

Overview of standards for rolling bearings

DIN
611

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Supersedes November 1973 edition.

This standard provides an overview of DIN Standards dealing with rolling bearings and related International Standards.

Table 1: Basic standards

Subject	Related DIN Standard(s) or ISO Standard(s)
General plan	DIN 616, ISO 15, ISO 104, ISO 246, ISO 355, ISO 464, ISO 1206, ISO 3030, ISO 3031, ISO 3245, ISO 8443
Gauging methods for dimensional and running tolerances	DIN 620-1
Tolerances for radial ball bearings	DIN 620-2, ISO 492
Tolerances for thrust bearings	DIN 620-3, ISO 199
Radial internal clearance	DIN 620-4, ISO 5753
Chamfer dimension limits	DIN 620-6, ISO 582
Designation system for rolling bearings	DIN 623-1
Tabular layout of article characteristics for rolling bearings and bearing parts	DIN 4000-12
Mounting dimensions of rolling bearings	DIN 5418
Mounting tolerances	DIN 5425-1
Steel for rolling bearings; technical delivery conditions	DIN 17 230, ISO 683-17
Static load ratings	ISO 76
Dynamic load ratings and rating life	ISO 281
Tolerances; definitions	ISO 1132
Rolling bearings; vocabulary	ISO 5593
Spherical plain bearings; vocabulary	ISO 6811

Continued on pages 2 to 8.

Table 2: Standards for ball bearings














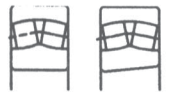




Schematic representation	Bearing type	Type of construction	Related DIN Standard(s) or ISO Standard(s)
	Magneto ball bearing	Single row	DIN 615
	Deep groove ball bearing	Single row	DIN 625-1
	Deep groove ball bearing	Double row	DIN 625-3
	Deep groove ball bearing	Flanged outer ring	DIN 625-4, ISO 8443
	Deep groove ball bearing, insert bearing	Spherical outside surface and extended inner ring width	DIN 626-1
	Angular contact ball bearing	Single and double row	DIN 628-1
	Self-aligning ball bearing	Cylindrical and tapered bore	DIN 630
	Deep groove thrust ball bearing	Single-direction, with flat back faces, or spherical back faces and plain washer, or capped	DIN 711
	Deep groove thrust ball bearing	Double-direction, flat back faces, spherical back faces and plain washer	DIN 715

Table 3: Standards for roller bearings

Schematic representation	Bearing type	Type of construction	Related DIN Standard(s) or ISO Standard(s)
	Needle roller bearing	With cage, with or without inner ring, dimension series 48 and 49	DIN 617, ISO 1206
	Needle roller bearing	Open end drawn cup or closed end drawn cup, with cage	DIN 618-1, ISO 3245
	Needle roller bearing	Open end drawn cup, with cage, sealed	DIN 618-2
	Self-aligning roller bearing	Single row, cylindrical or tapered bore	DIN 635-1
	Self-aligning roller bearing	Double row, cylindrical or tapered bore	DIN 635-2
	Tapered roller bearing	Single row	DIN 720, Suppl 1 to DIN 720, ISO 355
	Cylindrical roller thrust bearing	Single-direction	DIN 722
	Self-aligning thrust bearing	Single-direction, with asymmetrical rollers	DIN 728
	Needle roller bearing	Radial needle roller and cage assembly	DIN 5405-1, ISO 3030

(continued)

Table 3 (concluded)







Schematic representation	Bearing type	Type of construction	Related DIN Standard(s) or ISO Standard(s)
	Needle roller bearing	Thrust needle roller and cage assembly	DIN 5405-2, ISO 3031
	Cylindrical roller bearing	Single row, with cage, extended inner ring, thrust collar	DIN 5412-1
	Cylindrical roller bearing	Double row, with cage	DIN 5412-4
	Cylindrical roller bearing	Double row, full type, non-separable, dimension series 48 and 49	DIN 5412-9
	Needle roller bearing combinations	Needle thrust ball bearing; needle cylindrical roller thrust bearing	DIN 5429-1
	Needle roller bearing combinations	Needle angular contact ball bearing	DIN 5429-2

Table 4: Miscellaneous bearings


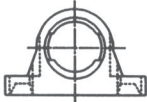

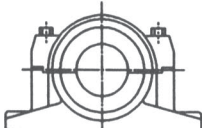





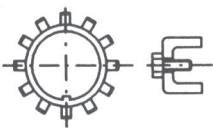
Schematic representation	Bearing type	Related DIN Standard(s) or ISO Standard(s)
	Joint type spherical plain radial bearing, spherical plain bearing rod ends	DIN 648, ISO 6124-1, ISO 6124-2, ISO 6124-3, ISO 6125, ISO 6126

Table 5: Rolling bearing parts, accessories and housings

Schematic representation	Subject	Related DIN Standard(s) or ISO Standard(s)
	Cast housings for insert bearings	DIN 626-2, ISO 3228
	Pressed housings for insert bearings	DIN 626-3, ISO 3228
	Plummer block housings for diameter series 2 and 3 rolling bearings, with tapered or cylindrical bore	DIN 736, DIN 737, DIN 738, DIN 739, ISO 113-2
	Locknut	DIN 981, ISO 2982
	Ball	DIN 5101-1, ISO 3290
	Cylindrical roller	DIN 5402-1
	Needle roller	DIN 5402-3, ISO 3096
	Thrust washer	DIN 5405-3
	Lockwasher, locking plate	DIN 5406, ISO 2982

(continued)

Table 5 (concluded)




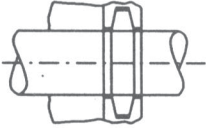
Schematic representation	Subject	Related DIN Standard(s) or ISO Standard(s)
	Adapter sleeve with locknut and lockwasher	DIN 5415, ISO 113-1
	Withdrawal sleeve	DIN 5416, ISO 113-1
	Snap ring for bearing with snap ring groove	DIN 5417, ISO 464
	Felt rings, felt strips, snap ring grooves for rolling bearing housings	DIN 5419

Table 6: List of DIN Standards and related ISO Standards

DIN Standard(s)	Subject	ISO Standard(s)
DIN 615	Magneto ball bearing	—
DIN 616	General plan	ISO 15, ISO 104, ISO 246, ISO 355, ISO 464, ISO 1206, ISO 3030, ISO 3031, ISO 3245, ISO 8443
DIN 617	Needle roller bearing with cage	ISO 1206
DIN 618-1	Open end drawn cups or closed end drawn cups, with cage	ISO 3245
DIN 618-2	Open end drawn cups with cage, sealed	—
DIN 620-1	Gauging methods for dimensional and running tolerances for rolling bearings	—
DIN 620-2	Tolerances for radial ball bearings	ISO 492
DIN 620-3	Tolerances for thrust bearings	ISO 199
DIN 620-4	Radial internal clearance	ISO 5753
DIN 620-6	Chamfer dimension limits	ISO 582
DIN 623-1	Designation system for rolling bearings	—
DIN 625-1, DIN 625-3	Deep groove ball bearings, single row or double row	—
DIN 625-4	Deep groove ball bearings with flanged outer ring	ISO 8443
DIN 626-1	Insert bearings	—
DIN 626-2	Cast housings for insert bearings	ISO 3228
DIN 626-3	Pressed housings for insert bearings	ISO 3228
DIN 628-1	Angular contact ball bearings	—
DIN 630-1, DIN 630-2	Self-aligning ball bearings	—
DIN 635-1, DIN 635-2	Self-aligning roller bearings	—
DIN 648	Joint type spherical plain radial bearings; spherical plain bearing rod ends	ISO 6124-1, ISO 6124-2, ISO 6124-3, ISO 6125, ISO 6126
DIN 711	Thrust ball bearings, single-direction	—
DIN 715	Thrust ball bearings, double-direction	—
DIN 720, Suppl 1 to DIN 720	Tapered roller bearings	ISO 355
DIN 722	Cylindrical roller thrust bearings	—
DIN 728	Self-aligning thrust bearings	—
DIN 736, DIN 737 DIN 738, DIN 739	Plummer block housings for rolling bearings	ISO 113-2
DIN 981	Locknuts	ISO 2982
DIN 4000-12	Tabular layout of article characteristics for rolling bearings and bearing parts	—
DIN 5401-1	Bearing balls	ISO 3290
DIN 5402-1	Cylindrical rollers	—

(continued)

Table 6 (concluded)

DIN Standard(s)	Subject	ISO Standard(s)
DIN 5402-3	Needle rollers	ISO 3096
DIN 5405-1	Radial needle roller and cage assemblies	ISO 3030
DIN 5405-2	Thrust needle roller and cage assemblies	ISO 3031
DIN 5405-3	Thrust washers	—
DIN 5406	Lockwashers	ISO 2982
DIN 5412-1, DIN 5412-4, DIN 5412-9	Cylindrical roller bearings	—
DIN 5415	Adapter sleeves with locknut and lockwasher	ISO 113-1
DIN 5416	Withdrawal sleeves	ISO 113-1
DIN 5417	Snap rings for bearings with snap ring groove	ISO 464
DIN 5418	Mounting dimensions of rolling bearings	—
DIN 5419	Felt rings, felt strips and snap ring grooves for rolling bearing housings	—
DIN 5425-1	Mounting tolerances	—
DIN 5429-1, DIN 5429-2	Needle roller bearing combinations	—
DIN 17 230	Steel for rolling bearings; technical delivery conditions	ISO 683-17
DIN ISO 76	Static load ratings	ISO 76
DIN ISO 281	Dynamic load ratings and rating life	ISO 281
DIN ISO 355	Tapered roller bearings	ISO 355
DIN ISO 1132	Tolerances; definitions	ISO 1132
—	Rolling bearings; vocabulary	ISO 5593
—	Spherical plain bearings; vocabulary	ISO 6811

Standards referred to

See tables 1 to 6.

Previous editions

DIN 611: 01.22, 08.42, 04.64, 11.73.

Amendments

In comparison with the November 1973 edition of this standard, the lists of standards on rolling bearings have been updated.

International Patent Classification

F 16 C 19/00

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F 16 C 35/00

F 16 C 33/30