

Retaining Rings - C Type (External) / E Type

Retaining Rings - C Type (Internal) / Retaining Ring Pliers

When large quantities are needed, box package sales is more economical. P.273

Retaining Rings - C Type (External)

STWN
STWS (Stainless Steel)

Applicable Shaft

d4: Maximum O.D. when retaining ring is fitted on d1. (Clearance O.D.)

Type	Material	Hardness
STWN	Spring Steel	44-53HRC
STWS	EN 1.4301 (CSP) Equiv.	36-44HRC

RoHS

Part Number	Retaining Ring										Applicable Shaft (Reference)						STWN			STWS				
	Type	No.	d3	Tolerance	t	Tolerance	b	a	do	(Min.)	d4	d1	d2	Tolerance	m	Tolerance	n	(Min.)	1-49	50-199	200-1000	1-49	50-199	200-500
STWN	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			0.5			0.3							
	5	4.7		0.6		1.1	2.4		10.5	5	4.8		-0.04	0.7		+0.10	0							
	6	5.6		0.7		1.3	2.8		12	6	5.7			0.8			0.5							
	7	6.5		0.8		1.4	3		14	7	6.7			0.9			0.6							
	8	7.4		0.8		1.6	3		15	8	7.6		-0.06	0.9			1.0							
	4	3.6		0.25	±0.03	0.7	1.4		9	4	3.7			0.3			1.5							
	5	4.5		0.4		0.7	1.4		10.5	5	4.7			0.45		+0.10	0							
STWS (Stainless Steel)	6	5.5	±0.1	0.4		0.8	2.0		12	6	5.7		±0.06	0.45		0								
	7	6.3		0.4		0.9	2.0		14	7	6.5			0.7			1.5							
	8	7.1		0.65		1.0	2.2		15	8	7.4			0.7			1.5							
	10	9.3	±0.15			1.8	3		17	10	9.6		-0.09				1.5							
	11	10.2				2	3.1	1.2	18	11	10.5						1.5							
	12	11.1				2.1	3.3	1.5	19	12	11.5						1.5							
	13	12				2.1	3.3	1.5	20	13	12.4						1.5							
	14	12.9				2.2	3.4	1.7	22	14	13.4						1.5							
STWN	15	13.8	±0.18			2.2	3.5		23	15	14.3						1.5							
	16	14.7				2.2	3.6		24	16	15.2						1.5							
	17	15.7				2.2	3.7		25	17	16.2						1.5							
	18	16.5				2.6	3.8		26	18	17						1.5							
	19	17.5				2.6	3.8		27	19	18						1.5							
	20	18.5				2.7	3.9		28	20	19						1.5							
	21	19.5				2.7	4		30	21	20						1.5							
	22	20.5				2.7	4.1		31	22	21						1.5							
	23	21.4				2.9	4.5		32.5	23	22						1.5							
	24	22.2				2.9	4.2		33	24	22.9						1.5							
	25	23	±0.2			3.1	4.3		34	25	23.9		-0.21				1.5							
	26	24.2				3.1	4.4		35	26	24.9						1.5							
28	25.9				3.1	4.4		38	28	26.6						1.5								
29	26.9				3.1	4.4		39	29	27.6						1.5								
30	27.9				3.5	4.8		40	30	28.6						1.5								
32	29.6				3.5	4.8		43	32	30.3						1.5								
35	32.2	±0.25			4	5.4		46	35	33						1.5								
40	37				4.5	5.8		53	40	38						1.5								
45	41.5	±0.4			4.8	6.3		58	45	42.5		-0.25				1.9								
50	45.8				4.8	6.3		64	50	47						2								
52	47.8				5	6.7		66	52	49						2								
60	55.8				5.5	7.2		75	60	57						2								
80	74.5	±0.45			7.4	8.2		97	80	76.5		-0.3				2.5								

For orders larger than indicated quantity, please check with WOS.

Retaining Rings - E Type

NETW
NETWS (Stainless Steel)

Applicable Shaft

Type	Material	Hardness	Surface Treatment
NETW	Spring Steel	44-53HRC	Trivalent Chromate
NETWS	EN 1.4301 (CSP) Equiv.	37-46HRC	-

RoHS

Part Number	Retaining Ring										Applicable Shaft (Reference)						NETW			NETWS			
	Type	No.	d	Tolerance	D	Tolerance	H	Tolerance	t	Tolerance	d1 Class	Over	or Less	d2	Tolerance	m	Tolerance	n	(Min.)	Unit Price	Volume Discount Rate		
NETW	1.2	1.2			3	±0.1	1		0.3	±0.025	1.4	2	1.2		0.6			0.8					
	1.5	1.5			4		1.3		0.4	±0.03	2	2.5	1.5		0.5		+0.05	0					
	2	2	-0.09		5		1.7	-0.25			2.5	3.2	2		0.5			1					
NETWS (Stainless Steel)	2.5	2.5			6		2.1				3.2	4	2.5		0.7			1.2					
	3	3			7		2.6				4	5	3		0.7			1.2					
	4	4			9	±0.2	3.5				5	7	4		0.9			1.5					
	5	5	-0.12		11		4.3	-0.30			6	8	5		0.9			1.8					
	6	6			12		5.2				7	9	6		0.9			2					
	7	7			14		6.1				8	11	7		0.9			2					
	8	8	0		16		6.9	0			9	12	8		0.9			2					
	9	9	-0.15		18		7.8	-0.35			10	14	9		0.9			2					

For orders larger than indicated quantity, please check with WOS.

Ordering Example
Part Number
STWS6
NETW9

Retaining Rings - C Type (Internal)

RTWN
RTWS (Stainless Steel)

Applicable Hole

d4: Minimum circumferential diameter when a retaining ring is fitted inside d1. (Clearance I.D.)

Type	Material	Hardness
RTWN	Spring Steel	44-53HRC
RTWS	EN 1.4301 (CSP) Equiv.	36-44HRC

RoHS

Part Number	Retaining Ring										Applicable Bore (Reference)						RTWN			RTWS				
	Type	No.	d3	Tolerance	t	Tolerance	b	a	do	(Min.)	d4	d1	d2	Tolerance	m	Tolerance	n	(Min.)	1-49	50-199	200-1000	1-49	50-199	200-1000
RTWN	10	10.7			1.5	2.8	1.2		4	10	10.4						1.5							
	11	11.8	±0.18		1.7	3.1	1.5		4	11	11.4						1.5							
	12	13			1.7	3.1	1.5		5	12	12.5						1.5							
	13	14.1			1.7	3.1	1.5		6	13	13.6						1.5							
	14	15.1			1.9	3.6			7	14	14.6						1.5							
	15	16.2			1.9	3.6			8	15	15.7						1.5							
	16	17.3			1.9	3.7			8	16	16.8						1.5							
	17	18.3			2.5	3.8			9	17	17.8						1.5							
	19	20.5			2.5	4			11	19	20						1.5							
	20	21.5			2.5	4.1			12	20	21						1.5							
RTWS (Stainless Steel)	21	22.5	±0.2		2.5	4.1			13	22	23					1.5								
	22	23.5			2.5	4.1			13	22	23					1.5								
	24	25			2.5	4.3			15	24	25.2					1.5								
	25	26.9			2.5	4.4			16	25	26.2					1.5								
	26	27.9			2.5	4.6			16	26	27.2					1.5								
	28	30.1			2.5	4.6																		