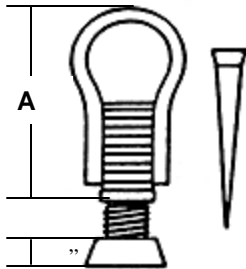


Met-Rak Bridge Hardware

I – Concrete Inserts and Anchors

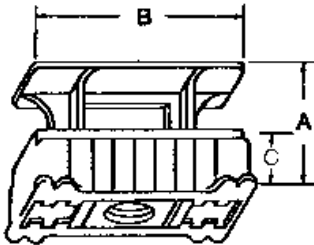
Loop Type Concrete Insert Sets



For installation in bridge deck prior to pouring concrete. Loop accommodates re-bars for added strength. Threaded for 1/2 or 3/4 NC bolts. Insert ultimate capacity - 8000#. Set includes insert, setting plug and cut nail.

Code Number	Thread Size (in.)	Mtl.	Thread Depth (in.)	Height A	Weight Each (lbs.)	Std. Pkg.
110000	1/2	Galv.	1 1/4	2 "	.6	50
110001	1/2	Stainless	1 1/4	2 "	.6	50
110003	3/4	Galv.	1	3 "	.7	50
110004	3/4	Stainless	1	3 "	.7	50
110002		Galv.	1 1/4	3 "	.7	50

Adjustable Concrete Insert



Zinc plated body and nut. Permits up to 1 3/4" lateral adjustment by raising nut in body and moving to proper alignment.

Code Number	Thread Size	A (in.)	B (in.)	C (in.)	Load Rating (lbs.)	Weight Each (lbs.)	Std. Pkg.
110008	1/2	2 1/2	3	13/16	1130	1.3	50
110009	3/4	2 1/2	3	11/16	1550	1.4	50

Pre-drilled Concrete Anchor

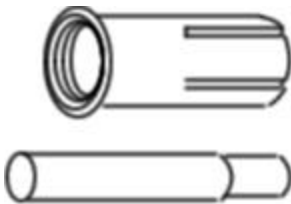


Requires pre-drilled hole with carbide-tip drill. Zinc Chromate coated. Use Hammer Drill (Code Number 110099) for easy installation.

Code Number	Thread Size (in.)	Thread Depth (in.)	Pullout* Strength	Depth in Concrete (in.)	Drill Size (in.)	Std. Pkg.
110105	1/2	23/32	6,800	2 1/16	11/16	50
110107	3/4	1	15,500	3 1/16	1	50

* In 3500 PSI Concrete

Drop-in Concrete Anchor



Pre-assembled plug - won't fall out in shipment. Can be installed flush in a hole of any depth. Zinc Chromate finish.

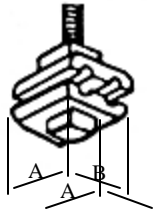
Code Number	Thread Size (in.)	Thread Depth (in.)	Pullout* Strength	Drill Depth (in.)	Drill Size (in.)	Std. Pkg.
110110	1/2	3/4	5450 lbs.	1 3/4		100
110111	3/4	1 1/4	9225 lbs.	2 1/2	1	100

One setting tool furnished with each 100 pieces

* In 3500 PSI Concrete

II – Strand Clamps

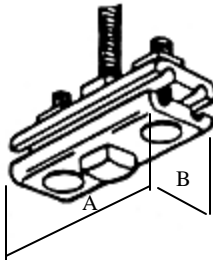
One Bolt Guy Clamp



Hot dipped galvanized clamp. File suspension strands from 3/16" to 7/16" thick. 1/2" x 1 1/2" galvanized bolt, nut, flat and lock washers for attachment to intermediate Metra Met-Rak brace member.

Code Number	Weight Each	Length A	Width B	Std. Pkg.
110016	67#	1 1/2"	1 9/16	100

Three Bolt Guy Clamp



For terminating suspension strands on Metra Met-Rak brace members. Hot dipped galvanized body and bolts. Includes 1/2" x 4 1/2" attachment bolt, which can also be used to attach angle brace. Accommodates 3/16" to 7/16" strand.

Code Number	Length A	Width B	Weight Each	Std. Pkg.
110018	6"	1 9/16	2 1/4#	25

III – Beam Clamps



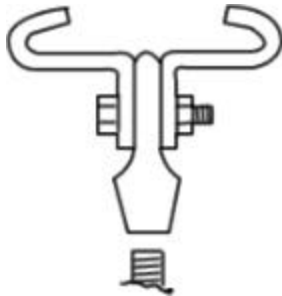
Galvanized steel with hardened steel set screw and lock nut for extra security. For mounting Met-Rak on steel bridge members.

Attachment Bolt



Code Number	Attachment Bolt Size	Dimension A	Dimension B	Load Capacity	Weight Each	Std. Pkg.
110020	1/2"	3/4"	3/4"	380#	.4#	50
110021	3/4"	3/4"	3/4"	630#	.7#	50

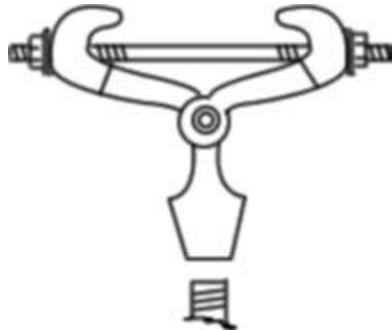
Heavy Duty I-Beam Clamp



Plated 1/4" thick clamp with plated malleable iron socket for flanges up to 12" wide. State flange width and thickness.

Code Number	Socket Thread Size	Flange Width	Load Capacity (lbs.)	Weight Each (lbs.)	Std. Pkg.
110025	1/2"	5 1/2" - 6"	610	1.6	10
110026	3/4"	5 1/2" - 6"	1450	1.8	10

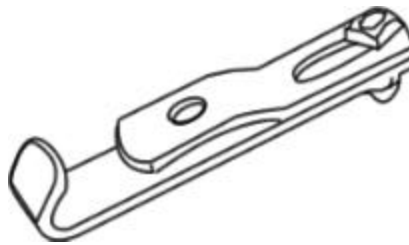
Adjustable I-Beam Clamp



Plated malleable iron clamp and socket.
Plated steel tie rod and nuts. Adjusts to fit
beams from 3" to 7".

Code Number	Socket Thread Size (in.)	A Dimension		Load Rating (lbs.)	Weight Each (lbs.)	Std. Pkg.
		Min.	Max.			
11030	1/2	3 7/16	5 1/16	610	2.0	10
110031	3/4	3 3/16	5 7/16	1290	2.2	10

Adjustable Side Beam Clamp



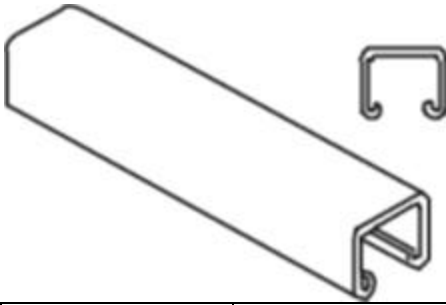
Positions the 3/4" Met-Rak attachment bolts close to the bridge I-beam. Adjustable to fit various beam flange widths and thicknesses. Standard Package 10 pieces - hot dipped galvanized or 316 stainless steel.

Code Number	Material	Flange Width (in.)	Max Flange Thickness (in.)	Approx. Wt.(lbs.) C/Pcs.
110080	Galv.	3 - 4 1/2	1/2	373
110081	316 SS	3 - 4 1/2	1/2	373
110082	Galv.	4 - 6	11/16	434
110083	316 SS	4 - 6	11/16	434
110084	Galv.	6 - 7 1/2	3/4	466

110085	316 SS	6 - 7 ½	¾	466
110086	Galv.	7 - 9	15/16	502
110087	316 SS	7 - 9	15/16	502

IV – Angle Bracing Hardware

Met-Rak Angle Braces (Galvanized)

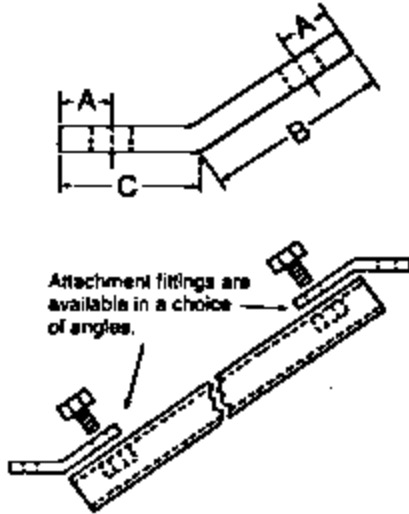


Available in 10' and 20' standard lengths and can be cut to length in field or ordered to exact required length from factory. Requires spring load nut and angle fitting.

Code Number	Wall Thickness (in.)	Width (in.)	Height (in.)	Typ. Design Load - 3' Length
110090	.105	1	1	8.770
110091	.060	1	1	3.630

Note: Available in 304 Stainless on Special Order

Angular Fittings



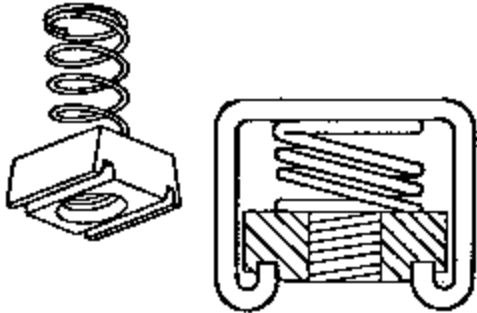
Galvanized - For attaching angle braces to Met-Rak and bridge deck or bridge members. 1" wide x 1/4" thick. Stainless angle fittings available on special order.

Code Number	Angle (Degrees)	Angle A (in.)	Dimensions B (in.)	(Inches) C	Hole Size*	Std. Pkg.
110035	45	1 1/16	3	2 5/16	9/16	20
110036	37½	1 1/16	2	2 11/16	9/16	20
110037	30	1 1/16	3 ¼	2 1/16	9/16	25
110038	22½	1 1/16	3 5/16	2 1/16	9/16	25
110039	15	1 1/16	3 5/16	2 1/16	9/16	25

Hex Head Bolts - For attaching angle braces - galvanized

Code Number	Size	Thread	Length	Wt. C/Pcs.
110045	½"	13-NC	15/16"	9.1

Spring Load Nuts

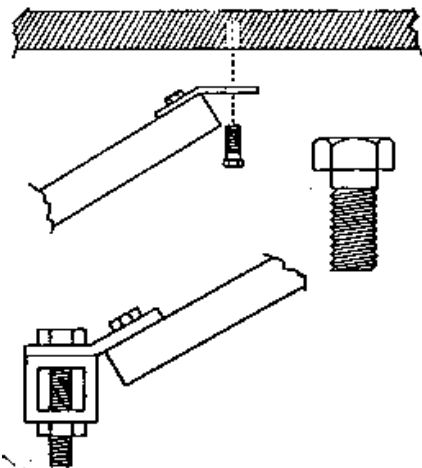


For use in continuous concrete inserts and angle braces. Galvanized mild steel and case hardened. Also available without spring if specified.

Code Number	Thread Size (in.)	NC Thread Count	Weight C/Pcs.	Design Torque	Std. Pkg.
110050	1/2	13	12	50	100
110051	3/4	10	21	50	100
110052*	1/2	13	12	50	100

*Stainless Steel - Available on special order

Hex Head Bolts, Nuts & Washers



For mounting angular fittings to bridge deck and to brace member of Met-Rak. Plated.

Code Number	Size (in.)	NC Thread	Bolt Length (in.)	Weight C/Pcs.	Application
10060	1/2	13	4 1/2	50.4	Met-Rak
110061*	1/2	13	1 3/16	10.2	Concr. Insert
110062*	3/4	10	2	30.7	Concr. Insert
110063*	3/4	10	1 1/2	29.7	Concr. Insert

*These do not include nuts and washers.