TRIANGLE MANUFACTURING COMPANY
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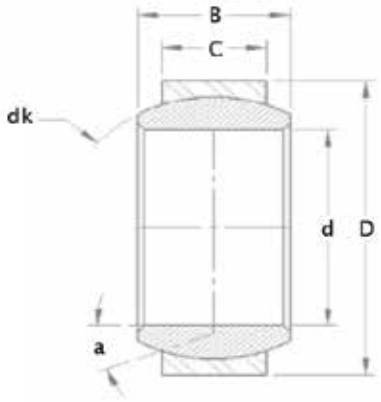
STATIC LOAD DATA

BALL & RING SPHERICAL BEARINGS

MATERIAL SINTERED BRONZE

- All load data was obtained by statically testing a large sample size of bearings of each specific size.
- The static load limit is the main value that was obtained by testing. It is the force it takes for the bearing ball's bore diameter to change 1/2 total tolerance allowed.
- The bore diameter is within the tolerance up to this force. It is not recommened to exceed this value.
- The static load rating is the max force the ball & ring assembly can take before failure due to either the ball cracking or permanent set created in the ball causing it to lock in place.
- Due to the wide variety of scenarios and by-use cases of the bearing assemblies, a dynamic load rating cannot be found directly.
- The dynamic load rating show was obtained by taking 1/3 the value of the static load rating.



IMPERIAL UNITS

Bearing Model	Nom. Bore Dia.	Min. Bore Dia.	Max Bore Dia.	Ball Dia.	Mounting Hole Dia.	Ball Height	Ring Height	Max Misalignmnet Rotation Angle	Dynamic Load Rating	Static Load Rating	Static Load Limit	Mass
	d(in)			Dk (in)	D (in)	B (in)	C (in)	a (deg.)	CD(lbf)	CS (lbf)	Pmax Limit (lbf)	m (lbm)
HA												
HA4104P	1/4"	0.2505	0.2515	0.5775	0.6560	0.3750	0.2660	36	1000	3001	1612	0.022
HA4105P	5/16"	0.3130	0.3145	0.5775	0.6560	0.3750	0.2660	29	1240	3719	1964	0.019
HA4106P	3/8"	0.3755	0.3765	0.5775	0.6560	0.3750	0.2660	22	877	2632	1400	0.014

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Bearing Model	Nom. Bore Dia.	Min. Bore Dia.	Max Bore Dia.	Ball Dia.	Mount-ing Hole Dia.	Ball Height	Ring Height	Max Mis-	Dynam-ic Load Rating	Static Load Rating	Static Load Limit	Mass
	d(in)			Dk (in)	D (in)	B (in)	C (in)	a (deg.)	CD(lbf)	CS (lbf)	Pmax Limit (lbf)	m (lbm)
HB												
HB1105P	5/16”	0.3130	0.3145	0.7505	0.8750	0.5000	0.3120	40	1487	4461	2782	0.050
HB1106P	3/8”	0.3755	0.3770	0.7505	0.8750	0.5000	0.3120	35	1495	4485	2873	0.044
HB1107P	7/16”	0.4380	0.4395	0.7505	0.8750	0.5000	0.3120	29	1394	4183	2662	0.038
HB1108P	1/2”	0.5005	0.5015	0.7505	0.8750	0.3750	0.3130	23	1295	3886	2428	0.027
HC												
HC3908P	7/16”	0.5005	0.5020	0.8000	0.9375	0.5000	0.438	17	1975	5925	3421	0.068
HD												
HDB8	1/2”	0.5005	0.5020	1.1885	1.3125	0.7500	0.5310	38	4334	13001	6641	0.180
HDB10	5/8”	0.6255	0.6270	1.1885	1.3125	0.7500	0.5310	31	4545	13634	6641	0.180
HDB12	3/4”	0.7505	0.7520	1.1885	1.3125	0.7500	0.5310	24	4011	12032	5896	0.129
HDB14	7/8”	0.8755	0.8770	1.1885	1.3125	0.6250	0.5310	15	3169	9506	4463	0.068
HE												
HE1406P	7/8”	0.8755	0.8770	1.0005	1.1250	0.5000	0.3430	47	2066	6198	3447	0.120
HE1408P	1/2”	0.5005	0.5020	1.0005	1.1250	0.5000	0.3430	39	2381	7144	4019	0.106
HE1410P	5/8”	0.6255	0.6270	1.0005	1.1250	0.5000	0.3430	31	2580	7740	4329	0.089
HF												
HF4014P	7/8”	0.8755	0.8770	1.4960	1.6875	1.0000	0.6880	26	4861	14582	9551	0.323
HF4016P	1”	1.0010	1.0030	1.4960	1.6875	1.0000	0.6880	20	5269	15808	10130	0.280