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THE SEAL SPECIALISTS

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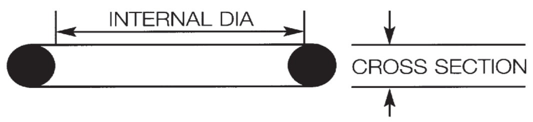
British Standard O-Ring Chart



SIZE REF.	To Suit SHAFT ins	To Suit SHAFT mm	To Suit CYLINDER ins	To Suit CYLINDER mm	INTERNAL DIAMETER ins	INTERNAL DIAMETER mm	CROSS SECTION ± ·003 ins (0.08 mm) ins	CROSS SECTION mm
001*	1/32	0.8	·095	2.5	0·029	0.73	·040	1.02
002*	3/64	1.2	·130	3.3	0·042	1.07	·050	1.27
003*	1/16	1.6	·160	4.1	0·056	1.42	·060	1.53
606*	5/64	2.0	-	3.8	0·070	1.78	·040	1.02
607*	7/64	2.8	-	4.5	0·100	2.54	·040	1.02

C/SEC. ·070" ± ·003" (1.78 mm ± 0.08 mm)

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
004*	5/64	2	13/64	5	0·070	1.78	·006	0.14
005*	7/64	2.8	15/64	6	0·101	2.57	·006	0.14
006*	1/8	3	1/4	6.3	0·114	2.90	·006	0.14
801*	-	3.2	-	6.5	0·125	3.17	·006	0.15
007*	5/32	4	9/32	7	0·145	3.69	·006	0.15
008*	3/16	4.5	5/16	8	0·176	4.47	·006	0.15
802*	-	4.7	-	8.3	0·187	4.76	·006	0.15
009*	7/32	5.5	11/32	8.7	0·208	5.28	·006	0.15
010*	1/4	6	3/8	9.5	0·239	6.07	·007	0.17
803*	-	6.3	-	10	0·250	6.35	·007	0.17
610	17/64	6.7	-	10.2	0·266	6.75	·007	0.17
011*	5/16	7.6	7/16	11	0·301	7.66	·007	0.17
804*	-	8	-	11.5	0·312	7.94	·007	0.17
611*	11/32	8.7	15/32	12	0·344	8.73	·007	0.17
012*	3/8	9.5	1/2	12.7	0·364	9.25	·007	0.17
013	7/16	11	9/16	14.2	0·426	10.82	·008	0.20
806	7/16	11	-	14.5	0·437	11.11	·008	0.20
014	1/2	12.5	5/8	15.6	0·489	12.42	·008	0.20
015	9/16	14	11/16	17.2	0·551	14	·008	0.20
016	5/8	15.5	3/4	18.8	0·614	15.60	·008	0.20
017	11/16	17.4	13/16	20.5	0·676	17.16	·008	0.20
018	3/4	19	7/8	22	0·739	18.77	·012	0.30
019	13/16	20.5	15/16	23.5	0·801	20.35	·012	0.30
020	7/8	22	1	25.4	0·864	21.95	·012	0.30
021	15/16	23.5	1 1/16	26.8	0·926	23.52	·012	0.30
022	1	25	1 1/8	28.5	0·989	25.12	·012	0.30
023	1 1/16	27	1 3/16	30	1·051	26.70	·012	0.30
024	1 1/8	28	1 1/4	31.5	1·114	28.30	·012	0.30
025	1 3/16	30	1 5/16	33.5	1·176	29.87	·012	0.30
026	1 1/4	31.5	1 3/8	35	1·239	31.47	·016	0.40
027	1 5/16	33	1 7/16	36.3	1·301	33.05	·016	0.40
028	1 3/8	34.5	1 1/2	38	1·364	34.65	·016	0.40
517	1 7/16	36	1 9/16	40	1·428	36.27	·016	0.40
029	1 1/2	38	1 5/8	41	1·489	37.82	·016	0.40
519	1 9/16	39.5	1 11/16	43	1·553	39.45	·016	0.40
030	1 5/8	41	1 3/4	44.5	1·614	41	·016	0.40
031	1 3/4	44	1 7/8	47	1·739	44.17	·016	0.40
032	1 7/8	47	2	51	1·864	47.37	·026	0.65
033	2	50	2 1/8	54	1·989	50.52	·026	0.65
034	2 1/8	53	2 1/4	58	2·114	53.67	·026	0.65
035	2 1/4	56.5	2 3/8	61	2·239	56.87	·026	0.65
036	2 3/8	60	2 1/2	64	2·364	60.04	·026	0.65
037	2 1/2	63	2 5/8	67	2·489	63.22	·026	0.65
038	2 5/8	66	2 3/4	70	2·614	66.4	·026	0.65
039	2 3/4	69.5	2 7/8	74	2·739	69.57	·026	0.65
040	2 7/8	73	3	77	2·864	72.76	·026	0.65
041	3	76	3 1/8	80	2·989	75.94	·026	0.65
532	3 1/8	79	3 1/4	83	3·110	79	·026	0.65
042	3 1/4	82	3 3/8	86	3·239	82.28	·033	0.85
534	3 3/8	85	3 1/2	90	3·360	85.34	·033	0.85
043	3 1/2	88.5	3 5/8	92	3·489	88.64	·033	0.85
536	3 5/8	91.5	3 3/4	96	3·610	91.7	·033	0.85
044	3 3/4	95	3 7/8	99	3·739	95	·033	0.85
538	3 7/8	98	4	102	3·860	98.05	·033	0.85
045	4	101	4 1/8	105	3·989	101.34	·039	1.00
540	4 1/8	104	4 1/4	109	4·110	104.4	·039	1.00
046	4 1/4	107	4 3/8	112	4·239	107.7	·039	1.00
542	4 3/8	110.5	4 1/2	115	4·360	110.74	·039	1.00
047	4 1/2	114	4 5/8	118	4·489	114	·039	1.00
544	4 5/8	116	4 3/4	121	4·610	117.1	·039	1.00
048	4 3/4	120	4 7/8	124	4·739	120.4	·047	1.20
546	4 7/8	123	5	127	4·860	123.44	·047	1.20
049	5	127	5 1/8	130	4·989	126.76	·047	1.20

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C/SEC. ·070" ± ·003" (1.78 mm ± 0.08 mm) continued

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
548	5 1/8	130	5 1/4	133	5·095	129.4	·047	1.20
050	5 1/4	133	5 3/8	136	5·239	133.1	·047	1.20
550	5 3/8	136	5 1/2	140	5·345	135.76	·047	1.20
551	5 1/2	139	5 5/8	143	5·470	138.94	·047	1.20
552	5 5/8	142	5 3/4	146	5·595	142.11	·047	1.20
553	5 3/4	145	5 7/8	149	5·720	145.29	·047	1.20
554	5 7/8	148	6	152	5·845	148.46	·047	1.20
555	6	151	6 1/8	156	5·970	151.64	·055	1.40
556	6 1/8	155	6 1/4	160	6·095	154.81	·055	1.40
557	6 1/4	158	6 3/8	163	6·220	158	·055	1.40
558	6 3/8	161	6 1/2	165	6·345	161.16	·055	1.40
559	6 1/2	164	6 5/8	169	6·470	164.34	·055	1.40
560	6 5/8	167	6 3/4	172	6·595	167.51	·055	1.40
561	6 3/4	170	6 7/8	175	6·720	170.69	·055	1.40
562	6 7/8	174	7	179	6·845	173.87	·055	1.40

C/SEC. ·103" ± ·003" (2.62 mm ± 0.08 mm)

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
102*	1/16	1.6	1/4	6.0	0·049	1.24	·006	0.14
103*	3/32	2.4	9/32	7.0	0·081	2.06	·006	0.14
104*	1/8	3.0	5/16	7.6	0·112	2.84	·006	0.14
105*	5/32	4.0	11/32	8.7	0·143	3.63	·006	0.15
106*	3/16	4.5	3/8	9.5	0·174	4.42	·006	0.15
107*	7/32	5.5	-	10.2	0·206	5.23	·006	0.15
108*	1/4	6	7/16	11	0·237	6.02	·007	0.17
109*	5/16	7.6	1/2	12.7	0·299	7.60	·007	0.17
110*	3/8	9.5	9/16	14.2	0·362	9.19	·007	0.17
613*	25/64	9.9	37/64	14.6	0·391	9.92	·007	0.17
111*	7/16	11	5/8	15.6	0·424	10.78	·008	0.20
614*	15/32	11.9	21/32	16.6	0·469	11.91	·008	0.20
112*	1/2	12.5	11/16	17.2	0·487	12.37	·008	0.20
807*	1/2	12.5	-	17.5	0·500	12.70	·008	0.20
615*	33/64	13	45/64	17.8	0·516	13.10	·008	0.20
113*	9/16	14	3/4	18.8	0·549	13.95	·008	0.20
616*	19/32	15	25/32	19.8	0·594	15.08	·008	0.20
114*	5/8	15.5	13/16	20.5	0·612	15.54	·008	0.20
809*	-	15.8	-	21	0·625	15.88	·008	0.20
115*	11/16	17.4	7/8	22	0·674	17.13	·008	0.20
810*	11/16	17.4	-	22.5	0·687	17.46	·008	0.20
617*	-	17.8	-	23	0·703	17.86	·008	0.20
116*	3/4	19	15/16	23.5	0·737	18.72	·012	0.30
117	13/16	20.5	1	25.4	0·799	20.29	·012	0.30
812	-	21	-	26	0·812	20.64	·012	0.30
118	7/8	22	1 1/16	26.8	0·862	21.90	·012	0.30
813	-	22.5	-	27.5	0·875	22.23	·012	0.30
119	15/16	23.5	1 1/8	28.5	0·924	23.47	·012	0.30
814	-	23.8	-	29	0·937	23.81	·012	0.30
120	1	25	1 3/16	30	0·987	25.07	·012	0.30
121	1 1/16	27	1 1/4	31.5	1·049	26.65	·012	0.30
122	1 1/8	28	1 5/16	33.5	1·112	28.25	·012	0.30
123	1 3/16	30	1 3/8	35	1·174	29.83	·012	0.30
124	1 1/4	31.5	1 7/16	36.3	1·237	31.42	·016	0.40
125	1 5/16	33	1 1/2	38	1·299	33	·016	0.40
126	1 3/8	34.5	1 9/16	40	1·362	34.60	·016	0.40
127	1 7/16	36	1 5/8	41	1·424	36.17	·016	0.40
128	1 1/2	38	1 11/16	43	1·487	37.77	·016	0.40
129	1 9/16	39.5	1 3/4	44.5	1·549	39.35	·016	0.40
130	1 5/8	41	1 13/16	46	1·612	40.95	·016	0.40
131	1 11/16	42.5	1 7/8	47	1·674	42.52	·016	0.40
132	1 3/4	44	1 15/16	49	1·737	44.12	·016	0.40
133	1 13/16	45.5	2	51	1·799	45.70	·016	0.40
134	1 7/8	47	2 1/16	53	1·862	47.30	·016	0.40
135	1 15/16	49	2 1/8	54	1·925	48.90	·016	0.40
136	2	50	2 3/16	56	1·987	50.47	·026	0.65
137	2 1/16	52	2 1/4	58	2·050	52.07	·026	0.65
138	2 1/8	53	2 5/16	59	2·112	53.65	·026	0.65
139	2 3/16	55	2 3/8	61	2·175	55.25	·026	0.65
140	2 1/4	56.5	2 7/16	62.5	2·237	56.82	·026	0.65
141	2 5/16	58.5	2 1/2	64	2·300	58.42	·026	0.65
142	2 3/8	60	2 9/16	66	2·362	60	·026	0.65
143	2 7/16	61.5	2 5/8	67	2·425	61.60	·026	0.65
144	2 1/2	63	2 11/16	69	2·487	63.17	·026	0.65
145	2 9/16	65	2 3/4	70	2·550	64.77	·026	0.65
146	2 5/8	66	2 13/16	72	2·612	66.35	·026	0.65
147	2 11/16	68	2 7/8	74	2·675	67.95	·026	0.65
148	2 3/4	69.5	2 15/16	75	2·737	69.52	·026	0.65
149	2 13/16	71	3	77	2·800	71.12	·026	0.65
150	2 7/8	73	3 1/16	78	2·862	72.70	·026	0.65
640	2 15/16	74.5	3 1/8	80	2·924	74.30	·026	0.65
151	3	76	3 3/16	82	2·987	75.88	·026	0.65
641	3 1/16	77	3 1/4	83	3·049	77.50	·026	0.65
642	3 3/16	80.5	3 3/8	86	3·174	80.60	·033	0.85
152	3 1/4	82	3 7/16	88	3·237	82.22	·033	0.85
643	3 5/16	84	3 1/2	90	3·299	83.80	·033	0.85
153	3 1/2	88.5	3 11/16	94	3·487	88.58	·033	0.85
154	3 3/4	95	3 15/16	101	3·737	94.93	·033	0.85
155	4	101	4 3/16	107	3·987	101.28	·039	1.00
156	4 1/4	107	4 7/16	113	4·237	107.63	·039	1.00
157	4 1/2	114	4 11/16	120	4·487	113.98	·039	1.00
158	4 3/4	120	4 15/16	126	4·737	120.33	·047	1.20
159	5	127	5 3/16	132	4·987	126.67	·047	1.20
160	5 1/4	133	5 7/16	138	5·237	133	·047	1.20
161	5 1/2	139	5 11/16	145	5·487	139.38	·047	1.20
162	5 3/4	145	5 15/16	151	5·737	145.73	·047	1.20
163	6	151	6 3/16	158	5·987	152.07	·055	1.40
164	6 1/4	158	6 7/16	164	6·237	158.43	·055	1.40
165	6 1/2	164	6 11/16	170	6·487	164.78	·055	1.40
166	6 3/4	170	6 15/16	177	6·737	171.13	·055	1.40
167	7	177	7 3/16	183	6·987	177.48	·055	1.40
168	7 1/4	183	7 7/16	190	7·237	183.83	·070	1.80
169	7 1/2	190	7 11/16	196	7·487	190.18	·070	1.80
170	7 3/4	196	7 15/16	202	7·737	196.53	·070	1.80

C/SEC. ·103" ± ·003" (2.62 mm ± 0.08 mm) continued

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
171	8	202	8 3/16	209	7·987	202.88	·070	1.80
172	8 1/4	209	8 7/16	215	8·237	209.23	·070	1.80
173	8 1/2	215	8 11/16	222	8·487	215.58	·070	1.80
174	8 3/4	221	8 15/16	228	8·737	221.93	·070	1.80
175	9	228	9 3/16	234	8·987	228.28	·070	1.80
176	9 1/4	234	9 7/16	240	9·237	234.63	·070	1.80
177	9 1/2	240	9 11/16	247	9·487	240.98	·070	1.80
178	9 3/4	247	9 15/16	253	9·737	247.33	·070	1.80

C/SEC. ·139" ± ·004" (3.53 mm ± 0.10 mm)

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
201*	3/16	4.5	7/16	11.0	0·171	4.34	·006	0.15
202*	1/4	6.0	1/2	12.5	0·234	5.94	·006	0.15
203*	5/16	7.6	9/16	14.0	0·296	7.52	·007	0.17
204*	3/8	9.5	5/8	15.5	0·359	9.12	·007	0.17
205*	7/16	11.0	11/16	17.4	0·421	10.69	·008	0.20
206*	1/2	12.5	3/4	19.0	0·484	12.29	·008	0.20
207*	9/16	14.0	13/16	20.5	0·546	13.87	·008	0.20
208*	5/8	15.5	7/8	22.0	0·609	15.47	·008	0.20
209*	11/16	17.4	15/16	23.5	0·671	17.04	·008	0.20
210*	3/4	19	1	25.4	0·734	18.64	·012	0.30
211*	13/16	20.5	1 1/16	26.8	0·796	20.22	·012	0.30
212*	7/8	22	1 1/8	28.5	0·859	21.82	·012	0.30
213*	15/16	23.5	1 3/16	30	0·921	23.4	·012	0.30
214*	1	25	1 1/4	31.5	0·984	25	·012	0.30
618*	1 1/64	25.5	-	33	1·016	25.8	·012	0.30
215*	1 1/16	27	1 5/16	33.5	1·046	26.57	·012	0.30
216*	1 1/8	28	1 3/8	35	1·109	28.17	·012	0.30
217*	1 3/16	30	1 7/16	36.3	1·171	29.75	·012	0.30
218*	1 1/4	31.5	1 1/2	38	1·234	31.34	·016	0.40
219*	1 5/16	33	1 9/16	40	1·296	32.93	·016	0.40
220*	1 3/8	34.5	1 5/8	41	1·359	34.52	·016	0.40
221*	1 7/16	36	1 11/16	43	1·421	36.1	·016	0.40
222*	1 1/2	38	1 3/4	44.5	1·484	37.7	·016	0.40
824*	1 9/16	39.5	1 13/16	46	1·563	39.7	·016	0.40
223	1 5/8	41	1 7/8	47	1·609	40.87	·016	0.40
825	1 5/8	41	-	48.5	1·625	41.28	·016	0.40
826	1 11/16	42.5	1 15/16	49	1·687	42.86	·016	0.40
224	1 3/4	44	2	51	1·734	44.05	·016	0.40
827	-	44.5	-	52	1·750	44.45	·016	0.40
828	1 13/16	45.5	2 1/16	53	1·812	46.04	·016	0.40
225	1 7/8	47	2 1/8	54	1·859	47.23	·016	0.40
829	-	47.5	-	55	1·875	47.62	·016	0.40
830	1 15/16	49	2 3/16	56	1·937	49.2	·016	0.40
226	2	50	2 1/4	58	1·984	50.4	·026	0.65
831	-	50.5	-	58.5	2·000	50.8	·026	0.65
832	2 1/16	52	2 5/16	59	2·062	52.4	·026	0.65
227	2 1/8	53	2 3/8	61	2·109	53.57	·026	0.65
833	-	53.5	-	61.5	2·125	53.97	·026	0.65
834	2 3/16	55	2 7/16	62.5	2·187	55.56	·026	0.65
228	2 1/4	56.5	2 1/2	64	2·234	56.75	·026	0.65
835	-	57	-	64.5	2·250	57.15	·026	0.65
836	2 5/16	58.5	2 9/16	66	2·312	58.74	·026	0.65
229	2 3/8	60	2 5/8	67	2·359	59.92	·026	0.65
837	2 3/8	60	-	68	2·375	60.32	·026	0.65
838	2 7/16	61.5	2 11/16	69	2·437	61.9	·026	0.65
230	2 1/2	63	2 3/4	70	2·484	63.1	·026	0.65
839	-	63.5	-	70.5	2·500	63.5	·026	0.65
840	2 9/16	65	2 13/16	72	2·563	65.1	·026	0.65
231	2 5/8	66	2 7/8	74	2·609	66.27	·026	0.65
841	-	66.5	-	74.5	2·625	66.67	·026	0.65
842	2 11/16	68	2 15/16	75	2·687	68.26	·026	0.65
232	2 3/4	69.5	3	77	2·734	69.44	·026	0.65
843	2 13/16	71	-	77.5	2·750	69.85	·026	0.65
844	-	72	3 1/16	78	2·812	71.44	·026	0.65
233	2 7/8	73	3 1/8	80	2·859	72.62	·026	0.65
845	-	74	-	80.5	2·875	73.02	·026	0.65
846	2 5/16	74.5	3 3/16	82	2·937	74.6	·026	0.65
234	3	76	3 1/4	83	2·984	75.8	·026	0.65
235	3 1/8	79	3 3/8	86	3·109	78.97	·026	0.65
236	3 1/4	82	3 1/2	90	3·234	82.14	·033	0.85
237	3 3/8	85	3 5/8	92	3·359	85.32	·033	0.85
238	3 1/2	88.5	3 3/4	96	3·484	88.5	·033	0.85
239	3 5/8	91.5	3 7/8	99	3·609	91.67	·033	0.85
240	3 3/4	95	4	102	3·734	94.84	·033	0.85
241	3 7/8	98	4 1/8	105	3·859	98.02	·033	0.85
242	4	101	4 1/4	109	3·984	101.2	·039	1.00
243	4 1/8	104	4 3/8	112	4·109	104.37	·039	1.00
244	4 1/4	107	4 1/2	115	4·234	107.54	·039	1.00
245	4 3/8	110.5	4 5/8	118	4·359	110.72	·039	1.00
246	4 1/2	114	4 3/4	121	4·484	113.9	·039	1.00
247	4 5/8	116	4 7/8	124	4·609	117.07	·039	1.00
248	4 3/4	120	5	127	4·734	120.24	·047	1.20
249	4 7/8	123	5 1/8	130	4·859	123.42	·047	1.20
250	5	127	5 1/4	133	4·984	126.6	·047	1.20
251	5 1/8	130	5 3/8	136	5·109	129.77	·047	1.20
252	5 1/4	133	5 1/2	140	5·234	132.94	·047	1.20
253	5 3/8	136	5 5/8	143	5·359	136.12	·047	1.20
254	5 1/2	139	5 3/4	146	5·484	139.3	·047	1.20
255	5 5/8	142	5 7/8	149	5·609	142.47	·047	1.20
256	5 3/4	145	6	152	5·734	145.65	·047	1.20
257	5 7/8	148	6 1/8	156	5·859	148.82	·047	1.20
258	6	151	6 1/4	160	5·984	152	·055	1.40
259	6 1/4	158	6 1/2	166	6·234	158.35	·055	1.40
260	6 1/2	164	6 3/4	172	6·484	164.7	·055	1.40
261	6 3/4	170	7	179	6·734	171.05	·055	1.40
262	7	177	7 1/4	185	6·984	177.4	·055	1.40
263	7 1/4	183	7 1/2	191	7·234	183.75	·070	1.80
264	7 1/2	190	7 3/4	198	7·484	190.1	·070	1.80
265	7 3/4	196	8	204	7·734	196.45	·070	1.80
266	8	202	8 1/4	210	7·984	202.8	·070	1.80
267	8 1/4	209	8 1/2	217	8·234	209.15	·070	1.80

C/SEC. ·139" ± ·004" (3.53 mm ± 0.10 mm) continued

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
268	8 1/2	215	8 3/4	223	8·484	215.5	·070	1.80
269	8 3/4	221	9	230	8·734	221.85	·070	1.80
270	9	228	9 1/4	236	8·984	228.2	·070	1.80
271	9 1/4	234	9 1/2	242	9·234	234.55	·070	1.80
272	9 1/2	240	9 3/4	249	9·484	240.9	·070	1.80
273	9 3/4	247	10	255	9·734	247.25	·070	1.80
274	10	253	10 1/4	262	9·984	253.6	·083	2.10
275	10 1/2	266	10 3/4	274	10·484	266.3	·083	2.10
276	11	278	11 1/4	287	10·984	279	·083	2.10
277	11 1/2	291	11 3/4	300	11·484	291.7	·083	2.10
278	12	304	12 1/4	312	11·984	304.4	·098	2.50
279	13	330	13 1/4	338	12·984	329.8	·098	2.50
280	14	355	14 1/4	363	13·984	355.2	·110	2.80
281	15	380	15 1/4	389	14·984	380.6	·110	2.80
282	16	405	16 1/4	414	15·955	405.26	·133	3.40
283	17	431	17 1/4	440	16·955	430.66	·133	3.40
284	18	456	18 1/4	465	17·955	456.06	·133	3.40

C/SEC. ·210" ± ·005" (5.33 mm ± 0.13 mm)

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
309*	7/16	11.0	13/16	20.5	0·412	10.46	·008	0.20
310*	1/2	12.5	7/8	22.0	0·475	12.07	·008	0.20
311*	9/16	14.0	15/16	23.5	0·537	13.64	·008	0.20
312*	5/8	15.5	1	25.0	0·600	15.24	·008	0.20
313*	11/16	17.4	1 1/16	27.0	0·662	16.81	·008	0.20
314*	3/4	19.0	1 1/8	28.0	0·725	18.42	·012	0.30
315*	13/16	20.5	1 3/16	30.0	0·787	19.99	·012	0.30
316*	7/8	22.0	1 1/4	31.5	0·850	21.59	·012	0.30
317*	15/16	23.5	1 5/16	33.0	0·912	23.16	·012	0.30
318*	1	25.0	1 3/8	34.5	0·975	24.77	·012	0.30
319*	1 1/16	27.0	1 7/16	36.3	1·037	26.34	·012	0.30
320*	1 1/8	28.0	1 1/2	38.0	1·100	27.94	·012	0.30
321*	1 3/16	30.0	1 9/16	40.0	1·162	29.51	·012	0.30
322*	1 1/4	31.5	1 5/8	41.0	1·225	31.12	·016	0.40
323*	1 5/16	33.0	1 11/16	43.0	1·287	32.69	·016	0.40
324*	1 3/8	34.5	1 3/4	44.5	1·350	34.29	·016	0.40
325*	1 1/2	38	1 7/8	47	1·475	37.47	·016	0.40
326*	1 5/8	41	2	51	1·600	40.65	·016	0.40
327*	1 3/4	44	2 1/8	54	1·725	43.82	·016	0.40
328*	1 7/8	47	2 1/4	58	1·850	47	·016	0.40
329*	2	50	2 3/8	61	1·975	50.16	·026	0.65
330*	2 1/8	53	2 1/2	64	2·100	53.34	·026	0.65
331*	2 1/4	56.5	2 5/8	67	2·225	56.32	·026	0.65
332*	2 3/8	60	2 3/4	70	2·350	59.70	·026	0.65
333*	2 1/2	63	2 7/8	74	2·475	62.87	·026	0.65
334*	2 5/8	66	3	77	2·600	66.04	·026	0.65
335*	2 3/4	69.5	3 1/8	80	2·725	69.22	·026	0.65
336*	2 7/8	73	3 1/4	83	2·850	72.40	·026	0.65
619*	2 15/16	74.5	3 5/16	85	2·938	74.63	·026	0.65
337*	3	76	3 3/8	86	2·975	75.57	·026	0.65
338*	3 1/8	79	3 1/2	90	3·100	78.74	·026	0.65
620*	-	80	-	91	3·141	79.77	·026	0.65
339*	3 1/4	82	3 5/8	92	3·225	81.92	·033	0.85
340*	3 3/8	85	3 3/4	96	3·350	85.10	·033	0.85
341*	3 1/2	88.5	3 7/8	99	3·475	88.27	·033	0.85
621*	3 9/16	90	3 15/16	101	3·531	89.69	·033	0.85
342*	3 5/8	91.5	4	102	3·600	91.44	·033	0.85
343*	3 3/4	95	4 1/8	105	3·725	94.62	·033	0.85
344*	3 7/8	98	4 1/4	109	3·850	97.80	·033	0.85
622*	3 15/16	100	4 5/16	111	3·937	100	·039	1.00
345*	4	101	4 3/8	112	3·975	100.97	·039	1.00
346*	4 1/8	104	4 1/2	115	4·100	104.14	·039	1.00
347*	4 1/4	107	4 5/8	118	4·225	107.32	·039	1.00
623*	4 5/16	109	-	120.5	4·312	109.54	·039	1.00
348*	4 3/8	110.5	4 3/4	121	4·350	110.50	·039	1.00
349*	4 1/2	114	4 7/8	124	4·475	113.67	·039	1.00
350	4 5/8	116	5	127	4·600	116.84	·039	1.00
860	-	117	5 1/16	129	4·625	117.48	·039	1.00
351	4 3/4	120	5 1/8	130	4·725	120.02	·047	1.20
861	-	121	5 3/16	132	4·750	120.65	·047	1.20
352	4 7/8	123	5 1/4	133	4·850	123.20	·047	1.20
862	-	124	5 5/16	135	4·875	123.83	·047	1.20
353	5	127	5 3/8	136	4·975	126.37	·047	1.20
863	-	128	5 7/16	138	5·0	127	·047	1.20
354	5 1/8	130	5 1/2	140	5·100	129.54	·047	1.20
864	-	131	-	141	5·125	130.18	·047	1.20
355	5 1/4	133	5 5/8	143	5·225	132.72	·047	1.20
865	-	134	-	144	5·250	133.35	·047	1.20
356	5 3/8	136	5 3/4	146	5·350	135.90	·047	1.20
866	-	137	-	148	5·375	136.53	·047	1.20
357	5 1/2	139	5 7/8	149	5·475	139.07	·047	1.20
867	-	140	5 15/16	151	5·500	139.70	·047	1.20
358	5 5/8	142	6	152	5·600	142.24	·047	1.20
868	-	143	-	154	5·625	142.88	·047	1.20
359	5 3/4	145	6 1/8	156	5·725	145.42	·047	1.20
869	-	146	6 3/16	158	5·750	146.05	·047	1.20
360	5 7/8	148	6 1/4	160	5·850	148.60	·047	1.20
870	-	149	-	161	5·875	149.23	·047	1.20
361	6	151	6 3/8	163	5·975	151.77	·055	1.40
644	6 1/8	155	6 1/2	166	6·100	155	·055	1.40
362	6 1/4	158	6 5/8	169	6·225	158.12	·055	1.40
645	6 3/8	161	6 3/4	172	6·350	161.30	·055	1.40
363	6 1/2	164	6 7/8	175	6·475	164.47	·055	1.40
646	6 5/8	167	7	179	6·600	167.70	·055	1.40
364	6 3/4	170	7 1/8	182	6·725	170.82	·055	1.40
647	6 7/8	174	7 1/4	185	6·850	174	·055	1.40
365	7	177	7 3/8	188	6·975	177.17	·055	1.40
366	7 1/4	183	7 5/8	195	7·225	183.52	·070	1.80
367	7 1/2	190	7 7/8	201	7·475	189.87	·070	1.80
368	7 3/4	196	8 1/8	208	7·725	196.22	·070	1.80
369	8	202	8 3/8	214	7·975	202.57	·070	1.80
370	8 1/4	209	8 5/8	220	8·225	208.92	·070	1.80

C/SEC. ·210" ± ·005" (5.33 mm ± 0.13 mm) continued

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
371	8 1/2	215	8 7/8	226	8·475	215.27	·070	1.80
372	8 3/4	221	9 1/8	232	8·725	221.62	·070	1.80
373	9	228	9 3/8	239	8·975	227.97	·070	1.80
374	9 1/4	234	9 5/8	245	9·225	234.32	·070	1.80
375	9 1/2	240	9 7/8	252	9·475	240.67	·070	1.80
376	9 3/4	247	10 1/8	258	9·725	247.02	·070	1.80
377	10	253	10 3/8	265	9·975	253.37	·083	2.10
378	10 1/2	266	10 7/8	277	10·475	266.07	·083	2.10
379	11	278	11 3/8	290	10·975	278.77	·083	2.10
380	11 1/2	291	11 7/8	303	11·475	291.47	·083	2.10
381	12	304	12 3/8	315	11·975	304.17	·098	2.50
382	13	330	13 3/8	341	12·975	329.57	·098	2.50
383	14	355	14 3/8	366	13·975	354.97	·110	2.80
384	15	380	15 3/8	392	14·975	380.37	·110	2.80
385	16	405	16 3/8	417	15·955	405.26	·133	3.40
386	17	431	17 3/8	443	16·955	430.66	·133	3.40
387	18	456	18 3/8	468	17·955	456.06	·133	3.40
388	19	482	19 3/8	494	18·955	481.46	·133	3.40
389	20	507	20 3/8	519	19·955	506.86	·169	4.30
390	21	532	21 3/8	544	20·955	532.26	·169	4.30
391	22	558	22 3/8	570	21·955	557.66	·169	4.30
392	23	583	23 3/8	595	22·940	582.68	·169	4.30
393	24	608	24 3/8	620	23·940	608.08	·169	4.30
394	25	634	25 3/8	646	24·940	633.48	·169	4.30
395	26	660	26 3/8	671	25·940	658.88	·256	6.50

C/SEC. ·275" ± ·006" (6.99 mm ± 0.15 mm)

SIZE REF.	SHAFT ins	SHAFT mm	CYLINDER ins	CYLINDER mm	I.D. ins	I.D. mm	± LIMITS ins	± LIMITS mm
425*	4 1/2	114	5	127	4·475	113.67	·039	1.00
624*	4 9/16	115	5 1/16	129	4·516	114.7	·039	1.00
426*	4 5/8	116	5 1/8	130	4·600	116.84	·039	1.00
427*	4 3/4	120	5 1/4	133	4·725	120.02	·047	1.20
428*	4 7/8	123	5 3/8	136	4·850	123.2	·047	1.20
625*	-	124	-	139	4·906	124.6	·047	1.20
429*	5	127	5 1/2	140	4·975	126.37	·047	1.20
430*	5 1/8	130	5 5/8	143	5·100	129.54	·047	1.20
431*	5 1/4	133	5 3/4	146	5·225	132.72	·047	1.20
626*	-	134	5 11/16	148	5·297	134.5	·047	1.20
432*	5 3/8	136	5 7/8	149	5·350	135.9	·047	1.20
433*	5 1/2	139	6	152	5·475	139.07	·047	1.20
434*	5 5/8	142	6 1/8	156	5·600	142.24	·047	1.20
435*	5 3/4	145	6 1/4	160	5·725	145.42	·047	1.20
436*	5 7/8	148	6 3/8	163	5·850	148.6	·047	1.20
437*	6	151	6 1/2	166	5·975	151.77	·055	1.40
872*	6 1/8	155	6 5/8	169	6·125	155.6	·055	1.40
438*	6 1/4	158	6 3/4	172	6·225	158.12	·055	1.40
627*	-	159	6 13/16	174	6·281	159.5	·055	1.40
874*	6 3/8	161	-	176	6·375	161.9	·055	1.40
439*	6 1/2	164	7	179	6·475	164.47	·055	1.40
628*	6 9/16	166	7 1/16	181	6·563	166.7	·055	1.40
876*	6 5/8	167	7 1/8	182	6·625	168.3	·055	1.40
440*	6 3/4	170	7 1/4	185	6·725	170.82	·055	1.40
878*	6 7/8	174	7 7/16	190	6·875	174.6	·055	1.40
441*	7	177	7 1/2	191	6·975	177.17	·055	1.40
880*	7 1/8	180	7 5/8	195	7·125	181	·070	1.80
442*	7 1/4	183	7 3/4	198	7·225	183.52	·070	1.80
882*	7 3/8	187	7 7/8	201	7·375	187.3	·070	1.80
443*	7 1/2	190	8	204	7·475	189.87	·070	1.80
884*	7 5/8	193	8 1/8	208	7·625	193.7	·070	1.80
444*	7 3/4	196	8 1/4	210	7·725	196.22	·070	1.80
886*	7 7/8	199	8 3/8	214	7·875	200	·070	1.80
445*	8	202	8 1/2	217	7·975	202.57	·070	1.80
674	8 1/4	209	8 3/4	223	8·225	208.92	·070	1.80
446	8 1/2	215	9	230	8·475	215.27	·070	1.80
676	8 3/4	221	9 1/4	236	8·725	221.62	·070	1.80
447	9	228	9 1/2	242	8·975	227.97	·070	1.80
678	9 1/4	234	9 3/4	249	9·225	234.32	·070	1.80
448	9 1/2	240	10	255	9·475	240.67	·070	1.80
680	9 3/4	247	10 1/4	262	9·725	247	·070	1.80
449	10	253	10 1/2	268	9·975	253.57	·083	2.10
682	10 1/4	260	10 3/4	274	10·225	259.7	·083	2.10
450	10 1/2	266	11	280	10·475	266.07	·083	2.10
684	10 3/4	273	11 1/4	287	10·725	272.4	·083	2.10
451	11	278	11 1/2	293	10·975	278.77	·083	2.10
686	11 1/4	285	11 3/4	300	11·225	285.1	·083	2.10
452	11 1/2	291	12	306	11·475	291.47	·083	2.10
688	11 3/4	298	12 1/4	312	11·725	297.8	·083	2.10
453	12	304	12 1/2	319	11·975	304.17	·098	2.50
648	12 1/4	311	12 3/4	325	12·225	310.5	·098	2.50
454	12 1/2	317	13	331	12·475	316.87	·098	2.50
649	12 3/4	323	13 1/4	338	12·725	323.2	·098	2.50
455	13	330	13 1/2	344	12·975	329.57	·098	2.50
650	13 1/4	336	13 3/4	350	13·225	335.9	·098	2.50
456	13 1/2	342	14	357	13·475	342.27	·098	2.50
457	14	355	14 1/2	370	13·975	354.97	·110	2.80
458	14 1/2	368	15	382	14·475	367.67	·110	2.80
459	15	380	15 1/2	395	14·975	380.37	·110	2.80
460	15 1/2	393	16	408	15·475	393.07	·110	2.80
461	16	405	16 1/2	420	15·955	405.26	·133	3.40
462	16 1/2	418	17	432	16·455	417.96	·133	3.40
463	17	431	17 1/2	445	16·955	430.66	·133	3.40
464	17 1/2	443	18	458	17·455	443.36	·133	3.40
465	18	456	18 1/2	471	17·955	456.06	·133	3.40
466	18 1/2	469	19	483	18·455	468.76	·133	3.40
467	19	482	19 1/2	496	18·955	481.46	·133	3.40
468	19 1/2	494	20	509	19·455	494.16	·133	3.40
469	20	507	20 1/2	521	19·955	506.86	·169	4.30
470	21	532	21 1/2	547	20·955	532.26	·169	4.30
471	22	558	22 1/2	573	21·955	557.66	·169	4.30
472	23	583	23 1/2	598	22·940	582.68	·169	4.30
473	24	608	24 1/2	624	23·940	608.08	·169	4.30
474	25	634	25 1/2	649	24·940	633.48	·169	4.30
475	26	660	26 1/2	675	25·940	658.88	·256	6.50