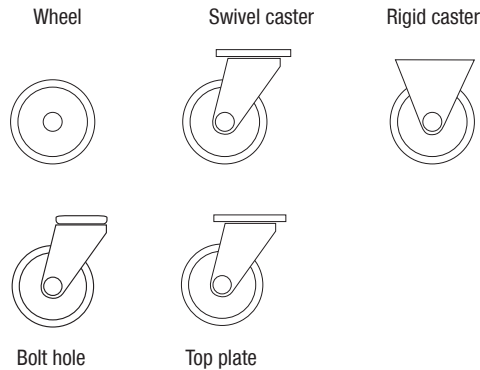


Selection Criteria for Wheels and Casters

1. Select your product.

Depending on the type of application, wheels, swivel and rigid casters can be used. Swivel casters will rotate while rigid casters will only operate in the running direction. The casters can be fitted with a top plate, bolt hole, stem, expander or plug-in pin.



2. Determine the required load capacity.

The required load capacity of a wheel or caster is calculated from the dead weight of the transport unit and its additional load, divided by the number of wheels or casters used. The result is multiplied by a safety factor which is dependent upon the application conditions. (Description refer to page 21)

$$T = \frac{E+Z}{n} \times S$$

T = Required load capacity of the wheel or caster
 E = Dead weight of the transport unit
 Z = Maximum additional load
 n = Number of wheels or casters used
 S = Safety factor

3. Select from different wheel materials.

The hardness, shape and tread material have a considerable influence on the operational comfort, smooth rolling performance and starting, rolling and swivel resistance of the wheels or casters. Generally, a wheel tread or tire should be softer than the floor otherwise damage to the floor can occur.

Material of the tread	Tread & tire hardness	Operating noise
Pneumatic tires, soft rubber	■ □ □ □ □ □ □ □	■ ■ ■ ■ ■ ■ ■ ■
Elastic solid rubber, super-elastic solid rubber	■ ■ □ □ □ □ □ □	■ ■ ■ ■ ■ ■ □ □
Solid rubber, TPE, Softhane®, Besthane® Soft, silicone rubber	■ ■ ■ □ □ □ □ □	■ ■ ■ ■ □ □ □ □
TPU, Extrathane®, Besthane®	■ ■ ■ ■ □ □ □ □	■ ■ ■ □ □ □ □ □
Steel, cast iron, nylon, polypropylene, phenolic resin	■ ■ ■ ■ ■ ■ ■ ■	■ □ □ □ □ □ □ □

soft —————> hard noisy —————> silent

4. Starting, rolling and swivel resistance. Maneuverability.

The starting, rolling and swivel resistance of a wheel or caster are significantly influenced by the tread, bearing type, wheel Ø, total load and condition of the floor.

The maneuverability of the transport unit depends on the number, type and arrangement of the casters. These factors will also have an influence on the load capacity, mobility, guidance, turning circle and stability of the vehicle.

