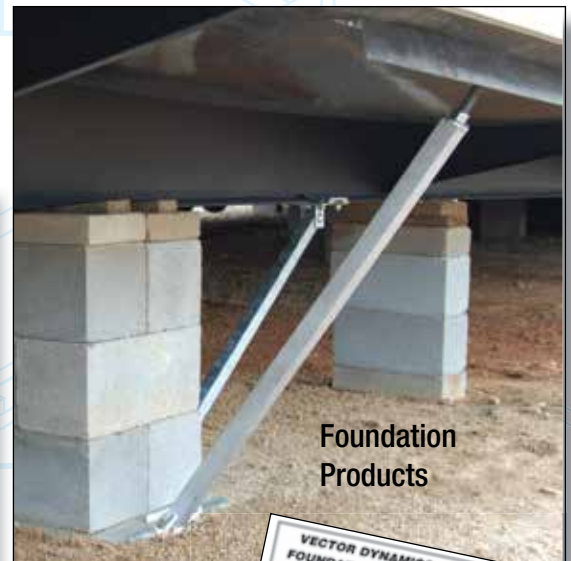




Manufactured Housing Products Catalog



Wind Tests in Excess of 100 mph.



Foundation Products

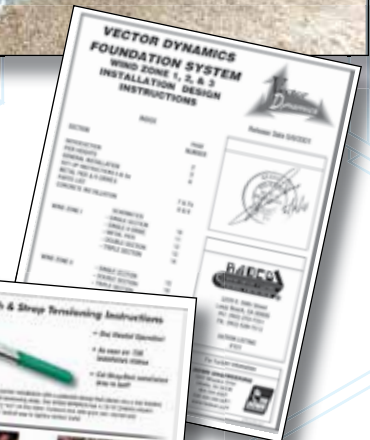
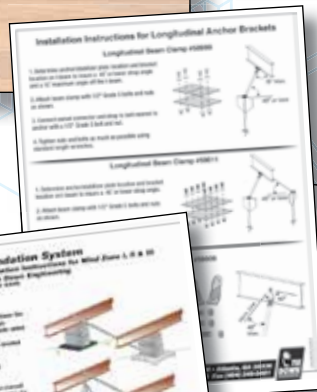
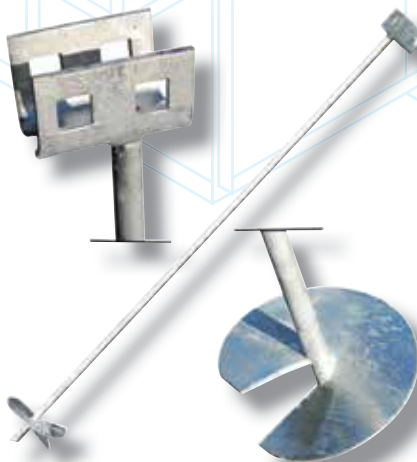
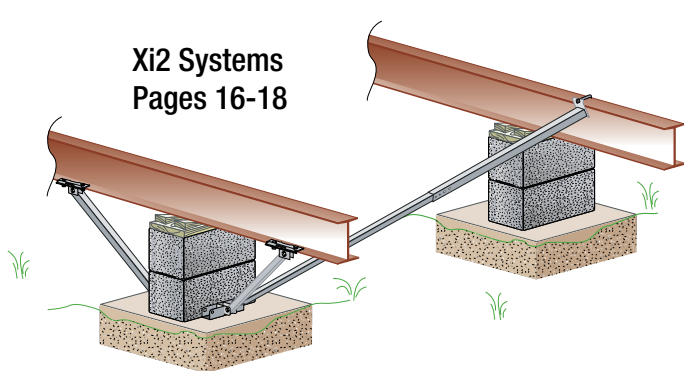
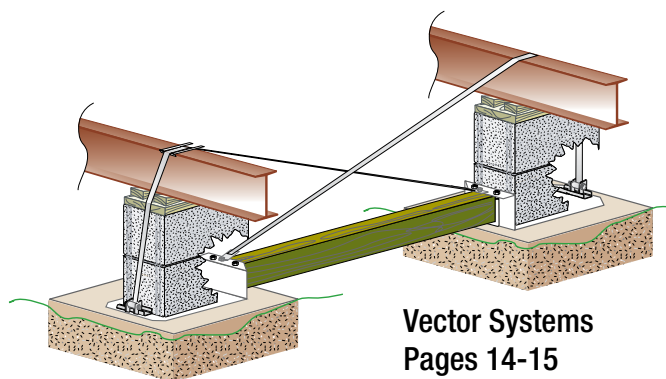


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Xi2 Systems
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Manufactured Housing Division
TIE DOWN ENGINEERING

www.tiedown.com

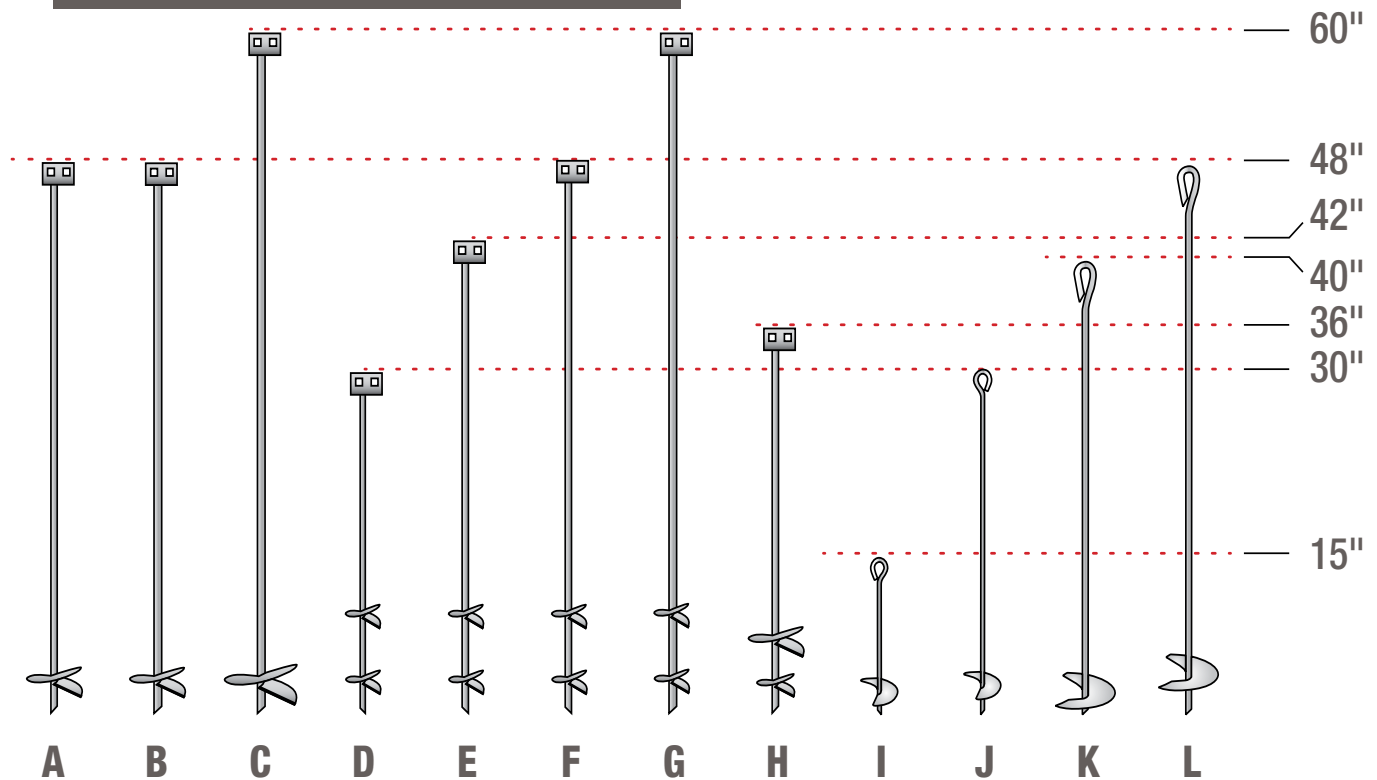
255 Villanova Dr. SW • Atlanta, Georgia 30336
800-241-1806 • (404) 344-0000 • Fax (404) 349-0401

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All manufactured housing anchors are tested to HUD Regulation 3280 to withstand a working load of 3,150 lbs. and ultimate load of 4,725 lbs. in their tested soil class.



Iron Root Double Head Manufactured Home Earth Anchors*

#	Description	Black Paint	Galvanized ¹
A	Model MI2H5/8 with 5/8" rod, 48" long, 6" helix, Class 4A	#59080	#59081
B	Model MI2H3/4 with 3/4" rod, 48" long, 6" helix, Class 4A	#59085	#59094
C	Model M607 with 3/4" rod, 60" long, 7" helix, Class 4B	N/A	#59099

Iron Root Double Head Double Helix Manufactured Home Earth Anchors*

#	Description	Black Paint	Galvanized ¹
D	Model MI225/8 with 5/8" rod, 30" long, 2 - 4" helix, Class 2	#59090	#59078
D	Model MI223/4 with 3/4" rod, 30" long, 2 - 4" helix, Class 2	#59095	#59079
E	Model MI423/4 with 3/4" rod, 42" long, 2 - 4" helix, Class 4A	#59128	#59128G
F	Model MI483/4 with 3/4" rod, 48" long, 2 - 4" helix, Class 4A	#59086	#59086G
G	Model MI603/4 with 3/4" rod, 60" long, 2 - 4" helix, Class 2	#59097	#59097G
H	Model MI2H64 with 3/4" rod, 36" long, 4" & 6" helix, Class 4A	#59250	#59250G

Eye Anchors*

#	Description	Black Paint	Galvanized ¹
I	15" long with 1/2" rod, 4" helix	#59050	N/A
J	30" long with 1/2" rod, 4" helix	#59055	#59057
K	40" long with 5/8" rod, 6" helix	#59060	#59061
L	48" long with 5/8" rod, 6" helix	#59065	#59064

* Other sizes available

¹ Not all anchors are stocked in galvanized



Deep Set Anchor/Stabilizer

Combines the earth anchor and stabilizer plate into one installation step. Large stabilizing disc 7" x 1-5/8" sets faster in hard ground with 4 digging points.

- Reduces installation time
- Slotted head for easy carry 4 packs
- Less inventory- plate & anchor in one!

30" long with 3/4" rod and 2 - 4" helix, for Soil Class 3
Black Paint Part #59091 Galvanized Part #59091G

36" long with 3/4" rod and 4" & 6" helix, for Soil Class 4A
Black Paint Part #59092 Galvanized Part #59092G



Concrete Anchor w/Threaded Rod

This anchor is designed to be inserted through a 3/4" hole drilled or formed into an existing concrete slab.

Model #MIT2
Black Paint Part #59115
Galvanized Part #59117



J Rod Concrete Anchor

The J Rod Concrete Anchor is designed to be installed into a concrete slab at the time the concrete is being poured.

Model	Black Paint	Galvanized
MIJ2 12" Anchor	#59120	#59121
MIJ2 8" Anchor	#59123	#59123G
MIJ2 12" w/Swivel Head	#59109	#59109G
MIJ2 8" w/Swivel Head	#59147	#59147G



Double Head Anchor with Expansion Bolt

This anchor is designed to be bolted to an expansion sleeve in an existing concrete slab.

Model # MICS2
Black Paint Part #59125
Galvanized Part #59124

Double Head Only

Black Paint Part #59103
Galvanized Part #59104

Single Head Anchor with Expansion Bolt

Black Paint Part #59029

Expansion Bolt Only

Part #2M58SA



Cross Drive Rock Anchor

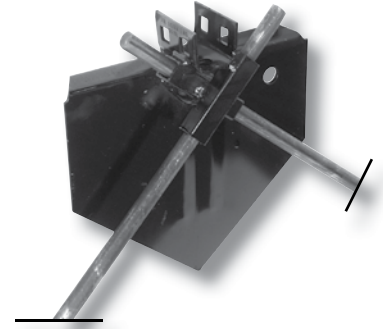
Engineered for installation into solid rock within 1" from bottom of the anchor base. Exact alignment is achieved with the swivel tensioning head.

Model #MRA with 30" rods, for Soil Class 1
Black Paint Part #59110
Galvanized Part #59110G

Model #MRA with 48" rods, for Soil Class 1
Black Paint Part #59111
Galvanized Part #59111G

X-Plate Anchor

Stabilized Cross Drive Anchor For difficult class 2 Soils. 2200 lb. working load at 50 degrees max angle.
Black Paint Part #59118 Galvanized Part #59119



Asphalt Anchor

Black painted asphalt anchor must be installed with hammer drill. Used for horizontal anchorage at a maximum of 50 degrees, not for vertical anchorage.
Part #59367



**All Purpose
15" Anchor Kit**

Eye Anchor Kits
All Purpose Anchor Kit
4 - 15" anchors, 8 - 1/8" galvanized clamps,
50' 1/8" galvanized aircraft cable
Part #59070

Storage Building Anchor Kit
4 - 30" anchors, 8 - 1/8" galvanized clamps,
60' 1/8" galvanized aircraft cable
Part #59075



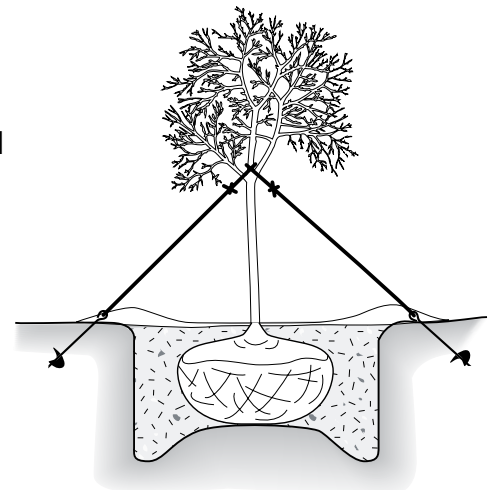
**Storage Building 30"
Anchor Kit**

Tie Down/ArborTie® Anchor Kit

ArborTie® is a revolutionary material for staking and guying trees. Specifically designed to replace traditional methods such as wire and hose, ArborTie® is safe, soft, easy to use and less expensive than traditional tree ties.

Small Tree Anchor Kit Part #59451
(3-15" Eye Anchors with 30' of ArborTie®)

Medium Tree Anchor Kit Part #59452
(3-30" Eye Anchors with 30' of ArborTie®)



Soil/Anchor Classification Chart

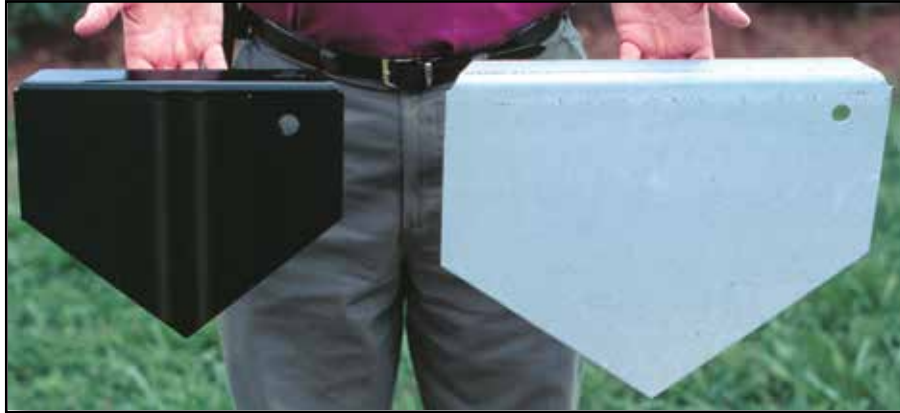
Soil Class & Test Value (in. lbs.)	Recommended Anchor / Stabilizers	Part Number	
		Black	Galvanized
<div style="border: 1px solid black; padding: 5px; display: inline-block; width: 40px; height: 40px; text-align: center; line-height: 40px; font-size: 24px; margin-bottom: 5px;">1</div> N/A	30" Cross Drive Rock Anchor	59110	59110G
	48" Cross Drive Rock Anchor	59111	59111G
<div style="background-color: #2e5496; color: white; padding: 5px; display: inline-block; width: 40px; height: 40px; text-align: center; line-height: 40px; font-size: 24px; margin-bottom: 5px;">2</div> 551 lbs. +	30" X 5/8" rod / 2 - 4" helix	59090	59078
	30" X 3/4" rod / 2 - 4" helix	59095	59079
	60" X 3/4" rod / 2 - 4" helix	59097	59097G
	All anchors above should use one of the following when subjected to lateral loads:		
	12" Stabilizer Plate	59292	59292G
	Quik-Set Stabilization Plate	59291	59291G

	X-Plate Anchor with 2 - 23/32" Rods	59118	59119
<div style="background-color: #ffff00; padding: 5px; display: inline-block; width: 40px; height: 40px; text-align: center; line-height: 40px; font-size: 24px; margin-bottom: 5px;">3</div> 351 to 550 lbs.	48" X 5/8" rod / 1 - 6" helix	59080	59081
	48" X 3/4" rod / 1 - 6" helix	59085	59094
	36" X 3/4" rod / 1 - 6" helix & 1 - 4" helix	59250	59250G
	All anchors above should use one of the following when subjected to lateral loads:		
	12" Stabilizer Plate	59292	59292G
	Quik-Set Stabilization Plate	59291	59291G

	Deepset Anchor 30" X 5/8" rod / 2 - 4" helix	59091	59091G
<div style="background-color: #008000; color: white; padding: 5px; display: inline-block; width: 40px; height: 40px; text-align: center; line-height: 40px; font-size: 24px; margin-bottom: 5px;">4a</div> 276 to 350 lbs.	48" X 5/8" rod / 1 - 6" helix	59080	59081
	48" X 3/4" rod / 1 - 6" helix	59085	59094
	36" X 3/4" rod / 1 - 6" helix & 1 - 4" helix	59250	59250G
	3/4" rod, 42" long, 2 - 4" helix, Class 4A	59128	59128G
	3/4" rod, 48" long, 2 - 4" helix, Class 4A	59086	59086G
	All anchors above should use one of the following when subjected to lateral loads:		
	12" Stabilizer Plate	59292	59292G
	17 -1/2" Stabilizer Plate (Florida Only)	NA	59286
Quik-Set Stabilization Plate	59291	59291G	
ABS Stabilization Plate (Florida Only)	59293	NA	

	Deepset Anchor 36" X 3/4" rod / 4" & 6" helix	59092	59092G
<div style="background-color: #ff0000; color: white; padding: 5px; display: inline-block; width: 40px; height: 40px; text-align: center; line-height: 40px; font-size: 24px; margin-bottom: 5px;">4b</div> 175 to 275 lbs.	60" X 3/4" rod / 1 - 7" helix	NA	59099
	All anchors above should use one of the following when subjected to lateral loads:		
	17 -1/2" Stabilizer Plate	NA	59286
	ABS Stabilization Plate	59293	NA

NOTE: Each State, County or Municipality may require a specific anchor from the groups shown for each soil classification. Check local and State regulations first.



Earth Anchor Stabilizer

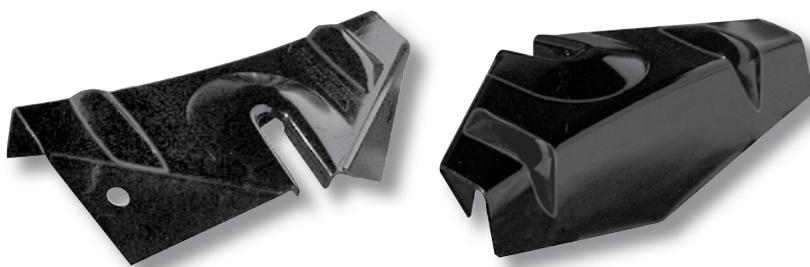
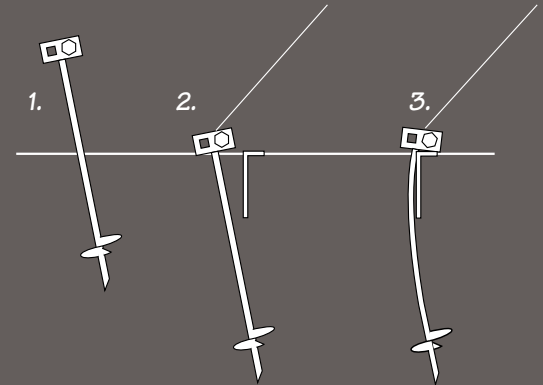
Prevents anchor from slicing through soil laterally in the direction of the frame tie. 12" wide.
Black Paint Part #59292 Galvanized Part #59292G

XL Stabilizer Plate

This plate is required in Florida for installation in Class 4 soils. The plate measures 17.5" x 13.5".
Galvanized Part #59286

Anchor/Stabilizer Installation

1. Position anchor at a slight back angle (10°) so that when fully installed, the anchor head will be inside any skirting or side wall.
2. Install anchor to +/- 2/3 depth, then install stabilizer vertically, within 3"-4" of anchor shaft, parallel to wall of home.
3. Fully drive anchor, attach strap (see proper strap tensioning), and pretension strap to pull anchor rod against the stabilizer plate.



Quik-Set Stabilization Plate

- Sets Quickly
- Requires little or no hammering
- Quick-N-Easy installation, let the Drive Machine do the work
- Inclined steady rest engineered to allow ground anchor to be installed at a slight back angle (10-15 degrees)

Black Paint Part #59291

Galvanized Part #59291G



ABS Stabilizer Plate
Designed for loose soil conditions.
For Class 4 Soils. 10" x 24"
Part #59293

Certified Galvanized Strapping

HUD Code 3280 and 3285(2) require 1-1/4" X .035" or larger steel strapping conforming to ASTM D3953-97, standard specifications for strapping, flat steel and seals. Type 1, Grade 1, Finish B, with a minimum total capacity of 4,725 lbs. and a working capacity of 3,150 lbs. marked every 5 ft. The straps must be provided with protections against weather deterioration and corrosion at least equivalent to that provided by a coating of zinc on steel of not less than .30 oz./ft. of surface coated. Slit or cut edges of coated strapping need not be zinc coated.



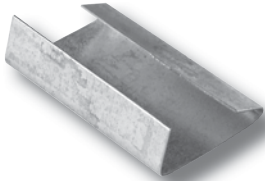
Tie Down Marked & Certified Galvanized Strapping

Galvanized	Part #	Length
G60	59150	35'
G60	59155	37'
G60	59165	60'
G60	59170	600'
G120	59218	37'
G120	59219	600'



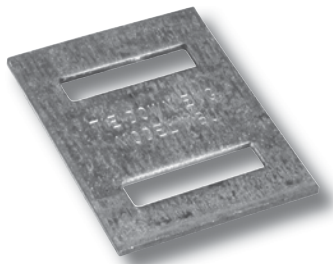
Crimping Tool

Tie Down crimp tools are designed for use with .035 thickness, 1-1/4" wide strap and steel crimp seals. Part #59180



Crimping Seals

Semi-Closed style for ease of use and strong bonds. Fits 1-1/4" strapping. Part #59175



Double Slot Strap Buckle

High strength steel buckle with rust resistant hot dipped galvanized finish. Secures strap around mobile home frame. Part #59140

Swivel Head Bracket
For use with Beam Clamps, Longitudinal Clamps and Vector Foundation Systems. Part #59002



Frame Tie with Hook



For fast and safe installation of frame ties, this heavy duty 1/4" steel hook locks securely onto frame. Certified Galvanized Steel Strapping conforms to NCS BCS A225.1 (ANSI A119.3) and HUD specifications.

Model	Part #	Length
MHT6	59185	6'
MHT7	59190	7'
MHT8	59195	8'
MHT10	59210	10'
MHT12	59211	12'
MHT14	59214	14'
MHT16	59196	16'

Frame Tie with Buckle

For fast & easy installation of frame ties with buckle.

Description	Part #	Length
MBU7	59141	7'
MBU8	59146	8'
MBU10	59138	10'
MBU12	59144	12'
MBU16	59234	16'



Slotted Bolt & Nut

Required for the tensioning of frame or sidewall with all tension head anchors.

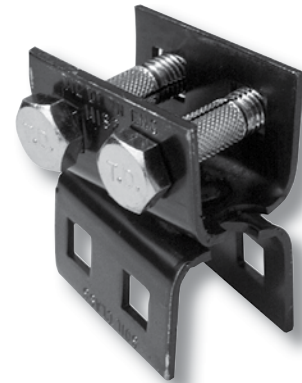
Model #BISB
Part #59135



Double Tension Head

Featured on all tension head anchors. Built tough for maximum tensioning on either frame and/or roof ties. Strap bolts are securely locked every fourth of a turn with the square lock head.

Model #MIDH
Black Paint Part #59100
Galvanized Part #59100G



Swivel Adapter Head

Adapter converts existing eye anchors into tension head anchors. Includes two slotted bolts & nuts.

Model #MIS2
Black Paint Part #59105
Galvanized Part #59106

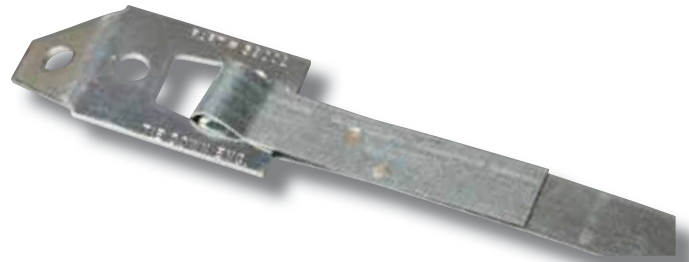
Strap & Hardware

Beam Clamps

For use with Universal & Standard Swivel Strap Connectors



Part #	Size
59003	3" Beam
59004	4" Beam
59005	DBL Beams



G-60 Strap w/ 59002 Swivel Connectors

Zone I & II Longitudinal - Beam Clamp - Vector

Part #59725	5' Strap w/Swivel Connector
Part #59726	6' Strap w/Swivel Connector
Part #59727	7' Strap w/Swivel Connector
Part #59728	8' Strap w/Swivel Connector
Part #59730	10' Strap w/Swivel Connector
Part #59732	12' Strap w/Swivel Connector
Part #59736	16' Strap w/Swivel Connector

Gator Beam Clamps



For attaching strap to I-beam at each end of the home for longitudinal anchors.

4 Bolt Gator Clamp for Zone I and II	Part #58999
8 Bolt Gator Clamp for Zone III and Florida	Part #59011

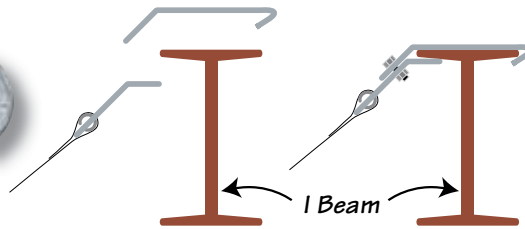
G-120 Strap w/ 59002 Swivel Connectors

Zone III & Florida Longitudinal Beam Clamp - Vector

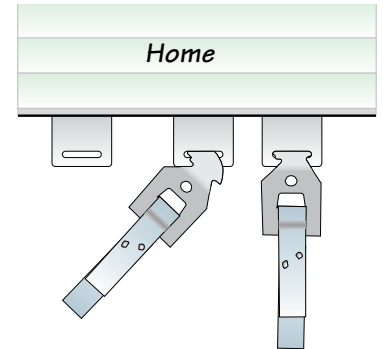
Part #59209V	7' Strap w/Swivel Connector
Part #59213V	8' Strap w/Swivel Connector
Part #59217V	10' Strap w/Swivel Connector
Part #59223V	12' Strap w/Swivel Connector
Part #59231V	16' Strap w/Swivel Connector

Universal Swivel Strap Connector

One Strap . . . Four installation Options
Made with G-120 strap for Zones II & III installations



Swivel Strap & I-Beam Bracket

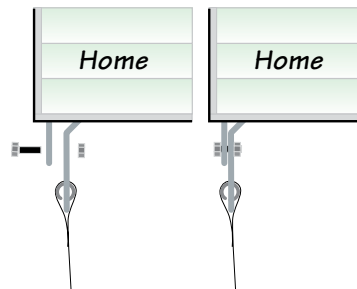


Sidewall Slotted

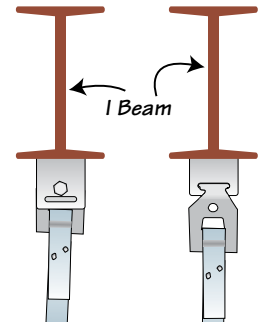
Universal Swivel Strap

Connector w/G120 Strap

Part #59207	5 Feet
Part #59208	6 Feet
Part #59209	7 Feet
Part #59213	8 Feet
Part #59217	10 Feet
Part #59223	12 Feet
Part #59231	16 Feet

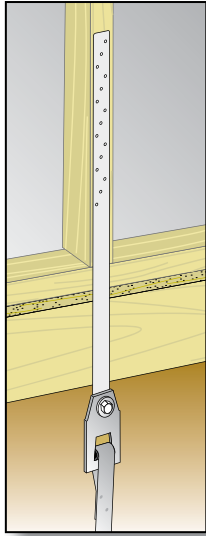


Sidewall w/ Nut & Bolt



Longitudinal I-Beam

Sidewall Brackets for Modular & Manufactured Homes



Sidewall Swivel Strap Assembly

Includes: Connector, Strap, Bolt, 2 Washers & Nylock Nut

Part #59337A 1,717 lb. Capacity

Part #59338A 2,500 lb. Capacity



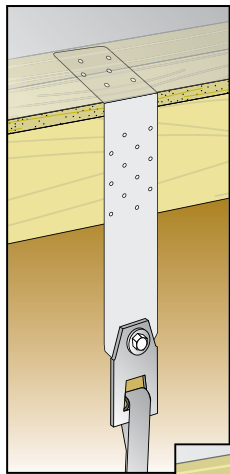
Swivel Strap Connector (Only)

Part #59336 10 ga. Zinc

Tie Straps (Only)

Part #59337 26.5" x 1.25" 14 ga. Pre-galvanized

Part #59338 28.75" x 1.50" 12 ga. Pre-galvanized



Swivel "L" Tie Plate Assembly

Includes: Connector, "L" Tie Plate, Bolt, 2 Washers & Nylock Nut

Part #59339A 2,350 lb. Capacity

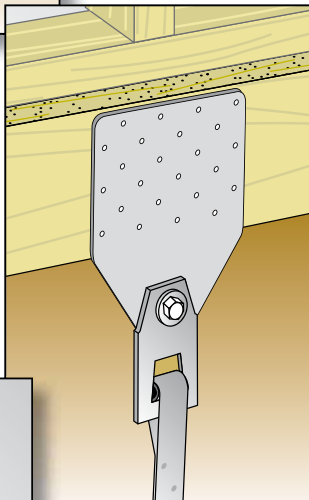


Swivel Strap Connector (Only)

Part #59336 10 ga. Zinc

Swivel "L" Tie Plate (Only)

Part #59339 13.3" x 3" x 3" 14 ga. Pre-galvanized

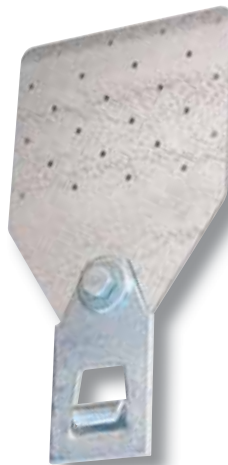


Swivel Tie Plate Assembly

Includes: Connector, Tie Plate, Bolt, 2 Washers & Nylock Nut

Part #59342A 2,000 lb. Capacity

Part #59340A 3,150 lb. Capacity



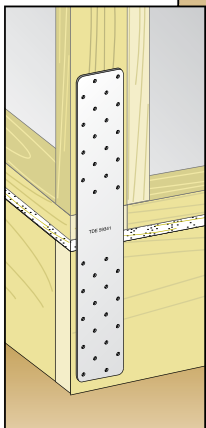
Swivel Strap Connector (Only)

Part #59336 10 ga. Zinc

Tie Plates (Only)

Part #59340 6" x 8" 12 ga. Pre-galvanized

Part #59342 6" x 8" 14 ga. Pre-galvanized

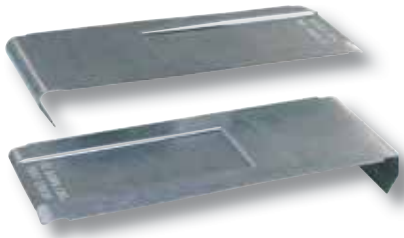


Tie Plate

Part #59341 3" x 16" 14 ga. Pre-galvanized

2,400 lb. Capacity

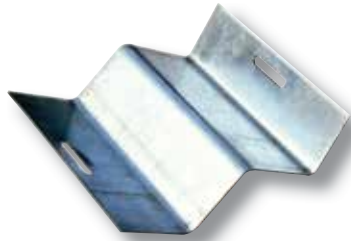




Strap Protectors

Attaches between strap and I-beam to prevent cutting or breaking of strap on sharp edges.

Bulk Part #59232
24 Pack Part #59232P



Galvanized Roof Bracket

Designed to hold strap or cable ties away from the roof and sides of mobile homes.

Part #59145



Angle Frame Bracket

For attaching longitudinal anchors to I-beam at each end of the home.

Part #59009

Jacking Plate



Jacking plate is used to add support to frame when adjusting trailer height with a jack. Required by many manufacturers when setting, to keep from bending the I-beam. Heavy gauge steel.

3-1/2" Wide
5" Wide

Part #59000
Part #59001



No more knuckle busting pliers!

Speed Wrench

Tie Down's SPEED WRENCH simplifies anchor installation with a design that allows for one handed operation for installing slotted bolts and tensioning strap. The SPEED WRENCH has a 15/16" (or 24 mm) impact socket on one side and a 15/16" "nut" on the other. Combine this with your own ratchet and 15/16" (or 24 mm) socket and you have the fastest way to tighten slotted bolts!

Part #48900



Strap Installation



1. Place Speed Wrench over the bolt head. Insert the strap end into the slot in bolt until flush with opposite side of bolt.



2. Hold Speed Wrench in place, tighten bolt with socket wrench on outside of Speed Wrench (bolt head side).

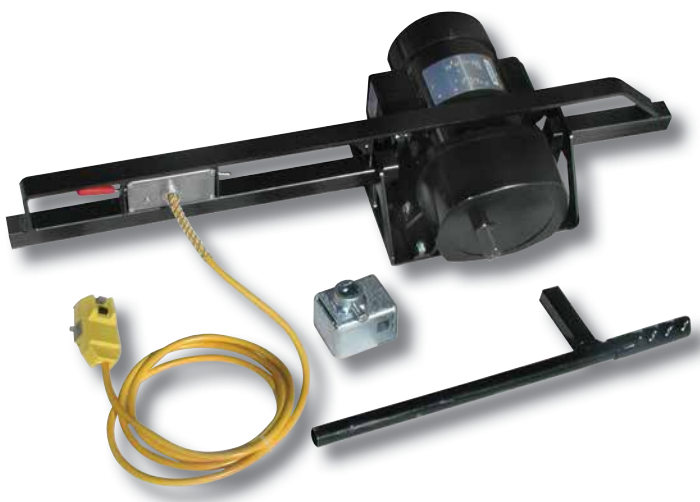


3. Move socket to the opposite (nut) side. Hold Speed Wrench in place. Use socket wrench to tighten nut.

Make quick work of earth anchor installation with the 1/2 HP, 18 RPM Electric Drive Machine from Tie Down Engineering. Adapter head fits all double head anchors and has a socket on the inside to fit the Soil Test Probe. Ground fault interrupter cord is standard on the EDM-18.

- 1/2 HP Motor
- 18 RPM
- 20% More Torque
- Quieter, Smoother Operation
- Ground Fault Interrupter (GFI)
- Solid Metal Housing
- Box Tube & Stamped Steel Frame
- Forward & Reverse Switch
- 90 Day Limited Warranty

Electric Drive Machine
 Model EDM-18, 1/2 HP
 Part #59224



Anchor Adapter Head
 (Included with the EDM-18)
 Part #59205



Eye Anchor Adapter Head
 Optional
 Part #59206

Soil Test Probe Kit
 Part #59200

The purpose of the Soil Test Probe Kit is to determine the soil conditions below the surfaces near the anchor's helix plate. This will provide maximum anchor holding strength by insuring use of proper anchors for each soil condition. Includes multi pocketed carrying case.



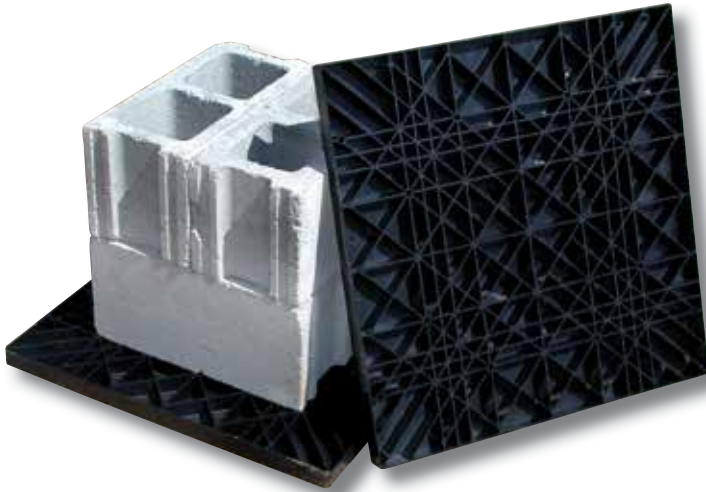
Soil Test Probe Information

The Soil Test Probe is used to determine the soil conditions below the surface near the anchor's helix. Using the Soil Test Probe will ensure maximum anchor holding strength by indicating the proper anchor model for each soil condition. The Anchor Chart on page 5 and a test probe reading can be used to get a recommend anchor for every soil condition. Instructions

1. Place probe tip into ground where you intend to place the anchor. Using a 15/16" (or 24 mm) hex socket with a ratchet or breaker bar, rotate the probe in a clockwise direction. (An electric drive machine with an adapter head may also be used)
2. Drive (rotate) the torque probe into the soil until reaching a depth equal to the length of the anchor being installed.
3. To determine the soil classification:
 - Place wrench adapter onto torque wrench.
 - Insert hex portion of wrench adapter onto the earth probe.
 - Support probe shaft with one hand, while rotating probe steadily with the wrench. (Do not exceed 600 in. lbs.)
 - Read the torque wrench while rotating probe clockwise.
 - Use the Anchor Chart on page 5 to cross reference probe readings.
4. If probe reading does not match the anchor for that depth, rotate probe to next anchor depth and check reading. Continue until reading on probe matches anchor length for depth of reading.
5. To remove probe, use wrench or electric drive machine in reverse (counter clockwise).

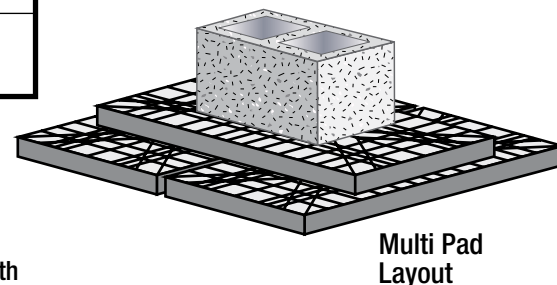
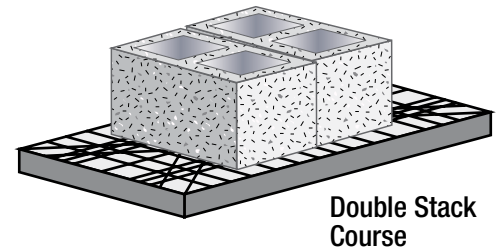
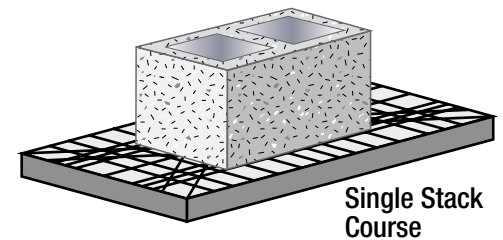
ABS Foundation Pads

- Lighter than concrete, saves on labor.
- Larger pads to increase spacing, saving time and material.
- Made from recycled materials.
- Easily stackable for larger pad area and wider pier spacing.
- Multi stack for 5 sq. ft. & 6 sq. ft.
- Approved for use by HUD 3285.312(3)



Pad Bearing Capacity

ABS Pad Size	Part#	1,000 lbs. Soil	2,000 lbs. Soil	3,000 lbs. Soil
16" x 18" - 2 Sq. Ft. 288 Sq. In.	59300	2,000 lbs.	4,000 lbs.	6,000 lbs.
16" x 22.5" - 2.5 Sq. Ft. 360 Sq. In.	59301	2,500 lbs.	5,000 lbs.	7,500 lbs.
17" x 25" - 3 Sq. Ft. 432 Sq. In.	59302	3,000 lbs.	6,000 lbs.	N/A
24" x 24" - 4 Sq. Ft. 576 Sq. In.	59303	4,000 lbs.	8,000 lbs.	N/A
Multi Pad Layout				
32" X 22.5" (See 1 below) 5 Sq. Ft. - 720 Sq. In.	3 X 59301	5,000 Lbs.	10,000 Lbs.*	
34.4 X 25.2 (See 2 below) 6 Sq. Ft. - 864 Sq. In.	3 X 59302	6,000 Lbs.	12,000 Lbs.*	



* Concrete Block rated @ 8,000 lbs. Double block any higher loads.

1. The 32 X 22.5 Pyramid configuration uses 2 - 16 X 22.5 pads placed side by side with 1 - 16 X 22.5 pad on top in the opposite direction.
2. The 34.4 X 25.4 Pyramid configuration uses 2 - 17.2 X 25.2 pads placed side by side with 1 - 17.2 X 25.2 pad on top in the opposite direction.



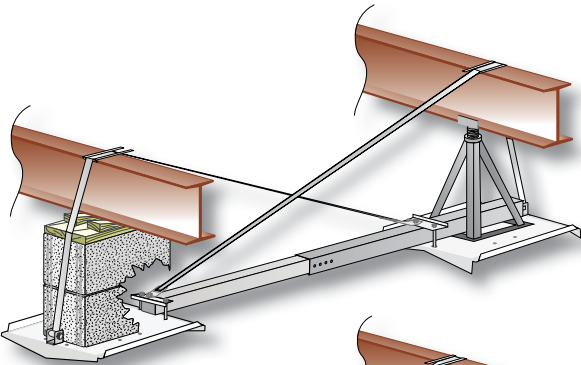
Tie Down's Patented Vector Dynamics Foundation System Provides Windstorm & Seismic Protection For Manufactured Homes (Wind Zones I, II & III, Florida & Seismic Loads)

Vector System For Lateral Stabilization Block Pads

Part #59018

Kit includes: 2 pans, swivel straps, strap protectors, pan connectors, slotted bolts & hardware.

Optional: Steel Compression Member

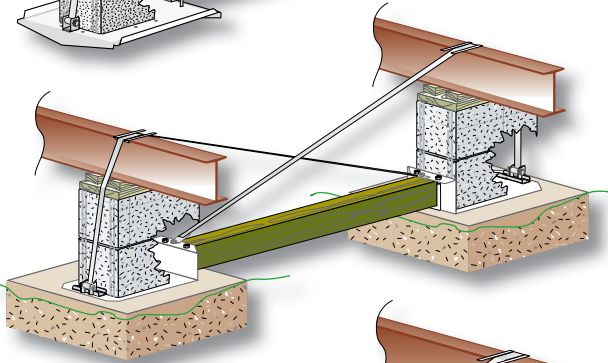


Vector System For Lateral Stabilization for Concrete (Single Block)

Part #59036

Kit includes: 2 concrete pans, swivel straps, strap protectors, concrete brackets, slotted bolts & hardware.

Optional: Steel Compression Member

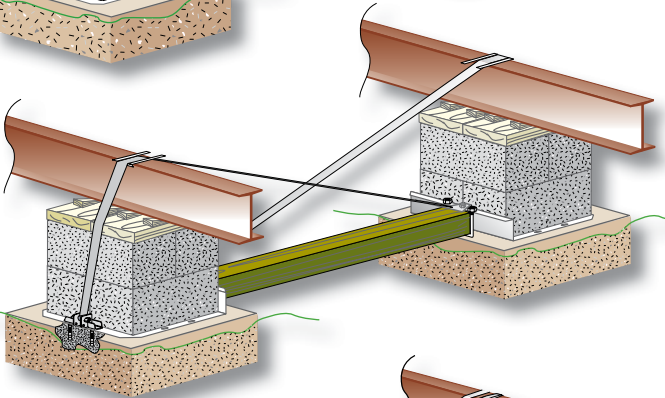


Vector System For Lateral Stabilization for Concrete (Double Block)

Part # 59049

Kit includes: 2 concrete pans, swivel straps, strap protectors, concrete brackets, slotted bolts & hardware.

Optional: Steel Compression Member



Vector System For Lateral Stabilization Difficult/Rocky Soils.

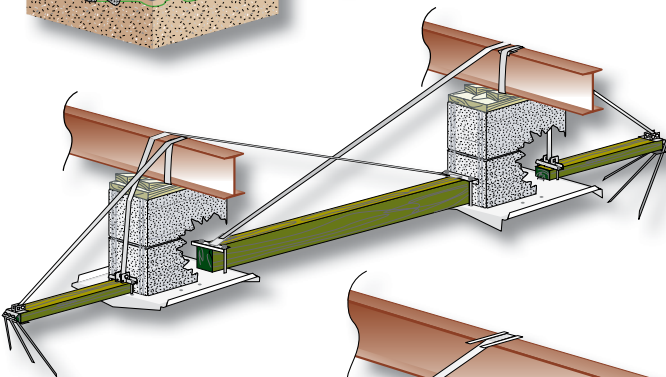
For use on single section units only.

#59287 - V-Drive System

Kit includes: 2 adapter heads and 6 rods

Must be used with:

#59018 - Vector for single/double block pads



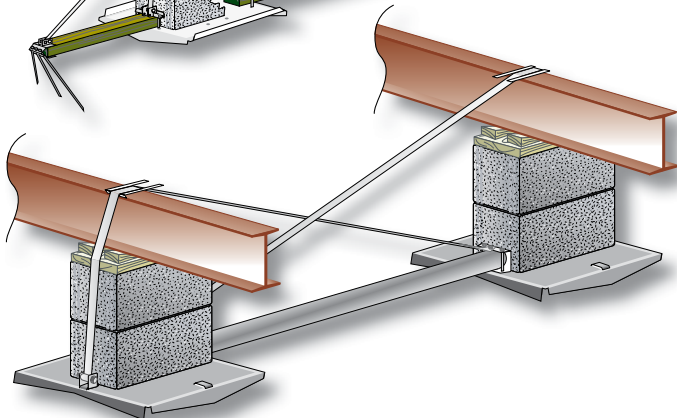
3 Sq. Ft. Pad Vector System

Part #59271 - Vector 3 Sq. Ft. pad

(sold individually, 2 required for lateral,
1 for longitudinal systems)

Part #59024 - Vector Lateral Hardware Kit (Florida)

Kit Includes: U-bolts, strap protectors,
pan connectors, PVC adapter, nuts & bolts
(swivel strap and slotted bolts not included).



Longitudinal Stabilization Hardware Kit

Part #10733

(for use with #59018 Vector System, single stack block sets only, longitudinal struts not included)

Longitudinal Stabilization Hardware Kit for Concrete

Part #59023 - Includes 2 beam clamps, tension brackets, nuts and bolts. (for use with #59036 & 59049, longitudinal struts not included)

3 Sq. Ft. Pad Vector Longitudinal System

Part #59026

Kit Includes: 2 beam clamps, 2 tension brackets, nuts & bolts. (for use with #59271, longitudinal struts not included)

Struts for Longitudinal Systems

Part #	Length	Pier Height
59016	30"	up to 2 Blocks
59012	39"	up to 3 Blocks
59013	44"	up to 4 Blocks
59014	53"	up to 5 Blocks
59015	65"	up to 6 Blocks

PVC Adapter Bracket

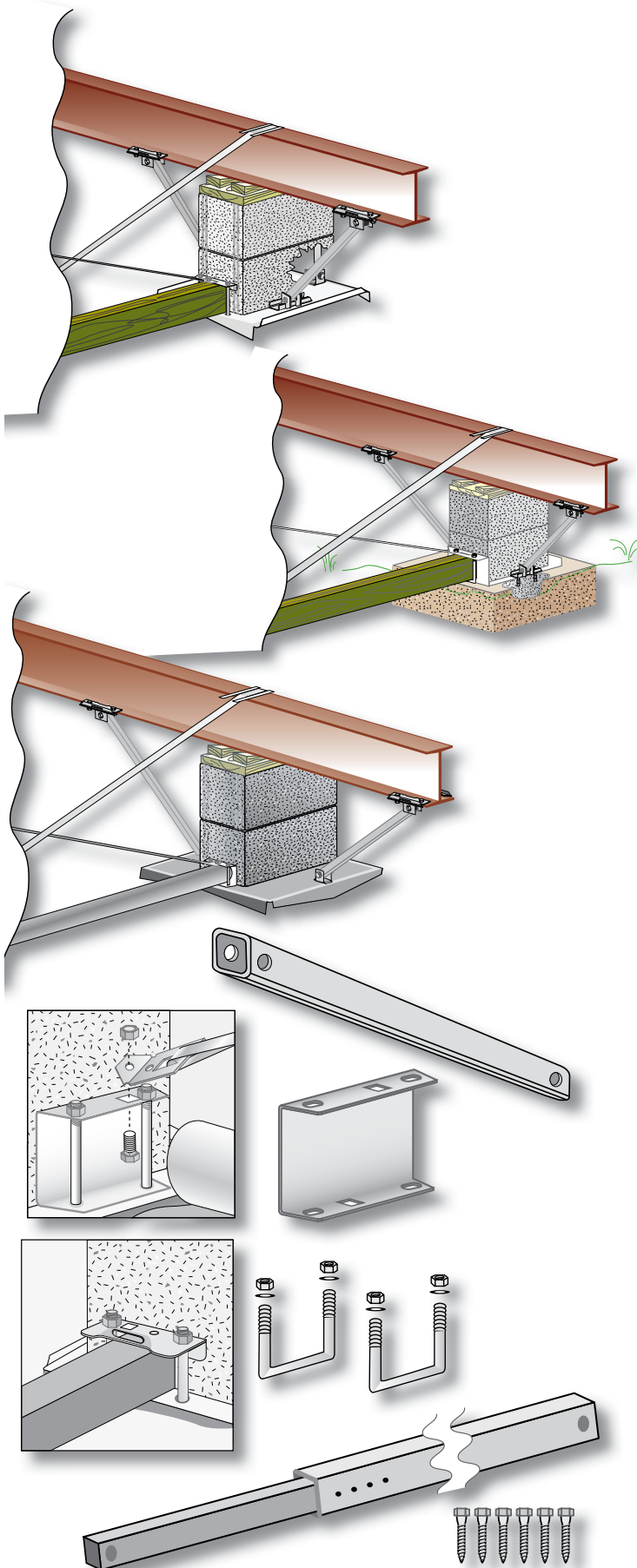
Part #59281 - For use with Schedule 40 PVC

Center Compression Strut

Part #48612 - Single Section, 62" - 108"

Part #48613 - Double Section, 34" - 60"

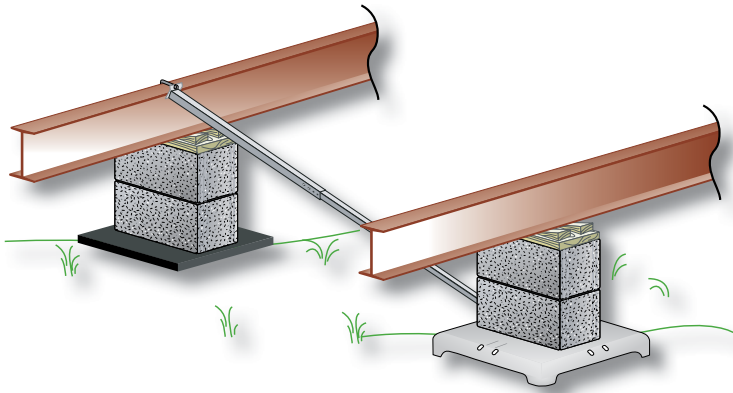
(Includes short u-bolts, nuts, washers and 6 self tapping screws)





Xi2 Ground Foundation System

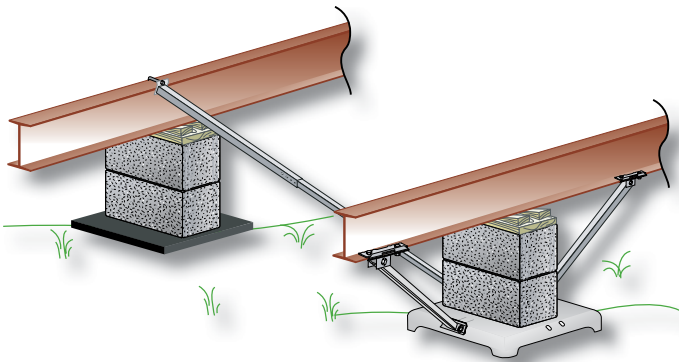
- Easiest system to install
- Stabilizer plates and diagonal frame ties are not required in most set-ups
- Longitudinal stabilization is easily added with Tie Down's LSD strut kit
- Heavy galvanized coating on bracket and struts
- For use in Wind Zones I, II & III, Florida & Seismic Loads



Xi2 Ground Lateral System

Part #59306

Includes: 5' Strut, Pad, & Hardware



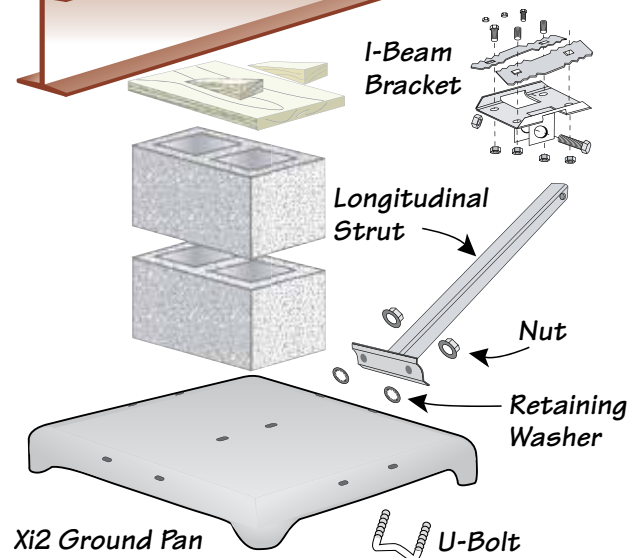
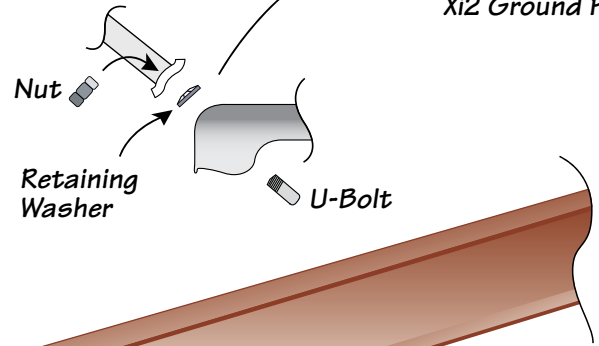
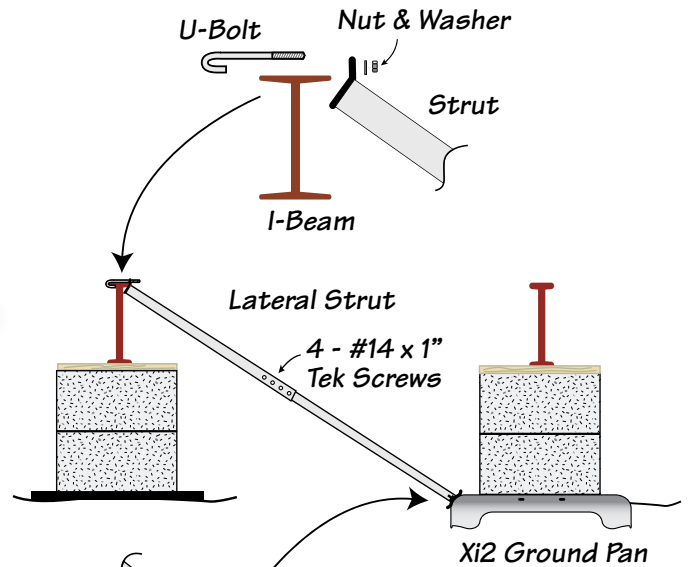
Longitudinal Hardware Kit

Part #59031- Includes hardware for 1 strut: I-beam brackets, U-bolt, nuts, bolts and washers

Part #59331- Includes hardware for 2 struts: I-beam brackets, U-bolts, nuts, bolts and washers

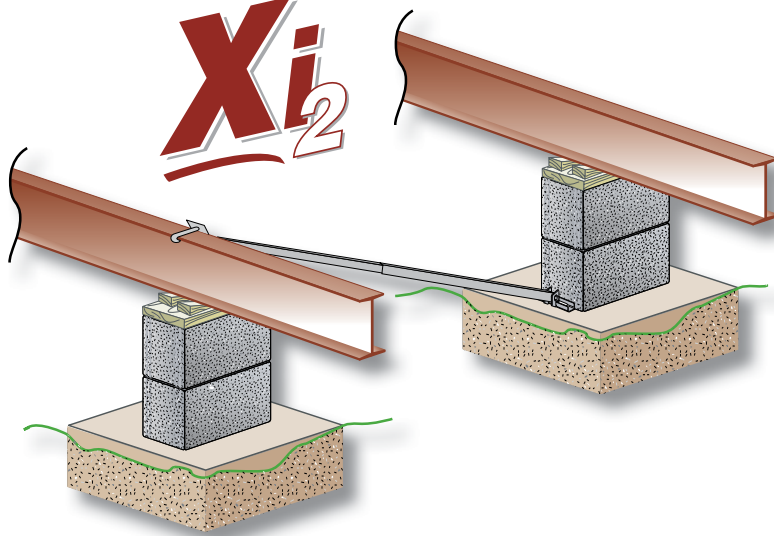
Longitudinal Struts for "Ground Systems"

Part #	Length	Pier Height
59330-30	30"	up to 2 Blocks
59330-39	39"	up to 3 Blocks
59330-44	44"	up to 4 Blocks
59330-53	53"	up to 5 Blocks
59330-65	65"	up to 6 Blocks



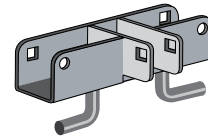
Xi2 Concrete Foundation System

Xi₂

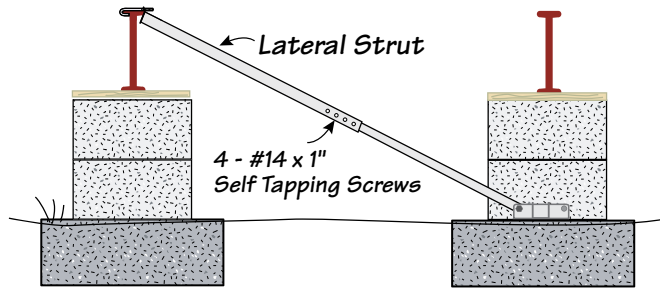
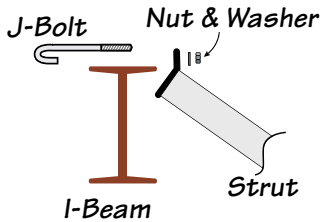
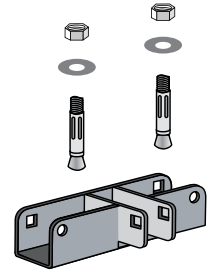


Xi2 Concrete Lateral Systems
 Includes: 5' Strut, Bracket, & Hardware
 "Dry Set" Concrete System Part #59307
 "Wet Set" Concrete System Part #59328

"Wet Set"
Concrete Bracket



"Dry Set"
Concrete Bracket

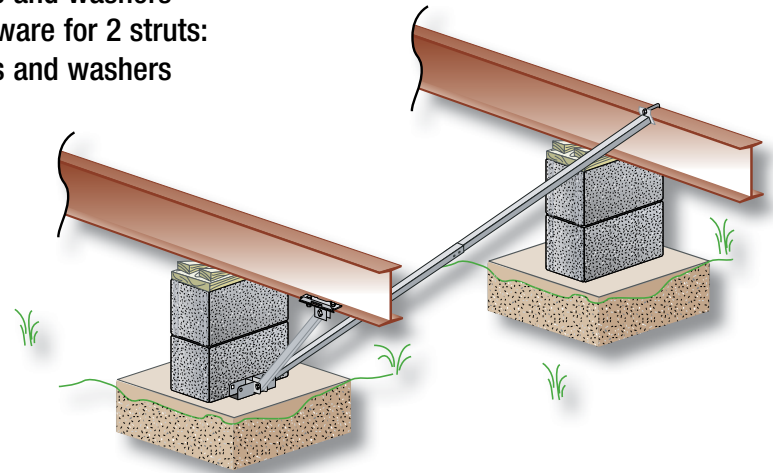
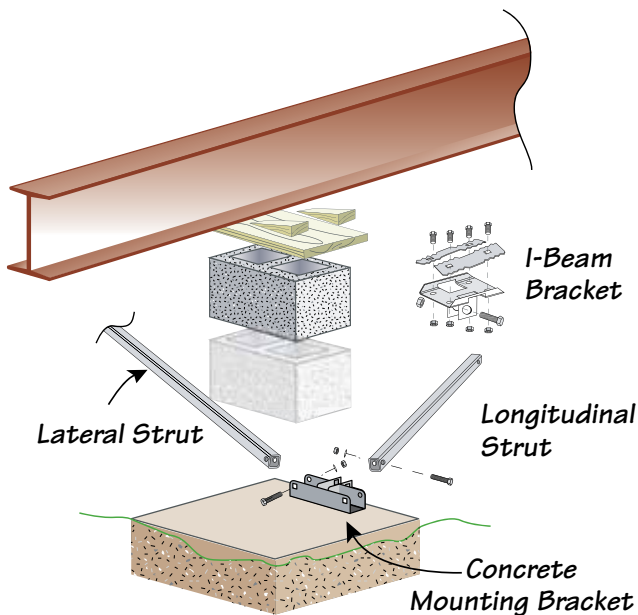


Xi₂

Xi2 Longitudinal Hardware Kit

Part #59163 - Includes hardware for 1 strut:
I-beam bracket, nuts, bolts and washers

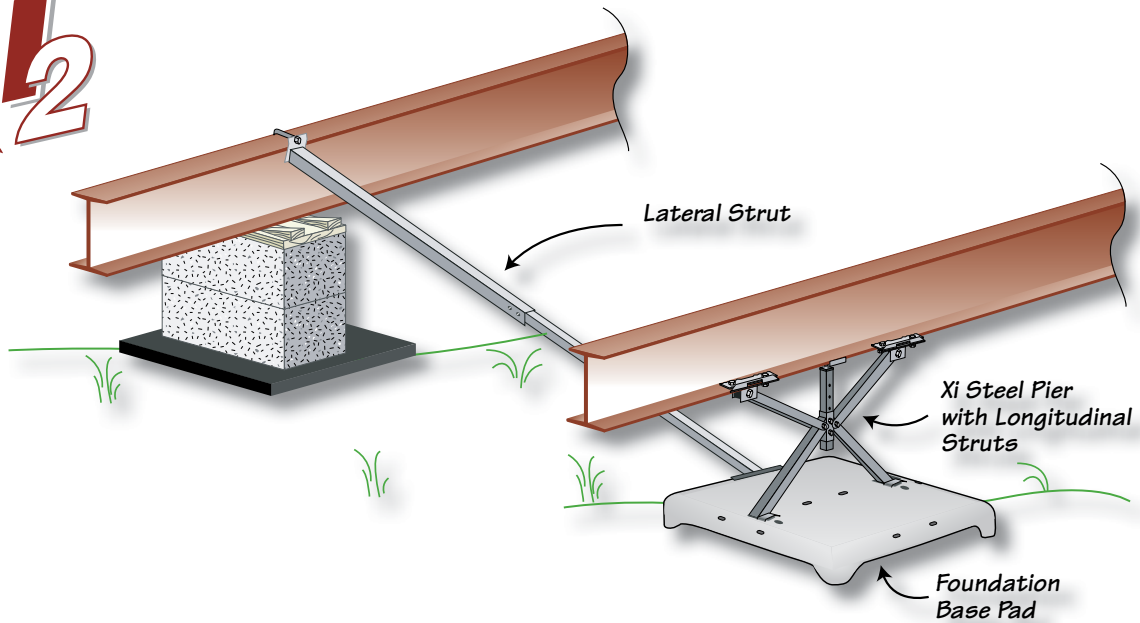
Part #59263 - Includes hardware for 2 struts:
I-beam bracket, nuts, bolts and washers



Longitudinal Struts for "Concrete Systems"

Part #	Length	Pier Height
59016	30"	up to 2 Blocks
59012	39"	up to 3 Blocks
59013	44"	up to 4 Blocks
59014	53"	up to 5 Blocks
59015	65"	up to 6 Blocks

Xi₂



Xi2 Steel Pier with Longitudinal System

Includes: steel pier/longitudinal struts and foundation base pad

Part #59321 - Xi2, for 12" Height

Part #59314 - Xi2, for 25.5" Height

Part #59317 - Xi2, for 36" Height

Lateral Stabilization Struts

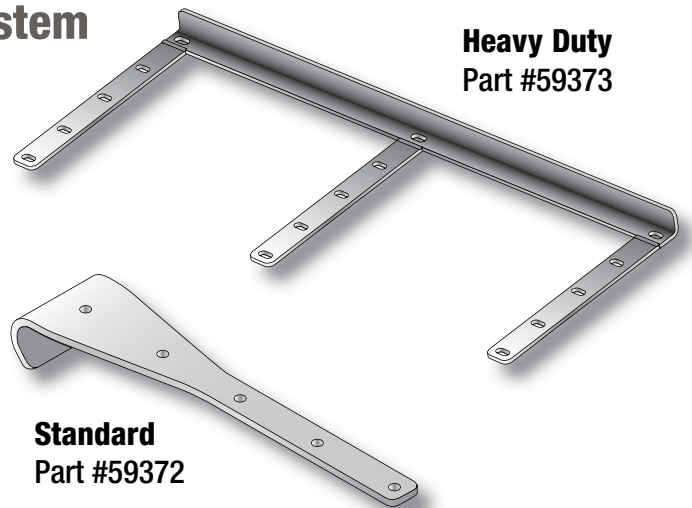
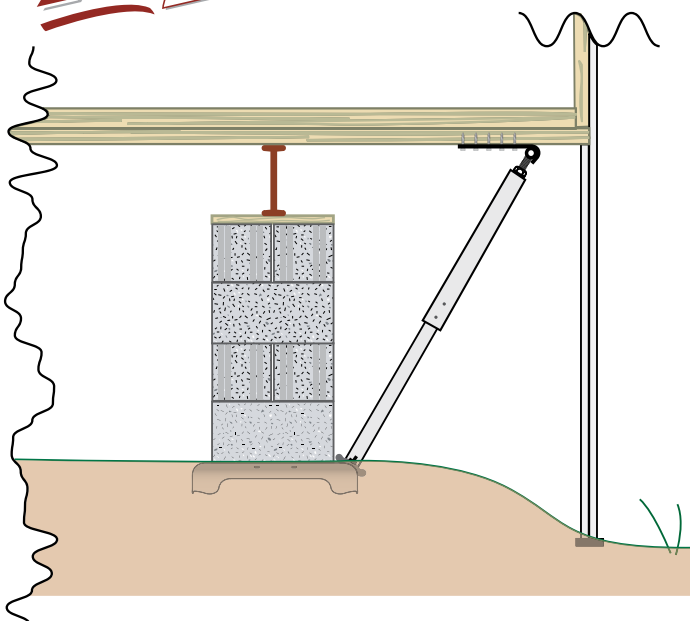
Steel Piers can be combined with one of the following for lateral support:

Part #59345 - Xi2, Lateral Strut, 5' w/hardware

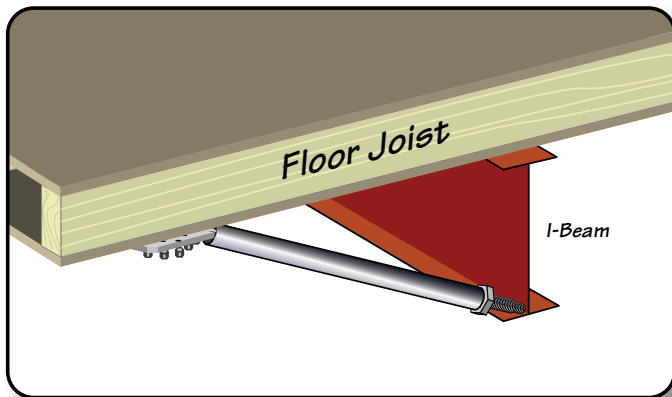
Part #59348 - Xi2, Lateral Strut, 6' w/hardware

Xi₂

Frost Free Foundation System



A cost effective Engineered Perimeter Foundation Support for use with Frost Protected designs meeting Model Installation "Standard", HUD 24 CFR 3285, International Residential Code (IRC) Appendix E and ANSI A225.1. For replacement of perimeter piers up to a maximum of 8' for a 40 lb. snow load.



Adjustable Outrigger/Diagonal Strut

Use under doors and windows instead of perimeter blocking. Allows for easy door adjustments. Easy to install, installation instructions included. Includes all hardware.

24" for 14 ft. wide - Part #59361

36" for 16 ft. wide - Part #59362

Racking Alignment Brackets

- Make alignment of problem roofs easier.
- Eliminate popped seams from lifting on corners of the home.
- Thick galvanized steel for years of service.
- One person operations saves time and money.

Part #59366



Latch Sav'r

Prevents damage to the latch area of most outswing doors and helps cover existing door damage. Simply remove door lock, lay plate on the door behind the lock, replace lock and tighten in place.

Stainless Steel

Part #59394

White Powder Coat

Part #59398

Skirt Hang'r

- Easily attaches to rim joist
- Pre-drilled and slotted for easy adjustment
- Galvanized to last a lifetime
- Mounts directly to the back rail or use the Skirt Hang'R for mounting support rails
- Meets HUD requirements 3285.504
- Stops vinyl to vinyl expansion and contraction problems
- Eliminates water between siding and trim wall cavities

Part #43779





Axle Removal Skid

Used when removing axles after completion of setting unit on site. Simply unbolt axle and lay in skid pan with hub behind bracket, move to opposite side and after removing bolts, slide axle out from under home. Turns a rough job into a safe one person operation.

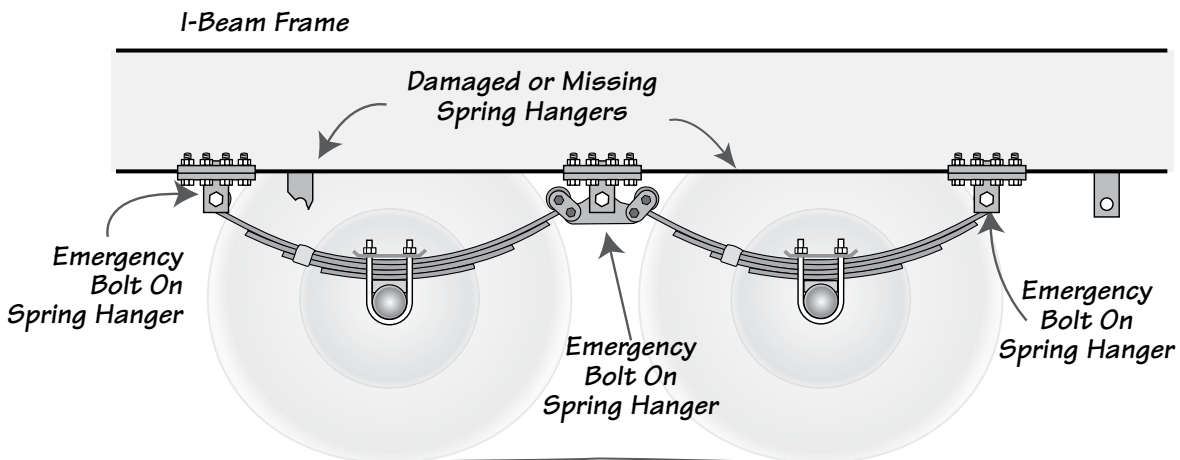
Part #59399

Emergency Spring Hanger

For temporary attachment of spring hangers, allowing for additional axle installations when broken down in the field. 4 bolt and 8 bolt models designed for use on 3" or 4" beams, simply bolt to the I-beam and add an axle where needed.

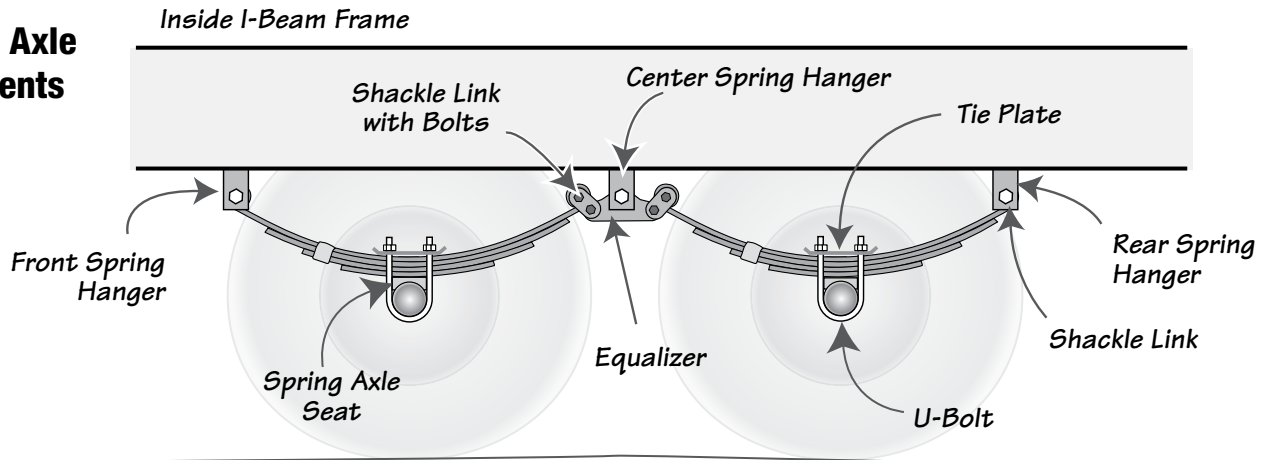
4 Bolt Model
Part #59600

8 Bolt Model
Part #59601



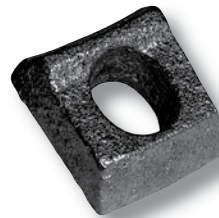
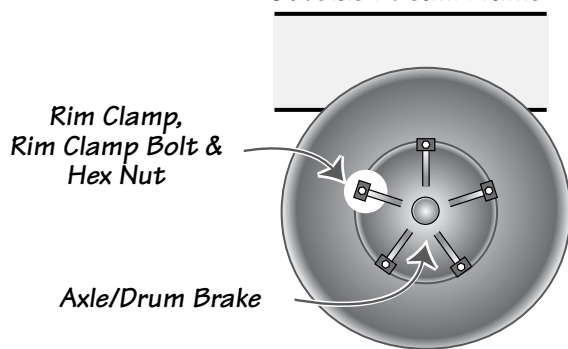
Transportation & Towing Products

Wheel & Axle Components



Product	Description	Part #
Double Eye, Four Leaf Spring	25-1/4" Long x 1-3/4" Wide 3,000# Capacity	13072
Double Eye Cast Equalizers	EQ-104	44018
	EQ-310	44055
Spring Hanger	1.44" High x 1.75" Wide	17013
	3.344" High x 2.0" Wide	44415
Zinc Shackle Link	1.5"W x 3.56"(hole to hole) X 5.188"L	44530
	1.25"W x 2.125"(hole to hole) X 3.75"L	44536
Shackle Bolt	9/16" x 3" Grade 5 Zinc Fluted	10830
Shackle Bolt	1/2" x 3-1/4" Grade 5 Plain	10825
Shackle Nut	9/16" Zinc	BBN563SZ
Shackle Nut	1/2" Zinc	10645

Outside I-Beam Frame



Rim Clamp



Rim Clamp Lug Bolt



Lug Stud



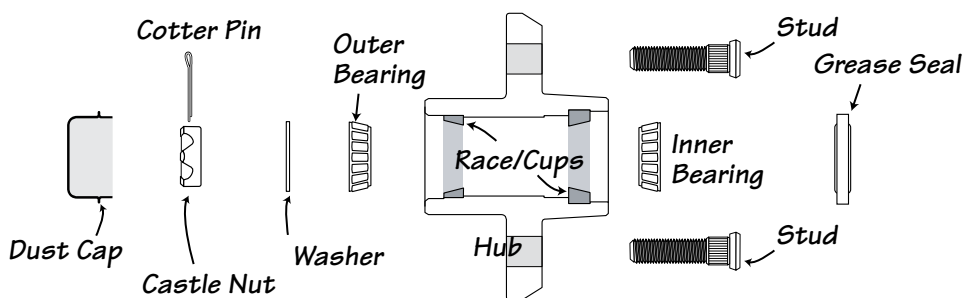
Lug Nuts

Product	Description	Part #
Rim Clamp	1-1/4" Rim Clamp, Fits Most Hubs with Lugs or Studs	10875
Rim Clamp Bolts	1/2"-13 X 1-7/8" Black	10873
	1/2"-20 X 1-7/8" Black	10874
	1/2"-13 X 2-1/4" Black	10876
Lug Stud	1/2"-20 X 2" Zinc	11123
Lug Nut	1/2"-20 Zinc	10641
Tapered Lug Bolt	1/2"-20 X 1-5/8" Zinc	10965



Tapered Lug Bolt

Transportation & Towing Products



Wheel & Axle Components



Bearings

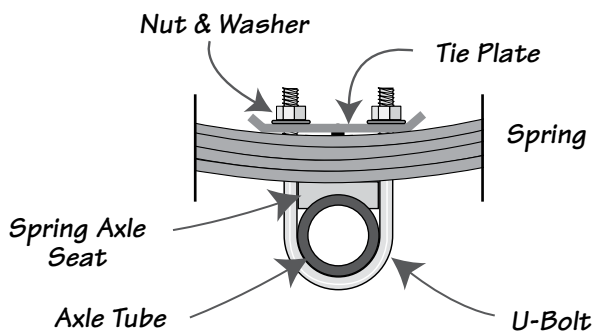


Race/Cups



Seals

Product	Description	Part #
Dust/Grease Caps		46494
Castle Nut		10665
Spindle Washer		10520
Cotter Pin		10560
Bearings	Outer Bearing 1-1/4" (L67048)	11058
	Inner Bearing 1-3/8" (L68149)	11060
	Inner Bearing 1-3/4" (L25580)	11064
Race/Cups	For 1-1/4" Bearings (L67010)	11057
	For 1-3/8" Bearings (L68111)	11061
	For 1-3/4" Bearings (L25520)	11067
Grease Seal	2.52" OD - 1.688 ID	11094
	2.569" OD - 1.719 ID	11092
	3.38" OD - 2.245 ID	11091

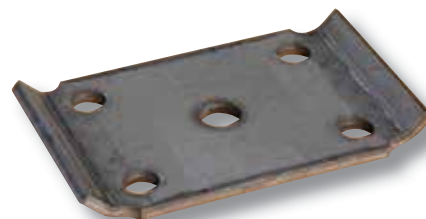


U-bolt



Spring Axle Seat

Product	Description	Part #
U-bolts	1/2" x 6.5" Long for 3" dia. tube	10831
	1/2" x 7.12" Long for 3" dia. tube	10832
Hex Head Nuts	1/2" Zinc	10643
Zinc Washers		10019
Spring Tie Plate	3" Axle Tie Plate	17114
Spring Axle Seat	3" Axle Seat	17115



Spring Tie Plate

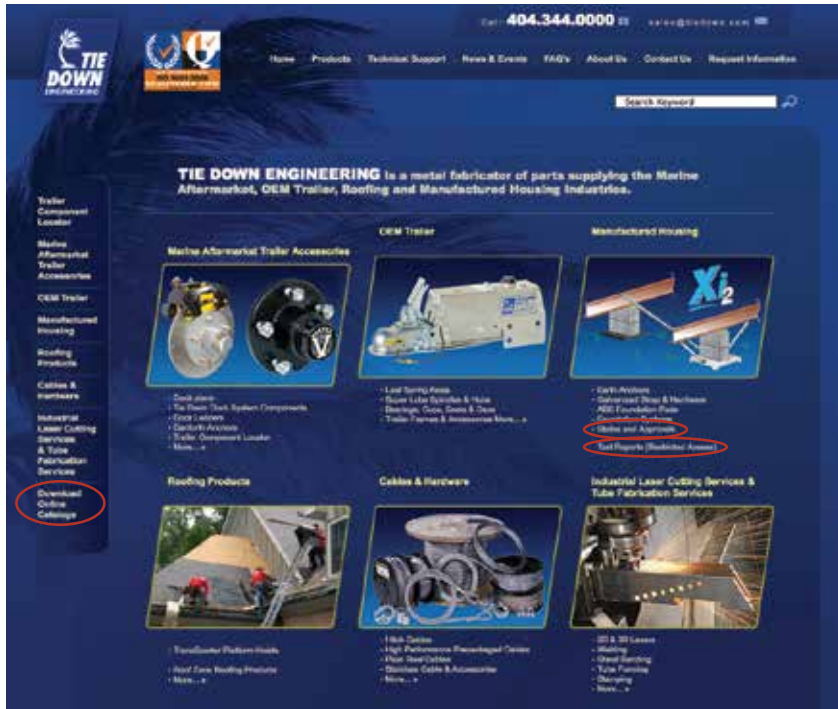


Washers



Hex Head Bolts

www.tiedown.com



The tiedown.com web site contains information for all six divisions within Tie Down Engineering which include:

- OEM Trailer Products
- Marine Aftermarket Products
- Manufactured Housing
- Roofing Products
- Cable and Hardware
- Industrial Laser Solutions

Manufactured Housing Division:

- Earth Anchors
- Galvanized Anchors & Strap
- ABS Foundation Pads
- Foundation Systems
- States and Approvals
- Test Reports (Restricted)



Downloads Library

<http://www.tiedown.com/technical-support.html>

Complete library includes detailed instructions for all of Tie Down's products and foundation systems.



States and Approvals

<http://tiedowneng.com/dapproval.html>

Not all States have specific requirements for manufactured housing, but most do. Simply click on your state to view state approvals and or requirements. We list every state required approval and installation specific instructions for each state.

Welcome to TIE DOWN ENGINEERING
 Last Update: March 14, 2012
Access to Technical Reports is Restricted
 For any assistance call:
 Karen Chastney 404-344-0000 Ext 1128

Please click on the link on the left to view the information. You will be able to view these documents if you are logged in, and you will be able to download a copy of the document. Please download the state of the document as the link is color, and you will be able to download a copy of the document.

File Name	Report Description	File Number	Number of Pages	File Size
00000001	1/2" and 3/4" x 4" Plate to 1000 & 2000 PSF Soils	000001_1_1	14	277 KB
00000002	ABS Pad Single 4' x 4' to 1000 & 2000 PSF	000002_1_1	17	43 KB
00000003	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000003_1_1	17	13 KB
00000004	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000004_1_1	17	13 KB
00000005	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000005_1_1	17	13 KB
00000006	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000006_1_1	17	13 KB
00000007	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000007_1_1	17	13 KB
00000008	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000008_1_1	17	13 KB
00000009	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000009_1_1	17	13 KB
00000010	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000010_1_1	17	13 KB
00000011	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000011_1_1	17	13 KB
00000012	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000012_1_1	17	13 KB
00000013	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000013_1_1	17	13 KB
00000014	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000014_1_1	17	13 KB
00000015	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000015_1_1	17	13 KB
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00000026	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000026_1_1	17	13 KB
00000027	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000027_1_1	17	13 KB
00000028	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000028_1_1	17	13 KB
00000029	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000029_1_1	17	13 KB
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00000031	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000031_1_1	17	13 KB
00000032	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000032_1_1	17	13 KB
00000033	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000033_1_1	17	13 KB
00000034	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000034_1_1	17	13 KB
00000035	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000035_1_1	17	13 KB
00000036	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000036_1_1	17	13 KB
00000037	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000037_1_1	17	13 KB
00000038	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000038_1_1	17	13 KB
00000039	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000039_1_1	17	13 KB
00000040	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000040_1_1	17	13 KB
00000041	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000041_1_1	17	13 KB
00000042	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000042_1_1	17	13 KB
00000043	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000043_1_1	17	13 KB
00000044	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000044_1_1	17	13 KB
00000045	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000045_1_1	17	13 KB
00000046	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000046_1_1	17	13 KB
00000047	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000047_1_1	17	13 KB
00000048	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000048_1_1	17	13 KB
00000049	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000049_1_1	17	13 KB
00000050	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000050_1_1	17	13 KB
00000051	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000051_1_1	17	13 KB
00000052	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000052_1_1	17	13 KB
00000053	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000053_1_1	17	13 KB
00000054	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000054_1_1	17	13 KB
00000055	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000055_1_1	17	13 KB
00000056	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000056_1_1	17	13 KB
00000057	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000057_1_1	17	13 KB
00000058	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000058_1_1	17	13 KB
00000059	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000059_1_1	17	13 KB
00000060	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000060_1_1	17	13 KB
00000061	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000061_1_1	17	13 KB
00000062	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000062_1_1	17	13 KB
00000063	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000063_1_1	17	13 KB
00000064	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000064_1_1	17	13 KB
00000065	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000065_1_1	17	13 KB
00000066	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000066_1_1	17	13 KB
00000067	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000067_1_1	17	13 KB
00000068	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000068_1_1	17	13 KB
00000069	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000069_1_1	17	13 KB
00000070	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000070_1_1	17	13 KB
00000071	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000071_1_1	17	13 KB
00000072	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000072_1_1	17	13 KB
00000073	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000073_1_1	17	13 KB
00000074	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000074_1_1	17	13 KB
00000075	ABS Pad Single 10' x 10' and 10' x 10' to 1000 and 2000 PSF Soils	000075_1_1	17	13 KB

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