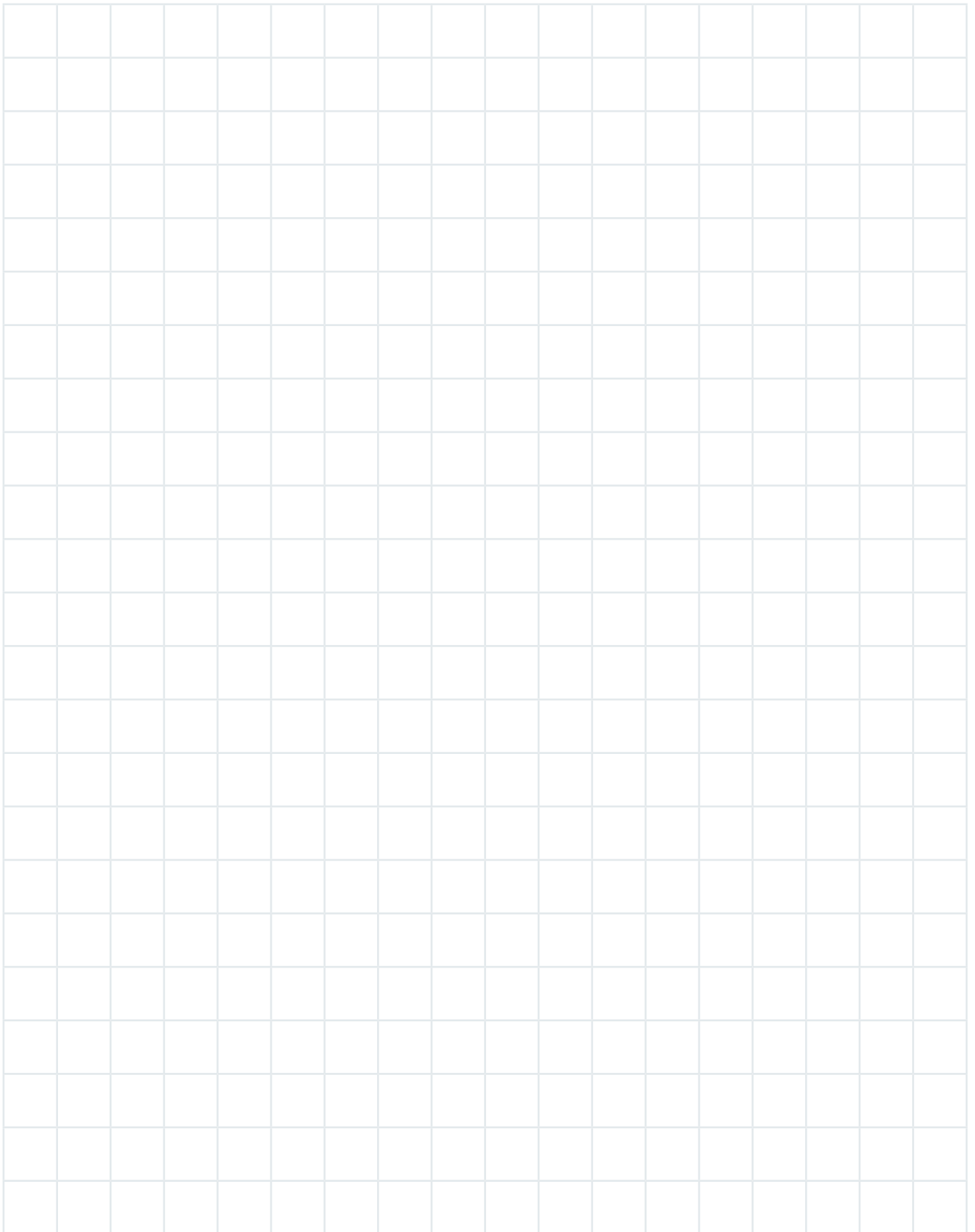
ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
685604	116	686824	113	687506	119	688703	241	694106	244
685605	116	686825	113	687514	119	688704	241	694802	245
685606	116	686826	113	687515	119	688706	241	694803	245
685608	116	686843	113	687516	119	688707	120	694804	245
685682	277	686846	113	687522	251	689001	116	694812	245
685683	277	686853	113	687524	240	689002	116	694902	245
685801	117	686863	251	687526	240	689003	116	694903	245
685802	117	686902	117	687533	240	689004	116	694904	245
685803	117	686903	117	687602	118	689005	116	695702	245
685804	117	686904	119	687603	118	689006	116	695703	245
685805	117	686905	119	687604	119	689101	116	695704	245
685806	117	686906	119	687605	119	689102	116	695712	245
685901	117	686912	251	687606	119	689103	116	695802	245
685902	117	686913	240	687700	114	689104	116	695803	245
685903	117	686914	240	687701	114	689105	116	695804	245
685904	117	686916	240	687702	114	689106	116	696203	258
685905	117	686922	118	687703	114	689204	118	696204	258
685906	117	686923	118	687704	114	689206	118	696206	258
685982	273	686924	119	687705	114	689315	241	696315	258
685983	273	686925	119	687706	114	689316	241	696316	258
686001	117	686926	119	687901	114	689306	241	696306	258
686002	117	686933	240	687902	114	689403	241	697504	258
686003	117	686946	119	687903	114	689404	241	697506	258
686004	117	686952	251	687904	114	689406	241	697603	258
686005	117	686953	251	687905	114	689503	303	697604	259
686006	117	686954	240	687906	114	689504	303	697606	259
686021	117	686956	240	688006	114	689506	303	697704	259
686022	117	687004	119	688066	241	689513	303	697706	259
686023	117	687005	119	688072	241	689514	303	697804	259
686024	117	687006	119	688074	241	689516	303	697806	259
686025	117	687014	240	688082	276	689604	303	698504	258
686026	117	687016	240	688083	276	689606	303	698506	258
686102	115	687033	240	688166	241	689704	304	698603	258
686103	115	687102	115	688172	241	689706	304	698804	259
686104	115	687103	115	688174	241	689714	304	698806	259
686106	115	687104	115	688204	118	689716	304		
686606	114	687106	115	688206	118	689803	241	71.....	
686701	114	687114	119	688315	241	689804	241	711101	80
686702	114	687115	119	688316	241	689806	241	711102	80
686703	114	687116	119	688306	241	689833	250	711103	80
686704	114	687124	240	688307	120			711104	80
686705	114	687126	240	688403	241	69.....		711105	80
686706	114	687133	240	688404	241	691102	244	711106	80
686721	114	687214	119	688406	241	691103	244	711132	80
686722	114	687215	119	688407	120	691104	244	711133	80
686723	114	687216	119	688502	118	691106	244	712201	80
686724	114	687224	240	688503	118	691112	244	712202	80
686725	114	687226	240	688504	119	691202	244	712203	80
686726	114	687233	240	688505	119	691203	244	712204	80
686801	113	687314	119	688506	119	691206	244	712206	80
686802	113	687315	119	688522	251	692102	244	712210	80
686803	113	687316	119	688524	240	692103	244	712404	80
686804	113	687414	119	688526	240	692104	244	712406	80
686805	113	687415	119	688533	240	692106	244	712410	80
686806	113	687416	119	688602	118	692122	244	713101	80
686813	251	687502	118	688603	118	692126	244	713102	80
686821	113	687503	118	688604	119	694102	244	713103	80
686822	113	687504	119	688605	119	694103	244	713104	80
686823	113	687505	119	688606	119	694104	244	713105	80

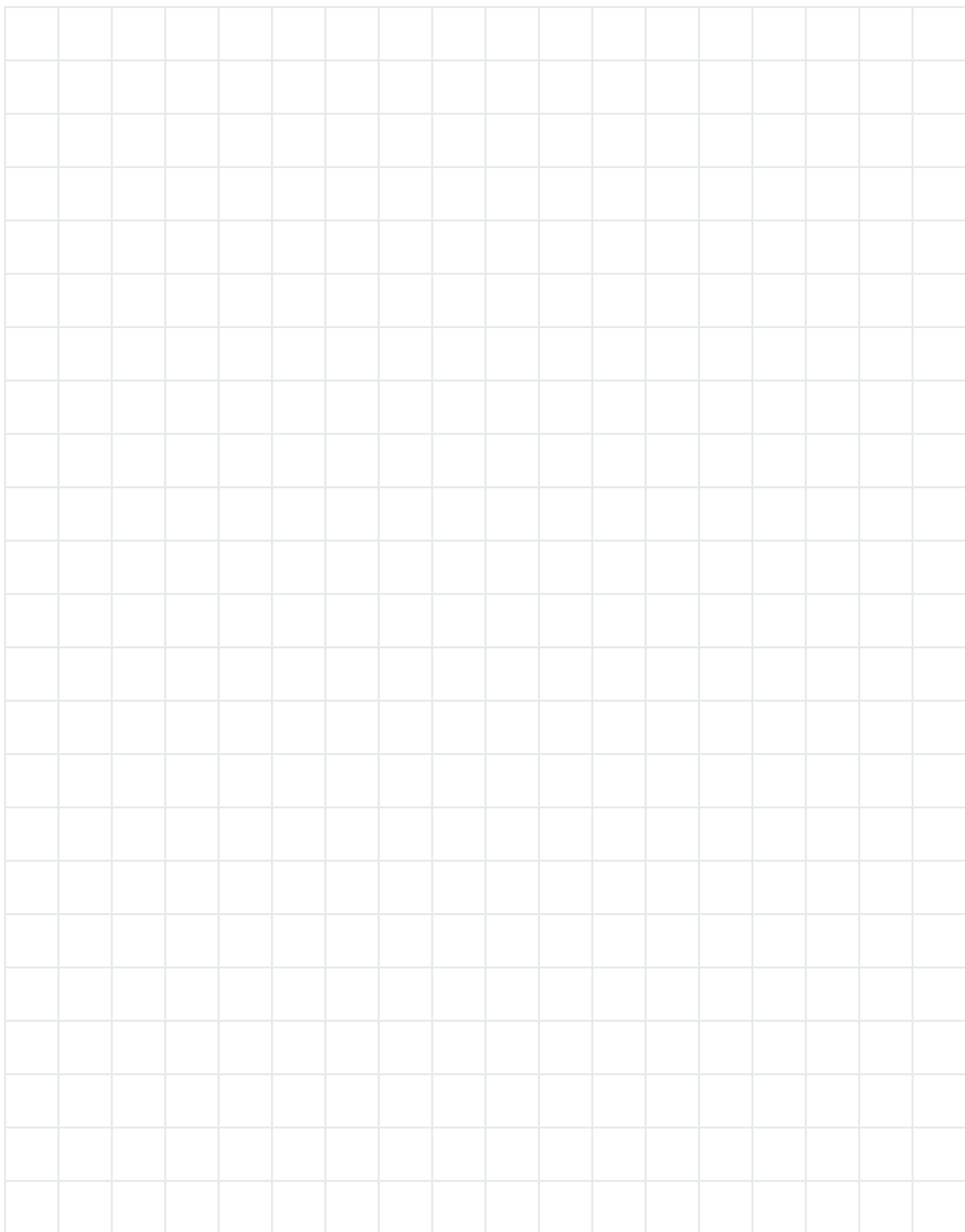
ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
713106	80	715301	84	716523	83	718802	85	724405	250
713201	80	715302	84	716524	83	718803	85	724410	250
713202	80	715315	84	716526	83	718804	85	724413	250
713203	80	715316	84	716531	83	718806	85	724452PF	280
713204	80	715306	84	716510	85	718851	85	724462PF	281
713205	80	715311	84	716541	85	718821	85	724504	259
713206	80	715406	84	716546	85	718822	85	724506	251
714201	82	715410	84	716601	82	718823	85	724536	259
714202	82	715411	84	716602	82	718824	85	724703	251
714203	82	715501	83	716603	82	718826	85	724706	251
714204	82	715502	83	716604	82	718831	85	724710	251
714206	82	715503	83	716606	82	719201	84	725810	251
714211	82	715506	83	716611	82	719202	84	725903	251
714301	83	715510	83	716621	82	719203	84	725906	251
714302	83	715511	83	716622	82	720301	84	725910	251
714315	83	715601	84	716623	82	720302	84	725204	250/251
714310	83	715602	84	716624	82	720315	84	725206	250/251
714331	83	715603	84	716626	82			725213	258
714336	83	715604	84	716631	82	72....		725236	258/259
714401	84	715606	84	716701	84	721103	250	725505	252
714402	84	715611	84	716702	84	721106	250	725510	252
714403	84	715701	82	716703	84	721110	250	725506	252
714404	84	715702	82	716704	84	721202	250	725704	262
714406	84	715703	82	716706	84	721203	250	725706	262
714411	84	715704	82	716711	84	721205	250	725804	262
714501	82	715706	82	716721	84	721206	250	725806	262
714502	82	715711	82	716722	84	721208	250	726004	262
714503	82	715801	81	716723	84	721210	250	726006	262
714504	82	715802	81	716724	84	721213	250	726202	250
714506	82	715803	81	716726	84	722103	258	726205	250
714511	82	715901	82	716731	84	722104	258	726210	250/251
714601	84	715902	82	716906	84	722106	258	726213	250
714602	84	715903	82	716910	84	722108	258	726252PF	280
714603	84	715904	82	716911	84	722109	258	726262PF	281
714604	84	715906	82	717401	83	722111	258	726316	254
714606	84	715911	82	717402	83	722124	258	726306	254
714611	84	716001	81	717403	83	722126	258	726308	254
714701	82	716002	81	717404	83	722129	258	726404	254
714702	82	716003	81	717406	83	722152	180	726406	254
714703	82	716101	81	717411	83	723003	250	726408	254
714710	82	716102	81	717801	83	723102	250	726504	254
714731	82	716103	81	717802	83	723103	250	726506	254
714736	82	716201	81	717803	83	723104	250	726508	254
714801	82	716202	81	717804	83	723105	250	727106	250
714802	82	716203	81	717806	83	723106	250	727113	258
714803	82	716301	81	717811	83	723108	250	727124	258
714806	82	716302	81	717901	85	723113	250	727126	258
714810	82	716310	85	717902	85	724103	258	727152PF	280
714811	82	716311	85	717903	85	724104	258	727162PF	281
714806	82	716336	85	717904	85	724106	258	727204	251
714901	82	716315	81	717906	85	724108	258	727205	251
714902	82	716501	83	717911	85	724109	258	727206	263/307
714903	82	716502	83	718001	85	724111	258	727208	263
714906	82	716503	83	718002	85	724126	258	727224	259
714910	82	716504	83	718003	85	724316	258	727226	259
714911	82	716506	83	718004	85	724306	258	727302	250
715006	84	716511	83	718006	85	724313	268	727305	250
715010	84	716521	83	718011	85	724336	268	727310	250
715011	84	716522	83	718801	85	724402	250	727313	250

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
727324	260	728518	263	732116	124	735506	125	736205	128
727326	260	728523	263	733102	124	735602	125	736206	128
727352PF	280	728603	252	733103	124	735602AE	133	736206AE	134
727362PF	281	728605	252	733104	124	735603	125	736302	128
727452PF	280	728606	252	733105	124	735603AE	133	736315	128
727462PF	281	728607	252	733106	124	735604	125	736316	128
727504	259	728614	252	733204	124	735604AE	133	736305	128
727506	259	728806	248	733205	124	735605	125	736306	128
727513	259	728808	272	733206	124	735606	125	736402	128
727516	263/307	728814	272	734102	124	735606AE	133	736403	128
727518	263	728816	272	734103	124	735702	125	736404	128
727602	263	729315	272	734104	124	735702AE	133	736405	128
727605	263	729316	272	734105	124	735703	125	736406	128
727610	263	732106	272	734106	124	735703AE	133	736502	128
727613	263	729307	261	734804AE	133	735704	125/127	736503	128
727706	263	729308	261	734806AE	133	735704AE	133	736504	128
727724	271	729316	261	735002	125	735705	125	736505	128
727726	271	729315	272	735002AE	133	735706	125/127	736506	128
727806	272	729316	272	735003	125	735706AE	133	736602	128
727808	272	729306	272	735003AE	133	735802	125	736602AE	134
727814	272	729307	261	735004	125	735802AE	133	736603	128
727816	272	729308	261	735004AE	133	735803	125	736603AE	134
727910	263	729316	261	735005	125	735803AE	133	736604	128
728062	252	729403	272	735006	125	735804	125	736604AE	134
728063	252	729404	272	735006AE	133	735804AE	133	736605	128
728066	261	729406	272	735102	125	735805	125	736606	128
728074	261	729407	261	735102AE	133	735806	125	736606AE	134
728076	261	729408	261	735103	125	735806AE	129	736702	128
728084	253	729416	261	735103AE	133	735902	125	736702AE	134
728086	253	729603	272	735104	125/127	735903	126	736703	128
728162	252	729604	272	735104AE	133	735904	126	736703AE	134
728163	252	729606	272	735105	125	735905	126	736704	128
728166	261	729607	272	735106	125/127	735906	126	736704AE	134
728174	261	729608	272	735106AE	133	736002	128	736705	128
728176	261	729616	272	735202	125	736002AE	134	736706	128
728184	253			735202AE	133	736003	128	736706AE	134
728186	253			735203	125	736003AE	134	736802	128
728204	252	731102	124	735203AE	133	736004	128	736802AE	134
728205	252	731102AE	132	735204	125	736004AE	134	736803	128
728206	252	731103	124	735204AE	133	736005	128	736803AE	134
728315	252	731103AE	132	735205	125	736006	128	736804	128
728305	252	731104	124	735206	125	736006AE	134	736804AE	134
728306	252	731104AE	132	735206AE	133	736102	128	736805	128
728307	252	731105	124	735302	125	736102AE	134	736806	128
728314	252	731106	124	735315	125	736103	128	736806AE	134
728403	252	731106AE	132	735316	125	736103AE	134	736904	127
728405	252	732102	124	735305	125	736104	128	736906	127
728406	252	732102AE	132	735306	125	736104AE	134	737004	129
728407	252	732103	124	735402	125	736105	128	737005	129
728414	252	732103AE	132	735403	125	736106	128	737006	129
728504	271	732104	124	735404	125/127	736106AE	134	737104	129
728506	271	732104AE	132	735405	125	736202	128	737105	129
728512	263	732105	124	735406	125/127	736202AE	134	737106	129
728513	271	732106	124	735502	125	736203	128	737204	129
728514	263	732106AE	132	735503	125	736203AE	134	737205	129
728515	263	732114	124	735504	125	736204	128	737206	129
728516	263/307	732115	124	735505	125	736204AE	134	737316	129

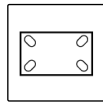
73.....

ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE	ITEM NR.	PAGE
737305	129	742122	286	754125	290	79.....	929324	362	
737306	129	742123	286	754127	290	792105	301	94.....	
737404	129	742125	286	754132	290	792121	301	947015	362
737405	129	742127	286	754134	290	792122	301	925809VE	278
737406	129	742202	286	754135	290	792125	301	925810VE	278
737504	129	742224	286	754137	290	792127	301		
737505	129	743201	286	754223	290	792132	301		
737506	129	743202	286	757300	292	792133	301		
737604	127	743203	286	757301	292	792135	301		
737606	127	743204	286	757400	292	792137	301		
737702	126	743205	286	757401	292	784105	301		
737703	126	743206	286	757500	292	794121	301		
737704	126	743224	286	757501	292	794122	301		
737705	126	744105	286	757600	292	791125	301		
737706	126	744121	286	757601	292	794127	301		
737802	126	744122	286	758301	293	794132	301		
737803	126	744123	286	758311	293	794133	301		
737804	126	744125	286	758321	293	794135	301		
737805	126	744127	286	758401	293	794137	301		
737806	126	744202	286	758411	293				
738202	126	744224	286	758421	293				
738203	126					82.....			
738204	126	75.....		76.....		821601	87		
738205	126	752099	290	760001	295	821602	87		
738206	126	752100	290	760002	295	822601	87		
738302	126	752101	290	761011	295	822602	87		
738315	126	752102	290	761012	295	823601	87		
738316	126	752105	290	761014	295	823602	87		
738305	126	752121	290	761015	295	823701	89		
738306	126	752122	290	763011	295	825801	87		
738402	126	752123	290	763012	295	825802	87		
738403	126	752125	290	763014	295	825601	87		
738404	126	752127	290	763015	295	825602	87		
738405	126	752132	290			825701	87		
738406	126	752134	290	77.....		825702	87		
738702	127	752135	290	772122	297	826601	87		
738703	127	752137	290	772125	297	826602	87		
738704	127	752223	290	772132	297	826701	87		
738705	127	753101	291	772135	297	826702	87		
738706	127	753102	291	772137	297	827601	89		
738802	127	753103	291	774122	297	828601	89		
738803	127	753104	291	774125	297				
738804	127	753105	291	774132	297	92.....			
738805	127	753106	291	774135	297	921070	362		
738806	127	753107	291	774137	297	921079	362		
738904	127	753108	291			922028	362		
738906	127	753109	291	78.....		922108	362		
739004	127	753110	291	782101	299	922112	362		
739006	127	753209	290	782102	299	925005	362		
739104	127	753223	291	782103	299	925006	362		
739106	127	754100	290	782104	299	925007	362		
739204	127	754101	290	782105	299	928606	362		
739206	127	754102	290	784101	299	928644	362		
		754105	290	784102	299	922124	362		
74.....		754121	290	784103	299	926006	362		
742105	286	754122	290	784104	299	926044	362		
742121	286	754123	290	784105	299				

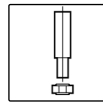




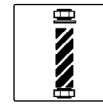
	Wheel diameter		Wheel width		Hub bore diameter
	Hub length		Ball bearing seat diameter		Ball bearing seat depth
	Hub diameter		Overall height		Top-plate outer dimensions
	Hole spacing		Hole width		Offset
	Brake swept radius		Plate diameter		Bolt hole diameter
	Solid stem diameter		Solid stem length		Threaded stem diameter
	Threaded stem length		Max. dimension of hub bore		Fork width
	Hexagonal pin diameter		Hexagonal pin protrusion		Hexagonal height
	Axle bore diameter		Tube diameter		Counter-plate thickness
	Spring travel		Initial tension		Spring tension
	Overall height (tripods)		Plate dimension (tripods)		
	Swivel top plate bracket		Fixed bracket		Swivel top plate bracket with front brake
	Swivel top plate bracket with rear brake		Swivel bolt hole bracket		Swivel bolt hole bracket with front brake
	Swivel bracket with centralised (hexagonal) brake system		Swivel bracket with stem		Swivel bracket with stem and front brake



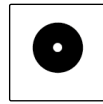
Counter-plate



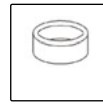
Solid stem, nut



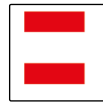
Threaded stem, washer, nut



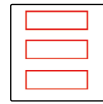
Threadguards



Spacers



Hub with plain bore



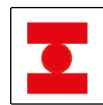
Hub with roller bearings



Hub with stainless steel roller bearings



Hub with ball bearings



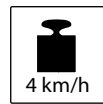
Hub with stainless steel ball bearings



Hub with ball bearing seats



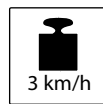
Static load



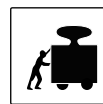
Dynamic carrying capacity at 4 km/h



Dynamic carrying capacity at 6 km/h



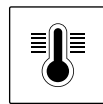
Dynamic carrying capacity at 3 km/h



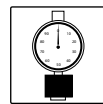
Rolling resistance



Weight



Temperature



Hardness



Available with stainless steel brackets



Wheel with ergonomic round profile



Tile floor



Asphalt floor



Resin-cement floor



Not paved floor



Expanded metal floor



Floor with chips



Floor with obstacles



SEE WEBSITE

213075



Tellure Rôta

Via Quattro Passi 15 • 41043 Formigine (MO)
Tel. 0039 059 410231-253 • Fax 0039 059 572859
comm.estero@tellurerota.com • www.tellurerota.com



TR Lab

Via Aldo Moro, 14/G-H • 41043 Formigine (MO)
Tel. 0039 059 410271 • Fax 0039 059 573167
info@trlab.it • www.trlab.it



UNI EN ISO 9001:2015



UNI EN ISO 14001:2015



OHSAS 18001:2007

