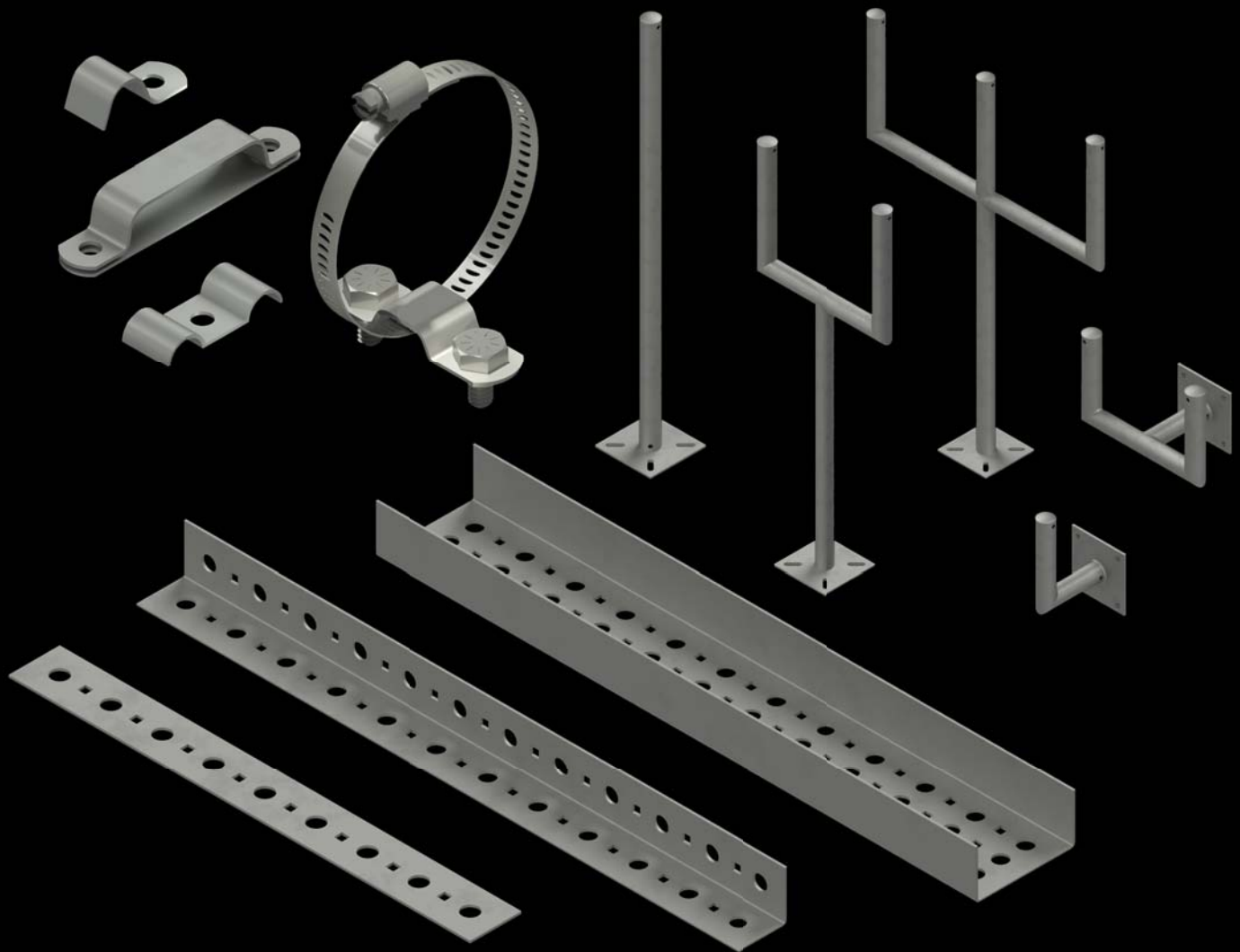


TechLine[®] MFG.

Leader in Instrumentation & Electrical Supports



**Tubing/Channel Tray • Snap Track Cable Tray • Instrument Stands
Condensate Pots • Air Manifolds • Custom Products**

...Supporting future industry today



TechLine[®] MFG.

TechLine's Goal

Techline Mfg.'s Primary goal is to be a world class manufacturer of instrument support and cable tray systems. We will continually design and provide industry with quality controlled innovative products and superior customer service. We will operate with the highest professional, ethical, safety, and quality standards. The management team will continually develop policies and procedures to ensure these objectives are met, while fostering a team culture where all employees work toward these common goals, maximize their individual potential, and share in the results.

Sincerely,



Wendy D'Olive

President
TechLine Manufacturing

Experience The TechLine Advantage

Fast Response to Customer Needs

TechLine Mfg.'s quality products are distributed through select industrial distributors who are able to respond to customer requirements in a professional and timely manner.

Quality Materials

TechLine Mfg. incorporates quality materials from certified suppliers.

Modern Design

TechLine Mfg.'s products are the result of continuous research and product development.

Warranty

TechLine Mfg. warrants all of its products to be free of defects, and that all components ordered will properly assemble to corresponding items.

Easy Installation

A wide variety of standard fittings are available for TechLine tubing and cable tray, minimizing the need for field fabrication and special tools.

Choice of Materials

TechLine Mfg. offers a variety of materials and coatings including: Aluminum, 304SS or 316SS, and a hot dipped galvanized finish meeting ASTM A123-89.

UL Classification

TechLine Mfg. cable tray has been tested and is classified by Underwriters Laboratories. File number E249472.

Made in the USA

TechLine Mfg. products are domestically manufactured.

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Perforated Channel and Angle Tray

Materials & Finishes:

Hot-dipped Galvanized, Aluminum, Stainless Steel and others upon request.

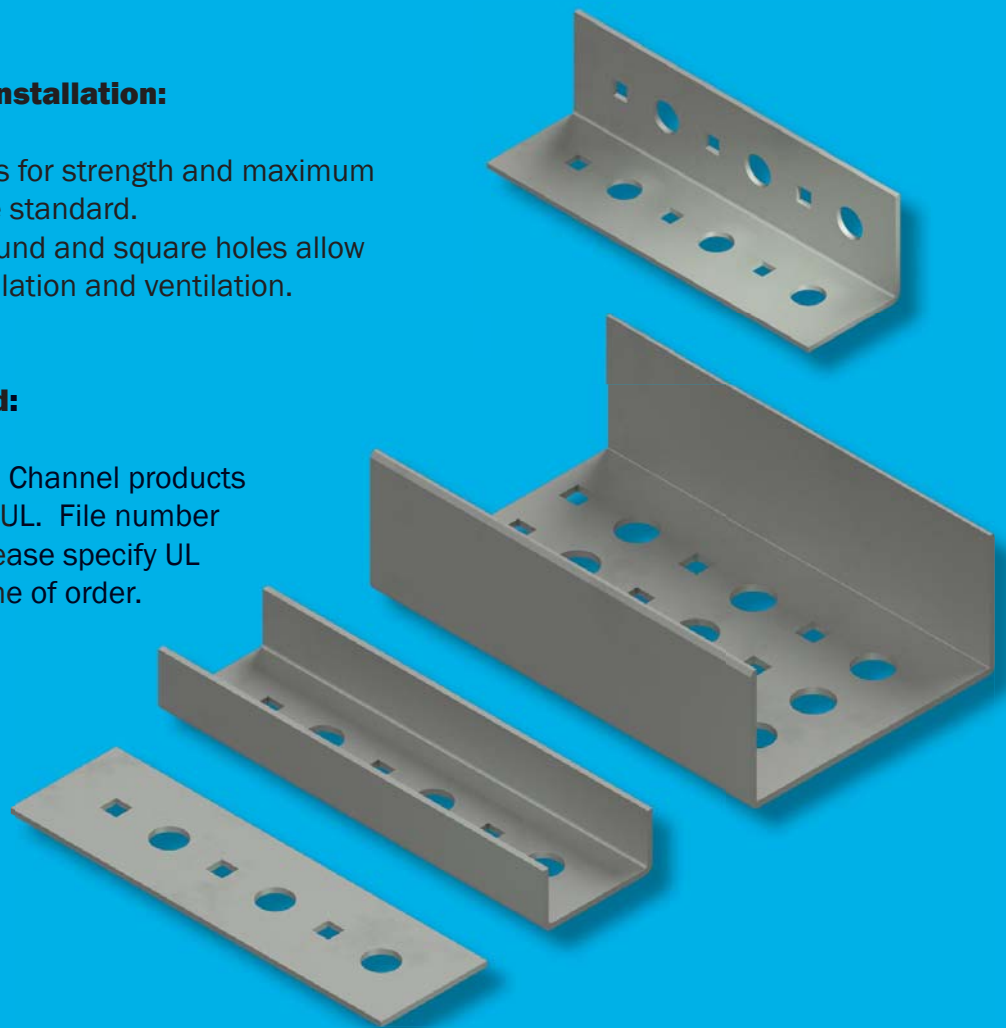
Strength & Installation:

Solid side rails for strength and maximum protection are standard.

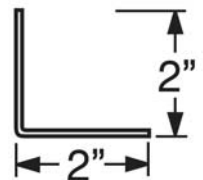
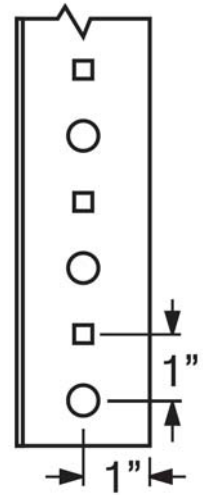
Alternating round and square holes allow for easy installation and ventilation.

UL Classified:

TechLine Mfg. Channel products are classified UL. File number E249472. Please specify UL labeling at time of order.



Angle



Raceway Angle

	W	D	L	
TLA-2-2-AL	2"	2"	20'	8 LBS
TLA-3-3-AL	3"	3"	20'	11 LBS
TLA-2-2-HDG	2"	2"	20'	26 LBS
TLA-3-3-HDG	3"	3"	20'	36 LBS
TLA-2-2-SS	2"	2"	20'	14 LBS
TLA-3-3-SS	3"	3"	20'	19 LBS

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel (16 Gauge Thickness)

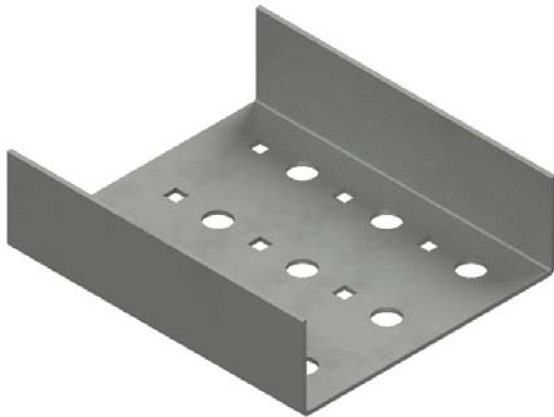
6SS: 316 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123
(12 Gauge Thickness)

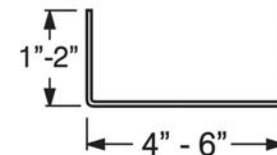
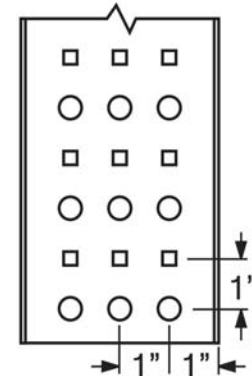
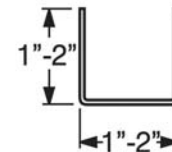
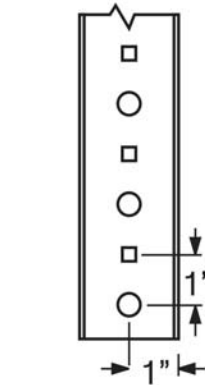
○ Round Holes=9/16"

□ Square Holes=5/16"

Channel



<div> <div>W</div> <div>D</div> <div>L</div> <div> </div> </div> <div> Raceway Channel <div> <div>CLASSIFIED</div> <div>UL</div> <div>Upon Request ★</div> </div> </div>				
TLC-2-1-AL	2"	1"	20'	8 LBS
TLC-2-2-AL	2"	2"	20'	11 LBS
TLC-2-1-HDG	2"	1"	20'	26 LBS
TLC-2-2-HDG	2"	2"	20'	40 LBS
TLC-2-1-SS	2"	1"	20'	14 LBS
TLC-2-2-SS	2"	2"	20'	22 LBS
TLC-4-1-AL	4"	1"	20'	11 LBS
TLC-4-2-AL	4"	2"	20'	16 LBS
TLC-4-1-HDG	4"	1"	20'	36 LBS
TLC-4-2-HDG	4"	2"	20'	52 LBS
TLC-4-1-SS	4"	1"	20'	20 LBS
TLC-4-2-SS	4"	2"	20'	28 LBS
TLC-6-1-AL	6"	1"	20'	16 LBS
TLC-6-2-AL	6"	2"	20'	18 LBS
TLC-6-1-HDG	6"	1"	20'	52 LBS
TLC-6-2-HDG	6"	2"	20'	66 LBS
TLC-6-1-SS	6"	1"	20'	20 LBS
TLC-6-2-SS	6"	2"	20'	35 LBS



AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel (16 Gauge Thickness)

6SS: 316 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123
(12 Gauge Thickness)

○ Round Holes=9/16"

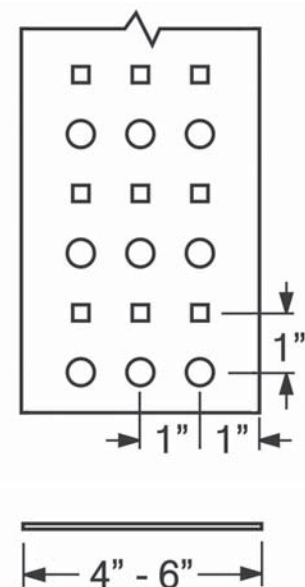
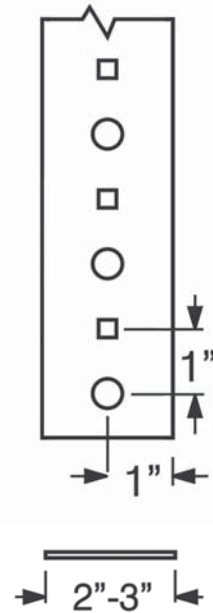
□ Square Holes=5/16"

Flatbar



Raceway Flat Bar			
TLF-2-AL	2"	10'	2.5 LBS
TLF-2-HDG	2"	10'	7 LBS
TLF-2-SS	2"	10'	2 LBS
TLF-3-AL	3"	10'	3.5 LBS
TLF-3-HDG	3"	10'	10 LBS
TLF-3-SS	3"	10'	3 LBS
TLF-4-AL	4"	10'	5 LBS
TLF-4-HDG	4"	10'	12 LBS
TLF-4-SS	4"	10'	4 LBS
TLF-6-AL	6"	10'	8 LBS
TLF-6-HDG	6"	10'	19 LBS
TLF-6-SS	6"	10'	6 LBS

AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)



- Round Holes=9/16"
- Square Holes=5/16"

Fittings

Materials & Finishes:

Hot-dipped Galvanized, Aluminum, Stainless Steel and others upon request.

Strength & Protection:

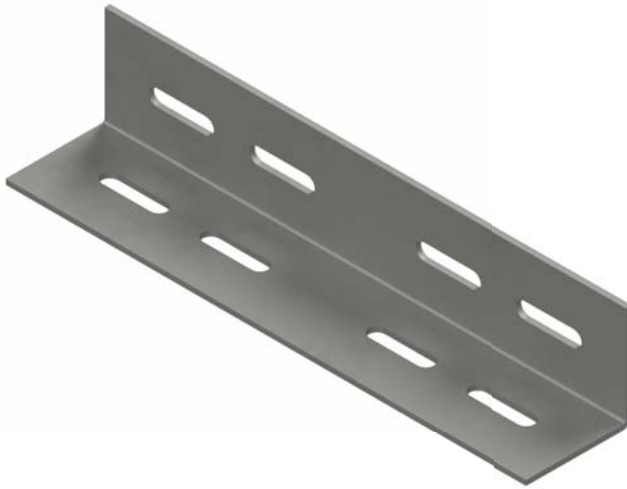
Solid bottom & side rails for maximum strength & protection

UL Classified:

TechLine Mfg. Channel products are available with UL Classification. File number E249472. Please specify UL labeling at time of order.



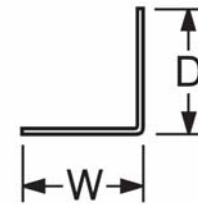
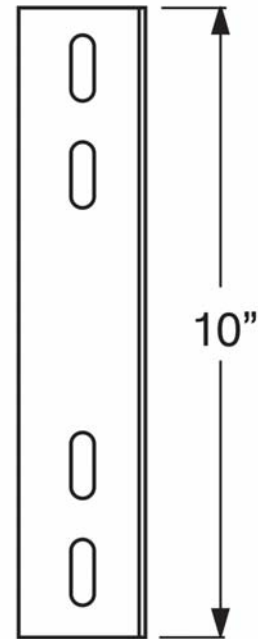
Angle Splice



Installation Guideline:

Minimum of four nuts, bolts and washers per connection. Fasteners sold separately

Fasteners see page 27.



 Slotted Holes=5/16"x1 1/4"

Angle Splice			
TLAS-2-2-AL	2"	2"	1 LBS
TLAS-2-2-HDG	2"	2"	2 LBS
TLAS-2-2-SS	2"	2"	1 LBS
TLAS-3-3-AL	3"	3"	1 LBS
TLAS-3-3-HDG	3"	3"	2 LBS
TLAS-3-3-SS	3"	3"	1 LBS

AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

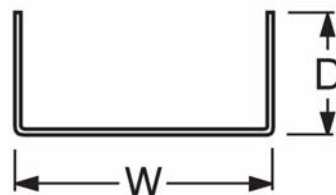
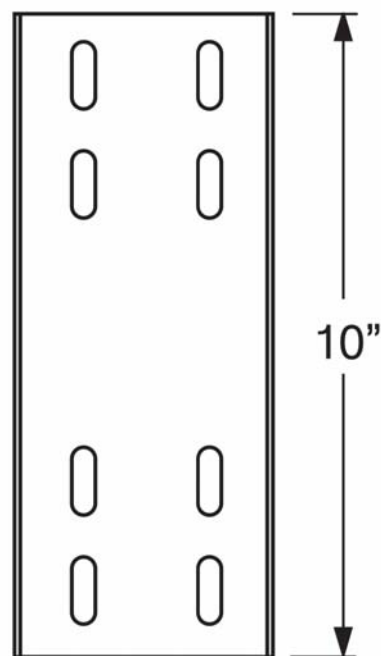
Channel Splice



Installation Guideline:

Minimum of four nuts, bolts and washers per connection. Fasteners sold separately

Fasteners see page 27.



○ Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel (16 Gauge Thickness)

6SS: 316 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123

(12 Gauge Thickness)

Channel Splice

	W	D	
TLCS-2-1-AL	2"	1"	1 LBS
TLCS-2-1-HDG	2"	1"	2 LBS
TLCS-2-1-SS	2"	1"	1 LBS
TLCS-2-2-AL	2"	2"	1 LBS
TLCS-2-2-HDG	2"	2"	2 LBS
TLCS-2-2-SS	2"	2"	1 LBS
TLCS-4-1-AL	4"	1"	1 LBS
TLCS-4-1-HDG	4"	1"	2 LBS
TLCS-4-1-SS	4"	1"	1 LBS
TLCS-4-2-AL	4"	2"	1 LBS
TLCS-4-2-HDG	4"	2"	3 LBS
TLCS-4-2-SS	4"	2"	2 LBS
TLCS-6-1-AL	6"	1"	1 LBS
TLCS-6-1-HDG	6"	1"	3 LBS
TLCS-6-1-SS	6"	1"	2 LBS
TLCS-6-2-AL	6"	2"	2 LBS
TLCS-6-2-HDG	6"	2"	3 LBS
TLCS-6-2-SS	6"	2"	2 LBS

Channel Splice

90° Short Radius Angle Elbows



90° Outside Elbow 3" Radius

TLOE-2-2-AL-3R	2"	2"	9.5"	1 LBS
TLOE-3-3-AL-3R	3"	3"	9.5"	2 LBS
TLOE-2-2-HDG-3R	2"	2"	9.5"	2 LBS
TLOE-3-3-HDG-3R	3"	3"	9.5"	2 LBS
TLOE-2-2-SS-3R	2"	2"	9.5"	2 LBS
TLOE-3-3-SS-3R	3"	3"	9.5"	2 LBS

90° Inside Elbow 3" Radius

TLAV-2-2-AL-3R	2"	2"	9.5"	1 LBS
TLAV-3-3-AL-3R	3"	3"	9.5"	2 LBS
TLAV-2-2-HDG-3R	2"	2"	9.5"	3 LBS
TLAV-3-3-HDG-3R	3"	3"	9.5"	3 LBS
TLAV-2-2-SS-3R	2"	2"	9.5"	2 LBS
TLAV-3-3-SS-3R	3"	3"	9.5"	2 LBS

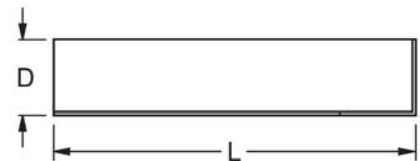
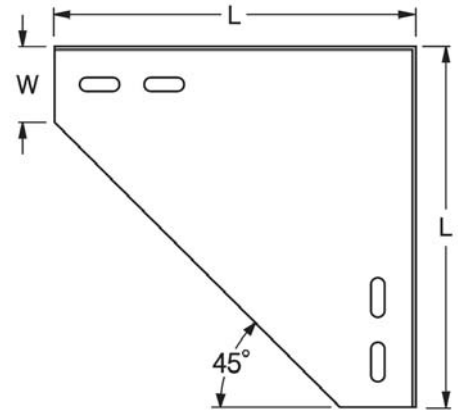
AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel (16 Gauge Thickness)

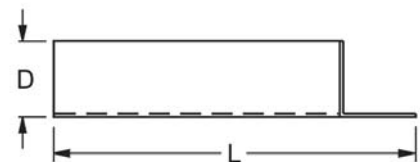
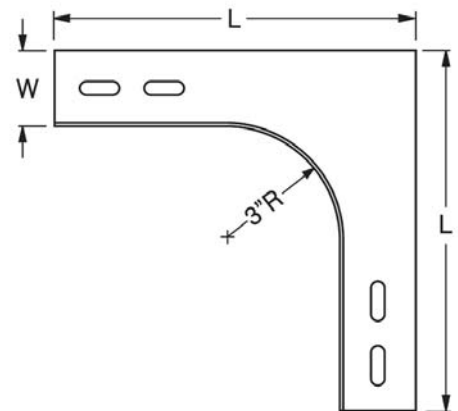
6SS: 316 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123

(12 Gauge Thickness)



OUTSIDE ELBOW

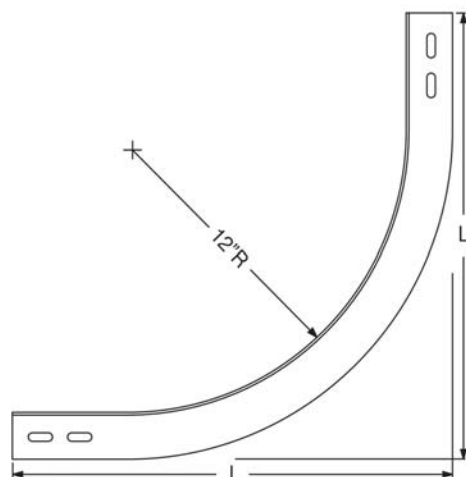


INSIDE ELBOW

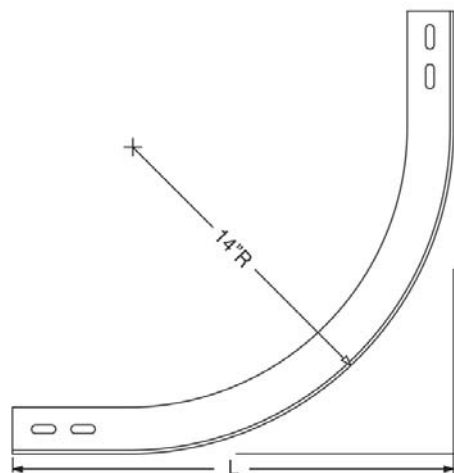
○ Slotted Holes=5/16"x1 1/4"

90° Long Radius Angle Elbows

90° Long Radius Angle Elbows



OUTSIDE ELBOW



INSIDE ELBOW

○ Slotted Holes=5/16"x1 1/4"

90° Outside Elbow 12" Radius

W	D	L	
TLAOE-2-2-AL-12R	2"	2"	19"
TLAOE-3-3-AL-12R	3"	3"	19"
TLAOE-2-2-HDG-12R	2"	2"	19"
TLAOE-3-3-HDG-12R	3"	3"	19"
TLAOE-2-2-SS-12R	2"	2"	19"
TLOE-3-3-SS-12R	3"	3"	19"

90° Inside Elbow 14" Radius

TLAIE-2-2-AL-14R	2"	2"	19"
TLAIE-3-3-AL-14R	3"	3"	19"
TLAIE-2-2-HDG-14R	2"	2"	19"
TLAIE-3-3-HDG-14R	3"	3"	19"
TLAIE-2-2-SS-14R	2"	2"	19"
TLAIE-3-3-SS-14R	3"	3"	19"

AL: Aluminum (12 Gauge Thickness)

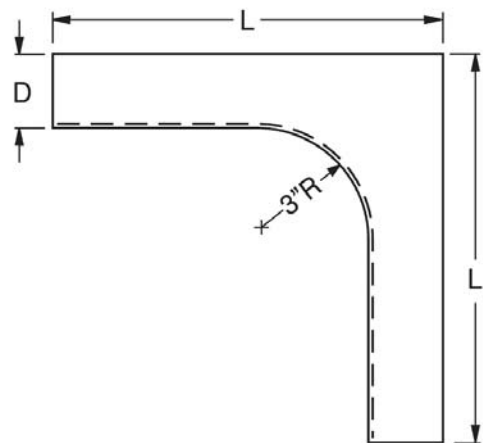
SS: 304 Stainless Steel (16 Gauge Thickness)

6SS: 316 Stainless Steel (16 Gauge Thickness)

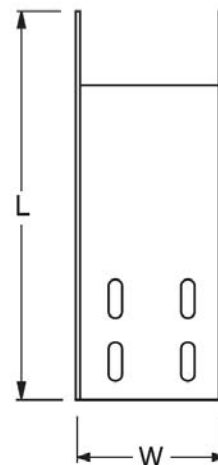
HDG: Hot Dipped Galvanized, ASTM A-123

(12 Gauge Thickness)

Vertical Outside Channel 3" Radius Elbows



SIDE VIEW



END VIEW

○ Slotted Holes=5/16"x1 1/4"

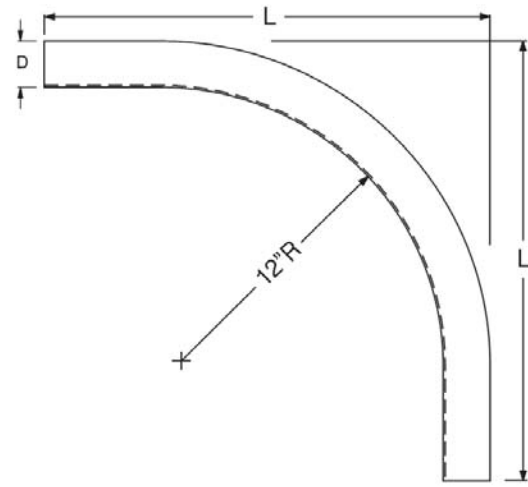
AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

**90° Vertical Outside Bend
3" Radius**

	W	D	L	CLASSIFIED UL Upon Request *
TLV0-2-1-AL-3R	2"	1"	8.5"	1 LBS
TLV0-2-1-HDG-3R	2"	1"	8.5"	2 LBS
TLV0-2-1-SS-3R	2"	1"	8.5"	1 LBS
TLV0-2-2-AL-3R	2"	2"	9.5"	2 LBS
TLV0-2-2-HDG-3R	2"	2"	9.5"	2 LBS
TLV0-2-2-SS-3R	2"	2"	9.5"	2 LBS
TLV0-4-1-HDG-3R	4"	1"	8.5"	3 LBS
TLV0-4-1-AL-3R	4"	1"	8.5"	2 LBS
TLV0-4-1-SS-3R	4"	1"	8.5"	2 LBS
TLV0-4-2-HDG-3R	4"	2"	9.5"	4 LBS
TLV0-4-2-AL-3R	4"	2"	9.5"	2 LBS
TLV0-4-2-SS-3R	4"	2"	9.5"	3 LBS
TLV0-6-1-HDG-3R	6"	1"	8.5"	4 LBS
TLV0-6-1-AL-3R	6"	1"	8.5"	2 LBS
TLV0-6-1-SS-3R	6"	1"	8.5"	3 LBS
TLV0-6-2-HDG-3R	6"	2"	9.5"	5 LBS
TLV0-6-2-AL-3R	6"	2"	9.5"	2 LBS
TLV0-6-2-SS-3R	6"	2"	9.5"	4 LBS

*UL labeling available upon request from factory prior to ordering. UL Classification is only available in 2" sidewall channel and fittings.


Vertical Outside Channel 12" Radius Elbows



SIDE VIEW



END VIEW

 Slotted Holes=5/16"x1 1/4"

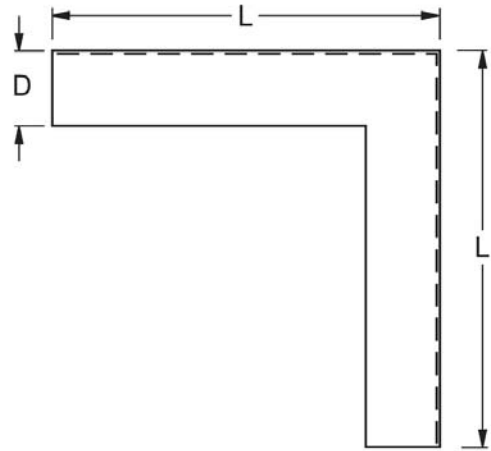
AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

90° Long Radius Channel Elbows

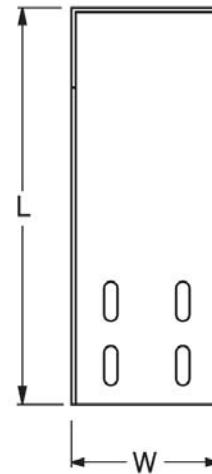
90° Vertical Outside Bend
12" Radius

	W	D	L	
TLV0-2-1-AL-12R	2"	1"	18"	2 LBS
TLV0-2-1-HDG-12R	2"	1"	18"	4 LBS
TLV0-2-1-SS-12R	2"	1"	18"	3 LBS
TLV0-2-2-AL-12R	2"	2"	19"	3 LBS
TLV0-2-2-HDG-12R	2"	2"	19"	6 LBS
TLV0-2-2-SS-12R	2"	2"	19"	4 LBS
TLV0-4-1-HDG-12R	4"	1"	18"	6 LBS
TLV0-4-1-AL-12R	4"	1"	18"	3 LBS
TLV0-4-1-SS-12R	4"	1"	18"	4 LBS
TLV0-4-2-HDG-12R	4"	2"	19"	8 LBS
TLV0-4-2-AL-12R	4"	2"	19"	3 LBS
TLV0-4-2-SS-12R	4"	2"	19"	4 LBS
TLV0-6-1-HDG-12R	6"	1"	18"	8 LBS
TLV0-6-1-AL-12R	6"	1"	18"	3 LBS
TLV0-6-1-SS-12R	6"	1"	18"	4 LBS
TLV0-6-2-HDG-12R	6"	2"	19"	9 LBS
TLV0-6-2-AL-12R	6"	2"	19"	4 LBS
TLV0-6-2-SS-12R	6"	2"	19"	5 LBS

Vertical Inside Channel 3" Radius Elbows



SIDE VIEW



END VIEW

 Slotted Holes=5/16"x1 1/4"

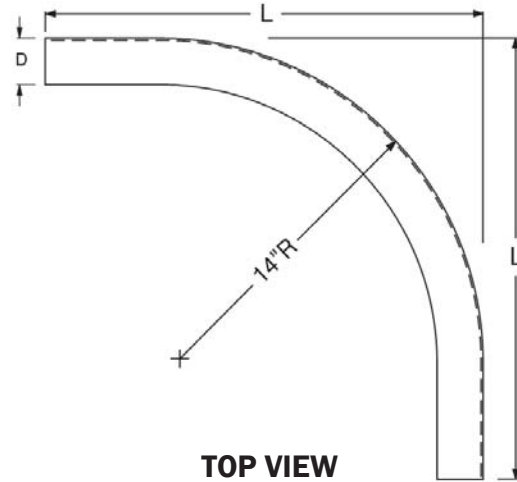
AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

90° Vertical Inside Bend 3" Radius

	W	D	L	
TLVI-2-1-AL-3R	2"	1"	7.5"	1 LBS
TLVI-2-1-HDG-3R	2"	1"	7.5"	2 LBS
TLVI-2-1-SS-3R	2"	1"	7.5"	1 LBS
TLVI-2-2-AL-3R	2"	2"	7.5"	2 LBS
TLVI-2-2-HDG-3R	2"	2"	7.5"	2 LBS
TLVI-2-2-SS-3R	2"	2"	7.5"	2 LBS
TLVI-4-1-HDG-3R	4"	1"	7.5"	3 LBS
TLVI-4-1-AL-3R	4"	1"	7.5"	2 LBS
TLVI-4-1-SS-3R	4"	1"	7.5"	2 LBS
TLVI-4-2-HDG-3R	4"	2"	7.5"	4 LBS
TLVI-4-2-AL-3R	4"	2"	7.5"	2 LBS
TLVI-4-2-SS-3R	4"	2"	7.5"	3 LBS
TLVI-6-1-HDG-3R	6"	1"	7.5"	4 LBS
TLVI-6-1-AL-3R	6"	1"	7.5"	2 LBS
TLVI-6-1-SS-3R	6"	1"	7.5"	3 LBS
TLVI-6-2-HDG-3R	6"	2"	7.5"	5 LBS
TLVI-6-2-AL-3R	6"	2"	7.5"	2 LBS
TLVI-6-2-SS-3R	6"	2"	7.5"	4 LBS

*UL labeling available upon request from factory prior to ordering. UL Classification is only available in 2" sidewall channel and fittings.

Vertical Inside Channel 14" Radius Elbows



TOP VIEW



END VIEW

○ Slotted Holes=5/16"x1 1/4"

90° Long Radius Channel Elbows

90° Vertical Inside Bend 14" Radius



	W	D	L	
TLVI-2-1-AL-14R	2"	1"	19"	2 LBS
TLVI-2-1-HDG-14R	2"	1"	19"	4 LBS
TLVI-2-1-SS-14R	2"	1"	19"	3 LBS
TLVI-2-2-AL-14R	2"	2"	19"	3 LBS
TLVI-2-2-HDG-14R	2"	2"	19"	6 LBS
TLVI-2-2-SS-14R	2"	2"	19"	3 LBS
TLVI-4-1-HDG-14R	4"	1"	19"	6 LBS
TLVI-4-1-AL-14R	4"	1"	19"	3 LBS
TLVI-4-1-SS-14R	4"	1"	19"	4 LBS
TLVI-4-2-HDG-14R	4"	2"	19"	8 LBS
TLVI-4-2-AL-14R	4"	2"	19"	3 LBS
TLVI-4-2-SS-14R	4"	2"	19"	5 LBS
TLVI-6-1-HDG-14R	6"	1"	19"	8 LBS
TLVI-6-1-AL-14R	6"	1"	19"	4 LBS
TLVI-6-1-SS-14R	6"	1"	19"	5 LBS
TLVI-6-2-HDG-14R	6"	2"	19"	10 LBS
TLVI-6-2-AL-14R	6"	2"	19"	4 LBS
TLVI-6-2-SS-14R	6"	2"	19"	6 LBS

AL: Aluminum (12 Gauge Thickness)

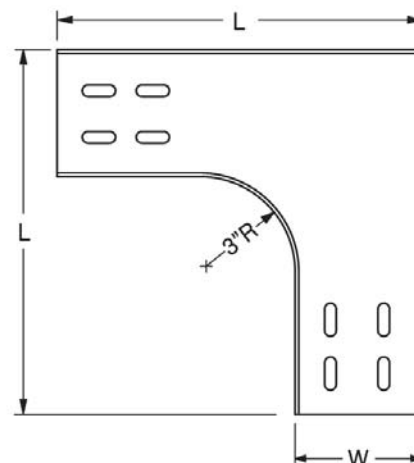
SS: 304 Stainless Steel (16 Gauge Thickness)

6SS: 316 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123
(12 Gauge Thickness)

*UL labeling available upon request from factory prior to ordering. UL Classification is only available in 2" sidewall channel and fittings.

Horizontal Channel 3" Radius Elbows



TOP VIEW



SIDE VIEW

 Slotted Holes=5/16"x1 1/4"

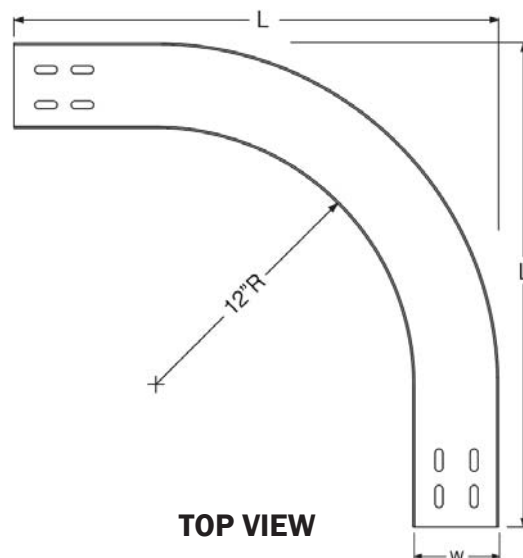
AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

90° Horizontal Bend
3" Radius

	W	D	L	CLASSIFIED UL Upon Request *
TLHE-2-1-AL-3R	2"	1"	9.75"	1 LBS
TLHE-2-1-HDG-3R	2"	1"	9.75"	3 LBS
TLHE-2-1-SS-3R	2"	1"	9.75"	2 LBS
TLHE-2-2-AL-3R	2"	2"	9.75"	2 LBS
TLHE-2-2-HDG-3R	2"	2"	9.75"	4 LBS
TLHE-2-2-SS-3R	2"	2"	9.75"	3 LBS
TLHE-4-1-HDG-3R	4"	1"	11.75"	4 LBS
TLHE-4-1-AL-3R	4"	1"	11.75"	2 LBS
TLHE-4-1-SS-3R	4"	1"	11.75"	3 LBS
TLHE-4-2-HDG-3R	4"	2"	11.75"	5 LBS
TLHE-4-2-AL-3R	4"	2"	11.75"	2 LBS
TLHE-4-2-SS-3R	4"	2"	11.75"	3 LBS
TLHE-6-1-HDG-3R	6"	1"	13.75"	5 LBS
TLHE-6-1-AL-3R	6"	1"	13.75"	3 LBS
TLHE-6-1-SS-3R	6"	1"	13.75"	4 LBS
TLHE-6-2-HDG-3R	6"	2"	13.75"	6 LBS
TLHE-6-2-AL-3R	6"	2"	13.75"	3 LBS
TLHE-6-2-SS-3R	6"	2"	13.75"	4 LBS

*UL labeling available upon request from factory prior to ordering. UL Classification is only available in 2" sidewall channel and fittings.

Horizontal Channel 12" Radius Elbows



TOP VIEW



SIDE VIEW

 Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)
SS: 304 Stainless Steel (16 Gauge Thickness)
6SS: 316 Stainless Steel (16 Gauge Thickness)
HDG: Hot Dipped Galvanized, ASTM A-123
 (12 Gauge Thickness)

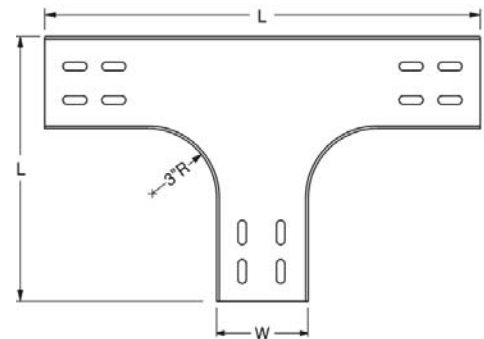
90° Long Radius Channel Elbows

90° Horizontal Bend 12" Radius

	W	D	L	
TLHE-2-1-AL-12R	2"	1"	18"	2 LBS
TLHE-2-1-HDG-12R	2"	1"	18"	5 LBS
TLHE-2-1-SS-12R	2"	1"	18"	3 LBS
TLHE-2-2-AL-12R	2"	2"	19"	3 LBS
TLHE-2-2-HDG-12R	2"	2"	19"	7 LBS
TLHE-2-2-SS-12R	2"	2"	19"	4 LBS
TLHE-4-1-HDG-12R	4"	1"	18"	7 LBS
TLHE-4-1-AL-12R	4"	1"	18"	3 LBS
TLHE-4-1-SS-12R	4"	1"	18"	4 LBS
TLHE-4-2-HDG-12R	4"	2"	19"	9 LBS
TLHE-4-2-AL-12R	4"	2"	19"	4 LBS
TLHE-4-2-SS-12R	4"	2"	19"	5 LBS
TLHE-6-1-HDG-12R	6"	1"	18"	10 LBS
TLHE-6-1-AL-12R	6"	1"	18"	4 LBS
TLHE-6-1-SS-12R	6"	1"	18"	5 LBS
TLHE-6-2-HDG-12R	6"	2"	19"	11 LBS
TLHE-6-2-AL-12R	6"	2"	19"	5 LBS
TLHE-6-2-SS-12R	6"	2"	19"	6 LBS

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Channel Tee 3" Radius



TOP VIEW



END VIEW

 Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel
(16 Gauge Thickness)

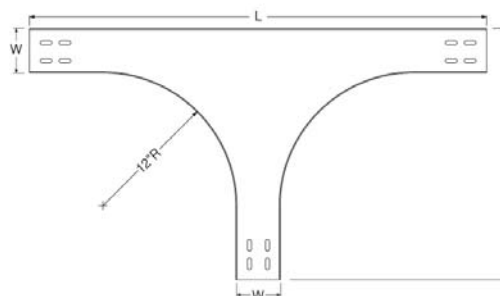
6SS: 316 Stainless Steel
(16 Gauge Thickness)

HDG: Hot Dipped Galvanized
ASTM A-123 (12 Gauge Thickness)

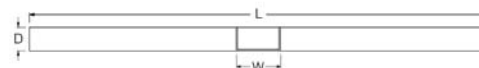
3" Radius Tee					
	W	D	L	L	
TLCT-2-1-AL-3R	2"	1"	17.25"	10.25"	1 LBS
TLCT-2-1-HDG-3R	2"	1"	17.25"	10.25"	3 LBS
TLCT-2-1-SS-3R	2"	1"	17.25"	10.25"	2 LBS
TLCT-2-2-AL-3R	2"	2"	17.25"	10.25"	2 LBS
TLCT-2-2-HDG-3R	2"	2"	17.25"	10.25"	5 LBS
TLCT-2-2-SS-3R	2"	2"	17.25"	10.25"	3 LBS
TLCT-4-1-HDG-3R	4"	1"	19.25"	12.25"	5 LBS
TLCT-4-1-AL-3R	4"	1"	19.25"	12.25"	3 LBS
TLCT-4-1-SS-3R	4"	1"	19.25"	12.25"	3 LBS
TLCT-4-2-HDG-3R	4"	2"	19.25"	12.25"	6 LBS
TLCT-4-2-AL-3R	4"	2"	19.25"	12.25"	3 LBS
TLCT-4-2-SS-3R	4"	2"	19.25"	12.25"	4 LBS
TLCT-6-1-HDG-3R	6"	1"	21.25"	14.25"	6 LBS
TLCT-6-1-AL-3R	6"	1"	21.25"	14.25"	2 LBS
TLCT-6-1-SS-3R	6"	1"	21.25"	14.25"	4 LBS
TLCT-6-2-HDG-3R	6"	2"	21.25"	14.25"	8 LBS
TLCT-6-2-AL-3R	6"	2"	21.25"	14.25"	4 LBS
TLCT-6-2-SS-3R	6"	2"	21.25"	14.25"	5 LBS

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Channel Tee 12" Radius



TOP VIEW



END VIEW

○ Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel
(16 Gauge Thickness)

6SS: 316 Stainless Steel
(16 Gauge Thickness)

HDG: Hot Dipped Galvanized
ASTM A-123 (12 Gauge Thickness)

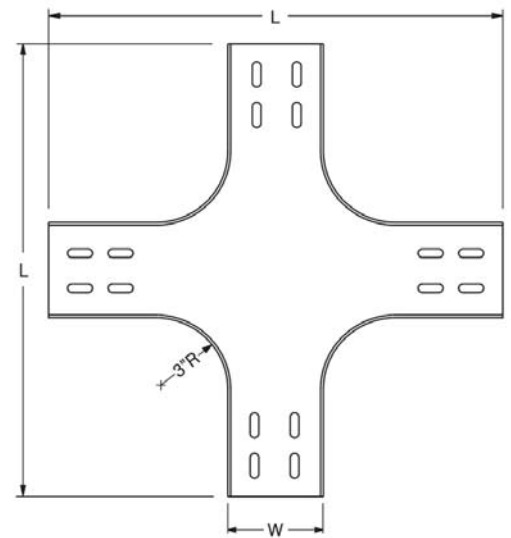
12" Radius Tee



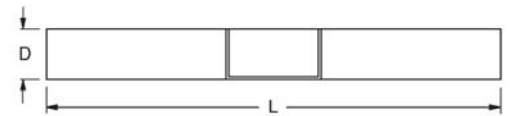
	W	D	L	L	
TLCT-2-1-AL-12R	2"	1"	36.25"	21.25"	3 LBS
TLCT-2-1-HDG-12R	2"	1"	36.25"	21.25"	8 LBS
TLCT-2-1-SS-12R	2"	1"	36.25"	21.25"	7 LBS
TLCT-2-2-AL-12R	2"	2"	36.25"	21.25"	4 LBS
TLCT-2-2-HDG-12R	2"	2"	36.25"	21.25"	12 LBS
TLCT-2-2-SS-12R	2"	2"	36.25"	21.25"	8 LBS
TLCT-4-1-HDG-12R	4"	1"	38.25"	23.25"	10 LBS
TLCT-4-1-AL-12R	4"	1"	38.25"	23.25"	4 LBS
TLCT-4-1-SS-12R	4"	1"	38.25"	23.25"	10 LBS
TLCT-4-2-HDG-12R	4"	2"	38.25"	23.25"	16 LBS
TLCT-4-2-AL-12R	4"	2"	38.25"	23.25"	6 LBS
TLCT-4-2-SS-12R	4"	2"	38.25"	23.25"	11 LBS
TLCT-6-1-HDG-12R	6"	1"	40.25"	25.25"	17 LBS
TLCT-6-1-AL-12R	6"	1"	40.25"	25.25"	6 LBS
TLCT-6-1-SS-12R	6"	1"	40.25"	25.25"	12 LBS
TLCT-6-2-HDG-12R	6"	2"	40.25"	25.25"	19 LBS
TLCT-6-2-AL-12R	6"	2"	40.25"	25.25"	10 LBS
TLCT-6-2-SS-12R	6"	2"	40.25"	25.25"	14 LBS

*UL labeling available upon request from factory prior to ordering. UL Classification is only available in 2" sidewall channel and fittings.

Channel Cross 3" Radius



TOP VIEW



END VIEW

 Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel
(16 Gauge Thickness)

6SS: 316 Stainless Steel
(16 Gauge Thickness)

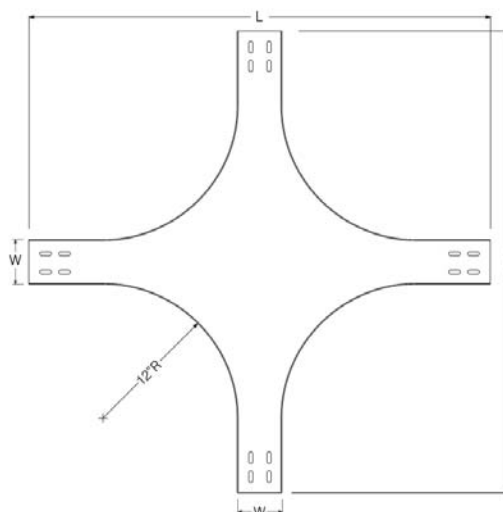
HDG: Hot Dipped Galvanized
ASTM A-123 (12 Gauge Thickness)

3" Radius Cross

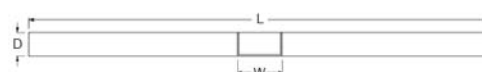
	W	D	A	L	
TLCC-2-1-AL-3R	2"	1"	17.25"	17.25"	2 LBS
TLCC-2-1-HDG-3R	2"	1"	17.25"	17.25"	5 LBS
TLCC-2-1-SS-3R	2"	1"	17.25"	17.25"	3 LBS
TLCC-2-2-AL-3R	2"	2"	17.25"	17.25"	2 LBS
TLCC-2-2-HDG-3R	2"	2"	17.25"	17.25"	7 LBS
TLCC-2-2-SS-3R	2"	2"	17.25"	17.25"	3 LBS
TLCC-4-1-HDG-3R	4"	1"	19.25"	19.25"	6 LBS
TLCC-4-1-AL-3R	4"	1"	19.25"	19.25"	3 LBS
TLCC-4-1-SS-3R	4"	1"	19.25"	19.25"	5 LBS
TLCC-4-2-HDG-3R	4"	2"	19.25"	19.25"	9 LBS
TLCC-4-2-AL-3R	4"	2"	19.25"	19.25"	3 LBS
TLCC-4-2-SS-3R	4"	2"	19.25"	19.25"	5 LBS
TLCC-6-1-HDG-3R	6"	1"	21.25"	21.25"	7 LBS
TLCC-6-1-AL-3R	6"	1"	21.25"	21.25"	4 LBS
TLCC-6-1-SS-3R	6"	1"	21.25"	21.25"	6 LBS
TLCC-6-2-HDG-3R	6"	2"	21.25"	21.25"	12 LBS
TLCC-6-2-AL-3R	6"	2"	21.25"	21.25"	4 LBS
TLCC-6-2-SS-3R	6"	2"	21.25"	21.25"	6 LBS

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Channel Cross 12" Radius



TOP VIEW



SIDE VIEW

○ Slotted Holes=5/16"x1 1/4"

AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel
(16 Gauge Thickness)

6SS: 316 Stainless Steel
(16 Gauge Thickness)

HDG: Hot Dipped Galvanized
ASTM A-123 (12 Gauge Thickness)

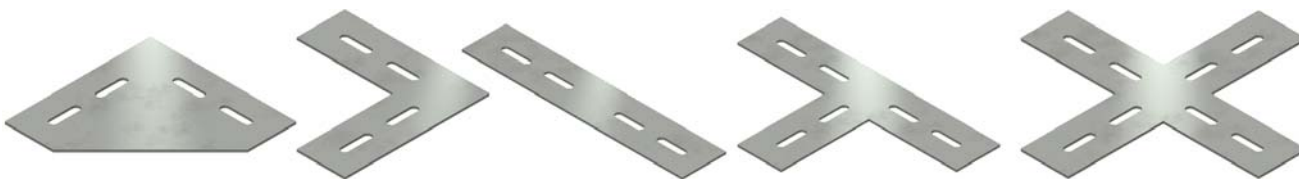
12" Radius Cross



	W	D	A	L	
TLCC-2-1-AL-12R	2"	1"	36.25"	36.25"	4 LBS
TLCC-2-1-HDG-12R	2"	1"	36.25"	36.25"	10 LBS
TLCC-2-1-SS-12R	2"	1"	36.25"	36.25"	8 LBS
TLCC-2-2-AL-12R	2"	2"	36.25"	36.25"	5 LBS
TLCC-2-2-HDG-12R	2"	2"	36.25"	36.25"	13 LBS
TLCC-2-2-SS-12R	2"	2"	36.25"	36.25"	10 LBS
TLCC-4-1-HDG-12R	4"	1"	38.25"	38.25"	12 LBS
TLCC-4-1-AL-12R	4"	1"	38.25"	38.25"	5 LBS
TLCC-4-1-SS-12R	4"	1"	38.25"	38.25"	12 LBS
TLCC-4-2-HDG-12R	4"	2"	38.25"	38.25"	18 LBS
TLCC-4-2-AL-12R	4"	2"	38.25"	38.25"	8 LBS
TLCC-4-2-SS-12R	4"	2"	38.25"	38.25"	13 LBS
TLCC-6-1-HDG-12R	6"	1"	40.25"	40.25"	19 LBS
TLCC-6-1-AL-12R	6"	1"	40.25"	40.25"	8 LBS
TLCC-6-1-SS-12R	6"	1"	40.25"	40.25"	14 LBS
TLCC-6-2-HDG-12R	6"	2"	40.25"	40.25"	21 LBS
TLCC-6-2-AL-12R	6"	2"	40.25"	40.25"	12 LBS
TLCC-6-2-SS-12R	6"	2"	40.25"	40.25"	16 LBS

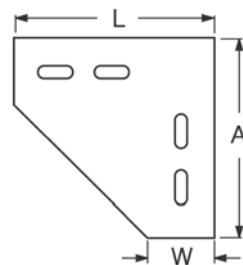
Long Radius Cross

Flat Splice, Elbows, Tee & Cross

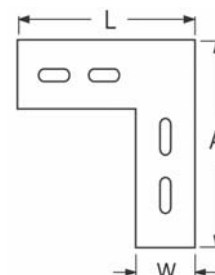


Bonding Plate

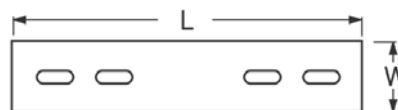
	W	A	L
Flat Elbow 3" Radius			
TLFS-2-F * * 3R	2"	6"	6"
TLFS-3-F __ 3R	3"	6"	6"
Flat Splice			
TLFS-2- __ __	2"	-	10"
TLFS-3- __ __	3"	-	10"
TLFS-4- __ __	4"	-	10"
TLFS-6- __ __	6"	-	10"
90° Flat Splice			
TLLS-2- __ __	2"	6"	6"
TLLS-3- __ __	3"	7"	7"
TLLS-4- __ __	4"	8"	8"
TLLS-6- __ __	6"	10"	10"
Flat Tee Splice			
TLTS-2- __ __	2"	6"	10"
TLTS-3- __ __	3"	7"	11"
TLTS-4- __ __	4"	8"	12"
TLTS-6- __ __	6"	10"	14"
Flat Cross Splice			
TLXS-2- __ __	2"	10"	10"
TLXS-3- __ __	3"	11"	11"
TLXS-4- __ __	4"	12"	12"
TLXS-6- __ __	6"	14"	14"



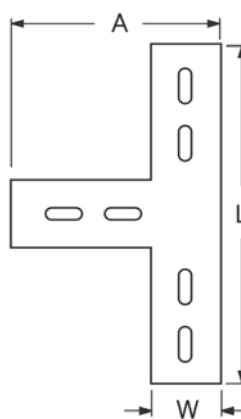
FLAT ELBOW 3"R



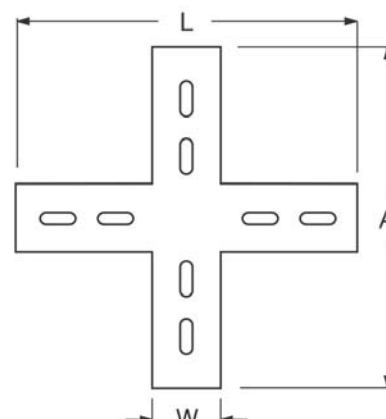
90 FLAT SPLICE



FLAT SPLICE



FLAT TEE SPLICE



FLAT CROSS SPLICE

**** Select appropriate suffix for Material Finishes: TLFS-2- AL**

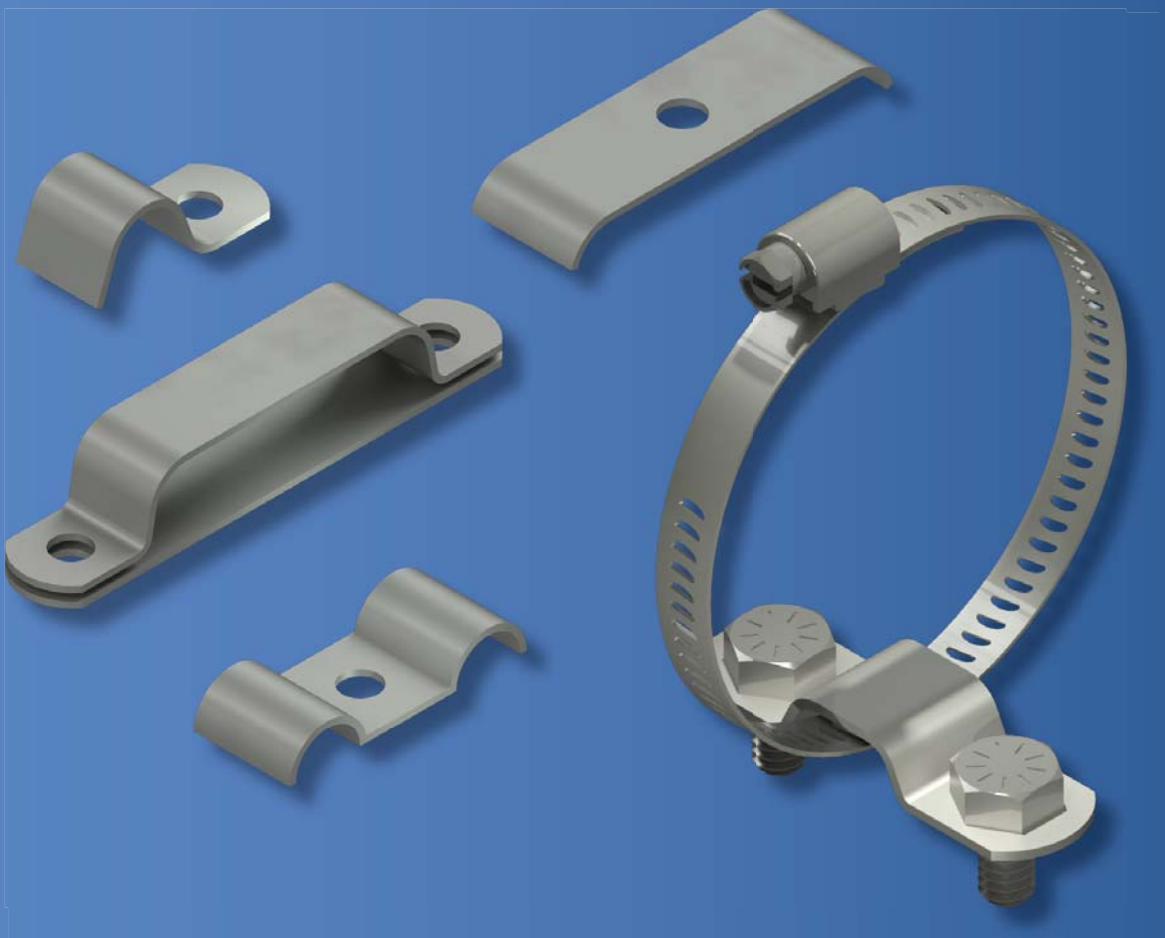
AL: Aluminum (12 Gauge Thickness)

SS: 304 Stainless Steel (16 Gauge Thickness)

HDG: Hot Dipped Galvanized, ASTM A-123 (12 Gauge Thickness)

Note: Contact factory for additional materials or finishes.

Clamps



Yoke, Single & Duplex Clamps

Part Number	Tube OD	Number of Tubes
Yoke Clamps		
TLY4-2	1/4"	2
TLY4-3	1/4"	2 thru 4
TLY6-2	3/8"	2
TLY6-3	3/8"	2 thru 3
TLY8-2	1/2"	2
TLY8-3	1/2"	2 thru 4
TLY12-2	3/4"	2
TLY4-10	variable sizes	multiple
TLY8-10	variable sizes	multiple

Note:

TLY6-3 fits 2" Wide Channel and Angle.

TLY4-10 fits 4"-6" Wide Channel.

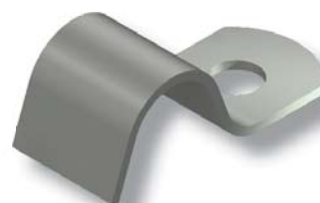
TLY8-10 fits 6" Wide Channel.

Part Number	Tube OD
Single Tube Clamps	
TLG4-1SSN	1/4"
TLG6-1SSN	3/8"
TLG8-1SSN	1/2"
TLG10-1SSN	5/8"
TLG12-1SSN	3/4"
TLG16-1SSN	1"
Duplex Clamps	
TLD4-2	1/4"
TLD6-2	3/8"
TLD8-2	1/2"
TLD12-2	3/4"
TLD16-2	1"

Note: Nuts and bolts sold separately.



Yoke Clamps
316SS Material
100 Clamps per bag



Single Clamps
316SS Material
50 Clamps per bag



Duplex Clamps
316SS Material
50 Clamps per bag

Gang Clamps

Gang Clamps

Part Number

of Tubes

Gang Clamps

TLG4-2SSB	2
TLG4-3SSB	3
TLG4-4SSB	4
TLG4-5SSB	5
TLG4-6SSB	6
TLG4-7SSB	7
TLG4-8SSB	8
TLG4-9SSB	9
TLG4-10SSB	10
TLG4-11SSB	11
TLG4-12SSB	12
TLG6-2SSB	2
TLG6-3SSB	3
TLG6-4SSB	4
TLG6-5SSB	5
TLG6-6SSB	6
TLG6-7SSB	7
TLG6-8SSB	8
TLG6-9SSB	9
TLG6-10SSB	10
TLG6-11SSB	11
TLG6-12SSB	12
TLG8-2SSB	2
TLG8-3SSB	3
TLG8-4SSB	4
TLG8-5SSB	5
TLG8-6SSB	6
TLG8-7SSB	7
TLG8-8SSB	8
TLG8-9SSB	9
TLG8-10SSB	10



Gang Clamps

316SS Material

25 Clamps per bag

***NOTE: Fasteners Sold Separately**

Example: TLG - * - * - SSB

Basic Part:

TechLine Mfg. Gang Clamp

Tube OD:

1/4=4; 3/8=6; 1/2=8

of Tubes:

2
3
4
5
6
7
8
9
10
11
12

SS Back Plate

Bundle Clamps & Cushion Clamps

Bundle Clamps are used to secure bundles of tubing or cable to TechLine Mfg. angle and channel. Bundle clamps are available in 304SS. Complete assembly comes with Bundle worm gear clamp, hold down clamp, 2 each Hex Bolts and Hex Nuts. 25 Clamps per bag.

Part Number	Cable Size
Bundle Clamps	
TLBC 0.0-1.2	1.24" or less
TLBC 1.2-2.0	1.25" to 2.00"
TLBC 2.0-3.0	2.00" to 3.00"
TLBC 3.0-4.0	3.00" to 4.00"
TLBC 4.0-5.0	4.00" to 5.00"
TLBC 5.0-6.0	5.00" to 6.00"



Cushion Clamps are used to secure tubing or pipe to strut. This provides vibration isolation or protection from dissimilar metals. Cushion clamps come in both a zinc plated and 304SS finish. Complete assembly comes with cushion insert, outer metal clamp and hardware.

Steel Part No.	SS Part No.	Tube Size
Cushion Clamps		
004T008	004NS008	1/4"
006T010	006NS010	3/8"
008T012	008NS012	1/2"
012T016	012NS016	3/4"
016T020	016NS020	1"



*Standard stock sizes and finishes listed. Contact TechLine Mfg. for additional tubing and pipe diameter sizes.

Fasteners

Finishes:

304 SS

316 SS

Zinc Plated

Hot Dipped Galvanized

Aluminum



Variety:

All standard size fasteners in stock.
Special sizes available upon request.

Fasteners

Zinc Plated

304 Stainless Steel

1/4" Carriage Bolts

ZP25CB.50	SS25CB.50
ZP25CB.75	SS25CB.75
ZP25CB1.00	SS25CB1.00
ZP25CB1.25	SS25CB1.25
ZP25CB1.50	SS25CB1.25
ZP25CB2.00	SS25CB2.00
ZP25CB3.00	SS25CB3.00
ZP25CB4.00	SS25CB4.00

1/4" Hex Bolts

ZP25HB.50	SS25HB.50
ZP25HB.75	SS25HB.75
ZP25HB1.00	SS25HB1.00
ZP25HB1.25	SS25HB1.25
ZP25HB1.50	SS25HB1.50
ZP25HB2.00	SS25HB2.00
ZP25HB3.00	SS25HB3.00
ZP25HB4.00	SS25HB4.00

1/4" Slotted Cap Screw

ZP25CS.50	SS25CS.50
ZP25CS.75	SS25CS.75
ZP25CS1.00	SS25CS1.00
ZP25CS1.25	SS25CS1.25
ZP25CS1.50	SS25CS1.50
ZP25CS2.00	SS25CS2.00
ZP25CS3.00	SS25CS3.00
ZP25CS4.00	SS25CS4.00

Flat Washers

(1/4") ZP25FW	(1/4") SS25FW
(5/16") ZP31FW	(5/16") SS31FW
(3/8") ZP38FW	(3/8") SS38FW
(1/2") ZP50FW	(1/2") SS50FW

Lock Washers

(1/4") ZP25LW	(1/4") SS25LW
(5/16") ZP31LW	(5/16") SS31LW
(3/8") ZP38LW	(3/8") SS38LW
(1/2") ZP50LW	(1/2") SS50LW

Hex Nuts & Wing Nuts

(1/4") ZP25HN	(1/4") SS25HN
(5/16") ZP31HN	(5/16") SS31HN
(3/8") ZP38HN	(3/8") SS38HN
(1/2") ZP50HN	(1/2") SS50HN
(1/4") ZP25WN	(1/4") SS25WN

Note: All fasteners 100 pieces per bag.
Other sizes available upon request.



Instrument Stands

Materials and Finishes:

Hot-dipped Galvanized per
ASTM A-123

Metallized

Aluminum

304 SS

316 SS

Painted

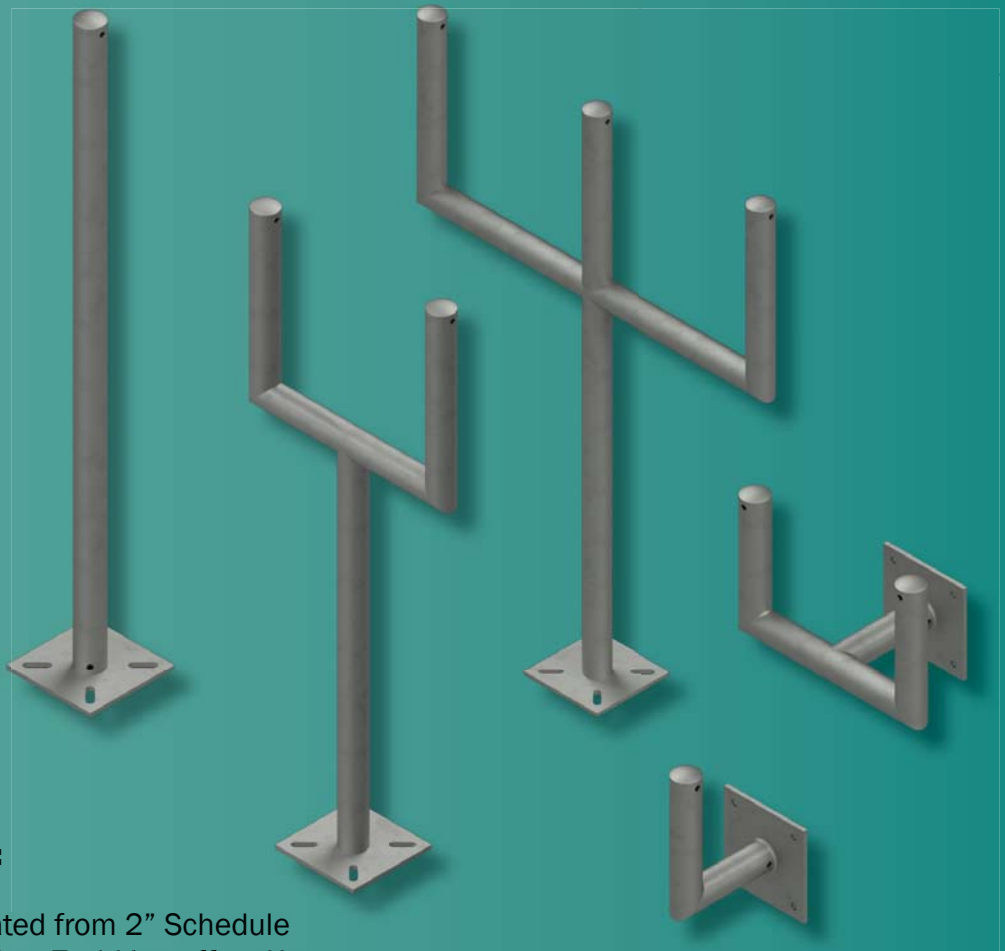
Powder Coated

General Stand Specifications:

TechLine Mfg. stands are fabricated from 2" Schedule 40 pipe and utilize a flat cap design. TechLine offers Hot Dipped Galvanized Carbon Steel meeting ASTM A123/89 requirements as a standard, but optional coatings are available upon request. Hot Dipped Galvanized stands come standard with weep holes and an open base to allow for drainage.

Custom Fabrication:

With our onsite fabrication facility, TechLine Mfg. can handle any of your custom requirements. "Send us your drawing and we will build it."

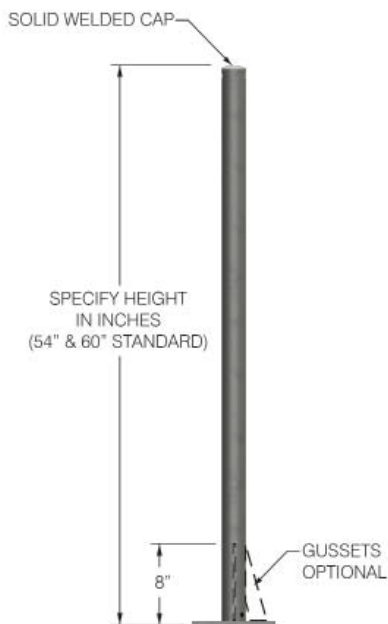


Single Floor Stand

General Stand Specifications:

TechLine Mfg. stands are fabricated from 2" Schedule 40 pipe and utilize a flat cap design. Standard stock stands have an 8"x 8" x 3/8" base plate, and a variety of sizes and thicknesses are available upon request. Gussets can also be added upon request for additional support. TechLine Mfg. offers Hot Dipped Galvanized Carbon Steel meeting ASTM A123/89 requirements as a standard, and optional coatings are available upon request. Hot Dipped Galvanized stands come standard with weep holes and an open base to allow for drainage.

Note: For mounting hardware, see page 28 and 39.



Example: **TLIS - 2 - FS - 1 - GV - 54 - 8 - ***

Basic Part:
TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:
Floor Stand (FS)

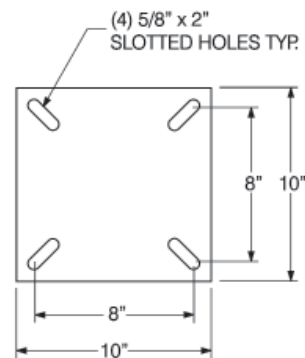
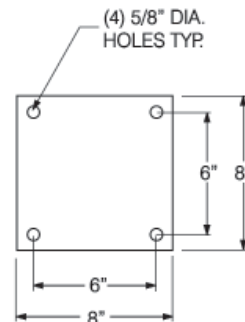
No. of Columns:
1

Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

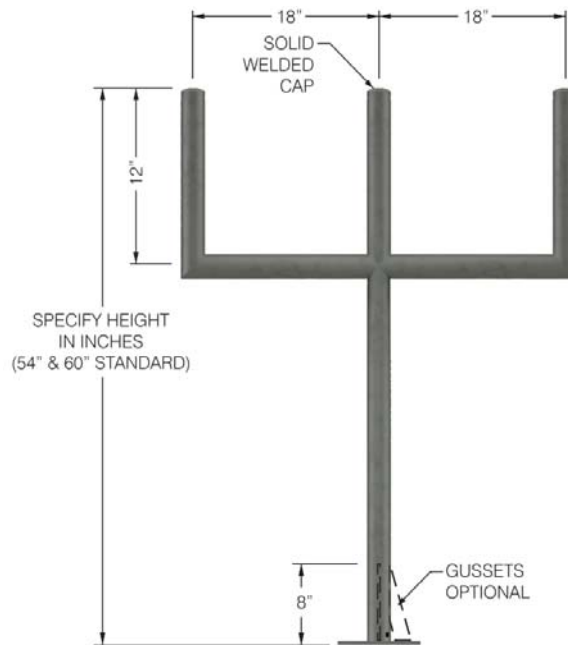
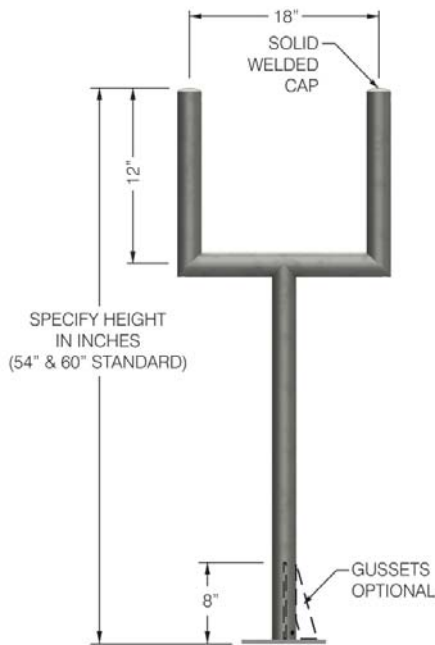
Heights:
Specify Height in Inches
(Standard is 54")

Base Plate Size:
8"
10"
(1/4" or 3/8" Standard Thickness)

Optional Gussets: G



Double & Triple Floor Stand



Example: **TLIS - 2 - FS - * - GV - 54 - 8 - ***

Basic Part:

TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:

Floor Stand (FS)

No. of Columns:

2
3

*Up to 4 Uprights Per Single Leg Stand. More, Please Use Dual Leg.

Material Finish:

Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Heights:

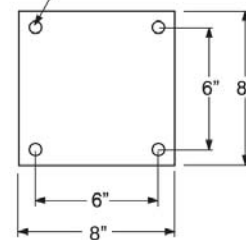
Specify Height in Inches
(Standard is 54")

Base Plate Size:

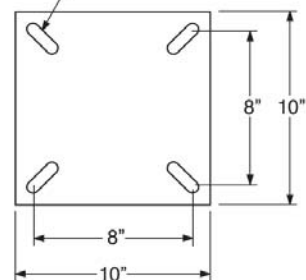
8"
10"
(1/4" or 3/8" Standard Thickness)

Optional Gussets: G

(4) 5/8" DIA.
HOLES TYP.

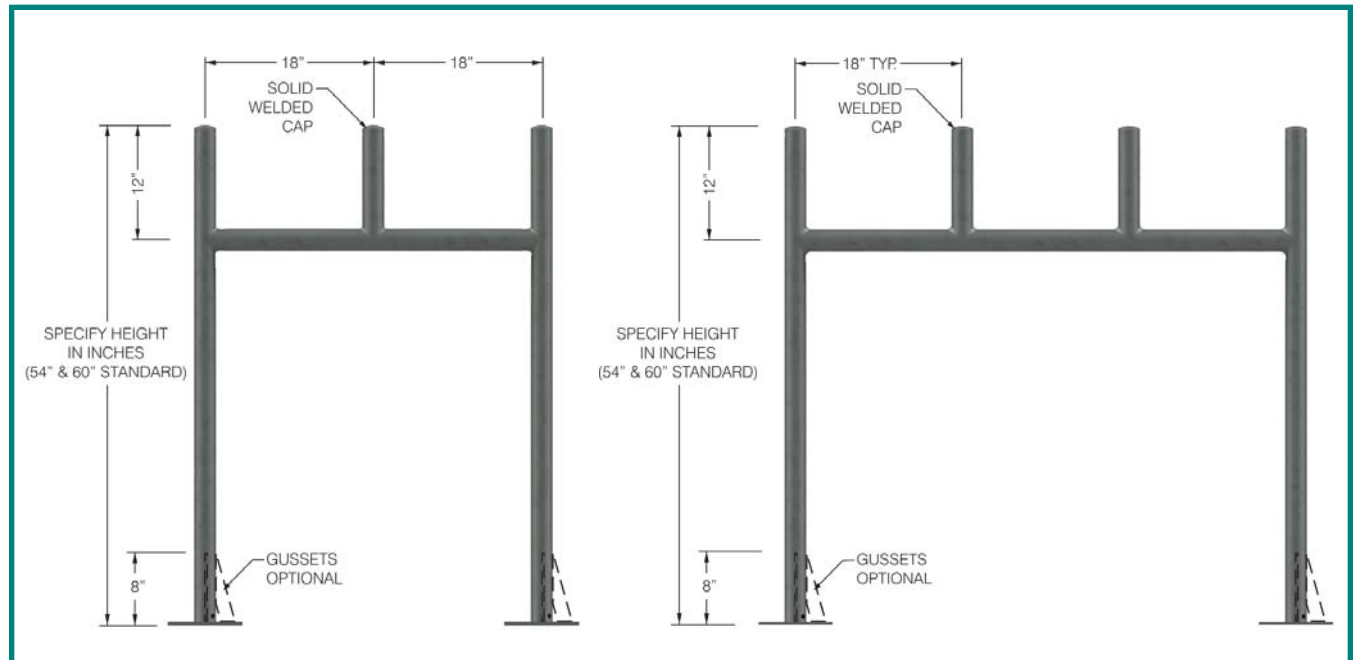


(4) 5/8" x 2"
SLOTTED HOLES TYP.



Double & Triple Floor Stands

Triple & Quad Multi-Rack Floor Stand



Example: TLIS - 2 - FS - 3 - GV - 54 - 8 - * - DL

Basic Part:
TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:
Floor Stand (FS)

No. of Columns:
1
2
3
4

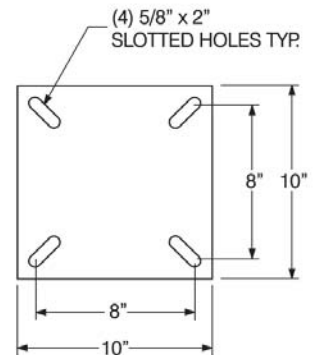
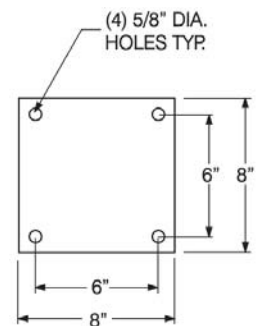
Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Heights:
Specify Height in Inches
(Standard is 54")

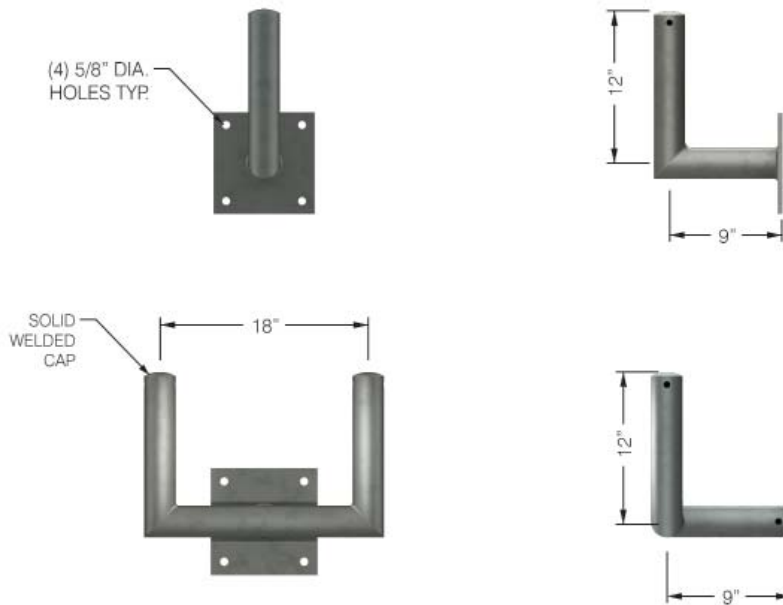
Base Plate Size:
8"
10"
(1/4" and 3/8" Standard Thickness)

Optional Gussets: G

Double Leg: DL



Wall Mount Stands



Example: TLIS - 2 - WM - 1 - GV - 8

Basic Part:
TechLine Mfg. Instrument Stand

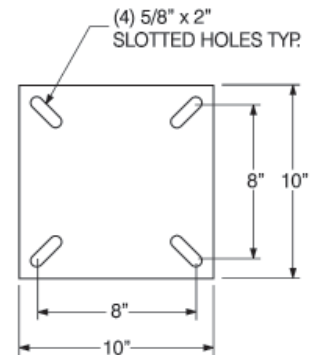
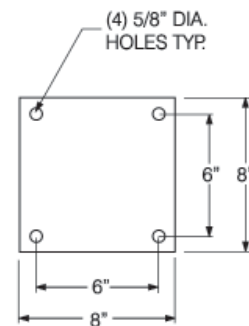
Size of Pipe: (2" or 3")

Type of Mount:
Wall Mount (WM)

No. of Columns:
1
2
3

Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Base Plate Size:
8"
10"
(1/4" or 3/8" Standard Thickness)



Vertical & Horizontal Cable Mount Stand



Example: TLIS - 2 - VCS - 1 - GV - 18 - 50 - ZP

Basic Part:
TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:
Vertical Cable Stand (VCS)
Horizontal Cable Stand (HCS)

No. of Columns:
1

Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Length:
Specify length in Inches
(Standard is 18")

Cable Length:
50" = 3" to 14" pipe
120" = 3" to 36" pipe

Cable Material:
304SS (SS)
Zinc Plated (ZP)

General Specifications:

Provides adjustable mounting capabilities on process lines. 2" SCH 40 pipe welded to 3" extruded channel. The channel provides the gripping edge on the process line. Two high-tensile strength cables 5/16" dia. wraps around the process line holding the stand in place. Galvanized cable is standard. SS Cable is optional. Cables are available in two lengths, 50" for process lines 3" to 14" dia. & 120" for process lines 3" to 36" dia. One end of cable terminates on the base bracket in a galvanized wire rope clip. The other end has a 5/8" threaded end which also terminates on the base bracket. 5/8"- 11 carbon steel zinc plated hex nut and SS plated washer used as a fine adjustment.

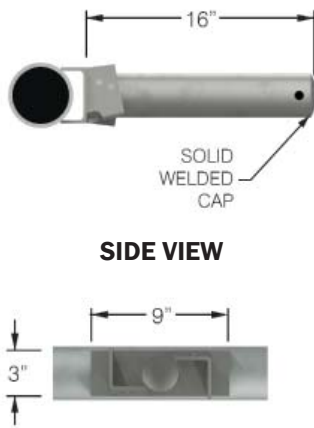
Material:

Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

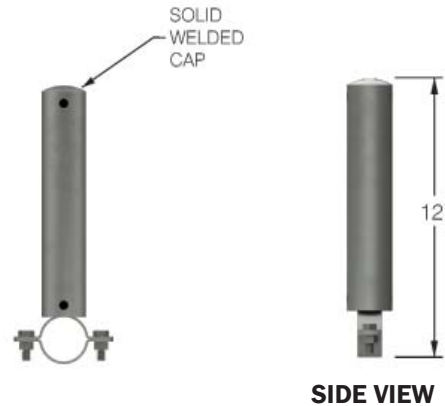
Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Cable Mount Stand / Pipe Mount Stand



SIDE VIEW

CABLE STAND



SIDE VIEW

PIPE MOUNT STAND

Example: **TLIS-2-CS-1-GV-18-50-ZP**

Basic Part:

TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:

Cable Stand (CS)

No. of Columns:

1

Material Finish:

Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Length:

Specify length in Inches
(Standard is 18")

Cable Length:

50" = 3" to 14" pipe
120" = 3" to 36" pipe

Cable Material:

304SS (SS)
Zinc Plated (ZP)

Example: **TLIS-2-PM-1-GV-18- ***

Basic Part:

TechLine Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:

Pipe Mount (PM)

No. of Columns:

1

Material Finish:

Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Length:

Specify length in Inches
(Standard is 18")

Pipe Clamp Diameter:

Specify length in Inches
(Standard is 2")

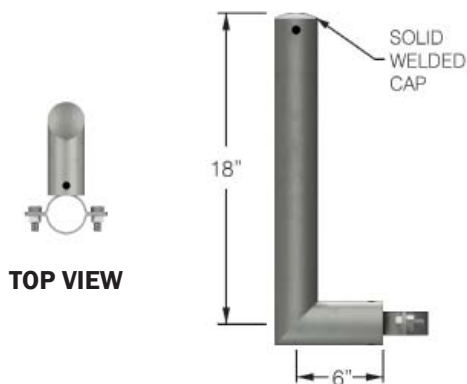
Material:

Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Vertical & Horizontal Pipe Mount Stand



TOP VIEW

VERTICAL MOUNT



SIDE VIEW

HORIZONTAL MOUNT

Example: TLIS - 2 - VPM/HPM - 1 - GV - 18 - 2

Basic Part:

TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:

Vertical Pipe Mount (VPM)
Horizontal Pipe Mount (HPM)

No. of Columns:

1

Material Finish:

Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Length:

Specify length in Inches
(Standard is 18")

Pipe Clamp Size:

2" thru 12"

General Specifications:

Vertical Pipe Mount

- Uses 2" SCH40 pipe welded to saddle style pipe clamp. Specify line size in inches.
- Solid welded cap is standard

Horizontal Pipe Mount

- Uses 2" SCH40 pipe welded to saddle style pipe clamp. Specify line size in inches.
- Solid welded cap is standard

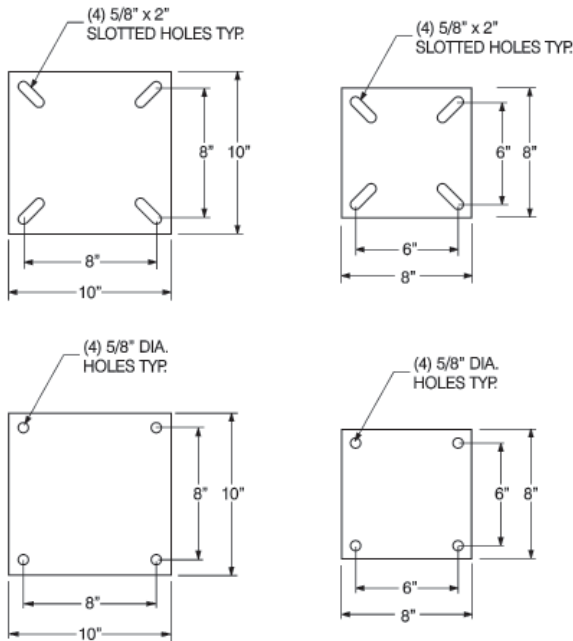
Material:

Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Channel Floor Stand



Note: For mounting hardware, see pages 27 & 39.

General Specifications: TechLine Mfg. offers single channel floor stands fabricated from structural channel and flat structural bar for the base. Customer to specify channel width and height as well as base plate size.

Standards: TechLine stocks hot dipped galvanized 4" wide channel stands with 8"x8"x3/8" base plates in 5', 6', 7' and 8' heights.

Coating: Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Example: TLIS - 4 - CFS - 1 - GV - 60 - 8

Basic Part:
TechLine Mfg. Instrument Stand

Channel Size: (3" - 12")

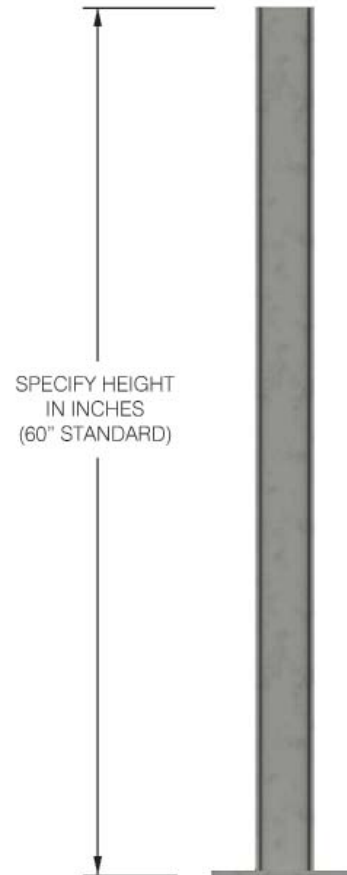
Type of Mount:
Channel Floor Stand (CFS)

No. of Columns:
1

Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Heights:
Specify height in Inches
(Standard is 60")

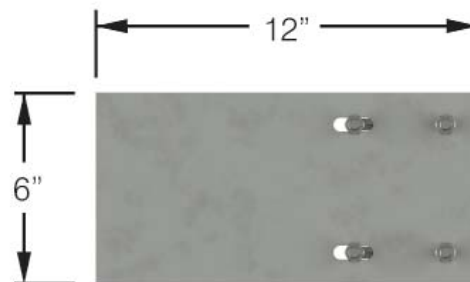
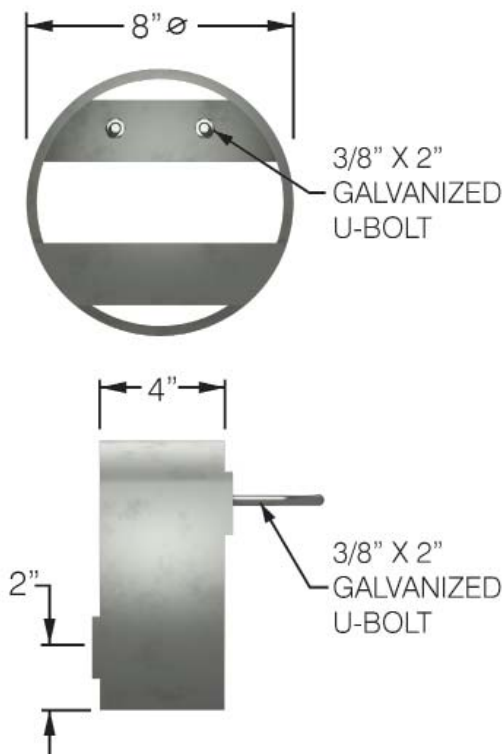
Base Plate Size:
8"
10"
(1/4" and 3/8" standard thickness)



Channel Floor Stand

Capillary Spool

Mounting Flag



SIDE VIEW



CH-8-__ __

General Specifications:

8" Schedule 40 Carbon Steel Capillary Spool.

This spool can be mounted horizontally or vertically. 2"x1/4" flat bar has two holes drilled to accept a 3/8" x 2" U-Bolt for mounting.

Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

****Also available in Schedule 10.**

TLIS2UFP-__ __

General Specifications:

1/4" Steel Plate Adapter

1/4" steel plate 6" x 12". Plate is slotted to accept two u-bolts that are 3/8" x 2" galvanized steel with two hex nuts.

Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Mounting Hardware



Model GM

This grating fastener is used to mount instrument stands as well as other devices onto existing grating services. Model GM does not fasten grating to structural steel supports.



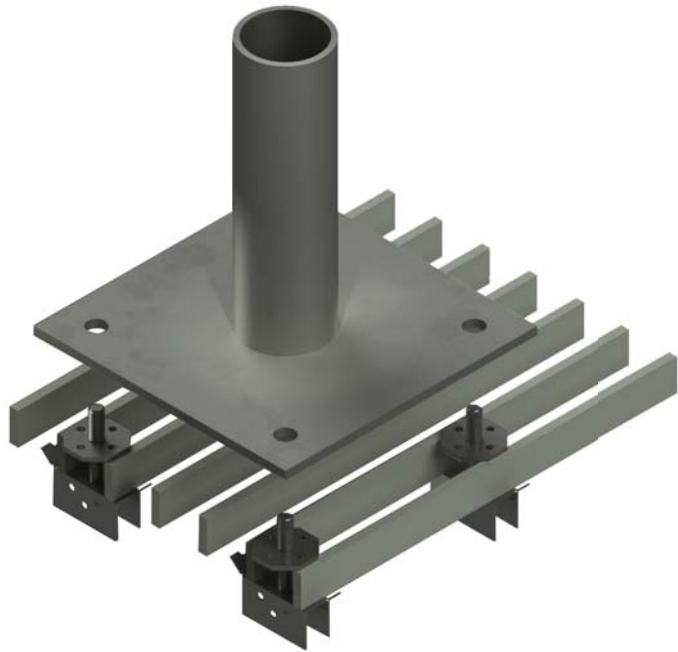
Model GA

For grating attachment to structural shapes when flange is in vertical plane.



Model GG

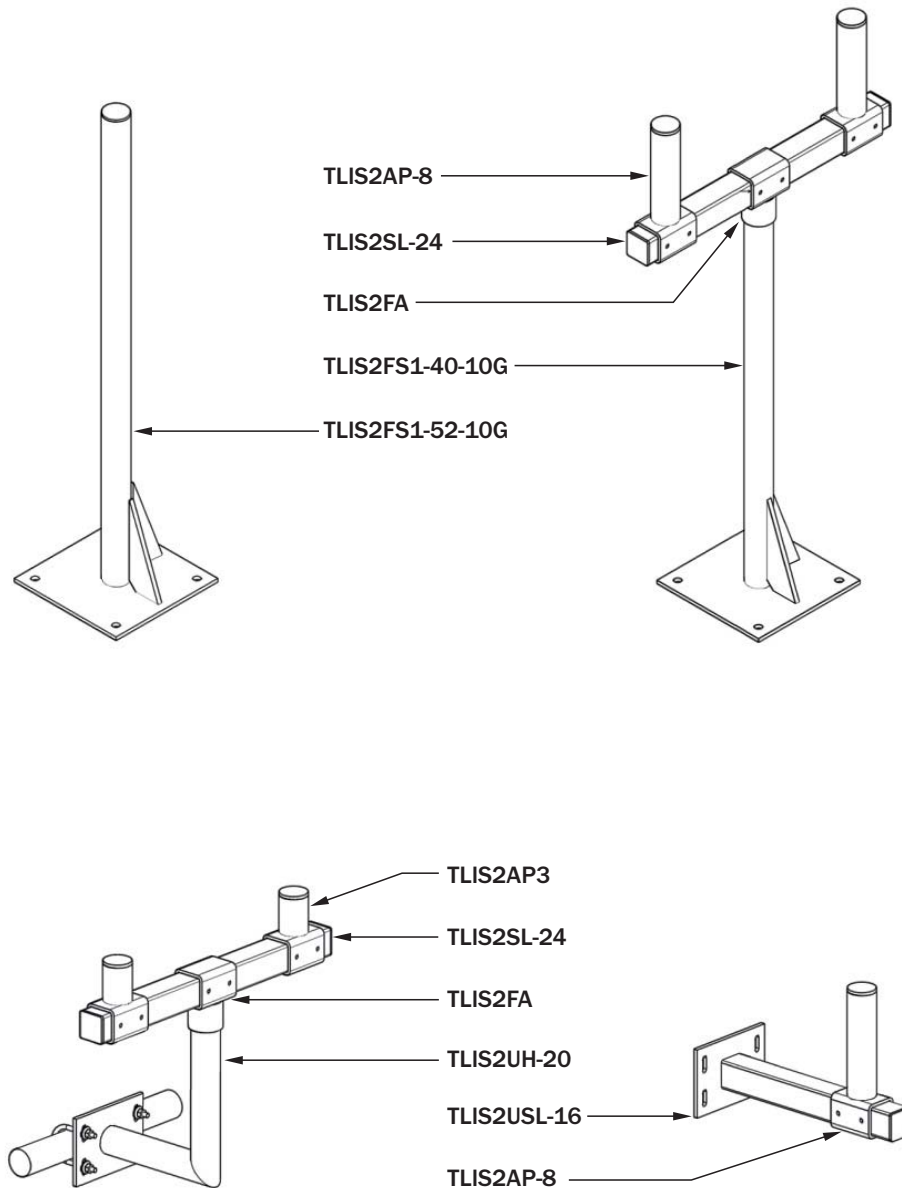
For grating attachment to structural shapes when flange is in horizontal plane.



Model GM is used as a stable base on which to mount instrument stands and other devices to a grating surface. Assembly consists of a 1/2 " stud about 3 " long (5" long available upon request), which contains a patented bottom part that holds captive a 1/2" nut. The top plate has a 1/2" diameter threaded hole, which sits above the grating, and is tightened down to complete the fastener installation. This provides a remaining stud length above the grating onto which can be fastened devices as desired.

Tools Required: The Model GM can be installed using a spanner wrench or tongue and groove pliers.

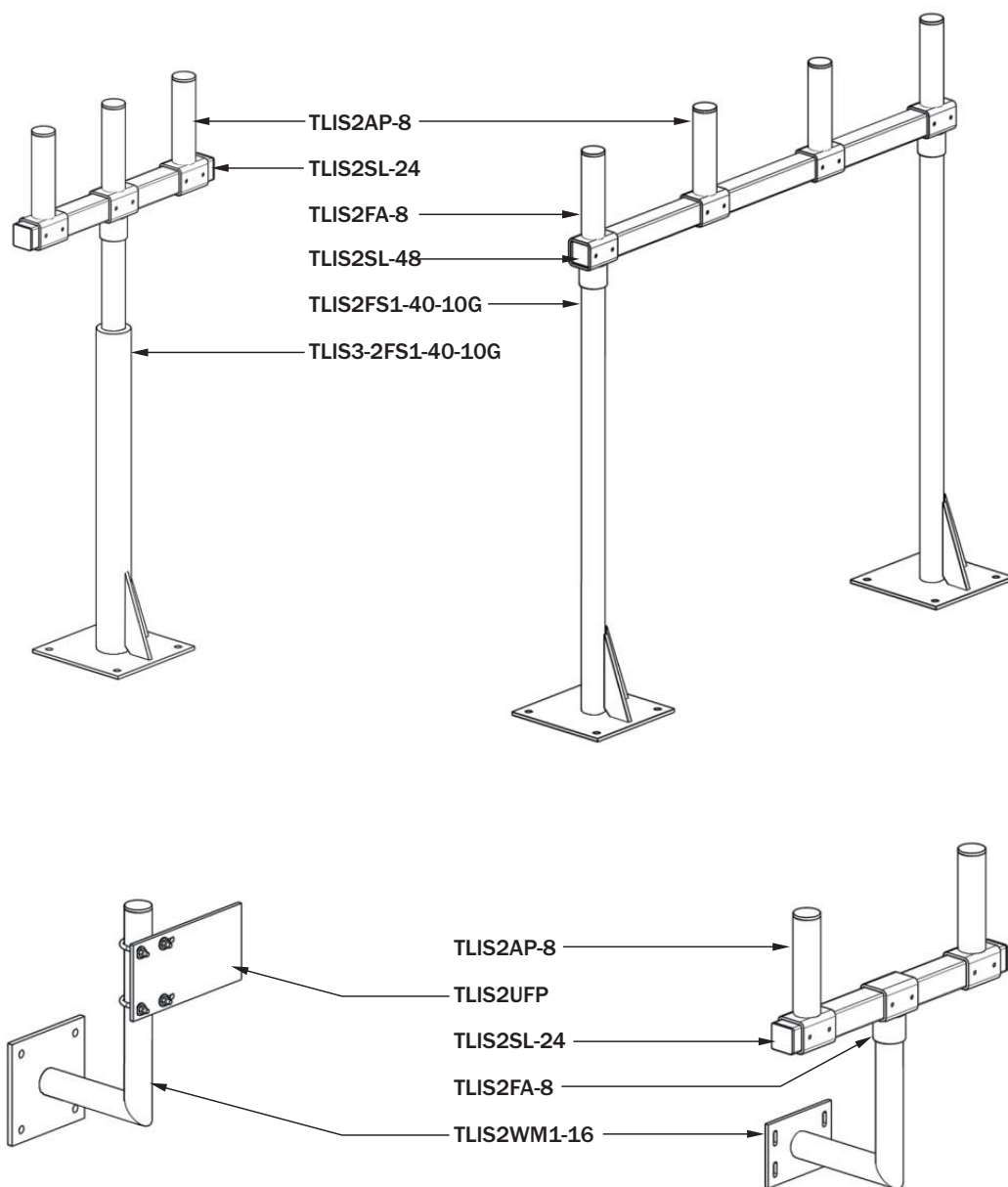
Tech-Mount Modular



Tech-Mount Modular Systems:

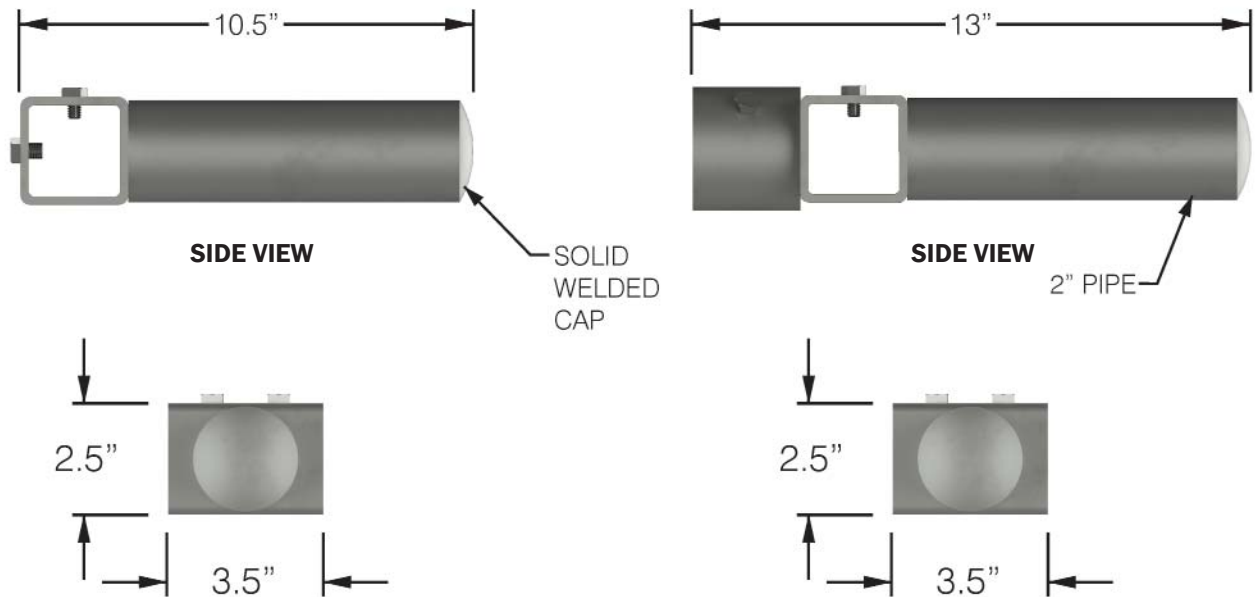
TechLine Mfg. can help you configure components needed for a modular instrument support system. Each part shown is featured in this catalog. Please refer to pages 42-45 for more detailed information and drawings of the individual parts shown here.

Tech-Mount Modular

**Tech-Mount Modular Systems:**

TechLine Mfg. can help you configure components needed for a modular instrument support system. Each part shown is featured in this catalog. Please refer to pages 42-45 for more detailed information and drawings of the individual parts shown here.

Female Pipe and Square Tube Adapter



TLIS2AP8 * *

General Specifications:

2-1/2" Square Tube

- This female adapter is primarily used with modular instrument stands.
- 2-1/2" square tube 3-1/2" long welded to the bottom of a 2" SCH 40 pipe extension 8" long. Four 5/16" x 1/2" zinc plated hex bolts in square tubing for securing.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting available upon request.

Materials:

Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS. Optional materials available upon request.

TLIS2FA8 * *

General Specifications:

2-1/2" Female Adapter with 8" Extension

- This adapter provides a female junction for 2" pipe. 2" SCH 40 pipe extension 8" long welded to 2-1/2" square tube 3-1/2" long, with a 2-1/2" pipe base. Six 5/16" x 1/2" zinc plated hex bolts in 2-1/2" pipe for securing.

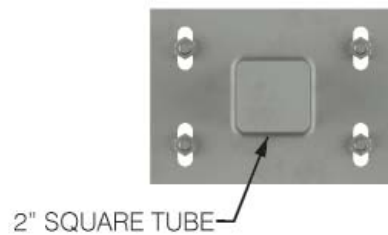
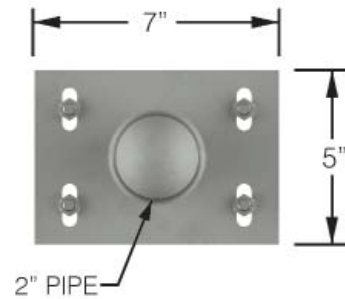
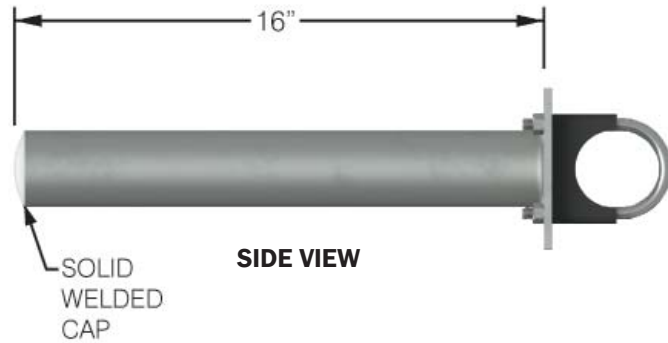
Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting available upon request.

Materials:

Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS. Optional materials available upon request.

Round & Square Leg U-Bolt Mount Stands



Example: **TLIS - 2 - URL/USL - GV - 16 - 2**

Basic Part:
TechLine Mfg. Instrument Stand

Size of Pipe: (2" or 3")

Type of Mount:
U-Bolt Round Leg (URL)
U-Bolt Square Leg (USL)

Material Finish:
Aluminum (AL)
Galvanized (GV)
Metallized (M)
304SS (4SS)
316SS (6SS)

Length:
Specify length in Inches
(Standard is 16")

U-Bolt Size:
2" thru 12"

General Specifications:

U-bolt Mount Stands

- 16" long 2" round or square leg extension for use with primary modular instrument stand. Fully galvanized steel welded cap provides weather tight seal as standard
- 1/4" steel plate 5' x 7"

Both can be mounted horizontally or vertically. 3/8" diameter galvanized U-bolts, nuts and washers are supplied with each for mounting.

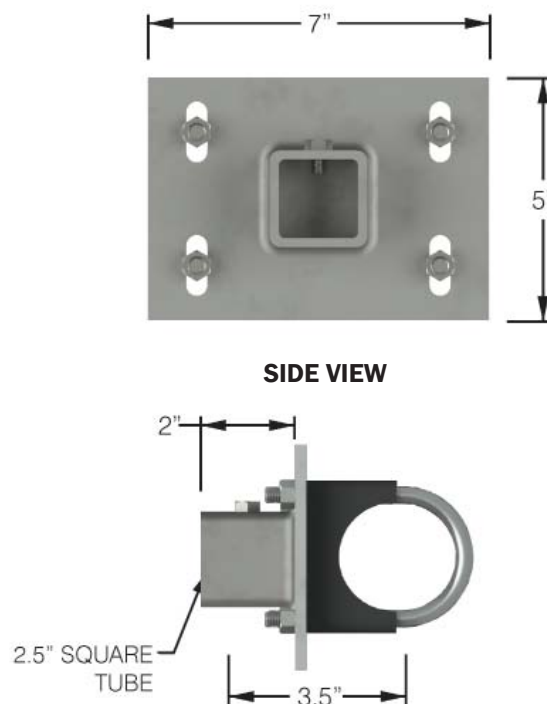
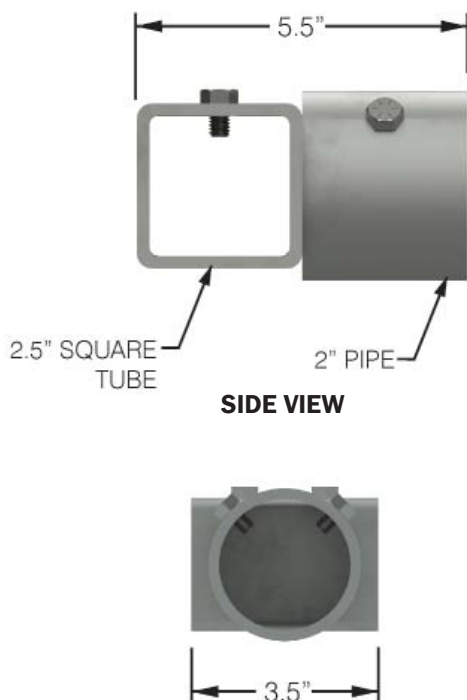
Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as spray arc metallizing and painting, available upon request.

Female Adapter & Square Tube Rack Adapter



** 2" diameter shown. Muffler Clamp only available in 2" diameter. For larger sizes, Please contact the factory.

TLIS2FA * *

General Specifications:

2-1/2" Female Adapter.

- Has 2 1/2" SCH 40 pipe, extension 2" long which provides a female junction for 2" pipe. This female adapter is used with primary modular instrument stand. 2" SCH 40 pipe 9" long is welded to 2 1/2" square tubing 3 1/2" long. .188" wall thickness in carbon steel. Four 5/16" x 1/2" zinc plated hex bolts in square tubing and two in pipe.

Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

TLIS2FUS * *

General Specifications:

2-1/2" Square Tube Rack Adapter for use with primary modular instrument stand

- This modular stand can be mounted horizontally or vertically 1/4" steel plate 5" x 7" with 2 1/2" square tubing. .188" wall thickness. Plate is slotted to accept two U-bolts. 3/8" diameter galvanized U-bolts, nuts and washers are supplied with each or mounting.

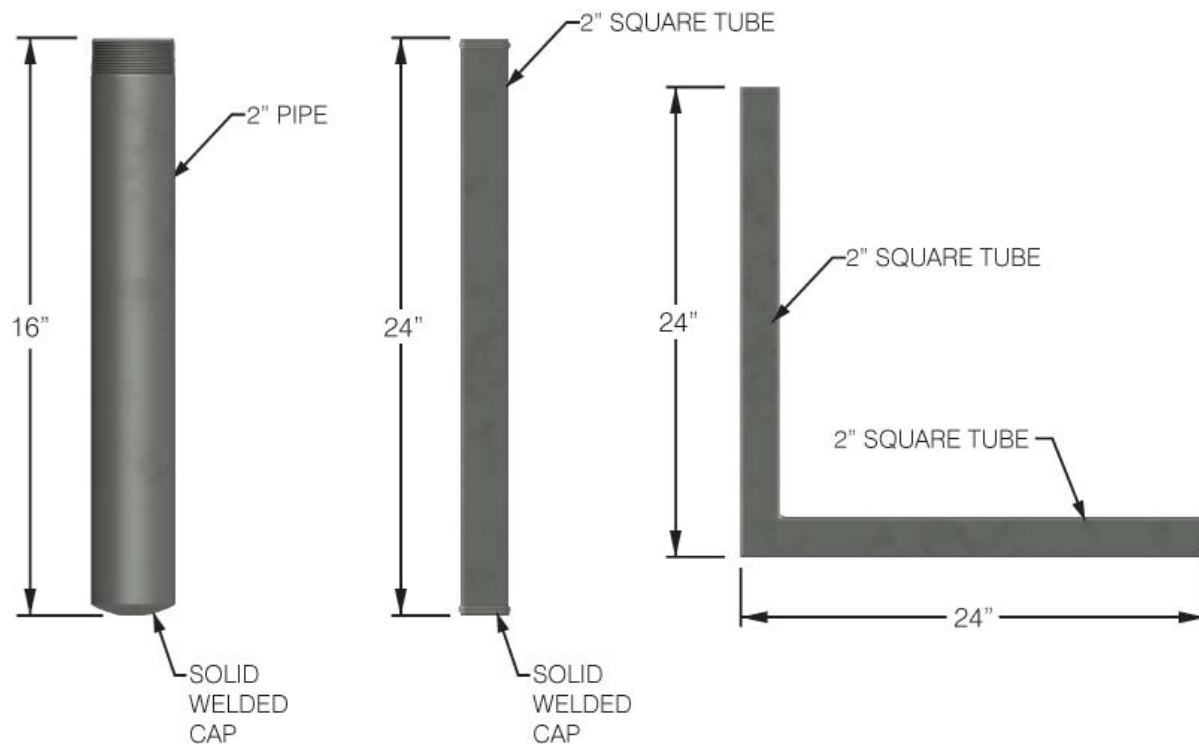
Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.

Round Threaded Leg Ext., Square Leg & Elbow Module



TLIS2RL16 * *

General Specifications:

2" pipe, threaded on one end, 16" long. For use with primary modular instrument stand.

- Fully galvanized inside and outside.
- Solid welded cap provided as a standard.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as spray arc metallizing and painting, available upon request.

TLIS2SL24 * *

General Specifications:

Square Leg Module

- 2" square leg tubing 24" long, for use with primary modular instrument stand. Wall thickness .188" carbon steel.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as spray arc metallizing and painting, available upon request.

TLIS2SE24 * *

General Specifications:

Square Elbow Module

- 2" square leg tubing "L" shaped, each leg 24" long. For use with primary modular instrument stand. Wall thickness .188" carbon steel.

- Solid welded cap provided as a standard.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as spray arc metallizing and painting, available upon request.

**** Select appropriate suffix for Material Finishes: TLIS-2-___ - AL**

AL: Aluminum

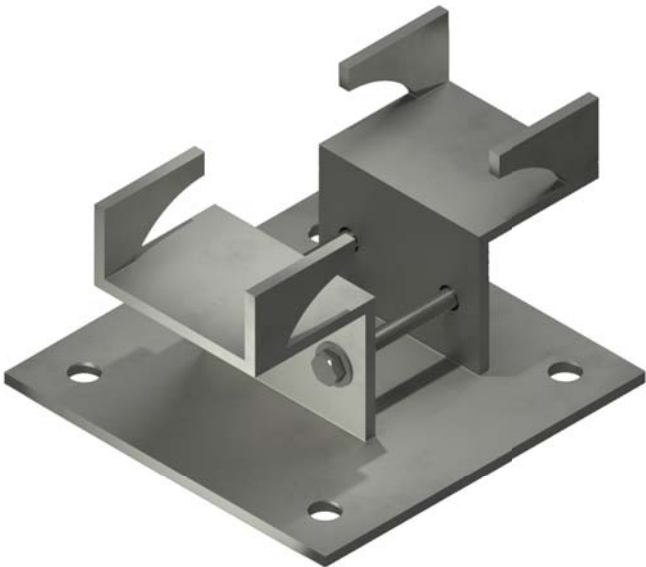
SS: 304 Stainless Steel

HDG: Hot Dipped Galvanized, ASTM A-123

Note: Contact factory for additional finishes.

Beam Mount

Beam Mount



Example: TLIS - BM - GV - 4-6 / 8-10

Basic Part:
TechLine Mfg. Instrument Stand

Type of Mount: (BM) Beam Mount

Material Finish:
Aluminum (AL)
Metallized (M)
304SS (4SS)
316SS (6SS)

Width of Beam:
Specify length in Inches

General Specifications:

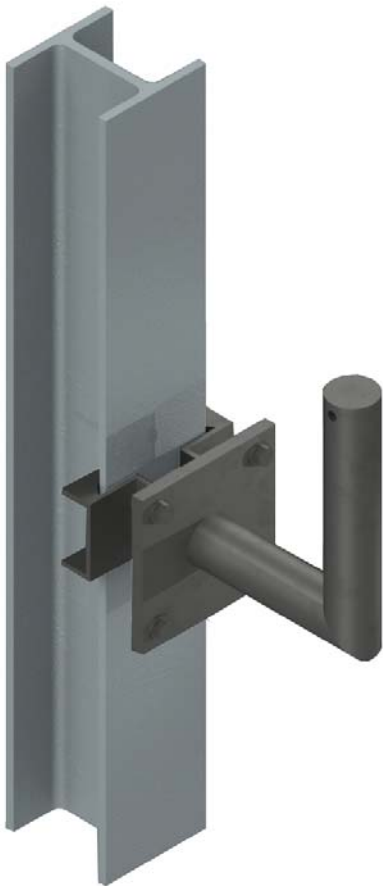
- Beam mount for standard 8"x8" instrument stand base plate
- (2) Sizes to choose from. 4-6 works for beams from 4"-6" in width. 8-10 works for beams from 8"-10" in width.

Material:

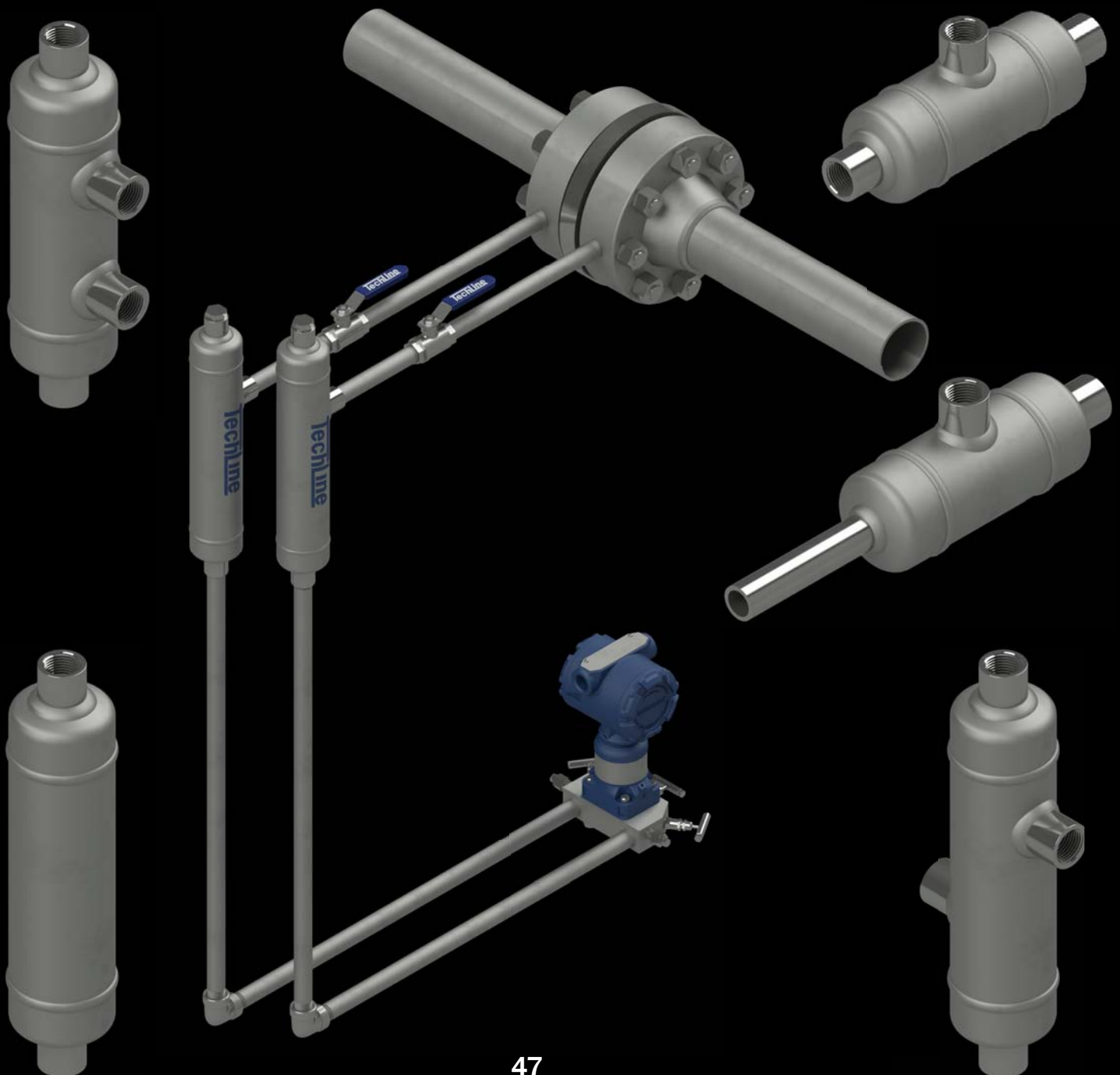
Galvanized carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

Coating:

Hot dipped galvanized (meeting ASTM A 123-89 specification) is our standard coating. Optional coatings, such as metallizing and painting, available upon request.



Distribution Manifolds/Condensate Chambers



About TechLine Mfg. Fabricated Chambers

Condensate Chambers/ Seal Pots:

TechLine Mfg. chambers are used to protect sensitive metering systems and devices by trapping and holding condensate and foreign material that may accumulate in gaseous service lines. TechLine Mfg. condensate chambers are also used as a liquid barrier between the main line and the secondary instruments, preventing steam and other vapors, or corrosive or viscous process fluids from reaching those instruments.

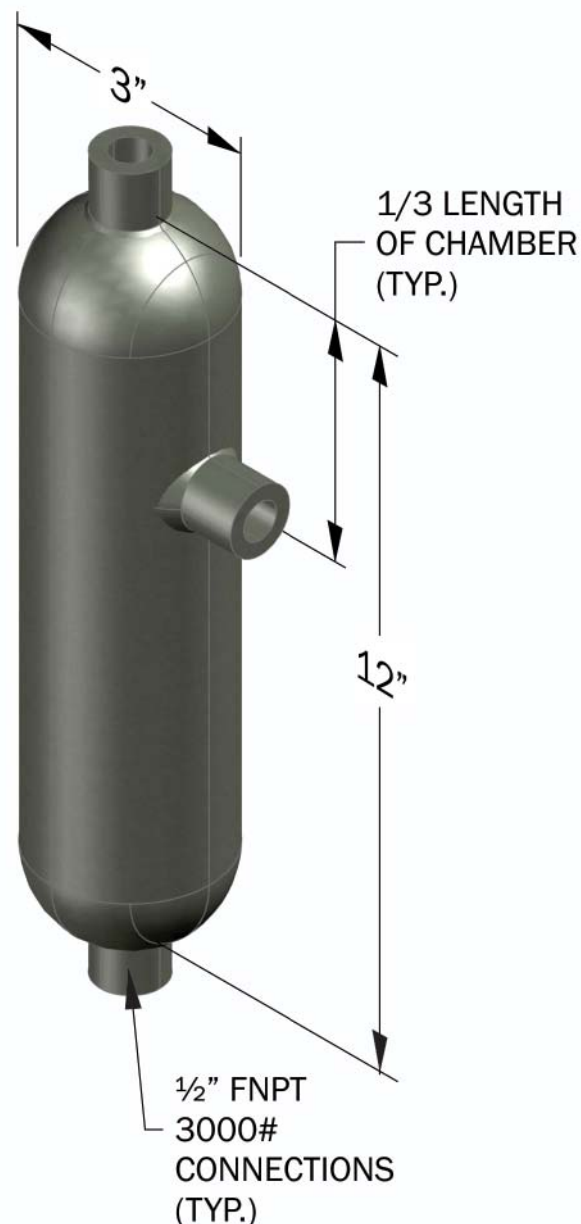
TechLine Mfg. Condensate Chambers & Seal Pots are fabricated from seamless pipe. A variety of materials and wall thicknesses are available to meet a customer's design pressure and temperature.

Standard stock chambers are 3" pipe, 12" long with three (3) ½" FNPT connections in Schedule 80 316 Stainless Steel or Carbon Steel. Expedited delivery is available for non-stock chambers.

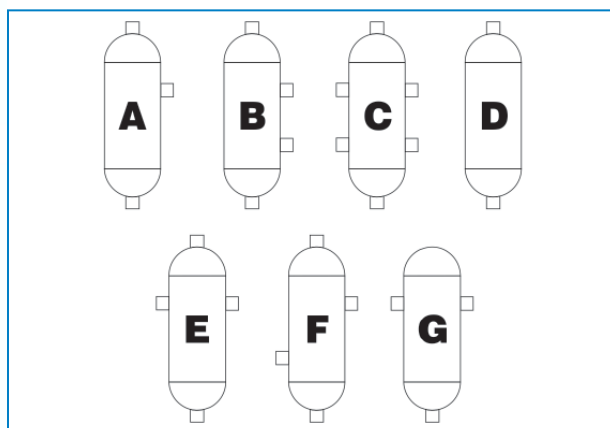
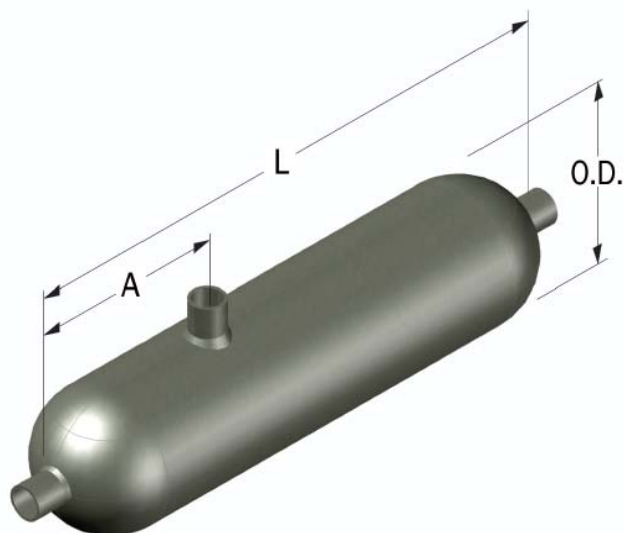
All chambers are hydro pressure tested and certified prior to shipping. X-Ray & Dye-Pen testing are available upon request.

ASME Standards

TechLine Mfg. manufactures our vessels to ASME standards. If an ASME U or S stamp is required, please request on quote and we can provide pricing according to your specific need.



How to Order Condensate Chambers



Example: **TLDP - 3 - 12 - CS - XH - F - 8**

Basic Part:

TechLine Drip

Size of Pipe: (2", 3", 4", 6", etc.)

Length of Chamber From End Cap to End Cap:
(6", 7", 8", 9", 10", 11", etc.)

Material Finish:

Carbon Steel=CS	Chrome 22=P22
304 SS=SS	Chrome 91=P91
316SS=316SS	Hastelloy =HC
Chrome 11=P11	Galvanized=GV

Wall Thickness of Pipe:

Standard S/40=S
Extra Heavy S/80=XH
Schedule 160=S/160
Extra Extra Heavy=XXH

Connection Style (Code) :

Female NPT = F
Socket Weld = S
Special = X

Connection Size (Code) :

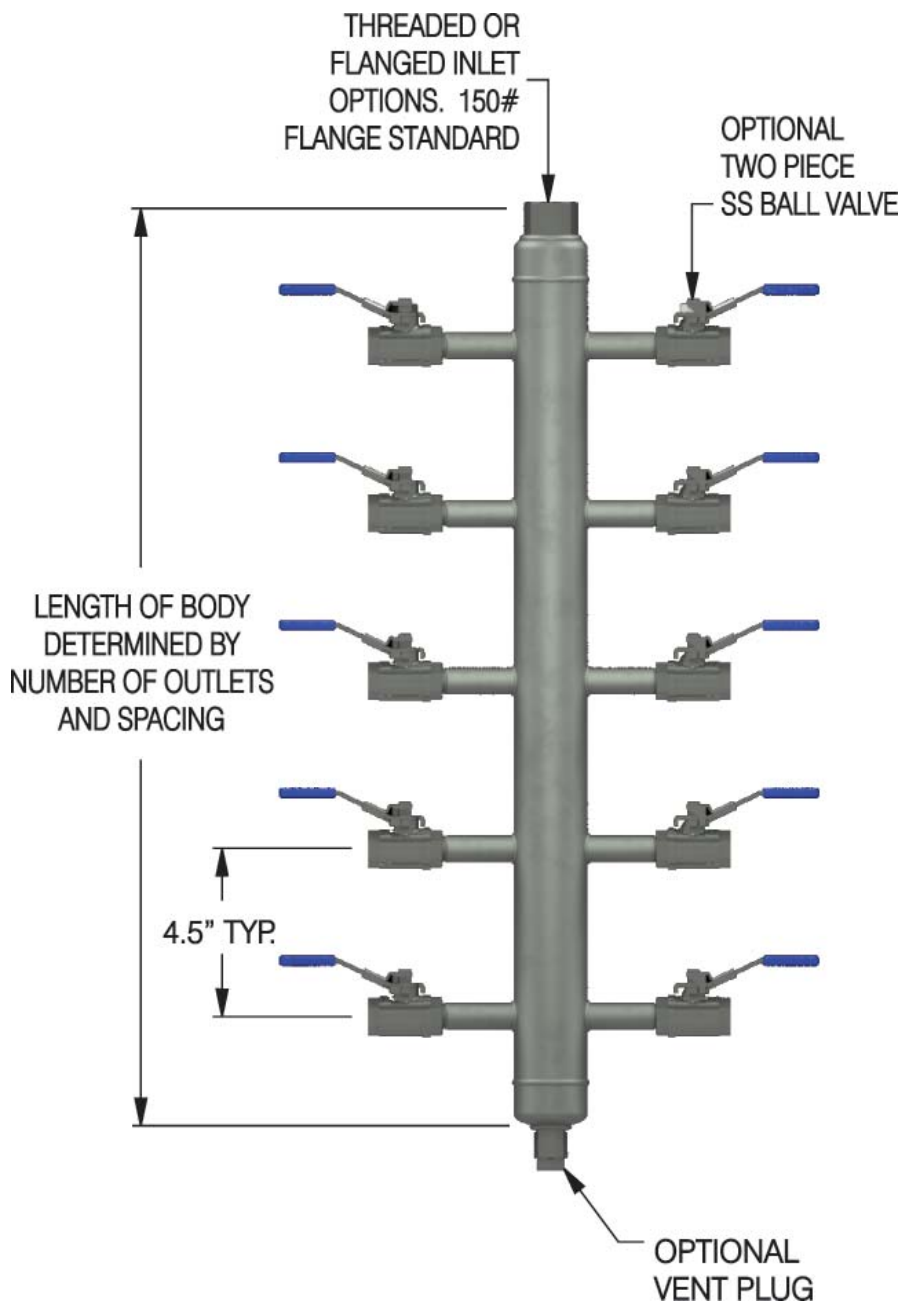
1/4" = 4	3/4" = 12
3/8" = 6	1" = 16
1/2" = 8	Special = X

Port Configuration

Condensate Chamber

Distribution Manifolds & Headers

Air Manifold



Notes:

TechLine Mfg. Air Headers are manufactured in accordance with customer specifications allowing for ease of installation. Offered in various pipe sizes, schedules and lengths, the distance between taps may vary depending upon customer specifications. Standard dimensions are 4-1/2" apart. Connections are available in threaded, socket weld or flanged.

Valves:

Two piece 1/2" threaded TechLine International Ball valves and 1/2" bleed valve.

Material:

Carbon steel is standard. Aluminum, 304SS, and 316SS materials available upon request.

How To Order Distribution Manifolds

Example: TLAM - 2 - S - F - 8 - 1 - 1/2 - 4 - 36 - B - V

Basic Part:

TechLine Mfg. Manifold

Size of Pipe: (1" or 2")

Material:

Carbon Steel (C)
Stainless (S)
Aluminum (A)
Brass (B)

Inlet Connections:

Flanged (F)
Threaded (T)
Socketweld (S)

Number of Taps:

(4, 5, 6, 7, 8...)

Orientation of Tap (sides):

1 side, 2 side

Size of Taps (in inches):

1/4", 3/8", 1/2", 3/4"

Spacing of Taps (in inches):

2" = 2, 3" = 3, 4" = 4

Overall length (in inches)

Ball Valve Option:

No Valve = N, Ball Valve = B

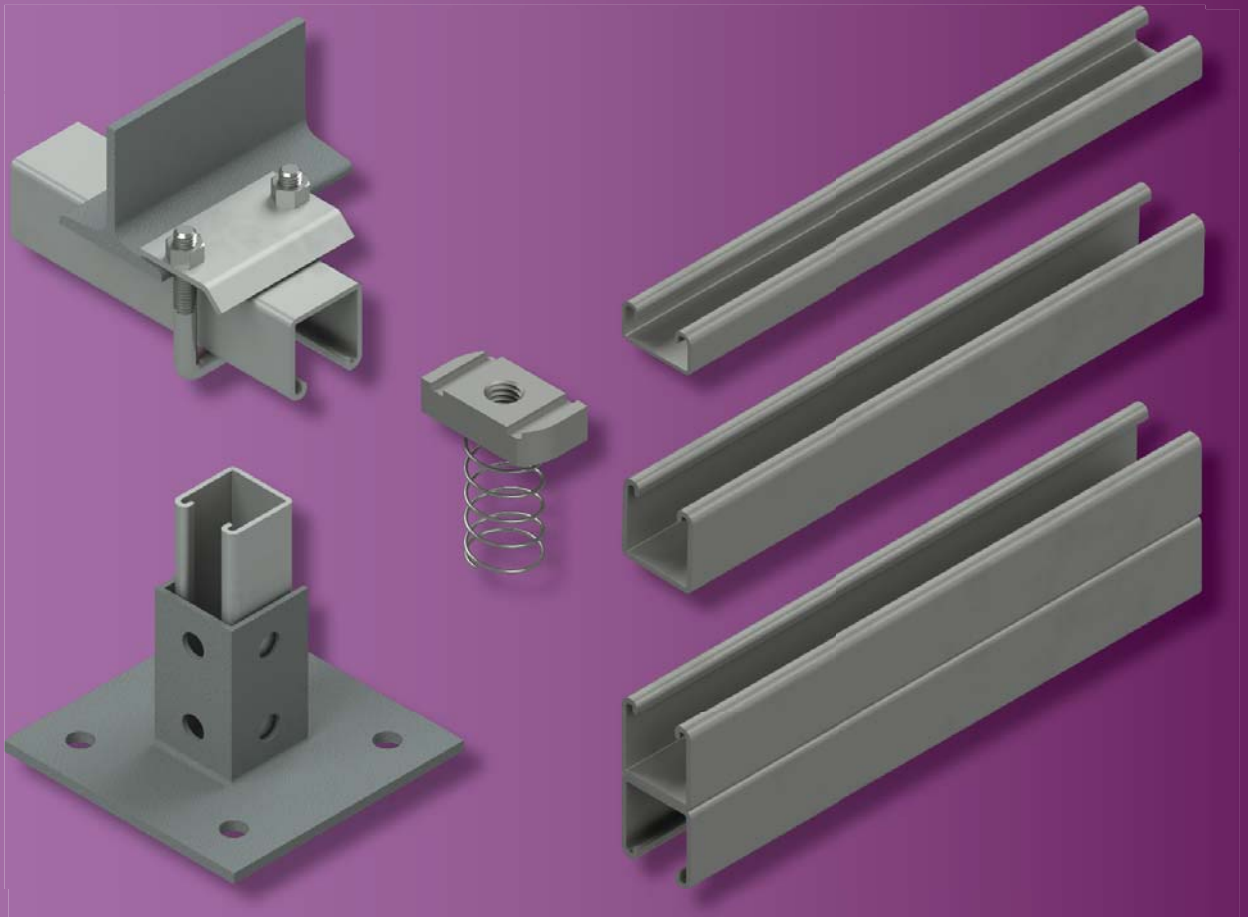
Vent Valve Option:

No Valve = N, Vent Valve = V

Air Manifold



Strut Products



Single Strut



1000



1315

Standard Strut:			
W—	D	L	
1000 * *	1 5/8"	1 5/8"	10'

**** Select appropriate suffix for Material Finishes: 1000-AL-S**

AL: Aluminum

HDG: Hot Dipped Galvanized

PG: PreGalvanized

4S: 304SS

6S: 316SS

S: Place an "S": after product number for a slotted strut.

All material offered is 12GA thickness

Shallow Strut:			
W—	D	L	
1315 * *	1 5/8"	13/16"	10'

**** Select appropriate suffix for Material Finishes: 1000-AL-S**

AL: Aluminum

HDG: Hot Dipped Galvanized

PG: PreGalvanized

4S: 304SS

6S: 316SS

S: Place an "S" after product number for a slotted strut.

All material offered is 12GA thickness

Double Strut

Double Strut



1001



1002

Double Strut			
W	D	L	
1001 _ _	1 5/8"	3-1/4"	10'

**** Select appropriate suffix for Material Finishes: 1001-AL-S**

AL: Aluminum

HDG: Hot Dipped Galvanized

PG: PreGalvanized

4S: 304SS

6S: 316SS

S: Place an "S": after product number for a slotted strut.

All material offered is 12GA thickness

Double Strut			
W	D	L	
1002 _ _	1 5/8"	3-1/4"	10'

**** Select appropriate suffix for Material Finishes: 1002-AL-S**

AL: Aluminum

HDG: Hot Dipped Galvanized

PG: PreGalvanized

4S: 304SS

6S: 316SS

S: Place an "S": after product number for a slotted strut.

All material offered is 12GA thickness

Channel Spring Nut & Beam Clamp



Channel Spring Nut		Tap Size
SN-25- * *		1/4"
SN-38- * *		3/8"
SN-50- * *		1/2"

**** Select appropriate suffix for Material Finishes: SN-25-ZP**

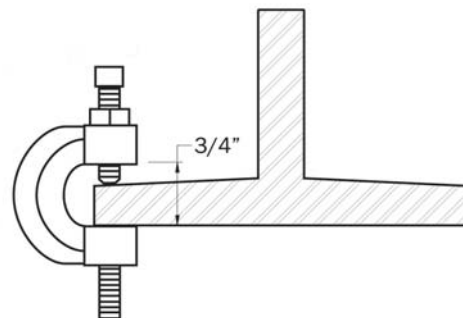
ZP: Zinc Plated

SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

Beam Clamp		Tap Size
RC375- * *		3/8"

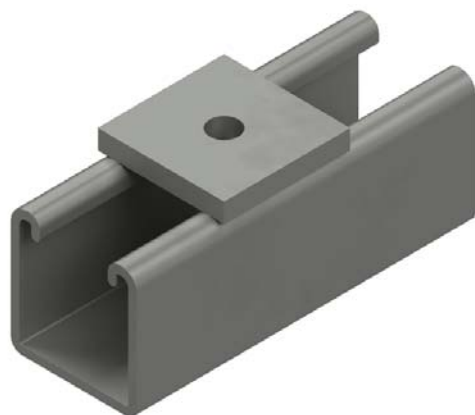


**** Select appropriate suffix for Material Finishes: RC375-ZP**

ZP: Zinc Plated

SS: 304SS

Square Washer & Angle Fittings



Square Washer & Angle Fittings

Tap Size	
Square Washer	
SW-25- * *	1/4"
SW-38- * *	3/8"
SW-50- * *	1/2"

**** Select appropriate suffix for Material Finishes: SW-25-ZP**

ZP: Zinc Plated

HDG: Hot Dipped Galvanized

SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

Tap Size	
Angle Fitting	
AE-25- * *	1/4"
AE-38- * *	3/8"
AE-50- * *	1/2"

**** Select appropriate suffix for Material Finishes: AE-25-ZP**

ZP: Zinc Plated

HDG: Hot Dipped Galvanized

SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

Flat Elbow & Tee



Flat Elbow & Tee

Tap Size	
Flat Elbow	
FE-50- _ * _ *	1/2"
Flat Tee	
FT-50- _ * _ *	1/2"

**** Select appropriate suffix for
Material Finishes: FE-50-ZP**

ZP: Zinc Plated

HDG: Hot Dipped Galvanized

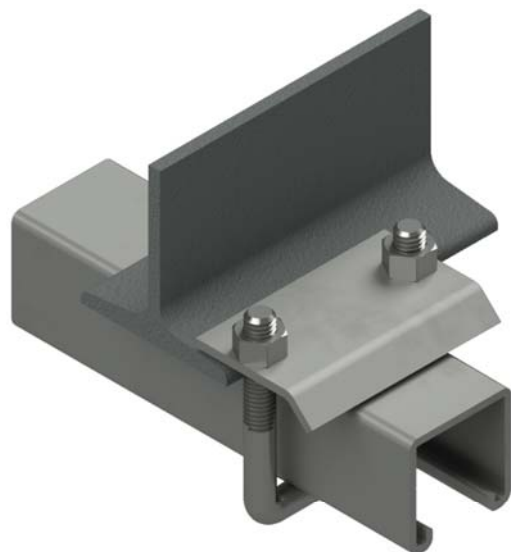
SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

Fitting Designed for use with 1/2" bolts

Window Type Beam Clamp



Window Type Beam Clamp		
WC-158 - * *	3"	3 3/8"

**** Select appropriate suffix for Material Finishes: WC-15-8 -ZP**

ZP: Zinc Plated

SS: 304SS

3/8" Square U-Bolt provided

Fits all 1 5/8" Channel

Right Angle Beam Clamp		
RA50 - * *	1/2"	2"
RA75 - * *	3/4"	2 1/8"
RA100 - * *	1"	2 5/8"
RA125 - * *	1 1/4"	2 7/8"
RA150 - * *	1 1/2"	3 3/4"
RA200 - * *	2"	3 7/8"
RA250 - * *	2 1/2"	4 5/8"
RA300 - * *	3"	5 1/4"
RA350 - * *	3 1/2"	5 3/4"
RA400 - * *	4"	6 1/4"

**** Select appropriate suffix for Material Finishes: RA50 -ZP**

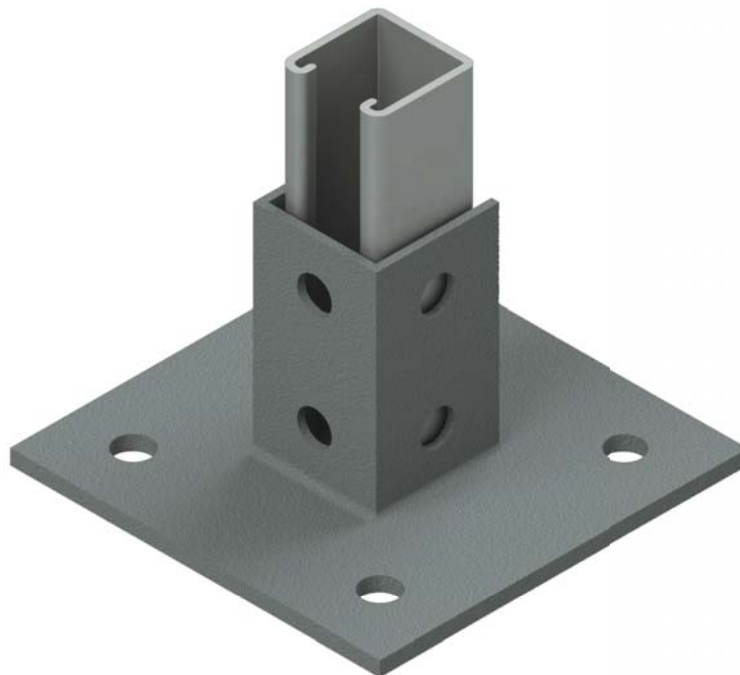
ZP: Zinc Plated

SS: 304SS

3/8" U-Bolt provided

Window Beam Clamp

Strut Post Base



Strut Post Base

PB-158- * *

**** Select appropriate suffix for
Material Finishes: PB-158-ZP**

ZP: Zinc Plated

HDG: Hot Dipped Galvanized

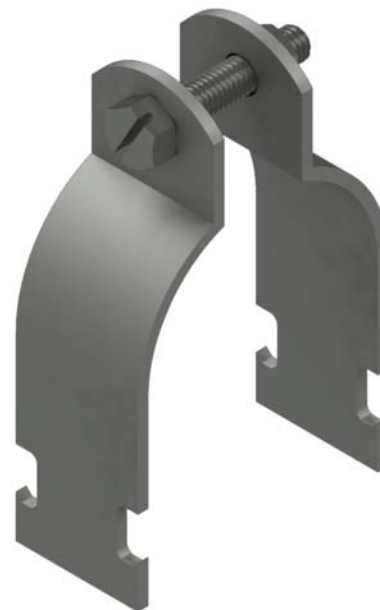
SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

Strut Clamps

	SIZE	LOAD	PKG.
Conduit Strut Clamps			
CC50 - * *	1/2"	400#	100
CC75 - * *	3/4"	400#	100
CC100 - * *	1"	400#	100
CC125 - * *	1-1/4"	600#	100
CC150 - * *	1-1/2"	600#	50
CC200 - * *	2"	600#	50
CC250 - * *	2-1/2"	800#	50
CC300 - * *	3"	800#	50
CC350 - * *	3-1/2"	1000#	50
CC400 - * *	4"	1000#	25
Tubing Strut Clamps			
TC25 - * *	1/4"	400#	100
TC38 - * *	3/8"	400#	100
TC50 - * *	1/2"	400#	100
TC63 - * *	5/8"	400#	50
TC75 - * *	3/4"	400#	50
TC100 - * *	1"	600#	50
TC125 - * *	1-1/4"	600#	25
TC138 - * *	1-3/8"	600#	25
TC150 - * *	1-1/2"	600#	25
TC175 - * *	1-3/4"	800#	25
TC200 - * *	2"	800#	25
TC250 - * *	2-1/2"	800#	25
TC300 - * *	3"	800#	1
TC350 - * *	3-1/2"	800#	1
TC400 - * *	4"	800#	1



- Easy Installation
- Conduit Clamps Fit Both EMT and Rigid Conduit
- Tubing Clamps Fit O.D. Tubing
- Nut and Bolt Included
- Zinc Plated Standard
- 304SS Available Upon Request
- 100 Clamps Per Bag

Material Finishes: CC-25-ZP

ZP: Zinc Plated

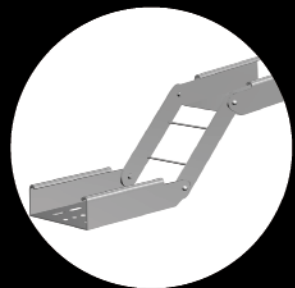
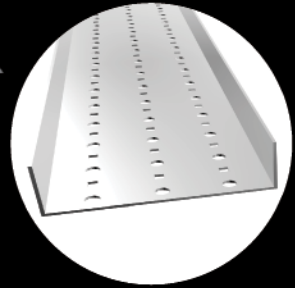
SS: 304SS

Easy Installation

Fits all 1 5/8" Channel

SNAP TRACK

- **Extruded Aluminum Construction (6063-T6)**
- **Solid Side Rails**
- **Ease of Installation**
- **Assembled with Patented Push-Pin Hardware**
- **Twice the Load Bearing Capacity of Wire Basket**
- **Innovative Form Fittings that Reduce Field Fabrication**
- **Considerable Installed Cost Savings VS. Conduit**
- **CLASSIFIED  As to its Suitability as an EGC**



Assembled With
Patented Push Pin



Assembles Without
Nuts & Bolts



Assembles Without
Tools



Does Not Require
Field Fabrication

TechLine[®] MFG. Leader in Instrumentation & Electrical Supports

Product Overview

Our philosophy is simple – reduce field labor, while supporting and protecting the cable.

TechLine Mfg.'s innovative channel type cable tray is a UL Classified product with patented push-pin assembly, and works well for electrical and fiber optic cabling in an industrial plant. As a less expensive alternative to conduit, some customers have saved very large amounts on their projects using this product.

Features:

- Quick, easy installation
- Unique patented push-pin assembly requires less time to install
- Longer span distances requires fewer supports
- Large selection of fittings: 15° - 36° large radius, waterfall, etc.
- Flexibility for future cable runs
- UL Classified marine grade aluminum
- Large inventories ready to ship

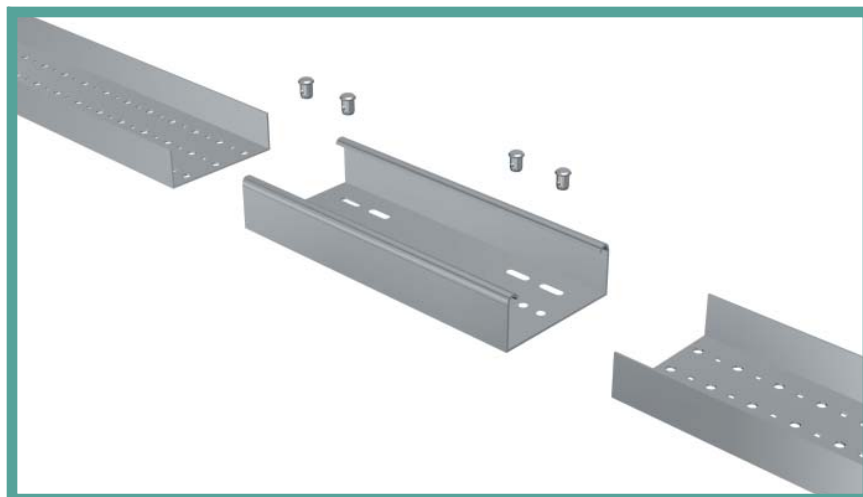
Schedule a no-obligation Product Seminar to learn more about how SnapTrack can benefit your next project.

Background

Snap Track was developed as a limited-width tray system to replace wire basket tray and conduit in an industrial environment. It is stronger, provides better cable protection and reduces installation cost.

Snap Track is

- An innovative channel tray system providing an adequate degree of cable protection.
- An alternative for transitioning from ladder tray to point of use in an industrial environment while providing cable protection and dramatically reducing installation cost.
- Snap Track is a unique limited-width, ventilated bottom channel tray, to be used as an alternative to conduit, typically 2 inch and below. Snap Track transitions control, power, and instrument cable from ladder tray to point of use, i.e. instruments and motor control stations.
- Commonly accepted benefits of running channel tray systems in lieu of conduit include
- Reduced total installed cost
- Cable accessibility
- Ease of future modifications
- Labor and material savings available
- Snap Track is an effective conduit alternative for routing power, control cable, and instrument cable.



NOTES:

This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings on the page.

1. **Acceptance**

(a) Acceptance of orders by Techline Mfg. is based on the following terms. These terms supersede all prior correspondence. Additional or different terms must be agreed to in writing by Techline Mfg.

(b) Techline Mfg. failure to insist on strict performance of any of the following terms or additional terms agreed to will not constitute a waiver of that or other terms and will not be considered a breach of contract.

(c) All orders are subject to final acceptance at Techline Mfg.'s primary facility, Spanish Fort, AL.

2. **Price, Payment Terms, Taxes, and Title**

(a) Unless otherwise stated, all pricing is firm for 30 days from the date of the quotation and is firm for goods released within 90 days of order acceptance. Quoted prices are valid only for the quantities indicated per item. A service charge of \$25.00 will be accessed for any order less than \$100.00.

(b) All invoices are payable in U S Dollars and are due in Net thirty (30) Days after delivery. If Buyer fails to fulfill the terms of payment, Techline Mfg. may defer future shipments to the buyer, or at its option, cancel the unshipped portions of the Buyer's orders. Buyer agrees to pay (i) interest at 12% annum, calculated monthly, on all past due invoices, (ii) In the event that legal action is required to collect past due invoices, buyer shall pay all reasonable collection agency costs, attorney fees and court cost incurred by Techline Mfg.

(c) "Sales", "Use" or similar taxes imposed on the sale or transaction are not included in the quoted price. If applicable, such taxes will be added to the invoice and are to be remitted by the buyer.

(d) Until full payment of all obligations of the Buyer for an order, Techline Mfg., reserves the title (but not the risk of loss) to all Products furnished under that order. If the Buyer defaults in payment or performance or becomes subject to insolvency, receivership or bankruptcy proceedings or makes an assignment for the benefit of creditors, or without the consent of Techline Mfg. voluntarily or involuntarily sells, transfers, leases or permits any lien or attachment on the Products, Techline Mfg., may treat all amounts then or thereafter owing by Buyer to be immediately due and payable and Techline Mfg., at its election Techline Mfg. may repossess Products for which Buyer has not paid in full. In the event of repossession of Products under this section, Buyer agrees that Techline Mfg., may enter the premises where the Products may be located and remove them without notice and without being liable to Buyer for such repossession. Buyer will not set off invoiced amounts or any portion thereof against sums that are due or may become due from Techline Mfg., its parents, affiliates, or subsidiaries. Buyer grants Techline Mfg., a security interest in all Products for which title has passed (including all after-acquired Products) that Techline Mfg. sells Buyer and all proceeds of Products (including but not limited to all products in which Products are incorporated and any funds and products that Buyer receives in exchange for Products). Buyer consents to Techline Mfg. execution of any documents to evidence and perfect this security interest, and agrees to execute the same if requested by Techline Mfg.

3. **Shipping, Freight and Packaging**

(a) Techline Mfg. reserves the right to make partial shipments unless otherwise specified in writing by the buyer.

(b) Freight charges may not be included in the quotation. Unless, expressly agreed to by Techline Mfg. in writing, all applicable freight charges will be added to the invoice and are to be remitted by the buyer.

(c) Packaging costs may not be included in the quotation. Unless, expressly agreed to by Techline Mfg. in writing, all applicable packaging costs will be added to the invoice and are to be remitted by the buyer.

4. **Force Majeure**

Techline Mfg., shall not be liable for any failure to perform or delay in performing its obligations resulting directly or indirectly from or contributed to by any acts of God, acts of Buyer or those under Buyer's control, acts of government or other civil or military authorities, priorities, strikes, or other labor disputes, fires, accidents, floods, epidemics, war, riot, embargoes, delays in transportation, lack of or inability to obtain raw materials, components, labor, fuel or supplies, or other circumstances beyond Techline Mfg. reasonable control ("Force Majeure Event"). If Techline Mfg. elects, the time for performance shall be extended by a period of time equal to the time lost because of any delays caused by reasons of a Force Majeure Event. Should Techline Mfg. be prevented from completing Buyer's order or any part thereof because of any Force Majeure Event, then Buyer agrees promptly upon request and upon receipt of invoice therefor, to pay Seller for any Product or Products then completed.

4. **Delivery and Risk of Loss**

(a) Unless otherwise agreed in writing, all deliveries of Products will be EXW (Incoterms 2000) Techline Mfg. facility. Products will be packed in Techline Mfg. standard commercial shipping packages.

(b) Delivery and shipping dates are approximate and represent Techline Mfg. best estimate of the time required to make delivery or shipment. Time is not of the essence with respect to the transactions covered by these terms and conditions, except with respect to Buyer's obligation to make all related payments. Techline Mfg.'s obligations under these terms and conditions will be dependent upon Techline Mfg.'s ability to obtain necessary raw materials and components.

5. **Shortages and Damages**

(a) Claims for shortages must be made in writing to Techline Mfg. within two (2) weeks of receipt of the product or the invoice for the product received, whichever is sooner.

(b) Freight claims, for any damaged incurred in transit, are the responsibility of the buyer.

6. **Cancellation / Liquidation Damages**

Orders accepted by Techline Mfg. may not be cancelled or deliveries deferred by the buyer without written consent of Techline Mfg. Techline Mfg., reserves the right to access liquidation damages for cancellation or other order changes. The determination of the exact cancellation charges will be based on but not limited to: the nature of the order, product type, or material. Cancellation charges will not exceed the following schedule: 1 week - 20%, 2 weeks - 45%, 3Weeks- 90%.

7. **Returns**

(a) Techline Mfg. will not accept product returns without written prior approval.

(b) Because of the nature of the product specialty fabricated items (seal pots, special fittings, air headers etc.) are not returnable.

(c) Returns from project awards in excess of \$5,000 will be limited to a 10% overage and must not exceed 10% per line item.

(d) Acceptance of all returns is subject to inspection of goods upon receipt by Techline Mfg. Material in non-resalable condition will not be credited. Consult factory for credit amount available for returned goods.

(e) Freight for returned goods is the responsibility of the buyer.

8. **Limited Warranty**

(a) Techline Mfg. warrants to each original Buyer of Products that Products are, at the time of delivery to the Buyer, in good working order, free of defects in material and workmanship, and conform to Techline Mfg.'s official published specifications, provided that no warranty is made with respect to any Products, component parts, or accessories manufactured by others but supplied by Techline Mfg..

(b) **Techline Mfg.'s obligation under this warranty for any Product proved not to be as warranted within the applicable warranty period is limited to, at its option, replacing the Product, refunding the purchase price of the Product, or using reasonable efforts to repair the Product during normal business hours at any authorized service facility of Techline Mfg.** All costs of transportation of any Product claimed not to be as warranted and of any repaired or replacement Product to or from such service facility shall be borne by Buyer.

(c) Techline Mfg. may require the return of any Product claimed not to be as warranted to one of its facilities, transportation prepaid by Buyer, to establish a claim under this warranty. The cost of labor for removing a Product and for installing a repaired or replacement Product shall be borne by Buyer. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period of the Products in which they are installed to the same extent as if such parts were original components. Warranty services provided under these terms and conditions do not assure uninterrupted operations of Products; Techline Mfg. shall not be liable for damages caused by any delays involving warranty service.

(d) The warranty period for Products is one (1) year from the date of shipment unless otherwise agreed by Techline Mfg. in writing.

(e) **EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, TECHLINE MFG. PROVIDES PRODUCTS AS-IS AND MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PARTICULAR PURPOSE, THEIR MERCHANTABILITY, THEIR QUALITY, THEIR NONINFRINGEMENT, OR OTHERWISE. IN NO EVENT SHALL TECHLINE MFG BE LIABLE FOR THE COST OF PROCUREMENT AND INSTALLATION OF SUBSTITUTE PRODUCT(S).**

9. **LIMITATION OF LIABILITY**

IN NO EVENT WILL TECHLINE MFG. BE LIABLE FOR ANY SPECIAL DAMAGES, CONSEQUENTIAL DAMAGES, INDIRECT DAMAGES, INCIDENTAL DAMAGES, STATUTORY DAMAGES, EXEMPLARY OR PUNITIVE DAMAGES, LOSS OF PROFITS, LOSS OF REVENUE, LIQUIDATED DAMAGES, OR LOSS OF USE, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. TECHLINE MFG.'S LIABILITY FOR DAMAGES ARISING OUT OF OR RELATED TO A PRODUCT SHALL IN NO CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT FROM WHICH THE CLAIM ARISES. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THESE LIMITATIONS AND EXCLUSIONS WILL APPLY WHETHER TECHLINE MFG'S LIABILITY ARISES OR RESULTS FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE, GROSS NEGLIGENCE, MALICE OR INTENTIONAL CONDUCT), STRICT LIABILITY, BY OPERATION OF LAW, OR OTHERWISE.

10. **Changes in Product Design or Manufacture**

Techline Mfg. reserves the right to change, discontinue or modify the design or construction of any of its products and to substitute Products equal to or superior to those originally specified or purchased.

11. **Patent Indemnity**

In the event any Product is made in accordance with drawings, samples or manufacturing specifications designated by Buyer, Buyer agrees to indemnify, defend, and hold Techline Mfg. harmless from any and all damages, costs and expenses (including attorney's fees) relating to any claim arising from or relating to the design, distribution, manufacture, marketing, sale, or use of the Product or arising from or relating to a claim that such Product furnished to Buyer by Techline Mfg., or the use thereof, infringes any claim of any patent, foreign or domestic, and Buyer agrees at its own expense to undertake the defense of any suit against Techline Mfg. brought upon by such claim or claims.

12. **Governing Law**

These terms and conditions shall be governed by and construed in accordance with the laws of the State of Alabama, without reference to its choice of law rules. If Buyer is incorporated in the United States, any claim or litigation arising out of or relating to Products shall be brought exclusively in a court of competent jurisdiction in Baldwin County, Alabama. If Buyer is incorporated outside of the United States, any dispute will be resolved by arbitration in Spanish Fort, Alabama, by three arbitrators and under the International Chamber of Commerce Rules of Arbitration. The language of the arbitration will be English. In all cases, Buyer and Seller expressly exclude from application the United Nations Convention on Contracts for the International Sale of Goods.

13. **Waiver**

No waiver of any portion of these terms and conditions shall be effective unless in writing and signed by an authorized representative of Techline Mfg. Any such waiver shall be effective only for instance given, and shall not operate as a waiver with respect to any other conditions or obligations under these terms and conditions.

14. **Severability**

If any provision of these terms and conditions is determined to be illegal, invalid, or unenforceable, the validity and enforceability of the remaining provisions of these terms and conditions will not be affected.

TLM 091313

TechLine[®] MFG.



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Corporate Office and Factory

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