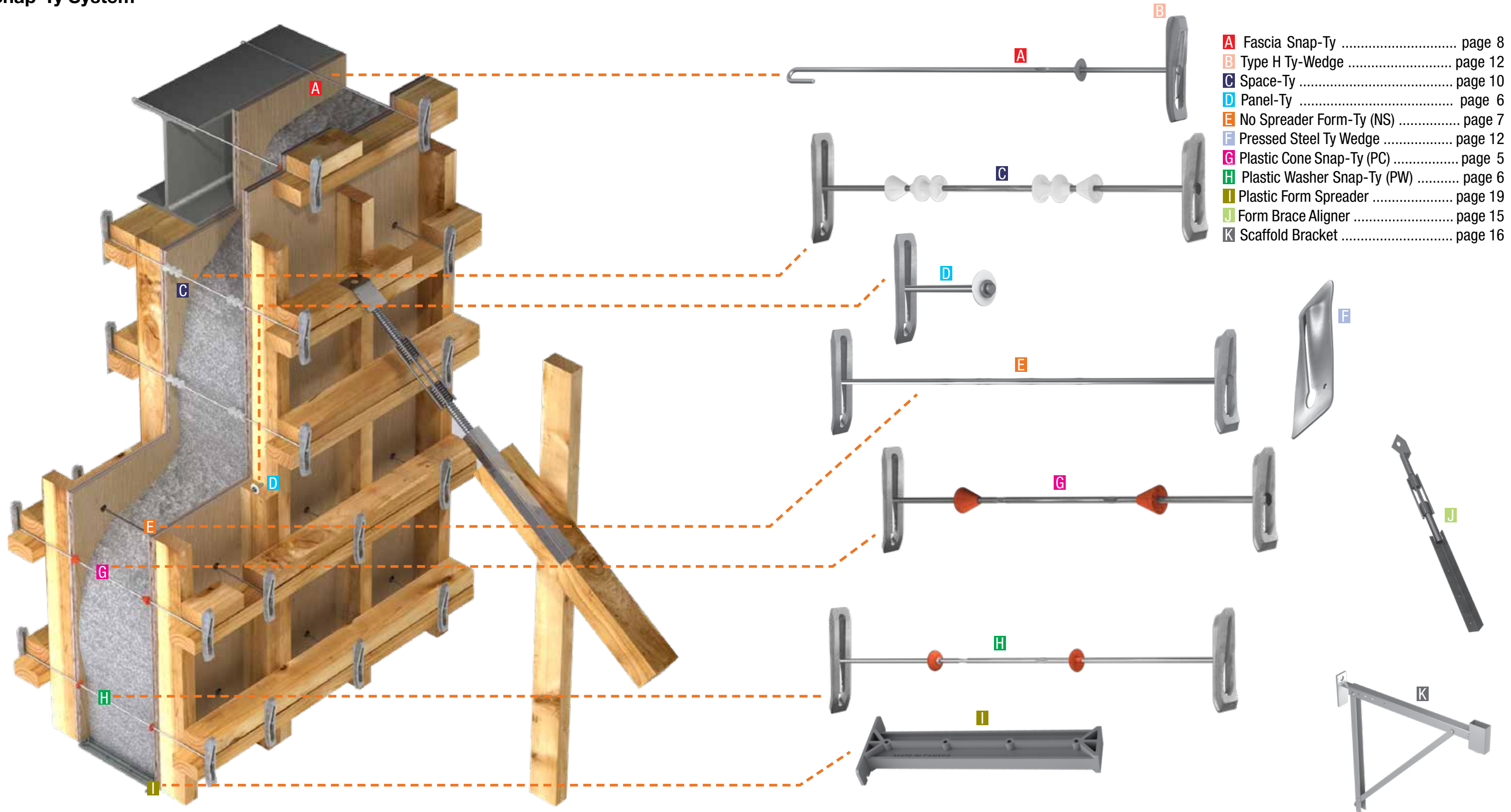


Snap-Ty System



- A** Fascia Snap-Ty page 8
- B** Type H Ty-Wedge page 12
- C** Space-Ty page 10
- D** Panel-Ty page 6
- E** No Spreader Form-Ty (NS) page 7
- F** Pressed Steel Ty Wedge page 12
- G** Plastic Cone Snap-Ty (PC) page 5
- H** Plastic Washer Snap-Ty (PW) page 6
- I** Plastic Form Spreader page 19
- J** Form Brace Aligner page 15
- K** Scaffold Bracket page 16

Snap-Ty

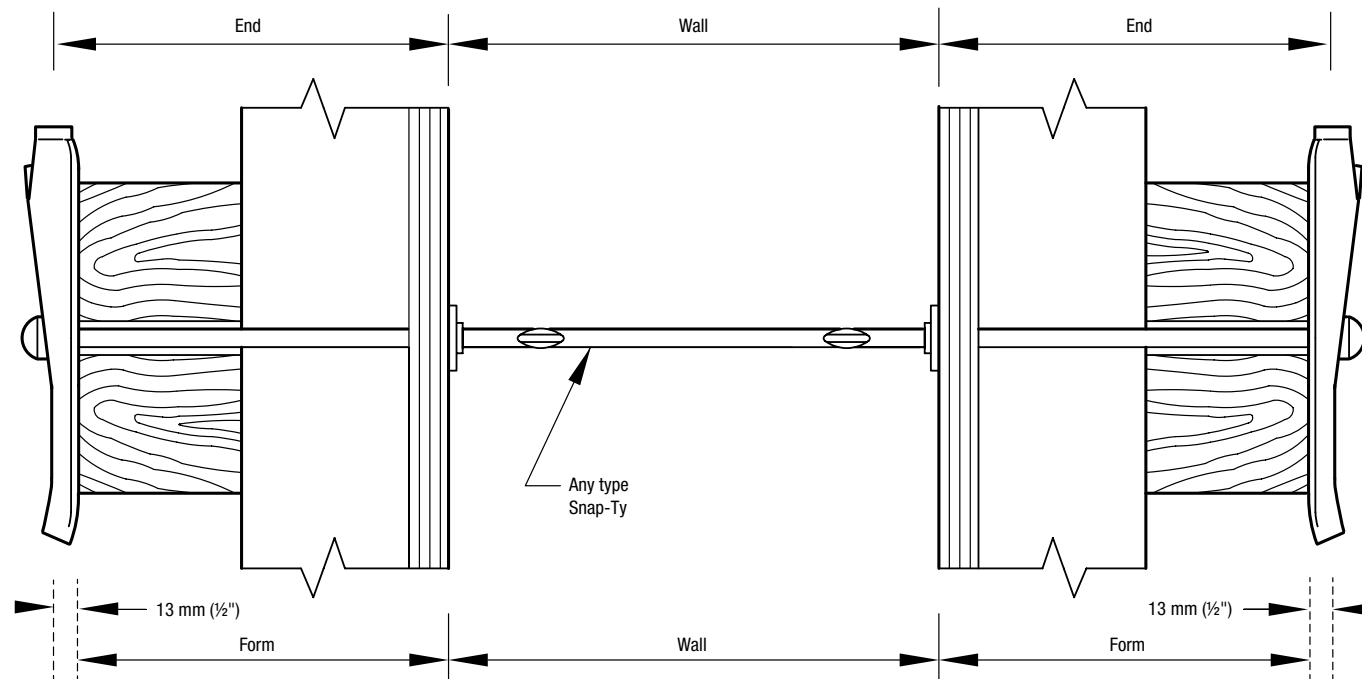
AR Snap-Tys are fabricated to fit either prefabricated panels or built-in-place forms. They are specifically designed for quick, easy and accurate erection of light formwork. End sizes can be as short as 32 mm (1¼") for Steel Washer Snap-Tys or as long as you need them to fit a special condition. Snap-Tys can be fabricated for any required wall thickness up to 6 m (19'-6") in length. Spreader washers are precisely located to give exact wall thicknesses. Break points are located at specified distances back from the wall face to permit clean stripping without spalling. All standard Tys are manufactured to provide set back from the wall face. The small Ty holes and washer indentations are easily pointed, grouted or plugged. Consult the Technical Department for minimum wall thicknesses. For exposed concrete or where a longer set back is required, the AR Space-Ty™ is suggested.

Snap-Tys are stocked in 120 mm or 211 mm (4¾" or 8½") ends for standard wall thicknesses.

10 kN (2,250 lbs) Snap-Tys are available in stainless steel upon request.

NOTE: For Ty removal and break back guidelines please see page 101 of the Appendix.

Refer to Lateral Pressure Design information on page 102 and typical Light Formwork on page 107 of the Appendix.



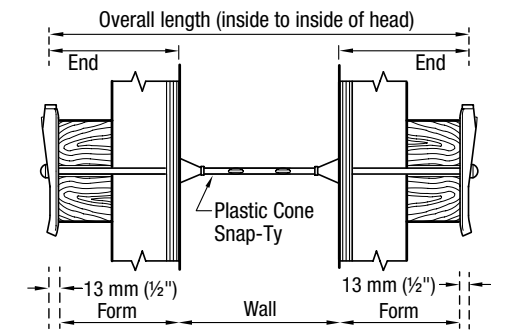
Plastic Cone Snap-Ty (PC)

The AR Plastic Cone Snap-Ty and the AR Heavy Duty Plastic Cone Snap-Ty are equipped with a Plastic Cone Spreader providing for a 25 mm (1") set back manufactured for specified wall thicknesses. The plastic cone reduces the likelihood of concrete paste seepage and protects the break back. The break back is approximately 3 mm (1/8") smaller than the cone length. The estimated break back is approximately 22 mm (7/8"). The table provides the length and taper of the cones. Special size cones are available as custom orders. Available in stainless steel. Also available in water seal.

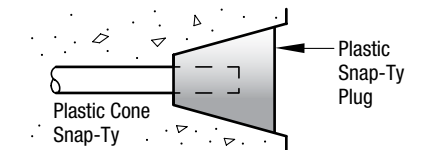
STANDARD 2.25M
APPROXIMATE SAFE
WORKING LOAD
 10kN (2,250 LBS)
 2:1 Safety Factor

HEAVY DUTY 3M
APPROXIMATE SAFE
WORKING LOAD
 13.5 kN (3,000 LBS)
 2:1 Safety Factor

Set back	Taper Inside to outside
25 mm (1")	10 mm to 25 mm (3/8" to 1")



For architectural design, insert the Plastic Snap-Ty Plug once form work has been removed.



To order, please specify the following information

EXAMPLE

Name Plastic Cone Snap-Ty (PC)
 Type Heavy Duty 3M
 End 120 mm (4¾")
 Wall 450 mm (18")
 End 120 mm (4¾")
 Break back (standard) 22 mm (7/8")
 Strength 13.5 kN (3,000 lbs)
 Quantity 300



Plastic Washer Snap-Ty (PW)

The AR Plastic Washer Snap-Ty and Heavy Duty Plastic Washer Snap-Ty are equipped with a plastic washer, provide for a 3 mm to 5 mm (1/8" to 3/16") break back less than the Plastic Washer Thickness and are manufactured for specified wall thicknesses. The Hex Head allows the Ty end to be broken back prior to removal of the forms, allowing for ease of stripping. Available in stainless steel. Also available in water seal.

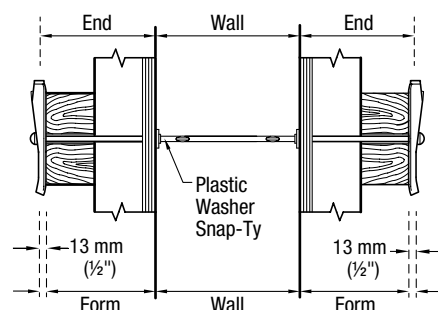
To order, please specify the following information

EXAMPLE

Name Plastic Washer Snap-Ty (PW)
 Type Standard 2.25M
 End 210 mm (8 1/4")
 Wall 250 mm (10")
 End 120 mm (8 1/4")
 Break back (standard) 3 mm (1/8")
 Strength 10 kN (2,250 lbs)
 Quantity (pkg of 100) 400

STANDARD 2.25M
APPROXIMATE SAFE
WORKING LOAD
10kN (2,250 LBS)
2:1 Safety Factor

HEAVY DUTY 3M
APPROXIMATE SAFE
WORKING LOAD
13.5 kN (3,000 LBS)
2:1 Safety Factor



Plastic Washer break back is 3 mm to 5 mm (1/8" to 3/16") less than the plastic washer thickness.

NOTE: For Ty removal and break back guidelines please see page 101 of the Appendix.



Panel-Ty

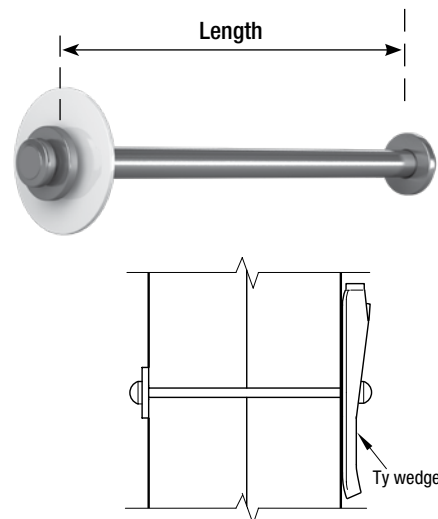
The AR Panel-Ty is equipped with a head washer at each end and with a large loose-fitting washer at one end. Its function is to tie together the end-studs of adjacent panel forms. Available in a range of sizes based on stud requirements. Also available in water seal.

To order, please specify the following information

EXAMPLE

Name Panel-Ty
 Length 100 mm (4")
 Quantity 200
 SWL is based on an approximate 2:1 Factor of Safety

STANDARD 2.25M
APPROXIMATE SAFE
WORKING LOAD
10kN (2,250 LBS)
2:1 Safety Factor



No Washer Snap-Ty (NW)

The AR No Washer Snap-Ty and Heavy Duty No Washer Snap-Ty have hex headed ends. These Snap-Tys are equipped with a 13 mm (1/2") break back and are manufactured for specified wall thicknesses. Available in stainless steel. Also available in water seal.

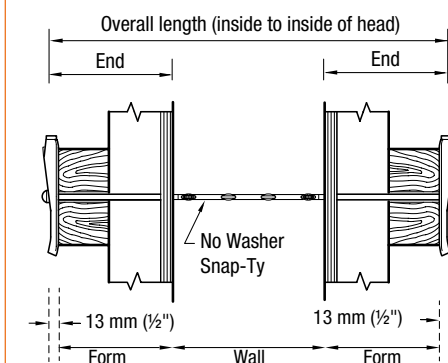
To order, please specify the following information

EXAMPLE

Name No Washer Snap-Ty (NW)
 Type Standard 2.25M
 End 210mm (8 1/4")
 Wall 200mm (8")
 End 210mm (8 1/4")
 Break back 13mm (1/2")
 Strength 10.0 kN (2,250 lbs)
 Quantity (lots of 100) 200

STANDARD 2.25M
APPROXIMATE SAFE
WORKING LOAD
10kN (2,250 LBS)
2:1 Safety Factor

HEAVY DUTY 3M
APPROXIMATE SAFE
WORKING LOAD
13.5 kN (3,000 LBS)
2:1 Safety Factor



NOTE: For Ty removal and break back guidelines please see page 101 of the Appendix.



No Spreader Form-Ty (NS)

The AR No Spreader Form-Ty and Heavy Duty No Spreader Form-Ty are plain rods with a hex headed end. These Snap-Tys are usually withdrawn from the wall or cut off after use. Can be equipped with a break back as a special order. Available in stainless steel.

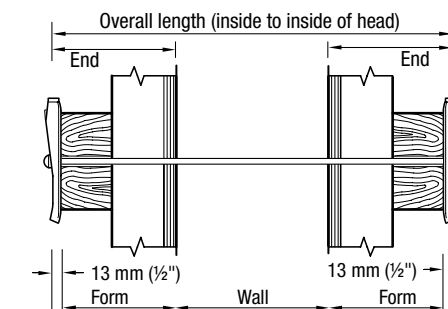
To order, please specify the following information

EXAMPLE

Name No Spreader Form-Ty (NS)
 Type Standard 2.25M
 Total Length ... End to End 400 mm (16")
 Break back N/A (N/A)
 Strength 10.0 kN (2,250 lbs)
 Quantity 200

STANDARD 2.25M
APPROXIMATE SAFE
WORKING LOAD
10kN (2,250 LBS)
2:1 Safety Factor

HEAVY DUTY 3M
APPROXIMATE SAFE
WORKING LOAD
13.5 kN (3,000 LBS)
2:1 Safety Factor



NOTE: When equipped with break back please see page 101 of the Appendix for Ty removal and break back guidelines.



Fascia Snap-Ty

The AR Fascia Snap-Ty is available for securing light outside spandrel beam forms to structural steel beams in the manner shown. Also available in water seal.

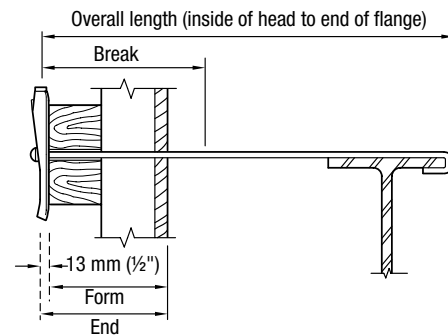
To order, please specify the following information

EXAMPLE

Name Fascia Snap-Ty
 End 200 mm (8")
 Overall Length 600 mm (24")
 Flange Depth 20 mm (3/4")
 Spreader Plastic Cone
 Break back 15 mm (1/2")
 Quantity 400

**APPROXIMATE SAFE
 WORKING LOAD
 3.6 kN (800 LBS)
 2:1 Safety Factor**

**ALSO AVAILABLE
 WITH ANY TYPE OF
 SPREADER WASHER
 AND PLASTIC CONE.**



Riser Support

The AR Riser Support provides a simple solution to support bulk heads for concrete stairs. It comes equipped with flat washers and a chisel point at both ends. Also available in water seal.

To order, please specify the following information

EXAMPLE

Name Riser Support
 Height of riser 150 mm (6")
 Quantity 200

Available up to 200 mm (8") in height. Refer to Lateral Design information on page 102 and typical Light Formwork on page 107 of the Appendix.



Snap-Ty I-Beam Ty (blind wall)

AR Snap-Ty I-Beam Tys are manufactured to fit around the I-Beam flange to support the formwork. A standard break back of 25 mm (1") is provided.

NOTE: Tolerance for wire bends will be calculated by AR. A 6 mm (1/4") tolerance may be added to the B & C dimension if desired for Ty placement.

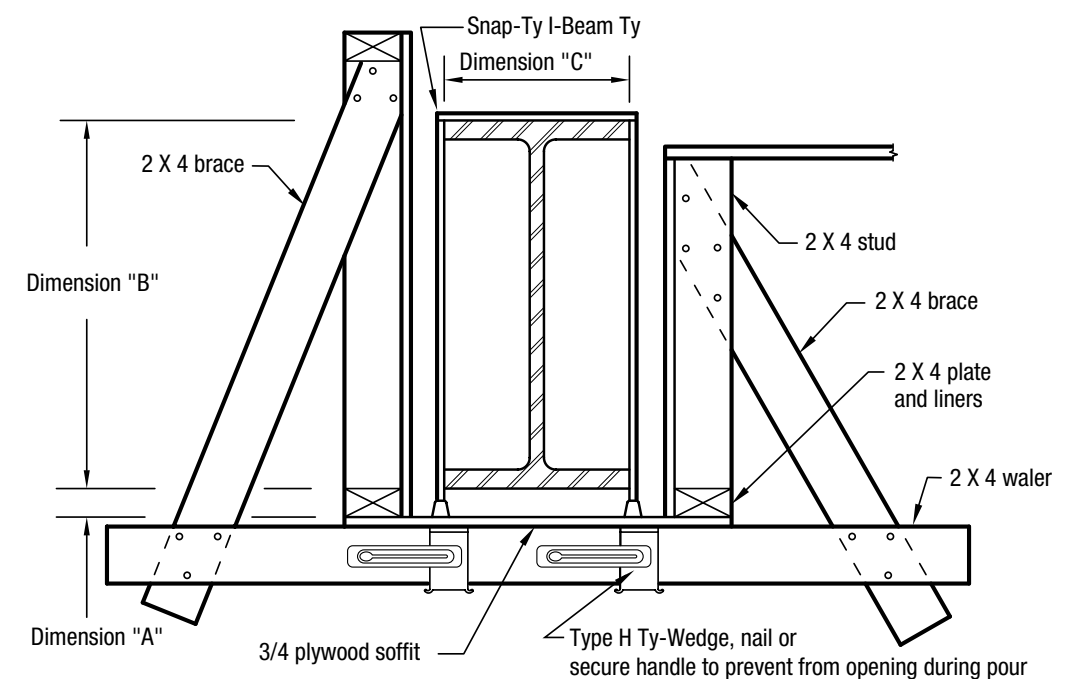
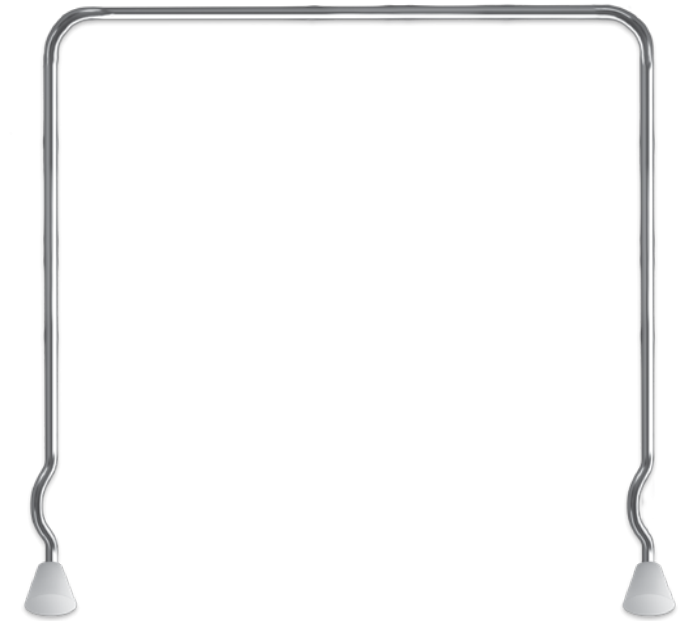
**APPROXIMATE SAFE
 WORKING LOAD
 10 kN (2,250 LBS)
 2:1 Safety Factor**

To order, please specify the following information

EXAMPLE

Name Snap-Ty I-Beam Ty (blind wall)
 Total Ty length:
 Sum of:
 Dimension "A" (as required)
 Dimension "B" (beam height)
 Dimension "C" (beam width)
 Dimension "B" (beam height)
 Dimension "A" (as required)
 Quantity 200

Refer to General Guidelines and Conditions on page 96 and Lateral Pressure Design Information beginning on page 102 of the Appendix.



Space-Ty™

BREAK BACK ASSURED

The Space-Ty™ re-bar locating device protects the break point during the concrete placement assuring a positive break and easy removal of the Ty end.

IMPROVED WATER SEAL

The plastic locating device is securely moulded to the Snap-Ty, effectively breaking the wire surface continuity, reducing the possibility of water seepage.

FIXED RE-BAR LOCATING DEVICE

Designed to accept and lock in place 10M, 15M, or 20M (#4, #5 or #6) re-bar into the correct position, preventing any movement during the concrete placement.

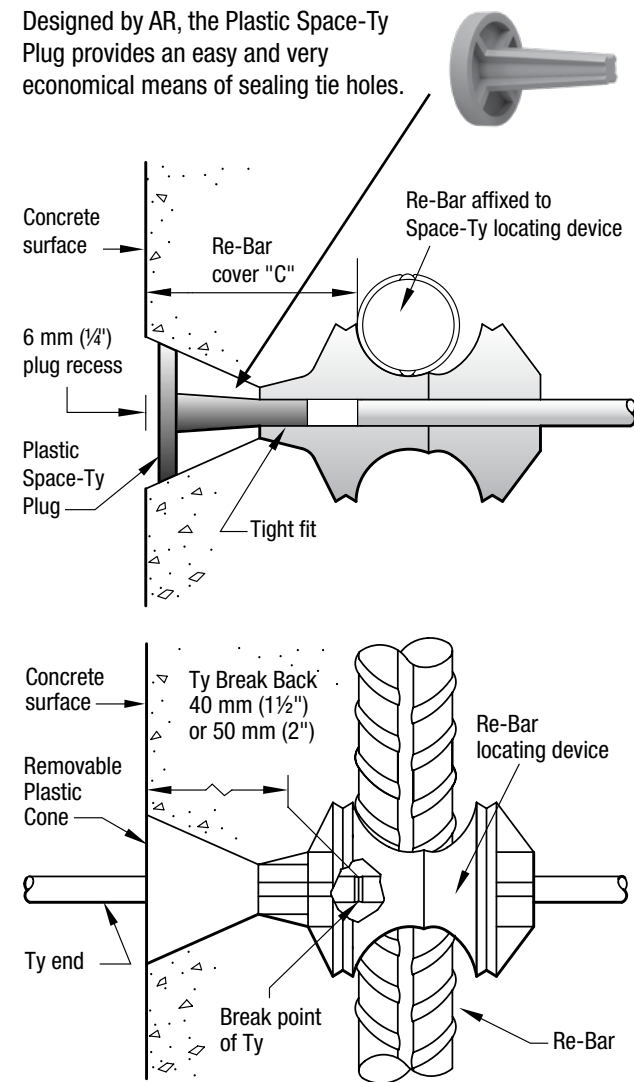
REMOVABLE PLASTIC CONE

The Removable Plastic Cone provides for an architectural recess in the concrete which can be sealed using the AR Plastic Set Back Tyscru Plug or by using standard grouting practices.

GUARANTEES CONCRETE COVER

The re-bar locating device guarantees the concrete cover as outlined in CSA -A23-3-M90. The Space-Ty™ rebar locating device complies with the Recommended Practice for Concrete Formwork as outlined in Architectural Concrete (ACI 347-95).

NOTE: Space-Tys™ have a guaranteed standard 40 mm (1½") set back. A 50 mm (2") set back is available on special order. Refer to Lateral Pressure Design information on page 102 and typical Light Formwork on page 107 of the Appendix.



Guaranteed concrete cover

For exposed conditions of
40 mm, 50 mm (1½", 2")



The Space-Ty™

SPACE-TY™ ASSEMBLY

The Space-Ty™ combines all essential features for light concrete forming. The Space-Ty™ re-bar locating device securely locks the re-bar at a correct distance from the face of the form and eliminates the need for spacers.

Minimum end length of 120 mm (4¾"). Standard sizes stocked in 120 mm (4¾") or 211 mm (8¼") ends.

FORM TY SPECIFICATIONS

Internal form ties shall be so arranged that when the forms are removed, no metal shall be within 40 mm or 50 mm (1½" or 2") of any exposed surface as outlined in CSA-A23-3-M90 or ACI 347-95. Use Space-Tys™ or approved equal and seal the tie holes with PVC plugs. The light grey plugs complement the adjacent concrete.

To order, please specify the following information

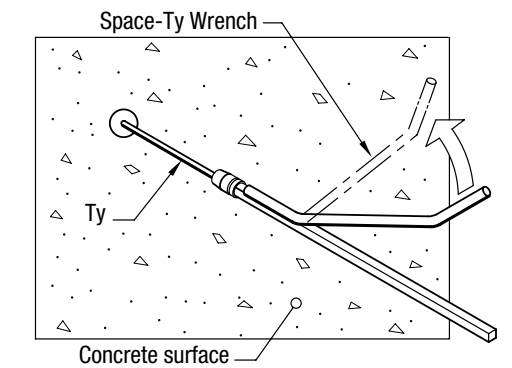
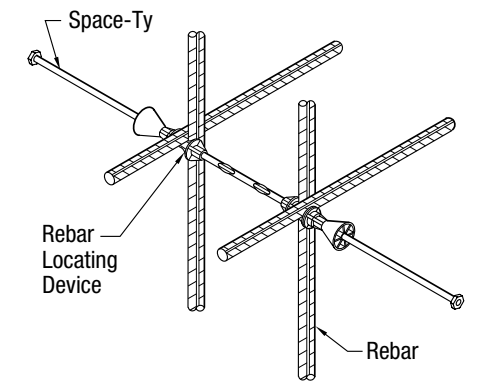
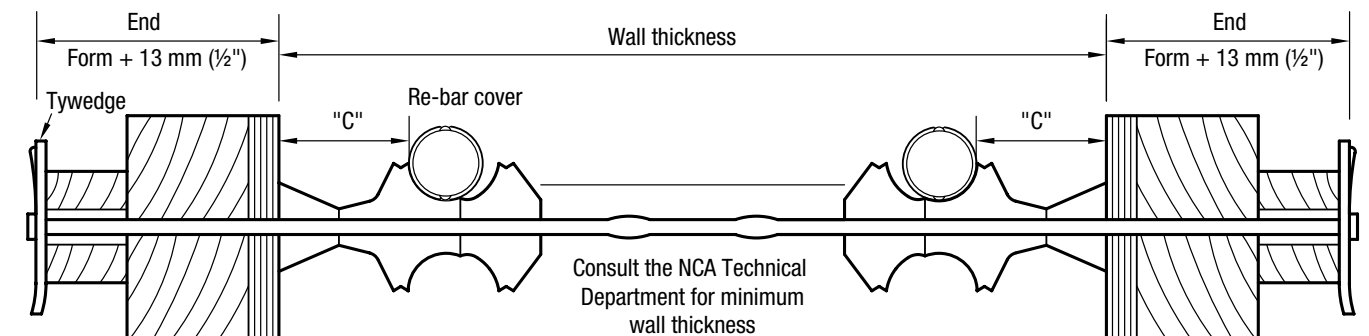
EXAMPLE

Name	Space-Ty
End	211 mm (8¼")
Wall	300 mm (8")
End	211 mm (8¼")
"C" dimensions	
40 mm or 50 mm (1½" or 2")	40 mm (1½")
Quantity (pkg of 50)	200

BREAK BACK TY

To facilitate the stripping of forms, the Space-Ty™ can be broken back prior to form removal. Using a Space-Ty™ wrench or standard 13 mm (½") socket wrench, twist and remove the Ty end.

NOTE: For Ty removal and break back guidelines please see page 101 of the Appendix. Refer to Lateral Pressure Design information on page 102 and typical Light Formwork on page 107 of the Appendix.



**APPROXIMATE SAFE
WORKING LOAD
13.5 kN (3,000 LBS)
2:1 Safety Factor**

SNAP-TY ACCESSORIES

Pressed Steel Ty Wedge

The AR Pressed Steel Ty Wedge is designed to slip over the head of a standard or heavy duty Snap-Ty to safely secure the waler system in place. Caution should be used when used with hex head Space-Ty™ or Snap-Ty products.

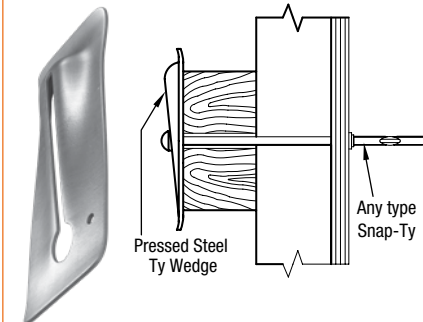
To order, please specify the following information

EXAMPLE

NamePressed Steel Ty-Wedge

Quantity 200

**APPROXIMATE SAFE
WORKING LOAD**
13.5 kN (3,000 LBS)
2:1 Safety Factor



Type H Ty-Wedge

AR Type H Ty Wedges are manufactured from a malleable cast iron material designed to slip over the head of a standard or heavy duty Snap-Ty. The Type H-Ty Wedge provides for long term durability, performance and bearing area to ensure proper load distribution on to the waler system.

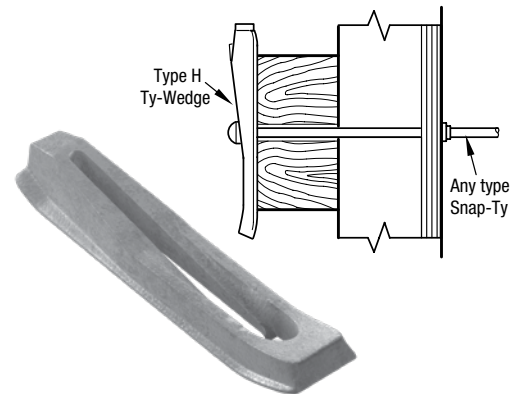
To order, please specify the following information

EXAMPLE

Name Type H Ty-Wedge

Quantity (lots of 50) 200

**APPROXIMATE SAFE
WORKING LOAD**
13.5 kN (3,000 LBS)
2:1 Safety Factor



A-Bracket

The AR A-Bracket is used to hold a horizontal waler bar, or a vertical stud with any type of wall form. The built-in slot allows the bracket to slip over 4-3/4" L&W snapties, and can be installed before or after waler bars have been positioned. The swivel bracket allows the snaptie end to lock-in and tightens on the 2 x 4 waler. The swivel bracket allows for 5/8" of adjustment to compensate for lumber variations.



Snap-Ty Wrench

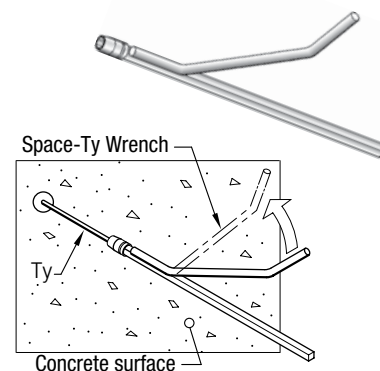
The AR Snap-Ty Wrench is designed to fit tight against the wall and facilitate the Snap-Ty break back once the concrete has cured. The angle of the Snap-Ty Wrench will prevent scraping of knuckles during the end removal. After the form has been removed, place the Snap-Ty Wrench on the Ty. Keep the Snap-Ty Wrench against the concrete, bend the Ty towards the concrete surface. Rotate the wrench using a cranking motion to break the Ty back within the concrete wall.

To order, please specify the following information

EXAMPLE

Name Snap-Ty Wrench

Quantity 2



Waler Bracket Forming System

The AR Waler Bracket is a proven method to form light weight walls and foundations. The basic unit of this system is the bracket with a moving wedge which provides the most effective type lock for the Snap-Ty. The basic components are the Waler Bracket and Snap-Tys, with plywood panels and loose 38 mm x 89 mm (standard 2x4 walers). No nailing is needed. Erection and stripping are made fast and simple and materials last longer. The Waler Bracket Forming System will save up to 50% of the forming cost.

Single Waler Bracket

The AR Waler Bracket is designed to be used with any AR Short-End Snap-Ty. The durable bracket can be used with both horizontal walers and vertical studs for any type of wall form; round, curved, battered, beam and/or columns. The Single Waler Bracket is fabricated from heavy gauge steel which is plated to resist corrosion for improved durability and reuse.

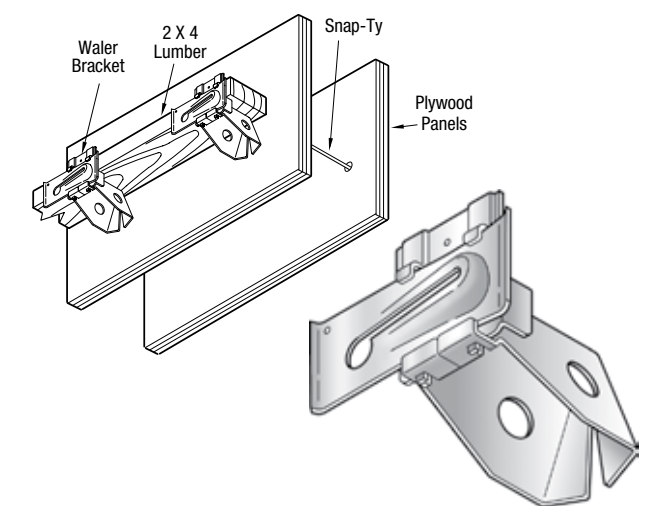
To order, please specify the following information

EXAMPLE

Name Single Waler Bracket

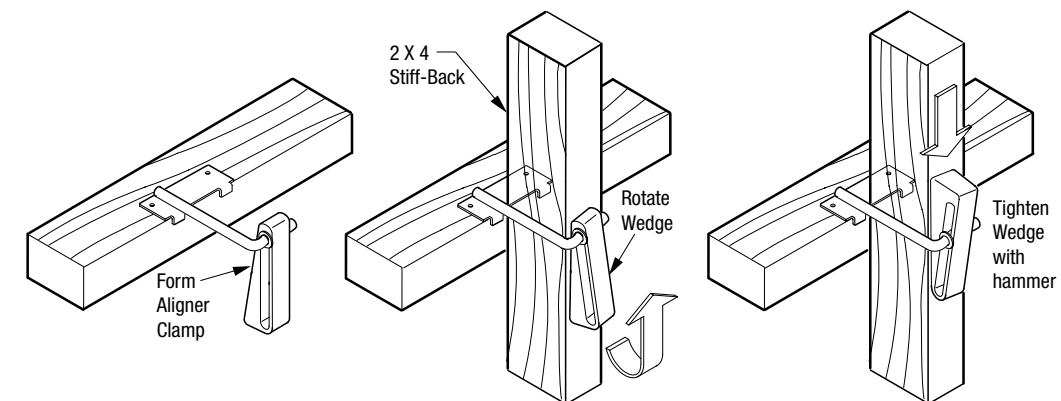
Quantity 200

APPROXIMATE SAFE WORKING LOAD
12 kN (2,700 LBS)
2:1 Safety Factor



Strong Back

The AR Form Aligner Clamp is designed for use with a single 38 mm x 89 mm (2" x 4") strong back for either vertical or horizontal form alignment. The Form Aligner Clamp can be installed after erection of the forms and is not limited by form-ty spacing. Sturdy, galvanized construction reduces maintenance and replacement and speedy installation reduces forming costs.

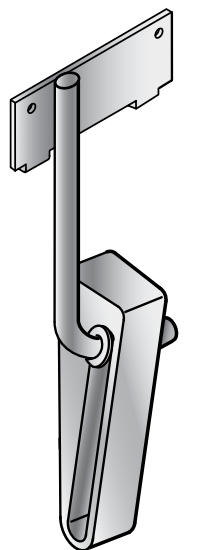


To order, please specify the following information

EXAMPLE

Name Strong Back

Quantity 200



Plastic Snap-Ty Plug

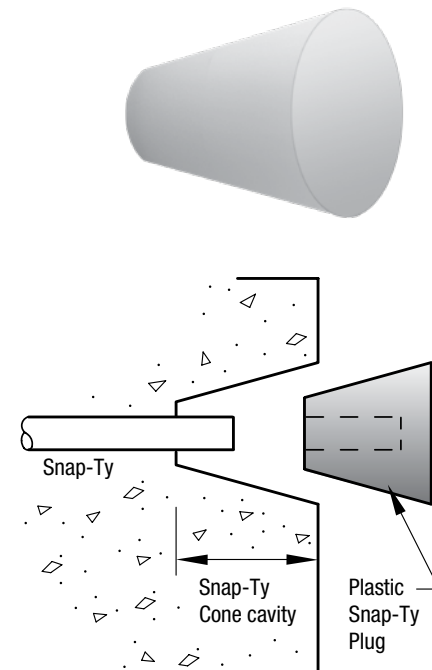
AR Plastic Snap-Ty Plugs are designed to provide an economical means of sealing Snap-Ty Cone holes, eliminating the need for grouting. The Plastic Snap-Ty Plug provides an architectural design in concrete walls and should be installed with a commercial grade adhesive material. Available in a standard grey colour. Other colours are available on special orders based on minimum quantities.

To order, please specify the following information

EXAMPLE

Name Plastic Snap-Ty Plug
Quantity 200

Plastic Snap-Ty Plug provides a recess of approximately 5mm (1/4").



Plastic Space-Ty™ Plug

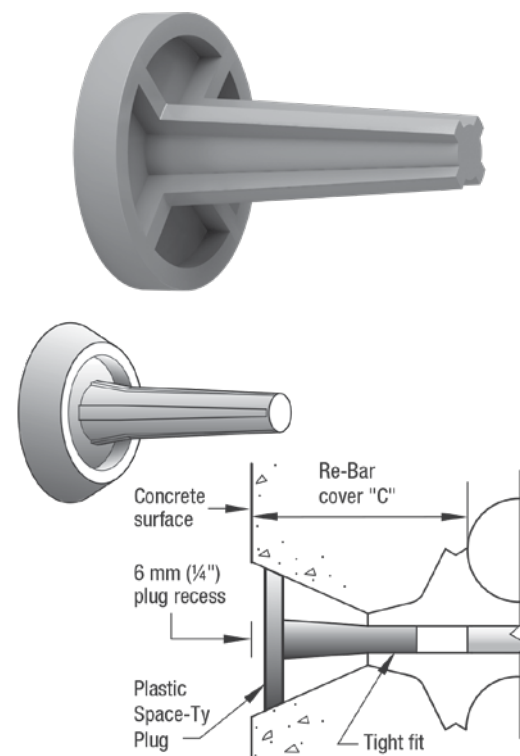
AR Plastic Space-Ty™ Plugs are designed to fit securely in the cone hole of a AR Space-Ty™ once the Ty break back is established in the concrete wall. The Space-Ty™ Plug is a simple and economical means of sealing Space-Ty™ holes providing an architectural design.

To order, please specify the following information

EXAMPLE

Name Plastic Space-Ty™ Plug
Colour light gray
Quantity 200

NOTE: Do not use Plastic Snap-Ty Plugs with AR Space-Tys™.



Form Brace Aligner

The AR Form Brace Aligner is designed to assist in accurately positioning and plumbing vertical forms. The heavy 25 mm (1") open style turnbuckle provides for fast, easy adjustments. The Form Brace Aligner is equipped with a bent nailing plate and holes. Manufactured from first quality materials for durability and repeat use. The Approximate Safe Working Loads of the aligner are limited by the field fastening and staking method. The Form Brace Aligner splicer unit provides for 90 mm (3 1/2") total adjustment. The overall maximum length is 1,040 mm (41") with a minimum length of 950 mm (37 1/2"). Also available in adjustable.

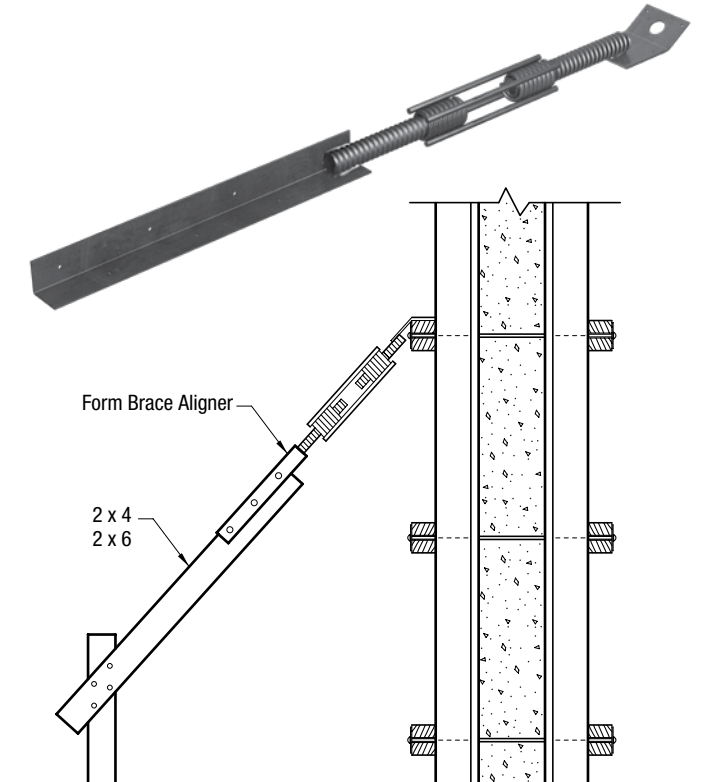
To order, please specify the following information

EXAMPLE

Name Form Brace Aligner
Quantity 2

NOTE: Not designed for wind loads.

Refer to General Guidelines and Conditions on page 96 and Lateral Pressure Design Information beginning on page 102 of the Appendix.



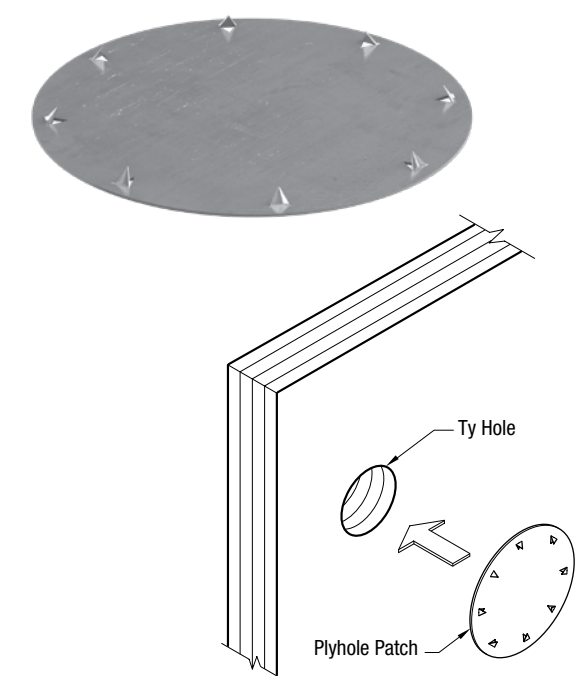
Plyhole Patch

The AR Plyhole Patch is designed to facilitate Ty hole repairs in wood formwork. Manufactured from 26 gauge galvanized steel, the 60 mm (2 1/4") diameter patch comes complete with its own fastening system. The self contained barbs eliminates the requirement for nails. Also available in plastic.

To order, please specify the following information

EXAMPLE

Name Plyhole Patch
Quantity (lots of 1,000) 1,000

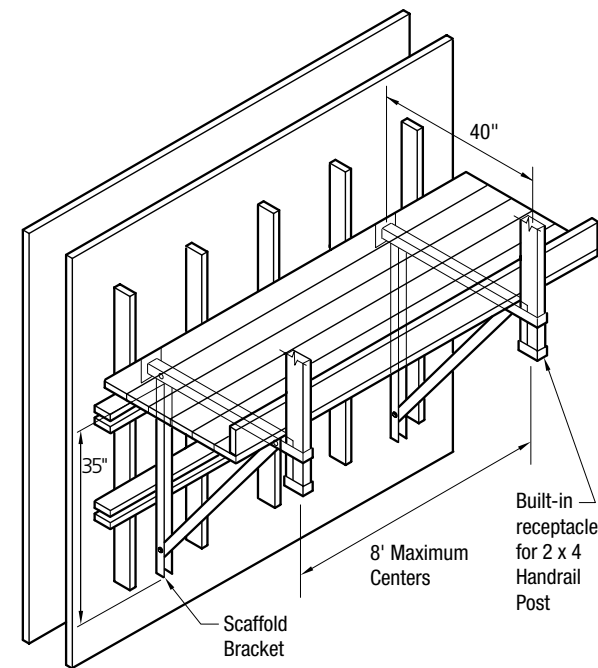
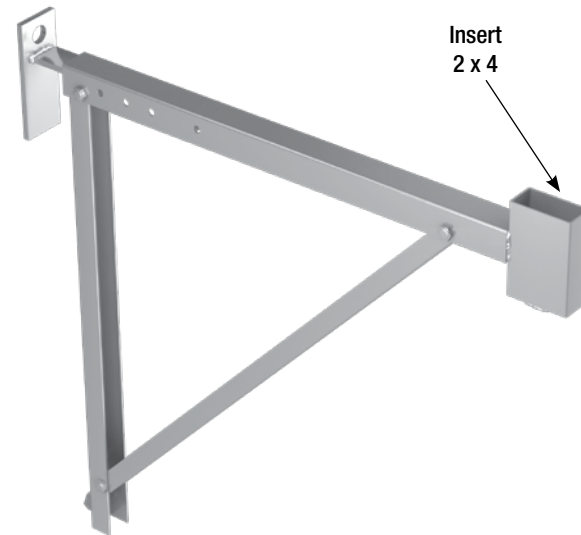


Scaffold Bracket

The AR Scaffold Bracket (TSB) meets most local code requirements and is suitable for most formwork systems. The Brackets are adjustable to fit vertical or horizontal wales and/or strongbacks by simply adjusting the pins position in the vertical or horizontal members. The AR Scaffold Bracket (TSB) can also be flush mounted to concrete surfaces and is also easily adapted to custom prefabricated forms.

Consult your AR Area Sales Representative or the AR Technical Department for additional information.

**APPROXIMATE SAFE
WORKING LOAD**
4.5 kN (1,000 LBS)
4:1 Safety Factor



Rod Clamp

AR Rod Clamps are malleable castings for plain or deformed re-bar ty systems. The Rod is clamped by a set screw and nut arrangement which tightens the grip as the load is applied. The clamp housing may be used indefinitely. The only wearing element is the relatively inexpensive nut and screw which can be replaced at will. The Rod Clamps are supplied with nail holes to simplify the attachment operation on the walers. Once the Ty rod is tightened and secured, bending the rod behind the clamp at 90° will provide an additional measure of safety.

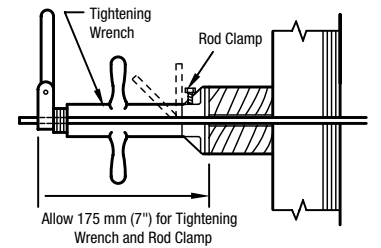
To order, please specify the following information

EXAMPLE

Name Rod Clamp
Rod Diameter 6 mm (1/4")
Quantity 200

Diameter	
6 mm (1/4")	
10 mm (3/8")	
13 mm (1/2")	

Refer to General Guidelines and Conditions on page 96 and Lateral Pressure Design Information beginning on page 102 of the Appendix.



Pencil Rod

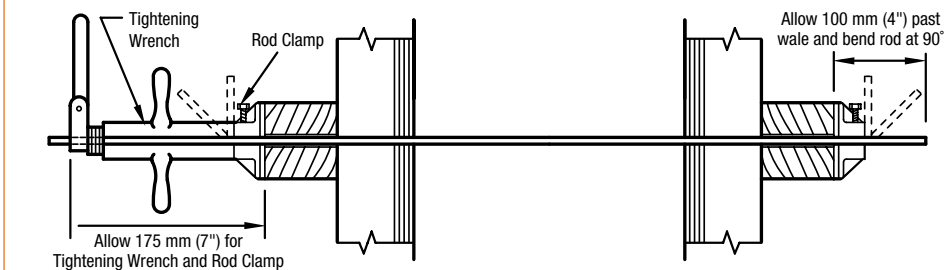
The AR Pencil Rod System is an economical forming system, used mainly for battered walls and foundations where the use of the AR Snap-ty is not feasible. Available in 1/4" diameter, cut to 10' or 20' lengths. Use where a clean breakback is not necessary. For use with the AR Rod Clamp and AR Tightening Wrench.



Diameter			
mm	(in)	kN	(lbs)
6	1/4"	10'	1,125
6	1/4"	20'	1,125

Pencil Rod Tightening Wrench

The AR Tightening Wrench is placed over a smooth or deformed rod behind a rod clamp and is used to draw the assembly tight, allowing the clamp to be properly tightened. The Tightening Wrench is available in 1/4", 3/8" and 1/2" sizes.



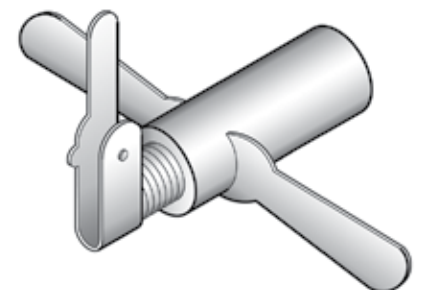
APPROXIMATE SAFE WORKING LOADS
2:1 Safety Factor

Diameter			
mm	(in)	kN	(lbs)
6 mm	(1/4")	5 kN	(1,125 lbs)
10 mm	(3/8")	10 kN	(2,200 lbs)
13 mm	(1/2")	15 kN	(3,750 lbs)

To order, please specify the following information

EXAMPLE

Name Tightening Wrench
Size 13 mm (1/2")
Quantity 200



Caution: Do not use the Tightening Wrench for straightening forms or for pulling smooth rods from set concrete.

Tie Wire

The AR Tie Wire is a fully annealed wire for use in general construction. It is packaged in Wire Loop Ties and Rolls designed to fit in standard reels. Available in 16 or 16.5 ga.

- 50 lbs. Coils
- 3.5 lbs. Coils
- Wire Loop Tys
- Coated & Uncoated



Tie Wire Twister

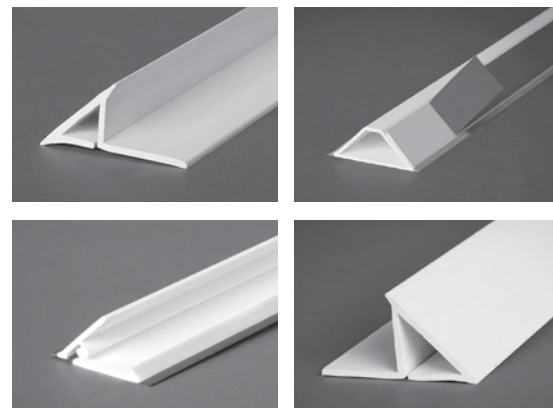
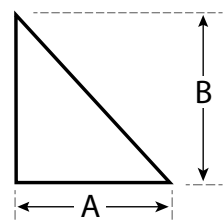
The AR Tie Wire Twister is offered in a compact size that allows the tool to be used in tight spaces. Safely and easily twists wire bar ties with a durable design.



PVC - Single Chamfer

Product Name	Width A	Height B	Chamfer Angle
Snap Single Chamfer 3/4" With Tape	0.75"	0.75"	45°
LC Single Chamfer 3/4" With Tape	0.5"	0.75"	45°
LC Single Chamfer 1/2" With Tape	0.5"	0.5"	45°
Single Chamfer 3/4" Top / Inside Chamfer	0.75"	0.75"	45°
Single Chamfer 1/2" x 45 Degree	0.5"	0.5"	45°
LC Single Chamfer 1" With Tape	1"	1"	45°

NOTE: Wood chamfer also available. Consult your AR Sales Representative or AR Technical Department for more information.



Formwork Pry Bar

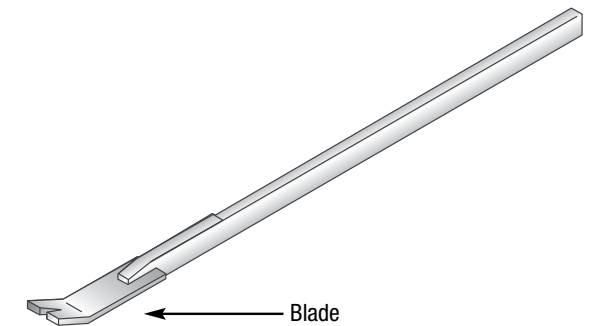
The AR Formwork Pry Bar is a heavy duty pry bar ideally suited for use by tilt-up erectors and form setters to strip forms and to "jockey" a panel into position or assist in removing forms. The Pry Bar is available with a 75 mm (3") blade widths.

To order, please specify the following information

EXAMPLE

Name Formwork Pry Bar

Quantity 2



Plastic Form Spreader

The AR Plastic Form Spreader eliminates the need of cutting and placing wood strips and reduces patching and grouting needs. The Form Spreader is corrosion free and reduce water penetration. Available in 150mm, 200 mm, 250 mm and 300 mm (6", 8", 10" and 12").

To order, please specify the following information

EXAMPLE

Name Plastic Form Spreader

Quantity 200

