

blackbends™

Durable Fiberglass Rebar

Blackbends™ are corrosion-free, precision-formed GFRP bends for large, industrial, and infrastructure projects where code-compliant reinforcement is essential. Made in the USA and fully Build America, Buy America (BABA) compliant, they are available in standard stock L-Bend sizes and a wide range of made-to-order shapes – including U-Bars, stirrups, hooks, and pile cages – for design flexibility. Ready to install without the delays or risks associated with field bending of steel, Blackbends™ save labor, reduce on-site errors, and deliver lightweight, rustproof, UV-resistant performance for demanding concrete structures.

Build Stronger. Faster. **Better.**

distributed by

PARADIGM INNOVATIVE COMPOSITES

Trusted Performance & Formed to Last

Blackbends™ deliver the same corrosion-free reliability as our straight bars. Lightweight and easy to handle, they provide labor savings, speed up placement, and reduce installation errors. With available standard stock L-Bend sizes and a wide range of made-to-order shapes for complex reinforcement needs, Blackbends™ keep projects efficient, on schedule, and built to last.



Meets or Exceeds Standards

Blackbends™ are engineered and independently tested to meet or exceed industry standards, codes, and specifications for GFRP reinforcement. Factory-formed to ACI and ASTM guidance, with strength adjustments built into the design, they deliver reliable, code-compliant performance you can trust across large industrial, and infrastructure applications.

MATERIAL STANDARDS: ASTM D7957, ASTM D8505 and CSA-S807 Grade III

RESIDENTIAL & COMMERCIAL CONCRETE: ICC EER-5548, ICC ESR-5548, ACI 117, ACI 332 & ACI 440.11

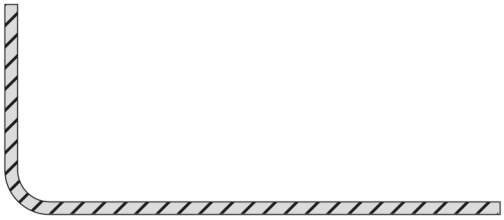
MASONRY: TMS 402/602-22

Standard Stock Bends & Applications

Blackbends™ are available in stocked 90° L-Bend sizes, providing a dependable, ready-to-install solution. These stocked bends simplify planning and speed up installation where Mateenbar60™ is specified. For more complex layouts, a wide range of made-to-order shapes – including U-Bars, stirrups, hooks, and pile cages – ensures flexibility and dependable performance in higher-load applications and demanding project environments.

APPLICATIONS: Bridge decks & traffic barriers • Seawalls, piles, and coastal structures • Stadiums & data centers • Multi-story columns & beams • Commercial foundations & wall panels • Power plant facilities • Rail & transit infrastructure

90° Bends



BAR SIZE	DESCRIPTION
#3	24” x 24”
#5	36” x 36”

1. All bends are packaged in bundles of 20, with 500 bends per pallet for ease of handling, storage, and transport.
2. Blackbends™ available in sizes #3 - #8.

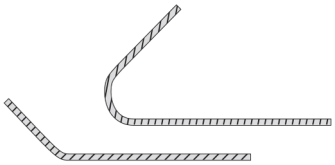
Blackbends™ Technical Data

BAR NUMBER	NOMINAL DIAMETER		GUARANTEED TENSILE FORCE		ELASTIC MODULUS		GUARANTEED TRANSVERSE SHEAR CAPACITY		WEIGHT	NOMINAL CROSS-SECTIONAL AREA		OUTER DIAMETER (INCLUDING RIBS)	
	mm	in	kN	kip	GPa	ksi	MPa	ksi	lb/ft	mm^2	in^2	mm	in
#3 / M10	9.5	0.375	71	16.0	50	7250	180	26.1	0.121	71	0.110	10.0	0.394
#4 / M13	12.7	0.500	124	27.9	50	7250	180	26.1	0.210	129	0.200	14.0	0.551
#5 / M16	15.9	0.625	181.5	40.8	50	7250	180	26.1	0.289	199	0.310	16.0	0.630
#6 / M19	19.1	0.750	254.9	57.3	50	7250	180	26.1	0.423	284	0.440	20.0 22.0 25.0	0.787
#7 / M22	22.2	0.875	337.2	75.8	50	7250	180	26.1	0.535	387	0.600		0.866
#8 / M25	25.4	1.000	422.1	94.9	50	7250	180	26.1	0.695	510	0.790		0.984

1. Primary materials: vinylester and corrosion resistant E-CR glass.
2. Bond strength exceeds ASTM D7957 and D8505.
3. For details on Greenbar2X®, Mateenbar60™ and any related bends product, refer to those specific product brochures.

Made-to-order BlackBends™

+/- 90° Bends



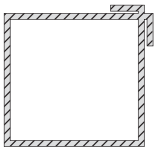
Stirrups



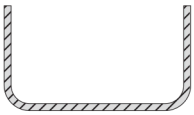
Large Radius



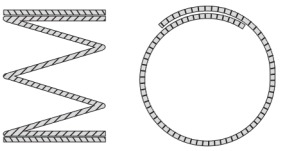
Squares with Overlap



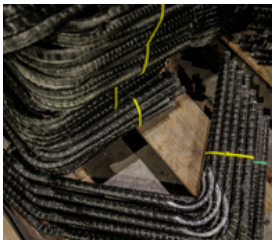
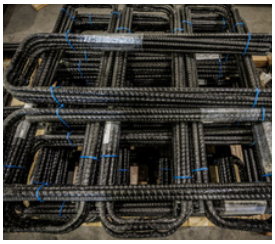
U/C Shapes



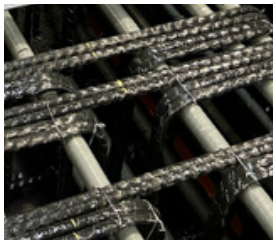
Spirals & Hoops



1. Lead time for made-to-order bends will be determined once the final bar is approved.
2. Made-to-order Blackbends™ require a minimum order of 500 pieces.
3. Additional quantities do not need to be in 500-piece increments.





Get Blackbends at Paradigm:

Mateenbar Composite Reinforcements, LLC.
2011 Highway 49, Concord NC, USA, 28027
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mateenbar
Leading the World in Durable Fiberglass Rebar

Made in the USA with local & global materials

Over 30 Years
Proven Global Service

BUILD AMERICA BUY AMERICA COMPLIANT

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