



"TR" POLYURETHANE WHEELS WITH ALUMINIUM CENTRE

-  80-200 mm
-  92 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 92 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.



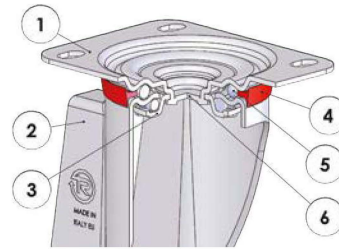
R $10^9\Omega$

ESD polyurethane wheels, with electrical resistance <math><10^9\Omega</math> (page 314)



| mm | | kg | COD. | kg | COD. | mm | | | | daN | daN | daN | daN |
|-----|----|------|--------|------|--------|----|----|----|----|-------------|------------|------------|------------|
| 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 | kg | CODE | 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

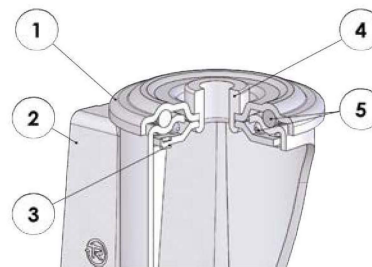
Standard-duty brackets NL - max carrying capacity 300 daN



| 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 | |



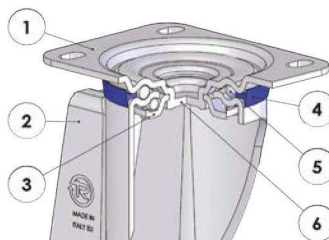
| mm | mm | kg | COD. | mm | mm | mm | mm | mm | mm | mm | mm | mm | daN |
|-----|----|------|--------|-----|---------|--------|----|----|----|------|----|------|------------|
| 160 | 50 | 2.84 | 654710 | 199 | 140x110 | 105x80 | 11 | 56 | 40 | 17,5 | 35 | 18,5 | 300 |
| 200 | 50 | 3.05 | 654716 | 240 | 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 |

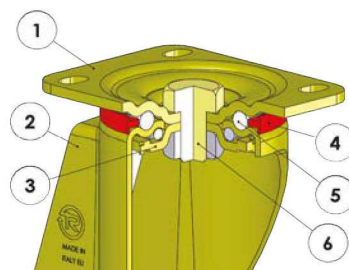
Medium-duty brackets M - max carrying capacity 500 daN



- 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 | | kg | | CODE | | kg | | CODE | | 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: yellow galvanised steel plate
 - 2) Fork: yellow galvanised steel plate
 - 3) Ball race ring: yellow galvanised 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 | |
|-----|----|------|--------|------|--------|------|--------|------|--------|-------|---|----|-----|-----|-----|----|--|-----|--|
| 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:

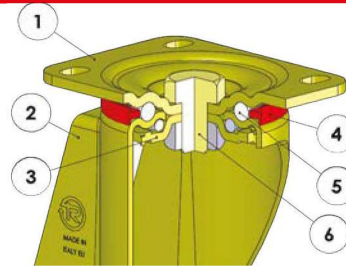


Directional lock for P-PT brackets d. 150-200 mm



Footguard for brackets NL-M-P-PT

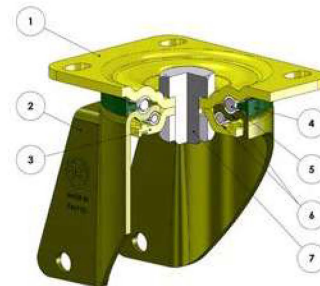
Medium-heavy duty brackets P - max carrying capacity 750 daN



- 1) Plate: yellow galvanised steel plate
 - 2) Fork: yellow galvanised steel plate
 - 3) Ball race ring: yellow galvanised 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 | kg | CODE | mm | mm | 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) Plate: yellow galvanised steel plate
 - 2) Fork: yellow galvanised steel plate
 - 3) Ball race ring: yellow 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 | daN | daN |
|-----|----|------|--------|------|--------|------|--------|-----|---------|--------|----|----|-----|-----|-----|
| 150 | 40 | 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:

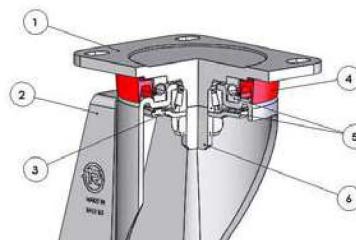


Directional lock for P-PT brackets d. 150-200 mm



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 | 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 | |