SERIES 64

# "TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE

80-400 mm

92 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 92 Shore A, excellent rolling resistance and elasticity, highly resistant to wear.

Centre: cast iron.

Hub available in following configurations:
- with plain bore so that it can easily be reworked to achieve a spline, also available with key housing;
- 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 125-200 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.

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# "TR" POLYURETHANE WHEELS WITH CAST IRON CENTRE



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).

| | | | | | | | | Static | 4 km/h | 6 km/h |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | mm | kg | COD. | mm | mm. | mm. | mm. | daN | daN | daN |
| 100 | 40 | 1,50 | 641102 | 15 H7 | 45 | 55 | 30 | **500** | **400** | **300** |
| 100 | 40 | 1,45 | 641112 | 20 H7 | 45 | 55 | 30 | **500** | **400** | **300** |
| 100 | 40 | 1,39 | 641122 | 25 H7 | 45 | 55 | 30 | **500** | **400** | **300** |
| 125 | 40 | 2,10 | 641103 | 20 H7 | 60 | 60 | 30 | **600** | **450** | **360** |
| 125 | 40 | 2,07 | 641143 | 25 H7 | 60 | 60 | 30 | **600** | **450** | **360** |
| 125 | 50 | 2,36 | 641113 | 20 H7 | 60 | 60 | 30 | **700** | **550** | **440** |
| 125 | 50 | 2,28 | 641123 | 25 H7 | 60 | 60 | 30 | **700** | **550** | **440** |
| 125 | 50 | 2,19 | 641133 | 30 H7 | 60 | 60 | 30 | **700** | **550** | **440** |
| 150 | 40 | 3.00 | 641104 | 20 H7 | 60 | 70 | 40 | **730** | **550** | **440** |
| 150 | 50 | 3,27 | 641114 | 20 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 150 | 50 | 3,13 | 641154 | 25 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 150 | 50 | 3,04 | 641164 | 30 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 150 | 50 | 2,93 | 641174 | 35 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 160 | 50 | 3,35 | 641124 | 20 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 160 | 50 | 3,27 | 641134 | 25 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 160 | 50 | 3,18 | 641144 | 30 H7 | 60 | 70 | 40 | **910** | **700** | **560** |
| 180 | 50 | 4,30 | 641105 | 20 H7 | 60 | 70 | 40 | **1100** | **800** | **650** |
| 180 | 50 | 4,26 | 641115 | 25 H7 | 60 | 70 | 40 | **1100** | **800** | **650** |
| 180 | 50 | 4,17 | 641125 | 30 H7 | 60 | 70 | 40 | **1100** | **800** | **650** |
| 180 | 50 | 4,05 | 641135 | 35 H7 | 60 | 70 | 40 | **1100** | **800** | **650** |
| 200 | 50 | 4,86 | 641106 | 20 H7 | 60 | 70 | 40 | **1500** | **950** | **750** |
| 200 | 50 | 4,72 | 641156 | 25 H7 | 60 | 70 | 40 | **1500** | **950** | **750** |
| 200 | 50 | 4,63 | 641166 | 30 H7 | 60 | 70 | 40 | **1500** | **950** | **750** |
| 200 | 50 | 4,52 | 641176 | 35 H7 | 60 | 70 | 40 | **1500** | **950** | **750** |
| 200 | 50 | 4,39 | 641186 | 40 H7 | 60 | 70 | 40 | **1500** | **950** | **750** |
| 200 | 60 | 5,20 | 641116 | 25 H7 | 60 | 70 | 40 | **1700** | **1100** | **900** |
| 200 | 80 | 8,51 | 641136 | 35 H7 | 80 | 95 | 60 | **2000** | **1400** | **1150** |
| 200 | 80 | 8,36 | 641126 | 40 H7 | 80 | 95 | 60 | **2000** | **1400** | **1400** |
| 200 | 80 | 7,93 | 641146 | 50 H7 | 80 | 95 | 60 | **2000** | **1400** | **1400** |
| 250 | 50 | 7,74 | 641107 | 20 H7 | 60 | 75 | 45 | **1800** | **1100** | **900** |
| 250 | 50 | 7,63 | 641007 | 25 H7 | 60 | 75 | 45 | **1800** | **1100** | **900** |
| 250 | 50 | 7,54 | 641017 | 30 H7 | 60 | 75 | 45 | **1800** | **1100** | **900** |
| 250 | 50 | 7,43 | 641027 | 35 H7 | 60 | 75 | 45 | **1800** | **1100** | **900** |
| 250 | 50 | 7,30 | 641037 | 40 H7 | 60 | 75 | 45 | **1800** | **1100** | **900** |
| 250 | 80 | 11,52 | 641117 | 40 H7 | 80 | 95 | 60 | **2800** | **1600** | **1300** |
| 250 | 80 | 11,09 | 641177 | 50 H7 | 80 | 95 | 60 | **2800** | **1600** | **1300** |
| 250 | 80 | 10,46 | 641127 | 60 H7 | 80 | 95 | 60 | **2800** | **1600** | **1300** |
| 300 | 80 | 14,88 | 641128 | 40 H7 | 80 | 100 | 65 | **3400** | **2100** | **1700** |
| 300 | 80 | 14,40 | 641108 | 50 H7 | 80 | 100 | 65 | **3400** | **2100** | **1700** |
| 300 | 100 | 23,80 | 641138 | 40 H7 | 100 | 120 | 80 | **4200** | **2500** | **2000** |
| 300 | 100 | 23,29 | 641118 | 50 H7 | 100 | 120 | 80 | **4200** | **2500** | **2000** |
| 300 | 100 | 22,67 | 641148 | 60 H7 | 100 | 120 | 80 | **4200** | **2500** | **2000** |
| 350 | 100 | 30,88 | 641109 | 50 H7 | 100 | 120 | 80 | **4700** | **2800** | **2250** |
| 400 | 100 | 35,58 | 641110 | 50 H7 | 100 | 120 | 80 | **5000** | **3500** | **2800** |



| | | | | | | | | Static | 4 km/h | 6 km/h |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | mm | kg | COD. | mm | mm. | mm. | mm. | daN | daN | daN |
| 100 | 40 | 1,50 | 641202 | 15 H7 | 45 | 5x5 | 17,3 | **500** | **400** | **300** |
| 125 | 40 | 2,10 | 641203 | 20 H7 | 60 | 6x6 | 22,8 | **600** | **450** | **360** |
| 125 | 50 | 2,28 | 641223 | 25 H7 | 60 | 8x7 | 28,3 | **700** | **550** | **440** |
| 150 | 40 | 2,90 | 641204 | 20 H7 | 60 | 6x6 | 22,8 | **730** | **550** | **440** |
| 150 | 50 | 3,70 | 641214 | 20 H7 | 60 | 6x6 | 22,8 | **910** | **700** | **560** |
| 150 | 50 | 3,13 | 641254 | 25 H7 | 60 | 8x7 | 28,3 | **910** | **700** | **560** |
| 160 | 50 | 3,18 | 641244 | 30 H7 | 60 | 8x7 | 28,3 | **910** | **700** | **560** |
| 180 | 50 | 4,40 | 641205 | 20 H7 | 60 | 6x6 | 22,8 | **1100** | **800** | **650** |
| 200 | 50 | 4,60 | 641206 | 20 H7 | 60 | 6x6 | 22,8 | **1500** | **950** | **750** |
| 200 | 50 | 4,72 | 641256 | 25 H7 | 60 | 8x7 | 28,3 | **1500** | **950** | **750** |
| 200 | 50 | 4,63 | 641266 | 30 H7 | 60 | 8x7 | 28,3 | **1500** | **950** | **750** |
| 200 | 60 | 6,00 | 641216 | 25 H7 | 60 | 8x7 | 28,3 | **1700** | **1100** | **900** |
| 200 | 80 | 8,40 | 641236 | 35 H7 | 80 | 10x8 | 38,3 | **2000** | **1400** | **1150** |
| 200 | 80 | 8,40 | 641226 | 40 H7 | 80 | 12x8 | 43,3 | **2000** | **1400** | **1150** |
| 250 | 50 | 6,60 | 641207 | 20 H7 | 60 | 6x6 | 22,8 | **1800** | **1100** | **900** |
| 250 | 50 | 7,54 | 641317 | 30 H7 | 60 | 8x7 | 28,3 | **1800** | **1100** | **900** |
| 250 | 80 | 11,00 | 641217 | 40 H7 | 80 | 12x8 | 43,3 | **2800** | **1600** | **1300** |
| 250 | 80 | 10,10 | 641227 | 60 H7 | 80 | 18x11 | 64,4 | **2800** | **1600** | **1300** |
| 300 | 80 | 14,88 | 641228 | 40 H7 | 80 | 12x8 | 43,3 | **3400** | **2100** | **1700** |
| 300 | 80 | 14,40 | 641208 | 50 H7 | 80 | 14x9 | 53,8 | **3400** | **2100** | **1700** |
| 300 | 100 | 21,20 | 641218 | 50 H7 | 100 | 14x9 | 53,8 | **4200** | **2500** | **2000** |
| 350 | 100 | 26,10 | 641209 | 50 H7 | 100 | 14x9 | 53,8 | **4700** | **2800** | **2250** |
| 400 | 100 | 31,60 | 641210 | 50 H7 | 100 | 14x9 | 53,8 | **5000** | **3500** | **2800** |

**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.