DSS

Driven by Service. Defined by Quality.

Forming & Shoring Catalog

FALL 2025

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Information

For decades DSS has accommodated the special needs of the construction and petrochemical industries. Our commitment to industry-leading quality assurance extensive employee training and factory certification are unmatched and our proprietary manufacturing and logistics programs ensure that you receive delivery of the safest most reliable scaffolding products wherever in the world you need them on time every time. We are here to help you retain your competitive edge.

Quality Steel Means Quality Scaffolding

At DSS we are committed to quality in every step of the scaffold manufacturing process. All the steel we use comes with mill certifications but we don't stop there. We use an independent lab to verify that all steel arriving in our factories meets or exceeds the appropriate BS EN ASTM/ANSI specifications.

Our Commitment to Safety

We provide extensive classroom and on the job training for all members of our factory team. Our welding procedures were written by an independent professional engineer and were qualified by testing at independent labs. We constantly qualify all of our welders to the AWS D1.1 standard.

Reliability

All of the products produced by DSS carry a warranty and we also have full product liability insurance issued by US carriers. We know that your safety depends on our scaffolding so we go above and beyond in our quality assurance programs to ensure that the scaffolding that you receive is the safest and most reliable available anywhere in the world. We are proud to have earned ISO9001:2008 certification for all of our manufacturing facilities. Most of our factories hold DIN BS EN1090 parts 1 & 2 (EXC 3) and EN ISO 3834 part 2.

Compatibility

We verified though independent professional engineers that all of our products and accessories are compatible with other major US and European Manufacturers.

Value

Our diversified manufacturing base provides us with sufficient manufacturing capacity to meet your requirements. Plus it creates a distinct competitive advantage. We implement our industry leading quality assurance and control programs in all of our oversees factories and combine those resources with the technical knowledge and experience of our US based technical and engineering services operations. This allows DSS to offer you a distinct cost advantage and creates significant value for our customers.

Quality by Design

At DSS we take a common sense approach to good business. We start with quality people manufacture quality products and work hard to establish and maintain quality relationships with our customers. We look forward to the privilege of working with you and the opportunity to demonstrate our commitment to quality manufacturing business excellence and above all customer satisfaction.

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Direct Ply

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Direct Ply Hand Set Modular Forming System

DSS Direct Ply is a pre-engineered, factory built, reusable modular forming system with endless application in handset and gang configurations. Direct Ply formwork can be used in residential, commercial, industrial, and heavy highway construction, and because there is no left, right, up, or down to the form itself, structures of almost any shape or size can be accomplished.

Direct Ply comes in standard panel and filler sizes that can easily be combined to create custom dimensions. The system simplifies the forming process, saving time and reducing costs compared to traditional job-built formwork, which requires extensive measuring, cutting and fabrication specific to each project. When using Direct Ply, no matter the application, the same basic components and methods are used time and time again. The only tool required for erection and tear down is a hammer.

Concrete crew performance becomes consistent and predictable with just a few simple hardware attachments to build virtually any size wall or structure. High-quality laminated birch plywood secured to high-strength steel frames will produce an equally high-quality concrete finish, and because the system is engineered, designed, and manufactured with a defined 1,000 PSF capacity, engineers, owners, and contractors can know the Direct Ply system will perform safely and efficiently on every project.

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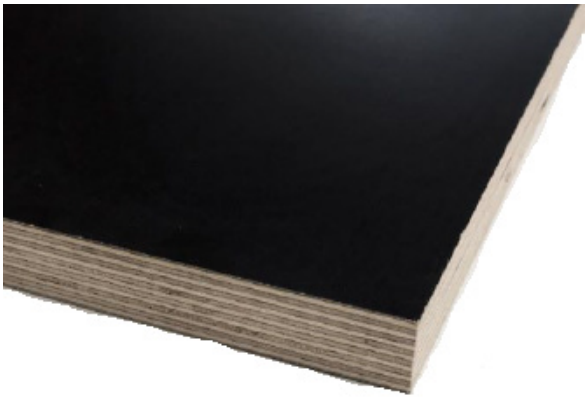
Standard Plywood

Facing panels are made from birch plywood for Direct Ply panels and fillers. Birch is an extremely durable and moisture-resistant construction material that is used in a wide variety of applications, such as beams, bridges, industrial, and commercial form construction.

The choice of form face material can significantly impact both the performance of the form itself, as well as the quality of the finished product. We have chosen birch plywood for its unique properties and exceptional performance.

- Birch plywood features a tight grain structure that provides superior strength compared to traditional fir plywood, resists moisture absorption, and maintains structural integrity use after use.
- The multi-ply manufacturing process, using a combination of long and short grain directional veneers, ensures consistent flatness and dimensional stability.
- 220/220 phenolic overlay on both the front and the back of the birch plywood prevents moisture absorption and extends the useful life of the form face.
- To further enhance the water resistance of cut-to-size pieces, the exposed plywood edges are sealed after saw cutting to minimize water penetration.



All formwork should be treated with a suitable form release agent before concrete pours. This good practice will maximize the lifespan of the form face and simplify the cleaning process.

Choosing birch plywood as the form face for our Direct Ply system provides numerous advantages that contribute to both the strength and aesthetic quality of your concrete structures. Superior performance characteristics combined with careful manufacturing and finishing processes make our birch plywood the best possible choice for your projects.

ADDITIONAL INFORMATION

- **Long Grain Direction Size:** 2440 x 1220 mm, 2500 x 1250 mm
- **Cross Grain Direction Size:** 1220 x 2440 mm, 1250 x 2500 mm
- **Thickness:** 1/2" / 12.5 mm
- **Tolerance:** + / - .3mm
- **Ply:** 10
- **Film Density:** 220 / 220
- **Film Color:** Black
- **Surface:** Smooth (F/F)

11 Direct Ply Panels

FWDPS4X24

Product Code	Description	Width		Height		Weight	
		IN	MM	IN	MM	LB	KG
FWDPS3X24	24″ x 3′ Panel	24	609.6	3	914.4	36.3	16.5
FWDPS4X24	24″ x 4′ Panel	24	609.6	4	1219.2	47.4	21.5
FWDPS5X24	24″ x 5′ Panel	24	609.6	5	1524	58.6	26.6
FWDPS6X24	24″ x 6′ Panel	24	609.6	6	1828.8	71.6	32.5
FWDPS8X24	24″ x 8′ Panel	24	609.6	8	2438.4	91.5	41.5

Direct Ply Panels are stocked in 3, 4, 5, 6 and 8 foot lengths, and are compatible with steel-ply style forms in the market. They are supplied standard with birch plywood facing.

The maximum allowable pour pressure for the Direct Ply system is 1,000 psf.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

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3’ Direct Ply Filler

Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPS3X4	4″ x 3′ Filler	4	101.6	3	76.2	13.8	6.3
FWDPS3X6	6″ x 3′ Filler	6	152.4	3	76.2	16.0	7.3
FWDPS3X8	8″ x 3′ Filler	8	203.2	3	76.2	18.3	8.3
FWDPS3X10	10″ x 3′ Filler	10	254	3	76.2	20.6	9.3
FWDPS3X12	12″ x 3′ Filler	12	304.8	3	76.2	22.8	10.3
FWDPS3X14	14″ x 3′ Filler	14	355.6	3	76.2	25.1	11.3
FWDPS3X16	16″ x 3′ Filler	16	406.4	3	76.2	27.6	12.5
FWDPS3X18	18″ x 3′ Filler	18	457.2	3	76.2	29.8	13.5
FWDPS3X20	20″ x 3′ Filler	20	508	3	76.2	31.9	14.4
FWDPS3X22	22″ x 3′ Filler	22	558.8	3	76.2	34.1	15.5

Direct Ply Fillers are stocked in even inch increments from 4″ to 22″ widths and multiple lengths. They are constructed of the same steel and plywood as the full 24″ wide panels.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

13 4’ Direct Ply Filler

Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPS4X4	4″ x 4′ Filler	4	101.6	4	101.6	18.4	8.3
FWDPS4X6	6″ x 4′ Filler	6	152.4	4	101.6	20.9	9.5
FWDPS4X8	8″ x 4′ Filler	8	203.2	4	101.6	24.0	10.8
FWDPS4X10	10″ x 4′ Filler	10	254	4	101.6	26.3	11.9
FWDPS4X12	12″ x 4′ Filler	12	304.8	4	101.6	29.3	13.3
FWDPS4X14	14″ x 4′ Filler	14	355.6	4	101.6	32.6	14.8
FWDPS4X16	16″ x 4′ Filler	16	406.4	4	101.6	36.0	16.3
FWDPS4X18	18″ x 4′ Filler	18	457.2	4	101.6	38.9	17.6
FWDPS4X20	20″ x 4′ Filler	20	508	4	101.6	41.6	18.9
FWDPS4X22	22″ x 4′ Filler	22	558.8	4	101.6	44.4	20.1

Direct Ply Fillers are stocked in even inch increments from 4″ to 22″ widths and multiple lengths. They are constructed of the same steel and plywood as the full 24″ wide panels.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

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5' Direct Ply Filler

Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPS5X4	4" x 5' Filler	4	101.6	5	127	22.7	10.3
FWDPS5X6	6" x 5' Filler	6	152.4	5	127	26.3	11.9
FWDPS5X8	8" x 5' Filler	8	203.2	5	127	29.6	13.4
FWDPS5X10	10" x 5' Filler	10	254	5	127	33.4	15.0
FWDPS5X12	12" x 5' Filler	12	304.8	5	127	36.9	16.8
FWDPS5X14	14" x 5' Filler	14	355.6	5	127	40.5	18.4
FWDPS5X16	16" x 5' Filler	16	406.4	5	127	44.7	20.3
FWDPS5X18	18" x 5' Filler	18	457.2	5	127	48.0	21.8
FWDPS5X20	20" x 5' Filler	20	508	5	127	51.6	23.4
FWDPS5X22	22" x 5' Filler	22	558.8	5	127	54.9	24.8

Direct Ply Fillers are stocked in even inch increments from 4" to 22" widths and multiple lengths. They are constructed of the same steel and plywood as the full 24" wide panels.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2" thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

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6’ Direct Ply Filler

Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPS6X4	4″ x 6′ Filler	4	101.6	6	154.4	27.1	12.3
FWDPS6X6	6″ x 6′ Filler	6	152.4	6	154.4	31.2	14.2
FWDPS6X8	8″ x 6′ Filler	8	203.2	6	154.4	35.3	16.0
FWDPS6X10	10″ x 6′ Filler	10	254	6	154.4	39.8	18.0
FWDPS6X12	12″ x 6′ Filler	12	304.8	6	154.4	44.1	20.0
FWDPS6X14	14″ x 6′ Filler	14	355.6	6	154.4	48.2	21.9
FWDPS6X16	16″ x 6′ Filler	16	406.4	6	154.4	55.4	25.1
FWDPS6X18	18″ x 6′ Filler	18	457.2	6	154.4	55.9	27.2
FWDPS6X20	20″ x 6′ Filler	20	508	6	154.4	64.4	29.2
FWDPS6X22	22″ x 6′ Filler	22	558.8	6	154.4	68.7	31.2

Direct Ply Fillers are stocked in even inch increments from 4″ to 22″ widths and multiple lengths. They are constructed of the same steel and plywood as the full 24″ wide panels.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

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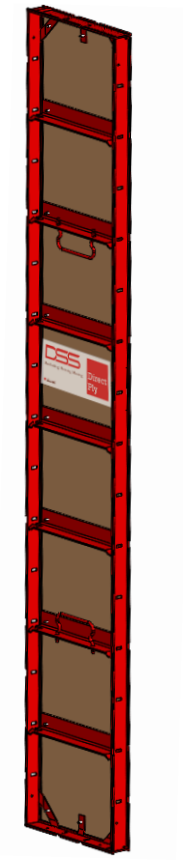
8’ Direct Ply Filler



Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPS8X4	4″ x 8′ Filler	4	101.6	8	203.2	36.1	16.4
FWDPS8X6	6″ x 8′ Filler	6	152.4	8	203.2	41.5	18.8
FWDPS8X8	8″ x 8′ Filler	8	203.2	8	203.2	46.8	21.2
FWDPS8X10	10″ x 8′ Filler	10	254	8	203.2	52.9	23.9
FWDPS8X12	12″ x 8′ Filler	12	304.8	8	203.2	57.3	26.0
FWDPS8X14	14″ x 8′ Filler	14	355.6	8	203.2	62.9	28.5
FWDPS8X16	16″ x 8′ Filler	16	406.4	8	203.2	68.3	30.9
FWDPS8X18	18″ x 8′ Filler	18	457.2	8	203.2	73.4	33.3
FWDPS8X20	20″ x 8′ Filler	20	508	8	203.2	80.3	36.4
FWDPS8X22	22″ x 8′ Filler	22	558.8	8	203.2	85.9	38.9

Direct Ply Fillers are stocked in even inch increments from 4″ to 22″ widths and multiple lengths. They are constructed of the same steel and plywood as the full 24″ wide panels.

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

WARNING
Handles are **NOT** to be used as tie off points.

17 Steel Fillers

Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPSF0301	1″ x 3′ Steel Filler	1	25.4	3	914.4	7.8	3.6
FWDPSF0401	1″ x 4′ Steel Filler	1	25.4	4	1219.2	10.4	4.7
FWDPSF0501	1″ x 5′ Steel Filler	1	25.4	5	1524	13	5.9
FWDPSF0601	1″ x 6′ Steel Filler	1	25.4	6	1828.8	15.6	7.1
FWDPSF0801	1″ x 8′ Steel Filler	1	25.4	8	2438.4	20.8	9.4
FWDPSF0315	1.5″ x 3′ Steel Filler	1.5	38.1	3	914.4	8.5	3.9
FWDPSF0415	1.5″ x 4′ Steel Filler	1.5	38.1	4	1219.2	11.4	5.2
FWDPSF0515	1.5″ x 5′ Steel Filler	1.5	38.1	5	1524	14.2	6.4
FWDPSF0615	1.5″ x 6′ Steel Filler	1.5	38.1	6	1828.8	17.1	7.7
FWDPSF0815	1.5″ x 8′ Steel Filler	1.5	38.1	8	2438.4	22.8	10.3
FWDPSF0302	2″ x 3′ Steel Filler	2	50.8	3	914.4	9	4.1
FWDPSF0402	2″ x 4′ Steel Filler	2	50.8	4	1219.2	12	5.5
FWDPSF0502	2″ x 5′ Steel Filler	2	50.8	5	1524	15.1	6.8
FWDPSF0602	2″ x 6′ Steel Filler	2	50.8	6	1828.8	18	8.2
FWDPSF0802	2″ x 8′ Steel Filler	2	50.8	8	2438.4	24.1	10.9

Direct Ply Steel Fillers are formed U-shaped steel available in 1″, 1-1/2″, and 2″ widths and are stocked in 3, 4, 5, 6, and 8 foot lengths. Connection to adjacent forms is accomplished with Long Bolts or Adjustable Long Bolts up to 3″ maximum

ADDITIONAL INFORMATION

- **Material:** High Strength Steel Alloy
- **Finish:** Powder Coated
- **Facing:** Stocked with 1/2″ thick, 10 ply-220/220 Birch Plywood

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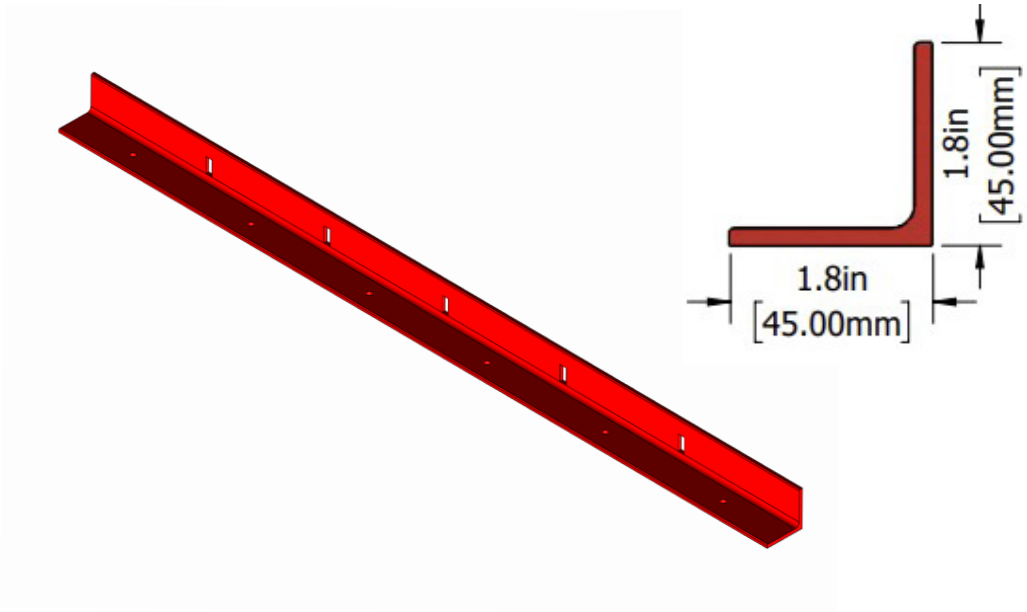
Filler Angles



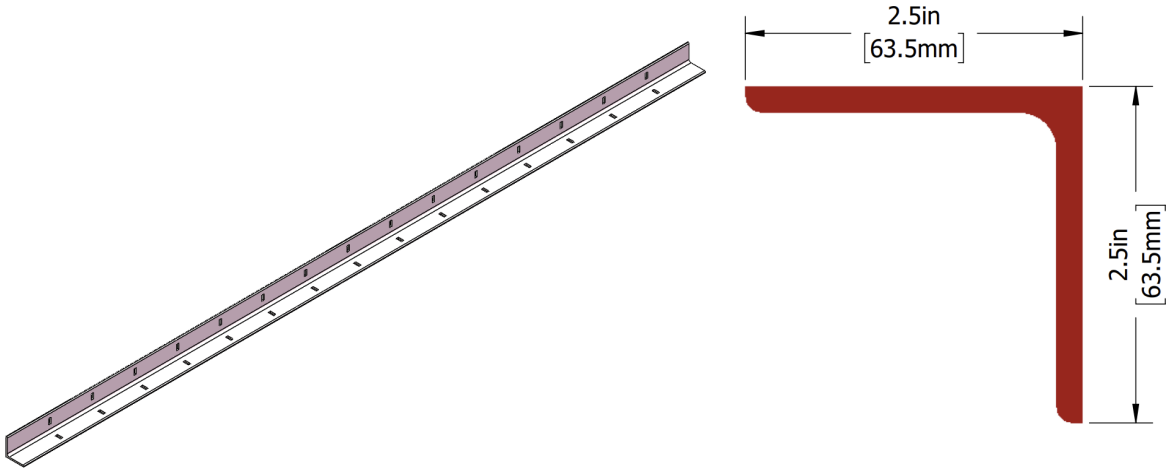
Product Code	Description	Height		Weight	
		FT	MM	LB	KG
FWDPFA3	3′ Filler Angle	4	914.4	4.85	2.2
FWDPFA4	4′ Filler Angle	6	1219.2	6.61	3.0
FWDPFA5	5′ Filler Angle	8	1524	8.15	3.7
FWDPFA6	6′ Filler Angle	10	1828.8	9.92	4.49
FWDPFA8	8′ Filler Angle	12	2438.4	13.01	5.9

Direct Ply Filler Angles allow for the construction of job-built fillers using ¾″ plywood, attaching to the side rails of adjacent Direct Ply forms. Filler angles are recommended where rebar and pipe penetrations must extend through the face of a form, eliminating damage to standard forms.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated
- Maximum recommended job-built filler is 12″ wide without additional support

19 Outside Corners



Product Code	Description	Height		Weight	
		FT	MM	LB	KG
FWDPSCO02	2′ Outside Corner	2	609.6	6.42	2.98
FWDPSCO03	3′ Outside Corner	3	914.4	7.45	3.38
FWDPSCO04	4′ Outside Corner	4	1219.2	9.92	4.5
FWDPSCO05	5′ Outside Corner	5	1524	7.45	3.38
FWDPSCO06	6′ Outside Corner	6	1828.8	9.92	4.5
FWDPSCO08	8′ Outside Corner	8	2438.4	12.38	5.61

Direct Ply Outside Corners are all-steel right angle corners that lock adjoining panels and/or fillers together to form outside corners.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated

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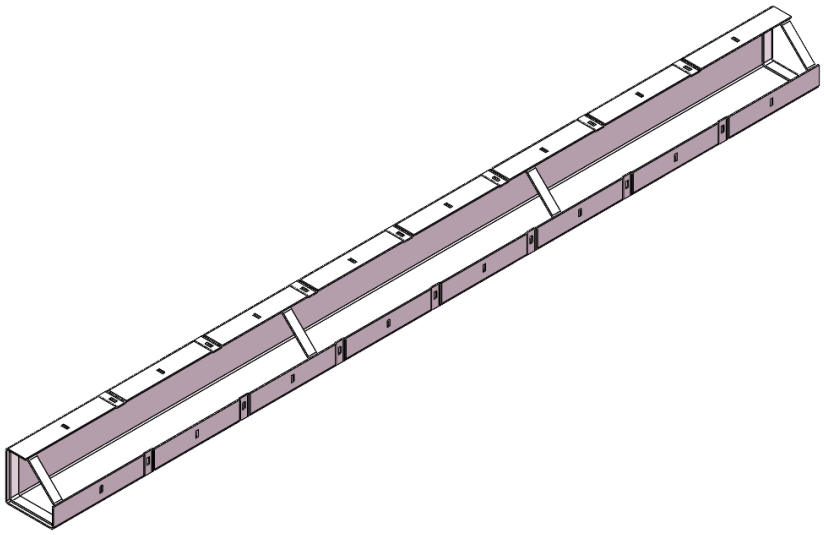
Inside Corners



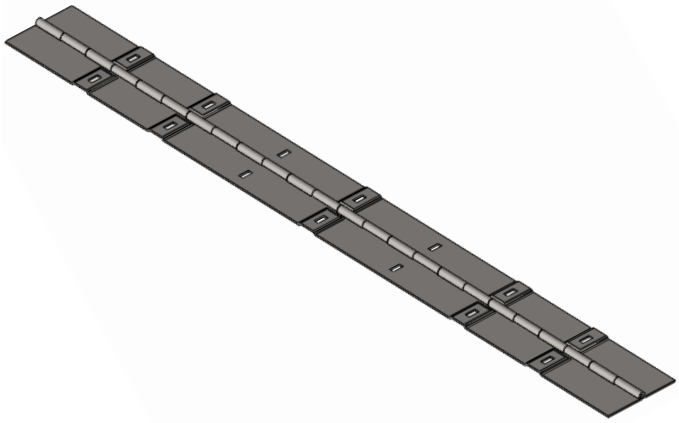
Product Code	Description	Width		Height		Weight	
		FT	MM	FT	MM	LB	KG
FWDPSCI0304	3′ x 4″ Inside Corner	4	101.6	3	914.4	19.17	8.7
FWDPSCI0404	4′ x 4″ Inside Corner	4	101.6	4	1219.2	25.04	11.36
FWDPSCI0504	5′ x 4″ Inside Corner	4	101.6	5	1524	31.19	14.15
FWDPSCI0604	6′ x 4″ Inside Corner	4	101.6	6	1828.8	37.06	16.81
FWDPSCI0804	8′ x 4″ Inside Corner	4	101.6	8	2438.4	48.79	22.14
FWDPSCI0206	2′ x 6″ Inside Corner	6	152.4	2	609.6	18.13	8.22
FWDPSCI0306	3′ x 6″ Inside Corner	6	152.4	3	914.4	25.92	11.76
FWDPSCI0406	4′ x 6″ Inside Corner	6	152.4	4	1219.2	33.71	15.3
FWDPSCI0506	5′ x 6″ Inside Corner	6	152.4	5	1524	41.96	19.04
FWDPSCI0606	6′ x 6″ Inside Corner	6	152.4	6	1828.8	49.75	22.57
FWDPSCI0806	8′ x 6″ Inside Corner	6	152.4	8	2438.4	65.34	29.65

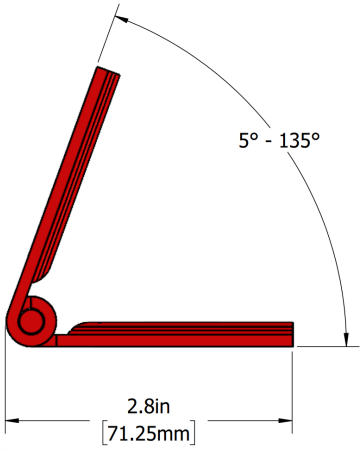
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated

Direct Ply Inside Corners are all-steel right angle corners that lock adjoining panels and/or fillers together. Inside Corners are available in 4″ x 4″ and 6″ x 6″ profiles..

21 Outside Hinged Corners





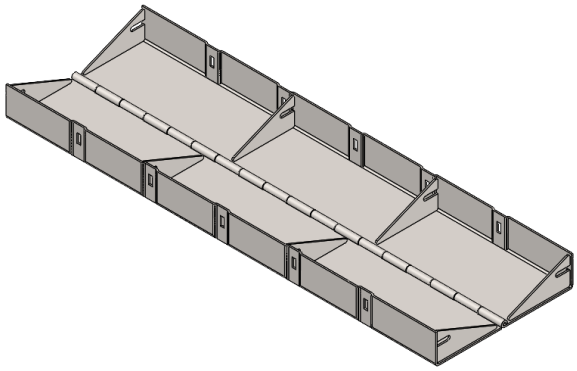
Product Code	Description	Height		Weight	
		FT	MM	LB	KG
FWDPSOHC3	3′ Outside Hinged Corner	3	914.4	7.45	3.38
FWDPSOHC4	4′ Outside Hinged Corner	4	1219.2	9.92	4.5
FWDPSOHC5	5′ Outside Hinged Corner	5	1524	12.38	5.61
FWDPSOHC6	6′ Outside Hinged Corner	6	1828.8	14.85	6.73
FWDPSOHC8	8′ Outside Hinged Corner	8	2438.4	19.8	8.98

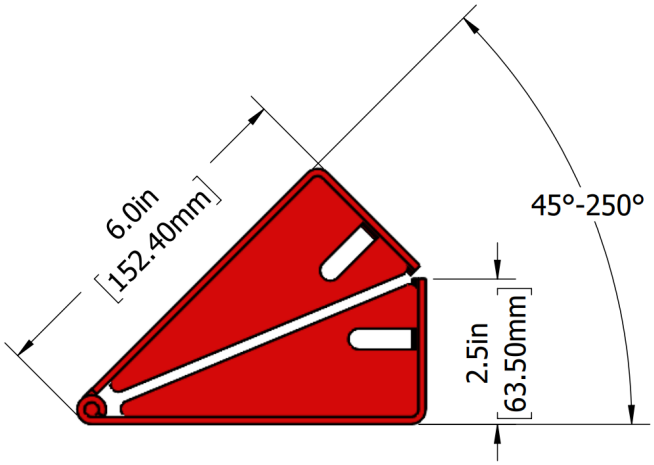
Direct Ply Outside Hinged Corners are used between two forms to form outside corners with angles ranging from 5° minimum to 135° maximum without interference.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated

22 Inside Hinged Corners





Product Code	Description	Height		Weight	
		FT	MM	LB	KG
FWDPSIHC3	3′ Inside Hinged Corner	3	914.4	23.54	10.68
FWDPSIHC4	4′ Inside Hinged Corner	4	1219.2	31.22	14.17
FWDPSIHC5	5′ Inside Hinged Corner	5	1524	39.12	17.75
FWDPSIHC6	6′ Inside Hinged Corner	6	1828.8	46.57	21.13
FWDPSIHC8	8′ Inside Hinged Corner	8	2438.4	62.15	28.20

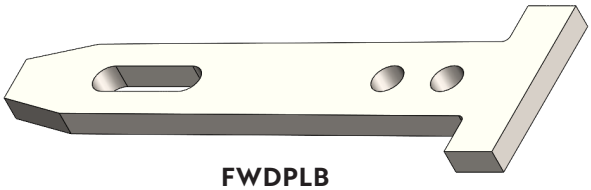
Direct Ply Inside Hinged Corners have a 6"x6" face dimension and can be used to form inside corners to a minimum 45° and a maximum of 250°.

ADDITIONAL INFORMATION

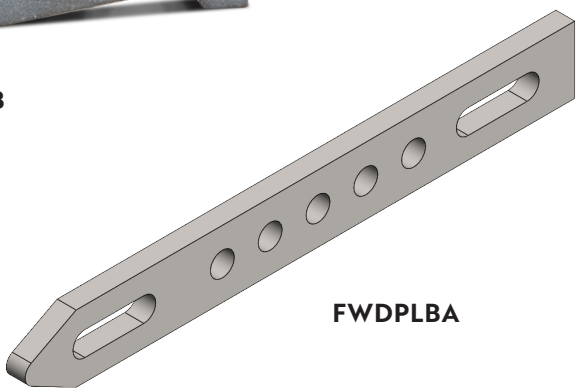
- **Material:** Steel
- **Finish:** Powder Coated

23 Direct Ply Connecting Hardware

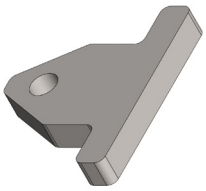
FWDPWB



FWDPLB



FWDPLBA



FWDPBTB

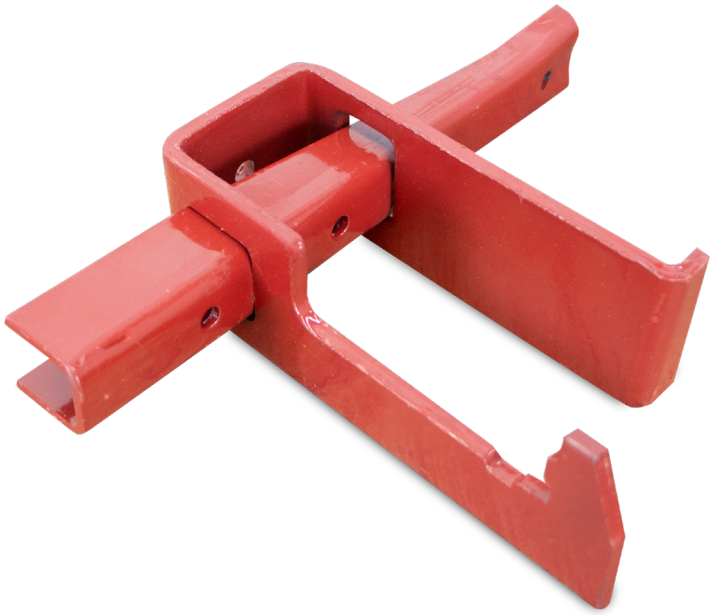
Product Code	Description	Height		Weight	
		FT	MM	LB	KG
FWDPWB	Standard Wedge Bolt	3.88	98.43	0.12	0.06
FWDPLB	Long Bolt	4.30	109.22	0.16	0.07
FWDPLBA	Adjustable Long Bolt	5.75	146.05	0.17	0.08
FWDPBTB	Base Tie Bolt	1.06	26.92	0.04	0.02

Direct Ply connecting hardware is utilized to connect adjacent panels, fillers, and corners. They may also be utilized to attach various other Direct Ply components.

ADDITIONAL INFORMATION

- **Standard Wedge Bolts:** Act as a lock-set for all standard connections
- **Long Bolts:** Used in conjunction with a standard wedge bolt to connect steel fillers to adjacent panels/fillers
- **Adjustable Long Bolts:** Used when two steel fillers are side-by-side, up to a maximum of 3 inches
- **Base Tie Bolts:** Allow a tie to be utilized at an endrail or siderail up against an existing concrete wall or footing
- **Material:** Normalized Steel
- **Finish:** Black

24 One Piece Waler Clamps



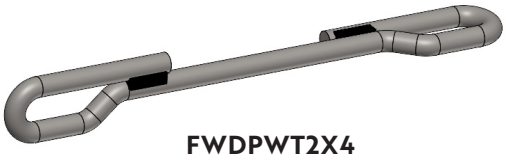
Product Code	Description	Weight	
		LB	KG
FWDPWC+10	One Piece Waler Clamp	1.91	0.87

The One-Piece Waler Bracket attaches to any side rail wedge bolt slot and will function with either a single or double 2x4 waler.

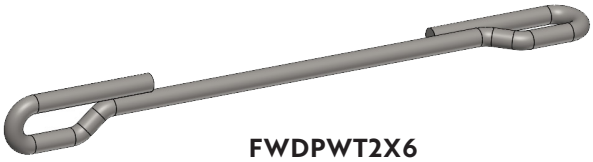
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated

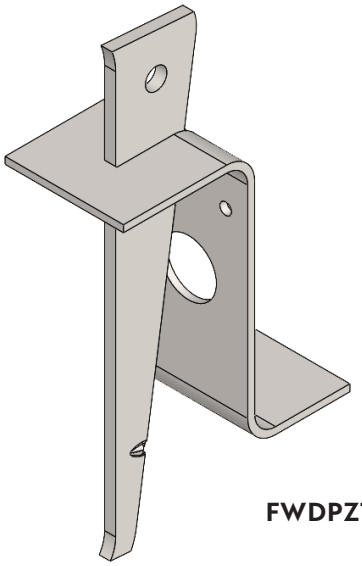
25 Waler Hardware



FWDPWT2X4



FWDPWT2X6



FWDPZTH

Product Code	Description	Length		Weight	
		IN	MM	LB	KG
FWDPWT2X4	2x4 Waler Tie	6.38	162	0.13	0.06
FWDPWT2X6	2x6 Waler Tie	8.38	212.8	0.15	0.07
FWDPZTH	Z-Tie Holder	-	-	0.81	0.37

Direct Ply Waler Ties used in conjunction with a Z-Tie Holder, serve to secure either double 2x4 or 2x6 waler lumber with a proper sized Waler Tie connected to the form with Standard Wedge Bolts.

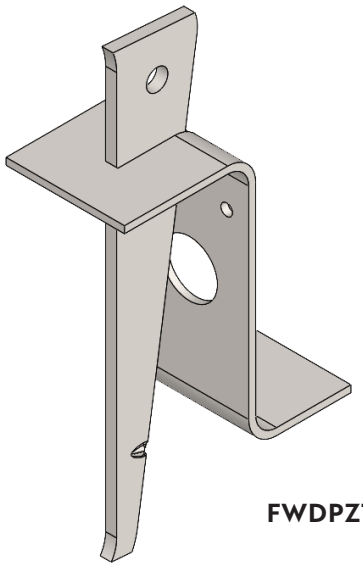
ADDITIONAL INFORMATION

- **Material:** Steel
- **Waler Ties Finish:** Black
- **Z-Tie Holder Finish:** Powder Coated

26 Strongback Ties

FWDPST44

FWDPST46



FWDPZTH

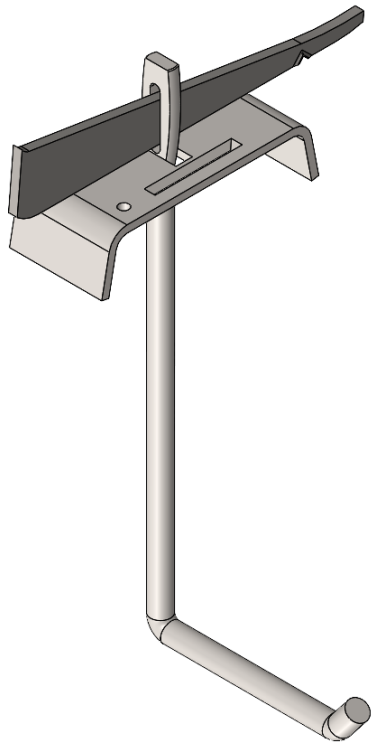
Product Code	Description	Length		Weight	
		IN	MM	LB	KG
FWDPST4X4	4x4 Strongback Tie	9.83	249.8	0.18	0.08
FWDPST4X6	4x6 Strongback Tie	11.83	300.6	0.20	0.09
FWDPZTH	Z-Tie Holder	-	-	0.81	0.37

Direct Ply Strongback Ties in conjunction with a Z-Tie Holder will secure either 2x4 or 2x6 strongbacks to the walers and the form system. When Strongback Ties are used with lumber walers, the need for a Waler Tie is eliminated at that connection.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black

27 J Strongback Hooks



Product Code	Description	Weight	
		LB	KG
FWDPSBJ2424	J Strongback Hook 4x4	1.364	0.65
FWDPSBJ2624	J Strongback Hook 6x4	1.05	0.48

Direct Ply J-Strongback Hooks are a one piece unit and will secure either 2x4 or 2x6 strongbacks to the lumber walers. Because of the design, the J-Strongback Hook simply hooks over one member of the double waler at any point.

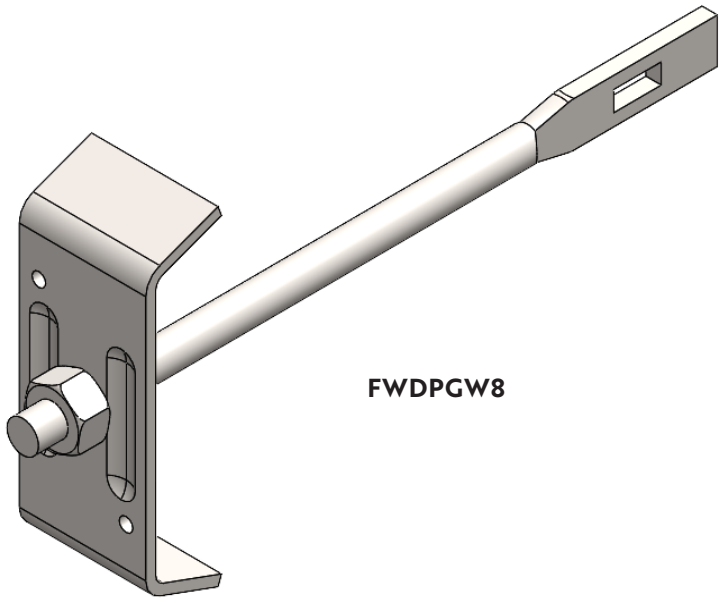
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black

28

Gang Waler Hardware

Gang Waler Assembly Includes Rod, Plate & Nut



FWDPGW8

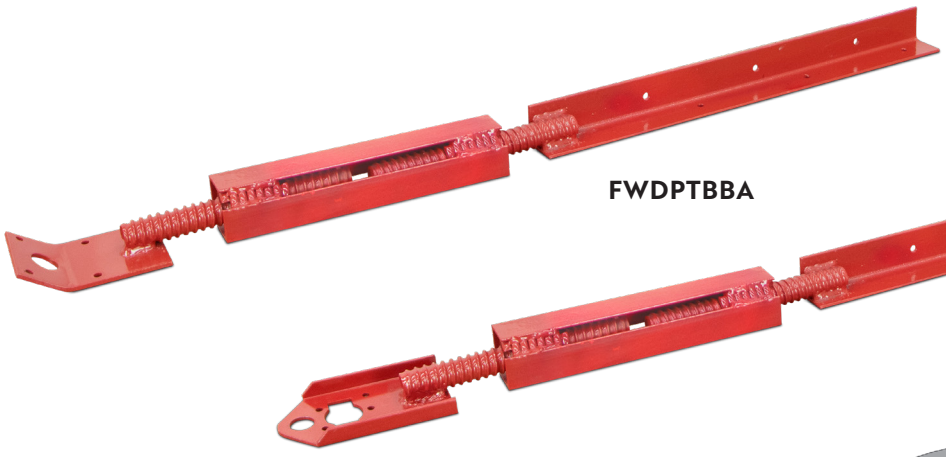
Product Code	Description	Weight	
		LB	KG
FWDPGW8	8″ Gang Waler Assembly	1.06	0.48
FWDPGW12	12″ Gang Waler Assembly		
FWDPGW14	14″ Gang Waler Assembly		
FWDPGWP	Gang Waler Plate	0.55	0.25
FWDPGWR8	8″ Gang Waler Rod	0.44	0.20
FWDPGWR12	12″ Gang Waler Rod		
FWDPGW14	14″ Gang Waler Rod	0.88	0.40
FWTRCN05	1/2″ Coil Nut	0.066	0.03

Direct Ply Gang Waler Assembly consists of a Gang Waler Rod, Gang Waler Plate, and a Coil Nut to secure a waler to either handset forms or in a gang situation. Loose Gange Waler Rods are stocked in two sizes, 8″ and 14″.

ADDITIONAL INFORMATION

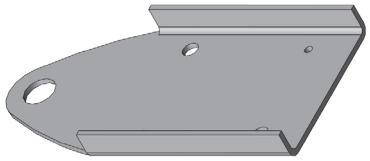
- **Material:** Steel
- **Plate Finish:** Electroplated
- **Rod & Nut Finish:** Black

29 Handset Forming Accessories



FWDPTBBA

FWDPTBFA



FWDPAP

Product Code	Description	Max Height		Width		Weight	
		IN	MM	FT	MM	LB	KG
FWDPTBBA	HD Bent Plate Turnbuckle Brace	41.73	1,060	2.9	76	7.28	3.3
FWDPTBFA	HD Flat Plate Turnbuckle Brace	41.50	1,054	2.9	76	7.05	3.2
FWDPAP	Attachment Plate	7.30	185	3.9	99	1.1	0.5

Used for positioning and plumbing forms.

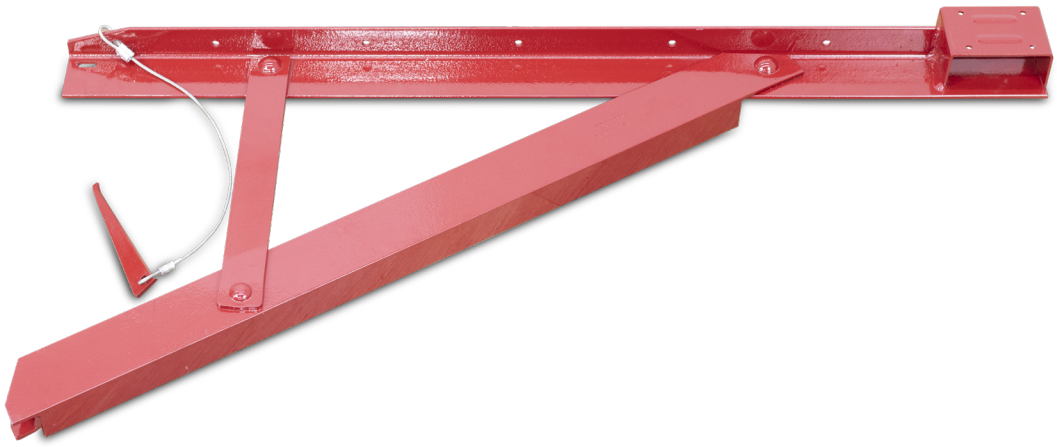
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated

30

Scaffold Bracket

Safety Factor 4:1



Product Code	Description	Length		Capacity		Weight	
		IN	MM	LB	KG	LB	KG
FWDPSBA	Scaffold Bracket	38.6	981	500	226.8	16.4	7.63

Scaffold Brackets should be installed where one or more work platforms are required for safe and easy access to forming components or where concrete placement requires work above grade.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated
- Maximum 8′ Centers

31

Heavy Duty Loop Ties

Safety Factor 2:1

Product Code	Description	Wall Thickness		Weight	
		IN	MM	LB	KG
FWDPLTHD06	6″ Heavy Duty Loop Tie	6	152.4	0.18	0.08
FWDPLTHD07	7″ Heavy Duty Loop Tie	7	177.8	0.19	0.09
FWDPLTHD08	8″ Heavy Duty Loop Tie	8	203.2	0.2	0.09
FWDPLTHD09	9″ Heavy Duty Loop Tie	9	228.6	0.22	0.1
FWDPLTHD10	10″ Heavy Duty Loop Tie	10	254	0.24	0.11
FWDPLTHD11	11″ Heavy Duty Loop Tie	11	279.4	0.25	0.11
FWDPLTHD12	12″ Heavy Duty Loop Tie	12	304.8	0.26	0.12
FWDPLTHD13	13″ Heavy Duty Loop Tie	13	330.2	0.29	0.13
FWDPLTHD14	14″ Heavy Duty Loop Tie	14	355.6	0.3	0.14
FWDPLTHD15	15″ Heavy Duty Loop Tie	15	381	0.3	0.14
FWDPLTHD16	16″ Heavy Duty Loop Tie	16	406.4	0.31	0.14
FWDPLTHD17	17″ Heavy Duty Loop Tie	17	431.8	0.32	0.15

Direct Ply Heavy Duty Loop Ties are used to space and secure modular concrete forms.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black
- **Capacity:** 3,000 lb Safe Working Load
- **Standard Breakback:** 1″

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Heavy Duty Loop Ties Cont.

Safety Factor 2:1

Product Code	Description	Wall Thickness		Weight	
		IN	MM	LB	KG
FWDPLTHD18	18″ Heavy Duty Loop Tie	18	457.2	0.33	0.15
FWDPLTHD19	19″ Heavy Duty Loop Tie	19	482.6	0.34	0.15
FWDPLTHD20	20″ Heavy Duty Loop Tie	20	508	0.35	0.16
FWDPLTHD21	21″ Heavy Duty Loop Tie	21	533.4	0.36	0.16
FWDPLTHD22	22″ Heavy Duty Loop Tie	22	558.8	0.37	0.17
FWDPLTHD23	23″ Heavy Duty Loop Tie	23	584.2	0.41	0.19
FWDPLTHD24	24″ Heavy Duty Loop Tie	24	609.6	0.42	0.19
FWDPLTHD30	30″ Heavy Duty Loop Tie	30	762	0.54	0.25
FWDPLTHD36	36″ Heavy Duty Loop Tie	36	914.4	0.63	0.29
FWDPLTHD48	48″ Heavy Duty Loop Tie	48	1219.2	0.82	0.37
FWDPLTHD60	60″ Heavy Duty Loop Tie	60	1524	1.01	0.46

Direct Ply Heavy Duty Loop Ties are used to space and secure modular concrete forms.

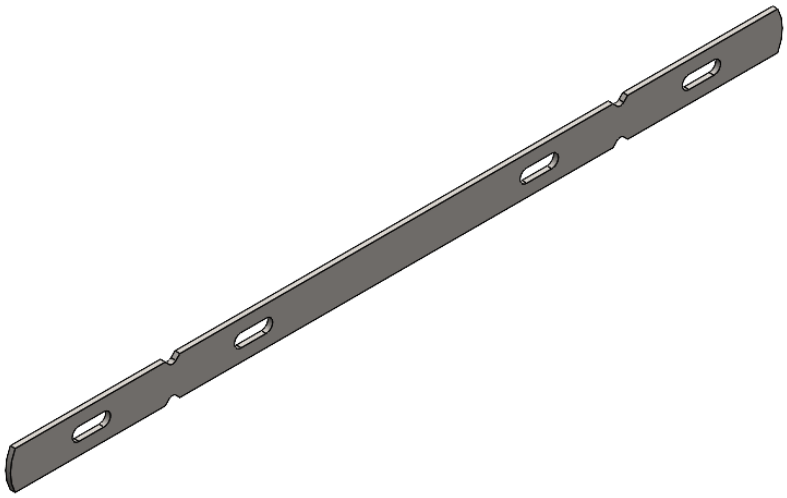
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black
- **Capacity:** 3,000 lb Safe Working Load
- **Standard Breakback:** 1″

33

Standard X Flat Ties

Safety Factor 2:1



Product Code	Description	Wall Thickness		Weight	
		IN	MM	LB	KG
FWDPXFT06	6″ Standard X Flat Tie	6	152.4	0.30	0.14
FWDPXFT08	8″ Standard X Flat Tie	8	203.2	0.36	0.16
FWDPXFT10	10″ Standard X Flat Tie	10	254	0.41	0.19
FWDPXFT12	12″ Standard X Flat Tie	12	304.8	0.46	0.21
FWDPXFT14	14″ Standard X Flat Tie	14	355.6	0.52	0.24
FWDPXFT16	16″ Standard X Flat Tie	16	406.4	0.57	0.26
FWDPXFT18	18″ Standard X Flat Tie	18	457.2	0.63	0.29
FWDPXFT20	20″ Standard X Flat Tie	20	508	0.68	0.31
FWDPXFT22	22″ Standard X Flat Tie	22	558.8	0.73	0.33
FWDPXFT24	24″ Standard X Flat Tie	24	609.6	0.79	0.36

Direct Ply Standard X Flat Ties are used to space and secure modular concrete forms.

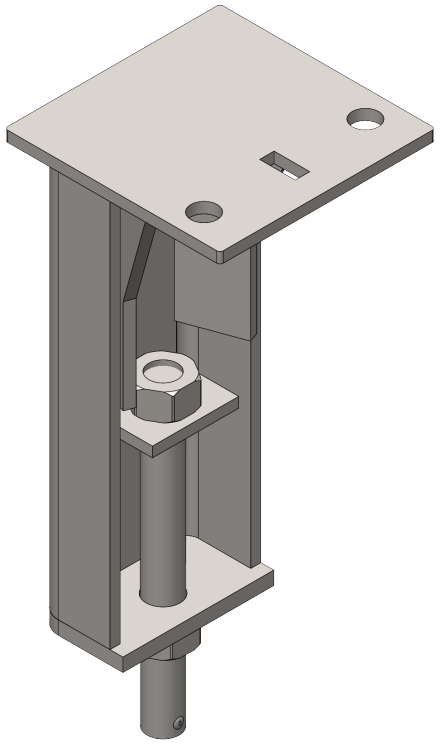
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black
- **Capacity:** 3,000 lb Safe Working Load
- **Standard Breakback:** 1/4″

34

Adjustable Shear Wall Bracket

Safety Factor 3:1



Product Code	Description	Safe Working Load		Weight	
		LB	KN	LB	KG
FWDPASWB	Adjustable Shear Wall Bracket	3,000	13.34	9.02	4.06

Direct Ply Adjustable Shear Wall Brackets are ideal for the vertical support of ganged or handset modular form systems.

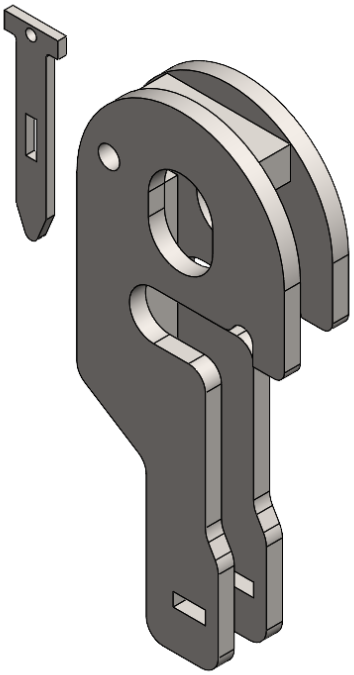
ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Painted
- Bracket has 2-3/8" of vertical adjustment in place
- Safe Working Load Rating when mounted flush in 3,500 psi concrete is 3,000 lb

35

Double Duty Lift Bracket

Safety Factor 5:1



Product Code	Description	Safe Working Load		Weight	
		LB	KN	LB	KG
FWDPDDLB	Double Duty Lift Bracket	2,000	8.89	6.78	3.07

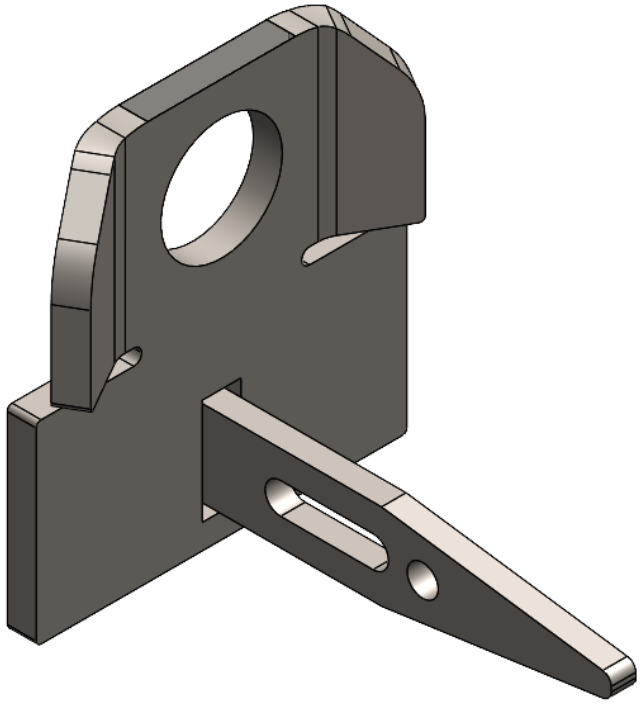
Two or more Direct Ply Double Duty Lift Brackets attach at the side rails of two adjoining panels and are secured with the included special long bolt cabled to the part, along with a Standard Wedge Bolt.

Install 16d nail and clinch over after installing Wedge Bolt in special connecting bolt.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated
- **Capacity:** 2,000 lb Safe Working Load, capacity drops to 1,000 pounds at 45º

36 Safety Eye



Product Code	Description	Weight	
		LB	KG
FWDPSE	Safety Eye	0.682	0.31

Direct Ply Safety Eyes allow easy attachment of safety belts through a 1" diameter hole when necessary to work on the forms. The Safety Eye is installed at the vertical side rails or end rails with an integral special bolt and secured to the form joint with a Standard Wedge Bolt.

Secure Wedge Bolt to plywood with 16d nail.

ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Painted
- The part was designed and tested in accordance with general scaffold safety standard 29 CFR Part 1926 subpart M Appendix C and is suitable for tying off a single person
- The part can be used for both horizontal and vertical rail orientations

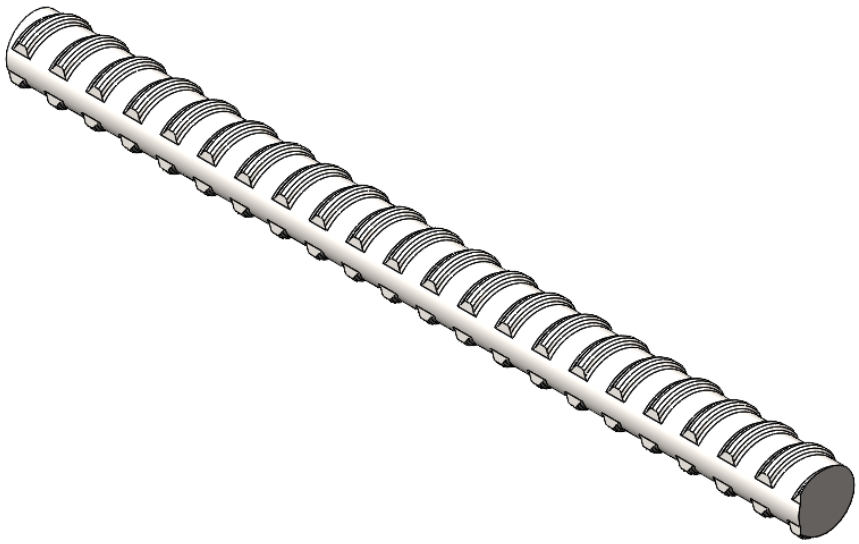
03

Forming

38

Hot Rolled Euro Threaded Rod

Safety Factor 2:1



Product Code	Description	Stock Length		Safe Working Load		Ultimate Load		Weight	
		FT	MM	LB	KN	LB	KN	LB	KG
FW15HRTB1901	15mm Hot Rolled Threaded Bar	19'-1"	5800	20232.8	90	41814.5	186	18.4	8.35
FW20HRTB1901	20mm Hot Rolled Threaded Bar	19'-1"	5800	35969.4	160	74187.0	330	32.74	14.84

Hot rolled Euro threaded bar is a non-weldable tie rod designed with two flat surfaces and can be used in multiple formwork applications.

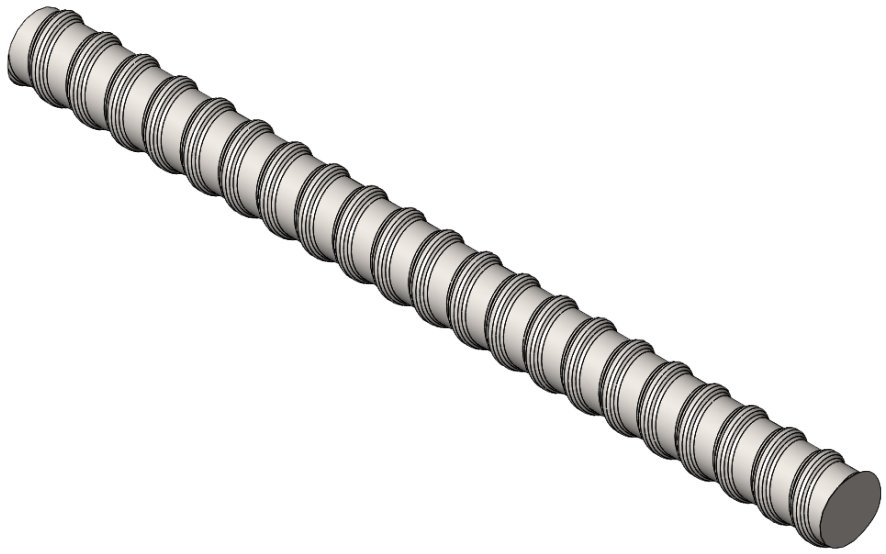
ADDITIONAL INFORMATION

- **Material:**
  Non-weldable High-strength steel
- Can be easily cut in the field to required lengths with bolt cutters or a carborundum blade.

39

Cold Rolled Euro Threaded Rod

Safety Factor 2:1



Product Code	Description	Stock Length		Safe Working Load		Ultimate Load		Weight	
		FT	M	LB	KN	LB	KN	LB	KG
FW15CRTB20	15mm Cold Rolled Threaded Rod	20	6.1	20907	93	41814	186	19.8	8.98
FW20CRTB20	20mm Cold Rolled Threaded Rod	20	6.1	32147	143	64294	286	36.15	16.40

Fast threading cold rolled Euro threaded bar is a non-weldable tie rod used in multiple formwork applications.

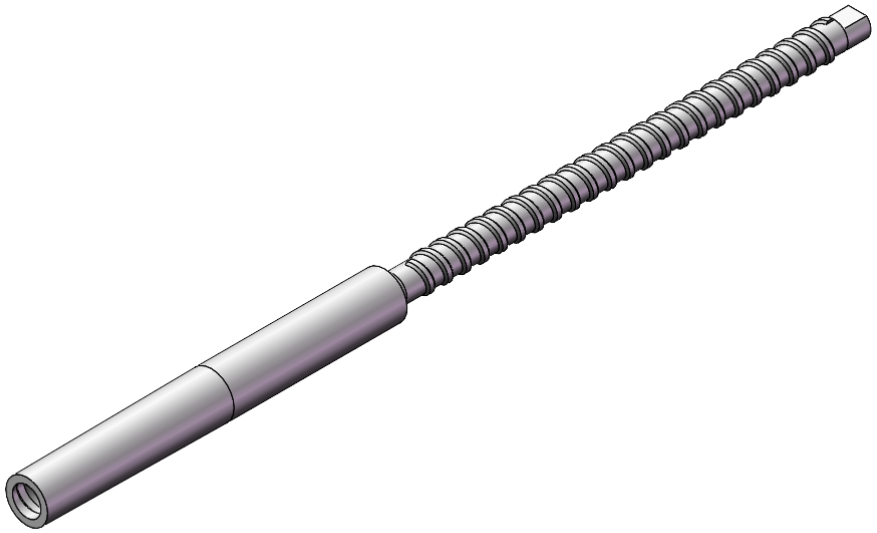
ADDITIONAL INFORMATION

- **Material:**
  Non-weldable High-strength steel

40

Euro Threaded She Bolt

Safety Factor 2:1



Product Code	Description	Total Length		Taper Length		Safe Working Load		Ultimate Load		Weight	
		IN	MM	IN	MM	LB	KN	LB	KN	LB	KG
FWSB18	15mm x 18″ She Bolt	18	457.2	4	101.6	20000	88.96	40000	177.93	2.4	1.1
FWSB24	15mm x 24″ She Bolt	24	609.6	4	101.6	20000	88.96	40000	177.93	2.9	1.3

She-Bolts are heavy duty reusable form ties used for medium and heavy concrete forming applications.

ADDITIONAL INFORMATION

- 15mm Euro Thread
- Taper diameter is 0.905″ to 0.984″ (23 mm to 25 mm)
- Unthreaded section is 7.75″ (196.85 mm)

41

Euro Threaded Taper Tie

Safety Factor 2:1

Product Code	Description	Total Length		Taper Length		Safe Working Load		Ultimate Load		Weight	
		IN	MM	IN	MM	LB	KN	LB	KN	LB	KG
FWTT32	15mm x 32″ Taper Tie	32	812.8	13	101.6	20000	88.96	40000	177.93	3.5	1.6
FWTT38	15mm x 38″ Taper Tie	34	965.2	19	482.6	20000	88.96	40000	177.93	4.4	2.0
FWTT44	15mm x 44″ Taper Tie	44	1117.6	25	635	20000	88.96	40000	177.93	5.5	25
FWTT50	15mm x 50″ Taper Tie	50	1270	31	787.4	20000	88.96	40000	177.93	6.5	3.0

Taper Ties are heavy duty reusable form ties used for medium and heavy concrete forming applications where specifications require or permit complete removal of the form tie from the concrete.

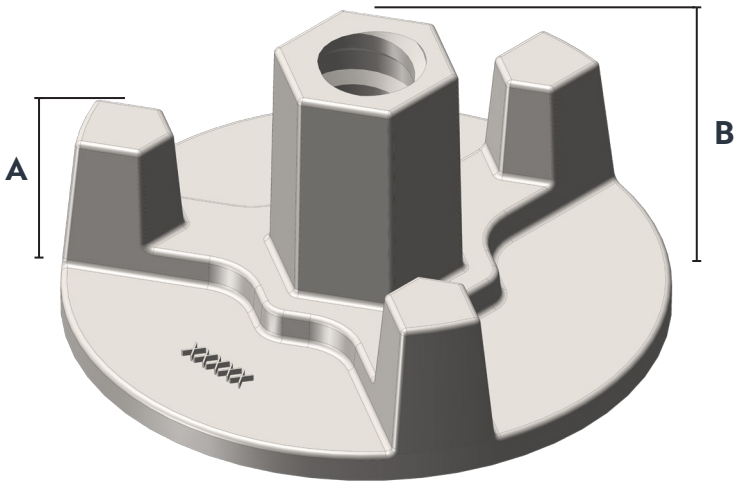
ADDITIONAL INFORMATION

- 15mm Euro Thread
- Square end of rod identifies large end of taper
- Taper diameter is 0.752″ to 0.866″ (19.1 mm to 22 mm)

42

Euro Flange Nut

Safety Factor 2:1



Product Code	Description	A		B		Diameter		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	LB	KN	LB	KG
FWTPN100+G	15mm Flange Nut Galvanized	1.08	27.5	1.87	47.5	3.84	97.5	21300	94.75	3.02	1.37
FWTPN100	15mm Flange Nut	1.08	27.5	1.87	47.5	3.84	97.5	21300	94.75	3.02	1.37

Forged Flange Nuts used to secure Euro Style threaded tie rods in a variety of formwork applications.

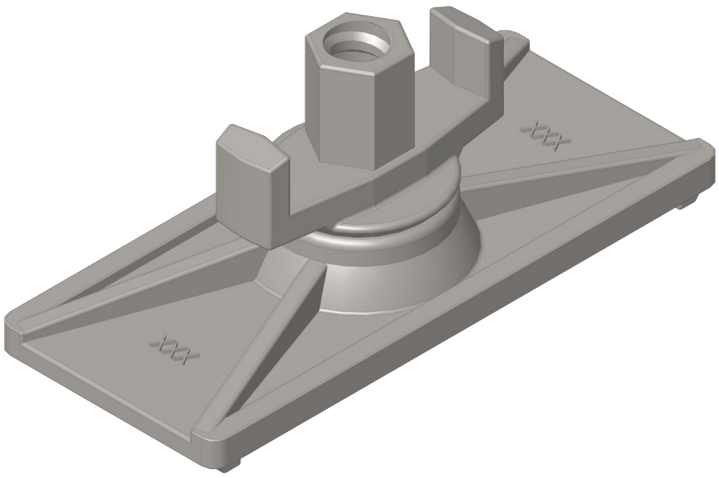
ADDITIONAL INFORMATION

- **Material:** Cast steel
- Compatible with Euro Style 15mm Thread
- Turn with 1" socket

43

Euro Articulated Flange Nut

Safety Factor 2:1



Product Code	Description	Length		Width		Height		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	LB	KN	LB	KG
FWATPN	Articulated Flange Nut	7.28	185	3.11	79	3.11	79	21300	94.75	2.91	1.32

Articulated Flange Nuts are used to secure Euro Style threaded tie rods in a variety of formwork applications.

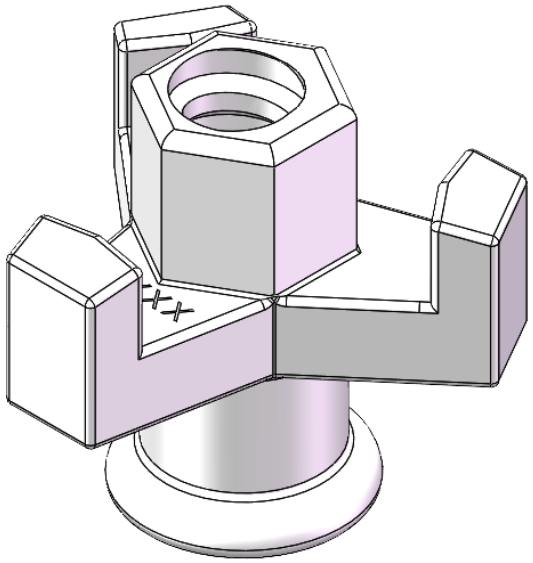
ADDITIONAL INFORMATION

- **Material:** Galvanized Cast Steel
- Compatible with Euro Style 15mm Thread
- Turn with 1" socket

44

Euro Star Nut

Safety Factor 2:1



Product Code	Description	Safe Working Load		Weight	
		LB	KN	LB	KG
FWNS	15mm Star Nut	21300	94.75	3.02	1.37

Star Nuts are wing style nuts used to secure Euro Style threaded tie rods in a variety of formwork applications.

ADDITIONAL INFORMATION

- **Material:** Cast steel with electro-plated finish
- Compatible with Euro Style 15mm Thread
- Turn with 1" socket

45

Euro Rod Hex Coupler

Safety Factor 2:1

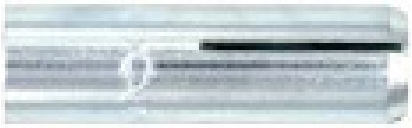
Product Code	Description	Safe Working Load		Weight	
		LB	KN	LB	KG
FW15HC	15mm EURO Rod Coupler	20233	90	0.93	0.42
FW20HC	20mm EURO Rod Coupler	35969	160	1.39	0.63

EURO Rod Couplers are used to couple both cold and hot rolled EURO Bars to any lengths that may be required for the spacing and securing ofclamp form systems.

ADDITIONAL INFORMATION

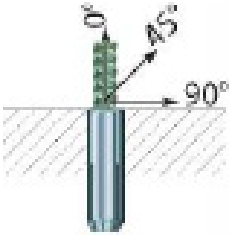
- **Material:** High Strength Steel Black Finish
- Compatible with Euro Style 15mm & 20mm Thread
- Supplied with Positive stop in middle of coupler ensuring full capacity of the tie system.

46 Euro Thread Drop-In Anchor



FWEUDA15

FWEUDA15T



Product Code	Description	Drill Hole ø X Depth		Thread ø X Length		Pkg Content Pcs	Weight	
		IN	MM	IN	MM		LB	KG
FWEUDA15	Drop-In Anchor ED-DW 15	.87 x 3.15	22 x 80	.59 x 1.38	15 x 35	25	8.29	3.76
FWEUDA15T	Setting Tool	-	-	-	-	-	-	-

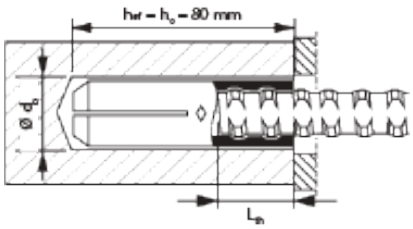
ADDITIONAL INFORMATION

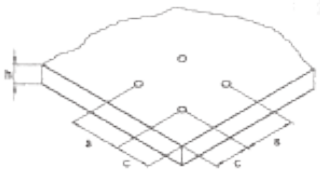
- **Material:** Steel
- **Finish:** Zinc Plated
- For fixing threadbars in formwork

Euro Thread Drop-In Anchor Cont.

Drop-in Anchor with EURO internal thread for post installed threadbar connections. Suitable for concrete C12/15-C50/60 or hard natural stone. The Drop-in Anchor does not protrude out of the concrete after removing the threadbar.

Multi-functional Anchor for concrete formwork. Cost efficient quick fixing into existing concrete. Ideal for fixing one-sided formwork or temporary guardrails.





Spacing & Edge Distance

• Effective anchorage depth:	3.15″	80 mm	hef
• MinSpacing:	23.62″	600 mm	Smin
• Min Edge Distance:	11.81″	300 mm	Cmin
• Min Concrete Slab Thickness:	6.3″	160 mm	hmin

Installation Parameters

• Drill Hole Diameter:	0.87″	22 mm	do
• Depth of Drill Hole:	3.15″	80 mm	ho
• Length of Thread :	1.38″	35 mm	Lth
• Stab/Screw min Inst Depth:	1.1″	28 mm	

Loads and Performance Data	Applied Load Angle	0°		15°		30°		45°	
		LB	KN	LB	KN	LB	KN	LB	KN
Recommended Loads Uncracked Concrete	C12/15 rec. F [kN]	3799	17.3	3799	16.9	3776	16.8	3912	17.4
	> C12/15 rec. F [kN]	4339	19.3	4203	18.7	4114	18.3	4181	18.6

Loads and Performance Data	Applied Load Angle	60°		75°		90°	
		LB	KN	LB	KN	LB	KN
Recommended Loads Uncracked Concrete	C12/15 rec. F [kN]	4203	18.7	4631	20.6	5081	22.6
	> C12/15 rec. F [kN]	4384	19.5	4743	21.1	5081	22.6

48

Coil Rod

Safety Factor 2:1

Product Code	Description	Diameter	TPI	Length		Tension		Shear		Min Coil Penetration
		IN		IN	MM	LB	KN	LB	KN	IN
FWCR05012	1/2" Threaded Coil Rod x 12'	0.5	6	12	3.65	9000	40	6000	26	2
FWCR07512	3/4" Threaded Coil Rod x 12'	0.75	4.5	12	3.65	18000	80	12000	53	2.25
FWCR10012	1" Threaded Coil Rod x 12'	1	3.5	12	3.65	38000	169	25300	112	2.5

Continuously threaded and manufactured from cold rolled high stength steel Coil Rod can be used in multiple forming applications in combination with coil ties, coil inserts and coil threaded form hardware, as well as hanging bridge overhang brackets, from a beam hanger.

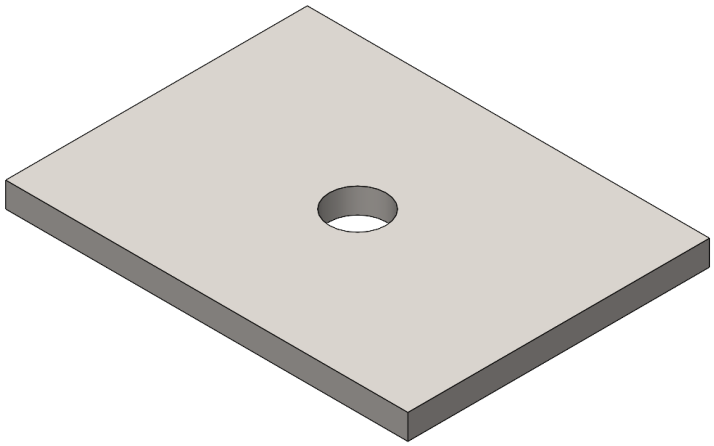
ADDITIONAL INFORMATION

- **Material:** Non-Weldable High-Strength Steel
- Can be easily cut in the field to required lengths with bolt cutters or a carborundum blade

49

Flat Washer

Safety Factor 2:1



Product Code	Description	Width		Length		Diameter		Thickness		Load Capacity		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
FWWSF05D3X4T25	3″ x 4″ Flat Washer for 1/2″ Diameter Rod	3	76.2	4	101.6	.5625	14.3	.25	6.4	6751	30.02	.83	.38
FWWSF075D4X5T25	4″ x 5″ Flat Washer for 3/4″ Diameter Rod	4	101.6	5	127	.8125	20.6	.25	6.4	6751	30.02	1.37	.62
FWWSF1D5X5T50	5″ x 5″ Flat Washer for 1″ Diameter Rod	5	127	5	127	1.0625	27	.5	12.7	18500	82.29	3.4	1.54

Flat Washers are made from flat steel plate and are used to transfer loads from the ties to a form system's frames, walers, or strongbacks.

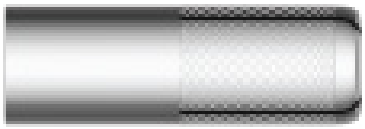
ADDITIONAL INFORMATION

- **Material:** High-Strength Steel
  Black Finish

50

Coil Thread Drop-In Anchor

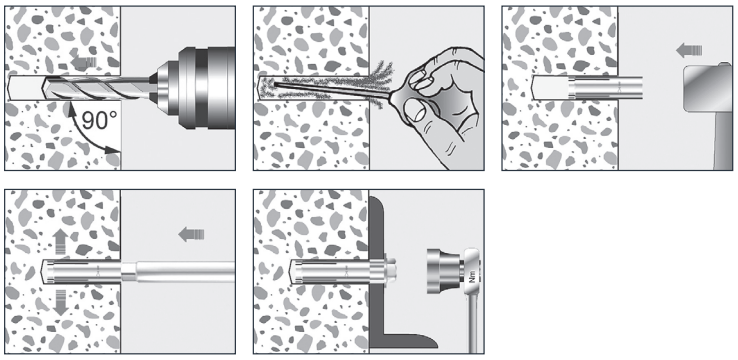
Safety Factor 2:1



Product Code	Bolt ø	Hole ø	Min Embed.	Max Torque	2000 PSI		4000 PSI		Box Qty	Master Qty
	IN	IN	IN	LB/FT	0.6372 IN	SHEAR	TENSION	SHEAR		
FWCRDA050	1/2″	5/8″	2	20	5315	5854	7698	5854	50	250
FWCRDA075	3/4″	1	3 3/16″	80	12.300	11627	16019	11627	10	50

Installation:

1. Drill hole same length as anchor. Do not use core bits. Maintain accurate hole diameter.
2. Clean hole of debris.
3. Drop in anchor slotted end first.
4. To set drive setting tool into anchor until shoulder of tool is flush with top of anchor.
5. Select appropriate coil thread rod or coil bolt.



ADDITIONAL INFORMATION

- Ideal for form work and tilt-up bracing
- Accepts 1/2″ or 3/4″ standard coil thread rod or coil thread bolts
- Preassembled for ease of installation
- Slotted body is precision-matched to tapered internal plug for uniform expansion
- Knurled body increases friction connection between anchor and wall of hole
- Dead load only
- Hole depth must be equal to anchor length
- Do not over torque
- **Material:** Carbon Steel
- **Finish:** Zinc Plated
- **Approval:** G.S.A. Spec FF-S-325C Group VIII Type 1

51

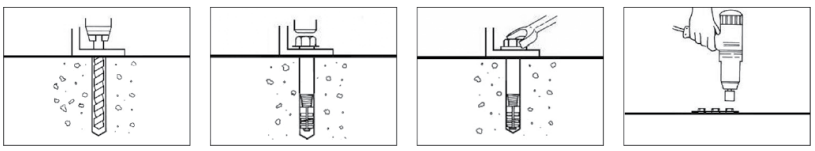
Taper Bolt

Safety Factor 2:1

Product Code	Size	Box Qty	Master Qty
	IN		
	3/8″	100	3000
FWNTTP050	1/2″	50	600
	5/8″	50	400
FWNTTP075	3/4″	50	400
FWNTTP100	1″	10	120

Installation:

1. Drill hole the same diameter as the Taper-Bolt using fixture as a template.
2. Clean hole of debris.
3. Drive Taper-Bolt into place leaving recommended head clearance. If hole is oversized simply remove and pre-expand the expander nut to fit hole.
4. Tighten Taper-Bolt to recommended torque.
5. For big jobs set Taper-Bolt with an impact wrench. This method offers speed consistency and greater installer productivity



ADDITIONAL INFORMATION

- Required hole diameter equals anchor diameter
- Variation in hole size can be accommodated by turning the expander nut
- Equipment may be removed and replaced. The bolt is simply re-inserted and torqued to obtain original holding power (the nut stays in the hole)
- Bolt can be removed and re-used with a new nut after cleaning and lubricating the threads
- Strength – the highest shear strength of any expansion anchor
- Withstands vibratory loads
- Works in a bottomless hole
- Do not use in brick or block
- Tested by Pittsburgh Testing Laboratory PG-2170
- Contact customer service for approvals/ listings for state D.O.T.'s
- **Material:** Grade 5
- **Finish:** Zinc plated other metals and finishes are available by special quote
- Eye bolt version available by special quote

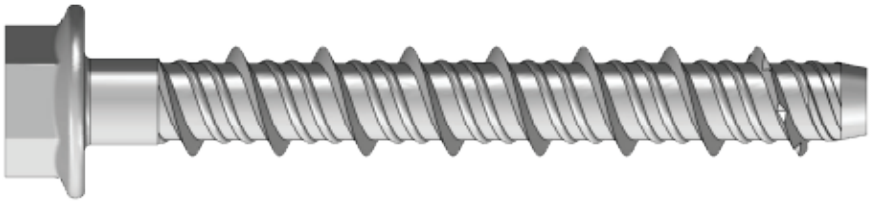
52 Taper Bolt Cont.

Product Code	Anchor ø x L	Hole ø	Min Embed.	Req Torque	Head Size	Req Head Clear.	2000 PSI		4000 PSI		Box Qty	Master Qty
	IN	IN	IN	LB/FT			TENSION	SHEAR	TENSION	SHEAR		
	3/8″ x 2-1/4″	3/8″	1-7/8	40	9/16	3/16	4030	7177	4987	8576	50	400
	3/8″ x 2-5/8″	3/8″	1-7/8″	40	9/16″	3/16″	4030	7177	4987	8567	50	400
	3/8″ x 3″	3/8″	1-7/8″	40	9/16″	3/16″	4030	7177	4987	8567	50	400
	3/8″ x 4″	3/8″	1-7/8″	40	9/16″	3/16″	4030	7177	4987	8567	50	400
	1/2″ x 2-7/8″	1/2″	2-3/8″	90	3/4″	1/4″	8165	12177	9346	15217	25	200
	1/2″ x 4″	1/2″	2-3/8″	90	3/4″	1/4″	8165	12177	9346	15217	25	200
FWBTTP05X5	1/2″ x 5″	1/2″	2-3/8″	90	3/4″	1/4″	8165	12177	9346	15217	20	100
	5/8″ x 3-1/2″	5/8″	2-7/8″	125	15/16″	5/16″	9990	17030	10470	17257	20	75
	5/8″ x 4-1/2″	5/8″	2-7/8″	125	15/16″	5/16″	9990	17030	10470	17257	25	75
	5/8″ x 6″	5/8″	2-7/8″	125	15/16″	5/16″	9990	17030	10470	17257	25	75
	5/8″ x 7″	5/8″	2-7/8″	125	15/16″	5/16″	9990	17030	10470	17257	25	75
FWBTTP075X4125	3/4″ x 4-1/8″	3/4″	3-3/8″	250	1-1/8″	7/16″	11906	27916	17073	28110	20	60
FWBTTP075X55	3/4″ x 5-1/2″	3/4″	3-3/8″	250	1-1/8″	7/16″	11906	27916	17073	28110	20	60
	3/4″ x 7″	3/4″	3-3/8″	250	1-1/8″	7/16″	11906	27916	17073	28110	15	45
	3/4″ x 8″	3/4″	3-3/8″	250	1-1/8″	7/16″	11906	27916	17073	28110	15	45
FWBTTP1X5625	1″ x 5-5/8″	1″	4-5/8″	550	1-1/2″	5/8″	28263	36257	30817	38487	10	30
	1″ x 6-3/4″	1″	4-5/8″	550	1-1/2″	5/8″	28263	36257	30817	38487	10	30
	1″ x 7-1/4″	1″	4-5/8″	550	1-1/2″	5/8″	28263	36257	30817	38487	10	20

53

Sup-R-Bolt

Safety factor of 1.48. This is based on a load combination of 30% dead loads and 70% live loads.

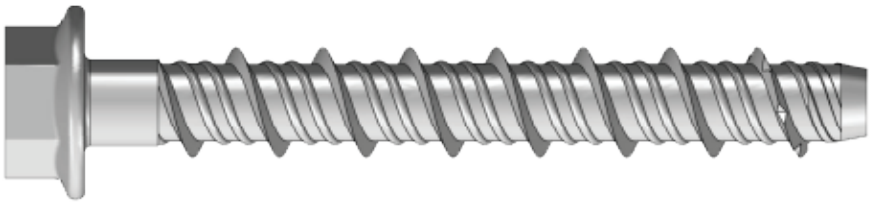


Product Code	Anchor ø x L	Hole ø x D	Min Embed.	Max Thickness Fastened	Required Torqe	Box Qty
	IN	IN	IN	LB/FT		
	3/8" x 3"	3/8" x 2-3/4"	2-1/2"	1/2"	35	50
	3/8" x 4"	3/8" x 2-3/4"	2-1/2"	1-1/2"	35	50
	3/8" x 5"	3/8" x 2-3/4"	2-1/2"	2-1/2"	35	50
	3/8" x 6"	3/8" x 2-3/4"	2-1/2"	3-1/2"	35	50
	1/2" x 4"	1/2" x 3-3/8"	3"	1"	45	25
FWBTSP05X5	1/2" x 5"	1/2" x 3-3/8"	3"	2"	45	25
	1/2" x 6"	1/2" x 3-3/8"	3"	3"	45	25
	5/8" x 4"	5/8" x 3-5/8"	3-3/4"	3/4"	85	25
	5/8" x 5"	5/8" x 3-5/8"	1-3/4"	1-3/4"	85	25
	5/8" x 6"	5/8" x 3-5/8"	3-1/4"	2-3/4"	85	20
	5/8" x 8"	5/8" x 3-5/8"	3-1/4"	4-3/4"	85	20
	3/4" x 4"	3/4" x 4-3/8"	4"	0"	115	15
	3/4" x 5"	3/4" x 4-3/8"	4"	1"	115	15
	3/4" x 6"	3/4" x 4-3/8"	4"	2"	115	15
	3/4" x 7"	3/4" x 4-3/8"	4"	3"	115	15
	3/4" x 10"	3/4" x 4-3/8"	4"	6"	115	5

54

Sup-R-Bolt Cont.

Safety factor of 1.48. This is based on a load combination of 30% dead loads and 70% live loads.

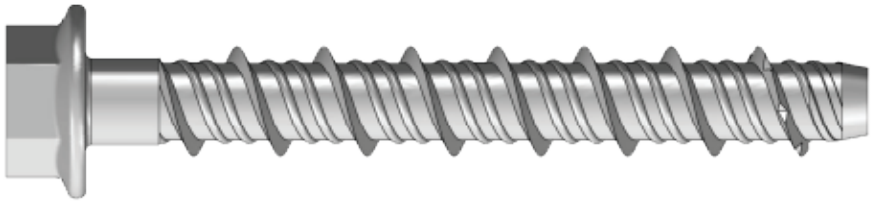


	Conc psi	Symbol	Units	3/8"		1/2"		5/8"		3/4"	
EMBEDMENT		HNOM	IN	2-1/2"	3-1/4"	3"	4-1/4"	3-1/4"	5"	4"	6-1/4"
CRACKED CONCRETE											
Avg. Ultimate Load Tension	4000	Nncr	lb	2705	4225	4077	6358	3898	8122	5503	11626
Avg. Ultimate Load Tension	4000	Vncr	lb	1894	2957	3054	6091	2729	8278	7704	9255
Allowable Loads Tension	2500	Nallowcr	lb	939	1467	1416	2207	1353	2820	1911	4037
	4000	Nallowcr	lb	1188	1855	1790	2792	1712	3567	2417	5106
	6000	Nallowcr	lb	1455	2272	2193	3420	2097	4369	2960	6254
	8500	Nallowcr	lb	1732	2705	2610	4070	2496	5200	3523	7443
UNCRACKED CONCRETE											
Allowable loads tension1	2500	Nallowcr	lb	1326	2330	1416	3116	1911	3981	2698	5699
	4000	Nallowcr	lb	1677	2947	1692	3942	2417	5036	3412	7209
	6000	Nallowcr	lb	2054	3609	1974	4828	2960	6168	4179	8829
	8500	Nallowcr	lb	2445	4296	2254	5746	3523	7341	4974	10508
Allowable loads tension - Light weight1	3000			872	930	1256	1773				
CRACKED & UNCRACKED CONCRETE											
Allowable loads shear1	2500	Vallow	lb	1428	1428	2098	4116	5594	5594	5810	6253
	>4.000	Vallow	lb	1805	1806	2653	4116	5594	5594	6253	6253
Allowable loads shear - Light weight1	3000	Vallow	lb	563		827		811		2291	

55

Sup-R-Bolt Cont.

Safety factor of 1.48. This is based on a load combination of 30% dead loads and 70% live loads.

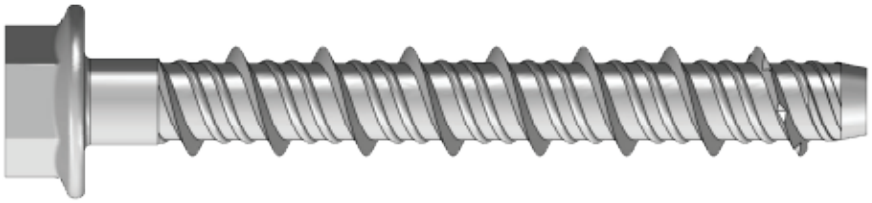


	Conc psi	Symbol	Units	3/8"		1/2"		5/8"		3/4"	
EMBEDMENT		**HNOM**	**IN**	**2-1/2"**	**3-1/4"**	**3"**	**4-1/4"**	**3-1/4"**	**5"**	**4"**	**6-1/4"**
SPACING & EDGE DISTANCE											
Effective Anchorage Depth		hef	in	1.85	2.49	2.21	3.27	2.36	3.85	2.97	4.89
Critical Edge Distance		Cac	in	4	5	4-1/2	5	3-34	7	4-1/2	8
Minimum Spacing		Smin	in	3	3	3	3	4	4	4	4
Minimum Edge Distance		Cmin	in	1-1/2	1-1/2	1-3/4	1-3/4	1-3/4	1-3/4	1-3/4	1-3/4
Minimum thickness of concrete slab		hmin	in	4	4-3/4	4-3/4	6-3/4	5	7	6	8-1/8
SPACING & EDGE DISTANCE											
Drilled hole diameter		do	in	3/8	3/8	1/2	1/2	5/8	5/8	3/4	3/4
Diameter of clearance hole		dc	in	1/2	1/2	5/8	5/8	3/4	3/4	7/8	7/8
Depth of drilled hole		ho	in	2-3/4	3-1/2	3-3/8	4-5/8	3-5/8	5-3/8	4-3/8	6-5/8
Installation Torque		Tinst	ft lb	35	50	45	65	85	100	115	150
Wrench Size		WS	in	9/16	9/16	3/4	3/4	5/16	5/16	1-1/8	1-1/8

56

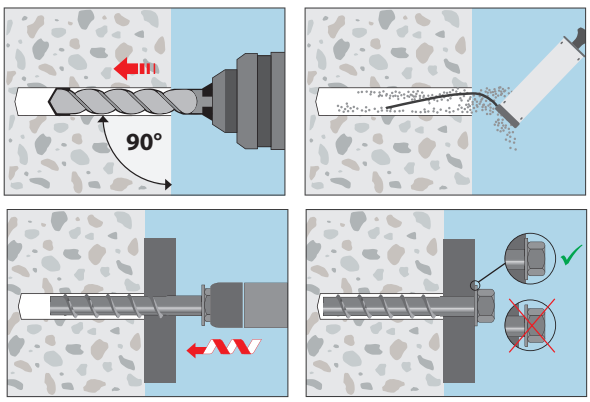
Sup-R-Bolt Cont.

Safety factor of 1.48. This is based on a load combination of 30% dead loads and 70% live loads.



Installation:

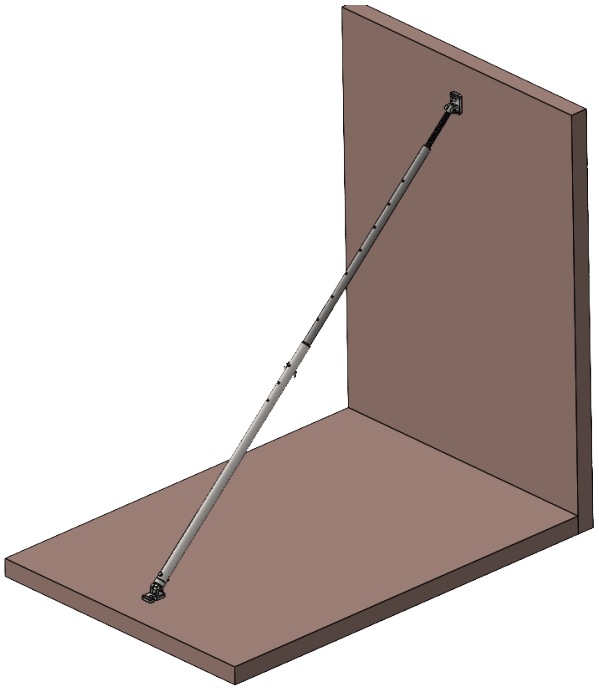
1. Drill hole to recommended diameter and depth.
2. Remove dust rubble from the hole with compressed air.
3. Assemble the proper socket size onto an impact or torque wrench. Insert the anchor through the itembeing fastened into the hole.
4. Tighten the anchor to the specified torque making sure the head is firmly against the item being fastened



ADDITIONAL INFORMATION

- Required hole diameter equals anchor diameter
- Designed for standard ANSI tolerance drill bits
- Hardened threads for tapping high strength concrete
- Anti-rotation teeth on underside of hex washer head lock against the fixture
- Fast installation with powered impact wrench
- Diameter length and identifying marking stamped on head of each anchor
- One-piece finished head design
- Equipment can be removed
- Able to resist seismic loads
- **Material:** High strength steel
- **Approval:** ACI 318 category 1 for cracked concrete ICC-ESESR 4347 except 3/4" x 4" size
- **Do not use in brick or block**
- **Do not reuse**

57 Adjustable Wall Brace



Product Code	Description	Min Extension Length		Max Extension Length		Weight	
		FT	MM	FT	MM	LB	KG
FWTUD1	Formwork Tilt Up Brace 8′-2″ to 14′	8′-2″	2.49	14′-0″	4.27	93	42.28
FWTUD4	Formwork Tilt Up Brace 13′-6″ to 23-4″	13′-6″	4.11	23′-4″	7.11	145.7	66.23
FWTUD5	Formwork Tilt Up Brace 22'-4"to 39'	22′-4″	6.81	39′-0″	11.89	224.42	102.01

Adjustable Wall Braces available in lengths from 8′-2″ to 39′-0″ are designed for formwork precast and tilt-up bracing applications. Braces have foot plates at either end and a threaded rod on one end for fine tune adjustment to height.

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Adjustable Wall Brace Cont.

FWTUD1, FWTUD4 and FWTUD5 have an ultimate tension capacity of 9,750 lb / 43.37 kN.
Use range for braces is based on a 45 – 60 degree angle.

D	V	X	L	Ultimate Load W/O Brace		Ultimate Load W/ Brace	
				LB	KN	LB	KN
FWTUD1							
10′-7″	7′-1″	4′-1″	8′-2″	9750	43.37	-	-
11′-8″	7′-10″	4′-6″	9′-0″	9750	43.37	-	-
14′-3″	9′-6″	5′-6″	11′-0″	9750	43.37	-	-
15′-7″	10′-5″	6′-0″	12′-0″	8175	36.36	-	-
18′-2″	12′-1″	7′-0″	14′-0″	6600	29.35	-	-
FWTUD4							
17′-6″	11′-8″	6′-9″	13′-6″	9750	43.37	9750	43.37
19′-6″	13′-0″	7′-6″	15′-0″	9750	43.37	9750	43.37
20′-7″	13′-9″	7′-11″	15′-10″	9750	43.37	9750	43.37
21′-8″	14′-5″	8′-4″	16′-8″	9750	43.37	9750	43.37
22′-9″	15′-2″	8′-9″	17′-6″	8800	39.14	9750	43.37
23′-10″	15′-10″	9′-2″	18′-4″	7200	32.02	9750	43.37
24′-11″	16′-7″	9′-7″	19′-2″	5888	26.19	9750	43.37
26′-0″	17′-4″	10′-0″	20′-0″	5363	23.85	9750	43.37
27′-1″	18′-0″	10′-5″	20′-10″	4464	19.85	9750	43.37
28′-2″	18′-9″	10′-10″	21′-8″	3750	16.68	9750	43.37
29′-3″	19′-6″	11′-3″	22′-6″	3412	15.17	9750	43.37
30′-4″	20′-2″	11′-8″	23′-4″	3200	14.23	9750	43.37
FWTUD5							
30′-4″	20′-2″	11′-8″	23′-4″	7988	35.53	9750	43.37
31′-5″	20′-11″	12′-1″	24′-2″	7200	32.02	9750	43.37
32′-6″	21′-8″	12′-6″	25′-0″	6375	28.35	9750	43.37
33′-7″	22′-4″	12′-11″	25′-10″	5175	23.02	9750	43.37
34′-8″	23′-1″	13′-4″	26′-8″	4375	19.46	9750	43.37
35′-9″	23′-10″	13′-9″	27′-6″	3833	17.05	9750	43.37
36′-10″	24′-6″	14′-2″	28′-4″	3150	14.01	9750	43.37

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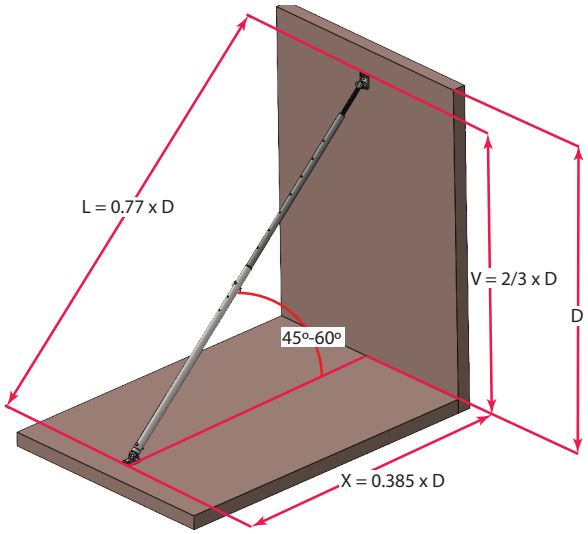
Adjustable Wall Brace Cont.

FWTUD1 FWTUD4 and FWTUD5 have an ultimate tension capacity of 9750 lb / 43.37 kN.
Use range for braces is based on a 45 – 60 degree angle shown in graphic below.



D	V	X	L	Ultimate Load W/O Brace		Ultimate Load W/ Brace	
				LB	KN	LB	KN
FWTUD5							
37′-11″	25′-3″	14′-7″	29′-2″	2625	11.67	9750	43.37
39′-0″	26′-0″	15′-0″	30′-0″	2400	10.68	9750	43.37
40′-1″	26′-8″	15′-5″	30′-10″	2025	9.00	9750	43.37
41′-2″	27′-5″	15′-10″	31′-8″	Not Recommended		9450	42.03
42′-2″	28′-2″	16′-3″	32′-6″	Not Recommended		9000	40.03
43′-3″	28′-10″	16′-8″	33′-4″	Not Recommended		8400	37.36
44′-4″	29′-7″	17′-1″	34′-2″	Not Recommended		7800	34.69
45′-5″	30′-4″	17′-6″	35′-0″	Not Recommended		7500	33.36
46′-6″	31′-0″	17′-11″	35′-10″	Not Recommended		6975	31.02
47′-7″	31′-9″	18′-4″	36′-8″	Not Recommended		6487	28.85
48′-8″	32′-6″	18′-9″	37′-6″	Not Recommended		6263	27.8
49′-9″	33′-2″	19′-2″	38′-4″	Not Recommended		5050	22.46
50′-8″	33′-9″	19′-6″	39′-0″	Not Recommended		5663	25.19

60

3’ to 5’ Adjustable Pipe Brace

Safety Factor 2:1

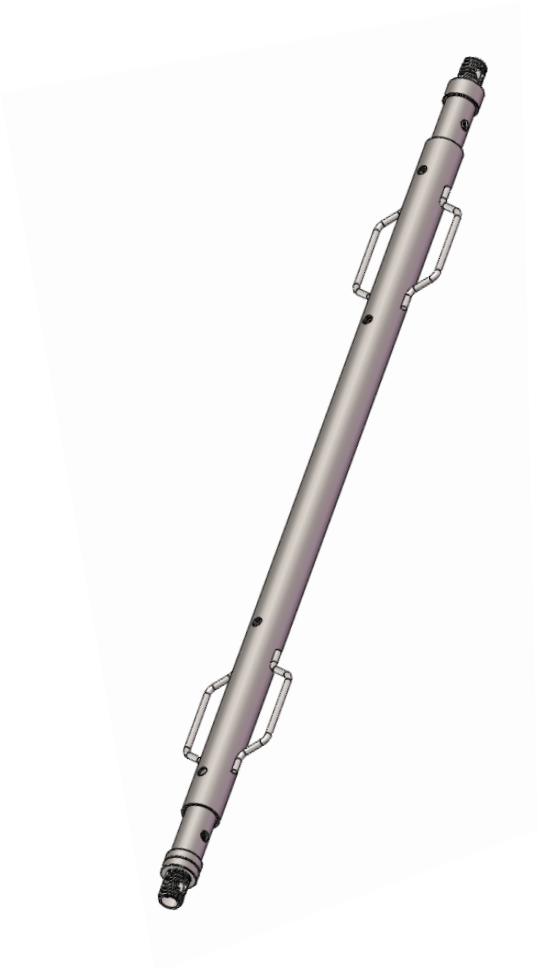
Product Code	Description	Min Extension Length		Max Extension Length		Min Load Capacity		Max Load Capacity		Weight	
		FT	MM	FT	MM	LB	KN	LB	KN	LB	KG
FWTUD1	3’ to 5’ Adjustable Pipe Braces	3.0’	0.91	5.0’	1.52	12500	55.6	10500	46.7	16.28	7.4

Adjustable Pipe Braces used to secure cast in place formwork.

61

Adjustable Pipe Brace

Safety Factor 2:1



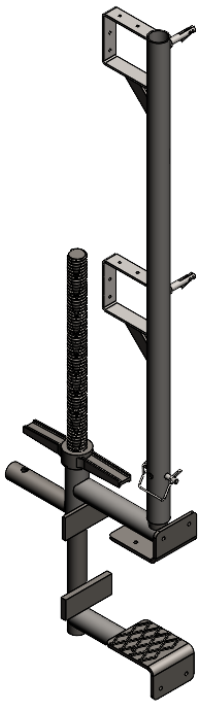
Product Code	Description	Min Extension Length		Max Extension Length		Min Load Capacity		Max Load Capacity		Weight	
		FT	MM	FT	MM	LB	KN	LB	KN	LB	KG
FWPB0509	5′ to 9′ Adjustable Pipe Braces	5′-3″	1.60	8′-10″	2.69	11500	51.2	4250	18.9	36.74	16.7
FWPB1019	10′ to 19′ Adjustable Pipe Braces	10′-10″	3.30	19-4″	5.89	2550	11.3	1125	5.0	67.76	30.8

Adjustable Pipe Braces used to secure cast in place formwork.

62

Concrete Slab Guardrail Post

Fall Prevention



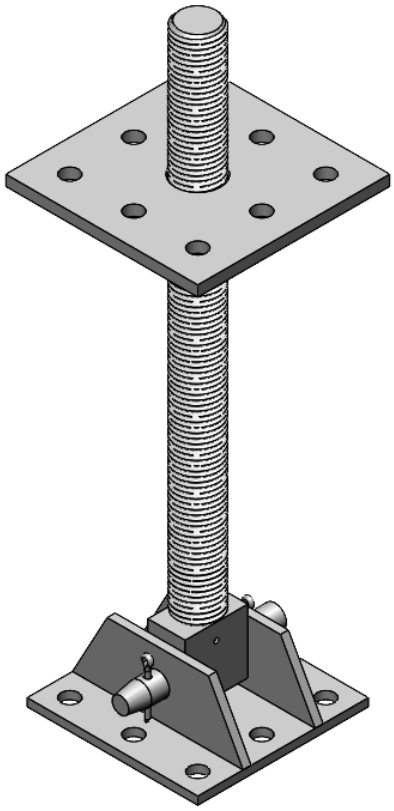
Product Code	Description	Min Extension Length		Max Extension Length		Load Capacity		Weight	
		IN	MM	IN	MM	LB	KN	LB	KG
GRSL	Concrete Slab Guardrail Post	4	101.6	23	584.2	200	.89	24.13	10.97

The DSS Concrete Slab Guardrail Post has been designed to provide easy fall prevention around the perimeter of a structure, adjusting horizontally for a concrete slab and vertically for a concrete wall.

ADDITIONAL INFORMATION

- Works with both vertical walls & horizontal slabs
- Can be used with 2" x 4" lumber or tube guardrail
- Attached Toe-Board Clip with nail holes to secure lumber
- Powder coated Red
- DSS' GRSL has been designed to meet and exceed the 200 lbs in any outward or downwards direction requirements stated in OSHA's 29 CFR 1926.502(b)(3)

63 Soldier Beam Strut Jack



Product Code	Description	Effective Length		Ultimate Load		Weight	
		IN	MM	LB	KN	LB	KG
FWSJHD2	2' Strut Jack - 2" Threaded Rod	15.53	394.5	174000	774	48.28	21.90

The free running nut on the 2" diameter threaded rod on our Soldier Beam Strut Jack allows for 15.5" of adjustment, ideal for post shore and form brace applications.

64

DSS Bridge Overhang Brackets

Safety Factor 2:1

Product Code	Description	Min Extension Height		Max Extension Height		Extention Length		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	LB	KN	LB	KG
SHBOB3050+10	Standard Overhang Bracket	30	762	50	1270	54	1371.6	3750	1371.6	46.96	21.30
SHBOB5070+10	Deep Overhang Bracket	50	1270	70	1778	54	1371.6	3750	1371.6	52.80	23.95
SHBOB1628+10	Junior Overhang Bracket	16	406.4	28	711.2	27	711.2	3750	1371.6	27.06	12.27

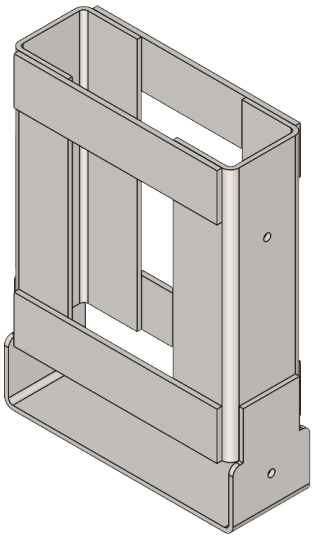
DSS Bridge Overhang Brackets provide adjustable deck support for both steel and precast concrete beams.

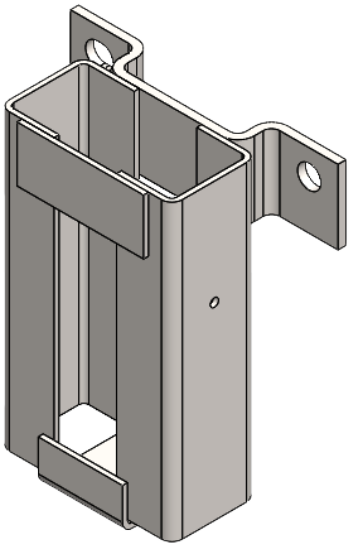
ADDITIONAL INFORMATION

- Vertical and Diagonal members have adjustability every 2"
- **Diagonal leg load rating**: 3750 lb based on a 2:1 safety factor
- **Material:** Carbon Steel
- **Finish:** Powder Coated

65

DSS Guard Rail Receptacles





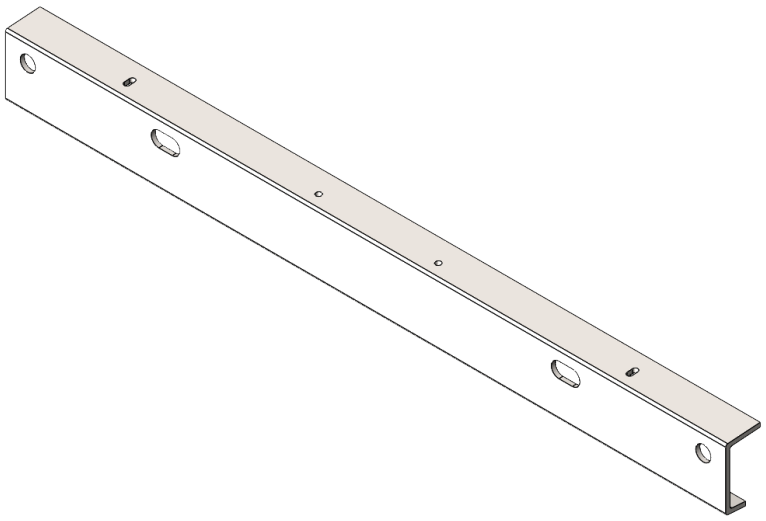
Product Code	Description	Weight	
		LB	KG
SHBOBGRR2X4	2"x 4" Guard Rail Receptacle	3.08	1.4
SHBOBGRR2X6	2"x 6" Guard Rail Receptacle	4.61	1.89

Guard Rail Receptacles are designed for easy installation of guard rail posts.

ADDITIONAL INFORMATION

- The SHBOBGRR2X4 Guardrail Receptacle bolts directly to the Bridge Overhang Bracket or to the Overhang Bracket Extender and allows the easy installation of an OSHA required lumber guard rail post. The 2x4 Guardrail Receptacle ships with two 1/2"-13 UNC 3"-1/4" long electro-galvanized bolts and nuts for attachment.
- The SHBOBGRR2X6 Guardrail Receptacle slips over the end of a 2x6 nailer on the overhang bracket and allows the easy installation of an OSHA required guard rail post. The 2x6 Guardrail Receptacle is attached to the nailer with two 16d double headed nails through the provided holes.
- **Material:** Carbon Steel
- **Finish:** Powder Coated

66 DSS Bracket Extender



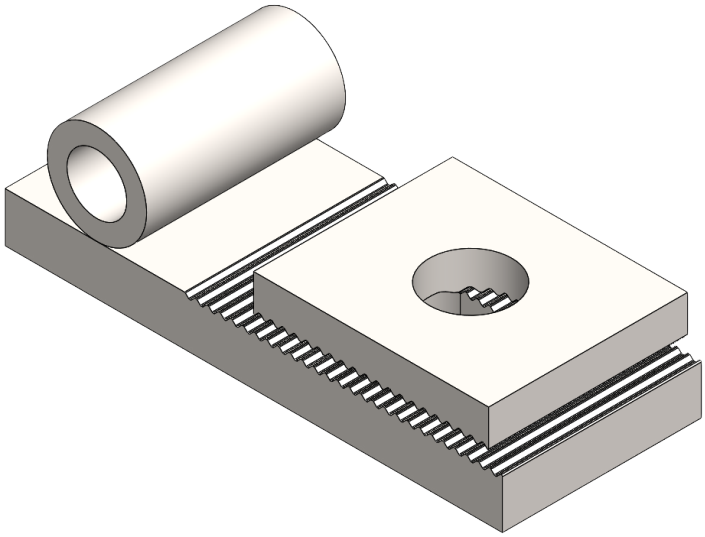
Product Code	Description	Weight	
		LB	KG
SHBOBEXT	Overhang Bracket Extender	4.61	2.09

DSS Bridge Overhang Bracket Extenders provide additional walkway surface to the Bridge Overhang Bracket.

ADDITIONAL INFORMATION

- The Extender is used to support walkway loads only
- Attaches to one side of the outboard end of a Bridge Overhang Bracket and allows for an additional 17" of usable walkway surface
- Ships with two ½"-13 NC x 1" long electro-galvanized bolts and nuts for attaching the 2x4 Guardrail Receptacle to the Extender
- The ½"-13 NC x 3" bolts and nuts (shipped with the SHBOBGRR2X4 Guard Rail Receptacle) are used to attach the Extender to the horizontal on the Bridge Overhang Bracket
- **Material:** Carbon Steel
- **Finish:** Powder Coated

67 DSS Wall Plate Assembly



Product Code	Description	Weight	
		LB	KG
SHBOBWPA	Wall Plate Assembly	1.92	0.87

The Wall Plate Assembly is an adjustable attachment plate that allows direct connection of a Bridge Overhang Bracket to a concrete wall or precast bridge beam.

ADDITIONAL INFORMATION

- The serrated face of the plate and washer allows for 13/16" of vertical adjustment
- Only used as a set not to be used without the serrated washer
- Use only ¾" diameter bolts (not included) for attachment to concrete wall or bridge beam
- **Material:** Carbon Steel
- **Finish:** Powder Coated

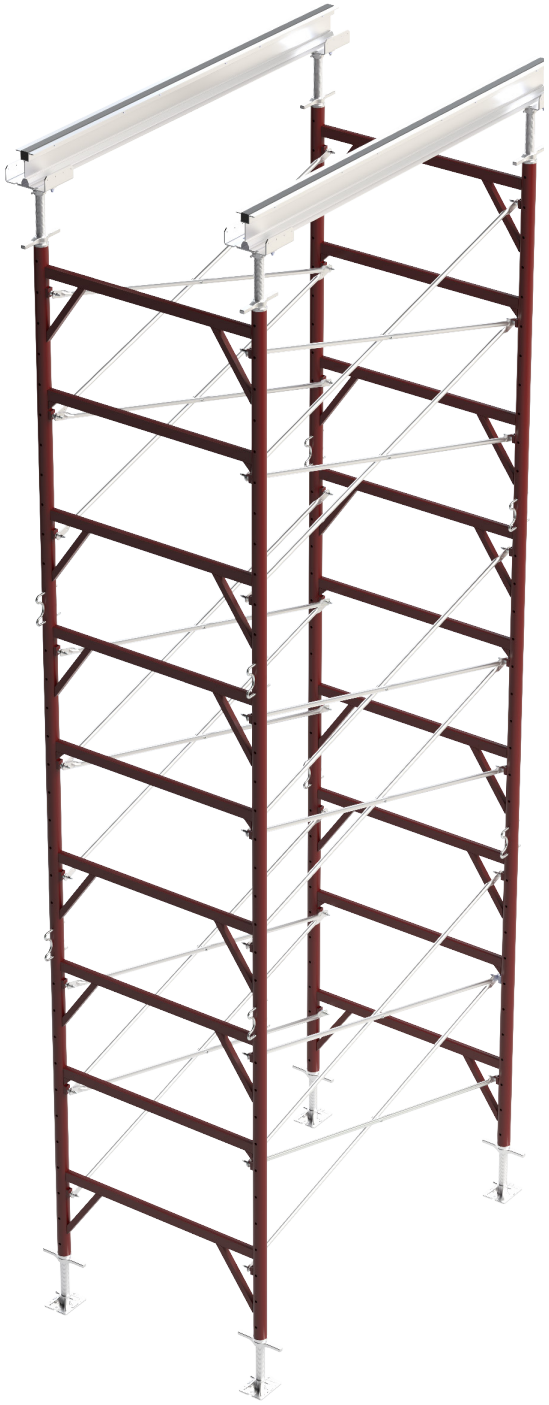
04

High-Load Frame Shoring System

69

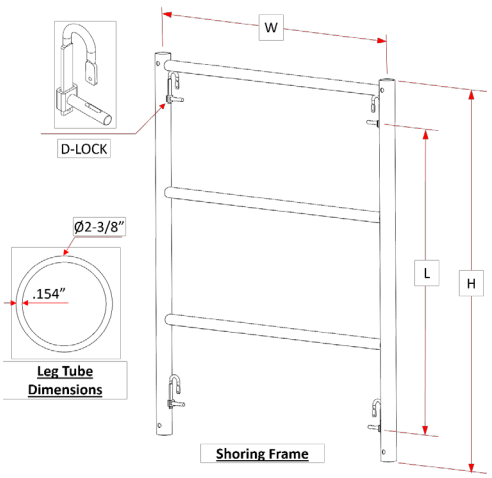
10K High-Load Frame Showing System

The High-Load Shoring Frame System is a reliable and strong system used to provide temporary support of fresh concrete reinforcing steel formwork and lives loads imposed during construction. This system uses our Steel Shoring Frames and compatible accessories.



Additional Information

- Total safe working load of a steel shoring tower should be determined by the frame leg capacity and by a qualified structural engineer. Tier refers to the number of frames connected vertically in a tower
- DSS recommends abiding to the 4:1 width to height ratio when determining the requirement of lateral bracing for the shoring towers. If no lateral bracing is possible consult with a qualified structural engineer
- When possible lateral bracing should be tied to permanent structures such as walls or columns
- Lateral bracing members shall not be connected to the frames' horizontal members.
- Lateral bracing shall be fixed as close as possible to the joint between two frames
- The system is compatible with DSS Angle Iron Cross Braces and Tubular Braces. Contact your DSS sales representatives for available sizes and other specs



70

Safe Working Load Chart

Safety Factor 2.5:1

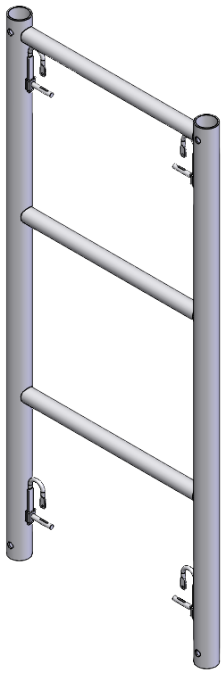
Use the chart for the allowable bearing capacity for the 10K High-Load Shoring System.

MAX SAFE WORKING LOAD PER LEG								
Number of Tiers	12″ Screw Leg Extension		24″ Screw Leg Extension		36″ Screw Leg Extension		48″ Screw Leg Extension	
	LB	KN	LB	KN	LB	KN	LB	KN
1	14400	65.04	12400	55.16	10000	44.48	8500	43.29
2	13200	58.72	11100	49.38	9000	40.03	8400	38.37
3	11600	51.60	10800	40.04	8600	38.25	8200	36.48
4	10600	47.15	9500	42.26	8300	36.92	8000	35.59
5	10200	45.37	9100	40.48	8000	35.59	7700	34.25
6	10000	44.48	8700	38.70	7700	34.25	7400	32.92
7	9900	44.04	8600	38.25	7300	32.47	7200	32.03
8	9800	43.59	8500	37.81	7000	31.14	7000	31.14
9	9700	43.15	8400	37.37	6750	30.03	6750	30.03
10	9600	42.70	8300	36.92	6500	28.91	6500	28.91

ADDITIONAL INFORMATION

- Tier refers to the number of frames connected vertically
- Screw leg extension is the total extension of the screws extended equally top and bottom on a 2:1 safety factor
- Load rating based on a 2.5:1 safety factor
- Consult with an engineer trained in shoring design for any shoring tower over 50′ in height

71 2’ Steel Shoring Frames

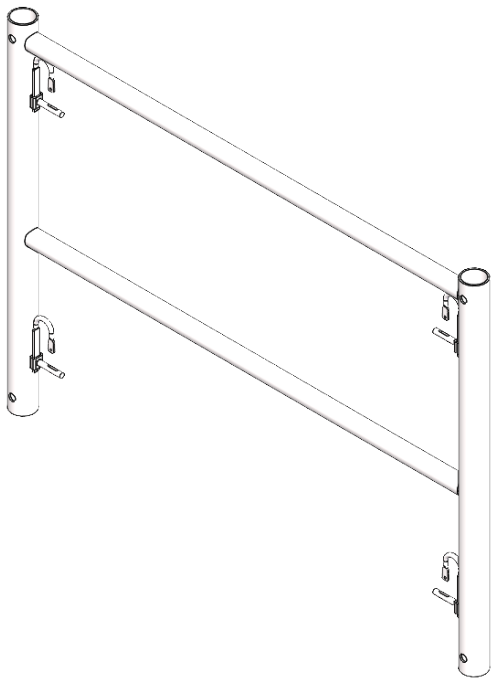


Product Code	Description	Extension Width		Extension Height		Lock Spacing		Weight	
		FT	MM	FT	MM	IN	MM	LB	KG
SHF2W2HD12P	2’x2’ Steel Shoring Frame	2	609.6	2	609.6	12	304.8	21.8	9.89
SHF2W3HD24P	2’x3’ Steel Shoring Frame	2	609.6	3	914.4	24	609.6	29.1	13.19
SHF2W4HD36P	2’x4’ Steel Shoring Frame	2	609.6	4	1219.2	36	914.4	39.2	17.76
SHF2W5HD48P	2’x5’ Steel Shoring Frame	2	609.6	5	1524.0	48	1219.2	46.4	21.06
SHF2W6HD48P	2’x6’ Steel Shoring Frame	2	609.6	6	1828.8	48	1219.2	56.5	25.63

ADDITIONAL INFORMATION

- **Lock Style:** D-Lock
- **Tube Diameter:** 2 3/8”
- **Finish:** Powder Coated

72 4’ Steel Shoring Frames

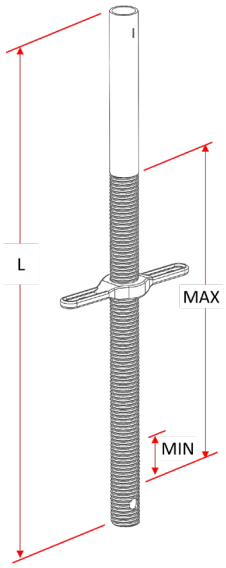


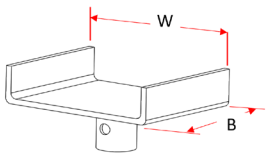
Product Code	Description	Extension Width		Extension Height		Lock Spacing		Weight	
		FT	MM	FT	MM	IN	MM	LB	KG
SHF4W2HD12P	4’x2’ Steel Shoring Frame	4	1219.2	2	609.6	12	304.8	28.0	12.70
SHF4W3HD24P	4’x3’ Steel Shoring Frame	4	1219.2	3	914.4	24	609.6	35.3	16.00
SHF4W4HD36P	4’x4’ Steel Shoring Frame	4	1219.2	4	1219.2	36	914.4	48.4	21.96
SHF4W5HD48P	4’x5’ Steel Shoring Frame	4	1219.2	5	1524.0	48	1219.2	55.7	25.26
SHF4W6HD48P	4’x6’ Steel Shoring Frame	4	1219.2	6	1828.8	48	1219.2	68.9	31.24

ADDITIONAL INFORMATION

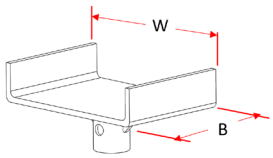
- **Lock Style:** D-Lock
- **Tube Diameter:** 2 3/8”
- **Finish:** Powder Coated

73 Screw Jack Steel Heads & Base Plates

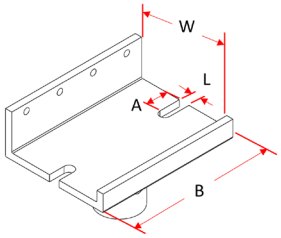




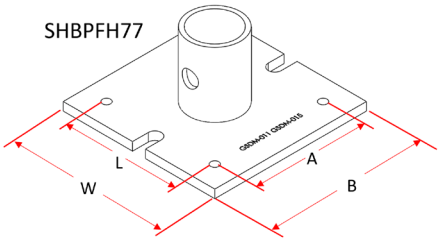
SHBPUH89

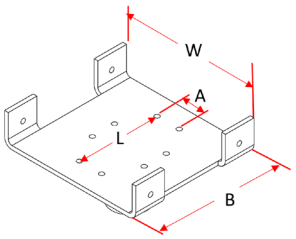


SHBPUH810



SHBPJH86



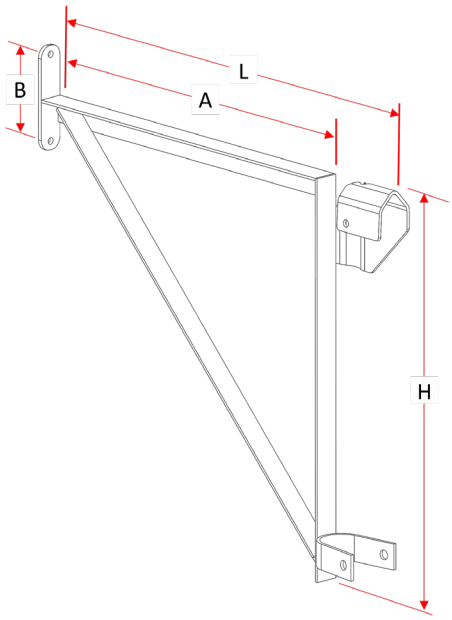


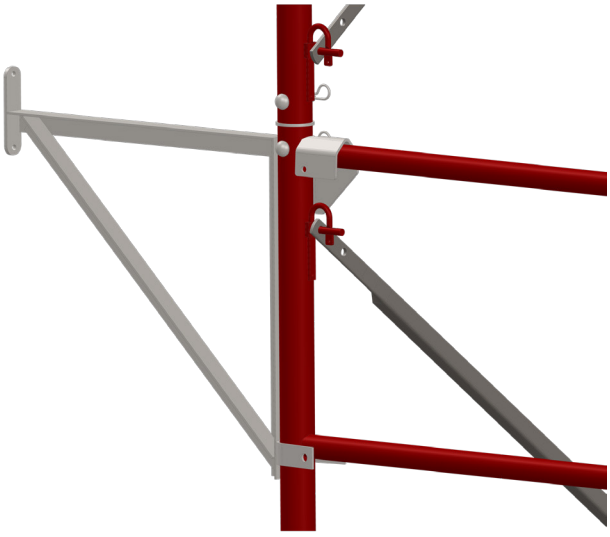
SHUHTW88

Product Code	Description	Length		Max Extension		Weight	
		IN	MM	IN	MM	LB	KG
SHBPBJ36	36″ Screw Jack	36	914.4	21.58	548.2	11.1	5.03

Product Code	Description	W		A		B		L		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
SHBPJH86	8″x5″ Shoring J-Head	5.25	133.4	1.34	34.15	8.0	203.2	0.6	15.2	8.90	4.04
SHUHTW88	8″x8″ U-Head	8.88	225.4	1.50	38.1	8.0	203.2	5.25	133.4	6.81	3.09
SHBPUH89	8″x9″ Shoring U-Head	9.75	247.7	-	-	8.0	203.2	-	-	12.60	5.72
SHBPUH810	8″x10″ U-Head	10.75	273.0	-	-	8.0	203.2	-	-	14.72	6.68
SHBPFH77	7″x7″ Shoring Base Plate	7.0	177.8	5.0	127.0	7.0	177.8	5.0	127.0	5.62	2.55

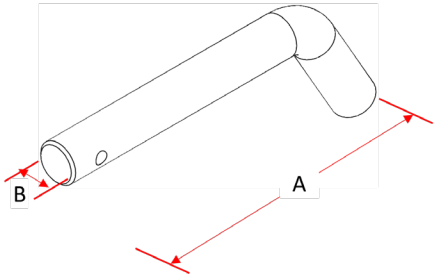
74 Side Brackets



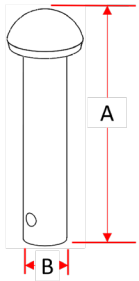


Product Code	Description	L		H		A		B		UDL		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
SHSB23H	23" Wide Hanging Side Bracket for Shoring Frames	29.50	749.3	23.25	590.6	23.10	586.7	5.00	127	310	140.6	12.60	5.72

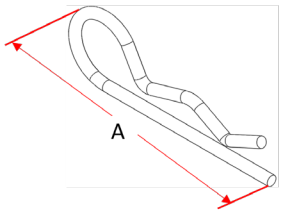
75 Accessories & Pins



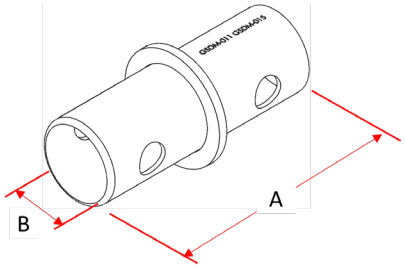
SHPNJP4



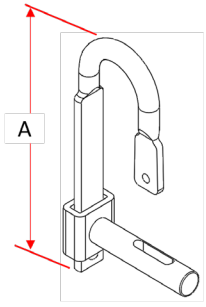
SHPNR



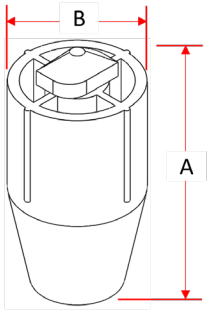
SHPNH



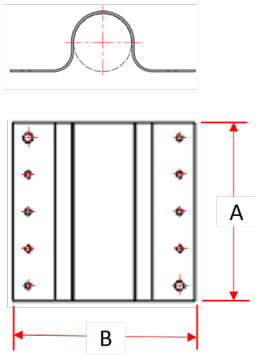
SHPNCPEP



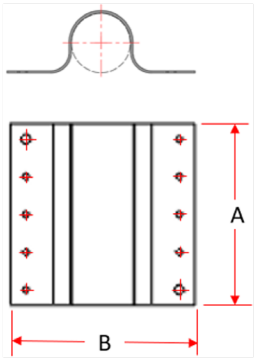
LKDF



SHPCIBN



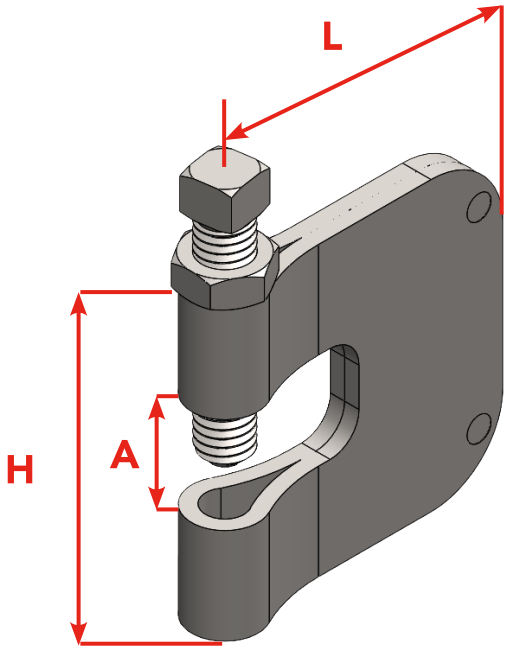
SHPSNP48



SHPSNP60

Product Code	Description	A		B		Weight	
		IN	MM	IN	MM	LB	KG
SHPNJP4	4" J Pin	5.59	142.0	0.63	203.2	0.42	0.19
LKDF	D-Lock 2 Piece Stud & Cane	4.16	106.6	-	-	0.3	0.14
SHPNH	Cotter Pin	3.31	84.0	-	-	0.04	0.02
SHPNR	Drilling Rivet - 3" x 5/8"	3.5	89.0	0.63	203.2	0.35	0.16
SHPNCPEP	Coupling Pin	5.5	140.0	1.9	48.3	1.54	0.70
SHPCIBN	Beam to Post Shore Positioner	2.94	74.6	1.55	39.4	2.50	1.13
SHPSNP48	Nail Plate for 1.88" / 48mm OD Shoring Frames	5.98	152.0	6.10	155	1.10	0.50
SHPSNP60	Nail Plate for 2.36 in / 60mm OD Shoring Frames	5.98	152.0	6.10	155	1.15	0.52

76 Shoring Mini C-Clamp



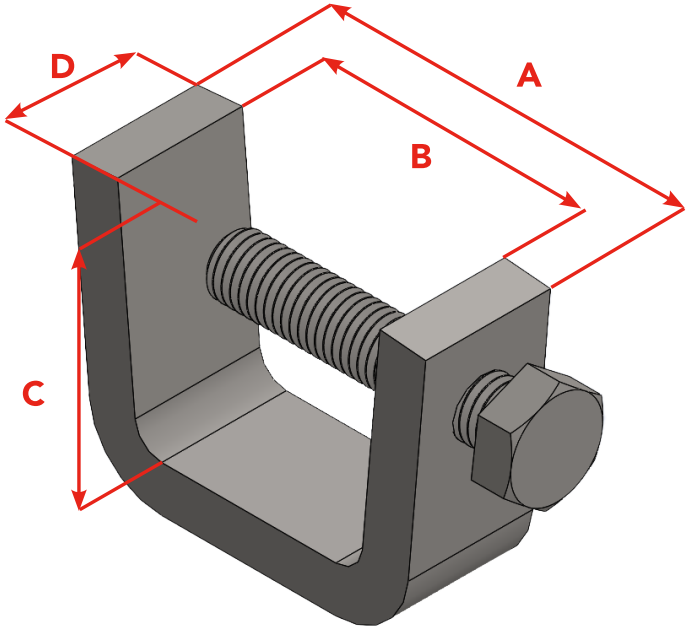
Product Code	Description	A		L		H		Weight	
		IN	MM	IN	MM	IN	MM	LB	KG
SHCMPMC	Shoring Mini C-Clamp	0.79	20.0	2.16	55.0	2.36	60.0	0.42	0.19

Used for fastening beams to other accessories in shoring applications.

ADDITIONAL INFORMATION

- Not load bearing use, for alignment purposes only
- Can be used in both steel and aluminum frame systems
- **Material:** Steel

77 Steel Beam C Clamp



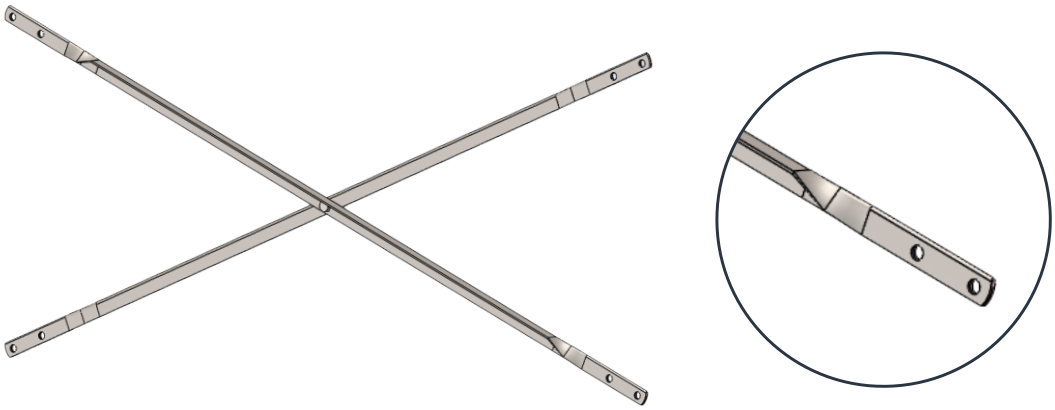
Product Code	Description	A		B		C		D		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
FWSBC	Steel Beam C Clamp	2.87	73.0	2.13	54.1	1.82	46.3	1.00	24.5	0.616	0.28

Used for fastening beams to other accessories in shoring applications.

ADDITIONAL INFORMATION

- Not load bearing use, for alignment purposes only
- Can be used in both steel and aluminum frame systems
- Includes Structural Grade M12x60mm bolt
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized

78 Double Hole Angle Iron Cross Braces



Product Code	Frame Bay		B: Lock Spacing		C: Lock Spacing		D: Hole to Hole		E: Hole to Hole		Weight	
	FT	MM	IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
BRA033648HD	3.0	914.4	36.0	914.4	48.0	1219.2	50.91	1293.2	60.0	1524	9.1	4.13
BRA041224HD	4.0	1219.2	12.0	304.8	24.0	609.6	49.48	1256.7	53.67	1363.1	9.19	4.17
BRA042436HD	4.0	1219.2	24.0	609.6	36.0	914.4	53.67	1363.1	60.0	1524	9.87	4.48
BRA043648HD	4.0	1219.2	36.0	914.4	48.0	1219.2	60.0	1524	67.88	1724.2	10.89	4.94
BRA051224HD	5.0	1524	12.0	304.8	24.0	609.6	61.19	1554.2	64.62	1641.4	11.06	5.02
BRA052436HD	5.0	1524	24.0	609.6	36.0	914.4	64.62	1641.4	69.97	1777.3	11.61	5.27
BRA053648HD	5.0	1524	36.0	914.4	48.0	1219.2	69.97	1777.3	76.84	1951.7	12.47	5.66
BRA062436HD	6.0	1828.8	24.0	609.6	36.0	914.4	75.9	1927.7	80.5	2044.7	13.42	6.09
BRA063648HD	6.0	1828.8	36.0	914.4	48.0	1219.2	80.5	2044.7	86.53	2179.9	14.15	6.42
BRA071224HD	7.0	2133.6	12.0	304.8	24.0	609.6	84.85	2155.2	87.36	2218.9	15.25	6.74
BRA072436HD	7.0	2133.6	24.0	609.6	36.0	914.4	87.36	2219	91.39	2321.3	14.85	6.92
BRA073648HD	7.0	2133.6	36.0	914.4	48.0	1219.2	91.38	2320.9	96.75	2457.5	15.89	7.21
BRA082436HD	8.0	2438.4	24.0	609.6	36.0	914.4	98.96	2513.5	102.53	2604.2	17.1	7.76
BRA083648HD	8.0	2438.4	36.0	914.4	48.0	1219.2	102.53	2604.2	107.33	2726.2	17.68	8.02
BRA103648HD	10.0	3048	36.0	914.4	48.0	1219.2	125.31	3183	129.25	3283	21.31	9.67

Contact a DSS sales specialist for more brace sizes not listed. Available in multiple finishes.

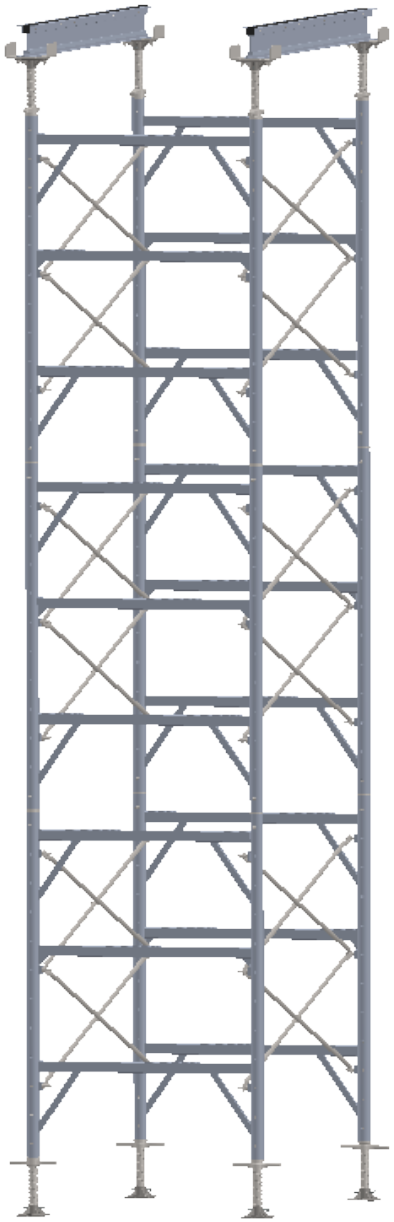
05

Aluminum Frame Shoring System

80

Aluminum Frame Shoring System

The aluminum Shoring System is a lightweight system use to provide temporary support of fresh concrete reinforcing steel formwork and live loads imposed during construction. Aluminum shoring towers use aluminum soring frames and compatible accessories.



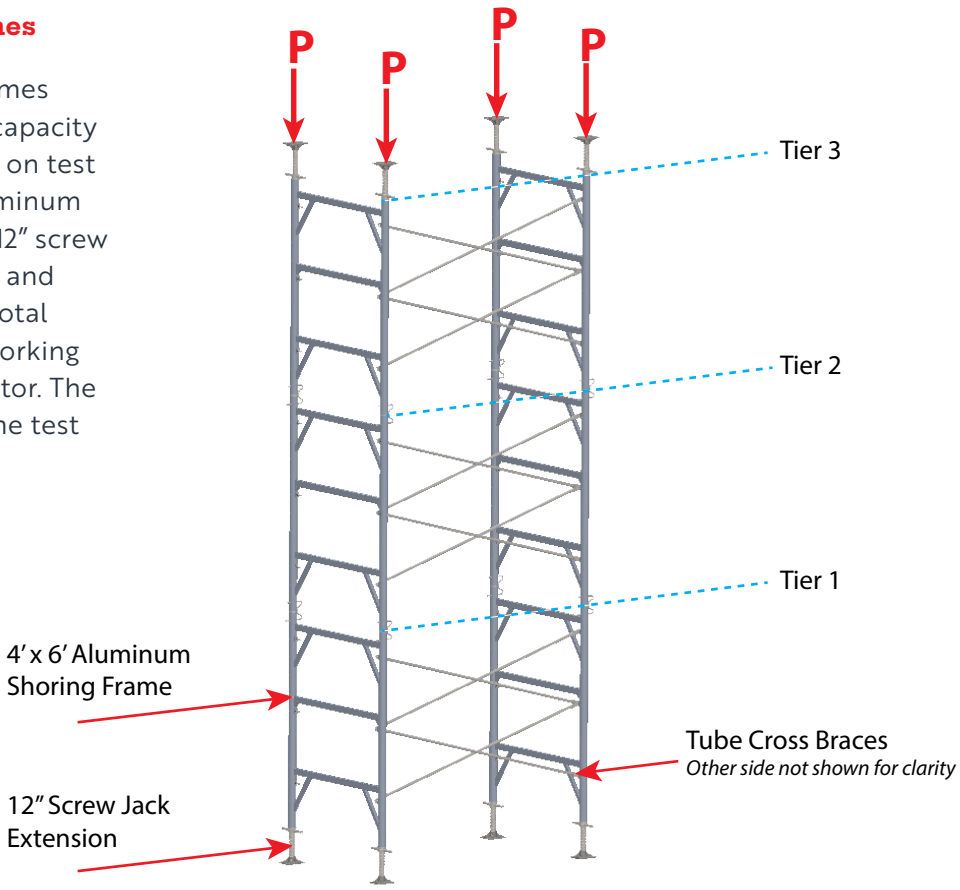
Additional Information

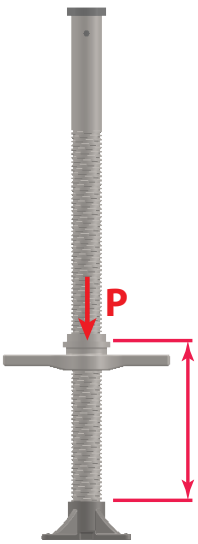
- Total safe working load of an aluminum shoring tower should be determined by the frame leg capacity and by a qualified structural engineer.
- Tier refers to the number of frames connected vertically in a tower.
- DSS recommends using lateral bracing designed by a qualified structural engineer for towers 4 tiers high or taller.
- When possible horizontal bracing should be tied to permanent structures such as walls or columns.
- Bracing members shall not be connected to the frame horizontal members.
- Lateral bracing shall be fixed at the junction of vertical legs with the bracing tube.
- The system is compatible with DSS Angle Iron and Tubular Braces.

81 Load Capacities

Aluminum Shoring Frames

The aluminum shoring frames (SHHLFxxJLxx) have a leg capacity of 12000 lb (53.4kN) based on test conducted on a 3-tier aluminum shoring frame tower with 12" screw leg extension on both top and bottom of the tower (24" total extension). This is a safe working load with a 2.5:1 Safety Factor. The image below represents the test setup.



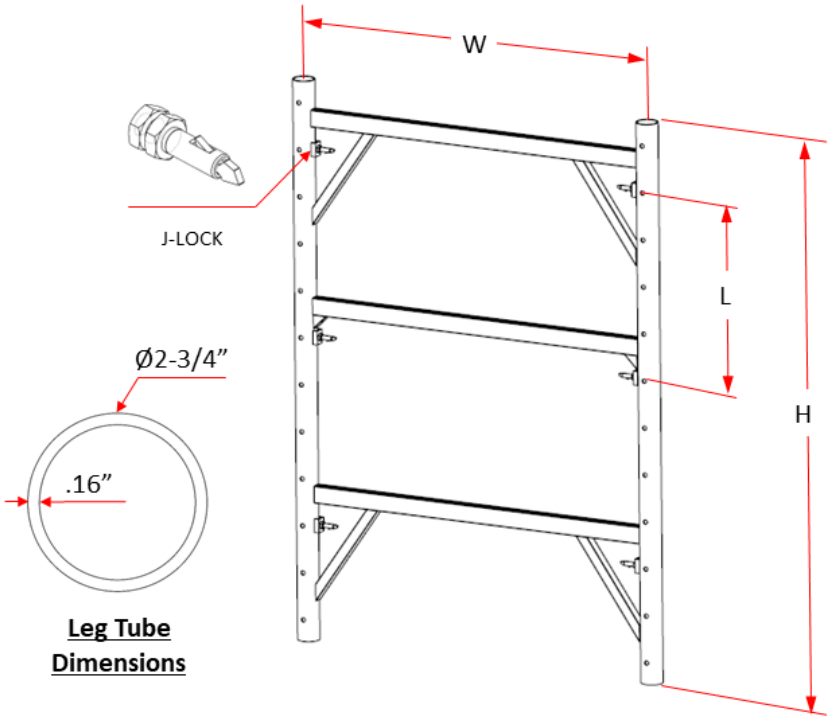


Screw Jack

The working load capacity of the screw jack (SHHLSJ) is 18500 lb (82.3kN) at its maximum extension of 24" with a safety factor of 3:1.

Other system accessories will safely resist the load applied in accordance with the aluminum shoring frame tower structure capacity as determined by a qualified structural engineer.

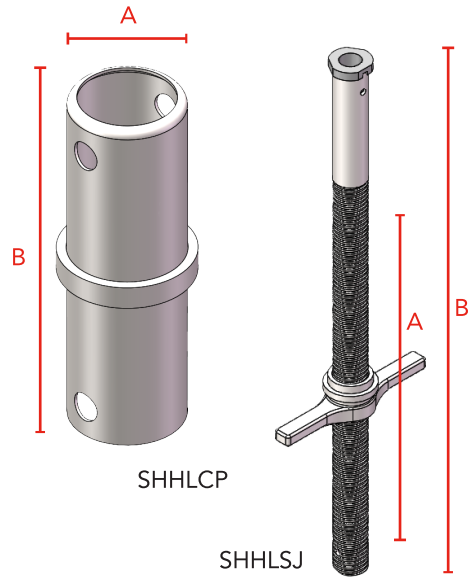
82 Aluminum Frame Shoring System

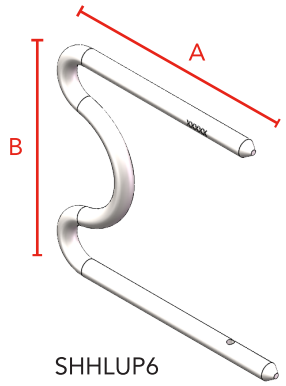


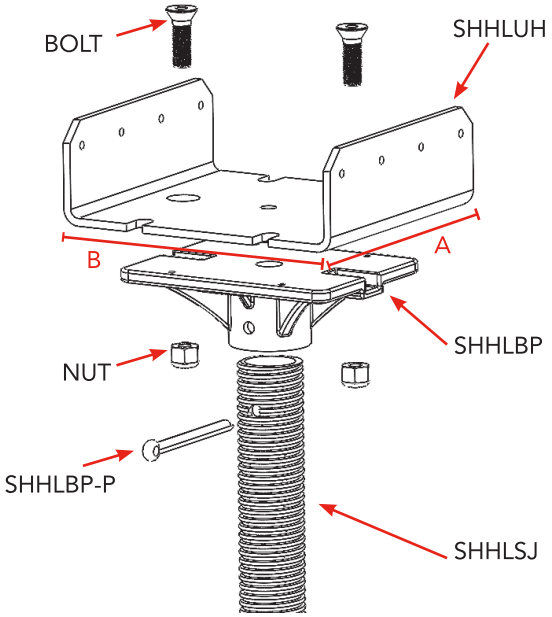
Product Code	Description	W		H		L		Weight	
		IN	MM	IN	MM	IN	MM	LB	KG
SHHLF44JL24	4′ x 4′ Aluminum Shoring Frame	48.0	1219.2	47.12	1206.8	24.0	609.6	21.0	9.57
SHHLF45JL48	4′ x 5′ Aluminum Shoring Frame	48.0	1219.2	59.51	1511.6	24.0	609.6	28.1	12.8
SHHLF46JL48	4′ x 6′ Aluminum Shoring Frame	48.0	1219.2	71.51	1816.4	24.0	609.6	32.2	14.62
SHHLF48JL48	4′ x 8′ Aluminum Shoring Frame	48.0	1219.2	95.51	2426.0	24.0	609.6	42.8	19.43

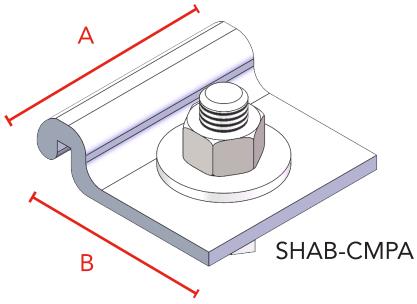
83

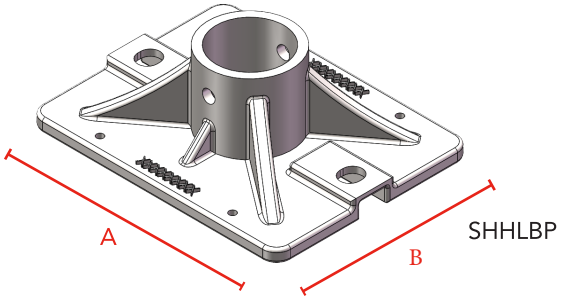
Aluminum Shoring Accessories





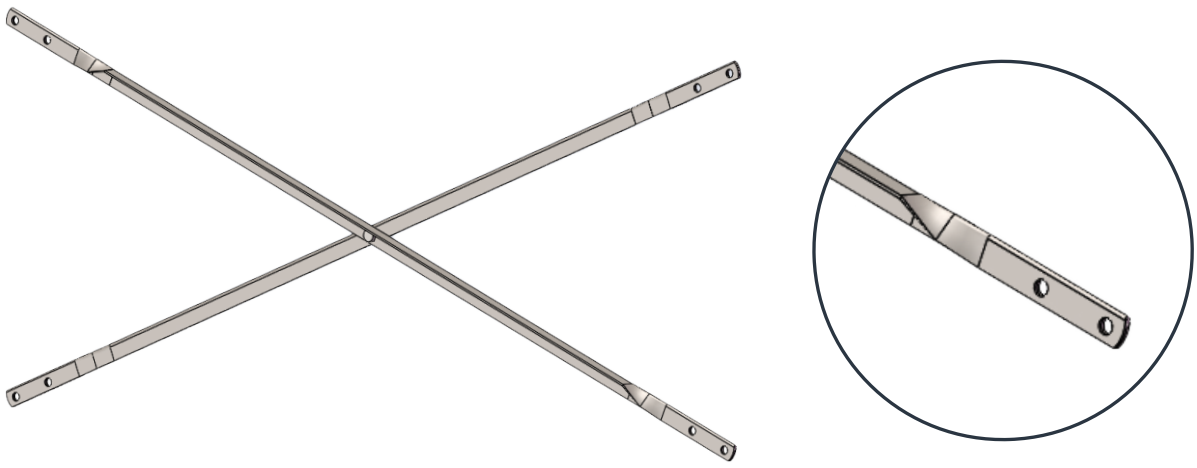






Product Code	Description	A		B		Weight	
		IN	MM	IN	MM	LB	KG
SHHLCP	Coupling Pin	2.13	54.1	7.5	190.5	1.21	0.55
SHHLUP6	6" Shaped Lock Pin (6" U-Pin)	6.0	152.4	4.33	110.0	1.0	0.45
SHHLBP-P	Cotter Pin	-	-	-	-	0.1	0.045
SHHLBP	Base Plate (Includes Cotter Pin SHHLBP-P)	5.5	1.397	7.0	177.8	5.28	2.39
SHHLSJ	Screw Jack	19.7	500.0	32.0	812.8	11.2	5.08
SHHLUH	8"x9" U-Head (Includes bolting)	9.0	228.6	8.0	203.2	7.18	3.26
SHAB-CMPA	Aluminum Beam A-Clip	2.44	61.9	2.5	63.4	0.35	0.16

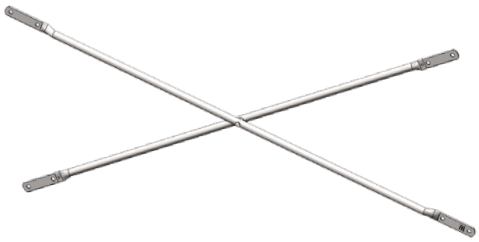
84 Double Hole Tubular Cross Braces



Product Code	Frame Bay		B: Lock Spacing		C: Lock Spacing		D: Hole to Hole		E: Hole to Hole		Weight	
	FT	MM	IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
BR043648H	4.0	1219.2	36.0	914.4	48.0	1219.2	60.0	1524	67.88	2486.2	8.2	3.71
BR053648H	5.0	1524	36.0	914.4	48.0	1219.2	69.97	1777.2	76.84	1951.7	9.9	4.47
BR054860H	5.0	1524	48.0	1219.2	60.0	1524	76.8	1951.7	84.85	2155.2	11.0	4.98
BR063648H	6.0	1828.8	36.0	914.4	48.0	1219.2	80.5	2044.7	86.53	2197.9	13.0	5.89
BR073648H	7.0	2133.6	36.0	914.4	48.0	1219.2	91.3	2321.3	96.75	2457.5	12.2	5.54
BR083648H	8.0	2438.4	36.0	914.4	48.0	1219.2	102.5	2604.2	107.33	2726.1	13.2	6.0
BR103648H	10.0	3048	36.0	914.4	48.0	1219.2	125.3	3182.8	129.25	3282.9	15.4	6.99

Contact a DSS sales specialist for more brace sizes not listed. Available in multiple finishes.

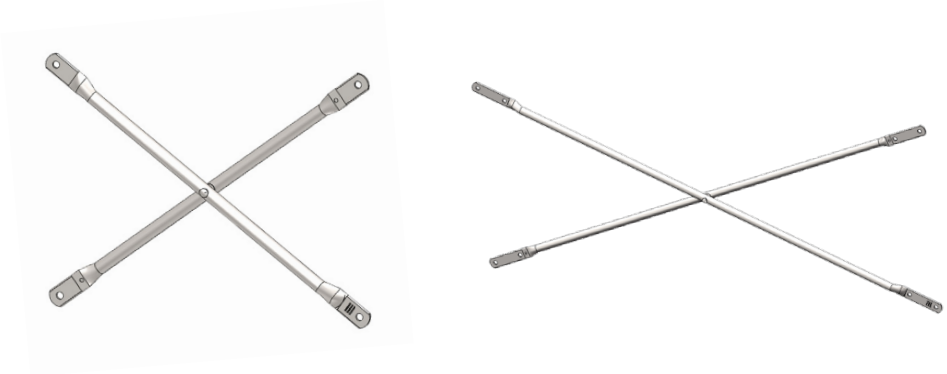
85 Single Hole Tubular Cross Braces



Product Code	Frame Bay		B: Lock Spacing		C: Hole to Hole		Weight	
	FT	MM	IN	MM	IN	MM	LB	KG
BR0212H	2.0	609.6	12.0	1143	26.83	681.4	3.5	1.58
BR0217H	2.0	609.6	17.63	447.8	29.78	756.4	5.4	2.45
BR0245H	2.0	609.6	45.0	1143	51	1295.4	8.5	3.85
BR0312H	3.0	914.4	12.0	1143	37.95	963.9	4.6	2.08
BR0317H	3.0	914.4	17.63	447.8	49.09	1018.2	6.6	2.99
BR0336H	3.0	914.4	36.0	914.4	50.91	1293.1	6.6	2.99
BR0345H	3.0	914.4	45.0	1143	57.63	1463.8	9.3	4.21
BR0412H	4.0	1219.2	12.0	1143	49.48	1256.7	6.4	2.9
BR0417H	4.0	1219.2	17.63	447.8	51.13	1298.7	7.9	3.58
BR0424H	4.0	1219.2	24.0	609.6	53.67	1363.2	6.6	2.99
BR0436H	4.0	1219.2	36.0	914.4	60.0	1524	7.3	3.31
BR0445H	4.0	1219.2	45.0	1143	65.8	1671.3	10.0	4.53
BR0448H	4.0	1219.2	48.0	1219.2	67.88	1724.1	8.8	4.0
BR0512H	5.0	1524	12.0	1143	61.19	1554.2	8.0	3.62
BR0517H	5.0	1524	17.63	447.8	62.54	1588.5	9.6	4.35
BR0524H	5.0	1524	24.0	609.6	64.62	1641.3	10.0	4.53
BR0527H	5.0	1524	27.75	914.4	66.1	1678.9	10.2	4.62
BR0545H	5.0	1524	45.0	1143	75.0	1905	11.4	5.17
BR0548H	5.0	1524	48.0	1219.2	76.84	1951.7	9.9	4.49

Contact a DSS sales specialist for more brace sizes not listed. Available in multiple finishes.

86 Single Hole Tubular Cross Braces Cont.



Product Code	Frame Bay		B: Lock Spacing		C: Hole to Hole		Weight	
	FT	MM	IN	MM	IN	MM	LB	KG
BR0612H	6.0	1828.8	12.0	1143	72.99	1853.9	8.8	3.99
BR0624H	6.0	1828.8	24.0	609.6	75.89	1927.6	9.2	4.17
BR0627H	6.0	1828.8	27.75	704.84	77.16	1959.9	9.04	4.1
BR0648H	6.0	1828.8	48.0	1219.2	86.53	2197.9	13.0	5.89
BR0712H	7.0	2133.6	12.0	1143	84.85	2155.2	11.5	5.21
BR0724H	7.0	2133.6	24.0	609.6	87.36	2218.9	10.54	4.78
BR0727H	7.0	2133.6	27.75	704.84	88.47	2247.3	10.41	4.72
BR0736H	7.0	2133.6	36.0	914.4	91.39	2321.3	11.02	4.99
BR0748H	7.0	2133.6	48.0	1219.2	96.75	2457.5	11.57	5.24
BR0824H	8.0	2438.4	24.0	609.6	98.95	2513.3	12.8	5.8
BR0827H	8.0	2438.4	27.75	704.84	99.93	2538.2	13.5	6.12
BR0836H	8.0	2438.4	36.0	914.4	102.53	2604.3	13.5	6.12
BR0848H	8.0	2438.4	48.0	1219.2	107.33	2726.2	13.2	6.0
BR1012H	10.0	3048	12.0	1143	120.6	3063.2	14.4	6.53
BR1024H	10.0	3048	24.0	609.6	122.38	3108.5	14.3	6.49
BR1027H	10.0	3048	27.75	704.84	123.17	3128.5	16.5	7.48
BR1036H	10.0	3048	36.0	914.4	125.28	3182.1	16.5	7.48
BR1048H	10.0	3048	48.0	1219.2	129.24	3282.7	16.9	7.64

Contact a DSS sales specialist for more brace sizes not listed. Available in multiple finishes.

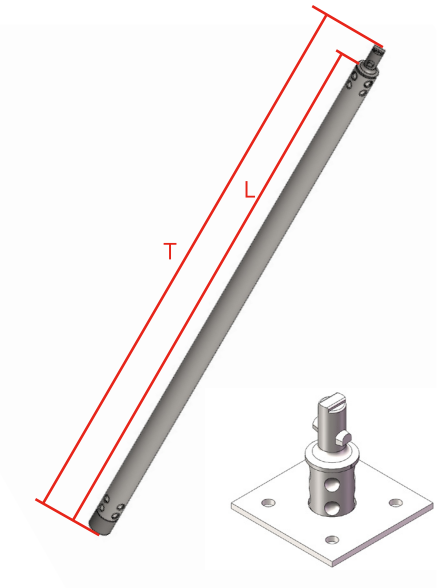
06

Tube & Clamp

88

Twist-Lock Tubes

Twist-Lock is a multipurpose scaffolding system designed to offer unlimited capacity to adapt the setup to any required job conditions. The system features easy interconnectivity between members using interlocking mechanisms and clamps.



Section Properties

- Outer Diameter: 1.90″ 48.3 mm
- Wall Thickness: 0.09″ 2.4 mm
- Cross Sectional Area: 0.54 in 2346.03 mm2
- Moment of Inertia (Ixx): 0.22 in4 91,389.21 mm4
- Section Modulus, Sxx (min): 0.23 in3 3784 mm3
- Modulus of Elasticity (E): 29E6 psi 200 GPa
- Validated Yield Strength (Fy): 50,200 psi 345M Pa

Product Code	Description	Length - L		Total Length - T		Weight	
		IN	MM	IN	MM	LB	KG
TL2	2′ Twist Lock Tube	24.0	609.6	26.16	664.5	6.61	2.99
TL3	3′ Twist Lock Tube	36.0	914.4	38.16	969.3	8.82	4.00
TL4	4′ Twist Lock Tube	48.0	1219.2	50.16	1274.1	9.57	4.34
TL5	5′ Twist Lock Tube	60.0	1524	62.16	1578.9	12.79	5.80
TL6	6′ Twist Lock Tube	72.0	1828.8	74.16	1883.7	13.23	6.10
TL8	8′ Twist Lock Tube	96.0	2438.4	98.16	2493.3	17.06	7.74
TL96	9′-6″ Twist Lock Tube	114.0	2895.6	116.16	2950.5	19.02	8.63
TL10	10′ Twist Lock Tube	120.0	3048	122.16	3102.9	20.02	9.08
TL13	13′ Twist Lock Tube	156.0	3962.4	158.16	4017.3	26.43	12.00
TL16	16′ Twist Lock Tube	192.0	4876.8	194.16	4931.7	33.86	15.36
TL20	20′ Twist Lock Tube	240.0	6096	242.16	6150.9	41.90	19.00

Product Code	Description	Capacity		Weight	
		LB	KN	LB	KG
TLBPR	Base Plate for Twist Lock	3,500	15.57	3.44	1.56

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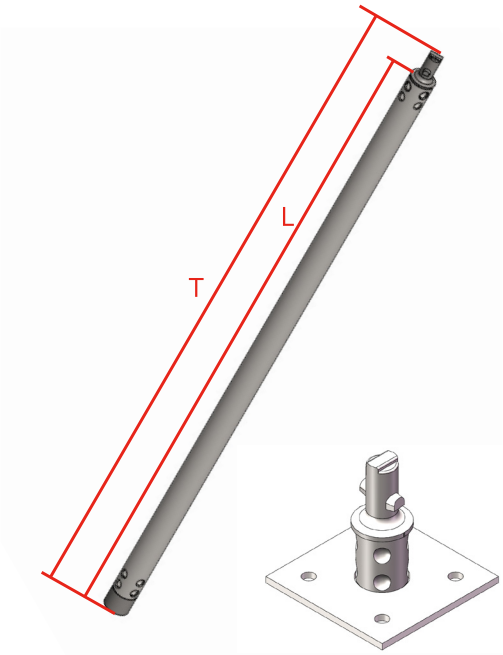
Allowable Load Bearing Capacities

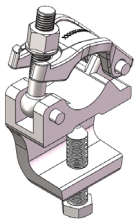
Safety Factor 4:1



Bearer Span		Uniformly Distributed Load		Allowable Total Load		Allowable Concentrated Load	
FT	MM	LB/F	KG/M	LB	KG	LB	KG
2′-0″	0.61	895	1332	1790	812	976	443
2′-6″	0.76	573	853	1432	650	767	348
3′-0″	0.92	389	593	1193	632	632	289
3′-6″	1.07	292	435	1023	464	537	244
4′-0″	1.22	224	334	895	406	467	212
4′-6″	1.37	177	264	796	361	413	187
5′-0″	1.52	143	213	716	325	370	168
5′-5″	1.68	109	162	600	272	327	148
6′-0″	1.83	75	112	450	204	284	123

Load capacity rated for tensile conditions. The compressive capacity of the system will be given by the buckling capacity of the vertical member attached to the baseplate. Safe working load is based on a 4:1 safety factor

90 Couplers & Accessories



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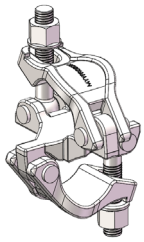
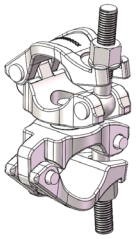


CMPRA



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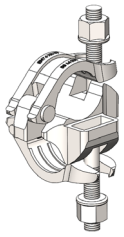

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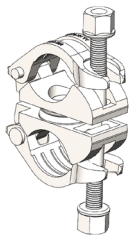
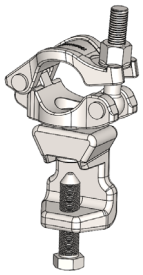
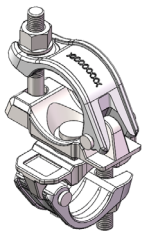


CMPTSW

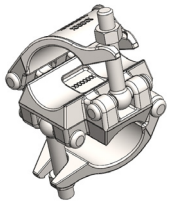
CMPIBTC



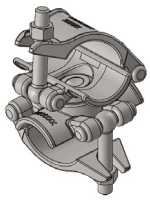
CMPIBSF



CMPTR2X238



CMP4RA



CMP4SW

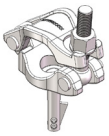
CMPNIRA

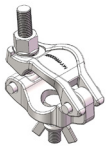
CMPNISW

Product Code	Description	Weight	
		LB	KG
CMPRA	Right Angle Clamp for 1.9″ OD Tube	3.26	1.48
CMPSW	Swivel Clamp for 1.9″ OD Tube	4.43	2.01
CMPTRA	T Bolt Right Angle Clamp	3.12	1.41
CMPTSW	T Bolt Swivel Clamp	2.8	1.3
CMPTR2X238	T Bolt Right Angle Clamp 1.9″ to 2.375″	3.2	1.46
CMPTS2X238	T Bolt Swivel Clamp 1.9″ to 2.375″	3.4	1.55
CMP4RA	4″ Wide Body Right Angle Clamp (I-Bolt)	5.7	2.6
CMP4SW	4″ Wide Body Swivel Clamp (I-Bolt)	4.4	2.0
CMPNIRA	4″ Wide Body Right Angle Clamp (I-Bolt) - Italy	4.23	1.91
CMPNISW	4″ Wide Body Swivel Clamp (I-Bolt) - Italy	4.85	2.19
CMPIBTC	I-Beam Tube Clamp	3.3	1.5
CMPIBTCF	I-Beam Tube Clamp Forge	3.5	1.6
CMPIBSF	Swivel I-Beam Clamp Forged	4	1.8

91 Couplers & Accessories Cont.


CMP12

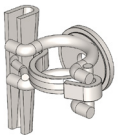

CMP12Q


CMP12W


CMPWR


CMPTR2X35


CMPWS


CMPW12


CMPWR2XB


CMPDPRA


CMPDPSW


CMPWS2XB


CMPWR2XC


CMPWS2XC


CMPTSW2X35

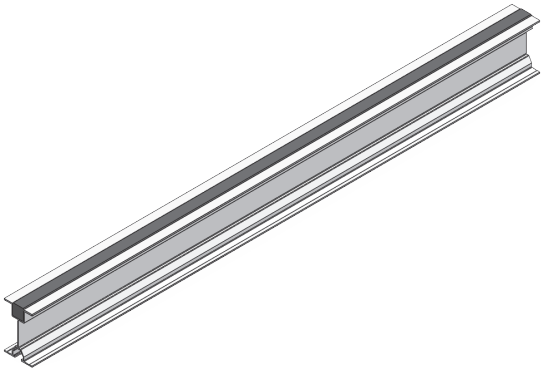
Product Code	Description	Weight	
		LB	KG
CMP12	1/2 Clamp (I-Bolt)	2.2	1.0
CMP12Q	1/2 Clamp with Q-Lock	2.4	1.1
CMP12W	1/2 Clamp with W-Lock	2.5	1.1
CMPWR	Wedge Clamp Right Angle	3.2	1.5
CMPWS	Wedge Clamp Swivel	3.6	1.7
CMPW12	1/2 Wedge Clamp	1.8	0.8
CMPWR2XB	Tube To Frame Right Angle Wedge Clamp 1.9" to 1.625"	3.2	1.4
CMPWS2XB	Tube To Frame Swivel Wedge Clamp 1.9" to 1.625"	3.6	1.6
CMPWR2XC	Tube To Frame Right Angle Wedge Clamp 1.9" to 1.69"	3.2	1.4
CMPWS2XC	Tube To Frame Swivel Wedge Clamp 1.9" to 1.69"	3.6	1.6
CMPDPRA	Dual-Purpose Right-Angle Clamp	3.2	1.4
CMPDPSW	Dual-Purpose Swivel Clamp	3.4	1.54
CMPTR2X35	1.9" x 3.5" Right Angle T Bolt	3.2	1.4
CMPTSW2X35	1.9" x 3.5" Swivel Clamp T Bolt	3.7	1.68

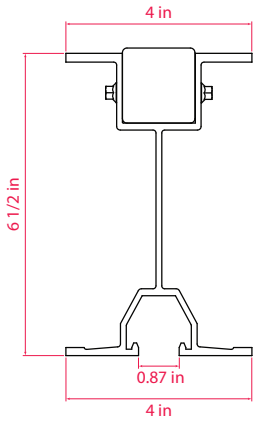
07

Shoring Beams

93

6.5” Aluminum Joist Beam - 4” Base





Product Code	Description	Beam Length		Weight	
		FT	M	LB	KG
SHAB6505BTF4PN	5′, 6.5″ x 4″ Aluminum Beam	5.0	1.52	18.7	8.5
SHAB6506BTF4PN	6′, 6.5″ x 4″ Aluminum Beam	6.0	1.82	22.4	10.1
SHAB6507BTF4PN	7′, 6.5″ x 4″ Aluminum Beam	7.0	2.13	26.1	11.8
SHAB6508BTF4PN	8′, 6.5″ x 4″ Aluminum Beam	8.0	2.44	29.8	13.5
SHAB6509BTF4PN	9′, 6.5″ x 4″ Aluminum Beam	9.0	2.74	33.6	15.2
SHAB6510BTF4PN	10′, 6.5″ x 4″ Aluminum Beam	10.0	3.01	37.3	16.9
SHAB6511BTF4PN	11′, 6.5″ x 4″ Aluminum Beam	11.0	3.35	41.0	18.6
SHAB6512BTF4PN	12′, 6.5″ x 4″ Aluminum Beam	12.0	3.66	44.8	20.3
SHAB6513BTF4PN	13′, 6.5″ x 4″ Aluminum Beam	13.0	3.96	48.5	22.0
SHAB6514BTF4PN	14′, 6.5″ x 4″ Aluminum Beam	14.0	4.27	52.2	23.7
SHAB6515BTF4PN	15′, 6.5″ x 4″ Aluminum Beam	15.0	4.57	56.0	25.4
SHAB6516BTF4PN	16′, 6.5″ x 4″ Aluminum Beam	16.0	4.88	59.7	27.1
SHAB6517BTF4PN	17′, 6.5″ x 4″ Aluminum Beam	17.0	5.18	63.4	28.8
SHAB6518BTF4PN	18′, 6.5″ x 4″ Aluminum Beam	18.0	5.49	67.1	30.4
SHAB6519BTF4PN	19′, 6.5″ x 4″ Aluminum Beam	19.0	5.79	70.9	32.1
SHAB6520BTF4PN	20′, 6.5″ x 4″ Aluminum Beam	20.0	6.1	74.6	33.8

The 6.5″ Aluminum Beam is a general-purpose structural aluminum beam used in shoring and forming applications. This beam features a synthetic nailer strip at the top and a 4″ bottom flange with a dog house channel.

94

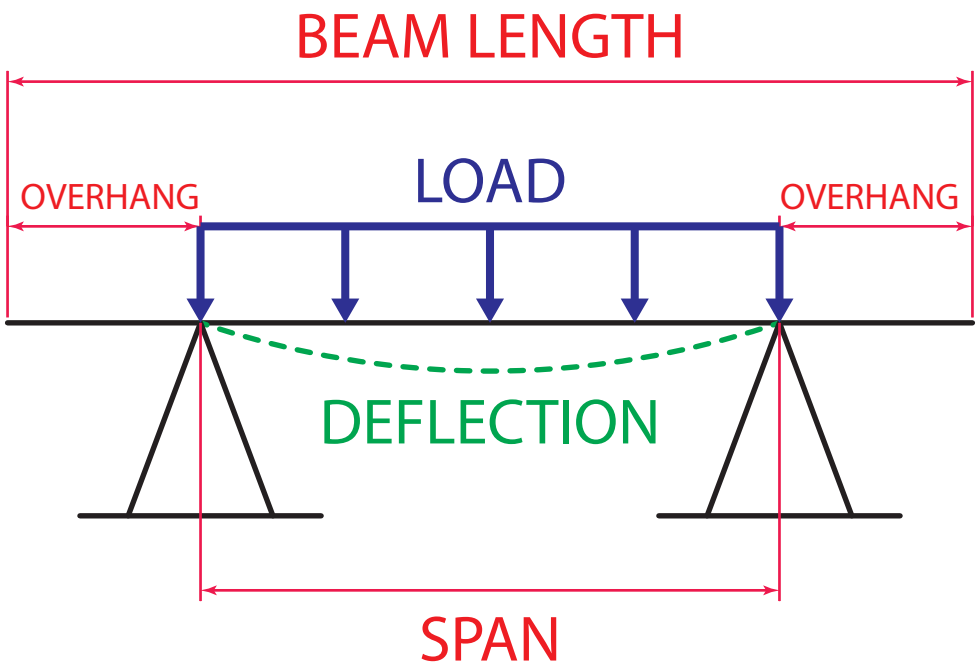
6.5” Alum Joist Beam Load Deflection - 4” Base

Safety Factor 2:1

Section Properties

Overall Height:	6.50”	165.1 mm
Base Width:	4.00”	101.6 mm
Width, Inverted Top Hat Section:	4.00”	101.6 mm
Cross Sectional Area (w/o nailer):	2.46 in2	1625.8 mm2
Nominal Weight (w/nailer):	3.73 lb/ft	5.55 kg/m
Nominal Weight (w/o nailer):	2.88 lb/ft	4.29 kg/m
Moment of Inertia (Ixx):	15.5 in4	6,451,587 mm4
Section Modulus, Sxx (min):	4.70 in3	77,019.2 mm3
Modulus of Elasticity (E):	10.2E6 p	7.03E7 KPa

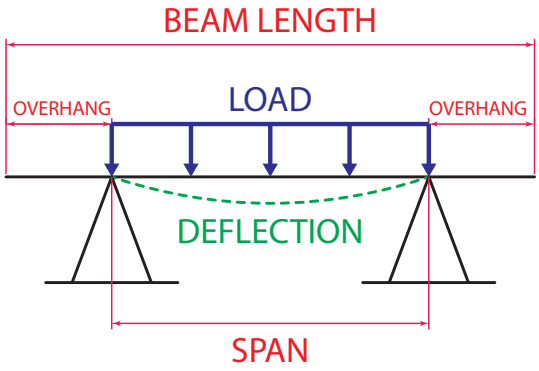
- Deflection data is based on simple supported span condition. Refer to the diagram.
- Beam is to be laterally supported
- The aluminum beam must have a minimum overhang of 6” on each end
- Load rating is based on a 2:1 safety factor and determined by shear analysis at reaction points



95

6.5” Alum Joist Beam Load Deflection - 4” Base

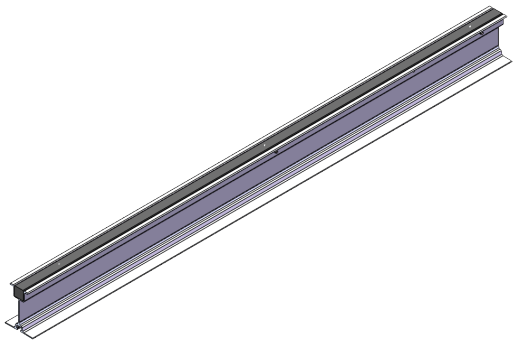
Safety Factor 2:1

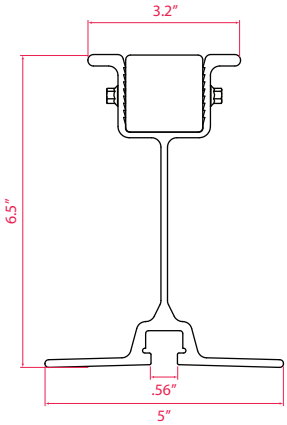


Span		L/360 Criteria Deflection		L/360 Criteria Load		L/270 Criteria Deflection		L/270 Criteria Load	
FT	M	IN	MM	LB	KN	IN	MM	LB	KN
4.0	1.22	-*	-*	3062.6	44.7*	-*	-*	3062.6	44.7*
5.0	1.52	0.17	4.2	1872.6	27.3	-	-	2450.1	35.8*
6.0	1.83	0.2	5.1	1083.7	15.8	0.27	6.8	1444.9	21.1
7.0	2.13	0.23	5.8	682.4	10.0	0.31	7.9	909.9	21.1
8.0	2.44	0.27	6.9	457.2	6.7	0.36	9.0	609.6	8.9
9.0	2.74	0.3	7.6	321.1	4.7	0.4	10.2	428.1	6.2
10.0	3.01	0.33	8.3	234.1	3.4	0.44	11.2	312.1	4.6
11.0	3.35	0.37	9.4	175.9	2.6	0.49	12.4	234.5	3.4
12.0	3.66	0.4	10.2	135.5	2.0	0.53	13.5	180.6	2.6
13.0	3.96	0.43	10.9	106.5	1.6	0.58	15.7	142.1	2.1
14.0	4.27	0.47	11.9	85.3	1.2	0.62	15.8	113.7	1.3
15.0	4.57	0.5	12.7	69.4	1.0	0.67	16.1	92.5	1.3
16.0	4.88	0.53	13.5	57.1	0.8	0.71	18.1	76.2	1.1
17.0	5.18	0.57	14.5	47.6	0.7	0.76	19.2	63.5	0.9
18.0	5.49	0.6	15.2	40.1	0.6	0.8	20.3	53.5	0.8
19.0	5.79	0.63	16.0	34.1	0.5	0.84	21.4	45.5	0.7
20.0	6.1	0.67	17.0	29.3	0.4	0.89	22.6	39.0	0.6

**Load rating is determined by shear analysis at reaction points with an included factor of safety of 2 to 1.*

96 6.5” Aluminum Joist Beam - 5” Base





Product Code	Description	Beam Length		Weight	
		FT	M	LB	KG
SHAB6505PN	5’, 6.5” x 5” Aluminum Beam	5.0	1.52	20.8	9.4
SHAB6506PN	6’, 6.5” x 5” Aluminum Beam	6.0	1.82	26.0	11.8
SHAB6507PN	7’, 6.5” x 5” Aluminum Beam	7.0	2.13	31.2	14.1
SHAB6508PN	8’, 6.5” x 5” Aluminum Beam	8.0	2.44	36.4	16.5
SHAB6509PN	9’, 6.5” x 5” Aluminum Beam	9.0	2.74	41.6	18.9
SHAB6510PN	10’, 6.5” x 5” Aluminum Beam	10.0	3.01	46.8	21.2
SHAB6511PN	11’, 6.5” x 5” Aluminum Beam	11.0	3.35	52.0	23.6
SHAB6512PN	12’, 6.5” x 5” Aluminum Beam	12.0	3.66	57.2	25.9
SHAB6513PN	13’, 6.5” x 5” Aluminum Beam	13.0	3.96	62.4	28.3
SHAB6514PN	14’, 6.5” x 5” Aluminum Beam	14.0	4.27	67.6	30.7
SHAB6515PN	15’, 6.5” x 5” Aluminum Beam	15.0	4.57	72.8	33.0
SHAB6516PN	16’, 6.5” x 5” Aluminum Beam	16.0	4.88	78.0	35.4
SHAB6517PN	17’, 6.5” x 5” Aluminum Beam	17.0	5.18	83.2	37.7
SHAB6518PN	18’, 6.5” x 5” Aluminum Beam	18.0	5.49	88.4	40.1
SHAB6519PN	19’, 6.5” x 5” Aluminum Beam	19.0	5.79	93.6	42.4
SHAB6520PN	20’, 6.5” x 5” Aluminum Beam	20.0	6.1	98.8	44.8
SHAB6524PN	24’, 6.5” x 5” Aluminum Beam	24.0	7.32	100.1	45.4

The 6.5” Aluminum Beam is a general-purpose structural aluminum beam used in shoring and forming applications. This beam features a synthetic nailer strip at the top and a shoring bolt cavity at the bottom flange.

97

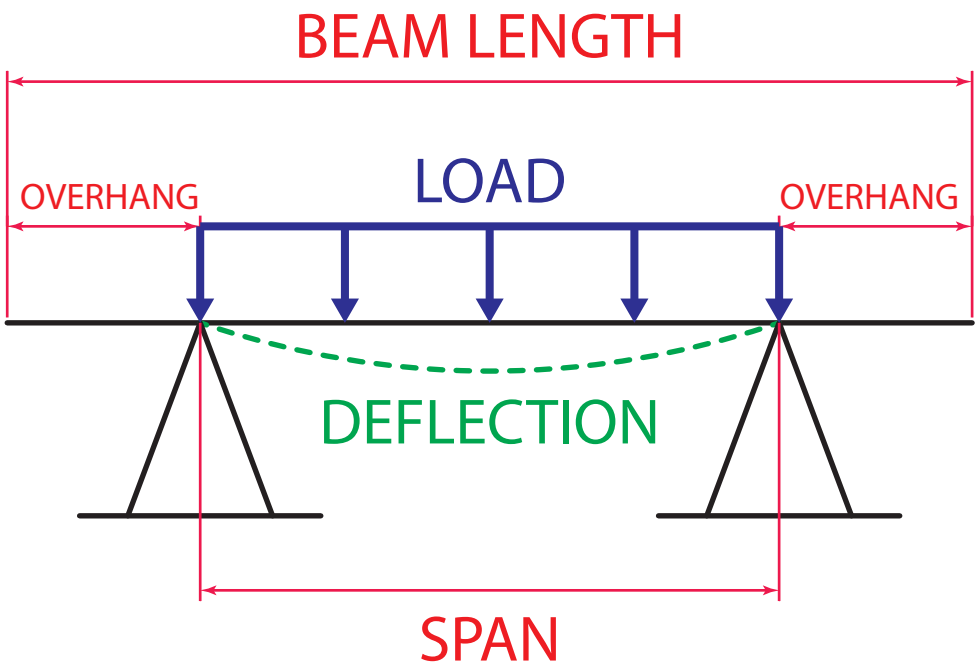
6.5” Alum Joist Beam Load Deflection - 5” Base

Safety Factor 2:1

Section Properties

- Overall Height: 6.50” 165.1 mm
- Base Width: 5.00” 127.0 mm
- Width, Inverted Top Hat Section: 3.20” 81.3 mm
- Cross Sectional Area (w/o nailer): 2.82 in2 1819.4 mm2
- Nominal Weight (w/nailer): 4.17 lb/ft 6.21 kg/m
- Nominal Weight (w/o nailer): 3.32 lb/ft 4.94 kg/m
- Moment of Inertia (lxx): 17.42 in4 7,25E6 mm4
- Section Modulus, Sxx (min): 4.36 in3 71,448.0 mm3
- Modulus of Elasticity (E): 10.2E6 psi 7.03E7 KPa

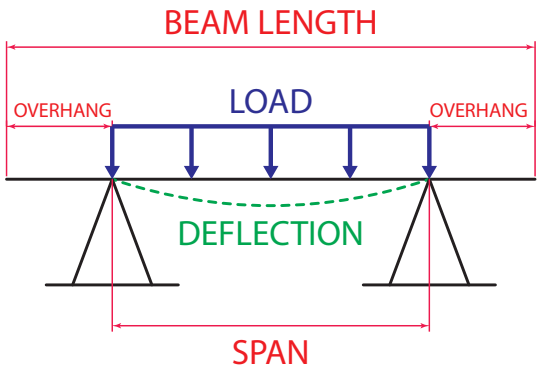
- Deflection data is based on simple supported span condition. Refer to the diagram.
- Beam is to be laterally supported
- The aluminum beam must have a minimum overhang of 6” on each end
- Load rating is based on a 2:1 safety factor and determined by shear analysis at reaction points



98

6.5” Alum Joist Beam Load Deflection - 5” Base

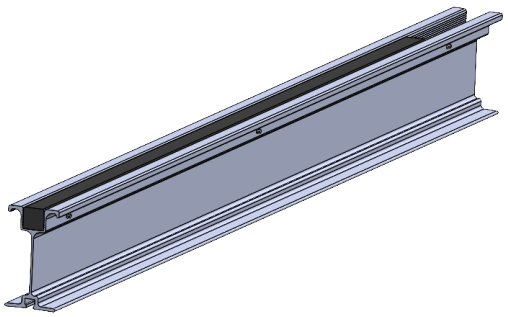
Safety Factor 2:1

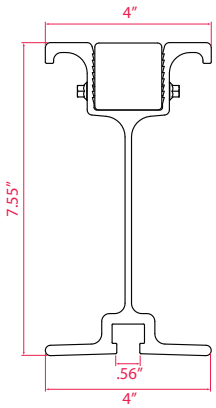


Span		L/360 Criteria Deflection		L/360 Criteria Load		L/270 Criteria Deflection		L/270 Criteria Load	
FT	M	IN	MM	LB	KN	IN	MM	LB	KN
4.0	1.22	-*	-*	3698.2	54.0*	-*	-*	3698.2	54.0*
5.0	1.52	0.17	4.2	2105.9	30.7	0.22	5.6	2807.8	41.0
6.0	1.83	0.2	5.1	1218.7	17.8	0.27	6.8	1624.9	23.7
7.0	2.13	0.23	5.8	767.5	11.2	0.31	7.9	1023.3	14.9
8.0	2.44	0.27	6.9	514.1	7.50	0.36	9.0	685.5	10.0
9.0	2.74	0.3	7.6	361.1	5.30	0.4	10.2	481.5	7.0
10.0	3.01	0.33	8.3	263.2	3.80	0.44	11.2	351.0	5.1
11.0	3.35	0.37	9.4	197.8	2.90	0.49	12.4	263.7	3.8
12.0	3.66	0.4	10.2	152.3	2.20	0.53	13.5	203.1	3.0
13.0	3.96	0.43	10.9	119.8	1.70	0.58	15.7	159.8	2.3
14.0	4.27	0.47	11.9	95.9	1.40	0.62	15.8	127.9	1.9
15.0	4.57	0.5	12.7	78.0	1.10	0.67	16.1	104.0	1.5
16.0	4.88	0.53	13.5	64.3	0.90	0.71	18.1	85.7	1.3
17.0	5.18	0.57	14.5	53.6	0.80	0.76	19.2	71.4	1.0
18.0	5.49	0.6	15.2	45.1	0.70	0.8	20.3	60.2	0.9
19.0	5.79	0.63	16.0	38.4	0.60	0.84	21.4	51.2	0.7
20.0	6.1	0.67	17.0	32.9	0.50	0.89	22.6	43.9	0.6
24.0	7.32	0.80	20.3	19.0	0.30	1.07	27.1	25.4	0.4

**Load rating is determined by shear analysis at reaction points with an included factor of safety of 2 to 1*

99 7.5” Aluminum Stringer Beam





Product Code	Description	Beam Length		Weight	
		FT	M	LB	KG
SHAB7504BF4PN	4’, 7.5” x 4” Aluminum Stringer	4.0	1.22	20.8	9.4
SHAB7505BF4PN	5’, 7.5” x 4” Aluminum Stringer	5.0	1.52	26.0	11.8
SHAB7506BF4PN	6’, 7.5” x 4” Aluminum Stringer	6.0	1.82	31.2	14.1
SHAB7507BF4PN	7’, 7.5” x 4” Aluminum Stringer	7.0	2.13	36.4	16.5
SHAB7508BF4PN	8’, 7.5” x 4” Aluminum Stringer	8.0	2.44	41.6	18.9
SHAB7509BF4PN	9’, 7.5” x 4” Aluminum Beam Stringer	9.0	2.74	46.8	21.2
SHAB7510BF4PN	10’, 7.5” x 4” Aluminum Stringer	10.0	3.01	52.0	23.6
SHAB7511BF4PN	11’, 7.5” x 4” Aluminum Stringer	11.0	3.35	57.2	25.9
SHAB7512BF4PN	12’, 7.5” x 4” Aluminum Stringer	12.0	3.66	62.4	28.3
SHAB7513BF4PN	13’, 7.5” x 4” Aluminum Stringer	13.0	3.96	67.6	30.7
SHAB7514BF4PN	14’, 7.5” x 4” Aluminum Stringer	14.0	4.27	72.8	33.0
SHAB7515BF4PN	15’, 7.5” x 4” Aluminum Stringer	15.0	4.57	78.0	35.4
SHAB7516BF4PN	16’, 7.5” x 4” Aluminum Stringer	16.0	4.88	83.2	37.7
SHAB7517BF4PN	17’, 7.5” x 4” Aluminum Stringer	17.0	5.18	88.4	40.1
SHAB7518BF4PN	18’, 7.5” x 4” Aluminum Stringer	18.0	5.49	93.6	42.4
SHAB7519BF4PN	19’, 7.5” x 4” Aluminum Stringer	19.0	5.79	98.8	44.8
SHAB7520BF4PN	20’, 7.5” x 4” Aluminum Stringer	20.0	6.1	104.0	47.2

The 7.5” Aluminum Beam is a general-purpose structural aluminum beam used in shoring and forming applications. This beam features a synthetic nailer strip at the top and a shoring bolt cavity at the bottom flange.

100

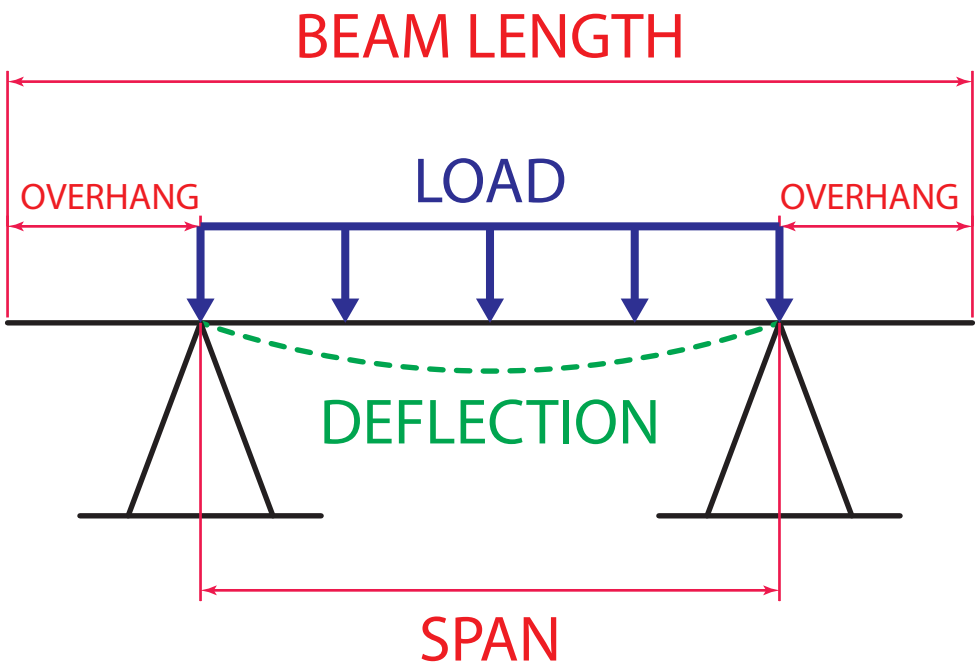
7.5” Alum Stringer Beam Load Deflection

Safety Factor 2:1

Section Properties

Overall Height:	7.50”	191.77 mm
Base Width:	4.00”	101.6 mm
Width, Inverted Top Hat Section:	4.00”	101.6 mm
Cross Sectional Area (w/o nailer):	3.74 in2	2412.89 mm2
Nominal Weight (w/nailer):	5.2 lb/ft	0.71 kg/m
Nominal Weight (w/o nailer):	4.47 lb/ft	0.61 kg/m
Moment of Inertia (Ixx):	32.82 in4	13,600,715.4 mm4
Section Modulus, Sxx (min):	3.96 in3	64,892.7 mm3
Modulus of Elasticity (E):	10.2E6 p	7.03E7 KPa

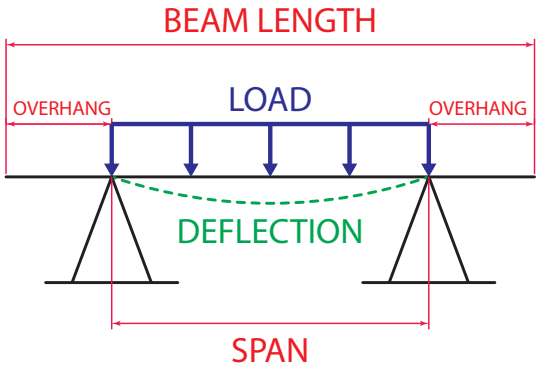
- Deflection data is based on simple supported span condition. Refer to the diagram.
- Beam is to be laterally supported
- The aluminum beam must have a minimum overhang of 6” on each end
- Load rating is based on a 2:1 safety factor and determined by shear analysis at reaction points



101

7.5” Alum Stringer Beam Load Deflection

Safety Factor 2:1



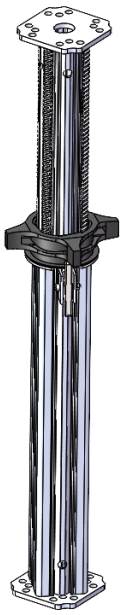
Span		L/360 Criteria Deflection		L/360 Criteria Load		L/270 Criteria Deflection		L/270 Criteria Load	
FT	M	IN	MM	LB	KN	IN	MM	LB	KN
4.0	1.22	-*	-*	5242.6	76.5*	-*	-*	5242.6	76.5*
5.0	1.52	0.17	4.2	3967.1	57.9	-	-	4194.0	61.2*
6.0	1.83	0.2	5.1	2295.8	33.5	0.27	6.8	4294.0	61.2
7.0	2.13	0.23	5.8	1445.7	21.1	0.31	7.9	3061.0	44.7
8.0	2.44	0.27	6.9	968.5	14.1	0.36	9.0	1927.7	28.1
9.0	2.74	0.3	7.6	744.4	10.9	0.4	10.2	907.0	13.2
10.0	3.01	0.33	8.3	495.9	7.2	0.44	11.2	661.2	9.6
11.0	3.35	0.37	9.4	372.6	5.4	0.49	12.4	496.8	7.2
12.0	3.66	0.4	10.2	287.0	4.2	0.53	13.5	382.6	5.6
13.0	3.96	0.43	10.9	225.7	3.3	0.58	15.7	300.9	4.4
14.0	4.27	0.47	11.9	180.7	2.6	0.62	15.8	241.0	3.5
15.0	4.57	0.5	12.7	146.9	2.1	0.67	16.1	195.9	2.9
16.0	4.88	0.53	13.5	121.1	1.8	0.71	18.1	161.4	2.4
17.0	5.18	0.57	14.5	100.9	1.5	0.76	19.2	134.6	2/0
18.0	5.49	0.6	15.2	85.0	1.2	0.8	20.3	113.4	2.0
19.0	5.79	0.63	16.0	72.3	1.1	0.84	21.4	96.4	1.4
20.0	6.1	0.67	17.0	62.0	0.9	0.89	22.6	82.6	1.2

**Load rating is determined by shear analysis at reaction points with an included factor of safety of 2 to 1.*

08

Post Shores

103 Aluminum Shoring Prop



Product Code	Description	Extension		Weight	
		IN	MM	LB	KG
SHPSA1200	Aluminum Prop 800 – 1200	31.5 to 47.2″	800 to 1200	23.27	10.6
SHPSA2500	Aluminum Prop 1450 – 2500	57.1 to 98.4″	1450 to 2500	36.74	16.7
SHPSA3500	Aluminum Prop 1980 – 3500	78.0 to 137.8″	1980 to 3500	46.5	21.1
SHPSA4800	Aluminum Prop 2600 – 4800	102.4 to- 189″	2600 to 4800	60.28	27.4
SHPSA6250	Aluminum Prop 4300 – 6250	169.3 to 246.1″	4300 to 6250	82.17	37.4

The Aluminum Shoring Props are designed to be both strong and lightweight according to the ANSI/SSFI SH300-2007 standard.

ADDITIONAL INFORMATION

- Extension from 2′-7.5″ to 20′-6
- Light weight
- Bolted steel top and bottom base plates for easy replacement
- **Material:** Aluminum
- **Finish:** Powder coated outer leg, mill finish threaded leg and galvanized nut

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Aluminum Shoring Prop Capacity

Span		SHPSA1200	SHPSA2500	SHPSA3500	SHPSA4800	SHPSA6250
FT	M	LB	LB	LB	LB	LB
2.62	0.8	24,200				
2.95	0.9	24,200				
3.28	1.0	22,000				
3.61	1.1	21,000				
3.94	1.2	19,800				
4.76	1.45		24,200			
4.92	1.5		24,200			
5.25	1.6		23,700			
5.58	1.7		22,500			
5.91	1.8		22,100			
6.23	1.9		21,600			
6.56	2.0		21,500	24,200		
6.89	2.1		21,100	24,000		
7.22	2.2		20,700	23,800		
7.55	2.3		20,100	23,500		
7.87	2.4		19,800	23,200		
8.2	2.5			22,800		
8.53	2.6			22,400	24,200	
8.86	2.7			21,800	24,200	
9.19	2.8			21,500	23,800	
9.51	2.9			21,300	23,600	
9.84	3.0			20,100	23,200	
10.17	3.1			19,500	22,800	
10.5	3.2			18,900	22,600	
10.83	3.3			18,000	22,000	
11.16	3.4			17,200	20,900	
11.48	3.5			16,500	20,100	
11.81	3.6				19,300	
12.14	3.7				18,400	

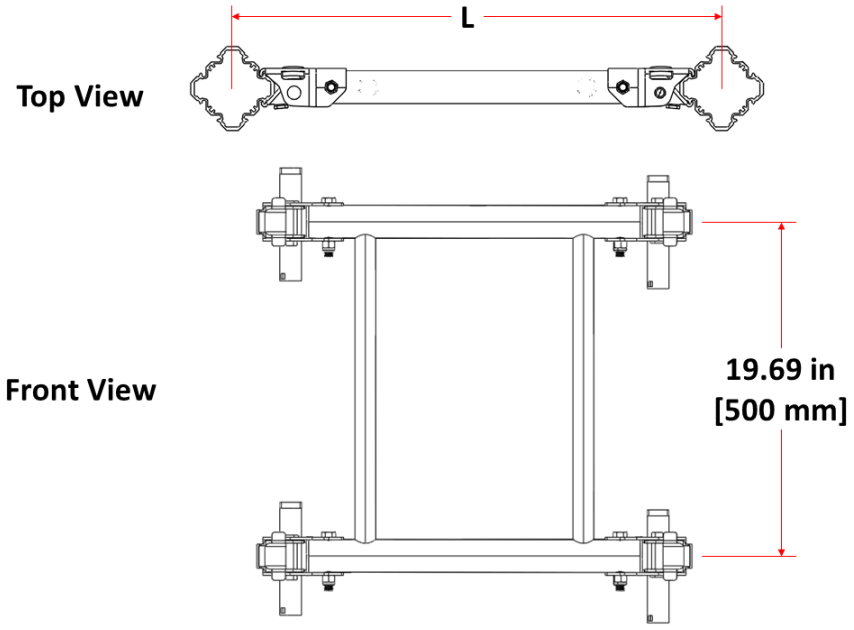
105

Aluminum Frame Shoring System

Span		SHPSA1200	SHPSA2500	SHPSA3500	SHPSA4800	SHPSA6250
FT	M	LB	LB	LB	LB	LB
12.47	3.8				17,500	
12.8	3.9				16,600	
13.12	4.0				15,500	
13.45	4.1				15,100	
13.78	4.2				14,400	
14.11	4.3				13,700	18,400
14.44	4.4				13,000	17,900
14.76	4.5				12,300	17,300
15.09	4.6				12000	16900
15.42	4.7				11600	16300
15.75	4.8				11000	15800
16.08	4.9					15300
16.41	5.0					14800
16.73	5.1					14200
17.06	5.2					13900
17.39	5.3					13200
17.72	5.4					12800
18.05	5.5					12300
18.37	5.6					11700
18.7	5.7					11400
19.03	5.8					10900
19.36	5.9					10500
19.69	6.0					10000
20.01	6.1					9700
20.34	6.2					9300
20.51	6.25					9100

106

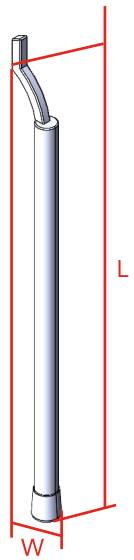
Aluminum Shoring Prop Frame Brace



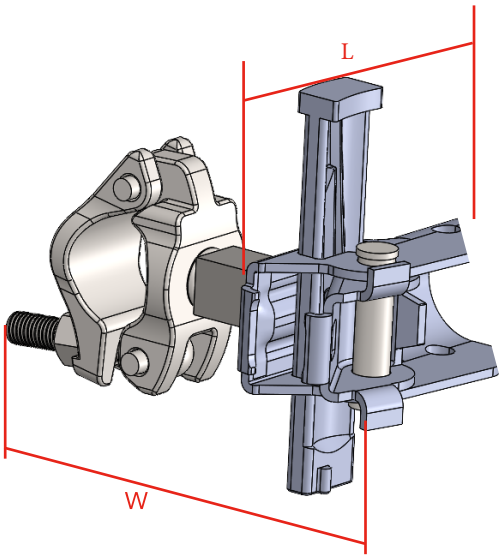
Product Code	Description	Material	Bay Length - L		Weight	
			FT	M	LB	KG
SHPSALFB0625	Alu-Prop Steel Frame Brace 62.5 cm	Steel	2′-1″	0.63	19.0	8.6
SHPSALFB0750	Alu-Prop Steel Frame Brace 75 cm	Steel	2′-6″	0.75	20.7	9.4
SHPSALFB0900	Alu-Prop Steel Frame Brace 90 cm	Steel	3′-0″	0.90	24.9	11.3
SHPSALFB1200	Alu-Prop Steel Frame Brace 120 cm	Steel	3′-11″	1.20	30.0	13.6
SHPSALFB1375	Alu-Prop Steel Frame Brace 137.5 cm	Steel	4′-6″	1.38	32.6	14.8
SHPSALFB1500	Alu-Prop Steel Frame Brace 150 cm	Steel	4′-11″	1.50	34.4	15.6
SHPSALFB2015	Alu-Prop Alum Frame Brace 201.5 cm	Aluminum	6′-7″	2.02	26.0	11.8
SHPSALFB2250	Alu-Prop Alum Frame Brace 225 cm	Aluminum	7′-5″	2.25	27.5	12.5
SHPSALFB2300	Alu-Prop Alum Frame Brace 230 cm	Aluminum	7′-7″	2.30	27.9	12.7
SHPSALFB2370	Alu-Prop Alum Frame Brace 237 cm	Aluminum	7′-9″	2.37	28.3	12.8
SHPSALFB2660	Alu-Prop Alum Frame Brace 266 cm	Aluminum	8′-9″	2.66	30.3	13.7
SHPSALFB2960	Alu-Prop Alum Frame Brace 296 cm	Aluminum	9′-9″	2.96	33.2	15.0

Accessories specifically designed for easing the erection of our Aluminum Shoring Props.

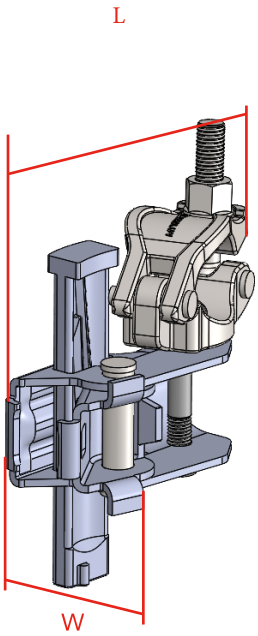
107 Aluminum Shoring Prop Accessories



SHPSALWNW



SHPSALRC



SHPSALSC

Product Code	Description	Width		Length		Weight	
		IN	MM	IN	MM	LB	KG
SHPSALWNW	Alu-Prop Wing Nut Wrench	35.0	888	3.7	93	6.6	3.0
SHPSALRC	Alu-Prop Right Angle Clamp	5.1	130	7.1	180	3.9	1.8
SHPSALSC	Alu-Prop Swivel Clamp	6.2	158	2.5	63	3.6	1.6

Accessories specifically designed for easing the erection of our Aluminum Shoring Props.

108

DSS 350 Post Shore

Safety Factor 3:1

Product Code	Description	Extention		Weight	
		FT	M	LB	KG
SHPSDSS350	Post Shore 6′-8″ to 11′-6″	6′8″to 11′6″	2.03 to 3.51	56.4	25.7

Extention		Allowable Load Capacity	
FT	M	LB	KG
6′-8″	2.03	18814	83.7
7′	2.13	18805	83.7
7′-6″	2.3	18793	83.6
8′	2.44	18537	82.5
8′-6″	2.59	18038	80.2
9′	2.74	17294	76.9
9′-6″	2.9	16308	72.5
10′	3.05	15077	67.1
10′-6″	3.2	13603	60.5
11′	3.35	11885	52.9
11′-6″	3.51	10340	46.0

ADDITIONAL INFORMATION

- Covers height ranges from 6′-8″ to 11′6″
- Diameter of outer tube is 3″ / 76.1 mm
- Diameter of inner tube is 2.5″ / 63.5 mm
- Quick Release Pin included
- Striker / Dismantle Support
- Universal hole pattern on base plates
- Allowable load capacity is based on 3:1 safety factor
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized

109

Heavy Duty Steel Post Shore

Safety Factor 3:1

Product Code	Description	Extention		Weight	
		FT	M	LB	KG
SHPSHD611	Post Shore, 6′-6″ to 11′-6″	6′-6″ to 11′-6″	1.98 - 3.51	46.3	21.00
SHPSHD1018	Post Shore, 10′ to 18′	10′ to 18′	3.05 - 5.49	74.1	33.61

Heavy-Duty Post Shores are primarily used in heavy construction applications and re-shoring.

ADDITIONAL INFORMATION

- Post OD 3″ / 76.0mm
- Staff OD 2.5″ / 63.5mm
- Quick Release Pin
- Striker/Dismantle Support
- Universal hole schedule on base plates
- Load capacity is based in a safety factor of 3:1.
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized, painted finish available upon request

110

Heavy Duty Steel Post Shore Capacities

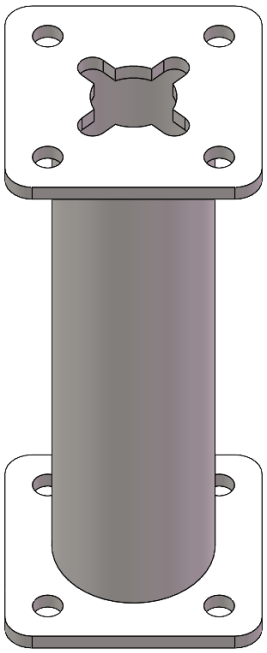
Safety Factor 3:1

***NOTE: Using the appropriate Post Shore Extension these load ratings are valid only when the extensions are secured to the shoring posts, using 4-1/2" grade 5 bolts. Nuts should be tightened to a minimum of 45'-lbf.**

Span		SHPSA1200		SHPSA2500	
FT	M	LB	KN	LB	
6'-6"	2.01	7750	34.47		
7'	2.13	7400	32.92		
7'-6"	2.31	7050	31.36		
8'	2.43	6700	29.8		
8'-6"	2.62	6350	28.25		
9'	2.74	6000	26.69		
9'-6"	2.92	5650	25.13		
10'	3.04	5300	23.58	9900	44.03
10'-6"	3.23	4950	22.02	9500	42.26
11'	3.35	4600	20.46	9050	40.26
11'-6"	3.53	4200	18.68	8625	38.37
12'	3.65	3850	17.25	8200	36.48
12'-6"	3.84	3525	15.79	7775	34.58
13'	3.96	3150	14.11	7350	32.69
13'-6"	4.14	2800	12.54	6925	30.8
14'	4.26			6500	28.91
14'-6"	4.45			6075	27.02
15'	4.57			5650	25.13
15'-6"	4.75			5225	23.24
16'	4.87			4800	21.35
16'-6"	5.05			4375	19.46
17'	5.18			3950	17.57
17'-6"	5.36			3525	15.68
18'	5.48			3100	13.79
18'-6"	5.64			2650	11.87
19'	5.79			2250	10.08
19'-6"	5.94			1800	8.06
20'	6.1			1400	6.27

111

Heavy Duty Post Shore Extension



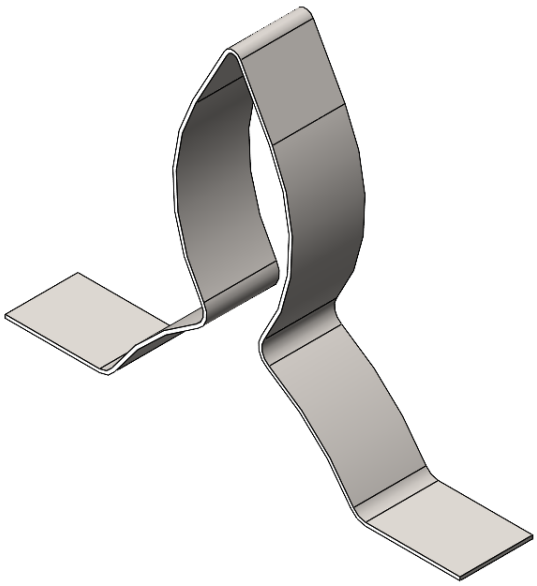
Product Code	Description	Length		Weight	
		IN	MM	LB	KG
SHPSHDEXT12	12" HD Post Shore Extension	12.0	304.8	6.86	3.11
SHPSHDEXT24	24" HD Post Shore Extension	24.0	609.6	10.47	4.75

Heavy-Duty Post Shore Extensions are meant to provide a safe and simple way to reach additional shore heights when required.

ADDITIONAL INFORMATION

- For load capacities, please refer back to each compatible shoring post's load chart
- **Compatible with:**
  - Heavy Duty Post Shore
  - Aluminum Shoring Prop
  - DSS 350 Post Shore
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized

112 Spring Clip



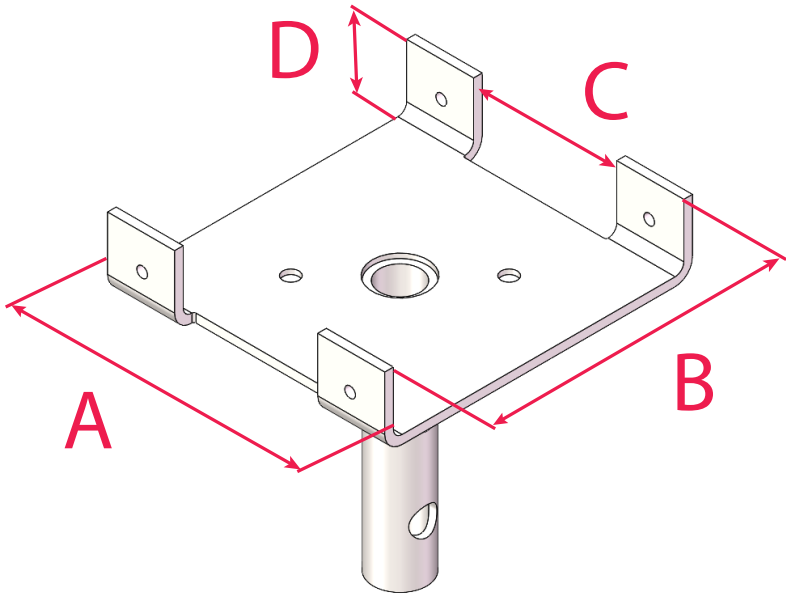
Product Code	Description	Width		Length		Height		Weight	
		IN	MM	IN	MM	IN	MM	LB	KG
SHSPCL	Post Shore Spring Clip	1.0	25.4	6.3	159.0	4.8	121.0	0.18	0.08

Post Shore Spring Clips ease the reshoring set-up and stripping processes.

ADDITIONAL INFORMATION

- For reshoring applications
- Corrosion resistant
- **Material:** Stainless Steel

113 Two Way U-Head



Product Code	Description	A		B		C		D	
		IN	MM	IN	MM	IN	MM	IN	MM
SHPSHDUH8	Two Way U-Head	8.0	203.2	8.375	212.7	4.13	104.9	1.0	25.4

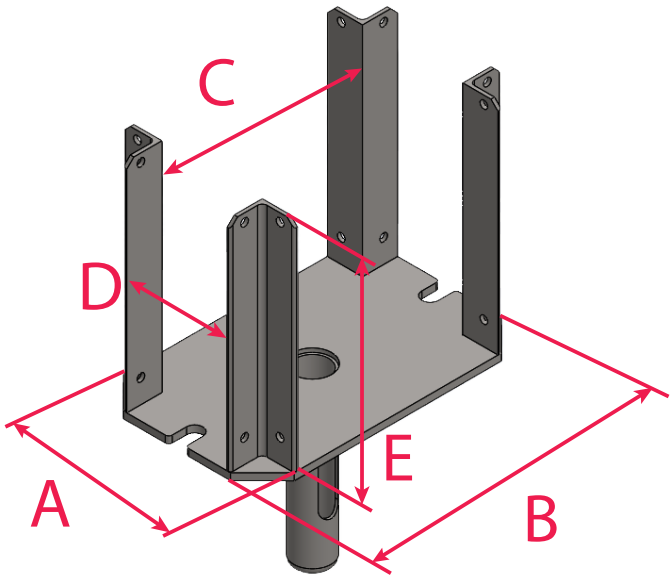
The Two Way U-Head is designed to be used in conjunction with post shores.

ADDITIONAL INFORMATION

- **DSS recommends using with one of the following pins:**
  - SHPNJP4
  - SHPNH
  - SHPNR
- **SHPSHUH8 is compatible with:**
  - Heavy Duty Post Shore
  - DSS 350 Post Shore

114

ForkHead 2-Way



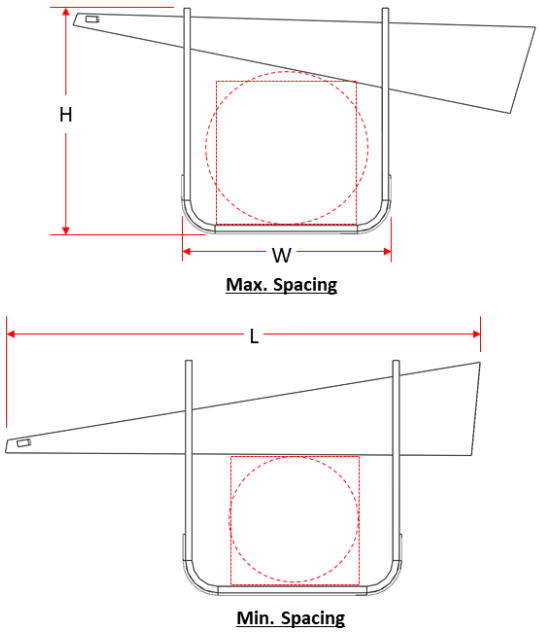
Product Code	Description	A		B		C		D		E		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	LB	KG
SHFHH20G	Forkhead 2-Way	5.71	145.0	9.06	230.0	6.69	170.0	3.35	85.0	7.28	185.0	5.72	2.6

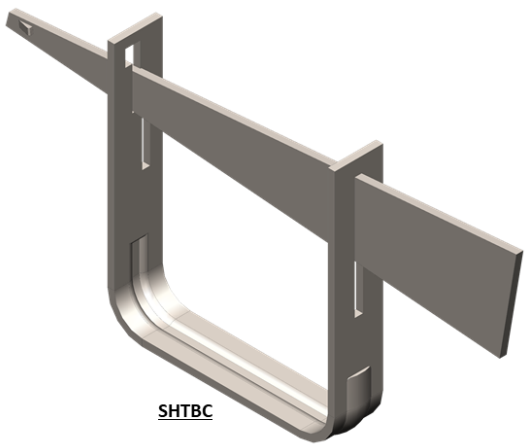
The Two Way U-Head is designed to be used in conjunction with post shores.

ADDITIONAL INFORMATION

- Compatible with H20 Beams (timber beams)
- Compatible with most Post Shores
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized

115 Timber Brace Clamp





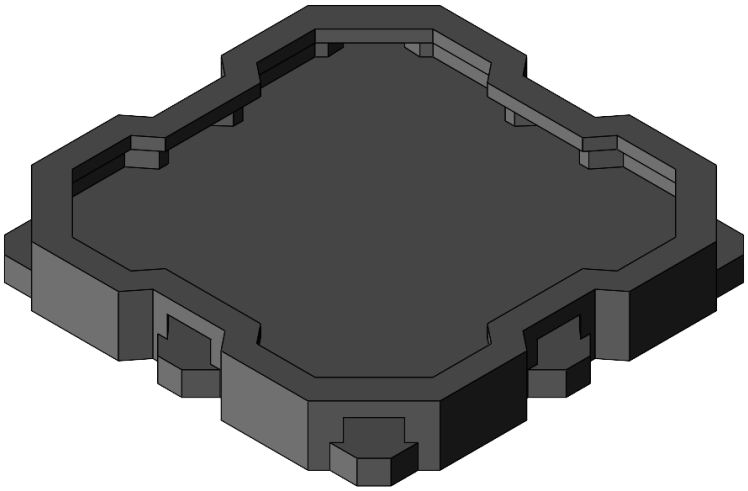
Product Code	Description	Width		Length		Height		Weight	
		IN	MM	IN	MM	IN	MM	LB	KG
SHTBC	Timber Brace Clamp	7.14	181.0	6.64	169.0	14.6	370.0	2.76	1.25

Timber Brace Clamps are designed to aid in the installation of lumber for bracing Post Shores.

ADDITIONAL INFORMATION

- For tubular shapes, the supported size range is 3.54" / 90 mm to 4.72" / 120 mm OD
- For square/rectangular shapes, the supported size range is from 3.94" / 100 mm to 4.72" / 120 mm per side
- **Material:** Steel
- **Finish:** Multiple finishes available

116 Shoring Post Plate Pad



Product Code	Description	Width		Length		Weight	
		IN	MM	IN	MM	LB	KG
SHPSBPP	Post Shore Base Plate Pad	6.3	160.0	6.7	170.0	.86	.39

Designed to protect sensitive surfaces when installing Post Shores.

ADDITIONAL INFORMATION

- **Compatible with:**
  - Medium Duty Post Shore
  - Heavy Duty Post Shore
  - DSS 350 Post Shore

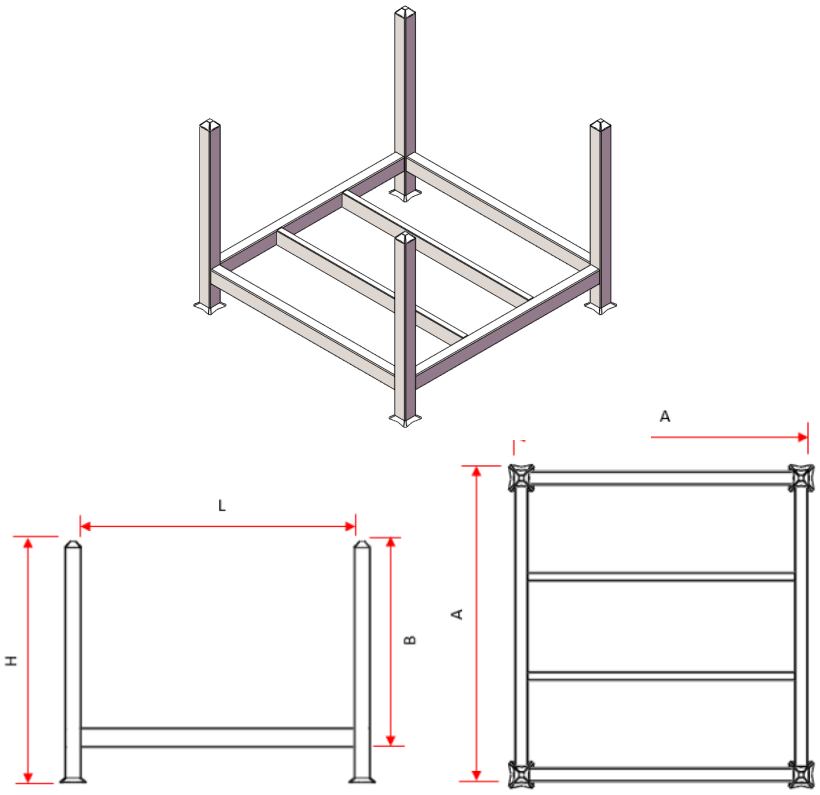
09

Storage

118

Rack

Safety Factor 4:1



Product Code	Description	A		B		L		H		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
RKSRO	Shipping Rack	44.01	1117.8	26.5	673.1	39.39	1000.5	34.28	870.6	5,000	2,500	110.5	50.09

The Shipping Rack provides an effective and efficient way to store and transport equipment.

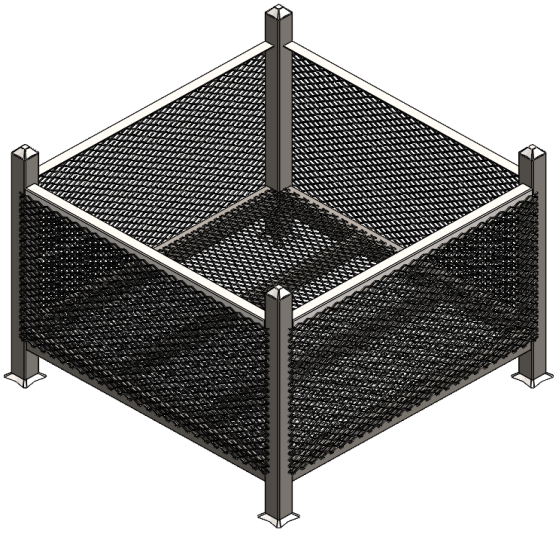
ADDITIONAL INFORMATION

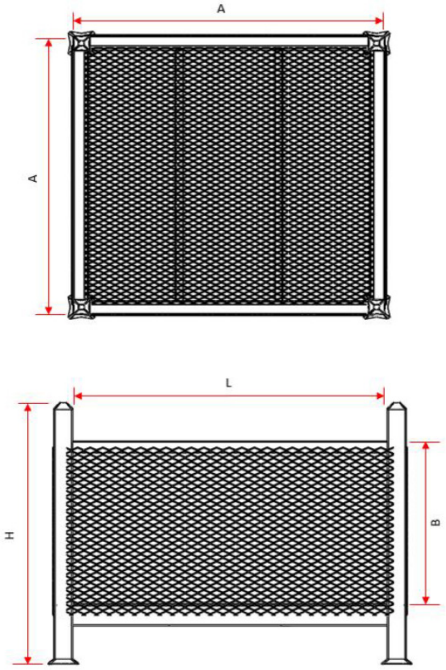
- Stack up to 5 high on a leveled surface
- Mud Sills required on unpaved surfaces
- Load rating based on a 4:1 safety factor
- **Material:** Steel
- **Finish:** Powder Coated Finish

119

Basket

Safety Factor 4:1





Product Code	Description	A		B		L		H		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
RKSRB	Shipping Basket	44.01	1117.8	21.19	538.2	39.39	1000.5	34.28	870.6	5,500	2,500	168.1	76.20

The Shipping Rack provides an effective and efficient way to store and transport equipment.

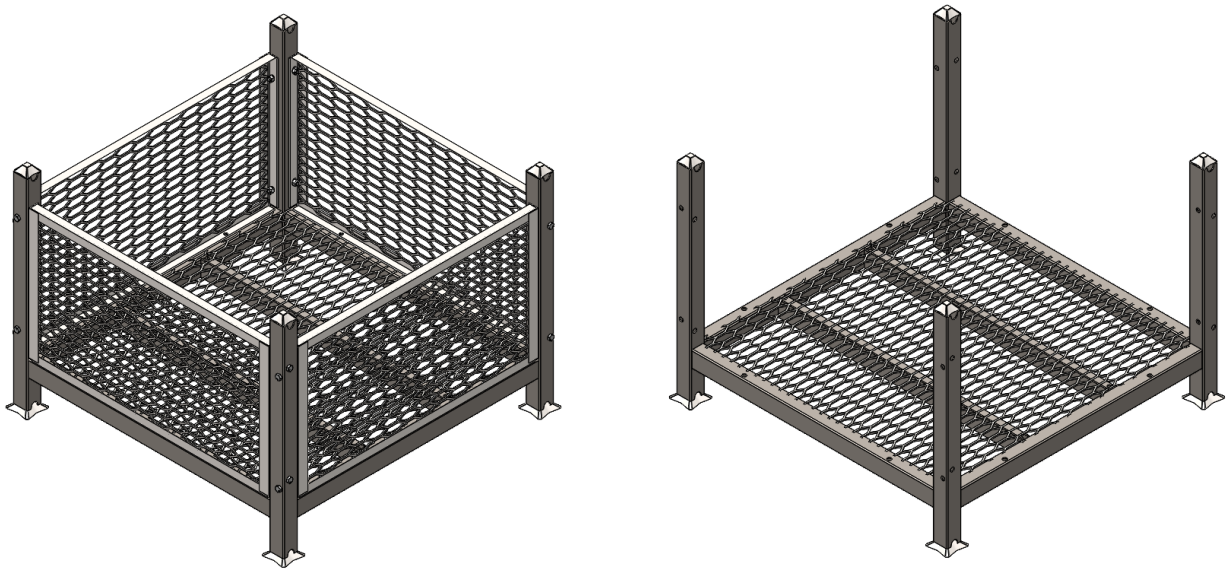
ADDITIONAL INFORMATION

- Stack up to 5 high on a leveled surface
- Mud Sills required on unpaved surfaces
- Load rating based on a 4:1 safety factor
- **Material:** Steel
- **Finish:** Powder Coated Finish

120

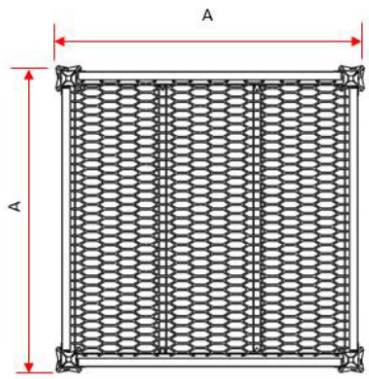
Basket With Removable Mesh Panels

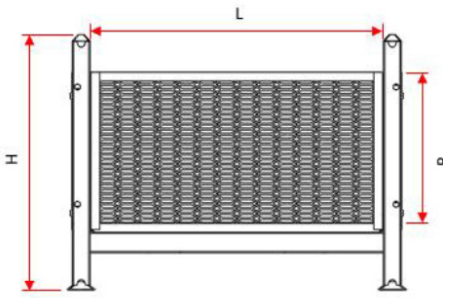
Safety Factor 4:1



Product Code	Description	A		B		L		H		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
RKSRB	Shipping Basket with Removable Mesh Panels	44.01	1117.8	21.46	545.0	39.39	1000.5	34.28	870.6	5,500	2,500	206.26	93.56

The Shipping Basket with Removable Mesh Panels gives the user the versatility for storage and transport solution with bolted removable mesh panels.





ADDITIONAL INFORMATION

- Stack up to 5 high on a leveled surface
- Mud Sills required on unpaved surfaces
- Load rating based on a 4:1 safety factor
- **Material:** Steel
- **Finish:** Powder Coated Finish

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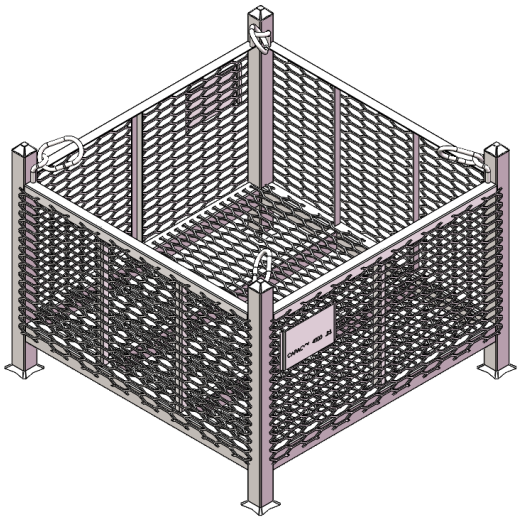
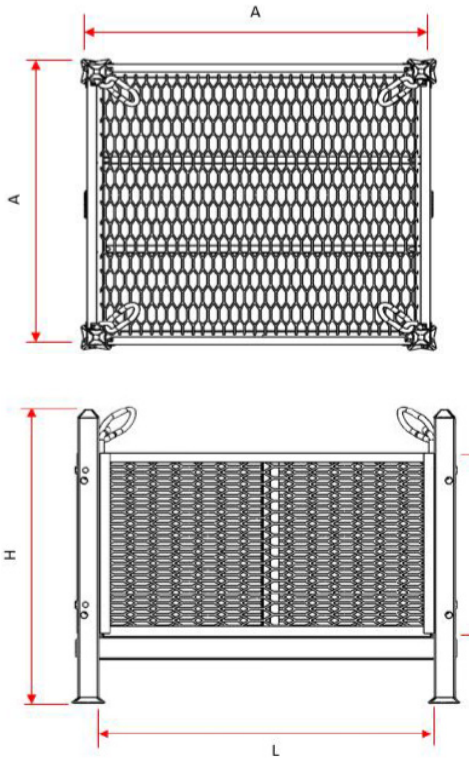
Flying Basket

Safety Factor 5:1





Product Code	Description	A		B		L		H		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
RKSRBFB	Steel Flying Basket	44.01	1117.8	24.24	615.6	39.39	1000.5	34.28	870.6	4,000	1,814	202.5	91.8

Shipping Flying Baskets are made from strong steel and used whenever there is the need to lift equipment to high locations.

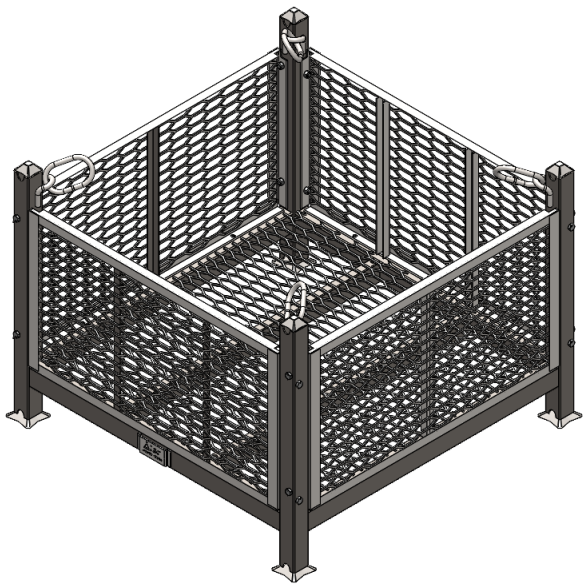
ADDITIONAL INFORMATION

- Stack up to 5 high on a leveled surface
- Mud Sills required on unpaved surfaces
- Load rating based on a 5:1 safety factor
- Steel mesh is comparable to #3 expanded metal
- Suitable for lifting from the bottom with forklift or from the shackles with a sling crane
- **Material:** Steel
- **Finish:** Powder Coated Finish

122

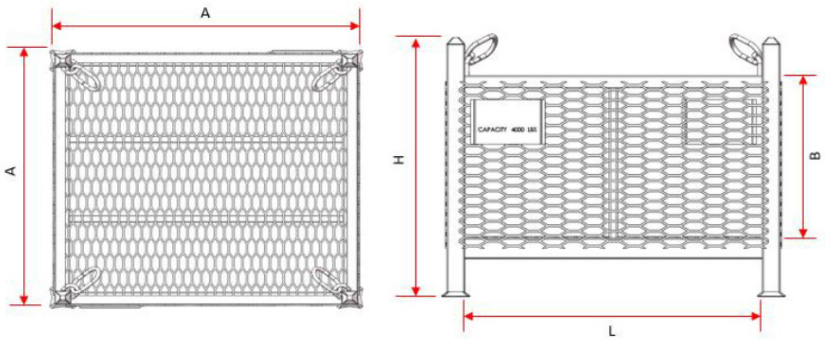
Flying Basket With Removable Mesh Panels

Safety Factor 5:1



Product Code	Description	A		B		L		H		Safe Working Load		Weight	
		IN	MM	IN	MM	IN	MM	IN	MM	LB	KG	LB	KG
RKSRBFB4R	Steel Flying Basket with 4 Mesh Panels	44.01	1117.8	21.46	545.0	39.39	1000.5	34.28	870.6	4,000	2,500	223.96	101.8

The Shipping Flying Basket with Removable Mesh Panels are made from strong steel and used whenever there is the need to lift equipment to high locations. The removable mesh panels allow for versatility for loading and storage.



ADDITIONAL INFORMATION

- Stack up to 5 high on a leveled surface
- Mud Sills required on unpaved surfaces
- Load rating based on a 5:1 safety factor
- Steel mesh is comparable to #3 expanded metal
- Suitable for lifting from the bottom with forklift or from the shackles with a sling crane
- **Material:** Steel
- **Finish:** Powder Coated Finish

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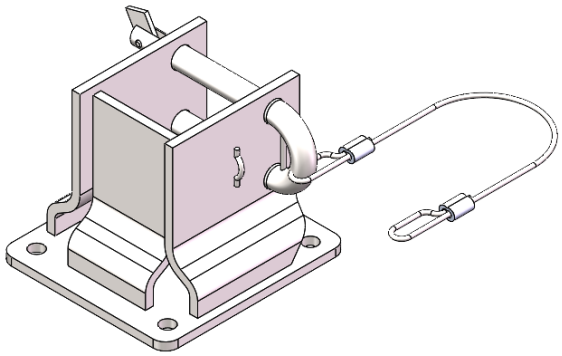
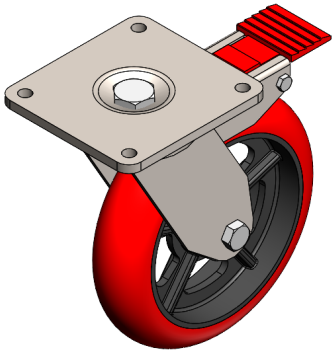
Caster Shoes

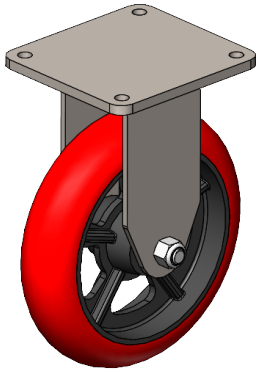
Safety Factor 4:1



CASRBA



CAS8SPHD



CAS8RPHD

Product Code	Description	Safe Working Load		Weight	
		LB	KG	LB	KG
CAS8SPHD	8" Swivel Caster	4,000	1814	17.2	7.80
CAS8RPHD	8" Rigid Caster	3,800	1724	13.1	5.9

The 8" Casters allow the user to convert any rack/basket into a rolling basket that can also be steered when using swivel casters. Use in conjunction with the Caster Adapters CASRBA.
Wheel: *Polyurethane with Iron Core* ***Bracket:*** *Hot Dipped Galvanized Steel*

Product Code	Description	Weight	
		LB	KG
CASRBA	Rack/Basket Caster Adapter with Hinge Pin	5.7	2.58

The Basket Caster Adapter allows the rack/basket to be mounted onto casters for safe and efficient transport in localized areas.

ADDITIONAL INFORMATION

- Allows for bolting on of mud sills for uneven terrain
- **Material:** Steel
- **Finish:** Hot Dipped Galvanized

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