

- Softer material for better strain relief
- Ultra-high shrink ratio: up to 20:1
- Less assembly time
- Rework made easier
- No build-up taping or feeding wire through a small grommet opening
- Typical installation in just 10-20 seconds
- Re-expandable I.D. allows wire addition to a cable bundle
- Meets SAE-AS81765/1 Type II

shrinkHOoP™

URHR

Cable clamp heat shrink grommet

A shrinkHOoP grommet (URHR) is a high ratio heat-shrinkable-strain-relief grommet that can be placed over the cable assembly after the connector pinning operation is completed. The ultra-high expansion ratio material conveniently fills the space between the clamp type connector accessory and the cable. When clamped into position, URHR grommet provides strain relief that is more consistent and convenient than many conventional practices—for example, taping, grommet, or tape/ grommet combination. The high ratio conformity of URHR grommets will match most typical

cable configurations from single conductor to the high density multiple conductor arrangements.

With URHR grommets, repair or rework is a snap—simply heat the grommet until soft and slide a NON-METALLIC probe through the center of the wire bundle enlarging the grommet I.D. Once cooled, the grommet will remain open allowing wires to be added, removed or reworked. The system can then be checked, the grommet reheated (shrinking it down again), positioned, and clamped in place.



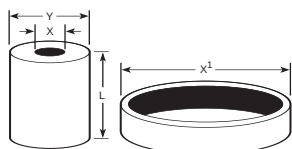
Temperature ratings

Operating temperature range -55°C to 135°C

Specifications and approvals

Refer to Tyco Electronics/Raychem Specification Control Drawing, URHR-X

Dimensions inches (millimeters)



Part Number	I.D. Expanded (X¹)	I.D. Recovered (X)	O.D. (Y)	Length (L)	Weight (grams)
URHR-2	1.23 (31)	0.10 (2.5)	0.375 (10)	0.5 (13)	1
URHR-3	1.44 (37)	0.14 (3.5)	0.5 (13)	0.5 (13)	1.5
URHR-4	1.85 (47)	0.18 (4.6)	0.562 (14)	0.75 (19)	3.5

Notes:

1. Recovered length will allow for 0.075" either side of the collar, minimum.
2. Recovered I.D. will conform to all wire arrangements available in the connector size.
3. URHR rings can be made to fit any connector size—consult factory.

Typical shrinkHOOP grommet performance

	Property	Performance	Test method
Physical	Tensile strength	1200 psi (8.3 Mpa) minimum	ASTM D-412
	Ultimate elongation	250% minimum	ASTM D-412
	Specific gravity	1.4 maximum	ASTM D-792
	Water absorption	0.5 % maximum	ASTM D-570
	Hardness	35 ± 5 Shore D	ASTM D-2240
	Flammability	Pass	ASTM D-635 FAR-25
	Corrosion resistance	Pass	MIL-I-81765
	Low temperature flex 4 hours at - 67+/-2°F (- 55+/-1°C)	Pass	MIL-I-81765
	Heat resistance 168 hrs at 347+/-2°F (175+/-1°C)	200% ultimate elongation, minimum 1000 psi (6.9 Mpa) tensile strength, minimum	MIL-I-81765
	Heat shock 4 hrs at 437+/-5°F (225+/-2°C)	No cracking, dripping or flowing	MIL-I-81765
Elastic Memory		275% minimum expansion to 4 inch (10 cm) of a fully recovered test specimen, and 93% recovery of expanded specimen after oven conditioning for 1 minute at 302 +/- 4°F (150+/-2°C)	
Electrical	Dielectric strength	200 v/mil (7880 v/mm) minimum	ASTM D-149
	Volume resistivity	10 ¹² ohm-cm minimum	ASTM D-257
Chemical		200% ultimate elongation, minimum	MIL-I-81765
Fluid Resistance		750 psi (5.2 Mpa) tensile strength, minimum	

Selection chart

Connector series		Connector Size				
		8 (9)	10,12 (11, 13)	14, 16 (15, 17)	18, 20 (19, 21)	22, 24, 28*
MIL-C-5015	MS3451, 52, 56, 59	*	2	3	4	*
	MS3450	2	3	4	*	*
MIL-C-26500**	MS24266	*	2	3	4	*
	MS24264, 265	2	3	4	*	*
MIL-C-26482	MS3120, 21, 22, 26	*	2	3	4	*
	MS3470, 71, 74 75, 76	*	2	3	4	*
MIL-C-83723 Series 1	MS3124, MS3472	2	3	4	*	*
	M83723/01 & 02, 05 & 06	*	2	3	4	*
	07 & 08, 13 & 14, 23 & 24	*	2	3	4	*
	M83723/03 & 03	2	3	4	*	*
MIL-C-83723 Series II	M83723/17 & 18, 23 & 24	*	2	3	4	*
	M83723/12 & 20, 21, & 22	2	3	4	*	*
MIL-C-83723 Series III	M83723/71 & 72 thru 97 & 98	*	2	3	4	*
	M83723/66, 67, 68 & 69	2	3	4	*	*
MIL-C-38999 Series	MS27469	*	2	3	4	*
	MS27466, 68, 96, 27505, 27656	2	3	4	*	*
MIL-C-38999 Series II	MS27472, 97, 98, 27508, 27513	*	2	3	4	*
	MS27473, 84, 27474	2	3	4	*	*
MIL-C-38999 Series III	38999/26	*	2	3	4	*
	38999/20, 24	3	4	*	*	*
Boeing	BACC45, F, M, N, P, R, S, T	—	2	3	4	*
	BACC 63X	—	3	4	*	*
Boeing	DC39, 31, 34, 35, 50-57	*	2	3	4	*
	DC32, 33, 36, 37, 60, 61, 62, 63	2	3	4	*	*

*Consult Tyco Electronics for availability of additional sizes.

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