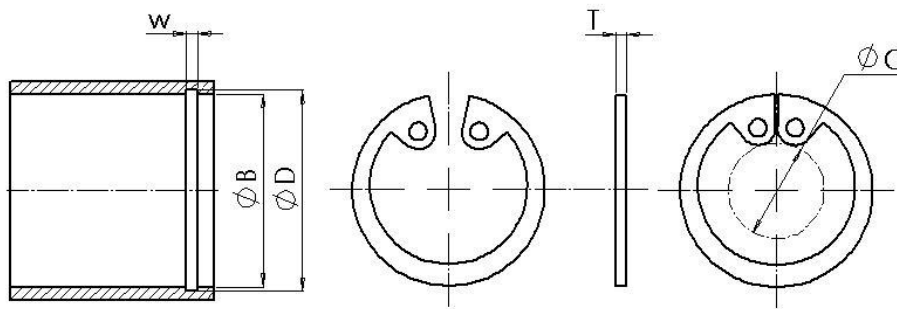


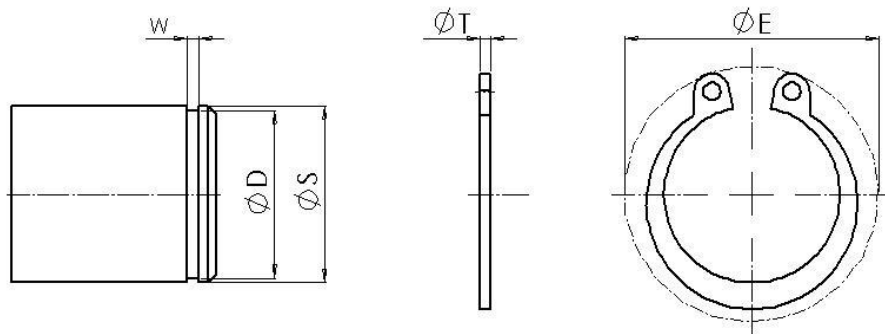
INTERNAL CIRCLIPS



NOMINAL BORE B mm	GROOVE DIMENSIONS				THICKNESS		MIN- INTERNAL CLEARANCE	
	'D'	TOL- -0	'W'	TOL- -0	'T'	TOL- +0	FITTED	DURING FITTING 'C'
16	16.8	+0.11	1.10	+0.14	1.0	-0.06	9.2	7.9
19	20.0	+0.21	1.10	+0.14	1.0	-0.06	11.8	9.8
22	23.0	+0.21	1.10	+0.14	1.0	-0.06	14.6	12.6
24	25.2	+0.21	1.30	+0.14	1.2	-0.06	16.4	14.2
28	29.4	+0.21	1.30	+0.14	1.2	-0.06	19.8	17.4
30	31.4	+0.25	1.30	+0.14	1.2	-0.06	21.8	19.4
32	33.7	+0.25	1.30	+0.14	1.2	-0.06	22.9	20.2
35	37.0	+0.25	1.60	+0.14	1.5	-0.06	26.2	23.2
38	40.0	+0.25	1.60	+0.14	1.5	-0.06	29.0	26.0
42	44.5	+0.25	1.85	+0.14	1.75	-0.06	32.7	29.2
47	49.5	+0.25	1.85	+0.14	1.75	-0.06	36.7	33.2
52	55.0	+0.30	2.15	+0.14	2.0	-0.06	41.6	37.6
55	58.0	+0.30	2.15	+0.14	2.0	-0.06	44.4	40.4
62	65.0	+0.30	2.15	+0.14	2.0	-0.06	50.4	46.4
72	75.0	+0.30	2.65	+0.14	2.5	-0.06	59.4	55.4
80	83.5	+0.35	2.65	+0.14	2.5	-0.06	66.5	62.0
90	93.5	+0.35	3.15	+0.18	3.0	-0.06	76.3	71.8
100	103.5	+0.35	3.15	+0.18	2.0	-0.06	85.5	81.0
110	114.0	+0.54	4.15	+0.18	4.0	-0.075	93.2	88.2
120	124.0	+0.63	4.15	+0.18	4.0	-0.075	102.0	97.0



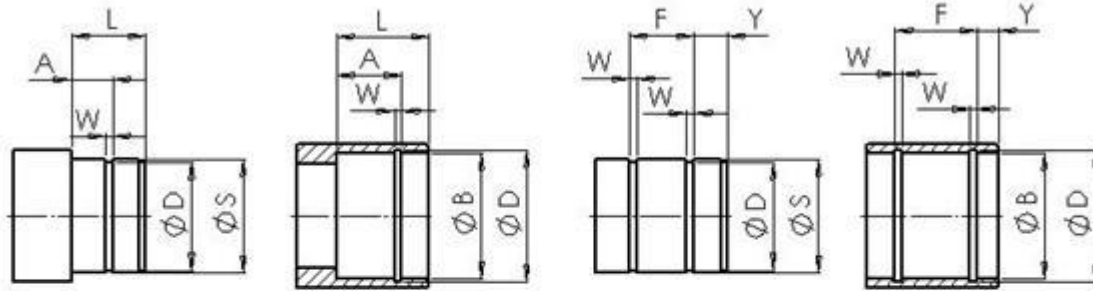
EXTERNAL CIRCLIPS



NOMINAL SHAFT DIA. 'S'	GROOVE DIMENSIONS				THICKNESS		MIN- INTERNAL CLEARANCE	
	'D'	TOL- +0	'W'	TOL- - 0	'T'	TOL- +0	FITTED	DURING FITTING 'E'
4	3.8	-0.075	0.5	+0.14	0.4	-0.04	8.2	8.8
5	4.8	-0.075	0.7	+0.14	0.6	-0.04	9.8	10.6
6	5.7	-0.075	0.8	+0.14	0.7	-0.04	11.1	12.1
7	6.7	-0.09	0.9	+0.14	0.8	-0.04	12.9	14.0
8	7.6	-0.09	0.9	+0.14	0.8	-0.04	14.0	15.2
9	8.6	-0.09	1.1	+0.14	1.0	-0.06	15.2	16.6
10	9.6	-0.09	1.1	+0.14	1.0	-0.06	16.2	17.6
12	11.5	-0.11	1.1	+0.14	1.0	-0.06	18.1	19.6
15	14.3	-0.11	1.1	+0.14	1.0	-0.06	21.5	23.2
17	16.2	-0.11	1.1	+0.14	1.0	-0.06	23.8	25.6
20	19.0	-0.21	1.3	+0.14	1.2	-0.06	27.0	29.0
25	23.9	-0.21	1.3	+0.14	1.2	-0.06	32.7	34.8
30	28.6	-0.21	1.6	+0.14	1.5	-0.06	38.6	41.0
35	33.0	-0.25	1.6	+0.14	1.5	-0.06	44.2	47.2
40	37.5	-0.25	1.85	+0.14	1.75	-0.06	49.5	53.0
45	42.5	-0.25	1.85	+0.14	1.75	-0.06	55.9	59.4
50	47.0	-0.25	2.15	+0.14	2.0	-0.06	60.8	64.8
55	52.0	-0.30	2.15	+0.14	2.0	-0.06	66.4	70.4
60	57.0	-0.30	2.15	+0.14	2.0	-0.06	71.8	75.8
65	62.0	-0.30	2.65	+0.14	2.5	-0.06	77.6	81.6
70	67.0	-0.30	2.65	+0.14	2.5	-0.06	83.2	87.2



CIRCLIP DIMENSIONING CONVENTIONS



General

All circlip grooves should be dimensioned as shown on the above examples to keep tolerance build-up to a minimum.

'Y' Dimension

Due to differing axial thrust and material being used, no precise guide can be given for dimension 'Y' however, as a general guide this should be greater than twice the circlip groove width

Minimum Dimension & Axial Play

To keep the axial play between the circlip and the bearing to a minimum the following formula can be used as a guide;

'A' (min) = max. bearing width + max. circlip thickness

Max. axial play = A (max) – (min. bearing width + min. circlip thickness)

'F' (min) = max. bearing width + (2x max. circlip thickness)

Max. axial play = F (max) – (min. bearing width + 2x min. circlip thickness)

Tolerances

Although application specific the general tolerance applied to dimensions 'A' & 'F' = +0.1/-0

