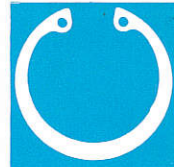
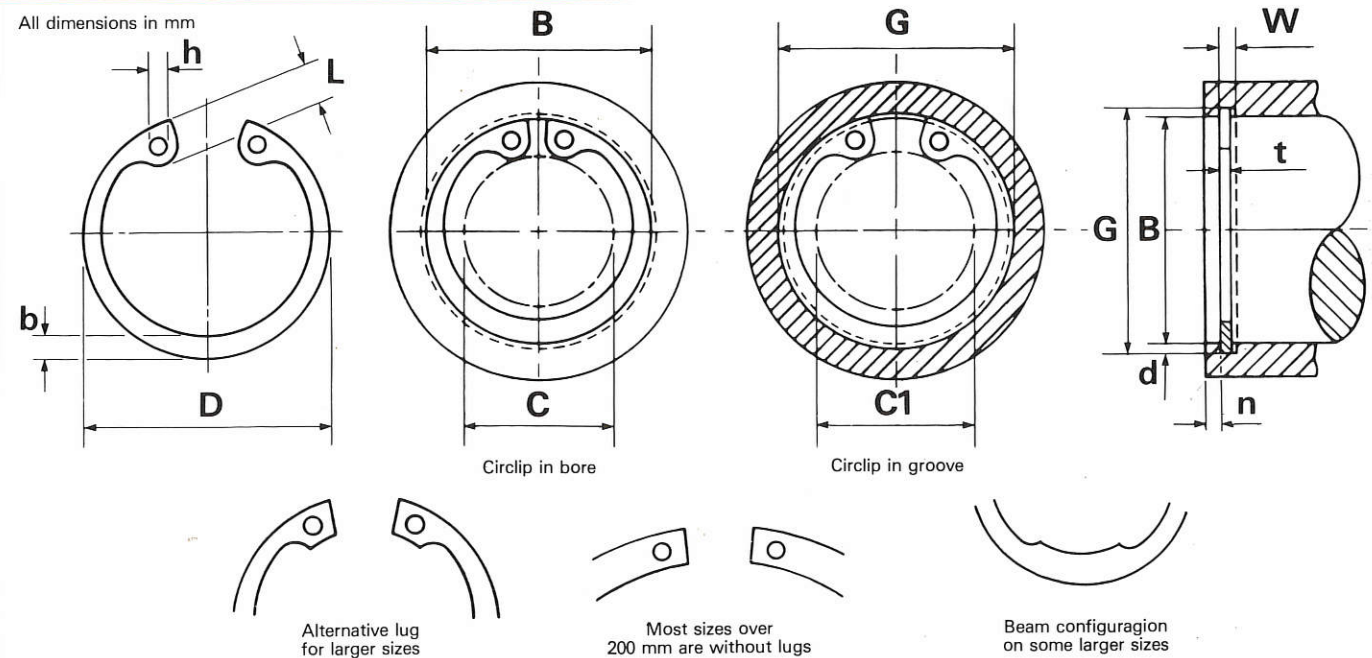


STANDARD INTERNAL CIRCLIPS EUROPEAN SPECIFICATIONS

D1300 INCORPORATING DIN 472



All dimensions in mm



† Thrust load calculations see pages 9 & 10

SIZE CODE	Bore		Groove (G)				Circlip (F)										Wt. (kg/k)	Tc† (N)	Tg† (N)
	B	G	Tol.	W	Tol.	n (min)	d ~	t	Tol.	D	Tol.	C	C1	L (max)	b ~	h (min)			
0080	8	8.4	+0.09	0.90	0.6	0.2	0.80	+0.00	8.7	3.0	3.6	2.4	1.1	1.0	0.11	6200	600		
0090	9	9.4	-0.00	0.90	0.6	0.2	0.80	-0.05	9.8	3.7	4.4	2.5	1.3	1.0	0.17	7000	680		
0095	9.5	9.9		1.10	0.6	0.2	1.00		10.3	3.2	3.9	3.0	1.3	1.2	0.22	9300	720		
0100	10	10.4		1.10	0.6	0.2	1.00		10.8	3.3	4.0	3.2	1.4	1.2	0.24	9700	750		
0110	11	11.4		1.10	0.6	0.2	1.00		11.8	4.1	4.8	3.3	1.5	1.2	0.30	10700	830		
0120	12	12.5		1.10	0.8	0.3	1.00		13.0	4.9	5.7	3.4	1.7	1.5	0.34	11700	1130		
0130	13	13.6	+0.11	1.10	0.9	0.3	1.00	-0.10	14.1	5.4	6.4	3.6	1.8	1.5	0.39	12700	1470		
0140	14	14.6	-0.00	1.10	0.9	0.3	1.00		15.1	6.2	7.2	3.7	1.9	1.7	0.45	13600	1580		
0150	15	15.7		1.10	1.1	0.4	1.00		16.2	7.2	8.3	3.7	2.0	1.7	0.48	14600	1980		
0160	16	16.8		1.10	1.2	0.4	1.00		17.3	8.0	9.2	3.8	2.0	1.7	0.54	15600	2410		
0170	17	17.8		1.10	1.2	0.4	1.00		18.3	8.8	10.0	3.9	2.1	1.7	0.59	16600	2560		
0180	18	19.0		1.10	1.5	0.5	1.00		19.5	9.4	10.8	4.1	2.2	2.0	0.61	17500	3390		
0190	19	20.0	+0.13	1.10	1.5	0.5	1.00	+0.42	20.5	10.4	11.8	4.1	2.2	2.0	0.72	1850	3580		
0200	20	21.0	-0.00	1.10	1.5	0.5	1.00	-0.13	21.5	11.2	12.6	4.2	2.3	2.0	0.75	19500	3770		
0210	21	22.0		1.10	1.5	0.5	1.00		22.5	12.2	13.6	4.2	2.4	2.0	0.84	20400	3960		
0220	22	23.0		1.10	1.5	0.5	1.00		23.5	13.2	14.6	4.2	2.5	2.0	0.86	21400	4150		
0230	23	24.1		1.30	1.7	0.6	1.20		24.6	14.2	15.7	4.2	2.5	2.0	1.20	26900	4770		
0240	24	25.2		1.30	1.8	0.6	1.20	+0.42	25.9	14.8	16.4	4.4	2.6	2.0	1.21	28000	5430		
0250	25	26.2	+0.21	1.30	1.8	0.6	1.20	-0.21	26.9	15.5	17.2	4.5	2.7	2.0	1.33	29200	5650		
0260	26	27.2	-0.00	1.30	1.8	0.6	1.20		27.9	16.1	17.8	4.7	2.8	2.0	1.35	30400	5880		
0270	27	28.4		1.30	2.1	0.7	1.20	+0.00	29.1	17.1	19.0	4.7	2.9	2.0	1.55	31600	7130		
0280	28	29.4		1.30	2.1	0.7	1.20	-0.06	30.1	17.9	19.8	4.8	2.9	2.0	1.64	32700	7390		
0290	29	30.4		1.30	2.1	0.7	1.20		31.1	18.9	20.8	4.8	3.0	2.0	1.74	33900	7650		
0300	30	31.4		1.30	2.1	0.7	1.20		32.1	19.9	21.8	4.8	3.0	2.0	1.87	35100	7920		
0310	31	32.7		1.30	2.6	0.9	1.20		33.4	20.0	22.3	5.2	3.2	2.5	2.20	36200	9930		
0320	32	33.7	+0.00	1.30	2.6	0.9	1.20	+0.50	34.4	20.6	22.9	5.4	3.2	2.5	1.98	37400	10300		
0330	33	34.7	-0.00	1.30	2.6	0.9	1.20	-0.25	35.5	21.6	23.9	5.4	3.3	2.5	2.13	36800	10600		
0340	34	35.7		1.60	2.6	0.9	1.50		36.5	22.6	24.9	5.4	3.3	2.5	2.88	49700	10900		
0350	35	37.0		1.60	3.0	1.0	1.50		37.8	23.6	26.2	5.4	3.4	2.5	2.93	51100	13200		
0360	36	38.0	+0.25	1.60	3.0	1.0	1.50	-0.21	38.8	24.6	27.2	5.4	4.0	2.5	3.23	52600	13600		
0370	37	39.0	-0.00	1.60	3.0	1.0	1.50		39.8	25.4	28.0	5.5	3.2	2.5	2.98	54100	13900		
0380	38	40.0		1.60	3.0	1.0	1.50		40.8	26.4	29.0	5.5	3.7	2.5	3.54	55500	14300		
0400	40	42.5		1.85	3.8	1.3	1.75		43.5	27.8	30.9	5.8	3.9	2.5	4.63	56600	18800		
0410	41	43.5		1.85	3.8	1.3	1.75	+0.90	44.5	28.6	31.7	5.9	4.0	2.5	5.37	58000	19300		
0420	42	44.5	-0.00	1.85	3.8	1.3	1.75	-0.39	45.5	29.6	32.7	5.9	4.1	2.5	5.21	59500	19800		
0450	45	47.5		1.85	3.8	1.3	1.75		48.5	32.0	35.1	6.2	4.3	2.5	5.88	63700	21200		
0470	47	49.5		1.85	3.8	1.3	1.75		50.5	33.5	36.7	6.4	4.4	2.5	6.13	66500	22100		
0480	48	50.5		1.85	3.8	1.3	1.75		51.5	34.5	37.7	6.4	4.5	2.5	6.31	68000	22600		
0500	50	53.0		2.15	4.5	1.5	2.00		54.2	36.3	40.0	6.5	4.6	2.5	8.01	80900	28300		
0510	51	54.0		2.15	4.5	1.5	2.00		55.2	37.3	41.0	6.5	4.7	2.5	8.72	82500	28800		
0520	52	55.0		2.15	4.5	1.5	2.00		56.2	37.9	41.6	6.7	4.7	2.5	8.91	84100	29400		
0550	55	58.0		2.15	4.5	1.5	2.00		59.2	40.7	44.4	6.8	5.0	2.5	9.44	89000	31100		
0560	56	59.0		2.15	4.5	1.5	2.00		60.2	41.7	45.4	6.8	5.1	2.5	9.75	90600	31700		
0570	57	60.0	+0.30	2.15	4.5	1.5	2.00	+1.10	62.2	42.7	46.4	6.8	5.1	2.5	10.36	92200	32200		
0580	58	61.0	-0.00	2.15	4.5	1.5	2.00	-0.46	62.2	43.5	47.2	6.9	5.2	2.5	9.56	93800	32800		
0600	60	63.0		2.15	4.5	1.5	2.00		64.2	44.7	48.4	7.3	5.4	2.5	11.15	97100	33900		
0620	62	65.0		2.15	4.5	1.5	2.00		66.2	46.7	50.4	7.3	5.5	2.5	11.59	100000	35100		
0630	63	66.0		2.15	4.5	1.5	2.00		67.2	47.7	51.4	7.3	5.6	2.5	11.78	102000	35600		
0640	64	67.0		2.15	4.5	1.5	2.00		68.2	48.7	52.4	7.3	5.2	2.5	16.80	104000	36200		
0650	65	68.0		2.15	4.5	1.5	2.50		69.2	49.0	52.8	7.6	5.8	3.0	17.71	131000	36800		

Standard material - carbon spring steel. Standard finish - phosphate and oil.

D1300 (continued)



SIZE CODE	Bore		Groove (G)				Circlip (F)										Wt. (kg/k)	Tc† (N)	Tg† (N)
	B	G	Tol.	W	Tol.	n (min)	d ~	t	Tol.	D	Tol.	C	C1	L (max)	b ~	h (min)			
0670	67	70.0		2.65		4.5	1.5	2.50		72.5		48.7	52.4	7.3	5.2	2.5	17.71	136000	37900
0680	68	71.0		2.65		4.5	1.5	2.50		72.5		51.6	55.4	7.8	6.1	3.0	17.72	138000	38500
0700	70	73.0		2.65		4.5	1.5	2.50	+0.00	74.5	+1.10	53.6	57.4	7.8	6.2	3.0	17.65	142000	39600
0720	72	75.0	+0.30	2.65		4.5	1.5	2.50	-0.07	76.5	-0.46	55.6	59.4	7.8	6.4	3.0	19.70	146000	40700
0750	75	78.0	-0.00	2.65	+0.14	4.5	1.5	2.50	-0.00	79.5		58.6	62.4	7.8	6.6	3.0	20.62	152000	42400
0760	76	79.0		2.65		4.5	1.5	2.50		80.7		59.6	63.4	7.8	6.1	3.0	22.68	154000	43000
0780	78	81.0		2.65		4.5	1.5	2.50		82.5		60.1	64.0	8.5	6.8	3.0	22.46	158000	44100
0800	80	83.5		2.65		5.3	1.8	2.50		85.5		62.1	66.5	8.5	7.0	3.0	21.38	162000	52800
0820	82	85.5		2.65		5.3	1.8	2.50		87.5		64.1	68.5	8.5	6.2	3.0	22.27	166000	54100
0850	85	88.5		3.15		5.3	1.8	3.00		90.5		66.9	71.3	8.6	7.2	3.5	31.78	206000	56100
0880	88	91.5	+0.35	3.15		5.3	1.8	3.00		93.5		69.9	74.3	8.6	7.4	3.5	32.94	214000	58100
0900	90	93.5	-0.00	3.15		5.3	1.8	3.00	+0.00	95.5	+1.30	71.9	76.3	8.6	7.6	3.5	33.35	218000	59400
0920	92	95.5		3.15		5.3	1.8	3.00	-0.08	97.5	-0.54	73.7	78.1	8.7	7.8	3.5	35.72	223000	60700
0950	95	98.5		3.15		5.3	1.8	3.00		100.5		76.5	80.9	8.8	8.1	3.5	38.88	231000	62700
0980	98	101.5		3.15		5.3	1.8	3.00		103.5		79.0	83.5	9.0	8.3	3.5	42.16	238000	64700
1000	100	103.5		3.15		6.0	2.0	4.00		105.5		80.6	85.1	9.2	8.4	3.5	43.41	243000	66000
1020	102	106.0		4.15		6.0	2.0	4.00		108.0		82.0	87.0	9.5	8.5	3.5	55.20	330000	76900
1050	105	109.0		4.15		6.0	2.0	4.00		112.0		85.0	90.0	9.5	8.7	3.5	59.20	340000	79200
1080	108	112.0	+0.54	4.15		6.0	2.0	4.00		115.0		88.0	93.0	9.5	8.9	3.5	62.60	350000	81400
1100	110	114.0	-0.00	4.15		6.0	2.0	4.00		117.0		88.2	93.2	10.4	9.0	3.5	71.75	356000	82900
1120	112	116.0		4.15		6.0	2.0	4.00		119.0		90.0	95.0	10.5	9.1	3.5	70.68	362000	84400
1150	115	119.0		4.15		6.0	2.0	4.00		122.0		93.0	98.0	10.5	9.3	3.5			