



# SEALS UK LTD

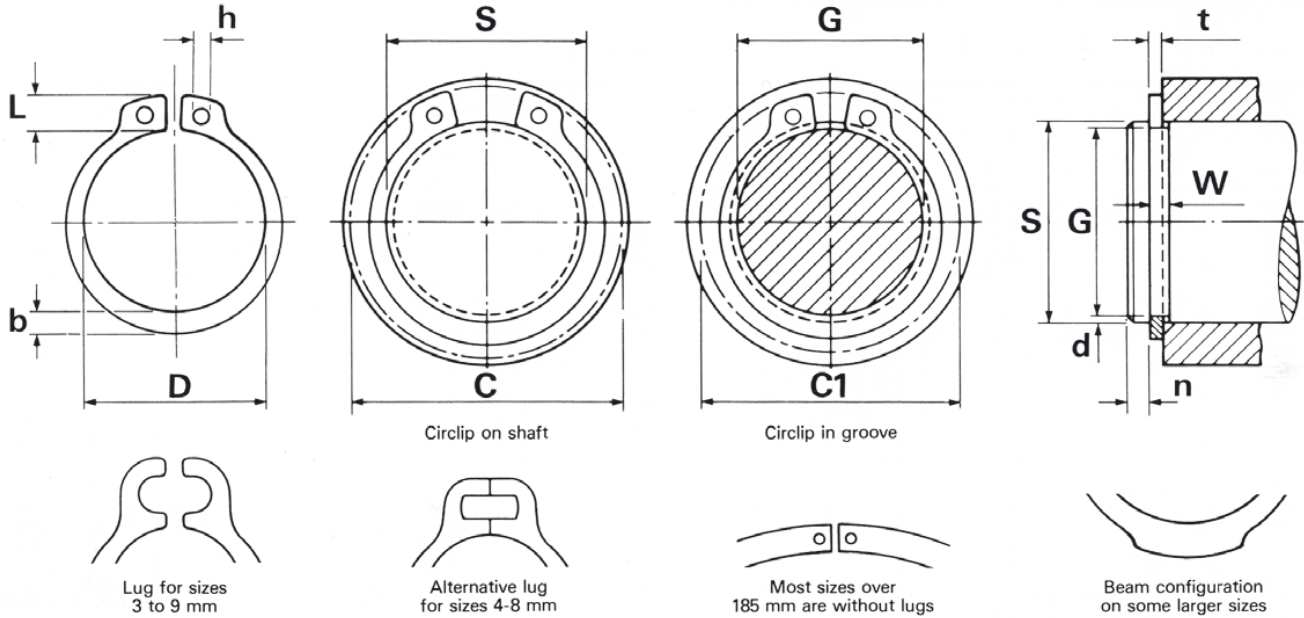
- Part of Diploma PLC

M Seals UK Ltd,  
Quartz Close, Enderby,  
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## D1400 Metric External Circlips - For Shafts - DIN 471

All dimensions in mm



Ref. Number	Nominal 'Shaft' Diameter (S)	Thickness (t)	Tolerance (t)	Circlip Dimensions				Groove Dimensions						
				Unstressed (Free) Diameter (D)	Tolerance (D)	Lug (L) max	Beam (b)	Lug Hole (h) min	Groove Diameter (G)	Tolerance (G)	Min Groove Width (W)	Radial Depth (d)	Shoulder Length (n) Min.	Pliers
0030	3	0.40	-0.05	2.7		1.9	0.8	1.0	2.8	-0.04	0.50	0.10	0.3	HA 0
0040	4	0.40	-0.05	3.7	+0.04	2.2	0.9	1.0	3.8	-0.04	0.50	0.10	0.3	HA 0
0050	5	0.60	-0.05	4.7	/ -0.15	2.5	1.1	1.0	4.8	-0.04	0.70	0.10	0.3	HA 0
0060	6	0.70	-0.05	5.6		2.7	1.3	1.2	5.7	-0.04	0.80	0.15	0.5	HA 0
0070	7	0.80	-0.05	6.5	+0.06	3.1	1.4	1.2	6.7	-0.06	0.90	0.15	0.5	HA 0
0080	8	0.80	-0.05	7.4	-0.18	3.2	1.5	1.2	7.6	-0.06	0.90	0.20	0.6	HA 0
0090	9	1.00	-0.06	8.4		3.3	1.7	1.2	8.6	-0.06	1.10	0.20	0.6	HA 0
0100	10	1.00	-0.06	9.3		3.3	1.8	1.5	9.6	-0.11	1.10	0.20	0.6	HA 1
0110	11	1.00	-0.06	10.2		3.3	1.8	1.5	10.5	-0.11	1.10	0.25	0.8	HA 1
0120	12	1.00	-0.06	11.0		3.3	1.8	1.7	11.5	-0.11	1.10	0.25	0.8	HA 1
0130	13	1.00	-0.06	11.9		3.4	2.0	1.7	12.4	-0.11	1.10	0.30	0.9	HA 1
0140	14	1.00	-0.06	12.9	+0.10	3.5	2.1	1.7	13.4	-0.11	1.10	0.30	0.9	HA 1
0150	15	1.00	-0.06	13.8	-0.36	3.6	2.2	1.7	14.3	-0.11	1.10	0.35	1.1	HA 1
0160	16	1.00	-0.06	14.7		3.7	2.2	1.7	15.2	-0.11	1.10	0.40	1.2	HA 1
0170	17	1.00	-0.06	15.7		3.8	2.3	1.7	16.2	-0.11	1.10	0.40	1.2	HA 1
0180	18	1.20	-0.06	16.5		3.9	2.4	2.0	17.0	-0.11	1.30	0.50	1.5	HA 2
0190	19	1.20	-0.06	17.5		3.9	2.5	2.0	18.0	-0.11	1.30	0.50	1.5	HA 2
0200	20	1.20	-0.06	18.5		4.0	2.6	2.0	19.0	-0.13	1.30	0.50	1.5	HA 2
0210	21	1.20	-0.06	19.5		4.1	2.7	2.0	20.0	-0.13	1.30	0.50	1.5	HA 2
0220	22	1.20	-0.06	20.5		4.2	2.8	2.0	21.0	-0.13	1.30	0.50	1.5	HA 2
0230	23	1.20	-0.06	21.5		4.3	2.9	2.0	22.0	-0.15	1.30	0.50	1.5	HA 2
0240	24	1.20	-0.06	22.2		4.4	3.0	2.0	22.9	-0.21	1.30	0.55	1.7	HA 2
0250	25	1.20	-0.06	23.2	+0.21	4.4	3.0	2.0	23.9	-0.21	1.30	0.55	1.7	HA 2
0260	26	1.20	-0.06	24.2	-0.42	4.5	3.1	2.0	24.9	-0.21	1.30	0.55	1.7	HA 2
0270	27	1.20	-0.06	24.9		4.6	3.1	2.0	25.6	-0.21	1.30	0.70	2.1	HA 2
0280	28	1.50	-0.06	25.9		4.7	3.2	2.0	26.6	-0.21	1.60	0.70	2.1	HA 2
0290	29	1.50	-0.06	26.9		4.8	3.4	2.0	27.6	-0.21	1.60	0.70	2.1	HA 2
0300	30	1.50	-0.06	27.9		5.0	3.5	2.0	28.6	-0.21	1.60	0.70	2.1	HA 2
0310	31	1.50	-0.06	28.6		5.1	3.5	2.5	29.3	-0.21	1.60	0.85	2.6	HA 2
0320	32	1.50	-0.06	29.6		5.2	3.6	2.5	30.3	-0.25	1.60	0.85	2.6	HA 2
0330	33	1.50	-0.06	30.5		5.2	3.7	2.5	31.3	-0.25	1.60	0.85	2.6	HA 2
0340	34	1.50	-0.06	31.5		5.4	3.8	2.5	32.3	-0.25	1.60	0.85	2.6	HA 2
0350	35	1.50	-0.06	32.2	+0.25	5.6	3.9	2.5	33.0	-0.25	1.60	1.00	3.0	HA 2
0360	36	1.75	-0.06	33.2	-0.50	5.6	4.0	2.5	34.0	-0.25	1.85	1.00	3.0	HA 2
0370	37	1.75	-0.06	34.2		5.7	4.1	2.5	35.0	-0.25	1.85	1.00	3.0	HA 2
0380	38	1.75	-0.06	35.2		5.8	4.2	2.5	36.0	-0.25	1.85	1.00	3.0	HA 2
0390	39	1.75	-0.06	36.0		5.9	4.3	2.5	37.0	-0.25	1.85	1.00	3.0	HA 2



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## D1400 CONTINUED

Ref. Number	Nominal 'Shaft' Diameter (S)	Thickness (t)	Tolerance (t)	Circlip Dimensions			Groove Dimensions							
				Unstressed (Free) Diameter (D)	Tolerance (D)	Lug (L) max	Beam (b)	Lug Hole (h) min	Groove Diameter (G)	Tolerance (G)	Min Groove Width (W)	Radial Depth (d)	Shoulder Length (n) Min.	Pliers
0400	40	1.75	-0.06	36.5	+0.39 -0.9	6.0	4.4	2.5	37.5	-0.25	1.85	1.25	3.8	HA 3
0410	41	1.75	-0.06	37.5		6.2	4.5	2.5	38.5	-0.25	1.85	1.25	3.8	HA 3
0420	42	1.75	-0.06	38.5		6.5	4.5	2.5	39.5	-0.25	1.85	1.25	3.8	HA 3
0440	44	1.75	-0.06	40.5		6.6	4.6	2.5	41.5	-0.25	1.85	1.25	3.8	HA 3
0450	45	1.75	-0.06	41.5		6.7	4.7	2.5	42.5	-0.25	1.85	1.25	3.8	HA 3
0460	46	1.75	-0.06	42.5		6.7	4.8	2.5	43.5	-0.25	1.85	1.25	3.8	HA 3
0470	47	1.75	-0.06	43.5		6.8	4.9	2.5	44.5	-0.25	1.85	1.25	3.8	HA 3
0480	48	1.75	-0.06	44.5		6.9	5.0	2.5	45.5	-0.25	1.85	1.25	3.8	HA 3
0500	50	2.00	-0.07	45.8		6.9	5.1	2.5	47.0	-0.25	2.15	1.50	4.5	HA 3
0520	52	2.00	-0.07	47.8		7.0	5.2	2.5	49.0	-0.25	2.15	1.50	4.5	HA 3
0540	54	2.00	-0.07	49.8		7.1	5.3	2.5	51.0	-0.30	2.15	1.50	4.5	HA 3
0550	55	2.00	-0.07	50.8		7.2	5.4	2.5	52.0	-0.30	2.15	1.50	4.5	HA 3
0560	56	2.00	-0.07	51.8		7.3	5.5	2.5	53.0	-0.30	2.15	1.50	4.5	HA 3
0570	57	2.00	-0.07	52.8		7.3	5.5	2.5	54.0	-0.30	2.15	1.50	4.5	HA 3
0580	58	2.00	-0.07	53.8		7.3	5.6	2.5	55.0	-0.30	2.15	1.50	4.5	HA 3
0600	60	2.00	-0.07	55.8		7.4	5.8	2.5	57.0	-0.30	2.15	1.50	4.5	HA 3
0620	62	2.00	-0.07	57.8	7.5	6.0	2.5	59.0	-0.30	2.15	1.50	4.5	HA 3	
0630	63	2.00	-0.07	58.8	7.6	6.2	2.5	60.0	-0.30	2.15	1.50	4.5	HA 3	
0650	65	2.50	-0.07	60.8	7.8	6.3	3.0	62.0	-0.30	2.65	1.50	4.5	HA 3	
0670	67	2.50	-0.07	62.5	7.9	6.4	3.0	64.0	-0.30	2.65	1.50	4.5	HA 3	
0680	68	2.50	-0.07	63.5	8.0	6.5	3.0	65.0	-0.30	2.65	1.50	4.5	HA 3	
0700	70	2.50	-0.07	65.5	8.1	6.6	3.0	67.0	-0.30	2.65	1.50	4.5	HA 3	
0720	72	2.50	-0.07	67.5	8.2	6.8	3.0	69.0	-0.30	2.65	1.50	4.5	HA 3	
0750	75	2.50	-0.07	70.5	8.4	7.0	3.0	72.0	-0.30	2.65	1.50	4.5	HA 3	
0770	77	2.50	-0.07	72.5	8.5	7.2	3.0	74.0	-0.30	2.65	1.50	4.5	HA 3	
0780	78	2.50	-0.07	73.5	8.6	7.3	3.0	75.0	-0.30	2.65	1.50	4.5	HA 3	
0800	80	2.50	-0.07	74.5	8.6	7.4	3.0	76.5	-0.30	2.65	1.75	5.3	HA 3	
0820	82	2.50	-0.07	76.5	8.7	7.6	3.0	78.5	-0.30	2.65	1.75	5.3	HA 3	
0850	85	3.00	-0.08	79.5	8.7	7.8	3.5	81.5	-0.35	3.15	1.75	5.3	HA 4	
0870	87	3.00	-0.08	81.5	8.8	7.9	3.5	83.5	-0.35	3.15	1.75	5.3	HA 4	
0880	88	3.00	-0.08	82.5	8.8	8.0	3.5	84.5	-0.35	3.15	1.75	5.3	HA 4	
0900	90	3.00	-0.08	84.5	8.8	8.2	3.5	86.5	-0.35	3.15	1.75	5.3	HA 4	
0920	92	3.00	-0.08	86.5	9.0	8.4	3.5	88.5	-0.35	3.15	1.75	5.3	HA 4	
0950	95	3.00	-0.08	89.5	9.4	8.6	3.5	91.5	-0.35	3.15	1.75	5.3	HA 4	
0970	97	3.00	-0.08	91.5	9.4	8.8	3.5	93.5	-0.35	3.15	1.75	5.3	HA 4	
0980	98	3.00	-0.08	91.5	9.4	8.8	3.5	94.5	-0.35	3.15	1.75	5.3	HA 4	
1000	100	3.00	-0.08	94.5	9.6	9.0	3.5	96.5	-0.35	3.15	1.75	5.3	HA 4	
1020	102	4.00	-0.10	95.0	9.7	9.2	3.5	98.0	-0.54	4.15	2.00	6.0	HA 4	
1050	105	4.00	-0.10	98.0	9.9	9.3	3.5	101.0	-0.54	4.15	2.00	6.0	HA 4	
1070	107	4.00	-0.10	100.0	10.0	9.5	3.5	103.0	-0.54	4.15	2.00	6.0	HA 4	
1080	108	4.00	-0.10	100.0	10.0	9.5	3.5	104.0	-0.54	4.15	2.00	6.0	HA 4	
1100	110	4.00	-0.10	103.0	10.1	9.6	3.5	106.0	-0.54	4.15	2.00	6.0	HA 4	
1120	112	4.00	-0.10	105.0	10.3	9.7	3.5	108.0	-0.54	4.15	2.00	6.0	HA 4	
1150	115	4.00	-0.10	108.0	10.6	9.8	3.5	111.0	-0.54	4.15	2.00	6.0	HA 4	
1170	117	4.00	-0.10	110.0	10.8	10.0	3.5	113.0	-0.54	4.15	2.00	6.0	HA 4	
1180	118	4.00	-0.10	110.0	10.8	10.0	3.5	114.0	-0.54	4.15	2.00	6.0	HA 4	
1200	120	4.00	-0.10	113.0	11.0	10.2	3.5	116.0	-0.54	4.15	2.00	6.0	HA 4	
1220	122	4.00	-0.10	115.0	11.2	10.3	4.0	118.0	-0.54	4.15	2.00	6.0	HA 5	
1250	125	4.00	-0.10	118.0	11.4	10.4	4.0	121.0	-0.63	4.15	2.00	6.0	HA 5	
1270	127	4.00	-0.10	120.0	11.4	10.5	4.0	123.0	-0.63	4.15	2.00	6.0	HA 5	
1280	128	4.00	-0.10	120.0	11.4	10.5	4.0	124.0	-0.63	4.15	2.00	6.0	HA 5	



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Ref. Number	Nominal 'Shaft' Diameter (S)	Thickness (t)	Tolerance (t)	Circlip Dimensions			Groove Dimensions							
				Unstressed (Free) Diameter (D)	Tolerance (D)	Lug (L) max	Beam (b)	Lug Hole (h) min	Groove Diameter (G)	Tolerance (G)	Min Groove Width (W)	Radial Depth (d)	Shoulder Length (n) Min.	Pliers
1300	130	4.00	- 0.10	123.0		11.6	10.7	4.0	126.0	- 0.63	4.15	2.00	6.0	HA 5
1320	132	4.00	- 0.10	125.0		11.7	10.8	4.0	128.0	- 0.63	4.15	2.00	6.0	HA 5
1350	135	4.00	- 0.10	128.0		11.8	11.0	4.0	131.0	- 0.63	4.15	2.00	6.0	HA 5
1370	137	4.00	- 0.10	130.0		11.9	11.0	4.0	133.0	- 0.63	4.15	2.00	6.0	HA 5
1380	138	4.00	- 0.10	130.0		11.9	11.0	4.0	134.0	- 0.63	4.15	2.00	6.0	HA 5
1400	140	4.00	- 0.10	133.0		12.0	11.2	4.0	136.0	- 0.63	4.15	2.00	6.0	HA 5
1420	142	4.00	- 0.10	135.0		12.1	11.3	4.0	138.0	- 0.63	4.15	2.00	6.0	HA 5
1450	145	4.00	- 0.10	138.0		12.2	11.5	4.0	141.0	- 0.63	4.15	2.00	6.0	HA 5
1470	147	4.00	- 0.10	140.0		12.3	11.6	4.0	143.0	- 0.63	4.15	2.00	6.0	HA 5
1480	148	4.00	- 0.10	140.0		12.3	11.6	4.0	144.0	- 0.63	4.15	2.00	6.0	HA 5
1500	150	4.00	- 0.10	142.0		13.0	11.8	4.0	145.0	- 0.63	4.15	2.50	7.5	HA 5
1520	152	4.00	- 0.10	143.0		13.0	11.9	4.0	147.0	- 0.63	4.15	2.50	7.5	HA 5
1550	155	4.00	- 0.10	146.0		13.0	12.0	4.0	150.0	- 0.63	4.15	2.50	7.5	HA 5
1570	157	4.00	- 0.10	148.0		13.1	12.0	4.0	152.0	- 0.63	4.15	2.50	7.5	HA 5
1580	158	4.00	- 0.10	148.0	+ 0.63	13.1	12.0	4.0	153.0	- 0.63	4.15	2.50	7.5	HA 5
1600	160	4.00	- 0.10	151.0	- 1.50	13.3	12.2	4.0	155.0	- 0.63	4.15	2.50	7.5	HA 5
1620	162	4.00	- 0.10	152.5		13.3	12.3	4.0	157.0	- 0.63	4.15	2.50	7.5	HA 5
1650	165	4.00	- 0.10	155.5		13.5	12.5	4.0	160.0	- 0.63	4.15	2.50	7.5	HA 5
1670	167	4.00	- 0.10	157.5		13.5	12.9	4.0	162.0	- 0.63	4.15	2.50	7.5	HA 5
1680	168	4.00	- 0.10	157.5		13.5	12.9	4.0	163.0	- 0.63	4.15	2.50	7.5	HA 5
1700	170	4.00	- 0.10	160.5		13.5	12.9	4.0	165.0	- 0.63	4.15	2.50	7.5	HA 5
1720	172	4.00	- 0.10	160.5		13.5	12.9	4.0	167.0	- 0.63	4.15	2.50	7.5	HA 5
1750	175	4.00	- 0.10	165.5		13.5	12.9	4.0	170.0	- 0.63	4.15	2.50	7.5	HA 5
1770	177	4.00	- 0.10	167.5		14.2	13.5	4.0	172.0	- 0.63	4.15	2.50	7.5	HA 5
1780	178	4.00	- 0.10	167.5		14.2	13.5	4.0	173.0	- 0.63	4.15	2.50	7.5	HA 5
1800	180	4.00	- 0.10	170.5		14.2	13.5	4.0	175.0	- 0.63	4.15	2.50	7.5	HA 5
1820	182	4.00	- 0.10	170.5		14.2	13.5	4.0	177.0	- 0.63	4.15	2.50	7.5	HA 5
1850	185	4.00	- 0.10	175.5		14.2	13.5	4.0	180.0	- 0.63	4.15	2.50	7.5	HA 5
1870	187	4.00	- 0.10	177.5		14.2	14.0	4.0	182.0	- 0.72	4.15	2.50	7.5	HA 5
1880	188	4.00	- 0.10	177.5		14.2	14.0	4.0	183.0	- 0.72	4.15	2.50	7.5	HA 5
1900	190	4.00	- 0.10	180.5		14.2	14.0	4.0	185.0	- 0.72	4.15	2.50	7.5	HA 5
1920	192	4.00	- 0.10	180.5		14.2	14.0	4.0	187.0	- 0.72	4.15	2.50	7.5	HA 5
1950	195	4.00	- 0.10	185.5		14.2	14.0	4.0	190.0	- 0.72	4.15	2.50	7.5	HA 5
1970	197	4.00	- 0.10	187.5		14.2	14.0	4.0	192.0	- 0.72	4.15	2.50	7.5	HA 5
1980	198	4.00	- 0.10	187.5		14.2	14.0	4.0	193.0	- 0.72	4.15	2.50	7.5	HA 5
2000	200	4.00	- 0.10	190.5		14.2	14.0	4.0	195.0	- 0.72	4.15	2.50	7.5	HA 5
2020	202	5.00	- 0.12	193.0		14.2	14.0	4.0	196.0	- 0.72	5.15	3.00	9.0	HA 5
2050	205	5.00	- 0.12	193.0		14.2	14.0	4.0	199.0	- 0.72	5.15	3.00	9.0	HA 5
2070	207	5.00	- 0.12	193.0		14.2	14.0	4.0	201.0	- 0.72	5.15	3.00	9.0	HA 5
2080	208	5.00	- 0.12	193.0		14.2	14.0	4.0	202.0	- 0.72	5.15	3.00	9.0	HA 5
2100	210	5.00	- 0.12	198.0		14.2	14.0	4.0	204.0	- 0.72	5.15	3.00	9.0	HA 5
2120	212	5.00	- 0.12	198.0		14.2	14.0	4.0	206.0	- 0.72	5.15	3.00	9.0	HA 5
2150	215	5.00	- 0.12	203.0		14.2	14.0	4.0	209.0	- 0.72	5.15	3.00	9.0	HA 5
2170	217	5.00	- 0.12	203.0		14.2	14.0	4.0	211.0	- 0.72	5.15	3.00	9.0	HA 5
2180	218	5.00	- 0.12	203.0		14.2	14.0	4.0	212.0	- 0.72	5.15	3.00	9.0	HA 5
2200	220	5.00	- 0.12	208.0		14.2	14.0	4.0	214.0	- 0.72	5.15	3.00	9.0	HA 5
2220	222	5.00	- 0.12	208.0		14.2	14.0	4.0	216.0	- 0.72	5.15	3.00	9.0	HA 5
2250	225	5.00	- 0.12	213.0		14.2	14.0	4.0	219.0	- 0.72	5.15	3.00	9.0	HA 5
2270	227	5.00	- 0.12	213.0		14.2	14.0	4.0	221.0	- 0.72	5.15	3.00	9.0	HA 5
2280	228	5.00	- 0.12	213.0	+ 0.72	14.2	14.0	4.0	222.0	- 0.72	5.15	3.00	9.0	HA 5
2300	230	5.00	- 0.12	218.0	- 1.70	14.2	14.0	4.0	224.0	- 0.72	5.15	3.00	9.0	HA 5
2320	232	5.00	- 0.12	218.0		14.2	14.0	4.0	226.0	- 0.72	5.15	3.00	9.0	HA 5
2350	235	5.00	- 0.12	223.0		14.2	14.0	4.0	229.0	- 0.72	5.15	3.00	9.0	HA 5
2370	237	5.00	- 0.12	223.0		14.2	14.0	4.0	231.0	- 0.72	5.15	3.00	9.0	HA 5
2380	238	5.00	- 0.12	223.0		14.2	14.0	4.0	232.0	- 0.72	5.15	3.00	9.0	HA 5
2400	240	5.00	- 0.12	228.0		14.2	14.0	4.0	234.0	- 0.72	5.15	3.00	9.0	HA 5
2420	242	5.00	- 0.12	228.0		14.2	14.0	4.0	236.0	- 0.72	5.15	3.00	9.0	HA 5
2450	245	5.00	- 0.12	233.0		14.2	14.0	4.0	239.0	- 0.72	5.15	3.00	9.0	HA 5
2470	247	5.00	- 0.12	233.0		14.2	14.0	4.0	241.0	- 0.72	5.15	3.00	9.0	HA 5
2480	248	5.00	- 0.12	233.0		14.2	14.0	4.0	242.0	- 0.72	5.15	3.00	9.0	HA 5
2500	250	5.00	- 0.12	238.0		14.2	14.0	4.0	244.0	- 0.72	5.15	3.00	9.0	HA 5
2520	252	5.00	- 0.12	238.0		16.2	16.0	5.0	244.0	- 0.72	5.15	4.00	12.0	MAJ
2550	255	5.00	- 0.12	240.0		16.2	16.0	5.0	247.0	- 0.72	5.15	4.00	12.0	MAJ
2570	257	5.00	- 0.12	240.0		16.2	16.0	5.0	249.0	- 0.72	5.15	4.00	12.0	MAJ
2580	258	5.00	- 0.12	240.0		16.2	16.0	5.0	250.0	- 0.72	5.15	4.00	12.0	MAJ
2600	260	5.00	- 0.12	245.0		16.2	16.0	5.0	252.0	- 0.81	5.15	4.00	12.0	MAJ
2620	262	5.00	- 0.12	245.0		16.2	16.0	5.0	254.0	- 0.81	5.15	4.00	12.0	MAJ
2650	265	5.00	- 0.12	250.0		16.2	16.0	5.0	257.0	- 0.81	5.15	4.00	12.0	MAJ
2670	267	5.00	- 0.12	250.0		16.2	16.0	5.0	259.0	- 0.81	5.15	4.00	12.0	MAJ
2680	268	5.00	- 0.12	250.0		16.2	16.0	5.0	260.0	- 0.81	5.15	4.00	12.0	MAJ



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## D1400 CONTINUED

Ref. Number	Nominal 'Shaft' Diameter (S)	Thickness (t)	Tolerance (t)	Circlip Dimensions			Groove Dimensions							Pliers	
				Unstressed (Free) Diameter (D)	Tolerance (D)	Lug (L) max	Beam (b)	Lug Hole (h) min	Groove Diameter (G)	Tolerance (G)	Min Groove Width (W)	Radial Depth (d)	Shoulder Length (n) Min.		
2700	270	5.00	- 0.12	255.0	+ 0.81 - 2.00	16.2	16.0	5.0	262.0	- 0.81	5.15	4.00	12.0	MAJ	
2720	272	5.00	- 0.12	255.0		16.2	16.0	5.0	264.0	- 0.81	5.15	4.00	12.0	MAJ	
2750	275	5.00	- 0.12	260.0		16.2	16.0	5.0	267.0	- 0.81	5.15	4.00	12.0	MAJ	
2770	277	5.00	- 0.12	260.0		16.2	16.0	5.0	269.0	- 0.81	5.15	4.00	12.0	MAJ	
2780	278	5.00	- 0.12	260.0		16.2	16.0	5.0	270.0	- 0.81	5.15	4.00	12.0	MAJ	
2800	280	5.00	- 0.12	265.0		16.2	16.0	5.0	272.0	- 0.81	5.15	4.00	12.0	MAJ	
2820	282	5.00	- 0.12	265.0		16.2	16.0	5.0	274.0	- 0.81	5.15	4.00	12.0	MAJ	
2850	285	5.00	- 0.12	270.0		16.2	16.0	5.0	277.0	- 0.81	5.15	4.00	12.0	MAJ	
2870	287	5.00	- 0.12	270.0		16.2	16.0	5.0	279.0	- 0.81	5.15	4.00	12.0	MAJ	
2880	288	5.00	- 0.12	270.0		16.2	16.0	5.0	280.0	- 0.81	5.15	4.00	12.0	MAJ	
2900	290	5.00	- 0.12	275.0		16.2	16.0	5.0	282.0	- 0.81	5.15	4.00	12.0	MAJ	
2920	292	5.00	- 0.12	275.0		16.2	16.0	5.0	284.0	- 0.81	5.15	4.00	12.0	MAJ	
2950	295	5.00	- 0.12	280.0		16.2	16.0	5.0	287.0	- 0.81	5.15	4.00	12.0	MAJ	
2970	297	5.00	- 0.12	280.0		16.2	16.0	5.0	289.0	- 0.81	5.15	4.00	12.0	MAJ	
2980	298	5.00	- 0.12	280.0		16.2	16.0	5.0	290.0	- 0.81	5.15	4.00	12.0	MAJ	
3000	300	5.00	- 0.12	285.0		16.2	16.0	5.0	292.0	- 0.81	5.15	4.00	12.0	MAJ	
3050	305	6.00	- 0.15	288.0		n/a	20.0	6.0	295.0	- 0.81	6.20	5.00	15.0	MAJ	
3100	310	6.00	- 0.15	293.0		n/a	20.0	6.0	300.0	- 0.81	6.20	5.00	15.0	SMAJ	
3150	315	6.00	- 0.15	298.0		n/a	20.0	6.0	305.0	- 0.81	6.20	5.00	15.0	SMAJ	
3200	320	6.00	- 0.15	303.0		n/a	20.0	6.0	310.0	- 0.81	6.20	5.00	15.0	SMAJ	
3250	325	6.00	- 0.15	308.0		n/a	20.0	6.0	315.0	- 0.81	6.20	5.00	15.0	SMAJ	
3300	330	6.00	- 0.15	313.0		n/a	20.0	6.0	320.0	- 0.89	6.20	5.00	15.0	SMAJ	
3350	335	6.00	- 0.15	318.0		+ 0.90 - 2.00	n/a	20.0	6.0	325.0	- 0.89	6.20	5.00	15.0	SMAJ
3400	340	6.00	- 0.15	323.0			n/a	20.0	6.0	330.0	- 0.89	6.20	5.00	15.0	SMAJ
3450	345	6.00	- 0.15	328.0			n/a	20.0	6.0	335.0	- 0.89	6.20	5.00	15.0	SMAJ
3500	350	6.00	- 0.15	333.0			n/a	20.0	6.0	340.0	- 0.89	6.20	5.00	15.0	SMAJ
3550	355	6.00	- 0.15	338.0			n/a	20.0	6.0	345.0	- 0.89	6.20	5.00	15.0	SMAJ
3600	360	6.00	- 0.15	343.0			n/a	20.0	6.0	350.0	- 0.89	6.20	5.00	15.0	SMAJ
3650	365	6.00	- 0.15	348.0			n/a	20.0	6.0	355.0	- 0.89	6.20	5.00	15.0	SMAJ
3700	370	6.00	- 0.15	353.0			n/a	20.0	6.0	360.0	- 0.89	6.20	5.00	15.0	SMAJ
3750	375	6.00	- 0.15	358.0			n/a	20.0	6.0	365.0	- 0.89	6.20	5.00	15.0	SMAJ
3800	380	6.00	- 0.15	363.0			n/a	20.0	6.0	370.0	- 0.89	6.20	5.00	15.0	SMAJ
3850	385	6.00	- 0.15	368.0			n/a	20.0	6.0	375.0	- 0.89	6.20	5.00	15.0	SMAJ
3900	390	6.00	- 0.15	373.0	n/a		20.0	6.0	380.0	- 0.89	6.20	5.00	15.0	SMAJ	
3950	395	6.00	- 0.15	378.0	n/a		20.0	6.0	385.0	- 0.89	6.20	5.00	15.0	SMAJ	
4000	400	6.00	- 0.15	383.0	n/a		20.0	6.0	390.0	- 0.89	6.20	5.00	15.0	SMAJ	