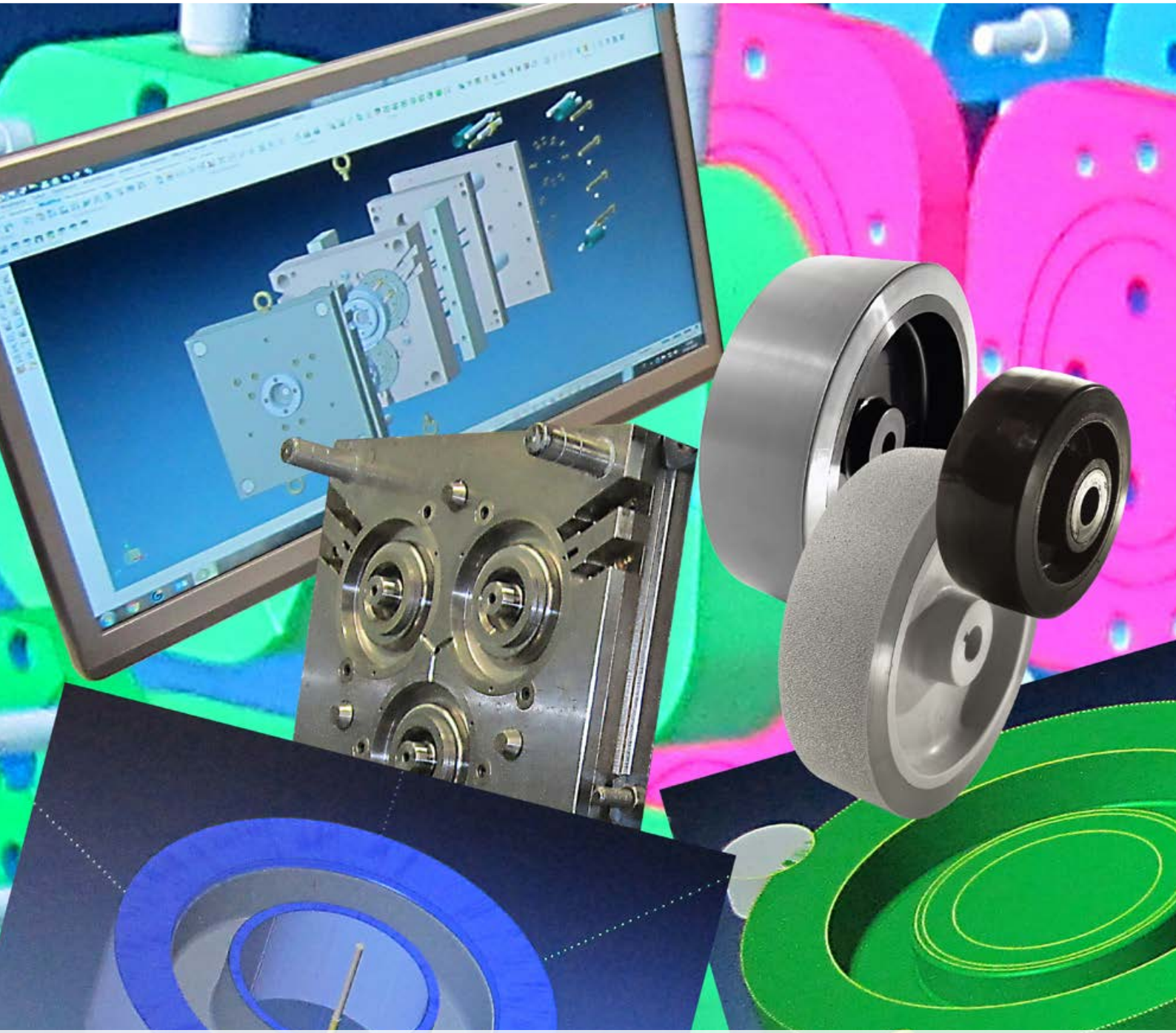
Fabbrica Italiana Ruote

www.fir.it

DAL 1985 SINCE



ELASTIC POLYURETHANE WHEELS

YOUR IDEAS IN MOTION

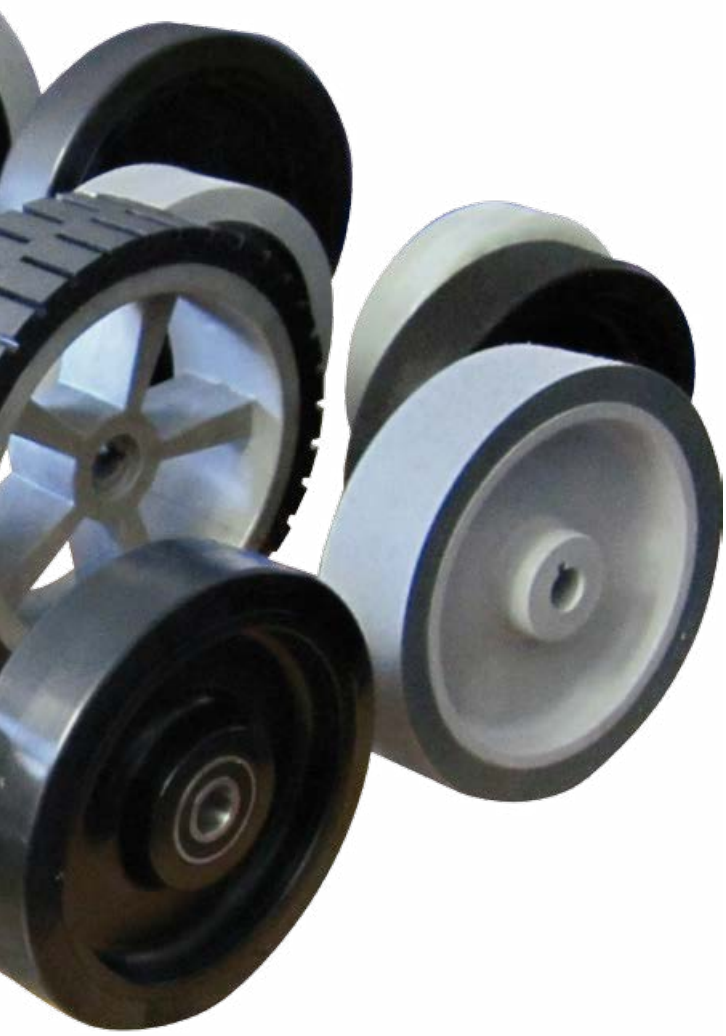
Symbols

- Wheel Diameter
- Load capacity
- Speed
- Hardness
- Temperature
- Price
- Plain bore
- Ball bearings
- Key hole
- Flanged hub
- Splined hub
- Designed and made in Italy
- Recyclable
- Shock absorbing
- Non-marking
- Non-slip
- Noise-free
- Resistant to chemicals and detergents
- Choice of colour
- Custom-made

Create your wheel: Series Alpha

α TPU+TPU, thermoplastic polyurethane injected onto a thermoplastic polyurethane center

F.I.R.'s top range, the Alpha series, features a combination of hub and tread both made from top quality TPU. These wheels have both mechanical and chemical interlocking systems making them exceptionally strong. They are ideal for high speed applications of up to 10 km/h or 6 mph. They are very durable and resistant to tearing. The elastic polyurethane, from 70 to 80 Shore A, allows excellent grip and the ability to overcome obstacles. The wheels are noiseless and do not vibrate; they are suited to most surfaces.



from 150 mm to 300 mm
from 6” to 12”

from 160 kg to 300 kg
from 350 lb to 660 lb

maximum speed 10 km/h
maximum speed 6 mph

Hub can be reinforced with fiberglass

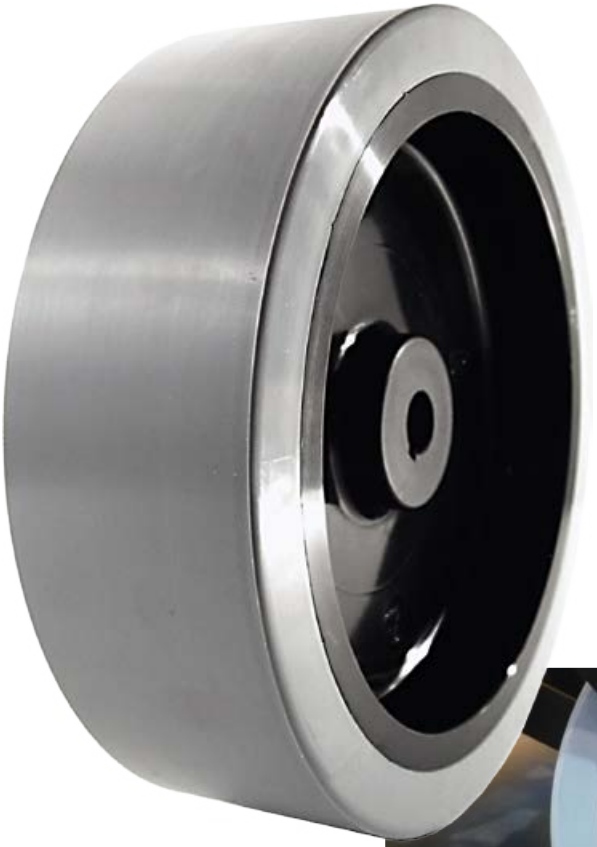
from 70 to 80 Shore A

from -20°C to +60°C
from -4°F to 140°F

Available in different colors, sizes and surface patterns

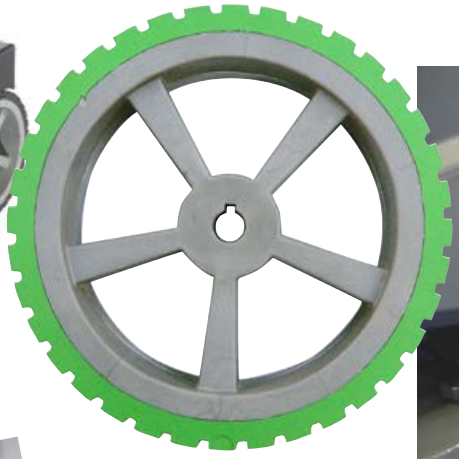
Available with double ball bearings, key seat or flanged hub

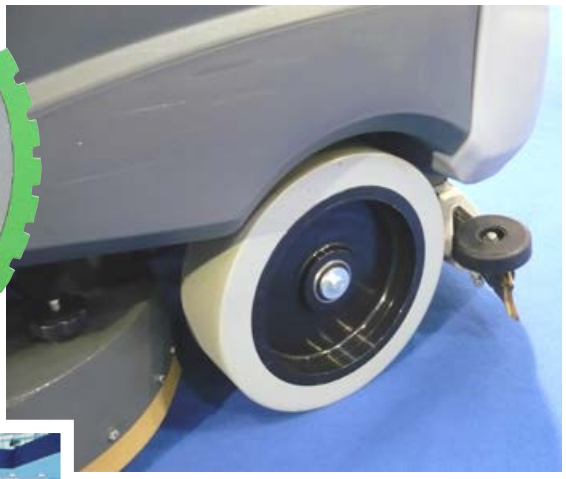
Custom-made wheels and applications

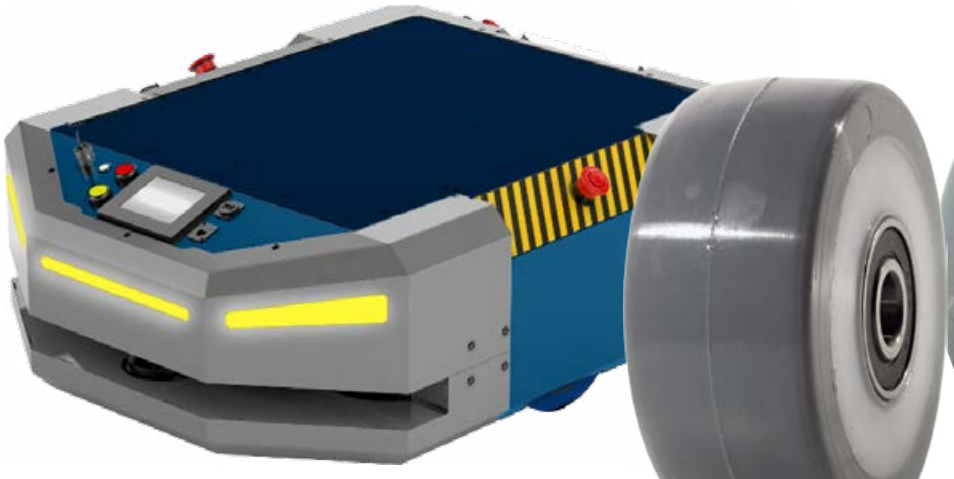


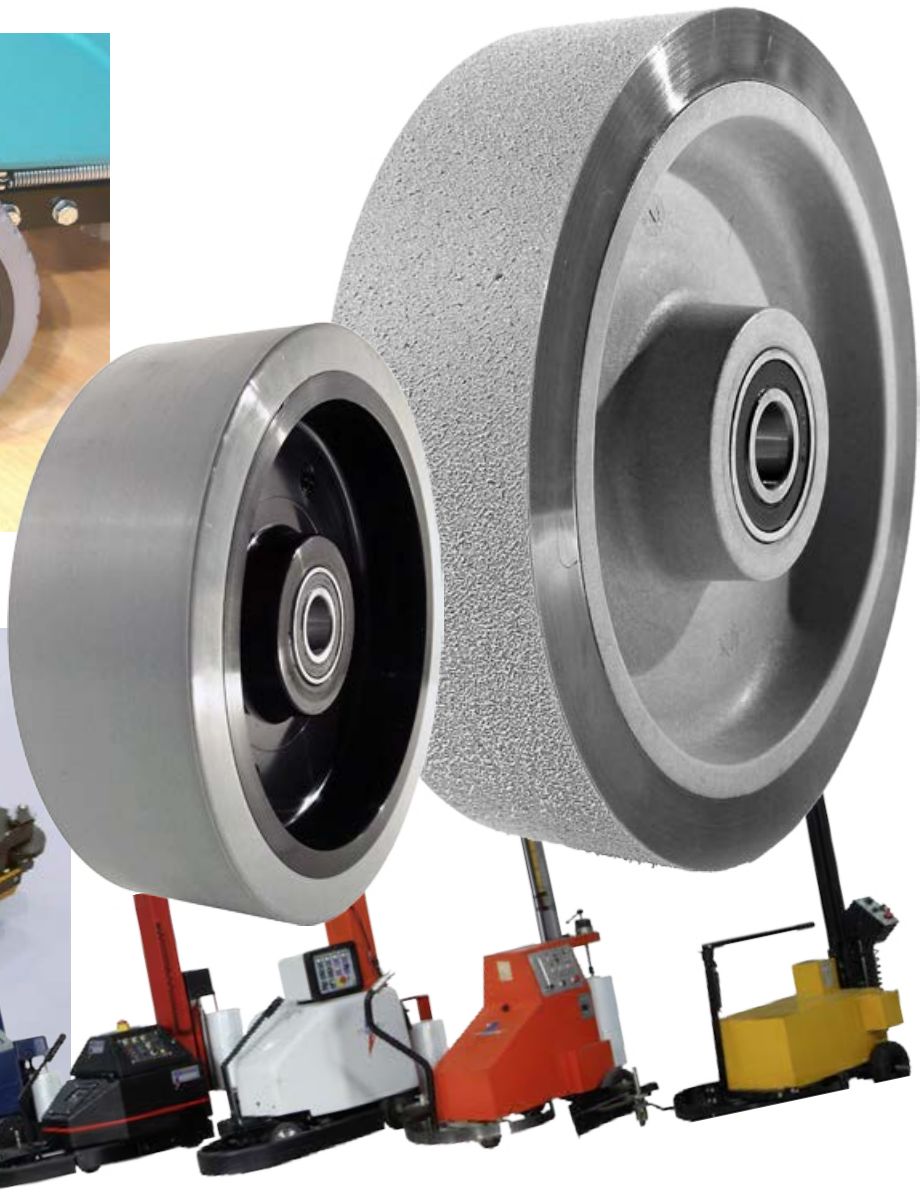

MICROMINI
TOMCAT
SPORT

Custom-made wheels and applications









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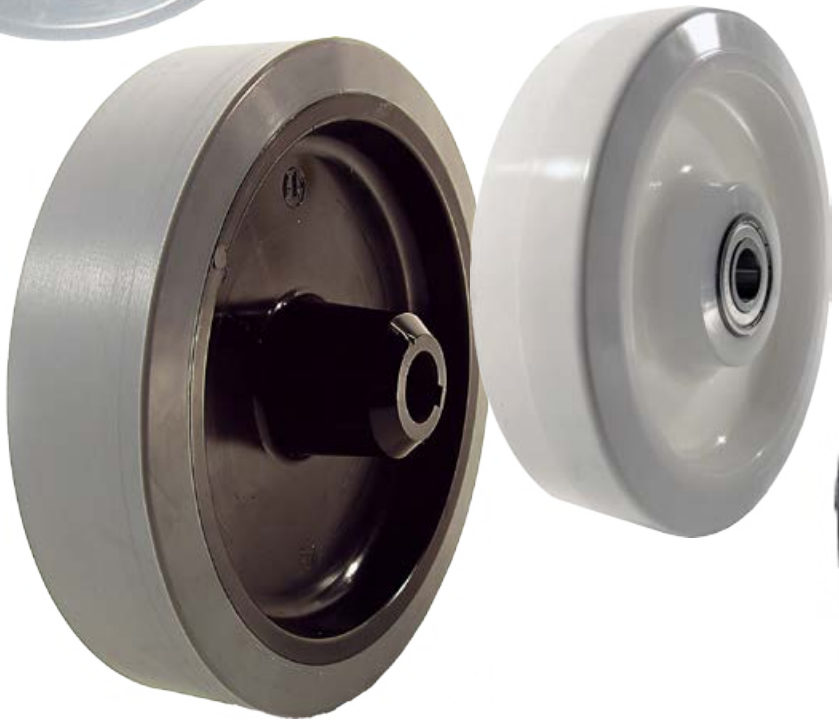
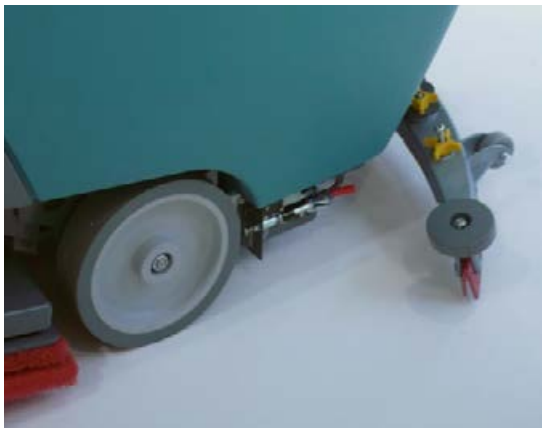
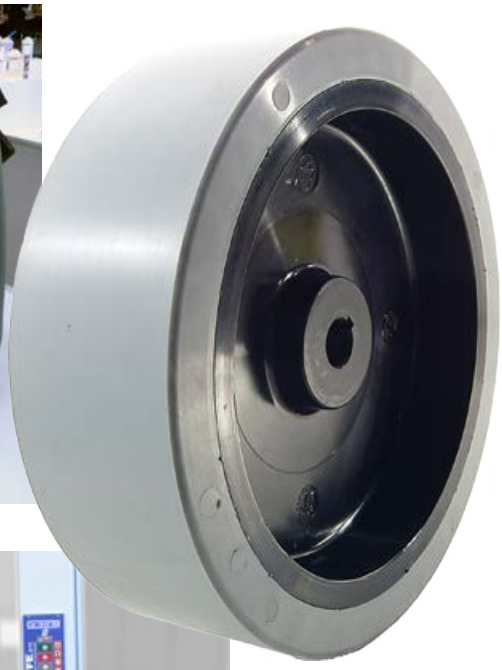
Custom-made wheels and applications




columbus



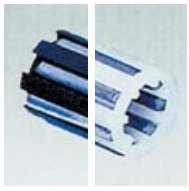
Custom-made wheels and applications



AVAILABLE BEARINGS AND ACCESSORIES

PLAIN BEARING

Suggested for intermittent wheel use. It will not require further lubrication. However axle tube wear and squeaking can be evident in dusty and gritty work conditions.



ROLLER BEARING AND STAINLESS STEEL ROLLER BEARING

Suggested for frequent wheel use. It will not require further lubrication and it is ideal for applications involving high radial and low axial loads. Roller bearings are shielded to retain the bearing and to avoid penetration of dust and dirt. Low inertial force.

BALL BEARINGS

Suggested for continuous wheel use. They do not require further lubrication. They are ideal for applications featuring high radial and axial loads. Ball bearings are shielded to avoid penetration of dust and dirt. Waterproof version also available. Very low inertial force.

DOUBLE BALL BEARINGS

All the wheels shown in this catalogue have double ball bearings with spacer.

KEY HOLE, FLANGED AND SPLINED HUB

These are suited for drive wheels and adapt to different traction devices.

REACH

F.I.R. products are manufactured in compliance with European Directive no. 1907/2006/CE, REACH “Registration, Evaluation, Authorisation and Restriction of Chemicals“.

RoHS

F.I.R. products are manufactured in compliance with European Directive 2011/65/UE, RoHS2 “Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment”.

FIR combines quality, innovation and respect for the environment. To this end, we have identified those products that may be recycled or regenerated. We strongly encourage use of these products.

ROLLING RESISTANCE

Rolling resistance is the force necessary to maintain the equipment at a constant speed. This force is inversely proportional to wheel diameter and depends on the type of bearing. It also depends upon the surface conditions and load.

SPEED

F.I.R. casters and wheels nominal load capacities relate to a maximum speed of 4 Km/h (1,1 m/s) - 249 mph (1,2 yds/s)

LOAD CAPACITY

F.I.R. recommends calculation of load capacity on a single caster by use of the formula (equipment weight + solid load)/3 and (equipment weight + liquid load)/2. Please ask our technical staff in relation to load requirements close to the maximum carrying capacities

TEST CONDITIONS

Load capacities and tests are determined according to the ISO 22884, UNI EN 12527, UN1 EN 12532 Standards. They refer to use under normal conditions: 1) TEST LOAD = nominal load 2) TEST SPEED = 4Km/h ±50 m/h or 249 mph ±55 yds/h 3) TEST TEMPERATURE = 20°C ± 10°C or 68°F ±50°F 4) SURFACE in good conditions, hard and solid, with obstacles having the following characteristics: height equal to 5 % of wheel diameter in the case of soft tread (up to 90 Shore A); equal to 2.5% of wheel diameter, in the case of hard tread (beyond 90 Shore A). 5) CYCLE: sequence of cycles each 4 minutes maximum, included a maximum pause time of 25% of the cycle duration.

ENVIRONMENT CONDITION

F.I.R. casters and wheels are manufactured in controlled production processes using the highest quality materials. The following standard conditions are considered as “normal working conditions”: - temperature range: +5 °C to +30 °C +41°F to +86° F - relative humidity: 40% to 80% - no direct sunlight exposure - no aggressive physical or chemical agents

STORAGE

FI.R. recommends that products are stored in a ventilated environment, with temperature between -10 °C -50° F and +30 °C - +86° F without high humidity and protected from dust. Do not store for long periods of time, and protect from direct sunlight.


Wheel
Customer
Raw
Kaizen
Design
Flexibility
Customization
Lean
Mold
S5
Molding

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Why choose F.I.R.:

EXPERIENCE
we have been producing wheels and casters for more than 30 years

TOTAL QUALITY
F.I.R. Quality Management System is in compliance with UNI EN ISO 9001:2008 standard.

INDUSTRY 4.0
we believe in smart manufacturing and we are committed to create a continually smarter factory

INNOVATION
we are at the forefront of polyurethane injection processes. We are committed to continuous process and product innovation

SUPPLY CHAIN
we choose the most reliable suppliers and the best performing materials

LOGISTICS
we offer fast delivery from our factory in Modena, Italy and from USA logistics hub in Royersford, PA

COLLABORATION
we create and supply value by interacting with our customers. Our slogan "your ideas in motion" summarizes our mission

LEAN MANUFACTURING
we believe in continuous improvement and apply "lean manufacturing".

CUSTOMER SATISFACTION
we provide prompt response, value for money and fast delivery to our customers

FLEXIBILITY
we meet special and individual requests by designing and developing custom-made products

CONVENIENCE
we provide a top class service by bringing together product quality and client convenience

ENVIRONMENT
we comply with European standards for the protection of the environment

MADE IN ITALY
we produce and sell "made in Italy"

To see the complete range of F.I.R. wheels and casters visit www.fir.it

YOUR IDEAS IN MOTION

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F.I.R. s.r.l.
Via Ho Chi Minh, 2
41122 Modena - ITALY
Tel. +39 059 255 77 00
Fax +39 059 255 77 33
sales@fir.it

Azienda con
sistema di gestione
UNI EN ISO 9001:2015
certificato

Quality
management
system ISO 9001:2015
certified company