

# Full Complement Drawn Cup Needle Bearings

# Koyo®

## Ball, Needle & Roller Bearings

Koyo offers a wide range of mechanically retained full complement drawn cup bearings. With our unique, world-class assembly and roller manufacturing processes, we incorporate optimum tolerances, features and materials. Products are supported by our unsurpassed engineering and technical know-how.

Full complement drawn cup needle bearings combine high radial load carrying capability with low cost.

TS-16949/ISO9000 certification and Koyo's advanced technology in metal forming help ensure the highest precision and quality. These bearings are available in a range of sizes, from 6 mm to 55 mm (1/8 in. to 5-1/2 in.) shaft diameter.

The inward-turned lips of the cup mechanically retain the optimum number of needle rollers. This feature provides positive radial retention even in applications where repeated shaft removal and reinstallation may be necessary.

Full complement needle bearings offer very high load-carrying capabilities, while minimizing required cross section. In certain applications, we can replace a caged bearing with a full complement bearing to provide greater power density.



### Automotive

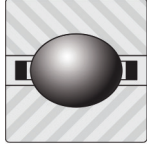
- *Starters*
- *Transmissions*
- *Alternators*
- *A/C compressors*

### Industrial & Consumer Products

- *Pumps*
- *Air compressors*
- *Outboard engines*
- *Power tools*
- *ATV's / snowmobiles*
- *Tractors*
- *Door closers*

## Bearing Selection Matrix

Comparison of Bearing Options (1" Shaft)



S10K Ball Bearing	HJ-162412 Machine Race Bearing	J-1612 Drawn Cup Bearing	B-1612 Full Complement Drawn Cup Bearing
Bore - 1.00"	Bore - 1.00"	Bore - 1.00"	Bore - 1.00"
OD - 2.00"	OD - 1.50"	OD - 1.25"	OD - 1.25"
Width - .375"	Width - 0.750"	Width - 0.750"	Width - 0.750"
Capacity - 2500 lbf	Capacity - 5680 lbf	Capacity - 4080 lbf	Capacity - 5770 lbf
Req. cross section = 0.5"	Req. cross section = 0.25"	Req. cross section = 0.125"	Req. cross section = 0.125"
<b>Capacity Advantage<sup>(1)</sup> = 1</b>	<b>Capacity Advantage<sup>(1)</sup> = 4.5</b>	<b>Capacity Advantage<sup>(1)</sup> = 6.5</b>	<b>Capacity Advantage<sup>(1)</sup> = 9</b>

$$^{(1)}\text{Capacity Advantage} = \frac{\text{Capacity}}{\text{Required Cross Section}} \quad \text{With Ball Bearing} = 1$$

### Features

Surface coatings available include nickel plating and black oxide coating.

Many materials available, including brass, stainless steel and high-carbon steel.

Unitized assembly.

More rollers in the load zone.

Special lubricants available.

Special quiet bearings available.

### Benefits

High load-carrying capacity.

Easy assembly.

Ideal for applications where the shaft must be removed for service.

Improved resistance to fretting corrosion.

Does not require a large angle of rotation to move lube into the path of the next roller.

Located by press fit; does not need a shoulder to locate the bearing.

Thin cross section compared to ball bearings, machined race bearings or cage and roller assemblies.



### Koyo Full Complement Drawn Cup Needle Bearings

Full complement drawn cup needle bearings have a drawn outer shell that serves as a raceway for the maximum number of rollers. This combines high radial load-carrying capability with low cost.

# Koyo®

**Call Koyo Today 1-800-331-5696**

Our sales and service engineers are available to assist with product design needs, maintenance recommendations, and technical support.

To learn more, contact your sales representative or visit us online at:  
[www.JTEKT-NA.com](http://www.JTEKT-NA.com)

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