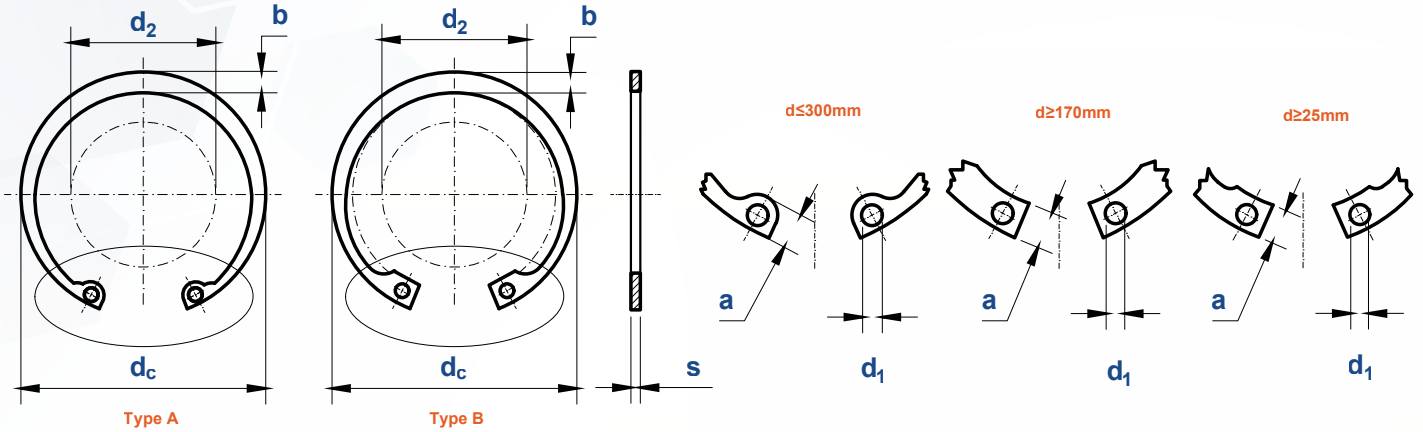


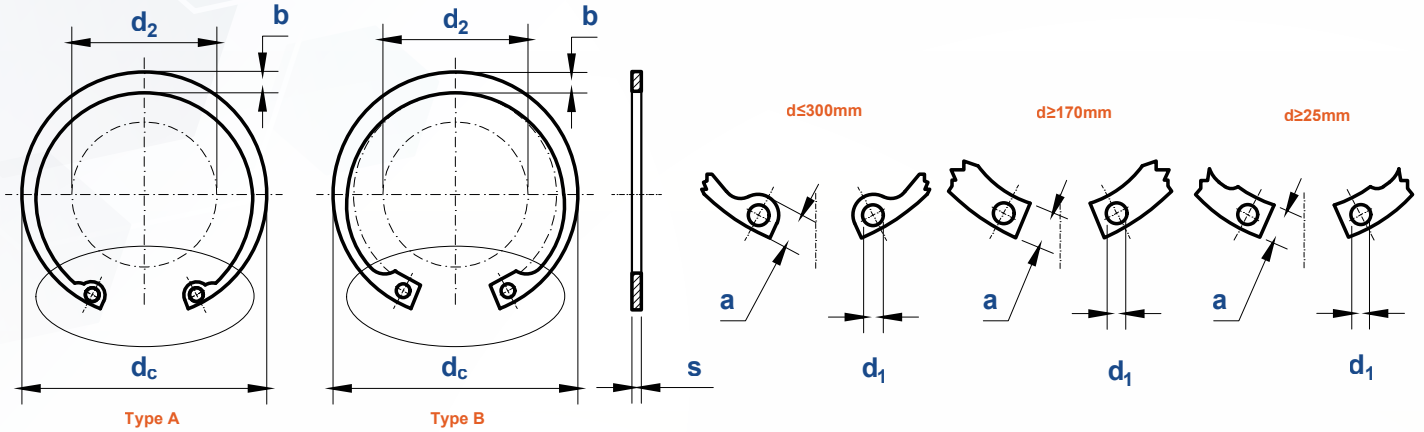


Nominal Diameter d ①		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
s	max	0.8	0.8	1	1	1	1	1	1	1	1	1	1	1	1	1
	min	0.75	0.75	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
dc	Nominal Size	8.7	9.8	10.8	11.8	13	14.1	15.1	16.2	17.3	18.3	19.5	20.5	21.5	22.5	23.5
	max	9.06	10.16	11.16	12.16	13.36	14.46	15.46	16.56	17.66	18.72	19.92	20.92	21.92	22.92	23.92
	min	8.6	9.7	10.7	11.7	12.9	14	15	16.1	17.2	18.17	19.37	20.37	21.37	22.37	23.37
a	max	2.4	2.5	3.2	3.3	3.4	3.6	3.7	3.7	3.8	3.9	4.1	4.1	4.2	4.2	4.2
b	≈	1.1	1.3	1.4	1.5	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.5
d1	min	1.0	1.0	1.2	1.2	1.5	1.5	1.7	1.7	1.7	1.7	2.0	2.0	2.0	2.0	2.0
d2		3.0	3.7	3.3	4.1	4.9	5.4	6.2	7.2	8.0	8.8	9.4	10.4	11.2	12.2	13.2
per 1000 units ≈ kg		0.14	0.15	0.18	0.31	0.37	0.42	0.52	0.56	0.60	0.65	0.74	0.83	0.90	1.00	1.10

Nominal Diameter d ①		24	25	26	28	30	31	32	34	35	36	37	38	40	42	45
s	max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.75	1.75	1.75
	min	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.44	1.44	1.44	1.44	1.44	1.69	1.69	1.69
dc	Nominal Size	25.9	26.9	27.9	30.1	32.1	33.4	34.4	36.5	37.8	38.8	39.8	40.8	43.5	45.5	48.5
	max	26.32	27.32	28.32	30.6	32.6	33.9	34.9	37	38.3	39.3	40.3	41.3	44.4	46.4	49.4
	min	25.69	26.69	27.69	29.85	31.85	33.15	34.15	36.25	37.55	38.55	39.55	40.55	43.11	45.11	48.11
a	max	4.4	4.5	4.7	4.8	4.8	5.2	5.4	5.4	5.4	5.4	5.5	5.5	5.8	5.9	6.2
b	≈	2.6	2.7	2.8	2.9	3.0	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.9	4.1	4.3
d1	min	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
d2		14.8	15.5	16.1	17.9	19.9	20.0	20.6	22.6	23.6	24.6	25.4	26.4	27.8	29.6	32.0
per 1000 units ≈ kg		1.42	1.50	1.60	1.80	2.06	2.10	2.21	3.20	3.54	3.70	3.74	3.90	4.70	5.40	6.00

Nominal Diameter d ①		47	48	50	52	55	56	58	60	62	63	65	68	70	72	75
s	max	1.75	1.75	2	2	2	2	2	2	2	2	2.5	2.5	2.5	2.5	2.5
	min	1.69	1.69	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.43	2.43	2.43	2.43	2.43
dc	Nominal Size	50.5	51.5	54.2	56.2	59.2	60.2	62.2	64.2	66.2	67.2	69.2	72.5	74.5	76.5	79.5
	max	51.6	52.6	55.3	57.3	60.3	61.3	63.3	65.3	67.3	68.3	70.3	73.6	75.6	77.6	80.6
	min	50.04	51.04	53.74	55.74	58.74	59.74	61.74	63.74	65.74	66.74	68.74	72.04	74.04	76.04	79.04
a	max	6.4	6.4	6.5	6.7	6.8	6.8	6.9	7.3	7.3	7.3	7.6	7.8	7.8	7.8	7.8
b	≈	4.4	4.5	4.6	4.7	5.0	5.1	5.2	5.4	5.5	5.6	5.8	6.1	6.2	6.4	6.6
d1	min	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0
d2		33.5	34.5	36.3	37.9	40.7	41.7	43.5	44.7	46.7	47.7	49.0	51.6	53.6	55.6	58.6
per 1000 units ≈ kg		6.10	6.70	7.30	8.20	8.30	8.70	10.50	11.10	11.20	12.40	14.30	16.00	16.50	18.10	18.80

① Hardness of retaining rings :
hole diameter d ≤ 48mm, 470-580 HV or 47-54 HRC
48mm < hole diameter d ≤ 200mm, 435-530 HV or 44-51 HRC
200mm < hole diameter d ≤ 300mm, 390-470 HV or 40-47 HRC



Nominal Diameter d ①		78	80	82	85	88	90	92	95	98	100	102	105	108	110	112
s	max	2.5	2.5	2.5	3	3	3	3	3	3	3	4	4	4	4	4
	min	2.43	2.43	2.43	2.92	2.92	2.92	2.92	2.92	2.92	2.92	3.9	3.9	3.9	3.9	3.9
dc	Nominal Size	82.5	85.5	87.5	90.5	93.5	95.5	97.5	100.5	103.5	105.5	108	112	115	117	119
	max	83.8	86.8	88.8	91.8	94.8	96.8	98.8	101.8	104.8	106.8	109.3	113.3	116.3	118.3	120.3
	min	81.96	84.96	86.96	89.96	92.96	94.96	96.96	99.96	102.96	104.96	107.46	111.46	114.46	116.46	118.46
a	max	8.5	8.5	8.5	8.6	8.6	8.6	8.7	8.8	9.0	9.2	9.5	9.5	9.5	10.4	10.5
b	≈	6.8	7.0	7.0	7.2	7.4	7.6	7.8	8.1	8.3	8.4	8.5	8.7	8.9	9.0	9.1
d1	min	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
d2		60.1	62.1	64.1	66.9	69.9	71.9	73.7	76.5	79.0	80.6	82.0	85.0	88.0	88.2	90.0
per 1000 units ≈ kg		20.40	22.00	24.00	25.30	28.00	31.00	32.00	35.00	37.00	38.00	55.00	56.00	60.00	64.50	72.00

Nominal Diameter d ①		115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
s	max	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	min	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
dc	Nominal Size	122	127	132	137	142	147	152	158	164	169	174.5	179.5	184.5	189.5	194.5
	max	123.5	128.5	133.5	138.5	143.5	148.5	153.5	159.5	165.5	170.5	176	181	186.2	191.2	196.2
	min	121.37	126.37	131.37	136.37	141.37	146.37	151.37	157.37	163.37	168.37	173.87	178.87	183.78	188.78	193.78
a	max	10.5	11.0	11.0	11.0	11.2	11.2	11.4	12.0	12.0	13.0	13.0	13.5	13.5	14.2	14.2
b	≈	9.3	9.7	10.0	10.2	10.5	10.7	10.9	11.2	11.4	11.6	11.8	12.2	12.7	13.2	13.7
d1	min	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
d2		93.0	96.9	101.9	106.9	111.5	116.5	121.0	124.8	129.8	132.7	137.7	141.6	146.6	150.2	155.2
per 1000 units ≈ kg		74.5	77.0	79.0	82.0	84.0	87.5	93.0	105	107	110	125	140	150	165	170

Nominal Diameter d ①		190	195	200	210	220	230	240	250	260	270	280	290	300
s	max	4	4	4	5	5	5	5	5	5	5	5	5	5
	min	3.9	3.9	3.9	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88
dc	Nominal Size	199.5	204.5	209.5	222	232	242	252	262	275	285	295	305	315
	max	201.2	206.2	211.2	223.7	233.7	243.7	254	264	277	287	297	307	317
	min	198.78	203.78	208.78	221.28	231.28	241.28	251.19	261.19	274.19	284.19	294.19	304.19	314.19
a	max	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	16.2	16.2	16.2	16.2	16.2
b	≈	13.8	13.8	14.0	14.0	14.0	14.0	14.0	14.0	16.0	16.0	16.0	16.0	16.0
d1	min	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
d2		160.2	165.2	170.2	180.2	190.2	200.2	210.2	220.2	226.0	236.0	246.0	256.0	266.0
per 1000 units ≈ kg		175	183	195	270	315	330	345	360	375	388	400	415	435

① Hardness of retaining rings :
hole diameter $d \leq 48\text{mm}$, 470-580 HV or 47-54 HRC
 $48\text{mm} < \text{hole diameter } d \leq 200\text{mm}$, 435-530 HV or 44-51 HRC
 $200\text{mm} < \text{hole diameter } d \leq 300\text{mm}$, 390-470 HV or 40-47 HRC