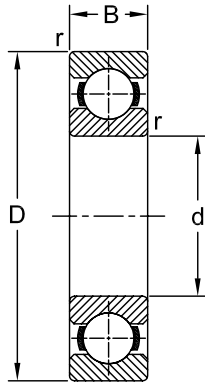


Ball Bearings

Single Row
Metric Series

60, 62, 63, 64, 160, 618, 619



Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm				kN											
d	D	B	r	Dynamic (C)	Static (C ₀)										
10	30	9	0.6	5.07	2.36	6200	•	•	•	•	•	•	•		
	35	11	0.6	8.06	3.40	6300	•	•	•	•					
12	32	10	0.6	6.89	3.10	6201	•	•	•	•	•	•	•		
	37	12	1.0	9.75	4.15	6301	•	•	•	•					
15	32	9	0.3	5.59	2.85	6002	•	•	•	•					
	35	11	0.6	7.80	3.75	6202	•	•	•	•	•	•	•		
	42	13	1.0	11.40	5.40	6302	•	•	•	•					
17	35	8	0.3	6.05	3.25	16003	•	•							
	35	10	0.3	6.05	3.25	6003	•	•	•	•					
	40	12	0.6	9.56	4.75	6203	•	•	•	•	•	•	•		
	47	14	1.0	13.50	6.55	6303	•	•	•	•	•	•	•	•	
	62	17	1.1	22.90	10.80	6403	•	•							
20	37	9	0.3	6.37	3.65	61904			•	•					
	42	12	0.6	9.36	5.00	6004	•	•	•	•	•				
	47	14	1.0	12.70	6.55	6204	•	•	•	•	•	•	•		
	52	15	1.1	15.90	7.80	6304	•	•	•	•	•	•	•	•	
	72	19	1.1	30.70	15.00	6404	•	•							
25	42	9	0.3	6.63	4.00	61905			•	•					
	47	8	0.3	7.61	4.75	16005									
	47	12	0.6	11.20	6.55	6005	•	•	•	•	•				
	52	15	1.0	14.00	7.80	6205	•	•	•	•	•	•	•	•	
	60	17	1.1	22.50	11.60	6305	•	•	•	•	•	•	•	•	
	80	21	1.5	35.80	19.30	6405	•	•							
30	47	9	0.3	7.28	4.55	61906			•	•					
	55	9	0.3	11.20	7.35	16006									
	55	13	1.0	13.30	8.30	6006	•	•	•	•	•				
	62	16	1.0	19.50	11.20	6206	•	•	•	•	•	•	•	•	
	72	19	1.1	28.10	16.00	6306	•	•	•	•	•	•	•	•	
	90	23	1.5	43.60	23.60	6406	•	•							

Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm			kN												
d	D	B	r	Dynamic (C)	Static (C ₀)										
35	55	10	0.6	9.56	6.20	61907			•	•					•
	62	9	0.3	12.40	8.15	16007									
	62	14	1.0	15.90	10.20	6007	•	•	•	•	•				
	72	17	1.1	25.50	15.30	6207	•	•	•	•	•	•	•	•	•
	80	21	1.5	33.20	19.00	6307	•	•	•	•	•	•	•		
	100	25	1.5	55.30	31.00	6407	•	•			•				
40	62	12	0.6	13.80	9.30	61908			•	•					
	68	9	0.3	13.30	9.15	16008									
	68	15	1.0	16.80	11.60	6008	•	•	•	•	•				
	80	18	1.1	30.70	19.00	6208	•	•	•	•	•	•	•		
	90	23	1.5	41.00	24.00	6308	•	•	•	•	•	•	•		
	110	27	2.0	63.70	36.50	6408	•	•			•				
45	68	12	0.6	10.10	6.70	61909			•	•					
	75	10	0.6	15.60	10.80	16009									
	75	16	1.0	20.80	14.60	6009	•	•	•	•	•				
	85	19	1.1	33.20	21.60	6209	•	•	•	•	•	•	•		•
	100	25	1.5	52.70	31.50	6309	•	•	•	•	•	•	•	•	
	120	29	2.0	76.10	45.00	6409	•	•			•	•	•		
50	65	7	0.3	6.24	4.75	61810			•	•					
	72	12	0.6	14.60	10.40	61910	•	•	•	•					
	80	10	0.6	16.30	11.40	16010									
	80	16	1.0	21.60	16.00	6010	•	•	•	•	•	•	•		
	90	20	1.1	35.10	23.20	6210	•	•	•	•	•	•	•		
	110	27	2.0	61.80	38.00	6310	•	•	•	•	•	•	•		
	130	31	2.1	87.10	52.00	6410	•	•			•				
55	72	9	0.3	8.32	6.20	61811			•	•					
	80	13	1.0	15.90	11.40	61911	•	•	•	•					
	90	11	0.6	19.50	14.00	16011									
	90	18	1.1	28.10	21.20	6011	•	•	•	•	•	•	•	•	•
	100	21	1.5	43.60	29.00	6211	•	•	•	•	•	•	•	•	•
	120	29	2.0	71.50	45.00	6311	•	•	•	•	•	•	•		
	140	33	2.1	99.50	62.00	6411	•	•			•	•	•		
60	78	10	0.3	8.71	6.70	61812			•	•					
	85	13	1.0	16.50	12.00	61912	•	•	•	•					
	95	11	0.6	19.90	15.00	16012									
	95	18	1.1	29.60	23.20	6012	•	•	•	•	•				•
	110	22	1.5	47.50	32.50	6212	•	•	•	•	•	•	•		
	130	31	2.1	81.90	52.00	6312	•	•	•	•	•	•	•		
	150	35	2.1	108.00	69.50	6412	•	•			•				
65	85	10	0.6	11.70	9.15	61813			•	•					
	90	13	1.0	17.40	13.40	61913	•	•	•	•					
	100	11	0.6	21.20	16.60	16013									
	100	18	1.1	30.70	25.00	6013	•	•	•	•	•				•
	120	23	1.5	55.90	40.50	6213	•	•	•	•	•	•	•		
	140	33	2.1	92.30	60.00	6313	•	•	•	•	•	•	•		
	160	37	2.1	119.00	78.00	6413	•	•			•				•

Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm			kN	Dynamic (C)	Static (C ₀)										
d	D	B	r												
70	90	10	0.6	12.10	10.00	61814			•	•					
	100	16	1.0	23.80	18.30	61914	•	•	•	•					
	110	13	0.6	28.10	25.00	16014									
	110	20	1.1	37.70	31.00	6014	•	•	•	•	•				
	125	24	1.5	60.50	45.00	6214	•	•	•	•	•	•	•		
	150	35	2.1	104.00	68.00	6314	•	•	•	•	•	•	•	•	•
	180	42	3.0	143.00	110.40	6414	•	•							•
75	95	10	0.6	12.50	10.80	61815			•	•					
	105	16	1.0	24.20	19.30	61915	•	•	•	•					
	115	13	0.6	28.60	27.00	16015									
	115	20	1.1	39.70	33.50	6015	•	•	•	•	•				•
	130	25	1.5	66.30	49.00	6215	•	•	•	•	•				
	160	37	2.1	114.00	76.50	6315	•	•	•	•	•				
	190	45	3.0	153.00	114.00	6415	•	•							
80	100	10	0.6	12.40	10.80	61816			•	•					
	110	16	1.0	25.10	20.40	61916	•	•	•	•					
	125	14	0.6	33.20	31.50	16016									
	125	22	1.1	40.00	40.00	6016	•	•	•	•	•				
	140	26	2.0	70.20	55.00	6216	•	•	•	•	•				
	170	39	2.1	124.00	86.50	6316	•	•	•	•					
	200	48	3.0	16.30	125.00	6416	•	•							
85	110	13	1.0	19.50	16.60	61817			•	•					
	130	14	0.6	33.80	33.50	16017									
	130	22	1.1	49.40	43.00	6017	•	•	•	•	•				
	150	28	2.0	83.20	64.00	6217	•	•	•	•	•				
	180	41	3.0	133.00	96.50	6317	•	•	•	•					
	210	52	4.0	174.00	137.00	6417	•	•							
	90	115	13	1.0	19.50	17.00	61818			•	•				
125		18	1.1	33.20	31.50	61918			•	•					•
140		16	1.0	41.60	39.00	16018									
140		24	1.5	58.50	50.00	6018	•	•	•	•	•				•
160		30	2.0	95.60	73.50	6218	•	•	•	•	•				
190		43	3.0	143.00	108.00	6318	•	•	•	•					
225		54	4.0	186.00	150.00	6418	•	•							
95	120	13	1.0	19.90	17.60	61819			•	•					
	130	18	1.1	33.80	33.50	61919									
	145	16	1.0	42.30	41.50	16019									
	145	24	1.5	60.50	54.00	6019	•	•	•	•					
	170	32	2.1	108.00	81.50	6219	•	•	•	•	•				
	200	45	3.0	153.00	118.00	6319	•	•							
100	125	13	1.0	19.90	18.30	61820			•	•					
	140	20	1.1	42.30	41.50	61920									
	150	16	1.0	44.20	44.00	16020									
	150	24	1.5	60.50	54.00	6020	•	•	•	•	•				
	180	34	2.1	124.00	93.00	6220	•	•	•	•	•				
	215	47	3.0	174.00	140.00	6320	•	•							

Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm			kN												
d	D	B	r	Dynamic (C)	Static (C ₀)										
105	130	13	1.0	20.80	19.60	61821			•	•					
	145	20	1.1	44.20	44.00	61921									
	160	18	1.0	52.00	51.00	16021									
	160	26	2.0	72.80	65.50	6021	•	•	•	•	•				
	190	36	2.1	133.00	104.00	6221	•	•	•	•					
	225	49	3.0	182.00	153.00	6321	•	•							
110	140	16	1.0	28.10	26.00	61822			•	•					
	150	20	1.1	43.60	45.00	61922									
	170	19	1.0	57.20	57.00	16022									
	170	28	2.0	81.90	73.50	6022	•	•	•	•	•				
	200	38	2.1	143.00	118.00	6222	•	•	•	•					
	240	50	3.0	203.00	180.00	6322	•	•							
120	150	16	1.0	29.10	28.00	61824			•	•					
	165	22	1.1	55.30	57.00	61924									
	180	19	1.0	60.50	64.00	16024									
	180	28	2.0	85.20	80.00	6024	•	•	•	•	•				
	215	40	2.1	146.00	118.00	6224	•	•	•	•					
	260	55	3.0	208.00	186.00	6324									
130	165	18	1.1	37.70	43.00	61826			•	•					
	180	24	1.5	65.00	67.00	61926									
	200	22	1.1	79.30	81.50	16026									
	200	33	2.0	106.00	100.00	6026	•	•	•	•					
	230	40	3.0	156.00	132.00	6226	•	•							•
	280	58	4.0	229.00	216.00	6326									
140	175	18	1.1	39.00	46.50	61828			•	•					
	190	24	1.5	66.30	72.00	61928									
	210	22	1.1	80.60	86.50	16028									
	210	33	2.0	111.00	108.00	6028	•	•	•	•					•
	250	42	3.0	165.00	150.00	6228									
	300	62	4.0	251.00	245.00	6328									
150	190	20	1.1	48.80	61.00	61830									•
	210	28	2.0	88.40	93.00	61930									
	225	24	1.1	92.30	98.00	16030									
	225	35	2.1	125.00	125.00	6030	•	•	•	•					
	270	45	3.0	174.00	166.00	6230									
	320	65	4.0	276.00	285.00	6330									
160	200	20	1.1	49.40	64.00	61832									•
	220	28	2.0	92.30	98.00	61932									
	240	25	1.5	99.50	108.00	16032									
	240	38	2.1	143.00	143.00	6032	•	•	•	•					•
	290	48	3.0	186.00	186.00	6232									•
	340	68	4.0	276.00	285.00	6332									
170	215	22	1.1	61.80	78.00	61834									•
	230	28	2.0	93.60	106.00	61934									
	260	28	1.5	119.00	129.00	16034									
	260	42	2.1	168.00	173.00	6034									•

Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm			kN												
d	D	B	r	Dynamic (C)	Static (C ₀)										
180	310	52	4.0	212.00	224.00	6234									•
	360	72	4.0	312.00	340.00	6334									
	225	22	1.1	62.40	81.50	61836									•
	250	33	2.0	119.00	134.00	61936									•
	280	31	2.0	138.00	146.00	16036									
	280	46	2.1	190.00	200.00	6036									•
190	320	52	4.0	229.00	240.00	6236									•
	380	75	4.0	351.00	405.00	6336									
	240	24	1.5	76.10	98.00	61838									•
	260	33	2.0	117.00	134.00	61938									•
	290	31	2.0	148.00	166.00	16038									
	290	46	2.1	195.00	216.00	6038									•
200	340	55	4.0	255.00	280.00	6238									•
	400	78	5.0	371.00	430.00	6338									
	250	24	1.5	76.10	102.00	61840									•
	280	38	2.1	148.00	166.00	61940									•
	310	34	2.0	168.00	190.00	16040									
	310	51	2.1	216.00	245.00	6040									•
220	360	58	4.0	270.00	310.00	6240									•
	420	80	5.0	377.00	465.00	6340									
	270	24	1.5	78.00	110.00	61844									•
	300	38	2.1	151.00	180.00	61944									•
	340	37	2.1	174.00	204.00	16044									
	340	56	3.0	247.00	290.00	6044									•
240	400	65	4.0	296.00	365.00	6244									•
	460	88	4.0	410.00	520.00	6344									
	300	28	2.0	108.00	150.00	61848									•
	320	38	2.1	159.00	200.00	61948									•
	360	37	2.1	178.00	220.00	16048									•
	360	56	3.0	255.00	315.00	6048									•
260	440	72	4.0	358.00	475.00	6248									•
	320	28	2.0	111.00	163.00	61852									•
	360	46	2.1	212.00	270.00	61952									•
	400	44	3.0	238.00	310.00	16052									•
	400	65	4.0	291.00	375.00	6052									•
	480	80	5.0	390.00	530.00	6252									•
280	350	33	2.0	138.00	200.00	61856									•
	380	46	2.1	216.00	285.00	61956									•
	420	44	3.0	242.00	335.00	16056									•
	420	65	4.0	302.00	405.00	6056									•
	500	80	5.0	423.00	600.00	6256									•
	300	380	38	2.1	172.00	245.00	61860								
420		56	3.0	270.00	375.00	61960									•
460		50	4.0	286.00	405.00	16060									•
460		74	4.0	358.00	500.00	6060									•

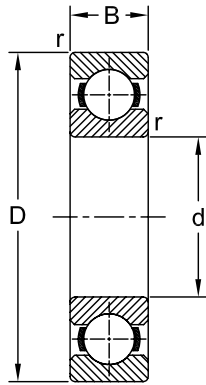
Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K	
mm				kN												
d	D	B	r	Dynamic (C)	Static (C ₀)											
320	400	38	2.1	172.00	255.00	61864										•
	440	56	3.0	276.00	400.00	61964										•
	480	50	4.0	281.00	405.00	16064										•
	480	74	4.0	371.00	540.00	6064										•
340	420	38	2.1	178.00	275.00	61868										•
	460	56	3.0	281.00	425.00	61968										•
	520	57	4.0	345.00	520.00	16068										•
	520	82	5.0	423.00	640.00	6068										•
360	440	38	2.1	182.00	285.00	61872										•
	480	56	3.0	291.00	450.00	61972										•
	540	57	4.0	351.00	550.00	16072										•
	540	82	5.0	462.00	735.00	6072										•
380	480	46	2.1	242.00	390.00	61876										•
	520	65	4.0	338.00	540.00	61976										•
	560	57	4.0	377.00	620.00	16076										•
	560	82	5.0	462.00	750.00	6076										•
400	500	46	2.1	247.00	405.00	61880										•
	540	65	4.0	345.00	570.00	61980										•
	600	90	5.0	520.00	865.00	6080										•
420	520	46	2.1	251.00	425.00	61884										•
	560	65	4.0	351.00	600.00	61984										•
	620	90	5.0	507.00	880.00	6084										•
440	540	46	2.1	255.00	440.00	61888										•
	600	74	4.0	410.00	720.00	61988										•
	650	94	6.0	553.00	965.00	6088										•
460	580	56	3.0	319.00	570.00	61892										•
	620	74	4.0	423.00	750.00	61992										•
	680	100	6.0	582.00	1060.00	6092										•
480	600	56	3.0	325.00	600.00	61896										•
	650	78	5.0	449.00	815.00	61996										•
	700	100	6.0	618.0	1140.0	6096										•
500	620	56	3.0	332.00	620.00	618/500										•
	670	78	5.0	462.00	865.00	619/500										•
	720	100	6.0	605.00	1140.00	60/500										•
530	650	56	3.0	332.00	655.00	618/530										•
	710	82	5.0	488.00	930.00	619/530										•
	780	112	6.0	650.00	1270.00	60/530										•
560	680	56	3.0	345.00	695.00	618/560										•
	750	85	5.0	494.00	980.00	619/560										•
	820	115	6.0	663.00	1470.00	60/560										•
600	730	60	3.0	364.00	765.00	618/600										•
	800	90	5.0	585.00	1220.00	619/600										•
630	780	69	4.0	442.00	965.00	618/630										•
	850	100	6.0	624.00	1340.00	619/630										•

Dimensions				Load Rating		AEC Bearing	Z	ZZ	RS	2RS	N	ZN	ZZN	M	K
mm			kN												
d	D	B	r	Dynamic (C)	Static (C ₀)										
	920	128	7.5	819.00	1760.00	60/630									•
670	820	69	4.0	442.00	1000.00	618/670									•
	900	103	6.0	676.00	1500.00	619/670									•
	980	136	7.5	904.00	2040.00	60/670									•

Ball Bearings

Single Row
Inch Series

RLS, RMS, XLJ



Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
0.500	1.3125	0.3750	0.0315 (0.8)	7.0	3.0	RLS 4	
	1.6250	0.6250	0.0630 (1.6)	12.1	5.6	RMS 4	
0.625	1.5625	0.4375	0.0315 (0.8)	10.9	5.0	RLS 5	
	1.8125	0.6250	0.0630 (1.6)	12.6	5.6	RMS 5	
0.750	1.8750	0.5625	0.0630 (1.6)	14.2	6.6	RLS 6	
	2.0000	0.6875	0.0630 (1.6)	16.5	7.8	RMS 6	
0.875	2.0000	0.5625	0.0630 (1.6)	14.4	6.6	RLS 7	
	2.2500	0.6875	0.0630 (1.6)	19.2	9.2	RMS 7	
1.000	2.2500	0.6250	0.0630 (1.6)	18.6	8.9	RLS 8	
	2.5000	0.7500	0.0945 (2.4)	22.1	10.6	RMS 8	
1.125	2.5000	0.6250	0.0630 (1.6)	20.2	10.0	RLS 9	
	2.8125	0.8125	0.0945 (2.4)	30.8	15.8	RMS 9	
1.250	2.7500	0.6875	0.0630 (1.6)	27.7	13.9	RLS 10	
	3.1250	0.8750	0.0945 (2.4)	37.7	19.5	RMS 10	
1.375	2.5625	0.5625	0.0630 (1.6)	16.6	8.5	XLJ 1.3/8	
	3.0000	0.6875	0.0630 (1.6)	30.2	15.7	RLS 11	
	3.5000	0.8750	0.0945 (2.4)	45.3	23.9	RMS 11	
1.500	2.6875	0.5625	0.0630 (1.6)	14.3	7.5	XLJ 1.1/2	
	3.2500	0.7500	0.0945 (2.4)	34.8	17.8	RLS 12	
	3.7500	0.9375	0.0945 (2.4)	49.5	26.2	RMS 12	
1.625	2.8750	0.5625	0.0630 (1.6)	14.9	8.2	XLJ 1.5/8	
	3.5000	0.7500	0.0945 (2.4)	38.7	20.0	RLS 13	
	4.0000	0.9375	0.0945 (2.4)	55.0	29.9	RMS 13	
1.750	3.0000	0.5625	0.0630 (1.6)	21.8	12.2	XLJ 1.3/4	
	3.7500	0.8125	0.0945 (2.4)	42.7	22.3	RLS 14	
	4.2500	1.0625	0.0945 (2.4)	59.5	32.7	RMS 14	
1.875	3.1875	0.6250	0.0630 (1.6)	22.7	13.1	XLJ 1.7/8	
	4.0000	0.8125	0.0945 (2.4)	50.5	27.8	RLS 15	
	4.5000	1.0625	0.0945 (2.4)	69.0	38.7	RMS 15	
2.000	3.3125	0.6250	0.0630 (1.6)	22.7	13.1	XLJ 2	
	4.0000	0.8125	0.0945 (2.4)	50.5	27.8	RLS 16	
	4.5000	1.0625	0.0945 (2.4)	69.0	38.7	RMS 16	

Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
2.250	3.5625	0.6250	0.0630 (1.6)	29.4	17.0	XLJ 2.1/4	
	4.5000	0.8750	0.0945 (2.4)	60.0	32.7	RLS 18	
	5.0000	1.2500	0.1260 (3.2)	85.0	48.5	RMS 18	
2.375	3.7500	0.6875	0.0630 (1.6)	29.6	18.5	XLJ 2.3/8	
2.500	3.8750	0.6875	0.0630 (1.6)	31.8	19.6	XLJ 2.1/2	
	5.0000	0.9375	0.0945 (2.4)	65.5	36.8	RLS 20	
	5.5000	1.2500	0.1260 (3.2)	96.5	55.5	RMS 20	
2.750	4.1250	0.6875	0.0630 (1.6)	24.5	15.9	XLJ 2.3/4	
	5.2500	0.9375	0.0945 (2.4)	70.0	40.9	RLS 22	
	6.2500	1.3750	0.1260 (3.2)	118.0	71.5	RMS 22	
3.000	4.5000	0.7500	0.0945 (2.4)	41.1	26.1	XLJ 3	•
	5.7500	1.0625	0.0945 (2.4)	81.5	48.3	RLS 24	•
	7.0000	1.5625	0.1575 (4.0)	138.0	89.5	RMS 24	
3.250	4.7500	0.7500	0.0945 (2.4)	30.5	21.2	XLJ 3.1/4	
	6.0000	1.0625	0.0945 (2.4)	87.5	52.5	RLS 26	•
	7.5000	1.5625	0.1575 (4.0)	139.0	89.5	RMS 26	•
3.375	7.5000	1.5625	0.1575 (4.0)	139.0	89.5	RMS 27	•
3.500	5.0000	0.7500	0.0945 (2.4)	34.1	23.5	XLJ 3.1/2	•
	6.5000	1.1250	0.1260 (3.2)	100.0	60.5	RLS 28	
	8.1250	1.7500	0.1575 (4.0)	169.0	120.0	RMS 28	
3.750	5.2500	0.7500	0.0945 (2.4)	40.6	28.8	XLJ 3.3/4	•
	6.7500	1.1250	0.1260 (3.2)	106.0	66.5	RLS 30	
	8.2500	1.7500	0.1575 (4.0)	169.0	120.0	RMS 30	
4.000	5.6250	0.8750	0.0945 (2.4)	41.4	30.3	XLJ 4	•
	7.2500	1.2500	0.1260 (3.2)	120.0	74.5	RLS 32	
	8.5000	1.7500	0.1575 (4.0)	170.0	120.0	RMS 32	
4.250	6.0000	0.8750	0.0945 (2.4)	48.4	36.5	XLJ 4.1/4	•
	7.5000	1.2500	0.1260 (3.2)	127.0	81.5	RLS 34	
	8.7500	1.7500	0.1890 (4.8)	171.0	120.0	RMS 34	
4.500	6.2500	0.8750	0.0945 (2.4)	55.5	40.2	XLJ 4.1/2	
	8.0000	1.3125	0.1260 (3.2)	147.0	98.5	RLS 36	•
	9.3750	2.0000	0.1890 (4.8)	203.0	155.0	RMS 36	
4.750	6.5000	0.8750	0.0945 (2.4)	57.0	42.4	XLJ 4.3/4	
	8.2500	1.3125	0.1260 (3.2)	134.0	87.0	RLS 38	
	10.0000	2.0000	0.1890 (4.8)	209.0	160.0	RMS 38	
4.875	7.0000	1.0000	0.0945 (2.4)	60.0	45.5	XLJ 4.7/8	
5.000	7.0000	1.0000	0.0945 (2.4)	68.0	50.0	XLJ 5	
	9.0000	1.3750	0.1260 (3.2)	154.0	107.0	RLS 40	
	10.0000	2.0000	0.1890 (4.8)	209.0	160.0	RMS 40	
5.250	7.2500	1.0000	0.0945 (2.4)	51.0	39.6	XLJ 5.1/4	
5.500	7.5000	1.0000	0.0945 (2.4)	57.0	47.5	XLJ 5.1/2	
	9.5000	1.3750	0.1260 (3.2)	153.0	107.0	RLS 44	
	11.0000	2.0000	0.1890 (4.8)	221.0	174.0	RMS 44	•
5.750	7.7500	1.0000	0.0945 (2.4)	53.5	43.5	XLJ 5.3/4	
6.000	8.0000	1.0000	0.0945 (2.4)	54.5	45.5	XLJ 6	•
	10.5000	1.5625	0.1575 (4.0)	180.0	134.0	RLS 48	
	12.0000	2.2500	0.1890 (4.8)	259.0	218.0	RMS 48	
6.500	8.7500	1.1250	0.1260 (3.2)	66.0	55.0	XLJ 6.1/2	•

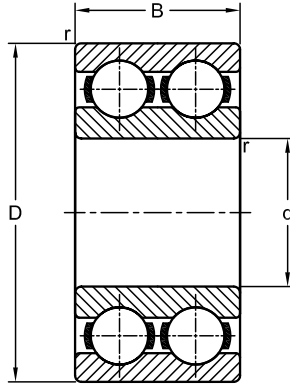
Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
	11.0000	1.5625	0.1575 (4.0)	188.0	145.0	RLS 52	
	13.0000	2.5000	0.1890 (4.8)	286.0	251.0	RMS 52	
6.750	9.0000	1.1250	0.1260 (3.2)	70.0	60.0	XLJ 6.3/4	•
7.000	9.5000	1.2500	0.1260 (3.2)	77.5	65.0	XLJ 7	•
	12.0000	1.7500	0.1575 (4.0)	221.0	180.0	RLS 56	•
	13.5000	2.5000	0.1890 (4.8)	306.0	278.0	RMS 56	•
7.250	9.7500	1.2500	0.1260 (3.2)	79.5	67.0	XLJ 7.1/4	
7.500	10.0000	1.2500	0.1260 (3.2)	79.0	68.0	XLJ 7.1/2	•
	12.5000	1.7500	0.1575 (4.0)	231.0	195.0	RLS 60	•
	14.5000	2.7500	0.1890 (4.8)	340.0	322.0	RMS 60	•
8.000	10.7500	1.3750	0.1260 (3.2)	94.5	82.5	XLJ 8	•
	13.0000	1.7500	0.1575 (4.0)	230.0	195.0	RLS 64	•
	15.0000	2.7500	0.1890 (4.8)	366.0	358.0	RMS 64	•
8.500	11.5000	1.5000	0.1260 (3.2)	108.0	95.5	XLJ 8.1/2	•
	14.0000	2.0000	0.1890 (4.8)	263.0	232.0	RLS 68	•
	16.0000	3.0000	0.1890 (4.8)	396.0	401.0	RMS 68	•
9.000	12.0000	1.5000	0.1260 (3.2)	110.0	98.0	XLJ 9	•
	14.5000	2.0000	0.1890 (4.8)	275.0	251.0	RLS 72	•
	17.0000	3.0000	0.1890 (4.8)	415.0	445.0	RMS 72	•
9.500	12.7500	1.6250	0.1575 (4.0)	127.0	115.0	XLJ 9.1/2	•
	15.1250	2.0000	0.1890 (4.8)	287.0	271.0	RLS 76	•
10.000	13.2500	1.6250	0.1575 (4.0)	130.0	120.0	XLJ 10	•
	15.7500	2.0000	0.1890 (4.8)	285.0	271.0	RLS 80	•
	18.5000	3.2500	0.1890 (4.8)	455.0	490.0	RMS 80	•
10.500	14.0000	1.7500	0.1575 (4.0)	145.0	133.0	XLJ 10.1/2	•
	16.6250	2.2500	0.1890 (4.8)	338.0	339.0	RLS 84	•
11.000	14.5000	1.7500	0.1575 (4.0)	148.0	139.0	XLJ 11	•
	17.5000	2.2500	0.1890 (4.8)	335.0	339.0	RLS 88	•
	20.0000	3.5000	0.1890 (4.8)	540.0	623.0	RMS 88	•
11.500	15.2500	1.8750	0.1575 (4.0)	169.0	160.0	XLJ 11.1/2	•
	18.0000	2.3750	0.1890 (4.8)	371.0	390.0	RLS 92	•
12.000	16.0000	2.0000	0.1890 (4.8)	190.0	182.0	XLJ 12	•
	18.5000	2.6250	0.1890 (4.8)	388.0	412.0	RLS 96	•
	21.5000	3.7500	0.1890 (4.8)	557.0	654.0	RMS 96	•
12.500	16.5000	2.0000	0.1890 (4.8)	195.0	183.0	XLJ 12.1/2	•
	19.0000	2.6250	0.1890 (4.8)	405.0	444.0	RLS 100	•
13.000	17.5000	2.2500	0.1890 (4.8)	218.0	221.0	XLJ 13	•
	20.0000	2.7500	0.1890 (4.8)	420.0	466.0	RLS 104	•
13.500	18.0000	2.2500	0.1890 (4.8)	235.0	240.0	XLJ 13.1/2	•
	20.7500	2.7500	0.1890 (4.8)	438.0	494.0	RLS 108	•
14.000	18.5000	2.2500	0.1890 (4.8)	255.0	245.0	XLJ 14	•
	21.5000	2.8750	0.1890 (4.8)	455.0	525.0	RLS 112	•
14.500	19.5000	2.5000	0.1890 (4.8)	299.0	328.0	XLJ 14.1/2	•
	22.0000	3.0000	0.1890 (4.8)	476.0	562.0	RLS 116	•
15.000	20.0000	2.5000	0.1890 (4.8)	297.0	328.0	XLJ 15	•
	22.5000	3.0000	0.1890 (4.8)	474.0	562.0	RLS 120	•
16.000	21.5000	2.7500	0.1890 (4.8)	323.0	375.0	XLJ 16	•
	23.7500	3.2500	0.1890 (4.8)	511.0	627.0	RLS 128	•

Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
17.000	22.5118	2.7500	0.1890 (4.8)	329.0	393.0	XLJ 17	•
18.000	24.0000	3.0000	0.1890 (4.8)	360.0	435.0	XLJ 18	•
19.000	25.5000	3.2500	0.1890 (4.8)	410.0	521.0	XLJ 19	•

Ball Bearings

Double Row
Metric Series

42, 43



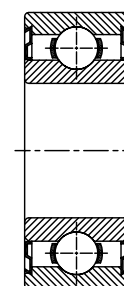
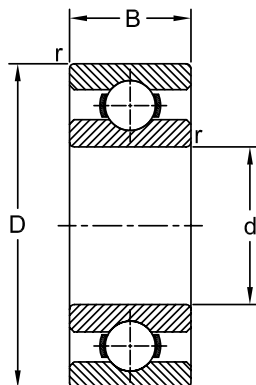
Dimensions				Load Rating		AEC Bearing	K
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
15	35	14	0.6	11.9	7.5	4202	
	42	17	1.0	14.8	9.5	4302	
17	40	16	0.6	14.8	9.5	4203	
	47	19	1.0	19.5	13.2	4303	•
20	47	18	1.0	17.8	12.5	4204	
	52	21	1.1	23.4	16.0	4304	
25	52	18	1.0	19.0	14.6	4205	•
	62	24	1.1	31.9	22.4	4305	
30	62	20	1.0	26.0	20.8	4206	•
	72	27	1.1	41.0	30.0	4306	
35	72	23	1.1	35.1	28.5	4207	•
	80	31	1.5	50.7	38.0	4307	
40	80	23	1.1	37.1	32.5	4208	•
	90	33	1.5	55.9	45.0	4308	
45	85	23	1.1	39.0	36.0	4209	•
	100	36	1.5	68.9	56.0	4309	
50	90	23	1.1	41.0	40.0	4210	•
	110	40	2.0	81.9	69.5	4310	
55	100	25	1.5	44.9	44.0	4211	
	120	43	2.0	97.5	83.0	4311	
60	110	28	1.5	57.2	55.0	4212	•
	130	46	2.1	112.0	98.0	4312	
65	120	31	1.5	67.6	67.0	4213	
	140	48	2.1	121.0	106.0	4313	
70	125	31	1.5	70.2	73.5	4214	
	150	51	2.1	138.0	125.0	4314	
75	130	31	1.5	72.8	80.0	4215	
	160	55	2.1	156.0	143.0	4315	

Dimensions				Load Rating		AEC Bearing	K
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
80	140	33	2.0	80.6	90.0	4216	
85	150	36	2.0	93.6	102.0	4217	
90	160	40	2.0	112.0	122.0	4218	
100	180	46	2.1	140.0	156.0	4220	

Ball Bearings

Wide Row
Metric Series

W200, W300



ZZ



O/S

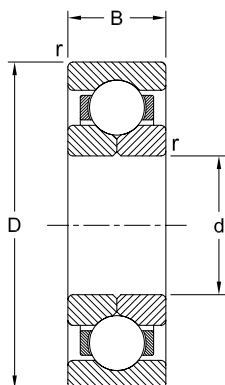
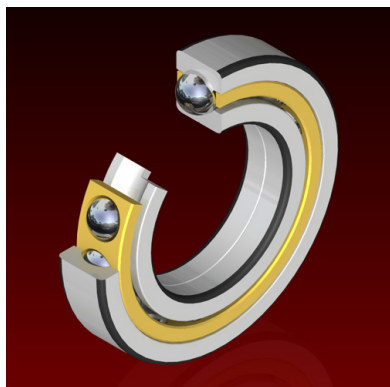
Dimensions				Load Rating		AEC Bearing	M	ZZ	O/S
mm				kN					
d	D	B	r	Dynamic (C)	Static (C ₀)				
17	40	17.46	0.6	9.6	4.8	W 203 PP		•	•
20	47	20.64	1.0	12.7	6.6	W 204 PP		•	•
	52	22.23	1.0	15.9	7.8	W 304 PP		•	•
25	52	20.64	1.0	14.0	7.8	W 205 PP		•	•
	62	25.40	1.0	22.5	11.6	W 305 PP		•	•
30	62	23.81	1.0	19.5	11.2	W 206 PP		•	•
	72	30.16	1.0	28.1	16.0	W 306 PP		•	•
35	72	26.99	1.0	25.5	15.3	W 207 PP		•	•
	80	34.93	1.5	33.2	19.0	W 307 PP		•	•
40	80	30.16	1.0	30.7	19.0	W 208 PP		•	•
	90	36.51	1.5	41.0	24.0	W 308 PP		•	•
45	85	30.16	1.0	33.2	21.6	W 209 PP		•	•
	100	39.69	1.5	52.7	31.5	W 309 PP		•	•
50	90	30.16	1.0	35.1	23.2	W 210 PP		•	•
	110	44.45	2.0	61.8	38.0	W 310 PP		•	•
55	100	33.34	1.5	43.6	29.0	W 211 PP		•	•
	120	49.21	2.0	71.5	45.0	W 311 PP		•	•
60	110	36.51	1.5	47.5	32.5	W 212 PP		•	•
	130	53.93	2.0	81.9	52.0	W 312 PP		•	•
65	120	38.10	1.5	55.9	40.5	W 213 PP		•	•
	140	58.74	2.0	92.3	60.0	W 313 PP		•	•
70	125	39.69	1.5	60.5	45.0	W 214 PP		•	•
	150	63.50	2.0	104.0	68.0	W 314 PP		•	•
75	130	41.28	1.5	66.3	49.0	W 215 PP		•	•
	160	68.26	2.0	114.0	76.5	W 315 PP		•	•
80	140	44.45	2.0	70.2	55.0	W 216 PP		•	•
	170	68.26	2.0	124.0	86.5	W 316 PP		•	•

Dimensions				Load Rating		AEC Bearing	M	ZZ	O/S
mm			kN						
d	D	B	r	Dynamic (C)	Static (C ₀)				
85	150	49.21	2.0	83.2	64.0	W 217 PP		•	•
	180	73.03	2.5	133.0	96.5	W 317 PP		•	•
90	160	52.39	2.0	95.6	73.5	W 218 PP		•	•
	190	73.03	2.5	143.0	108.0	W 318 PP	•	•	•
95	200	77.78	3.0	153.0	118.0	W 319 PP	•	•	•
100	215	82.55	3.0	174.0	140.0	W 320 PP	•	•	•

Ball Bearings

Four Point Contact
Metric Series

QJ200, QJ300



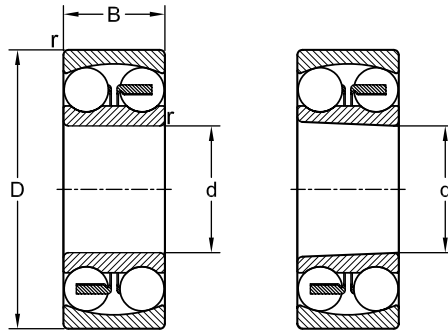
Dimensions				Load Rating		AEC Bearing	M
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
20	52	15	1.1	29.6	20.0	QJ 304	•
25	52	15	1.0	25.1	20.0	QJ 205	•
30	62	16	1.0	35.1	28.5	QJ 206	•
	72	19	1.1	49.4	39.0	QJ 306	•
35	72	17	1.1	46.2	39.0	QJ 207	•
	80	21	1.5	59.2	46.5	QJ 307	•
40	80	18	1.1	52.7	45.0	QJ 208	•
	90	23	1.5	71.5	58.5	QJ 308	•
45	85	19	1.1	58.5	51.0	QJ 209	•
	100	25	1.5	93.6	76.5	QJ 309	•
50	90	20	1.1	61.8	56.0	QJ 210	•
	110	27	2.0	111.0	91.5	QJ 310	•
55	100	21	1.5	79.3	76.5	QJ 211	•
	120	29	2.0	127.0	108.0	QJ 311	•
60	110	22	1.5	92.3	86.5	QJ 212	•
	130	31	2.1	146.0	125.0	QJ 312	•
65	120	23	1.5	104.0	104.0	QJ 213	•
	140	33	2.1	165.0	146.0	QJ 313	•
70	125	24	1.5	114.0	114.0	QJ 214	•
	150	35	2.1	186.0	166.0	QJ 314	•
75	130	25	1.5	117.0	122.0	QJ 215	•
	160	37	2.1	199.0	186.0	QJ 315	•
80	140	26	2.0	138.0	146.0	QJ 216	•
	170	39	2.1	216.0	208.0	QJ 316	•
85	150	28	2.0	148.0	160.0	QJ 217	•
	180	41	3.0	234.0	236.0	QJ 317	•
90	160	30	2.0	174.0	186.0	QJ 218	•
	190	43	3.0	265.0	285.0	QJ 318	•

Dimensions				Load Rating		AEC Bearing	M
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
95	170	32	2.1	199.0	212.0	QJ 219	•
	200	45	3.0	286.0	315.0	QJ 319	•
100	180	34	2.1	225.0	240.0	QJ 220	•
	215	47	3.0	307.0	340.0	QJ 320	•
110	200	38	2.1	265.0	305.0	QJ 222	•
	240	50	3.0	364.0	430.0	QJ 322	•
120	215	40	2.1	286.0	340.0	QJ 224	•
	260	55	3.0	390.0	490.0	QJ 324	•
130	230	40	3.0	296.0	365.0	QJ 226	•
	280	58	4.0	423.0	560.0	QJ 326	•
140	250	42	3.0	325.0	440.0	QJ 228	•
	300	62	4.0	468.0	640.0	QJ 328	•
150	270	45	3.0	338.0	465.0	QJ 230	•
	320	65	4.0	494.0	710.0	QJ 330	•
160	290	48	3.0	390.0	570.0	QJ 232	•
	310	52	4.0	397.0	600.0	QJ 234	•
170	360	72	4.0	618.0	965.0	QJ 334	•
	320	52	4.0	436.0	680.0	QJ 236	•
180	380	75	4.0	637.0	1020.0	QJ 336	•
	200	58	4.0	507.0	850.0	QJ 240	•
220	400	65	4.0	553.0	980.0	QJ 244	•

Ball Bearings

Self Aligning
Metric Series

12, 13, 14, 22, 23



Cylindrical bore

Tapered bore

Dimensions				Load Rating		AEC Bearing	K
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
15	35	11	0.6	7.4	1.8	1202	•
	35	14	0.6	8.7	2.0	2202	•
	42	13	1.0	10.8	2.6	1302	•
	42	17	1.0	11.9	2.9	2302	•
17	40	12	0.6	8.8	2.2	1203	•
	40	16	0.6	10.6	2.6	2203	•
	47	14	1.0	12.7	3.4	1303	•
20		19	1.0	14.6	3.6	2303	•
	47	14	1.0	12.7	3.4	1204	•
	47	18	1.0	16.8	4.2	2204	•
	52	15	1.1	14.3	4.0	1304	•
25	52	21	1.1	18.2	4.8	2304	•
	52	15	1.0	14.3	4.0	1205	•
	52	18	1.0	16.8	4.4	2205	•
	62	17	1.1	19.0	5.4	1305	•
30	62	24	1.1	24.2	6.6	2305	•
	62	16	1.0	15.6	4.7	1206	•
	62	20	1.0	23.8	6.7	2206	•
	72	19	1.1	22.5	6.8	1306	•
35	72	27	1.1	31.2	8.8	2306	•
	90	28	1.5	59.2	17.0	1406	•
	72	17	1.1	19.0	6.0	1207	•
	72	23	1.1	30.7	8.8	2207	•
	80	21	1.5	26.5	8.5	1307	•
40	80	31	1.5	39.7	11.2	2307	•
		30	1.5	62.4	18.0	1407	•
	80	18	1.1	19.9	7.0	1208	•
	80	23	1.1	31.9	10.0	2208	•
45	90	23	1.5	33.8	11.2	1308	•
	90	33	1.5	54.0	16.0	2308	•
		33	2.0	76.1	23.6	1408	•
	85	19	1.1	22.9	7.8	1209	•

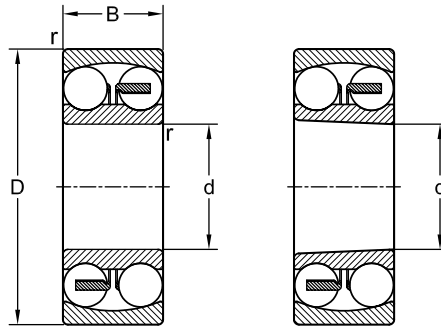
Dimensions				Load Rating		AEC Bearing	K
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
50	85	19	1.1	32.5	10.6	2209	•
	100	23	1.5	39.0	13.4	1309	•
	100	36	1.5	63.7	19.3	2309	•
		35	2.0	88.4	27.5	1409	•
	90	20	1.1	26.5	9.2	1210	•
	90	23	1.1	33.8	11.2	2210	•
	110	27	2.0	43.6	14.0	1310	•
	110	40	2.0	63.7	20.0	2310	•
55		37	2.1	101.0	32.0	1410	•
	100	21	1.5	27.6	10.6	1211	•
	100	25	1.5	39.0	13.4	2211	•
	120	29	2.0	50.7	18.0	1311	•
	120	43	2.0	76.1	24.0	2311	•
60		40	2.1	111.0	36.5	1411	•
	110	22	1.5	31.2	12.2	1212	•
	110	28	1.5	48.8	17.0	2212	•
	130	31	2.1	58.5	22.0	1312	•
	130	46	2.1	87.1	28.5	2312	•
65		42	2.1	125.0	41.5	1412	•
	120	23	1.5	35.1	14.0	1213	•
	120	31	1.5	57.2	20.0	2213	•
65	140	33	2.1	65.0	25.5	1313	•
	140	48	2.1	95.6	32.5	2313	•
70	125	24	1.5	34.5	13.7	1214	•
	125	31	1.5	44.2	17.0	2214	•
	150	35	2.1	74.1	27.5	1314	•
75	150	51	2.1	111.0	37.5	2314	•
	130	25	1.5	39.0	15.6	1215	•
	130	31	1.5	44.2	18.0	2215	•
	160	37	2.1	79.3	30.0	1315	•
	160	55	2.1	124.0	43.0	2315	•
80	140	26	2.0	39.7	17.0	1216	•
	140	33	2.0	65.0	25.5	2216	•
	170	39	2.1	88.4	33.5	1316	•
	170	58	2.1	135.0	49.0	2316	•
	150	28	2.0	48.8	20.8	1217	•
85	150	36	2.0	58.5	23.6	2217	•
	180	41	3.0	97.5	38.0	1317	•
	180	60	3.0	140.0	51.0	2317	•
	160	30	2.0	57.2	23.6	1218	•
	160	40	2.0	70.2	28.5	2218	•
	190	43	3.0	117.0	44.0	1318	•
90	190	64	3.0	153.0	57.0	2318	•
	170	32	2.1	63.7	27.0	1219	•
	170	43	2.1	83.2	34.5	2219	•
	200	45	3.0	133.0	51.0	1319	•
95	200	67	3.0	165.0	64.0	2319	•
	180	34	2.1	68.9	30.0	1220	•

Dimensions				Load Rating		AEC Bearing	K
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
	180	46	2.1	97.5	40.5	2220	•
	215	47	3.0	143.0	57.0	1320	•
	215	73	3.0	190.0	80.0	2320	•
105	190	36	2.1	74.1	32.5	1221	•
110	190	50	2.1	108.0	45.0	2220	•
	200	38	2.1	88.4	39.0	1222	•
	200	53	2.1	124.0	52.0	2222	•
	240	50	3.0	163.0	72.0	1322	•
	240	80	3.0	216.0	95.0	2322	•
120	215	42	2.1	119.0	53.0	1224	•
130	230	46	3.0	127.0	58.5	1226	•

Ball Bearings

Self Aligning
Inch Series

RL, RM



Cylindrical bore

Tapered bore

Dimensions				Load Rating		AEC Bearing	K
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
0.500	1.3125	0.3750	0.0315 (0.8)	5.65	1.48	RL 4	
	1.6250	0.6250	0.0630 (1.6)	12.10	2.95	RM 4	
0.625	1.5625	0.4375	0.0315 (0.8)	8.25	2.42	RL 5	
	1.8125	0.6250	0.0630 (1.6)	12.90	3.67	RM 5	
0.750	1.8750	0.5625	0.0630 (1.6)	10.30	3.17	RL 6	
	2.0000	0.6875	0.0630 (1.6)	12.90	4.01	RM 6	
0.875	2.0000	0.5625	0.0630 (1.6)	12.90	4.01	RL 7	•
	2.2500	0.6875	0.0630 (1.6)	18.40	5.45	RM 7	•
1.000	2.2500	0.6250	0.0630 (1.6)	15.40	4.96	RL 8	•
	2.5000	0.7500	0.0945 (2.4)	21.30	6.55	RM 8	•
1.125	2.5000	0.6250	0.0630 (1.6)	16.30	5.80	RL 9	•
	2.8125	0.8125	0.0945 (2.4)	25.50	8.35	RM 9	•
1.250	2.7500	0.6875	0.0630 (1.6)	16.40	6.65	RL 10	•
	3.1250	0.8750	0.0945 (2.4)	0.00	10.50	RM 10	•
1.375	3.0000	0.6875	0.0630 (1.6)	19.10	7.55	RL 11	•
	3.5000	0.8750	0.0945 (2.4)	26.10	9.80	RM 11	•
1.500	3.2500	0.7500	0.0945 (2.4)	20.00	8.55	RL 12	•
	3.7500	0.9375	0.0945 (2.4)	34.10	13.10	RM 12	•
1.625	3.5000	0.7500	0.0945 (2.4)	22.70	9.60	RL 13	•
	4.0000	0.9375	0.0945 (2.4)	32.90	13.10	RM 13	•
1.750	3.7500	0.8125	0.0945 (2.4)	23.60	10.80	RL 14	•
	4.2500	1.0625	0.0945 (2.4)	44.50	18.00	RM 14	•
1.875	4.0000	0.8125	0.0945 (2.4)	27.80	13.40	RL 15	•
	4.5000	1.0625	0.0945 (2.4)	42.80	16.20	RM 15	•
2.000	4.0000	0.8125	0.0945 (2.4)	27.80	13.40	RL 16	•
	4.5000	1.0625	0.0945 (2.4)	42.80	16.20	RM 16	•
2.250	4.5000	0.8750	0.0945 (2.4)	31.50	15.50	RL 18	•
	5.0000	1.2500	0.1260 (3.2)	58.50	24.90	RM 18	•
2.500	5.0000	0.9375	0.0945 (2.4)	37.30	19.70	RL 20	•
	5.5000	1.2500	0.1260 (3.2)	60.50	24.20	RM 20	•
2.750	5.2500	0.9375	0.0945 (2.4)	40.60	21.40	RL 22	
	6.2500	1.3750	0.1260 (3.2)	74.50	33.00	RM 22	

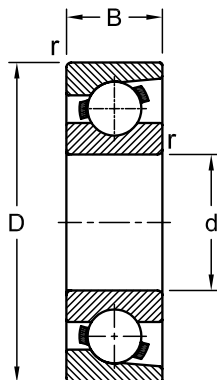
Dimensions				Load Rating		AEC Bearing	K
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
3.000	5.7500	1.0625	0.0945 (2.4)	43.10	22.90	RL 24	•
	7.0000	1.5625	0.1575 (4.0)	86.50	36.40	RM 24	•
3.250	6.0000	1.0625	0.0945 (2.4)	58.50	27.60	RL 26	•
	7.5000	1.5625	0.1575 (4.0)	101.00	41.30	RM 26	•
3.375	7.5000	1.5625	0.1575 (4.0)	101.00	41.30	RM 27	
3.500	6.5000	1.1250	0.1260 (3.2)	66.00	30.90	RL 28	•
	8.1250	1.7500	0.1575 (4.0)	133.00	56.00	RM 28	•
3.750	6.7500	1.1250	0.1260 (3.2)	64.50	31.00	RL 30	•
	8.2500	1.7500	0.1575 (4.0)	135.00	64.00	RM 30	
4.000	7.2500	1.2500	0.1260 (3.2)	75.50	36.60	RL 32	•
	8.5000	1.7500	0.1575 (4.0)	149.00	76.50	RM 32	•
4.250	7.5000	1.2500	0.1260 (3.2)	77.50	39.20	RL 34	
	8.7500	1.7500	0.1890 (4.8)	146.00	76.50	RM 34	
4.500	8.0000	1.3125	0.1260 (3.2)	85.50	45.20	RL 36	•
	9.4021	2.0000	0.1890 (4.8)	159.00	78.50	RM 36	
4.750	8.2500	1.3125	0.1260 (3.2)	84.00	45.20	RL 38	•
	10.0000	2.0000	0.1890 (4.8)	168.00	90.00	RM 38	
5.000	9.0000	1.3750	0.1260 (3.2)	88.00	46.00	RL 40	•
	10.0000	2.0000	0.1890 (4.8)	168.00	90.00	RM 40	
5.500	9.5000	1.3750	0.1260 (3.2)	109.00	60.50	RL 44	
	11.0000	2.0000	0.1890 (4.8)	191.00	113.00	RM 44	
6.000	10.5000	1.5625	0.1575 (4.0)	120.00	68.50	RL 48	
	12.0000	2.2500	0.1890 (4.8)	211.00	129.00	RM 48	
0.500	1.3125	0.3750	0.0315 (0.8)	5.65	1.48	RL 4	
	1.6250	0.6250	0.0630 (1.6)	12.10	2.95	RM 4	
0.625	1.5625	0.4375	0.0315 (0.8)	8.25	2.42	RL 5	
	1.8125	0.6250	0.0630 (1.6)	12.90	3.67	RM 5	
0.750	1.8750	0.5625	0.0630 (1.6)	10.30	3.17	RL 6	
	2.0000	0.6875	0.0630 (1.6)	12.90	4.01	RM 6	
0.875	2.0000	0.5625	0.0630 (1.6)	12.90	4.01	RL 7	•
	2.2500	0.6875	0.0630 (1.6)	18.40	5.45	RM 7	•
1.000	2.2500	0.6250	0.0630 (1.6)	15.40	4.96	RL 8	•
	2.5000	0.7500	0.0945 (2.4)	21.30	6.55	RM 8	•
1.125	2.5000	0.6250	0.0630 (1.6)	16.30	5.80	RL 9	•
	2.8125	0.8125	0.0945 (2.4)	25.50	8.35	RM 9	•
1.250	2.7500	0.6875	0.0630 (1.6)	16.40	6.65	RL 10	•
	3.1250	0.8750	0.0945 (2.4)	0.00	10.50	RM 10	•
1.375	3.0000	0.6875	0.0630 (1.6)	19.10	7.55	RL 11	•
	3.5000	0.8750	0.0945 (2.4)	26.10	9.80	RM 11	•
1.500	3.2500	0.7500	0.0945 (2.4)	20.00	8.55	RL 12	•
	3.7500	0.9375	0.0945 (2.4)	34.10	13.10	RM 12	•
1.625	3.5000	0.7500	0.0945 (2.4)	22.70	9.60	RL 13	•
	4.0000	0.9375	0.0945 (2.4)	32.90	13.10	RM 13	•
1.750	3.7500	0.8125	0.0945 (2.4)	23.60	10.80	RL 14	•
	4.2500	1.0625	0.0945 (2.4)	44.50	18.00	RM 14	•
1.875	4.0000	0.8125	0.0945 (2.4)	27.80	13.40	RL 15	•
	4.5000	1.0625	0.0945 (2.4)	42.80	16.20	RM 15	•
2.000	4.0000	0.8125	0.0945 (2.4)	27.80	13.40	RL 16	•

Dimensions				Load Rating		AEC Bearing	K
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
	4.5000	1.0625	0.0945 (2.4)	42.80	16.20	RM 16	•
2.250	4.5000	0.8750	0.0945 (2.4)	31.50	15.50	RL 18	•
	5.0000	1.2500	0.1260 (3.2)	58.50	24.90	RM 18	•
2.500	5.0000	0.9375	0.0945 (2.4)	37.30	19.70	RL 20	•
	5.5000	1.2500	0.1260 (3.2)	60.50	24.20	RM 20	•
2.750	5.2500	0.9375	0.0945 (2.4)	40.60	21.40	RL 22	
	6.2500	1.3750	0.1260 (3.2)	74.50	33.00	RM 22	
3.000	5.7500	1.0625	0.0945 (2.4)	43.10	22.90	RL 24	•
	7.0000	1.5625	0.1575 (4.0)	86.50	36.40	RM 24	•
3.250	6.0000	1.0625	0.0945 (2.4)	58.50	27.60	RL 26	•
	7.5000	1.5625	0.1575 (4.0)	101.00	41.30	RM 26	•

Ball Bearings

Magneto
Metric Series

E, BO, L

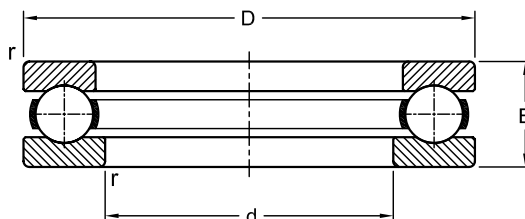
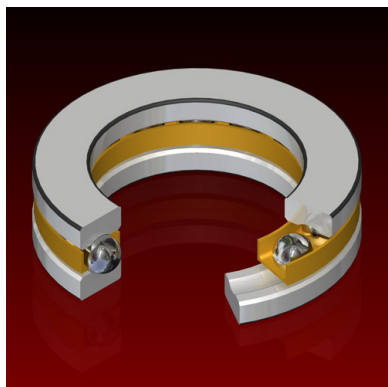


Dimensions				Load Rating		AEC Bearing	M
mm				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
10	28	8	0.5	4.44	0.72	E 10	
12	32	7	0.5	3.58	0.74	E 12	
13	30	7	0.3	3.57	0.74	E 13	•
14	35	8	0.5	4.70	1.00	E 14	•
15	35	8	0.5	4.70	1.00	E 15	•
	40	10	1.0	7.55	1.50	BO 15	
17	40	10	0.6	5.96	1.31	L 17	•
	44	11	1.0	9.00	1.87	BO 17	
19	40	9	0.7	3.64	0.94	E 19	
20	47	12	1.0	9.20	2.04	E 20	•
	47	14	1.5	9.20	2.04	L 20	
	52	15	2.0	12.78	2.65	M 20	
25	52	15	1.5	9.20	2.04	L 25	
30	62	16	1.5	7.55	2.24	L 30	

Ball Bearings

Thrust
Metric Series

51



Dimensions				Load Rating		AEC Bearing
mm				kN		
d	D	B	r	Dynamic (C)	Static (C ₀)	
10	24	9	0.3	10.0	14.0	51100
	26	11	0.6	12.7	17.0	51200
12	26	9	0.3	10.4	15.3	51101
	28	11	0.6	13.3	19.0	51201
15	28	9	0.3	9.4	14.0	51102
	32	12	0.6	16.5	25.0	51202
17	30	9	0.3	9.8	15.3	51103
	35	12	0.6	17.2	27.5	51203
20	35	10	0.3	12.7	20.8	51104
	40	14	0.6	22.5	37.5	51204
25	42	11	0.6	15.9	29.0	51105
	47	15	0.6	27.6	50.0	51205
	52	18	1.0	34.5	55.0	51305
	52	24	1.0	55.3	90.0	51405
30	47	11	0.6	16.8	33.5	51106
	52	16	0.6	25.5	47.5	51206
	60	21	1.0	37.7	65.5	51306
	70	28	1.0	72.8	125.0	51406
35	52	12	0.6	17.4	37.5	51107
	62	18	1.0	35.1	67.0	51207
	68	24	1.0	49.4	88.0	51307
	80	32	1.1	87.1	156.0	51407
40	60	13	0.6	23.4	50.0	51108
	68	19	1.0	46.8	98.0	51208
	78	26	1.0	61.8	112.0	51308
	90	36	1.1	112.0	204.0	51408
45	65	14	0.6	24.2	57.0	51109
	73	20	1.0	39.0	80.0	51209
	85	28	1.0	76.1	140.0	51309

Dimensions				Load Rating		AEC Bearing
mm				kN		
d	D	B	r	Dynamic (C)	Static (C ₀)	
	100	39	1.1	130.0	240.0	51409
50	70	14	0.6	25.5	63.0	51110
	78	22	1.0	49.4	106.0	51210
	95	31	1.1	88.4	173.0	51310
	110	43	1.5	159.0	310.0	51410
55	78	16	0.6	30.7	78.0	51111
	90	25	1.0	61.8	134.0	51211
	105	35	1.1	104.0	208.0	51311
	120	48	1.5	178.0	360.0	51411
60	85	17	1.0	35.8	90.0	51112
	95	26	1.0	62.4	140.0	51212
	110	35	1.1	101.0	208.0	51312
	130	51	1.5	199.0	400.0	51412
65	90	18	1.0	37.1	98.0	51113
	100	27	1.0	63.7	150.0	51213
	115	36	1.1	106.0	220.0	51313
	140	56	2.0	216.0	450.0	51413
70	95	18	1.0	37.7	104.0	51114
	105	27	1.0	65.0	160.0	51214
	125	40	1.1	135.0	300.0	51314
	150	60	2.0	234.0	500.0	51414
75	100	19	1.0	44.2	137.0	51115
	110	27	1.0	67.6	170.0	51215
	135	44	1.5	163.0	360.0	51315
	160	65	2.0	251.0	560.0	51415
80	105	19	1.0	44.9	140.0	51116
	115	28	1.0	76.1	190.0	51216
	140	44	1.5	159.0	360.0	51316
	170	68	2.1	270.0	620.0	51416
85	110	19	1.0	46.2	150.0	51117
	125	31	1.0	97.5	250.0	51217
	150	49	1.5	190.0	425.0	51317
	180	72	2.1	286.0	680.0	51417
90	120	22	1.0	59.2	190.0	51118
	135	35	1.1	119.0	300.0	51218
	155	50	1.5	195.0	465.0	51318
	190	77	2.1	307.0	750.0	51418
100	135	25	1.0	85.2	270.0	51120
	150	38	1.1	124.0	320.0	51220
	170	55	1.5	229.0	560.0	51320
	210	85	3.0	371.0	965.0	51420
110	145	25	1.0	87.1	290.0	51122
	160	38	1.1	130.0	360.0	51222
	190	63	2.0	276.0	720.0	51322
	230	95	3.0	410.0	1140.0	51422

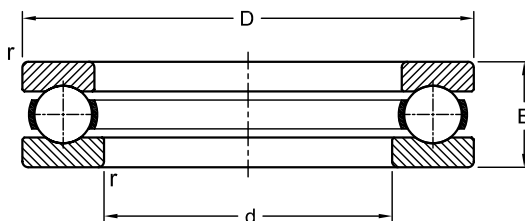
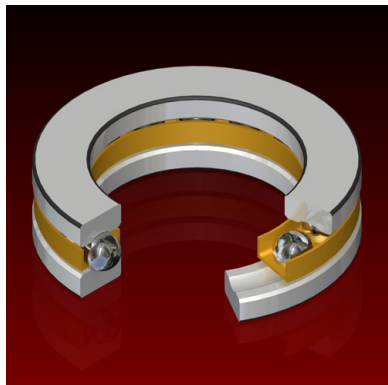
Dimensions				Load Rating		AEC Bearing
mm				kN		
d	D	B	r	Dynamic (C)	Static (C ₀)	
130	170	30	1.0	111.0	390.0	51126
	190	45	1.5	186.0	540.0	51226
	225	75	2.1	358.0	1060.0	51326
	270	110	4.0	520.0	1600.0	51426
140	180	31	1.0	111.0	400.0	51128
	200	46	1.5	190.0	570.0	51228
	240	80	2.1	397.0	1220.0	51328
	280	112	4.0	520.0	1600.0	51428
150	190	31	1.0	111.0	400.0	51130
	215	50	1.5	238.0	735.0	51230
	250	80	2.1	410.0	1290.0	51330
	300	120	4.0	559.0	1800.0	51430
160	200	31	1.0	112.0	425.0	51132
	225	51	1.5	242.0	780.0	51232
	270	87	3.0	449.0	1500.0	51332
170	215	34	1.1	133.0	500.0	51134
	240	55	1.5	286.0	930.0	51234
	280	87	3.0	468.0	1600.0	51334
180	225	34	1.1	135.0	530.0	51136
	250	56	1.5	296.0	1000.0	51236
	300	95	3.0	520.0	1830.0	51336
190	240	37	1.1	172.0	655.0	51138
	270	62	2.0	332.0	1160.0	51238
	320	105	4.0	600.0	2200.0	51338
200	250	37	1.1	168.0	655.0	51140
	280	62	2.0	338.0	1220.0	51240
	340	110	4.0	624.0	2400.0	51340
220	270	37	1.1	178.0	735.0	51144
	300	63	2.0	351.0	1320.0	51244
240	300	45	1.5	234.0	965.0	51148
	340	78	2.1	462.0	1860.0	51248
260	320	45	1.5	238.0	1020.0	51152
	360	79	2.1	475.0	2000.0	51252
280	350	53	1.5	319.0	1340.0	51156
	380	80	2.1	494.0	2160.0	51256
300	380	62	2.0	364.0	1600.0	51160
	420	95	3.0	605.0	2750.0	51260
320	400	63	2.0	371.0	1700.0	51164
	440	95	3.0	572.0	2700.0	51264
340	420	64	2.0	377.0	1800.0	51168
	460	96	3.0	605.0	2900.0	51268
360	440	65	2.0	390.0	1900.0	51172
	500	110	4.0	741.0	3800.0	51272

Dimensions mm				Load Rating kN		AEC Bearing
d	D	B	r	Dynamic (C)	Static (C ₀)	
380	460	65	2.0	430.0	2240.0	51176
400	480	65	2.0	440.0	2320.0	51180

Ball Bearings

Thrust
Inch Series

W, EW, XW, MT



Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
0.375	1.0000	0.5312	0.0315 (0.8)	8.90	8.90	W 3/8	•
0.438	1.2812	0.6250	0.0315 (0.8)	14.90	15.80	W 7/16	
0.500	1.2812	0.6250	0.0315 (0.8)	19.20	20.00	W 1/2	•
0.563	1.4062	0.6250	0.0315 (0.8)	20.00	22.50	W 9/16	
0.625	1.4062	0.6250	0.0315 (0.8)	20.00	22.50	W 5/8	
0.750	1.5313	0.6250	0.0315 (0.8)	18.20	23.70	W 3/4	
	1.5625	0.7187	0.0315 (0.8)	20.80	25.00	MT 3/4	•
0.875	1.6562	0.6250	0.0315 (0.8)	19.60	27.60	W 7/8	
	1.8125	0.7500	0.0315 (0.8)	24.80	30.80	MT 7/8	•
1.000	1.7813	0.6250	0.0630 (1.6)	19.30	27.60	W 1	
	2.0000	0.7500	0.0630 (1.6)	27.30	37.00	MT 1	•
1.125	1.9063	0.6250	0.0630 (1.6)	20.50	31.60	W 1.1/8	
	2.2500	0.8750	0.0630 (1.6)	34.00	44.40	MT 1.1/8	•
1.250	2.0625	0.5000	0.0630 (1.6)	4.47	8.90	EW 1.1/4	
	2.0937	0.7187	0.0630 (1.6)	23.10	35.00	W 1.1/4	
	2.5000	1.0000	0.0630 (1.6)	45.60	60.50	MT 1.1/4	•
1.375	2.1875	0.5000	0.0630 (1.6)	4.36	8.90	EW 1.3/8	
	2.2187	0.7187	0.0630 (1.6)	22.70	35.00	W 1.3/8	
1.500	2.3125	0.5000	0.0630 (1.6)	4.62	10.00	EW 1.1/2	
	2.3438	0.7187	0.0630 (1.6)	24.30	40.00	W 1.1/2	
	2.8750	1.1250	0.0630 (1.6)	57.30	79.00	MT 1.1/2	•
1.625	2.4375	0.5000	0.0630 (1.6)	4.54	10.00	EW 1.5/8	
	2.4687	0.7187	0.0630 (1.6)	23.90	40.00	W 1.5/8	•
1.751	2.6250	0.6250	0.0630 (1.6)	5.70	12.70	EW 1.3/4	
	2.6875	0.7500	0.0630 (1.6)	35.40	59.50	W 1.3/4	
	3.3125	1.2500	0.0630 (1.6)	84.50	122.00	MT 1.3/4	•
1.875	2.7500	0.6250	0.0630 (1.6)	6.00	14.10	EW 1.7/8	
	2.8125	0.7500	0.0630 (1.6)	31.00	55.50	W 1.7/8	
2.000	2.8750	0.6250	0.0630 (1.6)	5.90	14.10	EW 2	
	3.0625	0.6875	0.0630 (1.6)	25.90	50.00	XW 2	
	2.9688	0.7500	0.0945 (2.4)	33.60	65.00	W 2	
	3.6875	1.3750	0.0945 (2.4)	96.00	148.00	MT 2	•

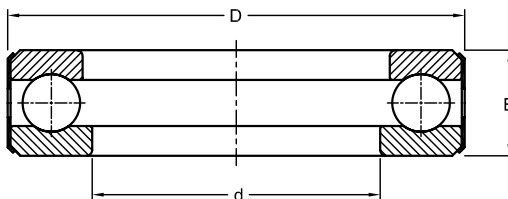
Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
2.125	3.1875	0.6875	0.0630 (1.6)	25.50	50.00	XW 2.1/8	•
	3.2187	0.8750	0.0945 (2.4)	43.70	80.00	W 2.1/8	•
2.250	3.1250	0.6250	0.0630 (1.6)	6.10	15.50	EW 2.1/4	
	3.3125	0.6875	0.0630 (1.6)	26.80	55.00	XW 2.1/4	•
	3.3437	0.8750	0.0945 (2.4)	43.10	80.00	W 2.1/4	•
	4.2500	1.6875	0.0945 (2.4)	128.00	195.00	MT 2.1/4	•
2.375	3.4375	0.6875	0.0630 (1.6)	26.50	55.00	XW 2.3/8	•
	3.5937	1.0000	0.0945 (2.4)	58.00	109.00	W 2.3/8	
2.500	3.5625	0.6875	0.0630 (1.6)	27.70	60.00	XW 2.1/2	•
	3.7187	1.0000	0.0945 (2.4)	57.50	109.00	W 2.1/2	•
	4.7500	2.0000	0.0945 (2.4)	160.00	242.00	MT 2.1/2	•
2.625	3.7500	0.7500	0.0630 (1.6)	32.10	68.00	XW 2.5/8	•
	3.8437	1.0000	0.0945 (2.4)	57.00	109.00	W 2.5/8	•
2.750	3.8750	0.7500	0.0630 (1.6)	33.70	74.00	XW 2.3/4	•
	4.0314	1.0000	0.0945 (2.4)	56.50	109.00	W 2.3/4	•
	5.0000	2.0000	0.0945 (2.4)	163.20	290.00	MT 2.3/4	•
2.875	4.0000	0.7500	0.0630 (1.6)	35.10	80.00	XW 2.7/8	•
	4.1562	1.0000	0.0945 (2.4)	64.00	125.00	W 2.7/8	•
3.000	4.1250	0.7500	0.0630 (1.6)	34.80	80.00	XW 3	•
	4.3750	1.1250	0.1260 (3.2)	72.50	142.00	W 3	•
	5.6250	2.2500	0.1260 (3.2)	226.00	379.00	MT 3	•
3.125	4.2500	0.7500	0.0630 (1.6)	34.80	84.00	XW 3.1/8	•
	4.5000	1.1250	0.1260 (3.2)	87.00	178.00	W 3.1/8	•
3.250	4.3750	0.7500	0.0630 (1.6)	35.80	86.50	XW 3.1/4	•
	4.8125	1.2500	0.1260 (3.2)	90.50	180.00	W 3.1/4	•
3.375	4.9375	1.2500	0.1260 (3.2)	89.50	180.00	W 3.3/8	•
3.500	4.6250	0.7500	0.0630 (1.6)	36.80	92.50	XW 3.1/2	•
	5.0625	1.2500	0.1260 (3.2)	88.50	180.00	W 3.1/2	•
	6.4375	2.5000	0.1260 (3.2)	274.00	490.00	MT 3.1/2	•
3.625	5.1875	1.2500	0.1260 (3.2)	94.50	200.00	W 3.5/8	•
3.750	4.8750	0.7500	0.0630 (1.6)	37.70	98.50	XW 3.3/4	•
	5.3125	1.2500	0.1260 (3.2)	93.50	200.00	W 3.3/4	•
3.875	5.6875	1.3750	0.1260 (3.2)	107.00	222.00	W 3.7/8	•
4.000	5.2500	0.8750	0.0945 (2.4)	49.50	124.00	XW 4	•
	5.8125	1.3750	0.1260 (3.2)	122.00	258.00	W 4	•
	7.2500	2.8125	0.1260 (3.2)	305.00	592.00	MT 4	•
4.250	6.3125	1.7500	0.1260 (3.2)	153.00	320.00	W 4.1/4	•
4.500	5.7500	1.0000	0.0945 (2.4)	50.50	133.00	XW 4.1/2	•
	6.5625	1.7500	0.1890 (4.8)	150.00	320.00	W 4.1/2	•
	8.3750	3.3750	0.1890 (4.8)	398.00	853.00	MT 4.1/2	•
4.750	7.0625	2.0000	0.1890 (4.8)	203.00	435.00	W 4.3/4	
5.000	6.5000	1.1250	0.0945 (2.4)	67.00	181.00	XW 5	•
	7.3125	2.0000	0.1890 (4.8)	201.00	435.00	W 5	•
	9.5000	4.0000	0.1890 (4.8)	473.00	1064.00	MT 5	•
5.500	7.0000	1.1250	0.0945 (2.4)	68.50	193.00	XW 5.1/2	•
	8.0625	2.1875	0.1890 (4.8)	258.00	568.00	W 5.1/2	•
	10.3750	4.2500	0.1890 (4.8)	486.00	1110.00	MT 5.1/2	•
6.000	7.6250	1.2500	0.1260 (3.2)	88.00	253.00	XW 6	•

Dimensions				Load Rating		AEC Bearing	M
inch (mm)				kN			
d	D	B	r	Dynamic (C)	Static (C ₀)		
	8.6875	2.3750	0.1890 (4.8)	280.00	642.00	W 6	•
	11.1250	4.5000	0.1890 (4.8)	564.00	1390.00	MT 6	•
6.500	8.1250	1.2500	0.1260 (3.2)	90.00	268.00	XW 6.1/2	•
	9.4063	2.5000	0.250 (6.35)	312.00	759.00	W 6.1/2	•
7.000	8.7500	1.3750	0.1260 (3.2)	113.00	340.00	XW 7	•
	10.1250	2.6250	0.250 (6.35)	346.00	891.00	W 7	•
	12.7500	5.0000	0.250 (6.35)	619.00	1599.00	MT 7	•
7.500	9.2500	1.3750	0.1260 (3.2)	115.00	360.00	XW 7.1/2	•
	10.8750	2.7500	0.250 (6.35)	310.00	799.00	W 7.1/2	•
8.000	10.0000	1.5000	0.1260 (3.2)	135.00	419.00	XW 8	•
	11.6250	3.0000	0.250 (6.35)	339.00	888.00	W 8	•
	14.3750	5.6250	0.250 (6.35)	713.00	1974.00	MT 8	•
8.500	10.5000	1.5000	0.1260 (3.2)	138.00	444.00	XW 8.1/2	•
9.000	11.2500	1.8750	0.1890 (4.8)	191.00	604.00	XW 9	•
	13.1250	3.5000	0.250 (6.35)	445.00	1277.00	W 9	•
	16.6250	6.7500	0.250 (6.35)	931.00	2840.00	MT 9	•
9.500	11.7500	1.8750	0.1890 (4.8)	196.00	640.00	XW 9.1/2	•
10.000	12.5000	2.1250	0.1890 (4.8)	246.00	770.00	XW 10	•
	14.6250	4.0000	0.3110 (7.9)	561.00	1740.00	W 10	•
10.500	13.0000	2.1250	0.1890 (4.8)	253.00	823.00	XW 10.1/2	•
11.000	13.7500	2.3750	0.1890 (4.8)	276.00	885.00	XW 11	•
	15.8750	4.2500	0.3110 (7.9)	613.00	2000.00	W 11	•
11.500	14.2500	2.3750	0.1890 (4.8)	284.00	943.00	XW 11.1/2	•
12.000	15.0000	2.5000	0.1890 (4.8)	307.00	1010.00	XW 12	•
	17.3750	4.5000	0.3110 (7.9)	667.00	2274.00	W 12	•
12.500	15.5000	2.6250	0.250 (6.35)	317.00	1072.00	XW 12.1/2	•
13.000	16.2500	2.7500	0.250 (6.35)	333.00	1140.00	XW 13	•
13.500	16.7500	2.8750	0.250 (6.35)	363.00	1280.00	XW 13.1/2	•
14.000	17.5000	3.0000	0.250 (6.35)	376.00	1330.00	XW 14	•
14.500	18.0000	3.1250	0.250 (6.35)	407.00	1480.00	XW 14.1/2	•
15.000	18.7500	3.2500	0.250 (6.35)	419.00	1570.00	XW 15	•
15.500	19.2500	3.3750	0.250 (6.35)	434.00	1630.00	XW 15.1/2	•
16.000	20.0000	3.5000	0.250 (6.35)	464.00	1790.00	XW 16	•
16.500	20.5000	3.6250	0.250 (6.35)	481.00	1910.00	XW 16.1/2	•
17.000	21.2500	3.7500	0.250 (6.35)	514.00	2081.00	XW 17	•
17.500	21.7500	3.8750	0.3110 (7.9)	548.00	2270.00	XW 17.1/2	•
18.000	22.5000	4.0000	0.3110 (7.9)	543.00	2270.00	XW 18	•

Ball Bearings

Full Complement Thrust
Inch Series

D



Dimensions			Load Rating		AEC Bearing
inch			kN		
d	D	B	Dynamic (C)	Static (C ₀)	
0.500	1.2190	0.5625	14.5	15.4	D 1
0.625	1.3438	0.5625	15.5	20.3	D 3
0.750	1.4688	0.5625	16.0	22.8	D 5
0.875	1.8438	0.6250	24.0	40.3	D 7
1.000	1.9688	0.6250	25.1	43.2	D 9
1.125	2.0940	0.6250	25.8	47.0	D 11
1.250	2.3438	0.6250	27.0	54.4	D 13
1.375	2.4687	0.6250	27.5	58.4	D 15
1.500	2.5938	0.6250	28.3	66.7	D 17
1.750	3.0938	0.8125	39.3	96.0	D 21
2.000	3.3438	0.8125	40.8	107.0	D 25
2.250	3.7190	0.8125	42.0	118.0	D 29
2.438	3.8438	0.8125	43.2	122.5	D 32
2.500	3.9688	0.8125	43.2	129.0	D 33
2.750	4.4690	1.0000	68.5	190.0	D 37
2.813	4.4690	1.0000	68.5	190.0	D 38
3.000	4.5940	1.0000	68.5	190.0	D 39.1/2
3.000	4.7190	1.0000	70.5	198.2	D 40
3.250	4.9690	1.0000	72.6	218.0	D 41