

AXIALLY INSTALLED

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EXTERNAL – TAMPER PROOF

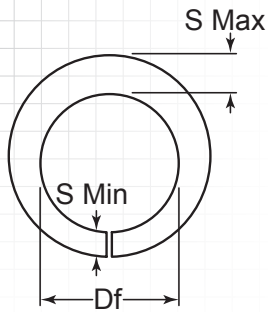


DESCRIPTION

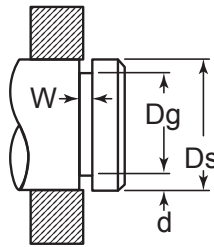
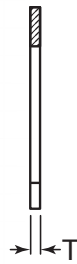
The SHM also functions like an SH retaining ring, but in smaller applications. It is a tamper-proof ring which does not have any lugs and will be destroyed during removal.

HOW TO IDENTIFY

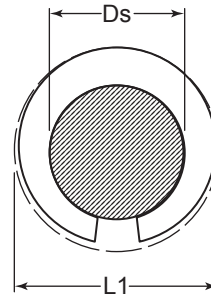
1. Verify lug free external design and appearance.
2. Measure the shaft diameter (Ds).
3. Measure the maximum ring cross section (S Max).
4. Measure the minimum ring cross section (S Min).
5. Measure the ring thickness (T).
6. Find the part in the chart.



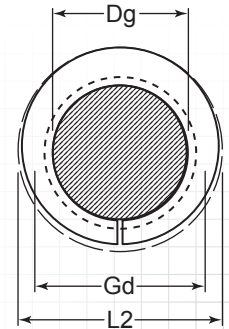
Ring Dimensions



Groove Dimensions



Clearance Diameter Expanded Over Shaft



Clearance Diameter & Gauging Diameter Released in Groove.

Item #	Shaft Diameter		Groove Size				Ring Size & Weight					Clearance Diameter	
	Diameter		Width		Depth	Free Diameter		Thickness ²		Weight Per 1,000 pcs. lbs.	Expanded Over Shaft L1	Released in Groove L2	
	Ds	Dg	Tol.	W	Tol.	d	Df	Tol.	T				Tol.
SHM-010	.101"	.093"	±.001"	.024"	+0.002/-0.000"	.004"	.090"	±.002"	.020"	±.002"	.036	.160"	.152"
SHM-012	.125" (1/8)	.115"		.024"	+0.002/-0.000"	.005"	.112"	±.002"	.020"	±.002"	.050	.186"	.176"
SHM-013	.134"	.124"		.024"	+0.002/-0.000"	.005"	.120"	±.002"	.020"	±.002"	.059	.197"	.187"
SHM-015	.156" (5/32)	.144"		.029"	+0.002/-0.000"	.006"	.140"	±.002"	.025"	±.002"	.122	.252"	.240"
SHM-018	.188" (3/16)	.174"		.029"	+0.002/-0.000"	.007"	.168"	±.003"	.025"	±.002"	.179	.297"	.283"
SHM-020	.203" (13/64)	.189"		.029"	+0.002/-0.000"	.007"	.180"	±.003"	.025"	±.002"	.167	.302"	.288"
SHM-022	.219" (7/32)	.205"	±.0015" +.002"	.039"	+0.003/-0.000"	.007"	.200"	±.003"	.035"	±.002"	.334	.345"	.331"
SHM-025	.250" (1/4)	.232"		.039"	+0.003/-0.000"	.009"	.224"	±.003"	.035"	±.002"	.386	.384"	.366"
SHM-026	.266" (17/64)	.248"		.039"	+0.003/-0.000"	.009"	.240"	±.003"	.035"	±.002"	.467	.406"	.388"
SHM-031	.312" (5/16)	.292"		.039"	+0.003/-0.000"	.010"	.284"	±.003"	.035"	±.002"	.626	.478"	.458"
SHM-032	.328" (21/64)	.308"		.039"	+0.003/-0.000"	.010"	.300"	±.003"	.035"	±.002"	.688	.498"	.480"
SHM-037	.375" (3/8)	.351"		±.002" .002"	.046"	+0.003/-0.000"	.012"	.340"	±.003"	.042"	±.002"	1.035	.567"

TO ORDER DIFFERENT MATERIAL/FINISHES,
APPEND SUFFIX WITH YOUR CHOICE:
"NONE" • -BC • -SS • -ZD • -Z3

Additional attribute data on adjacent page. ▶

Larger sizes available upon request.

** F.I.M. (Full Indicator Movement) – Maximum allowable deviation of runout between groove and shaft.

¹ Based on housings/shafts made of cold rolled steel. For more information on thrust load and safety factor see pages 14 & 15.

² For plated rings add .002" to the listed maximum thickness. Maximum thickness will be a minimum of .0002" less than the listed groove width (W) minimum.

HARDNESS RANGES: SHM RINGS

Material	Size Range	Scale	Rockwell Hardness
(blank) Carbon Steel, (SAE 1060-1090)	10 – 15 18+	15N 30N	85.5 – 87.4** 68.5 – 72
-SS Stainless Steel, (PH 15-7 Mo)	10 – 15 18+	15N 30N	82.5 – 86** 63 – 69.5
-BC Beryllium Copper	10 – 15 18+	15N 30N	77 – 82** 54 – 62

** Hardness cannot be checked with any degree of accuracy directly on these rings.

FOR DETAILED SPECIFICATIONS AND TOLERANCES, VISIT HUYETT.COM.

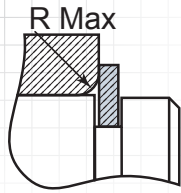
Prices, materials, dimensions, tolerances, designs, and grades subject to change without notice. © 2017 G.L. Huyett

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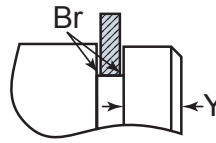
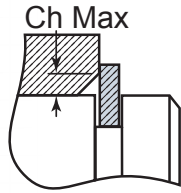
SUFFIX MATERIAL/FINISH

- ### = CARBON SPRING STEEL, PHOSPHATE
- ###-BC = BERYLLIUM COPPER, PLAIN
- ###-SS = PH 15-7 MO STAINLESS STEEL, PLAIN
- ###-ZD = CARBON SPRING STEEL, ZINC YELLOW
- ###-Z3 = CARBON SPRING STEEL, ZINC TRIVALENT

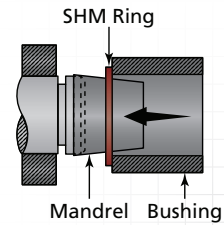
Material/finish combinations may not be available in all sizes.
More finishes available, see page 22 for a complete listing.



Maximum Corner Radius (R Max) & Chamfer (Ch Max) for Retained Part



Maximum Bottom Radii (Br). Sharp corners - no radii for ring sizes SHM-010 – SHM-037.



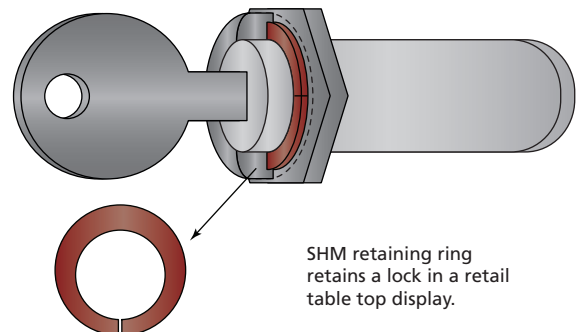
SHM retaining rings can be installed by using a tapered mandrel and a bushing.

Item #	Thrust Load ¹ Square Corner Abutment Groove with 90° wall		S Max.	S Min.	Gauging Dia.	Allowable Corner Radii & Chamfers		Max. Load w/R Max. or Ch Max.	Edge Margin	RPM Limits Standard Material
	Ring Safety Factor of 4	Groove Safety Factor of 2				R	Ch			
	Pr lbs.	Pg lbs.	Ref.	Ref.	Gd Min.	R Max.	Ch Max.	P'r lbs.	Y	
SHM-010		30	.027"	.017"	.143"	.013"	.010"	See Note ¹	.012"	80,000
SHM-012		40	.028"	.018"	.167"	.013"	.010"		.015"	80,000
SHM-013		45	.029"	.019"	.178"	.014"	.011"		.015"	80,000
SHM-015		65	.045"	.027"	.222"	.021"	.017"		.018"	80,000
SHM-018		90	.052"	.032"	.264"	.024"	.019"		.021"	80,000
SHM-020	Contact sales@huyett.com for information	100	.046"	.030"	.272"	.023"	.018"		.021"	80,000
SHM-022		110	.058"	.036"	.308"	.028"	.022"		.021"	80,000
SHM-025		160	.063"	.037"	.340"	.028"	.022"		.027"	80,000
SHM-026		170	.065"	.037"	.359"	.027"	.022"		.027"	80,000
SHM-031		220	.078"	.050"	.431"	.038"	.030"		.030"	80,000
SHM-032		230	.080"	.050"	.448"	.038"	.030"		.030"	80,000
SHM-037		315	.090"	.058"	.511"	.042"	.033"		.036"	80,000

Additional attribute data on adjacent page.

Item #	Mandrel					Bushing		
	Dp	Tol.	W Ref.	G	Tol.	ID	Tol.	OD
SHM-10	.102"	+.000/ -.0015"	.036"	.750"	±.005"	.104"	+.002/ -.000"	3/8"
SHM-12	.126"		.059"	.750"	±.005"	.128"		3/8"
SHM-13	.135"		.069"	.750"	±.005"	.137"		3/8"
SHM-15	.157"		.078"	.875"	±.005"	.159"		1/2"
SHM-18	.189"		.110"	.875"	±.005"	.191"		1/2"
SHM-20	.204"		.125"	.875"	±.005"	.206"		1/2"
SHM-22	.221"		.129"	1.000"	±.005"	.223"		1/2"
SHM-25	.252"		.101"	1.000"	±.005"	.254"		5/8"
SHM-26	.268"		.176"	1.000"	±.005"	.270"		5/8"
SHM-31	.314"		.223"	1.000"	±.005"	.316"		5/8"
SHM-32	.330"		.238"	1.000"	±.005"	.332"		5/8"
SHM-37	.377"		.286"	1.000"	±.005"	.379"		5/8"

APPLICATIONS



SHM retaining ring retains a lock in a retail table top display.