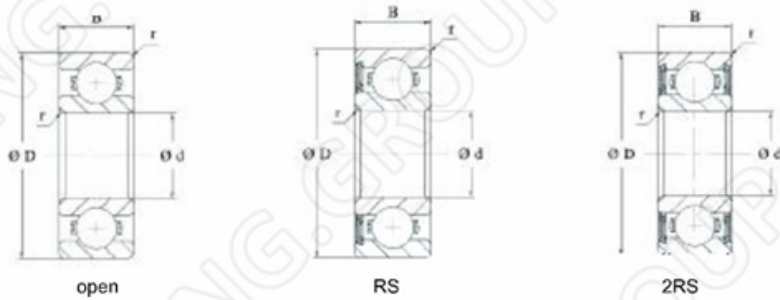
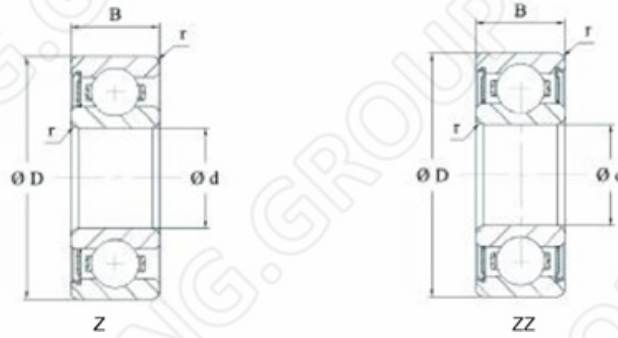


**Deep groove ball bearings
(metric sizes)**



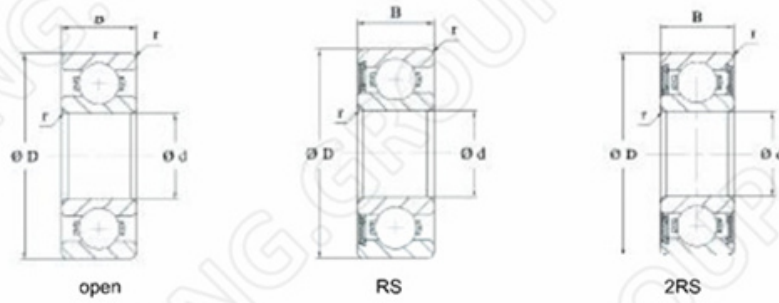
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s\ min}$	dyn. C	stat. Co	HMEC	≈	
	mm								
					kN		min^{-1}		kg
3	3	10	4	0.15	0.64	0.22	53000	623	0.001
	3	10	4	0.15	0.64	0.22	45000	623.ZZ	0.001
	3	10	4	0.15	0.64	0.22	32000	623.2RS	0.001
4	4	13	5	0.2	1.29	0.49	45000	624	0.003
	4	13	5	0.2	1.29	0.49	38000	624.ZZ	0.004
	4	13	5	0.2	1.29	0.49	26000	624.2RS	0.003
	4	16	5	0.3	1.73	0.67	43000	634	0.006
	4	16	5	0.3	1.73	0.67	36000	634.ZZ	0.006
	4	16	5	0.3	1.73	0.67	24000	634.2RS	0.006
5	5	16	5	0.3	1.32	0.44	43000	625	0.005
	5	16	5	0.3	1.32	0.44	36000	625.ZZ	0.005
	5	16	5	0.3	1.32	0.44	24000	625.2RS	0.005
	5	19	6	0.3	2.55	1.04	38000	635	0.008
	5	19	6	0.3	2.55	1.04	32000	635.ZZ	0.009
	5	19	6	0.3	2.55	1.04	22000	635.2RS	0.008
6	6	19	6	0.3	2.55	1.04	38000	626	0.008
	6	19	6	0.3	2.55	1.04	32000	626.ZZ	0.009
	6	19	6	0.3	2.55	1.04	22000	626.2RS	0.008
7	7	19	6	0.3	2.55	1.04	38000	607	0.007
	7	19	6	0.3	2.55	1.04	32000	607.ZZ	0.008

HMEC



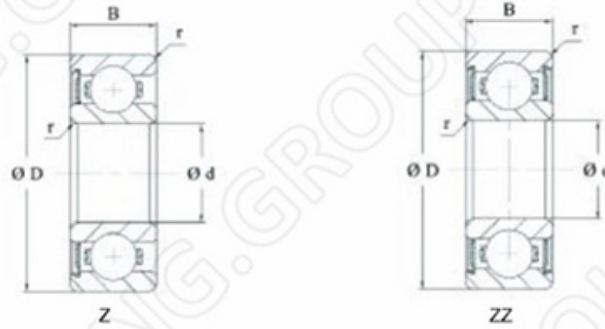
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
	mm								
7	7	19	6	0.3	2.55	1.04	22000	607.2RS	0.007
	7	22	7	0.3	3.25	1.37	36000	627	0.011
	7	22	7	0.3	3.25	1.37	30000	627.ZZ	0.012
	7	22	7	0.3	3.25	1.37	20000	627.2RS	0.011
8	8	22	7	0.3	3.25	1.37	36000	608	0.01
	8	22	7	0.3	3.25	1.37	30000	608.ZZ	0.011
	8	22	7	0.3	3.25	1.37	20000	608.2RS	0.01
9	9	24	7	0.3	3.65	1.63	36000	609	0.015
	9	24	7	0.3	3.65	1.63	30000	609.ZZ	0.016
	9	24	7	0.3	3.65	1.63	20000	609.2RS	0.015
	9	26	8	0.3	4.55	1.96	34000	629	0.02
	9	26	8	0.3	4.55	1.96	28000	629.ZZ	0.021
	9	26	8	0.3	4.55	1.96	19000	629.2RS	0.021
10	10	19	5	0.3	1.72	0.84	40000	6800	0.005
	10	19	5	0.3	1.72	0.84	34000	6800.ZZ	0.005
	10	19	5	0.3	1.72	0.84	24000	6800.2RS	0.005
	10	22	6	0.3	2.70	1.27	38000	6900	0.009
	10	22	6	0.3	2.70	1.27	32000	6900.ZZ	0.009
	10	22	6	0.3	2.70	1.27	22000	6900.2RS	0.009

**Deep groove ball bearings
(metric sizes)**



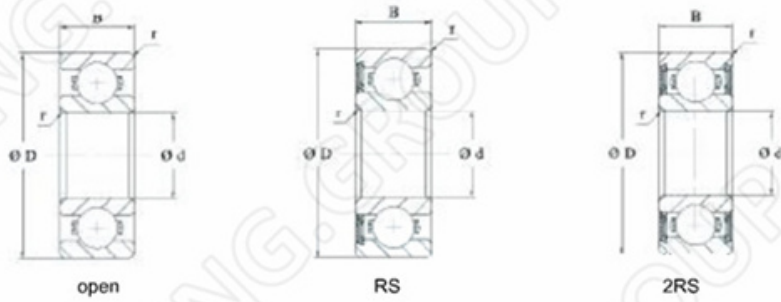
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s \min}$	dyn. C	stat. Co	HMEC	≈	
	mm								
					kN	min ⁻¹		kg	
10	10	26	8	0.3	4.55	1.96	34000	6000	0.019
	10	26	8	0.3	4.55	1.96	28000	6000.ZZ	0.02
	10	26	8	0.3	4.55	1.96	19000	6000.2RS	0.02
	10	28	8	0.3	7.5	2.37	32000	16100	0.024
	10	30	9	0.6	6	2.6	32000	6200	0.031
	10	30	9	0.6	6	2.6	26000	6200.ZZ	0.032
	10	30	9	0.6	6	2.6	17000	6200.2RS	0.032
	10	30	14	0.6	6	2.6	17000	62200.2RS	0.048
	10	35	11	0.6	8.15	3.45	56000	6300	0.055
	10	35	11	0.6	8.15	3.45	22000	6300.ZZ	0.057
	10	35	11	0.6	8.15	3.45	15000	6300.2RS	0.057
	12	12	21	5	0.3	1.92	1.04	38000	6801
12		21	5	0.3	1.92	1.04	32000	6801.ZZ	0.006
12		21	5	0.3	1.92	1.04	20000	6801.2RS	0.006
12		24	6	0.3	2.89	1.46	36000	6901	0.010
12		24	6	0.3	2.89	1.46	30000	6901.ZZ	0.010
12		24	6	0.3	2.89	1.46	20000	6901.2RS	0.010
12		28	8	0.3	5.1	2.36	32000	6001	0.02
12		28	8	0.3	5.1	2.36	26000	6001.ZZ	0.02
12		28	8	0.3	5.1	2.36	18000	6001.2RS	0.022
12		28	7	0.3	5.1	2.37	32000	16001	0.021

HMEC



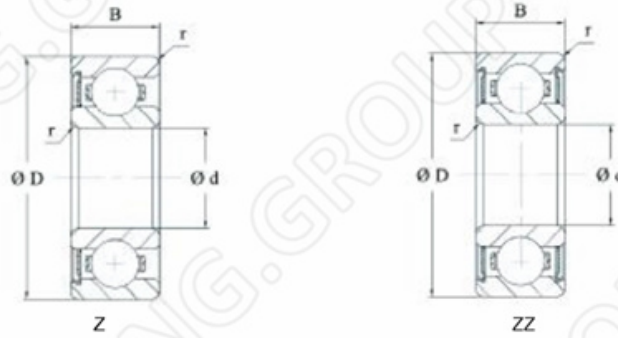
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg	
	d	D	B	r _{min}	dyn. C	stat. Co				
	mm									
12	12	32	10	0.6	6.95	3.1	30000	6201	0.037	
	12	32	10	0.6	6.95	3.1	24000	6201.ZZ	0.039	
	12	32	10	0.6	6.95	3.1	16000	6201.2RS	0.039	
	12	32	14	0.6	6.95	3.1	16000	62201.2RS	0.052	
	12	37	12	1	9.65	4.15	53000	6301	0.062	
	12	37	12	1	9.65	4.15	20000	6301.ZZ	0.064	
	12	37	12	1	9.65	4.15	13000	6301.2RS	0.064	
	15	15	24	5	0.3	2.07	1.26	34000	6802	0.007
		15	24	5	0.3	2.07	1.26	28000	6802.ZZ	0.007
15		24	5	0.3	2.07	1.26	17000	6802.2RS	0.007	
15		28	7	0.3	4.35	2.26	30000	6902	0.015	
15		28	7	0.3	4.35	2.26	26000	6902.ZZ	0.015	
15		28	7	0.3	4.35	2.26	17000	6902.2RS	0.015	
15		32	8	0.3	5.6	2.85	30000	16002	0.027	
15		32	9	0.3	5.6	2.85	30000	6002	0.031	
15		32	9	0.3	5.6	2.85	24000	6002.ZZ	0.033	
15		32	9	0.3	5.6	2.85	16000	6002.2RS	0.033	
15		35	11	0.6	7.8	3.75	26000	6202	0.043	
15		35	11	0.6	7.8	3.75	20000	6202.ZZ	0.045	
15		35	11	0.6	7.8	3.75	14000	6202.2RS	0.045	
15		35	14	0.6	7.8	3.75	14000	62202.2RS	0.057	

**Deep groove ball bearings
(metric sizes)**



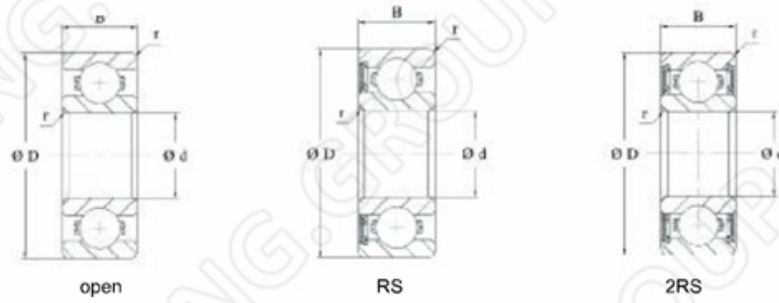
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s_{min}}$	dyn. C	stat. Co	HMEC	≈	
	mm				kN		min^{-1}		kg
15	15	42	13	1	11.4	5.4	43000	6302	0.088
	15	42	13	1	11.4	5.4	18000	6302.ZZ	0.09
	15	42	13	1	11.4	5.4	12000	6302.2RS	0.09
	15	42	17	1	11.4	5.4	12000	62302.2RS	0.114
17	17	26	5	0.3	2.63	1.57	30000	6803	0.007
	17	26	5	0.3	2.63	1.57	26000	6803.ZZ	0.007
	17	26	5	0.3	2.63	1.57	15000	6803.2RS	0.007
	17	30	7	0.3	4.60	2.55	28000	6903	0.017
	17	30	7	0.3	4.60	2.55	24000	6903.ZZ	0.017
	17	30	7	0.3	4.60	2.55	15000	6903.2RS	0.017
	17	35	8	0.3	6	3.25	28000	16003	0.03
	17	35	10	0.3	6	3.25	28000	6003	0.038
	17	35	10	0.3	6	3.25	22000	6003.ZZ	0.04
	17	35	10	0.3	6	3.25	14000	6003.2RS	0.04
	17	40	12	0.6	9.5	4.75	22000	6203	0.065
	17	40	12	0.6	9.5	4.75	18000	6203.ZZ	0.067
	17	40	12	0.6	9.5	4.75	12000	6203.2RS	0.067
	17	40	16	0.6	9.5	4.75	12000	62203.2RS	0.087
	17	47	14	1	13.4	6.55	19000	6303	0.114
	17	47	14	1	13.4	6.55	16000	6303.ZZ	0.117
	17	47	14	1	13.4	6.55	11000	6303.2RS	0.118

HMEC



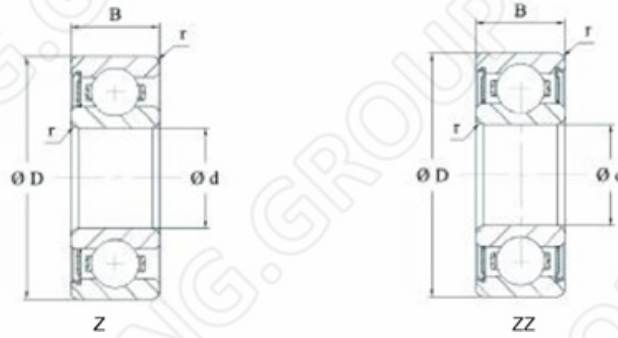
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
	mm								
17	17	47	19	1	13.4	6.55	11000	62303.2RS	0.154
	17	62	17	1.1	22.4	11.4	28000	6403	0.269
20	20	32	7	0.3	4.00	2.47	26000	6804	0.017
	20	32	7	0.3	4.00	2.47	22000	6804.ZZ	0.017
	20	32	7	0.3	4.00	2.47	13000	6804.2RS	0.017
	20	37	9	0.3	6.40	3.70	22000	6904	0.037
	20	37	9	0.3	6.40	3.70	19000	6904.ZZ	0.037
	20	37	9	0.3	6.40	3.70	12000	6904.2RS	0.037
	20	47	14	1	12.7	6.55	18000	6204	0.105
	20	47	14	1	12.7	6.55	15000	6204.ZZ	0.109
	20	47	14	1	12.7	6.55	10000	6204.2RS	0.109
	20	47	18	1	12.7	6.55	10000	62204.2RS	0.139
	20	52	15	1.1	16	7.8	34000	6304	0.151
	20	52	15	1.1	16	7.8	14000	6304.ZZ	0.155
	20	52	15	1.1	16	7.8	9500	6304.2RS	0.155
	20	52	21	1.1	16	7.8	9500	62304.2RS	0.209
20	72	19	1.1	30.5	15	26000	6404	0.415	
25	25	37	7	0.3	4.30	2.95	22000	6805	0.021
	25	37	7	0.3	4.30	2.95	18000	6805.ZZ	0.021

**Deep groove ball bearings
(metric sizes)**



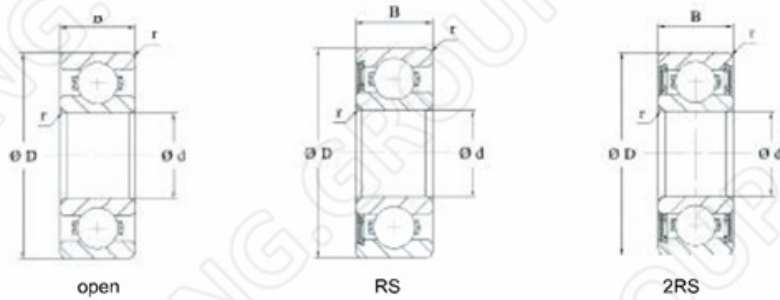
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{min}	dyn. C	stat. Co			
	mm								
25	25	37	7	0.3	4.30	2.95	10000	6805.2RS	0.021
	25	42	9	0.3	7.05	4.55	19000	6905	0.042
	25	42	9	0.3	7.05	4.55	16000	6905.ZZ	0.042
	25	42	9	0.3	7.05	4.55	10000	6905.2RS	0.042
	25	47	8	0.3	7.2	4.65	19000	16005	0.055
	25	47	12	0.6	10	5.85	36000	6005	0.08
	25	47	12	0.6	10	5.85	15000	6005.ZZ	0.083
	25	47	12	0.6	10	5.85	10000	6005.2RS	0.084
	25	52	15	1	14	7.8	17000	6205	0.128
	25	52	15	1	14	7.8	14000	6205.ZZ	0.132
	25	52	15	1	14	7.8	9000	6205.2RS	0.132
	25	52	18	1	14	7.8	9000	62205.2RS	0.156
	25	62	17	1.1	22.4	11.4	28000	6305	0.234
	25	62	17	1.1	22.4	11.4	11000	6305.ZZ	0.24
25	62	17	1.1	22.4	11.4	7500	6305.2RS	0.242	
25	62	24	1.1	22.4	11.4	7500	62305.2RS	0.272	
25	80	21	1.5	36	19.3	22000	6405	0.56	
30	30	42	7	0.3	4.50	3.45	18000	6806	0.024
	30	42	7	0.3	4.50	3.45	15000	6806.ZZ	0.024
	30	42	7	0.3	4.50	3.45	9000	6806.2RS	0.024

HMEC



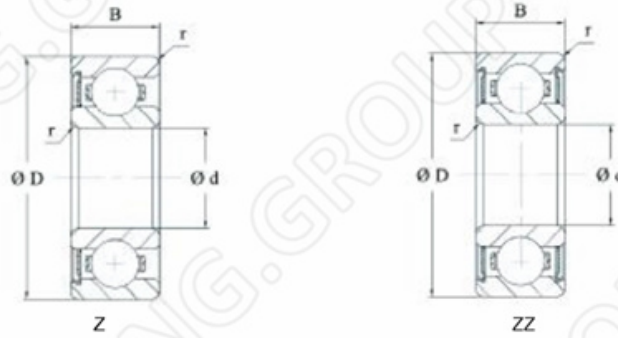
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
	mm								
30	30	47	9	0.3	7.25	5.00	17000	6906	0.052
	30	47	9	0.3	7.25	5.00	14000	6906.ZZ	0.052
	30	47	9	0.3	7.25	5.00	8500	6906.2RS	0.052
	30	55	9	0.3	11.2	7.35	16000	16006	0.082
	30	55	13	1	12.7	8	32000	6006	0.122
	30	55	13	1	12.7	8	13000	6006.ZZ	0.125
	30	55	13	1	12.7	8	8500	6006.2RS	0.125
	30	62	16	1	19.3	11.2	14000	6206	0.195
	30	62	16	1	19.3	11.2	11000	6206.ZZ	0.201
	30	62	16	1	19.3	11.2	7500	6206.2RS	0.201
	30	62	20	1	19.3	11.2	7500	62206.2RS	0.245
	30	72	19	1.1	29	16.3	24000	6306	0.355
	30	72	19	1.1	29	16.3	9500	6306.ZZ	0.363
	30	72	19	1.1	29	16.3	6300	6306.2RS	0.365
	30	72	27	1.1	29	16.3	6300	62306.2RS	0.499
30	90	23	1.5	42.5	23.2	19000	6406	0.76	
35	35	47	7	0.3	4.75	3.90	16000	6807	0.027
	35	47	7	0.3	4.75	3.90	13000	6807.ZZ	0.027
	35	47	7	0.3	4.75	3.90	7500	6807.2RS	0.027
	35	55	10	0.6	10.60	7.25	15000	6907	0.075

**Deep groove ball bearings
(metric sizes)**



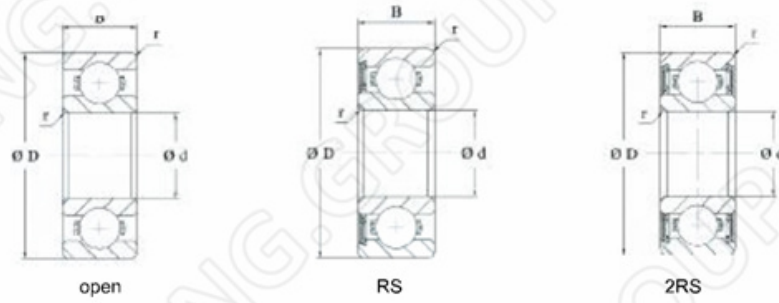
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s \min}$	dyn. C	stat. Co	HMEC	≈ kg	
	mm								
					kN		min ⁻¹		
35	35	55	10	0.6	10.60	7.25	12000	6907.ZZ	0.075
	35	55	10	0.6	10.60	7.25	7500	6907.2RS	0.075
	35	62	9	0.3	12.2	8.8	14000	16007	0.105
	35	62	14	1	16	10.2	28000	6007	0.157
	35	62	14	1	16	10.2	11000	6007.ZZ	0.163
	35	62	14	1	16	10.2	7500	6007.2RS	0.163
	35	72	17	1.1	25.5	15.3	24000	6207	0.291
	35	72	17	1.1	25.5	15.3	9500	6207.ZZ	0.299
	35	72	17	1.1	25.5	15.3	6300	6207.2RS	0.301
	35	72	23	1.1	25.5	15.3	6300	62207.2RS	0.393
	35	80	21	1.5	33.5	19	20000	6307	0.471
	35	80	21	1.5	33.5	19	8500	6307.ZZ	0.481
35	80	21	1.5	33.5	19	5600	6307.2RS	0.483	
35	80	31	1.5	33.5	19	5600	62307.2RS	0.687	
35	100	25	1.5	53	31.5	16000	6407	0.971	
40	40	52	7	0.3	4.90	4.35	14000	6808	0.031
	40	52	7	0.3	4.90	4.35	12000	6808.ZZ	0.031
	40	52	7	0.3	4.90	4.35	6700	6808.2RS	0.031
	40	62	12	0.6	13.70	10.00	13000	6908	0.112
	40	62	12	0.6	13.70	10.00	11000	6908.ZZ	0.112

HMEC



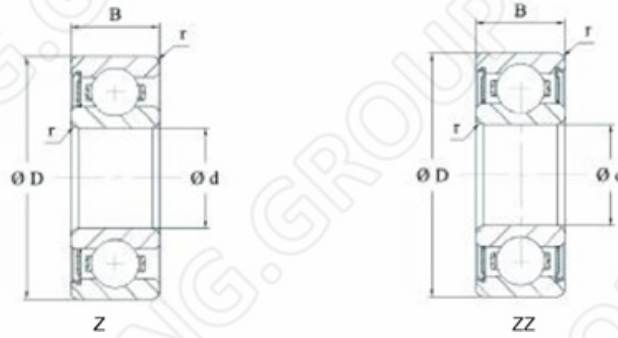
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
mm									
40	40	62	12	0.6	13.70	10.00	6300	6908.2RS	0.112
	40	68	9	0.3	13.2	10.2	13000	16008	0.12
	40	68	15	1	16.6	11.6	26000	6008	0.194
	40	68	15	1	16.6	11.6	10000	6008.ZZ	0.2
	40	68	15	1	16.6	11.6	6700	6008.2RS	0.202
	40	80	18	1.1	29	18	20000	6208	0.371
	40	80	18	1.1	29	18	8500	6208.ZZ	0.382
	40	80	18	1.1	29	18	5600	6208.2RS	0.384
	40	80	23	1.1	29	18	5600	62208.2RS	0.477
	40	90	23	1.5	42.5	25	18000	6308	0.64
	40	90	23	1.5	42.5	25	7500	6308.ZZ	0.654
	40	90	23	1.5	42.5	25	5000	6308.2RS	0.654
40	90	33	1.5	42.5	25	5000	62308.2RS	0.903	
40	110	27	2	62	38	14000	6408	1.12	
45	45	58	7	0.3	5.35	5.25	13000	6809	0.038
	45	58	7	0.3	5.35	5.25	11000	6809.ZZ	0.038
	45	58	7	0.3	5.35	5.25	6000	6809.2RS	0.038
	45	68	12	0.6	14.10	10.90	12000	6909	0.126
	45	68	12	0.6	14.10	10.90	9500	6909.ZZ	0.126
	45	68	12	0.6	14.10	10.90	5600	6909.2RS	0.126

**Deep groove ball bearings
(metric sizes)**



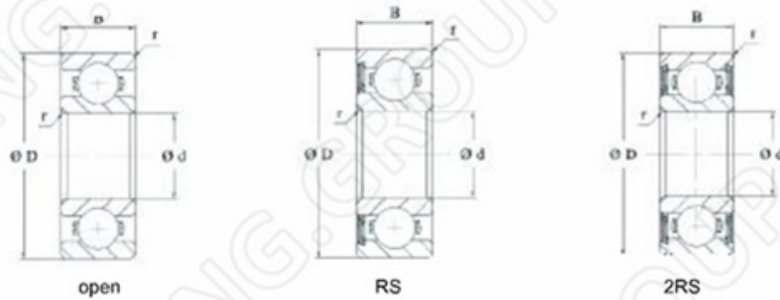
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{s min}	dyn. C	stat. Co			
	mm								
45	45	75	10	0.6	15.6	12.2	22000	16009	0.167
	45	75	16	1	20	14.3	22000	6009	0.247
	45	75	16	1	20	14.3	9000	6009.ZZ	0.253
	45	75	16	1	20	14.3	6000	6009.2RS	0.257
	45	85	19	1.1	31	20.4	19000	6209	0.429
	45	85	19	1.1	31	20.4	8000	6209.ZZ	0.441
	45	85	19	1.1	31	20.4	5300	6209.2RS	0.441
	45	85	23	1.1	31	20.4	5300	62209.2RS	0.522
	45	100	25	1.5	53	31.5	16000	6309	0.847
	45	100	25	1.5	53	31.5	6700	6309.ZZ	0.869
	45	100	25	1.5	53	31.5	4500	6309.2RS	0.867
	45	100	36	1.5	53	31.5	4500	62309.2RS	1.2
50	50	65	7	0.3	6.40	6.20	11000	6810	0.050
	50	65	7	0.3	6.40	6.20	9500	6810.ZZ	0.050
	50	65	7	0.3	6.40	6.20	5300	6810.2RS	0.050
	50	72	12	0.6	14.50	11.70	11000	6910	0.135
	50	72	12	0.6	14.50	11.70	9000	6910.ZZ	0.135
	50	72	12	0.6	14.50	11.70	5300	6910.2RS	0.135
	50	80	10	0.6	16	13.2	20000	16010	0.181

HMEC



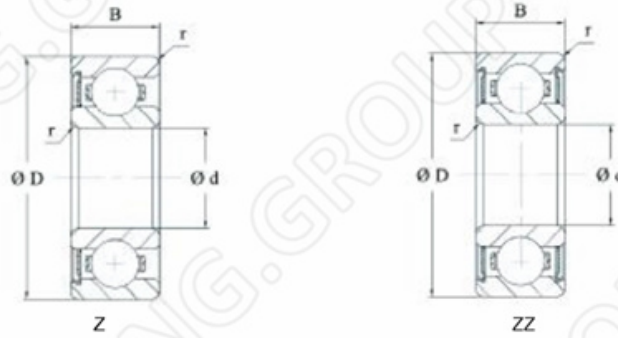
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
	mm								
50	50	80	16	1	20.8	15.6	20000	6010	0.272
	50	80	16	1	20.8	15.6	8500	6010.ZZ	0.282
	50	80	16	1	20.8	15.6	5600	6010.2RS	0.283
	50	90	20	1.1	36.5	24	18000	6210	0.466
	50	90	20	1.1	36.5	24	7500	6210.ZZ	0.478
	50	90	20	1.1	36.5	24	4800	6210.2RS	0.48
	50	90	23	1.1	36.5	24	4800	62210.2RS	0.543
	50	110	27	2	62	38	14000	6310	1.1
	50	110	27	2	62	38	6000	6310.ZZ	1.12
	50	110	27	2	62	38	4000	6310.2RS	1.12
	50	110	40	2	62	38	4000	62310.2RS	1.59
	50	130	31	2.1	81.5	52	12000	6410	1.96
55	55	72	9	0.3	8.80	8.50	10000	6811	0.081
	55	72	9	0.3	8.80	8.50	8500	6811.ZZ	0.081
	55	72	9	0.3	8.80	8.50	4800	6811.2RS	0.081
	55	80	13	1	16.00	13.30	9500	6911	0.189
	55	80	13	1	16.00	13.30	8000	6911.ZZ	0.189
	55	80	13	1	16.00	13.30	4500	6911.2RS	0.189
	55	90	11	0.6	19.3	16.3	18000	16011	0.266
	55	90	18	1.1	28.5	21.2	18000	6011	0.397

**Deep groove ball bearings
(metric sizes)**



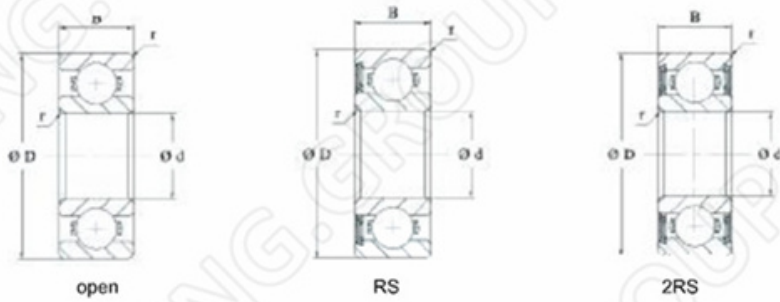
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s \min}$	dyn. C	stat. Co	HMEC	≈	
	mm				kN		min^{-1}		kg
55	55	90	18	1.1	28.5	21.2	7500	6011.ZZ	0.408
	55	90	18	1.1	28.5	21.2	5000	6011.2RS	0.41
	55	100	21	1.5	43	29	16000	6211	0.616
	55	100	21	1.5	43	29	6700	6211.ZZ	0.632
	55	100	21	1.5	43	29	4300	6211.2RS	0.632
	55	120	29	2	76.5	47.5	13000	6311	1.39
	55	120	29	2	76.5	47.5	5300	6311.ZZ	1.43
	55	120	29	2	76.5	47.5	3600	6311.2RS	1.43
	55	140	33	2.1	93	60	11000	6411	1.38
	60	60	78	10	0.3	11.50	10.90	9500	6812
60		78	10	0.3	11.50	10.90	8000	6812.ZZ	0.103
60		78	10	0.3	11.50	10.90	4500	6812.2RS	0.103
60		85	13	1	19.40	16.30	9000	6912	0.192
60		85	13	1	19.40	16.30	7500	6912.ZZ	0.192
60		85	13	1	19.40	16.30	4300	6912.2RS	0.192
60		95	11	0.6	20	17.6	17000	16012	0.283
60		95	18	1.1	29	23.2	17000	6012	0.419
60		95	18	1.1	29	23.2	7000	6012.ZZ	0.431
60		95	18	1.1	29	23.2	4500	6012.2RS	0.432
60		110	22	1.5	52	36	14000	6212	0.789
60		110	22	1.5	52	36	6000	6212.ZZ	0.807

HMEC



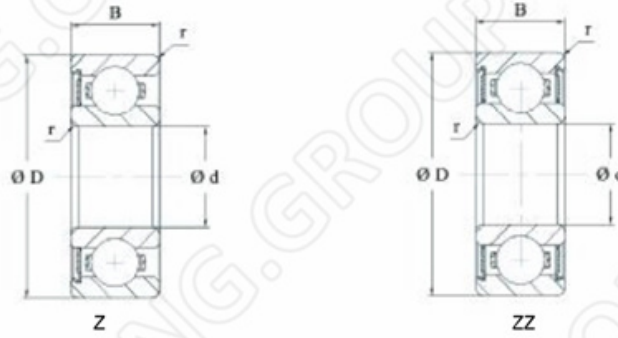
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s_{mn}}$	dyn. C	stat. Co	HMEC	≈	
	mm				kN			min ⁻¹	kg
60	60	110	22	1.5	52	36	4000	6212.2RS	0.809
	60	130	31	2.1	81.5	52	12000	6312	1.75
	60	130	31	2.1	81.5	52	5000	6312.ZZ	1.79
	60	130	31	2.1	81.5	52	3400	6312.2RS	1.79
	60	150	35	2.1	104	68	10000	6412	2.89
65	65	85	10	0.6	11.90	12.10	8500	6813	0.128
	65	85	10	0.6	11.90	12.10	7500	6813.ZZ	0.128
	65	85	10	0.6	11.90	12.10		6813.2RS	0.128
	65	90	13	1	17.40	16.10	8500	6913	0.218
	65	90	13	1	17.40	16.10	7100	6913.ZZ	0.218
	65	90	13	1	17.40	16.10	4000	6913.2RS	0.218
	65	100	11	0.6	21.2	19.6	16000	16013	0.302
	65	100	18	1.1	30.5	25	15000	6013	0.448
	65	100	18	1.1	30.5	25	6300	6013.ZZ	0.464
	65	100	18	1.1	30.5	25	4300	6013.2RS	0.463
	65	120	23	1.5	60	41.5	13000	6213	1
	65	120	23	1.5	60	41.5	5300	6213.ZZ	1.03
	65	120	23	1.5	60	41.5	3600	6213.2RS	1.03
	65	140	33	2.1	93	60	11000	6313	2.14
	65	140	33	2.1	93	60	4500	6313.ZZ	2.18
	65	140	33	2.1	93	60	3000	6313.2RS	2.18

**Deep groove ball bearings
(metric sizes)**



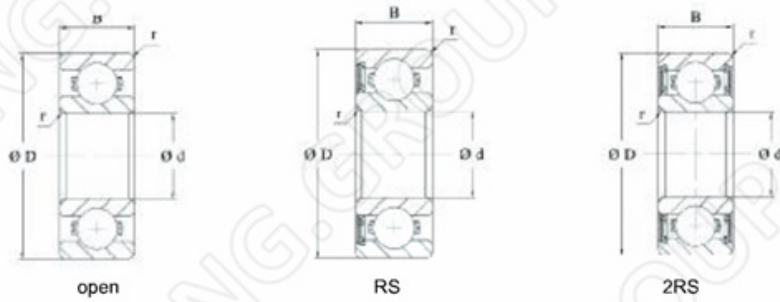
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s \text{ min}}$	dyn. C	stat. Co	HMEC	≈	
	mm				kN		min^{-1}		kg
65	65	160	37	2.1	114	76.5	9500	6413	3.49
70	70	90	10	0.6	12.10	12.70	8000	6814	0.134
	70	90	10	0.6	12.10	12.70	6700	6814.ZZ	0.134
	70	90	10	0.6	12.10	12.70		6814.2RS	0.134
	70	100	16	1	23.70	21.20	7500	6914	0.349
	70	100	16	1	23.70	21.20	6300	6914.ZZ	0.349
	70	100	16	1	23.70	21.20	3600	6914.2RS	0.349
	70	110	13	0.6	28	25	14000	16014	0.438
	70	110	20	1.1	38	31	14000	6014	0.622
	70	110	20	1.1	38	31	6000	6014.ZZ	0.642
	70	110	20	1.1	38	31	4000	6014.2RS	0.64
	70	125	24	1.5	62	44	12000	6214	1.09
	70	125	24	1.5	62	44	5000	6214.ZZ	1.11
	70	125	24	1.5	62	44	3400	6214.2RS	1.11
	70	150	35	2.1	104	68	10000	6314	2.61
	70	150	35	2.1	104	68	4300	6314.ZZ	2.66
70	150	35	2.1	104	68	2800	6314.2RS	2.66	
70	180	42	3	132	96.5	8500	6414	5.06	
75	75	95	10	0.6	12.50	13.90	7500	6815	0.149
	75	95	10	0.6	12.50	13.90	6300	6815.ZZ	0.149

HMEC



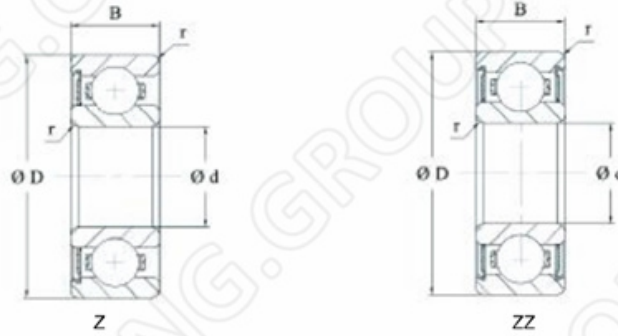
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. C ₀			
	mm								
75	75	105	16	1	24.40	22.60	7100	6915	0.364
	75	105	16	1	24.40	22.60	6000	6915.ZZ	0.364
	75	115	13	0.6	28.5	27	13000	16015	0.463
	75	115	20	1.1	39	33.5	13000	6015	0.654
	75	115	20	1.1	39	33.5	5600	6015.ZZ	0.676
	75	115	20	1.1	39	33.5	3800	6015.2RS	0.678
	75	130	25	1.5	65.5	49	11000	6215	1.18
	75	130	25	1.5	65.5	49	4800	6215.ZZ	1.21
	75	130	25	1.5	65.5	49	3200	6215.2RS	1.21
	75	160	37	2.1	114	76.5	9500	6315	3.18
	75	160	37	2.1	114	76.5	4000	6315.ZZ	3.23
	75	190	45	3	132	96.5	8500	6415M	7.08
80	80	100	10	0.6	12.70	14.50	7100	6816	0.151
	80	100	10	0.6	12.70	14.50	6000	6816.ZZ	0.151
	80	110	16	1	25.00	24.00	6700	6916	0.391
	80	110	16	1	25.00	24.00	5600	6916.ZZ	0.391
	80	110	16	1	25.00	24.00	3200	6916.2RS	0.391
	80	125	14	0.6	32	31	13000	16016	0.609
	80	125	22	1.1	47.5	40	12000	6016	0.867
	80	125	22	1.1	47.5	40	5000	6016.ZZ	0.889

**Deep groove ball bearings
(metric sizes)**



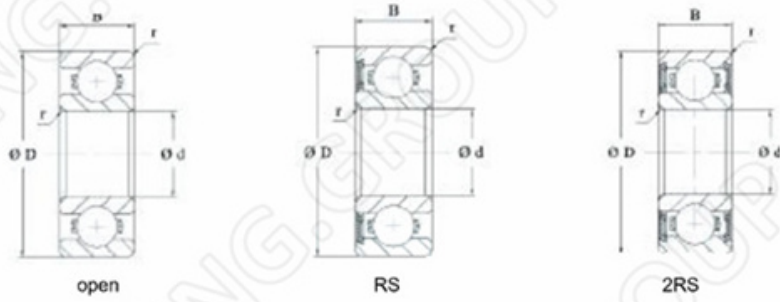
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing HMEC	Mass
	d	D	B	$r_{s_{mn}}$	dyn. C	stat. Co		≈	
	mm				kN		min^{-1}	kg	
80	80	140	26	2	72	53	11000	6216	1.46
	80	140	26	2	72	53	4500	6216.ZZ	1.49
	80	40	26	2	72	53	3000	6216.2RS	1.49
	80	170	39	2.1	122	86.5	9000	6316	3.75
	80	70	39	2.1	122	86.5	3800	6316.ZZ	3.82
	80	200	48	3	162	125	7500	6416M	8.29
85	85	110	13	1	18.70	20.00	6700	6817	0.263
	85	110	13	1	18.70	20.00	5600	6817.ZZ	0.263
	85	120	18	1.1	32.00	29.60	6300	6917	0.550
	85	120	18	1.1	32.00	29.60	5300	6917.ZZ	0.550
	85	130	14	0.6	34	33.5	12000	16017	0.666
	85	130	22	1.1	49	43	11000	6017	0.916
	85	130	22	1.1	49	43	4800	6017.ZZ	0.939
	85	150	28	2	83	64	10000	6217	1.87
	85	150	28	2	83	64	4300	6217.ZZ	1.91
	85	180	41	3	132	96.5	8000	6317	4.25
	85	180	41	3	132	96.5	3400	6317.ZZ	4.33
	85	210	52	4	173	137	7000	6417M	9.58

HMEC



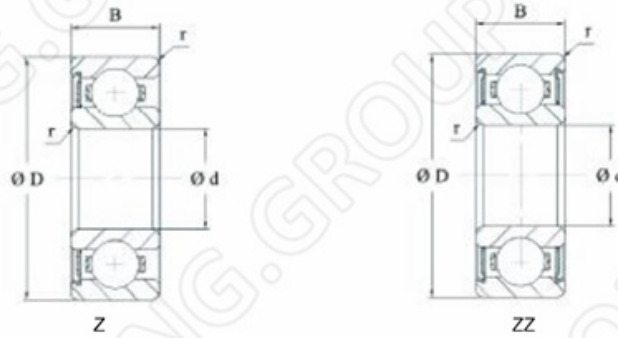
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s_{mn}}$	dyn. C	stat. Co	min^{-1}	HMEC	≈ kg
	mm								
90	90	115	13	1	19.00	21.00	6300	6818	0.276
	90	115	13	1	19.00	21.00	5300	6818.ZZ	0.276
	90	125	18	1.1	33.00	31.50	6000	6918	0.585
	90	125	18	1.1	33.00	31.50	5000	6918.ZZ	0.585
	90	125	18	1.1	33.00	31.50	2800	6918.2RS	0.585
	90	140	16	1	41.5	39	11000	16018	0.866
	90	140	24	1.5	58.5	50	11000	6018	1.21
	90	140	24	1.5	58.5	50	4500	6018.ZZ	1.23
	90	160	30	2	96.5	72	9000	6218	2.21
	90	160	30	2	96.5	72	3800	6218.ZZ	2.26
	90	190	43	3	134	102	8000	6318	5.43
	90	190	43	3	134	102	3400	6318.ZZ	5.53
	90	225	54	4	196	163	6700	6418M	11.7
	95	95	120	13	1	19.30	22.00	6000	6819
95		120	13	1	19.30	22.00	5000	6819.ZZ	0.297
95		130	18	1.1	33.50	33.50	5600	6919	0.601
95		130	18	1.1	33.50	33.50	4800	6919.ZZ	0.601
95		145	16	1	40	40.5	11000	16019	0.922
95		145	24	1.5	60	54	10000	6019	1.27

**Deep groove ball bearings
(metric sizes)**



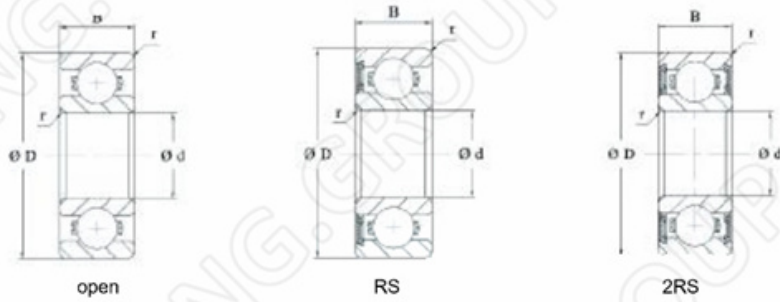
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	r_{mn}	dyn. C	stat. Co	HMEC	≈	
	mm				kN				min ⁻¹
95	95	170	32	2.1	108	81.5	8500	6219	2.73
	95	170	32	2.1	108	81.5	3600	6219.ZZ	2.79
	95	200	45	3	143	112	7500	6319	6.23
	95	200	45	3	143	112	3200	6319.ZZ	6.34
100	100	125	13	1	19.60	23.00	5600	6820	0.310
	100	125	13	1	19.60	23.00	4800	6820.ZZ	0.310
	100	140	20	1.1	43.00	42.00	5300	6920	0.828
	100	140	20	1.1	43.00	42.00	4500	6920.ZZ	0.828
	100	140	20	1.1	43.00	42.00	2600	6920.2RS	0.828
	100	150	16	1	44	44	10000	16020	0.956
	100	150	24	1.5	60	54	9500	6020	1.32
	100	150	24	1.5	60	54	4000	6020.ZZ	1.35
	100	180	34	2.1	122	93	8000	6220	3.3
	100	180	34	2.1	122	93	3400	6220.ZZ	3.36
	100	215	47	3	163	134	7000	6320	7.67
	100	215	47	3	163	134	3000	6320.ZZ	7.78
105	105	130	13	1	19.80	23.90	5600	6821	0.324
	105	130	13	1	19.80	23.90	4800	6821.ZZ	0.324
	105	145	20	1.1	42.50	42.00	5300	6921	0.856

HMEC



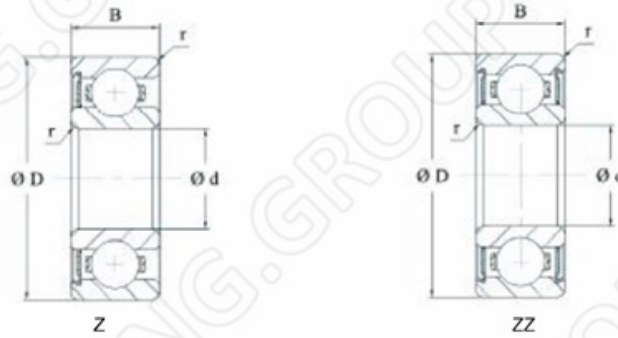
Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing	Mass
	d	D	B	$r_{s_{mn}}$	dyn. C	stat. Co	HMEC	≈	
	mm				kN			min ⁻¹	kg
105	105	145	20	1.1	42.50	42.00	4300	6921.ZZ	0.856
	105	160	18	1	54	54	9500	16021	1.24
	105	160	26	2	71	64	9000	6021	1.67
	105	160	26	2	71	64	3800	6021.ZZ	1.7
	105	190	36	2.1	132	104	7500	6221	3.88
	105	190	36	2.1	132	104	3200	6221.ZZ	3.99
	105	225	49	3	173	146	6700	6321	8.7
110	110	140	16	1	28.10	32.50	5300	6822	0.497
	110	140	16	1	28.10	32.50	4300	6822.ZZ	0.497
	110	150	20	1.1	43.50	44.50	5000	6922	0.893
	110	150	20	1.1	43.50	44.50	4300	6922.ZZ	0.893
	110	170	19	1	57	57	9000	16022	1.51
	110	170	28	2	80	71	8500	6022	2.06
	110	170	28	2	80	71	3600	6022.ZZ	2.11
	110	200	38	2.1	143	116	7000	6222	4.64
	110	200	38	2.1	143	116	3000	6222.ZZ	4.8
	110	240	50	3	190	166	6300	6322	10.3
	110	240	50	3	190	166	2600	6322.ZZ	10.5

**Deep groove ball bearings
(metric sizes)**



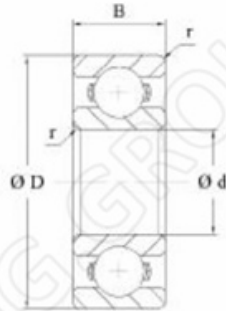
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass bearing ≈ kg
	d	D	B	r _{sn}	dyn. C	stat. C ₀			
mm	mm	mm	mm	mm	kN				
120	120	150	16	1	28.90	35.50	4800	6824	0.537
	120	150	16	1	28.90	35.50	4000	6824.ZZ	0.537
	120	165	22	1.1	53.00	54.00	4500	6924	1.21
	120	165	22	1.1	53.00	54.00	3800	6924.ZZ	1.21
	120	180	19	1	61	64	8000	16024	1.62
	120	180	28	2	83	78	8000	6024	2.18
	120	180	28	2	83	78	3400	6024.ZZ	2.23
	120	215	40	2.1	146	122	6700	6224	5.62
120	260	55	3	212	190	6000	6324	12.8	
130	130	165	18	1.1	37.00	44.00	4300	6826	0.758
	130	165	18	1.1	37.00	44.00	3600	6826.ZZ	0.758
	130	180	24	1.5	65.00	67.50	4000	6926	1.570
	130	180	24	1.5	65.00	67.50	3400	6926.ZZ	1.570
	130	200	22	1.1	78	81.50	7500	16026	2.41
	130	200	33	2	104	100	7000	6026	3.34
	130	200	33	2	104	100	3000	6026.ZZ	3.45
	130	230	40	3	165	146	6300	6226	6.24
	130	280	58	4	228	216	5600	6326M	18.3

HMEC



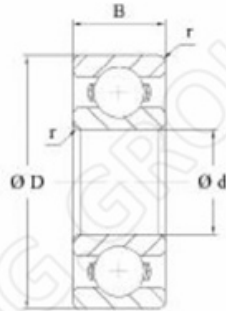
Shaft diameter	Dimensions				Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	dyn. C	stat. Co			
140	140	175	18	1.1	38.50	48.00	4000	6828	0.832
	140	175	18	1.1	38.50	48.00	3400	6828.ZZ	0.832
	140	190	24	1.5	66.50	72.00	3800	6928	1.67
	140	190	24	1.5	66.50	72.00	3200	6928.ZZ	1.67
	140	210	22	1.1	80	86.5	7000	16028	2.55
	140	210	33	2	108	108	6700	6028	3.57
	140	210	33	2	108	108	2800	6028.ZZ	3.65

**Deep groove ball bearings
(imperial sizes)**



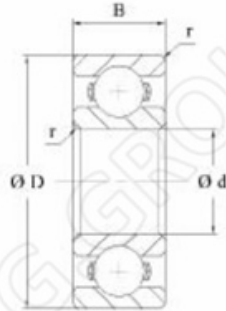
Dimensions			Load rating		Code bearing
d	D	B	dyn. C	stat. Co	HMEC
mm			kN		
3.175	9.525	3.969	0.64	0.22	R2
3.175	12.7	4.366	1.15	0.395	R2A
4.726	12.7	3.969	1.07	0.42	R3
6.35	15.875	4.978	1.47	0.6	R4
6.35	19.05	5.556	2.8	1.06	R4A
9.525	22.225	5.556	3.33	1.41	R6
12.7	28.575	6.35	5.11	2.38	R8
15.875	34.925	7.144	6.00	3.25	R10
19.05	41.275	7.938	9.37	5.02	R12
22.225	47.625	9.525	10.06	5.92	R14
25.4	50.8	9.525	14.02	7.93	R16
28.575	56.261	9.525	10.18	6.91	R18
31.75	57.15	9.525	10.71	7.53	R20
34.925	63.5	11.112	12.47	8.66	R22
38.1	66.675	11.112	12.47	8.66	R24
2.381	4.763	1.59	0.98	0.036	R133
3.175	6.350	2.38	0.156	0.058	R144
3.969	7.938	2.799	0.187	0.08	R155
4.762	7.938	2.779	0.187	0.08	R156
4.762	9.525	3.175	0.36	0.147	R166
6.35	9.525	3.175	0.187	0.089	R168
4.762	12.7	2.779	0.64	0.345	R186
6.35	12.7	3.175	0.55	0.25	R188
7.938	12.7	3.969	0.276	0.138	R1810
15.875	34.925	7.94	5.868	3.214	99502H
4.762	17.462	6.35	1.97	0.73	1601
6.35	17.462	6.35	1.97	0.73	1602
7.938	22.225	7.144	3.29	1.36	1603
9.525	22.225	7.144	3.33	1.41	1604
7.938	23.019	7.938	3.33	1.41	1605

HMEC



Dimensions			Load rating		Code bearing
d	D	B	dyn. C	stat. Co	HMEC
mm			kN		
9.525	23.019	7.938	3.33	1.41	1606
11.112	23.019	7.938	2.69	1.27	1607
9.525	28.575	9.525	5.11	2.39	1614
11.112	28.575	9.525	5.11	2.39	1615
12.7	28.575	9.525	5.11	2.39	1616
11.112	34.925	11.112	7.45	3.70	1620
12.7	34.925	11.112	7.45	3.70	1621
14.288	34.925	11.112	7.45	3.70	1622
15.875	34.925	11.112	7.45	3.70	1623
15.875	41.275	12.7	9.39	5.02	1628
19.05	41.275	12.7	9.39	5.02	1630
15.875	44.45	12.7	9.39	5.02	1633
19.05	44.45	12.7	9.39	5.02	1635
19.05	50.8	14.288	10.06	5.86	1638
22.225	50.8	14.288	10.06	5.86	1640
25.4	50.8	14.288	10.06	5.06	1641
28.575	63.5	15.875	12.30	8.53	1652
31.75	63.500	15.875	12.30	8.53	1654
31.750	65.088	17.462	14.90	10.04	1657
33.338	65.088	17.462	14.90	10.04	1658

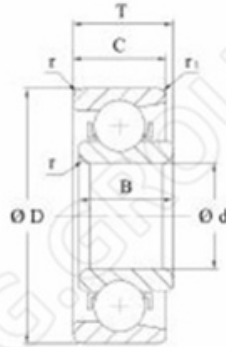
**Deep groove ball bearings
(imperial sizes)**



Shaft	Dimensions			Load rating		Limiting speed		Code bearing HMEC	Mass ≈ kg
	d	D	B	dyn. C	stat. Co	Grease	oil		
	mm			KN					
	15.875	39.688	11.112	7.34	4.74	17000	20000	RLS5	0.064
	19.05	47.625	14.288	9.88	6.65	15000	18000	RLS6	0.12
	22.225	50.80	14.288	11.67	7.94	14000	17000	RLS7	0.13
	25.4	57.15	15.875	12.78	9.44	11000	14000	RLS8	0.17
	28.575	63.5	15.875	14.96	11.31	10000	13000	RLS9	0.23
	31.75	69.85	17.462	13.64	11.2	9500	12000	RLS10	0.30
	34.925	76.2	17.462	19.77	15.59	9000	11000	RLS11	0.35
	38.1	82.55	19.05	25.09	19.84	8500	10000	RLS12	0.41
	15.875	46.038	15.875	8.87	5.51	16000	19000	RMS5	0.13
	19.05	50.8	17.462	12.26	7.88	13000	16000	RMS6	0.16
	22.225	57.15	17.462	15.97	10.5 1	2000	15000	RMS7	0.19
	25.4	63.5	19.05	17.3	11.51	12000	14000	RMS8	0.26
	28.575	71.438	20.638	21.73	15.82	9000	11000	RMS9	0.37
	31.75	79.375	22.225	25.75	18.33	8500	10000	RMS10	0.44
	34.925	88.9	22.225	31.35	24.01	7500	9000	RMS11	0.61
	38.1	95.25	23.812	35	25.4	7500	9000	RMS12	0.77

Magnetic ball bearings
 Series E
 EN
 BO
 L

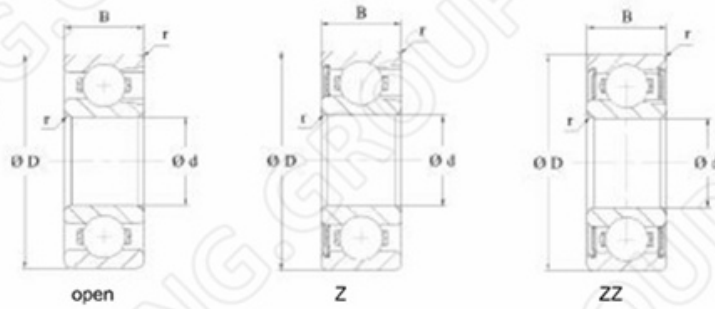
HMEC



Dimensions				Load rating		Limiting speed	Code bearing		Mass	
d	D	B	r _{min}	r _{1min} ⁽¹⁾	dyn. C	stat. Co	HMEC		≈	
mm					kN		E-series	EN-series	kg	
4	16	5	0.15	0.1	1.65	0.288	40000	E 4	EN 4	0.005
5	16	5	0.15	0.1	1.65	0.288	40000	E 5	EN 5	0.004
6	21	7	0.3	0.15	2.49	0.445	36000	E 6	EN 6	0.011
7	22	7	0.3	0.15	2.49	0.445	36000	E 7	EN 7	0.013
8	24	7	0.3	0.15	3.45	0.65	34000	E8	EN8	0.014
9	28	8	0.3	0.15	4.55	0.88	30000	E9	EN9	0.022
10	28	8	0.3	0.15	4.55	0.88	30000	E10	EN10	0.021
11	32	7	0.3	0.15	4.40	0.845	26000	E11	EN11	0.029
12	32	7	0.3	0.15	4.40	0.845	26000	E12	EN12	0.028
13	30	7	0.3	0.15	4.40	0.845	26000	EN13	EN13	0.021
14	35	8	0.3	0.15	5.80	1.15	22000		EN14	0.035
15	35	8	0.3	0.15	5.80	1.15	22000	E15	EN15	0.034
	40	10	0.6	0.3	7.40	1.50	20000	BO15		0.055
16	38	10	0.6	0.2	6.90	1.38	22000		EN16	0.049
17	40	10	0.6	0.3	7.40	1.50	20000	L17		0.051
	44	11	0.6	0.3	7.35	1.50	19000		EN17	0.080
	44	11	0.6	0.3	7.35	1.50	19000	BO17		0.080
18	40	9	0.6	0.2	5.05	1.03	20000		EN18	0.051
19	40	9	0.6	0.2	5.05	1.03	20000	E19	EN19	0.049
20	47	12	1	0.6	11.00	2.38	17000	E20	EN20	0.089
	47	14	1	0.6	11.00	2.38	17000	L20		0.101

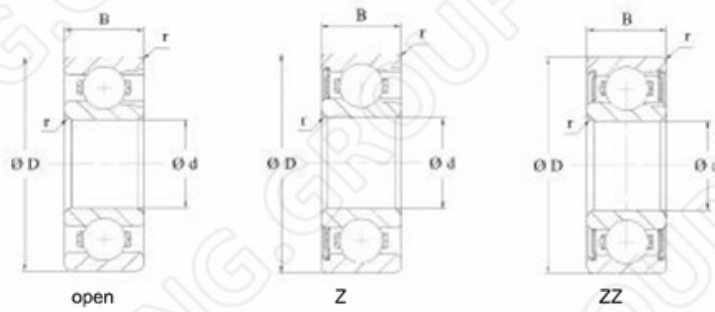
Full complement ball bearings

Series **BL2...**
BL3...



Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing HMEC	Mass ≈ kg
	d	D	B	$r_{\min}^{(1)}$	dyn. C	stat. Co	oil min^{-1}		
	mm								
25	25	52	15	1	17.00	10.50	15000	BL205	0.134
	25	62	17	1.1	25.40	15.50	13000	BL305	0.246
30	30	62	16	1	24.90	16.30	13000	BL206	0.215
	30	72	19	1.1	33.00	20.70	12000	BL306	0.364
35	35	72	17	1.1	33.00	22.10	11000	BL207	0.307
	35	80	21	1.5	44.00	29.10	10000	BL307	0.486
40	40	80	18	1.1	41.50	28.80	10000	BL208	0.394
	40	90	23	1.5	55.00	36.00	9000	BL308	0.685
45	45	85	19	1.1	44.00	32.00	9000	BL209	0.449
	45	100	25	1.5	65.50	44.00	8000	BL309	0.883
50	50	90	20	1.1	46.00	35.00	8500	BL210	0.504
	50	110	27	2	76.50	52.50	7500	BL310	1.14
55	55	100	21	1.5	57.00	44.00	7500	BL211	0.667
	55	120	29	2	88.50	61.50	6700	BL311	1.49
60	60	110	22	1.5	68.50	54.00	7100	BL212	0.856
	60	130	31	2.1	101.00	71.50	6300	BL312	1.88
65	65	120	23	1.5	75.00	60.00	6300	BL213	1.09
	65	140	33	2.1	121.00	89.50	6000	BL313	2.36

HMEC

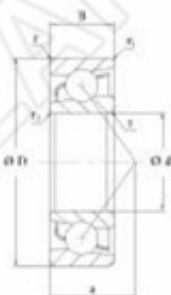


Shaft diameter	Dimensions				Load rating		Limiting speed	Code bearing HMEC	Mass ≈ kg
	d	D	B	$r_{\min}^{(1)}$	dyn. C	stat. Co			
	mm				kN		min^{-1}		
70	70	125	24	1.5	81.50	66.00	6300	BL214	1.19
	70	150	35	2.1	136.00	102.00	5300	BL314	2.87
75	75	130	25	1.5	85.00	72.00	5600	BL215	1.29
	75	160	37	2.1	149.00	116.00	5000	BL315	3.43
80	80	140	26	2	99.50	85.00	5300	BL216	1.61
	80	170	39	2.1	161.00	130.00	4800	BL316	4.08
85	85	150	28	2	110.00	93.00	5000	BL217	1.97
	85	180	41	3	174.00	145.00	4500	BL317	4.77
90	90	160	30	2	126.00	107.00	4300	BL218	2.43
	90	190	43	3	187.00	161.00	4300	BL318	5.44
95	95	170	32	2.1	143.00	123.00	4500	BL219	2.95
	95	200	45	3	200.00	178.00	3600	BL319	6.4

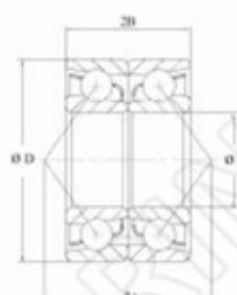
Angular-contact ball bearings



Angular Contact Ball Bearings
Single Row



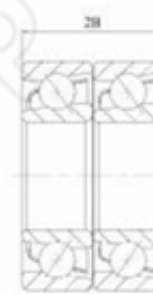
single



DB



DF



DT

HMEC

Shaft diameter	Dimensions			Basic load ratings (single type)		Limiting Speed (single type)		Working point
	d	D	B	dyn. C	stat. Co	grease	oil	
mm	mm			kN		min ⁻¹		≈
10	10	26	8	4.65	2.07	29000	39000	9
	10	30	9	5.45	2.74	28000	37000	10.5
	10	30	9	5.00	2.52	24000	32000	13
	10	35	11	9.35	4.40	26000	34000	12
	10	35	11	8.80	4.10	22000	29000	15
12	12	28	8	5.05	2.46	26000	35000	10
	12	32	10	7.15	3.60	25000	33000	11.5
	12	32	10	6.60	3.35	21000	28000	14
	12	37	12	11.2	5.25	23000	30000	13
	12	37	12	10.5	4.95	19000	26000	16.5
15	15	32	9	5.80	3.15	23000	31000	11.5
	15	35	11	9.05	4.70	22000	29000	12.5
	15	35	11	8.35	4.35	18000	25000	16
	15	42	13	13.5	7.20	19000	26000	15
	15	42	13	12.5	6.65	17000	22000	19
17	17	35	10	7.15	3.85	21000	28000	12.5
	17	40	12	12.0	6.60	19000	26000	14.5
	17	40	12	11.0	6.10	17000	22000	18
	17	47	14	15.9	8.65	18000	24000	16
	17	47	14	14.8	8.00	15000	20000	20.5
20	20	42	12	9.70	5.60	19000	25000	15
	20	47	14	14.5	8.40	17000	23000	17

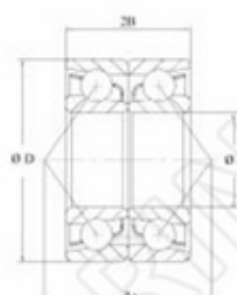
Basic load ratings (combined type)		Limiting Speed (combined type)		Code bearing HMEC (combined type)			Mass	
dyn. Cr	stat. Cor	grease	oil	DB	DF	DT		
kN		min ⁻¹		(single type)			≈	
							kg	
7.50	4.15	23000	31000	7000DB	7000DF	7000DT	7000	0.023
8.80	5.45	22000	30000	7200DB	7200DF	7200DT	7200	0.029
8.10	5.05	19000	26000	7200BDB	7200BDF	7200BDT	7200B	0.029
15.2	8.75	20000	27000	7300DB	7300DF	7300DT	7300	0.040
14.3	8.20	18000	24000	7300BDB	7300BDF	7300BDT	7300B	0.041
8.20	4.90	21000	28000	7001DB	7001DF	7001DT	7001	0.025
11.6	7.20	20000	26000	7201DB	7201DF	7201DT	7201	0.035
10.7	6.70	17000	23000	7201BDB	7201BDF	7201BDT	7201B	0.036
18.2	10.5	18000	24000	7301DB	7301DF	7301DT	7301	0.044
17.1	9.90	16000	21000	7301BDB	7301BDF	7301BDT	7301B	0.045
9.40	6.30	18000	24000	7002DB	7002DF	7002DT	7002	0.035
14.7	9.40	17000	23000	7202DB	7202DF	7202DT	7202	0.046
13.6	8.70	15000	20000	7202BDB	7202BDF	7202BDT	7202B	0.046
21.9	14.4	15000	21000	7302DB	7302DF	7302DT	7302	0.055
20.3	13.3	13000	18000	7302BDB	7302BDF	7302BDT	7302B	0.057
11.6	7.65	17000	22000	7003DB	7003DF	7003DT	7003	0.046
19.4	13.2	15000	21000	7203DB	7203DF	7203DT	7203	0.064
17.9	12.2	13000	18000	7203BDB	7203BDF	7203BDT	7203B	0.066
25.9	17.3	14000	19000	7303DB	7303DF	7303DT	7303	0.107
24.0	16.0	12000	16000	7303BDB	7303BDF	7303BDT	7303B	0.109
15.8	11.2	15000	20000	7004DB	7004DF	7004DT	7004	0.080
23.6	16.8	14000	18000	7204DB	7204DF	7204DT	7204	0.100

Angular Contact Ball Bearings
Single Row

HMEC



single



DB



DF



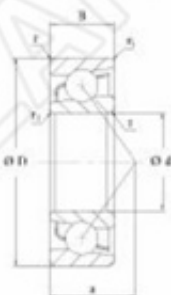
DT

Shaft diameter	Dimensions			Basic load ratings (single type)		Limiting Speed (single type)		Working point ≈
	d	D	B	dyn. Cr	stat. Cor	grease	oil	
	mm			kN		min ⁻¹		as
20	20	47	14	13.3	7.70	15000	20000	21.5
	20	52	15	18.7	10.4	16000	21000	18
	20	52	15	17.3	9.65	13000	18000	22.5
25	25	42	9	7.15	4.95	17000	22000	14
	25	47	12	10.7	6.85	16000	21000	16.5
	25	52	15	16.2	10.3	14000	19000	19
	25	52	15	14.8	9.40	12000	16000	24
	25	62	17	26.4	15.8	13000	17000	21
	25	62	17	24.4	14.6	11000	15000	27
30	30	47	9	7.55	5.75	14000	19000	15.5
	30	55	13	13.9	9.45	13000	18000	19
	30	62	16	22.5	14.8	12000	16000	21.5
	30	62	16	20.5	13.5	11000	14000	27.5
	30	72	19	33.5	22.3	11000	15000	24.5
	30	72	19	31.0	20.5	9600	13000	31.5
35	35	55	10	12.0	8.85	13000	17000	18
	35	62	14	17.5	12.6	12000	16000	21
	35	72	17	29.7	20.1	11000	14000	24
	35	72	17	27.1	18.4	9300	12000	31
	35	80	21	40.0	26.3	9800	13000	27
	35	80	21	36.5	24.2	8400	11000	34.5
40	40	62	12	12.7	10.2	11000	15000	20.5

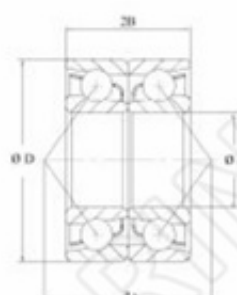
Basic load ratings (combined type)		Limiting Speed (combined type)		Code bearing HMEC (combined type)			Mass ≈	
dyn. Cr	stat. Cor	grease	oil	DB	DF	DT		
kN		min ⁻¹		(single type)			kg	
21.6	15.4	12000	16000	7204BDB	7204BDF	7204BDT	7204B	0.102
30.5	20.8	12000	17000	7304DB	7304DF	7304DT	7304	0.138
28.2	19.3	11000	14000	7304BDB	7304BDF	7304BDT	7304B	0.141
11.6	9.95	13000	18000	7905DB	7905DF	7905DT	7905	0.050
17.5	13.7	12000	17000	7005DB	7005DF	7005DT	7005	0.093
26.3	20.6	11000	15000	7205DB	7205DF	7205DT	7205	0.125
24.0	18.8	10000	13000	7205BDB	7205BDF	7205BDT	7205B	0.129
43.0	31.5	10000	14000	7305DB	7305DF	7305DT	7305	0.230
39.5	29.3	9100	12000	7305BDB	7305BDF	7305BDT	7305B	0.234
12.3	11.5	12000	15000	7906DB	7906DF	7906DT	7906	0.058
22.5	18.9	11000	14000	7006DB	7006DF	7006DT	7006	0.135
36.5	29.6	9800	13000	7206DB	7206DF	7206DT	7206	0.193
33.5	27.1	8600	11000	7206BDB	7206BDF	7206BDT	7206B	0.197
54.5	44.5	8900	12000	7306DB	7306DF	7306DT	7306	0.345
50.0	41.0	7700	10000	7306BDB	7306BDF	7306BDT	7306B	0.352
19.5	17.7	10000	13000	7907DB	7907DF	7907DT	7907	0.088
28.5	25.1	9400	13000	7007DB	7007DF	7007DT	7007	0.180
48.5	40.0	8600	11000	7207DB	7207DF	7207DT	7207	0.281
44.0	36.5	7500	10000	7207BDB	7207BDF	7207BDT	7207B	0.287
65.0	52.5	7800	10000	7307DB	7307DF	7307DT	7307	0.462
59.5	48.5	6800	9000	7307BDB	7307BDF	7307BDT	7307B	0.469
20.6	20.4	9000	12000	7908DB	7908DF	7908DT	7908	0.130

Angular Contact Ball Bearings
Single Row

HMEC



single



DB



DF



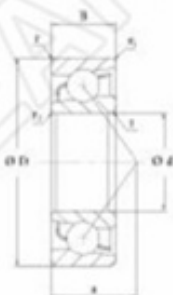
DT

Shaft diameter	Dimensions			Basic load ratings (single type)		Limiting Speed (single type)		Working point
	d	D	B	dyn. Cr	stat. Cor	grease	oil	
	mm			kN		min ⁻¹		s
40	40	68	15	18.8	14.6	10000	14000	23
	40	80	18	35.5	25.1	9600	13000	26.5
	40	80	18	32.0	23.0	8300	11000	34
	40	90	23	49.0	33.0	8500	12000	30.5
	40	90	23	45.0	30.5	7400	9900	39
45	45	68	12	15.7	12.9	10000	14000	22.5
	45	75	16	22.3	17.7	9500	13000	25.5
	45	85	19	39.5	28.7	8700	12000	28.5
	45	85	19	36.0	26.2	7400	9900	37
	45	100	25	63.5	43.5	7800	10000	33.5
	45	100	25	58.5	40.0	6600	8900	43
50	50	72	12	16.6	14.5	9200	12000	23.5
	50	80	16	23.7	20.1	8600	11000	27
	50	90	20	41.5	31.5	7900	10000	30
	50	90	20	37.5	28.6	6700	9000	39.5
	50	110	27	74.0	52.0	7100	9400	36.5
	50	110	27	68.0	48.0	6000	8100	47
55	55	80	13	17.3	16.1	8400	11000	26
	55	90	18	31.0	26.3	7900	11000	30
	55	100	21	51.0	39.5	7100	9500	33
	55	100	21	46.5	36.0	6100	8200	43
	55	120	29	86.0	61.5	6400	8600	40
	55	120	29	79.0	56.5	5500	7300	52

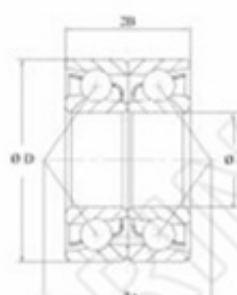
Basic load ratings (combined type)		Limiting Speed (combined type)		Code bearing HMEC (combined type)			Mass	
dyn. Cr	stat. Cor	grease	oil	DB	DF	DT		
kN		min ⁻¹		(single type)			kg	
30.5	29.2	8300	11000	7008DB	7008DF	7008DT	7008	0.222
57.5	50.5	7700	10000	7208DB	7208DF	7208DT	7208	0.355
52.0	46.0	6700	8900	7208BDB	7208BDF	7208BDT	7208B	0.375
79.5	66.0	6900	9200	7308DB	7308DF	7308DT	7308	0.625
73.0	60.5	6000	8000	7308BDB	7308BDF	7308BDT	7308B	0.636
25.5	25.7	8100	11000	7909DB	7909DF	7909DT	7909	0.150
36.0	35.5	7500	10000	7009DB	7009DF	7009DT	7009	0.282
64.5	57.5	6900	9200	7209DB	7209DF	7209DT	7209	0.404
58.5	52.5	6000	8000	7209BDB	7209BDF	7209BDT	7209B	0.410
103	87.0	6200	8200	7309DB	7309DF	7309DT	7309	0.837
95.0	80.5	5400	7200	7309BDB	7309BDF	7309BDT	7309B	0.854
27.0	28.9	7300	9800	7910DB	7910DF	7910DT	7910	0.157
38.5	40.0	6800	9100	7010DB	7010DF	7010DT	7010	0.306
67.0	63.0	6300	8300	7210DB	7210DF	7210DT	7210	0.457
60.5	57.0	5500	7300	7210BDB	7210BDF	7210BDT	7210B	0.466
121	104	5600	7500	7310DB	7310DF	7310DT	7310	1.09
111	96.0	4900	6500	7310BDB	7310BDF	7310BDT	7310B	1.11
28.1	32.0	6700	8900	7911DB	7911DF	7911DT	7911	0.214
50.5	52.5	6300	8400	7011DB	7011DF	7011DT	7011	0.447
83.0	79.0	5700	7600	7211DB	7211DF	7211DT	7211	0.600
75.0	72.0	5000	6600	7211BDB	7211BDF	7211BDT	7211B	0.612
139	123	5100	6800	7311DB	7311DF	7311DT	7311	1.39
128	113	4500	5000	7311BDB	7311BDF	7311BDT	7311B	1.42

Angular Contact Ball Bearings

Single Row



single



DB

Shaft diameter	Dimensions			Basic load ratings (single type)		Limiting Speed (single type)		Working point
	d	D	B	dyn. Cr	stat. Cor	grease	oil	
	mm			kN		min ⁻¹		s
60	60	85	13	18.1	17.4	7800	10000	27.5
	60	95	18	32.0	28.1	7200	9600	31.5
	60	110	22	61.5	49.0	6600	8800	36
	60	110	22	56.0	44.5	5700	7600	47.5
	60	130	31	98.0	71.5	5900	7900	43
	60	130	31	90.0	66.0	5100	6800	56
65	65	90	13	18.3	18.0	7200	9600	29
	65	100	18	33.5	31.5	6700	9000	33
	65	120	23	70.5	58.0	6100	8100	38
	65	120	23	63.5	52.5	5200	7000	50.5
	65	140	33	111	82.0	5500	7300	46
	65	140	33	102	75.5	4700	6300	59.5
70	70	100	16	26.2	26.2	6700	9000	32.5
	70	110	20	42.5	39.5	6200	8300	36
	70	125	24	76.5	63.5	5700	7600	40
	70	125	24	69.0	58.0	4900	6500	53
	70	150	35	125	93.5	5100	6800	49.5
	70	150	35	114	86.0	4400	5800	63.5
75	75	105	16	26.5	27.1	6300	8400	34
	75	115	20	43.5	41.5	5800	7800	37.5
	75	130	25	79.0	68.5	5300	7100	42.5
	75	130	25	71.5	62.0	4500	6000	56
	75	160	37	136	106	4800	6300	52.5
	75	160	37	125	97.5	4100	5400	68

HMEC



DF

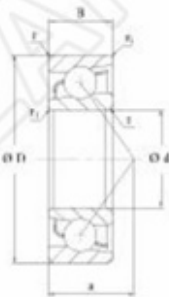


DT

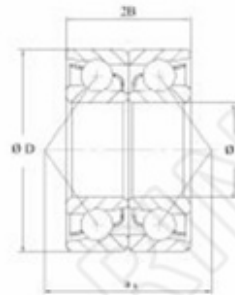
Basic load ratings (combined type)		Limiting Speed (combined type)		Code bearing HMEC (combined type)			Mass	
dyn. Cr	stat. Cor	grease	oil	DB	DF	DT		
kN		min ⁻¹		(single type)			kg	
29.3	35.0	6200	8300	7912DB	7912DF	7912DT	7912	0.230
52.0	56.0	5800	7700	7012DB	7012DF	7012DT	7012	0.478
100	98.0	5300	7000	7212DB	7212DF	7212DT	7212	0.765
91.0	89.0	4600	6100	7212BDB	7212BDF	7212BDT	7212B	0.780
169	143	4700	6300	7312DB	7312DF	7312DT	7312	1.74
146	132	4100	5500	7312BDB	7312BDF	7312BDT	7312B	1.77
29.7	36.0	5700	7600	7913DB	7913DF	7913DT	7913	0.245
55.0	62.5	5400	7100	7013DB	7013DF	7013DT	7013	0.509
114	116	4900	6500	7213DB	7213DF	7213DT	7213	0.962
103	105	4200	5600	7213BDB	7213BDF	7213BDT	7213B	0.981
180	164	4400	5800	7313DB	7313DF	7313DT	7313	2.11
166	151	3800	5100	7313BDB	7313BDF	7313BDT	7313B	2.15
42.5	52.5	5300	7100	7914DB	7914DF	7914DT	7914	0.397
69.5	78.5	5000	6600	7014DB	7014DF	7014DT	7014	0.705
124	127	4500	6000	7214DB	7214DF	7214DT	7214	1.09
112	116	3900	5200	7214BDB	7214BDF	7214BDT	7214B	1.11
203	187	4100	5400	7314DB	7314DF	7314DT	7314	2.56
186	172	3500	4700	7314BDB	7314BDF	7314BDT	7314B	2.61
43.0	54.0	5000	6700	7915DB	7915DF	7915DT	7915	0.420
71.0	83.5	4600	6200	7015DB	7015DF	7015DT	7015	0.745
128	137	4200	5600	7215DB	7215DF	7215DT	7215	1.17
116	124	3700	4900	7215BDB	7215BDF	7215BDT	7215B	1.19
221	212	3800	5000	7315DB	7315DF	7315DT	7315	3.07
202	195	3300	4400	7315BDB	7315BDF	7315BDT	7315B	3.13

Angular Contact Ball Bearings
Single Row

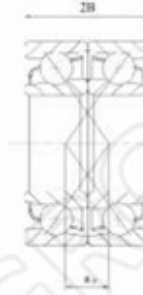
HMEC



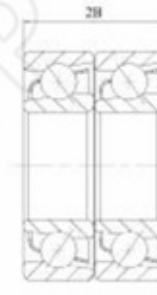
single



DB



DF

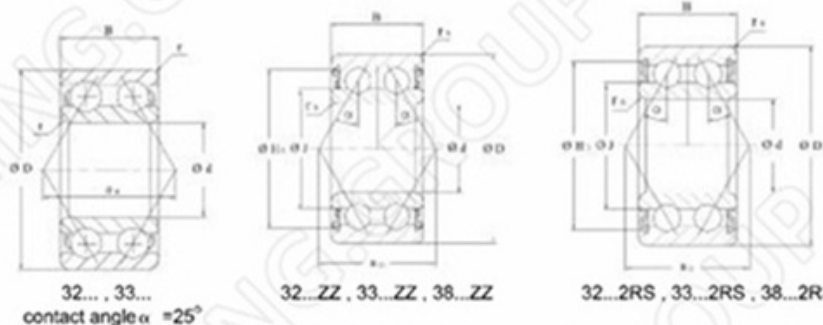


DT

Shaft diameter	Dimensions			Basic load ratings (single type)		Limiting Speed (single type)		Working point ≈
	d	D	B	dyn. Cr	stat. Cor	grease	oil	
mm	mm			kN		min ⁻¹		‰
80	80	110	16	26.9	28.0	5900	7800	35.5
	80	125	22	53.5	50.5	5500	7300	40.5
	80	140	26	89.0	76.0	5000	6600	45
	80	140	26	80.5	69.5	4300	5700	59
	80	170	39	147	119	4500	5900	55.5
	80	170	39	135	109	3800	5100	72
85	85	120	18	36.0	38.0	5500	7400	38.5
	85	130	22	54.5	53.5	5100	6900	42
	85	150	28	99.5	88.5	4700	6200	48
	85	150	28	90.0	80.5	4000	5300	63.5
	85	180	41	159	133	4200	5600	59
	85	180	41	146	122	3600	4800	76

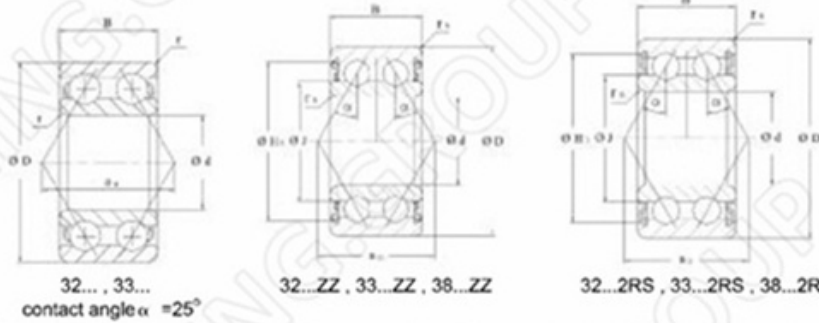
Basic load ratings (combined type)		Limiting Speed (combined type)		Code bearing HMEC (combined type)			Mass ≈	
dyn. Cr	stat. Cor	grease	oil	DB	DF	DT		
kN		min ⁻¹		(single type)			kg	
43.5	56.0	4700	6200	7916DB	7916DF	7916DT	7916	0.444
86.5	101	4400	5800	7016DB	7016DF	7016DT	7016	0.994
145	152	3900	5300	7216DB	7216DF	7216DT	7216	1.39
131	139	3400	4600	7216BDB	7216BDF	7216BDT	7216B	1.42
239	238	3500	4700	7316DB	7316DF	7316DT	7316	3.65
219	218	3100	4100	7316BDB	7316BDF	7316BDT	7316B	3.72
<hr/>								
59.0	76.0	4400	5900	7917DB	7917DF	7917DT	7917	0.628
89.0	107	4100	5500	7017DB	7017DF	7017DT	7017	1.04
162	177	3700	5000	7217DB	7217DF	7217DT	7217	1.78
146	161	3200	4300	7217BDB	7217BDF	7217BDT	7217B	1.82
258	265	3300	4500	7312DB	7312DF	7312DT	7312	4.34
236	244	2900	3900	7312BDB	7312BDF	7312BDT	7312B	4.43

Angular Contact Ball Bearings Double Row



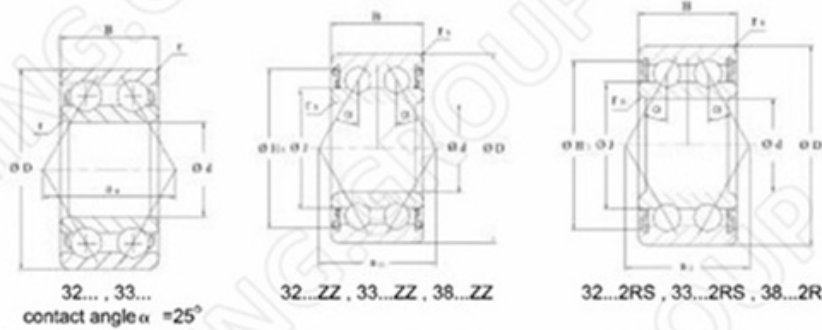
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _s mm	a°	dyn. C	stat. C ₀				
mm						≈	kN	min ⁻¹			
10	10	30	14	0.6	15	7.8	4.55	22000	24000	3200	0.05
	10	30	14	0.6	15	7.8	4.55	16000	24000	3200 ZZ	0.052
	10	19	7	0.3	8.1	2.1	1.4	22500	29200	3800 2RS	0.008
	10	19	7	0.3	8.1	2.1	1.4	22500	29200	3800 ZZ	0.008
12	12	32	15.9	0.6	17	10.6	5.85	20000	24000	3201	0.051
	12	32	15.9	0.6	17	10.6	5.85	15000	24000	3201 ZZ	0.053
	12	21	7	0.3	8.9	2.19	1.55	20000	20000	3801 2RS	0.008
	12	21	7	0.3	8.9	2.19	1.55	20000	20000	3801 ZZ	0.008
15	15	35	15.9	0.6	18	11.8	7.1	19000	20000	3202	0.065
	15	35	15.9	0.6	18	11.8	7.1	14000	20000	3202 ZZ	0.067
	15	35	15.9	0.6	18	11.8	7.1	12000	-	3202 2RS	0.067
	15	42	19	1	21	16.3	10	16000	14000	3302	0.124
	15	24	7	0.3	10	2.43	1.96	17500	16500	3802 2RS	0.009
	15	24	7	0.3	10	2.43	1.96	17500	16500	3802 ZZ	0.009
17	17	40	17.5	0.6	20	14.6	9	17000	18000	3203	0.093
	17	40	17.5	0.6	20	14.6	9	12000	18000	3203 ZZ	0.095
	17	40	17.5	0.6	20	14.6	9	10000	-	3203 2RS	0.095
	17	47	22.2	1	24	20.8	12.5	15000	13000	3303	0.177
	17	26	7	0.3	10.9	2.48	2.08	15000	14500	3803 2RS	0.015
	17	26	7	0.3	10.9	2.48	2.08	15000	14500	3803 ZZ	0.015
20	20	47	20.6	1	24	19.6	12.5	15000	16000	3204	0.154
	20	47	20.6	1	24	19.6	12.5	10000	16000	3204 ZZ	0.16

HMEC



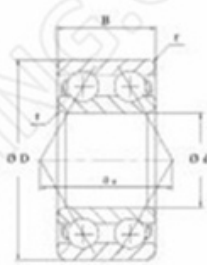
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	r _s mm	a°	dyn. C	stat. Co				
mm						≈	kN	min ⁻¹		HMEC	≈ kg
20	20	47	20.6	1	24	19.6	12.5	8500	-	3204 2RS	0.158
	20	52	22.2	1.1	26	23.2	15	13000	11000	3304	0.217
	20	52	22.2	1.1	26	23.2	15	9000	11000	3304 ZZ	0.222
	20	52	22.2	1.1	26	23.2	15	8000	-	3304 2RS	0.221
	20	32	10	0.3	14.3	5.6	4.85	13000	13000	3804 2RS	0.02
	20	32	10	0.3	14.3	5.6	4.85	13000	13000	3804 ZZ	0.02
25	25	52	20.6	1	26	21.2	14.6	12000	14000	3205	0.178
	25	52	20.6	1	26	21.2	14.6	8500	14000	3205 ZZ	0.182
	25	52	20.6	1	26	21.2	14.6	7500	-	3205 2RS	0.182
	25	62	25.4	1.1	31	30	20	10000	10000	3305	0.353
	25	62	25.4	1.1	31	30	20	7500	10000	3305 ZZ	0.359
	25	62	25.4	1.1	31	30	20	6700	-	3305 2RS	0.359
	25	37	10	0.3	15.9	6.0	5.6	11500	11500	3805 2RS	0.025
	25	37	10	0.3	15.9	6.0	5.6	11500	11500	3805 ZZ	0.025
30	30	62	23.8	1	31	30	21.2	9500	12000	3206	0.289
	30	62	23.8	1	31	30	21.2	7000	12000	3206 ZZ	0.295
	30	62	23.8	1	31	30	21.2	6300	-	3206 2RS	0.296
	30	72	30.2	1.1	36	41.5	28.5	8500	9000	3306	0.548
	30	72	30.2	1.1	36	41.5	28.5	6300	9000	3306 ZZ	0.558
	30	72	30.2	1.1	36	41.5	28.5	5600	-	3306 2RS	0.558
	30	42	10	0.3	32.8	6.3	6.1	10000	9500	3806 2RS	0.03
	30	42	10	0.3	32.8	6.3	6.1	10000	9500	3806 ZZ	0.03

Angular Contact Ball Bearings Double Row



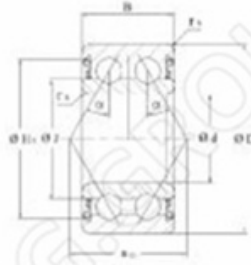
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	$r_{s \min}$	α°	dyn. C	stat. Co				
mm						≈ kN		min ⁻¹		HMEC	≈ kg
35	35	72	27	1.1	36	39	28.5	8500	11000	3207	0.445
	35	72	27	1.1	36	39	28.5	6300	11000	3207 ZZ	0.454
	35	72	27	1.1	36	39	28.5	5300	-	3207 2RS	0.454
	35	47	10	0.3	38.5	6.7	7.0	8500	9500	3807 2RS	0.035
	35	47	10	0.3	38.5	6.7	7.0	8500	9500	3807 ZZ	0.035
40	40	80	30.2	1.1	41	48	36.5	7500	10000	3208	0.594
	40	80	30.2	1.1	41	48	36.5	5600	10000	3208 ZZ	0.604
	40	80	30.2	1.1	41	48	36.5	4800	-	3208 2RS	0.605
	40	90	36.5	1.5	46	62	45	6700	7500	3308	0.984
	40	90	36.5	1.5	46	62	45	5000	7500	3308 ZZ	0.998
	40	90	36.5	1.5	46	62	45	4500	-	3308 2RS	0.998
	40	52	10	0.3	22.4	7.0	7.8	7000	7000	3808 2RS	0.04
40	52	10	0.3	22.4	7.0	7.8	7000	7000	3808 ZZ	0.04	
45	45	85	30.2	1.1	43	48	37.5	6700	9000	3209	0.627
	45	85	30.2	1.1	43	48	37.5	5000	9000	3209 ZZ	0.64
	45	85	30.2	1.1	43	48	37.5	4500	-	3209 2RS	0.64
	45	100	39.7	1.5	50	68	51	6000	7000	3309	1.34
	45	100	39.7	1.5	50	68	51	4000	-	3309 2RS	1.36
	45	58	10	0.3	24.2	7.2	8.3	6500	6300	3809 2RS	0.053
45	58	10	0.3	24.2	7.2	8.3	6500	6300	3809 ZZ	0.053	
50	50	90	30.2	1.1	45	51	42.5	6300	8000	3210	0.68
	50	90	30.2	1.1	45	51	42.5	4800	8000	3210 ZZ	0.692

HMEC

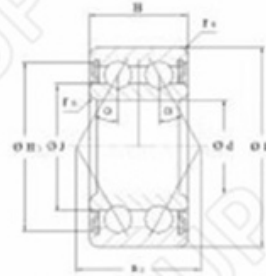


32... , 33...

contact angle $\alpha = 25^\circ$



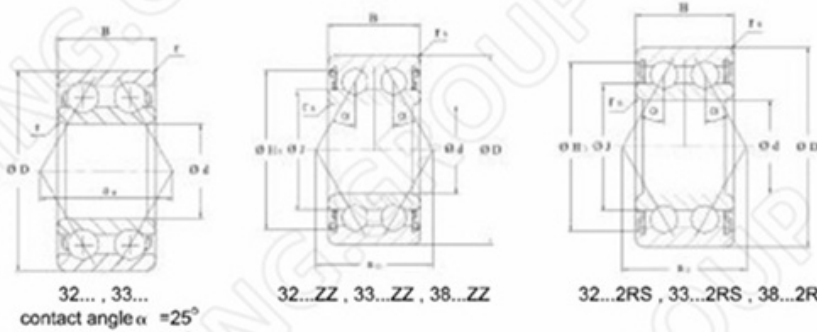
32...ZZ , 33...ZZ , 38...ZZ



32...2RS , 33...2RS , 38...2RS

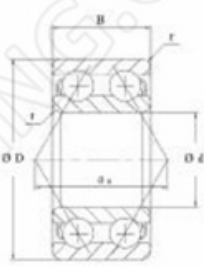
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	r_s	a°	dyn. C	stat. Co				
	mm					kN					
50	50	90	30.2	1.1	45	51	42.5	4000	-	3210 2RS	0.693
	50	110	44.4	2	55	81.5	62	5300	6700	3310	1.8
	50	65	12	0.3	27.1	8.7	10.4	6000	6000	3810 2RS	0.07
	50	65	12	0.3	27.1	8.7	10.4	6000	6000	3810 ZZ	0.07
55	55	100	33.3	1.5	50	58.5	49	5600	7500	3211	0.954
	55	100	33.3	1.5	50	58.5	49	3800	-	3211 2RS	0.969
	55	120	49.2	2	61	102	78	5000	6000	3311	2.32
	55	120	49.2	2	61	102	78	3800	6000	3311 ZZ	2.36
	55	120	49.2	2	61	102	78	3400	-	3311 2RS	2.35
	55	72	13	0.3	30.7	12.1	15.7	5500	5700	3811 2RS	0.09
55	72	13	0.3	30.7	12.1	15.7	5500	5700	3811 ZZ	0.09	
60	60	110	36.5	1.5	55	72	61	5000	7500	3212	1.27
	60	110	36.5	1.5	55	72	61	3800	7500	3212 ZZ	1.29
	60	110	36.5	1.5	55	72	61	3400	-	3212 2RS	1.29
	60	130	54	2.1	67	125	98	4500	5600	3312	2.92
	60	78	14	0.3	33.2	14.5	17.5	5000	5000	3812 2RS	0.14
	60	78	14	0.3	33.2	14.5	17.5	5000	5000	3812 ZZ	0.14
65	65	120	38.1	1.5	60	80	73.5	4500	6700	3213	1.64
	65	120	38.1	1.5	60	80	73.5	3000	-	3213 2RS	1.66
	65	140	58.7	2.1	71	143	112	4300	5300	3313	3.63

Angular Contact Ball Bearings Double Row

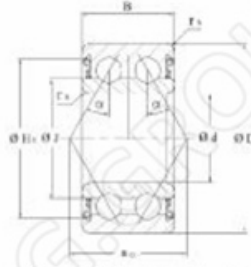


Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	r_s $r_{s\ min}$	a°	dyn. C	stat. Co				
mm						≈ kN		min^{-1}		HMEC	≈ kg
70	70	125	39.7	1.5	62	83	76.5	4500	6300	3214	1.8
	70	150	63.5	2.1	109	143	166	4000	4800	3314	5.03
	70	90	15	0.6	38.5	19.2	23.8	4400	4400	3814 2RS	0.19
	70	90	15	0.6	38.5	19.2	23.8	4400	4400	3814 ZZ	0.19
75	75	130	41.3	1.5	65	91.5	85	4300	6000	3215	1.91
	75	160	68.3	2.1	117	163	193	3800	4300	3315	6.4
80	80	140	44.4	2	69	95	93	4000	5600	3216	2.45
	80	140	44.4	2	69	95	93	3000	5600	3216 ZZ	2.48
	80	170	68.3	2.1	123	176	212	3600	4000	3316	7.26
	80	100	15	0.6	42.2	19.6	25.5	4000	4000	3816 2RS	0.23
	80	100	15	0.6	42.2	19.6	25.5	4000	4000	3816 ZZ	0.23
85	85	150	49.2	2	106	112	150	3800	5000	3217	3.44
	85	180	73	3	131	190	228	3400	3800	3317	8.78
90	90	160	52.4	2	113	125	170	3600	4800	3218	4.22
	90	190	73	3	136	216	275	3200	3400	3318	9.23
95	95	170	55.6	2.1	120	140	186	3400	4500	3219	5.31
	95	200	77.8	3	143	220	285	3200	3200	3319	11.2

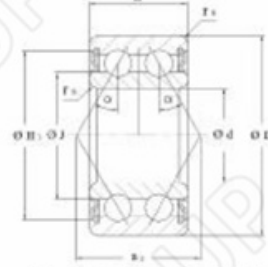
HMEC



32... , 33...
contact angle $\alpha = 25^\circ$



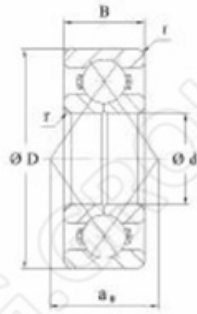
32...ZZ, 33...ZZ, 38...ZZ



32...2RS, 33...2RS, 38...2RS

Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	$r_{s \min}$	α°	dyn. C	stat. Co				
mm						≈ kN	min ⁻¹		HMEC	≈ kg	
100	100	180	60.3	2.1	127	160	224	3200	4300	3220	6.19
	100	215	82.6	3	153	236	320	3000	3000	3320	14.6
105	105	190	65.1	2.1	135	180	245	3200	4000	3221	7.78
110	110	200	69.8	2.1	144	190	260	3000	3800	3222	9.1
	110	240	92.1	3	171	280	400	2600	2600	3322	20.3

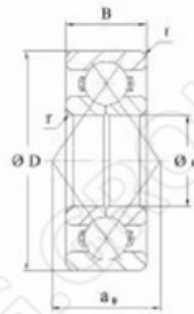
Four point contact ball bearings



contact angle $\alpha^\circ = 35^\circ$

Shaft diameter	Dimensions					Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{mn}	a _o	dyn. C	stat. C _o			
	mm					≈ kN				
20	20	52	15	1.1	26	30	19.6	28000	QJ304	0.184
	25	52	15	1	27	25.5	18.6			
25	25	62	17	1.1	31	44	31.5	14000	QJ305	0.256
	30	62	16	1	32	36.5	27.5			
30	30	72	19	1.1	36	58.5	43	11000	QJ306	0.379
	35	72	17	1.1	38	44	35.5			
35	35	80	21	1.5	41	62	51	9500	QJ307	0.504
	40	80	18	1.1	42	56	46.5			
40	40	90	23	1.5	46	86.5	68	8500	QJ308	0.70
	45	85	19	1.1	45	64	57			
45	45	100	25	1.5	51	102	83	7500	QJ309	0.934
	50	90	20	1.1	49	61	56			
50	50	110	27	2	56	110	91.5	11000	QJ310	1.39
	55	100	21	1.5	54	80	76.5			
55	55	120	29	2	61	127	108	10000	QJ311	1.76

HMEC



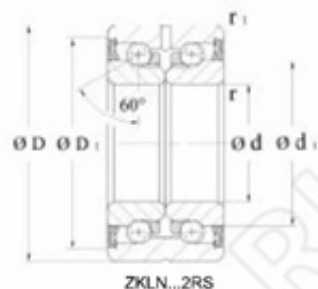
contact angle $\alpha^{\circ} = 35^{\circ}$

Shaft diameter	Dimensions					Load rating		Limiting speed min ⁻¹	Code bearing HMEC	Mass kg
	d	D	B	r _{mn}	a _o	dyn. C	stat. Co			
	mm					≈	kN			
60	60	110	22	1.5	60	96.5	93	6300	QJ212	0.89
	60	130	31	2.1	67	146	127	9000	QJ312	2.2
65	65	120	23	1.5	65	104	104	9500	QJ213	1.27
	65	140	33	2.1	72	163	146	8500	QJ313	2.71
70	70	125	24	1.5	68	118	122	5600	QJ214	1.42
	70	150	35	2.1	77	183	166	8000	QJ314	3.29
75	75	130	25	1.5	72	125	129	5300	QJ215	1.55
	75	160	37	2.1	82	212	204	7000	QJ315	3.96
80	80	140	26	2	77	132	137	8000	QJ216	1.84
	80	170	39	2.1	88	224	220	7000	QJ316	4.65
85	85	150	28	2	82	153	160	7000	QJ217	2.3
	85	180	41	3	93	245	255	6300	QJ317	5.54

High Precision Axial Angular Contact Ball Bearings For Guide Screw

Double direction
Series ZKLN...2RS
ZKLN...ZZ

HMEC



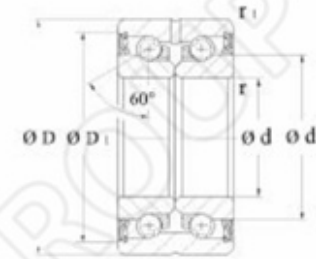
Shaft diameter	Dimensions							Basic Load rating	
	D	B	d ₁	D ₁	r	r ₁	dyn. C	stat. C ₀	
	-0.005 ^{h)}	-0.010 ^{h)}	-0.25		mm	mm	kN		
6	6	19	12	12	16.5	0.3	0.3	4.9	6.1
	6	24	15	14	19.5	0.3	0.6	6.9	8.5
8	8	32	20	19	26.5	0.3	0.6	12.5	16.3
	8	32	20	19	26.5	0.3	0.6	12.5	16.3
10	10	34	20	21	28.5	0.3	0.6	13.4	18.8
	10	34	20	21	28.5	0.3	0.6	13.4	18.8
12	12	42	25	25	33.5	0.3	0.6	17	24.7
	12	42	25	25	33.5	0.3	0.6	17	24.7
15	15	45	25	28	36	0.3	0.6	17.9	28
	15	45	25	28	36	0.3	0.6	17.9	28
17	17	47	25	30	38	0.3	0.6	18.8	31
	17	47	25	30	38	0.3	0.6	18.8	31
20	20	52	28	34.5	44	0.3	0.6	26	47
	20	52	28	34.5	44	0.3	0.6	26	47
25	25	57	28	40.5	49	0.3	0.6	27.5	55
	25	57	28	40.5	49	0.3	0.6	27.5	55
30	30	62	28	45.5	54	0.3	0.6	29	64
	30	62	28	45.5	54	0.3	0.6	29	64
35	35	72	34	52	63	0.3	0.6	41	89
	35	72	34	52	63	0.3	0.6	41	89
40	40	75	34	58	68	0.3	0.6	43	101
	40	75	34	58	68	0.3	0.6	43	101
50	50	90	34	72	82	0.3	0.6	46.5	126
	50	90	34	72	82	0.3	0.6	46.5	126
60	60	110	45	85	100	0.6	0.6	84	214
	60	110	45	85	100	0.6	0.6	84	214
70	70	120	45	95	110	0.6	0.6	88	241
	70	120	45	95	110	0.6	0.6	88	241
80	80	130	45	105	120	0.6	0.6	91	265
	80	130	45	105	120	0.6	0.6	91	265
90	90	150	55	120	138	0.6	0.6	135	395
	90	150	55	120	138	0.6	0.6	135	395
100	100	100	55	132	150	0.6	0.6	140	435
	100	100	55	132	150	0.6	0.6	140	435

Limiting speed n _G grease min ⁻¹	Bearing frictional torque M _{RL} Nm	Axial rigidity C _{aL} N/um	Tilting rigidity C _{kL} Nm/mrad	Code bearing HMEC	Mass ≈ kg
14000	0.01	150	4	ZKLN 0619.ZZ	0.02
6800	0.04	200	8	ZKLN 0624.2RS	0.03
12000	0.02	200	8	ZKLN 0624.ZZ	0.03
5100	0.08	250	20	ZKLN 0832.2RS	0.09
9500	0.04	250	20	ZKLN 0832.ZZ	0.09
4600	0.12	325	25	ZKLN 1034.2RS	0.1
8600	0.06	325	25	ZKLN 1034.ZZ	0.1
3800	0.16	375	50	ZKLN 1242.2RS	0.2
7600	0.08	375	50	ZKLN 1242.ZZ	0.2
3500	0.2	400	65	ZKLN 1545.2RS	0.21
7000	0.1	400	65	ZKLN 1545.ZZ	0.21
3300	0.24	450	80	ZKLN 1747.2RS	0.22
6600	0.12	450	80	ZKLN 1747.ZZ	0.22
3000	0.3	650	140	ZKLN 2052.2RS	0.31
5400	0.15	650	140	ZKLN 2052.ZZ	0.31
2600	0.4	750	200	ZKLN 2557.2RS	0.34
4700	0.2	750	200	ZKLN 2557.ZZ	0.34
2200	0.5	850	300	ZKLN 3062.2RS	0.39
4300	0.25	850	300	ZKLN 3062.ZZ	0.39
2000	0.6	900	400	ZKLN 3572.2RS	0.51
3800	0.3	900	400	ZKLN 3572.ZZ	0.51
1800	0.7	1000	550	ZKLN 4075.2RS	0.61
3300	0.35	1000	550	ZKLN 4075.ZZ	0.61
1500	0.9	1250	1000	ZKLN 5090.2RS	0.88
3000	0.45	1250	1000	ZKLN 5090.ZZ	0.88
3000	1	1300	1650	ZKLN 60110.ZZ	2.2
2800	1.2	1450	2250	ZKLN 70120.ZZ	2.4
2700	1.4	1600	3000	ZKLN 80130.ZZ	2.7
2300	2.3	1700	4400	ZKLN 90150.ZZ	4.5
2150	2.6	1900	5800	ZKLN 100160.ZZ	4.9

High Precision Axial Angular Contact Ball Bearings For Guide Screw

Double direction
Series ZKLN..2RSPE

HMEC



ZKLN..2RSPE

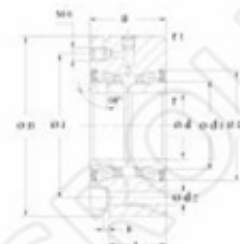
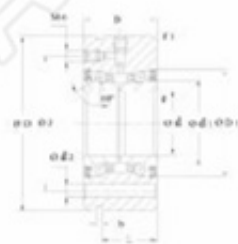
Shaft diameter	Dimensions							Basic Load rating	
	d	D	B	d ₁	D ₁	r	r ₁	dyn. C	stat. C ₀
	-0.005 ⁽¹⁾	-0.010 ⁽¹⁾	-0.25			min	max	kN	
6	6	24	15	14	19.5	0.3	0.6	6.9	8.5
10	10	34	20	21	28.5	0.3	0.6	13.4	18.8
12	12	42	25	25	33.5	0.3	0.6	17	24.7
15	15	45	25	28	36	0.3	0.6	17.9	28
17	17	47	25	30	38	0.3	0.6	18.8	31
20	20	52	28	34.5	44	0.3	0.6	26	47
25	25	57	28	40.5	49	0.3	0.6	27.5	55
30	30	62	28	45.5	54	0.3	0.6	29	64
50	50	90	34	72	82	0.3	0.6	46.5	126

Limiting speed n _G grease min ⁻¹	Bearing frictional torque M _{RL} Nm	Axial rigidity C _{aL} N/um	Tilting rigidity C _{kL} Nm/mrad	Code bearing HMEC	Mass ≈ kg
6800	0.04	200	8	ZKLN 0624.2RS PE	0.03
4600	0.12	325	25	ZKLN 1034.2RS PE	0.1
3800	0.16	375	50	ZKLN 1242.2RS PE	0.2
3500	0.2	400	65	ZKLN 1545.2RS PE	0.21
3300	0.24	450	80	ZKLN 1747.2RS PE	0.22
3000	0.3	650	140	ZKLN 2052.2RS PE	0.31
2600	0.4	750	200	ZKLN 2557.2RS PE	0.34
2200	0.5	850	300	ZKLN 3062.2RS PE	0.39
1500	0.9	1250	1000	ZKLN 5090.2RS PE	0.88

High Precision Axial Angular Contact Ball Bearings For Guide Screw

Double direction suitable for flange mounting
 Series ZKLF...2RS
 ZKLF...ZZ

HMEC



ZKLF...ZZ (60<d<100mm)

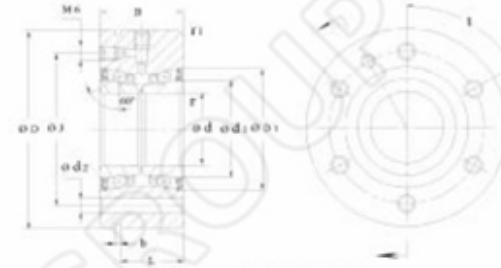
Shaft diameter	Dimensions										Pitch t	
	d	D	B	d ₁	D ₁	r	r ₁	J	d ₂	b		L
	-0.005 ^H	-0.010 ^H	-0.25			min	min				Quantity X1	
12	12	55	25	25	33.5	0.3	0.6	42	6.5	3	17	3X120 ⁰
15	15	60	25	28	36	0.3	0.6	46	6.5	3	17	3X120 ⁰
17	17	62	25	30	38	0.3	0.6	48	6.5	3	17	3X120 ⁰
20	20	68	28	34.5	44	0.3	0.6	53	6.5	3	19	4X90 ⁰
25	25	75	28	40.5	49	0.3	0.6	58	6.5	3	19	4X90 ⁰
30	30	80	28	45.5	54	0.3	0.6	63	6.5	3	19	6X60 ⁰
35	35	90	34	52	63	0.3	0.6	75	8.5	3	25	4X90 ⁰
40	40	100	34	58	68	0.3	0.6	80	8.5	3	25	4X90 ⁰
50	50	115	34	72	82	0.3	0.6	94	8.5	3	25	6X60 ⁰
60	60	145	45	85	100	0.6	0.6	120	8.5	3	35	8X45 ⁰
70	70	155	45	95	110	0.6	0.6	130	8.5	3	35	8X45 ⁰
80	80	165	45	105	120	0.6	0.6	140	8.5	3	35	8X45 ⁰
90	90	190	55	120	138	0.6	0.6	165	10.5	3	45	8X45 ⁰
100	100	200	55	132	150	0.6	0.6	175	10.5	3	45	8X45 ⁰

Basic Load rating dyn. C	stat. Co	Limiting speed n _G grease	Bearing frictional torque M _{RL}	Axial rigidity C _{aL}	Tilting rigidity C _{tL}	Code bearing HMEC	Mass ≈ kg
17	24.7	3800	0.16	375	50	ZKLF 1255.2RS	0.37
17	24.7	7600	0.08	375	50	ZKLF 1255.2Z	0.37
17.9	28	3500	0.2	400	65	ZKLF 1560.2RS	0.43
17.9	28	7000	0.1	400	65	ZKLF 1560.2Z	0.43
18.8	31	3300	0.24	450	80	ZKLF 1762.2RS	0.45
18.8	31	6600	0.12	450	80	ZKLF 1762.2Z	0.45
26	47	3000	0.3	650	140	ZKLF 2068.2RS	0.61
26	47	5400	0.15	650	140	ZKLF 2068.2Z	0.61
27.5	55	2600	0.4	750	200	ZKLF 2575.2RS	0.72
27.5	55	4700	0.2	750	200	ZKLF 2575.2Z	0.72
29	64	2200	0.5	850	300	ZKLF 3080.2RS	0.78
29	64	4300	0.25	850	300	ZKLF 3080.2Z	0.78
41	89	2000	0.6	900	400	ZKLF 3590.2RS	1.13
41	89	3800	0.3	900	400	ZKLF 3590.2Z	1.13
43	101	1800	0.7	1000	550	ZKLF 40100.2RS	1.46
43	101	3300	0.35	1000	550	ZKLF 40100.2Z	1.46
46.5	126	1500	0.9	1250	1000	ZKLF 50115.2RS	1.86
46.5	126	3000	0.45	1250	1000	ZKLF 50115.2Z	1.86
84	214	3000	1	1300	1650	ZKLF 60145.2Z	4.3
88	241	2800	1.2	1450	2250	ZKLF 70155.2Z	4.9
91	265	2700	1.4	1600	3000	ZKLF 80165.2Z	5.3
135	395	2300	2.3	1700	4400	ZKLF 90190.2Z	8.7
140	435	2150	2.6	1900	5800	ZKLF 100200.2Z	9.3

Axial Angular Contact Ball Bearings For Guide Screw

Double direction
Suitable for flange mounting with increased tolerances
Series ZKLF...2RS PE

HMEC



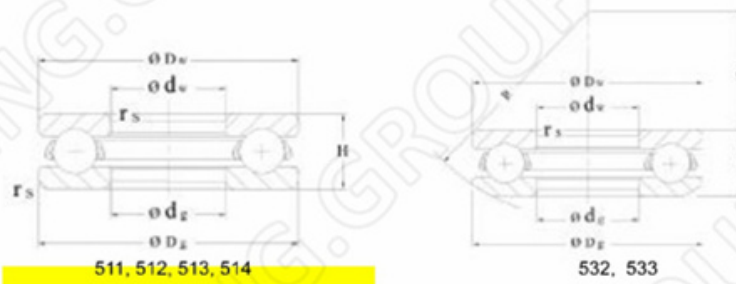
ZKLF...2RS PE

Shaft diameter	Dimensions										Pitch	
	d	D	B	d ₁	D ₁	r	r ₁	J	d ₂	b		L
	-0.005 ⁽³⁾	-0.010 ⁽⁴⁾	-0.25			min	min					Quantity X1
12	12	55	25	25	33.5	0.3	0.6	42	6.8	3	17	3X120°
15	15	60	25	28	36	0.3	0.6	46	6.8	3	17	3X120°
17	17	62	25	30	38	0.3	0.6	48	6.8	3	17	3X120°
20	20	68	28	34.5	44	0.3	0.6	53	6.8	3	19	4X90°
25	25	75	28	40.5	49	0.3	0.6	58	6.8	3	19	4X90°
30	30	80	28	45.5	54	0.3	0.6	63	6.8	3	19	6X60°
35	35	90	34	52	63	0.3	0.6	75	8.8	3	25	4X90°
40	40	100	34	58	68	0.3	0.6	80	8.8	3	25	4X90°
50	50	115	34	72	82	0.3	0.6	94	8.8	3	25	6X60°

Basic Load rating		Limiting speed n _G grease	Bearing frictional torque M _{RL}	Axial rigidity C _{aL}	Tilting rigidity C _{kL}	Code bearing HMEC	Mass ≈ kg
dyn. C	stat. C ₀						
kN	min ⁻¹	Nm	N/um	Nm/mrad			
17	24.7	3800	0.16	375	50	ZKLF 1255.2RS PE	0.37
17.9	28	3500	0.2	400	65	ZKLF 1560.2RS PE	0.43
18.8	31	3300	0.24	450	80	ZKLF 1762.2RS PE	0.45
26	47	3000	0.3	650	140	ZKLF 2068.2RS PE	0.61
27.5	55	2600	0.4	750	200	ZKLF 2575.2RS PE	0.72
29	64	2200	0.5	850	300	ZKLF 3080.2RS PE	0.78
41	89	2000	0.6	900	400	ZKLF 3590.2RS PE	1.13
43	101	1800	0.7	1000	550	ZKLF 40100.2RS PE	1.46
46.5	126	1500	0.9	1250	1000	ZKLF 50115.2RS PE	1.86

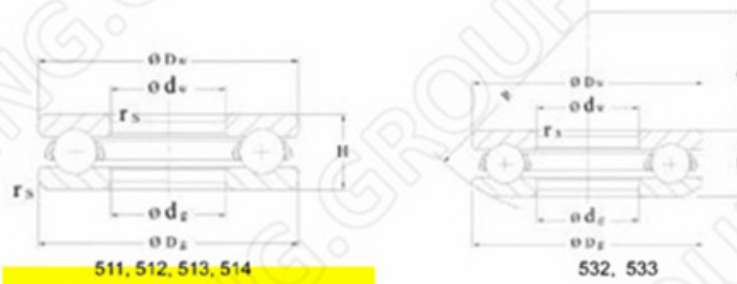
Thrust ball bearings

Thrust Ball Bearing



Shaft diameter	Dimensions						Load rating		Limiting speed min ⁻¹	Code Bearing HMEC	Mass Bearing ≈ kg	Seating washer
	d _w	d _g	D _e	D _g	H	r _{s min}	dyn. C	stat. Co				
	mm						kN					
10	10	11	24	24	9	0.3	10	14	9500	51100	0.018	
	10	12	26	26	11	0.6	12.7	17	8000	51200	0.029	
	10	12	26	26	11.6	0.6	12.7	17	8000	53200	0.028	0.01
12	12	13	26	26	9	0.3	10.4	15.3	9000	51101	0.021	
	12	14	28	28	11	0.6	13.2	19	8000	51201	0.032	
	12	14	28	28	11.4	0.6	13.2	19	8000	53201	0.036	0.012
15	15	16	28	28	9	0.3	9.3	14	8500	51102	0.022	
	15	17	32	32	12	0.6	16.6	25	6700	51202	0.043	
	15	17	32	32	13.3	0.6	16.6	25	6700	53202	0.045	0.014
17	17	18	30	30	9	0.3	9.6	15.3	8500	51103	0.026	
	17	19	35	35	12	0.6	17.3	27.5	6700	51203	0.05	
	17	19	35	35	13.2	0.6	17.3	27.5	6700	53203	0.052	0.015
20	20	21	35	35	10	0.3	12.7	20.8	7000	51104	0.038	
	20	22	40	40	14	0.6	22.4	37.5	5600	51204	0.076	
	20	22	40	40	14.7	0.6	22.4	37.5	5600	53204	0.095	0.02
25	25	26	42	42	11	0.6	15.6	29	6300	51105	0.058	
	25	27	47	47	15	0.6	28	50	5000	51205	0.114	
	25	27	47	47	16.7	0.6	28	50	5000	53205	0.121	0.032
	25	27	52	52	18	1	34.5	55	4300	51305	0.154	
	25	27	52	52	19.8	1	34.5	55	4300	53305	0.203	0.044

HMEC

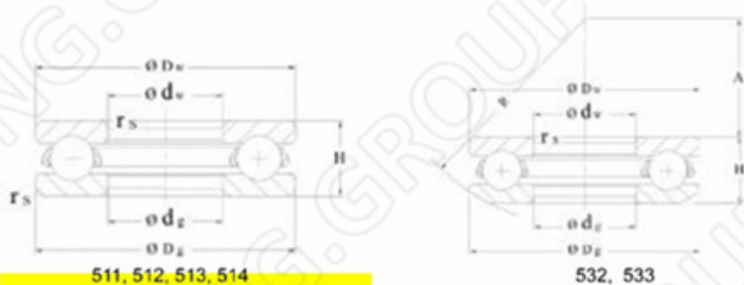


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532, 533

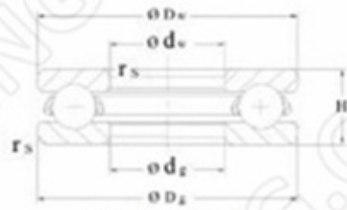
Shaft diameter	Dimensions						Load rating		Limiting speed min ⁻¹	Code Bearing HMEC	Mass Bearing ≈ kg	Seating washer
	d _s	d _e	D _e	D _g	H	r _s min	dyn. C	stat. Co				
	mm						kN					
25	25	27	60	60	24	1	51	80	3600	51405	0.363	
30	30	32	47	47	11	0.6	16.6	33.5	5600	51106	0.66	
	30	32	52	52	16	0.6	25	46.5	4800	51206	0.136	
	30	32	52	52	17.8	0.6	25	46.5	4800	53206	0.147	0.038
	30	32	60	60	21	1	38	65.5	4000	51306	0.244	
	30	32	60	60	22.6	1	38	65.5	4000	53306	0.303	0.056
	30	32	70	70	28	1	72	125	3200	51406	0.577	
35	35	37	52	52	12	0.6	17.6	37.5	5300	51107	0.085	
	35	37	62	62	18	1	35.5	67	4000	51207	0.198	
	35	37	62	62	19.9	1	35.5	67	4000	53207	0.265	0.057
	35	37	68	68	24	1	50	88	3600	51307	0.351	
	35	37	68	68	25.6	1	50	88	3600	53307	0.437	0.084
	35	37	80	80	32	1.1	86.5	156	3000	51407	0.855	
40	40	42	60	60	13	0.6	23.2	50	4500	51108	0.125	
	40	42	68	68	19	1	46.5	98	3800	51208	0.257	
	40	42	68	68	20.3	1	46.5	98	3800	53208	0.259	0.07
	40	42	78	78	26	1	61	112	3200	51308	0.536	
	40	42	78	78	28.5	1	61	112	3200	53308	0.561	0.12
	40	42	90	90	36	1.1	112	204	2400	51408	1.17	
45	45	47	65	65	14	0.6	24.5	57	4500	51109	0.148	
	45	47	73	73	20	1	39	80	3600	51209	0.279	
	45	47	73	73	21.3	1	39	80	3600	53209	0.278	0.087

Thrust Ball Bearing

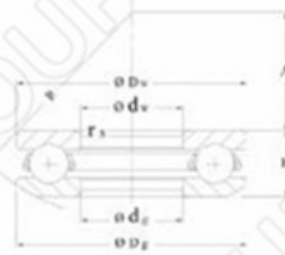


Shaft diameter	Dimensions						Load rating		Limiting speed min ⁻¹	Code Bearing HMEC	Mass Bearing ≈ kg	Seating washer
	d _s	d _e	D _e	D _g	H	r _{s min}	dyn. C	stat. Co				
	mm						kN					
45	45	47	85	85	28	1	75	140	3000	51309	0.612	
	45	47	85	85	30.1	1	75	140	3000	53309	0.783	0.17
	45	47	100	100	39	1.1	129	245	2200	51409	1.6	
50	50	52	70	70	14	0.6	25.5	63	4300	51110	0.165	
	50	52	78	78	22	1	50	106	3400	51210	0.346	
	50	52	78	78	23.5	1	50	106	3400	53210	0.341	0.098
	50	52	95	95	31	1.1	86.5	170	2800	51310	0.932	
	50	52	95	95	34.3	1.1	86.5	170	2800	53310	0.97	0.23
	50	52	110	110	43	1.5	156	310	2000	51410	2.18	
55	55	57	78	78	16	0.6	31	78	3800	51111	0.247	
	55	57	90	90	25	1	61	134	3200	51211	0.382	
	55	57	90	90	27.3	1	61	134	3200	53211	0.609	0.152
	55	57	105	105	35	1.1	102	208	2400	51311	1.3	
	55	57	105	105	39.3	1.1	102	208	2400	53311	1.38	0.28
	55	57	120	120	48	1.5	180	360	1800	51411	2.91	
60	60	62	85	85	17	1	36.5	93	3600	51112	0.817	
	60	62	95	95	26	1	62	140	3000	51212	0.649	
	60	62	95	95	28	1	62	140	3000	53212	0.655	0.16
	60	62	110	110	35	1.1	100	208	2200	51312	1.36	
	60	62	110	110	38.3	1.1	100	208	2200	53312	1.42	0.31
	60	62	130	130	51	1.5	200	400	1700	51412FP	3.7	
65	65	67	90	90	18	1	37.5	98	3400	51113	0.364	

HMEC



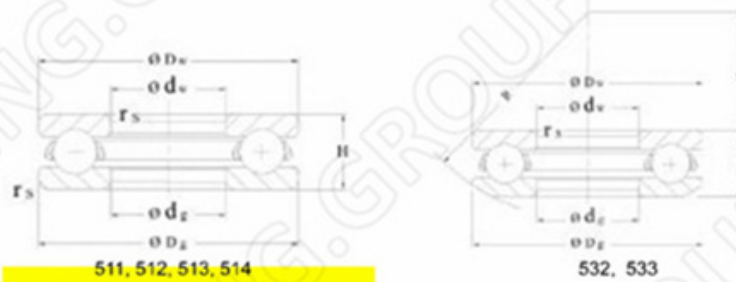
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532, 533

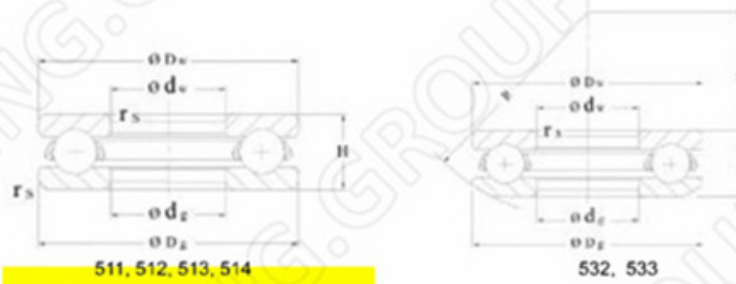
Shaft diameter	Dimensions						Load rating		Limiting speed min ⁻¹	Code Bearing HMEC	Mass kg	Seating washer
	d _s	d _e	D _e	D _g	H	r _s min	dyn. C	stat. Co				
	mm						kN					
65	65	67	100	100	27	1	64	150	3000	51213	0.684	
	65	67	100	100	28.7	1	64	150	3000	53213	0.855	0.18
	65	67	115	115	36	1.1	106	220	2200	51313	1.39	
	65	67	115	115	39.4	1.1	106	220	2200	53313	1.78	0.34
	65	68	140	140	56	2	216	450	1600	51413FP	4.67	
70	70	72	95	95	18	1	37.5	104	3400	51114	0.364	
	70	72	105	105	27	1	65.5	160	2800	51214	0.727	
	70	72	105	105	28.8	1	65.5	160	2800	53214	0.903	0.185
	70	72	125	125	40	1.1	137	300	1900	51314	1.91	
	70	72	125	125	44.2	1.1	137	300	1900	53314	2.01	0.41
	70	73	150	150	60	2	236	500	1600	51414FP	5.72	
75	75	77	100	100	19	1	44	137	3200	51115	0.528	
	75	77	110	110	27	1	67	170	2800	51215	0.819	
	75	77	110	110	28.3	1	67	170	2800	53215	1.01	0.21
	75	77	135	135	44	1.5	163	360	3800	51315	2.59	
	75	77	135	135	48.1	1.5	163	360	3800	53315	3.19	0.55
	75	78	160	160	65	2	250	560	1500	51415FP	7.06	
80	80	82	105	105	19	1	45	140	3200	51116	0.565	
	80	82	115	115	28	1	75	190	2600	51216	0.908	
	80	82	115	115	29.5	1	75	190	2600	53216	0.903	0.22
	80	82	140	140	44	1.5	160	360	3600	51316	2.69	
	80	82	140	140	47.8	1.5	160	360	3600	53316	2.75	0.57
	80	83	170	170	68	2.1	270	620	1400	51416FP	8.23	

Thrust Ball Bearing



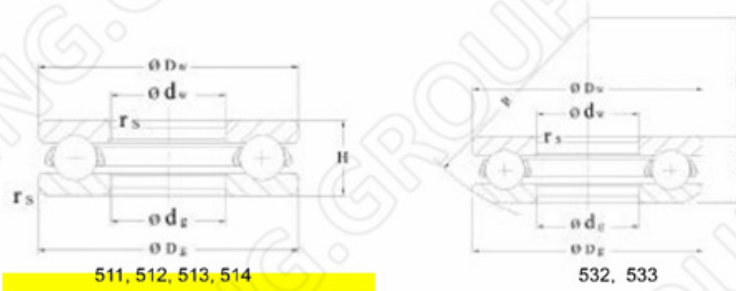
Shaft diameter	Dimensions						Load rating		Limiting speed min ⁻¹	Code Bearing HMEC	Mass kg	Seating washer
	d _s	d _e	D _e	D _o	H	r _s min	dyn. C	stat. C _o				
85	85	87	110	110	19	1	45.5	150	3200	51117	0.605	
	85	88	125	125	31	1	98	250	2200	51217	1.21	
	85	88	125	125	33.1	1	98	250	2200	53217	1.22	0.29
	85	88	150	150	49	1.5	186	415	1700	51317	3.48	
	85	88	150	150	53.1	1.5	186	415	1700	53317	3.51	0.81
	85	88	177	180	72	2.1	290	680	1300	51417FP	9.79	
90	90	92	120	120	22	1	60	190	2800	51118	0.892	
	90	93	135	135	35	1.1	118	300	2000	51218	1.66	
	90	93	135	135	38.5	1.1	118	300	2000	53218	1.7	0.42
	90	93	155	155	50	1.5	193	455	1700	51318	3.75	
	90	93	155	155	54.6	1.5	193	455	1700	53318	3.81	0.84
	90	93	187	190	77	2.1	305	750	1200	51418FP	11.6	
100	100	102	135	135	25	1	85	270	2200	51120	1.26	
	100	103	150	150	38	1.1	122	320	1900	51220	2.08	
	100	103	150	150	40.9	1.1	122	320	1900	53220	2.08	0.5
	100	103	170	170	55	1.5	240	585	1500	51320	4.94	
	100	103	170	170	59.2	1.5	240	585	1500	53320	4.99	0.95
	100	103	205	210	85	3	365	965	1000	51420FP	15.4	
110	110	112	145	145	25	1	86.5	290	2200	51122	1.45	
	110	113	160	160	38	1.1	129	360	1800	51222	2.26	
	110	113	160	160	40.2	1.1	129	360	1800	53222	2.23	0.56
	110	113	187	190	63	2	280	750	1400	51322MP	7.85	
	110	113	187	190	67.2	2	280	750	1400	53322MP	7.85	1.28
	110	113	225	230	95	3	415	1140	950	51422FP	20.8	

HMEC



Shaft diameter	Dimensions						Load rating		Limiting speed min^{-1}	Code Bearing HMEC	Mass kg	Seating washer
	d_s	d_g	D_e	D_g	H	$r_{s \text{ min}}$	dyn. C	stat. Co				
	mm						kN					
120	120	122	155	155	25	1	90	310	2000	51124	1.59	
	120	123	170	170	39	1.1	134	390	1700	51224	2.66	
	120	123	170	170	40.8	1.1	134	390	1700	53224	2.58	0.65
	120	123	205	210	70	2.1	325	915	1200	51324MP	9.3	
	120	123	205	210	74.1	2.1	325	915	1200	53324MP	9.18	2.1
	120	123	245	250	102	4	425	1220	900	51424FP	26.5	
130	130	132	170	170	30	1	112	390	1800	51126	2.28	
	130	133	187	190	45	1.5	183	540	1600	51226	3.75	
	130	133	187	190	47.9	1.5	183	540	1600	53226	3.69	0.9
	130	134	220	225	75	2.1	360	1060	1100	51326MP	13	
	130	134	265	270	110	4	520	1600	800	51426FP	32.8	
140	140	142	178	180	31	1	112	400	1800	51128	2.6	
	140	143	197	200	46	1.5	190	570	1500	51228	4.3	
	140	143	197	200	48.6	1.5	190	570	1500	53228	4.25	1.22
	140	144	235	240	80	2.1	405	1250	1000	51328MP	15.6	
150	150	152	188	190	31	1	110	400	1700	51130FP	2.26	
	150	153	212	215	50	1.5	236	735	1400	51230MP	6.08	
	150	153	212	215	53.3	1.5	236	735	1400	53230MP	5.95	1.69
	150	154	245	250	80	2.1	415	1340	950	51330MP	16.2	
	150	154	245	250	83.7	2.1	415	1340	950	53330MP	12.8	3.1
	150	154	295	300	120	4	560	1800	750	51430FP	43.1	
160	160	162	198	200	31	1	112	430	1700	51132FP	2.39	

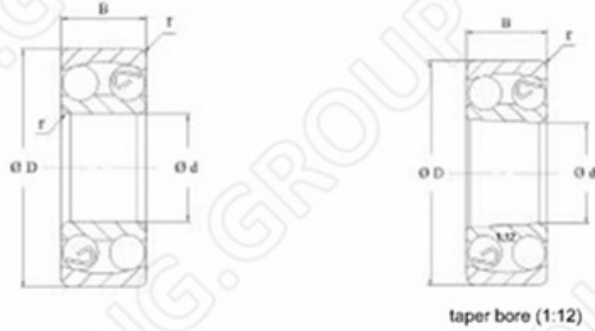
Thrust Ball Bearing



Shaft diameter	Dimensions						Load rating		Limiting speed	Code Bearing	Mass Bearing	Seating washer
	d_w	d_g	D_w	D_g	H	$r_{s \min}$	dyn. C	stat. Co				
	mm						kN		min^{-1}	HMEC	kg	
160	160	163	222	225	51	1.5	245	780	1400	51232MP	6.53	
	160	163	222	225	54.7	1.5	245	780	1400	53232MP	6.45	1.81
	160	164	265	270	87	3	455	1500	900	51332M	21.1	
170	170	172	213	215	34	1.1	132	500	1600	51134FP	3.08	
	170	173	237	240	55	1.5	285	930	1200	51234MP	8.12	
	170	173	237	240	58.7	1.5	285	930	1200	53234MP	7.91	2.14
	170	174	275	280	87	3	465	1630	900	51334M	24.1	
180	180	183	222	225	34	1.1	134	530	1500	51136FP	3.17	
	180	183	245	250	56	1.5	305	1040	1200	51236MP	8.55	
	180	183	245	250	58.2	1.5	305	1040	1200	53236MP	8.19	1.06
	180	184	295	300	95	3	520	1830	800	51336M	24.8	

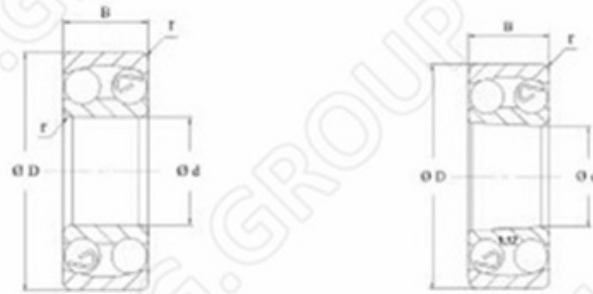
Self-aligning ball bearings

Self Aligning Ball Bearing



Shaft diameter	Dimensions				Load rating		Limiting speed		Code		Mass	
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor	min ⁻¹	Bearing HMEC		≈ kg		
	mm				kN		ng grease	ng Oil	Cylindrical Bore	Taper Bore	Cylindrical Bore	Taper Bore
10	10	30	9	0.6	5.50	1.19	21000	24000	1200	-	0.033	-
	10	30	14	0.6	7.30	1.59	19000	23000	2200	-	0.047	-
	10	35	11	0.6	7.25	1.62	18000	21000	1300	-	0.058	-
	10	35	17	0.6	10.1	2.15	17000	20000	2300	-	0.083	-
12	12	32	10	0.6	5.6	1.27	18000	22000	1201	-	0.04	-
	12	32	14	0.6	7.60	1.73	17000	20000	2201	-	0.051	-
	12	37	12	1	9.45	2.16	16000	18000	1301	-	0.066	-
	12	37	17	1	11.8	2.71	15000	17000	2301	-	0.091	-
15	15	35	11	0.6	7.45	1.75	16000	19000	1202	-	0.049	-
	15	35	14	0.6	7.70	1.85	15000	18000	2202	-	0.060	-
	15	42	13	1	9.55	2.30	13000	16000	1302	-	0.092	-
	15	42	17	1	12.0	2.90	13000	15000	2302	-	0.114	-
17	17	40	12	0.6	7.90	2.01	14000	17000	1203	-	0.072	-
	17	40	16	0.6	9.80	2.41	13000	16000	2203	-	0.088	-
	17	47	14	1	12.5	3.20	12000	14000	1303	-	0.218	-
	17	47	19	1	14.4	3.55	11000	14000	2303	-	0.156	-
20	20	47	14	1	9.90	2.61	13000	15000	1204	1204K	0.116	0.114
	20	47	18	1	12.6	3.30	12000	14000	2204	2204K	0.140	0.137
	20	52	15	1.1	12.4	3.35	11000	13000	1304	1304K	0.160	0.158
	20	52	21	1.1	18.1	4.70	10000	12000	2304	2304K	0.206	0.201

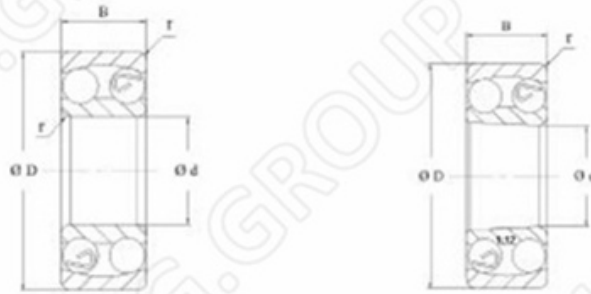
HMEC



taper bore (1:12)

Shaft diameter	Dimensions				Load rating		Limiting speed		Code		Mass	
	d	D	B	r _{min}	dyn. Cr	stat. Cor	min ⁻¹		Bearing HMEC		≈	
	mm			mm	kN		ng grease	ng Oil	Cylindrical Bore	Taper Bore	Cylindrical Bore	Taper Bore
25	25	52	15	1	12.1	3.30	11000	13000	1205	1205K	0.138	0.135
	25	52	18	1	12.3	3.45	10000	12000	2205	2205K	0.157	0.153
	25	62	17	1.1	18.0	5.00	9100	11000	1305	1305K	0.255	0.251
	25	62	24	1.1	24.4	6.60	8500	10000	2305	2305K	0.334	0.326
30	30	62	16	1	15.6	4.65	9200	11000	1206	1206K	0.217	0.213
	30	62	20	1	15.2	4.50	8600	10000	2206	2206K	0.256	0.250
	30	72	19	1.1	21.3	6.30	7700	9100	1306	1306K	0.383	0.377
	30	72	27	1.1	31.5	8.75	7200	8500	2306	2306K	0.496	0.485
35	35	72	17	1.1	15.8	5.10	8000	9400	1207	1207K	0.317	0.312
	35	72	23	1.1	21.5	6.60	7500	8800	2207	2207K	0.392	0.382
	35	80	21	1.5	25.1	7.85	6800	8000	1307	1307K	0.500	0.492
	35	80	31	1.5	39.5	11.3	6300	7400	2307	2307K	0.671	0.653
40	40	80	18	1.1	19.3	6.55	7100	8400	1208	1208K	0.414	0.407
	40	80	23	1.1	22.3	7.35	6700	7900	2208	2208K	0.493	0.482
	40	90	23	1.5	29.6	9.70	6000	7000	1308	1308K	0.709	0.698
	40	90	33	1.5	45.0	13.5	5600	6600	2308	2308K	0.918	0.895
45	45	85	19	1.1	21.9	7.35	6400	7500	1209	1209K	0.457	0.448
	45	85	23	1.1	23.2	8.15	6000	7100	2209	2209K	0.540	0.528
	45	100	25	1.5	38.0	12.7	5400	6300	1309	1309K	0.953	0.938
	45	100	36	1.5	54.0	16.7	5000	5900	2309	2309K	1.23	1.20

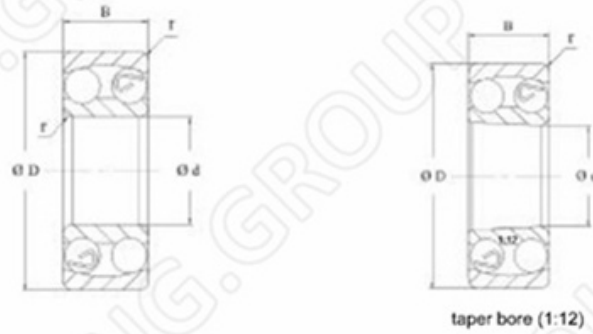
Self Aligning Ball Bearing



taper bore (1:12)

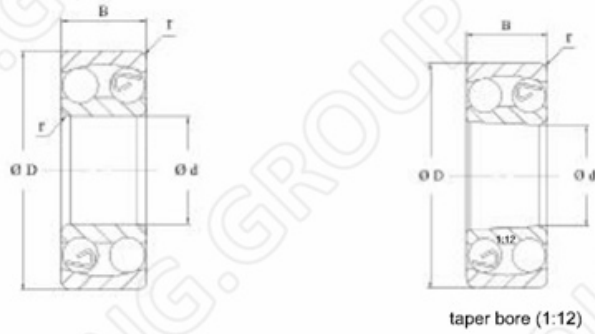
Shaft diameter	Dimensions				Load rating		Limiting speed		Code		Mass	
	d	D	B	r _s mm	dyn. Cr	stat. Cor	min ⁻¹	Bearing HMEC		≈ kg		
	mm				kN		ng grease	ng Oil	Cylindrical Bore	Taper Bore	Cylindrical Bore	Taper Bore
50	50	90	20	1.1	22.7	8.10	5800	6800	1210	1210K	0.515	0.504
	50	90	23	1.1	23.2	8.45	5500	6400	2210	2210K	0.583	0.569
	50	110	27	2	43.5	14.1	4900	5800	1310	1310K	1.20	1.18
	50	110	40	2	64.5	20.2	4600	5400	2310	2310K	1.63	1.59
55	55	100	21	1.5	26.8	10.0	5300	6200	1211	1211K	0.692	0.679
	55	100	25	1.5	26.5	9.90	5000	58000	2211	2211K	0.787	0.769
	55	120	29	2	51.5	17.9	4500	5200	1311	1311K	1.58	1.56
	55	120	43	2	75.5	24.0	4200	4900	2311	2311K	2.10	2.05
60	60	110	22	1.5	30.0	11.5	4900	5800	1212	1212K	0.879	0.864
	60	110	28	1.5	34.0	12.6	4600	5400	2212	2212K	1.08	1.06
	60	130	31	2.1	57.0	20.8	4100	4800	1312	1312K	1.96	1.93
	60	130	46	2.1	87.0	28.2	3800	4500	2312	2312K	2.59	2.52
65	65	120	23	1.5	31.0	12.5	4500	5300	1213	1213K	1.13	1.11
	65	120	31	1.5	43.5	16.4	4200	5000	1213	1213K	1.44	1.41
	65	140	33	2.1	62.0	22.9	3800	4500	1313	1313K	2.42	2.38
	65	140	48	2.1	96.0	32.5	3600	4200	2313	2313K	3.20	3.12
70	70	125	24	1.5	34.5	13.8	4200	4900	1214	-	1.24	-
	70	125	31	1.5	44.0	17.1	3900	4600	2214	-	1.52	-
	70	150	35	2.1	74.5	27.7	3500	4200	1314	-	2.99	-
	70	150	51	2.1	109	37.5	3300	3900	2314	-	3.92	-

HMEC



Shaft diameter	Dimensions				Load rating		Limiting speed		Code Bearing		Mass	
	d	D	B	r _{min}	dyn. Cr	stat. Cor	min ⁻¹		HMEC		≈ kg	
	mm				kN		ng grease	ng Oil	Cylindrical Bore	Taper Bore	Cylindrical Bore	Taper Bore
75	75	130	25	1.5	39.0	17.5	3900	4600	1215	1215K	1.33	1.31
	75	130	31	1.5	44.5	17.8	3700	4300	2215	2215K	1.58	1.54
	75	160	37	2.1	79.5	30.0	3300	3900	1315	1315K	3.55	3.50
	75	160	55	2.1	123	43.0	3100	3600	2315	2315K	4.78	4.66
80	80	140	26	2	40.0	17.0	3700	4300	1216	1216K	1.65	1.62
	80	140	33	2	48.5	19.9	3400	4000	2216	2216K	1.99	1.95
	80	170	39	2.1	88.5	33.0	3100	3600	1316	1316K	4.17	4.11
	80	170	58	2.1	128	45.0	2900	3400	2316	2316K	5.65	5.51
85	85	150	28	2	49.0	20.8	3500	4100	1217	1217K	2.06	2.03
	85	150	36	2	58.0	23.6	3200	3800	2217	2217K	2.54	2.49
	85	180	41	3	97.5	38.0	2900	3400	1317	1317K	4.96	4.89
	85	180	60	3	140	51.5	2700	3200	2317	2317K	6.55	6.39
90	90	160	30	2	57.0	23.5	3300	3800	1218	1218K	2.51	2.47
	90	160	40	2	70.0	28.7	3100	3600	2218	2218K	3.19	3.12
	90	190	43	3	116	44.5	2700	3200	1318	1318K	5.78	5.69
	90	190	64	3	152	57.5	2600	3000	2318	2318K	7.75	7.56
95	95	170	32	2.1	64.0	27.1	3100	3600	1219	1219K	3.10	3.05
	95	170	43	2.1	83.5	34.5	2900	3400	2219	2219K	3.89	3.80
	95	200	45	3	132	51.0	2600	3000	1319	1319K	6.69	6.59
	95	200	67	3	165	64.5	2400	2800	2319	2319K	9.05	8.83

Self Aligning Ball Bearing



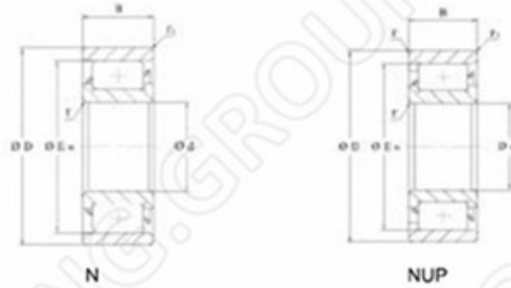
Shaft diameter	Dimensions				Load rating		Limiting speed		Code		Mass	
	d	D	B	r _{s min}	dyn. Cr	stat. Cor	min ⁻¹	Bearing HMEC		≈ kg		
	mm				kN		ng grease	ng Oil	Cylindrical Bore	Taper Bore	Cylindrical Bore	Taper Bore
100	100	180	34	2.1	69.0	29.7	2900	3400	1220	1220K	3.70	3.64
	100	180	46	2.1	94.0	38.5	2700	3200	2220	2220K	4.65	4.54
	100	215	47	3	143	57.5	2400	2900	1320	1320K	8.30	8.19
	100	215	73	3	192	79.0	2300	2700	2320	2320K	11.5	11.2
105	105	190	36	2.1	74.5	32.5	2800	3300	1221	-	4.34	-
	105	190	50	2.1	109	45.0	2600	3100	2221	-	6.07	-
	105	225	49	3	156	64.5	2300	2700	1321	-	10.0	-
	105	225	77	3	205	87.0	2200	2600	2321	-	13.2	-
110	110	200	38	2.1	80.5	35.5	2600	3100	1222	1222K	5.15	5.07
	110	200	53	2.1	124	51.5	2500	2900	2222	2222K	7.10	6.94
	110	240	50	3	164	71.5	2200	2600	1322	1322K	11.8	11.7
	110	240	80	3	217	94.5	2100	2400	2322	2322K	15.8	15.4

Cylindrical roller bearings



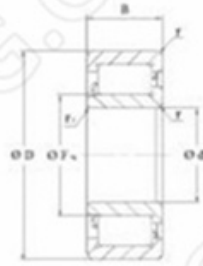
Cylindrical roller bearings

Series N..
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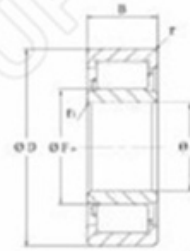


Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	r1, r2 min	r3, r4 min	dyn. Cr	stat. Cor	ng grease rpm	ng oil		
	mm										
15	15	35	11	0.6	0.3	12.7	10.4	18000	22000	N 202 E	0.047
	15	35	11	0.6	0.3	12.7	10.4	18000	22000	NU 202 E	0.047
	15	35	11	0.6	0.3	12.7	10.4	18000	22000	NJ 202 E	0.047
17	17	40	12	0.6	0.3	17.6	14.6	15000	18000	N 203 E	0.068
	17	40	12	0.6	0.3	17.6	14.6	15000	18000	NU 203 E	0.068
	17	40	12	0.6	0.3	17.6	14.6	15000	18000	NJ 203 E	0.068
	17	40	12	0.6	0.3	17.6	14.6	15000	18000	NUP 203 E	0.068
	17	40	16	0.6	0.3	24	22	15000	18000	NU 2203 E	0.091
	17	40	16	0.6	0.3	24	22	15000	18000	NJ 2203 E	0.091
	17	40	16	0.6	0.3	24	22	15000	18000	NUP 2203 E	0.091
	17	47	14	1.1	0.6	25.5	21.2	13000	16000	NU 303 E	0.120
	17	47	14	1.1	0.6	25.5	21.2	13000	16000	NJ 303 E	0.120
17	47	14	1.1	0.6	25.5	21.2	13000	16000	NUP 303 E	0.120	
20	20	47	14	1	0.6	27.5	24.5	13000	16000	N 204 E	0.132
	20	47	14	1	0.6	27.5	24.5	13000	16000	NU 204 E	0.132
	20	47	14	1	0.6	27.5	24.5	13000	16000	NJ 204 E	0.132
	20	47	14	1	0.6	27.5	24.5	13000	16000	NUP 204 E	0.132
	20	47	18	1	0.6	32.5	31	13000	16000	NU 2204 E	0.142
	20	47	18	1	0.6	32.5	31	13000	16000	NJ 2204 E	0.142
	20	47	18	1	0.6	32.5	31	13000	16000	NUP 2204 E	0.142
	20	52	15	1	0.6	31.5	27	11000	14000	N 304 E	0.151
	20	52	15	1	0.6	31.5	27	11000	14000	NU 304 E	0.151
	20	52	15	1	0.6	31.5	27	11000	14000	NJ 304 E	0.151
	20	52	15	1.1	0.6	31.5	27	11000	14000	NUP 304 E	0.150
	20	52	21	1.1	0.6	41.5	39	11000	14000	NU 2304 E	0.210
	20	52	21	1.1	0.6	41.5	39	11000	14000	NJ 2304 E	0.210

HMEC



NJ

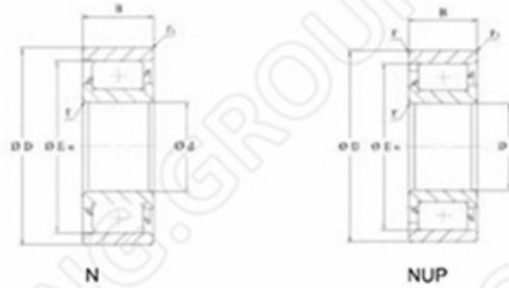


NU

Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{1,2} min	r _{3,4} min	dyn. Cr	stat. Cor	ng _{grease}	ng _{oil}		
	mm										
20	20	52	21	1.1	0.6	41.5	39	11000	14000	NUP 2304 E	0.210
25	25	47	12	0.6	0.3	13.4	12	14000	17000	NU 1005	0.083
	25	52	15	1	0.6	29	27.5	12000	15000	N 205 E	0.140
	25	52	15	1	0.6	29	27.5	12000	15000	NU 205 E	0.140
	25	52	15	1	0.6	29	27.5	12000	15000	NJ 205 E	0.140
	25	52	15	1	0.6	29	27.5	12000	15000	NUP 205 E	0.140
	25	52	18	1	0.6	34.5	35	12000	15000	NU 2205 E	0.160
	25	52	18	1	0.6	34.5	35	12000	15000	NJ 2205 E	0.160
	25	52	18	1	0.6	34.5	35	12000	15000	NUP 2205 E	0.160
	25	62	17	1.1	1.1	41.5	37.5	9500	12000	N 305 E	0.245
	25	62	17	1.1	1.1	41.5	37.5	9500	12000	NU 305 E	0.245
	25	62	17	1.1	1.1	41.5	37.5	9500	12000	NJ 305 E	0.245
	25	62	17	1.1	1.1	41.5	37.5	9500	12000	NUP 305 E	0.245
	25	62	24	1.1	1.1	57	56	9500	12000	NU 2305 E	0.350
	25	62	24	1.1	1.1	57	56	9500	12000	NJ 2305 E	0.350
	25	62	24	1.1	1.1	57	56	9500	12000	NUP 2305 E	0.350
	25	80	21	1.5	1.5	45	38	8500	10000	NU 405 M	0.625
	25	80	21	1.5	1.5	45	38	8500	10000	NJ 405 M	0.625
30	30	55	13	1	0.6	16.6	16	12000	15000	NU 1006	0.134
	30	62	16	1	0.6	39	37.5	9500	12000	N 206 E	0.210
	30	62	16	1	0.6	39	37.5	9500	12000	NU 206 E	0.210
	30	62	16	1	0.6	39	37.5	9500	12000	NJ 206 E	0.210
	30	62	16	1	0.6	39	37.5	9500	12000	NUP 206 E	0.210
	30	62	20	1	0.6	49	50	9500	12000	NU 2206 E	0.260
	30	62	20	1	0.6	49	50	9500	12000	NJ 2206 E	0.260
	30	62	20	1	0.6	49	50	9500	12000	NUP 2206 E	0.260

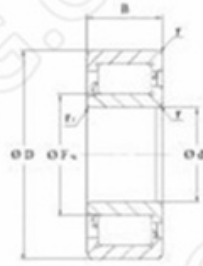
Cylindrical roller bearings

Series N..
 NU..
 NJ..
 NUP..

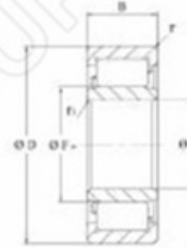


Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg		
	d	D	B	r1, r2 mm	r3, r4 mm	dyn. Cr	stat. Cor	ng grease			ng oil	
	mm											
30	30	72	19	1.1	1.1	51	48	8500	10000	N 306 E	0.370	
	30	72	19	1.1	1.1	51	48	8500	10000	NU 306 E	0.370	
	30	72	19	1.1	1.1	51	48	8500	10000	NJ 306 E	0.370	
	30	72	19	1.1	1.1	51	48	8500	10000	NUP 306 E	0.370	
	30	72	27	1.1	1.1	73.5	75	8500	10000	NU 2306 E	0.528	
	30	72	27	1.1	1.1	73.5	75	8500	10000	NJ 2306 E	0.528	
	30	72	27	1.1	1.1	73.5	75	8500	10000	NUP 2306 E	0.528	
	30	90	23	1.5	1.5	71	64	7000	8500	N 406 M	0.870	
	30	90	23	1.5	1.5	71	64	7000	8500	NU 406 M	0.870	
	30	90	23	1.5	1.5	71	64	7000	8500	NJ 406 M	0.870	
	30	90	23	1.5	1.5	71	64	7000	8500	NUP 406 M	0.870	
	35	35	62	14	1	0.6	23.6	24.5	10000	13000	NU 1007 M	0.180
		35	72	17	1.1	0.6	50	50	8500	10000	N 207 E	0.305
		35	72	17	1.1	0.6	50	50	8500	10000	NU 207 E	0.305
35		72	17	1.1	0.6	50	50	8500	10000	NJ 207 E	0.305	
35		72	17	1.1	0.6	50	50	8500	10000	NUP 207 E	0.305	
35		72	23	1.1	0.6	62	65.5	8500	10000	NU 2207 E	0.395	
35		72	23	1	0.6	62	65.5	8500	10000	NJ 2207 E	0.395	
35		72	23	1	0.6	62	65.5	8500	10000	NUP 2207 E	0.395	
35		80	21	1.1	1.5	64	63	7500	9000	N 307 E	0.485	
35		80	21	1.1	1.5	64	63	7500	9000	NU 307 E	0.485	
35		80	21	1.1	1.5	64	63	7500	9000	NJ 307 E	0.485	
35		80	21	1.1	1.5	64	63	7500	9000	NUP 307 E	0.485	
35		80	31	1.1	1.5	91.5	98	7500	9000	NU 2307 E	0.715	
35		80	31	1.1	1.5	91.5	98	7500	9000	NJ 2307 E	0.715	
35		80	31	1.1	1.5	91.5	98	7500	9000	NUP 2307 E	0.715	
35		100	25	1.5	1.5	75	69.5	6300	7500	N 407 M	1.05	
35		100	25	1.5	1.5	75	69.5	6300	7500	NU 407 M	1.05	

HMEC



NJ

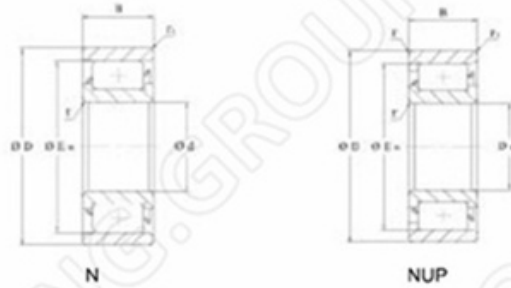


NU

Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	r _{1,2} min	r _{3,4} min	dyn. Cr	stat. Cor	ng grease	ng oil		
	mm										
35	35	100	25	1.5	1.5	75	69.5	6300	7500	NJ 407 M	1.05
	35	100	25	1.5	1.5	75	69.5	6300	7500	NUP 407 M	1.05
40	40	68	15	1	0.6	29	32	9500	12000	NU 1008 M	0.23
	40	80	18	1.1	1.1	53	53	7500	9000	N 208 E	0.38
	40	80	18	1.1	1.1	53	53	7500	9000	NU 208 E	0.38
	40	80	18	1.1	1.1	53	53	7500	9000	NJ 208 E	0.38
	40	80	18	1.1	1.1	53	53	7500	9000	NUP 208 E	0.38
	40	80	23	1.1	1.1	71	75	7500	9000	NU 2208 E	0.49
	40	80	23	1.1	1.1	71	75	7500	9000	NJ 2208 E	0.49
	40	80	23	1.1	1.1	71	75	7500	9000	NUP 2208 E	0.49
	40	90	23	1.5	1.5	81.5	78	6300	7500	N 308 E	0.65
	40	90	23	1.5	1.5	81.5	78	6300	7500	NU 308 E	0.65
	40	90	23	1.5	1.5	81.5	78	6300	7500	NJ 308 E	0.66
	40	90	23	1.5	1.5	81.5	78	6300	7500	NUP 308 E	0.66
	40	90	33	1.5	1.5	112	120	6300	7500	NU 2308 E	0.95
	40	90	33	1.5	1.5	112	120	6300	7500	NJ 2308 E	0.95
	40	90	33	1.5	1.5	112	120	6300	7500	NUP 2308 E	0.95
	40	110	27	2	2	93	86.5	5500	6800	N 408 M	1.30
	40	110	27	2	2	93	86.5	5500	6800	NU 408 M	1.30
	40	110	27	2	2	93	86.5	5500	6800	NJ 408 M	1.30
40	110	27	2	2	93	86.5	5500	6800	NUP 408 M	1.30	
45	45	75	16	1	0.6	32.5	35.5	8500	10000	NU 1009 M	0.29
	45	85	19	1.1	1.1	61	63	7000	8500	N 209 E	0.5
	45	85	19	1.1	1.1	61	63	7000	8500	NU 209 E	0.5
	45	85	19	1.1	1.1	61	63	7000	8500	NJ 209 E	0.5
	45	85	19	1.1	1.1	61	63	7000	8500	NUP 209 E	0.5

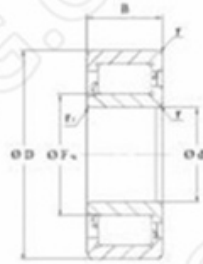
Cylindrical roller bearings

Series N..
 NU..
 NJ..
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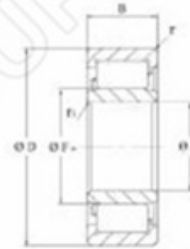


Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass \approx kg
	d	D	B	$r_{1,2}$ min	$r_{3,4}$ min	dyn. C_r	stat. C_{or}	n_g grease	n_g oil		
	mm										
45	45	85	23	1.1	1.1	73.5	81.5	7000	8500	NU 2209 E	0.6
	45	85	23	1.1	1.1	73.5	81.5	7000	8500	NJ 2209 E	0.6
	45	85	23	1.1	1.1	73.5	81.5	7000	8500	NUP 2209 E	0.6
	45	100	25	1.5	1.5	98	100	5600	6700	N 309 E	1
	45	100	25	1.5	1.5	98	100	5600	6700	NU 309 E	1
	45	100	25	1.5	1.5	98	100	5600	6700	NJ 309 E	1
	45	100	25	1.5	1.5	98	100	5600	6700	NUP 309 E	1
	45	100	36	1.5	1.5	137	153	5600	6700	NU 2309 E	1.3
	45	100	36	1.5	1.5	137	153	5600	6700	NJ 2309 E	1.3
	45	100	36	1.5	1.5	137	153	6700	6000	NUP 2309 E	1.3
	45	120	29	2	2	106	100	5000	6000	N 409 M	1.7
	45	120	29	2	2	106	100	5000	6000	NU 409 M	1.7
	45	120	29	2	2	106	100	5000	6000	NJ 409 M	1.7
	45	120	29	2	2	106	100	5000	6000	NUP 409 M	1.7
	50	50	80	16	1	0.6	36	41.5	8000	9500	NU 1010 M
50		90	20	1.1	1.1	64	68	6700	8000	N 210 E	0.6
50		90	20	1.1	1.1	64	68	6700	8000	NU 210 E	0.6
50		90	20	1.1	1.1	64	68	6700	8000	NJ 210 E	0.6
50		90	20	1.1	1.1	64	68	6700	8000	NUP 210 E	0.6
50		90	23	1.1	1.1	78	88	6700	8000	NU 2210 E	0.65
50		90	23	1.1	1.1	78	88	6700	8000	NJ 2210 E	0.65
50		90	23	1.1	1.1	78	88	6700	8000	NUP 2210 E	0.65
50		110	27	2	2	110	114	5300	6300	N 310 E	1.2
50		110	27	2	2	110	114	5300	6300	NU 310 E	1.2
50		110	27	2	2	110	114	5300	6300	NJ 310 E	1.2
50		110	27	2	2	110	114	5300	6300	NUP 310 E	1.2
50		110	40	2	2	163	186	5300	6300	NU 2310 E	1.9
50		110	40	2	2	163	186	5300	6300	NJ 2310 E	1.9

HMEC



NJ

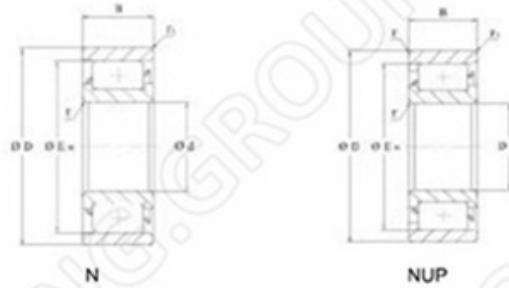


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r _{1,2} min	r _{3,4} min	dyn. Cr	stat. Cor	ng _{grease}			ng _{oil}
	mm										
50	50	110	40	2	2	163	186	5300	6300	NUP 2310 E	1.9
	50	130	31	2.1	2.1	129	125	4500	5300	N 410 M	2.1
	50	130	31	2.1	2.1	129	125	4500	5300	NU 410 M	2.1
	50	130	31	2.1	2.1	129	125	4500	5300	NJ 410 M	2.1
	50	130	31	2.1	2.1	129	125	4500	5300	NUP 410 M	2.2
55	55	90	18	1.1	1	41.5	50	7000	8500	NU 1011 M	0.47
	55	100	21	1.5	1.1	83	95	6000	70000	N 211 E	0.75
	55	100	21	1.5	1.1	83	95	6000	70000	NU 211 E	0.75
	55	100	21	1.5	1.1	83	95	6000	70000	NJ 211 E	0.75
	55	100	21	1.5	1.1	83	95	6000	70000	NUP 211 E	0.75
	55	100	25	1.5	1.1	98	118	6000	7000	NJ 2211 E	0.9
	55	100	25	1.5	1.1	98	118	6000	7000	NU 2211 E	0.9
	55	100	25	1.5	1.1	98	118	6000	7000	NUP 2211 E	0.9
	55	120	29	2	2	134	140	4800	5600	N 311 E	1.6
	55	120	29	2	2	134	140	4800	5600	NU 311 E	1.6
	55	120	29	2	2	134	140	4800	5600	NJ 311 E	1.6
	55	120	29	2	2	134	140	4800	5600	NUP 311 E	1.6
	55	120	43	2	2	200	228	4800	5600	NU 2311 E	2.3
	55	120	43	2	2	200	228	4800	5600	NUP 2311 E	2.3
	55	140	33	2.1	2.1	140	137	4300	5000	N 411 M	2.5
55	140	33	2.1	2.1	140	137	4300	5000	NU 411 M	2.5	
55	140	33	2.1	2.1	140	137	4300	5000	NJ 411 M	2.5	
55	140	33	2.1	2.1	140	137	4300	5000	NUP 411 M	2.5	
60	60	95	18	1.1	1	44	55	6700	8000	NU 1012 M	0.49
	60	110	22	1.5	1	95	104	5300	6300	NU 212 E	1

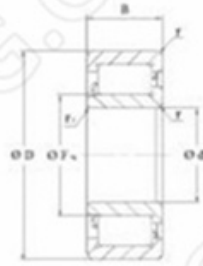
Cylindrical roller bearings

Series N..
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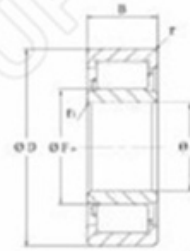


Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	r1, r2 min	r3, r4 min	dyn. Cr	stat. Cor	ng grease rpm	ng oil		
	mm										
60	60	110	22	1.5	1.5	95	104	5300	6300	NU 212 E	1
	60	110	22	1.5	1.5	95	104	5300	6300	NJ 212 E	1
	60	110	22	1.5	1.5	95	104	5300	6300	NUP 212 E	1
	60	110	28	1.5	1.5	129	153	5300	6300	NU 2212 E	1.2
	60	110	28	1.5	1.5	129	153	5300	6300	NJ 2212 E	1.2
	60	110	28	1.5	1.5	129	153	5300	6300	NUP 2212 E	1.2
	60	130	31	2.1	2.1	150	156	4300	5000	N 312 E	1.9
	60	130	31	2.1	2.1	150	156	4300	5000	NU 312 E	1.9
	60	130	31	2.1	2.1	150	156	4300	5000	NJ 312 E	1.9
	60	130	31	2.1	2.1	150	156	4300	5000	NUP 312 E	1.9
	60	130	46	2.1	2.1	224	260	4300	5000	NU 2312 E	2.9
	60	130	46	2.1	2.1	224	260	4300	5000	NJ 2312 E	2.9
	60	130	46	2.1	2.1	224	260	4300	5000	NUP 2312 E	2.9
	60	150	35	2.1	2.1	166	170	4000	4800	N 412 M	3.1
	60	150	35	2.1	2.1	166	170	4000	4800	NU 412 M	3.1
	60	150	35	2.1	2.1	166	170	4000	4800	NJ 412 M	3.1
60	150	35	2.1	2.1	166	170	4000	4800	NUP 412 M	3.1	
65	65	100	18	1.1	1	45	58.5	6300	7500	NU 1013 M	0.52
	65	120	23	1.5	1.5	108	120	5000	6000	N 213 E	1.2
	65	120	23	1.5	1.5	108	120	5000	6000	NU 213 E	1.2
	65	120	23	1.5	1.5	108	120	5000	6000	NJ 213 E	1.2
	65	120	23	1.5	1.5	108	120	5000	6000	NUP 213 E	1.2
	65	120	31	1.5	1.5	150	183	4800	5600	NJ 2213 E	1.6
	65	120	31	1.5	1.5	150	183	4800	5600	NUP 2213 E	1.6
	65	120	31	1.5	1.5	150	183	4800	5600	N 2213 E	1.6
	65	140	33	2.1	2.1	180	190	4000	4800	N 313 E	2.3
	65	140	33	2.1	2.1	180	190	4000	4800	NU 313 E	2.3
	65	140	33	2.1	2.1	180	190	4000	4800	NJ 313 E	2.3

HMEC



NJ

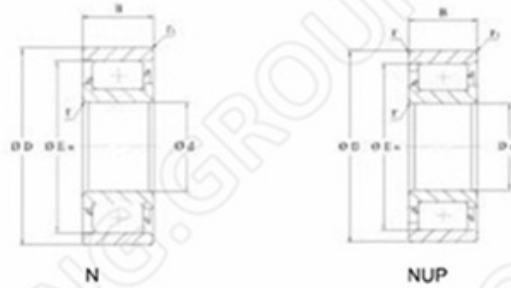


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r _{1,2} min	r _{3,4} min	dyn. Cr	stat. Cor	ng _{grease}			ng _{oil}
	mm										
65	65	140	33	2.1	2.1	180	190	4000	4800	NUP 313 E	2.3
	65	140	48	2.1	2.1	245	285	4000	4800	NU 2313 E	3.3
	65	140	48	2.1	2.1	245	285	4000	4800	NJ 2313 E	3.3
	65	140	48	2.1	2.1	245	285	4000	4800	NUP 2313 E	3.3
	65	160	37	2.1	2.1	183	186	3800	4500	N 413 M	3.8
	65	160	37	2.1	2.1	183	186	3800	4500	NU 413 M	3.8
	65	160	37	2.1	2.1	183	186	3800	4500	NJ 413 M	3.8
	65	160	37	2.1	2.1	183	186	3800	4500	NUP 413 M	3.8
70	70	110	20	1.1	1	65	81.5	5600	6700	NU 1014 M	0.75
	70	125	24	1.5	1.5	120	137	4500	5300	N 214 E	1.3
	70	125	24	1.5	1.5	120	137	4500	5300	NU 214 E	1.3
	70	125	24	1.5	1.5	120	137	4500	5300	NJ 214 E	1.3
	70	125	24	1.5	1.5	120	137	4500	5300	NUP 214 E	1.3
	70	125	31	1.5	1.5	156	196	4500	5300	NU 2214 E	1.7
	70	125	31	1.5	1.5	156	196	4500	5300	NJ 2214 E	1.7
	70	125	31	1.5	1.5	156	196	4500	5300	NUP 2214 E	1.7
	70	150	35	2.1	2.1	204	220	3800	4500	N 314 E	2.8
	70	150	35	2.1	2.1	204	220	3800	4500	NU 314 E	2.8
	70	150	35	2.1	2.1	204	220	3800	4500	NJ 314 E	2.8
	70	150	35	2.1	2.1	204	220	3800	4500	NUP 314 E	2.8
	70	150	51	2.1	2.1	275	325	3800	4500	NU 2314 E	4.0
	70	150	51	2.1	2.1	275	325	3800	4500	NJ 2314 E	4.0
	70	150	51	2.1	2.1	275	325	3800	4500	NUP 2314 E	4.0
	70	180	42	3	3	224	232	3400	4000	N 414 M	5.5
	70	180	42	3	3	224	232	3400	4000	NU 414 M	5.5
	70	180	42	3	3	224	232	3400	4000	NJ 414 M	5.5
70	180	42	3	3	224	232	3400	4000	NUP 414 M	5.5	

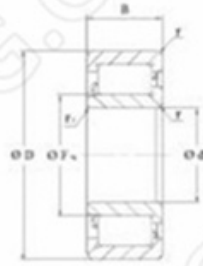
Cylindrical roller bearings

Series N..
 NU..
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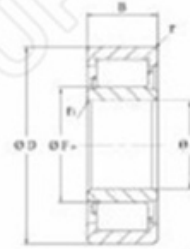


Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r1, r2 min	r3, r4 min	dyn. Cr	stat. Cor	ng grease			ng oil
	mm										
75	75	115	20	1.1	1	65.5	85	5300	6300	NU 1015 M	0.75
	75	130	25	1.5	1.5	132	156	4500	5300	N 215 E	1.25
	75	130	25	1.5	1.5	132	156	4500	5300	NU 215 E	1.25
	75	130	25	1.5	1.5	132	156	4500	5300	NJ 215 E	1.25
	75	130	25	1.5	1.5	132	156	4500	5300	NUP 215 E	1.25
	75	130	31	1.5	1.5	163	208	4500	5300	NU 2215 E	1.6
	75	130	31	1.5	1.5	163	208	4500	5300	NJ 2215 E	1.6
	75	130	31	1.5	1.5	163	208	4500	5300	NUP 2215 E	1.6
	75	160	37	2.1	2.1	240	265	3400	4000	N 315 E	3.4
	75	160	37	2.1	2.1	240	265	3400	4000	NU 315 E	3.4
	75	160	37	2.1	2.1	240	265	3400	4000	NJ 315 E	3.4
	75	160	37	2.1	2.1	240	265	3400	4000	NUP 315 E	3.4
	75	160	55	2.1	2.1	325	390	3400	4000	NU 2315 E	5.0
	75	160	55	2.1	2.1	325	390	3400	4000	NJ 2315 E	5.0
	75	160	55	2.1	2.1	325	390	3400	4000	NUP 2315 E	5.0
	75	190	45	3	3	260	270	3200	3800	N 415 M	6.45
75	190	45	3	3	260	270	3200	3800	NU 415 M	6.45	
75	190	45	3	3	260	270	3200	3800	NJ 415 M	6.45	
75	190	45	3	3	260	270	3200	3800	NUP 415 M	6.45	
80	80	125	22	1.1	1	76.5	98	5000	6000	NU 1016 M	1.03
	80	140	26	2	2	140	170	4000	4800	N 216 E	1.54
	80	140	26	2	2	140	170	4000	4800	NU 216 E	1.54
	80	140	26	2	2	140	170	4000	4800	NJ 216 E	1.54
	80	140	26	2	2	140	170	4000	4800	NUP 216 E	1.54
	80	140	33	2	2	186	245	4000	4800	NU 2216 E	2.1
	80	140	33	2	2	186	245	4000	4800	NJ 2216 E	2.1
	80	140	33	2	2	186	245	4000	4800	NUP 2216 E	2.1
80	170	39	2.1	2.1	255	275	3200	3800	N 316 E	3.95	

HMEC



NJ

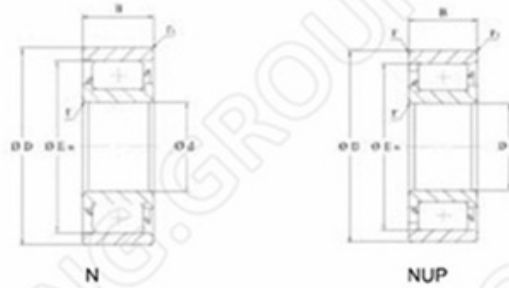


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r1, r2 min	r3, r4 min	dyn. Cr	stat. Cor	ng grease			ng oil
	mm										
80	80	170	39	2.1	2.1	255	275	3200	3800	NU 316 E	3.95
	80	170	39	2.1	2.1	255	275	3200	3800	NJ 316 E	3.95
	80	170	39	2.1	2.1	255	275	3200	3800	NUP 316 E	3.95
	80	170	58	2.1	2.1	355	425	3200	3800	NU 2316 E	5.9
	80	170	58	2.1	2.1	355	425	3200	3800	NJ 2316 E	5.9
	80	170	58	2.1	2.1	355	425	3200	3800	NUP 2316 E	5.9
	80	200	48	3	3	300	310	3000	3600	N 416 M	8.3
	80	200	48	3	3	300	310	3000	3600	NU 416 M	8.3
	80	200	48	3	3	300	310	3000	3600	NJ 416 M	8.3
85	80	200	48	3	3	300	310	3000	3600	NUP 416 M	8.3
	85	130	22	1.1	1	78	104	4800	5600	NU 1017 M	1.1
	85	150	28	2	2	163	193	3800	4500	N 217 E	1.9
	85	150	28	2	2	163	193	3800	4500	NU 217 E	1.9
	85	150	28	2	2	163	193	3800	4500	NJ 217 E	1.9
	85	150	28	2	2	163	193	3800	4500	NUP 217 E	1.9
	85	150	36	2	2	216	275	3800	4500	NU 2217 E	2.6
	85	150	36	2	2	216	275	3800	4500	NJ 2217 E	2.6
	85	150	36	2	2	216	275	3800	4500	NUP 2217 E	2.6
	85	180	41	3	3	270	300	3000	3600	N 317 E	5.3
	85	180	41	3	3	270	300	3000	3600	NU 317 E	5.3
	85	180	41	3	3	270	300	3000	3600	NJ 317 E	5.3
	85	180	41	3	3	270	300	3000	3600	NUP 317 E	5.3
	85	180	60	3	3	365	450	3000	3600	NU 2317 E	6.9
	85	180	60	3	3	365	450	3000	3600	NJ 2317 E	6.9
	85	180	60	3	3	365	450	3000	3600	NUP 2317 E	6.9
	85	210	52	4	4	335	355	2800	3400	N 417 M	9.8
	85	210	52	4	4	335	355	2800	3400	NU 417 M	9.8
85	210	52	4	4	335	355	2800	3400	NJ 417 M	9.8	
85	210	52	4	4	335	355	2800	3400	NUP 417 M	9.8	

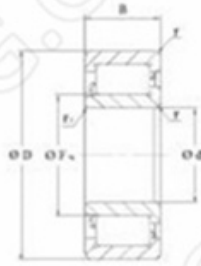
Cylindrical roller bearings

Series N..
 NU..
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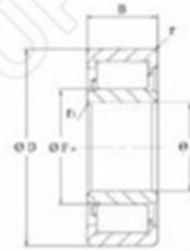


Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r1, r2 mm	r3, r4 mm	dyn. Cr	stat. Cor	ng grease rpm			ng oil
	mm										
90	90	140	24	1.5	1.1	93	125	4500	5300	NU 1018 M	1.4
	90	160	30	2	2	183	216	3600	4300	N 218 E	2.4
	90	160	30	2	2	183	216	3600	4300	NU 218 E	2.4
	90	160	30	2	2	183	216	3600	4300	NUP 218 E	2.4
	90	160	30	2	2	183	216	3600	4300	NJ 218 E	2.7
	90	160	40	2	2	240	315	3600	4300	NU 2218 E	3.2
	90	160	40	2	2	240	315	3600	4300	NJ 2218 E	3.2
	90	160	40	2	2	240	315	3600	4300	NUP 2218 E	3.2
	90	190	43	3	3	315	345	2800	3400	N 318 E	5.4
	90	190	43	3	3	315	345	2800	3400	NU 318 E	5.4
	90	190	43	3	3	315	345	2800	3400	NJ 318 E	5.4
	90	190	43	3	3	315	345	2800	3400	NUP 318 E	5.4
	90	190	64	3	3	430	530	2800	3400	NU 2318 E	8.1
	90	190	64	3	3	430	530	2800	3400	NJ 2318 E	8.1
	90	190	64	3	3	430	530	2800	3400	NUP 2318 E	8.1
	90	225	54	4	4	365	390	2600	3200	N 418 M	11.5
90	225	54	4	4	365	390	2600	3200	NU 418 M	11.5	
90	225	54	4	4	365	390	2600	3200	NJ 418 M	11.5	
90	225	54	4	4	365	390	2600	3200	NUP 418 M	11.5	
95	95	145	24	1.5	1.1	96.5	129	4300	5000	NU 1019 M	1.45
	95	170	32	2.1	2.1	220	265	3200	3800	N 219 E	2.8
	95	170	32	2.1	2.1	220	265	3200	3800	NU 219 E	2.8
	95	170	32	2.1	2.1	220	265	3200	3800	NJ 219 E	2.8
	95	170	32	2.1	2.1	220	265	3200	3800	NUP 219 E	2.8
	95	170	43	2.1	2.1	285	375	3200	3800	NU 2219 E	3.8
	95	170	43	2.1	2.1	285	375	3200	3800	NJ 2219 E	3.8
	95	170	43	2.1	2.1	285	375	3200	3800	NU 2219 E	3.8
	95	200	45	3	3	335	380	2800	3400	N 319 E	6.3

HMEC



NJ

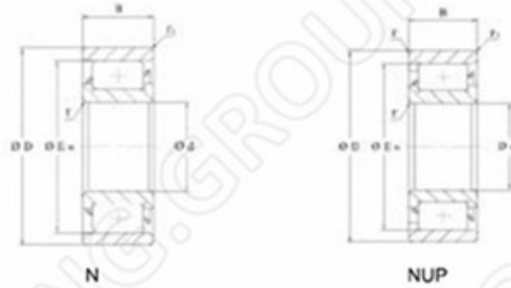


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r _{1,2} min	r _{3,4} min	dyn. Cr	stat. Cor	ng _{grease}			ng _{oil}
	mm										
95	95	200	45	3	3	335	380	2800	3400	NU 319 E	6.3
	95	200	45	3	3	335	380	2800	3400	NJ 319 E	6.3
	95	200	45	3	3	335	380	2800	3400	NUP 319 E	6.3
	95	200	67	3	3	455	585	2800	3400	NU 2319 E	9.3
	95	200	67	3	3	455	585	2800	3400	NJ 2319 E	9.3
	95	200	67	3	3	455	585	2800	3400	NUP 2319 E	9.3
	95	240	55	4	4	390	430	2400	3000	N 419 M	13.8
	95	240	55	4	4	390	430	2400	3000	NU 419 M	13.8
	95	240	55	4	4	390	430	2400	3000	NJ 419 M	13.8
	95	240	55	4	4	390	430	2400	3000	NUP 419 M	13.8
100	100	150	24	1.5	1.1	98	134	4000	4800	NU 1020 M	1.5
	100	180	34	2.1	2.1	250	305	3200	3800	N 220 E	3.44
	100	180	34	2.1	2.1	250	305	3200	3800	NU 220 E	3.44
	100	180	34	2.1	2.1	250	305	3200	3800	NJ 220 E	3.44
	100	180	34	2.1	2.1	250	305	3200	3800	NUP 220 E	3.44
	100	180	46	2.1	2.1	335	440	3200	3800	NU 2220 E	5.5
	100	180	46	2.1	2.1	335	440	3200	3800	NJ 2220 E	5.5
	100	180	46	2.1	2.1	335	440	3200	3800	NUP 2220 E	5.5
	100	215	47	3	3	380	425	2600	3200	N 320 E	7.7
	100	215	47	3	3	380	425	2600	3200	NU 320 E	7.7
	100	215	47	3	3	380	425	2600	3200	NJ 320 E	7.7
	100	215	47	3	3	380	425	2600	3200	NUP 320 E	7.7
	100	215	73	3	3	570	720	2600	3200	NU 2320 E	12
	100	215	73	3	3	570	720	2600	3200	NJ 2320 E	12
	100	215	73	3	3	570	720	2600	3200	NUP 2320 E	12
	100	250	58	4	4	440	490	2400	3000	N 420 M	15.8
	100	250	58	4	4	440	490	2400	3000	NU 420 M	15.8
	100	250	58	4	4	440	490	2400	3000	NJ 420 M	15.8

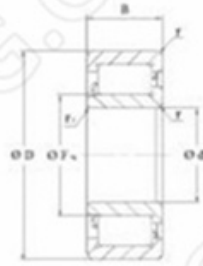
Cylindrical roller bearings

Series N..
 NU..
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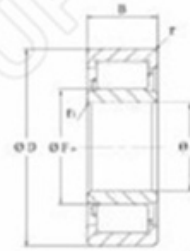


Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	r1, r2 mm	r3, r4 mm	dyn. Cr	stat. Cor	ng grease rpm	ng oil		
	mm	mm	mm			kN					
100	100	250	58	4	4	440	490	2400	3000	NUP 420 M	15.8
105	105	160	26	2	1.1	112	153	3800	4500	NU 1021 M	1.9
	105	190	36	2.1	2.1	260	320	3000	3600	N 221 E	4.1
	105	190	36	2.1	2.1	260	320	3000	3600	NU 221 E	4.1
	105	190	36	2.1	2.1	260	320	3000	3600	NJ 221 E	4.1
	105	190	36	2.1	2.1	260	320	3000	3600	NUP 221 E	4.1
	105	225	49	3	3	335	380	2600	3200	N 321 E	9.1
	105	225	49	3	3	335	380	2600	3200	NU 321 E	9.1
	105	225	49	3	3	335	380	2600	3200	NJ 321 E	9.1
	105	225	49	3	3	335	380	2600	3200	NUP 321 E	9.1
	105	260	60	4	4	490	540	2200	2800	NU 421 M	17.5
	105	260	60	4	4	490	540	2200	2800	NJ 421 M	17.5
	105	260	60	4	4	490	540	2200	2800	NUP 421 M	17.5
	110	110	170	28	2	1.1	140	190	3600	4300	NU 1022 M
110		200	38	2.1	2.1	290	365	2800	3400	N 222 E	4.9
110		200	38	2.1	2.1	290	365	2800	3400	NU 222 E	4.9
110		200	38	2.1	2.1	290	365	2800	3400	NJ 222 E	4.9
110		200	38	2.1	2.1	290	365	2800	3400	NUP 222 E	4.9
110		200	53	2.1	2.1	380	520	2800	3400	NU 2222 E	6.7
110		200	53	2.1	2.1	380	520	2800	3400	NJ 2222 E	6.7
110		200	53	2.1	2.1	380	520	2800	3400	NUP 2222 E	6.7
110		240	50	3	3	415	475	2400	3000	N 322 E	10.5
110		240	50	3	3	415	475	2400	3000	NU 322 E	10.5
110		240	50	3	3	415	475	2400	3000	NJ 322 E	10.5
110		240	50	3	3	415	475	2400	3000	NUP 322 E	10.5
110		240	80	3	3	630	800	2200	2800	NU 2322 E	17.0

HMEC



NJ

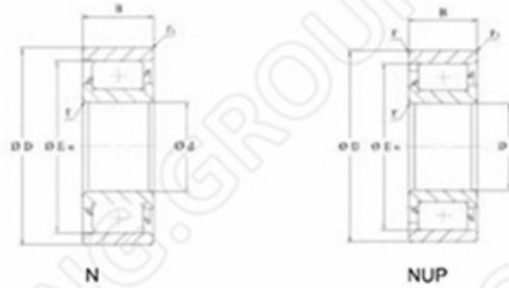


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg		
	d	D	B	r ₁ , r ₂ min	r ₃ , r ₄ min	dyn. Cr	stat. Cor	ng grease rpm			ng oil	
110	110	240	80	3	3	630	800	2200	2800	NJ 2322 E	17.0	
	110	240	80	3	3	630	800	2200	2800	NUP 2322 E	17.0	
	110	280	65	4	4	540	610	2200	2800	NU 422 M	20.8	
	110	280	65	4	4	540	610	2200	2800	NJ 422 M	20.8	
	110	280	65	4	4	540	610	2200	2800	NUP 422 M	20.8	
120	120	180	28	2	1	150	208	3400	4000	NU 1024 M	2.6	
	120	215	40	2.1	2.1	335	415	2600	3200	N 224 E	5.7	
	120	215	40	2.1	2.1	335	415	2600	3200	NU 224 E	5.7	
	120	215	40	2.1	2.1	335	415	2600	3200	NJ 224 E	5.7	
	120	215	40	2.1	2.1	335	415	2600	3200	NUP 224 E	5.7	
	120	215	58	2.1	2.1	450	610	2600	3200	NU 2224 E	8.3	
	120	215	58	2.1	2.1	450	610	2600	3200	NJ 2224 E	8.3	
	120	215	58	2.1	2.1	450	610	2600	3200	NUP 2224 E	8.3	
	120	260	55	3	3	520	600	2200	2800	N 324 E	15.2	
	120	260	55	3	3	520	600	2200	2800	NU 324 E	13.4	
	120	260	55	3	3	520	600	2200	2800	NJ 324 E	13.4	
	120	260	55	3	3	520	600	2200	2800	NUP 324 E	13.4	
	120	260	86	3	3	780	1020	2000	2600	NU 2324 M	23.5	
	120	260	86	3	3	780	1020	2000	2600	NJ 2324 M	23.5	
	120	260	86	3	3	780	1020	2000	2600	NUP 2324 M	23.5	
	120	310	72	5	5	670	780	1900	2400	NU 424 M	30.5	
	120	310	72	5	5	670	780	1900	2400	NJ 424 M	30.5	
	130	130	200	33	2	1	180	250	3000	3600	NU 1026 M	3.9
		130	230	40	3	3	360	450	2400	3000	N 226 E	6.5
		130	230	40	3	3	360	450	2400	3000	NU 226 E	6.5
130		230	40	3	3	360	450	2400	3000	NJ 226 E	6.5	

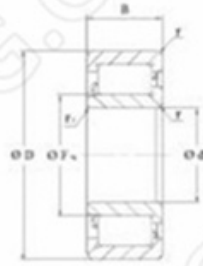
Cylindrical roller bearings

Series N..
 NU..
 NJ..
 NUP..

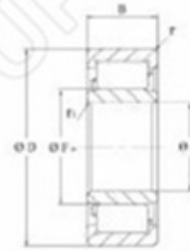


Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r ₁ , f ₂ min	r ₃ , f ₄ min	dyn. Cr	stat. Cor	n _g grease			n _g oil
	mm										
130	130	230	40	3	3	360	450	2400	3000	NUP 226 E	6.5
	130	230	64	3	3	530	735	2400	3000	NU 2226 E	10.5
	130	230	64	3	3	530	735	2400	3000	NJ 2226 E	10.5
	130	230	64	3	3	530	735	2400	3000	NUP 2226 E	10.5
	130	280	58	4	4	570	670	2000	2600	N 326 E	16.5
	130	280	58	4	4	570	670	2000	2600	NU 326 E	16.5
	130	280	58	4	4	570	670	2000	2600	NJ 326 E	16.5
	130	280	58	4	4	570	670	2000	2600	NUP 326 E	16.5
	130	280	93	4	4	915	1220	1900	2400	NU 2326 E.M	29.6
	130	280	93	4	4	915	1220	1900	2400	NJ 2326 E.M	29.6
	130	280	93	4	4	915	1220	1900	2400	NUP 2326 E.M	29.6
	130	340	78	6	5	790	960	1800	2200	NU 426 M	42.6
	130	340	78	6	5	790	960	1800	2200	NJ 426 M	42.6
	140	140	210	33	2	1.1	183	265	2800	3400	NU 1028 M
140		250	42	3	3	390	510	2400	3000	N 228 E.M	9.5
140		250	42	3	3	390	510	2400	3000	NU 228 E.M	9.5
140		250	42	3	3	390	510	2400	3000	NJ 228 E.M	9.5
140		250	42	3	3	390	510	2400	3000	NUP 228 E.M	9.5
140		250	68	3	3	570	830	2200	2800	NU 2228 E.M	15.5
140		250	68	3	3	570	830	2200	2800	NJ 2228 E.M	15.5
140		250	68	3	3	570	830	2200	2800	NUP 2228 E.M	15.5
140		300	62	4	4	670	800	1900	2400	N 328 E	22.5
140		300	62	4	4	670	800	1900	2400	NU 328 E	22.5
140		300	62	4	4	670	800	1900	2400	NJ 328 E	22.5
140		300	62	4	4	670	800	1900	2400	NUP 328 E	22.5
140		300	102	4	4	1020	1400	1800	2200	NU 2328 E.M	37.2
140		300	102	4	4	1020	1400	1800	2200	NJ 2328 E.M	37.2
140	300	102	4	4	1020	1400	1800	2200	NUP 2328 E.M	37.2	

HMEC



NJ

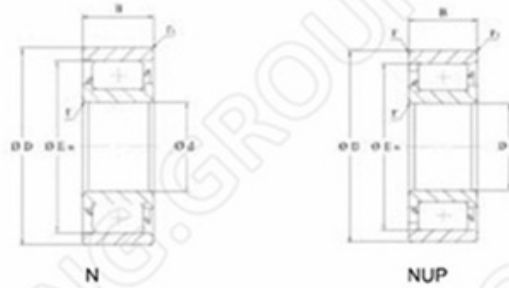


NU

Shaft diameter	Dimensions					Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg
	d	D	B	f ₁ , f ₂ min	f ₃ , f ₄ min	dyn. Cr	stat. Cor	ng grease rpm	ng oil		
	mm										
140	140	360	82	6	5	850	1020	1600	1900	NU 428 M	49.51
	140	360	82	6	5	850	1020	1600	1900	NJ 428 M	49.5
150	150	225	35	2.1	1.5	208	310	2600	3200	NU 1030 M	5
	150	270	45	3	3	440	585	2200	2800	N 230 E.M	11.8
	150	270	45	3	3	440	585	2200	2800	NU 230 E.M	11.8
	150	270	45	3	3	440	585	2200	2800	NJ 230 E.M	11.8
	150	270	45	3	3	440	585	2200	2800	NUP 230 E.M	11.8
	150	270	73	3	3	655	980	2000	2600	NU 2230 E.M	19.5
	150	270	73	3	3	655	980	2000	2600	NJ 2230 E.M	19.5
	150	270	73	3	3	655	980	2000	2600	NUP 2230 E.M	19.5
	150	320	65	4	4	800	1000	1800	2200	N 330 E.M	27.5
	150	320	65	4	4	800	1000	1800	2200	NU 330 E.M	27.5
	150	320	65	4	4	800	1000	1800	2200	NJ 330 E.M	27.5
	150	320	65	4	4	800	1000	1800	2200	NUP 330 E.M	27.5
	150	320	108	4	4	1160	1600	1700	2000	NU 2330 E.M	44.8
	150	320	108	4	4	1160	1600	1700	2000	NJ 2330 E.M	44.8
	150	320	108	4	4	1160	1600	1700	2000	NUP 2330 E.M	44.8
	150	380	85	6	5	898	1145	1500	1800	NU 430 M	48
150	380	85	6	5	898	1145	1500	1800	NJ 430 M	48	
160	160	240	38	2.1	1.5	245	355	2400	3000	NU 1032 M	6.2
	160	290	48	3	3	500	670	2000	2600	N 232E.M	14.6
	160	290	48	3	3	500	670	2000	2600	NU 232E.M	14.6
	160	290	48	3	3	500	670	2000	2600	NJ 232E.M	14.6
	160	290	48	3	3	500	670	2000	2600	NUP 232E.M	14.6
	160	290	80	3	3	800	1180	1900	2400	NU 2232 E.M	24.5
	160	290	80	3	3	800	1180	1900	2400	NJ 2232 E.M	24.5

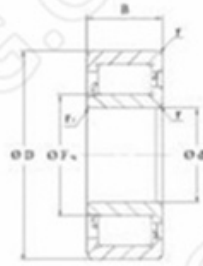
Cylindrical roller bearings

Series N..
 NU..
 NJ..
 NUP..

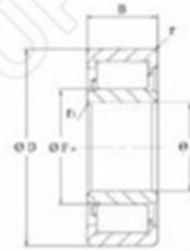


Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	r ₁ , f ₂ min	r ₃ , f ₄ min	dyn. Cr	stat. Cor	ng _{grease}			ng _{oil}
	mm										
160	160	290	80	3	3	800	1180	1900	2400	NUP 2232 E.M	24.5
	160	340	68	4	4	865	1060	1600	1900	N 332 E.M	32.3
	160	340	68	4	4	865	1060	1600	1900	NU 332 E.M	32.3
	160	340	68	4	4	865	1060	1600	1900	NJ 332 E.M	32.1
	160	340	68	4	4	865	1060	1600	1900	NUP 332 E.M	32.1
	160	340	114	4	4	1320	1830	1600	1900	NU 2332 E.M	53.5
	160	340	114	4	4	1320	1830	1600	1900	NJ 2332 E.M	53.5
	160	340	114	4	4	1320	1830	1600	1900	NUP 2332 E.M	53.5
170	170	260	42	2.1	2.1	300	430	2200	2800	NU 1034 M	8.4
	170	310	52	4	4	585	780	1800	2200	N 234 E.M	18.2
	170	310	52	4	4	585	780	1800	2200	NU 234 E.M	18.2
	170	310	52	4	4	585	780	1800	2200	NJ 234 E.M	18.2
	170	310	52	4	4	585	780	1800	2200	NUP 234 E.M	18.2
	170	310	86	4	4	95	1400	1700	2000	NU 2234 E.M	29.8
	170	310	86	4	4	950	1400	1700	2000	NJ 2234 E.M	29.8
	170	310	86	4	4	950	1400	1700	2000	NUP 2234 E.M	29.8
	170	360	72	4	4	800	1020	1600	1900	N 334 E.M	38
	170	360	72	4	4	800	1020	1600	1900	NU 334 E.M	38
	170	360	72	4	4	800	1020	1600	1900	NJ 334 E.M	38
	170	360	72	4	4	800	1020	1600	1900	NUP 334 E.M	38
	170	360	120	4	4	1220	1760	1500	1800	NU 2334 M	63.5
	170	360	120	4	4	1220	1760	1500	1800	NJ 2334 M	63.5
	170	360	120	4	4	1220	1760	1500	1800	NUP 2334 M	63.5
	180	180	280	46	2.1	2.1	360	520	2200	2800	NU 1036 M
180		320	52	4	4	610	830	1800	2200	N 236 E.M	18.9
180		320	52	4	4	610	830	1800	2200	NU 236 E.M	18.9

HMEC



NJ

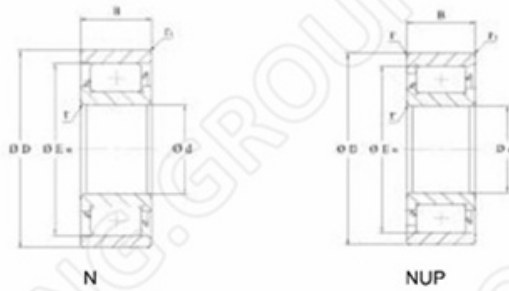


NU

Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg		
	d	D	B	r ₁ , r ₂ min	r ₃ , r ₄ min	dyn. Cr	stat. Cor	ng grease rpm			ng oil	
	mm											
180	180	320	52	4	4	610	830	1800	2200	NJ 236 E.M	19	
	180	320	52	4	4	610	830	1800	2200	NUP 236 E.M	19	
	180	320	86	4	4	1000	1500	1700	2000	NU 2236 E.M	31.2	
	180	320	86	4	4	1000	1500	1700	2000	NJ 2236 E.M	31.2	
	180	320	86	4	4	1000	1500	1700	2000	NUP 2236 E.M	31.2	
	180	380	75	4	4	900	1160	1500	1800	N 336 M	44	
	180	380	75	4	4	900	1160	1500	1800	NU 336 M	44	
	180	380	75	4	4	900	1160	1500	1800	NJ 336 M	44	
	180	380	75	4	4	900	1160	1500	1800	NUP 336 M	44	
	180	380	126	4	4	1370	2000	1400	1700	NU 2336 M	74	
	180	380	126	4	4	1370	2000	1400	1700	NJ 2336 M	74	
	180	380	126	4	4	1370	2000	1400	1700	NUP 2336 M	74	
190	190	290	46	2.1	2.1	365	550	2000	2600	NU 1038 M	11.4	
	190	340	55	4	4	680	930	1700	2000	N 238 E.M	22.8	
	190	340	55	4	4	680	930	1700	2000	NU 238 E.M	22.8	
	190	340	55	4	4	680	930	1700	2000	NJ 238 E.M	22.8	
	190	340	55	4	4	680	930	1700	2000	NUP 238 E.M	22.8	
	190	340	92	4	4	1100	1660	1600	1900	NU 2238 E.M	37.9	
	190	340	92	4	4	1100	1660	1600	1900	NJ 2238 E.M	37.9	
	190	400	78	5	5	965	1250	1400	1700	NU 338 M	50.5	
	190	400	78	5	5	965	1250	1400	1700	NJ 338 M	50.5	
	190	400	132	5	5	1500	2200	1400	1700	NU 2338 E	88.5	
	190	400	132	5	5	1500	2200	1400	1700	NJ 2338 E	88.5	
	190	400	132	5	5	1500	2200	1400	1700	NUP 2338 M	88.5	
	200	200	310	51	2.1	2.1	400	600	1900	2400	NU 1040 M	14.8
		200	360	58	4	4	750	1040	1600	1900	N 240 E.M	26.9

Cylindrical roller bearings

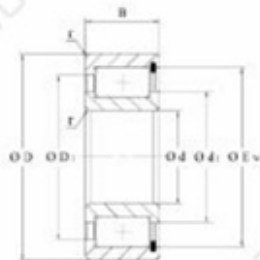
Series N..
 NU..
 NJ..
 NUP..



Shaft diameter	Dimensions				Load rating		Speed rating		Code bearing HMEC	Mass ≈ kg	
	d	D	B	f _{1, f2} min	f _{3, f4} min	dyn. Cr	stat. Cor	ng _{grease}			ng _{oil}
	mm										
200	200	360	58	4	4	750	1040	1600	1900	NU 240 E.M	26.9
	200	360	58	4	4	750	1040	1600	1900	NJ 240 E.M	26.9
	200	360	58	4	4	750	1040	1600	1900	NUP 240 E.M	26.9
	200	360	98	4	4	1220	1860	1500	1800	NU 2240 E.M	45.7
	200	360	98	4	4	1220	1860	1500	1800	NJ 2240 E.M	45.7
	200	420	80	5	5	965	1250	1400	1700	NU 340 M	57.5
	200	420	80	5	5	965	1250	1400	1700	NJ 340 M	57.5
	200	420	138	5	5	1500	2200	1300	1600	NU 2340 M	99
	200	420	138	5	5	1500	2200	1300	1600	NJ 2340 M	99
220	220	340	56	3	3	510	765	1700	2000	NU 1044 M	19.3
	220	400	65	4	4	750	1060	1500	1800	NU 244 M	38.1
	220	400	65	4	4	750	1060	1500	1800	NJ 244 M	38.1
	220	400	65	4	4	750	1060	1500	1800	NUP 244 M	38.1
	220	400	108	4	4	1120	1800	1400	1700	NU 2244 M	63.5
	220	400	108	4	4	1120	1800	1400	1700	NJ 2244 M	63.5
	220	460	88	5	5	1180	1560	1300	1600	NU 344 M	75.5
	220	460	145	5	5	1760	2600	1200	1500	NU 2344 E	124
	240	240	360	56	3	3	540	850	1600	1900	NU 1048 M
240		440	72	4	4	930	1340	1300	1600	NU 248 M	51.5
240		440	72	4	4	930	1340	1300	1600	NJ 248 M	51.5

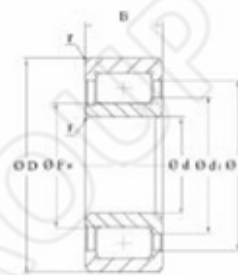
Cylindrical roller bearings
full complement
single row

Semi-locating
Series SL1829
SL1830
SL1822
SL1923



SL1829, SL1830, SL1822, SL1818

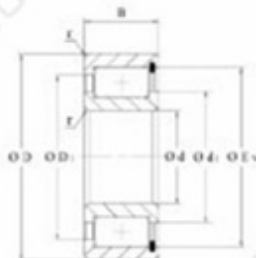
Shaft diameter	Dimensions					Mounting dimensions				Basic Load rating	
	d	D	B	r	s	F _w	d ₁	D ₁	E _w	dyn. C	stat. Co
	mm									kN	
20	20	42	16	0.6	1.5	-	29	33	36.5	27.5	26.5
	20	47	18	1	1	-	30	37	41.5	41	37.5
25	25	47	16	0.6	1.5	-	34.5	38.5	42.5	31.5	32.5
	25	52	18	1	1	-	35	42	46.5	46	45
	25	62	24	1.1	2	31.72	36.5	47.5	-	65	60
30	30	55	19	1	2	-	40	45	49.5	40.5	43
	30	62	20	1	1	-	42	50.5	55	63	65
	30	72	27	1.1	2	38.30	43.5	56	-	89	88
35	35	62	20	1	2	-	45	51	55.5	49.5	55
	35	72	23	1.1	1	-	47	59	64	79	79
	35	80	31	1.5	2	44.68	51	65.5	-	113	112
40	40	68	21	1	2	-	50.5	57.5	61.5	59	68
	40	80	23	1.1	1	-	54	66	71	87	83
	40	90	33	1.5	2	51.12	57.5	75	-	152	156
45	45	75	23	1	2	-	55.5	62	66.5	63	76
	45	85	23	1.1	1	-	57.5	69.5	74.5	90	99
	45	100	36	1.5	3	56.10	62.5	80	-	162	172
50	50	80	23	1	2	-	59	67.5	72	79	96



SL1923

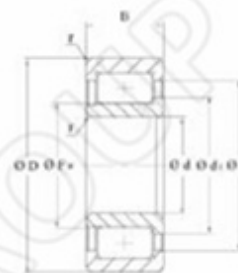
Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	≈
kN	min ⁻¹	min ⁻¹		kg
3.45	10000	9000	SL18 3004	0.11
4.75	9500	8000	SL18 2204	0.16
4.3	9000	7000	SL18 3005	0.12
5.7	8500	6500	SL18 2205	0.18
7.3	7500	5500	SL19 2305	0.37
5.6	7500	6500	SL18 3006	0.2
8.1	7000	5500	SL18 2206	0.3
10.7	6500	4900	SL19 2306	0.56
7	6500	6000	SL18 3007	0.26
9.8	6000	5000	SL18 2207	0.44
13.9	5500	4300	SL19 2307	0.74
8.6	6000	5000	SL18 3008	0.31
11.4	5500	4400	SL18 2208	0.55
19.1	5000	3600	SL19 2308	1.01
9.6	5500	5000	SL18 3009	0.4
12.3	5000	4200	SL18 2209	0.59
21	4500	3700	SL19 2309	1.37
12	5000	4500	SL18 3010	0.43

Cylindrical roller bearings
full complement
single row
Semi-locating
Series SL1829
SL1830
SL1822
SL1923



SL1829, SL1830, SL1822, SL1818

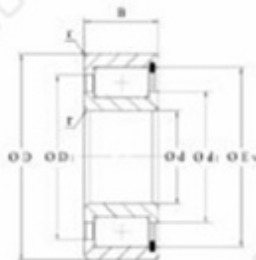
Shaft diameter	Dimensions					Mounting dimensions				Basic Load rating	
	d	D	B	r	s	F _w	d ₁	D ₁	E _w	dyn. C	stat. Co
	mm									kN	
50	90	23	1.1	1	-	64.5	76.5	81.5	97	113	
	110	40	2	3	60.72	68.5	89.5	-	208	219	
55	90	26	1.1	2	-	68.5	78.5	83.5	107	138	
	100	25	1.5	1.5	-	70	83.5	89	125	150	
	120	43	2	3	67.11	75.5	99	-	242	255	
60	85	16	1	1	-	69	74.5	78.5	57	78	
	95	26	1.1	2	-	71.5	81.5	86.5	110	145	
	110	28	1.5	1.5	-	77	93	99	152	180	
	130	46	2.1	3	73.62	82	105.5	-	260	280	
65	90	16	1	1	-	75.5	81	85	60	86	
	100	26	1.1	2	-	78	88	93	116	159	
	120	31	1.5	1.5	-	82.5	100	108	178	214	
	140	48	2.1	3.5	80.69	90	116	-	315	355	
70	100	19	1	1	-	81	87.5	92.5	79	114	
	110	30	1.1	3	-	81.5	95	100	137	176	
	125	31	1.5	1.5	-	87	105	111	184	227	
	150	51	2.1	3.5	84.14	94	121	-	345	390	
75	105	19	1	1	-	86	93	97.5	81	121	
	115	30	1.1	3	-	89	102.5	107.5	145	194	
	130	31	1.5	1.5	-	91.5	110	116	190	241	
	160	55	2.1	3.5	91.22	101.5	131.5	-	410	475	



SL1923

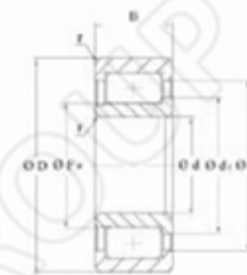
Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	m
kN	min ⁻¹	min ⁻¹		kg
14	4600	3600	SL18 2210	0.64
26.5	4100	3400	SL19 2310	1.81
17	4500	3800	SL18 3011	0.64
18.4	4200	3300	SL18 2211	0.87
31.5	3700	3100	SL19 2311	2.28
10.2	4500	3500	SL18 2912	0.29
17.9	4200	3600	SL18 3012	0.69
22.3	3800	3100	SL18 2212	1.18
34.5	3400	2900	SL19 2312	2.88
11.2	4200	3100	SL18 2913	0.31
19.7	3900	3300	SL18 3013	0.73
26.5	3500	3000	SL18 2213	1.57
42.5	3200	2500	SL19 2313	3.52
14.5	3800	3100	SL18 2914	0.49
21.7	3600	3400	SL18 3014	1.02
28	3300	2800	SL18 2214	1.66
46.5	2900	2400	SL19 2314	4.33
15.4	3600	2900	SL18 2915	0.52
23.8	3400	3000	SL18 3015	1.06
29.5	3200	2700	SL18 2215	1.75
55	2800	2100	SL19 2315	5.3

Cylindrical roller bearings
full complement
single row
Semi-locating
Series SL1829
SL1830
SL1822
SL1923



SL1829, SL1830, SL1822, SL1818

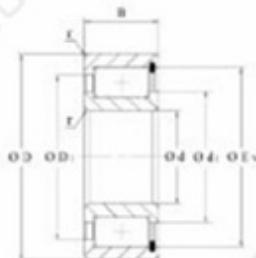
Shaft diameter	Dimensions				Mounting dimensions				Basic Load rating		
	d	D	B	r	s	F _w	d ₁	D ₁	E _w	dyn. C	stat. Co
	mm				mm		mm		kN		
80	80	110	19	1	1	-	91	98	102	84	129
	80	125	34	1.1	4	-	95	111	117	173	225
	80	140	33	2	1.5	-	98.5	119	126	226	285
	80	170	58	2.1	3.5	98.24	109.5	141.5	-	480	560
85	85	120	22	1.1	1	-	96	105	109	105	162
	85	130	34	1.1	4	-	99.5	115.5	121	178	237
	85	150	36	2	1.5	-	104.5	126	133	255	325
	85	180	60	3	4	107.01	118.5	150.5	-	510	620
90	90	125	22	1.1	1	-	102	110.5	115	109	172
	90	140	37	1.5	4	-	106	124	130	208	280
	90	160	40	2	2.5	-	110	133	140.5	290	370
	90	190	64	3	4	105.26	117.5	152	-	560	660
95	95	130	22	1.1	1	-	106.5	117	122	118	179
	95	170	43	2.1	2.5	-	122	147	155.5	340	435
	95	200	67	3	4	114.66	127	161.5	-	580	720
100	100	140	24	1.1	1.5	-	113.5	125.5	130	136	206
	100	150	37	1.5	4	-	115.5	133.5	139	219	310
	100	180	46	2.1	2.5	-	127.5	154	163	395	520
	100	215	73	3	4	119.3	133	172.5	-	710	860
110	110	150	24	1.1	1.5	-	124	136	141	140	220
	110	170	45	2	5.5	-	127.5	149	156	285	395



SL1923

Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	m
kN	min ⁻¹	min ⁻¹		kg
16.4	3400	2700	SL18 2916	0.55
27.5	3200	3000	SL18 3016	1.43
34	2900	2500	SL18 2216	2.15
63	2600	1900	SL19 2316	6.32
20.2	3200	2700	SL18 2917	0.81
29	3000	2800	SL18 3017	1.51
38.5	2800	2400	SL18 2217	2.74
67	2400	1700	SL19 2317	7.34
21.2	3000	2500	SL18 2918	0.84
33.5	2800	2700	SL18 3018	1.97
43	2600	2100	SL18 2218	3.48
72	2300	1800	SL19 2318	8.83
21.7	2900	2400	SL18 2919	0.86
49	2400	2000	SL18 2219	4.17
77	2200	1700	SL19 2319	10.2
24.3	2700	2300	SL18 2920	1.14
35.5	2600	2400	SL18 3020	2.15
58	2300	1800	SL18 2220	5.13
91	2100	1500	SL19 2320	13
26	2500	2100	SL18 2922	1.23
45	2300	2200	SL18 3022	3.5

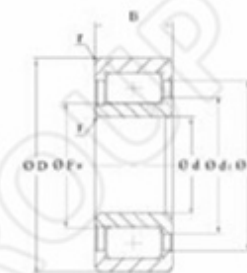
Cylindrical roller bearings
full complement
single row
Semi-locating
Series SL1829
SL1830
SL1822
SL1923



SL1829, SL1830, SL1822, SL1818

Shaft diameter	Dimensions					Mounting dimensions				Basic Load rating	
	d	D	B	r	s	F _w	d ₁	D ₁	E _w	dyn. C	stat. Co
	mm									kN	
	110	200	53	2.1	4	-	137	167	177	455	590
	110	240	80	3	5	134.27	151.5	199.5	-	850	980
120	120	165	27	1.1	1.5	-	135	148.5	154	180	295
	120	180	46	2	5.5	-	139	160.5	167	300	435
	120	215	58	2.1	4	-	150.5	182	192.5	540	730
	120	260	86	3	5	147.39	164.5	212.5	-	1000	1240
130	130	180	30	1.5	2	-	146	161	166	214	355
	130	200	52	2	5.5	-	148.5	175	183	435	620
	130	230	64	3	5	-	162.5	196	207	630	860
140	140	190	30	1.5	2	-	157	173.5	179	232	385
	140	210	53	2	5.5	-	162.5	189	197	455	680
	140	250	68	3	5	-	174	210	222	720	1020
150	150	210	36	2	2.5	-	169	189	196	305	490
	150	225	56	2.1	7	-	170	197.5	206	480	710
	150	270	73	3	6	-	185.5	224	237	830	1180
160	160	220	36	2	2.5	-	180	200	207	320	520
	160	240	60	2.1	7	-	185	215	224	550	820
	160	290	80	3	6	-	208.5	252	266.5	1030	1490
170	170	230	36	2	2.5	-	191	210.5	218	330	560

HMEC

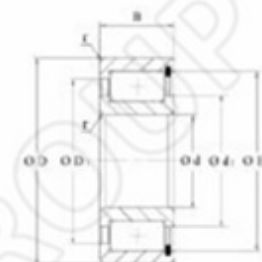


SL1923

Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	m
kN	min ⁻¹	min ⁻¹		kg
64	2100	1800	SL18 2222	7.24
99	1900	1300	SL19 2322	17
33.5	2300	1900	SL18 2924	1.73
48	2200	1900	SL18 3024	3.8
77	1900	1500	SL18 2224	9.08
123	1700	1200	SL19 2324	22.3
39.5	2100	1800	SL18 2926	2.33
65	2000	1700	SL18 3026	5.65
89	1800	1400	SL18 2226	11.25
41.5	2000	1600	SL18 2928	2.42
70	1900	1500	SL18 3028	6.04
102	1700	1300	SL18 2228	14.47
52	1800	1500	SL18 2930	3.77
72	1700	1500	SL18 3030	7.33
116	1500	1200	SL18 2230	16.43
54	1700	1300	SL18 2932	4
81	1600	1300	SL18 3032	8.8
140	1400	950	SL18 2232	23
57	1600	1200	SL18 2934	4.3

Cylindrical roller bearings
full complement
single row
Semi-locating
Series SL1829
SL1830
SL1822
SL1923

HMEC



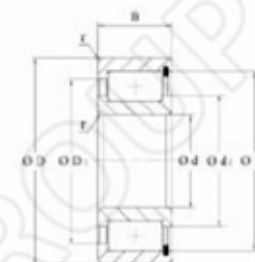
SL1829, SL1830, SL1822, SL1818

Shaft diameter	Dimensions					Mounting dimensions			Basic Load rating	
	d	D	B	r	s	d ₁	D ₁	E _w	dyn. C	stat. C ₀
	mm								kN	
170	260	67	2.1	7	198	231.5	242	710	1070	
	310	86	4	7	220.5	266	281	1150	1680	
180	250	42	2	2.5	201	223.5	231	410	690	
	280	74	2.1	7	212	248	260	820	1260	
	320	86	4	7	232.5	278	293	1190	1780	
190	260	42	2	2.5	211.5	235	243	455	790	
	290	75	2.1	9	222	258	269	840	1320	
	340	92	4	9	243.5	294	310.5	1310	1920	
200	250	24	1.5	2	217	231	237	183	330	
	280	48	2.1	3	225.5	252	261	550	960	
	310	82	2.1	9	236.5	275	287	960	1530	
	360	98	4	9	248.5	300.5	318.5	1420	2040	
220	270	24	1.5	2	237.5	251.5	258	192	365	
	300	48	2.1	3	246.5	273	282	580	1050	
	340	90	3	9	254.5	298	312	1160	1840	
240	300	28	2	3	260	276	282	224	435	
	320	48	2.1	3	267.5	294	303	610	1140	
	360	92	3	11	277.5	320.5	335	1220	2010	
260	320	28	2	3	282.5	298.5	304	234	475	

Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	m
kN	min ⁻¹	min ⁻¹		kg
104	1500	1100	SL18 3034	12.2
155	1400	900	SL18 2234	28.65
69	1500	1200	SL18 2936	6.2
119	1400	1000	SL18 3036	16.1
163	1300	850	SL18 2236	29.8
77	1400	1100	SL18 2938	6.5
124	1400	1000	SL18 3038	17
172	1200	800	SL18 2238	35.65
34	1400	1200	SL18 1840	2.57
91	1400	1000	SL18 2940	9.1
140	1300	900	SL18 3040	21.8
183	1200	800	SL18 2240	43.12
36	1300	1000	SL18 1844	2.8
97	1200	850	SL18 2944	9.9
164	1200	850	SL18 3044	28.4
41.5	1200	950	SL18 1848	4.4
103	1200	750	SL18 2948	10.6
176	1100	750	SL18 3048	30.9
44	1100	850	SL18 1852	4.71

Cylindrical roller bearings
full complement
single row
Semi-locating
Series SL1829
SL1830
SL1822
SL1923

HMEC



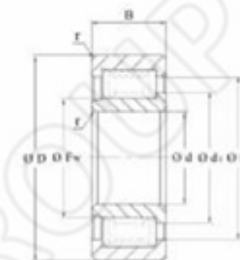
SL1829, SL1830, SL1822, SL1818

Shaft diameter	Dimensions					Mounting dimensions			Basic Load rating	
	d	D	B	r	s	d ₁	D ₁	E _w	dyn. C	stat. C ₀
	mm				mm				kN	
	260	360	60	2.1	3.5	291.5	322.5	333	790	1470
	260	400	104	4	11	304	358	376	1620	2550
280	280	350	33	2	3	304.5	324.5	332	315	620
	280	380	60	2.1	3.5	314	347.5	358	920	1740
	280	420	106	4	11	319.5	372.5	391	1670	2700
300	300	380	38	2.1	3.5	328	351	358	380	750
	300	420	72	3	5	338	376.5	389	1180	2230
	300	460	118	4	14	353.5	413.5	433	2040	3350
320	320	400	38	2.1	4.5	346	369	377	390	800
	320	440	72	3	5	358.5	397	410	1220	2370
	320	480	121	4	14	369.5	429.5	449	2100	3500
340	340	420	38	2.1	4.5	364.5	387	395	405	840
	340	460	72	3	5	379	417.5	430	1260	2500
	340	520	133	5	16	396	463.5	485	2500	4150
360	360	440	38	2.1	4.5	388.5	411.5	419	426	890
	360	480	72	3	5	399.5	438	450	1290	2650
	360	540	134	5	16	414	481	503	2550	4350

Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	≈
kN	min ⁻¹	min ⁻¹		kg
129	1000	700	SL18 2952	18.5
217	1000	650	SL18 3052	44.5
57	1000	800	SL18 1856	7
149	1000	600	SL18 2956	19.7
225	950	600	SL18 3056	48
67	950	700	SL18 1860	10
186	900	550	SL18 2960	31.2
270	850	500	SL18 3060	66.6
69	900	650	SL18 1864	10.6
194	850	500	SL18 2964	32.9
280	800	500	SL18 3064	71.7
72	850	650	SL18 1868	11.2
202	800	480	SL18 2968	34.7
330	750	450	SL18 3068	95.8
75	800	550	SL18 1872	11.7
211	750	440	SL18 2972	36.4
340	700	430	SL18 3072	101

**Cylindrical roller bearings
with plastic spacers
single row
series ZSL1923**

HMEC



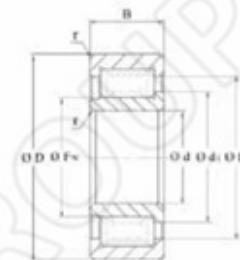
ZSL1923

Shaft diameter	Dimensions				Mounting dimensions			Load rating	
	d	D	B	r	F _w	d ₁	D ₁	dyn. C	stat. C ₀
	mm				mm			kN	kN
25	25	62	24	1.1	31.72	37	47.5	61	55
30	30	72	27	1.1	38.3	43.5	56	84	81
35	35	80	31	1.5	44.68	51	65.5	106	104
40	40	90	33	1.5	51.12	57.5	75	143	144
45	45	100	36	1.5	56.1	62.5	80	153	160
50	50	110	40	2	60.72	68.5	89.5	196	202
55	55	120	43	2	67.11	75.5	99	228	236
60	60	130	46	2.1	73.62	82	105.5	244	260
65	65	140	48	2.1	80.69	90	116	300	330
70	70	150	51	2.1	84.14	94	121	330	365
75	75	160	55	2.1	91.22	101.5	131.5	390	440
80	80	170	58	2.1	98.24	109.5	142	455	520
85	85	180	60	3	107.01	118.5	150.5	485	570
90	90	190	64	3	105.26	117.5	152	530	610
95	95	200	67	3	114.66	127	161.5	560	670
100	100	215	73	3	119.3	133	172.5	670	800
110	110	240	80	3	134.27	151.5	199.5	800	910
120	120	260	86	3	147.39	164.5	212.5	950	1150

Fatigue limit load	Limiting speed	Reference speed	Code bearing HMEC	Mass
P _u	n _G	n _B		≈
kN	min ⁻¹	min ⁻¹		kg
6.7	16000	11000	ZSL19 2305	0.36
9.9	14000	9500	ZSL19 2306	0.55
12.8	12000	9000	ZSL19 2307	0.72
17.6	11000	8000	ZSL19 2308	1
19.5	10000	7500	ZSL19 2309	1.34
24.4	9000	7000	ZSL19 2310	1.76
29	8000	6500	ZSL19 2311	2.22
32	7400	6000	ZSL19 2312	2.82
39.5	6800	5000	ZSL19 2313	3.44
43	6400	4800	ZSL19 2314	4.27
51	6000	4400	ZSL19 2315	5.2
59	5600	4000	ZSL19 2316	6.2
63	5300	3700	ZSL19 2317	7.23
67	5000	3500	ZSL19 2318	8.7
72	4800	3300	ZSL19 2319	10
85	4400	3000	ZSL19 2320	12.7
92	4000	2700	ZSL19 2322	16.5
114	3700	2400	ZSL19 2324	21.9

**Cylindrical roller bearings
with brass disc cage
single row
series LSL 1923**

HMEC

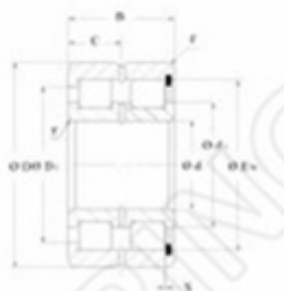


ZSL 1923

Shaft diameter	Dimensions				Mounting dimensions			Load rating	
	d	D	B	r	F _w	d ₁	D ₁	dyn. C	stat. Co
	mm				min			kN	
100	100	215	73	3	119.3	133	172.5	670	800
110	110	240	80	3	135.5	151	195	790	940
120	120	260	86	3	147.39	164.5	212.5	950	1150
130	130	280	93	4	157.9	176	227.5	1070	1300
140	140	300	102	4	168.45	188	243	1200	1470
150	150	320	108	4	182.49	203.5	263.5	1420	1780
160	160	340	114	4	196.38	219	284	1600	2020
170	170	360	120	4	203.55	227	295	1750	2230
180	180	380	126	4	221.56	245	312.5	1850	2440
190	190	400	132	5	224.43	250	326.5	2110	2750
200	200	420	138	5	238.45	266	347	2350	3050
220	220	460	145	5	226.71	297	388	2500	3200
240	240	500	155	5	280.55	312.5	408.5	2750	3550
260	260	540	165	6	315.6	352	459.5	3400	4400
280	280	580	175	6	333.1	371	485	3700	4850
300	300	620	185	7.5	350.93	391	511	4150	5600

Fatigue limit load	Limiting speed	Reference speed	Code bearing	Mass
P _u	n _G	n _B	HMEC	≈
kN	min ⁻¹	min ⁻¹		kg
85	6500	3300	LSL19 2320	12.8
96	5600	2900	LSL19 2322	17.3
114	5300	2600	LSL19 2324	22
126	4900	2400	LSL19 2326	27.2
140	4600	2200	LSL19 2328	34
165	4200	2000	LSL19 2330	40.7
186	3900	1800	LSL19 2332	48.05
200	3800	1700	LSL19 2334	57.5
215	3500	1600	LSL19 2336	67.4
238	3400	1500	LSL19 2338	78.1
260	3200	1400	LSL19 2340	89.3
265	2900	1300	LSL19 2344	108
290	2700	1200	LSL19 2348	138.6
345	2400	1000	LSL19 2352	168
375	2300	950	LSL19 2356	206.6
420	2200	850	LSL19 2360	253

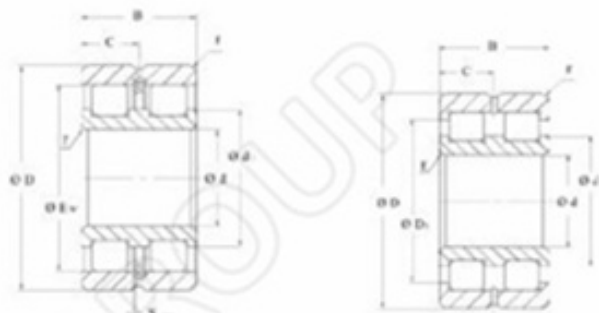
Cylindrical roller bearings
full complement, double row
Semi-locating bearings
series SL 1850
Locating bearings
series SL 0148, SL 0149
Non-locating bearings
series SL 0249



SL 1850 (semi-locating bearings)

Shaft diameter	Dimensions						Mounting dimensions			Load rating	
	d	D	B	r	s	C	d ₁	D ₁	E _w	dyn. C	stat. C ₀
	mm									kN	
20	20	42	30	0.6	1	15	29	33	36.5	47.5	53
25	25	47	30	0.6	1	15	34.5	38.5	42.5	54	65
30	30	55	34	1	1.5	17	40	45.5	49.5	70	86
35	35	62	36	1	1.5	18	45	51.5	55.5	85	109
40	40	68	38	1	1.5	19	50.5	57.5	61.5	101	136
45	45	75	40	1	1.5	20	55.5	62.5	66.5	108	151
50	50	80	40	1	1.5	20	59	67.5	72	135	191
55	55	90	46	1.1	1.5	23	68.5	78.5	83.5	184	275
60	60	85	25	1	-	12.5	70.5	73.5	-	71	125
60	85	25	1	1	12.5	70.5	-	77	71	125	
60	95	46	1.1	1.5	23	71.5	82	86.5	189	290	
65	65	100	46	1.1	1.5	23	78	88	93	199	320
70	70	100	30	1	-	15	83	87	-	108	189
70	100	30	1	1	15	83	-	91	108	189	
70	110	54	1.1	3	27	81.5	95	100	235	355	
75	75	115	54	1.1	3	27	89	103	107.5	248	390
80	80	110	30	1	-	15	92	96	-	115	211
80	110	30	1	1	15	92	-	100	115	211	
80	125	60	1.1	3.5	30	95	111	117	295	450	
85	85	130	60	1.1	3.5	30	99.5	115.5	121	305	475
90	90	125	35	1.1	-	17.5	103	110	-	155	295
90	125	35	1.1	1.5	17.5	103	-	115	155	295	
90	140	67	1.5	4	33.5	106.5	124	130	355	560	
100	100	140	40	1.1	-	20	116.5	124.5	-	196	380
100	140	40	1.1	2	20	116.5	-	129	196	380	
100	150	67	1.5	4	33.5	116	133.5	139	375	620	
110	110	150	40	1.1	-	20	125	133.5	-	204	410
110	150	40	1.1	2	20	125	-	138	204	410	
110	170	80	2	5	40	127.5	148.5	156	490	790	
120	120	165	45	1.1	-	22.5	139	148	-	228	455
120	165	45	1.1	3	22.5	139	-	153	228	455	

HMEC

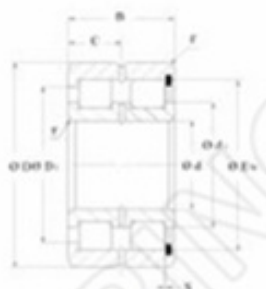


SL 0249 (non-locating bearings)

SL 0148, SL 0149 (locating bearings)

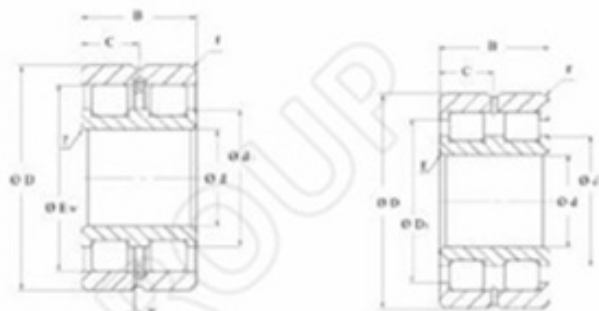
Fatigue limit load	Limiting speed	Reference speed	Code bearing HMEC			Mass
			semi-locating bearings	locating bearings	non-locating bearings	
6.9	10000	9000	SL18 5004	-	-	0.2
8.6	9000	7000	SL18 5005	-	-	0.23
11.1	7500	6500	SL18 5006	-	-	0.35
14	6500	5500	SL18 5007	-	-	0.46
17.3	6000	5000	SL18 5008	-	-	0.56
19.2	5500	4700	SL18 5009	-	-	0.71
23.9	5000	4200	SL18 5010	-	-	0.76
34	4500	3600	SL18 5011	-	-	1.16
16.7	4500	3200	-	SL01 4912	-	0.49
16.7	4500	3200	-	-	SL02 4912	0.47
36	4200	3400	SL18 5012	-	-	1.24
39.5	3900	3100	SL18 5013	-	-	1.32
24.6	3800	2800	-	SL01 4914	-	0.78
24.6	3800	2800	-	-	SL02 4914	0.75
43.5	3600	3100	SL18 5014	-	-	1.85
47.5	3400	2700	SL18 5015	-	-	1.93
27.5	3400	2500	-	SL01 4916	-	0.88
27.5	3400	2500	-	-	SL02 4916	0.85
55	3200	2500	SL18 5016	-	-	2.59
58	3000	2400	SL18 5017	-	-	2.72
37	3000	2300	-	SL01 4918	-	1.35
37	3000	2300	-	-	SL02 4918	1.3
67	2800	2200	SL18 5018	-	-	3.62
47	2700	2000	-	SL01 4920	-	1.95
47	2700	2000	-	-	SL02 4920	1.9
71	2600	2000	SL18 5020	-	-	3.94
49.5	2500	1800	-	SL01 4922	-	2.15
49.5	2500	1800	-	-	SL02 4922	2.1
90	2300	1800	SL18 5022	-	-	6.32
53	2300	1700	-	SL01 4924	-	2.95
53	2300	1700	-	-	SL02 4924	2.85

Cylindrical roller bearings
full complement, double row
Semi-locating bearings
series SL 1850
Locating bearings
series SL 0148, SL 0149
Non-locating bearings
series SL 0248
SL 0249



SL 1850 (semi-locating bearings)

Shaft diameter	Dimensions						Mounting dimensions			Load rating	
	d	D	B	r	s	C	d ₁	D ₁	E _w	d _{yn} C	stat. C ₀
	mm									kN	
120	120	180	80	2	5	40	139	160	167	520	870
130	130	180	50	1.5	-	25	149.5	159.5	-	265	530
130	180	50	1.5	4	25	-	149.5	-	165	265	530
130	200	95	2	5	47.5	149	174.5	183	-	740	1230
140	140	190	50	1.5	-	25	160	170	-	275	570
140	190	50	1.5	4	25	-	160	-	176	275	570
140	210	95	2	5	47.5	163	188.5	197	-	780	1360
150	150	190	40	1.1	-	20	166	173	-	237	550
150	190	40	2	2	20	-	166	-	178	237	550
150	210	60	2	-	30	171.5	186.5	-	192	415	840
150	210	60	2	4	30	-	171.5	-	192	415	840
150	225	100	2	6	50	170.5	197.5	206	-	820	1420
160	160	200	40	2.1	-	20	174	182	-	243	580
160	200	40	1.1	2	20	-	174	-	186	243	580
160	220	60	2	-	30	185	199.5	-	206	435	900
160	220	60	2	4	30	-	185	-	206	435	900
170	170	215	45	1.1	-	22.5	187	196	-	265	620
170	215	45	1.1	3	22.5	-	187	-	201	265	620
170	230	60	2	-	30	194	208.5	-	215	445	950
170	230	60	2	4	30	-	194	-	215	445	950
180	180	225	45	1.1	-	22.5	200	208.5	-	275	660
180	225	45	1.1	3	22.5	-	200	-	214	275	660
180	250	69	2	-	34.5	206	223.5	-	230	580	1230
180	250	69	2	4	34.5	-	206	-	230	580	1230
190	190	240	50	1.5	-	25	209	219	-	315	750
190	240	50	1.5	4	25	-	209	-	225	315	750
190	260	69	2	-	34.5	216	233	-	240	590	1290
190	260	69	2	4	34.5	-	216	-	240	590	1290
200	200	250	50	1.5	-	25	220	229.5	-	325	790
200	250	50	1.5	4	25	-	220	-	235	325	790
200	280	80	2.1	-	40	231	251.5	-	260	690	1480



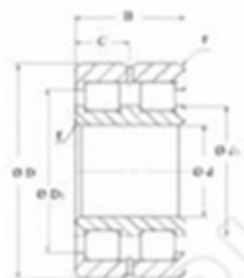
SL 0248, SL 0249 (non-locating bearings)

SL 0148, SL 0149 (locating bearings)

Fatigue limit load P _u kN	Limiting speed n _G min ⁻¹	Reference speed n _B min ⁻¹	Code bearing HMEC			Mass m ₀ kg
			semi-locating bearings	locating bearings	non-locating bearings	
			SL 18 5024	SL 01 4926	SL 02 4926	
96	2200	1600	SL 18 5024	-	-	6.77
60	2100	1500	-	SL 01 4926	-	3.95
60	2100	1500	-	-	SL 02 4926	3.8
130	2000	1400	SL 18 5026	-	-	10.2
63	2000	1400	-	SL 01 4928	-	4.2
63	2000	1400	-	-	SL 02 4928	4.1
140	1900	1200	SL 18 5028	-	-	11.1
61	1900	1300	-	SL 01 4830	-	2.9
61	1900	1300	-	-	SL 02 4830	2.8
88	1800	1200	-	SL 01 4930	-	6.65
88	1800	1200	-	-	SL 02 4930	6.45
145	1700	1200	SL 18 5030	-	-	13.3
63	1800	1300	-	SL 01 4832	-	3.1
63	1800	1200	-	-	SL 02 4832	3
93	1700	1100	-	SL 01 4932	-	7
93	1700	1100	-	-	SL 02 4932	6.8
66	1700	1200	-	SL 01 4834	-	4.1
66	1700	1200	-	-	SL 02 4834	3.95
96	1600	1000	-	SL 01 4934	-	7.35
96	1600	1000	-	-	SL 02 4934	7.1
70	1600	1100	-	SL 01 4836	-	4.3
70	1600	1100	-	-	SL 02 4836	4.15
121	1500	950	-	SL 01 4936	-	10.8
121	1500	950	-	-	SL 02 4936	10.5
77	1500	1100	-	SL 01 4838	-	5.65
77	1500	1100	-	-	SL 02 4838	5.45
125	1400	900	-	SL 01 4938	-	11.2
125	1400	900	-	-	SL 02 4938	10.9
80	1400	1000	-	SL 01 4840	-	5.9
80	1400	1000	-	-	SL 02 4840	5.7
142	1400	850	-	SL 01 4940	-	15.8

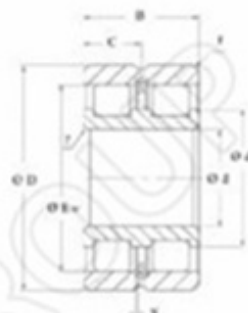
HMEC

Cylindrical roller bearings
full complement, double row
Semi-locating bearings
series SL 1850
Locating bearings
series SL 0148, SL 0149
Non-locating bearings
series SL 0248
SL 0249



SL 0148, SL 0149 (locating bearings)

Shaft diameter	Dimensions					Mounting dimensions				Load rating		
	d	D	B	r	s	C	d ₁	D ₁	E _w	dyn. C	stat. Co	
	mm					mm						kN
200	200	280	80	2.1	5	40	231	-	259	690	1480	
220	220	270	50	1.5	-	25	241	250.5	-	340	870	
	220	270	50	1.5	4	25	241	-	256	340	870	
220	300	80	2.1	-	40	248	268.5	-	720	1590		
	220	300	80	2.1	5	40	248	-	276	720	1590	
240	240	300	60	2	-	30	261	275	-	520	1290	
	240	300	60	2	4	30	261	-	281	520	1290	
	240	320	80	2.1	-	40	271	291	-	750	1740	
	240	320	80	2.1	5	40	271	-	299	750	1740	
260	260	320	60	2	-	30	283.5	297	-	540	1400	
	260	320	60	2	4	30	283.5	-	304	540	1400	
	260	360	100	2.1	-	50	295	321	-	1120	2500	
	260	360	100	2.1	6	50	295	-	331	1120	2500	
280	280	350	69	2	-	34.5	308	326	-	710	1860	
	280	350	69	2	4	34.5	308	-	332	710	1860	
	280	380	100	2.1	-	50	317	343	-	1170	2700	
	280	380	100	2.1	6	50	317	-	353	1170	2700	
300	300	380	80	2.1	-	40	329	349	-	830	2120	
	300	380	80	2.1	6	40	329	-	356	830	2120	
	300	420	118	3	-	59	341.5	374	-	1650	3800	
	300	420	118	3	6	59	341.5	-	385	1650	3800	
320	320	400	80	2.1	-	40	352	372	-	860	2280	
	320	400	80	2.1	6	40	352	-	379	860	2280	
	320	440	118	3	-	59	368	400	-	1720	4100	
	320	440	118	3	6	59	368	-	412	1720	4100	
340	340	420	80	2.1	-	40	369	389	-	880	2390	
	340	420	80	2.1	6	40	369	-	396	880	2390	
	340	460	118	3	-	59	386	418	-	1770	4300	
	340	460	118	3	6	59	386	-	430	1770	4300	

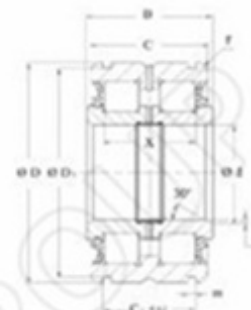


SL 0248, SL 0249 (non-locating bearings)

Fatigue limit load Pu kN	Limiting speed n _G min ⁻¹	Reference speed n _B min ⁻¹	Code bearing HMEC			Mass m ₀ kg
			semi-locating bearings	locating bearings	non-locating bearings	
				SL01	SL02	
142	1400	850	-	-	SL02 4940	15.3
85	1300	850	-	SL01 4844	-	6.4
85	1300	850	-	-	SL02 4844	6.2
150	1200	750	-	SL01 4944	-	17.2
150	1200	750	-	-	SL02 4944	16.7
120	1200	750	-	SL01 4848	-	10
120	1200	750	-	-	SL02 4848	9.9
160	1200	700	-	SL01 4948	-	18.5
160	1200	700	-	-	SL02 4948	17.9
128	1100	700	-	SL01 4852	-	11
128	1100	700	-	-	SL02 4852	10.6
221	1000	600	-	SL01 4952	-	32
221	1000	600	-	-	SL02 4952	31.2
163	1000	600	-	SL01 4856	-	16
163	1000	600	-	-	SL02 4856	15.6
233	1000	550	-	SL01 4956	-	34
233	1000	550	-	-	SL02 4956	33.1
185	950	550	-	SL01 4860	-	23
185	950	550	-	-	SL02 4860	22
315	900	460	-	SL01 4960	-	53
315	900	460	-	-	SL02 4960	51.9
194	900	500	-	SL01 4864	-	24
194	900	500	-	-	SL02 4864	23.5
335	850	410	-	SL01 4964	-	56
335	850	410	-	-	SL02 4964	54.9
201	850	480	-	SL01 4868	-	25.5
201	850	480	-	-	SL02 4868	25
350	800	390	-	SL01 4968	-	59
350	800	390	-	-	SL02 4968	57.8

HMEC

Cylindrical roller bearings
with snap ring grooves
full complement, double row, sealed
series SL0450_PP
SL04_PP



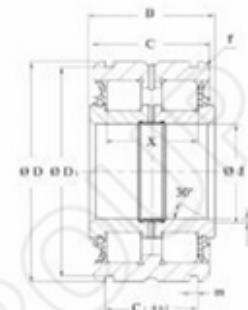
SL04 50_PP
SL04_PP

HMEC

Shaft diameter	Dimensions											
	d	D	B	C	C ₁	D ₁	m	r _{min}	t	x		
20	20	42	30	29	24.7	40.2	1.8	0.3	0.5	22.5		
25	25	47	30	29	24.7	45.2	1.8	0.3	0.5	22.5		
30	30	55	34	33	28.2	53	2.1	0.3	0.5	25.5		
35	35	62	36	35	30.2	60	2.1	0.3	0.5	27.5		
40	40	68	38	37	32.2	65.8	2.7	0.6	0.8	28.5		
45	45	75	40	39	34.2	72.8	2.7	0.6	0.8	30.5		
50	50	80	40	39	34.2	77.8	2.7	0.6	0.8	30.5		
55	55	90	46	45	40.2	87.4	3.2	0.6	1	36		
60	60	95	46	45	40.2	92.4	3.2	0.6	1	36		
65	65	100	46	45	40.2	97.4	3.2	0.6	1	36		
70	70	110	54	53	48.2	107.1	4.2	0.6	1	42		
75	75	115	54	53	48.2	112.1	4.2	0.6	1	42		
80	80	125	60	59	54.2	122.1	4.2	0.6	1.5	48		
85	85	130	60	59	54.2	127.1	4.2	0.6	1.5	48		
90	90	140	67	66	59.2	137	4.2	0.6	1.5	54		
95	95	145	67	66	59.2	142	4.2	0.6	1.5	54		
100	100	150	67	66	59.2	147	4.2	0.6	1.5	54		
110	110	170	80	79	70.2	167	4.2	0.6	1.8	64		
120	120	180	80	79	71.2	176	4.2	0.6	1.8	64		
130	130	200	95	94	83.2	196	4.2	0.6	1.8	77		
		130	190	80	79	71.2	186	4.2	0.6	1.8	64	
140	140	210	95	94	83.2	206	5.2	0.6	1.8	77		
		140	200	80	79	71.2	196	4.2	0.6	1.8	64	
150	150	225	100	99	87.2	221	5.2	0.6	2	80		
		150	210	80	79	71.2	206	5.2	0.6	1.8	64	
160	160	240	109	108	95.2	236	5.2	0.6	2	89		
		160	220	80	79	71.2	216	5.2	0.6	1.8	64	
170	170	260	122	121	107.2	254	5.2	0.6	2	100		
		170	230	80	79	71.2	226	5.2	0.6	1.8	64	
180	180	280	136	135	118.2	274	5.2	0.6	2	112		
		180	240	80	79	71.2	236	5.2	0.6	1.8	64	

Basic Load ratings		Fatigue limit load	Limiting speed	Code bearing	Mass
dyn. C	stat. C ₀	P _U	n _{G grease}	HMEC	m ₀
kN	kN	kN	min ⁻¹		kg
40.5	49	7.2	4000	SL04 5004 PP	0.2
44.5	58	7.9	3600	SL04 5005 PP	0.24
50	67	9.2	3000	SL04 5006 PP	0.37
63	88	11.8	2600	SL04 5007 PP	0.48
76	103	14.7	2400	SL04 5008 PP	0.56
92	130	18.1	2200	SL04 5009 PP	0.7
97	142	19.8	2000	SL04 5010 PP	0.76
115	175	24	1800	SL04 5011 PP	1.18
120	189	26	1700	SL04 5012 PP	1.26
125	203	28	1600	SL04 5013 PP	1.33
168	265	35	1400	SL04 5014 PP	1.87
194	300	39.5	1400	SL04 5015 PP	1.96
203	325	42.5	1300	SL04 5016 PP	2.71
211	350	45	1200	SL04 5017 PP	2.83
305	510	62	1100	SL04 5018 PP	3.71
315	530	64	1100	SL04 5019 PP	3.88
330	550	66	1000	SL04 5020 PP	3.95
395	680	78	900	SL04 5022 PP	6.57
410	740	83	900	SL04 5024 PP	7.04
540	960	105	800	SL04 5026 PP	10.5
430	790	87	800	SL04 130 PP	7.5
610	1100	118	750	SL04 5028 PP	11.1
445	840	91	750	SL04 140 PP	8
710	1260	131	700	SL04 5030 PP	13.3
465	920	98	700	SL04 150 PP	8.4
740	1360	140	650	SL04 5032 PP	16.6
480	970	101	700	SL04 160 PP	8.8
960	1750	174	600	SL04 5034 PP	22.6
490	1030	105	650	SL04 170 PP	9.3
1140	2130	205	550	SL04 5036 PP	30.1
500	1080	1110	600	SL04 180 PP	9.8

**Cylindrical roller bearings
with snap ring grooves
full complement, double row, sealed
series SL0450..PP
SL04..PP**



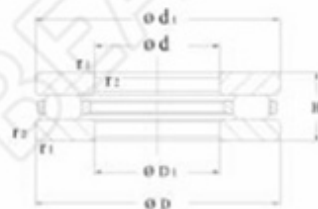
SL04 50..PP
SL04 ..PP

Shaft diameter	Dimensions										
	d	D	B	C	C ₁	D ₁	m	r _{min}	t	x	
					+0.2						
190	190	290	136	135	118.2	284	5.2	0.6	2	112	
	190	260	80	79	73.2	254	5.2	0.6	1.8	64	
200	200	310	150	149	128.2	304	6.3	0.6	2	126	
	200	270	80	79	73.2	264	5.2	0.6	1.8	64	
220	220	340	160	159	138.2	334	6.3	1	2	132	
	220	300	95	94	83.2	294	5.2	1	2	72	
240	240	360	160	159	138.2	354	6.3	1	2	132	
	240	320	95	94	83.2	314	6.3	1	2	72	
260	260	400	190	189	162.2	394	6.3	1.1	3	150	
	260	340	95	94	83.2	334	6.3	1	3	75	
280	280	420	190	189	163.2	413	7.3	1.1	3	150	
300	300	460	218	216	185.2	453	7.3	1.1	3	170	
	300	380	95	94	83.2	374	6.3	1	3	75	

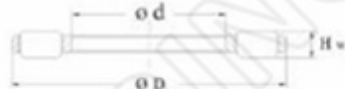
Basic Load ratings		Fatigue limit load Pu kN	Limiting speed n _{G grease} min ⁻¹	Code beaing HMEC	Mass ≈ kg
dyn. C kN	stat. Co kN				
1160	2210	211	550	SL04 5038 PP	31.5
520	1130	113	550	SL04 190 PP	12.7
1350	2600	245	500	SL04 5040 PP	40.8
540	1210	119	550	SL04 200 PP	13.2
1570	3050	280	480	SL04 5044 PP	52.5
700	1550	150	480	SL04 220 PP	19.5
1630	3300	295	440	SL04 5048 PP	56
740	1700	160	480	SL04 240 PP	21
2380	4700	405	400	SL04 5052 PP	84.5
840	1990	182	440	SL04 260 PP	22.5
2600	5200	440	380	SL04 5056 PP	90
3000	5800	480	340	SL04 5060 PP	126
900	2250	199	380	SL04 300 PP	25.5

Cylindrical Roller Thrust Bearings
series 811..

K 81100
WS 811..
GS 811..



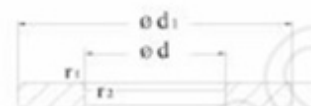
811..



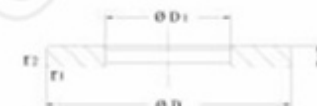
K 811..

Shaft diameter	Dimensions							Load ratings		
	d	D	H	d	d ₁	D ₁	S	r _{1/2} mm	dyn. Ca	stat. Coa
	mm									
30	30	47	11	30	47	32	3	0.6	28	83
	30	52	16	30	52	32	4.25	0.6	50	132
35	35	52	12	35	52	37	3.5	0.6	30	93
	35	62	18	35	62	37	5.25	1	54	156
40	40	60	13	40	60	42	3.5	0.6	42.5	137
	40	68	19	40	68	42	5	1	76.5	220
45	45	65	14	45	65	47	4	0.6	45	150
	45	73	20	45	73	47	5.5	1	83	255
50	50	70	14	50	70	52	4	0.6	42.5	143
	50	78	22	50	78	52	6.5	1	88	285
55	55	78	16	55	78	57	5	0.6	52	193
	55	90	25	55	90	57	7	1	122	390
60	60	85	17	60	85	62	4.75	1	73.5	265
	60	95	26	60	95	62	7.5	1	114	365
65	65	90	18	65	90	67	5.25	1	76.5	285
	65	100	27	65	100	67	8	1	118	390

HMEC



WS 811..

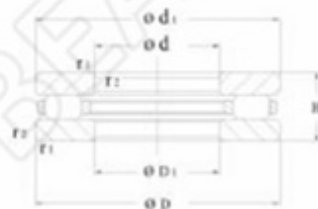


GS 811..

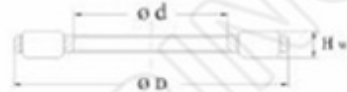
Speed rating ng grease	Speed rating ng oil	Code bearing HMEC	Cylindrical Roller and Cage thrust assembly			Mass kg
			Shaft Washer	Housing Washer	R _z	
2600	6700	81106	K81106	WS81106	GS81106	0.06
2200	6000	81107	K81107	WS81107	GS81107	0.08
1900	5300	81108	K81108	WS81108	GS81108	0.12
1700	4800	81109	K81109	WS81109	GS81109	0.14
1500	4300	81110	K81110	WS81110	GS81110	0.16
1400	4000	81111	K81111	WS81111	GS81111	0.23
1200	3600	81112	K81112	WS81112	GS81112	0.28
1100	3400	81113	K81113	WS81113	GS81113	0.33

Cylindrical Roller Thrust Bearings
series 811..

K 81100
WS 811..
GS 811..



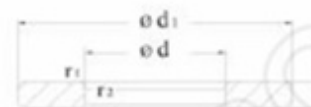
811..



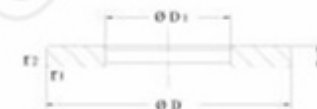
K 811..

Shaft diameter	Dimensions							Load ratings		
	d	D	H	d	d ₁	D ₁	S	r _{1/2} min	dyn. Ca	stat. Coa
	mm									
70	70	95	18	70	95	72	5.25	1	71	265
	70	105	27	70	105	72	8	1	122	440
75	75	100	19	75	100	77	5.75	1	75	285
	75	110	27	75	110	77	8	1	125	440
80	80	105	19	80	105	82	5.75	1	76.5	300
	80	115	28	80	115	82	8.5	1	129	455
85	85	110	19	85	110	87	5.75	1	76.5	310
	85	125	31	85	125	88	9.5	1	153	550
90	90	120	22	90	120	92	6.5	1	104	415
	90	135	35	90	135	93	10.5	1.1	190	670
100	100	135	25	100	135	102	7	1	146	585
	100	150	38	100	150	103	11.5	1.1	224	815
110	110	145	25	110	145	112	7	1	160	655
	110	160	38	110	160	113	11.5	1.1	232	865
120	120	155	25	120	155	122	7	1	160	680
	120	170	39	120	170	123	12	1.1	245	950

HMEC



WS 811..

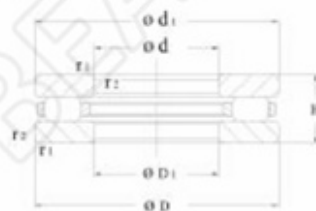


GS 811..

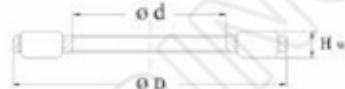
Speed rating ng grease	Speed rating ng oil	Code bearing HMEC	Cylindrical Roller and Cage thrust assembly	Shaft Washer	Housing Washer	Mass
						M ₂ kg
1000	3200	81114	K81114	WS81114	GS81114	0.36
						950
950	3000	81115	K81115	WS81115	GS81115	0.43
						900
900	2800	81116	K81116	WS81116	GS81116	0.46
						850
850	2600	81117	K81117	WS81117	GS81117	0.48
						800
800	2400	81118	K81118	WS81118	GS81118	0.72
						800
750	2200	81120	K81120	WS81120	GS81120	1.07
						700
700	2000	81122	K81122	WS81122	GS81122	1.12
						670
670	1900	81124	K81124	WS81124	GS81124	1.25
						630

Cylindrical Roller Thrust Bearings
series 811..

K 81100
WS 811..
GS 811..



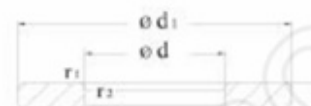
811..



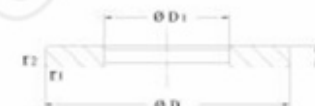
K 811..

Shaft diameter	Dimensions							Load ratings		
	d	D	H	d	d ₁	D ₁	S	r _{1/2} min	dyn. Ca	stat. Coa
	mm									
130	130	170	30	130	170	132	9	1	186	780
	130	190	45	130	187	133	13	1.5	365	1400
140	140	180	31	140	178	142	9.5	1	196	865
	140	200	46	140	197	143	13.5	1.5	375	1460
150	150	190	31	150	188	152	9.5	1	204	930
	150	215	50	150	212	153	14.5	1.5	455	1800
160	160	200	31	160	198	162	9.5	1	212	980
	160	225	51	160	222	163	15	1.5	465	1900
170	170	215	34	170	213	172	10	1.1	265	1220
	170	240	55	170	237	173	16.5	1.5	520	2080
180	180	225	34	180	222	183	10	1.1	275	1290
	180	250	56	180	247	183	17	1.5	520	2160

HMEC



WS 811..



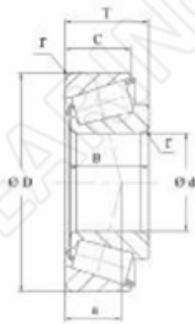
GS 811..

Speed rating ng grease	ng oil	Code bearing HMEC	Cylindrical Roller and Cage thrust assembly	Shaft Washer	Housing Washer	Mass
						≈ kg
600	1700	81126	K81126	WS81126	GS81126	1.72
560	1600	81226	K81226	WS81226	GS81226	4.37
560	1600	81128	K81128	WS81128	GS81128	2.02
530	1500	81228	K81228	WS81228	GS81228	4.76
530	1500	81130	K81130	WS81130	GS81130	2.15
500	1400	81230	K81230	WS81230	GS81230	6.04
500	1400	81132	K81132	WS81132	GS81132	2.28
500	1400	81232	K81232	WS81232	GS81232	6.52
500	1400	81134	K81134	WS81134	GS81134	3.01
480	1300	81234	K81234	WS81234	GS81234	8.12
480	1300	81136	K81136	WS81136	GS81136	3.07
450	1200	81236	K81236	WS81236	GS81236	8.69

Taper roller bearings



Taper Roller Bearing (metric size)



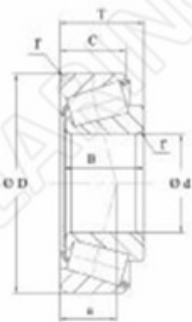
Shaft diameter d	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing HMEC	Mass ≈ kg
	D	B	C	T	dyn. C	stat. Co					
	mm						kN				
15	15	35	11	10	11.75	12.5	11.8	24000	15000	30202	0.057
	15	42	13	11	14.25	23.2	20.8	20000	13000	30302A	0.098
17	17	40	12	11	13.25	19.3	19	20000	13000	30203A	0.082
	17	40	16	14	17.25	29	30	20000	11000	32203A	0.108
	17	47	14	12	15.25	28	25	18000	11000	30303A	0.133
	17	47	19	16	20.25	36.5	36.5	18000	11000	32303A	0.182
20	20	42	15	12	15	24	29	18000	9500	32004X	0.108
	20	47	14	12	15.25	27.5	27.5	17000	11000	30204A	0.013
	20	52	15	13	16.25	34.5	33.5	15000	10000	30304A	0.188
	20	52	15	11	16.25	31	30.5	14000	9500	31304	0.174
	20	52	21	18	22.25	46.5	48	15000	9500	32304A	0.269
25	25	47	15	11.5	15	26.5	34	15000	8000	32005X	0.12
	25	52	15	13	16.25	32.5	35.5	14000	9500	30205A	0.16
	25	52	18	16	19.25	40.5	45	14000	8500	32205A	0.188
	25	52	22	18	22	49	58.5	14000	7500	33205	0.223
	25	62	17	15	18.25	47.5	46.5	13000	8500	30305A	0.289
	25	62	17	13	18.25	38	39	12000	8500	31305A	0.297
	25	62	24	20	25.25	63	65.5	13000	8000	32305A	0.362
28	28	52	16	12	16	34	40.5	13000	7000	320/28X	0.156
30	30	55	17	13	17	39	47.5	13000	7000	32006X	0.195

HMEC



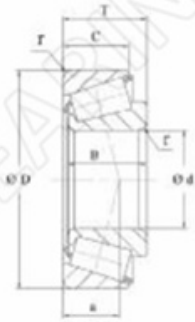
Shaft	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing HMEC	Mass ≈
	d	D	B	C	T	dyn. C	stat. Co				
	mm					kN		min ⁻¹			kg
30	30	62	16	14	17.25	44	49	12000	7500	30206A	0.237
	30	62	20	17	21.25	54	63	12000	7000	32206A	0.274
	30	62	25	19.5	25	65.5	78	11000	6700	33206	0.394
	30	72	19	16	20.75	60	61	10000	7500	30306A	0.445
	30	72	19	14	20.75	45.5	47.5	10000	7500	31306A	0.441
	30	72	27	23	28.75	81.5	90	10000	7000	32306A	0.587
32	32	58	17	13	17	40	50	12000	6300	320/32X	0.188
35	35	62	18	14	18	46.5	58.5	11000	6000	32007X	0.225
	35	72	17	15	18.25	54	60	10000	6700	30207A	0.334
	35	72	23	19	24.25	71	85	10000	6000	32207A	0.482
	35	72	28	22	28	86.5	106	10000	5600	33207	0.585
	35	80	21	18	22.75	73.5	76.5	9500	6700	30307A	0.573
	35	80	21	15	22.75	60	65.5	9000	6300	31307A	0.582
	35	80	31	25	32.75	100	114	9500	6300	32307A	0.741
	35	80	31	25	32.75	96.5	118	9000	6300	32307B	0.802
40	40	68	19	14.5	19	54	71	10000	5600	32008XA	0.312
	40	75	26	20.5	26	80	104	9000	5300	33108	0.546
	40	80	18	16	19.75	62	68	9000	6000	30208A	0.42
	40	80	23	19	24.75	80	95	9000	5300	32208A	0.555
	40	80	32	25	32	106	134	8500	5300	33208	0.736
	40	90	23	20	25.25	91.5	102	8000	6000	30308A	0.812
	40	90	23	17	25.25	76.5	83	7500	6000	31308A	0.8
	40	90	33	27	35.25	120	146	8000	5600	32308A	1.03
	40	90	33	27	35.25	122	150	7500	5600	32308B	1.18

Taper Roller Bearing (metric size)



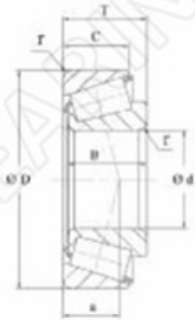
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing HMEC	Mass ≈	
	d	D	B	C	T	dyn. C	stat. Co					
	mm					kN		min ⁻¹			kg	
45	45	75	20	15.5	20	61	86.5	9000	5000	32009XA	0.329	
	45	75	24	19	24	72	104	9000	4800	33009	0.432	
	45	80	26	20.5	26	85	116	8500	4800	33109	0.526	
	45	85	19	16	20.75	71	83	8000	5600	30209A	0.47	
	45	85	23	19	24.75	83	100	8000	5000	32209A	0.57	
	45	85	32	25	32	108	146	8000	4800	33209	0.895	
	45	95	26.5	20	29	90	110	7000	5600	T7FC045	0.933	
	45	100	25	22	27.25	112	127	7000	5300	30309A	1	
	45	100	25	18	27.25	96.5	110	6700	5300	31309A	0.998	
	45	100	36	30	38.25	156	193	7000	5000	32309A	1.43	
	45	100	36	30	38.25	146	190	7000	5000	32309B	1.48	
	50	50	80	20	15.5	20	64	95	8000	4500	32010X	0.386
		50	80	24	19	24	75	114	8000	4300	33010	0.47
50		85	26	20	26	86.5	122	7500	4300	33110	0.604	
50		90	20	17	21.75	80	96.5	7500	5000	30210A	0.543	
50		90	23	19	24.75	88	110	7500	4500	32210A	0.602	
50		90	32	24.5	32	114	163	7000	4500	33210	0.971	
50		105	29	22	32	108	137	6300	5300	T7FC050	1.21	
50		110	27	23	29.25	132	150	6300	5000	30310A	1.38	
50		110	27	19	29.25	112	127	6300	4800	31310A	2.9	
50		110	40	33	42.25	186	236	6300	4800	32310A	1.9	
50		110	40	33	42.25	166	224	6300	4800	32310B	1.9	
55		55	90	23	17.5	23	81.5	118	7000	4300	32011X	0.64
		55	90	27	21	27	93	143	7000	4000	33011	0.673
	55	95	30	23	30	114	163	6700	4000	33111	0.894	

HMEC



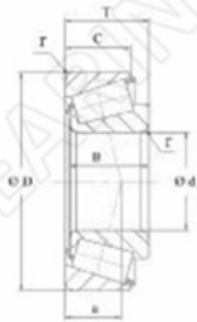
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass	
	d	D	B	C	T	dyn. C	stat. Co					
	mm					kN						min ⁻¹
55	55	100	21	18	22.75	91.5	108	6700	4800	30211A	0.804	
	55	100	25	21	26.75	110	137	6700	4300	32211A	0.872	
	55	100	35	27	35	137	196	6700	4000	33211	1.17	
	55	115	31	23.5	34	129	166	5600	4800	T7FC055	1.8	
	55	120	29	25	31.5	153	176	6000	4500	30311A	1.8	
	55	120	29	21	31.5	125	140	5600	4500	31311A	1.57	
	55	120	43	35	45.5	212	270	6000	4300	32311A	2.33	
	55	120	43	35	45.5	196	270	5600	4300	32311B	2.47	
60	60	95	23	17.5	23	83	125	6700	4000	32012X	0.68	
	60	95	27	21	27	96.5	150	6700	3800	33012	0.73	
	60	100	30	23	30	116	173	6300	3800	33112	1.01	
	60	110	22	19	23.75	104	122	6300	4300	30212A	0.919	
	60	110	28	24	29.75	134	170	6000	4000	32212A	1.14	
	60	110	38	29	38	170	240	6000	3800	33212	1.5	
	60	115	39	33	40	190	255	6000	3800	T2EE060	1.85	
	60	125	33.5	26	37	153	200	5300	4500	T7FC060	2.05	
	60	130	31	26	33.5	176	204	5300	4300	30312A	2.05	
	60	130	31	22	33.5	146	170	5300	4300	31312A	2.17	
	60	130	46	37	48.5	245	310	5300	4000	32312A	3.19	
	60	130	46	37	48.5	224	305	5300	4000	32312B	3.15	
	65	65	100	23	17.5	23	83	129	6300	3600	32013X	0.62
		65	100	27	21	27	100	163	6300	3400	33013	0.84
65		110	34	26.5	34	150	228	6000	3400	33113	1.31	
65		120	23	20	24.75	120	143	5600	4000	30213A	1.28	
65		120	31	27	32.75	156	200	5600	3800	32213A	1.49	

Taper Roller Bearing (metric size)



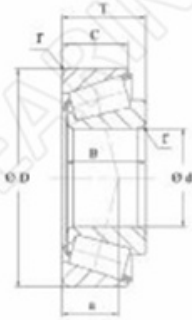
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	C	T	dyn. C	stat. Co				
	mm					kN		min ⁻¹		HMEC	≈ kg
65	65	120	38	31	39	163	236	5300	3600	T5ED065	2.1
	65	120	41	32	41	204	285	5600	3600	33213	2.02
	65	140	33	28	36	196	228	5000	4000	30313A	2.4
	65	140	33	23	36	163	190	5000	4000	31313A	2.63
	65	140	48	39	51	270	345	5000	3800	32313A	3.49
	65	140	48	39	51	250	345	5000	3800	32313B	3.7
70	70	110	25	19	25	106	163	5600	3400	32014X	0.967
	70	110	31	25.5	31	137	224	5600	3200	33014	1.14
	70	120	37	29	37	176	260	5300	3400	33114	1.71
	70	125	24	21	26.25	132	163	5300	3800	30214A	1.3
	70	125	31	27	33.25	163	216	5300	3600	32214A	1.83
	70	125	41	32	41	212	300	5300	3400	33214	2.06
	70	140	35.5	27	39	176	240	4800	4000	T7FC070	2.66
	70	150	35	30	38	224	265	4800	3800	30314A	3.08
	70	150	35	25	38	186	220	4800	3800	31314A	2.9
	70	150	51	42	54	310	405	4800	3400	32314A	4.27
	70	150	51	42	54	285	400	4800	3400	32314BA	4.52
75	75	115	25	19	25	108	170	5600	3200	32015X	0.922
	75	115	31	25.5	31	140	232	5600	3200	33015	1.12
	75	125	37	29	37	180	275	5300	3200	33115	1.79
	75	130	25	22	27.25	137	173	5300	3800	30215A	1.42
	75	130	31	27	33.25	173	232	5000	3400	32215A	1.93
	75	130	41	31	41	208	310	5000	3200	33215	2.24
	75	150	38	29	42	204	275	4800	3800	T7FC075	3.23
	75	160	37	31	40	250	300	4500	3600	30315A	3.64
	75	160	37	26	40	204	240	4500	3600	31315	3.36

HMEC



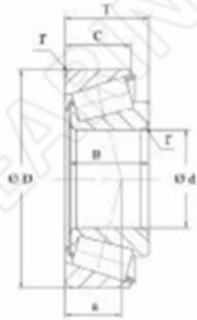
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass	
	d	D	B	C	T	dyn. C	stat. Co					
	mm					kN	min ⁻¹					HMEC
75	75	160	55	45	58	360	475	4500	3200	32315A	5.37	
	75	160	55	45	58	335	475	4500	3200	32315B	5.7	
80	80	125	29	22	29	137	212	5000	3200	32016X	1.24	
	80	125	36	29.5	36	176	290	5000	3000	33016	1.67	
	80	130	37	29	37	190	300	5000	3000	33116	1.9	
	80	140	26	22	28.25	156	193	5000	3400	30216A	1.68	
	80	140	33	28	35.25	200	265	5000	3200	32216A	2.36	
	80	140	46	35	46	250	380	4800	3000	33216	3.23	
	80	160	41	31	45	232	320	4500	3600	T7FC080	4	
	80	170	39	33	42.5	290	345	4500	3200	30316A	4.34	
	80	170	39	27	42.5	228	270	4500	3400	31316	4.19	
	80	170	58	48	61.5	400	540	4500	2800	32316A	6.57	
	80	170	58	48	61.5	360	510	4300	3000	32316B	7.02	
	85	85	130	29	22	29	143	228	5000	3000	32017X	1.36
		85	130	36	29.5	36	183	315	5000	2800	33017	1.73
		85	140	41	32	41	220	355	4800	2800	33117	2.38
85		150	28	24	30.5	180	228	4800	3200	30217A	2.29	
85		150	36	30	38.5	228	305	4800	3000	32217A	3.03	
85		150	49	37	49	290	440	4500	2600	33217	3.5	
85		170	45	33	48	260	365	4300	3200	T7FC085	4.79	
85		180	41	34	44.5	310	375	4300	3000	30317A	4.83	
85		180	41	28	44.5	255	305	4300	3200	31317	4.88	
85		180	60	49	63.5	430	585	4300	2600	32317A	7.5	
85		180	60	49	63.5	415	600	4300	2600	32317B	7.86	
90	90	140	32	24	32	166	255	4800	2800	32018XA	1.76	

Taper Roller Bearing (metric size)



Shaft diameter	Dimensions					Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing HMEC	Mass ≈ kg
	d	D	B	C	T	dyn. C	stat. Co				
	mm					kN					
90	90	140	39	32.5	39	216	365	4800	2800	33018	2.48
	90	150	45	35	45	265	425	4500	2600	33118	3.19
	90	160	30	26	32.5	204	260	4500	3200	30218A	2.64
	90	160	40	34	42.5	260	360	4500	2800	32218A	3.78
	90	175	45	33	48	270	380	4000	3000	T7FC090	5.09
	90	190	43	36	46.5	335	400	4000	3000	30318A	5.83
	90	190	43	30	46.5	275	325	4000	3000	31318	5.5
	90	190	64	53	67.5	490	655	4000	2400	32318A	8.51
95	95	130	23	18	23	102	183	4800	2600	32919	0.825
	95	145	32	24	32	173	275	4500	2600	32019XA	1.86
	95	145	39	32.5	39	220	380	4500	2600	33019	2.33
	95	170	32	27	34.5	224	285	4300	3000	30219A	3
	95	170	43	37	45.5	300	415	4300	2600	32219A	4.24
	95	200	45	38	49.5	365	440	3600	2800	30319A	6.77
	95	200	45	32	49.5	305	365	3600	2800	31319A	6.5
	95	200	67	55	71.5	530	710	3600	2400	32319A	10.3
	100	100	150	32	24	32	176	285	4500	2600	32020X
100		150	39	32.5	39	224	400	4500	2400	33020	2.42
100		160	40	34	42	232	400	4300	2400	T5ED100	3.25
100		180	34	29	37	250	325	4300	2800	30220A	3.75
100		180	46	39	49	335	475	4000	2400	32220A	5.67
100		215	47	39	51.5	415	510	3400	2400	30320A	8.38
100		215	51	35	56.5	380	480	3000	2400	31320X	8.81
100		215	73	60	77.5	610	850	3400	2200	32320A	12.9

HMEC



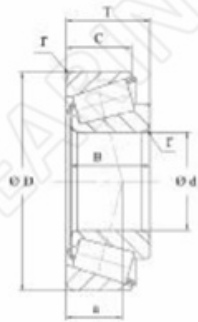
Shaft diameter d	Dimensions					Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing HMEC	Mass ≈ kg
	D	B	C	T	dyn. C	stat. Co	kn				
105	145	25	20	25	129	220	4500	2400	32921	1.15	
	160	35	26	35	204	335	4300	2400	32021X	2.33	
	160	43	34	43	265	450	4300	2200	33021	3.34	
	190	36	30	39	280	365	4000	2600	30221A	4.23	
	190	50	43	53	380	550	3600	2200	32221A	6.07	
	225	77	63	81.5	670	930	3000	2000	32321A	15.1	
110	170	38	29	38	240	400	4000	2400	32022X	3.07	
	170	47	37	47	300	520	4300	1500	33022	4.16	
	200	38	32	41	315	415	3600	2400	30222A	5.23	
	200	53	46	56	415	600	3400	2200	32222A	7.35	
	240	50	42	54.5	480	585	2800	2200	30322A	11.1	
	240	57	38	63	465	585	2800	2200	31322X	12.3	
	240	80	65	84.5	735	1020	2800	1800	32322A	19.1	
120	165	29	23	29	176	310	4000	2200	32924	1.82	
	170	25	19.5	27	156	245	4000	2000	T4CB120	1.97	
	180	38	29	38	250	425	3600	2200	32024X	3.28	
	180	48	38	48	310	560	3600	1900	33024	4.55	
	215	40	34	43.5	340	455	3000	2200	30224A	6.73	
	215	58	50	61.5	490	735	3000	1900	32224A	9.28	
	260	55	46	59.5	560	710	2600	1900	30324A	14.3	
	260	62	42	68	540	695	2600	1900	31324X	15.4	
	260	86	69	90.5	670	965	2600	1800	32324	21.1	
	130	180	32	25	32	208	375	3600	2000	32926	2.4
185		27	21	29	183	280	3400	1900	T4CB130	2.55	
200		45	34	45	335	560	3000	1900	32026X	5.02	

Taper Roller Bearing (metric size)



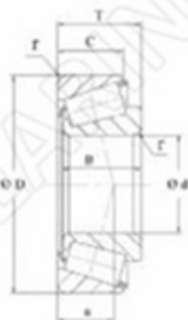
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing HMEC	Mass ≈
	d	D	B	C	T	dyn. C	stat. Co				
	mm					kN					
130	130	230	40	34	43.75	360	480	2800	2000	30226A	7.08
	130	230	64	54	67.75	570	865	2800	1800	32226A	11.7
	130	280	58	49	63.75	600	750	2600	1800	30326	17.2
	130	280	66	44	72	610	800	2400	1700	31326X	18.8
	130	280	93	78	98.75	830	1120	2600	1700	32326	28.9
140	140	190	32	25	32	216	400	3400	1800	32928	2.62
	140	195	27	21	29	193	310	3000	1800	T4CB140	2.3
	140	210	45	34	45	345	610	2800	1700	32028X	5.9
	140	250	42	36	45.75	425	570	2600	1800	30228A	8.48
	140	250	68	58	71.75	655	1000	2600	1600	32228A	14
	140	300	62	53	67.75	585	735	2400	1800	30328	20.5
	140	300	70	47	77	695	900	2400	1600	31328X	23.4
	140	300	102	85	107.7	1160	1700	2400	1300	32328A	37.8
150	150	210	38	30	38	285	500	2800	1700	32930	3.9
	150	225	48	36	48	390	695	2600	1600	32030X	6.46
	150	270	45	38	49	475	640	2600	1700	30230A	11.1
	150	270	73	60	77	750	1160	2600	1400	32230A	18.5
	150	320	65	55	72	800	1020	2200	1500	30330A	25.5
	150	320	75	50	82	780	1020	2200	1500	31330X	30.8
	150	320	108	90	114	1320	1930	2200	1200	32330A	46.1
160	160	220	38	30	38	285	500	2600	1600	32932	4.17
	160	240	51	38	51	425	750	2600	1500	32032X	7.8
	160	290	48	40	52	405	585	2400	1700	30232	13.8
	160	290	80	67	84	880	1400	2400	1300	32232A	23.8
	160	340	68	58	75	880	1120	2200	1400	30332A	29.9

HMEC



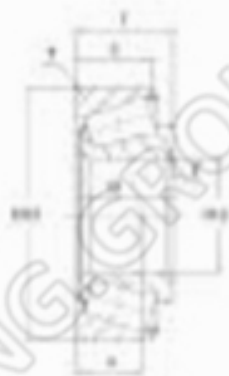
Shaft diameter	Dimensions					Load rating		Limiting speed	Reference speed	Code bearing	Mass
	d	D	B	C	T	dyn. C	stat. Co				
	mm					kN		min ⁻¹		HMEC	≈ kg
170	170	230	30	23	32	236	405	2600	1400	T4DB170	3.52
	170	230	38	30	38	300	560	2600	1400	32934	4.42
	170	260	57	43	57	510	900	2400	1400	32034X	11.4
	170	310	52	43	57	600	830	2200	1400	30234A	19.2
	170	310	86	71	91	980	1600	2200	1200	32234A	28.6
180	180	250	45	34	45	365	720	2400	1300	32936	7.08
	180	280	64	48	64	630	1100	2200	1200	32036X	14.2
	180	320	52	43	57	570	800	2200	1400	30236A	17.9
	180	320	86	71	91	1020	1660	2000	1100	32236A	29.1
190	190	260	45	34	45	375	765	2400	1200	32938	7.55
	190	290	64	48	64	640	1140	2200	1200	32038X	14.8
	190	340	55	46	60	530	780	2000	1400	30238	21
	190	340	92	75	97	1140	1830	2000	1000	32238A	36.7

Taper Roller Bearing (imperial size)



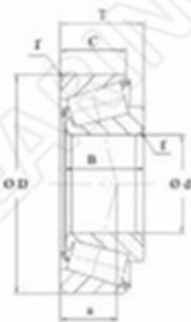
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		(CONE)	(CUP)	≈	
mm					kN		(Grease) (Oil)		(CONE)	(CUP)	kg	
12.000	31.991	10.008	10.785	7.938	10300	8900	13000	18000	A2047	A2126	0.023	0.017
12.700	34.988	10.998	10.988	8.73	11700	10900	12000	16000	A4050	A4138	0.033	0.022
15.000	34.988	10.998	10.988	8.73	11700	10900	12000	16000	A4059	A4138	0.029	0.022
15.875	34.988	10.998	10.988	8.712	13800	13400	11000	15000	L21549	L21511	0.031	0.018
	39.992	12.014	11.153	9.525	14900	15700	9500	13000	A6062	A6157	0.044	0.031
	41.275	14.288	14.681	11.112	21300	19900	10000	13000	03062	03162	0.061	0.035
	42.862	14.288	14.288	9.525	17300	17200	8500	12000	11590	11520	0.061	0.040
	42.862	16.67	16.67	13.495	26900	26300	9500	13000	17580	17520	0.075	0.048
	44.45	15.494	14.381	11.43	23800	23900	8500	11000	05062	05175	0.081	0.039
	49.225	19.845	21.539	14.288	37500	37000	8500	11000	09062	09195	0.139	0.065
16.000	47.00	21.00	21.00	16.00	35000	36500	9000	12000	HMB1649	HMB1610	0.115	0.082
16.993	39.992	12.014	11.153	9.525	14900	15700	9500	13000	A6067	A6157	0.042	0.031
17.455	36.525	11.112	11.112	7.938	11600	11000	10000	14000	A5069	A5144	0.03	0.02
17.462	39.878	13.843	14.605	10.668	22500	22500	10000	13000	LM11749	LM11710	0.055	0.028
	47.00	14.381	14.381	11.112	23800	23900	8500	11000	05068	05185	0.082	0.047
19.050	39.992	12.014	11.153	9.525	14900	15700	9500	13000	A6075	A6157	0.037	0.031
	45.237	15.494	16.637	12.065	28500	28900	9000	12000	LM11949	LM11910	0.081	0.044
	47.00	14.381	14.381	11.112	23800	23900	8500	11000	05075	05185	0.077	0.047
	49.225	18.034	19.05	14.288	37500	37000	8500	11000	09067	09195	0.115	0.065
	49.225	19.845	21.539	14.288	37500	37000	8500	11000	09078	09195	0.124	0.065
	49.225	21.209	19.05	17.462	37500	37000	8500	11000	09067	09196	0.115	0.085
	49.225	23.02	21.539	17.462	37500	37000	8500	11000	09074	09194	0.124	0.082
	53.975	22.225	21.839	15.875	40500	39500	7500	10000	21075	21212	0.156	0.097

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		as	
mm					kN		(Grease) (Oil)		(CONE)	(CUP)	(CONE)	(CUP)
19,990	47,00	14,381	14,381	11,112	23800	23900	8500	11000	05079	05185	0,073	0,047
20,000	51,994	15,011	14,26	12,70	26000	27900	7500	10000	07079	07204	0,105	0,081
20,025	49,225	23,02	21,539	17,462	37500	37000	8500	11000	09081	09196	0,115	0,085
20,038	49,225	19,815	19,815	15,875	38000	37000	8000	11000	12580	12520	0,114	0,067
20,430	50,005	17,526	18,288	13,97	38500	40000	8000	11000	M12649	M12610	0,115	0,059
22,000	45,237	15,494	16,637	12,065	29200	33500	8500	11000	LM12710	LM12710	0,078	0,038
	45,975	15,494	16,637	12,065	29200	33500	8500	11000	LM12710	LM12711	0,078	0,043
22,225	50,005	13,485	14,26	9,525	26000	27900	7500	10000	07087	07196	0,097	0,035
	50,005	17,526	18,288	13,97	38500	40000	8000	11000	M12648	M12610	0,111	0,059
	52,388	19,368	20,168	14,288	40500	43000	7500	10000	1380	1328	0,137	0,067
	53,875	19,368	20,168	14,288	40500	43000	7500	10000	1380	1329	0,137	0,082
	56,898	19,368	19,837	15,875	38000	40500	7100	9500	1755	1729	0,152	0,102
	57,15	22,225	22,225	17,462	48000	50000	7100	9500	1280	1220	0,183	0,100
22,808	47,00	15,59	15,59	12,00	26500	30000	8000	11000	LM72849	LM72840	0,086	0,048
23,812	50,292	14,224	14,732	10,668	27600	32000	7100	10000	L44640	L44610	0,097	0,039
	56,896	19,368	19,837	15,875	38000	40500	7100	9500	1779	1729	0,143	0,102
24,000	55,00	25,00	25,00	21,00	49500	55000	7100	9500	JH933440	JH933410	0,181	0,107
24,981	51,994	15,011	14,26	12,70	26000	27900	7500	10000	07098	07204	0,085	0,081
	52,001	15,011	14,26	12,70	26000	27900	7500	10000	07098	07205	0,085	0,081
	62,00	16,002	16,566	14,288	37000	39500	6300	8500	17098	17244	0,165	0,091
25,000	50,005	13,485	14,26	9,525	26000	27900	7500	10000	07087	07196	0,085	0,035
	51,994	15,011	14,26	12,70	26000	27900	7500	10000	07097	07204	0,085	0,081

Taper Roller Bearing (imperial size)



Dimensions					Load rating		Limiting speed		Code bearing		Mass		
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		(CONE)	(CUP)	(CONE)	(CUP)	
mm					kN		(Grease)	(Oil)	HMEC	HMEC	kg	kg	
25.400	50.005	13.495	14.26	9.525	26000	27900	7500	10000	07100SA	07196	0.082	0.035	
	50.005	13.495	14.26	9.525	26000	27900	7500	10000	07100	07196	0.084	0.035	
	50.292	14.224	14.732	10.668	27600	32000	7100	10000	L44643	L44610	0.090	0.039	
	57.15	17.462	17.462	13.495	39500	45500	6700	9000	15578	15520	0.151	0.07	
	57.15	19.431	19.431	14.732	42500	49000	6700	9000	M84548	M84510	0.156	0.089	
	59.53	23.368	23.114	18.288	50000	58000	6300	9000	M84249	M84210	0.194	0.13	
	62.00	19.05	20.638	14.288	46000	53000	6000	8000	15101	15245	0.222	0.081	
	63.50	20.638	20.638	15.875	46000	53000	6000	8000	15100	15250	0.22	0.113	
	64.292	21.433	21.433	16.670	51000	64500	5600	8000	M86643	M86610	0.246	0.128	
	65.088	22.225	21.463	15.875	45000	47500	5600	8000	23100	23256	0.214	0.142	
	68.262	22.225	22.225	17.462	55000	64000	5600	7500	02473	02420	0.28	0.152	
	72.233	25.40	25.40	19.842	63500	83500	5000	7100	HM88630	HM88610	0.398	0.188	
	72.626	24.608	24.257	17.462	60000	58000	5600	7500	41100	41286	0.32	0.177	
	26.988	50.292	14.224	14.732	10.668	27600	32000	7100	10000	L44649	L44610	0.081	0.039
	57.15	19.845	19.355	15.875	40000	44500	6700	9000	1997	1922	0.152	0.077	
	60.325	19.842	17.462	15.875	39500	45500	6700	9000	15580	15523	0.141	0.123	
	62.00	19.05	20.638	14.288	46000	53000	6000	8000	15106	15245	0.211	0.081	
	28.575	57.15	19.845	19.355	15.875	40000	44500	6700	9000	1988	1922	0.141	0.077
	59.131	15.875	16.764	11.811	34500	41500	6300	8500	LM67043	LM67010	0.147	0.062	
	62.00	19.05	20.638	14.288	46000	53000	6000	8000	15112	15245	0.199	0.081	
	62.00	19.05	20.638	14.288	46000	53000	6000	8000	15113	15245	0.20	0.081	
	64.292	21.433	21.433	16.67	51000	64500	5600	8000	M86647	M86610	0.223	0.128	
	68.262	22.225	22.225	17.462	55000	64000	5600	7500	02474	02420	0.257	0.152	
	726.606	24.608	24.257	17.462	60000	58000	5600	7500	41125	41286	0.292	0.177	

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
72,626	24,808	24,257	17,482		80000	58000	5600	7500	41126	41286	0,295	0,177
73,025	22,225	22,225	17,482		54500	64500	5300	7100	02872	02820	0,321	0,16
29,090	50,292	14,224	14,732	10,698	28800	34000	7100	9500	L45449	L45410	0,079	0,036
29,367	66,421	23,812	25,433	19,05	65000	73000	8000	8000	2696	2631	0,242	0,165
30,090	62,00	16,002	16,566	14,288	37000	39500	6300	8500	17118	17244	0,136	0,081
	62,00	19,05	20,638	14,288	46000	53000	6000	8000	15117	15245	0,189	0,081
	63,50	20,638	20,638	15,875	46000	53000	6000	8000	15117	15250	0,189	0,113
	72,00	18,00	18,923	15,875	52000	56000	5600	7500	26118	26283	0,225	0,163
30,112	62,00	19,05	20,638	14,288	46000	53000	6000	8000	15116	15245	0,189	0,081
30,162	58,738	11,681	15,08	10,716	28800	33500	6000	8000	08118	08231	0,12	0,057
	66,262	22,225	22,225	17,462	55500	70500	5300	7500	M88043	M88010	0,263	0,146
	69,85	23,812	25,357	19,05	71000	84000	5600	7500	2558	2523	0,297	0,169
	69,85	23,812	25,357	19,05	71000	84000	5600	7500	2559	2523	0,298	0,169
	76,20	24,608	24,074	16,670	67500	69500	5000	6700	43118	43300	0,383	0,146
30,213	62,00	19,05	20,638	14,288	46000	53000	6000	8000	15118	15245	0,186	0,081
	62,00	19,05	20,638	14,288	46000	53000	6000	8000	15120	15245	0,188	0,081
	62,00	19,05	20,638	14,288	46000	53000	6000	8000	15119	15245	0,188	0,081
30,955	84,292	21,433	21,433	16,67	51000	64500	5900	8000	M88048	AMB8010	0,205	0,128
31,750	58,738	14,884	15,08	10,716	28800	33500	6000	8000	08125	08231	0,113	0,057
	59,131	15,875	16,764	11,811	34500	41500	6300	8500	LM67043	LM67010	0,127	0,062
	62,00	18,161	19,05	14,288	46000	53000	6000	8000	15123	15245	0,165	0,081

Taper Roller Bearing (imperial size)



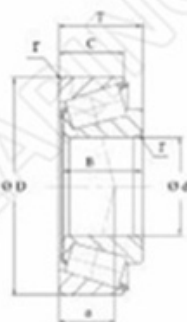
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
62.00	19.05	20.638	14.288	46000	53000	6000	8000	15126	15245	0.176	0.081	
62.00	19.05	20.638	14.288	46000	53000	6000	8000	15125	15245	0.174	0.081	
63.50	20.638	20.638	15.875	46000	53000	6000	8000	15126	15250	0.176	0.113	
68.262	22.225	22.225	17.462	55000	64000	5600	7500	02475	02420	0.229	0.152	
68.262	22.225	22.225	17.462	55500	70500	5300	7500	M88046	M88010	0.25	0.146	
69.012	19.845	19.583	15.875	47000	56000	5600	7500	14125A	14276	0.219	0.135	
69.012	26.982	26.721	15.875	47000	56000	5600	7500	14123A	14274	0.289	0.132	
69.85	23.812	25.357	19.05	71000	84000	5600	7500	2580	2523	0.282	0.169	
69.85	23.812	25.357	19.05	71000	84000	5600	7500	2582	2523	0.28	0.169	
72.626	30.162	29.997	23.812	79500	90000	5300	7500	3188	3120	0.368	0.225	
73.025	29.37	27.783	23.02	74000	100000	5000	7100	HM88542	HM88510	0.379	0.242	
80.00	21.00	22.403	17.826	68500	75500	4500	6300	346	332	0.419	0.146	
32.000	72.233	25.40	25.40	19.842	63500	83500	5000	7100	HM88638	HM88610	0.337	0.188
33.338	66.675	20.638	20.638	15.875	46000	53500	5600	7500	1680	1620	0.196	0.121
68.262	22.225	22.225	17.462	55500	70500	5300	7500	M88048	M88010	0.236	0.146	
69.012	19.845	19.583	15.875	47000	56000	5600	7500	14130	14274	0.207	0.132	
69.012	19.845	19.583	15.875	47000	56000	5600	7500	14131	14276	0.209	0.135	
69.85	23.812	25.357	19.05	71000	84000	5600	7500	2585	2523	0.263	0.169	
72.00	19.00	18.923	15.875	52000	56000	5600	7500	26131	26283	0.20	0.163	
72.626	30.162	29.997	23.812	79500	90000	5300	7500	3197	3120	0.348	0.225	
73.025	29.37	27.783	23.02	74000	100000	5000	7100	HM88547	HM88510	0.362	0.242	
76.20	29.37	28.575	23.02	78500	106000	4800	6700	HM89444	HM89411	0.419	0.261	
76.20	29.37	28.575	23.02	78500	106000	4800	6700	HM89443	HM89410	0.421	0.257	

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		m	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
79,375	25,40	24,074	17,462		67500	69500	5000	6700	43131	43312	0,348	0,22
34,925	65,088	18,034	18,268	13,97	47500	57500	5600	7500	LM48548	LM48510	0,172	0,087
	65,088	20,32	18,268	16,256	47500	57500	5600	7500	LM48548	LM48511	0,172	0,108
	66,675	20,638	20,638	16,67	53000	62500	5600	7500	M38540	M38510	0,194	0,112
	69,012	19,846	19,583	15,875	47000	56000	5600	7500	14138A	14276	0,194	0,135
	69,012	19,846	19,583	15,875	47000	56000	5600	7500	14137A	14276	0,196	0,135
	72,233	25,40	25,40	19,842	63500	83500	5000	7100	HM88640	HM88610	0,307	0,188
	73,025	22,225	22,225	17,462	54500	64500	5300	7100	02878	02820	0,266	0,16
	73,025	22,225	23,812	17,462	63500	77000	5300	7100	2877	2820	0,291	0,15
	73,025	23,812	24,608	16,05	71000	86000	5300	7100	25877	25821	0,306	0,167
	73,025	23,812	24,608	19,05	71000	86000	5300	7100	25878	25820	0,304	0,165
	76,20	29,37	28,575	23,02	78500	106000	4800	6700	HM89416A	HM89411	0,403	0,261
	76,20	29,37	28,575	23,02	78500	106000	4800	6700	HM89416	HM89411	0,40	0,261
	76,20	29,37	28,575	23,02	78500	106000	4800	6700	HM89416	HM89410	0,40	0,267
	76,20	29,37	28,575	23,812	80500	96500	5000	6700	31594	31520	0,404	0,235
	79,375	29,37	29,771	23,812	88000	106000	4800	6700	3478	3420	0,448	0,259
34,976	68,262	15,875	16,52	11,908	45000	53500	5300	7100	19138	19268	0,196	0,073
	72,085	22,385	19,583	18,415	47000	56000	5600	7500	14139	14283	0,198	0,21
	80,00	21,008	20,94	15,875	56500	64500	5000	6700	28138	28315	0,308	0,199
35,000	59,131	15,875	16,764	11,938	35000	47000	6000	8000	L68149	L68110	0,117	0,058
	59,975	15,875	16,764	11,938	35000	47000	6000	8000	L68149	L68111	0,117	0,064
	62,00	16,70	17,00	13,60	38000	50000	5600	8000	LM78349	LM78310	0,137	0,074

Taper Roller Bearing (Imperial size)



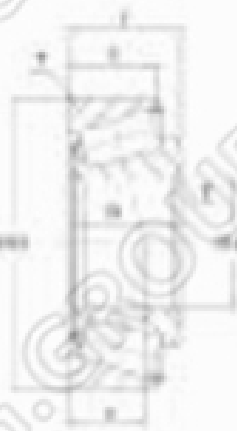
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
62.00	16.70	17.00	13.60	38000	50000	5600	8000	LM78349	LM78310A	0.138	0.073	
65.987	20.638	20.638	16.67	53000	62500	5600	7500	M38547	M38511	0.193	0.103	
73.025	26.988	26.975	22.225	75500	88500	5300	7500	23691	23621	0.309	0.212	
35.717	72.233	25.40	25.40	19.842	63500	83500	5000	7100	HM88648	HM88610	0.298	0.188
36.487	73.025	23.812	24.608	19.05	71000	86000	5300	7100	25880	25821	0.291	0.167
36.512	76.20	29.37	28.575	23.02	78500	106000	4800	6700	HM89449	HM89410	0.38	0.257
79.375	29.37	29.771	23.812	88000	106000	4800	6700	3479	3420	0.429	0.259	
88.501	25.40	23.698	17.462	73000	81000	4000	5600	44143	44348	0.502	0.245	
93.662	31.75	31.75	26.195	110000	142000	4000	5600	46143	46368	0.765	0.405	
38.000	63.00	17.00	17.00	13.50	38500	52000	5600	7500	JL69349	JL69310	0.132	0.071
38.100	63.50	12.70	11.908	9.525	24100	30500	5300	7100	13889	13830	0.109	0.046
65.088	18.034	18.288	13.97	42500	55000	5300	7500	LM29749	LM29710	0.16	0.079	
65.088	18.034	18.288	13.97	42500	55000	5300	7500	LM29748	LM29710	0.158	0.079	
65.088	19.812	18.288	15.748	42500	55000	5300	7500	LM29749	LM29711	0.16	0.094	
68.262	15.875	16.52	11.908	45000	53500	5300	7100	19150	19268	0.173	0.073	
69.012	19.05	19.05	15.083	49000	61000	5300	7100	13687	13621	0.193	0.104	
69.012	19.05	19.05	15.083	49000	61000	5300	7100	13685	13620	0.191	0.105	
72.238	20.638	20.638	15.875	48500	59500	5300	7100	16150	16284	0.212	0.146	
73.025	23.812	25.654	19.05	73500	91000	5000	6700	2788	2735	0.312	0.135	
76.20	23.812	25.654	19.05	73500	91000	5000	6700	2788	2720	0.312	0.187	
76.20	23.812	25.654	19.05	73500	91000	5000	6700	2788	2729	0.312	0.191	
79.375	29.37	29.771	23.812	88000	106000	4800	6700	3490	3420	0.404	0.259	
80.035	24.608	23.698	18.512	69000	845000	4500	6300	27880	27820	0.362	0.209	

HMEC



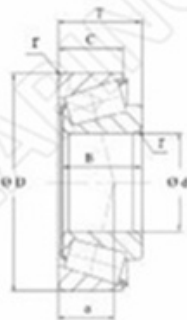
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
	82,55	29,37	28,575	23,02	87000	117000	4500	6000	HM801348	HM801310	0,483	0,282
	88,501	25,40	23,698	17,462	73000	81000	4000	5600	44150	44348	0,484	0,245
	88,501	26,898	29,083	22,225	96500	109000	4500	6000	418	414	0,50	0,329
	95,25	30,958	28,301	20,638	87500	97000	3600	5300	53150	53375	0,665	0,365
	39,688	73,025	25,654	22,098	62500	80000	5000	6700	M201047	M201011	0,206	0,169
	76,20	23,812	25,654	19,05	73500	91000	5000	6700	2789	2720	0,292	0,187
	80,167	29,37	30,391	23,812	92500	108000	4800	6300	3386	3320	0,442	0,217
40,000	80,00	21,00	22,403	17,826	68500	75500	4500	6300	344	332	0,338	0,146
	80,00	21,00	22,403	17,826	68500	75500	4500	6300	344A	332	0,339	0,146
	88,501	25,40	23,688	17,462	73000	81000	4000	5600	44157	44348	0,463	0,245
41,000	68,00	17,50	18,00	13,50	43500	58000	5300	7100	LM300849	LM300811	0,16	0,062
41,275	73,025	16,667	17,462	12,70	44500	54000	4800	6700	18590	18520	0,199	0,066
	73,431	19,658	19,812	14,732	54500	67000	4800	6700	LM501349	LM501310	0,226	0,108
	73,431	21,43	19,812	16,604	54500	67000	4800	6700	LM501349	LM501314	0,226	0,129
41,275	76,20	18,009	17,384	14,288	42500	51000	4500	6300	11162	11300	0,212	0,129
	76,20	22,225	23,02	17,462	66000	82000	4800	6700	24780	24720	0,279	0,15
	76,20	25,40	23,02	20,638	66000	82000	4800	6700	24780	24721	0,279	0,189
	79,375	23,812	25,40	19,05	77000	96500	4800	6300	26882	26822	0,349	0,186
	80,00	21,00	22,403	17,826	68500	75500	4500	6300	336	332	0,325	0,146
	80,00	21,00	22,403	17,826	68500	75500	4500	6300	342	332	0,323	0,146
	80,167	25,40	25,40	20,638	77000	96500	4800	6300	26882	26820	0,349	0,219
	82,55	28,543	25,654	20,193	78500	102000	4300	6000	M802048	M802011	0,406	0,23
	85,725	30,162	30,182	23,812	91000	115000	4300	6000	3877	3820	0,508	0,285

Taper Roller Bearing (Imperial size)



Dimensions					Load rating		Limiting speed		Code bearing		Mass		
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		m	kg	
mm					HN		(Grease) (Oil)		(CONE) (CUP)	(CONE) (CUP)	(CONE) (CUP)		
87,312	98,162	30,885	23,812	96000	120000	4300	6000	3576	3525	0,532	0,304		
88,501	25,40	23,698	17,462	73000	81000	4600	5600	44162	44348	0,447	0,245		
88,90	30,162	29,37	23,02	96500	120000	4600	5600	HME03140	HME03118	0,579	0,322		
88,90	30,162	29,37	23,02	96500	120000	4600	5600	HME03140	HME03118	0,532	0,322		
90,458	39,685	40,386	33,338	139000	180000	4300	3600	4388	4335	0,788	0,459		
93,662	31,75	31,75	26,195	110000	142000	4600	5600	46162	46368	0,635	0,465		
95,25	30,162	29,37	23,02	105000	143000	3800	5300	HME04340	HME04310	0,720	0,354		
98,425	30,058	28,301	20,638	87500	97000	3600	5300	53182	53387	0,618	0,442		
42,852	76,992	17,462	17,145	11,008	44000	54000	4500	6000	12168	12363	0,228	0,008	
52,55	19,842	19,837	15,08	58500	69000	4600	6300	22168	22325	0,293	0,176		
52,901	23,812	25,40	19,05	76500	89000	4600	6000	25578	25526	0,363	0,203		
52,901	26,998	25,40	22,225	76500	89000	4600	6000	25578	25523	0,363	0,248		
42,875	76,20	25,40	25,40	29,638	77000	98500	4800	6300	26884	26823	0,337	0,136	
65,00	21,00	22,403	17,826	68500	75000	4600	6300	3428	332	0,305	0,146		
52,901	26,965	25,40	22,225	76500	89000	4600	6000	25577	25423	0,361	0,248		
53,058	23,812	25,40	19,05	76500	89000	4600	6000	25577	25521	0,361	0,201		
43,000	74,988	19,368	19,837	14,288	52500	68000	4800	6300	16986	16929	0,24	0,106	
44,456	80,962	19,05	17,462	14,268	45000	57000	4300	6000	13175	13318	0,252	0,144	
52,901	23,812	25,40	19,05	76500	89000	4600	6000	25586	25526	0,358	0,203		
53,058	23,812	25,40	19,05	76500	89000	4600	6000	25586	25521	0,358	0,201		
87,312	30,162	30,885	23,812	96000	120000	4300	6000	3578	3525	0,477	0,304		
88,90	30,162	29,37	23,02	96500	120000	4000	5600	HME03148	HME03118	0,528	0,322		
93,264	30,162	30,362	23,812	103000	130000	3800	5300	3782	3726	0,678	0,292		

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
93.662	31.75	31.75	25.40	120000	147000	4000	5600	49176	49368	0.648	0.371	
93.662	31.75	31.75	25.40	120000	147000	4000	5600	49175	49368	0.645	0.371	
93.662	31.75	31.75	28.195	110000	142000	4000	5600	46176	46368	0.635	0.405	
95.25	27.783	29.901	22.225	106000	126000	4300	5600	438	432	0.555	0.384	
44.450	95.25	30.162	29.37	23.02	106000	143000	3800	5300	HM804843	HM804810	0.677	0.354
95.25	30.958	28.301	20.638	87500	97000	3600	5300	53177	53375	0.572	0.365	
95.25	30.958	28.301	20.638	87500	97000	3600	5300	53176	53375	0.574	0.365	
95.25	30.958	28.301	20.638	87500	97000	3600	5300	53178	53375	0.574	0.365	
95.25	30.958	28.301	22.225	100000	122000	3600	5000	HM903247	HM903210	0.651	0.389	
95.25	30.958	28.575	22.225	100000	122000	3600	5000	HM903249	HM903210	0.635	0.389	
98.425	30.958	28.301	20.638	87500	97000	3600	5300	53177	53387	0.568	0.442	
103.188	43.658	44.475	36.512	178000	238000	3800	5000	5356	5335	1.23	0.637	
104.775	36.512	36.512	28.575	139000	192000	3400	4800	HM807940	HM807010	1.14	0.502	
107.95	27.783	29.317	22.225	116000	149000	3400	4800	460	453A	0.93	0.42	
111.125	30.162	26.909	20.638	92500	110000	3200	4300	55175	55437	0.867	0.514	
114.30	44.45	44.45	34.925	172000	205000	3600	4800	65385	65320	1.39	0.894	
44.983	82.931	23.812	25.40	19.05	76500	99000	4500	6000	25584	25520	0.354	0.203
45.000	93.264	20.638	22.225	15.082	77000	93000	3800	5300	376	374	0.492	0.174
45.230	79.985	19.842	20.638	15.08	62000	78500	4500	6000	17887	17831	0.274	0.136
45.242	73.431	19.558	19.812	15.748	53500	75000	4800	6300	LM102949	LM102910	0.213	0.102
77.788	19.842	19.842	15.08	56000	71000	4500	6300	LM603049	LM603011	0.249	0.119	
77.788	21.43	19.842	16.667	56000	71000	4500	6300	LM603049	LM603012	0.249	0.137	
45.618	82.931	23.812	25.40	19.05	76500	99000	4500	6000	25590	25520	0.343	0.203
82.931	26.988	25.40	22.225	76500	99000	4500	6000	25590	25523	0.343	0.248	

Taper Roller Bearing (imperial size)



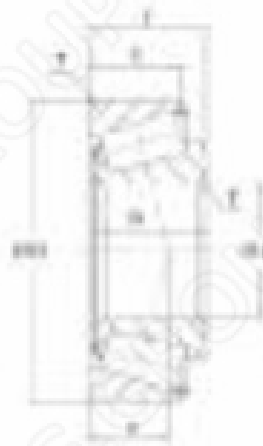
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		(CONE)	(CUP)	Co	kg
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
46,000	75,00	18,00	18,00	14,00	51000	71500	4500	6000	LM503349	LM503350	0,209	0,096
46,038	79,375	17,462	17,462	13,485	46000	57000	4500	6000	18690	18620	0,211	0,126
80,962	18,05	17,462	14,288	45000	57000	4300	6000	13181	13318	0,236	0,144	
85,00	20,638	21,602	17,462	71500	81500	4300	6000	3595	354A	0,343	0,162	
85,00	25,40	25,608	20,638	70500	105000	4300	6000	2984	2924	0,397	0,223	
85,25	27,783	29,601	22,225	106000	126000	4300	5600	436	432A	0,536	0,381	
47,625	88,90	20,638	22,225	16,513	73000	85000	4000	5600	369A	362A	0,381	0,166
88,90	25,40	25,40	19,05	86000	107000	4000	5600	WR0409	WR0409	0,455	0,218	
95,25	30,162	29,37	23,02	106000	143000	3800	5300	HM04846	HM04810	0,626	0,354	
101,60	34,925	36,068	26,968	137000	169000	3600	5000	526	522	0,894	0,416	
111,125	30,162	26,909	20,638	92500	110000	3200	4300	55187	55437	0,817	0,514	
112,712	30,162	26,909	20,638	92500	110000	3200	4300	55187	55443	0,816	0,554	
117,475	33,338	31,75	23,812	137000	156000	3200	4300	66187	66462	1,19	0,552	
123,625	36,512	32,791	25,40	143000	160000	3000	4000	72187	72487	1,29	0,79	
48,412	95,25	30,162	29,37	23,02	106000	143000	3800	5300	HM04846	HM04810	0,81	0,354
95,25	30,162	29,37	23,02	106000	143000	3800	5300	HM04846	HM04810	0,814	0,354	
49,212	104,775	36,512	36,512	28,575	139000	192000	3400	4800	HM07046	HM07010	1,03	0,508
114,30	44,45	44,45	36,098	196000	243000	3400	4800	HM06046	HM06010	1,43	0,837	
50,000	82,00	21,50	21,50	17,90	71000	96000	4300	5600	JLM104846	JLM104810	0,306	0,129
82,55	21,50	22,225	16,51	71000	96000	4300	5600	LM104847	LM104811	0,316	0,133	
88,00	20,638	22,225	16,513	73000	85000	4000	5600	366	362A	0,351	0,166	
90,00	28,00	28,00	23,00	104000	138000	4000	5600	JW05149	JW05110	0,507	0,246	

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
105,00	37,00	36,00	29,00		139000	192000	3400	4900	JHM107045	JHM107012	1,01	0,523
60,800	80,962	18,258	18,258	14,288	53000	81000	4300	5600	L305649	L305610	0,239	0,119
82,55	23,622	22,225	18,542		71000	96000	4300	5600	LM104948	LM104911A	0,303	0,156
82,931	21,59	22,225	16,51		71000	96000	4300	5600	LM104949	LM104912	0,301	0,14
85,09	17,462	17,462	13,495		48500	63000	4300	5600	18790	18720	0,239	0,136
85,725	19,05	18,263	12,70		42500	54000	4000	5300	18209	18337	0,268	0,136
68,99	20,836	22,225	16,513		73000	85000	4000	5800	368A	362A	0,338	0,166
68,99	20,836	22,225	16,513		73000	85000	4000	5600	368	362A	0,341	0,166
92,075	24,608	25,40	19,845		84500	117000	4000	5300	28580	28520	0,46	0,247
93,264	30,162	30,302	23,812		103000	138000	3600	5300	3775	3730	0,568	0,297
93,264	30,162	30,302	23,812		110000	138000	3600	5300	3780	3736	0,565	0,297
95,25	27,783	28,575	22,225		110000	144000	3800	5300	33889	33821	0,601	0,267
101,60	31,75	31,75	25,40		118000	150000	3600	5000	49585	49520	0,744	0,389
101,60	34,925	36,068	26,988		137000	169000	3800	5000	529	522	0,822	0,416
101,60	34,925	36,068	26,988		137000	169000	3800	5000	529X	522	0,819	0,416
104,775	36,512	36,512	28,575		139000	192000	3400	4800	HM107046	HM107011	0,997	0,508
104,775	36,512	36,512	28,575		139000	192000	3400	4900	HM107046	HM107010	0,993	0,502
108,988	34,925	36,512	26,988		145000	181000	3600	4800	59200	59429	0,943	0,594
111,125	30,162	26,909	20,638		113000	162000	3000	4300	56200C	55437	0,845	0,514
111,125	30,162	26,909	20,638		92500	110000	3200	4300	55200	55437	0,767	0,514
123,825	36,512	32,791	25,40		162000	199000	2800	4000	72200C	72487	1,33	0,79
123,825	36,512	32,791	25,40		143000	160000	3000	4000	72200	72487	1,22	0,79
127,00	44,45	44,45	34,925		199000	258000	3000	4000	65200	65500	1,86	1,03

Taper Roller Bearing (imperial size)



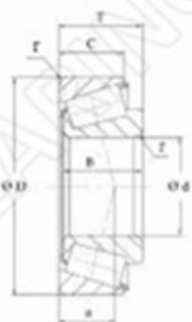
Dimensions					Load rating		Limiting speed		Code bearing HMEC		Mass m_0 kg	
d	D	T	B	C	dyn. C	stat. C ₀	min ⁻¹		(CONE)	(CUP)	(CONE)	(CUP)
mm					kN		(Grease)	(Oil)				
	127,00	50,80	52,388	41,275	296000	300000	3200	4300	6279	6220	2,08	1,22
52,388	92,075	24,808	25,40	19,845	84500	117000	4000	5300	28584	28521	0,435	0,247
	100,00	25,00	22,225	21,624	77000	83000	3800	5300	377	372	0,392	0,435
	111,125	30,162	26,909	20,638	92500	110000	3200	4300	55206	55437	0,737	0,514
53,975	104,775	39,688	40,157	33,338	150000	210000	3800	4800	4585	4535	0,972	0,583
	107,95	36,512	36,957	28,575	144000	182000	3800	4800	539	532	0,88	0,57
	122,238	33,338	31,75	23,812	135000	158000	3000	4000	66584	66520	1,2	0,558
	123,825	36,512	32,791	25,40	143000	160000	3000	4000	72212	72487	1,16	0,79
	123,825	36,512	32,791	25,40	162000	189000	2500	4000	72212C	72487	1,27	0,79
	123,825	38,10	36,678	30,162	161000	221000	3000	4000	5678	562A	1,49	0,764
	127,00	44,45	44,45	34,925	199000	258000	3000	4000	65212	65500	1,76	1,03
	127,00	50,80	52,388	41,275	236000	300000	3200	4300	6280	6220	1,97	1,22
	130,175	36,512	33,338	23,812	133000	154000	2600	3600	HM9112M2	HM911210	1,45	0,725
55,000	90,00	23,00	23,00	18,50	79000	111000	3800	5300	JLM506249	JLM506819	0,378	0,186
	96,00	29,00	29,00	23,50	111000	152000	3800	5000	JM207046	JM207019	0,59	0,28
	96,838	21,00	21,946	15,875	80500	100000	3600	5000	385	382	0,455	0,179
	110,00	39,00	38,00	32,00	177000	225000	3400	4500	J4307749	J4307719	1,13	0,567
	115,00	41,021	41,275	31,496	172000	214000	3200	4500	622X	614X	1,3	0,587
55,562	97,83	24,808	24,608	19,446	89000	129000	3800	5000	28680	28622	0,499	0,27
	122,238	43,658	43,764	36,512	188000	292000	3000	4000	5588	5535	1,76	0,815
	123,825	36,512	32,791	25,40	143000	160000	3000	4000	72210	72487	1,12	0,79
	123,825	36,512	32,791	25,40	182000	199000	2800	4000	72218C	72487	1,23	0,79
57,150	96,838	21,00	21,946	15,875	80500	100000	3800	5000	387A	382A	0,42	0,179

HMEC

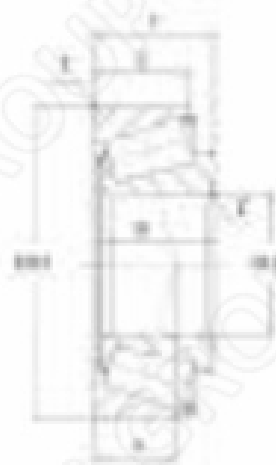


Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈	kg
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
98,838	21,00	21,946	15,875	80500	100000	3800	5000	387	382A	0,423	0,179	
98,838	25,40	21,946	20,275	80500	100000	3800	5000	387A	382S	0,42	0,249	
98,425	21,00	21,946	17,826	80500	100000	3800	5000	387A	382	0,42	0,226	
104,775	30,162	29,317	24,605	116000	149000	3400	4800	460	453X	0,692	0,376	
104,775	30,162	29,317	24,605	116000	149000	3400	4800	462	453X	0,694	0,376	
104,775	30,162	30,858	23,812	130000	170000	3400	4800	45289	45220	0,752	0,347	
104,775	30,162	30,858	23,812	130000	170000	3400	4800	45288	45221	0,76	0,35	
122,238	33,338	31,75	23,812	135000	158000	3000	4000	66587	66520	1,14	0,558	
123,825	36,512	32,791	25,40	162000	199000	2800	4000	72225C	72457	1,16	0,79	
123,825	38,10	36,678	30,162	161000	221000	3000	4000	555S	552A	1,41	0,764	
140,03	36,512	33,236	23,52	152000	183000	2600	3600	78225	78551	1,67	0,926	
144,983	36,00	33,236	23,007	152000	183000	2600	3600	78225	78571	1,68	1,08	
149,225	53,975	54,229	44,45	287000	410000	2600	3400	6455	6420	3,49	1,63	
57,531	98,838	21,00	21,946	15,875	80500	100000	3600	5000	388A	382A	0,416	0,179
58,738	112,712	33,338	30,048	26,989	120000	173000	3200	4300	3981	3926	0,899	0,541
60,000	95,00	24,00	24,00	19,00	86500	125000	3600	5000	JLM508748	JLM508710	0,43	0,20
104,775	21,433	22,00	15,875	83500	107000	3400	4500	39236	39412	0,559	0,186	
110,00	22,00	21,895	18,824	85500	113000	3200	4300	397	394A	0,642	0,263	
122,238	33,338	31,75	23,812	135000	158000	3000	4000	66585	66520	1,07	0,558	
80,325	100,00	25,40	25,40	19,845	91000	135000	3400	4800	26985	26921	0,538	0,232
101,60	25,40	25,40	19,845	91000	135000	3400	4800	26985	26920	0,538	0,272	
122,238	38,10	36,678	30,162	161000	221000	3000	4000	558	553X	1,33	0,692	
122,238	38,10	38,354	29,716	188000	245000	3000	4000	HM212044	HM212019	1,43	0,604	

Taper Roller Bearing (imperial size)

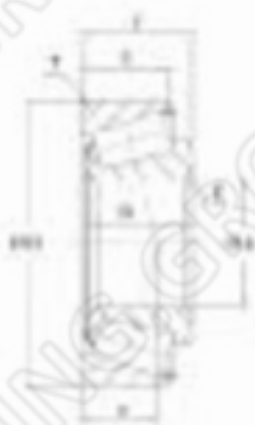


Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
122.238	43.658	43.764	36.512	198000	292000	3000	4000	5582	5535	1.61	0.815	
127.00	44.45	44.45	34.925	199000	258000	3000	4000	65237	65500	1.56	1.03	
130.175	41.275	41.275	31.75	195000	263000	2800	3800	637	633	1.87	0.712	
135.755	53.975	56.007	44.45	264000	355000	2800	3800	6376	6320	2.45	1.39	
61.912	136.525	46.038	46.038	36.512	233000	370000	2600	3400	H715334	H715311	2.51	0.961
146.05	41.275	39.688	25.40	193000	225000	2400	3400	H913842	H913810	2.2	0.898	
152.40	47.625	46.038	31.75	237000	267000	2400	3400	9180	9121	2.77	1.21	
63.500	94.458	19.05	19.05	15.083	59000	100000	3600	4800	L610549	L610510	0.306	0.154
104.775	21.433	22.000	15.875	83500	107000	3400	4500	39250	39412	0.501	0.186	
107.95	25.40	25.40	19.05	90000	138000	3200	4300	29586	29520	0.661	0.281	
110.00	22.00	21.996	18.824	85500	113000	3200	4300	395	394A	0.58	0.263	
110.00	22.00	21.996	18.824	85500	113000	3200	4300	390A	394A	0.583	0.263	
112.712	30.162	30.048	23.812	120000	173000	3200	4300	3982	3920	0.789	0.454	
112.712	30.162	30.162	23.812	142000	202000	3200	4300	39585	39520	0.889	0.359	
112.712	33.338	30.048	26.988	120000	173000	3200	4300	3982	3926	0.789	0.541	
122.238	38.10	38.354	29.718	188000	245000	3000	4000	HM212047	HM212011	1.34	0.596	
122.238	38.10	38.354	29.718	188000	245000	3000	4000	HM212047	HM212010	1.34	0.604	
122.238	38.10	38.354	29.718	188000	245000	3000	4000	HM212046	HM212010	1.35	0.604	
122.238	43.658	43.764	36.512	198000	292000	3000	4000	5584	5535	1.5	0.815	
123.825	38.10	36.678	30.162	161000	221000	3000	4000	559	522A	1.23	0.764	
127.00	36.512	36.17	28.575	166000	234000	2800	3800	565	563	1.46	0.655	
130.175	41.275	41.275	31.75	195000	263000	2800	3800	639	633	1.77	0.712	
136.525	36.512	33.236	23.52	152000	183000	2600	3600	78250	78537	1.51	0.782	



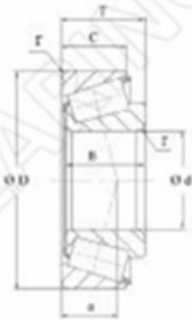
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kn		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
138,525	41,275	41,275	31,75	185000	263000	2800	3800	639	632	1,77	1,04	
140,03	36,512	33,236	23,52	152000	183000	2800	3800	78250	78551	1,51	0,928	
64,963	127,00	36,512	36,17	28,575	168000	234000	2800	3800	569	563	1,41	0,655
65,000	105,00	24,00	23,00	18,50	93000	126000	3400	4500	JLM710943	JLM710910	0,526	0,237
110,00	28,00	28,00	22,50	120000	173000	3200	4300	JM511946	JM511910	0,72	0,342	
120,00	29,002	29,007	23,444	123000	169000	3000	4000	478	472A	0,942	0,466	
120,00	39,00	38,50	32,00	185000	249000	3000	4000	JH211749	JH211710	1,25	0,625	
65,088	136,755	53,975	56,007	44,45	264000	355000	2800	3800	6379	6320	2,25	1,39
136,525	46,038	46,038	36,512	233000	370000	2600	3400	H715340	H715311	2,4	0,961	
66,675	110,00	22,00	21,996	18,824	85500	113000	3200	4300	395A	394A	0,528	0,263
110,00	22,00	21,996	18,824	85500	113000	3200	4300	395B	394A	0,524	0,263	
112,712	30,162	30,048	23,812	120000	173000	3200	4300	3984	3920	0,712	0,454	
112,712	30,162	30,048	23,812	12000	173000	3200	4300	3984	3920	0,708	0,454	
112,712	30,162	30,162	23,812	14200	202000	3200	4300	39590	39521	0,822	0,365	
112,712	30,162	30,162	23,812	142000	202000	3200	4300	39590	39520	0,822	0,350	
117,475	30,162	30,162	23,812	119000	179000	3000	4000	33262	33462	0,911	0,442	
122,238	38,10	36,678	30,162	161000	221000	3000	4000	560	553X	1,14	0,692	
122,238	38,10	38,354	29,718	188000	245000	3000	4000	HM213049	HM213010	1,25	0,604	
122,238	38,10	38,354	29,718	188000	245000	3000	4000	HM213049	HM213011	1,25	0,598	
123,825	38,10	36,678	30,162	161000	221000	3000	4000	560	553A	1,14	0,764	
136,525	46,038	46,038	36,512	233000	370000	2600	3400	H715340	H715311	2,31	0,961	
68,262	110,00	22,00	21,996	18,842	85500	113000	3200	4300	399A	394A	0,497	0,263
120,00	29,794	29,007	24,237	123000	169000	3000	4000	480	472	0,882	0,493	

Taper Roller Bearing (imperial size)



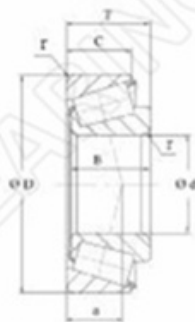
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
122,238	38,10	36,878	30,162	181000	221000	3000	4000	5805	553X	1,09	0,892	
127,00	36,512	36,17	28,575	166000	234000	2800	3800	570	563	1,32	0,655	
136,525	41,275	41,275	31,75	229000	287000	2600	3600	H14305	H14310	1,95	0,796	
136,525	46,038	46,038	36,512	233000	370000	2600	3400	H15343	H15351	2,28	0,901	
152,40	47,625	46,038	31,75	237000	267000	2100	3100	9185	9121	2,53	1,21	
60,850	112,712	22,225	21,996	15,875	85000	113000	3000	4000	LM61348	LM61346	0,562	0,238
112,712	25,40	25,40	19,05	96000	152000	2800	4000	29675	29620	0,695	0,273	
117,475	30,162	30,162	23,812	119000	179000	3000	4000	33275	33462	0,83	0,442	
120,00	32,545	32,545	26,195	152000	225000	3000	4000	47487	47429	1,02	0,477	
120,65	25,40	25,40	19,05	96000	152000	2800	4000	29675	29630	0,695	0,489	
127,00	36,512	36,17	28,575	166000	234000	2800	3800	566	563	1,27	0,658	
130,175	41,275	41,275	31,75	195000	263000	2800	3800	643	633	1,56	0,712	
146,05	41,275	39,688	25,40	193000	225000	2400	3400	H913849	H913818	1,95	0,898	
146,05	41,275	41,275	31,75	207000	296000	2400	3200	655	653	2,35	0,891	
148,225	53,975	54,229	44,45	287000	410000	2600	3400	6454	6429	2,85	1,63	
150,088	44,45	46,672	36,512	265000	370000	2400	3200	745A	742	2,82	1,07	
70,000	110,00	26,00	25,00	20,50	88500	152000	3000	4000	JLM613941	JLM613818	0,694	0,304
115,00	29,00	29,00	23,00	123000	188000	3000	4000	JM613948	JM613818	0,816	0,362	
120,00	29,794	29,007	24,237	123000	169000	3000	4000	484	472	0,822	0,493	
71,438	117,475	30,162	30,162	23,812	119000	179000	3000	4000	33281	33462	0,789	0,442
120,00	32,545	32,545	26,195	152000	225000	3000	4000	47490	47420	0,983	0,477	
127,00	36,512	36,17	28,575	166000	234000	2800	3800	5678	563	1,21	0,655	
127,00	36,512	36,17	28,575	166000	234000	2800	3800	567A	563	1,23	0,655	

HMEC



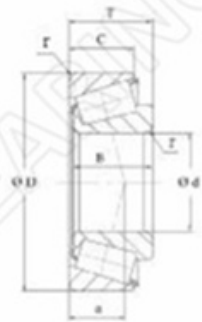
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
130.175	41.275	41.275	31.75		195000	263000	2800	3800	645	633	1.49	0.712
136.525	41.275	41.275	31.75		195000	263000	2800	3800	644	632	1.5	1.04
136.525	41.275	41.275	31.75		229000	297000	2600	3600	H414249	H414210	1.83	0.706
136.525	46.038	46.038	36.512		233000	370000	2600	3400	H715345	H715311	2.15	0.961
73.025	112.712	25.40	25.40	19.05	96000	152000	2800	4000	29685	29620	0.62	0.273
117.475	30.162	30.162	23.812		119000	179000	3000	4000	33287	33462	0.746	0.442
127.00	36.512	36.17	28.575		166000	234000	2800	3800	567	563	1.17	0.655
146.05	41.275	41.275	31.75		207000	296000	2400	3200	657	653	2.24	0.891
149.225	53.975	54.229	44.45		287000	410000	2600	3400	6460	6420	2.8	1.63
73.817	127.00	36.512	36.17	28.575	166000	234000	2800	3800	568	563	1.15	0.655
74.612	150.00	41.275	41.275	31.75	207000	296000	2400	3200	658	653	2.37	0.932
75.000	115.00	25.00	25.00	19.00	101000	150000	3000	4000	JLM714149	JLM714110	0.638	0.272
120.00	31.00	29.50	25.00		129000	198000	2800	3800	JM714249	JM714210	0.863	0.436
145.00	51.00	51.00	42.00		287000	410000	2600	3400	JH415647	JH415610	2.64	1.19
76.200	121.442	24.608	23.012	17.462	89000	124000	2800	3800	34300	34478	0.65	0.316
127.00	30.162	31.00	22.225		134000	195000	2800	3800	42687	42620	1.03	0.438
127.00	36.162	31.001	22.225		134000	195000	2800	3800	42688	42620	1.01	0.438
133.35	33.338	33.338	26.195		154000	237000	2600	3600	47680	47620	1.39	0.577
135.732	44.45	46.101	34.925		216000	340000	2600	3600	5760	5735	1.86	0.887
136.525	30.162	29.769	22.225		130000	192000	2800	3400	495A	493	1.27	0.55
136.525	30.162	29.769	22.225		130000	192000	2600	3400	495AX	493	1.26	0.55
139.992	36.512	36.098	28.575		175000	260000	2600	3400	575	572	1.61	0.788
149.225	53.975	54.229	44.45		287000	410000	2600	3400	6461	6420	2.64	1.63

Taper Roller Bearing (imperial size)



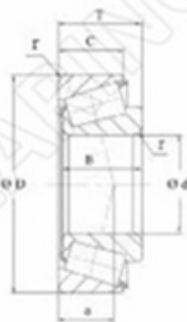
Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
152.40	39.688	36.322	30.162		183000	285000	2200	3200	590A	592A	2.2	1.06
152.40	41.275	41.275	31.75		207000	296000	2400	3200	659	652	2.11	1.26
161.925	49.212	46.038	31.75		248000	290000	2200	3000	9285	9220	2.82	1.4
161.925	53.975	55.10	42.862		325000	480000	2200	3000	6576	6535	3.74	1.67
161.925	53.975	55.10	42.862		325000	480000	2200	3000	6575	6535	3.73	1.67
161.925	53.975	55.10	42.862		325000	480000	2200	3000	6575	6536	3.73	1.68
76.200	168.275	53.975	56.363	41.275	345000	470000	2200	3000	843	832	4.11	1.74
168.275	53.975	56.363	41.275		345000	470000	2200	3000	837	832	4.13	1.74
171.45	49.212	46.038	31.75		257000	310000	2000	2800	9380	9321	3.47	1.51
177.80	55.562	50.80	34.925		257000	310000	2000	2800	9378	9320	3.71	2.24
77.788	121.442	24.608	23.012	17.462	89000	124000	2800	3800	34306	34478	0.612	0.316
127.00	30.162	31.00	22.225		134000	195000	2800	3800	42690	42620	0.976	0.438
135.733	44.45	46.101	34.925		216000	340000	2600	3600	5795	5735	1.79	0.887
79.375	146.05	41.275	41.275	31.75	207000	296000	2400	3200	661	653	1.99	0.891
150.089	44.45	46.672	36.512		265000	370000	2400	3200	750	742	2.42	1.07
80.000	130.00	35.00	34.00	28.50	166000	251000	2600	3600	JM515649	JM515610	1.18	0.583
80.962	136.525	30.162	19.769	22.225	130000	192000	2600	3400	496	493	1.13	0.55
139.700	36.512	36.098	28.575		175000	260000	2600	3400	581	572X	1.44	0.774
139.992	36.512	36.098	28.575		175000	260000	2600	3400	581	572	1.44	0.788
82.550	125.412	25.40	25.40	19.845	102000	164000	2600	3600	27687	27620	0.747	0.348
133.35	30.162	29.769	22.225		130000	192000	2600	3400	495	492A	1.08	0.434
133.35	33.338	33.338	26.195		154000	237000	2600	3600	47686	47620	1.18	0.577
133.35	33.338	33.338	26.195		154000	237000	2600	3600	47685	47620	1.18	0.577

HMEC



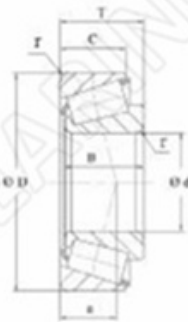
Dimensions					Load rating		Limiting speed		Code bearing		Mass		
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈		
mm					kN		(Grease) (Oil)		(CONE) (CUP)	(CONE) (CUP)	kg		
133.35	33.338	33.338	26.195	154000	237000	2600	3600	47687	47620	1.16	0.577		
133.35	39.688	39.688	32.545	179000	310000	2600	3600	HM516448	HM516410	1.35	0.767		
136.525	30.162	29.769	22.225	130000	192000	2600	3400	495	493	1.08	0.55		
139.70	36.512	36.098	28.575	175000	260000	2600	3400	580	572X	1.39	0.774		
139.992	36.512	36.098	28.575	175000	260000	2600	3400	580	572	1.39	0.788		
139.992	36.512	36.098	28.575	175000	260000	2600	3400	582	572	1.37	0.788		
146.05	41.275	41.275	31.75	207000	296000	2400	3200	663	653	1.85	0.891		
150.00	44.455	46.672	35.00	265000	370000	2400	3200	749A	743	2.26	1.04		
150.089	44.45	46.672	36.512	265000	370000	2400	3200	749A	742	2.26	1.07		
152.40	41.275	41.275	31.75	207000	296000	2400	3200	663	652	1.85	1.26		
161.925	47.625	48.26	38.10	274000	390000	2200	3000	757	752	2.79	1.61		
161.925	53.975	55.10	42.862	325000	480000	2200	3000	6559	6535	3.4	1.67		
168.275	47.625	48.26	38.10	274000	390000	2200	3000	757	753	2.79	2.1		
168.275	53.975	56.363	41.275	345000	470000	2200	3000	842	832	3.76	1.74		
83.345	125.412	25.40	25.40	19.845	102000	164000	2600	3600	27690	27620	0.727	0.348	
125.412	25.40	25.40	19.845	102000	164000	2600	3600	27689	27620	0.732	0.348		
84.138	136.525	30.162	29.769	22.225	130000	192000	2600	3400	498	493	1.04	0.55	
146.05	41.275	41.275	31.75	207000	296000	2400	3200	664	653	1.79	0.891		
171.45	49.212	46.038	31.75	257000	310000	2000	2800	9385	9321	3.11	1.51		
85.000	130.00	30.00	29.00	24.00	138000	222000	2600	3600	JM716648	JM716610	0.931	0.461	
130.00	30.00	29.00	24.00	138000	222000	2600	3600	M716649	JM716610	0.943	0.461		
140.00	39.00	38.00	31.50	202000	305000	2400	3400	JHM516849	JHM51681	0.155	0.767		
150.00	46.00	46.00	38.00	275000	390000	2400	3200	JH217249	JH217210	2.29	1.09		

Taper Roller Bearing (imperial size)



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
85.026	150.089	44.45	46.672	36.512	265000	370000	2400	3200	749	742	2.14	1.07
	150.089	44.45	46.672	36.512	265000	370000	2400	3200	749S	742	2.14	1.07
85.725	133.35	30.162	29.769	22.225	130000	192000	2600	3400	497	492A	0.987	0.434
	136.525	30.162	29.769	22.225	130000	192000	2600	3400	497	493	0.987	0.55
	142.138	42.862	42.862	34.133	221000	360000	2400	3400	HM617049	HM617010	1.77	0.911
146.05	41.275	41.275	31.75	207000	296000	2400	3200	665A	653	1.71	0.891	
146.05	41.275	41.275	31.75	207000	296000	2400	3200	665	653	1.72	0.891	
152.40	39.688	36.322	30.162	183000	285000	2200	3200	596	592A	1.85	1.06	
161.925	47.625	48.26	38.10	274000	390000	2200	3000	758	752	2.63	1.61	
168.275	41.275	41.275	30.162	223000	345000	2000	2800	677	672	2.91	1.24	
87.312	190.50	57.15	57.531	46.038	390000	520000	1900	2600	HM221432	HM221410	5.51	2.24
88.900	149.225	31.75	28.971	24.608	140000	218000	2200	3000	42350	42587	1.39	0.711
	152.40	39.688	36.322	30.162	183000	285000	2200	3200	593	592A	1.73	1.06
	152.40	39.688	39.688	30.162	253000	365000	2200	3200	HM518445	HM518410	2.11	0.776
161.925	47.625	48.26	38.10	274000	390000	2200	3000	759	752	2.47	1.61	
161.925	47.625	48.26	38.10	274000	390000	2200	3000	766	752	2.45	1.61	
161.925	53.975	55.10	42.862	325000	480000	2200	3000	6580	6535	3.03	1.67	
168.275	47.625	48.26	38.10	274000	390000	2200	3000	759	753	2.47	2.1	
168.275	53.975	56.363	41.275	345000	470000	2200	3000	850	832	3.39	1.74	
190.50	57.15	57.531	44.45	355000	500000	1900	2600	855	854	4.99	2.55	
190.50	57.15	57.531	46.038	390000	520000	1900	2600	HM221434	HM221410	5.41	2.24	
90.000	145.00	35.00	34.00	27.00	190000	285000	2400	3200	JM718149	JM718110	1.49	0.66

HMEC



Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈ kg	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
147.00	40.00	40.00	32.50		229000	345000	2400	3200	HM218248	HM21821	0.177	0.796
155.00	44.00	44.00	35.50		274000	395000	2200	3000	JHM318448	JHM318410	2.32	1.01
90.488	161.925	47.625	48.26	38.10	274000	390000	2200	3000	760	752	2.38	1.61
92.075	146.05	33.338	34.925	26.195	169000	280000	2400	3200	47890	47820	1.46	0.664
148.43	28.575	28.971	21.433	140000	218000	2200	3000	42362	42584	1.29	0.553	
152.40	39.688	36.322	30.162	183000	285000	2200	3200	598	592A	1.6	1.06	
152.40	39.688	36.322	30.162	183000	285000	2200	3200	598A	592A	1.59	1.06	
168.275	41.275	41.275	30.162	223000	345000	2000	2800	681	672	2.62	1.24	
190.50	57.15	57.531	44.45	355000	500000	1900	2600	857	854	4.78	2.55	
93.662	148.43	28.575	28.971	21.433	140000	218000	2200	3000	42368	42584	1.24	0.553
149.225	31.75	28.971	24.608	140000	218000	2200	3000	42368	42587	1.24	0.711	
152.40	39.688	36.322	30.162	183000	285000	2200	3200	597	592A	1.54	1.06	
95.000	150.00	35.00	34.00	27.00	183000	285000	2200	3200	JM719149	JM719113	1.46	0.765
95.250	146.05	33.338	34.925	26.195	169000	280000	2400	3200	47896	47820	1.33	0.664
148.43	28.575	28.971	21.433	140000	218000	2200	3000	42375	42584	1.18	0.553	
149.225	31.75	28.971	24.608	140000	218000	2200	3000	42376	42587	1.18	0.711	
152.40	39.688	36.322	30.162	183000	285000	2200	3200	594	592A	1.47	1.06	
152.40	39.688	36.322	33.338	183000	285000	2200	3200	594	592	1.47	1.12	
168.275	41.275	41.275	30.162	223000	345000	2000	2800	683	672	2.47	1.24	
171.45	47.625	48.26	38.10	282000	415000	2000	2800	77375	77675	2.91	1.67	
180.975	47.625	48.006	38.10	258000	375000	2000	2600	776	772	3.25	1.99	
190.50	57.15	57.531	44.45	355000	500000	1900	2600	864	854	4.57	2.55	
190.50	57.15	57.531	46.038	390000	520000	1900	2600	HQ221440	HQ221410	5.0	2.24	

Taper Roller Bearing (Imperial size)

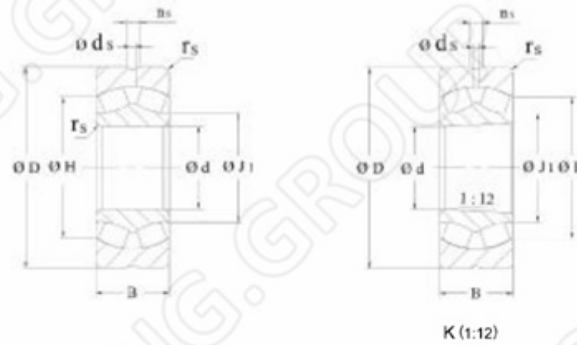


Dimensions					Load rating		Limiting speed		Code bearing		Mass	
d	D	T	B	C	dyn. C	stat. Co	min ⁻¹		HMEC		≈	
mm					kN		(Grease)	(Oil)	(CONE)	(CUP)	(CONE)	(CUP)
96,838	148,43	28,575	28,971	21,433	140000	218000	2200	3000	42381	42584	1,13	0,553
	149,225	31,75	28,971	24,608	140000	218000	2200	3000	42381	42587	1,13	0,711
98,425	161,925	36,512	36,116	26,195	191000	310000	2000	2800	52387	52637	1,89	0,942
	168,275	41,275	41,275	30,162	223000	345000	2000	2800	685	672	2,32	1,24
	180,975	47,625	48,006	38,10	258000	375000	2000	2600	779	772	3,07	1,68
	190,50	57,15	57,531	44,45	355000	500000	1900	2600	866	854	4,38	2,55
	190,50	57,15	57,531	46,038	380000	520000	1900	2600	HH221442	HH221410	4,81	2,24
98,982	190,50	57,15	57,531	46,038	380000	520000	1900	2600	HH221447	HH221410	4,68	2,24
100,000	150,00	32,00	30,00	28,00	149000	235000	2200	3000	JLM62048	JLM62012	1,27	0,616
	155,00	36,00	35,00	28,00	191000	325000	2000	2800	JM720249	JM720210	1,68	0,772
	160,00	41,00	40,00	32,00	239000	380000	2000	2800	JHM720249	JHM720210	2,09	0,974
100,012	157,162	36,512	36,116	26,195	191000	310000	2000	2800	52393	52618	1,81	0,702

Spherical roller bearings

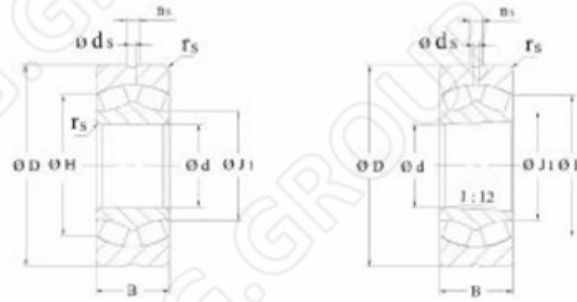


Spherical Roller Bearing



Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor				
	mm				kN		min^{-1}		HMEC	≈ kg
20	20	52	15	1.1	34.5	33.5	15000	12000	21304	0.16
25	25	52	18	1	43	45	17000	11000	22205	0.18
	25	52	18	1	43	45	17000	11000	22205K	0.175
	25	62	17	1.1	42.5	40.5	13000	10000	21305	0.254
30	30	62	20	1	58.5	62	13000	9500	22206	0.275
	30	62	20	1	58.5	62	13000	9500	22206K	0.269
	30	72	19	1.1	62	63	10000	8500	21306	0.386
35	35	72	23	1.1	78	83	11000	8500	22207	0.434
	35	72	23	1.1	78	83	11000	8500	22207K	0.425
	35	80	21	1.5	71	73.5	9500	8000	21307	0.503
	35	80	21	1.5	71	73.5	9500	8000	21307K	0.496
40	40	80	23	1.1	88	95	10000	7500	22208	0.528
	40	80	23	1.1	88	95	10000	7500	22208K	0.517
	40	90	23	1.5	91.5	100	8000	7000	21308	0.706
	40	90	23	1.5	91.5	100	8000	7000	21308K	0.696
	40	90	33	1.5	129	143	7500	7000	22308	1.05
	40	90	33	1.5	129	143	7500	7000	22308K	1.03

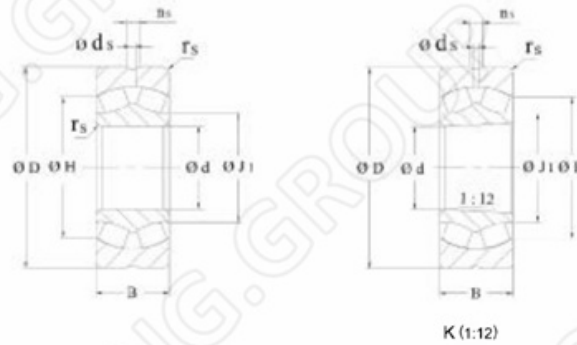
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K (1:12)

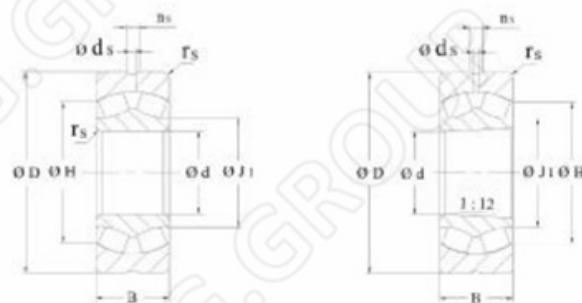
Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	r _{s min}	dyn. Cr	stat. Cor				
	mm				kN		min ⁻¹		HMEC	≈ kg
45	45	85	23	1.1	93	106	10000	6700	22209	0.589
	45	85	23	1.1	93	106	10000	6700	22209K	0.577
	45	100	25	1.5	108	120	7500	6700	21309	0.947
	45	100	25	1.5	108	120	7500	6700	21309K	0.934
	45	100	36	1.5	156	176	6700	6300	22309	1.39
	45	100	36	1.5	156	176	6700	6300	22309K	1.36
50	50	90	23	1.1	98	114	9500	6000	22210	0.622
	50	90	23	1.1	98	114	9500	6000	22210K	0.608
	50	110	27	2	122	137	6700	6300	21310	1.21
	50	110	27	2	122	137	6700	6300	21310K	1.19
	50	110	40	2	190	216	6000	6000	22310	1.9
	50	110	40	2	190	216	6000	6000	22310K	1.86
55	55	100	25	1.5	120	146	8500	5600	22211	0.85
	50	100	25	1.5	120	146	8500	5600	22211K	0.825
	55	120	29	2	146	166	6000	5600	21311	1.55
	55	120	29	2	146	166	6000	5600	21311K	1.53
	55	120	43	2	224	255	5600	5600	22311	2.27
	55	120	43	2	224	255	5600	5600	22311K	2.22

Spherical Roller Bearing



Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor				
	mm				kN		min^{-1}		HMEC	≈ kg
60	60	110	28	1.5	143	166	7500	5300	22212	1.12
	60	110	28	1.5	143	166	7500	5300	22212K	1.09
	60	130	31	2.1	166	193	5600	5300	21312	1.93
	60	130	31	2.1	166	193	5600	5300	21312K	1.9
	60	130	46	2.1	260	300	5000	5000	22312	2.89
	60	130	46	2.1	260	300	5000	5000	22312K	2.83
65	65	120	31	1.5	173	208	6700	5000	22213	1.55
	65	120	31	1.5	173	208	6700	5000	22213K	1.52
	65	140	33	2.1	196	228	5300	5000	21313	2.42
	65	140	33	2.1	196	228	5300	5000	21313K	2.39
	65	140	48	2.1	290	355	4800	4500	22313	3.57
	65	140	48	2.1	290	355	4800	4500	22313K	3.49
70	70	125	31	1.5	180	228	6300	4800	22214	1.65
	70	125	31	1.5	180	228	6300	4800	22214K	1.61
	70	150	35	2.1	220	265	5000	4800	21314	2.95
	70	150	35	2.1	220	265	5000	4800	21314K	2.91
	70	150	51	2.1	325	375	4500	4300	22314	4.21
	70	150	51	2.1	325	375	4500	4300	22314K	4.12

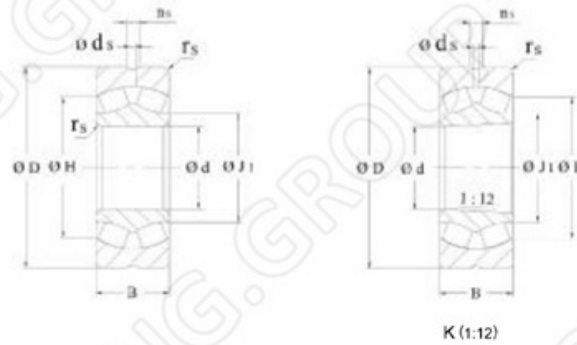
HMEC



K (1:12)

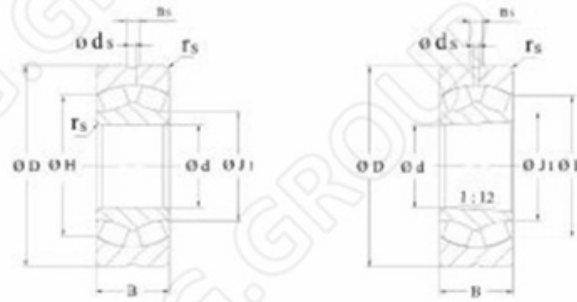
Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \text{ min}}$	dyn. Cr	stat. Cor				
	mm				kN		min ⁻¹		HMEC	≈ kg
75	75	130	31	1.5	183	236	6300	4500	22215	1.72
	75	130	31	1.5	183	236	6300	4500	22215K	1.66
	75	160	37	2.1	250	305	4800	4500	21315	3.75
	75	160	37	2.1	250	305	4800	4500	21315K	3.5
	75	160	55	2.1	375	440	4300	3800	22315	5.18
	75	160	55	2.1	375	440	4300	3800	22315K	5.06
80	80	140	33	2	212	270	5600	4300	22216	2.13
	80	140	33	2	212	270	5600	4300	22216K	2.08
	80	170	39	2.1	275	340	4500	4000	21316	4.23
	80	170	39	2.1	275	340	4500	4000	21316K	4.17
	80	170	58	2.1	415	500	4300	3600	22316	6.27
	80	170	58	2.1	415	500	4300	3600	22316K	6.05
85	85	150	36	2	260	325	5300	4000	22217	2.65
	85	150	36	2	260	325	5300	4000	22217K	2.59
	85	180	41	3	305	375	4300	3800	21317	5.03
	85	180	41	3	305	375	4300	3800	21317K	4.87
	85	180	60	3	155	540	4000	3200	22317	7.25
	85	180	60	3	155	540	4000	3200	22317K	7.06

Spherical Roller Bearing



Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor				
	mm				kN		min^{-1}		HMEC	≈ kg
90	90	160	40	2	285	360	4800	3800	22218	3.43
	90	160	40	2	285	360	4800	3800	22218K	3.35
	90	160	52.4	2	375	510	4300	2800	23218	4.46
	90	160	52.4	2	375	510	4300	2800	23218K	4.08
	90	190	43	3	335	415	4300	3600	21318	5.74
	90	190	43	3	335	415	4300	3600	21318K	5.66
95	95	170	43	2.1	315	400	4500	3600	22219	4.13
	95	170	43	2.1	315	400	4500	3600	22219K	4.04
	95	200	45	3	360	450	4000	3400	21319	6.63
	95	200	45	3	360	450	4000	3400	21319K	6.53
	95	200	67	3	560	680	3000	2800	22319	9.69
	95	200	67	3	560	680	3000	2800	22319K	9.46
100	100	165	52	2	375	560	4300	3000	23120	4.37
	100	165	52	2	375	560	4300	3000	23120K	4.06
	100	180	46	2.1	360	465	4300	3400	22220	4.96
	100	180	46	2.1	360	465	4300	3400	22220K	4.91
	100	180	60.3	2.1	465	655	3600	2400	23220	6.56
	100	180	60.3	2.1	465	655	3600	2400	23220K	6.56

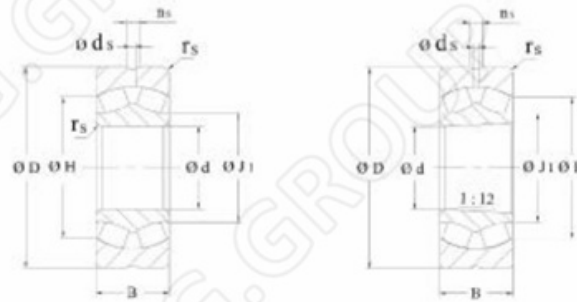
HMEC



K (1:12); K30 (1:30)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \text{ min}}$	dyn. Cr	stat. Cor				
	mm									
	kN									
	min ⁻¹									
	HMEC									
	≈									
	kg									
100	100	180	60.3	2.1	465	655	3600	2400	23220K	6.13
	100	215	47	3	425	530	3600	3200	21320	8.19
	100	215	47	3	425	530	3600	3200	21320K	8.08
	100	215	73	3	655	815	3000	2600	22320	13
	100	215	73	3	655	815	3000	2600	22320K	12.7
	100	215	82.6	3	680	900	2800		23320	15.5
110	110	170	45	2	335	510	4300	3200	23022	3.67
	110	170	45	2	335	510	4300	3200	23022K	3.55
	110	180	56	2	440	670	4000	2600	23122	5.51
	110	180	56	2	440	670	4000	2600	23122K	5.1
	110	180	69	2	520	880	2600	1800	24122	6.85
	110	180	69	2	520	880	2600	1800	24122K30	6.69
	110	200	53	2.1	455	585	4000	3000	22222	6.99
	110	200	53	2.1	455	585	4000	3000	22222K	6.82
	110	200	69.8	2.1	600	850	3000	2200	23222	9.54
	110	200	69.8	2.1	600	850	3000	2200	23222K	8.82
	110	240	50	3	510	640	3000	2800	21322	11.1
	110	240	50	3	510	640	3000	2800	21322K	10.9
	110	240	80	3	800	1060	2600	2200	22322	17.7

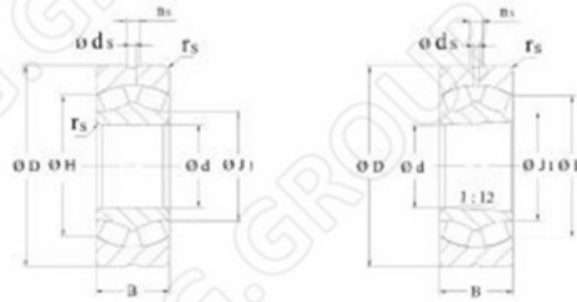
Spherical Roller Bearing



K (1:12); K30 (1:30)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass	
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor					
	mm				kN		min^{-1}		HMEC	≈ kg	
110	110	240	80	3	800	1060	2600	2200	22322K	17.4	
	110	240	92.1	3	830	1080	2600		23322	21.3	
120	120	180	46	2	360	570	4300	3000	23024	4.17	
	120	180	46	2	360	570	4300	3000	23024K	4.09	
	120	180	60	2	455	800	3000	2200	24024	5.65	
	120	180	60	2	455	800	3000	2200	24024K30	5.3	
	120	200	62	2	530	780	3400	2400	23124	7.7	
	120	200	62	2	530	780	3400	2400	23124K	7.57	
	120	200	80	2	655	1120	2200	1600	24124	11.6	
	120	200	80	2	655	1120	2200	1600	24124K30	11.5	
	120	215	58	2.1	540	720	3400	2800	22224	8.84	
	120	215	58	2.1	540	720	3400	2800	22224K	8.84	
	120	215	76	2.1	680	1000	2800	1900	23224	12.1	
	120	215	76	2.1	680	1000	2800	1900	23224K	11.4	
	120	260	86	3	900	1140	2600	2000	22324	22.5	
	120	260	86	3	900	1140	2600	2000	22324K	22.1	
	120	260	106	3	1020	1430	2400		23324	29.1	
	130	130	200	52	2	455	720	3600	2600	23026	6.45

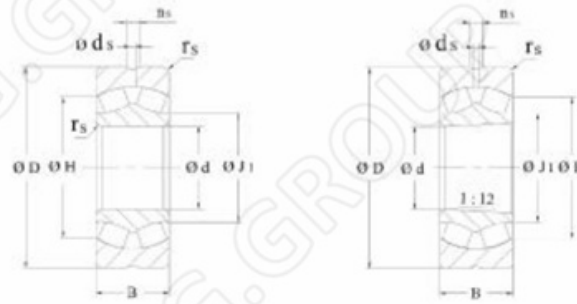
HMEC



K (1:12); K30 (1:30)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	rs min	dyn. Cr	stat. Cor				
	mm									
	kN									
	min ⁻¹									
	HMEC									
	≈									
	kg									
130	130	200	52	2	455	720	3600	2600	23026K	5.7
	130	200	69	2	570	1020	2600	2000	24026	7.72
	130	200	69	2	570	1020	2600	2000	24026K30	7.57
	130	210	64	2	570	865	3000	2200	23126	8.45
	130	210	64	2	570	865	3000	2200	23126K	8.1
	130	210	80	2	695	1180	2200	1500	24126	10.6
	130	210	80	2	695	1180	2200	1500	24126K	10.1
	130	230	64	3	630	880	3000	2600	22226	11.3
	130	230	64	3	630	880	3000	2600	22226K	10.9
	130	230	80	3	765	1140	2600	1800	23226	14
	130	230	80	3	765	1140	2600	1800	23226K	13.6
	130	280	93	4	1040	1340	2400	1900	22326	28
	130	280	93	4	1040	1340	2400	1900	22326K	27.4
	130	280	112	4	1160	1600	2200		22326C4	35.2
	140	140	210	53	2	480	780	3600	2400	23028
140		210	53	2	480	780	3600	2400	23028K	6
140		225	68	2.1	640	1000	2800	1900	23128	10.2
140		225	68	2.1	640	1000	2800	1900	23128K	9.66
140		250	68	3	735	1020	2400	2400	22228	14.2

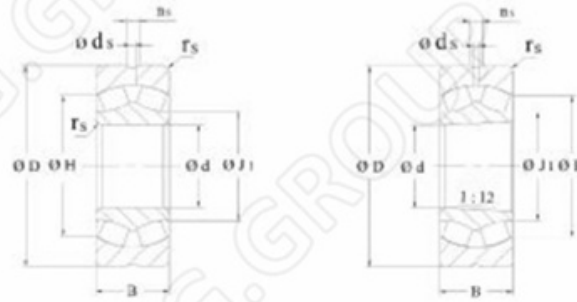
Spherical Roller Bearing



K (1:12)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass	
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor					
	mm										
	kN										
	min ⁻¹										
	HMEC										
	≈										
	kg										
140	140	250	68	3	735	1020	2400	2400	22228K	13.7	
	140	250	88	3	915	1370	2400	1600	23228	18.3	
	140	250	88	3	915	1370	2400	1600	23228K	17.6	
	140	300	102	4	1220	1600	2200	1700	22328	35.1	
	140	300	102	4	1220	1600	2200	1700	22328K	34.4	
	140	300	118	4	1270	1800	2000		23328C4	40.9	
	150	150	225	56	2.1	530	865	3400	2200	23030	7.83
150		225	56	2.1	530	865	3400	2200	23030K	7.33	
150		250	80	2.1	850	1320	2600	1700	23130	16.2	
150		250	80	2.1	850	1320	2600	1700	23130K	15.8	
150		270	73	3	850	1200	2600	2000	22230	18.2	
150		270	73	3	850	1200	2600	2000	22230K	17.8	
150		270	96	3	1080	1630	2200	1400	23230	23.7	
150		270	96	3	1080	1630	2200	1400	23230K	22.9	
150		320	108	4	1370	1830	2000	1500	22330	42.2	
150		320	108	4	1370	1830	2000	1500	22330K	41.2	
150		320	128	4	1500	2120	2000		23330C4	49.8	
160		160	240	60	2.1	600	1000	2800	2000	23032	9.7

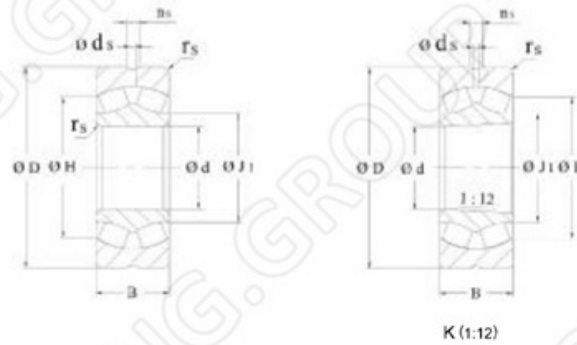
HMEC



K (1:12)

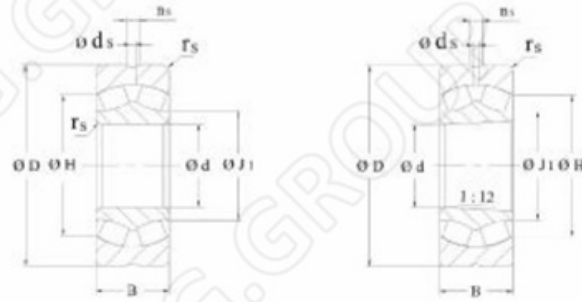
Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	rs min	dyn. Cr	stat. Cor				
	mm				kN		min ⁻¹		HMEC	≈ kg
160	160	240	60	2.1	600	1000	2800	2000	23032K	9.4
	160	270	86	2.1	980	1530	2400	1600	23132	20
	160	270	86	2.1	980	1530	2400	1600	23132K	18.6
	160	290	80	3	965	1370	2600	1900	22232	23.3
	160	290	80	3	965	1370	2600	1900	22232K	22.4
	160	290	104	3	1220	1900	2200	1300	23232	29.8
	160	290	104	3	1220	1900	2200	1300	23232K	28.5
	160	340	114	4	1430	1900	2000	1500	22332	50.4
	160	340	114	4	1430	1900	2000	1500	22332K	50.1
	160	340	136	4	1660	2320	2000		23332C4	61.3
170	170	260	67	2.1	735	1200	2600	1900	23034	12.6
	170	260	67	2.1	735	1200	2600	1900	23034K	12
	170	280	88	2.1	1020	1660	2400	1500	23134	22.1
	170	280	88	2.1	1020	1660	2400	1500	23134K	19.5
	170	310	86	4	1100	1530	2400	1800	22234	27.8
	170	310	86	4	1100	1530	2400	1800	22234K	27.1
	170	310	110	4	1370	2120	2000	1200	23234	36.5
	170	310	110	4	1370	2120	2000	1200	23234K	34.6
	170	360	120	4	1600	2120	1800	1400	22334	59.5

Spherical Roller Bearing



Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass	
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor					
	mm				kN		min^{-1}		HMEC	≈ kg	
170	170	360	120	4	1600	2120	1800	1400	22334K	56.9	
180	180	280	74	2.1	865	1430	2600	1800	23036	17	
	180	280	74	2.1	865	1430	2600	1800	23036K	16	
	180	300	96	3	1200	1930	2200	1400	23136	26.1	
	180	300	96	3	1200	1930	2200	1400	23136K	25.4	
	180	320	86	4	1140	1630	2400	1700	22236	29.2	
	180	320	86	4	1140	1630	2400	1700	22236K	28.5	
	180	320	112	4	1430	2320	2000	1100	23236	38.5	
	180	320	112	4	1430	2320	2000	1100	23236K	37	
	180	380	126	4	1760	2360	1500	1300	22336	69	
	180	380	126	4	1760	2360	1500	1300	22336K	66.7	
	190	190	290	75	2.1	915	1530	2400	1700	23038	18.3
		190	290	75	2.1	915	1530	2400	1700	23038K	17.7
		190	320	104	3	1340	2200	2000	1300	23138	33.9
		190	320	104	3	1340	2200	2000	1300	23138K	32.4
190		340	92	4	1200	1830	1800	1600	22238	37	
190		340	92	4	1200	1830	1800	1600	22238K	36.2	
190		340	120	4	1560	2600	1700	1000	23238	48.4	
190		340	120	4	1560	2600	1700	1000	23238K	46	

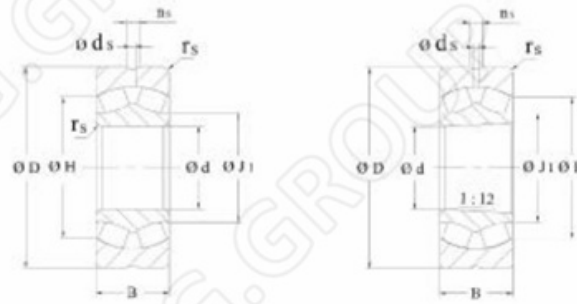
HMEC



K (1:12)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass	
	d	D	B	$r_{s \text{ min}}$	dyn. Cr	stat. Cor					
	mm				kN		min ⁻¹		HMEC	≈ kg	
190	190	400	132	5	1860	2500	1500	1200	22338	80.5	
	190	400	132	5	1860	2500	1500	1200	22338K	77.3	
	190	400	155	5	2200	3200	1400		23338C4	97.1	
200	200	280	60	2.1	550	1080	2000	1700	23940	12.2	
	200	280	60	2.1	550	1080	2000	1700	23940K	11.5	
	200	310	82	2.1	1060	1760	2400	1600	23040	22.5	
	200	310	82	2.1	1060	1760	2400	1600	23040K	21.4	
	200	340	112	3	1320	2280	1700	1200	23140	42.7	
	200	340	112	3	1320	2280	1700	1200	23140K	41.4	
	200	360	98	4	1320	2000	1700	1500	22240	44.2	
	200	360	98	4	1320	2000	1700	1500	22240K	42.3	
	200	360	128	4	1660	2750	1500	1000	23240	60.5	
	200	360	128	4	1660	2750	1500	1000	23240K	55.8	
	200	420	138	5	2080	2800	1400	1100	22340	91	
	200	420	138	5	2080	2800	1400	1100	22340K	89.5	
	200	420	165	5	2450	3600	1300		23340C4	108	
	220	220	340	90	3	1100	2000	1700	1400	23044	31.7
		220	340	90	3	1100	2000	1700	1400	23044K	29.9

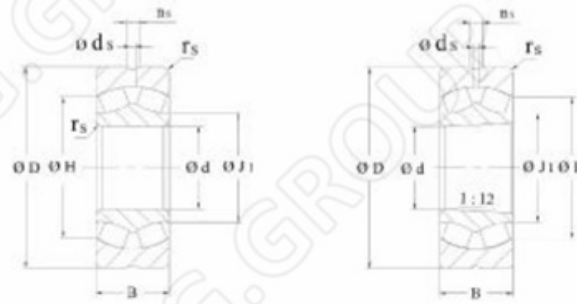
Spherical Roller Bearing



K (1:12)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass	
	d	D	B	$r_{s \min}$	dyn. Cr	stat. Cor					
	mm				kN		min^{-1}		HMEC	≈ kg	
220	220	370	120	4	1630	2900	1400	1100	23144	54.4	
	220	370	120	4	1630	2900	1400	1100	23144K	52	
	220	400	108	4	1630	2450	1400	1300	22244	61.5	
	220	400	108	4	1630	2450	1400	1300	22244K	59.6	
	220	400	144	4	2040	3450	1400	850	23244	81.1	
	220	400	144	4	2040	3450	1400	850	23244K	79	
	220	460	145	5	2320	3350	1300	950	22344	119	
	220	460	145	5	2320	3350	1300	950	22344K	114	
	240	240	360	92	3	1160	2200	1400	1300	23048	34.8
		240	360	92	3	1160	2200	1400	1300	23048K	31.9
		240	400	128	4	1860	3250	1300	950	23148	66.4
		240	400	128	4	1860	3250	1300	950	23148K	65.3
240		440	120	4	1960	3050	1300	1200	22248	84	
240		440	120	4	1960	3050	1300	1200	22248K	81.2	
240		440	160	4	2450	4250	1300	750	23248	111	
240		440	160	4	2450	4250	1300	750	23248K	105	
240		500	155	5	2650	3900	1500	850	22348	151	
240		500	155	5	2650	3900	1500	850	22348K	145	
260		260	400	104	4	1500	2800	1300	1200	23052	49.3

HMEC



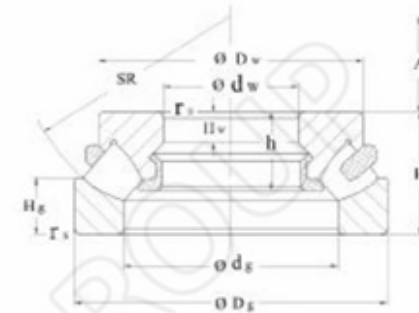
K (1:12)

Shaft diameter	Dimensions				Load rating		Limiting speed	Reference speed	Code Bearing	Mass
	d	D	B	$r_{s \text{ min}}$	dyn. Cr	stat. Cor				
mm					kN		min^{-1}		HMEC	≈ kg
260	260	400	104	4	1500	2800	1300	1200	23052K	46.2
	260	440	144	4	2200	4000	1200	850	23152	92.5
	260	440	144	4	2200	4000	1200	850	23152K	89.6
	260	480	130	5	2240	3450	1100	1100	22252	110
	260	480	130	5	2240	3450	1100	1100	22252K	106
	260	480	174	5	2900	4900	1100	670	23252	144
	260	480	174	5	2900	4900	1100	670	23252K	136
	260	540	165	6	3000	4400	1100	800	22352	181
	260	540	165	6	3000	4400	1100	800	22352K	177

Spherical roller thrust bearings

Spherical Roller Thrust Bearings

HMEC



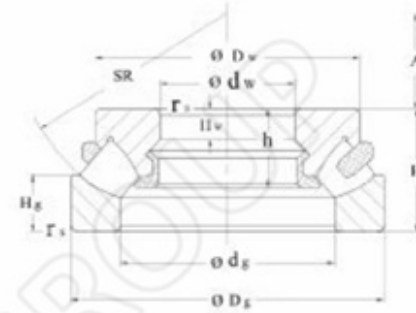
293..EMB
294..EMB

Shaft diameter	Dimensions									
	d_w	d_g	D_w	D_g	H	H_g	H_r	h	r_s min	A
	mm									
60	60	88	115	130	42	20	15	39	1.5	38
65	65	94	125	140	45	21	16	42	2	42
70	70	102	135	150	48	23	17	45	2	44
75	75	108	140	160	51	24	18	48	2	47
80	80	116	150	170	54	26	19	51	2.1	50
85	85	111	135	150	39	19	14	37	1.5	50
	85	123	160	180	58	28	21	55	2.1	54
90	90	115	140	155	39	19	14	37	1.5	52
	90	130	170	190	60	29	22	57	2.1	56
100	100	129	155	170	42	20.8	15	39	1.5	58
	100	142	185	210	67	32	24	64	3	62
110	110	142	175	190	48	23	17	45	2	64
	110	158	205	230	73	35	26	69	3	69

Load ratings		Limiting Speed	Reference Speed	Code Bearing HMEC	Mass ≈ kg
dyn. C	stat. Co				
kN		min ⁻¹			
335	900	3600	4800	29412EMB	2.4
380	1020	3400	4500	29413EMB	3.03
430	1200	3000	4000	29414EMB	3.71
490	1370	2800	3600	29415EMB	4.4
550	1560	2800	3400	29416EMB	5.28
345	1060	3400	3800	29317EMB	2.54
600	1730	2600	3200	29417EMB	5.89
355	1100	3400	3600	29318EMB	2.65
670	1930	2400	3000	29418EMB	7.38
415	1370	3000	3200	29320EMB	3.38
830	2450	2200	2600	29420EMB	10
530	1700	2600	3000	29322EMB	5.04
950	2600	2000	2400	29422EMB	13.1

Spherical Roller Thrust Bearings

HMEC



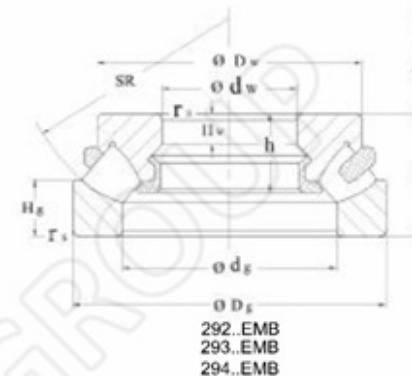
293..EMB
294..EMB

Shaft diameter	Dimensions									
	d_w	d_g	D_w	D_g	H	H_g	H_v	W	r_s mm	A
120	120	158	190	210	54	26	19	50	2.1	70
	120	172	220	250	78	37	28	72	4	74
130	130	169	205	225	58	28	21	54	2.1	76
	130	187	240	270	85	41	31	54	4	81
140	140	181	220	240	60	29	22	56	2.1	82
	140	194	250	280	85	41	31	80	4	86
150	150	192	230	250	60	29	22	56	2.1	87
	150	211	270	300	90	44	32	85	4	92
160	160	206	245	270	67	32	24	64	3	92
	160	224	285	320	95	45	34	90	5	99
170	170	215	255	280	67	32	24	64	3	96
	170	239	305	340	103	50	37	98	5	104
180	180	230	275	300	73	35	26	70	3	103
	180	253	320	360	109	52	39	105	5	110
190	190	243	295	320	78	38	28	75	4	110
	190	268	340	380	115	55	41	110	5	117

Load ratings		Limiting Speed min ⁻¹	Reference Speed	Code Bearing HMEC	Mass ≈ kg
dyn. C kN	stat. Co				
640	2080	2400	2600	29324EMB	6.9
1120	3350	1800	2200	29424EMB	16.3
720	2360	2200	2400	29326EMB	8.49
1250	3900	1700	2000	29426EMB	12.9
800	2700	2000	2200	29328EMB	9.87
1290	4050	1700	2000	29428EMB	21.9
815	2650	2000	2000	29330EMB	10.5
1460	4800	1500	1800	29430EMB	26.9
965	3350	2000	1900	29332EMB	13.6
1660	5300	1400	1700	29432EMB	31.6
1000	3450	1800	1900	29334EMB	14.2
1860	6000	1300	1600	29434EMB	39.2
1180	4150	1700	1700	29336EMB	18.1
2080	6800	1300	1400	29436EMB	46.2
1320	4650	1500	1600	29338EMB	22.8
2320	7500	1200	1400	29438EMB	54.9

Spherical Roller Thrust Bearings

HMEC



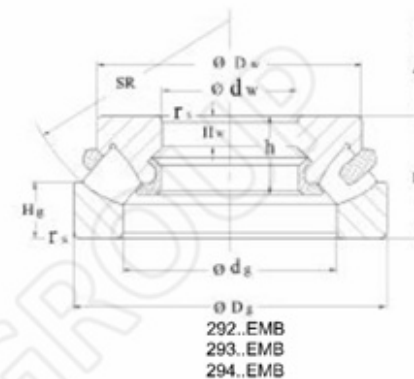
292..EMB
293..EMB
294..EMB

Shaft diameter	Dimensions									
	d_w	d_g	D_w	D_g	H	H_g	H_v	h	r_s	A
	mm									
200	200	236	265	280	48	24	17	45	2	108
	200	258	310	340	85	41	31	82	4	116
	200	282	360	400	122	59	44	118	5	122
220	220	254	285	300	48	24	17	45	2	117
	220	279	330	360	85	41	31	82	4	125
	220	303	375	420	122	58	44	118	6	132
240	240	282	320	340	60	30	22	56	2.1	130
	240	299	350	380	85	41	31	82	4	135
	240	321	400	440	122	59	44	118	6	142
260	260	302	340	360	60	30	22	56	2.1	139
	260	327	385	420	95	45	31	90	5	148
	260	353	435	480	132	64	48	127	6	154
280	280	322	360	380	60	30	22	56	2.1	150
	280	346	405	440	95	46	31	90	5	158
	280	380	470	520	145	68	52	140	6	166
300	300	353	395	420	73	38	26	69	3	162
	300	378	440	480	109	50	37	105	5	168
	300	398	490	540	145	70	52	140	6	175

Load ratings	Limiting Speed	Reference Speed	Code Bearing HMEC	Mass	
					dyn. C
	kN	min ⁻¹			
655	2650	2000	2000	29240EMB	8.15
1530	5300	1400	1500	29340EMB	28
2550	8500	1100	1300	29440EMB	64.7
720	3150	2000	1700	29244EMB	9.18
1560	5600	1400	1400	29344EMB	29.9
2600	8500	1100	1200	29444EMB	67.4
1040	4500	1700	1600	29248EMB	16.1
1700	6400	1400	1300	29348EMB	32.5
2700	9500	1100	1100	29448EMB	73.5
1060	4750	1700	1500	29252EMB	17.1
2040	7650	1200	1200	29352EMB	45.2
3100	11000	1000	1000	29452EMB	93.6
1120	5100	1500	1300	29256EMB	18.3
2120	8300	1200	1100	29356EMB	48.8
3650	12900	900	950	29456EMB	121
1430	6550	1400	1300	29260EMB	28.6
2550	9650	1100	1000	29360EMB	66.4
3900	14000	900	900	29460EMB	129

Spherical Roller Thrust Bearings

HMEC



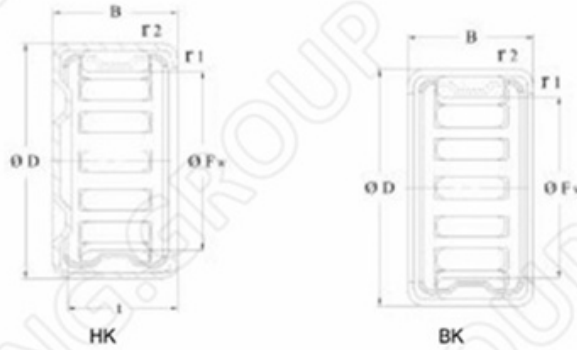
Shaft diameter	Dimensions									
	d_w	d_g	D_w	D_g	H	H_g	H_s	h	r_s min	A
mm										
320	320	372	415	440	73	38	26	69	3	172
	320	396	465	500	109	53	37	105	5	180
	320	432	525	580	155	75	55	150	7.5	191
340	340	391	435	460	73	37	26	68	3	183
	340	426	500	540	122	59	42	117	5	192
	340	458	560	620	170	82	60	164	7.5	201
360	360	423	475	500	85	44	30	80	4	194
	360	446	520	560	122	59	42	117	5	202
	360	475	580	640	170	82	60	164	7.5	210

Load ratings		Limiting Speed min ⁻¹	Reference Speed	Code Bearing HMEC	Mass ≈ kg
dyn. C kN	stat. Co				
1500	6950	1300	1200	29264E	30.3
2650	10600	1100	950	29364E	71
4300	15600	800	850	29464E	158
1560	7350	1300	1100	29268E	32
3250	12900	950	850	29368E	96.9
5200	19000	750	750	29468E	200
1900	8800	1200	1100	29272E	46.1
3350	13400	900	630	29372E	103
5400	20400	750	700	29472E	219

Needle roller bearings

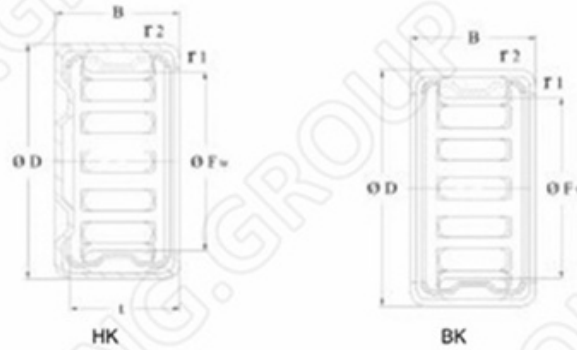


**Drawn Cup Needle Roller Bearings
with open end
Series HK
with closed end
series BK**



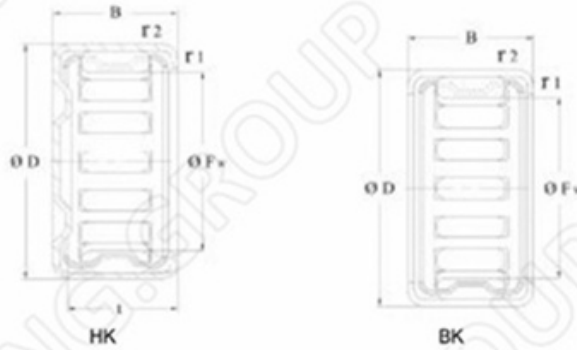
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1,2} min	dyn. C	stat. C ₀	min ⁻¹				
	mm					kN		ng grease	ng oil			
3	3	6.5	6	-	0.3	1.32	0.95	40000	60000	-	HK 0306 TN	0.001
	3	6.5	6	5.2	0.3	1.32	0.95	40000	60000	-	BK 0306 TN	0.001
4	4	8	8	-	0.4	1.76	1.37	32000	48000	-	HK 0408 TN	0.002
	4	8	8	6.4	0.4	1.76	1.37	32000	48000	-	BK 0408 TN	0.002
5	5	9	9	-	0.4	2.45	2.16	24000	38000	-	HK 0509	0.002
	5	9	9	7.4	0.4	2.45	2.16	24000	38000	-	BK 0509	0.002
6	6	10	8	-	0.4	2.28	2.04	20000	34000	-	HK 0609	0.002
	6	10	9	-	0.4	3.05	2.9	20000	34000	-	HK 0609	0.003
	6	10	9	7.4	0.4	3.05	2.9	20000	34000	-	BK 0609	0.003
7	7	11	9	-	0.4	3.1	3.15	18000	30000	-	HK 0709	0.002
	7	11	9	7.4	0.4	3.1	3.15	18000	30000	-	BK 0709	0.002
8	8	12	8	-	0.4	2.8	2.85	16000	26000	-	HK 0808	0.002
	8	12	8	6.4	-	2.8	2.85	16000	26000	-	BK 0808	0.002
	8	12	10	-	0.4	3.8	4.15	16000	26000	IR 5x8x12	HK 0810	0.004
	8	12	10	8.4	0.4	3.8	4.15	16000	26000	IR 5x8x12	BK 0810	0.004
9	9	13	10	-	0.4	4.4	5.2	15000	24000	IR 6x9x12	HK 0910	0.004
	9	13	10	8.4	0.4	4.4	5.2	15000	24000	IR 6x9x12	BK 0910	0.004
	9	13	12	-	0.4	5.4	6.8	15000	24000	IR 6x9x12	HK 0912	0.005

HMEC



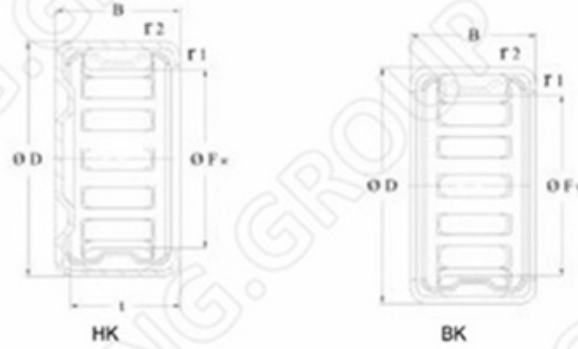
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1, f2} min	dyn. C	stat. C ₀	min ⁻¹				
	mm					kN		ng grease	ng oil			
9	9	13	12	10.4	0.4	5.4	6.8	15000	24000	IR 6x9x12	BK 0912	0.005
10	10	14	10	-	0.4	4.55	5.7	14000	22000	IR 7x10x10.5	HK 1010	0.004
	10	14	10	8.4	0.4	4.55	5.7	14000	22000	IR 7x10x10.5	BK 1010	0.004
	10	14	12	-	0.4	5.6	7.35	14000	22000	IR 7x10x12	HK 1012	0.005
	10	14	12	10.4	0.4	5.6	7.35	14000	22000	IR 7x10x12	BK 1012	0.005
	10	14	15	-	0.4	7.1	10	14000	22000	IR 7x10x16	HK 1015	0.006
	10	14	15	13.4	0.4	7.1	10	14000	22000	IR 7x10x16	BK 1015	0.006
12	12	16	10	-	0.4	4.75	6.3	12000	19000	IR 8x12x10.5	HK 1210	0.005
	12	16	10	8.4	0.4	4.75	6.3	12000	19000	IR 8x12x10.5	BK 1210	0.005
	12	18	12	-	1	6.3	7.35	12000	19000	IR 8x12x12.5	HK 1212	0.01
	12	18	12	9.3	1	6.55	7.8	12000	19000	IR 8x12x12.5	BK 1212	0.011
13	13	19	12	-	1	6.8	8.5	11000	18000	IR 10x13x12.5	HK 1312	0.012
	13	19	12	9.3	1	6.8	8.5	11000	18000	IR 10x13x12.5	BK 1312	0.012
14	14	20	12	-	1	6.8	8.5	10000	17000	IR 10x14x12	HK 1412	0.012
	14	20	12	9.3	1	6.8	8.5	10000	17000	IR 10x14x12	BK 1412	0.012
15	15	21	12	-	1	7.1	9.3	9500	16000	IR 12x15x12.5	HK 1512	0.012
	15	21	12	9.3	1	7.1	9.3	9500	16000	IR 12x15x12.5	BK 1512	0.015
	15	21	16	-	1	10.2	14.6	9500	16000	IR 12x15x16.5	HK 1516	0.018
	15	21	16	13.3	1	10.2	14.6	9500	16000	IR 12x15x16.5	BK 1516	0.019
	21	21	22	-	1	12.9	19.6	9500	16000	IR 12x15x22.5	HK 1522	0.024

Drawn Cup Needle Roller Bearings
with open end
Series HK
with closed end
series BK



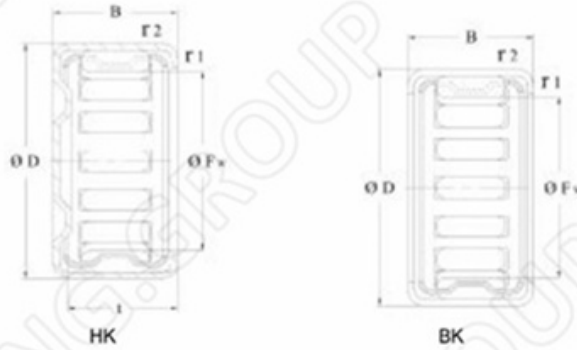
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1, r2} min	dyn. C	stat. Co	min ⁻¹				
	mm					kN		ng grease	ng oil			
15	15	21	22	19.3	1	12.9	19.6	9500	16000	IR 12x15x22.5	BK 1522	0.025
16	16	22	12	-	1	7.35	9.8	9500	16000	IR 12x16x12	HK 1612	0.014
	16	22	12	9.3	1	7.35	9.8	9500	16000	IR 12x16x12	BK 1612	0.016
	16	22	16	-	1	10.2	15	9500	16000	IR 12x16x16	HK 1616	0.018
	16	22	16	13.3	1	10.2	15	9500	16000	IR 12x16x16	BK 1616	0.02
	16	22	22	-	1	12.7	19.6	9500	16000	IR 12x16x22	HK 1622	0.026
	16	22	22	19.3	1	12.7	19.6	9500	16000	IR 12x16x22	BK 1622	0.028
17	17	23	12	-	1	7.65	10.6	9000	15000	-	HK1712	0.016
	17	23	12	9.3	1	7.65	10.6	9000	15000	-	BK1712	0.018
18	18	24	12	-	1	8	11.2	9000	15000	-	HK 1812	0.015
	18	24	12	9.3	1	8	11.2	9000	15000	-	BK 1812	0.017
	18	24	16	-	1	11	17	9000	15000	IR 15x18x16.5	HK 1816	0.02
	18	24	16	13.3	1	11	17	9000	15000	IR 15x18x16.5	BK 1816	0.022
20	20	26	12	-	1	8.5	12.7	8000	13000	IR 15x20x12	HK 2012	0.016
	20	26	12	9.3	1	8.5	12.7	8000	13000	IR 15x20x12	BK 2012	0.017
	20	26	16	-	1	11.8	19	8000	13000	IR 17x20x16.5	HK 2016	0.022
	20	26	16	13.3	1	11.8	19	8000	13000	IR 17x20x16.5	BK 2016	0.024
	20	26	20	-	1	14.6	25.5	8000	13000	IR 17x20x20.5	HK 2020	0.025
	20	26	20	17.3	1	14.6	25.5	8000	13000	IR 17x20x20.5	BK 2020	0.027
	20	26	30	-	1	20	38	8000	13000	IR 17x20x30.5	HK 2030	0.041
	20	26	30	27.3	1	20	38	8000	13000	IR 17x20x30.5	BK 2030	0.043

HMEC



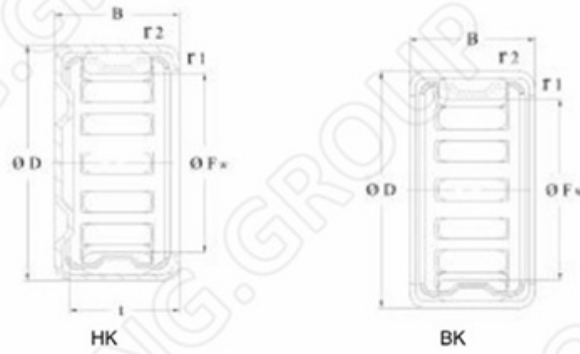
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1,2} min	dyn. C	stat. C ₀	min ⁻¹				
	mm					kN		ng grease	ng oil			
22	22	28	12	-	1	8.65	13.4	7500	12000	IR 17x22x13	HK 2212	0.018
	22	28	12	9.3	1	8.65	13.4	7500	12000	IR 17x22x13	BK 2212	0.02
	22	28	16	-	1	12.5	21.2	7500	12000	IR 17x22x16	HK 2216	0.024
	22	28	16	13.3	1	12.5	21.2	7500	12000	IR 17x22x16	BK 2216	0.027
	22	28	20	-	1	14.6	25.5	7500	12000	IR 17x22x23	HK 2220	0.035
	22	28	20	17.3	1	14.6	25.5	7500	12000	IR 17x22x23	BK 2220	0.04
25	25	32	12	-	1	10.8	15.6	6700	10000	-	HK 2512	0.023
	25	32	12	9.3	1	10.8	15.6	6700	10000	-	BK 2512	0.025
	25	32	16	-	1	15.6	25	6700	10000	IR 20x25x17	HK 2516	0.025
	25	32	16	13.3	1	15.6	25	6700	10000	IR 20x25x17	BK 2516	0.027
	25	32	20	-	1	19.6	34	6700	10000	IR 20x25x20.5	HK 2520	0.039
	25	32	20	17.3	1	19.6	34	6700	10000	IR 20x25x20.5	BK 2520	0.043
	25	32	26	-	1	23.6	43	6700	10000	IR 20x25x26.5	HK 2526	0.05
	25	32	26	23.3	1	23.6	43	6700	10000	IR 20x25x26.5	BK 2526	0.054
	25	32	38	-	1	33.5	68	6700	10000	IR 20x25x38.5	HK 2538	0.073
	25	32	38	35.3	1	33.5	68	6700	10000	IR 20x25x38.5	BK 2538	0.077
28	28	35	16	-	1	15.3	25.5	6300	9500	IR 22x28x17	HK 2816	0.034
	28	35	16	13.3	1	15.3	25.5	6300	9500	IR 22x28x17	BK 2816	0.038
	28	35	20	-	1	20	36	6300	9500	IR 22x28x20.5	HK 2820	0.042
	28	35	20	17.3	1	20	36	6300	9500	IR 22x28x20.5	BK 2820	0.047
30	30	37	12	-	1	11.2	17.3	5600	8500	-	HK 3012	0.028
	30	37	12	9.3	1	11.2	17.3	5600	8500	-	BK 3012	0.031
	30	37	16	-	1	16	28	5600	8500	IR 25x30x17	HK 3016	0.038
	30	37	16	13.3	1	16	28	5600	8500	IR 25x30x17	BK 3016	0.041
	30	37	20	-	1	21.6	40.5	5600	8500	IR 25x30x20.5	HK 3020	0.047

Drawn Cup Needle Roller Bearings
with open end
Series HK
with closed end
series BK



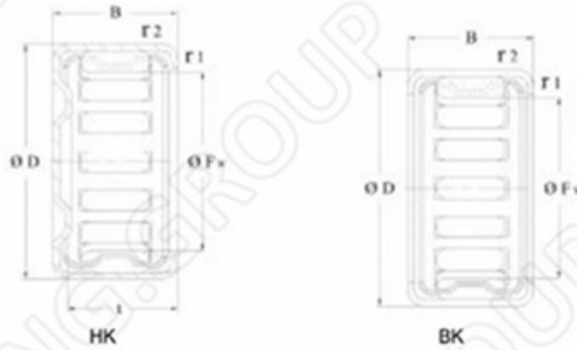
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1,2} min	dyn. C	stat. C ₀	min ⁻¹				
	mm					kN		ng grease	ng oil			
30	30	37	20	17.3	1	21.6	40.5	5600	8500	IR 25x30x20.5	BK 3020	0.053
	30	37	26	-	1	26	52	5600	8500	IR 25x30x26.5	HK 3026	0.061
	30	37	26	23.3	1	26	52	5600	8500	IR 25x30x26.5	BK 3026	0.067
	30	37	38	-	1	36.5	81.5	5600	8500	IR 25x30x38.5	HK 3028	0.087
	30	37	38	35.3	1	36.5	81.5	5600	8500	IR 25x30x28.5	BK 3028	0.093
35	35	42	12	-	1	12.9	22	5000	7500	-	HK 3512	0.034
	35	42	16	-	1	16.6	30.5	5000	7500	IR 30x35x17	HK 3516	0.046
	35	42	20	-	1	23.2	47.5	5000	7500	IR 30x35x20.5	HK 3520	0.057
40	40	47	12	-	1	12.9	23.3	4500	6700	-	HK 4012	0.036
	40	47	16	-	1	18	35.5	4500	6700	IR 35x40x17	HK 4016	0.048
	40	47	20	-	1	24	51	4500	6700	IR 35x40x20.5	HK 4020	0.06
45	45	52	16	-	1	19	39	4000	6000	IR 40x45x17	HK 4516	0.054
	45	52	20	-	1	25	56	4000	6000	IR 40x45x20.5	HK 4520	0.067
	45	52	20	17.3	1	25	56	4000	6000	IR 40x45x20.5	BK 4520	0.073
50	50	58	20	-	1	27.5	57	3600	5300	IR 45x50x20	HK 5020	0.082
	50	58	25	-	1	33.5	75	3600	5300	IR 45x50x25.5	HK 5025	0.104
60	60	68	12	-	1	17.3	31	2800	4300	-	HK 6012	0.06

HMEC



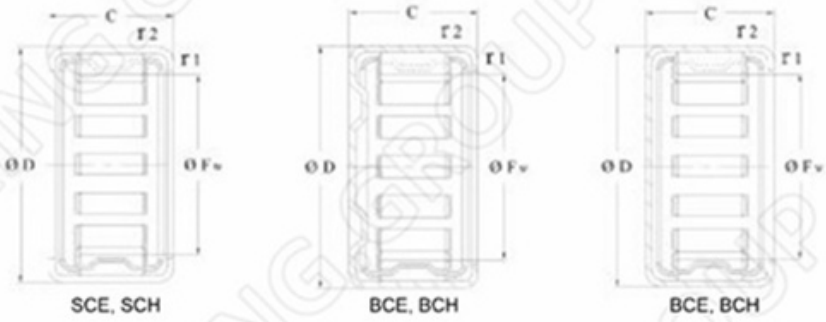
Shaft diameter	Dimensions					Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F _w	D	B	t	r _{1, r2} min	dyn. C	stat. Co	min ⁻¹				
	mm					kN		ng grease	ng Oil			
12	12	18	14	1	1	6.6	7.8	12000	-	-	HK 1210RS	0.013
	12	18	16	1	1	6.6	7.8	12000	-	-	BK 1212.2RS	0.016
14	14	20	14	1	1	6.8	8.5	11000	IR 10x14x16	-	HK 1412RS	0.015
	14	20	16	1	1	6.8	8.5	11000	IR 10x14x20	-	HK 1416.2RS	0.018
15	15	21	14	1	1	7.5	9.8	11000	IR 12x15x16.5	-	HK 1514RS	0.016
	15	21	16	1	1	7.5	9.8	11000	IR 12x15x16.5	-	HK 1516.2RS	0.019
16	16	22	14	1	1	7.4	9.8	10000	IR 12x16x16	-	HK 1614RS	0.016
	16	22	16	1	1	7.4	9.8	10000	IR 12x16x20	-	HK 1616.2RS	0.020
18	18	24	14	1	1	8.0	11.2	9500	IR 15x18x16.5	-	HK 1814RS	0.019
	18	24	16	1	1	8.0	11.2	9500	IR 15x18x16.5	-	HK 1816.2RS	0.020
20	20	26	16	1	1	8.5	12.7	8500	IR 17x20x16.5	-	HK 2016.2RS	0.023
	20	26	18	1	1	11.8	19	8500	IR 17x20x20.5	-	HK 2018RS	0.025
	20	26	20	1	1	11.8	19	8500	IR 17x20x20.5	-	HK 2020.2RS	0.028
22	22	28	16	1	1	8.6	13.4	7500	-	-	HK 2216.2RS	0.025
	22	28	18	1	1	12.5	21.2	7500	IR 17x22x23	-	HK 2218RS	0.028
	22	28	20	1	1	12.5	21.2	7500	IR 17x22x23	-	HK 2220.2RS	0.030

Drawn Cup Needle Roller Bearings
with open end
Series HK
with closed end
series BK



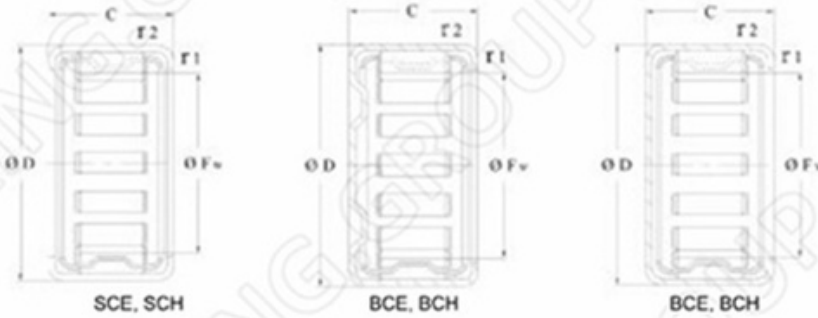
Shaft diameter	Dimensions				Load ratings		Speed ratings		appropriate inner ring	Code bearing HMEC	Weight ≈ kg
	F_w	D	B	t	dyn. C	stat. Co	min ⁻¹				
	mm				kN		ng grease	ng oil			
25	25	32	14	1	10.8	15.6	6700		IR 20x25x17	HK 2514RS	0.026
	25	32	16	1	10.8	15.6	6700		IR 20x25x17	HK 2516.2RS	0.031
	25	32	18	1	15.6	25	6700		IR 20x25x20.5	HK 2518RS	0.029
	25	32	20	1	15.6	25	6700		IR 20x25x20.5	HK 2520.2RS	0.032
	25	32	22	1	19.6	34	6700		IR 20x25x26	HK 2522RS	0.042
	25	32	24	1	19.6	34	6700		IR 20x25x26	HK 2524.2RS	0.046
28	28	35	20	1	15.3	25.5	6000		IR 22x28x20.5	HK 2820.2RS	0.042
30	30	37	16	1	11.2	17.3	5600		IR 25x30x17	HK 3016.2RS	0.038
	30	37	18	1	16	28	5600		IR 25x30x20.5	HK 3018RS	0.042
	30	37	20	1	16	28	5600		IR 25x30x20.5	HK 3020.2RS	0.048
	30	37	22	1	21.6	40.5	5600		IR 25x30x26	HK 3022RS	0.050
	30	37	24	1	21.6	40.5	5600		IR 25x30x26	HK 3024.2RS	0.056
35	35	42	16	1	12.9	22	4800		IR 30x35x17	HK 3516.2RS	0.048
	35	42	18	1	16.6	30.5	4800		IR 30x35x20.5	HK 3518RS	0.055
	35	42	20	1	16.6	30.5	4800		IR 30x35x20.5	HK 3520.2RS	0.064
40	40	47	16	1	12.9	23.2	4300		IR 35x40x20	HK 4016.2RS	0.050
	40	47	18	1	18	35.5	4300		IR 35x40x20.5	HK 4018RS	0.058
	40	47	20	1	18	35.4	4300		IR 35x40x20.5	HK 4020.2RS	0.065
45	45	52	18	1	19	39	3800		IR 40x45x20.5	HK 4518RS	0.064
	45	52	20	1	19	39	3800		IR 40x45x20.5	HK 4520.2RS	0.075

Drawn cup needle roller bearings(imperial sizes)
Series SCE, SCH
BCE, BCH



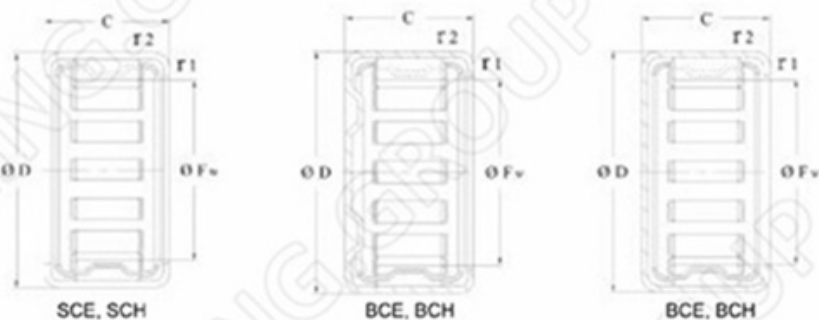
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
3.175	3.175	6.350	6.350	1070	740	31500	SCE24TN	BCE24TN
3.969	3.969	7.145	6.350	1260	940	25000	SCE2-1/2-4	-
	3.969	7.145	6.350	1230	910	25000	SCE2-1/2-4TN	-
4.762	4.762	8.731	6.350	1790	1360	21000	SCE34TN	BCE34TN
	4.762	8.731	9.525	2750	2350	21000	SCE36TN	BCE36TN
	4.762	8.731	9.530	2800	2440	21000	SCE36	-
6.350	6.350	11.112	6.350	1600	1200	44000	SCE44	BCE44
	6.25	11.112	6.350	1600	1200	44000	SCE44TN	-
	6.350	11.112	7.938	2500	2090	44000	SCE45	BCE45
	6.350	11.112	11.112	4000	3850	44000	SCE47	BCE47
	6.350	11.112	11.112	4000	3850	44000	SCE47TN	-
7.938	7.938	12.700	7.938	2900	2600	35500	SCE55	BCE55
	7.938	12.700	11.112	4700	4850	35500	SCE57	BCE57
	7.938	12.700	14.288	6000	6600	35500	SCE59	BCE59
	7.938	14.288	11.112	4750	4100	29500	SCH57	BCH57
9.525	9.525	14.288	7.938	2900	2700	29500	SCE65	BCE65
	9.525	14.288	9.525	3900	3950	29500	SCE66	BCE66
	9.525	14.288	11.112	4350	4600	29500	SCE67	BCE67
	9.525	14.288	12.700	5800	6600	29500	SCE68	BCE68
	9.525	14.288	14.288	6000	6900	29500	SCE69	BCE69

HMEC



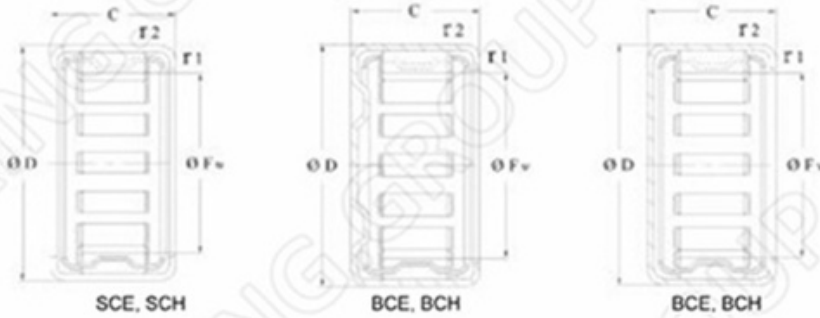
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
				N				
9.525	9.525	15.875	15.875	7400	9000	29500	SCE610	BCE610
	9.525	15.875	12.700	7100	7100	25000	SCH68	BCH68
11.112	11.112	15.875	12.700	6400	7800	25000	SCE78	BCE78
	11.112	15.875	15.875	8100	10700	25000	SCE710	-
	11.112	17.462	12.700	7900	8200	22000	SCH78	BCH78
12.700	12.700	17.462	7.938	3650	3950	22000	SCE85	BCE85
	12.700	17.462	9.525	4600	5400	22000	SCE86	BCE86
	12.700	17.462	11.112	5900	7400	22000	SCE87	BCE87
	12.700	17.462	12.700	6900	9000	22000	SCE88	BCE88
	12.700	17.462	15.875	8800	12300	22000	SCE810	BCE810
	12.700	17.462	19.050	9900	14300	22000	SCE812	BCE812
	12.700	19.050	11.112	7340	7800	22000	SCH87	BCH87
	12.700	19.050	12.700	8500	9400	22000	SCH88	BCH88
	12.700	19.050	15.875	10500	12400	22000	SCH810	BCH810
	12.700	19.050	19.050	12600	15700	22000	SCH812	BCH812
	14.288	14.288	19.050	7.938	4000	4700	19600	SCE95
14.288		19.050	9.525	5200	6400	19600	SCE96	BCE96
14.288		19.050	11.112	6600	8800	19600	SCE97	-
14.288		19.050	12.700	7700	10800	19600	SCE98	BCE98
14.288		19.050	15.875	9600	14000	19600	SCE910	BCE910
14.288		19.050	19.050	1070	16400	19600	SCE912	BCE912
14.288		20.638	12.700	9100	10600	19600	SCH98	BCH98
14.288		20.638	15.875	12000	15000	19600	SCH910	BCH910
14.288		20.638	19.050	14400	19000	19600	SCH912	BCH912

Drawn cup needle roller bearings(imperial sizes)
Series SCE, SCH
BCE, BCH



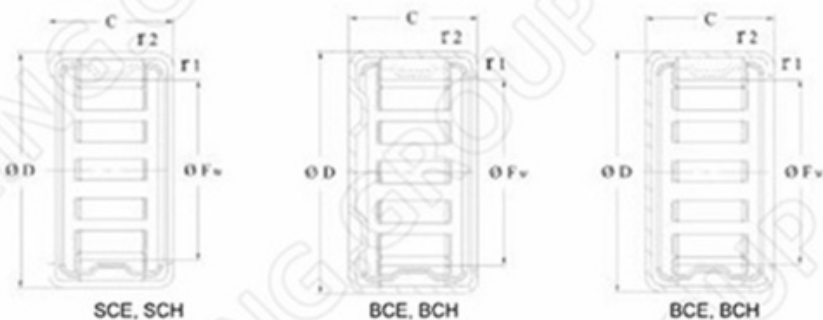
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
15.875	15.875	20.638	7.938	4300	5200	17600	SCE105	BCE105
	15.875	20.638	11.112	6600	9300	17600	SCE107	BCE107
	15.875	20.638	11.910	7100	10300	17600	SCE107-1/2	BCE107-1/2
	15.875	20.638	12.700	8100	12000	17600	SCE108	BCE108
	15.875	20.638	15.875	10400	16300	17600	SCE1010	BCE1010
	15.875	20.638	19.050	12100	19700	17600	SCE1012	BCE1012
	15.875	20.638	25.400	12800	20500	17600	SCE1016	BCE1016
	15.875	22.225	12.700	10000	12200	17600	SCH108	BCH108
	15.875	22.225	15.875	12700	16700	17600	SCH1010	BCH1010
	15.875	22.225	19.050	14700	20000	17600	SCH1012	BCH1012
15.875	22.225	25.400	19100	28000	17600	SCH1016	BCH1016	
17.462	17.462	22.225	9.525	5700	7900	16000	SCE116	-
	17.462	22.225	12.700	8600	13200	16000	SCE118	BCE118
	17.462	22.225	15.875	10900	18000	16000	SCE1110	BCE1110
	17.462	22.225	19.050	12400	21000	16000	SCE1112	BCE1112
	17.462	23.812	11.112	8400	10000	16000	SCH117	BCH117
	17.462	23.812	15.875	12900	17100	16000	SCH1110	BCH1110
	17.462	23.812	19.050	15900	22700	16000	SCH1112	BCH1112
19.050	19.050	25.400	9.525	7100	8300	14700	SCE126	BCE126
	19.050	25.400	12.700	9800	12500	14700	SCE128	BCE128
	19.050	25.400	15.875	12800	17500	14700	SCE1210	BCE1210
	19.050	25.400	19.050	15300	22100	14700	SCE1212	BCE1212
	19.050	26.988	19.050	18500	23600	14700	SCH1212	BCH1212

HMEC



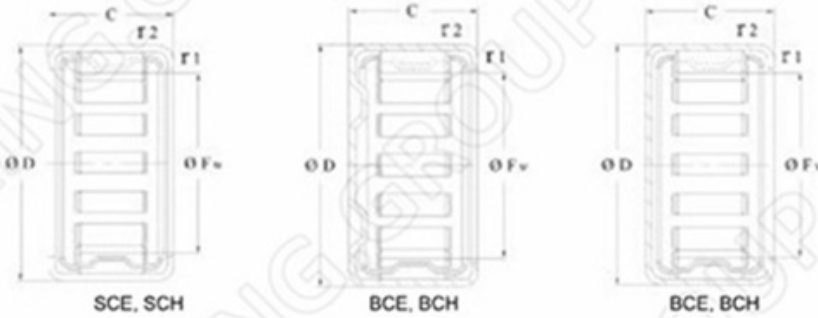
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
				N				
28.575	28.575	34.925	9.525	8300	11500	9800	SCE186	BCE186
	28.575	34.925	12.700	12800	20200	9800	SCE188	BCE188
	28.575	34.925	19.050	18900	34000	9800	SCE1812	BCE1812
	28.575	34.925	25.400	26000	49500	9800	SCE1816	BCE1816
	28.575	38.100	15.875	21800	29000	9800	SCH1810	BCH1810
	28.575	38.100	19.050	2500	35000	9800	SCH1812	BCH1812
	28.575	38.100	25.400	31500	46500	9800	SCH1816	BCH1816
	28.575	38.100	28.580	40500	65000	9800	SCH1818	BCH1818
	28.575	38.100	31.750	40900	64500	9800	SCH1820	BCH1820
30.162	30.162	38.100	25.400	33000	57000	9300	SCE1916	-
31.750	31.750	38.100	12.700	13500	22200	8800	SCE208	BCE208
	31.750	38.100	15.875	16500	29000	8800	SCE2010	BCE2010
	31.750	38.100	19.050	21100	39500	8800	SCE2012	BCE2012
	31.750	38.100	25.400	27000	55000	8800	SCE2016	BCE2016
	31.750	38.100	31.750	33500	71000	8800	SCE2020	BCE2020
	31.750	41.275	12.700	16400	21000	8800	SCH208	BCH208
	31.750	41.275	19.050	27100	39500	8800	SCH2012	BCH2012
	31.750	41.275	25.400	36000	57500	8800	SCH2016	BCH2016
	31.750	41.275	31.750	43600	72900	8800	SCH2020	BCH2020
33.338	33.338	41.275	15.875	21100	34000	8400	SCE2110	-
34.925	34.925	41.275	12.700	13600	23700	8000	SCE228	BCE228
	34.925	41.275	19.050	21500	42500	8000	SCE2212	BCE2212

Drawn cup needle roller bearings(imperial sizes)
Series SCE, SCH
BCE, BCH



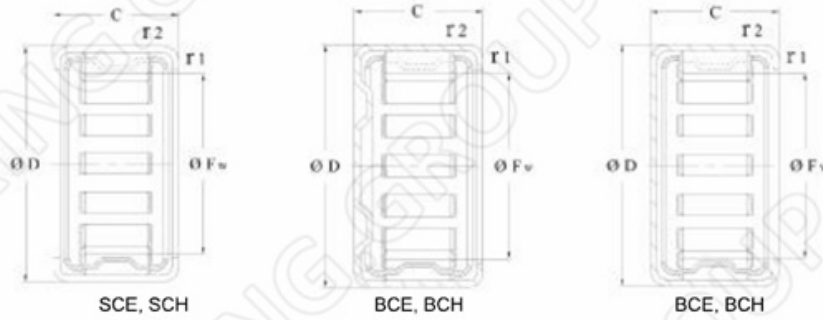
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
				N				
20.638	20.638	26.988	9.525	7100	8400	13600	SCE136	-
	20.638	26.988	12.700	10800	14300	13600	SCE138	BCE138
	20.638	26.988	19.050	15900	23700	13600	SCE1312	BCE1312
	20.638	26.988	22.225	18500	29000	13600	SCE1314	-
	20.638	26.988	25.400	20000	30500	13600	SCE1316	BCE1316
	20.638	28.575	19.875	15900	20700	13600	SCH1310	BCH1310
	20.638	28.575	19.050	19200	26500	13600	SCH1312	BCH1312
22.225	22.225	28.575	9.525	8200	10700	12600	SCE146	BCE146
	22.225	28.575	12.700	11200	15800	12600	SCE148	BCE148
	22.225	28.575	19.050	16900	27000	12600	SCE1412	BCE1412
	22.225	28.575	25.400	22100	38000	12600	SCE1416	BCE1416
	22.225	30.162	19.050	19500	27000	12600	SCH1412	NCH1412
	22.225	30.162	25.400	25500	38500	12600	SCH1416	BCH1416
23.812	23.812	30.162	25.400	24100	43000	11800	SCE1516	BCE1516
25.400	25.400	31.750	9.525	7800	10200	11000	SCE166	BCE166
	25.400	31.750	12.700	12600	19100	11000	SCE158	BCE158
	25.400	31.750	19.050	18500	31500	11000	SCE1612	BCE1612
	25.400	31.750	25.400	24800	45500	11000	SCE1616	BCE1616
	25.400	31.750	31.75	26500	52200	11000	SCE1620	BCE1620
	25.400	33.338	15.875	16700	22700	11000	SCH1610	BCH1610
	25.400	33.338	19.050	20000	28500	11000	SCH1612	BCH1612
	25.400	33.338	25.400	28900	46300	11000	SCH1616	BCH1616

HMEC



Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
	N							
34.925	34.925	41.275	25.400	27500	59000	8000	SCE2216	-
	34.925	41.275	31.750	34000	77000	8000	SCE2220	BCE2220
	34.925	44.450	19.050	29500	45000	8000	SCH2212	BCH2212
	34.925	44.450	25.400	39000	65000	8000	SCH2216	BCH2216
38.100	38.100	47.625	12.700	18600	26000	7400	SCE248	BCE248
	38.100	47.625	15.875	24400	36500	7400	SCE2410	BCE2410
	38.100	47.625	19.050	30500	48500	7400	SCE2412	BCE2412
	38.100	47.625	22.225	36000	60000	7400	SCE2414	BCE2414
	38.100	47.625	25.400	38500	66000	7400	SCE2416	BCE2416
	38.100	47.625	31.750	47500	86000	7400	SCE2420	BCE2420
41.275	41.275	50.800	15.875	25500	40000	6800	SCE2610	BCE2610
	41.275	50.800	31.750	51000	97000	6800	SCE2620	BCE2620
44.450	44.450	53.975	19.050	31500	55000	6300	SCE2812	BCE2812
	44.450	53.975	25.400	41500	76000	6300	SCE2816	BCE2816
	44.450	53.975	31.750	55000	108000	6300	SCE2820	-
	44.450	53.975	38.100	62000	130000	6300	SCE2824	BCE2824
50.800	50.800	60.325	12.700	21800	35000	5500	SCE328	-
	50.800	60.325	15.875	28500	49500	5500	SCE3210	-
	50.800	60.325	25.400	41500	80000	5500	SCE3216	BCE3216
	50.800	60.325	31.750	55000	116000	5500	SCE3220	-
	50.800	60.325	38.100	62000	123000	5500	SCE3224	-

Drawn cup needle roller bearings(imperial sizes)
Series SCE, SCH
BCE, BCH

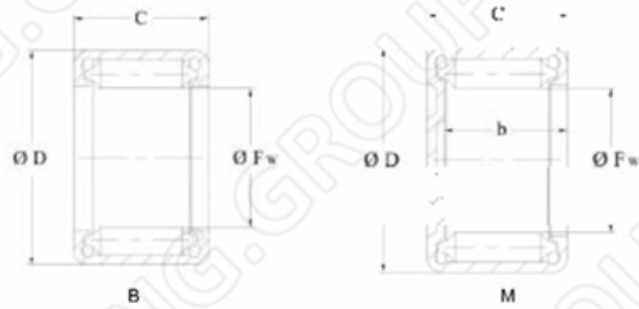


Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
53.975	53.975	63.500	12.700	25200	39000	5200	SCE348	-
	53.975	63.500	15.875	31000	57000	5200	SCE3410	BCE3410
	53.975	63.500	25.400	50000	103000	5200	SCE3416	-
	53.975	63.500	38.100	62000	120000	5200	SCE3424	-
57.150	57.150	66.675	19.050	37500	72000	4900	SCE3612	BCE3612
	57.150	66.675	25.400	50000	107000	4900	SCE3616	BCE3616
69.850	69.850	79.375	19.050	38500	80000	4000	SCE4412	BCE4412
	69.850	79.375	25.4	55000	115000	4000	SCE4416	-

Drawn cup full complement needle roller bearings(imperial sizes)

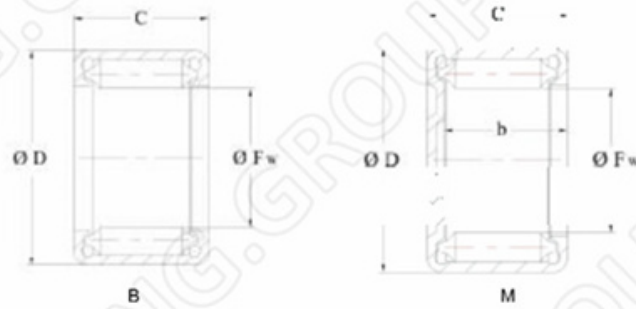
Series B

M



Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
	mm			N				
6.35	6.35	11.11	6.35	566	531	10000	B-44	M-441
	6.35	11.11	7.94	768	786	10000	B-45	M-451
	6.35	11.11	11.11	1210	1410	10000	B-47	M-471
7.94	7.94	12.70	7.94	833	985	8300	B-55	M-551
	7.94	12.70	9.52	1140	1370	8300	B-56	-
	7.94	12.70	11.11	1390	1770	8300	B-57	M-571
	7.94	12.70	14.29	1850	2550	8300	B-59	-
	7.94	14.29	11.11	1530	1590	11000	BH-57	-
	7.94	14.29	14.29	2080	2340	11000	BH-59	-
9.52	9.52	14.29	7.94	984	1180	7100	B-65	M-651
	9.52	14.29	9.52	1280	1650	7100	B-66	M-661
	9.52	14.29	11.11	1550	2120	7100	B-67	-
	9.52	14.29	12.70	1810	2590	7100	B-68	M-681
	9.52	14.29	14.29	2070	3070	7100	B-69	-
	9.52	14.29	15.88	2310	3530	7100	B-610	M-6101
	9.52	15.88	12.70	2050	2380	9400	BH-68	-
11.11	11.11	15.88	9.52	1390	1930	6300	B-76	-
	11.11	15.88	11.11	1700	2480	6300	B-77	-
	11.11	15.88	12.70	1980	3030	6300	B-78	M-781
	11.11	15.88	15.88	2520	4130	6300	B-710	-
	11.11	17.46	12.70	2260	2780	8300	BH-78	-

HMEC

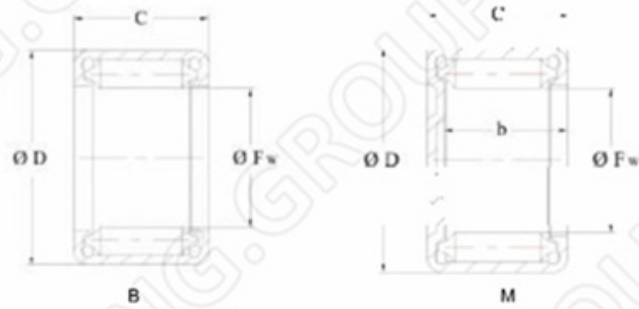


Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
	mm			N				
12.70	12.70	17.46	7.94	1160	1580	5500	B-85	-
	12.70	17.46	9.52	1500	2200	5500	B-86	M-861
	12.70	17.46	11.11	1830	2840	5500	B-87	M-871
	12.70	17.46	12.70	2130	3460	5500	B-88	M-881
	12.70	17.46	15.88	2720	4720	5500	B-810	M-8101
	12.70	17.46	19.05	3260	5980	5500	B-812	M-8121
	12.70	19.05	11.11	2060	2550	7500	BH-87	-
	12.70	19.05	12.70	2450	3180	7500	BH-88	-
	12.70	19.05	15.88	3180	4440	7500	BH-810	-
	12.70	19.05	19.05	3850	5690	7500	BH-812	-
14.29	14.29	19.05	7.94	1240	1780	5000	B-95	M-951
	14.29	19.05	9.52	1600	2480	5000	B-96	-
	14.29	19.05	11.11	1950	3190	5000	B-97	-
	14.29	19.05	12.70	2280	3900	5000	B-98	-
	14.29	19.05	15.88	2900	5310	5000	B-910	-
	14.29	19.05	19.05	3480	6730	5000	B-912	M-9121
	14.29	20.64	12.70	2630	3580	6800	BH-98	-
	14.29	20.64	15.88	3400	5000	6800	BH-910	-
	14.29	20.64	19.05	4130	6410	6800	BH-912	-
	15.88	15.88	20.64	7.94	1310	1980	4500	B-105
15.88		20.64	11.11	2070	3550	4500	B-107	M-1071
15.88		20.64	12.70	2410	4330	4500	B-108	M-1081
15.88		20.64	15.88	3070	5900	4500	B-1010	-
15.88		20.64	19.05	3690	7480	4500	B-1012	M-10121

Drawn cup full complement needle roller bearings(imperial sizes)

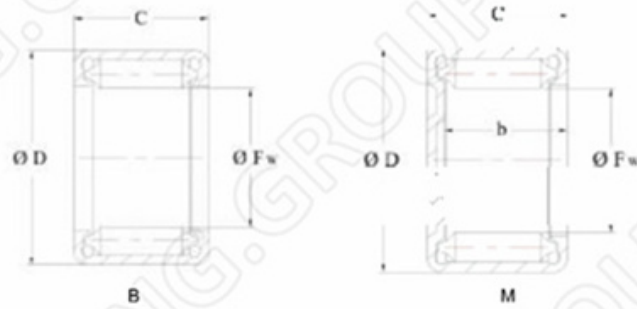
Series B

M



Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
	mm			N				
15.88	15.88	22.22	12.70	2790	3980	6200	BH-108	MH-1081
	15.88	22.22	15.88	3620	5530	6200	BH-1010	-
	15.88	22.22	19.05	4390	7130	6200	BH-1012	-
	15.88	22.22	25.40	5830	10300	6200	BH-1016	-
17.46	17.46	22.22	9.52	1790	3030	4200	B-116	-
	17.46	22.22	12.70	2540	4770	4200	B-118	-
	17.46	22.22	15.88	3230	6500	4200	B-1110	M11101
	17.46	22.22	19.05	3880	8230	4200	B-1112	M-11121
	17.46	23.81	11.11	2480	3510	5700	BH-117	-
	17.46	23.81	15.88	3820	6110	5700	BH-1110	MH-11101
	17.46	23.81	19.05	4640	7840	5700	BH-1112	-
19.05	19.05	25.40	9.52	2100	2900	5500	B-126	-
	19.05	25.40	12.70	3100	4790	5500	B-128	M-1281
	19.05	25.40	15.88	4010	6670	5500	B-1210	M-12101
	19.05	25.40	19.05	1870	8560	5500	B-1212	M-12121
20.64	20.64	26.99	9.52	2190	3140	5200	B-136	-
	20.64	26.99	12.70	3240	5190	5200	B-138	M-1381
	20.64	26.99	22.22	5940	11300	5200	B-1314	-
	20.64	26.99	25.40	6760	13400	5200	B-1316	M-13161
	20.64	28.58	15.88	4320	6510	6200	BH-1310	-
	20.64	28.58	19.05	5340	8550	6200	BH-1312	-

HMEC

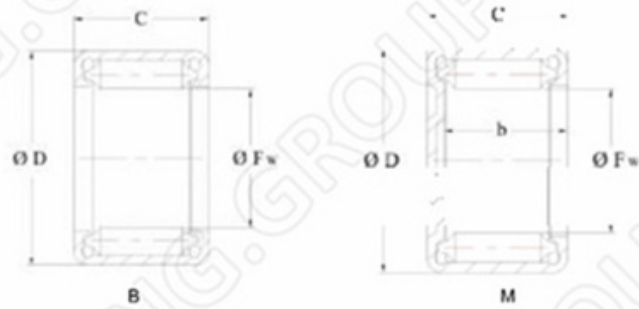


Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC		
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end	
	mm								N
22.22	22.22	28.58	9.52	2280	3380	4800	B-146	-	
	22.22	28.58	12.70	3370	5590	4800	B-148	-	
	22.22	28.58	19.05	5200	9990	4800	B-1412	M-14121	
	22.22	28.58	25.40	7040	14100	4800	B-1416	B-14161	
	22.22	28.58	28.58	7860	16600	4800	B-1418	-	
	22.22	30.16	15.88	4470	7030	5880	BH-1410	-	
	22.22	30.16	19.05	5530	9230	5880	BH-1412	-	
	22.22	30.16	25.40	7480	13600	5880	BH-1416	-	
23.81	23.81	30.16	12.70	3500	5990	4500	B-158	-	
	23.81	30.16	25.40	7300	15400	4500	B-1516	M-15161	
25.40	25.40	31.75	9.52	2450	3870	4300	B-166	-	
	25.40	31.75	11.11	3050	5120	4300	B-167	-	
	25.40	31.75	12.70	3620	6390	4300	B-168	-	
	25.40	31.75	15.88	4690	8910	4300	B-1610	-	
	25.40	31.75	19.05	5690	11400	4300	B-1612	M-16121	
	25.40	31.75	25.40	7560	16500	4300	B-1616	M-16161	
	25.40	33.34	12.70	3600	5500	5200	BH-168	MH-1681	
	25.40	33.34	15.88	4860	8020	5200	BH-1610	-	
	25.40	33.34	19.05	5970	10500	5200	BH-1612	MH-16121	
	25.40	33.34	25.40	8090	15600	5200	BH-1616	MH-16161	
	25.40	33.34	31.75	10100	20600	5200	BH-1620	-	
	25.40	33.34	38.10	11900	25600	5200	BH-1624	-	
	26.99	26.99	33.34	15.88	4840	9470	4000	B-1710	-

Drawn cup full complement needle roller bearings(imperial sizes)

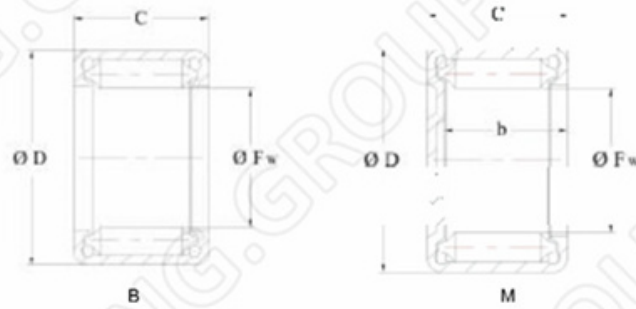
Series B

M



Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
mm				N				
28.58	28.58	34.92	9.52	2610	4350	3800	B-186	-
	28.58	34.92	12.70	3850	7190	3800	B-188	-
	28.58	34.92	19.05	6060	12900	3800	B-1812	-
	28.58	34.92	25.40	8050	18500	3800	B-1816	M-18161
	28.58	38.10	19.05	6920	11500	5500	BH-1812	-
	28.58	38.10	25.40	9420	17100	5500	BH-1816	-
	28.58	38.10	31.75	11800	22900	5500	BH-1820	-
30.16	30.16	38.10	25.40	8860	18500	4400	B-1916	-
31.75	31.75	38.10	12.70	4080	7990	3500	B-208	-
	31.75	38.10	15.88	5280	11100	3500	B-2010	-
	31.75	38.10	19.05	6410	14300	3500	B-2012	-
	31.75	38.10	25.40	8510	20600	3500	B-2016	M-20161
	31.75	38.10	31.75	10500	26900	3500	B-2020	M-20201
	31.75	41.28	12.70	4200	6320	5000	BH-208	-
	31.75	41.28	19.05	7250	12700	5000	BH-2012	-
	31.75	41.28	25.40	9910	19000	5000	BH-2016	MH-20161
	31.75	41.28	31.75	12400	25400	5000	BH-2020	MH-20201
33.34	33.34	41.28	12.70	4180	7220	4000	B-218	-
	33.34	41.28	15.88	5600	10500	4000	B-2110	-
	33.34	41.28	31.75	11700	27200	4000	B-2120	-
34.92	34.92	41.28	12.70	4280	8790	3200	B-228	-
	34.92	41.28	19.05	6730	15700	3200	B-2112	-

HMEC

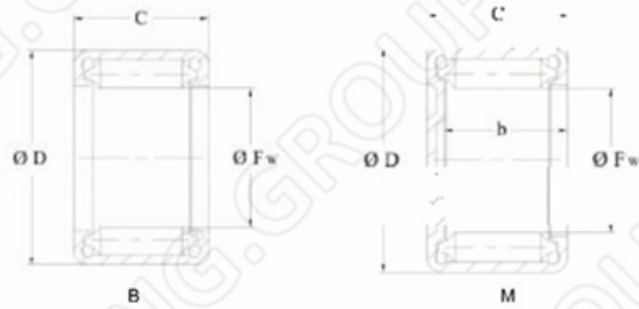


Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
	mm			N				
34.92	34.92	41.28	25.40	8950	22700	3200	B-2216	-
	34.92	41.28	31.75	11000	29600	4700	B-2220	-
	34.92	44.45	15.88	6240	10600	4700	BH-2210	-
	34.92	44.45	31.75	7770	14100	4700	BH-2212	-
	34.92	44.45	12.70	10600	20900	4700	BH-2216	-
	34.92	44.45	19.05	13200	28000	4300	BH-2220	-
38.10	38.10	47.62	25.40	4780	7830	4300	B-248	-
	38.10	47.62	31.75	6500	11600	4300	B-2410	-
	38.10	47.62	15.88	8090	15400	4300	B-2412	-
	38.10	47.62	19.05	9590	19200	4300	B-2414	-
	38.10	47.62	25.40	11000	22800	4300	B-2416	M-24161
	38.10	47.62	31.75	13800	30500	3900	B-2420	M-24201
41.28	41.28	50.80	12.70	4920	8390	3900	B-268	-
	41.28	50.80	15.88	6710	12540	3900	B-2610	-
	41.28	50.80	25.40	11400	24800	3900	B-2616	-
	41.28	50.80	31.75	14300	33000	3900	B-2620	-
44.45	44.45	53.98	19.05	8660	17900	3700	B-2812	-
	44.45	53.98	25.40	11800	26700	3700	B-2816	M-28161
	44.45	53.98	31.75	14800	35500	3700	B-2820	-
	44.45	53.98	38.10	17600	44300	3700	B-2824	-
47.62	47.62	57.15	12.70	5380	9790	3500	B-308	-
	47.62	57.15	19.05	9100	19210	3500	B-3012	-

Drawn cup full complement needle roller bearings(imperial sizes)

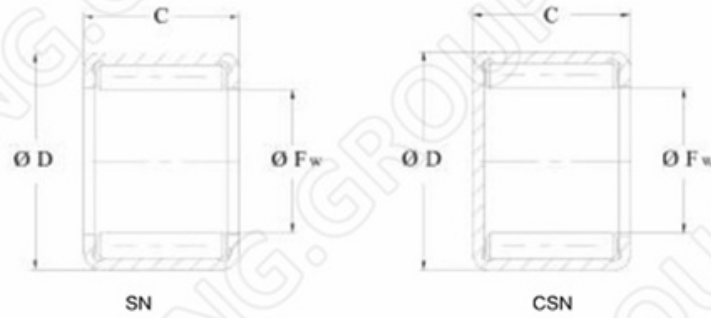
Series B

M



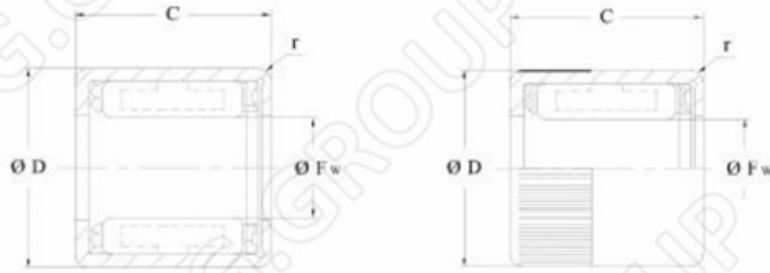
Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Sta. Cor		Open end	Close end
	mm			N				
47.62	47.62	57.15	25.40	12400	28600	3500	B-3016	-
50.80	50.80	60.32	12.70	5490	10300	3300	B-328	-
	50.80	60.32	25.40	12700	30500	3300	B-3216	M-32161
	50.80	60.32	31.75	15900	40600	3300	B-3220	-
	50.80	60.32	44.45	21800	60700	3300	B-3228	M-32281
52.39	52.39	64.29	19.05	10100	19000	4000	BH-3312	-
	52.39	64.29	25.40	14200	29400	4000	BH-3316	-
53.98	53.98	63.50	12.70	5650	11000	3100	B-348	-
	53.98	63.50	25.40	13100	32400	3100	B-3416	-
	53.98	63.50	38.10	19500	53900	3100	B-3424	-
57.15	57.15	66.68	19.05	10100	12000	3000	B-3612	-
	57.15	66.68	31.75	17300	23800	3000	B-3620	-
	57.15	66.68	38.10	20500	29700	3000	B-3624	-
66.68	66.68	76.20	25.40	14800	20600	2500	B-4216	M-42161
69.85	69.85	79.38	15.88	8980	10900	2500	B-4410	-
	69.85	79.38	25.40	15300	21600	2500	B-4416	-
	69.85	79.38	31.75	19000	28700	2500	B-4420	-

HMEC



Shaft diameter	Dimensions			Basic Load Rating		Limiting speeds min ⁻¹	Code bearing HMEC	
	Fw	D	C	Dyn Cr	Stat. Cor		Open end	Closed end
	mm			N				
6.35	6.350	11.112	7.938	4350	4900	10000	SN45	CSN45
7.938	7.938	12.700	7.938	5600	6200	8300	SN55	CSN55
	7.938	12.700	9.525	6800	8000	8300	SN56	CSN56
	7.938	12.700	11.113	6200	5800	8300	SN57	CSN57
9.525	9.525	14.288	7.938	6200	7400	7100	SN65	CSN65
	9.525	14.288	9.525	6800	8300	7100	SN66	CSN66
	9.525	14.288	12.700	7700	9700	7100	SN68	CSN68
11.112	11.112	15.875	9.525	7600	11000	6300	SN76	CSN76
	11.112	15.875	12.700	9900	16000	6300	SN78	CSN78
12.700	12.700	17.462	12.700	11800	18400	5600	SN88	CSN88
	12.700	17.462	15.875	12900	23600	5600	SN810	CSN810
	12.700	17.462	19.050	15900	29500	5600	SN812	CSN812
15.875	15.875	20.638	7.938	6400	6700	4550	SN105	CSN105
17.462	17.462	22.225	9.525	9300	17100	4200	SN116	CSN116
19.050	19.050	25.400	12.700	15000	25000	3750	SN128	CSN128
22.225	22.225	28.575	12.700	17400	31500	3250	SN148	CSN148
28.575	28.575	34.925	25.400	36500	90000	2600	SN1816	CSN1816

Drawn Cup roller clutches
Series HF
HF..KF

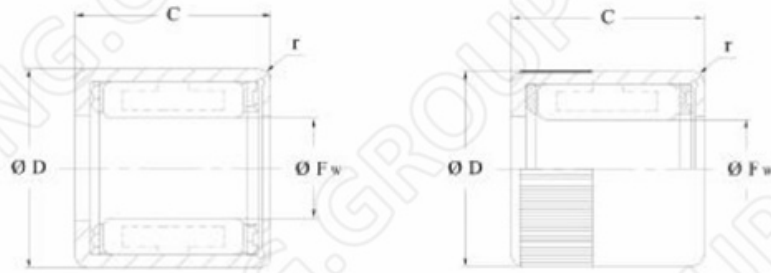


HF, HF..KF

HF..R, HF..KFR with knurled outer ring

Shaft diameter	Dimensions				Permissible torque Md	Limiting speeds		Code bearing HMEC		Mass ≈ g
	Fw	D	C	r _{min.}		n _{GW} ²⁾	n _{GA} ³⁾	Plastic springs	Steel springs	
	mm				Nm	min ⁻¹	min ⁻¹			
3	3	6.5	6	0.3	0.18	45000	8000	HF 0306 KF	-	1
	3	6.5	6	0.3	0.06	45000	8000	HF 0306KFR	-	1
4	4	8	6	0.3	0.34	34000	8000	HF 0406KF	-	1
	4	8	6	0.3	0.1	34000	8000	HF 0406KFR	-	1
6	6	10	12	0.3	1.76	23000	13000	HF 0612 KF	HF 0612	3
	6	10	12	0.3	0.5	23000	13000	HF 0612KFR	HF 0612	3
8	8	12	12	0.3	3.15	17000	12000	HF0812KF	HF 0812	3.5
	8	12	12	0.3	1	17000	12000	HF0812KFR	HF 0812R	3.5
10	10	14	12	0.3	5.3	14000	11000	HF 1012KF	HF 1012	4
12	12	18	16	0.3	12.2	11000	8000	-	HF1216	11
14	14	20	16	0.3	17.3	9500	8000	-	HF1416	13
16	16	22	16	0.3	20.5	8500	7500	-	HF 1616	14
18	18	24	16	0.3	24.1	7500	7500	-	HF1816	16

HMEC



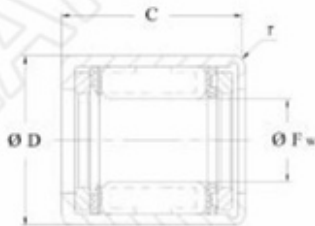
HF, HF..KF

HF..R, HF..KFR with knurled outer ring

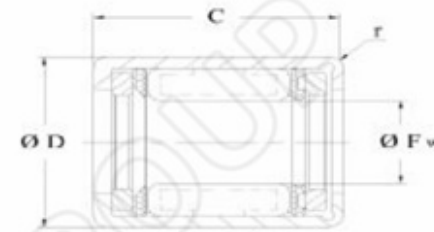
Shaft diameter	Dimensions				Permissible torque Md Nm	Limiting speeds		Code bearing HMEC		Mass ≈ g
	Fw	D	C	r _{min.}		n _{GW} ²⁾	n _{GA} ³⁾	Plastic springs	Steel springs	
	mm					min ⁻¹	min ⁻¹			
20	20	26	16	28.5	0.18	7000	6500	-	HF2016	17
25	25	32	20	0.3	66	5500	5500	-	HF 2520	30
30	30	37	20	0.3	90	4500	4500	-	HF3020	36
35	35	42	20	0.3	121	3900	3900	-	HF3520	40

Draw cup roller clutches with bearing assembly
Series HFL,HFL..KF
HFL..R,HFL..KFR
(Partially Knurled)

HMEC



HFL,HFL..KF with plain bearing assembly
 (HFL0308 KF,HFL0408 KF,HFL 0615KF,HFL0615)

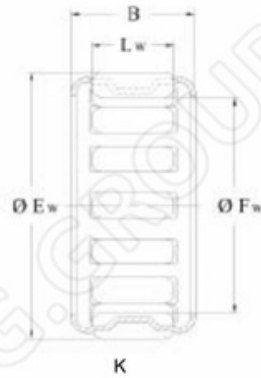


HFL, HFL..KF,with rolling bearing assembly
 (Fw≥8mm and C≥22mm),HFL0822 KFR,HFL0822R

Shaft diameter	Dimensions				Permissible torque Md perm Nm	Limiting speeds		Permissible radial load ⁴⁾ Frmax N
	Fw	D	C	r _{min.}		n _{GW} ²⁾	n _{GA} ³⁾	
	mm		-0.3			min ⁻¹	min ⁻¹	
3	3	6.5	8	0.3	0.18	45000	8000	60
4	4	8	8	0.3	0.34	34000	8000	80
	4	8	8	0.3	0.1	34000	8000	80
6	6	10	6	0.3	0.5	23000	13000	40
	6	10	15	0.3	1.76	23000	13000	110
	6	10	15	0.3	0.5	23000	13000	110
8	8	12	6	0.3	0.7	17000	12000	54
	8	12	22	0.3	3.15	17000	12000	-
	8	12	22	0.3	1	17000	12000	-
10	10	14	22	0.3	5.3	14000	11000	-
12	12	18	26	0.3	12.2	11000	8000	-
14	14	20	26	0.3	17.3	9500	8000	-
16	16	22	26	0.3	20.5	8500	7500	-
18	18	24	26	0.3	24.1	7500	7500	-
20	20	26	26	0.3	28.5	7000	6500	-
25	25	32	30	0.3	66	5500	5500	-
30	30	37	30	0.3	90	4500	4500	-
35	35	42	30	0.3	121	3900	3900	-

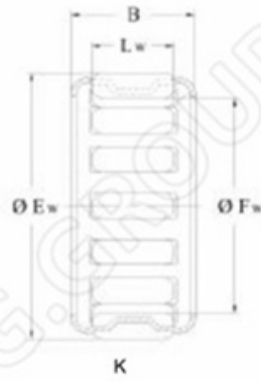
Limiting load/speeds (Fr n) _{max} ⁴⁾ N/min	Basic Load Ratings ⁵⁾		Fatigue limit load Pu KN	Code bearing HMEC		Mass ≈ g
	Cr Dyn KN	Cor Sta		Plastic springs Designation	Steel springs Designation	
16000	-	-	-	HFL 0308 KF	-	1.4
16000	-	-	-	HFL 0408 KF	-	1.6
16000	-	-	-	HFL 0408 KFR	-	1.6
4200	-	-	-	HFL 0605 KFR	-	1
18000	-	-	-	HFL 0615 KF	HFL 0615	4
18000	-	-	-	HFL 0615 KFR	HFL 0615 R	4
4200	-	-	-	HFL 0806 KFR	-	2
-	3.5	4.1	0.405	HFL 0822 KF	HFL 0822	7
-	3.5	4.1	0.405	HFL 0822 KFR	HFL 0822 R	7
-	3.75	4.65	0.46	-	HFL 1022	8
-	5.8	6.7	0.62	-	HFL 1226	18
-	6.3	7.8	0.73	-	HFL 1426	20
-	6.9	9	0.84	-	HFL 1626	22
-	7.4	10.2	0.95	-	HFL 1826	25
-	7.9	11.4	1.06	-	HFL 2026	27
-	9.8	14	1.19	-	HFL 2530	44
-	10.8	16.9	1.42	-	HFL 3030	51
-	11.4	18.8	1.6	-	HFL 3530	58

**Needle roller and cage assemblies
Series K**



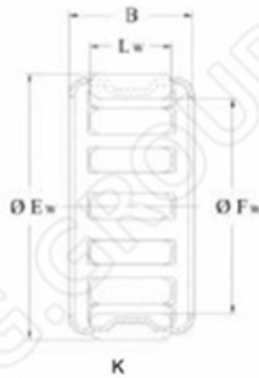
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
4	4	7	7	5	1.76	1.37	30000	45000	K 4x7x7 TN	0.001
5	5	8	8	6	2.12	1.76	26000	4000	K 5x8x8 TN	0.001
	5	8	10	7.8	2.6	2.32	26000	40000	K 5x8x10 TN	0.001
	5	9	13	9.8	4.05	3.6	28000	43000	K 5x9x13 TN	0.002
6	6	9	8	6.5	3	3	22000	36000	K 6x9x8	0.001
	6	9	10	7.8	2.9	2.8	22000	36000	K 6x9x10 TN	0.001
7	7	10	8	6	2.65	2.5	20000	34000	K 7x10x8 TN	0.001
	7	10	10	7.8	3.25	3.25	20000	34000	K 7x10x10 TN	0.001
	7	11	15	11.8	6.1	6.3	20000	34000	K 7x11x15 TN	0.003
8	8	11	8	6	3.1	3.2	19000	32000	K 8x11x8	0.002
	8	11	10	7.8	3.8	4.25	19000	32000	K 8x11x10	0.002
	8	11	13	10.8	5	5.85	19000	32000	K 8x11x13	0.003
	8	12	13	9.8	5.85	6	19000	32000	K 8x12x13	0.005
9	9	12	10	7.8	1.05	4.75	18000	30000	K 9x12x10	0.003
	9	12	13	10.8	5.3	6.55	18000	30000	K 9x12x13	0.004
10	10	13	9	7.4	4.6	5.7	17000	28000	K 10x13x9	0.002
	10	13	10	8.4	5.2	6.55	17000	28000	K 10x13x10	0.002
	10	13	13	10.8	5.6	7.35	17000	28000	K 10x13x13	0.004

HMEC



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
10	10	14	10	8.2	5.85	6.4	18000	30000	K10x14x10	0.004
	10	14	13	11.2	7.5	8.8	18000	30000	K10x14x13	0.005
11	11	14	10	7.8	4.55	5.7	17000	28000	K11x14x10	0.003
12	12	15	9	7.4	4.55	5.85	16000	26000	K12x15x9	0.002
	12	15	10	8.4	5.6	7.65	16000	26000	K12x15x10	0.003
	12	15	13	11.4	6.4	9.15	16000	26000	K12x15x13	0.004
	12	15	15	12.8	6.7	9.65	16000	26000	K12x15x15	0.005
	12	16	10	8.2	6.55	7.8	16000	26000	K12x16x10	0.005
	12	16	13	9.8	7.1	8.65	16000	26000	K12x16x13	0.007
	12	17	17	9.8	8.5	9.5	17000	28000	K12x17x13	0.008
	12	17	17	11.8	9.8	11.4	17000	28000	K12x17x14	0.009
13	13	17	17	8.2	6.8	8.5	16000	26000	K13x17x10	0.005
	13	18	18	12.5	10.4	12.2	16000	26000	K13x18x15	0.011
14	14	18	8	5.8	5.1	6	16000	26000	K14x18x8	0.005
	14	18	10	8.2	6.8	8.5	16000	26000	K14x18x10	0.005
	14	18	13	11.2	9.15	12.5	16000	26000	K14x18x13	0.007
	14	18	15	13.2	10	14	16000	26000	K14x18x15	0.007
	14	18	16	14.2	9.5	12.9	16000	26000	K14x18x16	0.007
	14	18	17	15.2	11.8	17.3	16000	26000	K14x18x17	0.008
	14	19	13	10.8	9.8	11.6	16000	26000	K14x19x13	0.007
	14	19	18	13.8	12.5	16.3	16000	26000	K14x19x18	0.014
14	20	12	9.5	10	10.8	16000	26000	K14x20x12	0.010	

**Needle roller and cage assemblies
Series K**



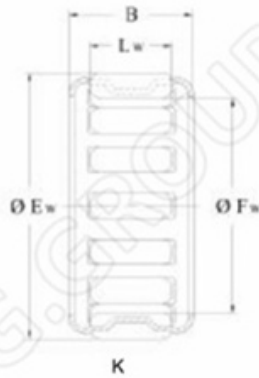
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
15	15	18	14	12,4	7,8	12,5	15000	24000	K15x18x14	0.005
	15	18	16	12,8	8	12,9	15000	24000	K15x18x16	0.007
	15	18	17	15,4	8,3	13,7	15000	24000	K15x18x17	0.005
	15	19	10	8,2	7,5	9,8	15000	24000	K15x19x10	0.005
	15	19	13	11,2	9,15	12,7	15000	24000	K15x19x13	0.007
	15	19	14	12,2	10,2	14,6	15000	24000	K15x19x14	0.007
	15	19	17	15,2	11,6	17,3	15000	24000	K15x19x17	0.009
	15	20	13	9,8	9,5	11,6	16000	24000	K15x20x13	0.011
	15	21	15	11,8	12,7	15	16000	26000	K15x21x15	0.014
	15	21	21	17,8	16,6	20,8	16000	26000	K15x21x21	0.018
16	16	20	8	6,4	6,1	7,65	15000	24000	K16x20x8	0.005
	16	20	10	8,2	7,35	9,8	15000	24000	K16x20x10	0.006
	16	20	13	11,2	9,5	13,7	15000	24000	K16x20x13	0.007
	16	20	14	12,2	10,2	15	15000	24000	K16x20x14	0.008
	16	20	17	13,8	11,2	17	15000	24000	K16x20x17	0.009
	16	20	20	18,2	12,7	19,6	15000	24000	K16x20x20	0.010
	16	22	12	9,8	11	12,5	16000	26000	K16x22x12	0.012
	16	22	20	17,8	17,6	23,2	16000	26000	K16x22x20	0.021
	16	24	20	16	19,3	21,6	16000	26000	K16x24x20	0.031
17	17	20	10	7,8	5,7	8,8	15000	24000	K17x20x10	0.005
	17	21	10	8,2	7,65	10,6	15000	24000	K17x21x10	0.005
	17	21	13	11,2	10	14,6	15000	24000	K17x21x13	0.008
	17	21	15	13,2	10,8	16,3	15000	24000	K17x21x15	0.009
	17	21	17	13,8	11,2	17	15000	24000	K17x21x17	0.012
	17	22	20	16,8	16,3	23,6	15000	24000	K17x22x20	0.018
	17	23	15	11,8	13,4	16,6	15000	24000	K17x23x15	0.017

HMEC



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
18	18	22	10	8.2	8	11.2	15000	24000	K18x22x10	0.006
	18	22	13	11.2	10.2	15.6	15000	24000	K18 x2x13	0.008
	18	22	14	12.2	11	17	15000	24000	K18x22x14	0.009
	18	22	17	15.2	12.5	20	15000	24000	K18x22x17	0.010
	18	22	20	17.8	14.3	23.6	15000	24000	K18x22x20	0.014
	18	23	20	16.8	17	25.5	15000	24000	K18x23x20	0.019
	18	24	12	9.5	11.2	13.4	15000	24000	K18x24x12	0.013
	18	24	13	9.8	11.6	13.7	15000	24000	K18x24x13	0.016
	18	24	20	17.5	18.3	25	15000	24000	K18x24x20	0.020
	18	25	22	19.3	22	29	15000	24000	K18x25x22	0.028
18	26	20	16	20.8	24.5	15000	24000	K18x26x20	0.034	
19	19	23	13	11.2	10.2	15.6	14000	22000	K19x23x13	0.008
	19	23	17	14.8	12.7	20.8	14000	22000	K19x23x17	0.013
20	20	24	8	6.4	6.95	9.8	13000	20000	K20x24x8	0.006
	20	24	10	8.2	8.5	12.7	13000	20000	K20x24x10	0.007
	20	24	12	10.2	10.2	16	13000	20000	K20x24x12	0.008
	20	24	13	11.2	11	17.3	13000	20000	K20x24x13	0.009
	20	24	14	12.2	11.8	19	13000	20000	K20x24x14	0.009
	20	24	17	15.2	14	24	13000	20000	K20x24x17	0.011
	20	26	12	9.5	12.5	15.6	13000	20000	K20x26x12	0.014
	20	26	13	10.5	12.7	16	13000	20000	K20x26x13	0.015
	20	26	17	14.5	18.6	26.5	13000	20000	K20x26x17	0.019
	20	26	20	17.5	19.3	27.5	13000	20000	K20x26x20	0.022
	20	28	20	17.3	23.2	29	13000	20000	K20x28x20	0.032
	20	28	20	17.3	23.2	29	13000	20000	K20x28x20	0.032
	20	28	25	22.3	28	37.5	13000	20000	K20x28x25	0.039
	20	30	30	25	34.5	42.5	13000	20000	K20x30x30	0.059

**Needle roller and cage assemblies
Series K**



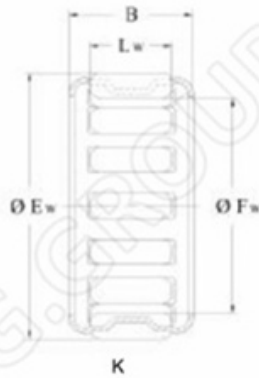
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
21	21	25	17	14.8	13.7	23.2	13000	20000	K21x25x17	0.014
22	22	26	10	8.2	8.65	13.4	12000	19000	K22x26x10	0.006
	22	26	13	11.2	11.2	18.6	12000	19000	K22x26x13	0.010
	22	26	14	12.2	12.5	21.2	12000	19000	K22x26x14	0.010
	22	26	17	15.2	14.6	26.5	12000	19000	K22x26x17	0.012
	22	26	18	16.2	14.6	25.5	12000	19000	K22x26x18	0.013
	22	27	17	14.8	15.6	24	12000	19000	K22x27x17	0.016
	22	28	13	10.5	14	18.6	12000	19000	K22x28x13	0.017
	22	28	17	14.7	17.3	24.5	12000	19000	K22x28x17	0.021
	22	30	15	12.3	18.6	22.8	12000	19000	K22x30x15	0.027
	22	32	28	25	37.5	48	12000	19000	K22x32x28	0.072
22	32	30	26.8	39	51	12000	19000	K22x32x30	0.064	
23	23	28	24	19.8	21.2	36.5	11000	18000	K23x28x24	0.028
24	24	28	10	7.8	8.8	14	10000	17000	K24x28x10	0.008
	24	28	13	11.2	11.8	20.4	10000	17000	K24x28x13	0.010
	24	28	16	11.8	12	20.4	10000	17000	K24x28x16	0.015
	24	28	17	15.2	14.6	26.5	10000	17000	K24x28x17	0.012
	24	30	17	14.5	18.6	28	10000	17000	K24x30x17	0.023
	24	30	22	17.8	22	34.5	10000	17000	K24x30x22	0.030
25	25	29	10	8.2	9.15	15	10000	17000	K25x29x10	0.008
	25	29	13	9.8	10	18.6	10000	17000	K25x29x13	0.014
	25	29	17	13.8	14.3	26.5	10000	17000	K25x29x17	0.017
	25	30	13	10.8	14	22	10000	17000	K25x30x13	0.014

HMEC



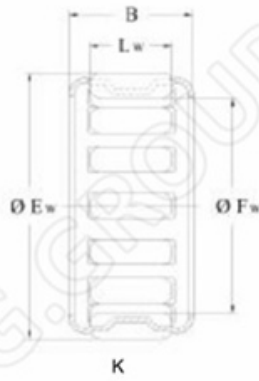
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
25	25	30	17	14.8	18	30.5	10000	17000	K25x30x17	0.019
	25	30	18	15.8	19.6	34	10000	17000	K25x30x18	0.020
	25	30	20	16.8	20	34.5	10000	17000	K25x30x20	0.02
	25	30	24	21.8	23.6	43	10000	17000	K25x30x24	0.025
	25	31	14	11.3	16	23.2	10000	17000	K25x31x14	0.019
	25	31	17	14.5	18.6	28	10000	17000	K25x31x17	0.023
	25	31	21	18.5	23.6	38	10000	17000	K25x31x21	0.029
	25	31	24	19.8	24	39	10000	17000	K25x31x24	0.038
	25	32	15	12.8	18.3	25	10000	17000	K25x32x15	0.028
	25	32	16	13.3	19	26	10000	17000	K25x32x16	0.027
	25	33	20	17.3	27.5	38	10000	17000	K25x33x20	0.039
	25	33	25	22.3	31	45	10000	17000	K25x33x25	0.046
	25	35	25	21.8	35.5	46.5	10000	17000	K25x35x25	0.059
25	35	30	26.8	42.5	57	10000	17000	K25x35x30	0.070	
26	26	30	13	10.8	11.6	20.4	9500	16000	K26x30x13	0.013
	26	30	17	13.8	14.3	26.5	9500	16000	K26x30x17	0.017
	26	31	20	16.8	19	32.5	9500	16000	K26x31x20	0.026
27	27	34	17	12.8	19.3	27	9000	15000	K27x34x17	0.035
28	28	32	21	17.8	17.6	36	9000	15000	K28x32x21	0.022
	28	33	17	14.8	19	33.5	9000	15000	K28x33x17	0.020
	28	33	27	24.8	27.5	54	9000	15000	K28x33x27	0.031
	28	34	17	14.5	20	32	9000	15000	K28x34x17	0.026
	28	34	20	17.3	23.2	38	9000	15000	K28x34x20	0.024
	28	35	16	12.8	20	28.5	9000	15000	K28x35x16	0.034
	28	35	17	12.8	20	28.5	9000	15000	K28x35x17	0.036
	28	35	18	15.3	23.2	34.5	9000	15000	K28x35x18	0.033

**Needle roller and cage assemblies
Series K**



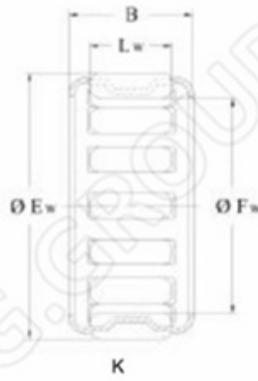
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
28	28	35	27	24.3	33.5	55	9000	15000	K28x35x27	0.047
	28	36	20	15.8	26.5	37.5	9000	15000	K28x36x20	0.049
	28	40	30	26.8	51	68	9000	15000	K28x40x30	0.097
29	29	34	27	23.8	27.5	55	8500	14000	K29x34x27	0.039
30	30	35	13	10.8	15	25.5	8500	14000	K30x35x13	0.017
	30	35	17	14.8	19.3	35.5	8500	14000	K30x35x17	0.022
	30	35	18	15.8	20.4	37.5	8500	14000	K30x35x18	0.023
	30	35	20	17.8	21.6	43	8500	14000	K30x35x20	0.025
	30	35	23	19.8	24.5	47.5	8500	14000	K30x35x23	0.034
	30	35	24	21.8	26	52	8500	14000	K30x35x24	0.030
	30	35	27	24.8	29	60	8500	14000	K30x35x27	0.033
	30	36	14	11.5	17	26.5	8500	14000	K30x36x14	0.023
	30	37	18	14.8	23.2	35.5	8500	14000	K30x37x18	0.040
	30	40	30	25	44	64	8500	14000	K30x40x30	0.081
	30	42	30	27	51	68	8500	14000	K30x42x30	0.096
	32	32	36	15	9.8	11	20.4	8000	13000	K32x36x15
32		37	13	9.8	14.6	25	8000	13000	K32x37x13	0.021
32		37	17	13.8	19	35.5	8000	13000	K32x37x17	0.022
32		37	27	23.8	28	57	8000	13000	K32x37x27	0.042
32		38	20	17.8	26	46.5	8000	13000	K32x38x20	0.039
32		38	26	23.8	31.5	58.5	8000	13000	K32x38x26	0.043
32		39	14	11.8	20	30	8000	13000	K32x39x14	0.033
32		39	16	12.8	21.2	32.5	8000	13000	K32x39x16	0.038
32		39	18	15.3	24.5	39	8000	13000	K32x39x18	0.037
32		40	25	22.3	36	57	8000	13000	K32x40x25	0.057

HMEC



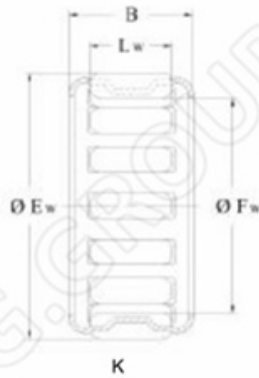
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
32	32	42	42	38.8	65.5	108	8000	13000	K 32x42x42	0.119
34	34	44	26	20	40.5	58.5	7500	12000	K 34x44x26	0.085
35	35	40	13	10.8	15.6	28	7500	12000	K 35x40x13	0.019
	35	40	17	14.8	20	39	7500	12000	K 35x40x17	0.026
	35	40	19	16.8	22	44	7500	12000	K 35x40x19	0.032
	35	40	25	22.5	27	57	7500	12000	K 35x40x25	0.034
	35	40	27	24.8	28.5	60	7500	12000	K 35x40x27	0.036
	35	40	31	28.8	32	69.5	7500	12000	K 35x40x31	0.041
	35	42	16	13.3	23.6	37.5	7500	12000	K 35x42x16	0.036
	35	42	18	15.3	26	43	7500	12000	K 35x42x18	0.040
	35	42	30	25.8	38	71	7500	12000	K 35x42x30	0.062
	35	45	20	17	35.5	50	7500	12000	K 35x45x20	0.077
	35	45	41	37.8	67	114	7500	12000	K 35x45x41	0.13
	35	45	49	45.5	78	137	7500	12000	K 35x45x49	0.147
	36	36	40	29	23.8	20.4	47.5	7500	12000	K 36x40x29
36		42	16	13.5	21.6	38	7500	12000	K 36x42x16	0.03
37	37	42	13	10.8	16.3	30	7000	11000	K 37x42x13	0.02
	37	42	17	14.8	20.8	41.5	7000	11000	K 37x42x17	0.026
	37	42	27	23.8	30.5	68	7000	11000	K 37x42x27	0.049
	37	44	19	16.3	28.5	49	7000	11000	K 37x44x19	0.044
38	38	43	17	13.8	20.8	41.5	7000	11000	K 38x43x17	0.032

**Needle roller and cage assemblies
Series K**



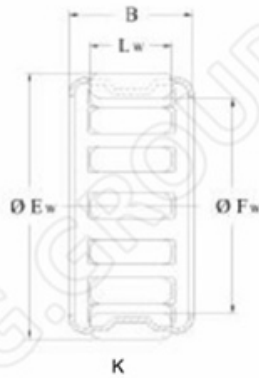
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
38	38	43	27	23.8	30.5	68	7000	11000	K 38x43x27	0.05
	38	46	20	16.8	31.5	52	7000	11000	K 38x46x20	0.056
	38	46	32	28.8	52	98	7000	11000	K 38x46x32	0.09
	38	50	33	29.5	64	98	7000	11000	K 38x50x33	0.132
39	39	44	24	21.8	29	64	7000	11000	K 39x44x24	0.037
40	40	45	17	14.8	22.8	48	6700	10000	K 40x45x17	0.024
	40	45	18	15.8	24	51	6700	10000	K 40x45x18	0.03
	40	45	21	18.8	22	45.5	6700	10000	K 40x45x21	0.031
	40	45	27	24.8	31	71	6700	10000	K 40x45x27	0.041
	40	46	17	14.5	24	45	6700	10000	K 40x46x17	0.035
	40	47	18	14.8	27	46.5	6700	10000	K 40x47x18	0.047
	40	48	20	15.8	31	51	6700	10000	K 40x48x20	0.06
	40	50	27	23.8	50	81.5	6700	10000	K 40x50x27	0.094
	40	55	45	41.5	96.5	146	6700	10000	K 40x55x45	0.237
	42	42	47	13	10.8	18	35.5	6700	10000	K 42x47x13
42		47	17	13.8	21.6	45.5	6700	10000	K 42x47x17	0.035
42		47	27	23.8	32	75	6700	10000	K 42x47x27	0.054
42		50	13	9.8	21.2	30	6700	10000	K 42x50x13	0.041
42		50	18	14.8	30	50	6700	10000	K 42x50x18	0.053
42		50	20	15.8	32	54	6700	10000	K 42x50x20	0.062
43	43	48	17	13.8	21.6	46.5	6300	9500	K 43x48x17	0.036
	43	48	27	23.8	32	75	6300	9500	K 43x48x27	0.045

HMEC

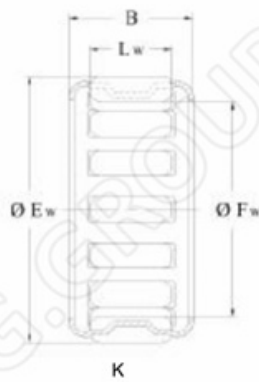


Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
44	44	50	22	18.8	30	61	6300	9500	K 44x50x22	0.046
45	45	50	13	10.8	17.6	36	6300	9500	K 45x50x13	0.024
	45	50	17	14.8	23.6	53	6300	9500	K 45x50x17	0.032
	45	50	21	18.5	23.2	51	6300	9500	K 45x50x21	0.034
	45	50	27	23.8	32.5	78	6300	9500	K 45x50x27	0.058
	45	52	18	14.8	29	53	6300	9500	K 45x52x18	0.052
	45	52	21	17.8	33.5	64	6300	9500	K 45x52x21	0.067
	45	53	20	16.8	34	60	6300	9500	K 45x53x20	0.065
	45	53	21	17.8	37.5	67	6300	9500	K 45x53x21	0.069
	45	53	25	19.8	40.5	75	6300	9500	K 45x53x25	0.094
	45	53	28	24.8	46.5	90	6300	9500	K 45x53x28	0.088
	45	55	20	16.5	40	62	6300	9500	K 45x55x20	0.077
	45	59	18	14	46.5	56	6300	9500	K 45x59x18	0.079
	45	59	36	32.8	78	118	6300	9500	K 45x59x36	0.186
	45	60	40	35	88	134	6300	9500	K 45x60x40	0.305
	45	60	45	40	98	153	6300	9500	K 45x60x45	0.342
47	47	52	17	14.8	23.2	51	6000	9000	K 47x52x17	0.034
	47	52	27	23.8	33.5	83	6000	9000	K 47x52x27	0.049
	47	55	26	21.8	43	83	6000	9000	K 47x55x26	0.101
	47	55	28	23.8	46.5	90	6000	9000	K 47x55x28	0.092
48	48	53	17	14.8	24.5	56	5600	8500	K 48x53x17	0.033
	48	54	19	16.8	29	62	5600	8500	K 48x54x19	0.047
49	49	65	38	34.6	93	140	5600	8500	K 49x65x38	0.249

**Needle roller and cage assemblies
Series K**



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
60	60	65	30	25.8	40.5	116	4800	7000	K 60x65x30	0.085
	60	68	20	16.8	40	80	4800	7000	K 60x68x20	0.084
	60	68	23	19.8	46.5	98	4800	7000	K 60x68x23	0.112
	60	68	25	21.8	49	104	4800	7000	K 60x68x25	0.123
	60	75	42	38	112	196	4800	7000	K 60x75x42	0.408
63	63	71	20	16.8	39	80	4500	6700	K 63x71x20	0.09
64	64	70	16	11.8	25	56	4500	6700	K 64x70x16	0.061
65	65	70	20	17.8	27	69.5	4300	6300	K 65x70x20	0.054
	65	70	30	25.8	42.5	125	4300	6300	K 65x70x30	0.092
	65	73	30	26.8	57	129	4300	6300	K 65x73x30	0.0131
68	68	74	28	24.8	42.5	110	4000	6000	K 68x74x28	0.081
	68	74	30	26.8	45	120	4000	6000	K 68x74x30	0.098
70	70	76	20	15.8	34	85	4000	6000	K 70x76x20	0.082
	70	76	30	25.8	49	134	4000	6000	K 70x76x30	0.121
	70	78	20	16.8	41.5	90	4000	6000	K 70x78x20	0.099
	70	78	23	19.8	47.5	106	4000	6000	K 70x78x23	0.128
	70	78	30	26.8	58.5	140	4000	6000	K 70x78x30	0.14
72	72	80	20	16.8	42.5	91.5	4000	6000	K 72x80x20	0.101



HMEC

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	E _w	B	L _w	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
73	73	79	20	15.8	35.5	90	3800	5600	K 73X79X20	0.086
75	75	83	23	19.8	50	116	3800	5600	K 75X83X23	0.12
	75	83	30	23.8	57	140	3800	5600	K 75X83X30	0.181
80	80	86	20	15.8	36.5	98	3600	5300	K 80X86X20	0.094
	80	88	25	19.8	51	122	3600	5300	K 80X88X25	0.161
	80	88	30	26.8	64	163	3600	5300	K 80X88X30	0.16
85	85	92	20	16.3	38	93	3400	5000	K 85X92X20	0.096
	85	93	25	19.8	53	129	3400	5000	K 85X93X25	0.17
	85	93	30	26.8	65.5	173	3400	5000	K 85X93X30	0.169
90	90	97	20	16.8	44	116	3000	4500	K 90X97X20	0.107
	90	98	25	19.8	52	129	3000	4500	K 90X98X25	0.179

Axial needle roller and cage assemblies

Series AXX

Axial bearing washers

series AS

LS

GS811

WS811



AXX



AS



LS



GS 811

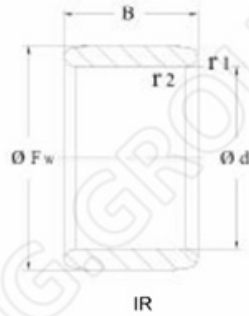


WS 811

Shaft diameter d	Dimensions							Basic Load Rating Cr Dyn KN	Fatigue limit load Pu KN	Limiting speeds ¹⁾ n _G min ⁻¹	Reference speeds n _B min ⁻¹		
	Dc1	D1	Dc	d1	Dw	B1	B						
4	4	-	14	-	2	1	-	4.4	8	0.61	21000	11000	
5	5	-	15	-	2	1	-	4.75	9.2	0.72	21000	9500	
6	6	-	19	-	2	1	2.75	0.3	6.8	15.5	1.57	19000	8000
8	8	-	21	-	2	1	2.75	0.3	7.8	19.4	2.02	18000	6500
10	10	-	24	-	2	1	2.75	0.3	9.2	25.5	2.65	17000	5500
12	12	-	26	-	2	1	2.75	0.3	9.9	29	3.05	15000	4700
15	15	16	28	28	2	1	2.75	0.3	11.3	36	3.9	13000	3600
17	17	18	30	30	2	1	2.75	0.3	11.9	39.5	4.35	12000	3200
20	20	21	35	35	2	1	2.75	0.3	13.1	46.5	5.2	10000	3100
25	25	26	42	42	2	1	3	0.6	14.7	58	6.5	8500	2800
30	30	32	47	47	2	1	3	0.6	16.3	70	7.9	7500	2300
35	35	37	52	52	2	1	3.5	0.6	17.8	81	9.3	6500	2000
40	40	42	60	60	3	1	3.5	0.6	28	114	12.6	6000	1700
45	45	47	65	65	3	1	4	0.6	30	128	14.3	5000	1500
50	50	52	70	70	3	1	4	0.6	32	143	16	4800	1400
55	55	57	78	78	3	1	5	0.6	38	186	21.6	4300	1200
60	60	62	85	85	3	1	4.75	1	44.5	234	28.5	4000	1100
65	65	67	90	90	3	1	5.25	1	46.5	255	31	3700	1000
70	70	72	95	95	4	1	5.25	1	54	255	30	3500	1000
75	75	77	100	100	4	1	5.75	1	55	265	31.5	3300	950
80	80	82	105	105	4	1	5.75	1	58	280	33	3100	900
85	85	87	110	110	4	1	5.75	1	58	290	34.5	3000	850
90	90	92	120	120	4	1	6.5	1	73	405	50	2700	750
100	100	102	135	135	4	1	7	1	91	560	63	2500	650
110	110	112	145	145	4	1	7	1	97	620	69	2300	600
120	120	122	155	155	4	1	7	1	102	680	74	2100	550
130	130	132	170	170	5	1	9	1	133	840	84	1900	500
140	140	142	180	178	5	1	9.5	1	138	900	88	1800	480
150	150	152	190	188	5	1	9.5	1	143	960	92	1700	440
160	160	162	200	198	5	1	9.5	1	148	1020	97	1600	420

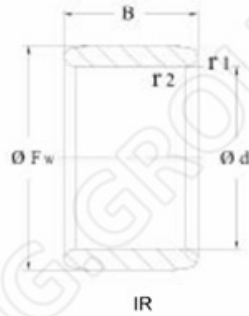
Axial needle roller and cage assembly			Axial bearing washers				
Code HMEC	Mass n _s g	Axial bearing washer Code HMEC	Mass n _s g	Bearing washer Code HMEC	Housing locating washer Code HMEC	shaft locating washer Code HMEC	Mass n _s g
AXX 0414 TN	0.7	AS 0414	1	-	-	-	-
AXX 0515 TN	0.8	AS 0515	1	-	-	-	-
AXX 0619 TN	1	AS 0619	2	LS 0619	-	-	4
AXX 0821 TN	2	AS 0821	2	LS 0821	-	-	4
AXX 1024	3	AS 1024	3	LS 1024	-	-	7
AXX 1226	3	AS 1226	3	LS 1226	-	-	8
AXX 1528	4	AS 1528	3	LS 1528	GS 81102	WS 81102	9
AXX 1730	4	AS 1730	4	LS 1730	GS 81103	WS 81103	9
AXX 2035	5	AS 2035	5	LS 2035	GS 81104	WS 81104	13
AXX 2542	7	AS 2542	7	LS 2542	GS 81105	WS 81105	19
AXX 3047	8	AS 3047	8	LS 3047	GS 81106	WS 81106	22
AXX 3552	10	AS 3552	9	LS 3552	GS 81107	WS 81107	29
AXX 4060	16	AS 4060	12	LS 4060	GS 81108	WS 81108	40
AXX 4565	18	AS 4565	13	LS 4565	GS 81109	WS 81109	50
AXX 5070	20	AS 5070	14	LS 5070	GS 81110	WS 81110	55
AXX 5578	28	AS 5578	18	LS 5578	GS 81111	WS 81111	88
AXX 6085	33	AS 6085	22	LS 6085	GS 81112	WS 81112	97
AXX 6590	35	AS 6590	24	LS 6590	GS 81113	WS 81113	115
AXX 7095	60	AS 7095	25	LS 7095	GS 81114	WS 81114	123
AXX 75100	61	AS 75100	27	LS 75100	GS 81115	WS 81115	142
AXX 80105	63	AS 80105	28	LS 80105	GS 81116	WS 81116	151
AXX 85110	67	AS 85110	29	LS 85110	GS 81117	WS 81117	159
AXX 90120	86	AS 90120	39	LS 90120	GS 81118	WS 81118	234
AXX 100135	104	AS 100135	50	LS 100135	GS 81120	WS 81120	350
AXX 110145	122	AS 110145	55	LS 110145	GS 81122	WS 81122	385
AXX 120155	131	AS 120155	59	LS 120155	GS 81124	WS 81124	415
AXX 130170	205	AS 130170	65	LS 130170	GS 81126	WS 81126	663
AXX 140180	219	AS 140180	79	LS 140180	GS 81128	WS 81128	749
AXX 150190	232	AS 150190	84	LS 150190	GS 81130	WS 81130	796
AXX 160200	245	AS 160200	89	LS 160200	GS 81132	WS 81132	842

Needle roller bearing inner rings
Series IR



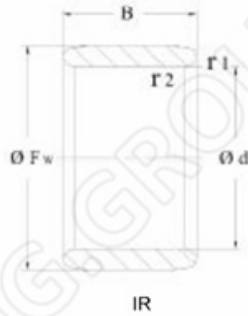
Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r _{1,2} min		
	mm					
5	5	8	12	0.3	IR 5x8x12	0.003
	5	8	16	0.3	IR 5x8x16	0.004
6	6	9	12	0.3	IR 6x9x12	0.003
	6	9	16	0.3	IR 6x9x16	0.004
	6	10	10	0.3	IR 6x10x10	0.004
	6	10	12	0.3	IR 6x10x12	0.005
7	7	10	10.5	0.3	IR 7x10x10.5	0.003
	7	10	12	0.3	IR 7x10x12	0.004
	7	10	16	0.3	IR 7x10x16	0.005
8	8	12	10	0.3	IR 8x12x10	0.005
	8	12	10.5	0.3	IR 8x12x10.5	0.005
	8	12	12	0.3	IR 8x12x12	0.006
	8	12	12.5	0.3	IR 8x12x12.5	0.006
9	9	12	12	0.3	IR 9x12x12	0.005
	9	12	16	0.3	IR 9x12x16	0.006
10	10	13	12.5	0.3	IR 10x13x12.5	0.005
	10	14	12	0.3	IR 10x14x12	0.007
	10	14	13	0.3	IR 10x14x13	0.007
	10	14	14	0.3	IR 10x14x14	0.008
	10	14	16	0.3	IR 10x14x16	0.009

HMEC



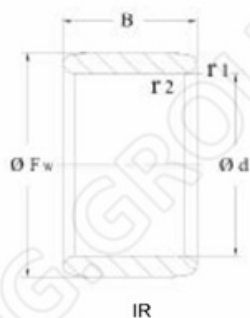
Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r _{1,2} min		
10	10	14	20	0.3	IR 10x14x20	0.012
12	12	15	12	0.3	IR 12x15x12	0.006
	12	15	12.5	0.3	IR 12x15x12.5	0.006
	12	15	16	0.3	IR 12x15x16	0.008
	12	15	16.5	0.3	IR 12x15x16.5	0.008
	12	15	22.5	0.3	IR 12x15x22.5	0.011
	12	16	12	0.3	IR 12x16x12	0.008
	12	16	13	0.3	IR 12x16x13	0.009
	12	16	14	0.3	IR 12x16x14	0.010
	12	16	16	0.3	IR 12x16x16	0.011
	12	16	20	0.3	IR 12x16x20	0.014
	12	16	22	0.3	IR 12x16x22	0.015
14	14	17	17	0.3	IR 14x17x17	0.010
15	15	18	12.5	0.3	IRx15x18x12.5	0.007
	15	18	16	0.3	IR 15x18x16	0.010
	15	18	16.5	0.3	IR 15x18x16.5	0.010
	15	19	16	0.3	IR 15x19x16	0.013
	15	19	20	0.3	IR 15x19x20	0.016
	15	20	12	0.3	IR 15x20x12	0.012
	15	20	13	0.3	IR 15x20x13	0.014
	15	20	14	0.3	IR 15x20x14	0.015
	15	20	23	0.3	IR 15x20x23	0.024

Needle roller bearing inner rings
Series IR



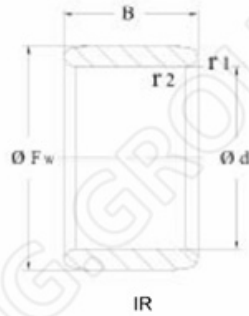
Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg	
	d	D	B	r ₁ , r ₂ min			
	mm						
17	17	20	16	0.3	IR 17x20x16	0.011	
	17	20	16.5	0.3	IR 17x20x16.5	0.011	
	17	20	20	0.3	IR 17x20x20	0.014	
	17	20	20.5	0.3	IR 17x20x20.5	0.014	
	17	20	30.5	0.3	IR 17x20x30.5	0.021	
	17	21	16	0.3	IR 17x21x16	0.014	
	17	21	20	0.3	IR 17x21x20	0.018	
	17	22	13	0.3	IR 17x22x13	0.015	
	17	22	16	0.3	IR 17x22x16	0.019	
	17	22	23	0.3	IR 17x22x23	0.027	
	17	24	20	0.6	IR 17x24x20	0.034	
	20	20	24	16	0.3	IR 20x24x16	0.017
		20	24	20	0.3	IR 20x24x20	0.021
20		25	12.5	0.3	IR 20x25x12.5	0.016	
20		25	16	0.3	IR 20x25x16	0.021	
20		25	16.5	0.3	IR 20x25x16.5	0.022	
20		25	17	0.3	IR 20x25x17	0.022	
20		25	18	0.3	IR 20x25x18	0.024	
20		25	20	0.3	IR 20x25x20	0.028	
20		25	20.5	0.3	IR 20x25x20.5	0.028	
20		25	26.5	0.3	IR 20x25x26.5	0.036	
20		25	30	0.3	IR 20x25x30	0.041	
20		25	38.5	0.3	IR 20x25x38.5	0.053	
20		28	20	0.6	IR 20x28x20	0.045	
22		22	26	16	0.3	IR 22x26x16	0.018
	22	26	20	0.3	IR 22x26x20	0.023	

HMEC



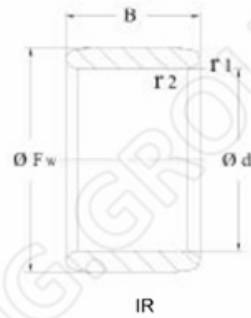
Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r _{1,2} min		
	mm					
22	22	28	17	0.3	IR 22x28x17	0.030
	22	28	20	0.3	IR 22x28x20	0.035
	22	28	20.5	0.3	IR 22x28x20.5	0.036
	22	28	30	0.3	IR 22x28x30	0.054
25	25	29	20	0.3	IR 25x29x20	0.026
	25	29	30	0.3	IR 25x29x30	0.039
	25	30	12.5	0.3	IR 25x30x12.5	0.020
	25	30	16	0.3	IR 25x30x16	0.026
	25	30	16.5	0.3	IR 25x30x16.5	0.027
	25	30	17	0.3	IR 25x30x17	0.028
	25	30	18	0.6	IR 25x30x18	0.030
	25	30	20	0.3	IR 25x30x20	0.033
	25	30	20.5	0.3	IR 25x30x20.5	0.034
	25	30	26.5	0.3	IR 25x30x26.5	0.043
	25	30	30	0.3	IR 25x30x30	0.050
	25	30	32	0.3	IR 25x30x32	0.053
	25	30	38.5	0.3	IR 25x30x38.5	0.064
	25	32	22	0.6	IR 25x32x22	0.052
28	28	32	17	0.3	IR 28x32x17	0.025
	28	32	20	0.3	IR 28x32x20	0.028
	28	32	30	0.3	IR 28x32x30	0.044
29	29	32	13	0.3	IR 29x32x13	0.015

Needle roller bearing inner rings
Series IR



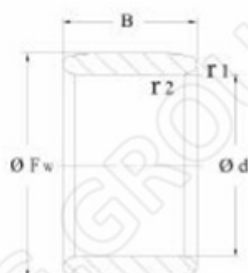
Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r ₁ , r ₂ min		
	mm					
30	30	35	12.5	0.3	IR 30x35x12.5	0.023
	30	35	13	0.3	IR 30x35x13	0.025
	30	35	16	0.3	IR 30x35x16	0.031
	30	35	16.5	0.3	IR 30x35x16.5	0.031
	30	35	17	0.3	IR 30x35x17	0.032
	30	35	18	0.3	IR 30x35x18	0.035
	30	35	20	0.3	IR 30x35x20	0.040
	30	35	20.5	0.3	IR 30x35x20.5	0.041
	30	35	26	0.3	IR 30x35x26	0.050
	30	35	30	0.3	IR 30x35x30	0.059
	30	37	18	0.6	IR 30x37x18	0.050
	30	37	22	0.6	IR 30x37x22	0.061
	30	38	20	0.6	IR 30x38x20	0.065
32	32	37	20	0.3	IR 32x37x20	0.042
	32	37	30	0.3	IR 32x37x30	0.063
	32	40	20	0.6	IR 32x40x20	0.068
	32	40	36	0.6	IR 32x40x36	0.124
33	33	37	13	0.3	IR 33x37x13	0.022
35	35	40	12.5	0.3	IR 35x40x12.5	0.027
	35	40	16.5	0.3	IR 35x40x16.5	0.037
	35	40	17	0.3	IR 35x40x17	0.038
	35	40	20	0.3	IR 35x40x20	0.044
	35	40	20.5	0.3	IR 35x40x20.5	0.046
	35	40	30	0.3	IR 35x40x30	0.068

HMEC



Shaft diameter	Dimensions				Code bearing	Weight
d	D	B	r ₁ , r ₂ min	HMEC	≈	
mm					kg	
35	35	42	20	0.6	IR 35x42x20	0.064
	35	42	20.5	0.6	IR 35x42x20.5	0.066
	35	42	21	0.6	IR 35x42x21	0.068
	35	42	23	0.6	IR 35x42x23	0.074
	35	42	36	0.6	IR 35x42x36	0.117
	35	43	22	0.6	IR 35x43x22	0.082
38	38	43	20	0.3	IR 38x43x20	0.048
	38	43	30	0.3	IR 38x43x30	0.074
40	40	45	16.5	0.3	IR 40x45x16.5	0.041
	40	45	17	0.3	IR 40x45x17	0.043
	40	45	20	0.3	IR 40x45x20	0.051
	40	45	20.5	0.3	IR 40x45x20.5	0.053
	40	45	30	0.3	IR 40x45x30	0.077
	40	48	22	0.6	IR 40x48x22	0.092
	40	48	23	0.6	IR 40x48x23	0.097
	40	48	40	0.6	IR 40x48x40	0.017
	40	50	20	1	IR 40x50x20	0.106
	40	50	22	1	IR 40x50x22	0.118
42	42	47	20	0.3	IR 42x47x20	0.054
	42	47	30	0.3	IR 42x47x30	0.081
45	45	50	20.5	0.3	IR 45x50x20.5	0.059
	45	50	25	0.6	IR 45x50x25	0.071

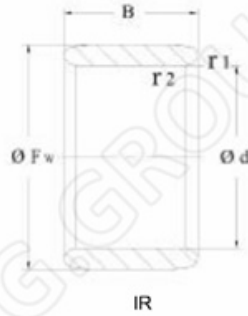
Needle roller bearing inner rings
Series IR



IR

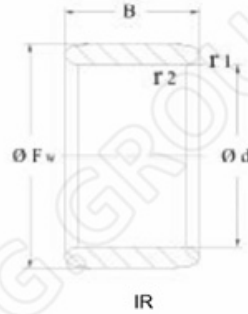
Shaft diameter	Dimensions				Code bearing	Weight
d	D	B	r _{1,2} min	HMEC	≈	
mm					kg	
45	45	50	25.5	0.3	IR 45x50x25.5	0.074
	45	50	35	0.6	IR 45x50x35	0.101
	45	52	22	0.6	IR 45x52x22	0.089
	45	52	23	0.6	IR 45x52x23	0.093
	45	52	40	0.6	IR 45x52x40	0.164
	45	55	20	1	IR 45x55x20	0.117
	45	55	22	1	IR 45x55x22	0.130
50	50	55	20	0.6	IR 50x55x20	0.063
	50	55	20.5	0.6	IR 50x55x20.5	0.064
	50	55	25	0.6	IR 50x55x25	0.078
	50	55	35	0.6	IR 50x55x35	0.112
	50	58	22	0.6	IR 50x58x22	0.115
	50	58	23	0.6	IR 50x58x23	0.119
	50	58	40	0.6	IR 50x58x40	0.209
	50	60	20	1	IR 50x60x20	0.129
	50	60	25	1	IR 50x60x25	0.163
	50	60	28	1.1	IR 50x60x28	0.183
	55	55	60	25	0.6	IR 55x60x25
55		60	35	0.6	IR 55x60x35	0.121
55		63	25	1	IR 55x63x25	0.141
55		63	45	1	IR 55x63x45	0.256
55		65	28	1.1	IR 55x65x28	0.198
60	60	68	25	1	IR 60x68x25	0.152
	60	68	35	0.6	IR 60x68x35	0.213

HMEC



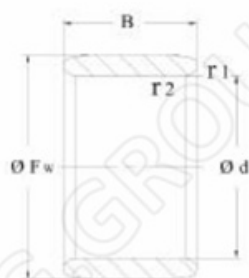
Shaft diameter	Dimensions				Code bearing HMEC	Weight
	d	D	B	r _{1,2} min		
	mm					≈ kg
60	60	68	45	1	IR 60x68x45	0.275
	60	70	25	1	IR 60x70x25	0.195
	60	70	28	1.1	IR 60x70x28	0.216
65	65	72	25	1	IR 65x72x25	0.142
	65	72	45	1	IR 65x72x45	0.259
	65	73	25	1	IR 65x73x25	0.164
	65	73	35	1	IR 65x73x35	0.232
	65	75	28	1.1	IR 65x75x28	0.230
70	70	80	25	1	IR 70x80x25	0.224
	70	80	30	1	IR 70x80x30	0.267
	70	80	35	1	IR 70x80x35	0.313
	70	80	54	1	IR 70x80x54	0.487
	70	80	56	1	IR 70x80x56	0.506
75	75	85	25	1	IR 75x85x25	0.238
	75	85	30	1	IR 75x85x30	0.287
	75	85	35	1	IR 75x85x35	0.336
	75	85	54	1	IR 75x85x54	0.520
80	80	90	25	1	IR 80x90x25	0.254
	80	90	30	1	IR 80x90x30	0.304
	80	90	35	1	IR 80x90x35	0.355
	80	90	54	1	IR 80x90x54	0.550

Needle roller bearing inner rings
Series IR



Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r ₁ , r ₂ min		
	mm					
85	85	95	26	1	IR 85x95x26	0.280
	85	95	36	1	IR 85x95x36	0.390
	85	100	35	1.1	IR 85x100x35	0.580
	85	100	63	1.1	IR 85x100x63	1.05
90	90	100	26	1	IR 90x100x26	0.294
	90	100	30	1	IR 90x100x30	0.340
	90	100	36	1	IR 90x100x36	0.406
	90	105	35	1.1	IR 90x105x35	0.610
	90	105	63	1.1	IR 90x105x63	1.11
95	95	105	26	1	IR 95x105x26	0.313
	95	105	36	1	IR 95x105x36	0.430
	95	110	35	1.1	IR 95x110x35	0.643
	95	110	63	1.1	IR 95x110x63	1.17
100	100	110	30	1.1	IR 100x110x30	0.370
	100	110	40	1.1	IR 100x110x40	0.505
	100	115	40	1.1	IR 100x115x40	0.775
110	110	120	30	1	IR 110x120x30	0.409
	110	125	40	1.1	IR 110x125x40	0.840
120	120	130	30	1	IR 120x130x30	0.442
	120	135	45	1.1	IR 120x135x45	1.00

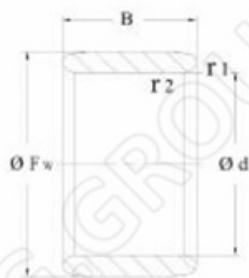
HMEC



IR

Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r ₁ , r ₂ min		
	mm					
130	130	145	35	1.1	IR 130x145x35	0.855
	130	150	50	1.5	IR 130x150x50	1.69
140	140	155	35	1.1	IR 140x155x35	0.92
	140	160	40	1.1	IR 140x160x50	1.80
150	150	165	40	1.1	IR 150x165x40	1.12
160	160	175	40	1.1	IR 160x175x40	1.20
170	170	185	45	1.1	IR 170x185x45	1.45
180	180	195	45	1.1	IR 180x195x45	1.50
190	190	210	50	1.5	IR 190x210x50	2.41
200	200	220	50	1.5	IR 200x220x50	2.49
220	220	240	50	1.5	IR 220x240x50	2.75
240	240	265	60	2	IR 240x265x60	4.60

Needle roller bearing inner rings
Series IR



IR

Shaft diameter	Dimensions				Code bearing HMEC	Weight ≈ kg
	d	D	B	r ₁ , r ₂ min		
	mm					
260	260	285	60	2	IR 260x285x60	4.98
280	280	305	69	2	IR 280x305x69	6.10
300	300	330	80	2.1	IR 300x330x80	9.20
320	320	350	80	2.1	IR 320x350x80	9.80
340	340	370	80	2.1	IR340x370x80	10.2
360	360	390	80	2.1	IR 360x390x80	10.9
380	380	415	100	2.1	IR 380x415x100	17.0

**Needle roller bearings with inner ring
serie NKI**

NA 48..

NA 49..

NA 69..

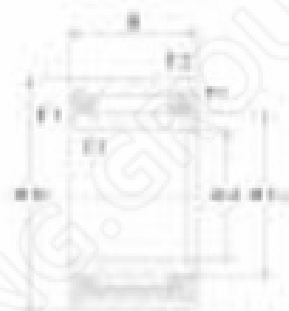
NKIS..



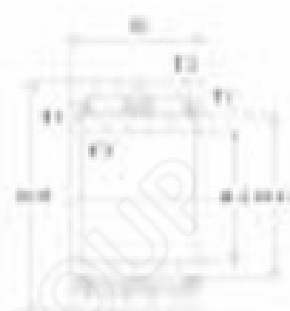
NKI (d>9mm)
NKIS
NA48
NA49
NA69(d<=30mm)

Shaft diameter	Dimensions					Load ratings		Speed ratings		Code bearing HMEC	Weight m_0 kg	
	d	D	B	F_w	r_1 mm	r_2	dyn. C	stat. Co	min ⁻¹			
	mm											ng (green)
5	5	15	12	8	0,3	1,5	4,4	5,0	19000	32000	NKI 5/12	0,014
	5	15	16	8	0,3	1,5	5,6	6,8	19000	32000	NKI 5/16	0,017
6	6	16	12	9	0,3	1,5	4,05	4,75	18000	30000	NKI 6/12	0,015
	6	16	16	9	0,3	1,5	5,85	7,65	18000	30000	NKI 6/16	0,019
7	7	17	12	10	0,3	1,5	5,2	6,55	17000	28000	NKI 7/12	0,017
	7	17	16	10	0,3	1,5	5,6	7,35	17000	28000	NKI 7/16	0,021
9	9	19	12	12	0,3	1,5	6,4	7,85	18000	26000	NKI 9/12	0,018
	9	19	16	12	0,3	1,5	6,4	9,15	18000	26000	NKI 9/16	0,024
10	10	22	13	14	0,3	1	8,15	9,15	18000	26000	NA4900	0,025
	10	22	16	14	0,3	1,5	11	13,7	18000	26000	NKI 10/16	0,032
	10	22	20	14	0,3	1,5	13,2	17,3	18000	26000	NKI 10/20	0,040
12	12	24	13	16	0,3	1	9	11	15000	24000	NA4901	0,028
	12	24	16	16	0,3	1,5	11,4	15	15000	24000	NKI 12/16	0,036
	12	24	20	16	0,3	1,5	13,7	19	15000	24000	NKI 12/20	0,046
	12	24	22	16	0,3	1	14,3	20	15000	24000	NA6901	0,051

HMEC



NK1 ($d \leq 7 \text{ mm}$)



NA69 ($d > 32 \text{ mm}$)

Shaft diameter	Dimensions					Load ratings		Speed ratings		Code bearing HMEC	Weight \approx kg	
	d	D	B	F_w	r_1	r_2	dyn, C	stat, Co	min ⁻¹			
	mm					kN		ng 01000	ng 01			
15	15	27	18	19	0,3	1,5	12,5	17,3	14000	22000	NK115/18	0,042
	15	27	20	19	0,3	1,5	15	22	14000	22000	NK115/20	0,054
	15	28	13	20	0,3	1	10,2	13,7	13000	20000	NA4902	0,037
	15	28	23	20	0,3	1,5	16,6	25,5	13000	20000	NA6902	0,067
17	17	29	16	21	0,3	2	13,4	20	13000	20000	NK117/16	0,047
	17	29	20	21	0,3	1,5	16,3	25	13000	20000	NK117/20	0,059
	17	30	13	22	0,3	1	10,4	14,6	12000	19000	NA4903	0,040
	17	30	23	22	0,3	1,5	18	29	12000	19000	NA6903	0,084
	17	37	20	24	0,6	1	26	31	10000	17000	NK1S17	0,108
20	20	32	16	24	0,3	1,5	14,3	22,4	10000	17000	NK120/16	0,053
	20	32	20	24	0,3	1,5	17,3	28,5	10000	17000	NK120/20	0,087
	20	37	17	25	0,3	1,5	19	23,6	10000	17000	NA4904	0,084
	20	37	30	25	0,3	1,5	33,5	49	10000	17000	NA6904	0,133
	20	42	20	28	0,6	1	27,5	36,5	9000	15000	NK1S20	0,130
22	22	34	18	26	0,3	1,5	14,6	23,6	9500	16000	NK122/18	0,058
	22	34	20	26	0,3	2	17,6	30	9500	16000	NK122/20	0,071
	22	39	17	28	0,3	1,5	20,8	27,5	9000	15000	NA49/22	0,089
	22	39	30	28	0,3	1	29	51	9000	15000	NA69/22	0,163
25	25	38	20	29	0,3	2	20,8	34	8500	14000	NK125/20	0,086
	25	38	30	29	0,3	2	27	54	8500	14000	NK125/30	0,130
	25	42	17	30	0,3	1,5	21,6	30	8500	14000	NA4905	0,099
	25	42	30	30	0,3	1,5	36,5	57	8500	14000	NA6905	0,178
	25	47	22	32	0,6	1,5	32,5	44	8000	13000	NK1S25	0,174

Needle roller bearings with inner ring series NKI

NA 48...
NA 49...
NA 69...
NKIS...



NKI (d≥9mm)
NKIS
NA48
NA49
NA69(d≤30mm)

Shaft diameter	Dimensions						Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	d	D	B	F _w	r ₁	r ₂	dyn. C	stat. Co	min ⁻¹			
	mm						kN		ng press	ng oil		
28	28	42	20	32	0,3	2	22	37,5	8000	13000	NKI28/20	0,104
	28	42	30	32	0,3	2	32,5	62	8000	13000	NKI28/30	0,156
	28	45	17	32	0,3	1,5	22,4	31,5	8000	13000	NA49/28	0,108
	28	45	30	32	0,3	1,5	40	60	8000	13000	NA69/28	0,190
30	30	45	20	35	0,3	1,5	23,2	41,5	7500	12000	NKI30/20	0,120
	30	45	30	35	0,3	1	34	68	7500	12000	NKI30/30	0,179
	30	47	17	35	0,3	1,5	23,2	33,5	7500	12000	NA4906	0,114
	30	47	30	35	0,3	1	39	65,5	7500	12000	NA6906	0,205
	30	52	22	37	0,6	1,5	35,5	51	7000	11000	NKIS30	0,198
32	32	47	20	37	0,3	2	23,6	43	7000	11000	NKI32/20	0,127
	32	47	30	37	0,3	1,5	34,5	71	7000	11000	NKI32/30	0,192
	32	52	20	40	0,6	1,5	28,5	46,5	6700	10000	NA49/32	0,169
	32	52	36	40	0,6	0	43	78	6700	10000	NA69/32	0,313
35	35	50	20	40	0,3	2	25	47,5	6700	10000	NKI35/20	0,135
	35	50	30	40	0,3	1,5	36,5	76,5	6700	10000	NKI35/30	0,208
	35	55	20	42	0,6	1,5	29	49	6700	10000	NA4907	0,179
	35	55	36	42	0,6	1	44	83	6700	10000	NA6907	0,340
	35	58	22	43	0,6	1	37,5	57	6300	9500	NKIS35	0,235
38	38	53	20	43	0,3	2	26	51	6300	9500	NKI38/20	0,146
	38	53	30	43	0,3	1,5	38	83	6300	9500	NKI38/30	0,196

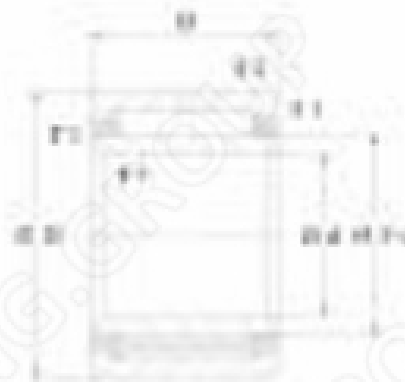


NA69 (d > 32 mm)

Shaft diameter	Dimensions						Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	d	D	B	F _w	r ₁ mm	r ₂	dyn. C	stat. C ₀	min ⁻¹			
	mm						kN		ng grease	ng oil		
40	40	55	20	45	0.3	2	26.5	53	6300	8500	NK140/20	0.152
	40	55	30	45	0.3	1.5	39	86.5	6300	8500	NK140/30	0.229
	40	62	22	48	0.6	2	40	64	5600	8500	NA4908	0.248
	40	62	40	48	0.6	1.5	64	118	5600	8500	NA6908	0.473
	40	65	22	50	1	1	41.5	68	5600	8500	NK1540	0.292
42	42	57	20	47	0.3	2	27	55	6000	9000	NK142/20	0.159
	42	57	30	47	0.3	1.5	39	90	6000	9000	NK142/30	0.241
45	45	62	25	50	0.6	3	37.5	78.5	5600	8500	NK145/25	0.244
	45	62	35	50	0.6	3	51	114	5600	8500	NK145/35	0.345
	45	68	22	52	0.6	2	41.5	69.5	5300	8000	NA4909	0.291
	45	68	40	52	0.6	1.5	65.5	125	5300	8000	NA6909	0.559
	45	72	22	55	1	1	42.5	72	5000	7500	NK1545	0.360
50	50	68	25	55	0.6	3	41.5	81.5	5000	7500	NK150/25	0.288
	50	68	35	55	0.6	3	57	122	5000	7500	NK150/35	0.406
	50	72	22	58	0.6	2	43	78.5	4800	7000	NA4910	0.296
	50	72	40	58	0.6	1.5	67	132	4800	7000	NA6910	0.577
	50	80	28	60	1.1	1.5	60	98	4800	7000	NK1550	0.523
55	55	72	25	60	0.6	3	40	88	4800	7000	NK155/25	0.290
	55	72	35	60	0.6	3	55	132	4800	7000	NK155/35	0.410
	55	80	26	63	1	2.5	56	100	4500	6700	NA4911	0.426
	55	80	45	63	1	2.5	83	160	4500	6700	NA6911	0.890
	55	85	28	65	1.1	1.5	64	108	4300	6300	NK1555	0.569

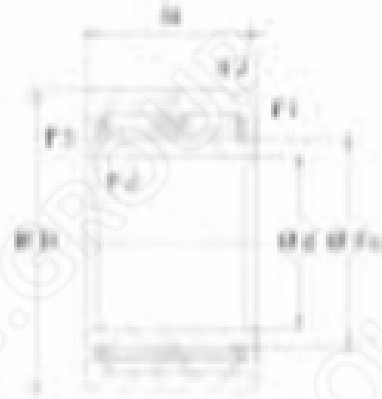
**Needle roller bearings with inner ring
series NKI**

NA 48..
NA 49..
NA 69..
NKIS..



NKI (d₂≠9mm)
NKIS
NA48
NA49
NA69(d₂≤30mm)

Shaft diameter	Dimensions						Load ratings		Speed ratings		Code bearing HMEC	Weight m_0 kg
	d	D	B	F _w	r ₁ min	r ₂	dyn. C	stat. C ₀	min ⁻¹			
	mm						kN		ng grease	ng oil		
60	60	82	25	68	0,6	2	44	85	4000	6000	NKI60/25	0,440
	60	82	35	68	0,6	2,5	60	143	4000	6000	NKI60/35	0,520
	60	85	25	68	1	1,5	58,5	108	4000	6000	NA49/12	0,457
	60	85	45	68	1	2	71	176	4000	6000	NA69/12	0,854
	60	90	28	70	1,1	1,5	65,5	114	4000	6000	NKIS60	0,607
65	65	90	25	73	0,6	2	55	112	3800	5600	NKI65/25	0,500
	65	90	25	72	1	1,5	58,5	114	4000	6000	NA49/13	0,489
	65	90	35	73	0,6	2	75	166	3800	5600	NKI65/35	0,690
	65	90	45	72	1	2	95	196	4000	6000	NA69/13	0,945
	65	95	28	75	1,1	1,5	69,5	125	3800	5600	NKIS65	0,855
70	70	95	25	80	1	2	58,5	122	3600	5300	NKI70/25	0,581
	70	95	35	80	1	3,5	72	176	3600	5300	NKI70/35	0,700
	70	100	28	80	1,1	1,5	72	137	3400	5000	NKIS70	0,680
	70	100	30	80	1	2,5	78	150	3600	5300	NA49/14	0,772
	70	100	54	80	1	2	125	270	3600	5300	NA69/14	1,450
75	75	105	25	85	1	2	69,5	129	3400	5000	NKI75/25	0,640
	75	105	30	85	1	2,5	80	156	3400	5000	NA49/15	0,817
	75	105	35	85	1	2	98	208	3400	5000	NKI75/35	1,050
	75	105	54	85	1	2	129	280	3400	5000	NA69/15	1,550
	75	110	32	90,8	1,1	3	61	160	3000	4500	NAK75	1,090

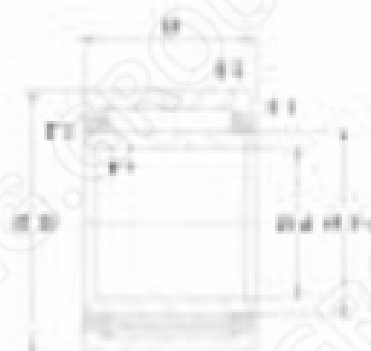


NA69 (d>32mm)

Shaft diameter	Dimensions						Load ratings		Speed ratings		Code bearing HMEC	Weight \approx
	d	D	B	F _w	r ₁	r ₂	dyn. C	stat. C ₀	min ⁻¹			
	mm				mm		kN		ng grease	ng oil	kg	
80	80	110	25	90	1	2	72	140	3000	4500	NK180/25	0,790
	80	110	35	90	1	2,5	83	170	3000	4500	NA4916	0,862
	80	110	35	90	1	2	102	220	3000	4500	NK180/35	0,980
	80	110	54	90	1	2	118	320	3000	4500	NA6916	1,620
	80	115	32	95,5	1,1	3	83	170	2800	4300	NAK80	1,150
85	85	115	26	95	1	3	48,5	116	3000	4500	NK185/25	0,862
	85	115	36	95	1	2	104	228	3000	4500	NK185/36	1,040
	85	120	32	101,2	1,1	3	64	178	2800	4000	NAK85	1,200
	85	120	35	100	1,1	2,5	100	220	2800	4300	NA4917	1,310
	85	120	63	100	1,1	2	143	415	2800	4300	NA6917	2,430
90	90	120	26	100	1	3	75	153	2800	4300	NK190/26	0,780
	90	120	36	100	1	2,5	108	245	2800	4300	NK190/36	1,080
	90	125	32	105	1,1	3	64	180	2600	4000	NAK90	1,280
	90	125	35	105	1,1	2,5	104	238	2600	4000	NA4918	1,370
	90	125	63	105	1,1	2	160	405	2600	4000	NA6918	2,64
95	95	125	26	105	1	2,5	50	129	2600	4000	NK195/26	0,935
	95	125	36	105	1	3,5	89,5	198	2600	4000	NK195/36	1,300
	95	130	32	110,8	1,1	3	67	193	2400	3800	NAK95	1,350
	95	130	35	110	1,1	2,5	106	245	2400	3800	NA4919	1,430
	95	130	63	110	1,1	2	150	455	2400	3800	NA6919	2,670
100	100	130	30	110	1,1	2	93	208	2400	3800	NK1100/30	0,984
	100	130	40	110	1,1	3	122	290	2400	3800	NK1100/40	1,413

**Needle roller bearings with inner ring
serie NKI**

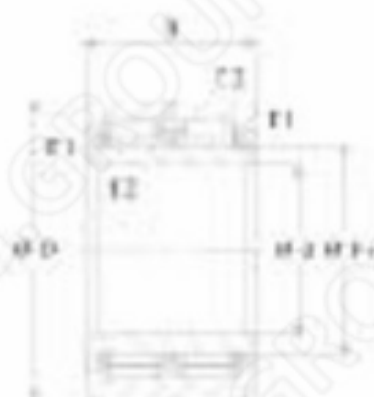
NA 48..
NA 49..
NA 69..
NKIS..



NKI (d_a≥9mm)
NKIS
NA48
NA49
NA69(d_a≤30mm)

Shaft diameter	Dimensions						Load ratings		Speed ratings		Code bearing HMEC	Weight kg
	d	D	B	F _w	r ₁ mm	r ₂	dyn. C	stat. C ₀	min ⁻¹			
	mm						kN		ng grease	ng oil		
100	100	135	32	115	1.1	2	95	216	2200	3600	NKIS100	1,340
	100	140	40	115	1.1	3.5	127	285	2200	3600	NA4920	2,010
110	110	140	30	120	1	0.5	81,5	216	2000	3400	NA4822	1,210
	110	150	40	125	1.1	3.5	134	315	2000	3400	NA4922	2,190
120	120	150	30	130	1	0.5	95	236	1900	3200	NA4824	1,310
	120	165	45	150	1.1	3	160	380	1800	3000	NA4926	3,040
130	130	165	35	145	1.1	1	98	300	1700	2800	NA4826	1,990
	130	180	50	150	1.5	3	190	490	1700	2800	NA4926	4,140
140	140	175	35	155	1.1	1	102	315	1600	2600	NA4828	2,120
	140	190	50	160	1.5	3	193	520	1600	2600	NA4928	4,410
150	150	190	40	165	1.1	2	125	375	1600	2600	NA4830	2,980
160	160	200	40	175	1.1	2	139	390	1500	2400	NA4832	3,150
170	170	215	45	185	1.1	2	163	480	1400	2200	NA4834	4,25
180	180	225	46	196	1.1	2	166	510	1400	2200	NA4836	4,49

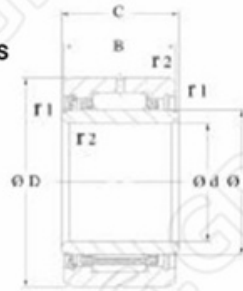
HMEC



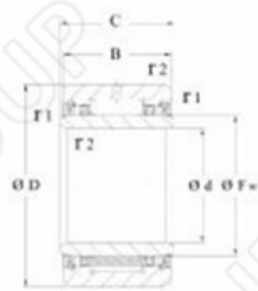
NA69 (d: 32mm)

Shaft diameter	Dimensions							Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	d	D	B	F ₁	r ₁	r ₂	dyn. C	stat. C ₀	min ⁻¹				
	mm	mm	mm	mm	mm	mm	kN	kN	ng grease	ng oil			
190	190	240	50	210	1.5	2.5	193	630	1300	2000	NA4838	5.96	
200	200	250	50	220	1.5	2.5	196	655	1200	1900	NA4840	6.19	
220	220	270	50	240	1.5	2.5	208	710	1000	1700	NA4844	6.75	
240	240	300	60	255	2	2.5	290	1040	950	1600	NA4848	10.80	
260	260	320	60	265	2	2.5	300	1120	900	1500	NA4852	11.60	
280	280	350	69	305	2	3	390	1270	850	1400	NA4856	16.70	
300	300	380	80	330	2.1	3.5	540	1800	800	1300	NA4860	23.70	
320	320	400	80	350	2.1	3.5	540	1860	750	1200	NA4864	25.20	
340	340	420	80	370	2.1	3.5	550	1930	700	1100	NA4868	26.70	
360	360	440	80	390	2.1	3.5	560	200	700	1100	NA4872	28.00	

**Needle Roller Bearings
with inner ring
sealed type
Series NA49..RS
NA49..2RS**



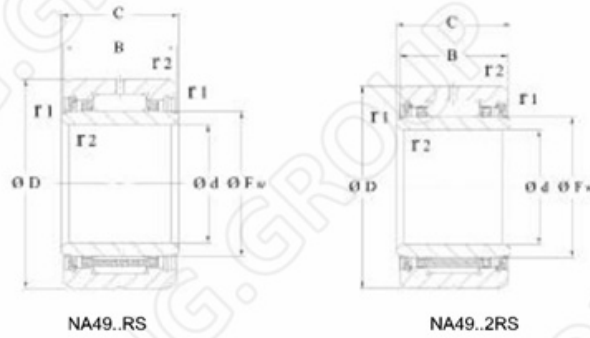
NA49..RS



NA49..2RS

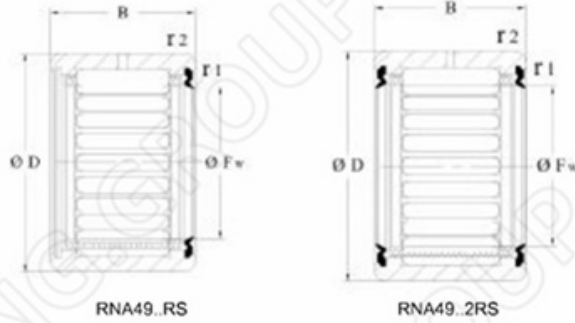
Shaft diameter	Dimensions						Load ratings		Speed ratings	Code bearing	Weight
	d	D	B	C	F	$r_{1,2}$ min	dyn. C	stat. Co	min ⁻¹	HMEC	≈
	mm						kN		ng grease		kg
10	10	22	13	14	14	0.3	6.6	7.0	10000	NA4900RS	0.027
		22	13	14	14	0.3	6.6	7.0	10000	NA4900.2RS	0.027
12	12	24	13	14	16	0.3	7.2	8.3	10000	NA4901RS	0.031
		24	13	14	16	0.3	7.2	8.3	10000	NA4901.2RS	0.031
15	15	28	13	14	20	0.3	8.2	10.4	8500	NA4902RS	0.041
		28	13	14	20	0.3	8.2	10.4	8500	NA4902.2RS	0.041
17	17	30	13	14	22	0.3	8.5	11	7500	NA4903RS	0.044
		30	13	14	22	0.3	8.5	11	7500	NA4903.2RS	0.044
20	20	37	17	18	25	0.3	16.3	19.6	6700	NA4904RS	0.087
		37	17	18	25	0.3	16.3	19.6	6700	NA4904.2RS	0.087
25	25	42	17	18	30	0.3	18.6	24.5	5600	NA4905RS	0.106
		42	17	18	30	0.3	18.6	24.5	5600	NA4905.2RS	0.106
30	30	47	17	18	35	0.3	19.6	27.5	4800	NA4906RS	0.119
		47	17	18	35	0.3	19.6	27.5	4800	NA4906.2RS	0.119
35	35	55	20	21	42	0.5	26	41.5	4000	NA4907RS	0.198
		55	20	21	42	0.5	26	41.5	4000	NA4907.2RS	0.198

HMEC



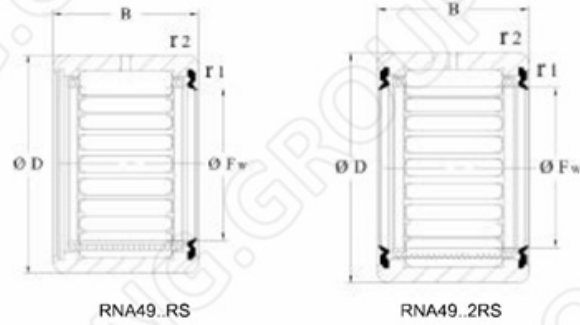
Shaft diameter	Dimensions						Load ratings		Speed ratings	Code bearing	Weight
	d	D	B	C	F	$r_{1,2}$ min	dyn. C	stat. Co	min ⁻¹	HMEC	≈
	mm						kN		ng grease		kg
40	40	62	22	23	48	0.6	34.5	53	3400	NA4908RS	0.263
	62	22	23	48	0.6	34.5	53	3400	NA4908.2RS	0.263	
45	45	68	22	23	52	0.6	34.5	54	3200	NA4909RS	0.303
	68	22	23	52	0.6	34.5	54	3200	NA4909.2RS	0.303	
50	50	72	22	23	58	0.6	36	60	2800	NA4910RS	0.309
	72	22	23	58	0.6	36	60	2800	NA4910.2RS	0.309	

**Needle Roller Bearings
without inner ring
sealed type
Series RNA49..RS
RNA49..2RS**



Shaft diameter	Dimensions						Load ratings		Speed ratings	Code bearing	Weight
	d	D	B	C	F	$r_{1,2}$ min	dyn. O	stat. Co	min ⁻¹	HMEC	≈
	mm						kN		ng grease		kg
14	14	22	13	0.3	6.6	7.0			10000	RNA4900RS	0.020
		22	13	0.3	6.6	7.0			10000	RNA4900.2RS	0.020
16	16	24	13	0.3	7.2	8.3			10000	RNA4901RS	0.021
		24	13	0.3	7.2	8.3			10000	RNA4901.2RS	0.021
20	20	28	13	0.3	8.2	10.4			8500	RNA4902RS	0.026
		28	13	0.3	8.2	10.4			8500	RNA4902.2RS	0.026
22	22	30	13	0.3	8.5	11			7500	RNA4903RS	0.027
		30	13	0.3	8.5	11			7500	RNA4903.2RS	0.027
25	25	37	17	0.3	16.3	19.6			6700	RNA4904RS	0.062
		37	17	0.3	16.3	19.6			6700	RNA4904.2RS	0.062
30	30	42	17	0.3	18.6	24.5			5600	RNA4905RS	0.075
		42	17	0.3	18.6	24.5			5600	RNA4905.2RS	0.075
35	35	47	17	0.3	19.6	27.5			4800	RNA4906RS	0.083
		47	17	0.3	19.6	27.5			4800	RNA4906.2RS	0.083
42	42	55	20	0.6	26	41.5			4000	RNA4907RS	0.130
		55	20	0.6	26	41.5			1000	RNA4907.2RS	0.130

HMEC



Shaft diameter	Dimensions						Load ratings		Speed ratings	Code bearing	Weight
	d	D	B	C	F	$r_{1,2}$ min	dyn. O	stat. Co	min ⁻¹	HMEC	≈
	mm						kN		ng grease		kg
48	48	62	22	0.6	34.5	53			3400	RNA4908RS	0.163
		62	22	0.6	34.5	53			3400	RNA4908.2RS	0.163
52	52	68	22	0.6	34.5	54			3200	RNA4909RS	0.187
		68	22	0.6	34.5	54			3200	RNA4909.2RS	0.187
58	58	72	22	0.6	36	60			2800	RNA4910RS	0.207
		72	22	0.6	36	60			2800	RNA4910.2RS	0.207

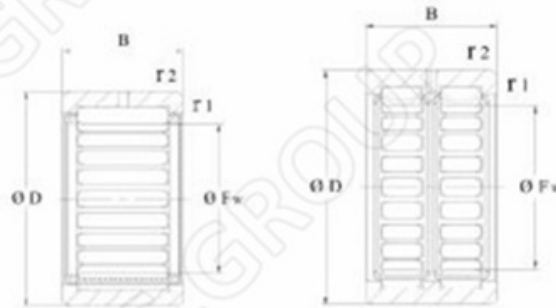
Needle roller bearings without inner rings

Series NK..

NKS..

RNA 49..

RNA 69..

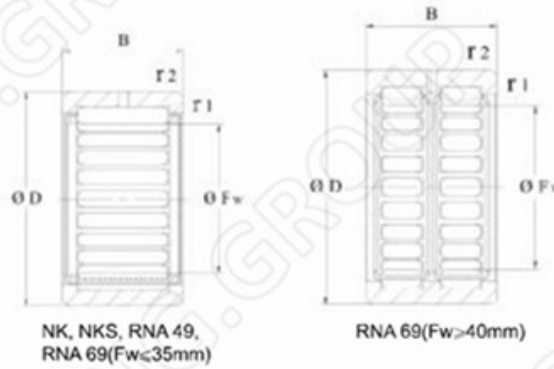


NK, NKS, RNA 49,
RNA 69(Fw<35mm)

RNA 69(Fw>40mm)

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w mm	D mm	B mm	r _{1,2} min	dyn. C	stat. C ₀	min ⁻¹ ng grease	min ⁻¹ ng oil		
					kN					
5	5	10	10	0.15	2.1	1.8	26000	40000	NK5/10TN	0.004
	5	10	12	0.15	2.9	2.7	26000	40000	NK5/12TN	0.004
6	6	12	10	0.15	3.1	3	22000	36000	NK6/10	0.005
	6	12	12	0.15	2.9	2.8	22000	36000	NK6/12TN	0.006
7	7	14	10	0.3	2.7	2.5	20000	34000	NK7/10TN	0.007
	7	14	12	0.3	3.3	3.4	20000	34000	NK7/12TN	0.009
8	8	15	12	0.3	4.4	5.0	19000	32000	NK8/12	0.011
	8	15	16	0.3	5.6	6.8	19000	32000	NK8/16	0.013
9	9	16	12	0.3	4.1	4.8	18000	30000	NK9/12	0.012
	9	16	16	0.3	5.9	7.7	18000	30000	NK9/16	0.015
10	10	17	12	0.3	5.2	6.6	17000	28000	NK10/12	0.013
	10	17	16	0.3	5.6	7.4	17000	28000	NK10/16	0.016
12	12	19	12	0.3	5.7	6.6	16000	26000	NK12/12	0.013
	12	19	16	0.3	6.4	9.2	16000	26000	NK12/16	0.018
14	14	22	13	0.3	8.2	9.2	16000	26000	RNA4900	0.018
	14	22	16	0.3	11.0	13.7	16000	26000	NK14/16	0.023
	14	22	20	0.3	13.2	17.3	16000	26000	NK14/20	0.028

HMEC



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r2} min	dyn.	stat.	min ⁻¹			
					C	Co	ng grease	ng oil		
mm	mm	mm	mm	kN	kN					
15	15	23	16	0.3	10.8	13.7	16000	26000	NK15/16	0.024
	15	23	20	0.3	13.2	17.3	16000	26000	NK15/20	0.030
16	16	24	13	0.3	9.0	11.0	15000	24000	RNA4901	0.020
	16	24	16	0.3	11.4	15	15000	24000	NK16/16	0.025
	16	24	20	0.3	13.7	19	15000	24000	NK16/20	0.032
	16	24	22	0.3	14.3	20	15000	24000	RNA6901	0.035
17	17	25	16	0.3	12	16	15000	24000	NK17/16	0.027
	17	25	20	0.3	13.7	19	15000	24000	NK17/20	0.034
18	18	26	16	0.3	12	16.3	15000	24000	NK18/16	0.028
	18	26	20	0.3	14.3	20.4	15000	24000	NK18/20	0.035
19	19	27	16	0.3	12.5	17.3	14000	22000	NK19/16	0.029
	19	27	20	0.3	15	22	14000	22000	NK19/20	0.037
20	20	28	13	0.3	10.2	13.7	13000	20000	RNA4902	0.023
	20	28	16	0.3	12.5	17.6	13000	20000	NK20/16	0.032
	20	28	20	0.3	15.6	23.6	13000	20000	NK20/20	0.038
	20	28	23	0.3	16.6	25.5	13000	20000	RNA6902	0.042
	20	32	20	0.6	22	25	13000	20000	NKS20	0.058
21	21	29	16	0.3	13.4	20	13000	20000	NK21/16	0.032
	21	29	20	0.3	16.3	25	13000	20000	NK21/20	0.040

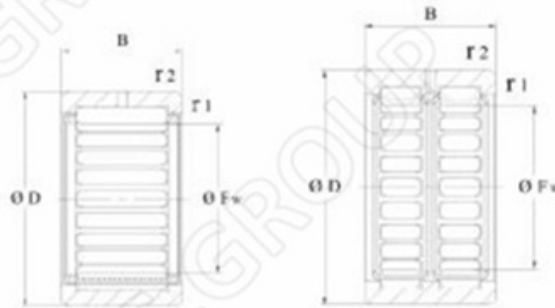
Needle roller bearings without inner rings

Series NK..

NKS..

RNA 49..

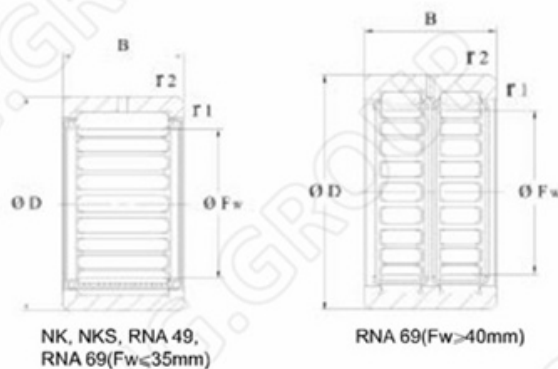
RNA 69..



NK, NKS, RNA 49,
RNA 69(Fw<35mm)

RNA 69(Fw>40mm)

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1,2} _{min}	dyn.	stat.	min ⁻¹			
					C	Co	ng grease	ng oil		
mm	mm	mm	mm	kN						
22	22	30	13	0.3	10.4	14.6	12000	19000	RNA4903	0.025
	22	30	16	0.3	13.4	20	12000	19000	NK22/16	0.034
	22	30	20	0.3	16	25	12000	19000	NK22/20	0.040
	22	30	23	0.3	18	29	12000	19000	RNA6903	0.056
	22	35	20	0.6	20.8	25.5	12000	19000	NKS22	0.069
24	24	32	16	0.3	14.3	22.4	10000	17000	NK24/16	0.035
	24	32	20	0.3	17.3	28.5	10000	17000	NK24/20	0.045
	24	37	20	0.6	26	31	10000	17000	NKS24	0.072
25	25	33	16	0.3	14.3	22.4	10000	17000	NK25/16	0.035
	25	33	20	0.3	17	28.5	10000	17000	NK25/20	0.045
	25	37	17	0.3	19	23.6	10000	17000	RNA4904	0.060
	25	37	30	0.3	33.5	49	10000	17000	RNA6904	0.090
	25	38	20	0.6	26	31	10000	17000	NKS25	0.076
26	26	34	16	0.3	14.6	23.6	9500	16000	NK26/16	0.039
	26	34	20	0.3	17.6	30	9500	16000	NK26/20	0.048
28	28	37	20	0.3	20	32	9000	15000	NK28/20	0.057
	28	37	30	0.3	26.5	52	9000	15000	NK28/30	0.088
	28	39	17	0.3	20.8	27.5	9000	15000	RNA49/22	0.060
	28	39	30	0.3	29	51	9000	15000	RNA69/22	0.105
	28	42	20	0.6	27.5	36.5	9000	15000	NKS28	0.095



HMEC

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r₂} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm	mm	mm	mm	kN		ng grease	ng oil		
29	29	38	20	0.3	20.8	34	8500	14000	NK29/20	0.060
	29	38	30	0.3	27	54	8500	14000	NK29/30	0.090
30	30	40	20	0.3	21.6	36	8500	14000	NK30/20	0.070
	30	40	30	0.3	31.5	58.5	8500	14000	NK30/30	0.107
	30	42	17	0.3	21.6	30	8500	14000	RNA4905	0.071
	30	42	30	0.3	36.5	57	8500	14000	RNA6905	0.127
	30	45	22	0.6	31	40.5	8500	14000	NKS30	0.114
32	32	42	20	0.3	22	37.5	8000	43000	NK32/20	0.074
	32	42	30	0.3	32.5	62	8000	13000	NK32/30	0.112
	32	45	17	0.3	22.4	31.5	8000	13000	RNA49/28	0.080
	32	45	30	0.3	40	60	8000	13000	RNA69/28	0.140
	32	47	22	0.6	32.5	44	8000	13000	NKS32	0.120
35	35	45	20	0.3	23.2	41.5	7500	12000	NK35/20	0.080
	35	45	30	0.3	34	68	7500	12000	NK35/30	0.122
	35	47	17	0.3	23.2	33.5	7500	12000	RNA4906	0.080
	35	47	30	0.3	39	65.5	7500	12000	RNA6906	0.148
	35	50	22	0.6	34	47.5	7500	12000	NKS35	0.130
37	37	47	20	0.3	23.6	43	7000	11000	NK37/20	0.084
	37	47	30	0.3	34.5	71	7000	11000	NK37/30	0.128
	37	52	22	0.6	35.5	51	7000	11000	NKS37	0.134

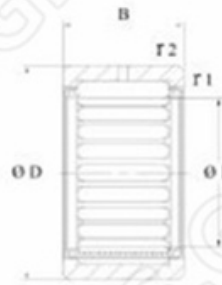
Needle roller bearings without inner rings

Series NK..

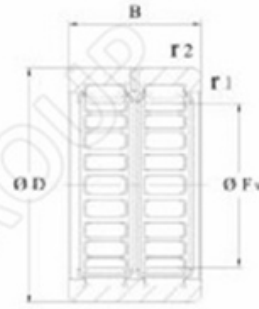
NKS..

RNA 49..

RNA 69..

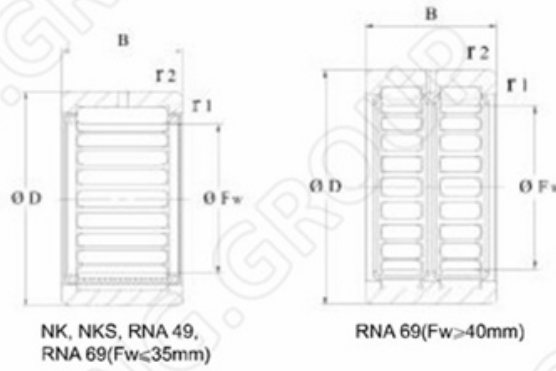


NK, NKS, RNA 49,
RNA 69($F_w \leq 35\text{mm}$)



RNA 69($F_w > 40\text{mm}$)

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight \approx kg
	F_w	D	B	r_1, r_2 mm	dyn. C	stat. Co	min^{-1}			
	mm		kN		ng grease	ng oil				
38	38	48	20	0.3	20.8	41.5	7000	11000	NK38/20	0.087
	38	48	30	0.3	30.5	68	7000	11000	NK38/30	0.130
40	40	52	20	0.6	28.5	46.5	6700	10000	RNA49/32	0.100
	40	52	36	0.6	43	78	6700	10000	RNA69/32	0.185
	40	50	20	0.3	25	47.5	6700	10000	NK40/20	0.089
	40	50	30	0.3	36.5	76.5	6700	10000	NK40/30	0.137
	40	55	22	0.6	36.5	54	6700	10000	NKS40	0.140
42	42	52	20	0.3	25.5	49	6700	10000	NK42/20	0.085
	42	52	30	0.3	37.5	80	6700	10000	NK42/30	0.140
	42	55	20	0.6	29	49	6700	10000	RNA4907	0.115
	42	55	36	0.6	44	83	6700	10000	RNA6907	0.220
43	43	53	20	0.3	26	51	6300	9500	NK43/20	0.095
	43	53	30	0.3	38	83	6300	9500	NK43/30	0.133
	43	58	22	0.6	37.5	57	6300	9500	NKS43	0.150
45	45	55	20	0.3	26.5	53	6300	9500	NK45/20	0.100
	45	55	30	0.3	39	86.5	6300	9500	NK45/30	0.150
	45	60	22	0.6	39	61	6300	9500	NKS45	0.155
47	47	57	20	0.3	27	55	6000	9000	NK47/20	0.105
	47	57	30	0.3	39	90	6000	9000	NK47/30	0.160



HMEC

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r₂} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
48	48	62	22	0.6	40	64	5600	8500	RNA4908	0.155
	48	62	40	0.6	64	118	5600	8500	RNA6908	0.305
50	50	62	25	0.6	37.5	76.5	5600	8500	NK50/25	0.170
	50	62	35	0.6	51	114	5600	8500	NK50/35	0.240
	50	65	22	1	41.5	68	5600	8500	NKS50	0.170
52	52	68	22	0.6	41.5	69.5	5300	8000	RNA4909	0.200
	52	68	40	0.6	65.5	125	5300	8000	RNA6909	0.390
55	55	68	25	0.6	41.5	81.5	5000	75000	NK55/25	0.210
	55	68	35	0.6	57	122	5000	7500	NK55/35	0.295
	55	72	22	1	42.5	72	5000	7500	NKS55	0.230
58	58	72	22	0.6	43	76.5	4800	7000	RNA4910	0.180
	58	72	40	0.6	67	132	4800	7000	RNA6910	0.365
60	60	80	28	1.1	60	98	4800	7000	NKS60	0.335
	60	72	25	0.6	40	88	4800	7000	NK60/25	0.200
	60	72	35	0.6	55	132	4800	7000	NK60/35	0.285
63	63	80	25	1	56	100	4500	6700	RNA4911	0.285
	63	80	45	1	83	160	4500	6700	RNA6911	0.540

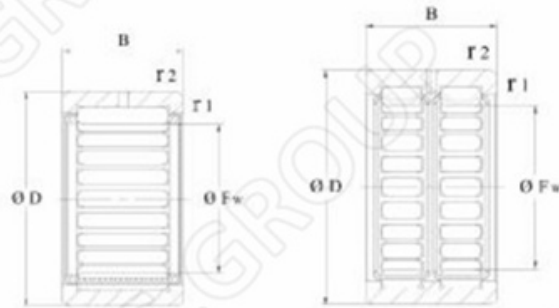
Needle roller bearings without inner rings

Series NK..

NKS..

RNA 49..

RNA 69..

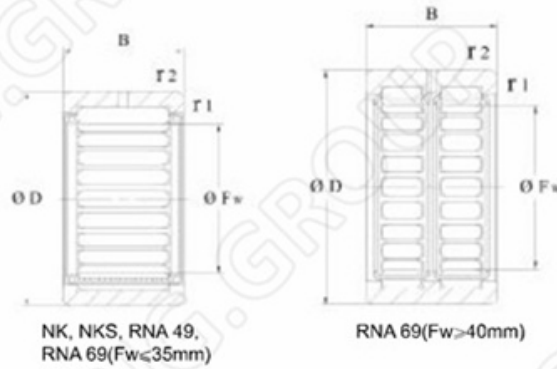


NK, NKS, RNA 49,
RNA 69(Fw≤35mm)

RNA 69(Fw>40mm)

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1,2} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
65	65	78	25	0.6	43	91.5	4500	6700	NK65/25	0.260
	65	78	35	0.6	60	137	4500	6700	NK65/35	0.300
	65	85	28	1.1	64	108	4300	6300	NKS65	0.360
68	68	82	25	0.6	44	95	4000	6000	NK68/25	0.285
	68	82	35	0.6	60	143	4000	6000	NK68/35	0.350
	68	85	25	1	58.5	108	4000	6000	RNA4912	0.305
	68	85	45	1	71	176	4000	6000	RNA6912	0.570
70	70	85	25	0.6	41.5	90	4000	6000	NK70/25	0.300
	70	85	35	0.6	58.5	140	4000	6000	NK70/35	0.410
	70	90	28	1.1	65.5	114	4000	6000	NKS70	0.385
72	72	90	25	1	58.5	114	4000	6000	RNA4913	0.345
	72	90	45	1	95	196	4000	6000	RNA6913	0.680
73	73	90	25	0.6	55	112	3800	5600	NK73/25	0.320
	73	90	35	0.6	75	166	3800	5600	NK73/35	0.450
75	75	92	25	0.6	41.5	91.5	3800	5600	NK75/25	0.365
	75	92	35	0.6	58.5	143	3800	5600	NK75/35	0.520
	75	95	28	1.1	69.5	125	3800	5600	NKS75	0.410

HMEC



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r₂} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
80	80	95	25	1	58.5	122	3600	5300	NK80/25	0.330
	80	95	35	1	72	176	3600	5300	NK80/35	0.380
	80	100	30	1	78	150	3600	5300	RNA4914	0.500
	80	100	54	1	125	270	3600	5300	RNA6914	0.945
85	85	105	25	1	69.5	129	3400	5000	NK85/25	0.400
	85	105	30	1	80	156	3400	5000	RNA4915	0.530
	85	105	35	1	98	208	3400	5000	NK85/35	0.710
	85	105	54	1	129	290	3400	5000	RNA6915	1.020
90	90	110	25	1	72	140	3000	4500	NK90/25	0.530
	90	110	30	1	83	170	3000	4500	RNA4916	0.556
	90	110	35	1	102	220	3000	4500	NK90/35	0.620
	90	110	54	1	118	320	3000	4500	RNA6916	1.050
95	95	115	26	1	46.5	116	3000	4500	NK95/26	0.572
	95	115	36	1	104	228	3000	4500	NK95/36	0.640
100	100	120	35	1.1	100	220	2800	4300	RNA4917	0.715
	100	120	63	1.1	143	415	2800	4300	RNA6917	1.350
	100	120	26	1	75	153	2800	4300	NK100/26	0.480
	100	120	36	1	108	245	2800	4300	NK100/36	0.66
105	105	125	35	1.1	104	236	2600	4000	RNA4918	0.75
	105	125	63	1.1	160	405	2600	4000	RNA6918	1.50

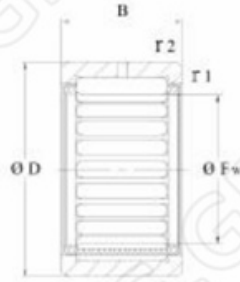
Needle roller bearings without inner rings

Series NK..

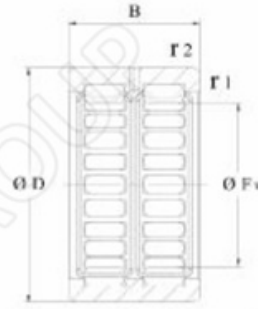
NKS..

RNA 49..

RNA 69..



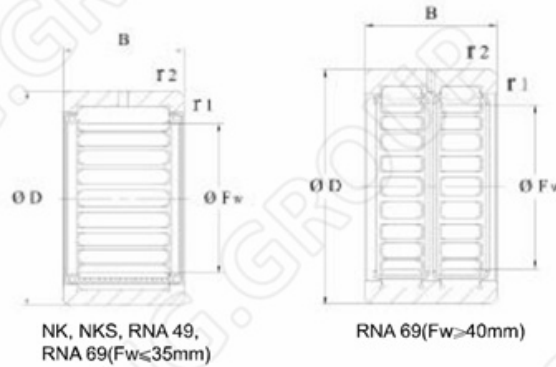
NK, NKS, RNA 49,
RNA 69(Fw≤35mm)



RNA 69(Fw>40mm)

Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r₂} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
105	105	125	26	1	50	129	2600	4000	NK105/26	0.63
	105	125	36	1	69.5	196	2600	4000	NK105/36	0.87
110	110	130	30	1.1	93	208	2400	3800	NK110/30	0.60
	110	130	40	1.1	122	290	2400	3800	NK110/40	0.90
	110	130	35	1.1	106	245	2400	3800	RNA4919	0.78
	110	130	63	1.1	150	455	2400	3800	RNA6919	1.47
115	115	140	40	1.1	127	285	2200	3600	RNA4920	1.22
120	120	140	30	1	81.5	216	2000	3400	RNA4822	0.79
125	125	150	40	1.1	134	315	2000	3400	RNA4922	1.32
130	130	150	30	1	85	236	1900	3200	RNA4824	0.85
135	135	165	45	1.1	160	380	1800	3000	RNA4924	1.98
145	145	165	35	1.1	98	300	1700	2800	RNA4826	1.10
150	150	180	50	1.5	190	490	1700	2800	RNA4926	2.42

HMEC



Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r ₁ , r ₂ min	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng oil		
155	155	175	35	1.1	102	315	1600	2600	RNA4828	1.17
160	160	190	50	1.5	193	520	1600	2600	RNA4928	2.56
165	165	190	40	1.1	125	375	1600	2600	RNA4830	1.82
175	175	200	40	1.1	129	390	1500	2400	RNA4832	1.90
185	185	215	45	1.1	163	480	1400	2200	RNA4834	2.78
195	195	225	45	1.1	166	510	1400	2200	RNA4836	2.92
210	210	240	50	1.5	193	630	1300	2000	RNA4838	3.50
220	220	250	50	1.5	196	655	1200	1900	RNA4840	3.60
240	240	270	50	1.5	208	710	1000	1700	RNA4844	3.90
265	265	300	60	2	290	1040	950	1600	RNA4848	6.10
285	285	320	60	2	300	1120	900	1500	RNA4852	6.50

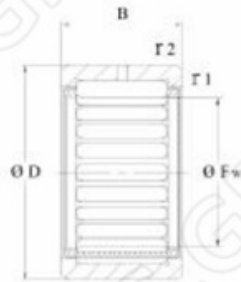
Needle roller bearings without inner rings

Series NK..

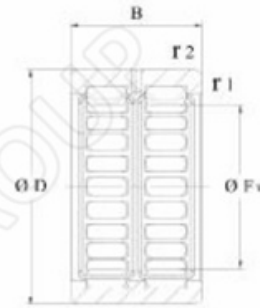
NKS..

RNA 49..

RNA 69..



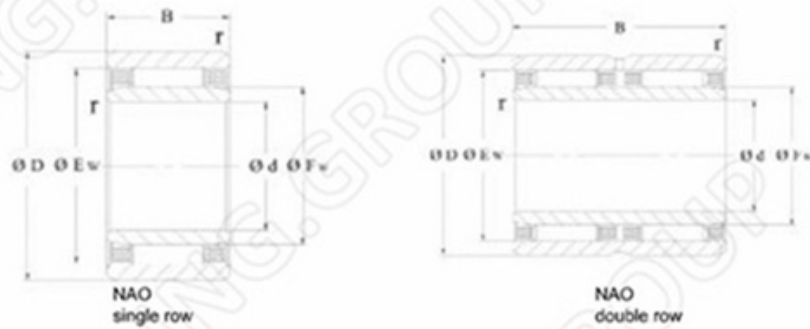
NK, NKS, RNA 49,
RNA 69(Fw≤35mm)



RNA 69(Fw>40mm)

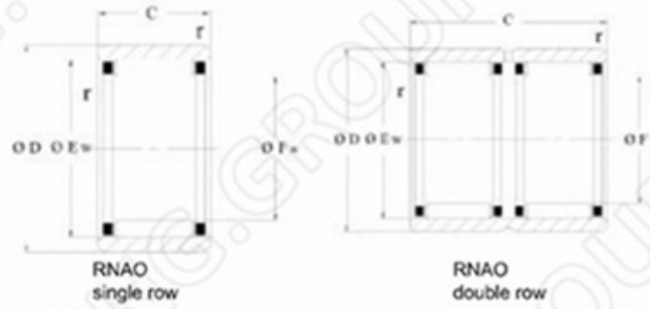
Shaft diameter	Dimensions				Load ratings		Speed ratings		Code bearing HMEC	Weight ≈ kg
	F _w	D	B	r _{1, r₂} _{min}	dyn. C	stat. Co	min ⁻¹			
	mm				kN		ng grease	ng Oil		
305	305	350	69	2	390	1270	850	1400	RNA4856	10.50
330	330	380	80	2.1	540	1800	800	1300	RNA4860	14.40
350	350	400	80	2.1	540	1860	750	1200	RNA4864	15.30
370	370	420	80	2.1	550	1930	700	1100	RNA4868	16.20
390	390	440	80	2.1	560	200	700	1100	RNA4872	16.90
415	415	480	100	2.1	930	3150	670	1000	RNA4876	29.90

**Needle roller bearings without ribs
with inner ring
Series NAO**



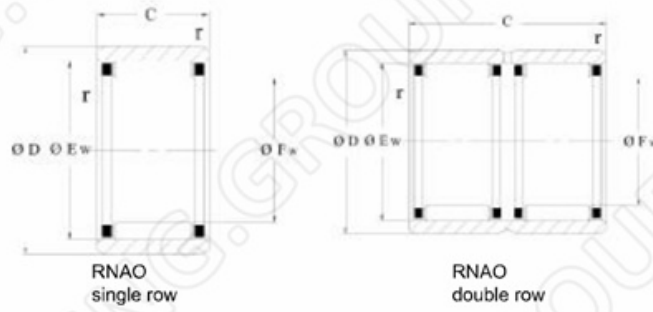
Shaft diameter	Dimensions				Basic Load rating		Fatigue limit load Pu kN	Limiting speed nG min ⁻¹	Reference speed nB min ⁻¹	Code Bearing HMEC dxDxB	Mass ≈ g
	Fw	Ew	r	s ¹⁾	dyn. C	stat. Co					
	mm	mm	mm	mm	kN	kN					
6	10	13	0.3	0.5	4.75	5.5	0.71	29000	28000	NAO 6X17X10 TN	14
9	12	18	0.3	0.5	10	9.9	1.25	25000	21000	NAO 9X22X12 TN	23.5
12	16	20	0.3	0.5	8.9	11.8	1.46	24000	18000	NAO 12X24X13	30
	16	22	0.3	0.5	11.5	12.5	1.58	22000	17000	NAO 12X28X12	40
15	20	24	0.3	0.5	9.8	14.3	1.78	22000	14000	NAO 15X28X13	29
	20	26	0.3	0.5	13.4	16.2	2.05	21000	13000	NAO 15X32X12	50
17	22	26	0.3	0.5	10.4	15.9	1.98	21000	13000	NAO 17X30X13	42
	22	29	0.3	0.5	20	25.5	3.15	19000	12000	NAO 17X35X16	78
20	25	29	0.3	0.5	14.9	26	3.3	18000	12000	NAO 20X35X17	76
	25	32	0.3	0.5	21	28	3.5	17000	11000	NAO 20X37X16	82
25	30	35	0.3	0.8	19.6	34	3.95	15000	9500	NAO 25X40X17	88
	30	37	0.3	0.8	23.1	33.5	4.15	15000	9000	NAO 25X42X16	86
	30	37	0.3	0.8	39.5	67	8.3	15000	9000	NAO 25X42X32	190
30	35	40	0.3	0.8	20.8	38.5	4.55	13000	8500	NAO 30X45X17	102
	35	40	0.3	0.8	27.5	56	6.7	13000	8500	NAO 30X45X26	157
	35	42	0.3	0.8	24.4	37.5	4.65	13000	8000	NAO 30X47X16	109
	35	42	0.3	0.8	27.5	43	5.5	13000	8000	NAO 30X47X18	119
35	40	45	0.3	0.8	21.4	41.5	4.85	12000	7500	NAO 35X50X17	113
	40	47	0.3	0.8	32.5	57	6.8	11000	7500	NAO 35X55X20	190
40	45	50	0.3	0.8	22.5	46	5.4	10000	7000	NAO 40X55X17	127
50	55	60	0.3	1	28.5	66	8	8500	6000	NAO 50X68X20	230
70	80	88	1	1	71	176	22.4	6000	3900	NAO 70X100X30	850
80	90	98	1	1	68	172	21.3	5000	3800	NAO 80X110X30	920
90	100	108	1	1	71	188	23.1	4700	3500	NAO 90X120X30	1044

Needle roller bearings without ribs
without inner ring
Series RNAO



Shaft diameter	Dimensions		Basic Load rating		Fatigue limit load Pu kN	Limiting speed nG min ⁻¹	Reference speed nB min ⁻¹	Code Bearing HMEC FwxDxC	Mass g
	E _w mm	r min	dyn. C kN	stat. Co kN					
5	8	0.15	2.35	1.92	0.235	37000	60000	RNAO 5X10X8 TN	3
6	9	0.3	2.6	2.28	0.28	32000	55000	RNAO 6X13X8 TN	6
7	10	0.3	2.85	2.65	0.32	31000	48000	RNAO 7X14X8 TN	6
8	11	0.3	3.95	4.1	0.53	29000	41000	RNAO 8X15X10 TN	8
10	13	0.3	4.75	5.5	0.71	27000	33000	RNAO 10X17X10 TN	10
12	18	0.3	10	9.9	1.25	24000	23000	RNAO 12X22X12 TN	19
15	19	0.3	8.5	10.9	1.36	23000	21000	RNAO 15X23X13	20
16	20	0.3	8.9	11.8	1.46	22000	20000	RNAO 16X24X13	21
	22	0.3	11.5	12.5	1.58	21000	19000	RNAO 16X28X12	32
17	21	0.3	10.4	14.6	1.78	22000	18000	RNAO 17X25X13	22
18	24	0.3	21.9	30	3.75	20000	17000	RNAO 18X30X24	69
20	24	0.3	9.8	14.3	1.78	20000	16000	RNAO 20X28X13	25
	24	0.3	16.8	28.5	3.55	20000	16000	RNAO 20X28X26	50
	26	0.3	13.4	16.2	2.05	19000	15000	RNAO 20X32X12	38
22	26	0.3	10.4	15.9	1.98	19000	15000	RNAO 22X30X13	27
	29	0.3	20	25.5	3.15	17000	13000	RNAO 22X35X16	59
25	29	0.3	14.9	26	3.3	16000	13000	RNAO 25X35X17	53
	29	0.3	19.4	37	4.55	16000	13000	RNAO 25X35X26	76
	32	0.3	21	28	3.5	16000	12000	RNAO 25X37X16	60
30	35	0.3	19.6	34	3.95	14000	10000	RNAO 30X40X17	60
	37	0.3	23.1	33.5	4.15	14000	10000	RNAO 30X42X16	59
	37	0.3	39.5	67	8.3	14000	10000	RNAO 30X42X32	137
35	40	0.3	16.2	28	3.35	12000	9000	RNAO 35X45X13	53
	40	0.3	20.8	38.5	4.55	12000	9000	RNAO 35X45X17	69
	40	0.3	27.5	56	6.7	12000	9000	RNAO 35X45X26	91
	42	0.3	24.4	37.5	4.65	12000	9000	RNAO 35X47X16	78
	42	0.3	27.5	43	5.5	12000	8500	RNAO 35X47X18	89
	42	0.3	42	75	9.3	12000	9000	RNAO 35X47X32	156

HMEC

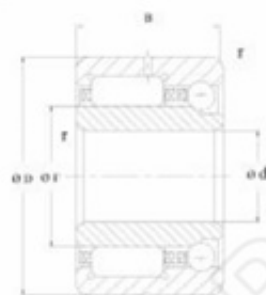


Shaft diameter	Dimensions		Basic Load rating		Fatigue limit load Pu kN	Limiting speed nG min ⁻¹	Reference speed nB min ⁻¹	Code Bearing HMEC FwIDIC	Mass ≈ g
	E mm	r min	dyn. C kN	stat. Co kN					
40	45	0.3	21.4	41.5	4.85	11000	8000	RNAO 40X50X17	74
	45	0.3	36.5	83	9.7	11000	7000	RNAO 40X50X34	152
	47	0.3	32.5	57	6.8	11000	8500	RNAO 40X55X20	145
	48	0.3	62	118	13.6	10000	7500	RNAO 40X55X40	275
45	50	0.3	22.5	46	5.4	10000	7500	RNAO 45X55X17	83
	53	0.3	67	135	15.5	9000	7000	RNAO 45X62X40	377
50	55	0.3	26.5	60	7.2	9000	7000	RNAO 50X62X20	140
	58	0.3	35.5	62	7.9	8500	6500	RNAO 50X65X20	168
	58	0.6	61	124	15.7	8500	6500	RNAO 50X65X40	355
55	60	0.6	28.5	66	8	8000	6500	RNAO 55X68X20	166
60	68	1	43.5	85	9.9	7000	5500	RNAO 60X78X20	255
	68	1	75	171	19.8	7000	5500	RNAO 60X78X40	435
65	73	1	57	123	15.2	6500	5500	RNAO 65X85X30	464
70	78	1	60	135	16.7	6000	5000	RNAO 70X90X30	499
80	88	1	71	176	22.4	5500	4200	RNAO 80X100X30	580
90	98	1	61	150	18	5000	4000	RNAO 90X105X26	373
	98	1	68	172	21.3	4900	4000	RNAO 90X110X30	610
100	108	1	71	188	23.1	4500	3700	RNAO 100X120X30	694

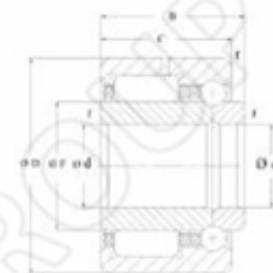
Needle roller / angular contact ball bearings

Single direction
Series NKIA
Double direction
Series NKIB

HMEC



NKIA



NKIB

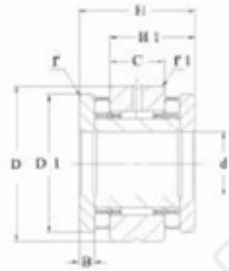
Shaft diameter	Dimensions						Basic Load rating			
	d	F	D	B	C	r	radial dyn. C	radial stat. Co	axial dyn. C	axial stat. Co
						mm	kN	kN	kN	kN
12	12	16	24	16	-	0.3	7.6	8.3	2.7	3.45
	12	16	24	17.5	16	0.3	7.6	8.3	2.7	3.45
15	15	20	28	18	-	0.3	10.6	13.6	2.9	4.2
	15	20	28	20	18	0.3	10.6	13.6	2.9	4.2
17	17	22	30	18	-	0.3	11	14.6	3.15	4.9
	17	22	30	20	18	0.3	11	14.6	3.15	4.9
20	20	25	37	23	-	0.3	21	25.5	4.9	7.4
	20	25	37	25	23	0.3	21	25.5	4.9	7.4
22	22	28	39	23	-	0.3	22.8	29.5	5.3	8.6
	22	28	39	25	23	0.3	22.8	29.5	5.3	8.6
25	25	30	42	23	-	0.3	23.6	31.5	5.4	9.3
	25	30	42	25	23	0.3	23.6	31.5	5.4	9.3
30	30	35	47	23	-	0.3	25	35.5	5.9	11.2
	30	35	47	25	23	0.3	25	35.5	5.9	11.2
35	35	42	55	27	-	0.6	31.5	50	7.4	14.9
	35	42	55	30	27	0.6	31.5	50	7.4	14.9
40	40	48	62	30	-	0.6	43	67	9.2	19.4
	40	48	62	34	30	0.6	43	67	9.2	19.4
45	45	52	68	30	-	0.6	45	73	9.6	21.4
	45	52	68	34	30	0.6	45	73	9.6	21.4
50	50	58	72	30	-	0.6	47	80	10.1	24.3
	50	58	72	34	30	0.6	47	80	10.1	24.3
55	55	63	80	34	-	1	58	100	12.1	29.5
	55	63	80	38	34	1	58	100	12.1	29.5
60	60	68	85	34	-	1	60	108	12.4	32
	60	68	85	38	34	1	60	108	12.4	32
65	65	72	90	34	-	1	61	112	12.8	34
	65	72	90	38	34	1	61	112	12.8	34
70	70	80	100	40	-	1	84	156	16.8	44.5
	70	80	100	45	40	1	84	156	16.8	44.5

Fatigue limit load		Limiting speed	Reference speed ⁽²⁾	Code bearing HMEC	Mass m_0
radial Pu	axial Pu	n_G	n_B		
kN	kN	min ⁻¹	min ⁻¹		kg
1.19	0.128	24000	21000	NKIA 5901	40
1.19	0.128	24000	21000	NKIB 5901	43
1.84	0.156	22000	17000	NKIA 5902	50
1.84	0.156	22000	17000	NKIB 5902	52
1.97	0.181	21000	15000	NKIA 5903	56
1.97	0.181	21000	15000	NKIB 5903	58
3.35	0.275	17000	14000	NKIA 5904	103
3.35	0.275	17000	14000	NKIB 5904	107
3.85	0.32	16000	12000	NKIA 59/22	118
3.85	0.32	16000	12000	NKIB 59/22	122
4.1	0.345	15000	12000	NKIA 5905	130
4.1	0.345	15000	12000	NKIB 5905	134
4.65	0.415	13000	10000	NKIA 5906	147
4.65	0.415	13000	10000	NKIB 5906	151
6.8	0.55	11000	9000	NKIA 5907	243
6.8	0.55	11000	9000	NKIB 5907	247
8.5	0.72	9500	7500	NKIA 5908	315
8.5	0.72	9500	7500	NKIB 5908	320
9.4	0.79	8500	7000	NKIA 5909	375
9.4	0.79	8500	7000	NKIB 5909	380
10.2	0.9	8000	6500	NKIA 5910	380
10.2	0.9	8000	6500	NKIB 5910	385
12.6	1.09	7500	6000	NKIA 5911	550
12.6	1.09	7500	6000	NKIB 5911	555
13.6	1.19	7000	5500	NKIA 5912	590
13.6	1.19	7000	5500	NKIB 5912	595
14.2	1.26	6500	5500	NKIA 5913	635
14.2	1.26	6500	5500	NKIB 5913	640
20.1	1.65	6000	4900	NKIA 5914	960
20.1	1.65	6000	4900	NKIB 5914	965

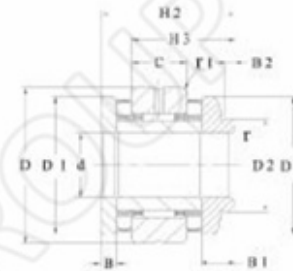
Needle roller / axial cylindrical roller bearings

Series ZARN
ZARN...L
light series

HMEC



ZARN



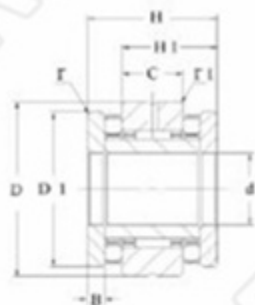
ZARN...L

Shaft diameter	Dimensions														
	d	D	H	H ₁	H ₂	H ₃	C	D ₁	D ₂	D ₃	B	B ₁	B ₂	r	r ₁
														min	min
15	15	45	40	28	-	-	16	35	-	-	7.5	-	-	0.3	0.6
	15	45	-	-	53	41	16	35	24	34	7.5	20.5	11	0.3	0.6
17	17	47	43	29.5	-	-	16	38	-	-	9	-	-	0.3	0.6
	17	47	-	-	57	43.5	16	38	28	38	9	23	11	0.3	0.6
20	20	52	46	31	-	-	16	42	-	-	10	-	-	0.3	0.6
	20	52	-	-	60	45	16	42	30	40	10	24	11	0.3	0.6
25	25	57	50	35	-	-	20	47	-	-	10	-	-	0.3	0.6
	25	57	-	-	65	50	20	47	36	45	10	25	11	0.3	0.6
30	30	62	50	35	-	-	20	52	-	-	10	-	-	0.3	0.6
	30	62	-	-	65	50	20	52	40	50	10	25	11	0.3	0.6
35	35	70	54	37	-	-	20	60	-	-	11	-	-	0.3	0.6
	35	70	-	-	70	53	20	60	45	58	11	27	12	0.3	0.6
40	40	75	54	37	-	-	20	65	-	-	11	-	-	0.3	0.6
	40	75	-	-	70	53	20	65	50	63	11	27	12	0.3	0.6
45	45	80	60	42.5	-	-	25	70	-	-	11.5	-	-	0.3	0.6
	45	80	-	-	75	57.5	25	70	56	68	11.5	26.5	12	0.3	0.6
50	50	90	60	42.5	-	-	25	78	-	-	11.5	-	-	0.3	0.6
	50	90	-	-	78	60.5	25	78	60	78	11.5	29.5	12	0.3	0.6

Basic Load rating				Limiting speed ng grease	Bearing frictional torque M _{RL}	Axial rigidity C _{aL}	Tilting rigidity C _{tL}	Code bearing HMEC	Mass ≈ kg
axial dyn. C	stat. Co	radial dyn. C	stat. Co						
kN		kN		min ⁻¹	Nm	N/mm	Nm/mrad		
24.9	53	13	17.5	2200	0.35	1400	110	ZARN 1545 TN	0.34
24.9	53	13	17.5	2200	0.35	1400	110	ZARN 1545 LTN	0.37
26	57	14	19.9	2100	0.4	1600	160	ZARN 1747 TN	0.37
26	57	14	19.9	2100	0.4	1600	160	ZARN 1747 LTN	0.41
33.5	76	14.9	22.4	2000	0.5	1800	230	ZARN 2052 TN	0.41
33.5	76	14.9	22.4	2000	0.5	1800	230	ZARN 2052 LTN	0.46
33.5	86	22.6	36	1900	0.55	1900	350	ZARN 2557 TN	0.53
33.5	86	22.6	36	1900	0.55	1900	350	ZARN 2557 LTN	0.59
39	101	24.3	41.5	1800	0.65	2200	520	ZARN 3062 TN	0.6
39	101	24.3	41.5	1800	0.65	2200	520	ZARN 3062 LTN	0.75
56	148	26	47	1700	0.9	2600	740	ZARN 3570 TN	0.8
56	148	26	47	1700	0.9	2600	740	ZARN 3570 LTN	0.93
59	163	27.5	53	1600	1	2800	1030	ZARN 4075 TN	0.9
59	163	27.5	53	1600	1	2800	1030	ZARN 4075 LTN	1
61	177	38	74	1500	1.2	3000	1340	ZARN 4580 TN	1.12
61	177	38	74	1500	1.2	3000	1340	ZARN 4580 LTN	1.27
90	300	40	82	1200	2.2	4800	2470	ZARN 5090 TN	1.43
90	300	40	82	1200	2.2	4800	2470	ZARN 5090 LTN	1.78

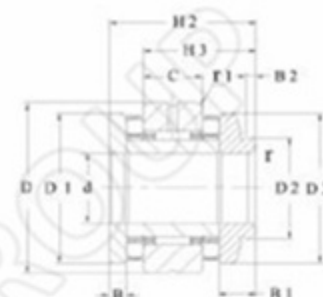
Needle roller / axial cylindrical roller bearings

Series ZARN
ZARN...L
heavy series



ZARN

Shaft diameter	Dimensions							Basic Load rating	
	d	D	B	D1	D2	r	r1	dyn. C	stat. Co
	-0.005 ⁽¹⁾	-0.010 ⁽¹⁾	-0.25			mm	mm	kN	
20	20	62	12.5	52	-	0.3	0.6	22.6	36
20	62	12.5	52	40	0.3	0.6	22.6	36	
25	25	72	12.5	62	-	0.3	0.6	24.3	41.5
25	72	12.5	62	48	0.3	0.6	24.3	41.5	
30	30	80	14	68	-	0.3	0.6	26	47
30	80	14	68	52	0.3	0.6	26	47	
35	35	85	14	73	-	0.3	0.6	27.5	53
35	85	14	73	60	0.3	0.6	27.5	53	
40	40	90	16	78	-	0.3	0.6	38	74
40	90	16	78	60	0.3	0.6	38	74	
45	45	105	17.5	90	-	0.3	0.6	40	82
45	105	17.5	90	70	0.3	0.6	40	82	
50	50	110	17.5	95	-	0.3	0.6	42	90
50	110	17.5	95	75	0.3	0.6	42	90	
55	55	115	17.5	100	-	0.3	0.6	44	98
55	115	17.5	100	80	0.3	0.6	44	98	
60	60	120	17.5	105	-	0.3	0.6	44.5	92
60	120	17.5	105	90	0.3	0.6	44.5	92	
65	65	125	17.5	110	-	0.3	0.6	54	104
65	125	17.5	110	90	0.3	0.6	54	104	
70	70	130	17.5	115	-	0.3	0.6	56	119
70	130	17.5	115	100	0.3	0.6	56	119	
75	75	155	21	135	-	0.3	1	75	139
75	155	21	135	115	0.3	1	75	139	
90	90	180	22.5	160	-	0.3	1	101	218
90	180	22.5	160	130	0.3	1	101	218	



ZARN.L

Limiting speed	Bearing frictional torque	Axial rigidity	Tilting rigidity	Code bearing	Mass
n_g grease	M_{RL}	C_{aL}	C_{kL}	HMEC	m
min ⁻¹	Nm	N/μm	Nm/mrad		kg
1500	1.3	2300	400	ZARN 2062 TN	0.87
1500	1.3	2300	400	ZARN 2062 LTN	0.99
1400	1.6	3000	800	ZARN 2572 TN	1.17
1400	1.6	3000	800	ZARN 2572 LTN	1.32
1300	2.1	3300	1100	ZARN 3080 TN	1.5
1300	2.1	3300	1100	ZARN 3080 LTN	1.7
1250	2.3	3500	1300	ZARN 3585 TN	1.65
1250	2.3	3500	1300	ZARN 3585 LTN	1.8
1200	2.5	3800	1800	ZARN 4090 TN	2.09
1200	2.5	3800	1800	ZARN 4090 LTN	2.39
1150	3.5	4000	2100	ZARN 45105 TN	3.02
1150	3.5	4000	2100	ZARN 45105 LTN	3.42
1100	3.8	4600	2900	ZARN 50110 TN	3.3
1100	3.8	4600	2900	ZARN 50110 LTN	3.75
1000	4	4900	3600	ZARN 55115 TN	3.5
1000	4	4900	3600	ZARN 55115 LTN	4
950	4.2	5300	4300	ZARN 60120 TN	3.7
950	4.2	5300	4300	ZARN 60120 LTN	4.85
900	4	4800	4000	ZARN 60125 TN	4
900	4	4800	4000	ZARN 60125 LTN	4.6
800	4.8	5800	6000	ZARN 70130 TN	4.1
800	4.8	5800	6000	ZARN 70130 LTN	4.85
700	8	6600	8500	ZARN 75155 TN	7.9
700	8	6600	8500	ZARN 75155 LTN	9.1
700	10.5	7700	14500	ZARN 90180 TN	11.8
700	10.5	7700	14500	ZARN 90180 LTN	13.2

Needle roller / axial cylindrical roller bearings
suitable for flanged mounting

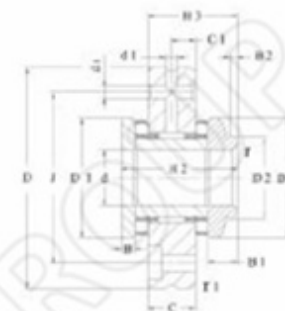
Series ZARF
ZARF...L
light series



ZARF

Shaft diameter	Dimensions																
	d	D	H	H ₁	H ₂	H ₃	C	D ₁	D ₂	D ₃	B	B ₁	B ₂	r	r ₁	J	
	-0.005 ⁽¹⁾ -0.010 ⁽²⁾											-0.25			min	min	
15	15	60	40	26	-	-	14	35	-	-	7.5	-	-	0.3	0.6	46	
	15	60	-	-	53	39	14	35	24	34	7.5	20.5	11	0.3	0.6	46	
17	17	62	43	27.5	-	-	14	38	-	-	9	-	-	0.3	0.6	48	
	17	62	-	-	57	41.5	14	38	28	38	9	23	11	0.3	0.6	48	
20	20	68	46	29	-	-	14	42	-	-	10	-	-	0.3	0.6	53	
	20	68	-	-	60	43	14	42	30	40	10	24	11	0.3	0.6	53	
25	25	75	50	33	-	-	18	47	-	-	10	-	-	0.3	0.6	58	
	25	75	-	-	65	48	18	47	36	45	10	25	11	0.3	0.6	58	
30	30	80	50	33	-	-	18	52	-	-	10	-	-	0.3	0.6	63	
	30	80	-	-	65	48	18	52	40	50	10	25	11	0.3	0.6	63	
35	35	90	54	35	-	-	18	60	-	-	11	-	-	0.3	0.6	73	
	35	90	-	-	70	51	18	60	45	58	11	27	12	0.3	0.6	73	
40	40	100	54	35	-	-	18	62	-	-	11	-	-	0.3	0.6	80	
	40	100	-	-	70	51	18	62	50	63	11	27	12	0.3	0.6	80	
45	45	105	60	40	-	-	22.5	70	-	-	11.5	-	-	0.3	0.6	85	
	45	105	-	-	75	55	22.5	70	56	68	11.5	26.5	12	0.3	0.6	85	
50	50	115	60	40	-	-	22.5	78	-	-	11.5	-	-	0.3	0.6	90	
	50	115	-	-	78	58	22.5	78	60	78	11.5	26.5	12	0.3	0.6	90	

HMEC



ZARF...L

Basic Load rating				Limiting speed ng grease	Bearing frictional torque M _{RL}	Axial rigidity C _{aL}	Tilting rigidity C _{tL}	Code bearing HMEC	Mass m
axial dyn. C	stat. Co	radial dyn. C	stat. Co						
kN		kN		min ⁻¹	Nm	N/mm	Nm/mrad		kg
24.9	53	13	17.5	2200	0.35	1400	110	ZARF 1560 TN	0.42
24.9	53	13	17.5	2200	0.35	1400	110	ZARF 1560 LTN	0.45
26	57	14	19.9	2100	0.4	1600	160	ZARF 1762 TN	0.49
26	57	14	19.9	2100	0.4	1600	160	ZARF 1762 LTN	0.52
33.5	76	14.9	22.4	2000	0.5	1800	230	ZARF 2068 TN	0.56
33.5	76	14.9	22.4	2000	0.5	1800	230	ZARF 2068 LTN	0.61
35.5	86	22.6	36	1900	0.55	1900	350	ZARF 2575 TN	0.78
35.5	86	22.6	36	1900	0.55	1900	350	ZARF 2575 LTN	0.84
39	101	24.3	41.5	1800	0.65	2200	520	ZARF 3080 TN	0.85
39	101	24.3	41.5	1800	0.65	2200	520	ZARF 3080 LTN	0.9
56	148	26	47	1700	0.9	2600	740	ZARF 3590 TN	1.12
56	148	26	47	1700	0.9	2600	740	ZARF 3590 LTN	1.25
59	163	27.5	53	1600	1	2800	1030	ZARF 40100 TN	1.35
59	163	27.5	53	1600	1	2800	1030	ZARF 40100 LTN	1.45
61	177	38	74	1500	1.2	3000	1340	ZARF 45105 TN	1.7
61	177	38	74	1500	1.2	3000	1340	ZARF 45105 LTN	1.85
90	300	40	82	1200	2.2	4800	2470	ZARF 50115 TN	2.1
90	300	40	82	1200	2.2	4800	2470	ZARF 50115 LTN	2.45

Needle roller / axial cylindrical roller bearings
suitable for flanged mounting

Series ZARF
ZARF...L
heavy series



ZARF

Shaft diameter	Dimensions							Basic Load rating	
	d	D	B	D ₁	D ₂	r	r ₁	dyn. C	stat. C ₀
	-0.005 ⁽¹⁾	-0.010 ⁽¹⁾	-0.25			mm	mm	kN	
20	20	80	12.5	52	-	0.3	0.6	22.6	36
	20	80	12.5	52	40	0.3	0.6	22.6	36
25	25	90	12.5	62	-	0.3	0.6	24.3	41.5
	25	90	12.5	62	48	0.3	0.6	24.3	41.5
30	30	105	14	68	-	0.3	0.6	26	47
	30	105	14	68	52	0.3	0.6	26	47
35	35	110	14	73	-	0.3	0.6	27.5	53
	35	110	14	73	60	0.3	0.6	27.5	53
40	40	115	16	78	-	0.3	0.6	38	74
	40	115	16	78	60	0.3	0.6	38	74
45	45	130	17.5	90	-	0.3	0.6	40	82
	45	130	17.5	90	70	0.3	0.6	40	82
50	50	140	17.5	95	-	0.3	0.6	42	90
	50	140	17.5	95	75	0.3	0.6	42	90
55	55	145	17.5	100	-	0.3	0.6	44	98
	55	145	17.5	100	80	0.3	0.6	44	98
60	60	150	17.5	105	-	0.3	0.6	44.5	92
	60	150	17.5	105	90	0.3	0.6	44.5	92
65	65	155	17.5	110	-	0.3	0.6	54	104
	65	155	17.5	110	90	0.3	0.6	54	104
70	70	160	17.5	115	-	0.3	0.6	56	119
	70	160	17.5	115	100	0.3	0.6	56	119
75	75	185	21	135	-	0.3	1	75	139
	75	185	21	135	115	0.3	1	75	139
90	90	210	22.5	160	-	0.3	1	101	218
	90	210	22.5	160	130	0.3	1	101	218

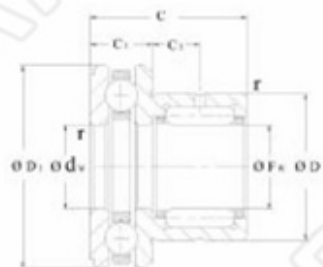


ZARF_L

Limiting speed n _G grease min ⁻¹	Bearing frictional torque M _{RL} Nm	Axial rigidity C _{aL} N/μm	Tilting rigidity C _{kL} Nm/mrad	Code bearing HMEC	Mass m kg
1500	1.3	2300	400	ZARF 2080 TN	1.1
1500	1.3	2300	400	ZARF 2080 LTN	1.22
1400	1.6	3000	800	ZARF 2590 TN	1.6
1400	1.6	3000	800	ZARF 2590 LTN	1.75
1300	2.1	3300	1100	ZARF 30105 TN	1.95
1300	2.1	3300	1100	ZARF 30105 LTN	2.15
1250	2.3	3500	1300	ZARF 35110 TN	1.6
1250	2.3	3500	1300	ZARF 35110 LTN	1.85
1200	2.5	3800	1800	ZARF 40115 TN	2.7
1200	2.5	3800	1800	ZARF 40115 LTN	3
1150	3.5	4000	2100	ZARF 45130 TN	3.9
1150	3.5	4000	2100	ZARF 45130 LTN	4.3
1100	3.8	4600	2900	ZARF 50140 TN	4.2
1100	3.8	4600	2900	ZARF 50140 LTN	4.65
1000	4	4900	3800	ZARF 55145 TN	4.5
1000	4	4900	3600	ZARF 55145 LTN	5
950	4.2	5300	4300	ZARF 60150 TN	4.7
950	4.2	5300	4300	ZARF 60150 LTN	5.35
900	4	4800	4000	ZARF 65155 TN	5.1
900	4	4800	4000	ZARF 65155 LTN	5.7
800	4.8	5800	6000	ZARF 70160 TN	5.2
800	4.8	5800	6000	ZARF 70160 LTN	5.95
700	8	6600	8500	ZARF 75185 TN	9.4
700	8	6600	8500	ZARF 75185 LTN	10.6
700	10.5	7700	14500	ZARF 90210 TN	13.7
700	10.5	7700	14500	ZARF 90210 LTN	15.1

Needle roller / axial ball bearings
with or without end cap

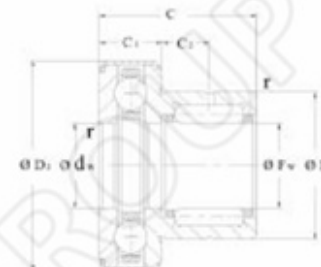
Series NKX
NKX...Z



NKX

Shaft Diameter mm	Dimensions								
	Fw mm	D	D1 max	D2 max	C -0.25	C1 -0.2	C2	Dw E8	r min
10	10	19	24.1	25.2	23	9	6.5	10	0.3
12	12	21	26.1	27.2	23	9	6.5	12	0.3
15	15	24	28.1	29.2	23	9	6.5	15	0.3
17	17	26	30.1	31.2	25	9	8	17	0.3
20	20	30	35.1	36.2	30	10	10.5	20	0.3
25	25	37	42.1	43.2	30	11	9.5	25	0.6
30	30	42	47.1	48.2	30	11	9.5	30	0.6
35	35	47	52.1	53.2	30	12	9	35	0.6
40	40	52	60.1	61.2	32	13	10	40	0.6
45	45	58	65.2	66.5	32	14	9	45	0.6
50	50	62	70.2	71.5	35	14	10	50	0.6
60	60	72	85.2	86.5	40	17	12	60	1
70	70	85	95.2	96.5	40	18	11	70	1

HMEC

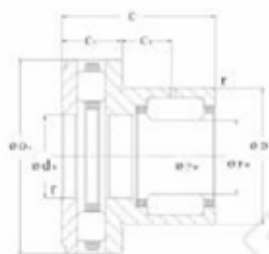


NKX...Z

Basic Load Ratings				Limiting speed NG min ⁻¹	Code bearing HMEC	Mass ≈ g	
Radial dyn. C KN	stat. Co	Axial dyn. C	stat. Co				with retaining end cap
6.2	7.8	10	14	12000	NKX10TN	NKX10ZTN	36
9	11	10.3	15.4	11000	NKX12	NKX12Z	40
10.7	12.7	10.5	16.8	9500	NKX15	NKX15Z	47
11.9	15	10.8	18.2	8500	NKX17	NKX17Z	55
16.4	23.8	14.3	24.7	7500	NKX20	NKX20Z	90
18.8	30.5	19.6	37.5	6000	NKX25	NKX25Z	132
22.6	36	20.4	42	5000	NKX30	NKX30Z	148
24.3	41.5	21.2	47	4600	NKX35	NKX35Z	168
26	47	27	63	4000	NKX40	NKX40Z	208
27.5	53	28	69	3600	NKX45	NKX45Z	265
38	74	29	75	3300	NKX50	NKX50Z	300
42	90	41.5	113	2800	NKX60	NKX60Z	380
44.5	92	43	127	2400	NKX70	NKX70Z	520

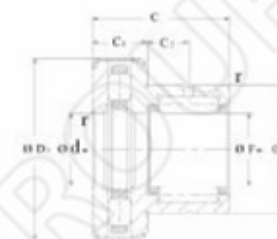
Needle roller / axial cylindrical roller bearings
with or without end cap
Series NKXR
NKXR...Z

HMEC



NKXR

Shaft Diameter mm	Dimensions									
	Fw mm	D	D1 max	D2 max	C -0.25	C1 -0.2	C2	dw E8	r min	
15	15	24	28.1	29.2	23	9	6.5	15	0.3	
17	17	26	30.1	31.2	25	9	8	17	0.3	
20	20	30	35.1	36.2	30	10	10.5	20	0.3	
25	25	37	42.1	43.2	30	11	9.5	25	0.6	
30	30	42	47.1	48.2	30	11	9.5	30	0.6	
35	35	47	52.1	53.2	30	12	9	35	0.6	
40	40	52	60.1	61.2	32	13	10	40	0.6	
45	45	58	65.2	66.5	32	14	9	45	0.6	
50	50	62	70.2	71.5	35	14	10	50	0.6	



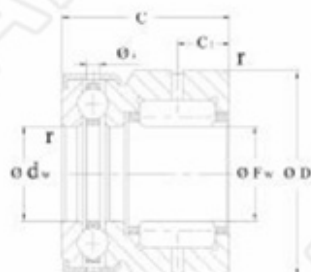
NKXR...Z

Basic Load Ratings				Limiting speed NG min ⁻¹	Code bearing HMEC	Mass ≈ g	
Radial dyn. C KN	stat. Co	Axial dyn. C	stat. Co				with retaining end cap
10.7	12.7	14.4	28.5	13000	NKXR15	NKXR15Z	42
11.9	15.0	15.9	33.5	12000	NKXR17	NKXR17Z	50
16.4	23.8	24.9	53.0	10000	NKXR20	NKXR20Z	80
18.8	30.5	33.5	76.0	8500	NKXR25	NKXR25Z	120
22.6	36.0	35.5	86.0	7500	NKXR30	NKXR30Z	135
24.3	41.5	39.0	101.0	6500	NKXR35	NKXR35Z	157
26.0	47.0	56.0	148.0	6000	NKXR40	NKXR40Z	204
27.5	53.0	59.0	163.0	5000	NKXR45	NKXR45Z	244
38.0	74.0	61.0	177.0	4800	NKXR50	NKXR50Z	268

Needle roller / axial ball bearings

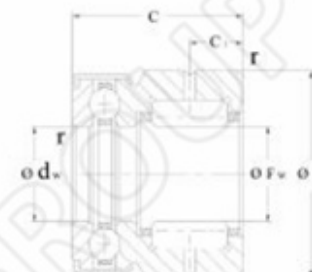
Series NX
NX...Z

HMEC



NX (for oil lubrication)

Shaft diameter	Dimensions					
	Fw	D	C	C1	dw E8	r mm
mm	mm		+0.25			
7	7	14	18	4.7	7	0.3
10	10	19	18	4.7	10	0.3
12	12	21	18	4.7	12	0.3
15	15	24	28	8	15	0.3
17	17	26	28	8	17	0.3
20	20	30	28	8	20	0.3
25	25	37	30	8	25	0.3
30	30	42	30	10	30	0.3
35	35	47	30	10	35	0.3



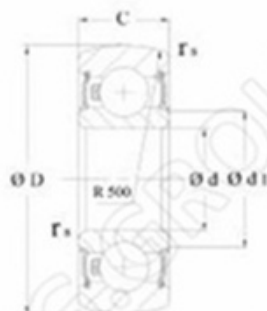
NX...Z (for grease lubrication)

Basic Load Ratings				Limiting speed rpm	Code bearing HMEC for Oil Lubrication	Code bearing HMEC for Grease Lubrication	Mass ≈ g
Radial dyn. C	stat. Co	Axial dyn. C	stat. Co				
2.850	2.650	3.150	4.300	15000	NX7TN	NX7ZTN	14
4.450	3.700	4.600	7.200	11000	NX10	NX10Z	25
4.800	4.300	4.850	8.200	9500	NX12	NX12Z	28
10.700	12.700	5.600	10.400	8000	NX15	NX15Z	48
11.900	15.000	5.800	11.500	7500	NX17	NX17Z	53
13.000	17.500	7.000	14.700	6500	NX20	NX20Z	68
14.900	22.400	11.100	24.300	4900	NX25	NX25Z	115
22.600	36.000	11.700	28.000	4300	NX30	NX30Z	130
24.300	41.500	12.400	32.500	3700	NX35	NX35Z	160

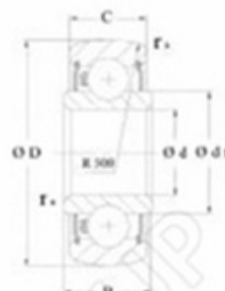
Track rollers



Yoke Type Track Rollers
angular-contact ball
single row
series
LR 6...NPPU
LR 60...NPPU
LR 2...NPPU
LR 2...NPP
 (with cylindrical
 outside surface)
LR 2...RRU



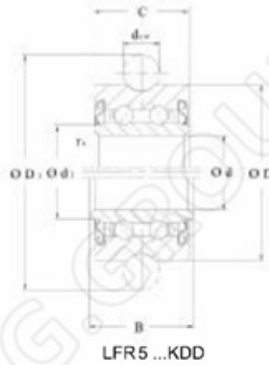
LR6...NPPU , LR60...NPPU , LR2...NPPU



LR2...RRU

Outside diameter	Dimensions			Basic Load rating	Speed rating	Code bearing	Mass			
	d	D	C					dyn. Cr	stat. Cor	HMEC
mm				kN						
13	4	13	4	6	0.2	860	350	24000	LR 604 NPPU	10
16	5	16	5	7.1	0.2	1190	490	23000	LR 605 NPPU	10
19	6	19	6	8.7	0.3	1740	700	22000	LR 606 NPPU	10
22	7	22	6	9	0.3	2130	870	20000	LR 607 NPPU	10
24	8	24	7	10	0.3	2750	1250	19000	LR 608 NPPU	20
28	10	28	8	14.6	0.3	3650	1700	17000	LR 6000 NPPU	20
30	12	30	8	16.6	0.3	4300	2100	16000	LR 6001 NPPU	30
32	10	32	9	15.4	0.6	4350	2130	13000	LR 200 NPPU	50
	10	32	9	15.4	0.6	4350	2130	13000	LR 200 NPP	50
35	12	35	10	17.1	0.6	5600	2700	12000	LR 201 NPPU	50
	12	35	10	17.1	0.6	5600	2700	12000	LR 201 NPP	50
	12	35	10	15	18.5	0.6	5500	2700	9000	LR 201 RRU
40	15	40	11	20	0.6	6500	3300	11000	LR 202 NPPU	70
	15	40	11	20	0.6	6500	3300	11000	LR 202 NPP	70
	15	40	11	14.4	21.5	0.6	6500	3300	8500	LR 202 RRU
47	17	47	12	22.5	0.6	8400	4400	9000	LR 203 NPPU	110
	17	47	12	22.5	0.6	8400	4400	9000	LR 203 NPP	110
52	20	52	14	26.5	1	10500	5600	8000	LR 204 NPPU	150
	20	52	14	26.5	1	10500	5600	8000	LR 204 NPP	150
62	25	62	15	30.3	1	12500	7100	7000	LR 205 NPPU	230
	25	62	15	30.3	1	12500	7100	7000	LR 205 NPP	230
72	30	72	16	37.4	1	16600	9600	5500	LR 206 NPPU	330
	30	72	16	37.4	1	16600	9600	5500	LR 206 NPP	330
80	35	80	17	42.4	1.1	20200	11900	4500	LR 207 NPPU	400
	35	80	17	42.4	1.1	20200	11900	4500	LR 207 NPP	400
90	45	90	19	53.2	1.1	22500	13700	3600	LR 209 NPPU	500
	45	90	19	53.2	1.1	22500	13700	3600	LR 209 NPP	500

**Yoke Type Track Rollers
angular-contact ball
single row
series LFR 5...KDD**



Outside Dimensions							Basic load rating		Fatigue load	Code bearing	Mass	
diameter d	D	C	B	d_{LW}	d_1	D_1	$r_{1s \min}$	dyn. C_r	stat. C_{or}	P_{UW}	HMEC	\approx g
mm								KN		N		
17	5	17	7	8	6	8	0.2	1610	890	37	LFR 50/5 KDD	10
24	8	24	11	11	6	10.5	0.3	4100	2280	96	LFR 50/8 KDD	20
35	12	35	15.9	15.9	10	17.1	0.6	8500	5100	211	LFR 5201 KDD	80
	12	35	15.9	15.9	12	17.1	0.6	8300	5000	211	LFR 5201-12 KDD	80
42	12	42	19	19	10	18	0.6	13000	7700	325	LFR 5301 KDD	100
47	15	47	19	19	10	21.7	1	14500	9200	385	LFR 5302 KDD	170
52	20	52	20.6	22.6	16	26.5	1	14600	9500	390	LFR 5204-16 KDD	230
	25	72	23.8	25.8	20	37.4	1	22800	16200	670	LFR 5206-20 KDD	250
72	25	72	23.8	25.8	25	37.4	1	22400	15900	670	LFR 5206-25 KDD	250
	30	80	27	29	30	42.4	1	28500	20800	860	LFR 5207-30 KDD	660
98	40	98	36	38	40	48.4	1.1	38500	29000	1210	LFR 5208-40 KDD	1360

**Yoke type track rollers
double row angular contact ball**

Series LR 50..NPPU

LR 52..NPPU

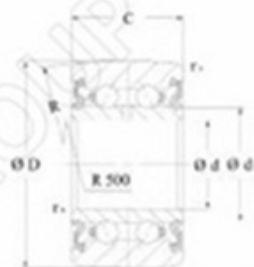
LR 53..NPPU

LR 52..KDDU

LR 53..KDDU

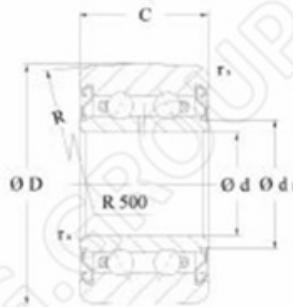
LR 52..KDD(with cylindrical outside surface)

HMEC



LR 50..NPPU, LR 52..NPPU, LR 53..NPPU

Outside Dimensions				Load rating			Speed rating	Code bearing	Mass			
diameter d	D	C	B	d ₁	f _{s min}	f _{ts min}	dyn. C _r	stat. C _{or}	n _D	HMEC	g	
mm												
kN												
min ⁻¹												
17	5	17	7	-	8.1	0.2	-	1650	950	12000	LR 50/5 NPPU	10
19	6	19	9	-	8.3	0.3	-	2650	1310	11000	LR 50/6 NPPU	20
22	7	22	10	-	9	0.3	-	3300	1690	10000	LR 50/7 NPPU	20
24	8	24	11	-	10.5	0.3	-	4200	2360	10000	LR 50/8 NPPU	30
28	10	28	12	-	13.5	0.3	-	4750	2850	9000	LR 5000 NPPU	30
30	12	30	12	-	15.5	0.3	-	4950	3100	8500	LR 5001 NPPU	30
32	10	32	14	-	15.4	0.6	-	6800	4050	11000	LR 5200 KDDU	70
	10	32	14	-	15.4	0.6	-	6800	4050	11000	LR 5200 KDD	70
	10	32	14	-	15.4	0.6	-	6800	4050	8000	LR 5200 NPPU	70
35	15	35	13	-	20.4	0.3	-	6500	4100	7000	LR 5002 NPPU	50
	12	35	15.9	-	17.1	0.6	-	8600	5100	10000	LR 5201 KDDU	80
	12	35	15.9	-	17.1	0.6	-	8600	5100	10000	LR 5201 KDD	80
	12	35	15.9	-	17.1	0.6	-	8600	5100	7500	LR 5201 NPPU	80
40	17	40	14	-	21.6	0.3	-	7700	5200	6000	LR 5003 NPPU	70
	15	40	15.9	-	20	0.6	-	9800	6200	10000	LR 5202 KDDU	110
	15	40	15.9	-	20	0.6	-	9800	6200	10000	LR 5202 KDD	110
	15	40	15.9	-	20	0.6	-	9800	6200	7000	LR 5202 NPPU	110
47	20	47	16	-	25.2	0.6	-	11500	7700	5500	LR 5004 NPPU	120
	17	47	17.5	-	22.5	0.6	-	12600	8200	7500	LR 5203 KDDU	170
	17	47	17.5	-	22.5	0.6	-	12600	8200	7500	LR 5203 KDD	170
	17	47	17.5	-	22.5	0.6	-	12600	8200	5500	LR 5203 NPPU	170
52	25	52	16	-	29.8	0.6	-	11600	8100	4700	LR 5005 NPPU	150
	20	52	20.6	-	26.5	1	-	15800	10500	7000	LR 5204 KDDU	230
	20	52	20.6	-	26.5	1	-	15800	10500	7000	LR 5204 KDD	230
	20	52	20.6	-	26.5	1	-	15800	10500	5000	LR 5204 NPPU	230
	17	52	22.2	-	23.5	1	-	17200	11100	4700	LR 5303 NPPU	210
62	30	62	19	-	35.5	1	-	15800	11800	4000	LR 5006 NPPU	250
	25	62	20.6	-	30.3	1	-	18500	13000	6500	LR 5205 KDDU	340
	25	62	20.6	-	30.3	1	-	18500	13000	6500	LR 5205 KDD	340
	25	62	20.6	-	30.3	1	-	18500	13000	4500	LR 5205 NPPU	340

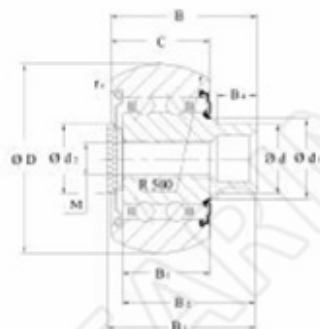


LR 52..KDDU
LR 53..KDDU

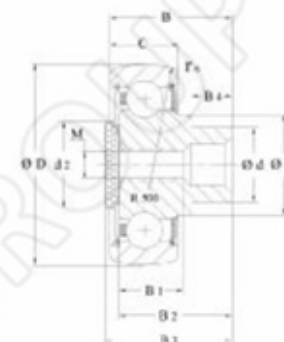
Outside diameter	Dimensions				Load rating			Speed rating	Code bearing	Mass			
	d	D	C	B	d ₁	f _{s min}	r _{1s min}	dyn. C _r	stat. C _{or}	n _D	HMEC	≈ g	
mm											kN	min ⁻¹	
62	20	62	22.2	-	29	1.1	-	21100	14500	6500	LR 5304 KDDU	340	
	20	62	22.2	-	29	1.1	-	21100	14500	4500	LR 5304 NPPU	340	
68	35	68	20.2	-	41.7	1	-	17600	13100	4300	LR 5007 NPPU	300	
72	30	72	23.8	-	37.4	1	-	24600	21400	5000	LR 5206 KDDU	510	
	30	72	23.8	-	37.4	1	-	24600	21400	5000	LR 5206 KDD	510	
	30	72	23.8	-	37.4	1	-	24600	21400	3500	LR 5206 NPPU	510	
75	25	72	25.4	-	34.4	1.1	-	27500	19500	5500	LR 5305 KDDU	500	
	25	72	25.4	-	34.4	1.1	-	27500	19500	3900	LR 5305 NPPU	500	
80	35	80	27	-	42.4	1.1	-	30500	22400	3900	LR 5207 KDDU	660	
	35	80	27	-	42.4	1.1	-	30500	22400	3900	LR 5207 KDD	660	
	35	80	27	-	42.4	1.1	-	30500	22400	2800	LR 5207 NPPU	660	
	30	80	30.2	-	41.4	1.1	-	36500	26500	4300	LR 5306 KDDU	670	
85	30	80	30.2	-	41.4	1.1	-	36500	26500	3100	LR 5306 NPPU	670	
	40	85	30.2	-	48.4	1.1	-	34500	25500	3500	LR 5208 KDDU	750	
	40	85	30.2	-	48.4	1.1	-	34500	25500	3500	LR 5208 KDD	750	
90	40	85	30.2	-	48.4	1.1	-	34500	25500	2500	LR 5208 NPPU	750	
	35	90	34.9	-	47.7	1.5	-	44500	33000	3600	LR 5307 KDDU	970	
100	35	90	34.9	-	47.7	1.5	-	44500	33000	2500	LR 5307 NPPU	970	
	40	100	36.5	-	52.4	1.5	-	56000	42000	3300	LR 5308 KDDU	1200	
100	40	100	36.5	-	52.4	1.5	-	56000	42000	2300	LR 5308 KDD	1200	
	40	100	36.5	-	52.4	1.5	-	56000	42000	2300	LR 5308 NPPU	1200	

**Stude Type Track Rollers
angular-contact ball**

Series **ZL 2...NPDU**
ZL 52...KRDU



ZL 52...KRDU

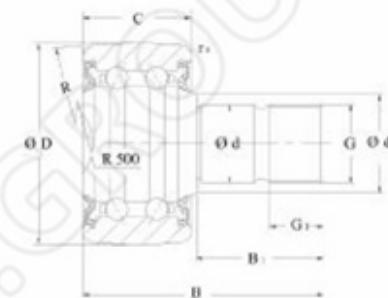


ZL 2...NPDU

Outside diameter	Dimensions											
	D	d	C	B	B ₁	B ₂	B ₃	B ₄	M	d ₁	d ₂	r ₃ min
	-0.05	+6										
	mm											
35	35	14	15.9	32.5	14	31	33.2	14	M8	17.1	18	0.6
40	40	16	11	23	15	21.5	23.8	10	M8	20	18	0.6
	40	16	15.9	35.4	15	34	36.2	16	M8	20	18	0.6
47	47	18	12	26	16	24.5	26.5	12	M8	22.9	21	1
	47	18	17.5	39	15	37.5	39.5	18	M8	22.9	21	1
52	52	20	14	30	18	28.5	30.7	14	M10	26.8	21	1
	52	20	20.6	44.6	18	43	45.3	20	M10	26.8	21	1
62	62	25	15	33	19	31	33.8	16	M10	30.3	21	1
	62	25	20.6	49.6	18	47.5	50.4	25	M10	30.3	21	1
72	72	30	23.8	58.3	20	56.5	59	30	M16	37.3	26	1
80	80	35	27	68.5	20	66.5	69.2	36	M16	42.4	26	1.1

Basic load ratings		Speed ¹⁾	Code bearing	Mass
dyn. Cw	stat. Cow	n _D	HMEC	≈
N		min ⁻¹		g
8600	5100	7500	ZL 5201 KRDU	90
6500	3300	8500	ZL 202 NPDU	80
9800	6200	7000	ZL 5202 KRDU	120
8400	4400	6500	ZL 203 NPDU	120
12600	8200	5500	ZL 5203 KRDU	190
10500	5600	6000	ZL 204 NPDU	170
15800	10500	5000	ZL 5204 KRDU	250
12500	7100	5500	ZL 205 NPDU	250
18500	13000	4500	ZL 5205 KRDU	380
24600	17700	3500	ZL 5206 KRDU	550
30500	22400	2800	ZL 5207 KRDU	710

**Stud Type Track Rollers
angular-contact ball
Series KR 52...NPPU**



KR 52...NPPU

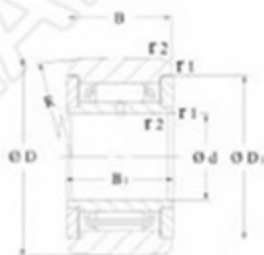
Outside diameter	Dimensions								r_s min	Tightening torque M_A Nm
	D -0.05 mm	d +0.06 mm	C	B	B ₁	G	G ₁	d ₁		
35	35	12	15.9	49.2	32.5	M12X1.5	17	17.1	0.6	45
40	40	16	15.9	53.2	36.5	M16X1.5	19	20	0.6	70
47	47	18	17.5	58.8	40.5	M18X1.5	21	22.9	1	115
52	52	20	20.6	63.5	41.5	M20X1.5	21	26.8	1	160
62	62	24	20.6	70.9	49.5	M24X1.5	25	30.3	1	290
72	72	24	23.8	74.1	49.5	M24X1.5	25	37.3	1	290
80	80	30	27	91	63	M30X1.5	32	42.4	1.1	600

Basic load ratings		Speed ¹⁾	Code bearing	Mass
dyn. C _w	stat. C _{0w}	n_D min ⁻¹	HMEC	g
8600	5100	7500	KR 5201 NPPU	120
9800	6200	7000	KR 5202 NPPU	190
12600	8200	5500	KR 5203 NPPU	290
15800	10500	5000	KR 5204 NPPU	380
18500	13000	4500	KR 5205 NPPU	580
24600	17700	3500	KR 5206 NPPU	800
30500	22400	2800	KR 5207 NPPU	1200

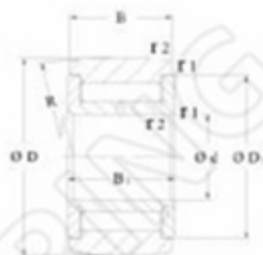
Yoke type track rollers with axial guidance

Series NATR
 NATV(full complement)
 NUTR(full complement)
 STO..2Z

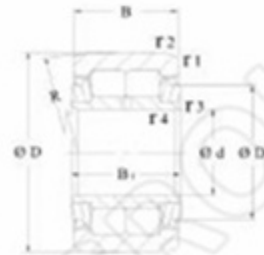
HMEC



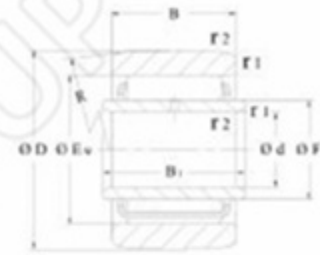
NATR



NATV



NUTR



STO..2Z

Outside diameter	Dimensions								As bearing	
	D	d	B	B ₁	D ₁	r ₁ /r ₂ mm	r ₁ r ₂ mm	R	dyn. Cr	stat. Cor
mm	kN									
16	16	5	11	12	12	0.1	--	500	3.7	3.9
	16	5	11	12	12	0.1	--	500	6	8.8
19	19	6	11	12	14	0.1	--	500	4.15	4.75
	19	6	11	12	14	0.1	--	500	6.9	11
	19	6	13.8	14	15	0.3	--	500	5.1	6.55
24	24	8	14	15	19	0.3	--	500	6.6	7.8
	24	8	14	15	19	0.3	--	500	9.7	16
	24	8	13.8	14	18	0.3	--	500	5.6	7.65
30	30	10	14	15	23	0.6	--	500	7.8	9.65
	30	10	14	15	23	0.6	--	500	11.4	19.3
	30	10	15.8	16	23	0.3	--	500	10	10.8
32	32	12	14	15	25	0.6	--	500	8.4	10.8
	32	12	14	15	25	0.6	--	500	12.3	22
	32	12	15.8	16	25	0.3	--	500	10.6	12
35	35	15	18	19	27	0.6	--	500	12.3	19.3
	35	15	18	19	27	0.6	--	500	17.2	35.5
	35	15	18	19	20	0.6	0.3	500	24.2	28.5
	35	15	15.8	16	30	0.3	--	500	12.3	15.6

As track roller		Max permissible radial load		Speed rating	Code bearing		Mass
dyn. C _{1R}	stat. C _{01R}	dyn. F _{r max}	stat. F _{0r max}		HMEC with sphered outer ring	HMEC with cylindrical outer ring	
				min ⁻¹			kg
3.1	3.2	2.9	4.1	22000	NATR 5	NATR 5 X	0.02
4.7	6.5	4	5.7	11000	NATV 5	NATV 5 X	0.02
3.25	3.8	3.45	5.5	20000	NATR 6	NATR 6 X	0.02
5.3	8	5.1	7.4	10000	NATV 6	NATV 6 X	0.02
4	5.1	4.2	5.85	18000	STO6.2Z	STO6.2Z X	0.03
5.3	6.1	4.8	7.35	17000	NATR 8	NATR 8 X	0.04
7.4	11.4	7.4	10.4	8500	NATV 8	NATV 8 X	0.04
4.65	6.4	7.1	7.5	16000	STO8.2Z	STO8.2Z X	0.04
6.4	8	7.1	11.2	15000	NATR 10	NATR 10 X	0.06
8.9	14.6	11	15.6	7500	NATV 10	NATV 10 X	0.07
8.3	8.8	8.15	11	12000	STO10.2Z	STO10.2Z X	0.07
6.6	8.5	7.1	10	14000	NATR 12	NATR 12 X	0.07
9.3	15.3	10.6	15	7000	NATV 12	NATV 12 X	0.07
8.3	9.3	8	11.2	10000	STO12.2Z	STO12.2Z X	0.06
9.5	13.7	11.4	16.3	13000	NATR 15	NATR 15 X	0.10
12.3	23.2	14.6	20.8	6700	NATV 15	NATV 15 X	0.11
16.8	17.6	8.7	12.2	5600	NUTR 15	NUTR 15 X	0.10
8.8	10.6	7.8	6.95	7000	STO15.2Z	STO15.2Z X	0.09

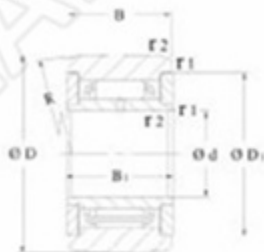
Yoke type track rollers with axial guidance

Series NATR

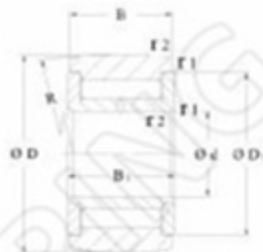
NATV(full complement)

NUTR(full complement)

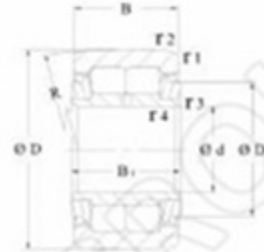
STO..2Z



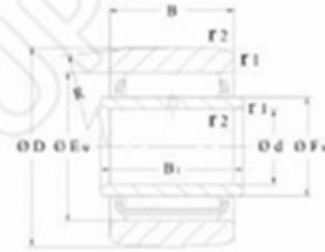
NATR



NATV



NUTR



STO..2Z

HMEC

Outside diameter	Dimensions							As bearing		
	D	d	B	B ₁	D ₁	r _{1/2} mm	r _{1/4} mm	R	dyn. Cr	stat. Cor
mm	kN									
40	40	17	20	21	32	1	--	500	13.4	20.4
	40	17	20	21	32	1	--	500	19.4	40
	40	17	20	21	22	1	0.3	500	26	32
	40	17	19.8	20	33	0.3	--	500	18.3	23.6
42	42	15	18	19	20	0.6	0.3	500	24.2	28.5
	47	20	24	25	37	1	--	500	18.7	32.5
47	47	20	24	25	37	1	--	500	26	60
	47	17	20	21	22	1	0.3	500	26	32
	47	20	24	25	27	1	0.3	500	39	49
	47	20	19.8	20	37	0.3	--	500	19	26
	52	25	24	25	42	1	--	500	20.5	38
52	52	25	24	25	42	1	--	500	28.6	72
	52	20	24	25	27	1	0.3	500	39	49
	52	25	24	25	31	1	0.3	500	44.6	61
	52	25	19.8	20	42	0.3	--	500	21.2	31.5
	62	30	28	29	51	1	--	500	33	60
62	62	30	28	29	51	1	--	500	44.6	108
	62	25	24	25	31	1	0.3	500	44.6	61
	62	30	28	29	38	1	0.3	500	60	78
	62	30	24.8	25	52	0.6	--	500	31.4	52

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass
dyn. C _{LR}	stat. C _{OR}	dyn. F _{r max}	stat. F _{or max}		with sphered outer ring	with cylindrical outer ring	
				min ⁻¹			kg
10.5	14.6	12.5	18	10000	NATR 17	NATR 17 X	0.14
14.2	26.5	17	24.5	5600	NATV 17	NATV 17 X	0.15
19	20	14	22.2	5300	NUTR 17	NUTR 17 X	0.15
13.2	16.6	11.4	18.6	6300	STO17.2Z	STO17.2Z X	0.15
20.1	17.6	21.6	31	5600	NUTR 1542	NUTR 1542 X	0.16
14.7	24.5	23.6	33.5	9500	NATR 20	NATR 20 X	0.25
19.4	41.5	30.5	43	5300	NATV 20	NATV 20 X	0.25
22	27	30	43	5300	NUTR 1747	NUTR 1747 X	0.22
28.6	33.5	17	25	4500	NUTR 20	NUTR 20 X	0.25
14.6	19.6	16.6	22.8	5300	STO20.2Z	STO20.2Z X	0.2
14.7	25.5	21.6	31	8000	NATR 25	NATR 25 X	0.28
19.8	44	28.5	40.5	4300	NATV 25	NATV 25 X	0.29
30	39	30	42.5	4500	NUTR 2052	NUTR 2052 X	0.32
29.7	36	18	25.5	3800	NUTR 25	NUTR 25 X	0.28
15.3	21.6	17	24	4300	STO25.2Z	STO25.2Z X	0.2
22.9	37.5	26.5	38	7000	NATR 30	NATR 30 X	0.47
29.2	62	34.5	49	3600	NATV 30	NATV 30 X	0.48
35.8	48	44	63	3800	NUTR 2562	NUTR 2562 X	0.45
41.3	47.5	24	34.5	3200	NUTR 30	NUTR 30 X	0.47
21.2	32	22.8	35.5	3000	STO30.2Z	STO30.2Z X	0.42

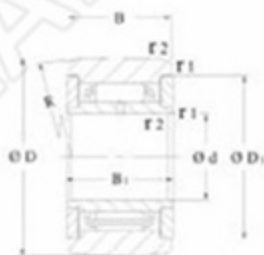
Yoke type track rollers with axial guidance

Series NATR

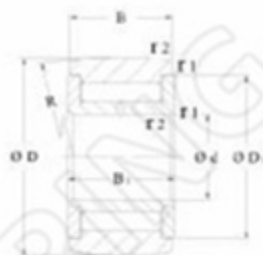
NATV(full complement)

NUTR(full complement)

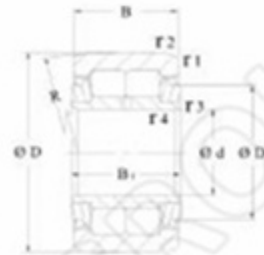
STO..2Z



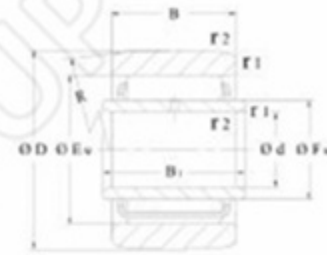
NATR



NATV



NUTR



STO..2Z

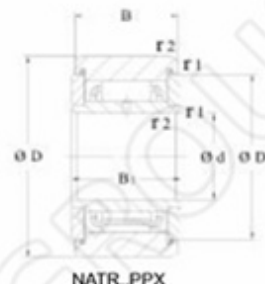
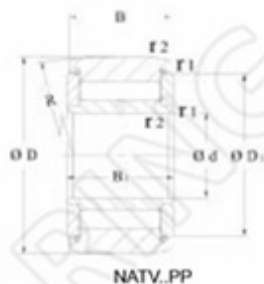
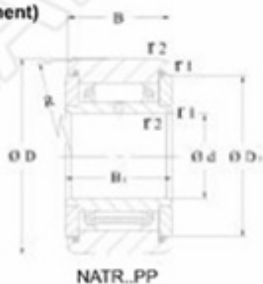
HMEC

Outside diameter	Dimensions								As bearing	
	D	d	B	B ₁	D ₁	r _{1/2} min	r _{3/4} min	R	dyn. Cr	stat. Cor
mm	kN									
72	72	35	28	29	58	1.1	—	500	35.8	69.5
	72	35	28	29	58	1.1	—	500	49.5	129
	72	30	28	29	38	1	0.3	500	60	78
	72	35	28	29	40	1.1	0.3	500	65.5	91.5
	72	35	24.8	25	56	0.6	—	500	31.9	54
80	80	40	30	32	66	1.1	—	500	46.8	95
	80	40	30	32	66	1.1	—	500	60.5	160
	80	35	28	29	44	1.1	0.6	500	65.5	91.5
	80	40	30	32	51	1.1	0.6	500	91.3	134
	80	40	25.8	26	64	0.6	—	500	36.5	68
85	85	45	30	32	72	1.1	—	500	48.4	102
	85	45	30	32	55	1.1	0.6	500	96.8	146
	85	45	25.8	26	69	0.6	—	500	38	75
90	90	50	30	32	76	1.1	—	500	50.1	108
	90	50	30	32	76	1.1	—	500	67.1	193
	90	40	30	32	51	1.1	0.6	500	91.3	134
	90	50	30	32	60	1.1	0.6	500	101	160
100	100	45	30	32	55	1.1	0.6	500	96.8	146
110	110	50	30	32	60	1.1	0.6	500	101	160

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass
dyn. C _{LR}	stat. C _{OR}	dyn. F _{r max}	stat. F _{or max}		with sphered outer ring	with cylindrical outer ring	
				min ⁻¹			kg
24.6	43	33.5	48	6000	NATR 35	NATR 35 X	0.64
31.9	72	43	62	3000	NATV 35	NATV 35 X	0.65
46.5	61	52	76.5	3200	NUTR 3072	NUTR 3072 X	0.71
44	57	33.5	47.5	2800	NUTR 35	NUTR 35 X	0.63
22.8	36.5	34	41.5	2400	STO35.2Z	STO35.2Z X	0.56
31.9	57	41.5	58.5	5300	NATR 40	NATR 40 X	0.80
39.1	88	51	73.5	2600	NATV 40	NATV 40 X	0.89
49	68	57	81.5	2800	NUTR 3580	NUTR 3580 X	0.86
57.2	72	32	45.5	2400	NUTR 40	NUTR 40 X	0.82
24.5	42.5	35.5	45.5	1800	STO40.2Z	STO40.2Z X	0.70
31.4	57	40	57	5000	NATR 45	NATR 45 X	0.91
58.3	75	32.5	46.5	2000	NUTR 45	NUTR 45 X	0.88
24.5	43	36.5	47.5	1600	STO45.2Z	STO45.2Z X	0.77
30.8	58.5	40	57	4500	NATR 50	NATR 50 X	0.96
39.1	93	50	72	2000	NATV 50	NATV 50 X	1.00
68.2	91.5	63	90	2400	NUTR 4090	NUTR 4090 X	1.16
58.3	78	32.5	47.5	1900	NUTR 50	NUTR 50 X	0.95
73.7	104	80	114	2000	NUTR 45100	NUTR 45100 X	1.43
78.1	116	98	140	1900	NUTR 50110	NUTR 50110 X	1.73

Yoke type track rollers with axial guidance
sealed
series NATR..PP
NATV..PP
(full complement)

HMEC

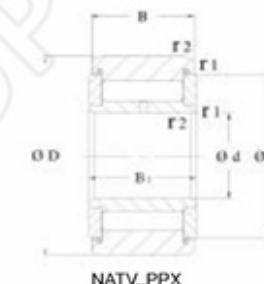
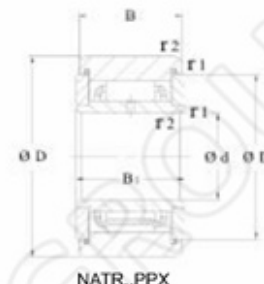
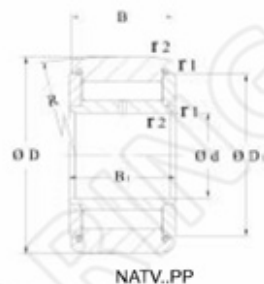
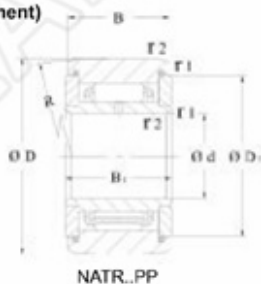


Outside diameter	Dimensions							As bearing		
	D	d	B	B ₁	D ₁	r _{1/2} mm	R	dyn. Cr	stat. Cor	
	mm									
16	16	5	11	12	12	0.1	500	3.7	3.9	
	16	5	11	12	12	0.1	500	6	8.8	
19	19	6	11	12	14	0.1	500	4.15	4.8	
	19	6	11	12	14	0.1	500	6.9	11	
24	24	8	14	15	19	0.3	500	6.6	7.8	
	24	8	14	15	19	0.3	500	9.6	16	
30	30	10	14	15	23	0.6	500	7.8	9.65	
	30	10	14	15	23	0.6	500	11.4	19.3	
32	32	12	14	15	25	0.6	500	8.4	10.8	
	32	12	14	15	25	0.6	500	12.3	22	
35	35	15	18	19	27	0.6	500	12.3	19.3	
	35	15	18	19	27	0.6	500	17.2	35.5	
40	40	17	20	21	32	1	500	13.4	20.4	
	40	17	20	21	32	1	500	19.4	40	
47	47	20	24	25	37	1	500	18.7	32.5	
	47	20	24	25	37	1	500	26	60	

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass
dyn. C _{LR}	stat. C _{OR}	dyn. F _{r max}	stat. F _{or max}		with sphered outer ring	with cylindrical outer ring	
				min ⁻¹			kg
3.1	3.2	2.9	4.2	20000	NATR 5 PP	NATR 5 PPX	0.01
4.7	6.5	4	5.7	11000	NATV 5 PP	NATV 5 PPX	0.02
3.25	3.8	3.45	5.5	17000	NATR 6 PP	NATR 6 PPX	0.02
5.3	8	5.1	7.3	10000	NATV 6 PP	NATV 6 PPX	0.02
5.3	6.1	5.2	7.65	15000	NATR 8 PP	NATR 8 PPX	0.04
7.4	11.4	7.3	10.4	8500	NATV 8 PP	NATV 8 PPX	0.04
6.4	8	7.1	11.2	13000	NATR 10 PP	NATR 10 PPX	0.07
8.9	14.6	11	15.6	7500	NATV 10 PP	NATV 10 PPX	0.07
6.6	8.5	7.1	10	11000	NATR 12 PP	NATR 12 PPX	0.07
9.3	15.3	10.6	15	7000	NATV 12 PP	NATV 12 PPX	0.07
9.5	13.7	11.4	16.3	10000	NATR 15 PP	NATR 15 PPX	0.10
12.3	23.2	14.6	20.8	6700	NATV 15 PP	NATV 15 PPX	0.11
10.5	14.6	12.5	18	9000	NATR 17 PP	NATR 17 PPX	0.14
14.2	26.5	17	24.5	5600	NATV 17 PP	NATV 17 PPX	0.15
14.7	24.5	23.6	33.5	8000	NATR 20 PP	NATR 20 PPX	0.25
19.4	41.5	30.5	43	5300	NATV 20 PP	NATV 20 PPX	0.26

Yoke type track rollers with axial guidance
sealed
series NATR..PP
NATV..PP
(full complement)

HMEC



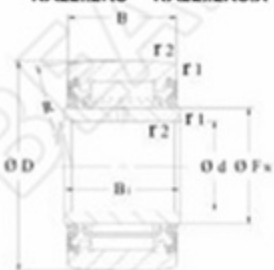
Outside diameter	Boundary dimensions				Dimensions				As bearing	
	D	d	B	B ₁	D	D ₁	r ₁ /r ₂ mm	R	dyn. Cr	stat. Cor
mm	kN									
52	52	25	24	25	52	42	1	500	20.5	38
	52	25	24	25	52	42	1	500	28.6	72
62	62	30	28	29	62	51	1	500	33	60
	62	30	28	29	62	51	1	500	44.6	108
72	72	35	28	29	72	58	1.1	500	38.5	69.5
	72	35	28	29	72	58	1.1	500	49.5	129
80	80	40	30	32	80	66	1.1	500	46.8	95
	80	40	30	32	80	66	1.1	500	60.5	160
85	85	45	30	32	85	72	1.1	500	48.4	102
90	90	50	30	32	90	76	1.1	500	50.1	108
	90	50	30	32	90	76	1.1	500	67.1	193

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass ≈ kg
dyn. C _{LR}	stat. C _{OR}	dyn. F _{r max}	stat. C _{or max}		with sphered outer	with cylindrical outer ring	
				min ⁻¹			
14.7	25.5	21.6	31	6700	NATR 25 PP	NATR 25 PPX	0.28
					NATV 25 PP	NATV 25 PPX	
22.9	37.5	26.5	38	5300	NATR 30 PP	NATR 30 PPX	0.47
					NATV 30 PP	NATV 30 PPX	
24.6	43	33.5	48	4500	NATR 35 PP	NATR 35 PPX	0.64
					NATV 35 PP	NATV 35 PPX	
31.9	57	41.5	58.5	4000	NATR 40 PP	NATR 40 PPX	0.80
					NATV 40 PP	NATV 40 PPX	
31.4	57	40	57	3600	NATR 45 PP	NATR 45 PPX	0.91
					NATV 45 PP	NATV 45 PPX	
30.8	58.5	40	57	3400	NATR 50 PP	NATR 50 PPX	0.96
					NATV 50 PP	NATV 50 PPX	
39.1	93	50	72	2000	NATR 50 PP	NATR 50 PPX	1.00
					NATV 50 PP	NATV 50 PPX	

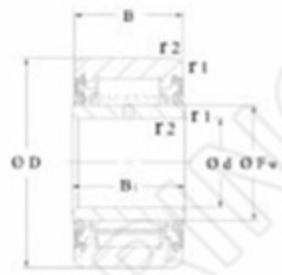
Yoke type track roller without axial guidance

Sealed

Series RNA22..2RS RNA22..2RS.X
NA22..2RS NA22..2RS.X



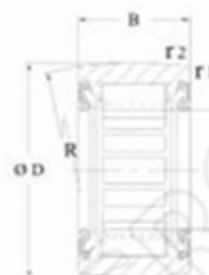
NA22..2RS



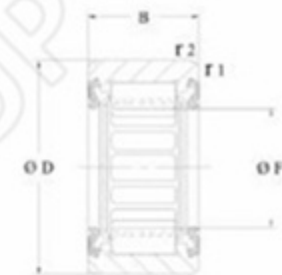
NA22..2RS.X

Outside diameter	dimensions					As bearing				
	D	d	B	B ₁	F	r ₁ /r ₂ mm	r ₃ /r ₄ mm	R	dyn. Cr	stat. Cor
mm	kN									
19	19	--	--	11.8	10	0.3	--	500	4.5	4.1
	19	6	12	11.8	10	0.3	0.3	500	4.5	4.1
24	24	--	--	11.8	12	0.3	--	500	5.4	5.2
	24	8	12	11.8	12	0.3	0.3	500	5.4	5.2
30	30	--	--	13.8	14	0.6	--	500	7.4	8.2
	30	10	14	13.8	14	0.6	0.3	500	7.4	8.2
32	32	--	--	13.8	16	0.6	--	500	8.1	9.1
	32	12	14	13.8	16	0.6	0.3	500	8.1	9.1
35	35	--	--	13.8	20	0.6	--	500	9.1	12
	35	15	14	13.8	20	0.6	0.3	500	9.1	12
40	40	--	--	15.8	22	1	--	500	11.3	16.3
	40	17	16	15.8	22	1	0.3	500	11.3	16.3
47	47	--	--	17.8	25	1	--	500	19.4	22.4
	47	20	18	17.8	25	1	0.3	500	19.4	22.4
52	52	--	--	17.8	30	1	--	500	21.6	27.5
	52	25	18	17.8	30	1	0.3	500	21.6	27.5

HMEC



RNA22..2RS



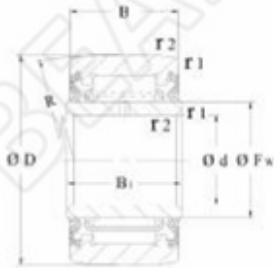
RNA22..2RS.X

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass
dyn. C _{IR}	stat. C _{OR}	dyn. F _{r max}	stat. F _{r max}		with sphered outer ring	with cylindrical outer ring	
				min ⁻¹			kg
3.5	3	1.9	2.8	16000	RNA 22/6.2RS	RNA 22/6.2RS.X	0.01
					NA 22/6.2RS	NA 22/6.2RS.X	
4.5	4.4	5	7.1	14000	RNA 22/8.2RS	RNA 22/8.2RS.X	0.03
					NA 22/8.2RS	NA 22/8.2RS.X	
6.4	7.2	12	17	13000	RNA 2200.2RS	RNA 2200.2RS.X	0.05
					NA 2200.2RS	NA 2200.2RS.X	
6.9	8.2	11.6	16.6	12000	RNA 2201.2RS	RNA 2201.2RS.X	0.06
					NA 2201.2RS	NA 2201.2RS.X	
7.2	9	9.6	13.7	9500	RNA 2202.2RS	RNA 2202.2RS.X	0.06
					NA 2202.2RS	NA 2202.2RS.X	
9.4	12.9	16	22.8	9000	RNA 2203.2RS	RNA 2203.2RS.X	0.09
					NA 2203.2RS	NA 2203.2RS.X	
15.4	17.3	17.6	25.5	7500	RNA 2204.2RS	RNA 2204.2RS.X	0.15
					NA 2204.2RS	NA 2204.2RS.X	
16.1	19	17.4	24.6	6300	RNA 2205.2RS	RNA 2205.2RS.X	0.17
					NA 2205.2RS	NA 2205.2RS.X	
16.1	19	17.4	24.6	6300	RNA 2205.2RS	RNA 2205.2RS.X	0.20
					NA 2205.2RS	NA 2205.2RS.X	

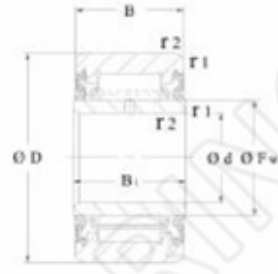
Yoke type track roller without axial guidance

Sealed

Series **RNA22..2RS RNA22..2RS.X**
NA22..2RS NA22..2RS.X



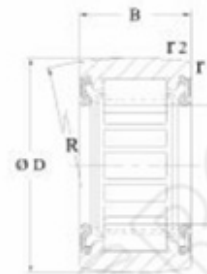
NA22..2RS



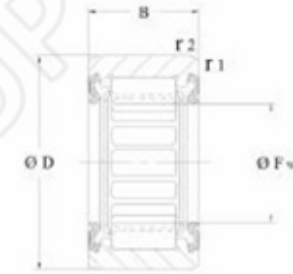
NA22..2RS.X

Outside diameter	dimensions								As bearing	
	D	d	B	B ₁	F	r ₁ /r ₂ min	r ₃ /r ₄ min	R	dyn. Cr	stat. Cor
mm										
62	62	--	--	19.8	35	1	--	500	22.4	32
	62	30	20	19.8	35	1	0.3	500	22.4	32
72	72	--	--	22.7	42	1.1	--	500	28.5	46.5
	72	35	23	22.7	42	1.1	0.6	500	28.5	46.5
80	80	--	--	22.7	48	1.1	--	500	36.9	58.5
	80	40	23	22.7	48	1.1	0.6	500	36.9	58.5
85	85	--	--	22.7	52	1.1	--	500	39	63
	85	45	23	22.7	52	1.1	0.6	500	39	63
90	90	--	--	22.7	58	1.1	--	500	40	71
	90	50	23	22.7	58	1.1	0.6	500	40	71

HMEC



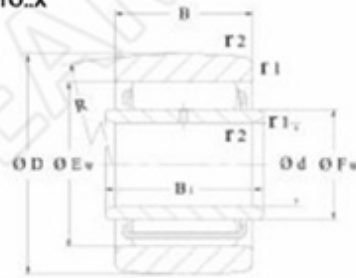
RNA22..2RS



RNA22..2RS.X

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass ≈ kg
dyn. CLR	stat. COLR	dyn. Fr max	stat. For max		with sphered outer ring	with cylindrical outer ring	
				min ⁻¹			
17.6	24.5	28.5	40.5	5600	RNA 2206.2RS	RNA 2206.2RS.X	0.29
					NA 2206.2RS	NA 2206.2RS.X	0.32
22	34	39	56	4800	RNA 2207.2RS	RNA 2207.2RS.X	0.42
					NA 2207.2RS	NA 2207.2RS.X	0.49
27	39	37.5	53	4000	RNA 2208.2RS	RNA 2208.2RS.X	0.515
					NA 2208.2RS	NA 2208.2RS.X	0.615
27.5	41.5	39	56	3800	RNA 2209.2RS	RNA 2209.2RS.X	0.565
					NA 2209.2RS	NA 2209.2RS.X	0.661
27	41.5	36.5	52	3400	RNA 2210.2RS	RNA 2210.2RS.X	0.59
					NA 2210.2RS	NA 2210.2RS.X	0.712

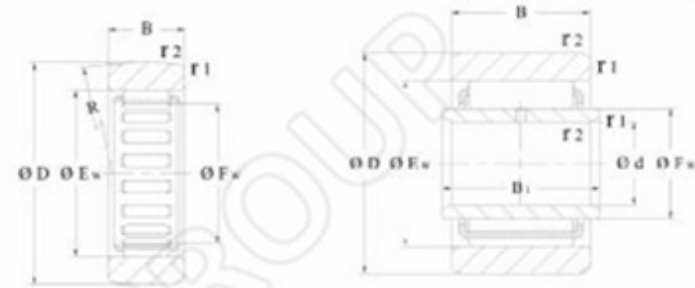
Yoke type track rollers without axial guidance
Series RSTO RSTO..X
STO STO..X



STO..

Outside diameter	Dimensions								As bearing			
	D	d	B	B ₁	F _w	E _w	r ₁ /r ₂ mm	R	dyn. Cr	stat. Cor		
	mm										kN	
16	16	--	7.8	--	7	10	0.3	500	2.65	2.5		
	19	--	9.8	--	10	13	0.3	500	5.2	6.55		
19	19	6	9.8	10	10	13	0.3	500	5.2	6.55		
	24	--	9.8	--	12	15	0.3	500	5.6	7.65		
24	24	8	9.8	12	12	15	0.3	500	5.6	7.65		
	30	--	11.8	--	14	20	0.3	500	10	10.8		
30	30	10	11.8	12	14	20	0.3	500	10	10.8		
	32	--	11.8	--	16	22	0.3	500	10.6	12		
32	32	12	11.8	12	16	22	0.3	500	10.6	12		
	35	--	11.8	--	20	26	0.3	500	12.5	15.6		
35	35	15	11.8	12	20	26	0.3	500	12.5	15.6		
	40	--	15.8	--	22	29	0.3	500	18.3	23.6		
40	40	17	15.8	16	22	29	0.3	500	18.3	23.6		
	47	--	15.8	--	25	32	0.3	500	19	26		
47	47	20	15.8	16	25	32	0.3	500	19	26		

HMEC

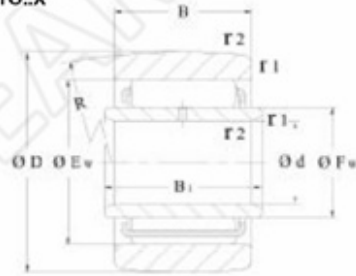


RSTO

STO..X

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass
dyn. CLR	stat. COLR	dyn. F _{r max}	stat. F _{or max}		with spherod outer ring	with cylindrical outer ring	
KN		KN		min ⁻¹			kg
2.36	2.5	2.9	3	24000	RSTO 5 TN	RSTO 5 X.TN	0.01
4	4.5	3.9	5.6	18000	RSTO 6	RSTO 6 X	0.01
4	4.5	3.9	5.6	18000	STO 6	STO 6 X	0.02
4.5	5.4	6.4	7.5	16000	RSTO 8	RSTO 8 X	0.02
4.5	5.4	6.4	7.5	16000	STO 8	STO 8 X	0.03
8.15	8.8	7.35	10.6	12000	RSTO 10	RSTO 10 X	0.04
8.15	8.8	7.35	10.6	12000	STO 10	STO 10 X	0.05
8.3	9.8	7.35	10.8	10000	RSTO 12	RSTO 12 X	0.05
8.3	9.8	7.35	10.8	10000	STO 12	STO 12 X	0.06
8.65	10.6	6.55	11	7000	RSTO 15	RSTO 15 X	0.06
8.65	10.6	6.55	11	7000	STO 15	STO 15 X	0.05
13.2	17.6	10.8	18	6300	RSTO 17	RSTO 17 X	0.09
13.2	17.6	10.8	18	6300	STO 17	STO 17 X	0.11
14.3	21.2	15.6	22.4	5300	RSTO 20	RSTO 20 X	0.13
14.3	21.2	15.6	22.4	5300	STO 20	STO 20 X	0.15

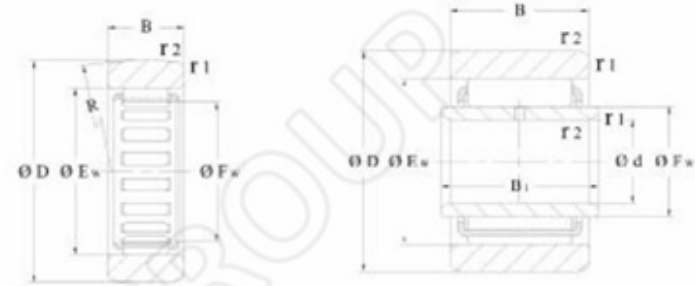
Yoke type track rollers without axial guidance
Series RSTO RSTO..X
STO STO..X



STO..

Outside diameter	Dimensions								As bearing		
	D	d	B	B ₁	F _w	E _w	r ₁ /r ₂ mm	R	dyn. Cr	stat. Cor	
	mm										kN
52	52	--	15.8	--	30	37	0.3	500	21.2	31.5	
	52	25	15.8	16	30	37	0.3	500	21.2	31.5	
62	62	--	19.8	--	38	46	0.6	500	31.5	52	
	62	30	19.8	20	38	46	0.6	500	31.5	52	
72	72	--	19.8	--	42	50	0.6	500	33.5	57	
	72	35	19.8	20	42	50	0.6	500	33.5	57	
80	80	--	19.8	--	50	58	1	500	36.5	68	
	80	40	19.8	20	50	58	1	500	36.5	68	
85	85	--	19.8	--	55	63	1	500	38	75	
	85	45	19.8	20	55	63	1	500	38	75	
90	90	--	19.8	--	60	68	1	500	40	80	
	90	50	19.8	20	60	68	1	500	40	80	

HMEC



RSTO

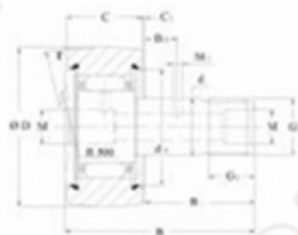
STO..X

As track roller		Max permissible radial load		Speed rating	Code bearing HMEC		Mass ≈ kg
dyn. CLR	stat. COLR	dyn. F _{r max}	stat. F _{or max}		with spherod outer ring	with cylindrical outer ring	
KN		KN		min ⁻¹			
15	22.8	16	23.6	4300	RSTO 25	RSTO 25 X	0.15
15	22.8	16	23.6	4300	STO 25	STO 25 X	0.18
21.2	34.5	22	33.5	3000	RSTO 30	RSTO 30 X	0.26
21.2	34.5	22	33.5	3000	STO 30	STO 30 X	0.31
24	40.5	31.5	43	2400	RSTO 35	RSTO 35 X	0.38
24	40.5	31.5	43	2400	STO 35	STO 35 X	0.44
23.8	39.0	32.5	45	1800	RSTO 40	RSTO 40 X	0.42
23.8	39.0	32.5	45	1800	STO 40	STO 40 X	0.53
24.5	43.0	33.5	45.5	1600	RSTO 45	RSTO 45 X	0.45
24.5	43.0	33.5	45.5	1600	STO 45	STO 45 X	0.58
25	45.5	34.5	45.5	1500	RSTO 50	RSTO 50 X	0.48
25	45.5	34.5	45.5	1500	STO 50	STO 50 X	0.62

Stud type track rollers

Series KR

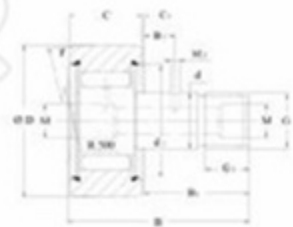
KR_PP
KRE_PP
KRV_PP



KR
KR_PP



KRE_PP



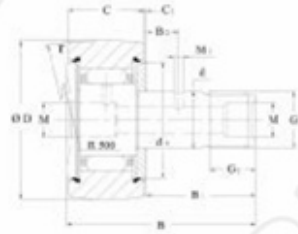
KRV_PP

HMEC

Outside diameter	Dimensions												Dimensions			
	D	d	C	r _{min}	B	B ₁	B ₂	G	G ₁	M	M ₁	C ₁	d ₂	Eccentric collar		
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	d ₁	B ₃	e
16	16	6	11	0.15	28	16	-	M6X1	8	4 ²⁾	-	0.6	12	9	7	0.5
	16	6	11	0.15	28	16	-	M6X1	8	4 ²⁾	-	0.6	12	9	7	0.5
	16	6	11	0.15	28	16	-	M6X1	8	4 ²⁾	-	0.6	12	9	7	0.5
19	19	8	11	0.15	32	20	-	M8X1.25	10	4 ²⁾	-	0.6	14	11	9	0.5
	19	8	11	0.15	32	20	-	M8X1.25	10	4 ²⁾	-	0.6	14	11	9	0.5
	19	8	11	0.15	32	20	-	M8X1.25	10	4 ²⁾	-	0.6	14	11	9	0.5
22	22	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
	22	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
	22	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
26	26	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
	26	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
	26	10	12	0.3	36	23	-	M10X1	12	4	-	0.6	17	13	10	0.5
30	30	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5
	30	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5
	30	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5
32	32	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5
	32	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5
	32	12	14	0.6	40	25	6	M12X1.5	13	6	3	0.6	23	15	11	0.5

Nut tightening torque M _A	Basic load rating dyn. C _w	Basic load rating stat. C _{0w}	Fatigue limit load P _{0w}	nD grease	Code bearing HMEC	with eccentric collar	Mass m ₀	Mass with eccentric collar m ₀
Nm	kN	kN	kN	min ⁻¹			g	g
3	3.15	3.3	0.41	14000	KR 16	-	18	20
3	3.15	3.3	0.41	14000	KR 16 PP	KRE 16 PP	18	20
3	4.85	6.5	0.85	3800	KRV 16 PP	-	20	22
8	3.5	3.9	0.485	11000	KR 19	-	28	31
8	3.5	3.9	0.485	11000	KR 19 PP	KRE 19 PP	28	31
8	5.5	7.9	1.03	3100	KRV 19 PP	-	32	35
15	4.45	5.2	0.65	8000	KR 22	-	44	48
15	4.45	5.2	0.65	8000	KR 22 PP	KRE 22 PP	44	48
15	6.3	9.1	1.09	2600	KRV 22 PP	-	45	49
15	5.1	6.2	0.77	8000	KR 26	-	58	62
15	5.1	6.2	0.77	8000	KR 26 PP	KRE 26 PP	58	62
15	7.3	11.3	1.36	2600	KRV 26 PP	-	61	65
22	6.8	8.4	1.07	5500	KR 30	-	87	93
22	6.8	8.4	1.07	5500	KR 30 PP	KRE 30 PP	87	93
22	9.5	14.6	1.82	2100	KRV 30 PP	-	89	95
22	7.1	9	1.14	5500	KR 32	-	98	104
22	7.1	9	1.14	5500	KR 32 PP	KRE 32 PP	98	104
22	10	15.8	1.97	2100	KRV 32 PP	-	100	106

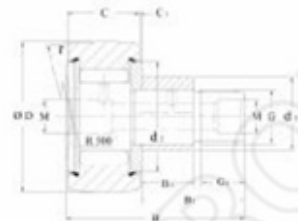
Stud type track rollers
Series KR
 KR..PP
 KRE..PP
 KRV..PP



KR
KR..PP

Outside diameter	Dimensions													Dimensions		
	D	d	C	r _{min}	B	B ₁	B ₂	G	G ₁	M	M ₁	C ₁	d ₂	Eccentric collar		
	mm													d ₁	B ₃	e
35	35	16	18	0.6	52	32.5	8	M16X1.5	17	6	3	0.8	27	20	14	1
	35	16	18	0.6	52	32.5	8	M16X1.5	17	6	3	0.8	27	20	14	1
	35	16	18	0.6	52	32.5	8	M16X1.5	17	6	3	0.8	27	20	14	1
40	40	18	20	1	58	36.5	8	M18X1.5	19	6	3	0.8	32	22	16	1
	40	18	20	1	58	36.5	8	M18X1.5	19	6	3	0.8	32	22	16	1
	40	18	20	1	58	36.5	8	M18X1.5	19	6	3	0.8	32	22	16	1
47	47	20	24	1	66	40.5	9	M20X1.5	21	8	4	0.8	37	24	18	1
	47	20	24	1	66	40.5	9	M20X1.5	21	8	4	0.8	37	24	18	1
52	52	20	24	1	66	40.5	9	M20X1.5	21	8	4	0.8	37	24	18	1
	52	20	24	1	66	40.5	9	M20X1.5	21	8	4	0.8	37	24	18	1

HMEC



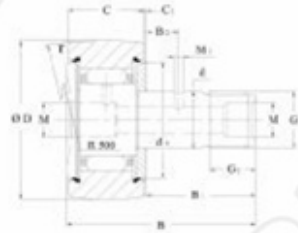
KRE..PP



KRV..PP

Nut tightening torque M _A	Basic load rating		Fatigue limit load P _{uW}	nD grease	Code bearing HMEC	with eccentric collar	Mass ≈ g	Mass with eccentric collar ≈ g
	dyn. C _w	stat. C _w						
Nm	kN	kN	kN	min ⁻¹				
58	9.7	14.1	1.68	3600	KR 35	-	169	182
58	9.7	14.1	1.68	3600	KR 35 PP	KRE 35 PP	169	182
58	12.8	23	2.9	1600	KRV 35 PP	-	171	184
87	10.9	15.5	1.83	2900	KR 40	-	247	263
87	10.9	15.5	1.83	2900	KR 40 PP	KRE 40 PP	247	263
87	14.8	26.5	3	1400	KRV 40 PP	-	249	265
120	15.5	25.5	3	2400	KR 47	-	386	406
120	15.5	25.5	3	2400	KRV 47 PP	KRE 47 PP	386	406
120	16.8	29	3.4	2400	KR 52	-	461	481
120	16.8	29	3.4	2400	KRV 52 PP	KRE 52 PP	461	481

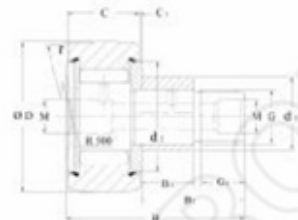
Stud type track rollers
Series KR
 KR..PP
 KRE..PP
 KRV..PP



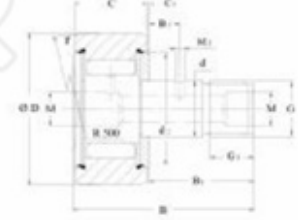
KR
KR..PP

Outside diameter	Dimensions													Dimensions				
	D	d	C	r _{min}	B	B ₁	B ₂	G	G ₁	M ₁	C ₁	d ₂	Eccentric collar A/F					
mm	h7											d ₁	B ₃	e				
62	62	24	29	1	80	49.5	11	M24X1.5	25	4	0.8	44	28	22	1	14		
	62	24	29	1	80	49.5	11	M24X1.5	25	4	0.8	44	-	-	-	14		
72	72	24	29	1.1	80	49.5	11	M24X1.5	25	4	0.8	44	-	-	-	14		
	72	24	29	1.1	80	49.5	11	M24X1.5	25	4	0.8	44	-	-	-	14		
80	80	30	35	1.1	100	63	15	M30X1.5	32	4	1	53	-	-	-	14		
	80	30	35	1.1	100	63	15	M30X1.5	32	4	1	53	-	-	-	14		
90	90	30	35	1.1	100	63	15	M30X1.5	32	4	1	53	-	-	-	14		
	90	30	35	1.1	100	63	15	M30X1.5	32	4	1	53	-	-	-	14		

HMEC



KRE..PP



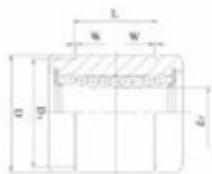
KRV..PP

Drive-fit lubrication (nipple*)	Central lubrication adapter ²⁾	Nut tightening torque M _N	Basic load rating C _w	Fatigue limit load C _{ow}	Speed nD grease	Code bearing HMEC	with eccentric collar	Mass ≈ g	Mass with eccentric collar ≈ g
NIP A3X9.5	AP 14	220	26.5	47.5	6.1	1900	KR 62 PP	KRE 62 PP	790 818
NIP A3X9.5	AP 14	220	34	76	9.9	1100	KRV 62 PP	-	802 -
NIP A3X9.5	AP 14	220	28	53	6.7	1900	KR 72 PP	-	1040 -
NIP A3X9.5	AP 14	220	37	85	11.1	1100	KRV 72 PP	-	1045 -
NIP A3X9.5	AP 14	450	39.5	77	9.7	1300	KR 80 PP	-	1550 -
NIP A3X9.5	AP 14	450	49.5	120	15.6	850	KRV 80 PP	-	1561 -
NIP A3X9.5	AP 14	450	41.5	83	10.5	1300	KR 90 PP	-	1950 -
NIP A3X9.5	AP 14	450	53	130	16.9	850	KRV 90 PP	-	1970 -

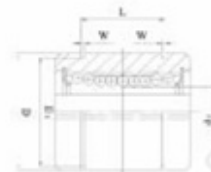
Linear Motion Ball Bearing

Series LM...UU
LM...AJ
LM...OP

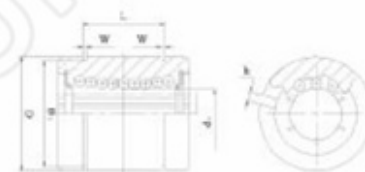
HMEC



LM...UU



LM...AJ



LM...OP

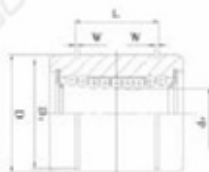
Code bearing		Major dimensions and tolerance						
HMEC								
LM...UU	Ball circuit	Weight g	LM...AJ	LM...OP	dr mm	Tolerance		
						Precision J	Precision P	
LM4UU	4	1.9	---	---	4	0~-5	0~-8	
LM5UU	4	4	---	---	5	0~-5	0~-8	
LM6UU	4	7.6	LM 6-AJ	---	6	0~-6	0~-9	
LM8SUU	4	10.4	LM 8-AJ	---	8	0~-6	0~-9	
LM8UU	4	15	LM 8-AJ	---	8	0~-6	0~-9	
LM10UU	4	29.5	LM 10-AJ	LM 10-OP	10	0~-6	0~-9	
LM12UU	4	31.5	LM 12-AJ	LM 12-OP	12	0~-6	0~-9	
LM13UU	4	43	LM 13-AJ	LM 13-OP	13	0~-6	0~-9	
LM16UU	5	69	LM 16-AJ	LM 16-OP	16	0~-6	0~-9	
LM20UU	5	87	LM 20-AJ	LM 20-OP	20	0~-7	0~-10	
LM25UU	5	220	LM 25-AJ	LM 25-OP	25	0~-7	0~-10	
LM30UU	6	250	LM 30-AJ	LM 30-OP	30	0~-7	0~-10	
LM35UU	6	390	LM 35-AJ	LM 35-OP	35	0~-8	0~-12	
LM40UU	6	585	LM 40-AJ	LM 40-OP	40	0~-8	0~-12	
LM50UU	6	1580	LM 50-AJ	LM 50-OP	50	0~-8	0~-12	
LM60UU	6	1860	LM 60-AJ	LM 60-OP	60	0~-9	0~-15	
LM80UU	6	4420	LM 80-AJ	LM 80-OP	80	0~-9	0~-15	

Major dimensions and tolerance											Um _{max}		Load ratings	
D	tolerance	L	tolerance	B	tolerance	W	D1	h	h ₁	θ	J	P	dyn. C	stat. Co
mm											mm			
8	0~-9	12	0~-120	---	---	---	---	---	---	---	8	12	88	127
10	0~-9	15	0~-120	10.2	---	1.1	9.6	---	---	---	8	12	167	206
12	0~-11	19	0~-200	13.5	0~-200	1.1	11.5	1	---	---	8	12	206	265
15	0~-11	17	0~-200	11.5	0~-200	1.1	14.3	1	---	---	8	12	176	216
15	0~-11	24	0~-200	17.5	0~-200	1.1	14.3	1	---	---	8	12	274	392
19	0~-13	29	0~-200	22	0~-200	1.3	18	1	6.8	80°	8	12	372	549
21	0~-13	30	0~-200	23	0~-200	1.3	20	1.5	8	80°	8	12	510	784
23	0~-13	32	0~-200	23	0~-200	1.3	22	1.5	9	80°	8	12	510	784
28	0~-13	37	0~-200	26.5	0~-200	1.6	27	1.5	11	80°	10	15	774	1180
32	0~-16	42	0~-200	30.5	0~-200	1.6	30.5	1.5	11	60°	10	15	882	1370
40	0~-16	59	0~-300	41	0~-300	1.85	38	2	12	60°	12	20	980	1570
45	0~-16	64	0~-300	44.5	0~-300	1.82	43	2.5	15	50°	12	20	1570	2740
52	0~-19	70	0~-300	49.5	0~-300	2.1	49	2.5	17	50°	12	20	1670	3140
60	0~-19	80	0~-300	60.5	0~-300	2.1	57	3	20	50°	12	20	2160	4020
80	0~-19	100	0~-300	74	0~-300	2.6	76.5	3	25	50°	12	20	3820	7940
90	0~-22	110	0~-300	85	0~-300	3.15	86.5	3	30	50°	17	25	4700	10000
120	0~-22	140	0~-400	105.5	0~-400	4.15	116	3	40	50°	17	25	7350	16000

Linear Motion Ball Bearing

Series LME...UU
LME...AJ
LME...OP

HMEC

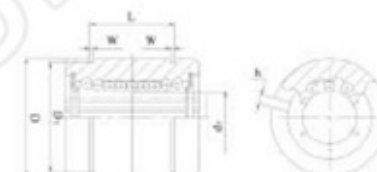


LME...UU

Code bearing		Major dimensions and tolerance				
HMEC		Tolerance				
LME...UU	Ball circuit	Weight g	LME...AJ	LME...OP	dr mm	Precision J Precision P
LME4UU	4	1.9			4	- +8~0
LME5UU	4	11	LME 5-AJ		5	- +8~0
LME8UU	4	20	LME 8-AJ		8	- +8~0
LME10UU	4	29.5	LME 10-AJ	LME 10-OP	10	- +8~0
LME12UU	4	41	LME 12-AJ	LME 12-OP	12	- +8~0
LME16UU	5	57	LME 16-AJ	LME 16-OP	16	- +9~0
LME20UU	5	91	LME 20-AJ	LME 20-OP	20	- +9~0
LME25UU	5	215	LME 25-AJ	LME 25-OP	25	- +11~-1
LME30UU	6	325	LME 30-AJ	LME 30-OP	30	- +11~-1
LME40UU	6	705	LME 40-AJ	LME 40-OP	40	- +13~-2
LME50UU	6	1130	LME 50-AJ	LME 50-OP	50	- +13~-2
LME60UU	6	2050	LME 80-AJ	LME 80-OP	60	- +13~-2



LME...AJ

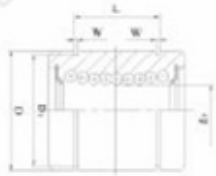


LME...OP

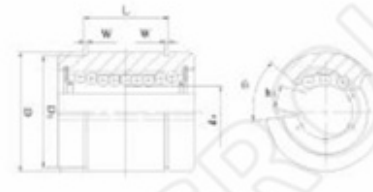
Major dimensions and tolerance											Um _{max}		Load ratings	
D	tolerance	L	tolerance	B	tolerance	W	D1	h	h ₁	θ	J	P	dyn. C	stat. Co
mm											mm			
8	0~-8	12	0~-120	----	----	----	----	----	----	----	12	88	127	
12	0~-8	22	0~-200	14.5	----	1.1	11.5	1	----	----	12	206	265	
16	0~-8	25	0~-200	16.5	0~-200	1.1	15.2	1	----	----	12	265	402	
19	0~-9	29	0~-200	22	0~-200	1.3	18	1	6.8	80'	12	372	549	
22	0~-9	32	0~-200	22.9	0~-200	1.3	21	1.5	7.5	78'	12	510	784	
26	0~-9	36	0~-200	24.9	0~-200	1.3	24.9	1.5	10	78'	12	578	892	
32	0~-11	45	0~-200	31.5	0~-200	1.6	30.3	2	10	60'	15	862	1370	
40	0~-11	58	0~-300	44.1	0~-300	1.85	37.5	2	12.5	60'	15	980	1570	
47	0~-11	68	0~-300	52.1	0~-300	1.85	44.5	2	12.5	50'	15	1570	2740	
62	0~-13	80	0~-300	60.6	0~-300	2.15	59	3	16.8	50'	17	2160	4020	
75	0~-13	100	0~-300	77.6	0~-300	2.65	72	3	21	50'	17	3820	7940	
90	0~-15	125	0~-400	101.7	0~-400	3.15	86.5	3	27.2	54'	20	4700	9800	

Linear Motion Ball Bearing

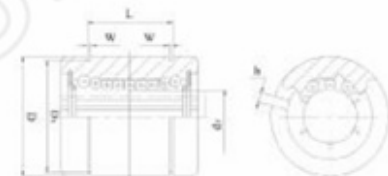
Series LMB...UU
LMB...AJ
LMB...OP



LMB...UU



LMB...AJ



LMB...OP

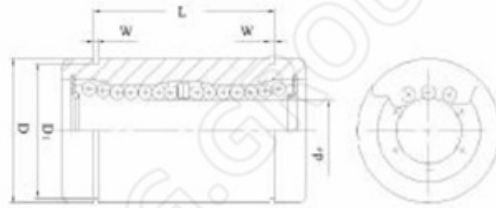
HMEC

Code bearing		Major dimensions and tolerance		
HMEC		dr	Tolerance	D
LME...UU	Ball circuit	mm	Precision J Precision P	mm
LMB3UU	4	4.763(3/16")	0~-6 0~-9	9.525(3/8")
LMB4UU	4	6.350(1/4")	0~-6 0~-9	12.700(1/2")
LMB5UU	4	9.525(3/8")	0~-6 0~-9	15.875(5/8")
LMB8UU	4	12.700(1/2")	0~-6 0~-9	22.225(7/8")
LMB10UU	4	15.875(5/8")	0~-6 0~-10	28.575(1 1/8")
LMB12UU	5	19.050(3/4")	0~-6 0~-10	31.750(1 1/4")
LMB16UU	6	25.400(1")	0~-6 0~-10	39.688(2 3/16")
LMB20UU	6	31.750(1 1/4")	0~-8 0~-12	50.800(2")
LMB24UU	6	38.100(1 1/2")	0~-8 0~-12	60.325(2 3/8")
LMB32UU	6	50.800(2")	0~-8 0~-12	76.200(3")
LMB40UU	6	63.500(2 1/2")	0~-9 0~-13	95.256(3 3/4")
LMB48UU	6	76.200(3")	0~-9 0~-13	114.3(4 1/2")
LMB64UU	6	101.600(4")	0~-10 0~-20	152.4(6")

Major dimensions and tolerance										Um _{max}		Load ratings	
tolerance	L	tolerance	B	tolerance	W	D1	h	h ₁	θ	J	P	dyn. C	stat. Co
mm													
0~-110	14.288(9/16")	0~-200	10.94	0~-200	0.71	8.910	---	---	---	8	12	14	17
0~-110	19.050(3/4")	0~-200	12.95	0~-200	0.992	11.906	---	---	---	8	12	21	27
0~-130	22.225(7/8")	0~-200	16.15	0~-200	0.992	14.935	---	---	---	8	12	23	32
0~-130	31.750(1 1/4")	0~-200	24.46	0~-200	1.168	20.853	1.5	9	80°	8	12	52	79
0~-160	38.100(1 1/2")	0~-200	28.04	0~-200	1.420	26.899	1.5	11	80°	8	12	70	100
0~-160	41.275(1 5/8")	0~-200	29.61	0~-200	1.422	29.870	1.5	11	60°	10	15	88	140
0~-160	57.150(2 1/4")	0~-300	44.57	0~-300	1.727	37.306	1.5	12	50°	10	15	100	160
0~-190	66.675(2 5/8")	0~-300	50.92	0~-300	1.727	47.904	2.5	15	50°	12	20	160	280
0~-190	76.200(3")	0~-300	61.26	0~-300	2.184	56.870	3	18	50°	12	20	220	410
0~-220	101.600(4")	0~-300	81.07	0~-300	2.616	72.065	3	25	50°	17	25	390	870
0~-220	127.000(5")	0~-300	100.99	0~-300	3.048	90.220	3	30	50°	17	25	480	1020
0~-220	152.400(6")	0~-400	120.04	0~-400	3.048	109.474	3	40	50°	17	25	150	1630
0~-250	203.200(8")	0~-400	158.958	0~-400	3.530	145.923	3	50	50°	20	30	1440	3550

Linear Motion Ball Bearing (Long Type)

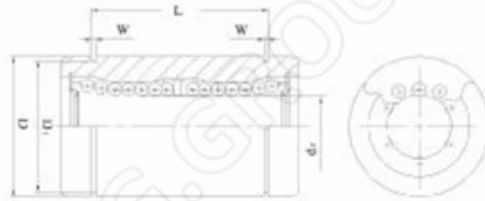
Series LM...LUU



LM...LUU

Code bearing HMEC	Rows of Ball	Inner Diameter		Main dimensions				W	D1	Weight g ≈	Basic Nominal Load			
		dr mm	Tolerance um	Outer Diameter D	Tolerance um	Outer Diameter L	Tolerance um				B	Tolerance um	Naminal Dynamic Load C(N)	Naminal Static Load C0(N)
LM6LUU	4	6	0~-10	12	0~-13	35	0~-0.3	27	0~-0.3	1.1	11.5	16	320	520
LM8LUU	4	8	0~-10	15	0~-13	45	0~-0.3	35	0~-0.3	1.1	14.3	31	430	780
LM10LUU	4	10	0~-10	19	0~-16	55	0~-0.3	44	0~-0.3	1.3	18	62	580	1100
LM12LUU	4	12	0~-10	21	0~-16	57	0~-0.3	46	0~-0.3	1.3	20	80	650	1200
LM13LUU	4	13	0~-10	23	0~-16	61	0~-0.3	46	0~-0.3	1.3	22	90	810	1570
LM16LUU	5	16	0~-10	28	0~-16	70	0~-0.3	53	0~-0.3	1.6	27	145	1230	2350
LM20LUU	5	20	0~-12	32	0~-19	80	0~-0.3	61	0~-0.3	1.6	30.5	180	1400	2750
LM25LUU	6	25	0~-12	40	0~-19	112	0~-0.4	82	0~-0.4	1.85	38	440	1560	3140
LM30LUU	6	30	0~-12	45	0~-19	123	0~-0.4	89	0~-0.4	1.85	43	580	2490	5490
LM35LUU	6	35	0~-15	52	0~-22	135	0~-0.4	99	0~-0.3	2.1	49	795	2650	6470
LM40LUU	6	40	0~-15	60	0~-22	154	0~-0.4	121	0~-0.3	2.1	57	1170	3430	8040
LM50LUU	6	50	0~-15	80	0~-22	192	0~-0.4	148	0~-0.3	2.6	76.5	3100	6080	15900
LM60LUU	6	60	0~-20	90	0~-25	211	0~-0.4	170	0~-0.3	3.15	86.5	3500	7650	20000

HMEC



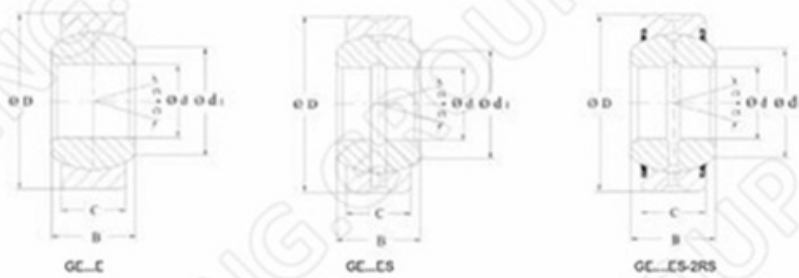
LME...LUU

Code bearing HMEC	Rows of Ball	Inner Diameter	Main dimensions					Weight	Basic Nominal Load					
			Outer Diameter D	Outer Diameter L	B	W	D1		Naminal Dynamic Load C(N)	Naminal Static Load C0(N)				
			dr	Tolerance	Tolerance	Tolerance	Tolerance		g					
mm	um	um	um	um	um	≈								
LME8LUU	4	8	+9~-1	16	0~-9	45	0~-0.3	33	0~-0.3	1.1	15.2	31	430	780
LME12LUU	4	12	+9~-1	22	0~-11	57	0~-0.3	45.8	0~-0.3	1.3	21	80	650	1200
LME16LUU	5	16	+11~-1	26	0~-11	70	0~-0.3	49.8	0~-0.3	1.3	24.9	145	1230	2350
LME20LUU	5	20	+11~-1	32	0~-13	80	0~-0.3	61	0~-0.3	1.6	30.3	180	1400	2750
LME25LUU	6	25	+13~-2	40	0~-13	112	0~-0.4	82	0~-0.4	1.85	38	440	1560	3140
LME30LUU	6	30	+13~-1	47	0~-13	123	0~-0.4	104.2	0~-0.4	1.85	44.5	580	2490	5490
LME40LUU	6	40	+16~-4	62	0~-15	154	0~-0.4	121.2	0~-0.4	2.15	59	1170	3430	8040
LME50LUU	6	50	+16~-4	75	0~-15	192	0~-0.4	155.2	0~-0.4	2.65	72	3100	6080	15900
LME60LUU	6	60	+16~-4	90	0~-20	211	0~-0.4	170	0~-0.4	3.15	86.5	3500	7650	20000

Spherical plain bearings & Rod-ends



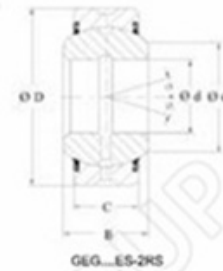
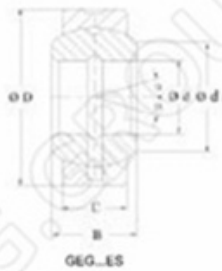
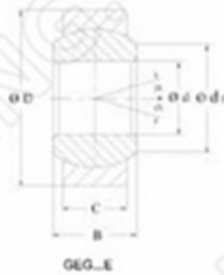
Steel-on-steel Spherical plain bearings
Series GE...E / ES
GE...ES-2RS
GE...DS



Code bearing HMEC	Principal dimensions					Basic load ratings		x'	Mass		
	d	D	B	C	d _{1min}	dyn	stat				
	mm							≈	≈		
									kg		
GE4E	4	12	5	3	6	2	10	16	0.0033		
GE5E	5	14	6	4	7	3.4	17	13	0.0038		
GE6E	6	14	6	4	8	3.4	17	13	0.0042		
GE8E	8	16	8	5	10	5.5	27	15	0.0075		
GE10E	10	19	9	6	13	8.1	40	12	0.011		
GE12E	12	22	10	7	15	10	54	10	0.015		
GE15ES	GE15ES-2RS	15	26	12	9	18	17	85	8	0.027	
GE17ES	GE17ES-2RS	17	30	14	10	20	21	106	10	0.041	
GE20ES	GE20ES-2RS	20	35	16	12	24	30	146	9	0.066	
GE25ES	GE25ES-2RS	25	42	20	16	29	48	240	7	0.119	
GE30ES	GE30ES-2RS	30	47	22	18	34	62	310	6	0.153	
GE35ES	GE35ES-2RS	35	55	25	20	39	80	400	6	0.233	
GE40ES	GE40ES-2RS	40	62	28	22	45	100	500	7	0.306	
GE45ES	GE45ES-2RS	45	68	32	25	50	127	640	7	0.327	
GE50ES	GE50ES-2RS	50	75	35	28	55	156	780	6	0.546	
GE60ES	GE60ES-2RS	60	90	44	36	66	245	1220	6	1.045	
GE70ES	GE70ES-2RS	70	105	49	40	77	315	1560	6	1.55	
GE80ES	GE80ES-2RS	80	120	55	45	88	400	2000	6	2.31	
GE90ES	GE90ES-2RS	90	130	60	50	98	490	2450	5	2.75	
GE100ES	GE100ES-2RS	100	150	70	55	109	610	3050	7	4.45	
GE110ES	GE110ES-2RS	110	160	70	55	120	655	3250	6	4.82	
GE120ES	GE120ES-2RS	120	180	85	70	130	950	4750	6	8.05	
GE140ES	GE140ES-2RS	140	210	90	70	150	1080	5400	7	11.02	
GE160ES	GE160ES-2RS	160	230	105	80	170	1370	6800	8	14.01	
GE180ES	GE180ES-2RS	GE180DS	180	260	105	80	192	1530	7650	6	18.65
GE200ES	GE200ES-2RS	GE200DS	200	290	130	100	212	2120	10600	7	28.03

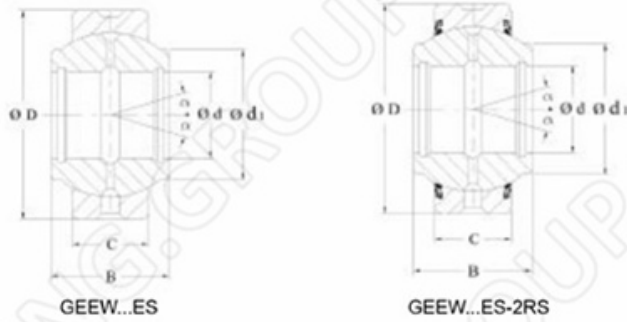
Steel-on-steel Spherical plain bearings with fitting crack
Series GEG...E / ES
GEGES-2RS
GEG...DS

HMEC



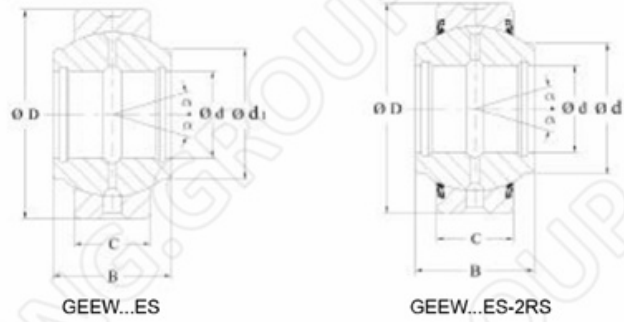
Code bearing	Principal dimensions				Basic load ratings	α'	Mass				
	d	D	B	C				d _{1min}	dyn	stat	≈
HMEC	mm							kg			
GEG4E	4	14	7	4	7	3.4	17	20	0.0045		
GEG5E	5	16	9	5	8	5.5	27	21	0.0066		
GEG6E	6	16	9	5	9	5.5	27	21	0.0081		
GEG8E	8	19	11	6	11	8.1	40	21	0.014		
GEG10E	10	22	12	7	13	10	54	18	0.021		
GEG12E	12	26	15	9	16	17	85	18	0.033		
GEG15ES	GEG15ES-2RS	15	30	16	10	19	21	106	16	0.049	
GEG17ES	GEG17ES-2RS	17	35	20	12	21	30	146	19	0.083	
GEG20ES	GEG20ES-2RS	20	42	25	16	24	48	240	17	0.153	
GEG25ES	GEG25ES-2RS	25	47	28	18	29	62	310	17	0.203	
GEG30ES	GEG30ES-2RS	30	55	32	20	34	80	400	17	0.304	
GEG35ES	GEG35ES-2RS	35	62	35	22	39	100	500	16	0.408	
GEG40ES	GEG40ES-2RS	40	68	40	25	44	127	640	17	0.542	
GEG45ES	GEG45ES-2RS	45	75	43	28	50	156	780	15	0.713	
GEG50ES	GEG50ES-2RS	50	90	56	36	57	245	1220	17	1.44	
GEG60ES	GEG60ES-2RS	60	105	63	40	67	315	1560	17	1.60	
GEG70ES	GEG70ES-2RS	70	120	70	45	77	400	2000	16	3.01	
GEG80ES	GEG80ES-2RS	80	130	75	50	87	490	2450	14	3.64	
GEG90ES	GEG90ES-2RS	90	150	85	55	98	610	3050	15	5.22	
GEG100ES	GEG100ES-2RS	100	160	85	55	110	655	3250	14	6.05	
GEG110ES	GEG110ES-2RS	110	180	100	70	122	950	4750	12	9.68	
GEG120ES	GEG120ES-2RS	120	210	115	70	132	1080	5400	16	14.72	
GEG140ES	GEG140ES-2RS	140	230	130	80	151	1370	6800	16	19.01	
GEG160ES	GEG160ES-2RS	GEG160DS	160	260	135	80	176	1530	7650	16	20.02
GEG180ES	GEG180ES-2RS	GEG180DS	180	290	155	100	196	2120	10600	14	32.21
GEG200ES	GEG200ES-2RS	GEG200DS	200	320	165	100	220	2320	11600	15	45.28

Steel-on-steel Spherical plain bearings with extended inner ring
series GEEW...E / ES
GEEW...ES-2RS



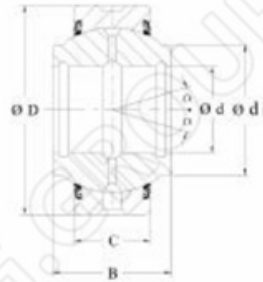
Code bearing	Principal dimensions				Basic load ratings			α Mass	
	d	D	B	C	d _{1min}	dyn	stat	≈	≈
HMEC	mm							kg	
GEEW12ES GEEW12ES-2RS	12	22	12	7	15.5	10	54	4	0.022
GEEW15ES GEEW15ES-2RS	15	26	15	9	18.5	17	85	5	0.031
GEEW16ES GEEW16ES-2RS	16	28	16	9	20	17	85	4	0.035
GEEW17ES GEEW17ES-2RS	17	30	17	10	21	21	106	7	0.044
GEEW20ES GEEW20ES-2RS	20	35	20	12	25	30	146	4	0.071
GEEW25ES GEEW25ES-2RS	25	42	25	16	30.5	48	240	4	0.131
GEEW30ES GEEW30ES-2RS	30	47	30	18	34	62	310	4	0.168
GEEW32ES GEEW32ES-2RS	32	52	32	18	37	62	310	4	0.182
GEEW35ES GEEW35ES-2RS	35	55	35	20	40	80	400	4	0.253
GEEW40ES GEEW40ES-2RS	40	62	40	22	46	100	500	4	0.338
GEEW45ES GEEW45ES-2RS	45	68	45	25	52	127	640	4	0.481
GEEW50ES GEEW50ES-2RS	50	75	50	28	57	156	780	4	0.558
GEEW60ES GEEW60ES-2RS	60	90	60	36	68	245	1220	3	1.15
GEEW63ES GEEW63ES-2RS	63	95	63	36	71.5	245	1220	4	1.23
GEEW70ES GEEW70ES-2RS	70	105	70	40	78	315	1560	4	1.71
GEEW80ES GEEW80ES-2RS	80	120	80	45	91	400	2000	4	2.39
GEEW100ES GEEW100ES-2RS	100	150	100	55	113	610	3050	4	4.80
GEEW125ES GEEW125ES-2RS	125	180	125	70	138	950	4750	4	8.50

HMEC



Code bearing	Principal dimensions				Basic load ratings			α° Mass	
	d	D	B	C	d _{1min}	dyn	stat	≈	≈
HMEC	mm							kg	
GEEW12ES GEEW12ES-2RS	12	22	12	7	15.5	10	54	4	0.022
GEEW15ES GEEW15ES-2RS	15	26	15	9	18.5	17	85	5	0.031
GEEW16ES GEEW16ES-2RS	16	28	16	9	20	17	85	4	0.035
GEEW17ES GEEW17ES-2RS	17	30	17	10	21	21	106	7	0.044
GEEW20ES GEEW20ES-2RS	20	35	20	12	25	30	146	4	0.071
GEEW25ES GEEW25ES-2RS	25	42	25	16	30.5	48	240	4	0.131
GEEW30ES GEEW30ES-2RS	30	47	30	18	34	62	310	4	0.168
GEEW32ES GEEW32ES-2RS	32	52	32	18	37	62	310	4	0.182
GEEW35ES GEEW35ES-2RS	35	55	35	20	40	80	400	4	0.253
GEEW40ES GEEW40ES-2RS	40	62	40	22	46	100	500	4	0.338
GEEW45ES GEEW45ES-2RS	45	68	45	25	52	127	640	4	0.481
GEEW50ES GEEW50ES-2RS	50	75	50	28	57	156	780	4	0.558
GEEW60ES GEEW60ES-2RS	60	90	60	36	68	245	1220	3	1.15
GEEW63ES GEEW63ES-2RS	63	95	63	36	71.5	245	1220	4	1.23
GEEW70ES GEEW70ES-2RS	70	105	70	40	78	315	1560	4	1.71
GEEW80ES GEEW80ES-2RS	80	120	80	45	91	400	2000	4	2.39
GEEW100ES GEEW100ES-2RS	100	150	100	55	113	610	3050	4	4.80
GEEW125ES GEEW125ES-2RS	125	180	125	70	138	950	4750	4	8.50

**Steel-on-steel Spherical plain bearings
with extended inner ring
Series GEEM-2RS**

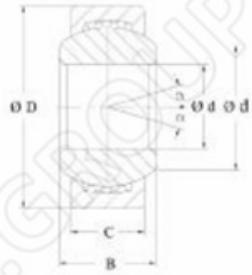


GEEM...ES-2RS

Code bearing HMEC	Principal dimensions				Basic load ratings			α^* Mass	
	d	D	B	C	d _{1min}	dyn	stat	≈	≈
	mm							kg	kg
GEEM20ES-2RS	20	35	24	12	24	30	146	6	0.073
GEEM25ES-2RS	25	42	29	16	29	48	240	4	0.13
GEEM30ES-2RS	30	47	30	18	34	62	310	4	0.17
GEEM35ES-2RS	35	55	35	20	40	80	400	4	0.25
GEEM40ES-2RS	40	62	38	22	45	100	500	4	0.35
GEEM45ES-2RS	45	68	40	25	52	127	640	4	0.49
GEEM50ES-2RS	50	75	43	28	57	156	780	4	0.60
GEEM60ES-2RS	60	90	54	36	68	245	1220	3	1.15
GEEM70ES-2RS	70	105	65	40	78	315	1560	4	1.65
GEEM80ES-2RS	80	120	74	45	90	400	2000	4	2.50

Maintenance free Spherical plain bearings
series GE...C
GE...ET-2RS

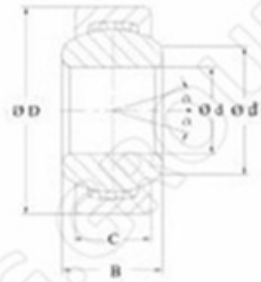
HMEC



GE...C
GE...ET-2RS

Code bearing HMEC	Principal dimensions				Basic load ratings			α^* Mass	
	d	D	B	C	d _{1min}	dyn	stat	≈	≈
	mm								kg
GE4C	4	12	5	3	6	2.1	5.4	16	0.0033
GE5C	5	14	6	4	7	3.6	9.1	13	0.0038
GE6C	6	14	6	4	8	3.6	9.1	13	0.0042
GE8C	8	16	8	5	10	5.8	14	15	0.0075
GE10C	10	19	9	6	13	8.6	21	12	0.011
GE12C	12	22	10	7	15	11	28	10	0.015
GE15C	15	26	12	9	18	18	45	8	0.027
GE17C	17	30	14	10	20	22	56	10	0.041
GE20C	20	35	16	12	24	31	78	9	0.066
GE25C	25	42	20	16	29	51	127	7	0.119
GE30C	30	47	22	18	34	65	166	6	0.163
GE35ET-2RS	35	55	25	20	39	110	220	6	0.25
GE40ET-2RS	40	62	28	22	45	140	280	6	0.3
GE45ET-2RS	45	68	32	25	50	180	350	6	0.35
GE50ET-2RS	50	75	35	28	55	220	430	6	0.50
GE60ET-2RS	60	90	44	36	66	340	690	6	1.00
GE70ET-2RS	70	105	49	40	77	430	870	6	1.40
GE80ET-2RS	80	120	55	45	88	560	1140	6	2.00
GE90ET-2RS	90	130	60	50	98	690	1350	6	2.50
GE100ET-2RS	100	150	70	55	109	850	1700	6	4.00
GE110ET-2RS	110	160	70	55	120	900	1850	6	4.50
GE120ET-2RS	120	180	85	70	130	1300	2700	6	7.20
GE140ET-2RS	140	210	90	70	150	1500	3000	6	10.00

Maintenance free Spherical plain bearings
series GEG...E
GEG...ES
GEG...ES-2RS
GEG...DS



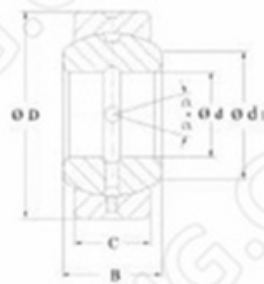
GEG..E
GEG..ES

Code bearing HMEC	Principal dimensions				Basic load ratings			α^* Mass	
	d	D	B	C	d _{1min}	dyn	stat	\approx	\approx
	mm								kg
GEG4E	4	14	7	4	7	3.4	17	20	0.0045
GEG5E	5	16	9	5	8	5.5	27	21	0.0066
GEG6E	6	16	9	5	9	5.5	27	21	0.0081
GEG8E	8	19	11	6	11	8.1	40	21	0.014
GEG10E	10	22	12	7	13	10	54	18	0.021
GEG12E	12	26	15	9	16	17	85	118	0.033
GEG15ES GEG15ES-2RS	15	30	16	10	19	21	106	16	0.049
GEG17ES GEG17ES-2RS	17	35	20	12	21	30	146	19	0.083
GEG20ES GEG20ES-2RS	20	42	25	16	24	48	240	17	0.153
GEG25ES GEG25ES-2RS	25	47	28	18	29	62	310	17	0.203
GEG30ES GEG30ES-2RS	30	55	32	20	34	80	400	17	0.304
GEG35ES GEG35ES-2RS	35	62	35	22	39	100	500	16	0.408
GEG40ES GEG40ES-2RS	40	68	40	25	44	127	640	17	0.542
GEG45ES GEG45ES-2RS	45	75	43	28	50	156	780	15	0.713
GEG50ES GEG50ES-2RS	50	90	56	36	57	245	1220	17	1.44
GEG60ES GEG60ES-2RS	60	105	63	40	67	315	1560	17	1.60
GEG70ES GEG70ES-2RS	70	120	70	45	77	400	2000	16	3.01
GEG80ES GEG80ES-2RS	80	130	75	50	87	490	2450	14	3.64
GEG90ES GEG90ES-2RS	90	150	85	55	98	610	3050	15	5.22
GEG100ES GEG100ES-2RS	100	160	85	55	110	655	3250	14	6.05
GEG110ES GEG110ES-2RS	110	180	100	70	122	950	4750	12	9.68
GEG120ES GEG120ES-2RS	120	210	115	70	132	1080	5400	16	14.72
GEG140ES GEG140ES-2RS	140	230	130	80	151	1370	6800	16	19.01
GEG160ES GEG160ES-2RS GEG160DS	160	260	135	80	176	1530	7650	16	20.02
GEG180ES GEG180ES-2RS GEG180DS	180	290	155	100	196	2120	10600	14	32.21
GEG200ES GEG200ES-2RS GEG200DS	200	320	165	100	220	2320	11600	15	45.28

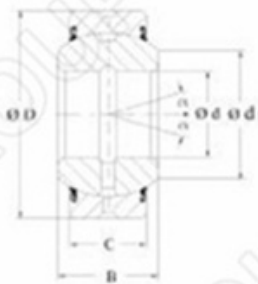
Inch-size steel-on-steel spherical plain bearing

Series GEZ..ES

GEZ..ES-2RS



GEZ..ES

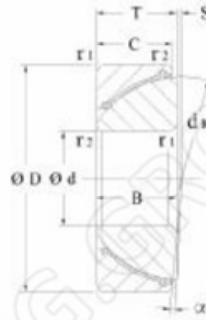


GEZ..ES-2RS

Code bearing HMEC	Principal dimensions				Basic load ratings			d		
	d	D	B	C	d _{1min}	dyn	stat	≈	≈	
	mm							kg		
GEZ12ES	12.7	22.225	11.1	9.525	14.1	13.7	41.5	6	0.022	
GEZ15ES	15.875	26.988	13.894	11.913	18.3	22.0	65.5	6	0.036	
GEZ19ES	19.05	31.75	16.662	14.275	21.8	31.5	95.0	6	0.053	
GEZ22ES	22.225	36.513	19.431	16.662	25.4	42.5	127	6	0.085	
GEZ25ES	GEZ25ES-2RS	25.4	41.275	22.225	19.05	27.6	56.0	166	6	0.121
GEZ31ES	GEZ31ES-2RS	31.75	50.8	27.762	23.8	36.0	86.5	260	6	0.232
GEZ34ES	GEZ34ES-2RS	34.925	55.563	30.15	26.187	38.6	102	310	6	0.351
GEZ38ES	GEZ38ES-2RS	38.1	61.913	33.325	28.575	41.2	125	375	6	0.422
GEZ44ES	GEZ44ES-2RS	44.45	71.438	38.887	33.325	50.7	170	510	6	0.641
GEZ50ES	GEZ50ES-2RS	50.8	80.963	44.45	38.1	57.9	224	670	6	0.932
GEZ57ES	GEZ57ES-2RS	57.15	90.488	50.013	42.85	64.9	280	850	6	1.33
GEZ63ES	GEZ63ES-2RS	63.5	100.013	55.55	47.625	73.3	355	1060	6	1.85
GEZ69ES	GEZ69ES-2RS	69.85	111.125	61.112	52.375	79.1	415	1250	6	2.42
GEZ76ES	GEZ76ES-2RS	76.2	120.65	66.675	57.15	86.8	500	1500	6	3.10
GEZ82ES	GEZ82ES-2RS	82.55	130.175	72.238	61.9	94.5	585	1760	6	3.82
GEZ88ES	GEZ88ES-2RS	88.9	139.7	77.775	66.675	101.6	680	2040	6	4.79
GEZ95ES	GEZ95ES-2RS	95.25	149.225	83.337	71.425	108.7	780	2360	6	5.78
GEZ101ES	GEZ101ES-2RS	101.6	158.75	88.9	76.2	115.8	900	2650	6	6.99
GEZ107ES	GEZ107ES-2RS	107.95	168.275	94.463	80.95	122.8	1000	3000	6	8.41
GEZ114ES	GEZ114ES-2RS	114.3	177.8	100.013	85.725	130.6	1120	3400	6	9.79
GEZ120ES	GEZ120ES-2RS	120.65	187.325	105.562	90.475	137.6	1250	3750	6	11.5
GEZ127ES	GEZ127ES-2RS	127	196.85	111.125	95.25	145.3	1400	4150	6	13.5
GEZ152ES	GEZ152ES-2RS	152.4	222.25	120.65	104.775	168.2	1730	5200	6	17.5

**Maintenance free angular contact spherical plain bearings
with sliding contact surface**

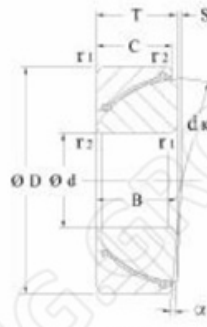
**Steel / PTFE composite
Series GAC...F**



GAC...F

principal dimensions			Angle of tilt α degrees	Basic load ratings		Code bearing HMEC	Mass \approx kg
d mm	D	T		Dynamic C	Static C_0		
25	47	15	3.5	21600	34500	GAC25F	0.14
30	55	17	3.5	27000	43000	GAC30F	0.21
35	62	18	3.5	32500	52000	GAC35F	0.27
40	68	19	3.5	39000	62000	GAC40F	0.33
45	75	20	3	45500	73500	GAC45F	0.42
50	80	20	3	53000	85000	GAC50F	0.46
60	95	23	3	69500	112000	GAC60F	0.73
70	110	25	2.5	88000	143000	GAC70F	1.05
80	125	29	2.5	110000	176000	GAC80F	1.55
90	140	32	2.5	134000	216000	GAC90F	2.10
100	150	32	2	170000	270000	GAC100F	2.35
110	170	38	2	200000	320000	GAC110F	3.70
120	180	38	1.5	240000	380000	GAC120F	4.00

HMEC

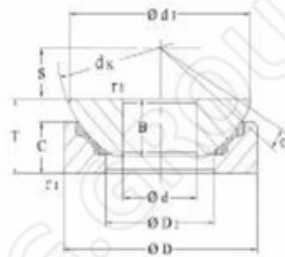


GAC...F

Dimensions							Abutment and fillet dimensions				
d	dk	B	C	r ₁	r ₂	s	d _a	d _b	D _a	D _b	r _a
				min	min		max	max	min	min	max
25	42	15	14	0.6	0.3	0.6	29	39	34	43	0.6
30	49.5	17	15	1	0.3	1.3	35	45	39	50.5	1
35	55.5	18	16	1	0.3	2.1	40	50	45	56.5	1
40	62	19	17	1	0.3	2.8	45	54	50	63	1
45	68.5	20	18	1	0.3	3.5	51	60	55	69	1
50	74	20	19	1	0.3	4.3	56	67	60	74.5	1
60	88.5	23	21	1.5	0.6	5.7	68	77	70	90	1.5
70	102	25	23	1.5	0.6	7.2	78	92	85	103	1.5
80	115	29	25.5	1.5	0.6	8.6	88	104	95	116	1.5
90	128.5	32	28	2	0.6	10.1	101	118	105	129	2
100	141	32	31	2	0.6	11.6	112	128	120	141	2
110	155	38	34	2.5	0.6	13	124	145	130	156	2.5
120	168	38	37	2.5	0.6	14.5	134	155	140	169	2.5

Maintenance-free Spherical plain thrust bearing with sliding contact surface combination steel / PTFE composite

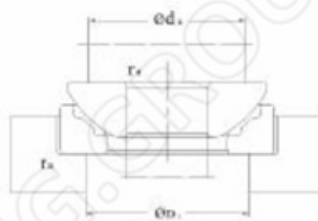
Series GX...F



GX..F

Dimensions			Abutment and fillet dimensions							
d	d_k	d_1	D1	B	C	r1	S	d_a	D_a	r_a
						min		min	max	max
17	52	43.5	27	11.8	11.2	0.6	11	34	37	0.6
20	68	50	31	14.5	13.8	1	12.5	40	44	1
25	68	58.5	34.5	16.5	16.7	1	14	45	47	1
30	82	70	42	19	19	1	17.5	56	59	1
35	98	84	50.5	22	20.7	1	22	66	71	1
40	114	97	59	27	21.5	1	24.5	78	84	1
45	128	110	67	31	25.5	1	27.5	89	97	1
50	139	120	70	33	30.5	1	30	98	105	1
60	160	140	84	37	34	1	35	109	120	1
70	176	153	94.5	42	36.5	1	35	121	125	1
80	197	172	107.5	43.5	38	1	42.5	135	145	1
100	222	198	127	51	46	1	45	155	170	1
120	250	220	145	53.5	50	1	52.5	170	190	1

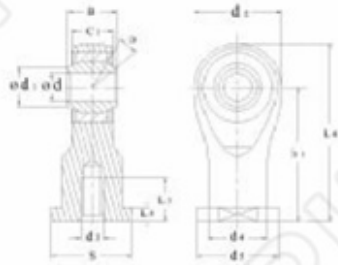
HMEC



principal dimensions			Angle of tilt α	Basic load ratings		Code bearing HMEC	Mass ^{net} kg
d	D	T		Dynamic C	Static C ₀		
17	47	16	5	36500	58500	GX17F	0.14
20	55	20	5	46500	73500	GX20F	0.25
25	62	22.5	5	69500	112000	GX25F	0.42
30	75	26	5	95000	153000	GX30F	0.61
35	90	28	6	134000	216000	GX35F	0.98
40	105	32	6	173000	275000	GX40F	1.50
45	120	36.5	6	224000	355000	GX45F	2.25
50	130	42.5	6	275000	440000	GX50F	3.15
60	150	45	6	375000	600000	GX60F	4.65
70	160	50	5	475000	750000	GX70F	5.40
80	180	50	5	570000	915000	GX80F	6.95
100	210	59	5	735000	1180000	GX100F	11.0
120	230	64	4	880000	1430000	GX120F	14.0

Rod-ends with female thread

Series **SI...E / ES**
SI...ES-2RS (sealed)

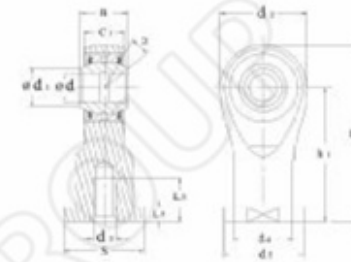


SI...E / ES

principal dimensions
mm

d	B	c1	d1	d2	d3	h1	L3_min	L4_max	L5_max	D4_max	D5_max	S
5	6	4.5	7	21	M5	30	11	42	5	10	13	10
6	6	4.5	8	21	M6	30	11	42	5	11	13	11
8	8	6.5	10	24	M8	36	15	49	5	13	16	13
10	9	7.5	13	29	M10	43	15	58	6.5	16	19	16
12	10	8.5	15	34	M12	50	18	67	7	18	22	18
15	12	10.5	18	40	M14	61	21	81	8	21	26	21
17	14	11.5	20	46	M16	67	24	90	10	24	29	24
20	16	13.5	24	53	M20x1.5	77	30	104	10	28	34	30
25	20	18	29	64	M24x2	94	36	126	12	35	42	36
30	22	20	34	73	M30x2	110	45	147	15	42	50	46
35	25	22	39	82	M36x3	125	60	167	15	48	58	55
40	28	24	45	92	M39x3	142	65	190	18	52	65	60
45	32	28	50	102	M42x3	145	65	199	20	58	70	65
50	35	31	55	112	M45x3	160	68	221	20	62	75	70

HMEC

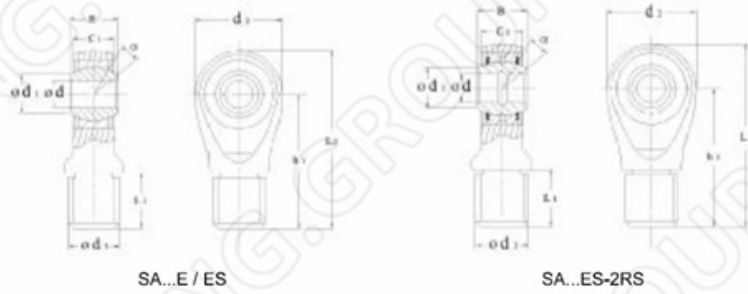


SI...ES-2RS

Code bearing	Basic load ratings			Mass ≈ kg	
	Dynamic kN	Static kN	α' ≈		
HMEC					
SI5E	3.4	8.1	13	0.016	
SI6E	3.4	8.1	13	0.017	
SI8E	5.5	12.9	15	0.035	
SI10E	8.1	17.8	12	0.061	
SI12E	10.8	24.5	10	0.096	
SI15ES	SI15ES-2RS	17	36	8	0.162
SI17ES	SI17ES-2RS	21	45	10	0.233
SI20ES	SI20ES-2RS	30	60	9	0.324
SI25ES	SI25ES-2RS	48	83	7	0.625
SI30ES	SI30ES-2RS	62	110	6	0.976
SI35ES	SI35ES-2RS	80	148	6	1.52
SI40ES	SI40ES-2RS	100	180	7	2.06
SI45ES	SI45ES-2RS	127	240	7	2.72
SI50ES	SI50ES-2RS	156	290	6	3.57

Rod-ends with male thread

Series SA...E / ES
SA...ES-2RS (sealed)

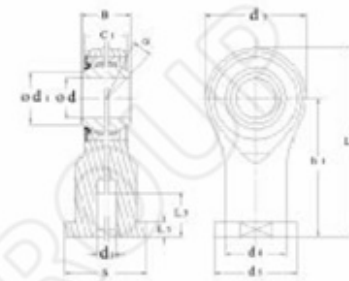


Code bearing HMEC	principal dimensions mm							Basic load ratings				Mass ≈ kg	
	d	B	C _{1max}	d _{1min}	d _{2min}	d ₃	h ₁	L _{1min}	L _{2min}	Dyn.	Sta.		α°
									kN	kN	≈		
SA5E	5	6	4.5	7	21	M5	36	16	48	3.4	8.1	13	0.011
SA6E	6	6	4.5	8	21	M6	36	16	48	3.4	8.1	13	0.013
SA8E	8	8	6.5	10	24	M8	42	21	55	5.5	12.9	15	0.026
SA10E	10	9	7.5	13	29	M10	48	26	63	8.1	17.8	12	0.044
SA12E	12	10	8.5	15	34	M12	54	28	71	10.8	24.5	10	0.066
SA15ES SA15ES-2RS	15	12	10.5	18	40	M14	63	34	83	17	36	8	0.121
SA17ES SA17ES-2RS	17	14	11.5	20	46	M16	69	36	92	21	45	10	0.172
SA20ES SA20ES-2RS	20	16	13.5	24	53	M20X1.5	78	43	105	30	60	9	0.283
SA25ES SA25ES-2RS	25	20	18	29	64	M24X2	94	53	126	48	83	7	0.504
SA30ES SA30ES-2RS	30	22	20	34	73	M30X2	110	65	147	62	110	6	0.835
SA35ES SA35ES-2RS	35	25	22	39	82	M36X3	140	82	182	80	148	6	1.41
SA40ES SA40ES-2RS	40	28	24	45	92	M39X3	150	86	198	100	180	7	1.86
SA45ES SA45ES-2RS	45	32	28	50	102	M42X3	163	92	217	127	240	7	2.57
SA50ES SA50ES-2RS	50	35	31	55	112	M45X3	185	104	246	156	290	6	3.58

Maintenance free Rod-ends with female thread

Series **SI...C**
SI...C-2RS (sealed)

HMEC



SI...C
SI...C-2RS

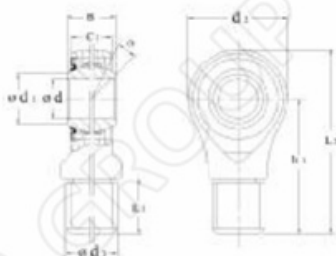
principal dimensions
mm

d	B	C1	d1	d2	d3	h ₁	L ₃ _{min}	L ₄ _{max}	L ₅ _{max}	D ₄ _{max}	D ₅ _{max}	S
6	6	4.5	8	21	M6	30	11	42	5	11	13	11
8	8	6.5	10	24	M8	36	15	49	5	13	16	13
10	9	7.5	13	29	M10	43	15	58	6.5	16	19	16
12	10	8.5	15	34	M12	50	18	67	7	18	22	18
15	12	10.5	18	40	M14	61	21	81	8	21	26	21
17	14	11.5	20	46	M16	67	24	90	10	24	29	24
20	16	13.5	24	53	M20x1.5	77	30	104	10	28	34	30
25	20	18	29	64	M24x2	94	36	126	12	35	42	36
30	22	20	34	73	M30x2	110	45	147	15	42	50	46
35	25	22	39	82	M36x3	125	60	167	15	48	58	55
40	28	24	45	92	M39x3	142	65	190	18	52	65	60
45	32	28	50	102	M42x3	145	65	199	20	58	70	65
50	35	31	55	112	M45x3	160	68	221	20	62	75	70

Code bearing	Basic load ratings			Mass ≈ kg
	Dynamic kN	Static kN	α^2 ≈	
HMEC				
SI6C	3.4	8.1	13	0.017
SI8C	5.5	12.9	15	0.035
SI10C	8.1	17.8	12	0.061
SI12C	10.8	24.5	10	0.096
SI15C	17	36	8	0.162
SI17C	21	45	10	0.233
SI20C	30	60	9	0.324
SI25C	48.8	83	7	0.625
SI30C	62	110	6	0.976
SI35C-2RS	80	148	6	1.52
SI40C-2RS	100	180	7	2.06
SI45C-2RS	127	240	7	2.72
SI50C-2RS	156	290	6	3.57

Maintenance free Rod-ends with male thread

Series **SA...C**
SA...C-2RS (sealed)



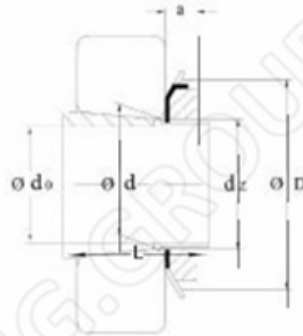
SA...C
SA...C-2RS

Code bearing HMEC	principal dimensions mm						Basic load ratings					Mass ≈ kg	
	d	B	C _{1max}	d _{1min}	d _{2min}	d ₃	h ₁	L _{1min}	L _{2min}	Dynamic kN	Static kN		α °
SA6C	6	6	4.5	8	21	M6	42	21	48	3.4	8.1	13	0.013
SA8C	8	8	6.5	10	24	M8	42	21	55	5.5	12.9	15	0.026
SA10C	10	9	7.5	13	29	M10	48	26	63	8.1	17.8	12	0.044
SA12C	12	10	8.5	15	34	M12	54	28	71	10.8	24.5	10	0.066
SA15C	15	12	10.5	18	40	M14	63	34	83	17	36	8	0.121
SA17C	17	14	11.5	20	46	M16	69	36	92	21	45	10	0.172
SA20C	20	16	13.5	24	53	M20X1.5	78	43	105	30	60	9	0.283
SA25C	25	20	18	29	64	M24X2	94	53	126	48	83	7	0.504
SA30C	30	22	20	34	73	M30X2	110	65	147	62	110	6	0.835
SA35C-2RS	35	25	22	39	82	M36X3	140	82	182	80	148	6	1.41
SA40C-2RS	40	28	24	45	92	M39X3	150	86	198	100	180	7	1.86
SA45C-2RS	45	32	28	50	102	M42X3	163	92	217	127	240	7	2.57
SA50C-2RS	50	35	31	55	112	M45X3	185	104	246	156	290	6	3.58

Bearing accessories

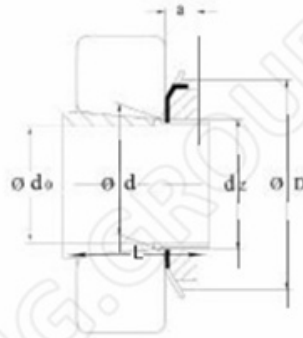


Adapter Sleeves



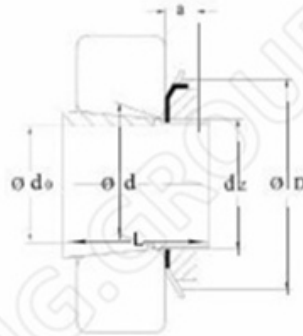
Dimensions						Code HMEC	Appropriate Components		Weight ≈ kg
d_0	d	d_z	D	L	a ≈		Nut	Locking	
mm									
20	25	M25x1.5	38	26	8	H205	KM5	MB5	0.070
20	25	M25x1.5	38	29	8	H305	KM5	MB5	0.075
20	25	M25x1.5	38	35	8	H2305	KM5	MB5	0.087
25	30	M30x1.5	45	27	8	H206	KM6	MB6	0.099
25	30	M30x1.5	45	31	8	H306	KM6	MB6	0.109
25	30	M30x1.5	45	38	8	H2306	KM6	MB6	0.126
30	35	M35x1.5	52	29	9	H207	KM7	MB7	0.125
30	35	M35x1.5	52	35	9	H307	KM7	MB7	0.142
30	35	M35x1.5	52	43	9	H2307	KM7	MB7	0.165
35	40	M40x1.5	58	31	10	H208	KM8	MB8	0.174
35	40	M40x1.5	58	36	10	H308	KM8	MB8	0.189
35	40	M40x1.5	58	46	10	H2308	KM8	MB8	0.224
40	45	M45x1.5	65	33	11	H209	KM9	MB9	0.227
40	45	M45x1.5	65	39	11	H309	KM9	MB9	0.248
40	45	M45x1.5	65	50	11	H2309	KM9	MB9	0.280
45	50	M50x1.5	70	35	12	H210	KM10	MB10	0.274
45	50	M50x1.5	70	42	12	H310	KM10	MB10	0.303
45	50	M50x1.5	70	55	12	H2310	KM10	MB10	0.362
50	55	M55x2	75	37	12	H211	KM11	MB11	0.308
50	55	M55x2	75	45	12	H311	KM11	MB11	0.345
50	55	M55x2	75	59	12	H2311	KM11	MB11	0.420
55	60	M60x2	80	38	13	H212	KM12	MB12	0.346
55	60	M60x2	80	47	13	H312	KM12	MB12	0.394

HMEC



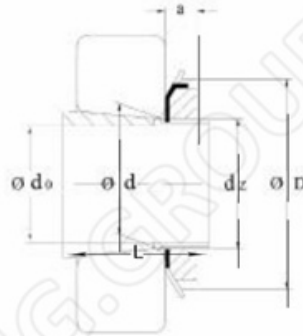
Dimensions						Code	Appropriate		Weight
d_0	d	d_z	D	L	a	HMEC	Nut	Locking	
						Sleeve incl Nut and Locking			\approx
mm									kg
55	60	M60x2	80	62	13	H2312	KM12	MB12	0.481
60	65	M65x2	85	40	14	H213	KM13	MB13	0.401
60	65	M65x2	85	50	14	H313	KM13	MB13	0.557
60	65	M65x2	85	65	14	H2313	KM13	MB13	0.557
65	75	M75x2	98	43	15	H215	KM15	MB15	0.707
65	75	M75x2	98	55	15	H315	KM15	MB15	0.831
65	75	M75x2	98	73	15	H2315	KM15	MB15	1.050
70	80	M80x2	105	46	17	H216	KM16	MB16	0.882
70	80	M80x2	105	59	17	H316	KM16	MB16	1.030
70	80	M80x2	105	78	17	H2316	KM16	MB16	1.280
75	85	M85x2	110	50	18	H217	KM17	MB17	1.020
75	85	M85x2	110	63	18	H317	KM17	MB17	1.180
75	85	M85x2	110	82	18	H2317	KM17	MB17	1.450
80	90	M90x2	120	62	18	H218	KM18	MB18	1.190
80	90	M90x2	120	65	18	H318	KM18	MB18	1.370
80	90	M90x2	120	86	18	H2318	KM18	MB18	1.690
85	95	M95x2	125	55	19	H219	KM19	MB19	1.370
85	95	M95x2	125	68	19	H319	KM19	MB19	1.560
85	95	M95x2	125	90	19	H2319	KM19	MB19	1.920
90	100	M100x2	130	58	20	H220	KM20	MB20	1.490
90	100	M100x2	130	71	20	H320	KM20	MB20	1.690
90	100	M100x2	130	97	20	H2320	KM20	MB20	2.150

Adapter Sleeves



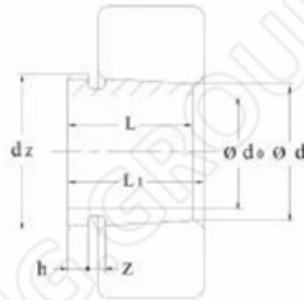
Dimensions						Code HMEC	Appropriate Components		Weight ≈ kg
d ₀	d	d ₂	D	L	a ≈		Nut	Locking	
mm									
100	110	M110x2	145	81	21	H3122	KM22	MB22	2.250
100	110	M110x2	145	77	21	H222	KM22	MB22	1.930
100	110	M110x2	145	105	21	H322	KM22	MB22	2.180
100	110	M110x2	145	105	21	H2322	KM22	MB22	2.740
110	120	M120x2	145	72	22	H3024	KML24	MBL24	1.9630
110	120	M120x2	155	88	22	H3124	KM24	MB24	2.640
110	120	M120x2	155	112	22	H2324	KM24	MB24	3.190
115	130	M130x2	155	80	23	H3026	KML26	MBL26	2.850
115	130	M130x2	165	92	23	H3126	KM26	MB26	3.660
115	130	M130x2	165	121	23	H2326	KM26	MB26	4.600
125	140	M140x2	165	82	24	H3028	KML28	MBL28	3.160
125	140	M140x2	180	97	24	H3128	KM28	MB28	4.340
125	140	M140x2	180	131	24	H2328	KM28	MB28	5.550
135	150	M150x2	180	87	26	H3030	KML30	MBL30	3.890
135	150	M150x2	195	111	26	H3130	KM30	MB30	5.520
135	150	M150x2	195	139	26	H2330	KM30	MB30	6.630
140	160	M160x3	190	93	28	H3032	KML32	MBL32	5.210
140	160	M160x3	210	119	28	H3132	KM32	MB32	7.670
140	160	M160x3	210	147	28	H2332	KM32	MB32	9.140
150	170	M170x3	200	101	29	H3034	KML34	MBL34	5.990
150	170	M170x3	220	122	29	H3134	KM34	MB34	8.360
150	170	M170x3	220	154	29	H2334	KM34	MB34	10.200
160	180	M180x3	210	109	30	H3036	KML36	MBL36	6.830

HMEC



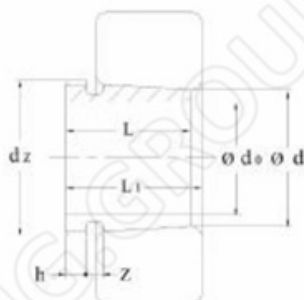
Dimensions						Code HMEC	Appropriate Components		Weight ≈ kg
d ₀	d	d _z	D	L	a ≈		Nut	Locking	
mm						Sleeve incl Nut and Locking			
160	180	M180x3	230	131	30	H3136	KM36	MB36	9.500
160	180	M180x3	230	161	30	H2336	KM36	MB326	11.300
170	190	M190x3	220	112	31	H3038	KML38	MBL38	7.450
170	190	M190x3	240	141	31	H3138	KM38	MB38	10.800
170	190	M190x3	240	169	31	H2338	KM38	MB38	12.600
180	200	M200x3	240	120	32	H3040	KML40	MBL40	9.190
180	200	M200x3	250	150	32	H3140	KM40	MB40	12.100
180	200	M200x3	250	176	32	H2340	KM40	MB40	13.900

Withdrawal Sleeves



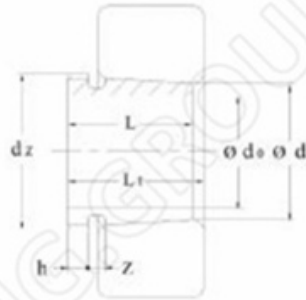
Dimensions							Code	Corresp	Weight
d_0	d	d_z	L	L_1	h	z	HMEC	Withdrawal	≈
mm							Sleeve	Nut	kg
35	40	M45X1.5	30	32	6	5	AH308	KM9	0.093
35	40	M45X1.5	40	43	7	6	AH2308	KM9	0.129
40	45	M50X1.5	32	34	6	6	AH309	KM10	0.112
40	45	M50X1.5	44	47	7	6	AH2309	KM10	0.163
45	50	M55X2	35	38	7	6	AH310X	KM11	0.138
45	50	M55X2	50	53	8	6	AH2310X	KM11	0.236
50	55	M60X2	37	40	7	6	AH311X	KM12	0.162
50	55	M60X2	54	57	9	6	SH2311X	KM12	0.257
55	60	M65X2	40	43	8	7	AH312X	KM13	0.194
55	60	M65X2	57	61	10	7	AH2312X	KM13	0.299
60	65	M75X2	42	45	8	7	AH313	KM15	0.256
60	65	M75X2	61	64	11	7	AH2313	KM15	0.399
65	70	M80X2	44	47	8	7	AH314	KM16	0.290
65	70	M80X2	65	68	12	7	AH2314X	KM16	0.466
70	75	M85X2	46	49	8	7	AH315	KM17	0.326
70	75	M85X2	69	72	12	7	AH2315X	KM17	0.536
75	80	M90X2	48	52	8	7	AH316	KM18	0.367
75	80	M90X2	72	78	12	7	AH2316X	KM18	0.602
80	85	M95X2	52	56	9	7	AH317X	KM19	0.431
80	85	M95X2	75	78	13	7	AH2317X	KM19	0.676

HMEC



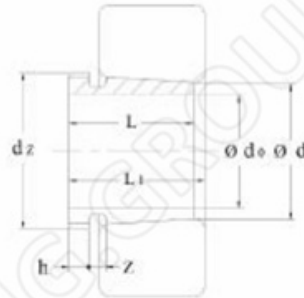
Dimensions							Code	Corresp	Weight
d_c	d	d_z	L	L_1	h	z	HMEC	Withdrawal	\approx
mm							Sleeve	Nut	kg
85	90	M100X2	53	57	9	7	AH318X	KM20	0.465
85	90	M100X2	63	67	10	7	AH3218X	KM20	0.578
85	90	M100X2	80	83	14	7	AH2318X	KM20	0.777
90	95	M105X2	57	61	10	8	AH319X	KM21	0.537
90	95	M105X2	85	89	15	8	AH2319X	KM21	0.888
95	100	M110X2	59	63	10	8	AH320X	KM22	0.586
95	100	M110X2	75	77	12	7	AH3220X	KM22	0.768
95	100	M110X2	90	94	15	8	AH2320	KM22	1.000

Withdrawal Sleeves



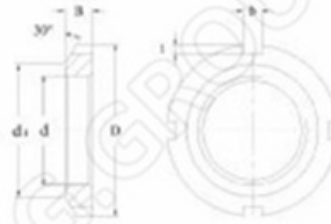
Dimensions								Code	Corresp	Weight
d_0	d	d_z	L	L_1	h	z	HMEC	Sleeve	Withdrawal Nut	≈
mm										kg
100	110	M125	68	72	11	8	AH3122		KM25	1.280
105	110	M120X2	68	72	11	8	AH3122X		KM24	0.786
105	110	M125X2	82	86	12	8	AH3222X		KM24	1.060
105	110	M125X2	98	102	16	8	AH2322X		KM25	1.350
110	120	M140X2	75	79	12	8	AH3124		KM28	1.670
110	120	M140X2	90	94	17	8	AH2324		KM28	2.470
115	120	M130X2	60	64	13	8	AH3024X		KM26	0.737
115	120	M130X2	75	79	12	8	AH3124X		KM26	0.948
115	120	M135X2	90	94	17	8	AH3224X		KM27	1.310
115	120	M135X2	105	109	17	8	AH2324X		KM27	1.610
125	130	M140X2	67	71	14	8	AH3026X		KM28	0.907
125	130	M140X2	78	82	12	8	AH3126X		KM28	1.080
125	130	M145X2	98	102	15	8	AH3226X		KM29	1.580
125	130	M145X2	115	119	19	8	AH2326X		KM29	1.970
135	140	M150X2	68	73	14	10	AH3028X		KM30	0.996
135	140	M150X2	83	88	14	10	AH3128X		KM30	1.260
135	140	M155X3	104	109	15	10	AH3228X		KM31	1.810
135	140	M155X3	125	130	20	10	AH2328X		KM31	2.340
145	150	M160X3	72	77	15	10	AH3030X		KM32	1.120
145	150	M160X3	96	101	15	10	AH3130X		KM33	1.750
145	150	M160X3	114	119	18	10	AH3230X		KM33	2.210
145	150	M160X3	135	140	24	10	AH2330X		KM33	0.000
150	160	M170X3	77	82	16	10	AH3032		KM34	2.010
150	160	M180X3	103	108	16	10	AH3132		KM36	3.180

HMEC



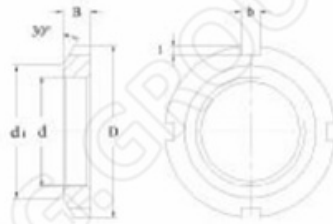
Dimensions							Code	Corresp	Weight
d_0	d	d_z	L	L_1	h	z	HMEC	Withdrawal	≈
mm							Sleeve	Nut	kg
150	160	M180X3	124	130	20	12	AH3232	KM36	4.020
150	160	M180X3	140	146	24	12	AH2332	KM36	4.690
160	170	M180X3	85	90	17	10	AH3034	KM36	2.400
160	170	M190X3	104	109	16	10	AH3134	KM38	3.410
160	170	M190X3	134	140	24	12	AH3234	KM38	3.410
160	170	M190X3	146	152	24	12	AH2334	KM38	5.230
170	180	M190X3	92	98	17	12	AH3036	KM38	2.800
170	180	M200X3	116	122	19	12	AH3136	KM40	4.160
170	180	M200X3	105	110	17	10	AH2236	KM40	3.670
170	180	M200X3	140	146	24	12	AH3236	KM40	5.290
170	180	M200X3	154	160	26	12	AH2336	KM40	5.940
180	190	Tr205X4	96	102	17	12	AH3038	HML41T	3.280
180	190	Tr210X4	125	131	19	12	AH3138	HM42T	4.730
180	190	Tr210X4	112	117	18	10	AH2238	HM42T	4.150
180	190	Tr210X4	160	167	26	14	AH3238	HM42T	6.530
180	190	Tr210X4	145	152	25	14	AH3238	HM42T	5.800

Lock nuts



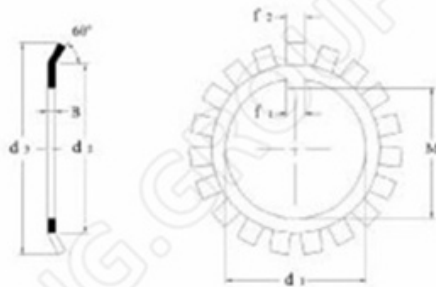
Dimensions						Code HMEC		Corresp.	Weight
d	D	d ₁	B	b	t	KM	KMA	Locking Washer	≈
mm									
kg									
M10x0.75	18	13.5	4	3	2.0	KM0		MB0	0.004
M12x1	22	17	4	3	2.0	KM1		MB1	0.007
M15x1	25	21	5	4	2.0	KM2		MB2	0.010
M17x1	28	24	5	4	2.0	KM3		MB3	0.013
M20x1	32	26	6	4	2.0	KM4		MB4	0.019
M25x1.5	38	32	7	5	2.0	KM5	KMA5	MB5	0.025
M30x1.5	45	38	7	5	2.0	KM6	KMA6	MB6	0.043
M35x1.5	52	44	8	5	2.0	KM7	KMA7	MB7	0.053
M40x1.5	58	50	9	6	2.5	KM8	KMA8	MB8	0.085
M45x1.5	65	56	10	6	2.5	KM9	KMA9	MB9	0.120
M50x1.5	70	61	11	6	2.5	KM10	KMA10	MB10	0.150
M55x2	75	67	11	7	3.0	KM11	KMA11	MB11	0.160
M60x2	80	73	11	7	3.0	KM12	KMA12	MB12	0.170
M65x2	85	79	12	7	3.0	KM13	KMA13	MB13	0.200
M70 x2	92	85	12	8	3.5	KM14	KMA14	MB14	0.240
M75x2	98	90	13	8	3.5	KM15	KMA15	MB15	0.290
M80x2	105	95	15	8	3.5	KM16	KMA16	MB16	0.400
M85x2	110	102	16	8	3.5	KM17	KMA17	MB17	0.450
M90x2	120	108	16	10	4.0	KM18	KMA18	MB18	0.560
M95x2	125	113	17	10	4.0	KM19		MB19	0.660
M100x2	130	120	18	10	4.0	KM20	KMA20	MB20	0.700
M105x2	140	126	18	12	5.0	KM21	KMA21	MB21	0.840
M110x2	145	133	19	12	5.0	KM22	KMA22	MB22	0.970
M115 x2	150	137	19	12	5.0	KM23		MB23	1.010
M120 x2	155	138	20	12	5.0	KM24	KMA24	MB24	1.080
M125x2	160	148	21	12	5.0	KM25	KMA25	MB25	1.190
M130x2	165	149	21	12	6.0	KM26	KMA26	MB26	1.250
M135x2	175	160	22	14	6.0	KM27		MB27	1.550
M140x2	180	160	22	14	6.0	KM28		MB28	1.600
M150x2	195	171	24	14	6.0	KM30		MB30	2.030

HMEC



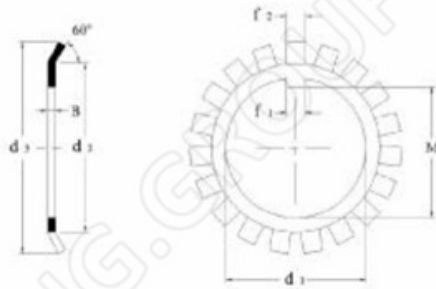
Dimensions						Code HMEC		Corresp	Weight
d	D	d ₁	B	b	t	KM	KMA	Locking Washer	≈
mm									kg
M160x3	210	182	25	16	7.0	KM32		MB32	2.590
M170x3	220	193	26	16	7.0	KM34		MB34	2.800
M180x3	230	203	27	18	8.0	KM36		MB36	3.070
M190x3	240	214	28	28	8.0	KM38		MB38	3.390
M200x3	250	226	29	18	8.0	KM40		MB40	3.690

Locking washers



Dimensions							Code	Weight
d_1	d_2	d_3	B	f_1	f_2	M	HMEC	
mm		≈	≈				Locking Washer	≈ kg
10	13.5	21	1.00	3	3	8.5	MB0	0.130
12	17.0	25	1.00	3	4	10.5	MB1	0.200
15	21.0	28	1.00	4	4	13.5	MB2	0.260
17	24.0	32	1.00	4	4	15.5	MB3	0.320
20	26.0	36	1.00	4	4	18.5	MB4	0.350
25	32.0	42	1.25	5	5	23.0	MB5	0.640
30	38.0	49	1.25	5	5	27.5	MB6	0.780
35	44.0	57	1.25	6	5	32.5	MB7	1.040
40	50.0	62	1.25	6	6	37.5	MB8	1.230
45	56.0	69	1.25	6	6	42.5	MB9	1.520
50	61.0	74	1.25	6	6	47.5	MB10	1.600
55	67.0	81	1.50	6	7	52.5	MB11	1.960
60	73.0	86	1.50	8	7	57.5	MB12	2.530
65	79.0	92	1.50	8	7	62.2	MB13	2.900
70	85.0	98	1.50	8	8	66.5	MB14	3.340
75	90.0	104	1.50	8	8	71.5	MB15	3.560
80	95.0	112	1.80	10	8	76.5	MB16	4.640
85	102.0	119	1.80	10	8	81.5	MB17	5.240
90	108.0	126	1.80	10	10	86.5	MB18	6.230
95	113.0	133	1.80	10	10	91.5	MB19	6.700
100	120.0	140	1.80	12	10	96.5	MB20	7.650
105	126.0	145	1.80	12	12	100.5	MB21	8.260
110	133.0	154	1.80	12	12	105.5	MB22	9.400
115	137.0	159	2.00	12	12	110.5	MB23	10.800
120	135.0	148	2.00	14	12	115.0	MBL24	7.000
120	138.0	164	2.00	14	12	115.0	MB24	10.500
125	148.0	170	2.00	14	12	120.0	MB25	11.800
130	149.0	175	2.00	14	12	125.0	MB26	11.300
135	160.0	185	2.00	14	14	135.0	MB27	14.400
140	160.0	192	2.00	16	14	135.0	MB28	14.200

HMEC



Dimensions							Code	Weight
d_1	d_2	d_3	B	f_1	f_2	M	HMEC	
mm		≈	≈				Locking Washer	≈ kg
150	171.0	205	2.00	16	14	145.0	MB30	15.500
160	182.0	217	2.50	18	16	154.0	MB32	22.200
170	193.0	232	2.50	18	16	164.0	MB34	24.700
180	203.0	242	2.50	20	18	174.0	MB36	16.800
190	214.0	252	2.50	20	18	184.0	MB38	27.800
200	226.0	262	2.50	20	18	194.0	MB40	29.300