



MULTI-GARD® FIBERGLASS RACEWAY

General Description

Multi-Gard Fiberglass is a multi-cell raceway system for bridge crossing applications consisting of 20' overall lengths of either standard wall, heavy wall or bullet resistant 4" fiberglass outer shell with 3 x 1 1/2" or 4 x 1 1/4" nominal pre-lubed innerducts preinstalled. In addition, fixed bends with "cutthrough" resistant engineered plastic innerducts are available along with many other accessories for terminating, cable pulling, and cable blowing.

Features

- Preinstalled silicone lined PVC innerducts reduce coefficient of friction for easy cable pulling or jetting.
- Anti-reversing gaskets on coupling body allow easy push in hard to pull out sealing system.
- Jettable using high-speed air blowing systems.
- Oring gasket at base of bell reduces risk of water entering system.
- Inward tapering holes on coupling body give quick and easy innerduct alignment.
- Marked innerduct and marked hole on coupling body ensure proper innerduct alignment.
- Couplings in standard and slip sleeve reduce waste.
- Transition adapters to allow transition between different outerducts.
- Deep bell provides strong joint.
- Internal spacers keep innerducts straight.
- Staging materials to job site is simplified.
- Standard Wall .070" provides basic mechanical and UV protection.
- Heavy Wall .090" provides enhanced mechanical protection where physical abuse might be experienced.
- Bullet Resistant .250" provides heavy duty protection.
- Lightweight construction for easy handling.



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20' Overall Length Fiberglass Multi-Cell with Bell

Part No.	Description	Bell (A) Dim.	Outerduct (B)Dim.	Innerduct Dim. O.D.	Innerduct Dim. I.D.	Pkg. Qty	Wt. per 100 ft. (lbs.)
MSSS4S-020	4-Cell Standard .070	4.31	4.14	1.31	1.19	1140'	240
MSSS3S-020	3-Cell Standard .070	4.31	4.14	1.66	1.50	1140'	253
MHSS4S-020	4-Cell	4.39	4.18	1.31	1.19	1140'	338
MHSS3S-020	3-Cell Heavy Wall .090	4.39	4.18	1.66	1.50	1140'	340
MBSS4S-020	4-Cell Bullet Res. .250	5.00	4.25	1.31	1.19	1140'	450
MBSS3S-020	3-Cell Bullet Res. .250	5.00	4.25	1.66	1.50	1140'	450

Standard Multi-Gard supplied with grey and one white tracer innerduct. Add C for multi-colored innerduct (3-cell white/grey/orange) (4-cell white/orange/green/grey)



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Fiberglass Multi-Cell Fixed Bends with Bell

Multi-Gard fixed bends use the same coupling design as straight sections. All bends are provided with engineered plastic innerducts to avoid rope cut-through into adjacent innerducts.

Part No.	Description	Pkg. Qty.	Wt. Ea.
M HN4S	4-cell 1.19 I.D.	*	*
M HN3S	3-cell 1.50 I.D.	*	*

Pos. 1	Pos. 2	Pos. 3 (A)	Pos. 4 Radius	Pos. 5	Pos. 6	Pos. 7
	Outerduct	Degree			Cells	Innerduct
	Outerduct	3 = 11 _				
M = Multi-Cell	S = Standard	5 = 22 _	H = 4ft.	N = 4"	4 = 4-Cell	S = Smooth
	H = Heavy Wall	7 = 45			3 = 3-Cell	
	B = Bullet Res.	9 = 90				

Pkg Qty and Wt ea.

Epoxy Kits

Apply epoxy to plain end and bell before insertion for a water tight joint and to avoid joint pull-out.

Part No.	Description	Pkg. Qty.	Wt. ea.
MA10EK	10 oz. w/ stick	1	1.50
MA30EK	30 oz. w/ stick	1	2.50



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Terminators Fiberglass Multi-Cell

Termination kits allow for sealing inner and outerducts. Each kit contains innerduct sealing plugs with tie rope. Standard terminators allow for end terminations.

Part No. 4-Cell	Part No. 3-Cell	Description	Pkg. Qty.	Wt. ea.
MXT14	MXT13	Terminator	1	1.5

Product	Outerduct	Description	Type	Cells
Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
M = Multi-Cell	X = Standard	T = Terminator	1 = Standard w/ plugs	3 = 3-Cell 4 = 4-Cell

Couplings Fiberglass Multi-Cell

Couplings are provided in standard sleeve for joining two uninstalled plain ends and slip couplings for repair of unoccupied Multi-Gard.

Part No. 4-Cell	Part No. 3-Cell	Description	Pkg. Qty.	Wt. ea.
M CC4	M CC3	Standard Sleeve Coupling	*	*
M SC4	M SC3	Slip Coupling	*	*

Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
M = Multi-Cell	S = Std. wall .070 H = Hvy. wall .090 B = B. res. .250	C = Standard S = Slip	C = Coupling	3 = 3-Cell 4 = 4-Cell



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Transition Adaptors

Transition adaptors allow different outerducts to be coupled together while maintaining same innerduct. (See PVC section for transitioning to PVC Multi-Gard.)

Part No.	Description	Pkg. Qty	Wt. ea.
M A	Transition Adaptors	*	*

Product	Outerduct	Outerduct	Cells
Pos. 1	Pos. 2	Pos. 3	Pos. 4
	B = F/G BR		
M = Multi-Cell	H = F/G HW	A = Adapter	R = Galv. Steel
	M = F/G Std.		3 = 3-Cell 4 = 4-Cell

Split Anchor Ring

Use split anchor rings on either side of support anchors to keep Multi-Gard stationary.

Part No.	Description	Pkg. Qty.	Wt. ea.
MSSR	Standard Wall Split Ring	1	.50
MSSRH	Heavy Wall Split Ring	1	.50
MBSSR	Bullet Resistant Split Ring	1	1.75



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Expansion Joints

Expansion Joints allow for thermal expansion and contraction of outerduct. Fiberglass expansion joints are recommended every 150 feet on bridge crossing applications.

Part No.	Description	Pkg. Qty.	Wt. ea.
M EC4	4-Cell 6" Stroke	*	*
M EC3	3-Cell 6" Stroke	*	*

Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos.5
Product	Outerduct			Cells
	S = Standard			
	H = Heavy Wall			
M = Multi-Cell	B = Bullet Res.	E = Expansion	C = Coupling	4 = 4-Cell 3 = 3-Cell
	X = Type C PVC			
	F = Type 40 PVC			

Assembly Instructions

The Multi-Gard Fiberglass system is designed for easy assembly:

1. Place plain end of one 20' section into gasketed coupling body 1/2" to the gasket depth of another 20' section.
2. Check for alignment and apply epoxy to outside of plain end.
3. Push sections together with a firm push by hand until plain end seats fully into belled end.