MST BAR
MAXIMUM STRENGTH GFRP

Go Verticals with MST-BAR™

Reinforce your walls with the best premium Fiberglass rebar which result in lower crack width, lower cost, stronger wall & corrosion free wall.

- ✓ **ASTM D7957**
- ✓ **CSA S807-19**
- ✓ **ACI 440**
- ✓ **ICC- ESR #4664**

Manufactured with long-lasting Vinyl Ester Resin and corrosion-proof Glass to reinforce your concrete with a superior grade, code approved reinforcement.

- **Rust-Proof**
  Eliminates spalling and corrosion cracks.
- **200+ Years Service Life**
  Engineered to last for generations.
- **Quick & Simple Installation**
  Up to 50% labor savings compared to traditional steel rebar.
- **Transportation Savings**
  75% lighter than traditional steel rebar. Load on your truck's ladder rack, no Class-A CDL required.
- **High Performance in All Climates**
  Stronger reinforcement in freeze-thaw regions and guaranteed longevity in corrosive coastal regions.
- **No Waterproofing**
  Eliminates need for costly waterproofing agents and epoxy coating necessitated by rust-prone steel rebar.
- **Stronger Than Steel**
  Over 4X stronger than Grade 40 rebar.
- **Nonconductive & Nonferrous**
  Ideal for projects with electromagnetic sensitivity.
- **Superior Crack Control**
  80% less crack initiation compared to traditional steel rebar.
- **Chemical Resistant**
  Impervious to de-icing salts and other chemicals.

B&B FRP MANUFACTURING INC.
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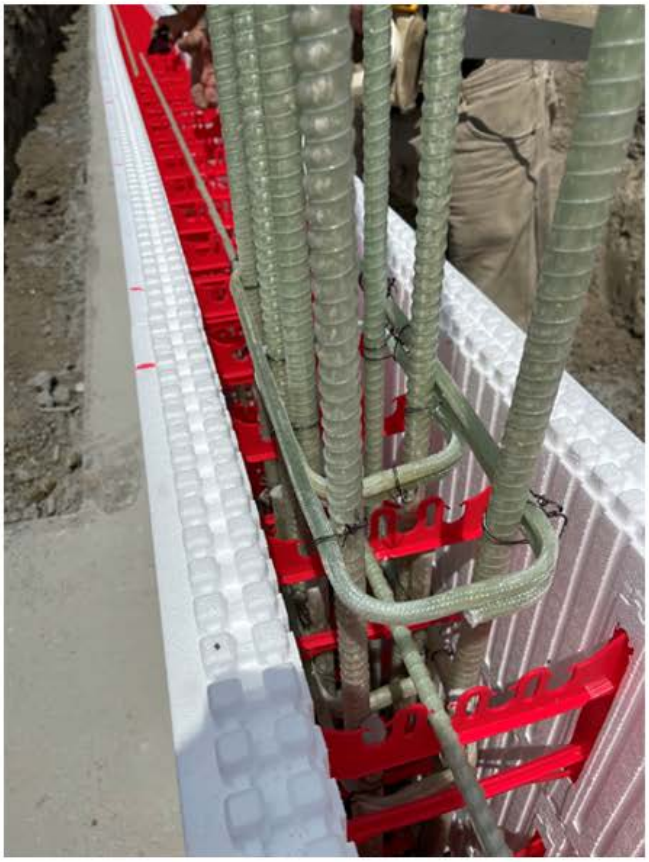
MST-BAR For Walls



PHYSICAL & MECHANICAL PROPERTIES

Nominal Bar Dimensions	10M,13M,15M,20M- 20 ft (6.09 m) Length
Nominal Cross-Sectional Area	71 mm^2, 129 mm^2, 200 mm^2, 284 mm^2
Bar Composition	Vinyl Ester Resin & ECR Glass Fiber
Bar Profile	Integral Rib Design (No Sand-Coating Required)
Guaranteed Tensile Strength	145 ksi (1000 MPa)
Elastic Modulus	8700 ksi (60 GPa)
Transverse Shear Strength	29 ksi (200 MPa)
Guaranteed Pull-Out Capacity	2900 psi (20 MPa)

ASTM D7957 | ACI 440.6 | CSA S807

HANDLING & INSTALLATION

Working with MST-BAR™ is quick and simple with our best practice guidelines.

Always wear gloves when handling MST-BAR™ to protect against iberglass splinters. Direct contact to skin can cause irritation.

Use a diamond blade when ield-cutting MST-BAR™. Do not shear the bars.

If lap-splicing is necessary, use contact lap splices. Lap length should be no less than 15 inches.

Tie and chair MST-BAR™ as you would steel rebar. Tie wire, rebar clips, and plastic zipties are acceptable methods of securing the bar.

Beware of settlement of floating when using MST-BAR™ with high slump concrete or when vibrating.

MST-BAR™ For Walls

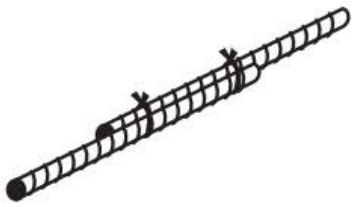
Minimum horizontal and vertical reinforcement reinforced with MST-BAR

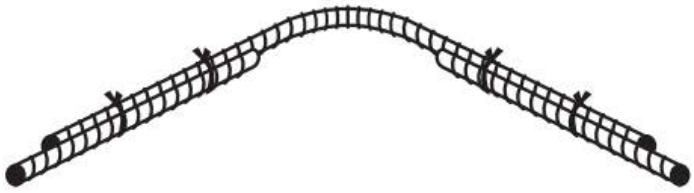
Wall Height m (ft)	Backfill Height m (ft)	Vertical GFRP GFRP MST-BAR GIII (60 GPa-1000 MPa) Reinforcement			Horizontal GFRP MST-BAR GIII Reinforcement
		Wall Thickness 150 mm (6")	Wall Thickness 200 mm (8")	Wall Thickness 250 mm (10")	Wall Thickness 150 mm (6"), 200 mm (8"), 250 mm (10")
2.44 (8)	1.22(4)	15M @ 250 (10)	15M @ 300 (12)	15M @ 300 (12)	For 150 mm (6") Wall: 10M @ 300 (12) For 200 mm (8") Wall: 10M @ 300 (12) For 250 mm (10") Wall: 10M @ 300 (12)
	1.53(5)	15M @ 200 (8)	15M @ 300 (12)	15M @ 300 (12)	
	1.83(6)	15M @ 150 (6)	15M @ 250 (10)	15M @ 300 (12)	
	2.13(7)		15M @ 250 (10)	15M @ 300 (12)	
	2.44(8)	-	15M @ 250 (10)	15M @ 250 (10)	
2.74 (9)	1.22(4)	15M @ 250 (10)	15M @ 300 (12)	15M @ 300 (12)	10M @ 300 (12)
	1.53(5)	15M @ 250 (10)	15M @ 300 (12)	15M @ 300 (12)	10M @ 300 (12)
	1.83(6)	15M @ 150 (6)	15M @ 250 (10)	15M @ 300 (12)	10M @ 300 (12)
	2.13(7)	-	15M @ 250 (10)	15M @ 300 (12)	10M @ 300 (12)
	2.44(8)	-	15M @ 200 (8)	15M @ 250 (10)	10M @ 300 (12)
	2.74(9)	-	15M @ 200 (8)	15M @ 250 (10)	10M @ 300 (12)
3.05 (10)	1.22(4)	15M @ 250 (10)	15M @ 300 (12)	15M @ 300 (12)	10M @ 300 (12)
	1.53(5)	15M @ 250 (10)	15M @ 300 (12)	15M @ 300 (12)	10M @ 300 (12)
	1.83(6)	15M @ 150 (6)	15M @ 250 (10)	15M @ 300 (12)	10M @ 300 (12)
	2.13(7)	-	15M @ 250 (10)	15M @ 300 (12)	10M @ 300 (12)
	2.44(8)	-	15M @ 200 (8)	15M @ 250 (10)	10M @ 300 (12)
	2.74(9)	-	15M @ 200 (8)	15M @ 250 (10)	10M @ 300 (12)
	3.05(10)	-	20M @ 200 (8)	20M @ 250 (10)	10M @ 300 (12)

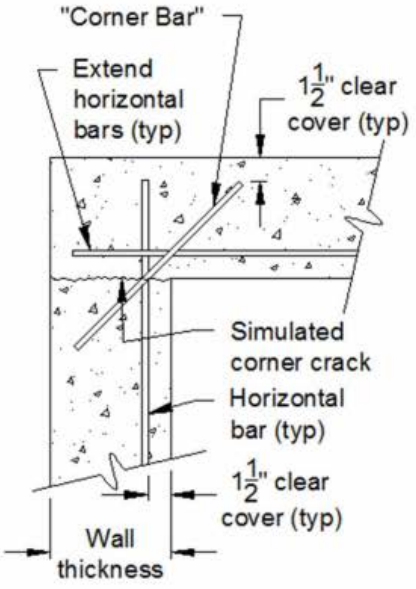
MST-BAR™ For Walls

Splices and Corners

Overlap 40 bar diameters.







Alternative Innovative Corner Support (AICS)

1.This table is to be used in conjunction with "Design Limitations" prepared by B&B FRP MFG. with high-quality MST-BAR .
2.As per table 9.15.4.2 A of the National Building Code for the wall and backfill height noted, an unreinforced wall with f'c = 25 MPa is adequate when supporting wood framing above.
3.Contractor should follow the sequences after curing the concrete, finish the top of the wall framing, then backfills.
4.Refer to Design Limitations for information on construction methods, material specifications, design loads, additional wall reinforcing around the opening, min. length ,etc.