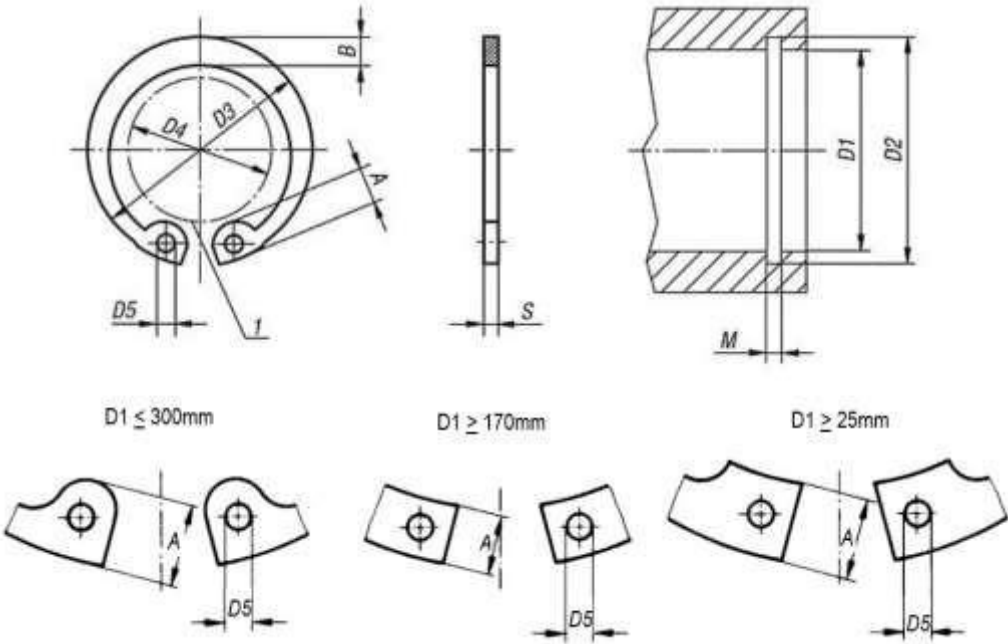




Product Dimensions and Weights

DIN 472 Specifications

Metric DIN 472 Internal Retaining Rings for Bores



Dimensions of Metric DIN 472 Retaining Rings

All measurements are in mm

Shaft dia		Clip							Groove				Supplementary data						
d1	s		d3		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg	Nominal size of pliers per DIN 5254
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.			kN	kN		
8	0.8	0	0.36		2.4	1.1	1	0.14	8.4	0.09	0.9	0.2	0.6	3	0.86	2	1	1.5	8
9	0.8	-0.05	8.7	-0.1						(H11)									
																		</	



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measurements are in mm

Shaft dia		Clip							Groove					Supplementary data				
d1	s		i3		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.		kN	kN		kN
10	1	0	10.8		3.2	1.4	1.2	0.18	10.4	0	1.1	0.2	0.6	3.3	1.08	4	1	2.2
11	1	-0.06	11.8		3.3	1.5	1.2	0.31	11.4	(H11)	1.1	0.2	0.6	4.1	1.17	4	1	2.3
12	1		13		3.4	1.7	1.5	0.37	12.5		1.1	0.3	0.8	4.9	16	4	1	2.3
13	1		14.1		3.6	1.8	1.5	0.42	13.6		1.1	0.3	0.9	5.4	2.1	4.2	1	2.3
14	1		15.1		3.7	1.9	1.7	0.52	14.6		1.1	0.3	0.9	6.2	2.25	4.5	1	23
15	1		16.2		3.7	2	1.7	0.56	15.7		1.1	0.4	1.1	7.2	2.8	5	1	2.3
16	1		17.3		3.8	2	1.7	0.6	16.8		1.1	0.4	1.2	8	3.4	5.5	1	2.6
17	1		18.3	0.42	3.9	2.1	1.7	0.65	17.8		1.1	0.4	1.2	8.8	3.6	6	1	2.5
18	1		19.5	-0.13	4.1	2.2	2	0.74	19	0.13	1.1	0.5	1.5	9.4	4.8	6.5	1	2.6
19	1		20.5		4.1	2.2	2	0.83	20	0	1.1	0.5	1.5	10.4	5.1	6.8	1	2.5
20	1		21.5		4.2	2.3	2	0.9	21	(H11)	1.1	0.5	1.5	11.2	5.4	7.2	1	2.5
21	1		22.5		4.2	2.4	2	1	22		1.1	0.5	1.5	12.2	5.7	7.6	1	2.6
22	1		23.5		4.2	2.5	2	1.1	23		1.1	0.5	1.5	13.2	5.9	8	1	2.7
24	1.2		25.9	0.42	4.4	2.6	2	1.42	25.2	0.21	1.3	0.6	1.8	14.8	7.7	13.9	1	4.6
25	1.2		26.9	-0.21	4.5	2.7	2	1.5	26.2	0	1.3	0.6	1.8	15.5	8	14.6	1	4.7
26	1.2		27.9	0.5	4.7	2.8	2	1.6	27.2	(H12)	1.3	0.6	1.8	16.1	8.4	13.9	1	4.6
28	1.2		30.1		4.8	2.9	2	1.8	29.4		1.3	0.7	2.1	17.9	10.5	13.3	1	4.5
30	1.2		32.1		-0.25	4.8	3	2	20.6	31.4	0.25	1.3	0.7	2.1	19.9	11.3	137	1
31	1.2		33.4		5.2	3.2	2.5	2.1	32.7	0	1.3	0.9	2.6	20	14.1	13.8	1	4.7



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32	1.2	34.4	5.4	3.2	2.5	2.21	33.7	(H12)	1.3	0.9	2.6	20.6	14.6	13.8	1	4.7
34	1.5	36.5	5.4	3.3	2.5	3.2	35.7		1.6	0.9	2.6	22.6	15.4	26.2	2	6.3

All measurements are in mm

Shaft dia		Clip							Groove					Supplementary data						
d1	s		13		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg	Nominal size of pliers per DIN 5254	
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.			kN		kN		
35	1.5		37.8		5.4	3.4	2.5	3.54	37		1.6	1	3	23.6	18.8	26.9	2	6.4	19	
36	1.5		38.8		5.4	3.5	2.5	3.7	38		1.6	1	3	24.6	19.4	26.4	2	6.4		
37	1.5		39.8		5.5	3.6	2.5	3.74	39		1.6	1	3	25.4	19.8	27.1	2	6.5		
38	1.5		40.8		5.5	3.7	2.5	3.9	40		1.6	1	3	26.4	22.5	28.2	2	6.7		
40	1.8	-0.07	43.5	1.1	5.8	3.9	2.5	4.7	42.5	0.3	1.9	1.3	3.8	27.8	27	44.6	2	8.3	40	
42	1.8		45.5		5.9	4.1	2.5	5.4	44.5		1.9	1.3	3.8	29.6	28.4	44.7	2	8.4		
45	1.8		48.5		6.2	4.3	2.5	6	47.5		1.9	1.3	3.8	32	30.2	43.1	2	8.2		
47	1.8		50.5		6.4	4.4	2.5	6.1	49.5		1.9	1.3	3.8	33.5	31.4	43.5	2	8.3		
48	1.8		51.5		6.4	4.5	2.5	6.7	50.5		1.9	1.3	3.8	34.5	32	43.2	2	8.4		
50	2		54.2		6.5	4.6	2.5	7.3	53		2.2	1.5	4.5	36.3	40.5	60.8	2	12		
52	2		26.2		6.7	4.7	2.5	8.2	55		2.2	1.5	4.5	37.9	42	60.3	2	12		
55	2		29.2		6.8	5	2.5	8.3	58		2.2	1.5	4.5	40.7	44.4	60.3	2	13		
56	2		60.2		6.8	5.1	2.5	8.7	59		2.2	1.5	4.5	41.7	45.2	60.3	2	13	40	
58	2		62.2		6.9	5.2	2.5	10.5	61		2.2	1.5	4.5	43.5	46.7	60.8	2	13		



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60	2
62	2
63	2
65	2.5
68	2.5
70	2.5

64.2
66.2
67.2
69.2
72.5
74.5

7.3	5.4	2.5	11.1	63
7.3	5.5	2.5	11.2	65
7.3	5.6	2.5	12.4	66
7.6	5.8	3	14.3	68
7.8	6.1	3	16	71
7.8	6.2	3	16.5	73

2.2	1.5	4.5	44.7	48.3	61	2	13
2.2	1.5	4.5	46.7	49.8	60.9	2	13
2.2	1.5	4.5	47.7	50.6	60.8	2	13
2.7	1.5	4.5	49	51.8	121	3	21
2.7	1.5	4.5	51.6	54.5	122	3	21
2.7	1.5	4.5	53.6	56.3	119	3	21



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Shaft dia		Clip							Groove					Supplementary						
														data						
d1	s		j3		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg	Nominal size of pliers per DIN 5254	
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.			kN		kN		
72	2.5		76.6	1.3	7.8	6.4	3	18.1	75	0.35	2.7	1.5	4.5	55.6	58	119	3	21	40	
75	2.5		79.5		7.8	6.6	3	18.8	78		2.7	1.5	4.5	58.6	60	118	3	21		
78	2.5		82.5		8.5	6.8	3	20.4	81		2.7	1.5	4.5	60.1	62.3	123	3	22		
80	2.5		85.5		8.5	7	3	22	83.5		0	2.7	1.8	5.3	62.1	74.6	121	3		22
82	3		87.5		8.5	7	3	24	85.5		(H13)	2.7	1.8	5.3	64.1	76.6	119	3		21
85	3	0	90.5	-0.54	8.6	7.2	3.5	25.3	88.5		3.2	1.8	5.3	66.9	79.5	201	3	31	85	
88	3	-0.08	93.5		8.6	7.4	3.5	28	91.5		3.2	1.8	5.3	69.9	82.1	209	3	33		
90	3		95.6		8.6	7.6	3.5	31	93.5		3.2	1.8	5.3	71.9	84	199	3	31		
92	3		97.5		8.7	7.8	3.5	32	95.5		3.2	1.8	5.3	73.7	85.8	201	3	32		
95	3		101		8.8	8.1	3.5	35	98.5		3.2	1.8	5.3	76.5	88.6	195	3	31		
98	3		104		9	8.3	3.5	37	102		3.2	1.8	5.3	79	91.3	191	3	31		
100	3		106		9.2	8.4	3.5	38	104		3.2	1.8	5.3	80.6	93.1	188	3	31		
102	4	0	108		9.5	8.5	3.5	55	106		0.54	4.2	2	6	82	109	439	3		73
105	4	-0.1	112		9.5	8.7	3.5	56	109		0	4.2	2	6	85	112	436	3		73
108	4		115		9.5	8.9	3.5	60	112		(H13)	4.2	2	6	88	115	419	3		71
110	4		117	10.4	9	3.5	64.5	114	4.2	2	6	88.2	117	415	3	71				
112	4		119	10.5	9.1	3.5	72	116		4.2	2	6	90	119	418	3	72			



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115	4	122	1.5	10.5	9.3	3.5	74.5	119		4.2	2	6	93	122	409	3	71	
120	4	127	-0.63	11	9.7	3.5	77	124	0.63	4.2	2	6	96.9	127	396	3	70	
125	4	132		11	10	4	79	129	0	4.2	2	6	102	132	385	3	70	
130	4	137		11	10.2	4	82	134	(H13)	4.2	2	6	107	138	374	3	69	125

Shaft dia		Clip							Groove				Supplementary						
d1	s		d3		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg	Nominal size of pliers per DIN 5254
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.			kN		kN	
135	4		142		11.2	10.5	4	84	139		4.2	2	6	112	143	358	3	67	125
140	4		147		11.2	10.7	4	87.5	144		4.2	2	6	117	148	350	3	67	
145	4		152		11.4	10.9	4	93	149		4.2	2	6	121	153	336	3	65	
150	4		158		12	11.2	4	105	155		4.2	2.5	7.5	125	191	326	3	64	
155	4		164		12	11.4	4	107	160		4.2	2.5	7.5	130	206	324	4	55	
160	4		169		13	11.6	4	110	165		4.2	2.5	7.5	133	212	321	4	55	
165	4		175		13	11.8	4	125	170		4.2	2.5	7.5	138	219	319	4	54	
170	4		180		13.5	12.2	4	140	175		4.2	2.5	7.5	142	225	349	4	59	
175	4		185	1.7	13.5	12.7	4	150	180		4.2	2.5	7.5	147	232	351	4	59	
180	4		190	-0.72	14.2	13.2	4	165	185	0.72	4.2	2.5	7.5	150	238	347	4	59	
185	4		195		14.2	13.7	4	170	190	0	4.2	2.5	7.5	155	245	349	4	59	
190	4		200		14.2	13.8	4	175	195	(H13)	4.2	2.5	7.5	160	251	340	4	58	



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195	4		205		14.2	13.8	4	183	200		4.2	2.5	7.5	165	258	330	4	56
200	4		210		14.2	14	4	195	205		4.2	2.5	7.5	170	265	325	4	55
210	5	0	222		14.2	14	4	270	216		5.2	3	9	180	333	601	4	90
220	5	-0.12	232		14.2	14	4	315	226		5.2	3	9	190	349	574	4	85
230	5		242		14.2	14	4	330	236		5.2	3	9	200	365	549	4	81
240	5		252	2	14.2	14	4	345	246		5.2	3	9	210	380	525	4	78
250	5		262	-0.81	14.2	14	4	360	256		5.2	3	9	220	396	504	4	75
260	5		275		16.2	16	5	375	268	0.81	5.2	4	12	226	553	538	4	80
270	5		285		16.2	16	5	388	278	0	5.2	4	12	236	573	518	4	77

Metric DIN 472 Internal Retaining Rings (aka circlips) are thin, circular, metal stampings that are used to prevent movement between mating components. The internal design is in order axial assembly into machined grooves in housings and bores They function to reduce vibration and maintain proper position of two parts in an assembly and permit easy disassembly of the components by removing the retaining ring. The tapered section design allows for uniform circular deformation and even contact with the surface in the groove. Unique Fasteners offers one of the most complete ranges of metric retaining rings and other inch and metric industrial fasteners for immediate delivery from stock. The following sizes of metric DIN 472 Retaining Rings are available for immediate shipping from stock: Diameters ranging from M3 to M120 in A2 stainless steel.

Shaft dia		Clip							Groove					Supplementary data						
d1	s		d3		a	b	d5	weight kg/1000pcs	d2		m	t	n	d4	FN	FR	g	FRg	Nominal size of pliers per DIN 5254	
Nominal size		per. dev.		per. dev.	max.	approx.	min.			per. dev.	H13		min.			kN		kN		
280	5		295		16.2	16	5	400	288	(H13)	5.2	4	12	246	593	499	4	74	125	
290	5		305		16.2	16	5	415	298		5.2	4	12	256	615	482	4	72		
300	5		315		16.2	16	5	435	308		5.2	4	12	266	636	466	4	69		