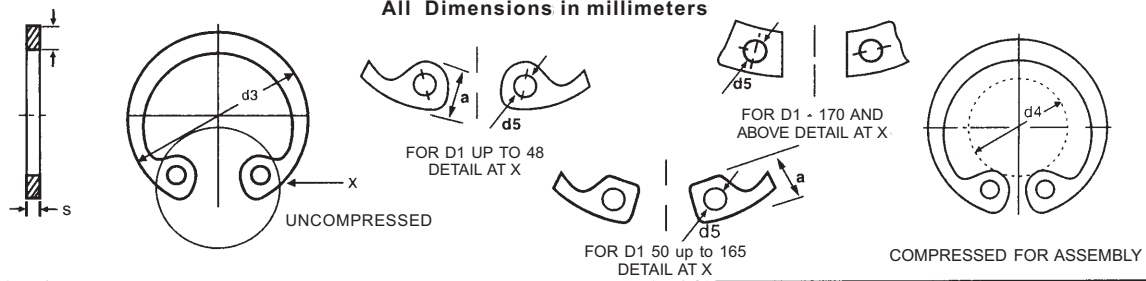




# SANJAY ENGINEERING WORKS

## INTERNAL CIRCLIPS DIN :472 IS : 3075

( LIGHT - SERIES )



Bore Dia d1	S h11	Tolerance	INTERNAL CIRCLIPS											Axial Force kgf						
			a Max	b Approx	d3	Tol ON d3	d5 Min	d4 Compressed	d2	Tol on d2	m1 H13	m2 Min	n Min							
8	0.8	+0.03	2.4	1.1	8.7	+0.36 -0.18	1	2.8	8.4	H11	0.9	1	0.6	128						
9			2.5	1.3	9.8			3.5	9.4					144						
10			3.2	1.4	10.8			3.1	10.4					160						
11	1	+0.04	3.3	1.5	11.8	+0.42 -0.21	1.2	3.9	11.4	H11	1.1	1.2	0.75	240						
12			3.4	1.7	13			4.7	12.5				314							
13			3.6	1.8	14.1			5.3	13.6				336							
14			3.7	1.9	15.1			6	14.6				422							
15			3.8	2	16.2			7	15.7				1.1	1.2	1.1	515				
16																17.3	7.7	16.8	547	
17			3.9	2.1	18.3			8.4	17.8				1.5	1.5	1.5	725				
18			4.1	2.2	19.5			8.9	19							1.5	1.5	1.5	764	
19													20.5	9.8	20				10.6	21
20			1.2	+0.04	2.3			2.4	22.5				+0.50 -0.25	2	11.6	22	H12	1.3	1.4	2.1
21	4.2	2.5			23.5	12.6	23	882												
22	4.4	2.6			25.9	14.2	25.2	1.8	1.8	1.8	1160									
23	4.5	2.7			26.9	15	26.2				1200									
24	4.7	2.8			27.9	15.6	27.2	2.1	2.1	2.1	1250									
25											4.8	2.9			30.1	17.4				
26	5.2	3			32.1	19.4	31.4	2.6	2.6	2.6	1690									
27											33.4	19.6			32.7	1700				
28											34.4	20.2			33.7	2200				
29	5.4	3.2			35.4	21.2	34.7	3	3	3	2280									
30			36.5	22.2							35.7	2320								
31			37.8	23.2							37	2820								
32	1.5	+0.05	5.4	3.3	36.5	+0.78 -0.39	2.5	24.2	38	H12	1.6	1.7	3	2900						
33								3.4	37.8					25	39	2980				
34								3.5	38.8					26	40	3070				
35	5.5	3.6	39.8	27.4	42.5	2.5	2.5	2.5	4050											
36									3.7	40.8	29.2	44.5	4250							
37	5.8	3.9	43.5	31.6	47.5	3.8	3.8	3.8	4520											
38									5.9	4.1	45.5	33.2	49.5	4720						
39									6.2	4.3	48.5	34.6	50.5	4820						
40	1.75	+0.06	6.4	4.4	50.5	+0.92 -0.46	2.5	36	53	H12	1.85	2	3.8	6070						
41								4.5	51.5					37.6	55	6300				
42								4.6	54.2					40.4	58	6650				
43	2	+0.06	6.8	5	59.2	+0.92 -0.46	2.5	41.4	59	H12	1.85	2	3.8	6750						
44								5.1	60.2					41.4	59	6750				

Bore Dia d1	S h11	Tolerance	INTERNAL CIRCLIPS											Axial Force kgf
			a Max	b Approx	d3	Tol ON d3	d 5 Min	d 4 Compressed	d 2	Tol on d2	m1 H13	m2 Min	n Min	
58	2	+0.06	6.9	5.2	62.2	+0.92 -0.46	2.5	43.2	61	H12	2.15	2.3	4.5	7 000
60			7.3	5.4	64.2			44.4	63					7 250
62				5.5	66.2			46.4	65					7 480
63			5.6	67.2	47.4			66	7 580					
65	2.5		7.6	5.8	69.2		3	48.8	68		2.65	2.8		7 820
68			7.8	6.1	72.5			51.4	71					8 170
70				6.2	74.5			53.4	73					8 420
72			6.4	76.5	55.4			75	8 650					
75		6.6	79.5	58.4	78	9 000								
78		6.8	82.5	60	81	9 350								
80	8.5	7	85.5	62	83.5	11 200								
82			87.5	64	85.5		11 500							
85	3	+0.07	8.6	7.2	90.5	+1.08 -0.54	3.5	66.8	88.5	H13	3.15	3.3	5.3	11 900
88				7.4	93.5			69.8	91.5					12 300
90			7.6	95.5	71.8			93.5	12 600					
92			8.7	7.8	97.5			73.6	95.5					12 900
95			8.8	8.1	100.5		76.4	98.5	13 300					
98				8.3	103.5		79	101.5	13 700					
100			9	8.4	105.5		81	103.5	14 000					
102			4	+0.08	9.2		8.5	108	+1.26 -0.63		3.5	82.6		106
105	8.7	112				85.6	109	16 800						
108	9.5	8.9			115	88	112	17 300						
110	10.4	9			117	88.2	114	17 600						
112	10.5	9.1			119	90	116	17 900						
115		9.3			122	93	119	18 400						
120	11	9.7			127	97	124	19 200						
125		10			132	102	129	19 900						
130		10.2			137	107	134	20 700						
135		10.5			142	112	139	21 500						
140	11.2	10.7			147	117	144	22 300						
145		11.4			10.9	152	122	149		23 100				
150	12	11.2			158	125	155	30 000						
155		11.4			164	130	160	30 900						
160		13			11.6	169	133	165		31 900				
165					11.8	174.5	138	170		32 900				
170	13.5	12.2	179.5	145	175	33 900								
175		Max	12.7	184.5	149	180	34 300							
180	14.2	13.2	189.5	153	185	34 500								
185		Max	13.7	194.5	157	190	35 000							
190		13.8	199.5	162	195	34 000								
195		Max	204.5	167	200	33 000								
200	5	+0.09	15.2	209.5	171	205	32 500							
210				222	181	216	49 800							
220				232	191	226	52 200							
230				242	201	236	54 900							
240			252	211	246	52 500								
250			262	221	256	50 500								
260			16.2	275	227	268	54 000							
270				285	237	278	51 800							
280	295	247		288	50 000									
290	305	257		298	48 200									
300	315	267	308	46 500										

Material: Spring steel HRC = 47 to 52 or HV = 480 to 558 kp / mm2 up to 38 mm bore diameter  
HRC = 44 to 49 or HV = 440 to 510 kp / mm2 from 40 to 200 mm bore diameter  
HRC = 40 to 45 or HV = 392 to 453 kp / mm2 from 210 to 300 mm bore diameter