

DIN 471

Retaining rings for shafts - Normal type



Standard	DIN 471		
Product Type	External retaining rings for shafts; controlled high-frequency dimensional range 3 mm to 100 mm.		
Material	Stainless Steel, Carbon Steel		
Surface Finish	Passivated, Plain, Phosphate, Zinc Plated		
Size Range	3 - 100	Thread	ISO metric coarse pitch

BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

Dimensions to	DIN 471:1981-09
---------------	------------------------

DIMENSIONAL DATA - SIZES WE SUPPLY

ALL DIMENSIONS PER THE STANDARD

d	s	d3	a (max)	b	d5	d2	m	t	n (min)
Diameter - mm	Ring Thickness - mm	Free Diameter - mm	Lug Radial Width - mm	Ring Width Opposite Opening - mm	Lug Hole Diameter - mm	Groove Diameter - mm	Groove Width - mm	Groove Depth - mm	Edge Margin - mm
3	0.4	2.7	1.9	0.8	1	2.8	0.5	0.1	0.3
4	0.4	3.7	2.2	0.9	1	3.8	0.5	0.1	0.3
5	0.6	4.7	2.5	1.1	1	4.8	0.7	0.1	0.3
6	0.7	5.6	2.7	1.3	1.2	5.7	0.8	0.15	0.5
8	0.8	7.4	3.2	1.5	1.2	7.6	0.9	0.2	0.6
10	1	9.3	3.3	1.8	1.5	9.6	1.1	0.2	0.6
12	1	11	3.3	1.8	1.7	11.5	1.1	0.25	0.8
14	1	12.9	3.5	2.1	1.7	13.4	1.1	0.3	0.9
16	1	14.7	3.7	2.2	1.7	15.2	1.1	0.4	1.2
18	1.2	16.5	3.9	2.4	2	17	1.3	0.5	1.5
20	1.2	18.5	4	2.6	2	19	1.3	0.5	1.5
22	1.2	20.5	4.2	2.8	2	21	1.3	0.5	1.5
25	1.2	23.2	4.4	3	2	23.9	1.3	0.55	1.7
28	1.5	25.9	4.7	3.2	2	26.6	1.6	0.7	2.1
30	1.5	27.9	5	3.5	2	28.6	1.6	0.7	2.1
32	1.5	29.6	5.2	3.6	2.5	30.3	1.6	0.85	2.6
35	1.5	32.2	5.6	3.9	2.5	33	1.6	1	3
40	1.75	36.5	6	4.4	2.5	37.5	1.85	1.25	3.8
45	1.75	41.5	6.7	4.7	2.5	42.5	1.85	1.25	3.8
50	2	45.8	6.9	5.1	2.5	47	2.15	1.5	4.5

DIMENSIONAL DATA - SIZES WE SUPPLY (CONTINUED)

ALL DIMENSIONS PER THE STANDARD

d	s	d3	a (max)	b	d5	d2	m	t	n (min)
Diameter - mm	Ring Thickness - mm	Free Diameter - mm	Lug Radial Width - mm	Ring Width Opposite Opening - mm	Lug Hole Diameter - mm	Groove Diameter - mm	Groove Width - mm	Groove Depth - mm	Edge Margin - mm
55	2	50.8	7.2	5.4	2.5	52	2.15	1.5	4.5
60	2	55.8	7.4	5.8	2.5	57	2.15	1.5	4.5
65	2.5	60.8	7.8	6.3	3	62	2.65	1.5	4.5
70	2.5	65.5	8.1	6.6	3	67	2.65	1.5	4.5
75	2.5	70.5	8.4	7	3	72	2.65	1.5	4.5
80	2.5	74.5	8.6	7.4	3	76.5	2.65	1.75	5.3
85	3	79.5	8.7	7.8	3.5	81.5	3.15	1.75	5.3
90	3	84.5	8.8	8.2	3.5	86.5	3.15	1.75	5.3
95	3	89.5	9.4	8.6	3.5	91.5	3.15	1.75	5.3
100	3	94.5	9.6	9	3.5	96.5	3.15	1.75	5.3

TECHNICAL SPECIFICATIONS

Surface Finish	Passivated, Plain, Phosphate, Zinc Plated
----------------	---

MARKING

Steel — Not mandatory on the part; required on the package

What	No head marking is specified. The standard fixes a written designation instead, and the property class or material symbol inside it comes from the referenced DIN 267 part or ISO material standard.
Where	In the written designation on the order and the certificate, not on the part
Sizes	All sizes
Clause	DIN product standards of the 1970s and 1980s, read page by page 2026-09-22, The Designation clause of the standard concerned

DIN 471:1981-09 has no marking clause. Clause 5 states circlips are normally supplied corrosion-proof to Table 4 at the manufacturer discretion, and that no special detail about that delivery condition is stated in the designation.

Where a treatment other than Table 4 is required the designation must be supplemented, and for platings the symbols of DIN 267 Part 9 apply: Circlip DIN 471 - 40 x 1,75 - A3K.

Three cautions belong on any plated order: mass plating in a drum or bell cannot hold closely toleranced coating thicknesses; DIN 267 Part 9 warns of hydrogen-induced delayed brittle fracture; and the upper limit of thickness s may be exceeded by the coating thickness, which must be allowed for when designing the groove.

Material is C 67, C 75 or Ck 75 spring steel to DIN 17 222 at the manufacturer discretion, with hardness banded by diameter: 470 to 580 HV up to 48, 435 to 530 HV from 48 to 200, and 390 to 470 HV from 200 to 300.

Confirm the ordered property class before production.

INSPECTION DOCUMENTS WE CAN ISSUE

EN 10204 3.1 material certificate	Can be included when agreed in the order.
Dimensional inspection report	Can be provided for the agreed inspection scope.
Certificate of conformity	Can be issued against the confirmed order requirements.
Mechanical test report	Available when the required tests are agreed before production.
Chemical analysis report	Available when the material verification scope is agreed.
Coating inspection report	Can record the coating checks agreed for the order.

REFERENCES & NOTES

Note: Dimensional values follow the selected execution standard. Material properties and batch test results are included only when declared or supported by the applicable certificate or test report.