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# Direct Ply Hand Set Modular Forming System

# CONTENTS

|                                     |    |
|-------------------------------------|----|
| STANDARD PLYWOOD.....               | 4  |
| PANELS .....                        | 5  |
| FILLERS.....                        | 6  |
| STEEL FILLERS.....                  | 8  |
| FILLER ANGLES.....                  | 9  |
| OUTSIDE CORNERS .....               | 10 |
| INSIDE CORNERS .....                | 11 |
| HINGED OUTSIDE CORNERS .....        | 12 |
| HINGED INSIDE CORNERS .....         | 13 |
| CONNECTING HARDWARE.....            | 14 |
| ONE PIECE WALER CLAMPS .....        | 15 |
| WALER HARDWARE .....                | 15 |
| STRONGBACK TIES .....               | 16 |
| J STRONGBACK HOOKS .....            | 16 |
| GANG WALER HARDWARE .....           | 17 |
| HANDSET FORMING ACCESSORIES.....    | 18 |
| SCAFFOLD BRACKETS.....              | 18 |
| HEAVY DUTY LOOP TIES.....           | 19 |
| STANDARD X FLAT TIES.....           | 20 |
| ADJUSTABLE SHEAR WALL BRACKETS..... | 21 |
| DOUBLE DUTY LIFT BRACKETS.....      | 21 |
| SAFETY EYES .....                   | 22 |



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## DISCLAIMERS

DSS recommends that all concrete forming professionals follow all applicable industry standards and safe practices established by the American Concrete Institute (ACI), American National Standards Institute (ANSI), the Scaffolding, Shoring and Forming Institute (SSFI), and the Occupational Safety and Health Administration (OSHA).

DSS recommends that all the job layouts be designed by a qualified professional engineer and that all erection and dismantling be performed by qualified personnel.

Always consider the load bearing capabilities of all components in the system and static loads when using this equipment.

Published values are true for components in good condition. DSS recommends inspecting each component before use.

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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.

# STANDARD PLYWOOD

## DIRECT PLY



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

- **Size - Long Grain Direction:** 2440 x 1220 mm, 2500 x 1250 mm
- **Size - Cross Grain Direction:** 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)

# PANELS

## DIRECT PLY



FWDPS4X24

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.

| Part No.  | Description    | Width          | Height         | Weight            |
|-----------|----------------|----------------|----------------|-------------------|
| FWDPS3X24 | 24" x 3' Panel | 24" / 609.6 mm | 3' / 914.4 mm  | 33.4 lb / 15.2 kg |
| FWDPS4X24 | 24" x 4' Panel | 24" / 609.6 mm | 4' / 1219.2 mm | 43.6 lb / 19.8 kg |
| FWDPS5X24 | 24" x 5' Panel | 24" / 609.6 mm | 5' / 1524 mm   | 53.9 lb / 24.5 kg |
| FWDPS6X24 | 24" x 6' Panel | 24" / 609.6 mm | 6' / 1828.8 mm | 67.8 lb / 30.8 kg |
| FWDPS8X24 | 24" x 8' Panel | 24" / 609.6 mm | 8' / 2438.4 mm | 83.8 lb / 38.1 kg |



# FILLERS

## DIRECT PLY



FWDPS4X10



**WARNING**

Handles are not to be used as tie off points.

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

| Part No.  | Description     | Width          | Height        | Weight            |
|-----------|-----------------|----------------|---------------|-------------------|
| FWDPS3X4  | 4" x 3' Filler  | 4" / 101.6 mm  | 3' / 76.2 mm  | 13.2 lb / 6 kg    |
| FWDPS3X6  | 6" x 3' Filler  | 6" / 152.4 mm  | 3' / 76.2 mm  | 15.2 lb / 6.9 kg  |
| FWDPS3X8  | 8" x 3' Filler  | 8" / 203.2 mm  | 3' / 76.2 mm  | 17.2 lb / 7.8 kg  |
| FWDPS3X10 | 10" x 3' Filler | 10" / 254 mm   | 3' / 76.2 mm  | 19.4 lb / 8.8 kg  |
| FWDPS3X12 | 12" x 3' Filler | 12" / 304.8 mm | 3' / 76.2 mm  | 21.3 lb / 9.7 kg  |
| FWDPS3X14 | 14" x 3' Filler | 14" / 355.6 mm | 3' / 76.2 mm  | 23.3 lb / 10.6 kg |
| FWDPS3X16 | 16" x 3' Filler | 16" / 406.4 mm | 3' / 76.2 mm  | 25.7 lb / 11.7 kg |
| FWDPS3X18 | 18" x 3' Filler | 18" / 457.2 mm | 3' / 76.2 mm  | 27.5 lb / 12.5 kg |
| FWDPS3X20 | 20" x 3' Filler | 20" / 508 mm   | 3' / 76.2 mm  | 29.5 lb / 13.4 kg |
| FWDPS3X22 | 22" x 3' Filler | 22" / 558.8 mm | 3' / 76.2 mm  | 31.5 lb / 14.3 kg |
| FWDPS4X4  | 4" x 4' Filler  | 4" / 101.6 mm  | 4' / 101.6 mm | 17.4 lb / 7.9 kg  |
| FWDPS4X6  | 6" x 4' Filler  | 6" / 152.4 mm  | 4' / 101.6 mm | 20 lb / 9.1 kg    |
| FWDPS4X8  | 8" x 4' Filler  | 8" / 203.2 mm  | 4' / 101.6 mm | 22.4 lb / 10.2 kg |
| FWDPS4X10 | 10" x 4' Filler | 10" / 254 mm   | 4' / 101.6 mm | 25.3 lb / 11.5 kg |
| FWDPS4X12 | 12" x 4' Filler | 12" / 304.8 mm | 4' / 101.6 mm | 27.9 lb / 12.7 kg |
| FWDPS4X14 | 14" x 4' Filler | 14" / 355.6 mm | 4' / 101.6 mm | 30.6 lb / 13.9 kg |
| FWDPS4X16 | 16" x 4' Filler | 16" / 406.4 mm | 4' / 101.6 mm | 33.4 lb / 15.2 kg |
| FWDPS4X18 | 18" x 4' Filler | 18" / 457.2 mm | 4' / 101.6 mm | 35.9 lb / 16.3 kg |
| FWDPS4X20 | 20" x 4' Filler | 20" / 508 mm   | 4' / 101.6 mm | 38.3 lb / 17.4 kg |
| FWDPS4X22 | 22" x 4' Filler | 22" / 558.8 mm | 4' / 101.6 mm | 40.9 lb / 18.6 kg |
| FWDPS5X4  | 4" x 5' Filler  | 4" / 101.6 mm  | 5' / 127 mm   | 21.6 lb / 9.8 kg  |
| FWDPS5X6  | 6" x 5' Filler  | 6" / 152.4 mm  | 5' / 127 mm   | 24.9 lb / 11.3 kg |
| FWDPS5X8  | 8" x 5' Filler  | 8" / 203.2 mm  | 5' / 127 mm   | 27.9 lb / 12.7 kg |
| FWDPS5X10 | 10" x 5' Filler | 10" / 254 mm   | 5' / 127 mm   | 31.2 lb / 14.2 kg |
| FWDPS5X12 | 12" x 5' Filler | 12" / 304.8 mm | 5' / 127 mm   | 34.5 lb / 15.7 kg |
| FWDPS5X14 | 14" x 5' Filler | 14" / 355.6 mm | 5' / 127 mm   | 37.6 lb / 17.1 kg |
| FWDPS5X16 | 16" x 5' Filler | 16" / 406.4 mm | 5' / 127 mm   | 41.4 lb / 18.8 kg |
| FWDPS5X18 | 18" x 5' Filler | 18" / 457.2 mm | 5' / 127 mm   | 44.4 lb / 20.2 kg |
| FWDPS5X20 | 20" x 5' Filler | 20" / 508 mm   | 5' / 127 mm   | 47.5 lb / 21.6 kg |
| FWDPS5X22 | 22" x 5' Filler | 22" / 558.8 mm | 5' / 127 mm   | 50.6 lb / 23 kg   |

# FILLERS - CONT.

## DIRECT PLY

| Part No.  | Description     | Width          | Height  | Weight            |
|-----------|-----------------|----------------|---|-------------------|
| FWDPS6X4  | 4" x 6' Filler  | 4" / 101.6 mm  | 6' / 152.4 mm                                 | 26 lb / 11.8 kg   |
| FWDPS6X6  | 6" x 6' Filler  | 6" / 152.4 mm  | 6' / 152.4 mm                                 | 29.5 lb / 13.4 kg |
| FWDPS6X8  | 8" x 6' Filler  | 8" / 203.2 mm  | 6' / 152.4 mm                                 | 33.2 lb / 15.1 kg |
| FWDPS6X10 | 10" x 6' Filler | 10" / 254 mm   | 6' / 152.4 mm                                 | 37.2 lb / 16.9 kg |
| FWDPS6X12 | 12" x 6' Filler | 12" / 304.8 mm | 6' / 152.4 mm                                 | 40.9 lb / 18.6 kg |
| FWDPS6X14 | 14" x 6' Filler | 14" / 355.6 mm | 6' / 152.4 mm                                 | 44.9 lb / 20.4 kg |
| FWDPS6X16 | 16" x 6' Filler | 16" / 406.4 mm | 6' / 152.4 mm                                 | 54.1 lb / 24.6 kg |
| FWDPS6X18 | 18" x 6' Filler | 18" / 457.2 mm | 6' / 152.4 mm </td <td>55.7 lb / 25.3 kg</td> | 55.7 lb / 25.3 kg |
| FWDPS6X20 | 20" x 6' Filler | 20" / 508 mm   | 6' / 152.4 mm                                 | 59.6 lb / 27.1 kg |
| FWDPS6X22 | 22" x 6' Filler | 22" / 558.8 mm | 6' / 152.4 mm                                 | 63.6 lb / 28.9 kg |
| FWDPS8X4  | 4" x 8' Filler  | 4" / 101.6 mm  | 8' / 203.2 mm                                 | 34.3 lb / 15.6 kg |
| FWDPS8X6  | 6" x 8' Filler  | 6" / 152.4 mm  | 8' / 203.2 mm                                 | 39.2 lb / 17.8 kg |
| FWDPS8X8  | 8" x 8' Filler  | 8" / 203.2 mm  | 8' / 203.2 mm                                 | 44 lb / 20 kg     |
| FWDPS8X10 | 10" x 8' Filler | 10" / 254 mm   | 8' / 203.2 mm                                 | 49.3 lb / 22.4 kg |
| FWDPS8X12 | 12" x 8' Filler | 12" / 304.8 mm | 8' / 203.2 mm                                 | 54.1 lb / 24.6 kg |
| FWDPS8X14 | 14" x 8' Filler | 14" / 355.6 mm | 8' / 203.2 mm                                 | 59.2 lb / 26.9 kg |
| FWDPS8X16 | 16" x 8' Filler | 16" / 406.4 mm | 8' / 203.2 mm                                 | 64.5 lb / 29.3 kg |
| FWDPS8X18 | 18" x 8' Filler | 18" / 457.2 mm | 8' / 203.2 mm                                 | 69.3 lb / 31.5 kg |
| FWDPS8X20 | 20" x 8' Filler | 20" / 508 mm   | 8' / 203.2 mm                                 | 74.1 lb / 33.7 kg |
| FWDPS8X22 | 22" x 8' Filler | 22" / 558.8 mm | 8' / 203.2 mm                                 | 79 lb / 35.9 kg   |



FWDPS8X16



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

# STEEL FILLERS

## DIRECT PLY



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

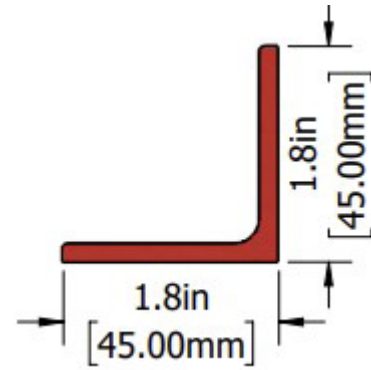
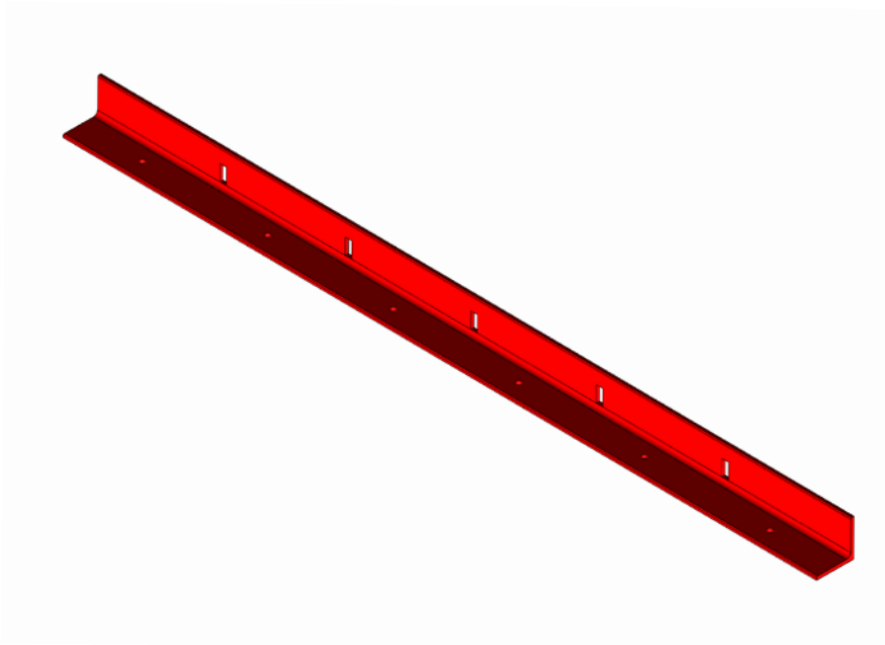
- **Material:** Steel
- **Finish:** Powder Coated

| Part No.   | Description            | Width          | Height        | Weight           |
|------------|------------------------|----------------|---------------|------------------|
| FWDPSF0301 | 1" x 3' Steel Filler   | 1" / 25.4 mm   | 3' / 914.4mm  | 7.8 lb / 3.6kg   |
| FWDPSF0401 | 1" x 4' Steel Filler   | 1" / 25.4 mm   | 4' / 1219.2mm | 10.4 lb / 4.7kg  |
| FWDPSF0501 | 1" x 5' Steel Filler   | 1" / 25.4 mm   | 5' / 1524mm   | 13 lb / 5.9kg    |
| FWDPSF0601 | 1" x 6' Steel Filler   | 1" / 25.4 mm   | 6' / 1828.8mm | 15.6 lb / 7.1kg  |
| FWDPSF0801 | 1" x 8' Steel Filler   | 1" / 25.4 mm   | 8' / 2438.4mm | 20.8 lb / 9.4kg  |
| FWDPSF0315 | 1.5" x 3' Steel Filler | 1.5" / 38.1 mm | 3' / 914.4mm  | 8.5 lb / 3.9kg   |
| FWDPSF0415 | 1.5" x 4' Steel Filler | 1.5" / 38.1 mm | 4' / 1219.2mm | 11.4 lb / 5.2kg  |
| FWDPSF0515 | 1.5" x 5' Steel Filler | 1.5" / 38.1 mm | 5' / 1524mm   | 14.2 lb / 6.4kg  |
| FWDPSF0615 | 1.5" x 6' Steel Filler | 1.5" / 38.1 mm | 6' / 1828.8mm | 17.1 lb / 7.7kg  |
| FWDPSF0815 | 1.5" x 8' Steel Filler | 1.5" / 38.1 mm | 8' / 2438.4mm | 22.8 lb / 10.3kg |
| FWDPSF0302 | 2" x 3' Steel Filler   | 2" / 50.8 mm   | 3' / 914.4mm  | 9 lb / 4.1kg     |
| FWDPSF0402 | 2" x 4' Steel Filler   | 2" / 50.8 mm   | 4' / 1219.2mm | 12 lb / 5.5kg    |
| FWDPSF0502 | 2" x 5' Steel Filler   | 2" / 50.8 mm   | 5' / 1524mm   | 15.1 lb / 6.8kg  |
| FWDPSF0602 | 2" x 6' Steel Filler   | 2" / 50.8 mm   | 6' / 1828.8mm | 18 lb / 8.2kg    |
| FWDPSF0802 | 2" x 8' Steel Filler   | 2" / 50.8 mm   | 8' / 2438.4mm | 24.1 lb / 10.9kg |



# FILLER ANGLES

## DIRECT PLY



Direct Ply Filler Angles allow for the construction of job-built fillers using  $\frac{3}{4}$ " 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.

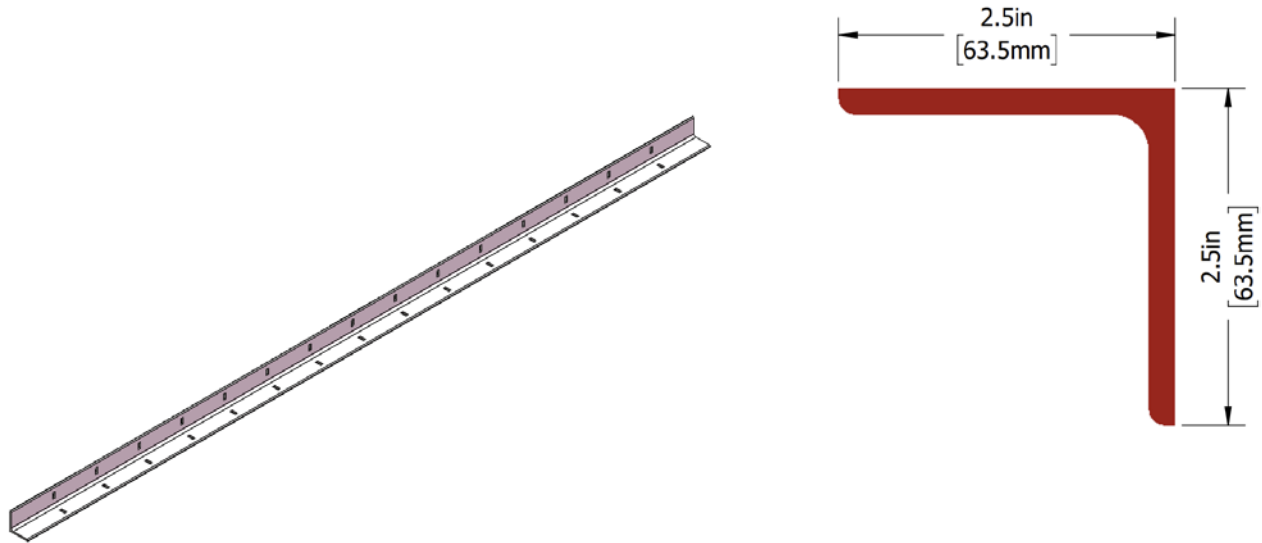
### ADDITIONAL INFORMATION

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

| Part No. | Description     | Height         | Weight             |
|----------|-----------------|----------------|--------------------|
| FWDPFA3  | 3' Filler Angle | 3' / 914.4 mm  | 5.41 lb / 2.46 kg  |
| FWDPFA4  | 4' Filler Angle | 4' / 1219.2 mm | 7.22 lb / 3.28 kg  |
| FWDPFA5  | 5' Filler Angle | 5' / 1524 mm   | 9.02 lb / 4.1 kg   |
| FWDPFA6  | 6' Filler Angle | 6' / 1828.8 mm | 10.82 lb / 4.92 kg |
| FWDPFA8  | 8' Filler Angle | 8' / 2438.4 mm | 14.39 lb / 6.54kg  |

# OUTSIDE CORNERS

DIRECT PLY



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

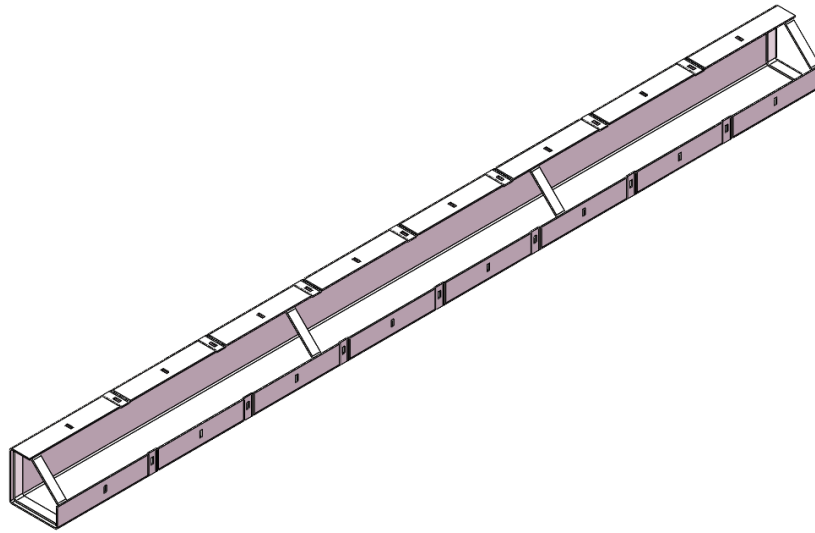
## ADDITIONAL INFORMATION

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

| Part No.  | Description       | Height         | Weight             |
|-----------|-------------------|----------------|--------------------|
| FWDPSCO02 | 2' Outside Corner | 2' / 609.6 mm  | 6.42 lb / 2.89 kg  |
| FWDPSCO03 | 3' Outside Corner | 3' / 914.4 mm  | 7.45 lb / 3.38 kg  |
| FWDPSCO04 | 4' Outside Corner | 4' / 1219.2 mm | 9.92 lb / 4.5 kg   |
| FWDPSCO05 | 5' Outside Corner | 5' / 1524 mm   | 7.45 lb / 3.38 kg  |
| FWDPSCO06 | 6' Outside Corner | 6' / 1828.8 mm | 9.92 lb / 4.5 kg   |
| FWDPSCO08 | 8' Outside Corner | 8' / 2438.4 mm | 12.38 lb / 5.61 kg |

# INSIDE CORNERS

## DIRECT PLY



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.

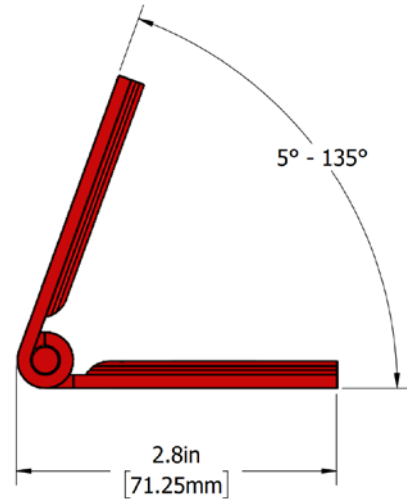
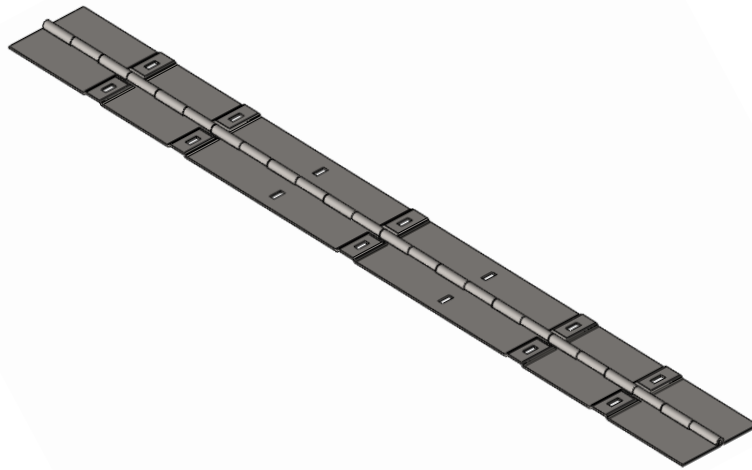
### ADDITIONAL INFORMATION

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

| Part No.    | Description           | Width         | Height         | Weight              |
|-------------|-----------------------|---------------|----------------|---------------------|
| FWDPSCI0304 | 3' x 4" Inside Corner | 4" / 101.6 mm | 3' / 914.4 mm  | 19.17 lb / 8.7 kg   |
| FWDPSCI0404 | 4' x 4" Inside Corner | 4" / 101.6 mm | 4' / 1219.2 mm | 25.04 lb / 11.36 kg |
| FWDPSCI0504 | 5' x 4" Inside Corner | 4" / 101.6 mm | 5' / 1524 mm   | 31.19 lb / 14.15 kg |
| FWDPSCI0604 | 6' x 4" Inside Corner | 4" / 101.6 mm | 6' / 1828.8 mm | 37.06 lb / 16.81 kg |
| FWDPSCI0804 | 8' x 4" Inside Corner | 4" / 101.6 mm | 8' / 2438.4 mm | 48.79 lb / 22.14 kg |
| FWDPSCI0206 | 2' x 6" Inside Corner | 6" / 152.4 mm | 2' / 609.6 mm  | 18.13 lb / 8.22 kg  |
| FWDPSCI0306 | 3' x 6" Inside Corner | 6" / 152.4 mm | 3' / 914.4 mm  | 25.92 lb / 11.76 kg |
| FWDPSCI0406 | 4' x 6" Inside Corner | 6" / 152.4 mm | 4' / 1219.2 mm | 33.71 lb / 15.3 kg  |
| FWDPSCI0506 | 5' x 6" Inside Corner | 6" / 152.4 mm | 5' / 1524 mm   | 41.96 lb / 19.04 kg |
| FWDPSCI0606 | 6' x 6" Inside Corner | 6" / 152.4 mm | 6' / 1828.8 mm | 49.75 lb / 22.57 kg |
| FWDPSCI0806 | 8' x 6" Inside Corner | 6" / 152.4 mm | 8' / 2438.4 mm | 65.34 lb / 29.65 kg |

# OUTSIDE HINGED CORNER

DIRECT PLY



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.

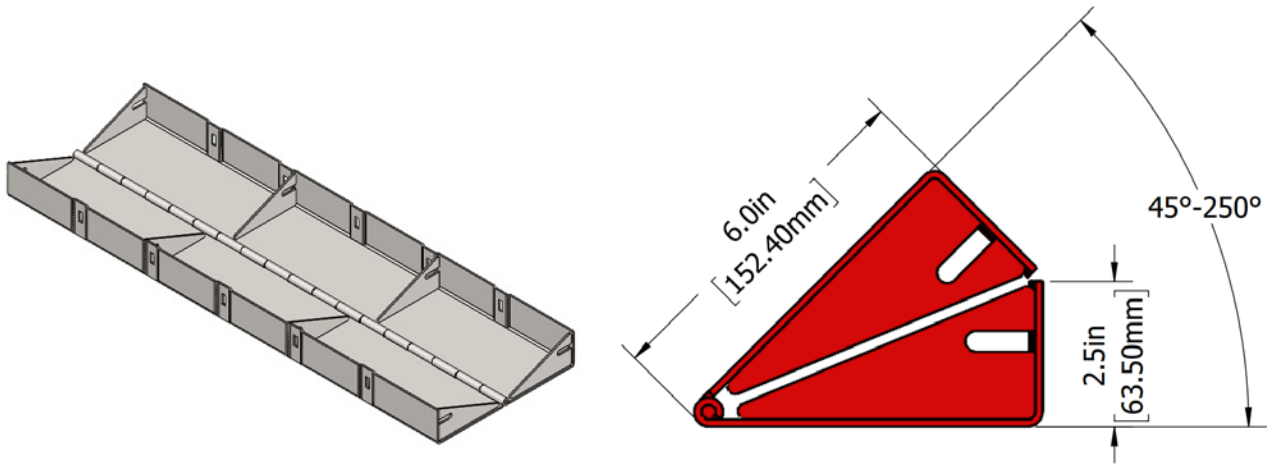
## ADDITIONAL INFORMATION

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

| Part No.  | Description              | Height         | Weight             |
|-----------|--------------------------|----------------|--------------------|
| FWDPSOHC3 | 3' Outside Hinged Corner | 3' / 914.4 mm  | 7.45 lb / 3.38 kg  |
| FWDPSOHC4 | 4' Outside Hinged Corner | 4' / 1219.2 mm | 9.92 lb / 4.5 kg   |
| FWDPSOHC5 | 5' Outside Hinged Corner | 5' / 1524 mm   | 12.38 lb / 5.61 kg |
| FWDPSOHC6 | 6' Outside Hinged Corner | 6' / 1828.8 mm | 14.85 lb / 6.73 kg |
| FWDPSOHC8 | 8' Outside Hinged Corner | 8' / 2438.4 mm | 19.8 lb / 8.98 kg  |

# INSIDE HINGED CORNERS

DIRECT PLY



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

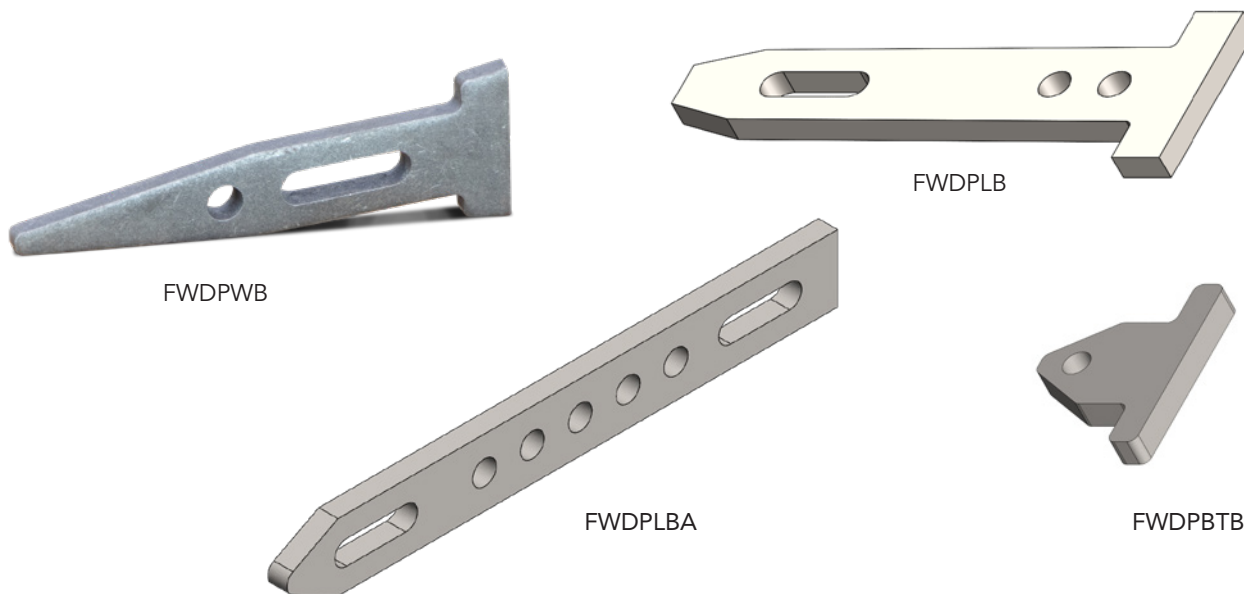
## ADDITIONAL INFORMATION

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

| Part No.  | Description             | Height         | Weight               |
|-----------|-------------------------|----------------|----------------------|
| FWDPSIHC3 | 3' Inside Hinged Corner | 3' / 914.4 mm  | 2438.4 lb / 62.15 kg |
| FWDPSIHC4 | 4' Inside Hinged Corner | 4' / 1219.2 mm | 1828.8 lb / 46.57 kg |
| FWDPSIHC5 | 5' Inside Hinged Corner | 5' / 1524 mm   | 1524 lb / 39.12 kg   |
| FWDPSIHC6 | 6' Inside Hinged Corner | 6' / 1828.8 mm | 1219.2 lb / 31.22 kg |
| FWDPSIHC8 | 8' Inside Hinged Corner | 8' / 2438.4 mm | 914.4 lb / 23.54 kg  |

# CONNECTING HARDWARE

## DIRECT PLY



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

| Part No. | Description          | Length            | Weight            |
|----------|----------------------|-------------------|-------------------|
| FWDPWB   | Standard Wedge Bolt  | 3.88" / 98.43 mm  | 0.12 lb / 0.06 kg |
| FWDPLB   | Long Bolt            | 4.30" / 109.22 mm | 0.16 / 0.07 kg    |
| FWDPLBA  | Adjustable Long Bolt | 5.75" / 146.05 mm | 0.17 / 0.08 kg    |
| FWDPBTB  | Base Tie Bolt        | 1.06" / 26.92 mm  | 0.04 / 0.02 kg    |



# ONE PIECE WALER CLAMPS

DIRECT PLY



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

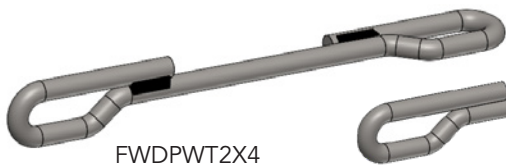
### ADDITIONAL INFORMATION

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

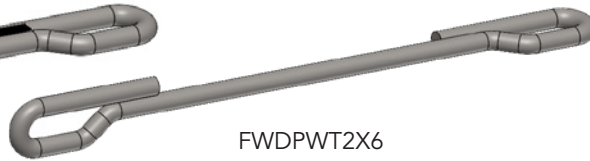
| Part No.  | Description           | Weight            |
|-----------|-----------------------|-------------------|
| FWDPWC+10 | One Piece Waler Clamp | 1.91 lb / 0.87 kg |

# WALER HARDWARE

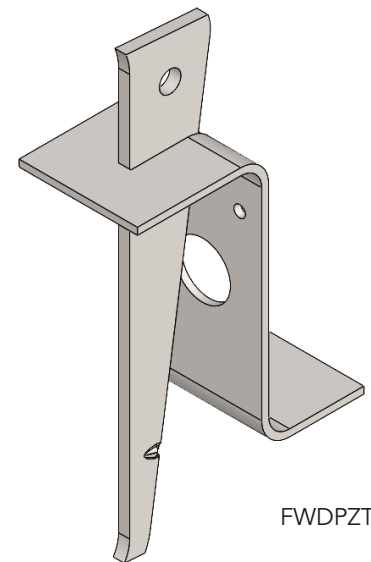
DIRECT PLY



FWDPWT2X4



FWDPWT2X6



FWDPZTH

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.

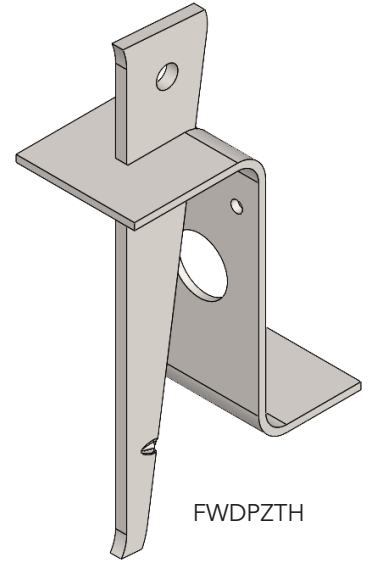
### ADDITIONAL INFORMATION

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

| Part No.  | Description   | Length           | Weight            |
|-----------|---------------|------------------|-------------------|
| FWDPWT2X4 | 2x4 Waler Tie | 6.38" / 162 mm   | 0.13 lb / 0.06 kg |
| FWDPWT2X6 | 2x6 Waler Tie | 8.38" / 212.8 mm | 0.15 lb / 0.07 kg |
| FWDPZTH   | Z-Tie Holder  |                  | 0.81 lb / 0.37 kg |

# STRONGBACK TIES

## DIRECT PLY



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

| Part No.  | Description        | Length            | Weight            |
|-----------|--------------------|-------------------|-------------------|
| FWDPST4X4 | 4x4 Strongback Tie | 9.83" / 249.8 mm  | 0.18 lb / 0.08 kg |
| FWDPST4X6 | 4x6 Strongback Tie | 11.83" / 300.6 mm | 0.20 lb / 0.09 kg |
| FWDPZTH   | Z-Tie Holder       |                   | 0.81 lb / 0.37 kg |

# J STRONGBACK HOOKS

## DIRECT PLY



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.

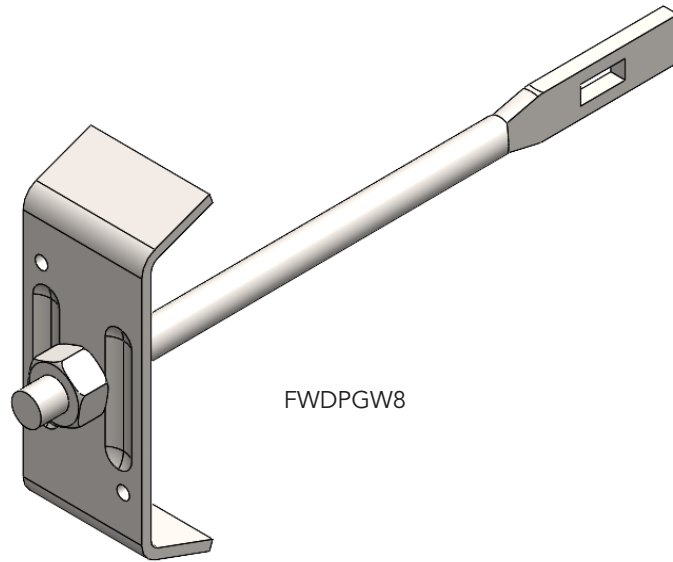
### ADDITIONAL INFORMATION

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

| Part No.    | Description           | Weight             |
|-------------|-----------------------|--------------------|
| FWDPSBJ2424 | J Strongback Hook 4x4 | 1.364 lb / 0.65 kg |
| FWDPSBJ2624 | J Strongback Hook 4x6 | 1.05 lb / 0.48 kg  |

# GANG WALER HARDWARE

DIRECT PLY



FWDPGW8

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".

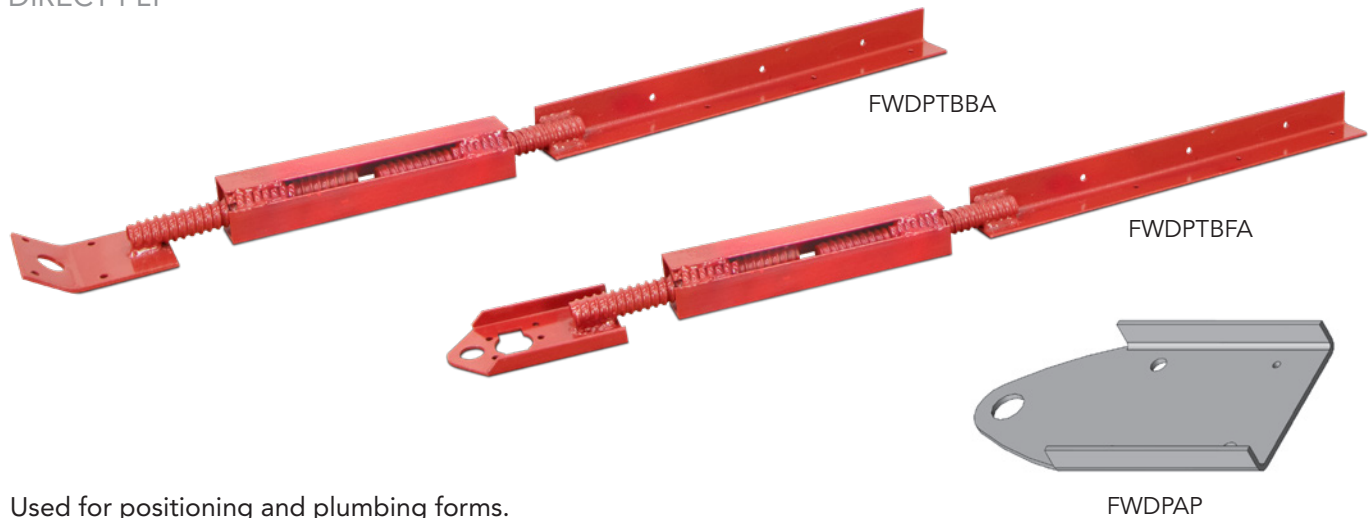
## ADDITIONAL INFORMATION

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

| Part No.  | Description                                       | Weight             |
|-----------|---|--------------------|
| FWDPGW8   | 8" Gang Waler Assembly Includes rod, plate & nut  | 1.06 lb / 0.48 kg  |
| FWDPGW12  | 12" Gang Waler Assembly Includes rod, plate & nut |                    |
| FWDPGW14  | 14" Gang Waler Assembly Includes rod, plate & nut |                    |
| FWDPGWP   | Gang Waler Plate                                  | 0.55 lb / 0.25 kg  |
| FWDPGWR8  | 8" Gang Waler Rod                                 | 0.44 lb / 0.20 kg  |
| FWDPGWR12 | 12" Gang Waler Rod                                |                    |
| FWDPGWR14 | 14" Gang Waler Rod                                | 0.88 lb / 0.40 kg  |
| FWTRCN05  | 1/2" Coil Nut                                     | 0.066 lb / 0.03 kg |

# HANDSET FORMING ACCESSORIES

DIRECT PLY



Used for positioning and plumbing forms.

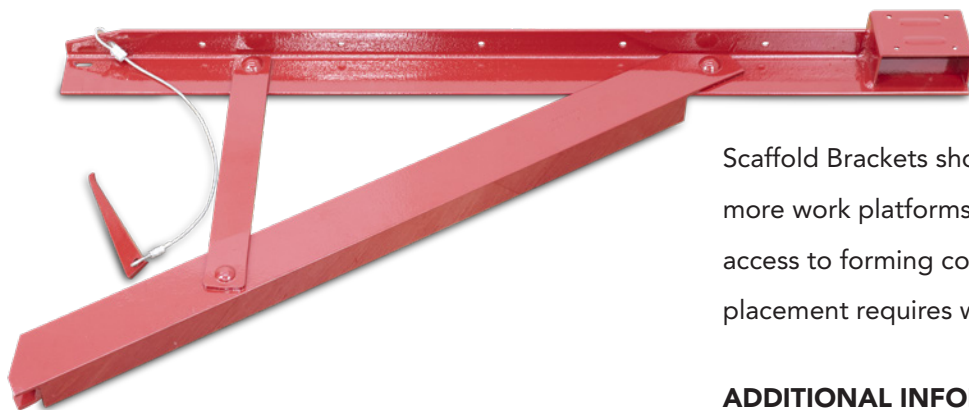
## ADDITIONAL INFORMATION

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

| Part No. | Description                    | Max Height        | Width         | Weight            |
|----------|--------------------------------|-------------------|---------------|-------------------|
| FWDPTBBA | HD Bent Plate Turnbuckle Brace | 41.73" / 1,060 mm | 2.9" / 76 mm  | 7.28 lb / 3.30 kg |
| FWDPTBFA | HD Flat Plate Turnbuckle Brace | 41.50" / 1,054 mm | 2.9" / 76 mm  | 7.05 lb / 3.20 kg |
| FWDPAP   | Attachment Plate               | 7.30" / 185 mm    | 3.90" / 99 mm | 1.1 lb / 0.5 kg   |

# SCAFFOLD BRACKETS

DIRECT PLY



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

- Capacity includes a 4:1 safety factor
- Maximum 8' Centers
- **Material:** Steel
- **Finish:** Powder Coated

| Part No. | Description      | Length         | Capacity          | Weight            |
|----------|------------------|----------------|-------------------|-------------------|
| FWDPSBA  | Scaffold Bracket | 38.6" / 981 mm | 500 lb / 226.8 kg | 16.4 lb / 7.43 kg |

# HEAVY DUTY LOOP TIES

## DIRECT PLY



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

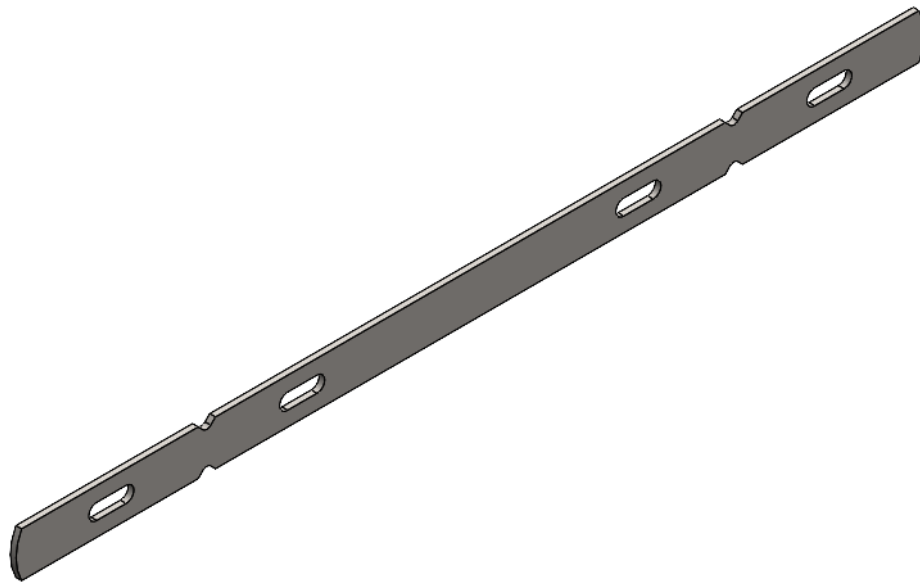
### ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Black
- **Capacity:** 3,000 lb Safe Working Load at 2:1 Safety Factor
- **Standard Breakback:** 1"

| Part No.   | Description             | Wall Thickness  | Weight            |
|------------|-------------------------|-----------------|-------------------|
| FWDPLTHD06 | 6" Heavy Duty Loop Tie  | 6" / 152.4 mm   | 0.18 lb / 0.08 kg |
| FWDPLTHD07 | 7" Heavy Duty Loop Tie  | 7" / 177.8 mm   | 0.19 lb / 0.09 kg |
| FWDPLTHD08 | 8" Heavy Duty Loop Tie  | 8" / 203.2 mm   | 0.2 lb / 0.09 kg  |
| FWDPLTHD09 | 9" Heavy Duty Loop Tie  | 9" / 228.6 mm   | 0.22 lb / 0.1 kg  |
| FWDPLTHD10 | 10" Heavy Duty Loop Tie | 10" / 254 mm    | 0.24 lb / 0.11 kg |
| FWDPLTHD11 | 11" Heavy Duty Loop Tie | 11" / 279.4 mm  | 0.25 lb / 0.11 kg |
| FWDPLTHD12 | 12" Heavy Duty Loop Tie | 12" / 304.8 mm  | 0.26 lb / 0.12 kg |
| FWDPLTHD13 | 13" Heavy Duty Loop Tie | 13" / 330.2 mm  | 0.29 lb / 0.13 kg |
| FWDPLTHD14 | 14" Heavy Duty Loop Tie | 14" / 355.6 mm  | 0.3 lb / 0.14 kg  |
| FWDPLTHD15 | 15" Heavy Duty Loop Tie | 15" / 381 mm    | 0.3 lb / 0.14 kg  |
| FWDPLTHD16 | 16" Heavy Duty Loop Tie | 16" / 406.4 mm  | 0.31 lb / 0.14 kg |
| FWDPLTHD17 | 17" Heavy Duty Loop Tie | 17" / 431.8 mm  | 0.32 lb / 0.15 kg |
| FWDPLTHD18 | 18" Heavy Duty Loop Tie | 18" / 457.2 mm  | 0.33 lb / 0.15 kg |
| FWDPLTHD19 | 19" Heavy Duty Loop Tie | 19" / 482.6 mm  | 0.34 lb / 0.15 kg |
| FWDPLTHD20 | 20" Heavy Duty Loop Tie | 20" / 508 mm    | 0.35 lb / 0.16 kg |
| FWDPLTHD21 | 21" Heavy Duty Loop Tie | 21" / 533.4 mm  | 0.36 lb / 0.16 kg |
| FWDPLTHD22 | 22" Heavy Duty Loop Tie | 22" / 558.8 mm  | 0.37 lb / 0.17 kg |
| FWDPLTHD23 | 23" Heavy Duty Loop Tie | 23" / 584.2 mm  | 0.41 lb / 0.19 kg |
| FWDPLTHD24 | 24" Heavy Duty Loop Tie | 24" / 609.6 mm  | 0.42 lb / 0.19 kg |
| FWDPLTHD30 | 30" Heavy Duty Loop Tie | 30" / 762 mm    | 0.54 lb / 0.25 kg |
| FWDPLTHD36 | 36" Heavy Duty Loop Tie | 36" / 914.4 mm  | 0.63 lb / 0.29 kg |
| FWDPLTHD48 | 48" Heavy Duty Loop Tie | 48" / 1219.2 mm | 0.82 lb / 0.37 kg |
| FWDPLTHD60 | 60" Heavy Duty Loop Tie | 60" / 1524 mm   | 1.01 lb / 0.46 kg |

# STANDARD X FLAT TIES

DIRECT PLY



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

## ADDITIONAL INFORMATION

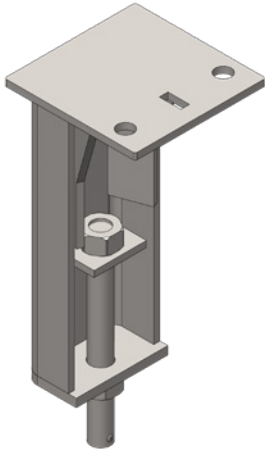
- **Material:** Steel
- **Finish:** Black
- **Capacity:** 3,000 lb Safe Working Load at 2:1 Safety Factor
- **Standard Breakback:** 1/4"

| Part No.  | Description             | Wall Thickness | Weight            |
|-----------|-------------------------|----------------|-------------------|
| FWDPXFT06 | 6" Standard X Flat Tie  | 6" / 152.4 mm  | 0.3 lb / 0.14 kg  |
| FWDPXFT08 | 8" Standard X Flat Tie  | 8" / 203.2 mm  | 0.36 lb / 0.16 kg |
| FWDPXFT10 | 10" Standard X Flat Tie | 10" / 254 mm   | 0.41 lb / 0.19 kg |
| FWDPXFT12 | 12" Standard X Flat Tie | 12" / 304.8 mm | 0.46 lb / 0.21 kg |
| FWDPXFT14 | 14" Standard X Flat Tie | 14" / 355.6 mm | 0.52 lb / 0.24 kg |
| FWDPXFT16 | 16" Standard X Flat Tie | 16" / 406.4 mm | 0.57 lb / 0.26 kg |
| FWDPXFT18 | 18" Standard X Flat Tie | 18" / 457.2 mm | 0.63 lb / 0.29 kg |
| FWDPXFT20 | 20" Standard X Flat Tie | 20" / 508 mm   | 0.68 lb / 0.31 kg |
| FWDPXFT22 | 22" Standard X Flat Tie | 22" / 558.8 mm | 0.73 lb / 0.33 kg |
| FWDPXFT24 | 24" Standard X Flat Tie | 24" / 609.6 mm | 0.79 lb / 0.36 kg |



# ADJUSTABLE SHEAR WALL BRACKETS

DIRECT PLY



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

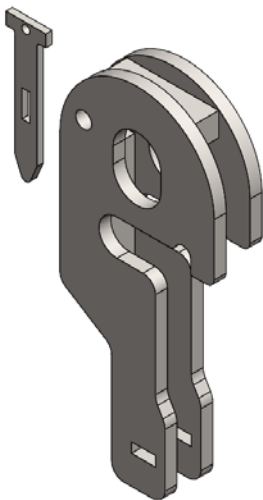
## ADDITIONAL INFORMATION

- 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 at a 3:1 safety factor
- **Material:** Steel
- **Finish:** Painted

| Part No. | Description                   | Safe Working Load   | Weight            |
|----------|-------------------------------|---------------------|-------------------|
| FWDPASWB | Adjustable Shear Wall Bracket | 3,000 lb / 13.34 kN | 9.02 lb / 4.06 kg |

# DOUBLE DUTY LIFT BRACKETS

DIRECT PLY



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.

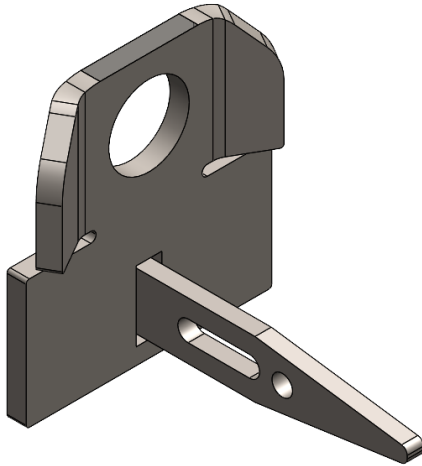
## ADDITIONAL INFORMATION

- **Material:** Steel
- **Finish:** Powder Coated
- **Capacity:** 2,000 lb Safe Working Load at 5:1 Safety Factor, capacity drops to 1,000 lb at 45°

| Part No.  | Description              | Safe Working Load  | Weight            |
|-----------|--------------------------|--------------------|-------------------|
| FWDPDDL B | Double Duty Lift Bracket | 2,000 lb / 8.89 kN | 6.78 lb / 3.07 kg |

# SAFETY EYES

## DIRECT PLY



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

- 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
- **Material:** Steel
- **Finish:** Painted

| Part No. | Description | Weight             |
|----------|-------------|--------------------|
| FWDPSE   | Safety Eye  | 0.682 lb / 0.31 kg |





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