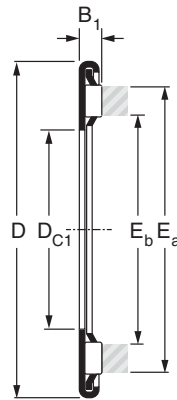
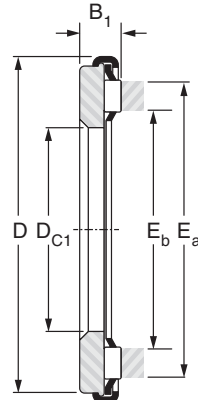


Needle thrust bearings

AX thin and thick series



AX thin

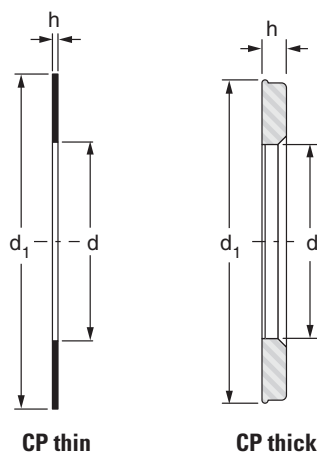


AX thick

Shaft Ø mm	Designation		D _{C1} mm	D mm	B ₁ mm	E _b mm	E _a mm	Load ratings		Speed rating oil min ⁻¹	Weight kg
	AX thin series	AX thick series						Dyn. C kN	Stat. Co kN		
5	AX 5 13		5	13	2.3	6.3	10.9	3.00	5.70	25000	0.001
		AX 3.5 5 13	5	13	3.5	6.3	10.9	3.00	5.70	25000	0.002
6	AX 6 14		6	14	2.3	7.3	11.9	3.15	6.35	22000	0.001
		AX 3.5 6 14	6	14	3.5	7.3	11.9	3.15	6.35	22000	0.002
7	AX 7 15		7	15	2.3	8.3	12.9	3.55	7.60	22000	0.002
		AX 3.5 7 15	7	15	3.5	8.3	12.9	3.55	7.60	22000	0.003
8	AX 8 16		8	16	2.3	9.3	13.9	3.70	8.30	22000	0.002
		AX 3.5 8 16	8	16	3.5	9.3	13.9	3.70	8.30	22000	0.003
9	AX 9 17		9	17	2.3	10.3	14.9	4.05	9.50	19000	0.002
		AX 3.5 9 17	9	17	3.5	10.3	14.9	4.05	9.50	19000	0.004
10	AX 10 22		10	22	2.8	12.0	18.6	5.00	10.90	15500	0.004
		AX 4 10 22	10	22	4.0	12.0	18.6	5.00	10.90	15500	0.007
12	AX 12 26		12	26	2.8	15.0	22.6	6.90	17.70	13000	0.006
		AX 4 12 26	12	26	4.0	15.0	22.6	6.90	17.70	13000	0.010
13	AX 13 26		13	26	2.8	15.0	22.6	6.90	17.70	13000	0.006
		AX 4 13 26	13	26	4.0	15.0	22.6	6.90	17.70	13000	0.010
15	AX 15 28		15	28	2.8	17.0	24.6	7.40	20.00	11500	0.007
		AX 4 15 28	15	28	4.0	17.0	24.6	7.40	20.00	11500	0.009
17	AX 17 30		17	30	2.8	19.0	26.6	7.80	22.00	10500	0.008
		AX 4 17 30	17	30	4.0	19.0	26.6	7.80	22.00	10500	0.010
19	AX 19 32		19	32	2.8	21.0	28.6	8.00	23.30	10000	0.009
		AX 4 19 32	19	32	4.0	21.0	28.6	8.00	23.30	10000	0.013
20	AX 20 35		20	35	2.8	22.0	31.6	11.80	39.00	9000	0.010
		AX 5 20 35	20	35	5.0	22.0	31.6	11.80	39.00	9000	0.018
25	AX 25 42		25	42	2.8	27.7	37.4	13.30	49.00	7500	0.012
		AX 5 25 42	25	42	5.0	27.7	37.4	13.30	49.00	7500	0.025
27	AX 27 44		27	44	2.8	30.0	39.6	13.70	52.00	7200	0.012
30	AX 30 47		30	47	2.8	32.7	42.4	14.50	57.00	6500	0.014
		AX 5 30 47	30	47	5.0	32.7	42.4	14.50	57.00	6500	0.029
35	AX 35 52		35	52	2.8	37.2	49.0	18.90	84.00	5500	0.019
		AX 5 35 52	35	52	5.0	37.2	49.0	18.90	84.00	5500	0.035
	AX 35 53		35	53	2.8	37.2	49.0	18.90	84.00	5500	0.019
		AX 5 35 53	35	53	5.0	37.2	49.0	18.90	84.00	5500	0.036

Thrust plates

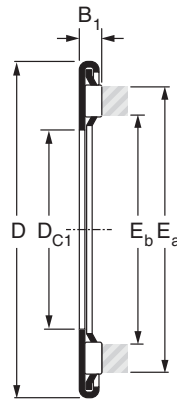
CP thin and thick series



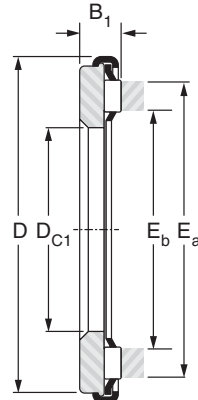
Shaft Ø mm	Designation		d mm	d ₁ mm	h mm	Weight kg	Thrust bearings	
	CP thin series	CP thick series					AX thin series	AX thick serie
5	CP 5 13		5	12.4	0.8	0.001	AX 5 13	
		CP 2 5 13	5	12.4	2.0	0.002		AX 3.5 5 13
6	CP 6 14		6	13.4	0.8	0.001	AX 6 14	
		CP 2 6 14	6	13.4	2.0	0.002		AX 3.5 6 14
7	CP 7 15		7	14.4	0.8	0.001	AX 7 15	
		CP 2 7 15	7	14.4	2.0	0.002		AX 3.5 7 15
8	CP 8 16		8	15.4	0.8	0.001	AX 8 16	
		CP 2 8 16	8	15.4	2.0	0.002		AX 3.5 8 16
9	CP 9 17		9	16.4	0.8	0.001	AX 9 17	
		CP 2 9 17	9	16.4	2.0	0.002		AX 3.5 9 17
10	CP 10 22		10	21.5	0.8	0.002	AX 10 22	
		CP 2 10 22	10	21.5	2.0	0.002		AX 4 10 22
12	CP 12 26		12	25.5	0.8	0.003	AX 12 26	
		CP 2 12 26	12	25.5	2.0	0.006		AX 4 12 26
13	CP 13 26		13	25.5	0.8	0.002	AX 13 26	
		CP 2 13 26	13	25.5	2.0	0.006		AX 4 13 26
15	CP 15 28		15	27.5	0.8	0.003	AX 15 28	
		CP 2 15 28	15	27.5	2.0	0.006		AX 4 15 28
17	CP 17 30		17	29.5	0.8	0.003	AX 17 30	
		CP 2 17 30	17	29.5	2.0	0.007		AX 4 17 30
19	CP 19 32		19	31.5	0.8	0.004	AX 19 32	
		CP 2 19 32	19	31.5	2.0	0.009		AX 4 19 32
20	CP 20 35		20	34.5	0.8	0.004	AX 20 35	
		CP 3 20 35	20	34.5	3.0	0.013		AX 5 20 35
25	CP 25 42		25	41.5	0.8	0.005	AX 25 42	
		CP 3 25 42	25	41.5	3.0	0.019		AX 5 25 42
27	CP 27 44		27	43.7	0.8	0.006	AX 27 44	
30	CP 30 47		30	46.5	0.8	0.006	AX 30 47	
		CP 3 30 47	30	46.5	3.0	0.022		AX 5 30 47
35	CP 35 52		35	51.5	0.8	0.007	AX 35 52	
		CP 3 35 52	35	51.5	3.0	0.026		AX 5 35 52
	CP 35 53		35	52.5	0.8	0.007	AX 35 53	
		CP 3 35 53	35	52.5	3.0	0.027		AX 5 35 53

Needle thrust bearings

AX thin and thick series



AX thin

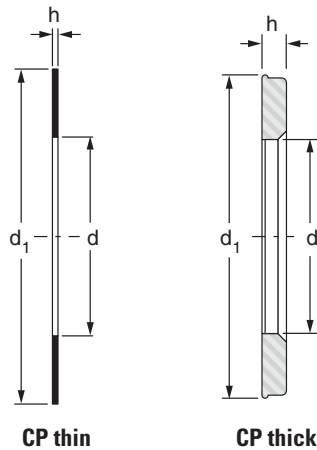


AX thick

Shaft Ø mm	Designation		D _{C1} mm	D mm	B ₁ mm	E _b mm	E _a mm	Load ratings		Speed rating oil min ⁻¹	Weight kg
	AX thin series	AX thick series						Dyn. C kN	Stat. Co kN		
40	AX 40 60		40	60	2.8	43.0	54.9	20.40	96.00	5000	0.024
		AX 5 40 60	40	60	5.0	43.0	54.9	20.40	96.00	5000	0.046
45	AX 45 65		45	65	2.8	48.0	59.9	21.80	109	4500	0.025
		AX 5 45 65	45	65	5.0	48.0	59.9	21.80	109	4500	0.050
50	AX 50 70		50	70	2.8	53.3	65.7	22.50	118	4000	0.026
		AX 5 50 70	50	70	5.0	53.3	65.7	22.50	118	4000	0.055
55	AX 55 78		55	78	2.8	58.4	72.5	28.50	164	3800	0.034
		AX 6 55 78	55	78	6.0	58.4	72.5	28.50	164	3800	0.089
60	AX 60 85		60	85	2.8	63.5	79.2	31.50	193	3500	0.040
		AX 6 60 85	60	85	6.0	63.5	79.2	31.50	193	3500	0.106
65	AX 3.5 65 90		65	90	3.5	68.5	84.2	33.50	210	3200	0.059
		AX 6 65 90	65	90	6.0	68.5	84.2	33.50	210	3200	0.114
70	AX 3.5 70 95		70	95	3.5	73.5	89.2	34.50	223	3000	0.061
		AX 6 70 95	70	95	6.0	73.5	89.2	34.50	223	3000	0.120
75	AX 3.5 75 100		75	100	3.5	78.5	94.2	36.00	240	2900	0.065
		AX 6 75 100	75	100	6.0	78.5	94.2	36.00	240	2900	0.127
80	AX 3.5 80 105		80	105	3.5	83.5	99.2	36.50	253	2700	0.069
		AX 6 80 105	80	105	6.0	83.5	99.2	36.50	253	2700	0.134
85	AX 3.5 85 110		85	110	3.5	88.5	104.2	38.00	270	2600	0.078
		AX 6 85 110	85	110	6.0	88.5	104.2	38.00	270	2600	0.142
90	AX 4.5 90 120		90	120	4.5	94.2	112.9	59.00	360	2400	0.117
		AX 8 90 120	90	120	8.0	94.2	112.9	59.00	360	2400	0.238
100	AX 4.5 100 135		100	135	4.5	104.2	127.3	73.00	490	2100	0.155
		AX 9 100 135	100	135	9.0	104.2	127.3	73.00	490	2100	0.364
110	AX 4.5 110 145		110	145	4.5	114.2	137.3	77.00	550	2000	0.168
		AX 9 110 145	110	145	9.0	114.2	137.3	77.00	550	2000	0.393
120	AX 4.5 120 155		120	155	4.5	124.2	147.3	80.00	590	1800	0.182
		AX 9 120 155	120	155	9.0	124.2	147.3	80.00	590	1800	0.424

Thrust plates

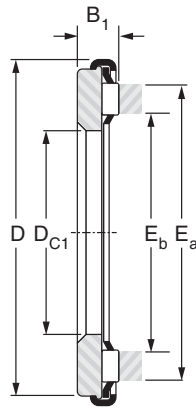
CP thin and thick series



Shaft Ø mm	Designation		d mm	d ₁ mm	h mm	Weight kg	Thrust bearings	
	CP thin series	CP thick series					AX thin series	AX thick serie
40	CP 40 60		40	59.5	0.8	0.009	AX 40 60	
		CP 3 40 60	40	59.5	3.0	0.034		AX 5 40 60
45	CP 45 65		45	64.4	0.8	0.010	AX 45 65	
		CP 3 45 65	45	64.4	3.0	0.037		AX 5 45 65
50	CP 50 70		50	69.4	0.8	0.011	AX 50 70	
		CP 3 50 70	50	69.4	3.0	0.040		AX 5 50 70
55	CP 55 78		55	77.4	0.8	0.014	AX 55 78	
		CP 4 55 78	55	77.4	4.0	0.069		AX 6 55 78
60	CP 60 85		60	84.3	0.8	0.017	AX 60 85	
		CP 4 60 85	60	84.3	4.0	0.083		AX 6 60 85
65	CP 1.5 65 90		65	89.3	1.5	0.033	AX 3.5 65 90	
		CP 4 65 90	65	89.3	4.0	0.088		AX 6 65 90
70	CP 1.5 70 95		70	94.3	1.5	0.034	AX 3.5 70 95	
		CP 4 70 95	70	94.3	4.0	0.093		AX 6 70 95
75	CP 1.5 75 100		75	99.3	1.5	0.037	AX 3.5 75 100	
		CP 4 75 100	75	99.3	4.0	0.099		AX 6 75 100
80	CP 1.5 80 105		80	104.3	1.5	0.039	AX 3.5 80 105	
		CP 4 80 105	80	104.3	4.0	0.104		AX 6 80 105
85	CP 1.5 85 110		85	109.3	1.5	0.047	AX 3.5 85 110	
		CP 4 85 110	85	109.3	4.0	0.111		AX 6 85 110
90	CP 1.5 90 120		90	118.8	1.5	0.052	AX 4.5 90 120	
		CP 5 90 120	90	118.8	5.0	0.173		AX 8 90 120
100	CP 1.5 100 135		100	133.8	1.5	0.068	AX 4.5 100 135	
		CP 6 100 135	100	133.8	6.0	0.277		AX 9 100 135
110	CP 1.5 110 145		110	143.8	1.5	0.075	AX 4.5 110 145	
		CP 6 110 145	110	143.8	6.0	0.300		AX 9 110 145
120	CP 1.5 120 155		120	153.8	1.5	0.081	AX 4.5 120 155	
		CP 6 120 155	120	153.8	6.0	0.323		AX 9 120 155

Needle thrust bearings

AX thick series

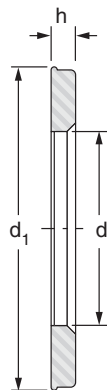


AX thick

Shaft Ø mm	Designation	D _{C1} mm	D mm	B ₁ mm	E _b mm	E _a mm	Load ratings		Speed rating oil min ⁻¹	Weight kg
	AX thick series						Dyn. C kN	Stat. Co kN		
130	AX 11 130 170	130	170	11	135	161	106	710	1700	0.660
140	AX 11 140 180	140	180	11	145	171	111	770	1600	0.670
150	AX 11 150 190	150	190	11	155	181	115	830	1500	0.710
160	AX 11 160 200	160	200	11	165	191	118	870	1400	0.760
170	AX 12 170 215	170	215	12	175	207	165	1160	1300	1.000
180	AX 12 180 225	180	225	12	185	217	173	1250	1200	1.050
190	AX 14 190 240	190	240	14	196	232	230	1650	1200	1.400
200	AX 14 200 250	200	250	14	206	242	239	1730	1100	1.500
220	AX 14 220 270	220	270	14	226	262	248	1850	1000	1.600
240	AX 15 240 300	240	300	15	246	286	280	2240	900	2.300

Thrust plates

CP thick series



CP thick

Shaft Ø mm	Designation	d mm	d ₁ mm	h mm	Weight kg	Thrust bearings
	CP thick series					AX thick serie
130	CP 7 130 170	130	168.7	7.0	0.480	AX 11 130 170
140	CP 7 140 180	140	178.7	7.0	0.500	AX 11 140 180
150	CP 7 150 190	150	188.7	7.0	0.530	AX 11 150 190
160	CP 7 160 200	160	198.7	7.0	0.560	AX 11 160 200
170	CP 7 170 215	170	213.5	7.0	0.700	AX 12 170 215
180	CP 7 180 225	180	223.5	7.0	0.735	AX 12 180 225
190	CP 8 190 240	190	238.3	8.0	0.950	AX 14 190 240
200	CP 8 200 250	200	248.3	8.0	1.000	AX 14 200 250
220	CP 8 220 270	220	268.3	8.0	1.100	AX 14 220 270
240	CP 9 240 300	240	298.5	9.0	1.600	AX 15 240 300