



Angular Bearings



Angular bearings are precision bearings that can simultaneously bear radial and axial loads, and are widely used in miniature fields characterized by low to medium loads and low torques.

By using them in sets of two bearings, they are able to maintain the appropriate precompression state, and are mainly used as support bearing units for ball screws and rotating main axles.



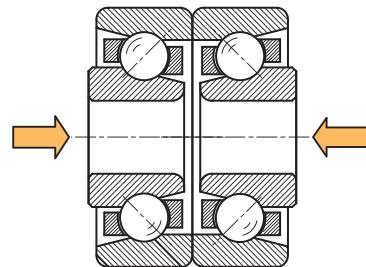
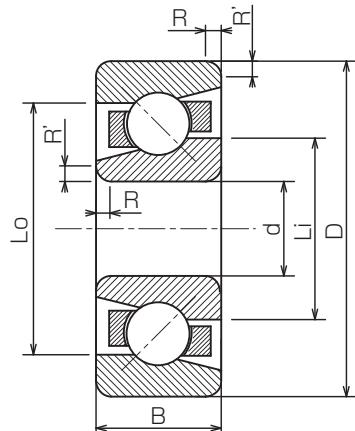
Origin Co., Ltd.

01 | Specifications for the Standard Models

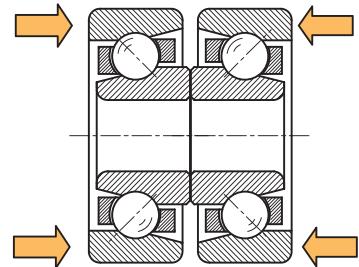
Naming and auxiliary symbols

Bearing numbers		Bearing type codes
Bearing type codes	Size codes	
AC	4-12	DF
AC= Angular bearings	Bore – Outside dia.(mm)	DB= Back combination DF= Front combination

Dimensions



Model DB
An inner ring is pressurized.



Model DF
An outer ring is pressurized.

Unit=mm

Nominal Number	Dimensions				Land dia.		Basic load ratings	
	Bore $d \text{ } 0_{-0.005}$	Outside dia. $D \text{ } 0_{-0.005}$	Width B	Chamfer ($R-R'$)	Inner ring (L_i)	Outer ring (L_o)	Dynamic load $C(N)$	Static load $C_o(N)$
A C 4 – 1 2	4	12	4	0.6–0.3	7.5	8.56	841	274
A C 5 – 1 4	5	14	4	0.6–0.3	8.6	9.65	905	304
A C 6 – 1 6	6	16	5	0.6–0.3	9.9	11.25	1248	441
A C 8 – 1 8	8	18	6	0.7–0.35	12.4	13.75	1619	647
A C 1 0 – 2 6	10	26	8	0.8–0.5	16.6	19.4	2742	1204

02 | Features

1. Supports high loads

The contact angle of 45 degrees shows superior performance against axial load.

2. High rotation speed

The retainer is made of plastic, has small inertia, and supports high rotation speeds.

3. Undivided structure

The inner and outer rings have an undivided structure that is easy to handle.

4. Customizable

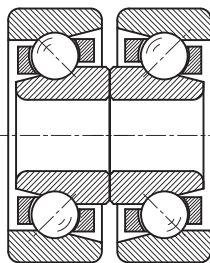
Stainless steel is also supported.

5. High precision

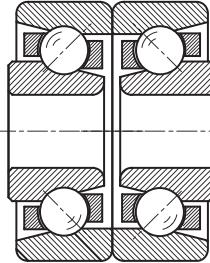
The duplex precision is equivalent to grade 5.

03 Features of duplex bearings

Front-to-front(DF)

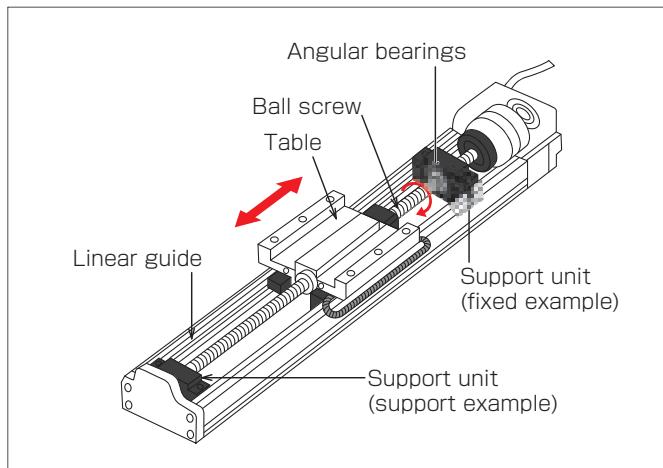


Back-to-back(DB)

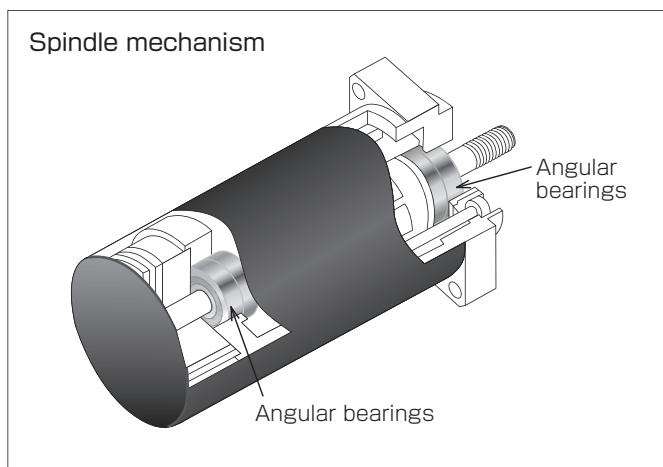
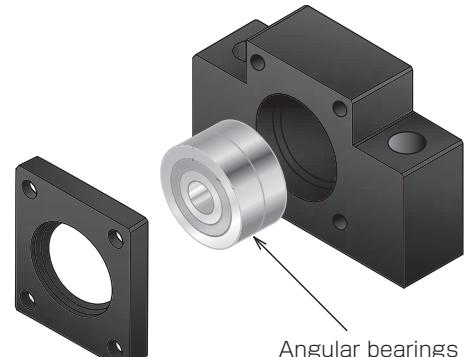


Distance between bearing load points	Small	Large
Momentum load capacity	Weak	Strong
Tolerable tilt angle	Large	Small
Misalignment tolerance	Large	Small

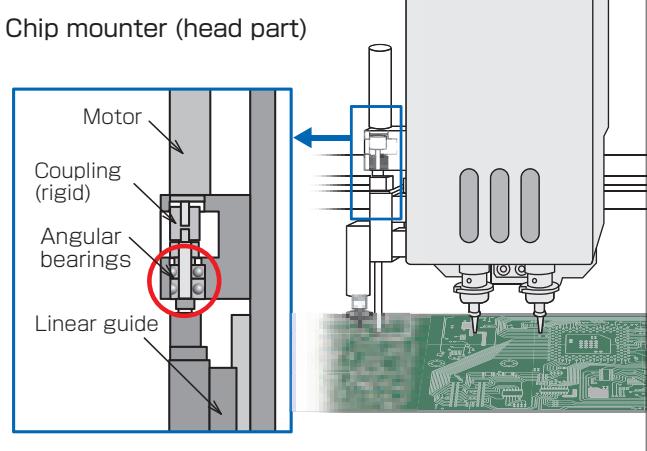
04 Example applications



Ball screw support unit



Chip mounter (head part)





<http://www.origin.co.jp/eng>

Sales Office 3-10-5, Akatsuki, Oyama-Shi, Tochigi-Ken 329-0211, Japan
Sales Dept, Component Div. Tel:+81-285-45-1115 Fax:+81-285-45-1236

Osaka Branch Office Room812, Osaka Ekimae No.4 Bldg., 1-11-4-800, Umeda, Kita-ku, Osaka 530-0001 Tel:+81-6-6345-8866 Fax:+81-6-6345-8854

Origin Electric Co., Ltd. 99F, No.110, Fuxing Rd., Taoyuan Dist, Taoyuan City 33066, Taiwan(R.O.C.) Tel:+886-3-332-6665 Fax:+886-3-332-8609

Hong Kong Branch Unit 1706-7 17/F, Saxon Tower, 7Cheung Shun Street, Kowloon, Hong Kong Tel:+852-2314-8811 Fax:+852-2314-8823

Mamada Plant 3-10-5, Akatsuki, Oyama-shi, Tochigi-ken, 329-0211, Japan Tel:+81-285-45-1111 Fax:+81-285-45-8337

■ Subsidiaries

Origin Electric America Co., Ltd. 3848 Carson Street Suite 216, Torrance, CA 90503, USA Tel:+1-310-540-6750 Fax:+1-310-540-6376

Origin Precision Machine (Shanghai) Co., Ltd. 3/F, No.26 Bldg., No.115 West Fute First Rd. Pilot Free Trade Zone, Shanghai, 200131 China Tel:+86-21-5046-2341 Fax:+86-21-5046-2342



The data presented in this catalog are for general application purposes. Do not use this product in such a way that may be harmful to people or exceed its performance.



To avoid accidents and/or failures as well as to ensure safety, do not use this product exceeding the specifications noted in this catalog and ignoring the precautions.

*Specifications are subject to change without a notice for future development.