



## HARDWARE XT™



3form® Hardware XT systems provide versatile and elegant solutions for affixing 3form XT materials to a variety of exterior substrates, including concrete, Brick, CMU and under certain approved conditions steel structure. Machined or cast from of Marine Grade 316 Stainless steel and available with anti-vibration thread locking tape the Hardware XT line is ready for demanding conditions. Due to the local variations in exterior requirements, Hardware XT must be approved by 3form for each installation.



For more information, please visit [3-form.com](http://3-form.com) or call **800.726.0126**

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## Exterior Rated Hardware (XT)

3form Hardware XT is designed specifically for exterior conditions over Brick / CMU and Concrete substrate. This hardware is 1-1/2" diameter marine grade Stainless Steel (316) with available vibration-resistant thread tape and panel protecting bushings and washers. Due to variations in local conditions please contact your 3form Representative for point support quantities required per panel.

Please see "Substrate Conditions" on page 3 for additional substrate conditions.

## General Notes

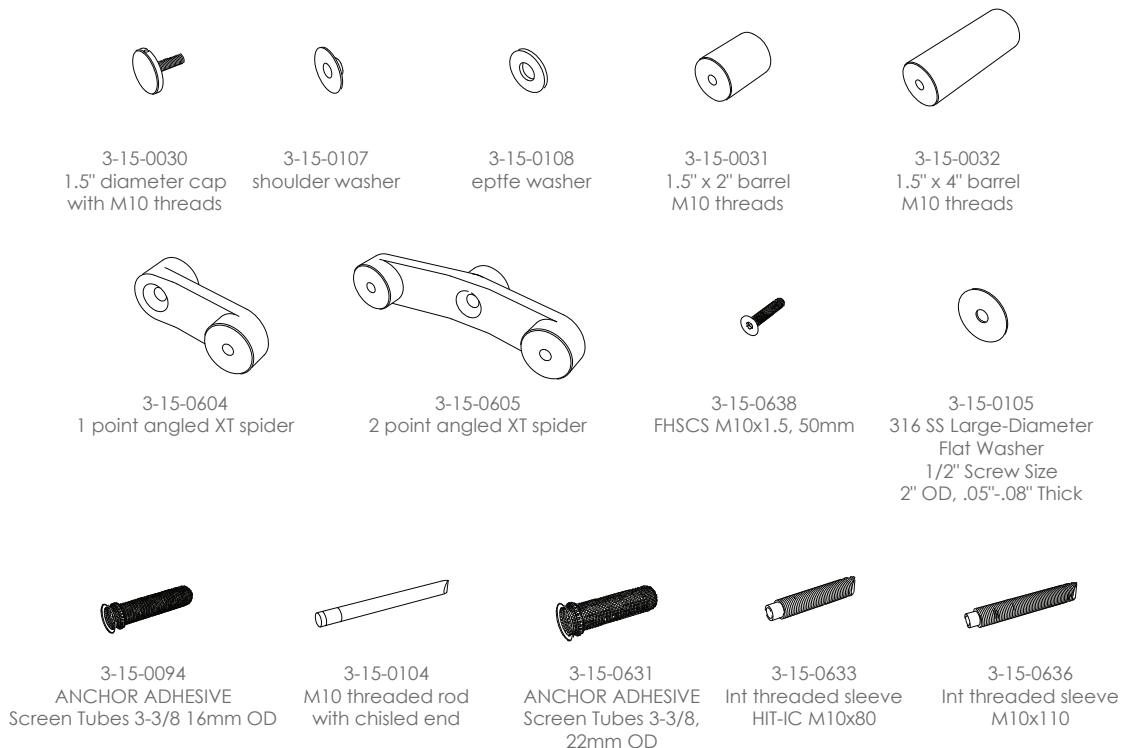
For Exterior conditions, contact your 3form Representative for additional help selecting appropriate materials and hardware requirements and quantities.

3form Hardware XT is paired and supplied with anti-vibration thread locking tape. **DO NOT** use cyanoacrylate or solvent type thread locking materials that are not approved by 3form with 3form panels (e.g. Loctite liquids or similar). Please be aware that if caps are installed and removed many times the functionality of this tape can be degraded.

Do Not overtighten Caps; Panels need to be able to expand and contract uninhibited. Hand-tighten caps until you are unable to turn more by hand, then use the cap tightening tool for an 1/4 additional turn.

**DO NOT use cyanoacrylate or solvent type thread locking materials with 3form panels as it can chemically damage them. 3form Hardware XT is supplied with thread locking tape approved for this purpose.**

### OVERVIEW

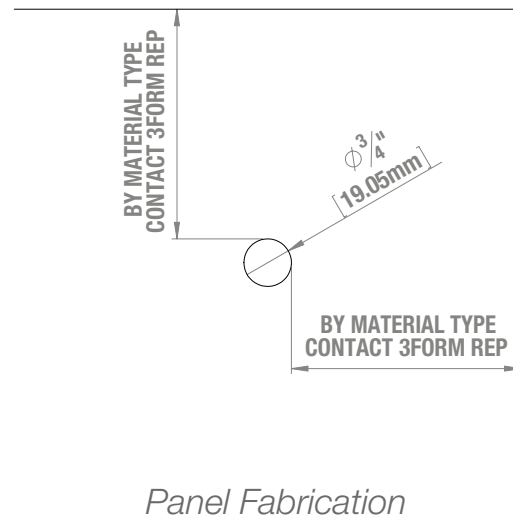


## Substrate Conditions

<b>Concrete</b>	Approved with appropriate anchors, refer to Hilti Anchoring manual for additional information.
<b>CMU</b>	Approved with appropriate anchors, refer to Hilti Anchoring manual for additional information.
<b>Solid Brick</b>	Approved with appropriate anchors and appropriate brick conditions, refer to Hilti Anchoring manual for additional information.
<b>Steel Structure</b>	Conditionally approved, contact 3form Representative for anchoring requirements, 3form Hardware XT is threaded M10 x 1.5.
<b>Stucco or other not listed above</b>	Not Approved unless approved and engineered by third party, additional blocking or secondary structure required.

## Panel Fabrication

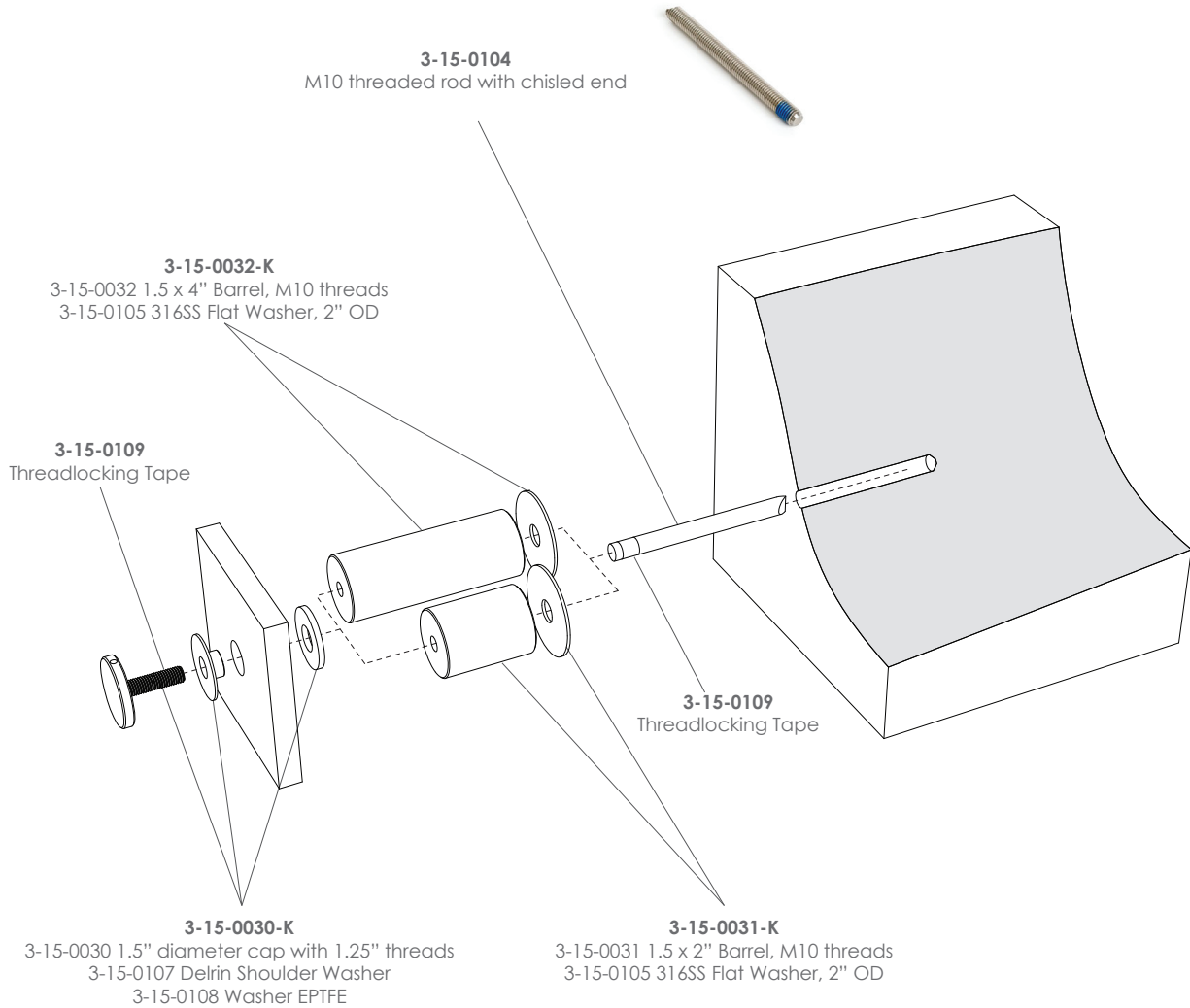
Panel Fabrication requirements are as shown on diagram to right. Hole diameter needs to allow panel to expand / contract.



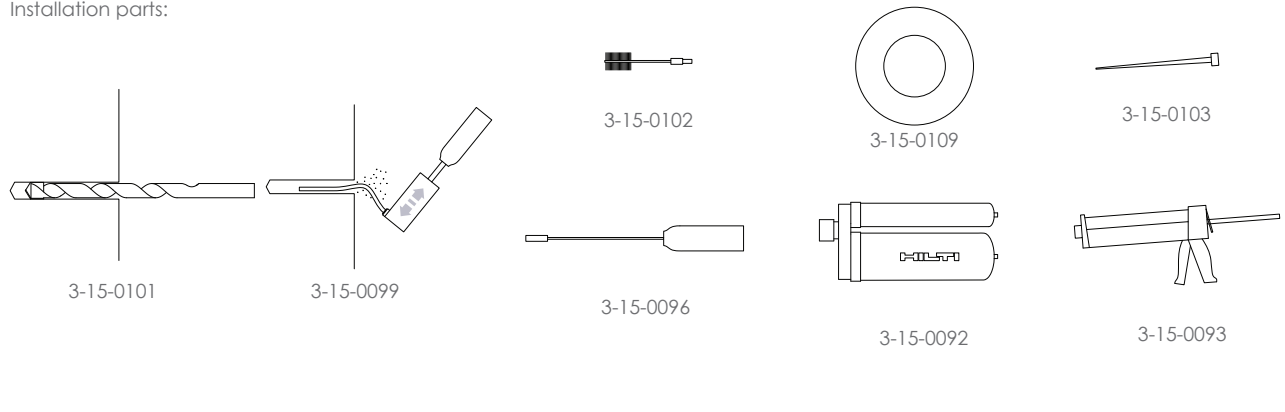
NOTE: All exterior projects must be approved by 3form Advanced Technology Group Prior to quoting and project acceptance.

# Point Support >> concrete

Overview



## Installation parts:



For more information, please visit [3-form.com](http://3-form.com) or call 800.726.0126

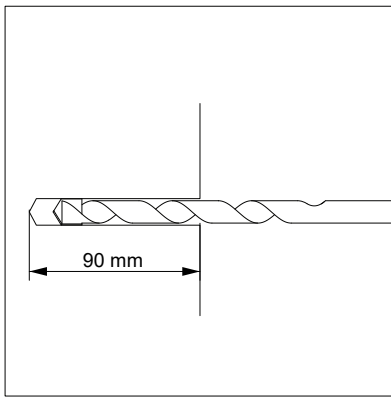
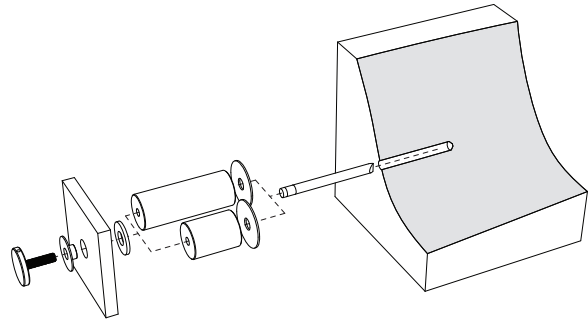
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# Point Support >> concrete

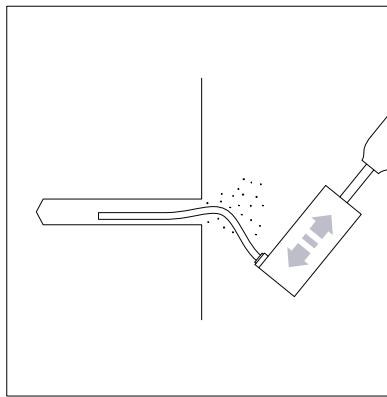
Installation



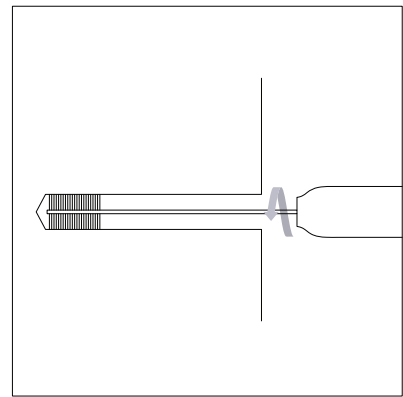
**3-15-0104**  
M10 threaded rod with chisled end



Drill Ø12mm hole Using 3-15-0101,  
90mm deep

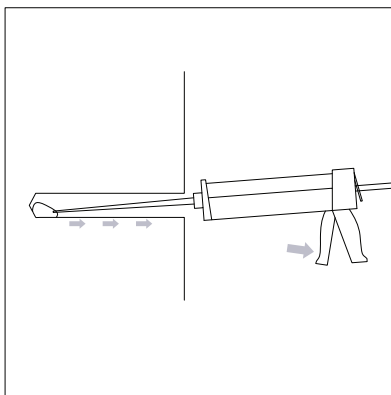


Remove drilling debris with a blowout  
bulb or with compressed air.

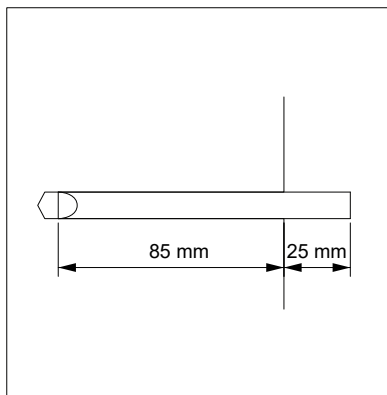


Brush bore hole.  
Use 3-15-0102+3-15-0096, brush and  
handle combo.

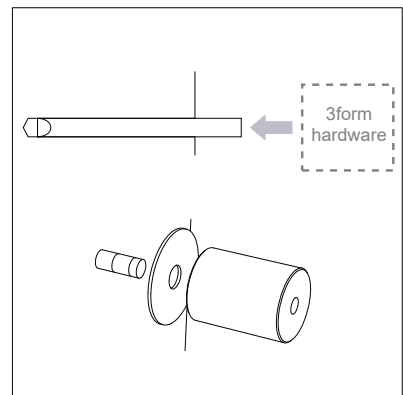
repeat these 2 steps 2 or 3 times



Use Epoxy Adhesive HILTI HY-200-A  
Inject until 1/2 -2/3 full (6-8 pumps)



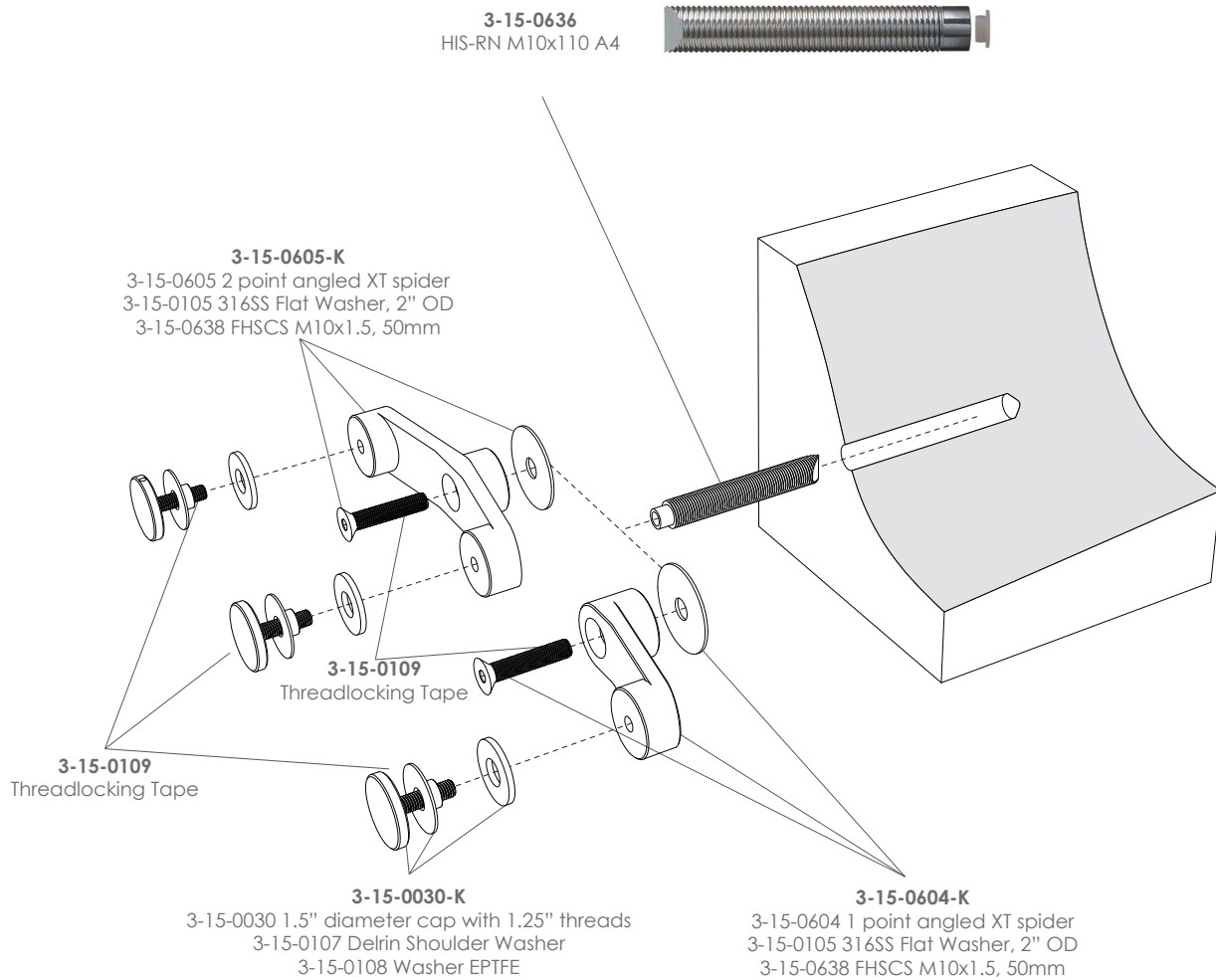
Install the concrete insert, keep  
perpendicular to the wall. Twist while  
installing to make sure there is 25 mm  
of thread rod visible outside the wall.  
Fastener may be adjusted during gel  
time (3min)



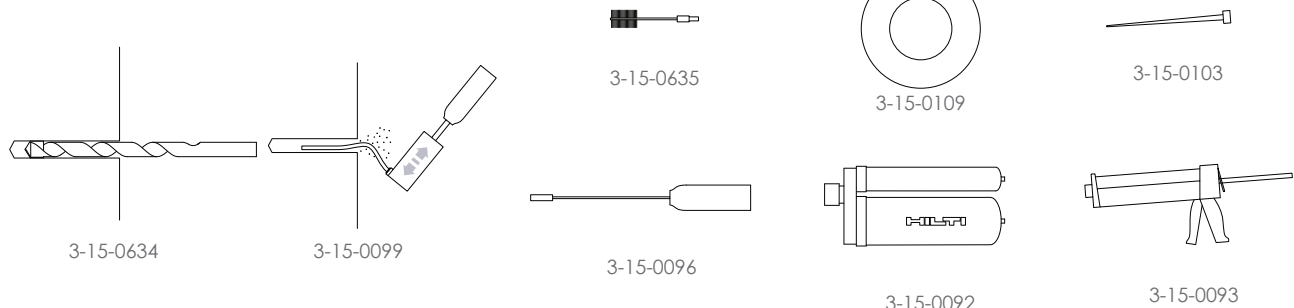
Don't move anchor for at least 30 min\  
before installing 3form hardware.  
minimum (@ 68°F). Wrap threadlocking  
tape on anchor threads.

# Spider >> concrete

Overview



## Installation parts:



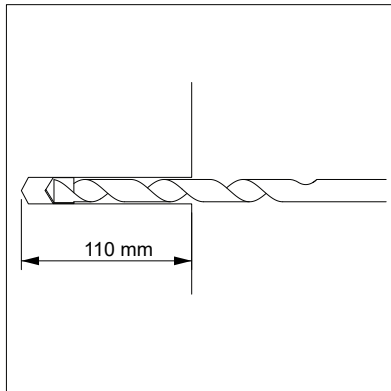
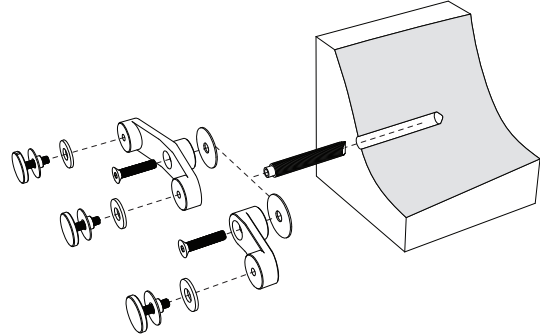
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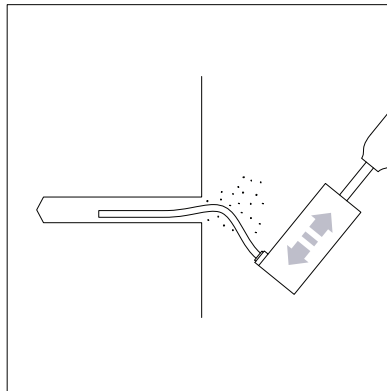
# Spider >> concrete

## Installation

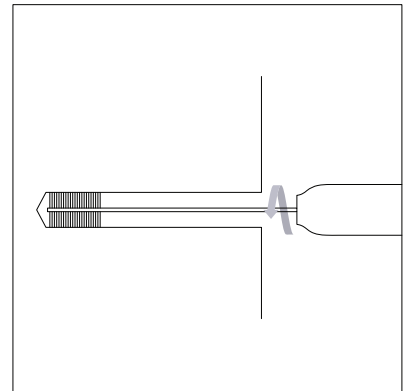
3-15-0636  
HIS-RN M10x110 A4



Drill hole 3/4" Ø, 110mm deep  
Use 3-15-0634

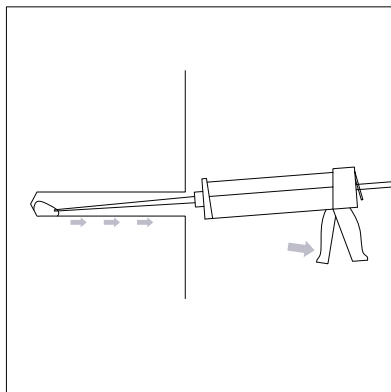


Remove drilling debris with a blowout bulb or with compressed air.

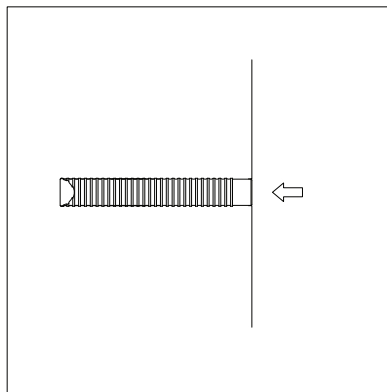


Brush bore hole.  
Use 3-15-0635+3-15-0096

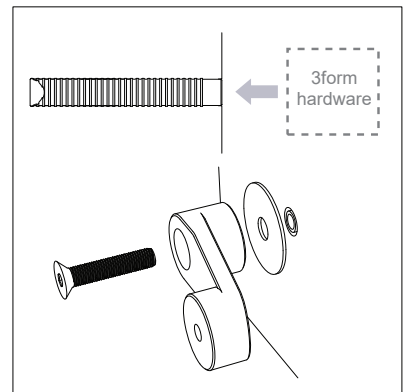
repeat these 2 steps 2 or 3 times



Use Epoxy Adhesive HILTI HY-200-A  
Inject until 1/2 - 2/3 full (~6-8 pumps)



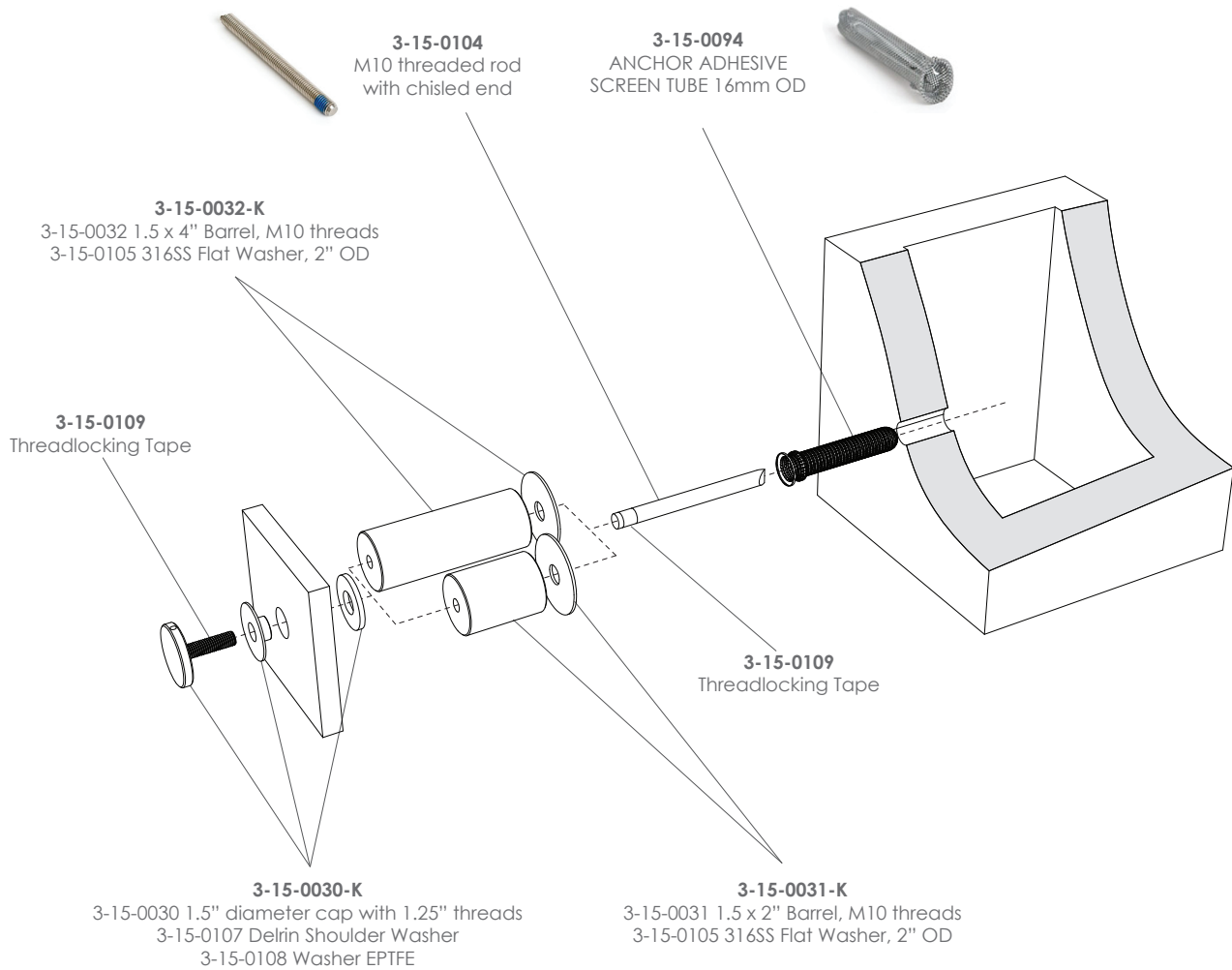
Install the concrete insert so that the  
insert is flush with the wall surface.



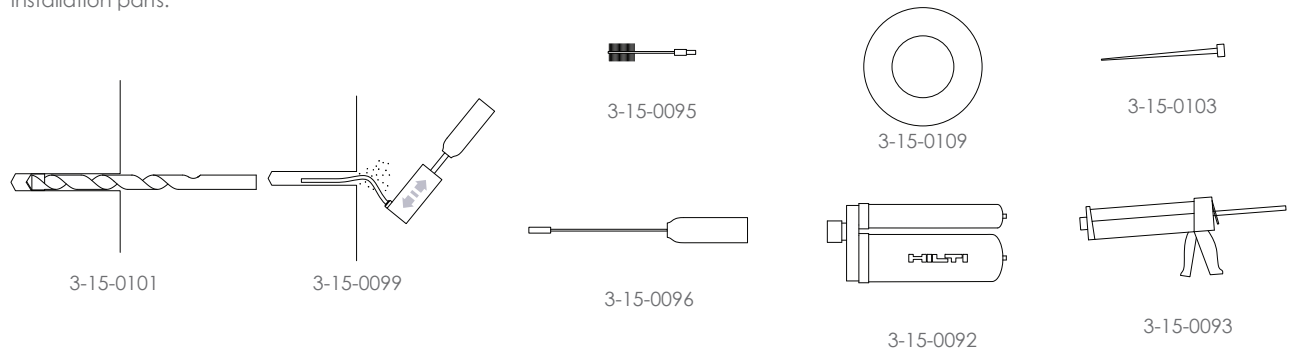
Don't move anchor during 30 mn  
minimum (@ 68°F). Wrap with  
threadlocking tape, then install

# Point Support >> CMU / Hollow block

Overview



Installation parts:



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# Point Support >> CMU / Hollow block

Installation

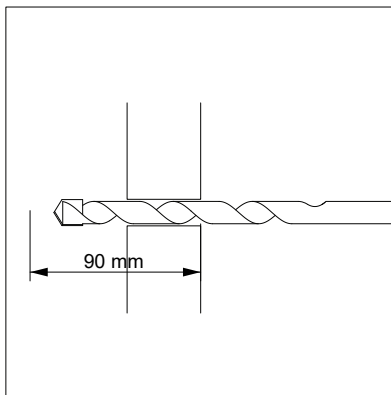
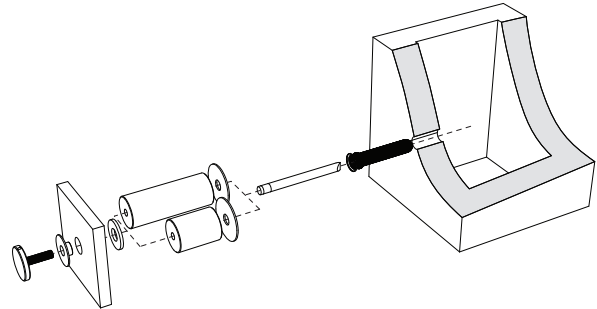
**3-15-0104**

M10 threaded rod with chisled end

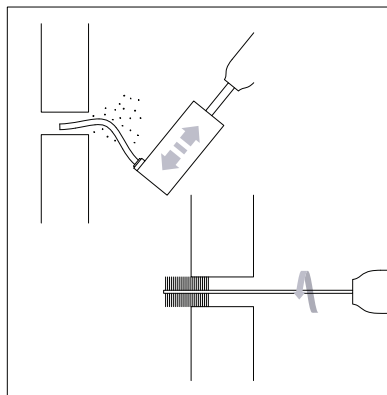


**3-15-0094**

ANCHOR ADHESIVE  
SCREEN TUBE 16mm OD

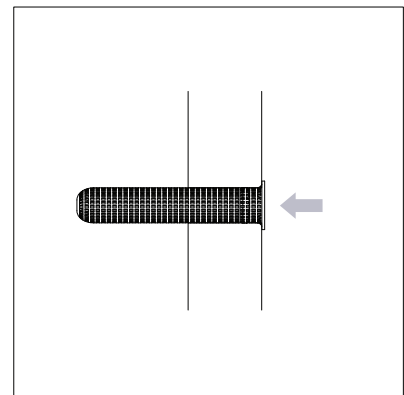


Drill hole 5/8"Ø, 90mm deep (through block wall)  
Use 3-15-0097

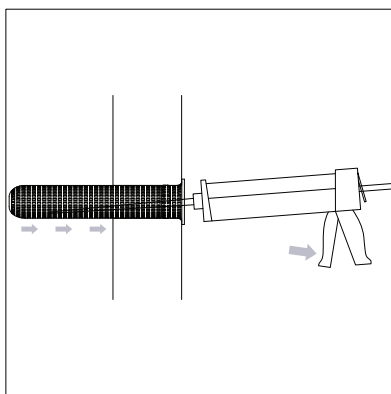


Remove drilling debris with a blowout bulb or with compressed air.  
Brush bore hole.  
Use 3-15-0095+3-15-0096

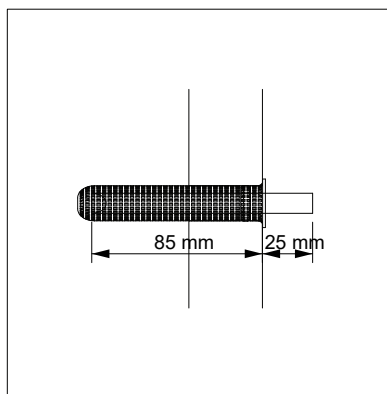
repeat these 2 steps 2 or 3 times



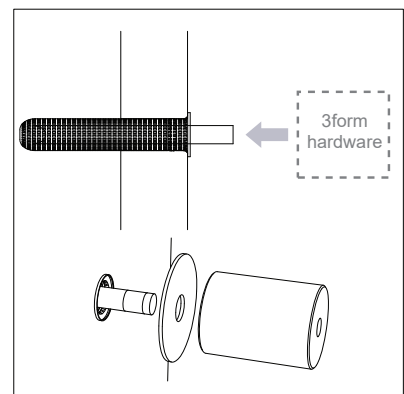
Insert anchor screen tube 3-15-0094



Fill 1/2 -2/3 full (~6-8 pumps)  
Use Epoxy Adhesive HILTI HIT-HY270 Hybrid Adhesive  
(3-15-0091)



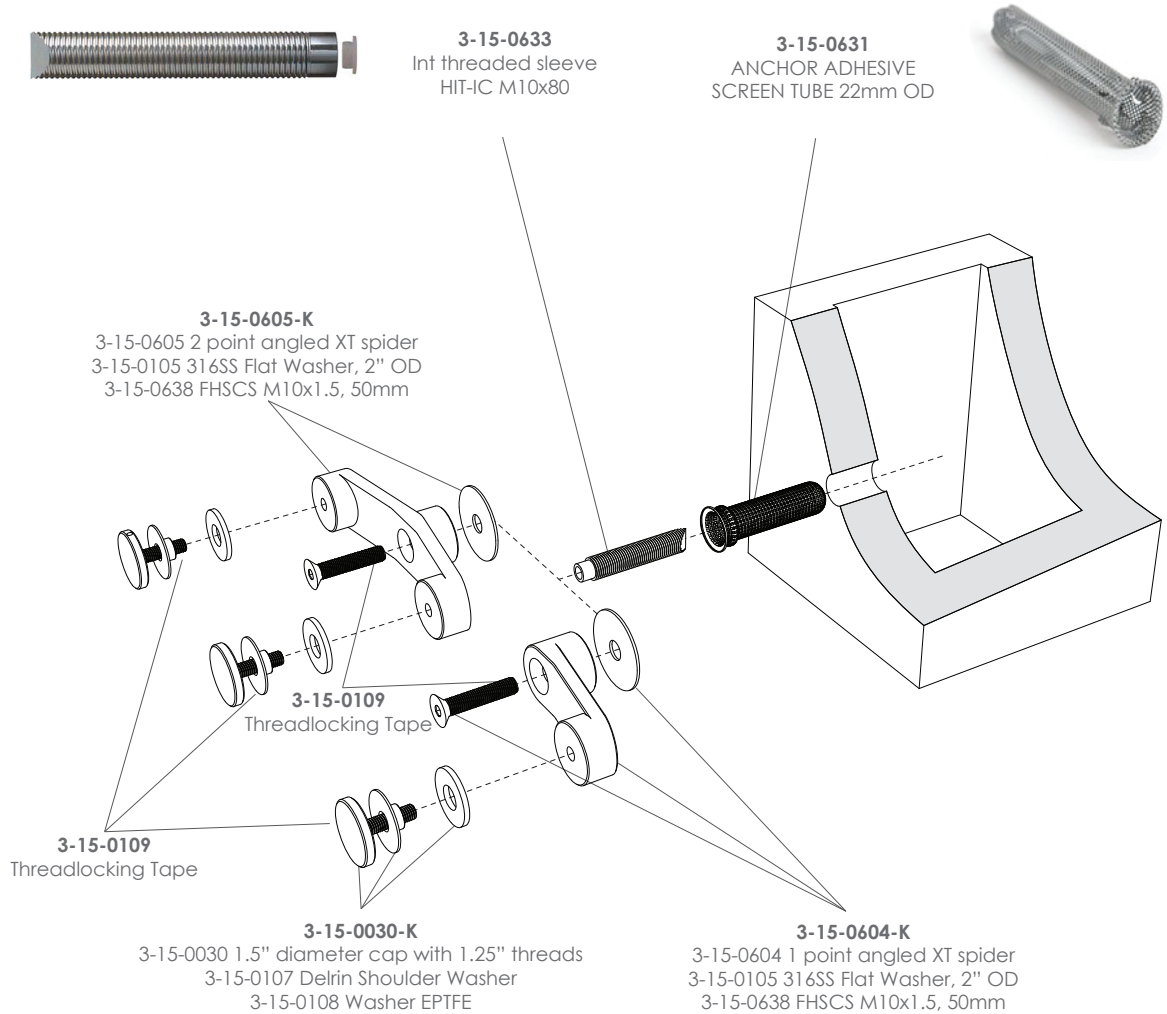
Install the threaded rod into the mesh screen verify embedment is 85mm + 25 mm outside the wall.  
Check if perpendicular to the wall during first five minutes of install



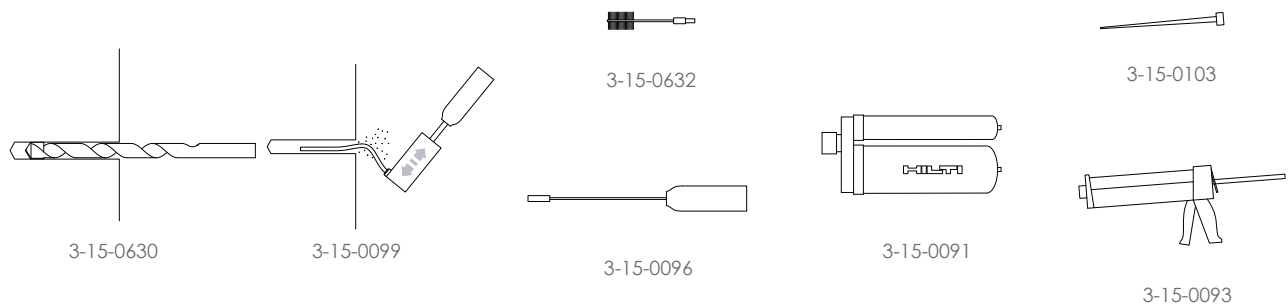
Don't move anchor for at least 30 min\ before installing 3form hardware.  
minimum (@ 68°F)

# Spider >> CMU / Hollow Block, Masonry

Overview



Installation parts:



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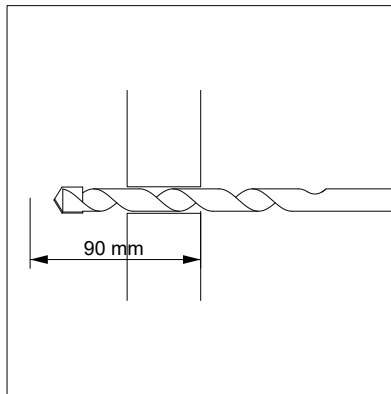
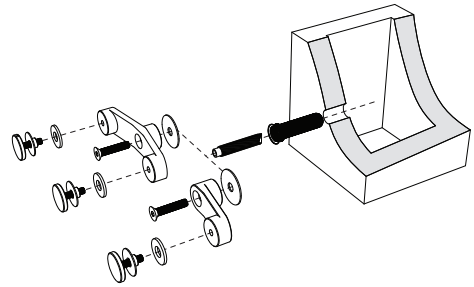
# Spider >> CMU / Hollow Block, Masonry

Installation

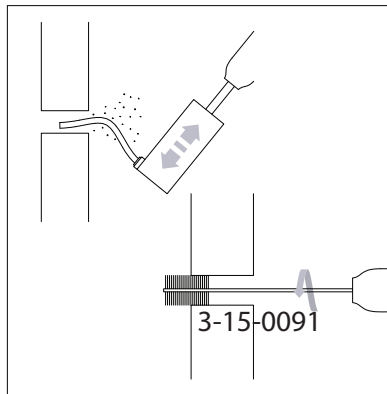
**3-15-0633**  
Int threaded sleeve  
HIT-IC M10x80



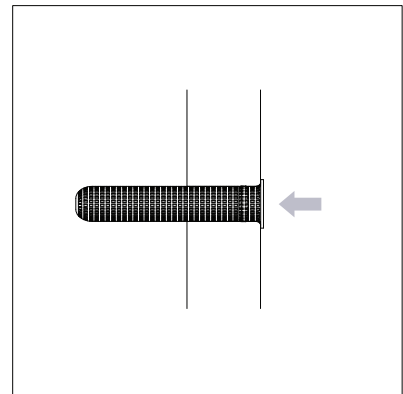
**3-15-0631**  
ANCHOR ADHESIVE  
SCREEN TUBE 22mm OD



Drill hole 27/32"Ø, 90mm deep (through block wall)  
Use 3-15-0630

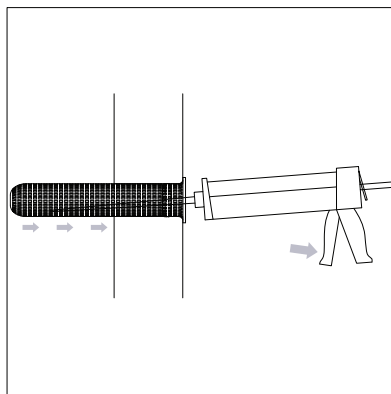


Remove drilling debris with a blowout bulb or with compressed air.  
Brush bore hole.  
Use 3-15-0632+3-15-0096

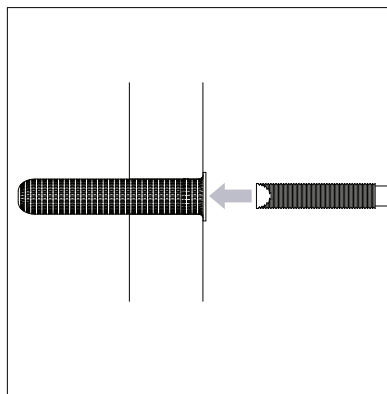


Insert anchor screen tube 3-15-0631

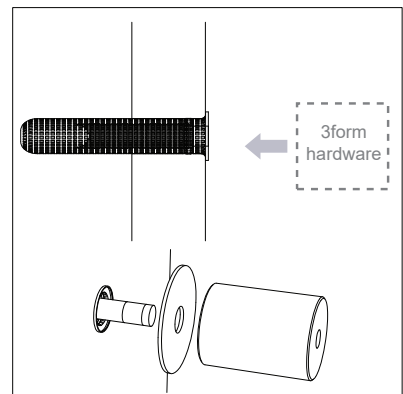
repeat these 2 steps 2 or 3 times



Fill 1/2 - 2/3 full (~6-8 pumps)  
Use Epoxy Adhesive HILTI HIT-HY270 Hybrid Adhesive  
(3-15-0091)



Install insert into the mesh screen so that insert is flush with wall.  
Check if perpendicular to the wall during first five minutes of install  
clean off any excess adhesive so that hardware will sit flush



Don't move anchor for at least 30 min\ before installing 3form hardware.  
minimum (@ 68°F)

# Threadlocking Tape to All Thread Points

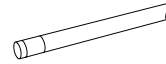
Installation



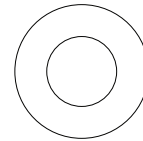
3-15-0030  
1.5" diameter cap  
with M10 threads



3-15-0638  
FHSCS M10x1.5, 50mm

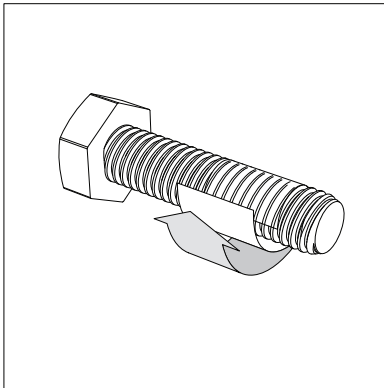


3-15-0104  
M10 threaded rod  
with chisled end

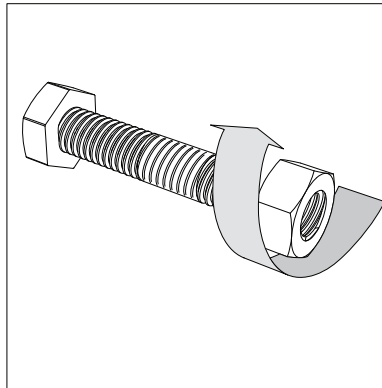


3-15-0109  
Threadlocking Tape

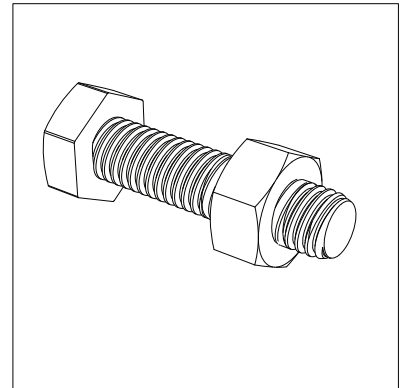
Ensure all surfaces are clean and free from debris. Apply the threadlocking tape where there will be contact between male and female threads.



Under moderate tension wrap the tape onto the male threads in the direction of the threads (clockwise for standard right-handed threads).



After wrapping with tape, profile of threads should be visible. Assemble male and female threads as required.



As you assemble some rolling tape in front of the nut is evidence that the gap is adequately filled.

For Disassembly:  
Remove with standard hand tools

## General Specifications: XT Point Support

### Milled Stainless Steel:

Including parts of; 3-15-0030-K, 3-15-0031-K, 3-15-0032-K, 3-15-0104

Specifications for Milled Stainless Steel for the Point Support XT product line are as follows;

Material:	Marine Grade Stainless Steel 316
Finish:	Mill Finish, Raw
	Powdercoating available
Recommended Use	Exterior and Interior
MSDS information	Recycled content typically approx. 60%, 35% Post Industrial, 25% Post Consumer

### Cast Stainless Steel:

Including parts of; 3-15-0604-K, 3-15-0605-K

Specifications for Cast Stainless Steel for the Point Support XT product line are as follows;

Material:	Marine Grade Stainless Steel 316
Finish:	Mill Finish, Raw
	Powdercoating available
Recommended Use	Exterior and Interior
MSDS information	Recycled content typically approx. 60%, 35% Post Industrial, 25% Post Consumer

### Zinc Plated Mild Steel:

Including parts of; 3-15-0094, 3-15-0631

Specifications for Zinc Plated Steel for the Point Support XT product line are as follows;

Material:	Zinc Plated Mild Steel
Finish:	Zinc Plated
Recommended Use	Exterior and Interior
MSDS information	NA

### Galvanized Mild Steel:

Including parts of; 3-15-0633, 3-15-0636

Specifications for Galvanized Mild Steel for the Point Support XT product line are as follows;

Material:	Galvanized Mild Steel
Finish:	Galvanized
Recommended Use	Exterior and Interior
MSDS information	NA

## Milled Solid Plastic:

Including parts of; 3-15-0030-K

Specifications for Solid Plastics for the Point Support XT product line are as follows;

Material:	Delrin Natural Translucent White
Finish:	Factory
Maximum Length:	NA
Recommended Use:	Exterior and Interior
MSDS information:	NA

## Milled Solid Plastic:

Including parts of; 3-15-0030-K

Specifications for Solid Plastics for the Point Support XT product line are as follows;

Material:	EPTFE, White
Finish:	Factory
Maximum Length:	NA
Recommended Use:	Exterior and Interior
MSDS information:	NA