SHIV SAGAR INDUSTRIES

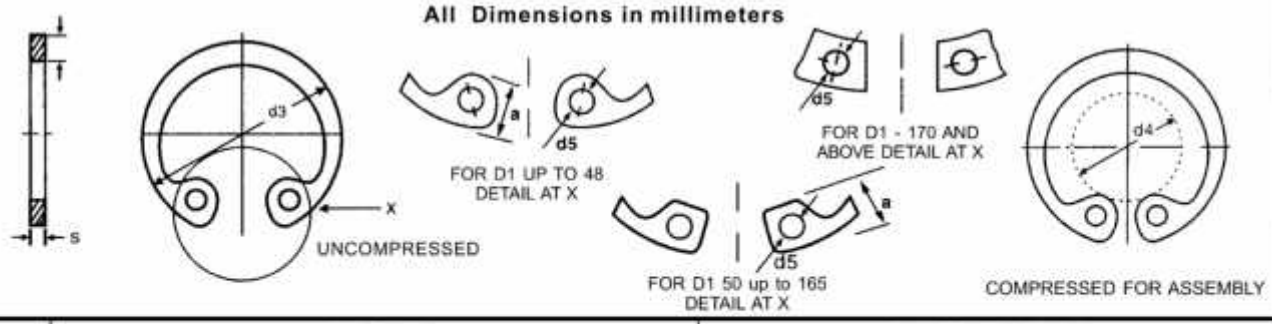
CERTIFIED QMS ISO 9001:2008 — ACCAB Accredited QMS

SCC/IN/QMS/2442

INTERNAL CIRCLIPS

DIN 472
IS: 3075

All Dimensions in millimeters



Bore Dia d1	CIRCLIP							GROOVE DATA					
	S H11	a Max	b Approx	D3	Tol. On D3	D4 Compressed	d5 Min.	d2	Tol. On d2	M1 H13	M2 min	N min	Axial Force Kgf
8	0.8	2.4	1.1	8.7	+0.36 -0.18	2.8	1	8.4	H11				128
9		2.5	1.3	9.8		3.5		9.4		0.9	1	0.6	144
10	1	3.2	1.4	10.8		3.1	1.2	10.4					160
11		3.3	1.5	11.8		3.9		11.4					176
12		3.4	1.7	13		4.7	1.5	12.5				0.75	240
13		3.6	1.8	14.1		5.3		13.6				0.9	314
14		3.7	1.9	15.1		6	1.7	14.6					336
15			2	16.2		7		15.7		1.1	1.2	1.1	422
16		3.8		17.3		7.7		16.8				1.2	515
17		3.9	2.1	18.3	+0.42 -0.21	8.4		17.8					547
18		4.1	2.2	19.5		8.9	2	19.					725
19				20.5		9.8		20	H12				764
20		4.2	2.3	21.5		10.6		21				1.5	780
21			2.4	22.5		11.6		22					810
22			2.5	23.5		12.6		23					835
24	1.2	4.4	2.6	25.9		14.2		25.2					1160
25		4.5	2.7	26.9		15		26.2				1.8	1200
26		4.7	2.8	27.9		15.6		27.2		1.3	1.4		1250
28		4.8	2.9	30.1	+0.50 -0.25	17.4		29.4		1.6	1.7	2.1	1330
30		4.8	3	32.1		19.4		31.4					1370
31		5.2	3.2	33.4		19.6	2.5	32.7				2.6	1380
32			3.2	34.4		20.2		33.7					1390
34	1.5	5.4	3.3	36.5		22.2		35.7					2320
35			3.4	37.8		23.2		37				3	2690
36			3.5	38.8		24.2		38					2640
37		5.5	3.6	39.8		25		39					2716
38			3.7	40.8		26		40					2820
40	1.75	5.8	3.9	43.5	+0.78 -0.39	27.4		42.5					4050
42		5.9	4.1	45.5		29.2		44.5		1.85	2	3.8	4250
45		6.2	4.3	48.5		31.6		47.5					4310
47		6.4	4.4	50.5	+0.92 -0.46	33.2		49.5					4350
48			4.5	51.5		34.6		50.5					4320
51	2	6.5	4.6	54.2		36		53					6070
52		6.7	4.7	56.2		37.6		55					6025
55		6.8	5	59.2		40.4		58		2.15	2.3		6350

Bore Dia d1	CIRCLIP							GROOVE DATA					
	S H11	a Max	b Approx	D3	Tol. On D3	D4 Compressed	d5 Min.	d2	Tol. On d2	M1 H13	M2 min	N min	Axial Force Kgf
56		6.8	5.1	60.2	+0.92 -0.46	41.4	2.5	59					6075
58		6.9	5.2	62.2		43.2		61					6150
60	2	7.3	5.4	64.2		44.4		63	H12			4.5	6210
62			5.5	66.2		46.4		65					6170
63			5.6	67.2		47.4		66					6160
65	2.5	7.6	5.8	69.2		48.8	3	68		2.65	2.8		7820
68		7.8	6.1	72.5		51.4		71					8170
70			6.2	74.5		53.4		73					8420
72			6.4	76.5		55.4		75					8650
75			6.6	79.5		58.4		78					9000
78		8.5	6.8	82.5	+1.08 -0.54	60		81					9350
80			7	85.5		62		83.5				5.3	11200
82				87.5		64		85.5					11500
85	3	8.6	7.2	90.5		66.8	3.5	88.5		3.15	3.3		11900
88			7.4	93.5		69.8		91.5					12300
90			7.6	95.5		71.8		93.5					12600
92		8.7	7.8	97.5		73.6		195.5					12900
95		8.8	8.1	100.5		76.4		198.5					13300
98		9	8.3	103.5		79		101.5					13700
100			8.4	105.5		81		103.5					14000
102	4	9.2	8.5	108		82.6		106	H13	4.15	4.3	6	16300
105			8.7	112		85.6		109					16800
108		9.5	8.9	115		88		112					17300
110		10.4	9	117		88.2		114					17600
112		10.5	9.1	119		90		116					17900
115			9.3	122	+1.26 -0.63	93		119					18400
120		11	9.7	127		97		124					19200
125			10	132		102	4	129					19900
130			10.2	137		107		134					20700
135		11.2	10.5	142		112		139					21500
140			10.7	147		117		144					22300
145		11.4	10.9	152		122		149					23100
150		12	11.2	158		125		155					30000
155			11.4	164		130		160					30900
160			11.6	169		133		165					31900
170			12.2	179.5		145		175					33900
175			12.7	184.5	+1.44 -0.72	149		180					34800
180			13.2	189.5		153		185					34500
185			13.7	194.5		157		190				7.5	34930
190			13.8	199.5		162		195					34000
195			13.8	204.5		167		200					33000
200			14 Max	209.5		171		205					32500
210	5			222		181		216		5.15	5.3	9	50000
220				232		191		226					52200
230				242		201		236					54900
240				252	+1.62 -0.81	211		246					52500
250				262		221		256					50500
260			16 Max	275		227	5	268				12	54000
270				285		237		278					51800
280				295		247		288					50000
290				305		257		298					48200
300				315		267		308					46500

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