

## Retaining rings for shafts

### 轴用挡圈

- DIN471
- Imperial size stand



### Product introduction

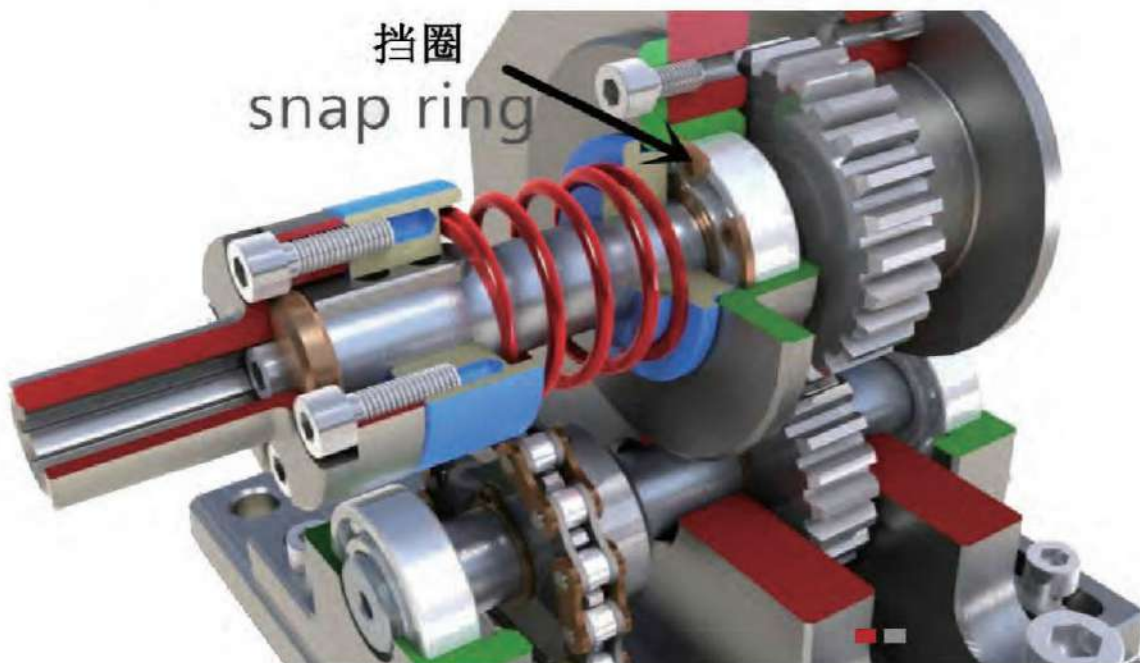
Retaining rings for shafts and bores are the most common retaining rings. These rings provide the most favorable solution with respect to thickness and radial width. They transfer large axial force from the located mating component onto the groove wall. The external rings can also be used for relatively higher shaft rotational speeds.

### Features

Circlips have been designed to fix seals or scraper rings on the cylinder rod. The advantages of the circlip are reduction of material waste and the number of components.

### Product application:

- Mechanical engineering
- Automotive engineering
- Gear systems
- Electrical engineering
- Precision mechanics

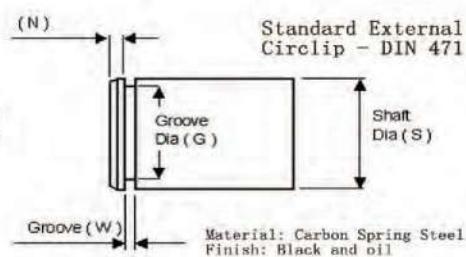
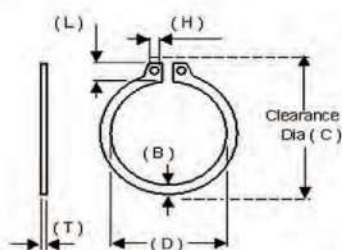




## Retaining rings for shafts

### 轴用挡圈

- DIN471
- Imperial size standard

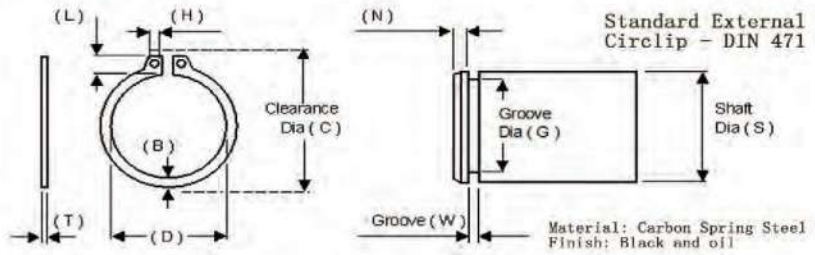


Circlip Dimensions									Groove Dimensions							
(T)	Tolerance		(D)	Tolerance		(C)	(B)	(L)	(H)	Fr KN	(G)	Tolerance		(W)	(N)	F <sub>n</sub> KN
0.40	+0.00	-0.05	2.7	+0.04	-0.15	7.0	0.8	1.9	1.0	0.5	2.8	+0.00	-0.040	0.5	0.3	0.2
0.40	+0.00	-0.05	3.7	+0.04	-0.15	8.6	0.9	2.2	1.0	0.5	3.8	+0.00	-0.048	0.5	0.3	0.2
0.60	+0.00	-0.05	4.7	+0.04	-0.15	10.3	1.1	2.5	1.0	1.0	4.8	+0.00	-0.048	0.7	0.3	0.3
0.70	+0.00	-0.05	5.6	+0.04	-0.15	11.7	1.3	2.7	1.2	1.5	5.7	+0.00	-0.048	0.8	0.5	0.5
0.80	+0.00	-0.05	6.5	+0.06	-0.18	13.5	1.4	3.1	1.2	2.6	6.7	+0.00	-0.06	0.9	0.5	0.5
0.80	+0.00	-0.05	7.4	+0.06	-0.18	14.7	1.5	3.2	1.2	3.0	7.6	+0.00	-0.06	1.1	0.6	0.8
1.00	+0.00	-0.06	8.4	+0.06	-0.18	16.0	1.7	3.3	1.2	3.5	8.6	+0.00	-0.06	1.1	0.6	0.9
1.00	+0.00	-0.06	9.3	+0.10	-0.36	17.0	1.8	3.3	1.5	4.0	9.6	+0.00	-0.06	1.1	0.6	1.0
1.00	+0.00	-0.06	10.2	+0.10	-0.36	18.0	1.8	3.3	1.5	4.5	10.5	+0.00	-0.11	1.1	0.8	1.4
1.00	+0.00	-0.06	11.0	+0.10	-0.36	19.0	1.8	3.3	1.7	5.0	11.5	+0.00	-0.11	1.1	0.8	1.5
1.00	+0.00	-0.06	11.9	+0.10	-0.36	20.2	2.0	3.4	1.7	5.8	12.4	+0.00	-0.11	1.1	0.9	2.0
1.00	+0.00	-0.06	12.9	+0.10	-0.36	21.4	2.1	3.5	1.7	6.4	13.4	+0.00	-0.11	1.1	0.9	2.2
1.00	+0.00	-0.06	13.8	+0.10	-0.36	22.6	2.2	3.6	1.7	6.9	14.3	+0.00	-0.11	1.1	1.1	2.7
1.00	+0.00	-0.06	14.7	+0.10	-0.36	23.8	2.2	3.7	1.7	7.4	15.2	+0.00	-0.11	1.1	1.2	3.3
1.00	+0.00	-0.06	15.7	+0.10	-0.36	25.0	2.3	3.8	1.7	8.0	16.2	+0.00	-0.11	1.1	1.2	3.5
1.20	+0.00	-0.06	16.5	+0.10	-0.36	26.2	2.4	3.9	2.0	17.0	17.0	+0.00	-0.11	1.3	1.5	4.6
1.20	+0.00	-0.06	17.5	+0.10	-0.36	27.2	2.5	3.9	2.0	17.0	18.0	+0.00	-0.11	1.3	1.5	4.8
1.20	+0.00	-0.06	18.5	+0.13	-0.42	28.4	2.6	4.0	2.0	17.1	19.0	+0.00	-0.21	1.3	1.5	5.1
1.20	+0.00	-0.06	19.5	+0.13	-0.42	29.6	2.7	4.1	2.0	16.8	20.0	+0.00	-0.21	1.3	1.5	5.4
1.20	+0.00	-0.06	20.5	+0.13	-0.42	30.8	2.8	4.2	2.0	16.9	21.0	+0.00	-0.21	1.3	1.5	5.7
1.20	+0.00	-0.06	21.5	+0.13	-0.42	32.0	2.9	4.3	2.0	16.6	22.0	+0.00	-0.21	1.3	1.5	5.9
1.20	+0.00	-0.06	22.2	+0.21	-0.42	33.2	3.0	4.4	2.0	16.1	22.9	+0.00	-0.21	1.3	1.7	6.8
1.20	+0.00	-0.06	23.2	+0.21	-0.42	34.2	3.0	4.4	2.0	16.2	23.9	+0.00	-0.21	1.3	1.7	7.1
1.20	+0.00	-0.06	24.2	+0.21	-0.42	35.5	3.1	4.5	2.0	16.1	24.9	+0.00	-0.21	1.3	1.7	7.3
1.20	+0.00	-0.06	24.9	+0.21	-0.42	36.7	3.1	4.6	2.0	16.4	25.6	+0.00	-0.21	1.3	2.1	9.6
1.50	+0.00	-0.06	25.9	+0.21	-0.42	37.9	3.2	4.7	2.0	32.1	26.6	+0.00	-0.21	1.6	2.1	10.0
1.50	+0.00	-0.06	26.9	+0.21	-0.42	39.1	3.4	4.8	2.0	31.8	27.6	+0.00	-0.21	1.6	2.1	10.4
1.50	+0.00	-0.06	27.9	+0.21	-0.42	40.5	3.5	5.0	2.0	32.1	28.6	+0.00	-0.21	1.6	2.1	10.7
1.50	+0.00	-0.06	28.6	+0.21	-0.42	41.5	3.5	5.0	2.5	31.5	29.3	+0.00	-0.21	1.6	2.6	13.9
1.50	+0.00	-0.06	29.6	+0.21	-0.42	43.0	3.6	5.2	2.5	31.2	30.3	+0.00	-0.25	1.6	2.6	13.9
1.50	+0.00	-0.06	30.5	+0.25	-0.50	44.0	3.7	5.2	2.5	31.6	31.3	+0.00	-0.25	1.6	2.6	14.3
1.50	+0.00	-0.06	31.5	+0.25	-0.50	45.4	3.8	5.4	2.5	31.3	32.3	+0.00	-0.25	1.6	2.6	14.7
1.50	+0.00	-0.06	32.2	+0.25	-0.50	46.8	3.9	5.6	2.5	33.0	33.0	+0.00	-0.25	1.6	3.0	17.8
1.75	+0.00	-0.06	33.2	+0.25	-0.50	47.8	4.0	5.6	2.5	34.0	34.0	+0.00	-0.25	1.85	3.0	18.3
1.75	+0.00	-0.06	34.2	+0.25	-0.50	49.0	4.1	5.7	2.5	35.0	35.0	+0.00	-0.25	1.85	3.0	18.8
1.75	+0.00	-0.06	35.2	+0.25	-0.50	50.2	4.2	5.8	2.5	36.0	36.0	+0.00	-0.25	1.85	3.0	19.3
1.75	+0.00	-0.06	36.0	+0.25	-0.50	51.4	4.3	5.9	2.5	37.0	37.0	+0.00	-0.25	1.85	3.8	19.9
1.75	+0.00	-0.06	36.5	+0.25	-0.50	52.6	4.4	6.0	2.5	37.5	37.5	+0.00	-0.25	1.85	3.8	25.3
1.75	+0.00	-0.06	37.5	+0.25	-0.50	54.1	4.5	6.2	2.5	38.5	38.5	+0.00	-0.25	1.85	3.8	26.0
1.75	+0.00	-0.06	38.5	+0.39	-0.90	55.7	4.5	6.5	2.5	39.5	39.5	+0.00	-0.25	1.85	3.8	26.7
1.75	+0.00	-0.06	39.5	+0.39	-0.90	56.7	4.6	6.5	2.5	40.5	40.5	+0.00	-0.25	1.85	3.8	27.3
1.75	+0.00	-0.06	40.5	+0.39	-0.90	57.9	4.6	6.6	2.5	41.5	41.5	+0.00	-0.25	1.85	3.8	28.0
1.75	+0.00	-0.06	41.5	+0.39	-0.90	59.1	4.7	6.7	2.5	42.5	42.5	+0.00	-0.25	1.85	3.8	28.1
1.75	+0.00	-0.06	42.5	+0.39	-0.90	60.1	4.8	6.7	2.5	43.5	43.5	+0.00	-0.25	1.85	3.8	29.0
1.75	+0.00	-0.06	43.5	+0.39	-0.90	61.3	4.9	6.8	2.5	44.5	44.5	+0.00	-0.25	1.85	3.8	30.0
1.75	+0.00	-0.06	44.5	+0.39	-0.90	62.5	5.0	6.9	2.5	45.5	45.5	+0.00	-0.25	1.85	3.8	30.1
2.00	+0.00	-0.07	45.8	+0.39	-0.90	64.5	5.1	6.9	2.5	47.0	47.0	+0.00	-0.25	2.15	4.5	38.0
2.00	+0.00	-0.07	46.8	+0.39	-0.90	65.7	5.2	7.0	2.5	48.0	48.0	+0.00	-0.25	2.15	4.5	38.8
2.00	+0.00	-0.07	47.8	+0.39	-0.90	66.7	5.2	7.0	2.5	49.0	49.0	+0.00	-0.25	2.15	4.5	39.7
2.00	+0.00	-0.07	48.8	+0.39	-0.90	68.0	5.3	7.1	2.5	50.0	50.0	+0.00	-0.25	2.15	4.5	40.4
2.00	+0.00	-0.07	49.8	+0.46	-1.10	69.0	5.3	7.1	2.5	51.0	51.0	+0.00	-0.30	2.15	4.5	41.2
2.00	+0.00	-0.07	50.8	+0.46	-1.10	70.2	5.4	7.2	2.5	52.0	52.0	+0.00	-0.30	2.15	4.5	42.0
2.00	+0.00	-0.07	51.8	+0.46	-1.10	71.6	5.5	7.3	2.5	53.0	53.0	+0.00	-0.30	2.15	4.5	42.8
2.00	+0.00	-0.07	52.8	+0.46	-1.10	72.4	5.5	7.3	2.5	54.0	54.0	+0.00	-0.30	2.15	4.5	43.7

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### 轴用挡圈

- DIN471
- Imperial size standard



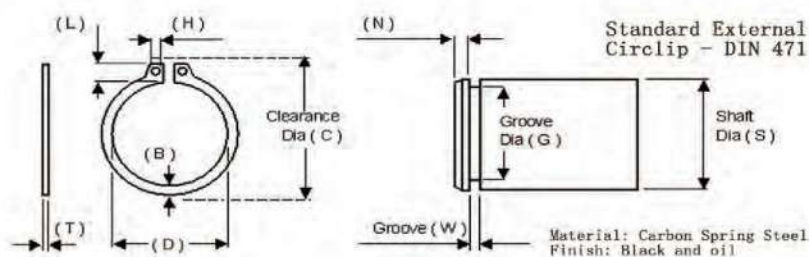
Circlip Dimensions									Groove Dimensions							
(T)	Tolerance		(D)	Tolerance		(C)	(B)	(L)	(H)	Fr KN	(G)	Tolerance		(W)	(N)	Fn KN
2.00	+0.00	-0.07	53.8	+0.46	-1.10	73.6	5.6	7.3	2.5	55.0	55.0	+0.00	-0.30	2.15	4.5	44.3
2.00	+0.00	-0.07	55.8	+0.46	-1.10	75.6	5.8	7.4	2.5	69.2	57.0	+0.00	-0.30	2.15	4.5	46.0
2.00	+0.00	-0.07	57.8	+0.46	-1.10	77.8	6.0	7.5	2.5	69.3	59.0	+0.00	-0.30	2.15	4.5	47.5
2.00	+0.00	-0.07	58.8	+0.46	-1.10	79.0	6.2	7.6	2.5	70.2	60.0	+0.00	-0.30	2.15	4.5	48.3
2.50	+0.00	-0.07	60.8	+0.46	-1.10	81.4	6.3	7.8	3.0	135.6	62.0	+0.00	-0.30	2.65	4.5	49.8
2.50	+0.00	-0.07	62.5	+0.46	-1.10	83.6	6.4	7.9	3.0	136.1	64.0	+0.00	-0.30	2.65	4.5	51.3
2.50	+0.00	-0.07	63.5	+0.46	-1.10	84.4	6.5	8.0	3.0	135.9	65.0	+0.00	-0.30	2.65	4.5	52.2
2.50	+0.00	-0.07	65.5	+0.46	-1.10	87.0	6.6	8.1	3.0	134.2	67.0	+0.00	-0.30	2.65	4.5	53.8
2.50	+0.00	-0.07	67.5	+0.46	-1.10	89.2	6.8	8.2	3.0	131.8	69.0	+0.00	-0.30	2.65	4.5	55.3
2.50	+0.00	-0.07	70.5	+0.46	-1.10	92.7	7.0	8.4	3.0	130.0	72.0	+0.00	-0.30	2.65	4.5	57.6
2.50	+0.00	-0.07	72.5	+0.46	-1.10	94.9	7.2	8.5	3.0	131.3	74.0	+0.00	-0.30	2.65	4.5	59.3
2.50	+0.00	-0.07	73.5	+0.46	-1.10	96.1	7.3	8.6	3.0	131.3	75.0	+0.00	-0.30	2.65	5.3	60.0
2.50	+0.00	-0.07	74.5	+0.46	-1.10	98.1	7.4	8.6	3.0	128.4	76.5	+0.00	-0.30	2.65	5.3	71.6
2.50	+0.00	-0.07	76.5	+0.46	-1.10	100.3	7.6	8.7	3.0	128.0	78.5	+0.00	-0.30	2.65	5.3	73.5
3.00	+0.00	-0.08	79.5	+0.46	-1.10	103.3	7.8	8.7	3.5	215.4	81.5	+0.00	-0.35	3.15	5.3	76.2
3.00	+0.00	-0.08	81.5	+0.54	-1.30	105.5	7.9	8.8	3.5	222.2	83.5	+0.00	-0.35	3.15	5.3	78.2
3.00	+0.00	-0.08	82.5	+0.54	-1.30	106.5	8.0	8.8	3.5	221.8	84.5	+0.00	-0.35	3.15	5.3	79.0
3.00	+0.00	-0.08	84.5	+0.54	-1.30	108.5	8.2	8.8	3.5	217.2	86.5	+0.00	-0.35	3.15	5.3	80.8
3.00	+0.00	-0.08	86.5	+0.54	-1.30	111.0	8.4	9.0	3.5	217.0	88.5	+0.00	-0.35	3.15	5.3	82.7
3.00	+0.00	-0.08	89.5	+0.54	-1.30	114.8	8.6	9.4	3.5	212.2	91.5	+0.00	-0.35	3.15	5.3	85.5
3.00	+0.00	-0.08	91.5	+0.54	-1.30	116.8	8.8	9.4	3.5	211.1	93.5	+0.00	-0.35	3.15	5.3	87.3
3.00	+0.00	-0.08	92.5	+0.54	-1.30	118.0	9.0	9.5	3.5	208.1	94.5	+0.00	-0.35	3.15	5.3	88.2
3.00	+0.00	-0.08	94.5	+0.54	-1.30	120.2	9.0	9.6	3.5	206.4	96.5	+0.00	-0.35	3.15	5.3	90.0
4.00	+0.00	-0.10	95.0	+0.54	-1.30	122.4	9.2	9.7	3.5	482.3	98.0	+0.00	-0.54	4.15	6.0	104.6
4.00	+0.00	-0.10	98.0	+0.54	-1.30	125.8	9.3	9.9	3.5	471.8	101.0	+0.00	-0.54	4.15	6.0	107.6
4.00	+0.00	-0.10	101.0	+0.54	-1.30	129.0	9.5	10.0	3.5	459.8	104.0	+0.00	-0.54	4.15	6.0	111.0
4.00	+0.00	-0.10	103.0	+0.54	-1.30	131.2	9.6	10.1	3.5	457.0	106.0	+0.00	-0.54	4.15	6.0	113.0
4.00	+0.00	-0.10	105.0	+0.54	-1.30	133.7	9.7	10.3	3.5	451.5	108.0	+0.00	-0.54	4.15	6.0	115.0
4.00	+0.00	-0.10	108.0	+0.54	-1.30	137.3	9.8	10.6	3.5	438.6	111.0	+0.00	-0.54	4.15	6.0	118.2
4.00	+0.00	-0.10	113.0	+0.54	-1.30	143.1	10.2	11.0	3.5	424.6	116.0	+0.00	-0.54	4.15	6.0	123.5
4.00	+0.00	-0.10	118.0	+0.54	-1.30	149.0	10.4	11.4	4.0	411.5	121.0	+0.00	-0.63	4.15	6.0	128.7
4.00	+0.00	-0.10	123.0	+0.63	-1.50	154.4	10.7	11.6	4.0	395.5	126.0	+0.00	-0.63	4.15	6.0	134.0
4.00	+0.00	-0.10	128.0	+0.63	-1.50	159.8	11.0	11.8	4.0	389.5	131.0	+0.00	-0.63	4.15	6.0	139.2
4.00	+0.00	-0.10	133.0	+0.63	-1.50	165.2	11.2	12.0	4.0	376.5	136.0	+0.00	-0.63	4.15	6.0	144.5
4.00	+0.00	-0.10	138.0	+0.63	-1.50	170.6	11.5	12.2	4.0	367.0	141.0	+0.00	-0.63	4.15	6.0	149.6
1.75	+0.00	-0.10	142.0	+0.63	-1.50	177.3	11.8	13.0	4.0	357.5	145.0	+0.00	-0.63	4.15	6.0	193.0
4.00	+0.00	-0.10	146.0	+0.63	-1.50	182.3	12.0	13.0	4.0	352.9	150.0	+0.00	-0.63	4.15	7.5	199.6
4.00	+0.00	-0.10	151.0	+0.63	-1.50	188.0	12.2	13.3	4.0	349.2	155.0	+0.00	-0.63	4.15	7.5	206.1
4.00	+0.00	-0.10	155.5	+0.63	-1.50	193.4	12.5	13.5	4.0	345.3	199.0	+0.00	-0.63	4.15	7.5	212.5
4.00	+0.00	-0.10	160.5	+0.63	-1.50	198.4	12.9	13.5	4.0	349.2	165.0	+0.00	-0.63	4.15	7.5	219.1
4.00	+0.00	-0.10	165.5	+0.63	-1.50	203.4	12.9	13.5	4.0	340.1	170.0	+0.00	-0.63	4.15	7.5	225.5
4.00	+0.00	-0.10	170.5	+0.63	-1.50	210.0	14.0	14.2	4.0	345.3	175.0	+0.00	-0.63	4.15	7.5	232.2
4.00	+0.00	-0.10	175.5	+0.63	-1.50	215.0	14.0	14.2	4.0	336.7	180.0	+0.00	-0.63	4.15	7.5	238.6
4.00	+0.00	-0.10	180.5	+0.72	-1.70	220.0	14.0	14.2	4.0	333.8	185.0	+0.00	-0.72	4.15	7.5	245.1
4.00	+0.00	-0.10	185.5	+0.72	-1.70	225.0	14.0	14.2	4.0	325.4	190.0	+0.00	-0.72	4.15	7.5	251.8
4.00	+0.00	-0.10	190.5	+0.72	-1.70	230.0	14.0	14.2	4.0	319.2	195.0	+0.00	-0.72	4.15	7.5	258.3
5.00	+0.00	-0.12	193.0	+0.72	-1.70	235.0	14.0	14.2	4.0	611.7	199.0	+0.00	-0.72	5.15	9.0	317.5
5.00	+0.00	-0.12	198.0	+0.72	-1.70	240.0	14.0	14.2	4.0	598.2	204.0	+0.00	-0.72	5.15	9.0	325.1
5.00	+0.00	-0.12	203.0	+0.72	-1.70	245.0	14.0	14.2	4.0	585.1	209.0	+0.00	-0.72	5.15	9.0	332.8
5.00	+0.00	-0.12	208.0	+0.72	-1.70	250.0	14.0	14.2	4.0	572.4	214.0	+0.00	-0.72	5.15	9.0	340.8
5.00	+0.00	-0.12	213.0	+0.72	-1.70	255.0	14.0	14.2	4.0	559.8	219.0	+0.00	-0.72	5.15	9.0	349.1
5.00	+0.00	-0.12	218.0	+0.72	-1.70	260.0	14.0	14.2	4.0	548.9	224.0	+0.00	-0.72	5.15	9.0	356.6
5.00	+0.00	-0.12	223.0	+0.72	-1.70	265.0	14.0	14.2	4.0	537.1	229.0	+0.00	-0.72	5.15	9.0	364.1
5.00	+0.00	-0.12	228.0	+0.72	-1.70	270.0	14.0	14.2	4.0	530.3	234.0	+0.00	-0.72	5.15	9.0	372.6



## Retauning rings for shafts

### 轴用挡圈

- DIN471
- Imperial size standard



Circlip Dimensions										Croove Dimensions					
(T)	Tolerance	(D)	Tolerance	(C)	(B)	(L)	(H)	Fr KN	(G)	Tolerance	(W)	(N)	Fn KN		
5.00	+0.00 -0.12	233.0	+0.72 -1.70	275.0	14.0	14.2	4.0	512.2	239.0	+0.00 -0.72	5.15	9.0	380.0		
5.00	+0.00 -0.12	238.0	+0.72 -1.70	280.0	14.0	14.2	4.0	504.3	244.0	+0.00 -0.72	5.15	9.0	388.3		
5.00	+0.00 -0.12	240.0	+0.72 -1.70	289.0	16.0	16.2	5.0	557.1	247.0	+0.00 -0.72	5.15	12.0	525.0		
5.00	+0.00 -0.12	245.0	+0.72 -1.70	294.0	16.0	16.2	5.0	540.6	252.0	+0.00 -0.81	5.15	12.0	535.8		
5.00	+0.00 -0.12	250.0	+0.72 -1.70	299.0	16.0	16.2	5.0	536.2	257.0	+0.00 -0.81	5.15	12.0	546.6		
5.00	+0.00 -0.12	255.0	+0.81 -2.0	304.0	16.0	16.2	5.0	525.3	262.0	+0.00 -0.81	5.15	12.0	556.6		
5.00	+0.00 -0.12	260.0	+0.81 -2.0	309.0	16.0	16.2	5.0	516.7	267.0	+0.00 -0.81	5.15	12.0	566.6		
5.00	+0.00 -0.12	265.0	+0.81 -2.0	314.0	16.0	16.2	5.0	508.2	272.0	+0.00 -0.81	5.15	12.0	576.6		
5.00	+0.00 -0.12	270.0	+0.81 -2.0	319.0	16.0	16.2	5.0	499.1	277.0	+0.00 -0.81	5.15	12.0	587.5		
5.00	+0.00 -0.12	275.0	+0.81 -2.0	324.0	16.0	16.2	5.0	490.8	282.0	+0.00 -0.81	5.15	12.0	599.1		
5.00	+0.00 -0.12	280.0	+0.81 -2.0	329.0	16.0	16.2	5.0	481.8	287.0	+0.00 -0.81	5.15	12.0	609.1		
5.00	+0.00 -0.12	285.0	+0.81 -2.0	334.0	16.0	20.2	6.0	475.0	292.0	+0.00 -0.81	5.15	12.0	619.1		
6.00	+0.00 -0.18	293.0	+0.81 -2.0	352.5	20.0	20.2	6.0	1016.9	300.0	+0.00 -0.81	6.2	15.0	796.6		
6.00	+0.00 -0.18	303.0	+0.81 -2.0	362.5	20.0	20.2	6.0	988.6	310.0	+0.00 -0.81	6.2	15.0	825.0		
6.00	+0.00 -0.18	313.0	+0.81 -2.0	372.5	20.0	20.2	6.0	958.4	320.0	+0.00 -0.89	6.2	15.0	850.0		
6.00	+0.00 -0.18	323.0	+0.90 -2.50	382.5	20.0	20.2	6.0	932.7	330.0	+0.00 -0.89	6.2	15.0	876.6		
6.00	+0.00 -0.18	333.0	+0.90 -2.50	392.5	20.0	20.2	6.0	905.6	340.0	+0.00 -0.89	6.2	15.0	903.3		
6.00	+0.00 -0.18	343.0	+0.90 -2.50	402.5	20.0	20.2	6.0	880.7	350.0	+0.00 -0.89	6.2	15.0	928.3		
6.00	+0.00 -0.18	353.0	+0.90 -2.50	412.5	20.0	20.2	6.0	856.7	360.0	+0.00 -0.89	6.2	15.0	955.0		
6.00	+0.00 -0.18	363.0	+0.90 -2.50	422.5	20.0	20.2	6.0	833.5	370.0	+0.00 -0.89	6.2	15.0	980.0		
6.00	+0.00 -0.18	373.0	+0.90 -2.50	432.5	20.0	20.2	6.0	814.3	380.0	+0.00 -0.89	6.2	15.0	1008.0		
6.00	+0.00 -0.18	383.0	+0.90 -2.50	442.5	20.0	20.2	6.0	793.4	390.0	+0.00 -0.89	6.2	15.0	1033.0		

Material:

Spring steel S60C / 65Mn / SKS

Stainless steel SUS304 / 316 / 301 / 420

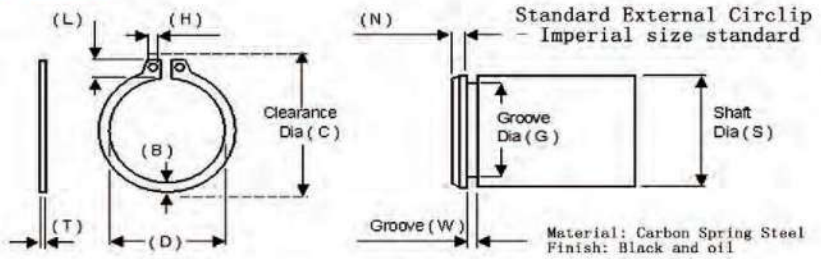
Surface treatment: Zinc / Black / Phosphating / Mechanical galvanizing



# Retaining rings for shafts

## 轴用挡圈

- DIN471
- Imperial size standard



Circlip Dimensions											Croove Dimensions						
(T)	Shaft		(T)	(D)	(C)	(B)	(L)	(H)	Force	(G)	(W)		(N)	Fn KN			
	(Frac)	(Dec)									Inch	Tol			Inch	Tol	Inch
N140012	1/8	0.125	0.010	+0.001	0.112		0.22	0.018	0.048	0.024	110	0.117		0.012		0.014	28
N140015	5/32	0.156	0.010	-0.001	0.142	+0.00	0.27	0.026	0.056	0.024	130	0.146		0.012	+0.00	0.017	44
N140018	3/16	0.188	0.015		0.168	2	0.30	0.025	0.052	0.023	240	0.175	+0.0015	0.018	2	0.022	69
N140021	7/32	0.219	0.015		0.196		0.34	0.028	0.058	0.024	280	0.205	-0.0015	0.018		0.023	87
N140023	15/64	0.236	0.015		0.215	-0.004	0.36	0.300	0.058	0.024	310	0.222		0.018	-0.000	0.023	93
N140025	1/4	0.250	0.025		0.225		0.45	0.035	0.083	0.039	880	0.230		0.029		0.032	141
N140028	9/32	0.281	0.025		0.256		0.49	0.038	0.083	0.039	990	0.261		0.029		0.035	160
N140031	5/16	0.312	0.025		0.281		0.54	0.040	0.090	0.039	1100	0.290		0.029		0.036	194
N140034	11/32	0.344	0.025		0.309	+0.00	0.57	0.042	0.090	0.039	1210	0.321		0.029		0.038	224
N140037	3/8	0.375	0.025		0.338	2	0.61	0.050	0.091	0.039	1320	0.352		0.029		0.038	244
N140040	13/32	0.406	0.025		0.366	-0.005	0.63	0.054	0.090	0.039	4130	0.382		0.029		0.039	275
N140043	7/16	0.438	0.025		0.395		0.66	0.055	0.091	0.039	1550	0.412	+0.002	0.029		0.042	322
N140046	15/32	0.469	0.025		0.428		0.68	0.060	0.091	0.039	1660	0.443	-0.002	0.029		0.042	345
N140050	1/2	0.500	0.035		0.461		0.77	0.065	0.111	0.045	2470	0.468		0.039		0.051	452
N140056	9/16	0.562	0.035		0.521		0.82	0.072	0.111	0.045	2780	0.530		0.039	+0.00	0.051	508
N140059	19/32	0.594	0.035		0.550		0.86	0.076	0.112	0.045	2940	0.590		0.039	3	0.057	588
N140062	5/8	0.625	0.035	+0.00	0.579		0.90	0.080	0.113	0.045	3090	0.588		0.039	-0.000	0.060	654
N140066	43/64	0.672	0.035	2	0.621		0.93	0.082	0.113	0.045	3320	0.631		0.039		0.066	780
N140068	11/16	0.688	0.042		0.635	+0.00	1.01	0.084	0.140	0.050	4080	0.646		0.046		0.068	817
N140075	3/4	0.750	0.042	-0.002	0.693	5	1.09	0.092	0.140	0.050	4450	0.704		0.046		0.074	975
N140078	25/32	0.781	0.042		0.722	-0.010	1.12	0.094	0.140	0.050	4600	0.733	+0.003	0.046		0.076	1060
N140081	13/16	0.812	0.042		0.751		1.15	0.096	0.140	0.050	4800	0.762	-0.003	0.046		0.080	1150
N140087	7/8	0.875	0.042		0.810		1.21	0.104	0.141	0.050	5200	0.821		0.046		0.085	1340
N140093	15/16	0.938	0.042		0.867		1.34	0.110	0.170	0.076	5600	0.882		0.046		0.088	1480
N140098	63/64	0.984	0.042		0.910		1.39	0.114	0.171	0.076	5800	0.984		0.046		0.091	1610
N140100	1	1.000	0.042		0.925		1.41	0.116	0.171	0.076	5900	0.940		0.046		0.094	1700
N140106	1.1/16	1.062	0.050		0.982		1.50	0.122	0.185	0.076	7500	0.998		0.056		0.102	1920
N140112	1.1/8	1.125	0.050		1.041		1.55	0.128	0.186	0.076	7900	1.059		0.056		0.105	2100
N140118	1.3/16	1.188	0.050		1.098	+0.01	1.61	0.132	0.186	0.076	8400	1.118	+0.004	0.056		0.111	2350
N140125	1.1/4	1.250	0.050		1.156	0	1.69	0.140	0.187	0.076	8800	1.176	-0.004	0.056		0.117	2610
N1400131	1.5/16	1.312	0.050		1.214	-0.015	1.75	0.146	0.187	0.076	9300	1.322		0.056		0.126	2970
N140137	1.3/8	1.375	0.050		1.272		1.80	0.152	0.188	0.076	9700	1.291		0.056	+0.00	0.132	3270
N140143	1.7/16	1.438	0.050		1.333		1.87	0.160	0.188	0.076	10200	1.350		0.056		0.138	3580
N140150	1.1/2	1.500	0.050		1.387		1.99	0.168	0.218	0.118	10600	1.406		0.056	4	0.147	3990
N140156	1.9/16	1.562	0.062		1.446		1.95	0.180	0.189	0.100	10700	1.468		0.068	-0.000	0.148	4150
N140162	1.5/8	1.625	0.062		1.503	+0.01	2.17	0.180	0.189	0.100	11100	1.529		0.068		0.151	4410
N140168	1.11/16	1.688	0.062		1.560	3	2.04	0.197	0.205	0.100	11500	1.589	+0.005	0.068		0.156	4720
N140175	1.3/4	1.750	0.062		1.618	-0.020	2.11	0.197	0.205	0.100	11900	1.650	-0.005	0.068		0.157	4950
N140181	1.13/16	1.812	0.062		1.675		2.23	0.197	0.205	0.100	12400	1.708		0.068		0.163	5330
N140187	1.7/8	1.875	0.062		1.735		2.29	0.197	0.205	0.100	12800	1.769		0.068		0.166	5620
N140200	2	2.000	0.062		1.850		2.48	0.224	0.232	0.123	13600	1.886		0.068		0.178	6450
N140212	2.1/8	2.125	0.078		1.964	+0.01	2.61	0.228	0.236	0.123	18200	2.003		0.086		0.192	7330
N140225	2.1/4	2.250	0.078		2.081	5	2.87	0.217	0.225	0.123	19300	2.120		0.086		0.204	8270
N140237	2.3/8	2.375	0.078	+0.00	2.197	-0.025	2.86	0.228	0.236	0.123	20400	2.239		0.086		0.213	9130
N140250	2.1/2	2.500	0.078		2.313		2.98	0.228	0.236	0.123	21400	2.360		0.086		0.219	9900
N140162	2.5/8	2.625	0.078		2.428		3.11	0.228	0.236	0.123	22500	2.481		0.086		0.225	10700
N140175	2.3/4	2.750	0.093	-0.003	2.543		3.33	0.276	0.284	0.123	28100	2.602		0.103	+0.00	0.231	11500
N140287	2.7/8	2.875	0.093		2.659		3.42	0.260	0.268	0.123	29400	2.721		0.103		0.240	12500
N140300	3	3.000	0.093		2.775		3.55	0.260	0.268	0.123	30700	2.838	+0.006	0.103	5	0.252	13700
N140312	3.1/8	3.125	0.093		2.892	+0.02	3.75	0.272	0.305	0.123	32000	2.957	-0.006	0.103	-0.000	0.261	14800
N140325	3.1/4	3.250	0.093		3.006	0	3.83	0.276	0.284	0.123	33200	3.076		0.103		0.270	16000
N140350	3.1/2	3.500	0.109		3.237	-0.030	4.15	0.285	0.320	0.123	42000	3.316		0.120		0.285	18200
N140362	3.5/8	3.625	0.109		3.352		4.28	0.315	0.323	0.123	43400	3.435		0.120		0.294	19500
N140375	3.3/4	3.750	0.109		3.468		4.44	0.337	0.337	0.123	44900	3.552		0.120		0.306	21000
N140387	3.7/8	3.875	0.109		3.584		4.56	0.335	0.335	0.123	46400	3.673		0.120		0.312	22100
N140400	4	4.000	0.109		3.700		4.72	0.352	0.352	0.123	47900	3.792		0.120		0.321	23500