

Reference

An industry "Guide to Understanding and Specifying Industrial Casters and Wheels" is available postpaid by sending \$5.00 to the Institute of Caster Manufacturers, 600 S. Federal St., Suite 400, Chicago, IL 60605.

This shop cart contains machined swivel caster top-plates that are awaiting the mating yoke bases (second shelf). The artistic arrangement highlights the "guaranteed-for-life" integral forged steel kingpins.



Capacity - the maximum recommended load **per caster or wheel** based on intermittent operation over smooth floors at speeds not exceeding 3 m.p.h., with no shock loading or adverse environmental conditions. (Gross weight should be divided by the number of casters or wheels on which it is distributed.)

Component Thrust - designates side forces exerted on a swivel caster and properly counteracted by the secondary load bearing.

Direct Thrust - designates those downward forces exerted on a caster by the load, and counteracted by the main load bearing.

Durometer - a measure of the hardness of resilient tread wheels.

Rig - a swivel or rigid caster assembly less wheel, that may or may not include axle, nut or spanner bushing.

Raceway - a surface in which bearing balls or rollers rotate.

Retaining Washer - a steel washer pressed into the hub ends of some roller bearing wheels to hold the bearing in place.

Rollability - ease of starting and rolling, measured by drawbar pull. This is determined by load, floor conditions, and type and size of wheels and bearings.

Mounting Plate - the flat base, usually with four bolt holes, that forms the top of a caster and permits attachment by bolting or welding to a flat surface.



Kingpin-A rivet, or threaded stud or bolt with nut, that holds the mounting plate and horn assembly of a swivel caster together. Forged as an integral part of mounting plate on higher quality casters for maximum rigidity and strength.

Main Load Bearing -the row of steel balls or rollers that swivels the horn base in relation to the mounting plate of a swivel caster, and counteracts direct thrust.



Horn -the caster part which is comprised of legs plus a base (horn base of swivel caster or mounting plate of rigid).

Yoke -alternate term for horn.

Horn Base -the flat part at the top of the horn from which the legs extend. Serves as lower raceway for main load bearing, and may provide a seat or upper raceway for secondary load bearing.

Lubrication Fitting

Standard Bolt Axle



Lube Axle



Legs -the axle-support brackets extending down from the horn base of a swivel caster, or from the mounting plate of a rigid caster.

Spanner Bushing -a non-rotating sleeve of seamless steel tubing that fits over the axle in many casters. Serves the dual purpose of providing a smooth inner raceway for the wheel bearings, and strengthening the caster by permitting the legs to be tightened against it.

Thrust Washer - a steel washer between the hub ends of the wheel and the inside of the caster legs.

Axle Nut



Secondary Load Bearing (Precision) - a precision self contained bearing, usually a tapered roller bearing, operating between the horn base and the kingpin of a swivel caster. Constitutes the most efficient means of assisting swivel action by counteracting component thrust.

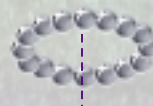


Cupped Grease Retainer



Cotter Pin

Secondary Bearing Retainer



Secondary Load Bearing (Commercial) - the row of steel balls that rides in the raceway between the horn base and secondary bearing retainer of a swivel caster to counteract component thrust. It is this bearing that characterizes the popular "double ball race" caster.

Kingpin Nut - the nut on the bottom of a threaded kingpin or bolt that permits the disassembly or adjustment of swiveling components; a maintenance feature of better casters not found with rivet-type kingpins.