

Cylindrical OD Housing Fit Guidelines

Tables 14-15 list fit up guidelines for light load conveyor roll application per ABMA J6 fit. Testing and experience is needed to verify if this fit is sufficient for specific operation conditions. If tighter press fit is needed, contact Application Engineering to review if the standard bearing internal clearance is sufficient or a modified clearance is needed to prevent reduction or elimination of internal clearance.

For best reliability, bearings and housings should be selectively matched to reduce variation in fit up due to manufacturing tolerances of the bearing outside diameter and housing bore. Roll pockets should be machined parallel with the axis of the shaft and both sides should be on the same centerline to minimize potential for misalignment.

Table 14 - ER, VER and Cylindrical OD Insert Bearing Housing/Roll Bore

Bore Diameter		Sealmaster ER	Browning VER	Nominal Outside Diameter	Dimensions inch / mm									
					Outside Diameter*		Stationary Housing				Revolving Housing			
							Diameters		Theoretical Fit		Diameters		Theoretical Fit	
inch	mm			Max	Min	Max	Min	Tight	Loose	Max	Min	Tight	Loose	
1/2	-	ER-8	VER-208	1.8504 47	1.8504 47.002	1.8499 46.9875	1.8509 47.0129	1.8503 46.9976	.0001 .0025	.0010 .0254	1.8504 47.002	1.8498 46.9848	.0006 .0152	.0005 .0127
9/16	-	ER-9	-											
5/8	-	ER-10	VER-210											
11/16	-	ER-11	-											
3/4	-	ER-12	VER-212											
-	20	ER-204	-											
7/8	-	ER-14	VER-214	2.0472 52	2.0472 51.9989	2.0466 51.9836	2.0476 52.0090	2.0471 51.9963	.0001 .0025	.0010 .0254	2.0471 51.9963	2.0466 51.9836	.0006 .0152	.0005 .0127
15/16	-	ER-15	VER-215											
1	-	ER-16	VER-216											
-	25	ER-205	-											
1 1/16	-	ER-17	VER-217	2.4409 62	2.4409 61.9989	2.4403 61.9836	2.4413 62.0090	2.4408 61.9963	.0001 .0025	.0010 .0254	2.4408 61.9963	2.4403 61.9836	.0006 .0152	.0005 .0127
1 1/8	-	ER-18	VER-218											
1 3/16	-	ER-19	VER-219											
1 1/4	-	ER-20R	VER-220S											
-	30	ER-206	-											
1 1/4	-	ER-20	VER-220	2.8364 72	2.8346 71.9988	2.8340 71.9836	2.8350 72.0090	2.8345 71.9963	.0001 .0025	.0010 .0254	2.8345 71.9963	2.8340 71.9836	.0006 .0152	.0005 .0127
1 5/16	-	ER-21	-											
1 3/8	-	ER-22	VER-222											
1 7/16	-	ER-23	VER-223											
-	35	ER-207	-											
1 1/2	-	ER-24	VER-224	3.1496 80	3.1496 79.9998	3.1490 79.9846	3.1500 80.0100	3.1495 79.9973	.0001 .0025	.0010 .0254	3.1495 79.9973	3.1490 79.9846	.0006 .0152	.0005 .0127
1 9/16	-	ER-25	VER-225											
-	40	ER-208	-											
1 5/8	-	ER-26	VER-226	3.3465 85	3.3465 85.0011	3.3459 84.9808	3.3470 85.0138	3.3464 84.9986	.0001 .0025	.0013 .0330	3.3464 84.9986	3.3458 84.9833	.0007 .0178	.0007 .0178
1 11/16	-	ER-27	VER-227											
1 3/4	-	ER-28	VER-228											
-	45	ER-209	-											

This chart displays the recommended housing dimensions for Sealmaster ER and Browning VER ball bearings at the various bore diameters and nominal Outer Diameter. For Sealmaster ER with Skwezloc Concentric locking use the similar size ER with setscrew locking as shown. For other Browning Cylindrical O.D. bearings use the similar nominal dimensioned bearing.

* Outside diameter may be slightly oversized due to seal press fit, dimensions listed are as measured prior to seal assembly.



Table 14 - ER, VER and Cylindrical OD Insert Bearing Housing/Roll Bore cont.

Bore Diameter		Sealmaster ER	Browning VER	Nominal Outside Diameter	Dimensions inch / mm									
					Outside Diameter*		Stationary Housing				Revolving Housing			
							Diameters		Theoretical Fit		Diameters		Theoretical Fit	
inch	mm			Max	Min	Max	Min	Tight	Loose	Max	Min	Tight	Loose	
1 13/16	-	ER-29	-	3.5433 90	3.5433 89.998	3.5425 89.9795	3.5438 90.0125	3.5432 89.9972	.0001 .0025	.0013 .0330	3.5432 89.9973	3.5426 89.9820	.0007 .0178	.0007 .0178
1 7/8	-	ER-30	-											
1 15/16	-	ER-31	VER-231											
2	-	ER-32R	VER-232S											
-	50	ER-210	-											
2	-	ER-32	VER-232	3.937 99.9998	3.9370 99.9795	3.9362 99.9795	3.9375 100.0125	3.9369 99.9973	.0001 .0025	.0013 .0330	3.9369 99.9973	3.9363 99.9820	.0007 .0178	.0007 .0178
2 1/8	-	ER-34	-											
2 3/16	-	ER-35	VER-235											
-	55	ER-211	-											
2 1/4	-	ER-36	VER-236	4.3307 109.9998	4.3307 109.9795	4.3299 109.9795	4.3312 110.0125	4.3306 109.9972	.0001 .0025	.0013 .0330	4.3306 109.9972	4.3300 109.9820	.0007 .0178	.0007 .0178
2 3/8	-	ER-38	VER-238											
2 7/16	-	ER-39	VER-239											
-	60	ER-212	-											
2 1/2	-	ER-40	-	4.9213 125	4.9213 125.0010	4.9203 124.9756	4.9219 125.0163	4.9211 124.9959	.0002 .0051	.0016 .0406	4.9212 124.9985	4.9204 124.9782	.0009 .0229	.0009 .0229
2 11/16	-	ER-43	-											
-	70	ER-214	-											
2 7/8	-	ER-46	-	5.1181 130	5.1181 129.9997	5.1171 129.9743	5.1187 130.0150	5.1179 129.9947	.0002 .0051	.0016 .0406	5.1180 129.9972	5.1172 129.9769	.0009 .0229	.0009 .0229
2 15/16	-	ER-47	-											
-	75	ER-215	-											
3	-	ER-48	-	5.5118 140	5.5118 139.9997	5.5108 139.9743	5.5124 140.0150	5.5116 139.9946	.0002 .0051	.0016 .0406	5.5117 139.9972	5.5109 139.9769	.0009 .0229	.0009 .0229
3 3/16	-	ER-51	-											
-	80	ER-216	-											
3 1/4	-	ER-52	-	5.9055 150	5.9055 148.9997	5.9045 149.9743	5.9061 150.0149	5.9053 149.9946	.0002 .0051	.0016 .0406	5.9054 149.9972	5.9046 149.9768	.0009 .0229	.0009 .0229
3 3/8	-	ER-54	-											
3 7/16	-	ER-55	-											
3 15/16	-	ER-63	-	7.4803 190	7.4803 189.9996	7.4791 189.9691	7.4815 190.0301	7.4801 189.9945	.0002 .0051	.0024 .0610	7.4805 190.0047	7.4791 189.9691	.0012 .0305	.0014 .0356
4	-	ER-64	-											

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