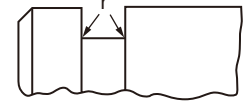
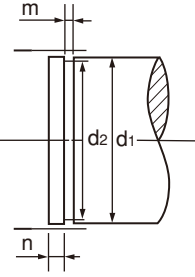
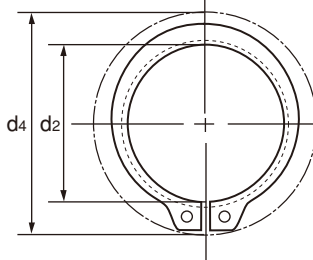
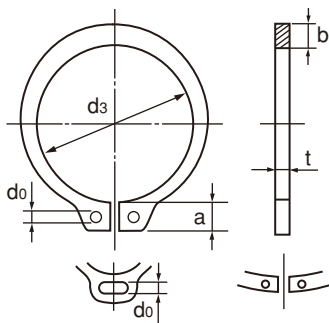


Retaining Rings (External) (STW-3 through 56)

Applicable shaft



The dimension d_4 is the minimum diameter of inner periphery when the retaining ring is set in the hole.

d_4 : CLEARANCE DIAMETER

Size-No.	r (Max.)
7 Under	Sharp edge
7~10 Under	0.08
10~26 Under	0.13
26 Above	0.25

Under Size No.9 Size No.170 and over

Unit:mm

Size-No.	Ring dimension							Ref. d_4	Applicable shaft					
	d_3		t		b	a	d_0		d_1	d_2		m		Ref. n
	Basic	Tol.	Basic	Tol.	Approx.	Approx.	Min.			Basic	Tol.	Basic	Tol.	Min.
STW- ※ 3	2.7	+0.04	0.25	±0.025	0.5	1.7	0.7	7	3	2.85		0.35		0.3
※ 4	3.7	-0.15	0.4	±0.03	0.9	2.2	0.8	9	4	3.8	0	0.5		0.3
※ 5	4.7		0.6	±0.04	1.1	2.4	0.8	10.5	5	4.8	-0.04	0.7	+0.1 0	0.3
※ 6	5.6		0.7		1.3	2.8	1	12	6	5.7		0.8		0.5
※ 7	6.5	+0.06	0.8	±0.05	1.4	3	1	14	7	6.7	0	0.9		0.5
※ 8	7.4	-0.2	0.8		1.6	3	1	15	8	7.6	-0.06	0.9	0.6	
※ 9	8.4		1	±0.05	1.8	3.2	1	16	9	8.6		1.15		0.6
※ 10	9.3	±0.15	1		1.8	3	1.2	17	10	9.6	-0.09	1.15	1.5	
※ 11	10.2		1	±0.05	2	3.1	1.2	18	11	10.5		1.15		1.5
※ 12	11.1		1		2.1	3.2	1.5	19	12	11.5		1.15	1.5	
※ 13	12		1	±0.05	2.1	3.3	1.5	20	13	12.4		1.15		1.5
※ 14	12.9		1		2.2	3.4	1.7	22	14	13.4	0	1.15	1.5	
※ 15	13.8	±0.18	1	±0.06	2.2	3.5	1.7	23	15	14.3	-0.11	1.15		1.5
16	14.7		1		2.2	3.6	1.7	24	16	15.2		1.15	1.5	
17	15.7		1	±0.06	2.2	3.7	1.7	25	17	16.2		1.15		1.5
18	16.5		1.2		2.6	3.8	1.7	26	18	17		1.35	1.5	
19	17.5		1.2	±0.06	2.7	3.8	2	27	19	18		1.35		1.5
20	18.5		1.2		2.7	3.9	2	28	20	19		1.35	1.5	
21	19.5		1.2	±0.06	2.7	4	2	30	21	20		1.35		1.5
22	20.5		1.2		2.7	4.1	2	31	22	21		1.35	1.5	
※ 23	21.4		1.2	±0.06	2.9	4.5	2	32.5	23	22		1.35		1.5
24	22.2		1.2		3.1	4.2	2	33	24	22.9	0	1.35	1.7	
25	23.2	±0.2	1.2	±0.06	3.1	4.3	2	34	25	23.9	-0.21	1.35		1.7
26	24.2		1.2		3.1	4.4	2	35	26	24.9		1.35	+0.14 0	1.7
※ 27	25		1.2	±0.06	3.3	4.5	2	36	27	25.8		1.35		1.8
28	25.9		1.5		3.1	4.6	2	38	28	26.6		1.65	2.1	
29	26.9		1.5	±0.07	3.5	4.7	2	39	29	27.6		1.65		2.1
30	27.9		1.5		3.5	4.8	2	40	30	28.6		1.65	2.1	
32	29.6		1.5	±0.07	3.5	5	2.5	43	32	30.3		1.65		2.6
34	31.5		1.5		4	5.3	2.5	45	34	32.3		1.65	2.6	
35	32.2	±0.25	1.5	±0.07	4	5.4	2.5	46	35	33		1.65		3
36	33.2		1.75		4	5.4	2.5	47	36	34		1.9	3	
38	35.2		1.75	±0.07	4.5	5.6	2.5	50	38	36		1.9		3
40	37		1.75		4.5	5.8	2.5	53	40	38	0	1.9	3.8	
42	38.5		1.75	±0.07	4.5	6.2	2.5	55	42	39.5	-0.25	1.9		3.8
45	41.5		1.75		4.8	6.3	2.5	58	45	42.5		1.9	3.8	
※ 47	43.4	±0.4	1.75	±0.07	5	6.6	2.5	61	47	44.5		1.9		3.8
48	44.5		1.75		4.8	6.5	2.5	62	48	45.5		1.9	3.8	
50	45.8		2	±0.07	5	6.7	2.5	64	50	47		2.2		4.5
52	47.8		2		5	6.8	2.5	66	52	49		2.2	4.5	
55	50.8	±0.45	2	±0.07	5	7	2.5	70	55	52	0	2.2		4.5
56	51.8		2		5	7	2.5	71	56	53	-0.3	2.2	4.5	

Retaining Rings (External) (STW-58 through 300)



Unit:mm

Size-No.	Ring dimension							Ref. d4	Applicable shaft						
	d3		t		b	a	d0		d1	d2		m		Ref. n	
	Basic	Tol.	Basic	Tol.	Approx.	Approx.	Min.			Basic	Tol.	Basic	Tol.	Min.	
STW-58	58	53.8	±0.45	2	±0.07	5.5	7.1	2.5	73	58	55	0 -0.3	2.2	+0.14 0	4.5
60	55.8	2		5.5		7.2	2.5	75	60	57	2.2		4.5		
62	57.8	2		5.5		7.2	2.5	77	62	59	2.2		4.5		
63	58.8	2		5.5		7.3	2.5	78	63	60	2.2		4.5		
65	60.8	2.5		6.4		7.4	2.5	81	65	62	2.7		4.5		
68	63.5	2.5		6.4	7.8	2.5	84	68	65	2.7	4.5				
70	65.5	2.5		6.4	7.8	2.5	86	70	67	2.7	4.5				
72	67.5	2.5		7	7.9	2.5	88	72	69	2.7	4.5				
75	70.5	2.5		7	7.9	2.5	92	75	72	2.7	4.5				
78	73.5	2.5		7.4	8.1	2.5	95	78	75	2.7	4.5				
80	74.5	2.5	7.4	8.2	2.5	97	80	76.5	2.7	5.3					
82	76.5	2.5	7.4	8.3	3	99	82	78.5	2.7	5.3					
85	79.5	3	8	8.4	3	103	85	81.5	0 -0.35	3.2	+0.18 0	5.3			
88	82.5	3	8	8.6	3	106	88	84.5		3.2		5.3			
90	84.5	3	8	8.7	3	108	90	86.5		3.2		5.3			
95	89.5	3	8.6	9.1	3	114	95	91.5		3.2		5.3			
100	94.5	3	9	9.5	3	119	100	96.5		3.2		5.3			
105	98	4	9.5	9.8	3	125	105	101		4.2		6			
110	103	4	9.5	10	3	131	110	106		4.2		6			
115	108	4	9.5	10.5	3	137	115	111		4.2		6			
120	113	4	10.3	10.9	3	143	120	116		4.2		6			
125	118	4	10.3	11.3	3.5	148	125	121		4.2		6			
130	123	4	11	11.5	3.5	154	130	126	4.2	6					
135	128	4	11	11.5	3.5	159	135	131	4.2	6					
140	133	4	11	11.8	3.5	164	140	136	4.2	6					
145	138	4	11.6	11.8	3.5	170	145	141	4.2	6					
150	142	4	11.6	12.3	3.5	175	150	145	4.2	7.5					
155	146	4	12.2	12.7	3.5	181	155	150	4.2	7.5					
160	151	4	12.2	12.9	3.5	186	160	155	4.2	7.5					
165	155.5	4	12.9	13.1	3.5	192	165	160	4.2	7.5					
170	160.5	4	12.9	—	4	197	170	165	4.2	7.5					
175	165.5	4	12.9	—	4	202	175	170	4.2	7.5					
180	170.5	4	13.5	—	4	208	180	175	4.2	7.5					
185	175.5	4	13.5	—	4	213	185	180	4.2	7.5					
190	180.5	4	14	—	4	219	190	185	4.2	7.5					
195	185.5	4	14	—	4	224	195	190	4.2	7.5					
200	190.5	4	14	—	4	229	200	195	4.2	7.5					
210	198	5	14	—	4	239	210	204	5.2	9					
220	208	5	14	—	4	249	220	214	5.2	9					
230	218	5	14	—	4	259	230	224	5.2	9					
240	228	5	14	—	4	269	240	234	5.2	9					
250	238	5	14	—	4	279	250	244	5.2	9					
260	245	5	16	—	4	293	260	252	5.2	12					
270	255	5	16	—	4	303	270	262	5.2	12					
280	265	5	16	—	4	313	280	272	5.2	12					
290	275	5	16	—	4	323	290	282	5.2	12					
300	285	5	16	—	4	333	300	292	5.2	12					

Material = Carbon spring steel Hardness = HRC-44~53 for up to STW200, HRC-40~50 for STW-210 and over.
 Finish = Phosphate coating (ACP).

Note

- ※mark and size No. 130 above are according to our company's specification.
- Our products with little marketability may not be in stock. When employing our products, consult with us for their availability.