



8 mm to 400 mm

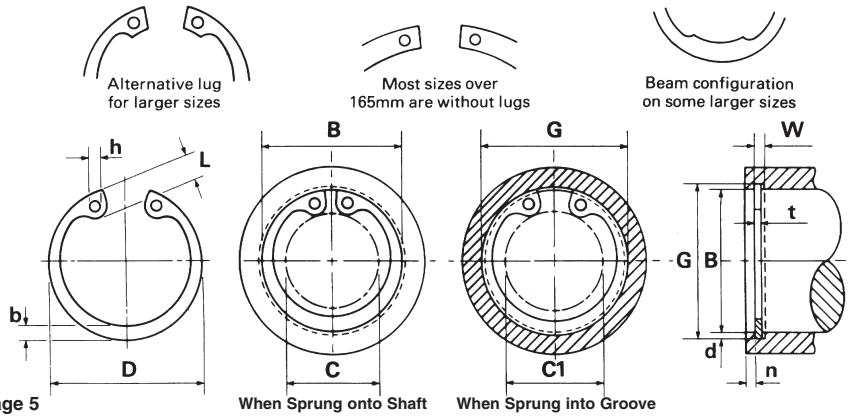
Standard Material  
Carbon Spring Steel

Standard Finish  
Phosphate and oil

DIN 472

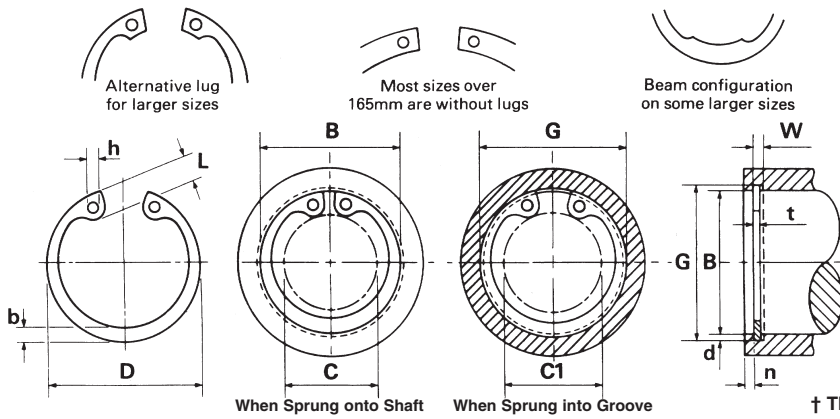
**STANDARD  
METRIC  
INTERNAL**

† Thrust load calculations see page 5



PART NUMBER	BORE		CIRCLIP							GROOVE						APPROX Wt. KG / 1000 PCS.	Tc (N)	Tg (N)	PLIER No.	
	B mm	t mm	Tol. mm	D mm	Tol. mm	C	C1	L (max)	b ~	h (min)	G mm	Tol. mm	W mm	Tol. mm	n (min)					d ~
D1300-8	8	0.80		8.7		2.8	3.6	2.4	1.1	1.0	8.4	+0.09	0.90		0.6	0.20	0.11	6200	620	
D1300-9	9	0.80		9.8		3.5	4.4	2.5	1.3	1.0	9.4	-0.00	0.90		0.6	0.20	0.17	7000	690	
D1300-9.5	9.5	1.00		10.3		3.5	3.9	3.0	1.4	1.2	9.9		1.10		0.6	0.20	0.22	9300	730	HC 1
D1300-10	10	1.00		10.8		3.1	4.0	3.2	1.4	1.2	10.4		1.10		0.6	0.20	0.24	9700	770	or
D1300-11	11	1.00		11.8	+0.36	3.9	4.8	3.3	1.5	1.2	11.4		1.10		0.6	0.20	0.30	10700	840	HD 1
D1300-12	12	1.00		13.0	-0.18	4.7	5.7	3.4	1.7	1.5	12.5		1.10		0.8	0.30	0.34	11700	1150	
D1300-13	13	1.00		14.1		5.3	6.4	3.6	1.8	1.5	13.6	+0.11	1.10		0.9	0.30	0.39	12700	1500	
D1300-14	14	1.00		15.1		6.0	7.2	3.7	1.9	1.7	14.6	-0.00	1.10		0.9	0.30	0.45	13600	1620	
D1300-15	15	1.00		16.2		7.0	8.3	3.7	2.0	1.7	15.7		1.10		1.1	0.40	0.48	14600	2030	
D1300-16	16	1.00		17.3		7.7	9.2	3.8	2.0	1.7	16.8		1.10		1.2	0.40	0.54	15600	2470	
D1300-17	17	1.00		18.3		8.4	10.0	3.9	2.1	1.7	17.8		1.10		1.2	0.40	0.59	16600	2620	
D1300-18	18	1.00		19.5		8.9	10.8	4.1	2.2	2.0	19.0		1.10		1.5	0.50	0.61	17500	3490	
D1300-19	19	1.00		20.5		9.8	11.8	4.1	2.2	2.0	20.0		1.10		1.5	0.50	0.72	18500	3680	
D1300-20	20	1.00		21.5		10.6	12.6	4.2	2.3	2.0	21.0		1.10		1.5	0.50	0.75	19500	3860	
D1300-21	21	1.00		22.5	+0.42	11.6	13.6	4.2	2.4	2.0	22.0		1.10		1.5	0.50	0.84	20400	4050	
D1300-22	22	1.00		23.5	-0.21	12.6	14.6	4.2	2.5	2.0	23.0		1.10		1.5	0.50	0.86	21400	4240	
D1300-23	23	1.20		24.6		13.6	15.7	4.2	2.5	2.0	24.1	+0.21	1.30		1.7	0.60	1.20	26900	4880	
D1300-24	24	1.20		25.9		14.2	16.4	4.4	2.6	2.0	25.2	-0.00	1.30		1.8	0.60	1.21	28000	5560	
D1300-25	25	1.20		26.9		15.0	17.2	4.5	2.7	2.0	26.2		1.30		1.8	0.60	1.33	29200	5790	
D1300-26	26	1.20		27.9		15.6	17.8	4.7	2.8	2.0	27.2		1.30		1.8	0.60	1.35	30400	6020	
D1300-27	27	1.20		29.1		16.6	19.0	4.7	2.9	2.0	28.4		1.30		2.1	0.70	1.55	31600	7310	
D1300-28	28	1.20		30.1		17.4	19.8	4.8	2.9	2.0	29.4		1.30		2.1	0.70	1.64	32700	7570	
D1300-29	29	1.20		31.1		18.4	20.8	4.8	3.0	2.0	30.4		1.30		2.1	0.70	1.74	33900	7840	HC 2
D1300-30	30	1.20		32.1		19.4	21.8	4.8	3.0	2.0	31.4		1.30		2.1	0.70	1.87	35100	8100	or
D1300-31	31	1.20	+0.00	33.4		19.6	22.3	5.2	3.2	2.5	32.7		1.30		2.6	0.90	2.20	36250	9900	HD 2
D1300-32	32	1.20	-0.06	34.4	+0.50	20.2	22.9	5.2	3.2	2.5	33.7		1.30		2.6	0.90	1.98	37400	10500	
D1300-33	33	1.20		35.5	-0.25	21.2	23.9	5.4	3.3	2.5	34.7		1.30		2.6	0.90	2.13	38600	10900	
D1300-34	34	1.50		36.5		22.2	24.9	5.4	3.3	2.5	35.7		1.60		2.6	0.90	2.88	49700	11200	
D1300-35	35	1.50		37.8		23.2	26.2	5.4	3.4	2.5	37.0		1.60	+0.14	3.0	1.00	2.93	51100	13600	
D1300-36	36	1.50		38.8		24.2	27.2	5.4	4.0	2.5	38.0	+0.25	1.60	-0.00	3.0	1.00	3.23	52600	14000	
D1300-37	37	1.50		39.8		25.0	28.0	5.5	3.2	2.5	39.0	-0.00	1.60		3.0	1.00	2.98	54100	14300	
D1300-38	38	1.50		40.8		26.0	29.0	5.5	3.7	2.5	40.0		1.60		3.0	1.00	3.54	55500	14700	
D1300-40	40	1.75		43.5		27.4	30.9	5.8	3.9	2.5	42.5		1.85		3.8	1.30	4.63	56600	19400	
D1300-41	41	1.75		44.5	+0.90	28.2	31.7	5.9	4.0	2.5	43.5		1.85		3.8	1.30	5.37	58100	19900	
D1300-42	42	1.75		45.5	-0.39	29.2	32.7	5.9	4.1	2.5	44.5		1.85		3.8	1.30	5.21	59500	20400	
D1300-45	45	1.75		48.5		31.6	35.1	6.2	4.3	2.5	47.5		1.85		3.8	1.30	5.88	63700	21800	
D1300-47	47	1.75		50.5		33.2	36.7	6.4	4.4	2.5	49.5		1.85		3.8	1.30	6.13	66600	22700	
D1300-48	48	1.75		51.5		34.6	37.7	6.4	4.5	2.5	50.5		1.85		3.8	1.30	6.31	68000	23200	
D1300-50	50	2.00		54.2		36.0	40.0	6.5	4.6	2.5	53.0		2.15		4.5	1.50	8.01	80900	29100	
D1300-51	51	2.00		55.2		37.0	41.0	6.5	4.7	2.5	54.0		2.15		4.5	1.50	8.72	82500	29700	
D1300-52	52	2.00		56.2		37.6	41.6	6.7	4.7	2.5	55.0		2.15		4.5	1.50	8.91	84100	30300	
D1300-55	55	2.00		59.2		40.4	44.4	6.8	5.0	2.5	58.0		2.15		4.5	1.50	9.44	89000	32000	
D1300-56	56	2.00		60.2		41.4	45.4	6.8	5.1	2.5	59.0		2.15		4.5	1.50	9.75	90600	32500	
D1300-57	57	2.00		62.2		42.4	46.4	6.8	5.1	2.5	60.0		2.15		4.5	1.50	10.36	92200	33100	
D1300-58	58	2.00		62.2		43.2	47.2	6.9	5.2	2.5	61.0		2.15		4.5	1.50	9.56	93900	33700	
D1300-60	60	2.00		64.2	+1.10	44.4	48.4	7.3	5.4	2.5	63.0		2.15		4.5	1.50	11.15	97100	34800	
D1300-62	62	2.00		66.2	-0.46	46.4	50.4	7.3	5.5	2.5	65.0	+0.30	2.15		4.5	1.50	11.59	100000	35900	
D1300-63	63	2.00		67.2		47.4	51.4	7.3	5.6	2.5	66.0	-0.00	2.15		4.5	1.50	11.78	102000	36800	
D1300-65	65	2.50		69.2		48.0	52.8	7.6	5.8	3.0	68.0		2.65		4.5	1.50	16.80	131000	37600	
D1300-67	67	2.50		72.0		50.6	54.6	7.7	6.0	3.0	70.0		2.65		4.5	1.50	17.71	136000	38700	
D1300-68	68	2.50		72.2		51.4	55.4	7.8	6.1	3.0	71.0		2.65		4.5	1.50	17.72	138000	39300	HA 3
D1300-70	70	2.50		74.5		53.4	57.4	7.8	6.2	3.0	73.0		2.65		4.5	1.50	17.65	142000	40400	or
D1300-72	72	2.50		76.5		55.4	59.4	7.8	6.4	3.0	75.0		2.65		4.5	1.50	19.70	146000	41600	HB 3
D1300-75	75	2.50		79.5		58.4	62.4	7.8	6.6	3.0	78.0		2.65		4.5	1.50	20.62	152000	43300	
D1300-76	76	2.50		80.7		59.4	63.4	7.9	6.7	3.0	79.0		2.65		4.5	1.50	22.68	154000	43800	





8 mm to 400 mm

Standard Material  
Carbon Spring Steel

Standard Finish  
Phosphate and oil

DIN 472



D1300

**STANDARD  
METRIC  
INTERNAL**

PART NUMBER	BORE B mm	THICKNESS		FREE DIAMETER		CIRCLIP					GROOVE					APPROX Wt. kg / 1000 PCS.	Tc (N)	Tg (N)	PLIER No.	
		t mm	Tol. mm	D mm	Tol. mm	C	C1	L (max)	b ~	h (min)	G mm	Tol. mm	W mm	Tol. mm	n (min)					d ~
D1300-78	78	2.50		82.5		60.0	64.0	8.5	6.8	3.0	81.0		2.65	+0.14	4.5	1.50	22.46	158000	45000	HC 3
D1300-80	80	2.50	+0.00	85.5		62.0	66.5	8.5	7.0	3.0	83.5		2.65	-0.00	5.3	1.80	21.38	162000	53900	or
D1300-82	82	2.50	-0.06	87.5		64.0	68.5	8.5	7.0	3.0	85.5		2.65		5.3	1.80	22.27	166000	55300	HD 3
D1300-85	85	3.00		90.5		66.8	71.3	8.6	7.2	3.5	88.5		3.15		5.3	1.80	31.78	206000	57200	
D1300-88	88	3.00		93.5		69.8	74.3	8.6	7.4	3.5	91.5		3.15		5.3	1.80	32.94	214000	59200	
D1300-90	90	3.00		95.5	+1.30	71.8	76.3	8.6	7.6	3.5	93.5	+0.35	3.15		5.3	1.80	33.35	218000	60500	
D1300-92	92	3.00		97.5	-0.54	73.6	78.1	8.7	7.8	3.5	95.5		3.15		5.3	1.80	35.72	223000	61900	HC 4
D1300-95	95	3.00		100.5		76.4	80.9	8.8	8.1	3.5	98.5		3.15		5.3	1.80	38.88	231000	63800	or
D1300-98	98	3.00		103.5		79.0	83.5	9.0	8.3	3.5	101.5		3.15		5.3	1.80	42.16	238000	65800	HD 4
D1300-100	100	3.00		105.5		81.0	85.5	9.0	8.4	3.5	103.5		3.15		5.3	1.80	43.41	243000	67100	
D1300-102	102	4.00		108.0		82.6	87.6	9.2	8.5	3.5	106.0		4.15		6.0	2.00	55.20	330000	78400	
D1300-105	105	4.00		112.0		85.6	90.6	9.2	8.7	3.5	109.0		4.15		6.0	2.00	59.20	340000	80700	
D1300-108	108	4.00		115.0		88.0	93.0	9.5	8.9	3.5	112.0	+0.54	4.15		6.0	2.00	62.60	350000	83000	
D1300-110	110	4.00		117.0		88.2	93.2	10.4	9.0	3.5	114.0	-0.00	4.15		6.0	2.00	71.75	356000	84500	
D1300-112	112	4.00		119.0		90.0	95.0	10.5	9.1	3.5	116.0		4.15		6.0	2.00	70.68	362000	86000	
D1300-115	115	4.00		122.0		93.0	98.0	10.5	9.3	3.5	119.0		4.15		6.0	2.00	73.16	372000	88200	
D1300-120	120	4.00		127.0		97.0	102.0	11.0	9.7	3.5	124.0		4.15		6.0	2.00	80.40	388000	92000	
D1300-125	125	4.00		132.0		102.0	107.0	11.0	10.0	4.0	129.0		4.15		6.0	2.00	81.20	405000	95800	
D1300-127	127	4.00		135.0		104.0	109.0	11.0	10.1	4.0	131.0		4.15		6.0	2.00	80.80	411000	97300	
D1300-130	130	4.00		137.0		107.0	112.0	11.0	10.2	4.0	134.0		4.15		6.0	2.00	85.13	421000	99500	
D1300-135	135	4.00		142.0	+1.50	112.0	116.0	11.2	10.5	4.0	139.0		4.15		6.0	2.00	94.79	437000	103000	
D1300-140	140	4.00		147.0	-0.63	117.0	121.0	11.2	10.7	4.0	144.0	+0.63	4.15		6.0	2.00	98.61	453000	107000	
D1300-145	145	4.00		152.0		122.0	126.0	11.4	10.9	4.0	149.0	-0.00	4.15	+0.18	6.0	2.00	106.50	496000	111000	
D1300-150	150	4.00		158.0		125.0	131.0	12.0	11.2	4.0	155.0		4.15	-0.00	7.5	2.50	106.80	485000	144000	
D1300-155	155	4.00	+0.00	164.0		130.0	136.0	12.0	11.4	4.0	160.0		4.15		7.5	2.50	128.00	502000	148000	
D1300-160	160	4.00	-0.075	169.0		133.0	139.0	13.0	11.6	4.0	165.0		4.15		7.5	2.50	130.50	518000	153000	MAJOR
D1300-165	165	4.00		174.5		138.0	144.0	13.0	11.8	4.0	170.0		4.15		7.5	2.50	132.00	534000	158000	77
D1300-170	170	4.00		179.5		145.0	150.0	13.5	12.2	4.0	175.0		4.15		7.5	2.50	149.50	550000	163000	
D1300-175	175	4.00		184.5		149.0	155.0	13.5	12.7	4.0	180.0		4.15		7.5	2.50	158.50	566000	167000	
D1300-180	180	4.00		189.5		153.0	158.0	14.2	13.2	4.0	185.0		4.15		7.5	2.50	168.00	583000	172000	
D1300-185	185	4.00		194.5		157.0	162.0	14.2	13.7	4.0	190.0		4.15		7.5	2.50	177.50	599000	177000	
D1300-190	190	4.00		199.5	+1.70	162.0	167.0	14.3	13.8	4.0	195.0		4.15		7.5	2.50	184.00	615000	181000	
D1300-195	195	4.00		204.5	-0.72	167.0	172.0	14.2	13.8	4.0	200.0	+0.72	4.15		7.5	2.50	189.60	631000	186000	
D1300-200	200	4.00		209.5		171.0	177.0	14.3	14.0	4.0	205.0	-0.00	4.15		7.5	2.50	196.00	647000	191000	
D1300-210	210	5.00		222.0		181.0	188.0	14.2	14.0	4.0	216.0		5.15		9.0	3.00	263.00	739000	241000	
D1300-220	220	5.00		232.0		191.0	198.0	14.2	14.0	4.0	226.0		5.15		9.0	3.00	276.00	774000	252000	
D1300-230	230	5.00		242.0		201.0	208.0	14.2	14.0	4.0	236.0		5.15		9.0	3.00	291.00	809000	264000	
D1300-240	240	5.00		252.0		211.0	218.0	14.2	14.0	4.0	246.0		5.15		9.0	3.00	304.00	845000	275000	
D1300-250	250	5.00		262.0		221.0	228.0	14.2	14.0	4.0	256.0		5.15		9.0	3.00	318.50	880000	286000	
D1300-260	260	5.00		275.0	+2.00	227.0	236.0	16.2	16.0	5.0	268.0		5.15		12.0	4.00	385.00	915000	398000	
D1300-270	270	5.00		285.0	-0.81	237.0	246.0	16.2	16.0	5.0	278.0	+0.81	5.15		12.0	4.00	401.50	950000	413000	
D1300-280	280	5.00		295.0		247.0	256.0	16.2	16.0	5.0	288.0	-0.00	5.15		12.0	4.00	417.50	985000	428000	
D1300-290	290	5.00		305.0		257.0	266.0	16.2	16.0	5.0	298.0		5.15		12.0	4.00	433.40	1020000	443000	
D1300-300	300	5.00		315.0		267.0	276.0	16.2	16.0	5.0	308.0		5.15		12.0	4.00	446.00	1060000	458000	
D1300-310	310	6.00		327.0		271.0	282.0	20.2	20.0	6.0	320.0		6.20		15.0	5.00	658.50	1310000	594000	
D1300-320	320	6.00		337.0		281.0	292.0	20.2	20.0	6.0	330.0		6.20		15.0	5.00	682.00	1350000	613000	
D1300-330	330	6.00		347.0		291.0	302.0	20.2	20.0	6.0	340.0		6.20		15.0	5.00	705.00	1390000	632000	MAJOR
D1300-340	340	6.00		357.0		301.0	312.0	20.2	20.0	6.0	350.0		6.20		15.0	5.00	729.00	1440000	650000	X 77
D1300-350	350	6.00		367.0	+2.20	311.0	322.0	20.2	20.0	6.0	360.0	+0.89	6.20	+0.22	15.0	5.00	752.50	1480000	669000	
D1300-360	360	6.00	+0.00	377.0	-1.00	321.0	332.0	20.2	20.0	6.0	370.0	-0.00	6.20	-0.00	15.0	5.00	769.00	1520000	688000	
D1300-370	370	6.00	-0.18	387.0		331.0	342.0	20.2	20.0	6.0	380.0		6.20		15.0	5.00	793.00	1560000	707000	
D1300-380	380	6.00		397.0		341.0	352.0	20.2	20.0	6.0	390.0		6.20		15.0	5.00	817.00	1690000	726000	
D1300-390	390	6.00		407.0		351.0	362.0	20.2	20.0	6.0	400.0		6.20		15.0	5.00	838.50	1646000	745000	
D1300-400	400	6.00		417.0		361.0	372.0	20.2	20.0	6.0	410.0		6.20		15.0	5.00	862.50	1689000	764000	