



Standard Part

Heavy External Retaining Rings Metric - Preferred and Non-Preferred

STPN580

87399904

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1. SCOPE

The fasteners described in this standard are Heavy Duty External Retaining Rings which conform essentially to Standard DIN 471. For reference dimensions refer to Table 1.

2. DEFINITIONS

DIN—German Standards Organization

3. RELATED DOCUMENTS

3.1 RELATED STANDARDS

DIN 471—External Heavy Duty Metric Series Retaining Rings.
STPA020—Fastener Finishes and Material Specifications

3.2 REPLACED STANDARDS

Case NM-032—External Heavy Retaining Rings (Preferred)

4. CROSS REFERENCE

For cross reference listing of company part numbers, go to [PARTsolutions](#).

5. REQUIREMENTS

5.1 MATERIAL

Retaining Rings shall be made from spring steel processed to meet the specified hardness ranges and be capable of meeting test requirements of the bend and fracture test set forth in DIN 471.

5.2 FINISH

Retaining Rings shall be furnished coated or finished per STPA020.

AUTHOR	APPROVED BY	ECO	PART NUMBER
A KHAN 25MAR25	A KHAN 25MAR25	35509153	87399904

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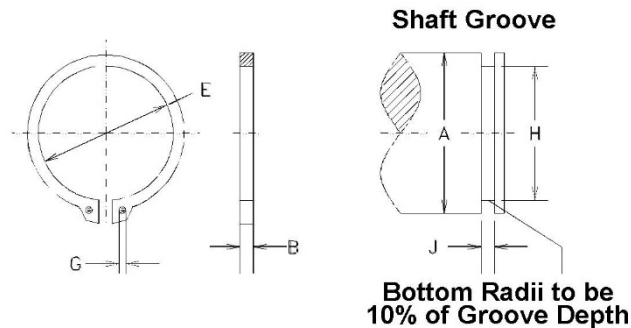


FIGURE 1: Heavy External Retaining Ring

TABLE 1: Reference Dimensions

Shaft Size	Ring Dimensions					Groove Dimensions			
	B		E		G	H		J	
A	Max	Min	Max	Min	Min	Max	Min	Max	Min
15	1.5	1.44	13.9	13.44	2	14.3	14.19	1.74	1.6
16	1.5	1.44	14.8	14.34	2	15.2	15.09	1.74	1.6
17	1.5	1.44	15.8	15.34	2	16.2	16.09	1.74	1.6
18	1.5	1.44	16.6	16.14	2	17	16.89	1.74	1.6
20	1.75	1.69	18.63	18.08	2	19	18.79	1.99	1.85
22	1.75	1.69	20.63	20.08	2	21	20.79	1.99	1.85
24	1.75	1.69	22.41	21.78	2	22.9	22.69	1.99	1.85
25	2	1.93	23.41	22.78	2	23.9	23.69	2.33	2.15
27	2	1.93	24.91	24.28	2	25.5	25.29	2.33	2.15
28	2	1.93	26.11	25.48	2	26.6	26.39	2.33	2.15
30	2	1.93	28.11	27.48	2	28.6	28.39	2.33	2.15
32	2	1.93	29.81	29.18	2.5	30.3	30.05	2.33	2.15
34	2.5	2.43	31.75	31	2.5	32.3	32.05	2.83	2.65
35	2.5	2.43	32.45	31.7	2.5	33	32.75	2.83	2.65
38	2.5	2.43	35.45	34.7	2.5	36	35.75	2.83	2.65
40	2.5	2.43	36.89	35.6	2.5	37.5	37.25	2.83	2.65
42	2.5	2.43	38.89	37.6	2.5	39.5	39.25	2.83	2.65
44	2.5	2.43	40.89	39.6	2.5	41.5	41.25	2.83	2.65
45	2.5	2.43	41.89	40.6	2.5	42.5	42.25	2.83	2.65
48	2.5	2.43	44.89	43.6	2.5	45.5	45.25	2.83	2.65
50	3	2.92	46.19	44.9	2.5	47	46.75	3.33	3.15
52	3	2.92	48.19	46.9	2.5	49	48.75	3.33	3.15
55	3	2.92	51.26	49.7	2.5	52	51.7	3.33	3.15
58	3	2.92	54.26	52.7	2.5	55	54.7	3.33	3.15
60	3	2.92	56.26	54.7	2.5	57	56.7	3.33	3.15
65	4	3.9	61.26	59.7	3	62	61.7	4.33	4.15
70	4	3.9	65.96	64.4	3	67	66.7	4.33	4.15
75	4	3.9	70.96	69.4	3	72	71.7	4.33	4.15
80	4	3.9	74.96	73.4	3	76.5	76.2	4.33	4.15
85	4	3.9	79.96	78.4	3.5	81.5	81.15	4.33	4.15
90	4	3.9	85.04	83.2	3.5	86.5	86.15	4.33	4.15
100	4	3.9	95.04	93.2	3.5	96.5	96.15	4.33	4.15



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TABLE 2: Heavy External Retaining Rings – Preferred

Shaft Dia.	Finish	Part Number
15	PHC	84041862
16	PHC	87024782
20	PHC	86625140
24	PHC	84305553
25	PHC	84168348
27	PHC	47538598
28	PHC	90445583
30	PHC	8409215
34	PHC	87349260
35	PHC	87016944
38	PHC	84603132
40	PHC	440442
42	PHC	84577052
44	PHC	91715995
45	PHC	5135061
48	PHC	87031303
50	PHC	86625142
52	PHC	84349416
55	PHC	84191677
60	PHC	86625143
65	PHC	84191678
70	PHC	48046544
75	PHC	47707933
80	PHC	92696875
85	PHC	92082742

TABLE 3: Heavy External Retaining Rings – Non-Preferred

Shaft Dia.	Finish	Part Number
20	ZNM	87024781
22	PHC	87599603
25	DAC	91741240
35	DAC	91868887
40	ZNM	87495311
45	DAC	87752086
45	ZNM	84163822
50	ZNM	87016943
55	ZNM	84233536
60	ZNM	84224886
70 (3mm)	ZNM	84221266
100	PHC	87025596