FIBERGLASS MULTI-GARD® MULTI-CELL RACEWAY



Heavy Wall

Bullet Resistant

Bends

Terminators

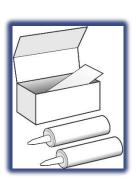
Couplings

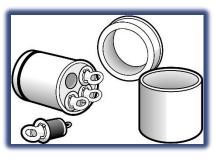
Adapters

Expansion Joints

Epoxy Kits

Spacers







Fiberglass Multi-Gard®

Fiberglass Multi-Gard® is a multi-cell raceway manufactured in 20 ft. lengths with pre-installed, pre-lubricated innerducts. The pre-installed innerduct design feature eliminates the need of pulling innerducts through existing pipe, which saves valuable time and money.

Applications: Outdoor (UV Resistant) Bridge Crossings, Areas

Subject to Physical Damage

Wall Types: Heavy or Bullet Resistant

Innerducts: PVC 3-Way 1-1/2" or 4-Way 1-1/4" Installation



Features:

- Pre-lubricated PVC innerducts reduce coefficient of friction for easy cable pulling.
- Anti-reversing gaskets on coupling body allow easy push in hard to pull out sealing system.
- O-ring 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.
- Deep bell provides strong joint.
- Internal spacers keep innerducts straight.
- Staging materials to job site is simplified.
- Heavy Wall 0.090" provides enhanced mechanical protection where physical abuse might be
- experienced.
- Bullet Resistant 0.250" provides heavy duty protection.
- Lightweight construction for easy handling.

Technical Information:

- Joint Tensile: Approx. 500 lbs. (for reference only)
- 20' overall stick length

Assembly Instructions:

- 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.



Fiberglass Multi-Gard®

20' Lay Length Fiberglass Multi-Gard with Bell End



Part No.	Description	Wall Thickness	Bell O.D. (A)	Outerduct O.D. (B)	Innerduct O.D.	Innerduct I.D.	Pkg. Qty.	Wt. per 100 ft.
MHSS4S-020	4-Way Heavy Wall	0.10	4.44	4.20	1.31	1.19	1140'	338
MHSS3S-020	3-Way Heavy Wall	0.10	4.44	4.20	1.66	1.50	1140'	340
MBSS4S-020	4-Way Bullet Res.	0.25	5.02	4.50	1.31	1.19	1140'	450
MBSS3S-020	3-Way Bullet Res.	0.25	5.02	4.50	1.66	1.50	1140'	450

Custom Orders: * Custom innerduct colors available upon request * Minimum order quantity required * Custom orders non-returnable, non-refundable and non-cancelable

Fiberglass Fixed Bends with Bell

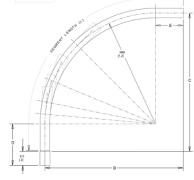
Multi-Gard fixed bends use the same coupling design as straight sections. All bends are provided with engineered plastic innerducts to avoid rope cut-through into adjacent innerducts..

Pos. 1 Product	Position 2 Outerduct	Pos. 3 Degree	Pos. 4 Radius	Pos. 5 O.D.	Pos. 6 Innerduct	Pos. 7 Innerduct Wall Type
M = Multi-Cell	H = Heavy Wall	3 = 11¼°	H = 4 ft.	N = 4"	4 = 4-Way	S = Smooth
	B = Bullet Res.	5 = 22 ½ °			3 = 3-Way	ļ s

7 = 45° 9 = 90°

Part Number Example: MH7HN4S

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Position:	1	2	3	4	5	6	7
Example:	М	Н	7	Н	N	4	S
Description:	Multi-Cell	Heavy Wall	45°	4 ft.	4"	4-Way	Smooth

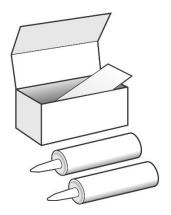


Epoxy Kits

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.
MA30EK	300 ml w/mixing tip	1	2.5

Pipe Size	# Joints per 300 ml Kit
2"	30
3"	24
4"	18
5"	12
6"	10



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Terminators

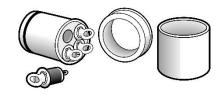
Termination kits allow for sealing inner and outerducts. Each kit contains innerduct sealing plugs with tie rope. Standard terminators allow for end termination.

Pos. 1 Product	Position 2 Outerduct	Pos. 3 Description	Pos. 4 Type	Pos. 5 Innerduct
M = Multi-Cell	X = Standard	T = Terminator	1 = Standard with Plugs	4 = 4-Way

3 = 3-Way

Part Number Example: MXT14

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Position:	1	2	3	4	5	
Example:	М	Х	Т	1	4	
Description:	Multi-Cell	Standard	Terminator	Std. w/Plugs	4-Way	

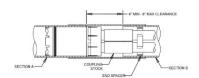


Couplings

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

Pos. 1 Product	Position 2 Outerduct	Pos. 3 Description	Pos. 4 Type	Pos. 5 Innerduct
M = Multi-Cell	H = Heavy Wall	C= Standard	C = Coupling	4 = 4-Way
	B = Bullet Resistant	S = Slip		3 = 3-Way

Fiberglass Slip Coupling



Part Number Example: MHCC4

Position:	1	2	3	4	5
Example:	М	Н	S	С	4
Description:	Multi-Cell	Heavy Wall	Slip	Coupling	4-Way

Transition Adapters

Transition adaptors (spigot to spigot) allow different outerducts to be coupled together while maintaining same innerduct. Part numbers configured from smaller duct to larger duct. (See PVC section for additional options.)

Pos. 1 Product	Position 2 Outerduct	Pos. 3 Description	Pos. 4 Outerduct	Pos. 5 Innerducts
M = Multi-Cell	X = Type C	A = Adapter	B = F/G BR	3 = 3-Way
'-	F = Type 40		H = F/G HW	4 = 4-Way
	D = Type 80		R = Galv. Steel	
	B = F/G BR			•

MA ADAPTER

MA ADAPTER

COUPLING BLEEVES

BULLT OR HEAVY
FERFOLASS MULTI-0440

Part Number Example: MXAD4

rait Number Example. MAAD4						
Position:	1	2	3	4	5	
Example:	М	Х	Α	В	4	
Description:	Multi-Cell	Type C	Adapter	FG BR	4-Way	

Spare Spacers

Part Number:	Description:
MAES4	4-Way End Spacers
MAES3	3-Way End Spacers

H = F/G HW





^{*}Not every combination is available. Contact your sales representative for details.

Fiberglass Multi-Gard®

Expansion Joints

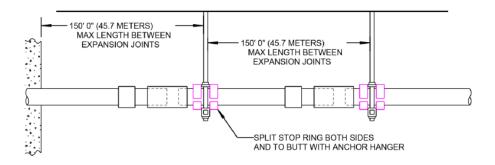
Expansion joints allow for thermal expansion and contraction of outerduct. Fiberglass expansion joints are recommended every 150 feet on bridge crossing applications.

- Must use split stop rings with expansion joints.
- Expansion joints are not required in underground applications.

Pos. 1 Product	Position 2 Outerduct	Pos. 3 Description	Pos. 4 Type	Pos. 5 Innerduct
M = Multi-Cell	H = Heavy Wall	E = Expansion	C = Coupling	4 = 4-Way
	B = Bullet Resistant			3 = 3-Way

Part Number Example: MHEC4

Position:	1	2	3	4	5
Example:	М	Н	E	С	4
Description:	Multi-Cell	Heavy Wall	Expansion Joint	Coupling	4-Way



Split Stop Ring

Use split stop rings on either side of support anchors to keep Multi-Gard stationary. *Must use Split Stop Rings with Expansion Joints.

Part Number:	Description:	
MSSRH	Heavy Wall Split Stop Ring	
MBSSR	Bullet Resistant Split Stop Ring	

