

CASTER SELECTION GUIDE



PAIRING THE RIGHT CASTER WITH YOUR ENVIRONMENT

Casters are rolling mechanisms used to support and help maneuver carts, racks, dollies and other material handling equipment. They come in different materials, wheel diameters, tread widths, load ratings and overall heights to give you improved mobility in a variety of work environments. To help determine which type of caster best fits your needs, ask yourself the following questions:

- Is the environment wet or oily?
- Is exposure to chemicals or corrosives a concern?
- What temperature range will the casters be exposed to?
- What floor or surface type do you need to maneuver across?
- Are athletics or noise reduction a concern?
- Are brakes needed?
- Do you need certifications in CA Prop 65, NSF for food service use or other standards?



CASTER TERMINOLOGY

CASTER TYPE

Swivel: Caster raceway capable of rotating 360°.

Rigid: Stationary or fixed caster without a raceway. Can roll forward or backwards, but restricted from swiveling 360°.

Kingpinless: Swivel caster constructed without a kingpin. Provides a superior raceway for shock conditions. Can be used in towing applications.

PNEUMATIC & SOLID RUBBER

Pneumatic: Air-filled wheels designed for low-speed manually moved applications (commonly found on hand trucks, lawn mowers and wheelbarrows). Provide a cushioned ride, shock absorption and quiet operation.

Semipneumatic: Extra-thick, solid, soft rubber tire has no air and eliminates the risk of a flat tire. Designed to reduce the vibration and shock caused by floor surfaces that are not smooth.

Solid Rubber Wheel: Designed for high-capacity applications (commonly found on hand trucks, lawn mowers and wheelbarrows). Feature a solid tire construction.

BRAKES & LOCKS

Brake: Prevents movement of the caster wheel. Not designed to stop moving equipment, nor intended for use on ramps or inclines.

4-Position Directional Lock: Locks the swivel of the caster to a rigid position for straight line travel.

Total Lock: Simultaneously locks both the swivel and wheel of the caster to hold equipment in place.

Flat-Free Wheel: Solid, polyurethane tire provides shock absorption and load handling characteristics similar to a pneumatic tire with the benefit of never going flat.

MOUNT TYPE

Plate: Attaches using bolts through designated bolt holes in the top plate.

Stem: Uses a stem as the attaching device.

Bolt Hole: Stemless caster where a standard bolt is inserted into the hole and bolted to the equipment.

DETERMINE THE WHEEL MATERIAL TO FIT YOUR NEEDS

Cast Iron: High-capacity and abrasion-resistant for easy rolling and long service life on concrete. High-temperature options available.

Ductile Iron: Superior resistance to breakage, cracking and chipping for long service life in the most severe applications.

Forged Steel: Indestructible in normal applications and long service life. Used where floor protection is a secondary consideration, or for use on steel plates.

Glass-Filled Nylon: Will not chip, absorb water or break down in caustic environments. High-temperature options available.

Monoprene: Rejects debris while offering the same great features as a pneumatic wheel without going flat.

Neoprene: High resistance from oil and chemicals while providing sufficient cushioning to substantially lower or eliminate shock, vibration and noise levels.

Nylon: Withstands solvents, corrosive environments and temperature extremes.

Phenolic: Floor protective and highly resistant to oil, grease, gasoline and mild acids. Recommended for use on smooth concrete. Not recommended for wet applications or use over rough surfaces. High-temperature options available.

Polyolefin: Lightweight, one-piece solid sanitary design suited for use in wet and corrosive applications.

Polypropylene: Resists absorption and withstands most chemicals and solvents.

Polyurethane: Easy-rolling wheels cushion loads, protect floors and offer superior chemical resistance.

Rubber: Long-wearing wheels provide floor protection and quiet operation.

Stainless Steel: Strong and durable design. Ideal for use in wet, corrosive or sanitary environments.

Steel: Provides strength and shock resistance with long service life and economy for use in rough service conditions.

Thermoplastic Rubber (TPR): Chemical- and water-resistant. Absorbs shock and protects floors while providing easy rollability. High-temperature options available.

Vulkollan: Highest quality polyurethane. Extremely durable with excellent abrasion resistance. Easy to roll.

MATCH YOUR CASTER TO YOUR FLOOR

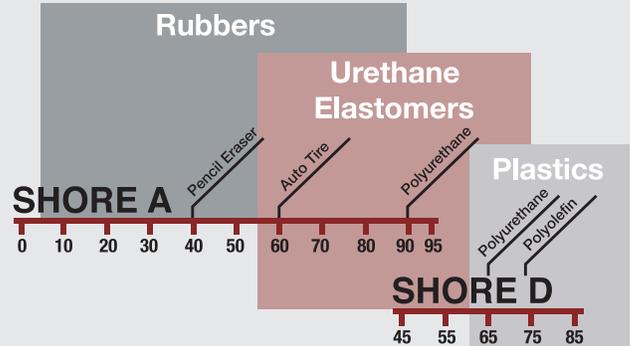
FLOOR-TO-WHEEL GUIDE

	Forged Steel	V-Groove Forged Steel	V-Groove Iron	V-Groove Polyurethane	Cast Iron	Phenolic	Hig Temperature Phenolic	Hig Temperature Nylon	Polyolefin	Hard Rubber	Soft Rubber	Rubber on Aluminum	Rubber on Cast Iron	Thermoplastic Rubber	Pneumatics
Finished Wood Floor	X	X	X	X	X	X	X	X	F	G	G	G	G	G	G
Finished Concrete Floor	F	X	X	X	F	E	E	E	E	G	E	E	E	E	E
Concrete Floor	G	X	X	X	G	E	E	E	E	G	E	E	E	E	E
Ceramic Tile	X	X	X	X	X	X	X	X	F	F	G	G	G	G	G
Vinyl Asphalt Rubber Tile	X	X	X	X	X	F	F	F	F	F	G	G	G	G	G
Oil, Grease, Solvents	G	G	G	G	G	F	F	F	E	G	G	G	G	G	F
Alkaline - Inorganic	F	F	F	G	G	F	F	F	E	G	G	G	G	G	F
Metal Chips on Floor	F	X	X	X	F	F	F	F	F	E	E	E	E	E	X

E = Excellent G = Good F = Fair X = Not Recommended

FLOOR GUIDE: DUROMETER

Measures the hardness of the wheel material—the higher the number, the harder the material. Using the Shore A or Shore D scale is the preferred method for rubbers/elastomers and is also commonly used for softer plastics such as polyolefins, fluoropolymers and vinyls. The Shore A scale is typically used for softer rubbers. Shore D is used for harder rubbers.

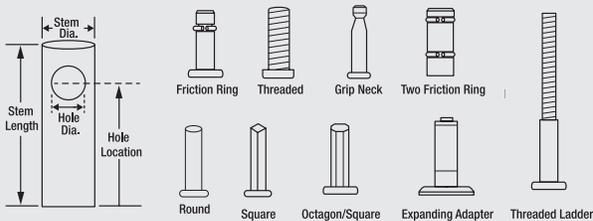


LOAD RATING & DIMENSIONS

Load Rating: The load rating of each caster adds to the overall capacity that can be supported. Each caster represents an incremental increase in load rating capacity. To find the load rating for each caster that is necessary for your application, divide the weight of the load by the number of casters. For a safety factor, remove one caster and divide the weight of the load to get the load rating for each caster.

Dimensions: Collect the following information for all casters: overall height, wheel diameter, wheel width and swivel radius. Unique dimensions will also need to be collected for each mounting type (plate, stem, bolt hole).

STEM TYPES



WHEEL SIZE & OVERALL HEIGHT

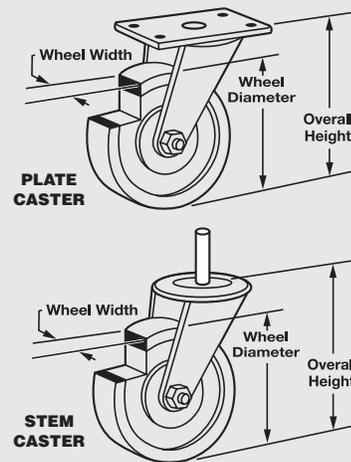
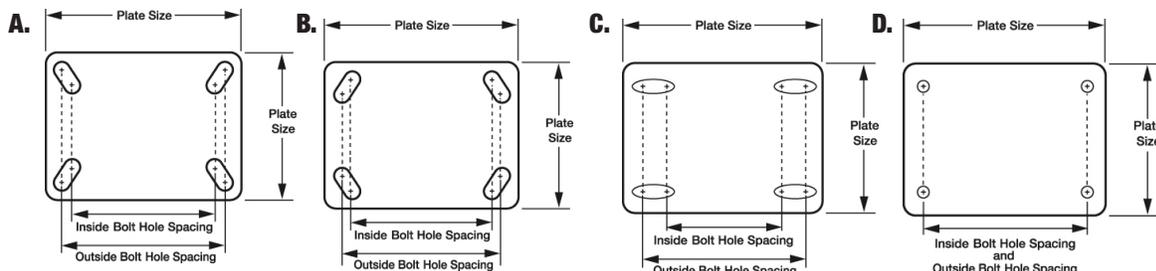


PLATE SIZE & BOLT HOLE SPACING



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