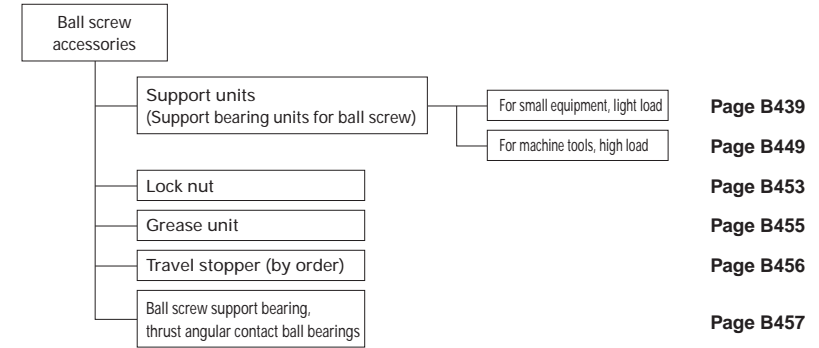
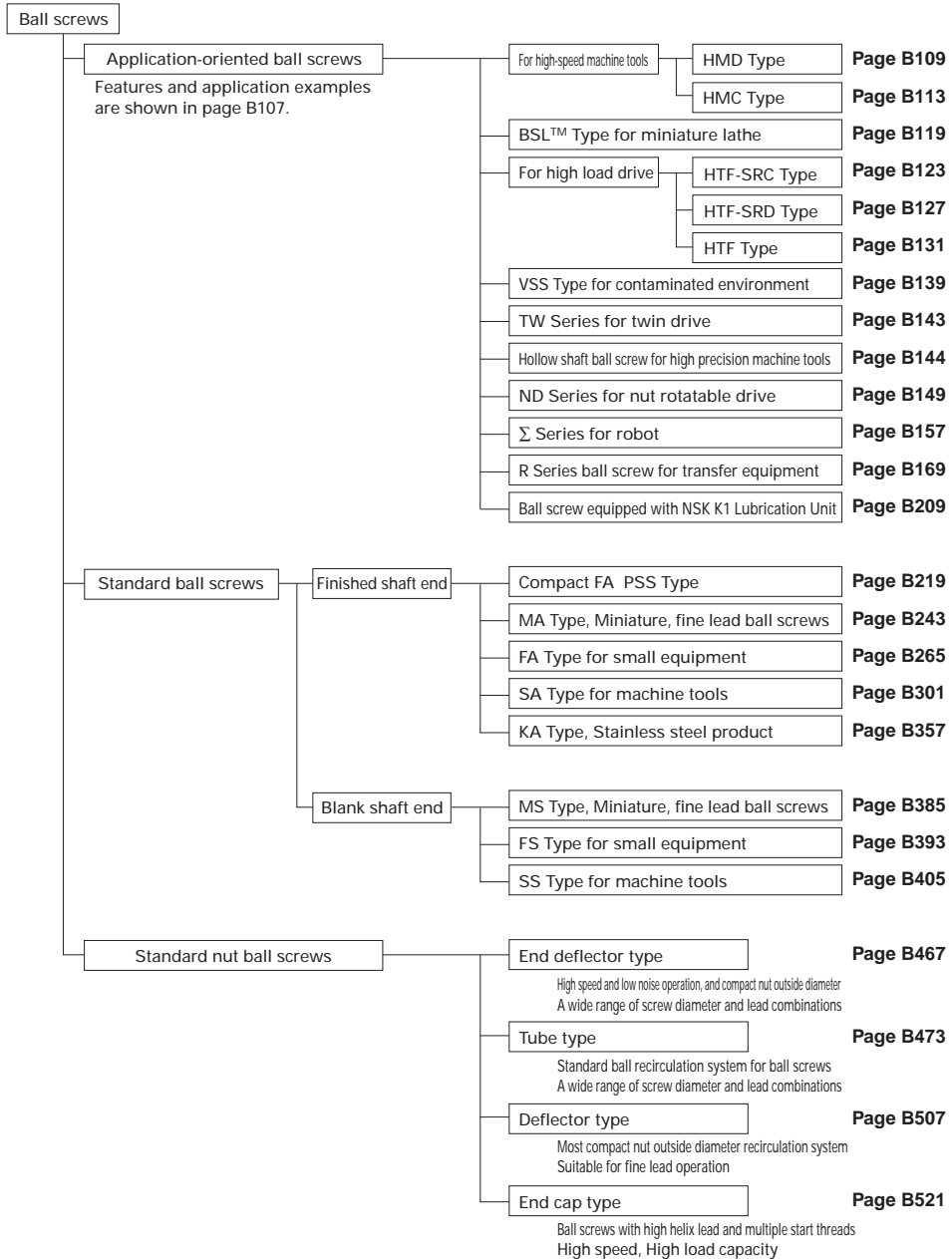


B-1-3 Ball Screw Series

B-1-3.1 Ball Screw Classification



Lead classification

Classification	Lead ratio $K = \text{lead } l / \text{shaft diameter } d$
Fine	$K < 0.5$
Medium	$0.5 \leq K < 1$
High helix	$1 \leq K < 2$
Ultra high helix	$2 \leq K$

B-1-3.2 Product externals

(1) Ball screws

● Application-oriented ball screws

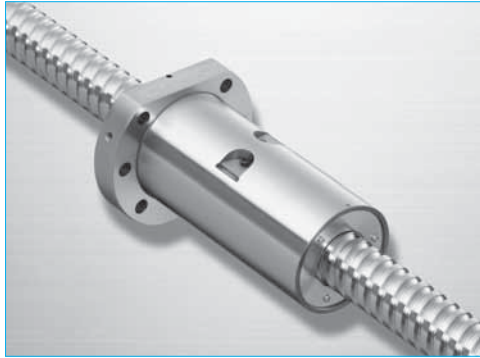


Fig. 3.1 HMD type for high-speed machine tools
Page B109

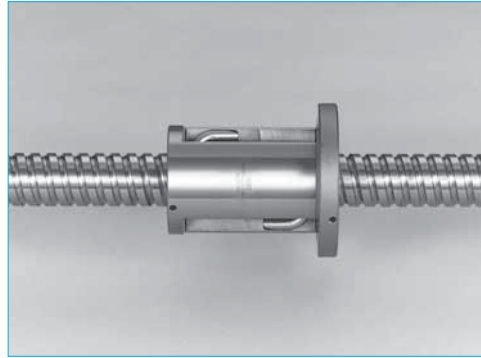


Fig. 3.2 HMC type for high-speed machine tools
Page B113

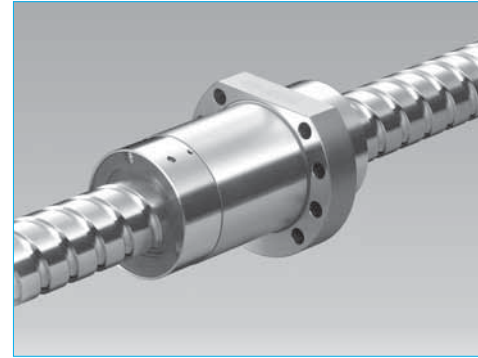


Fig. 3.7 VSS type for contaminated environment
Page B139

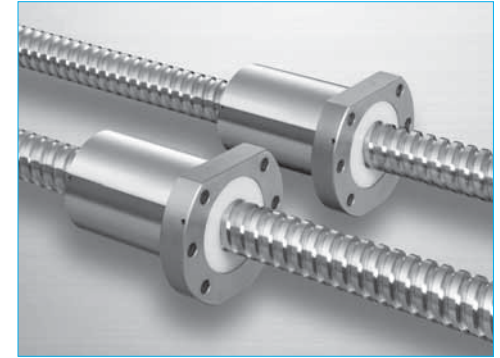


Fig. 3.8 TW series for twin-drive system
Page B143

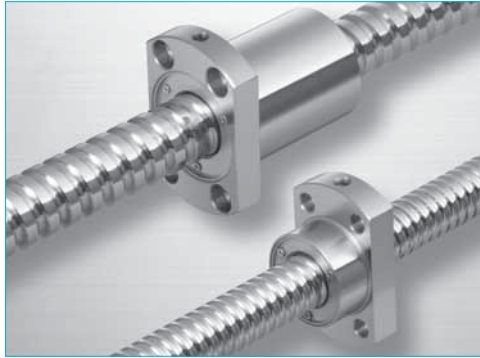


Fig. 3.3 BSL type for miniature lathe
Page B119

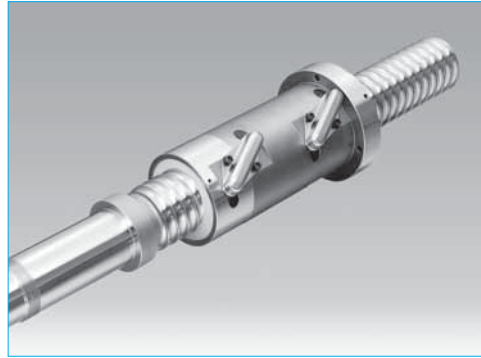


Fig. 3.4 HTF-SRC type for high-load drive
Page B123

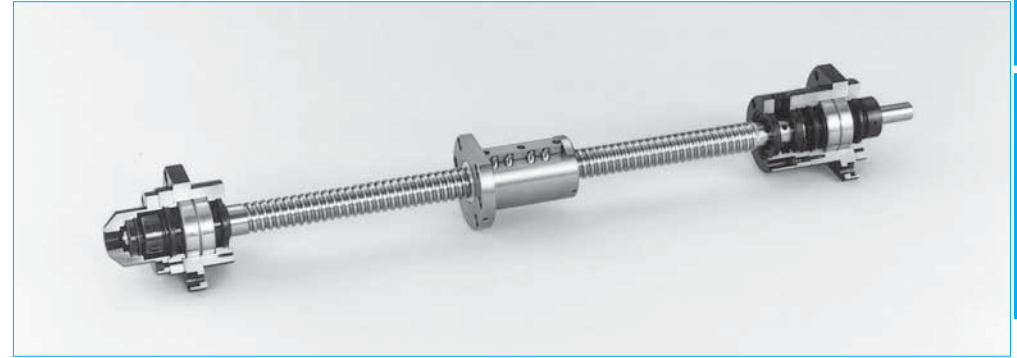


Fig. 3.9 Hollow shaft ball screw for high-precision machine tools
Page B144

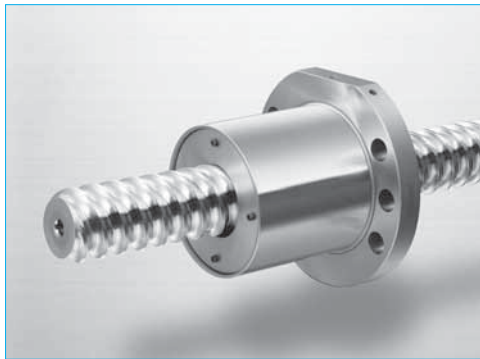


Fig. 3.5 HTF-SRD type for high-load drive
Page B127

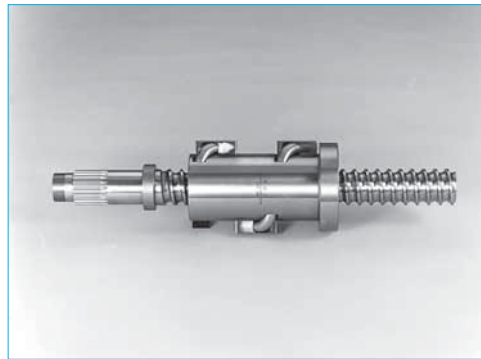


Fig. 3.6 HTF type for high-load drive
Page B131

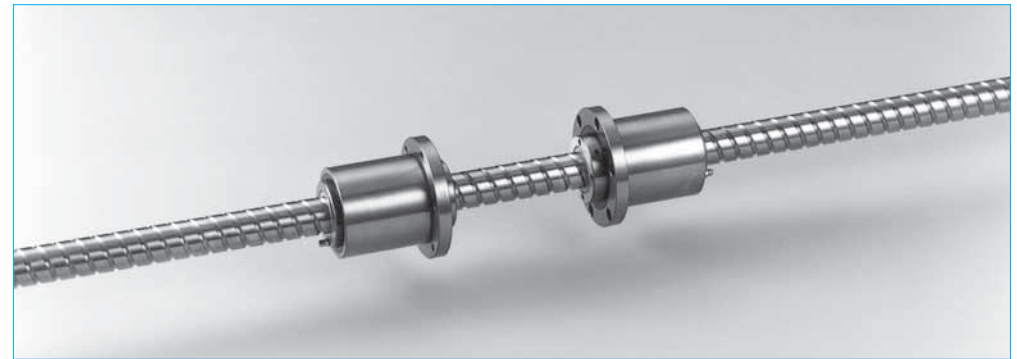


Fig. 3.10 ND series for nut-rotatable drive
Page B149

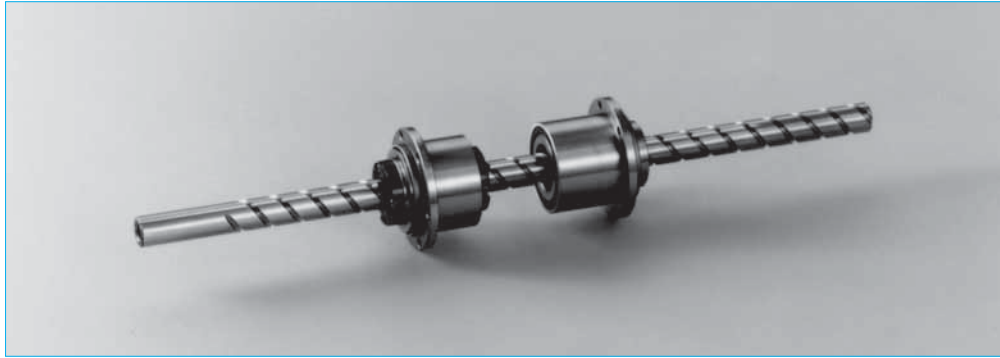


Fig. 3.11 Σ series for robot

Page B157

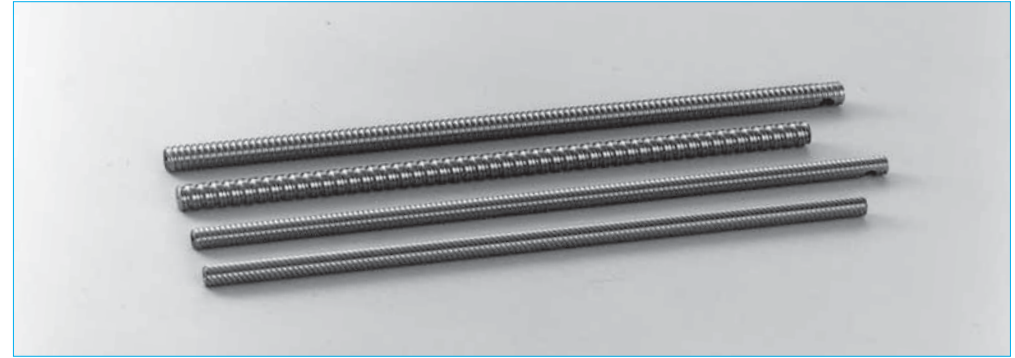


Fig. 3.14 Blank shaft end R series for transfer equipment

Page B169



Fig. 3.12 Finished shaft end VFA type for transfer equipment

Page B169



Fig. 3.15 R series nut assembly for transfer equipment

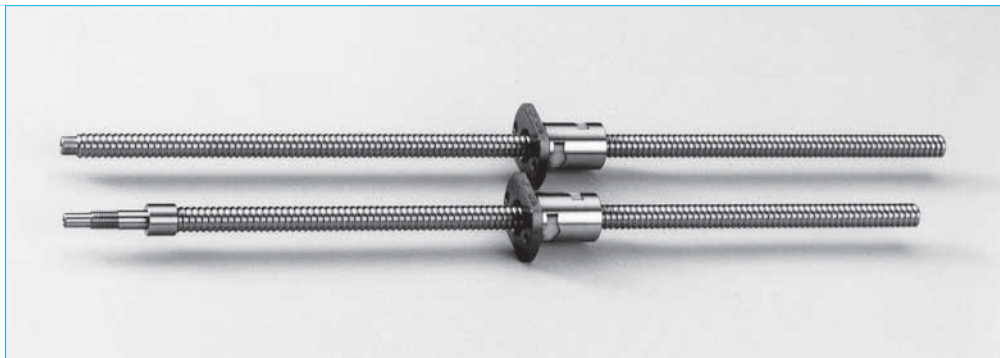


Fig. 3.13 Finished shaft end RMA type and blank shaft end RMS type for transfer equipment

Page B169

●Standard ball screws

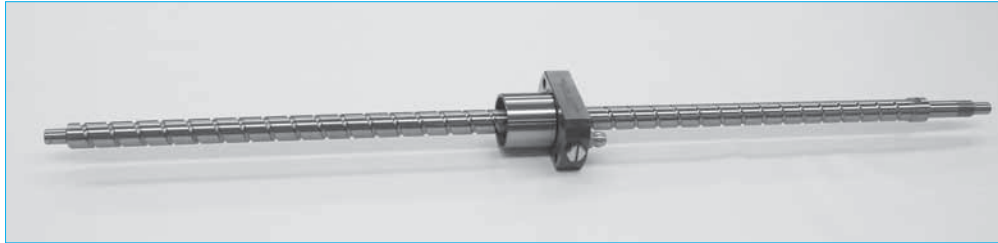


Fig. 3.16 Finished shaft end compact FA PSS type

Page B219

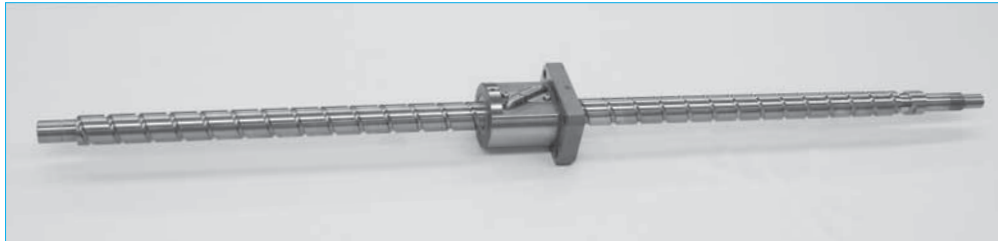


Fig. 3.17 Finished shaft end MA type, FA type, SA type

Page B241

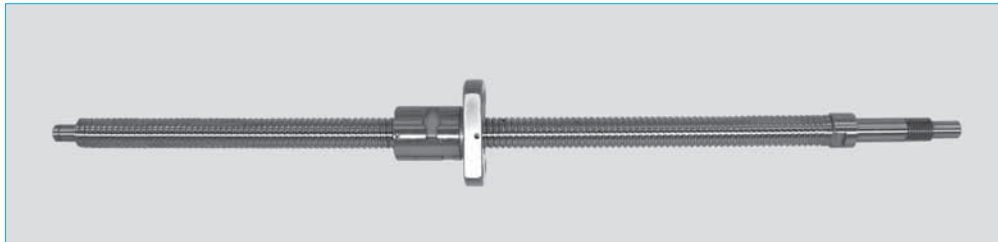


Fig. 3.18 Finished shaft end KA type

Page B357

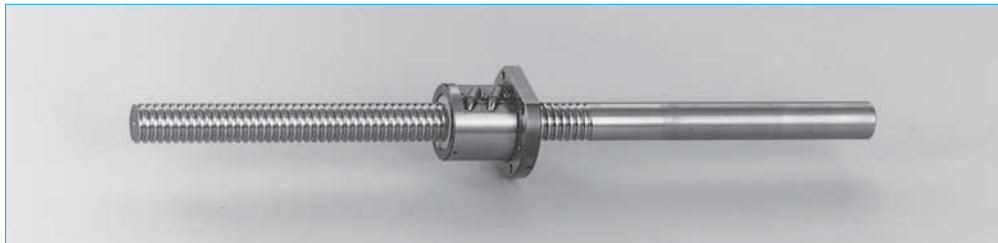


Fig. 3.19 Blank shaft end MS type, FS type, SS type

Page B383

●Standard nut ball screws

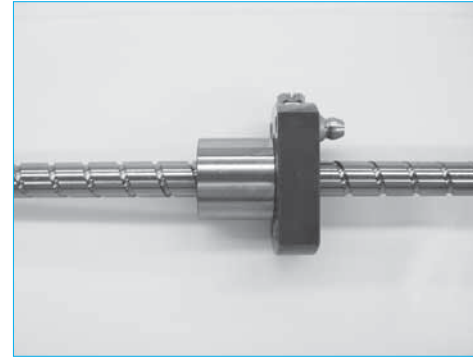


Fig. 3.20 End deflector type

Page B467

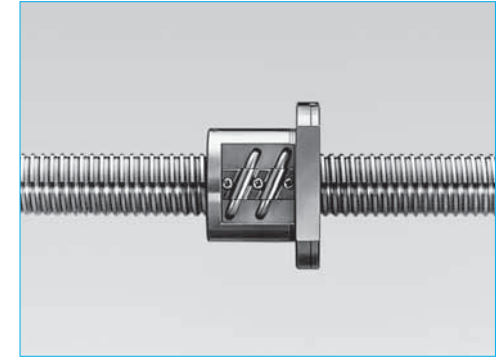


Fig. 3.21 Tube type

Page B473

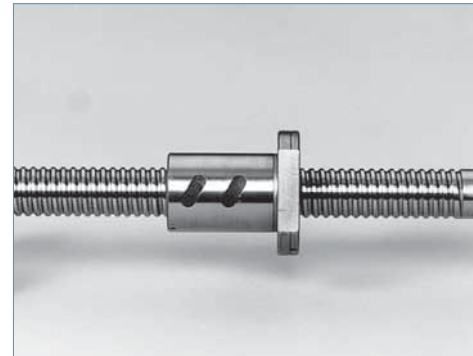


Fig. 3.22 Deflector type

Page B507

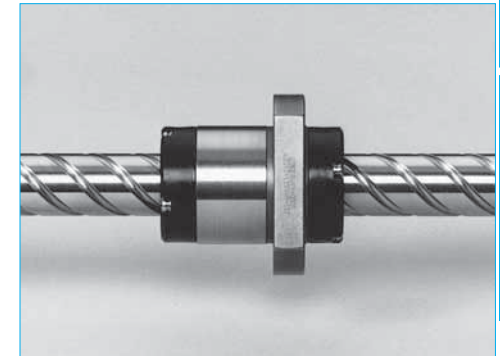


Fig. 3.23 End cap type

Page B521

(2) Standard accessories



Fig. 3.24 Support unit Page B439
(For small equipment, light load)



Fig. 3.25 Low-profile support unit Page B439
(For small equipment, light load)



Fig. 3.29 Lock nuts A type Page B453



Fig. 3.30 Lock nuts S type Page B454



Fig. 3.26 Support unit Page B449
(For machine tools, heavy load)

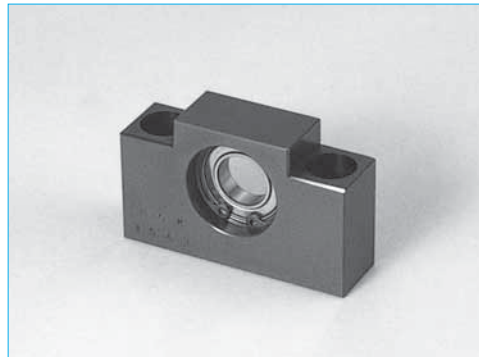


Fig. 3.27 Support unit for VFA type Page B446
(simple support side)



Fig. 3.31 NSK hand grease pump unit Page D20



Fig. 3.32 NSK grease Page B455, D20



Fig. 3.28 Support kit for RMA and RMS types Page B445

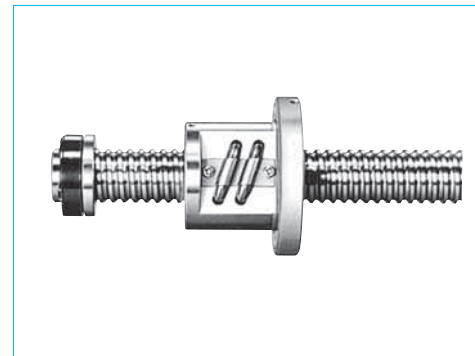


Fig. 3.33 Travel stopper (by order) Page B456

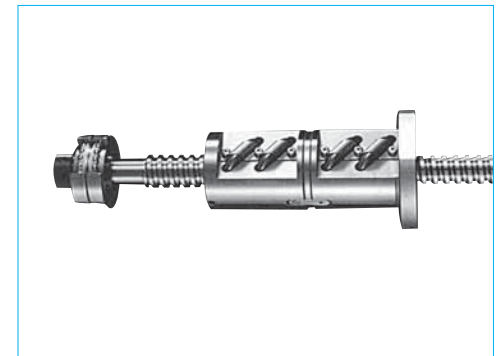


Fig. 3.34 Ball screw support bearing, thrust angular contact ball bearings Page B457