

EVERFLEX™

Bending Strain Relief

- *Use on Wire Rope, E/M Cable & Hose Bundles*
- *Control Bending Radius*
- *Proven Performance*
- *Fast, Easy Installation*
- *Designed for Marine Use*



EXTENDED CABLE LIFE

Cable life can be extended significantly, as much as several orders of magnitude, by controlling bending stresses and strains at rigid attachment points. Limiting the bending radius reduces stresses in the critical transition area where flexible cable interfaces with rigid attachments.

PROVEN PERFORMANCE

In laboratory tests, double armored electromechanical cables have failed under severe bend conditions in about 5,000 cycles (less than 24 hours of continuous flexing). With an EVERFLEX™ Bending Strain Relief, under identical loading conditions, the cable life exceeded one half million cycles.

EVERFLEX™ Bending Strain Reliefs are used in numerous operational systems by the U.S. Navy and in offshore petroleum and oceanographic applications for fixed, towed, and moored platform systems.

EASY INSTALLATION

Installation is quick and easy. Just slide the EVERFLEX™ Bending Strain Relief over the cable to the point of application and secure with the appropriate adaptor. Standard adaptors include an internally threaded sleeve coupling and modified pipe flange mounting ring.

DESIGNED FOR MARINE USE

The EVERFLEX™ Bending Strain Relief is made of cast polyether-based polyurethane, which encapsulates helically formed steel stiffening and reinforcing rods. The encapsulated rods are isolated from seawater and protected from corrosion.

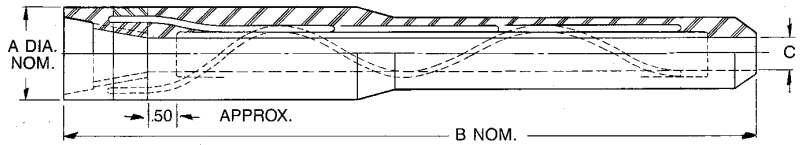
The polyurethane is tough, flexible, cold flow resistant, has high tensile strength, and a Shore A hardness of about 80. It has uniform characteristics over a wide temperature range, so you can count on flexibility regardless of ambient water temperature. In fact, the useful temperature range extends from well below zero to about 300 degrees Fahrenheit.



EVERFLEX™ Bending Strain Relief

DEF SERIES (for use with DYNA-GRIP®, EVERGRIP™, and FARMOR™ Terminations)

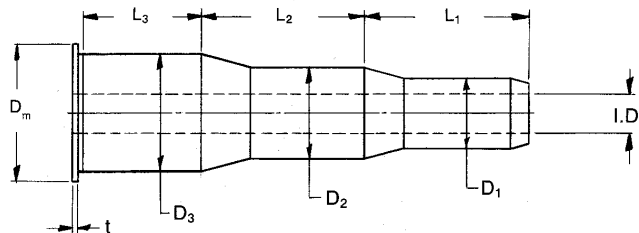
DASH No.	APPROX. CABLE DIA. RANGE (in.)		A (in.)	B (in.)	C (in.)
1	0.194	0.244	1.13	8.50	0.41
2	0.245	0.308	1.38	11.00	0.52
3	0.309	0.388	1.88	13.75	0.65
4	0.389	0.487	2.13	17.62	0.81
5	0.488	0.611	2.63	21.75	1.00
6	0.612	0.765	3.38	26.75	1.25
7	0.766	0.957	3.90	38.62	1.50
8	0.958	1.197	4.52	43.25	1.88



900347 SERIES (For Use On Large Cables & Hose Bundles)

Size	Approximate Cable Diameter Range (in.)		ID (in.)	D ₃ (in.)	D ₂ (in.)	D ₁ (in.)	L ₃ (in.)	L ₂ (in.)	L ₁ (in.)	D _m (in.)	t (in.)	Minimum Bend Radius (in.)	Off-Axis Load @ 50° (K-Lbs)
I	0.75	1.12	1.25	5.5	4.0	3.0	11	9	12-18	6.23	0.45	48	1.5
II	1.12	1.75	2.00	7.0	5.5	4.0	14	12	16-24	7.73	0.50	64	3.0
III	1.75	2.50	2.75	9.0	7.0	5.5	18	16	20-30	9.98	0.63	76	5.0
IV	2.50	3.50	3.87	11.5	9.0	7.0	23	20	25-38	12.98	0.83	92	7.0
V	3.50	5.00	5.38	14.0	11.5	9.0	29	25	33-50	15.48	1.00	113	9.0

Metric Conversion: Inches x 25.40 = mm K-lbs x 4.448 = KN



HOW IT WORKS

The EVERFLEX™ Bending Strain Relief is designed to ease the cable transition from flexible to rigid and control bending radius. It is very flexible at the mouth to maintain a gentle contour in the cable as it enters the Bending Strain Relief. Under high loads and large angle deflections, cable bending is controlled by increasing stiffness of heavier sections of the EVERFLEX™ Bending Strain Relief near the rigid attachment point. With an EVERFLEX™ Bending Strain Relief, the point of maximum bending travels along the length of the cable within the Bending Strain Relief as load conditions vary.

This distributes the otherwise localized bending conditions to increase cable life. The EVERFLEX™ Bending Strain Relief is symmetrical in design and omnidirectional in performance. It protects your cable independently of the direction in which off-axis load is applied.

DESIGN AND FLEXIBILITY

By adjusting design parameters including steel rod size, helix angle, helix diameter, number of rods, and layers of rods, the stiffness of the EVERFLEX™ Bending Strain Relief can be tailored to the specific needs of your cable system.

IMPORTANT ORDERING INFORMATION

A special EVERFLEX™ Bending Strain Relief can be custom engineered for your application. For quotation, specify cable or hose bundle outside diameter, construction or type, off-axis load direction and magnitude, minimum bend radius, and any size restrictions. For assistance in selecting correct products contact PMI Industries, Inc. or our sales representatives.

PMI also designs and manufactures all-polyurethane bending strain reliefs for special applications.

