

**Food  
Grade  
Strut®**

# Design Catalog

Sanitary mounting systems for the food processing and pharmaceutical industries

**Patented:** 7,651,056 | 7,926,766 | 7,931,242



**Food Grade Solutions**  
2030 S. Golden State Blvd. #206  
PO Box 69  
Fowler, CA 93625

**Phone: (559) 834-1219**  
**Fax: (559) 834-1760**

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# Food Grade Strut®

## Design Catalog

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**Food Grade Strut**  
4185 E. Jefferson Ave.  
Fresno CA 93725-9707  
USA

Toll free: (866) FG STRUT  
or (866) 347-8788  
Phone: (559) 834-1219  
Fax: (559) 834-1760

[www.FoodGradeStrut.com](http://www.FoodGradeStrut.com)

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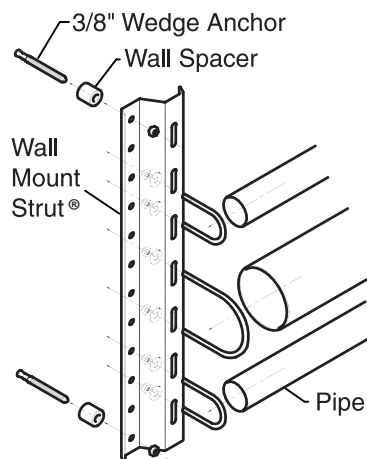
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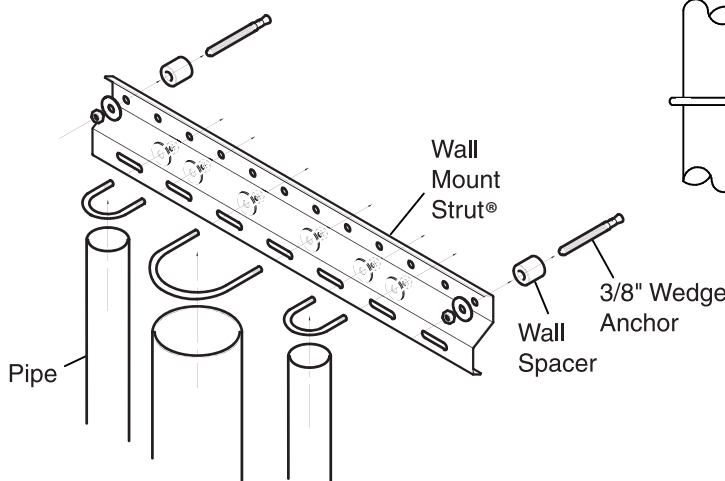
# Wall Mount Strut®

# Food Grade Strut®

## Design Catalog



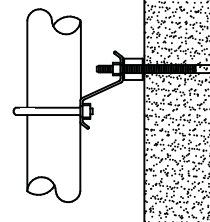
Wall Mount Strut® installed vertically



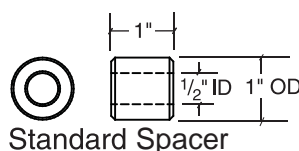
Wall Mount Strut® installed horizontally

Wall Mount Strut® may be used in either direction to mount pipes or conduit to walls.

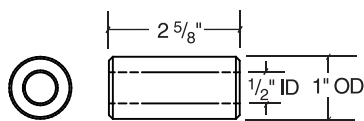
Side View



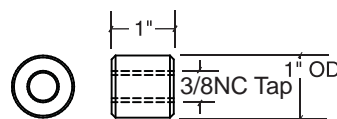
## Wall Spacers:



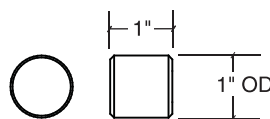
Standard Spacer



Add for Heavy Duty Mounting



Tapped Spacer



Solid Spacer

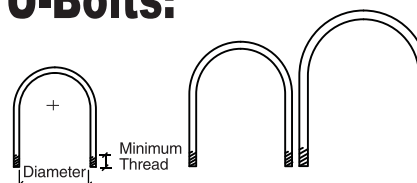
Wall spacers are made of solid 304/316 stainless steel and must be used between each piece of Wall Mount Strut® and walls. Use TWO for 1' to 5' long strut pieces, use THREE for strut pieces longer than 5'.

## Part Numbers

Wall Mount Strut®	Qty-1	Box of 5
12" Length w/ holes	<b>WMS 12</b>	<b>WMS 12 /5</b>
24" Length w/ holes	<b>WMS 24</b>	<b>WMS 24 /5</b>
48" Length w/ holes	<b>WMS 48</b>	<b>WMS 48 /5</b>
120" Length w/ holes	<b>WMS 120</b>	<b>WMS 120 /5</b>
12" Length - Blind	<b>WMSB 12</b>	<b>WMSB 12 /5</b>
24" Length - Blind	<b>WMSB 24</b>	<b>WMSB 24 /5</b>
48" Length - Blind	<b>WMSB 48</b>	<b>WMSB 48 /5</b>
120" Length - Blind	<b>WMSB 120</b>	<b>WMSB 120 /5</b>

Wall Spacer P/Ns	Qty-1	Box of 72
Standard spacer	<b>WS</b>	<b>WS /72</b>
Heavy Duty spacer	<b>WSL</b>	<b>WSL /72</b>
Tapped spacer	<b>WST</b>	<b>WST /72</b>
Solid spacer	<b>WSS</b>	<b>WSS /72</b>

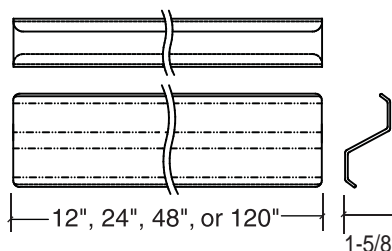
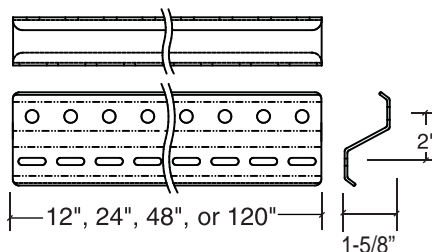
## U-Bolts:



Food Grade Strut® U-bolts are fabricated to accommodate trade sizes of conduit and tubing. Each U-bolt has minimum thread to ease assembly and minimize exposed threads.

See inside back cover for U-Bolt Selection Chart.

## Wall Mount Strut®



Wall Mount Strut® is made of heavy-duty 12 ga. 304/316 stainless steel and is available in pre-cut lengths of: 12", 24", 48", and 120"

**Food Grade Solutions**  
2030 S. Golden State  
Blvd. #206

PO Box 69  
Fowler, CA 93625

Phone: (559) 834-1219  
Fax: (559) 834-1760

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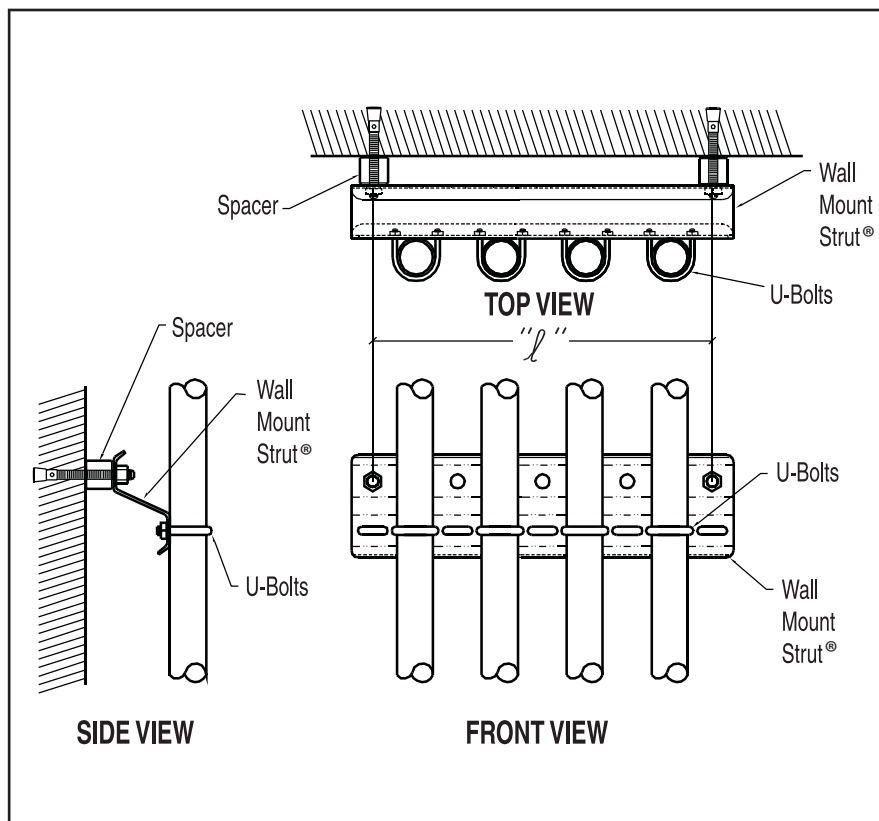
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# Wall Mount Strut®

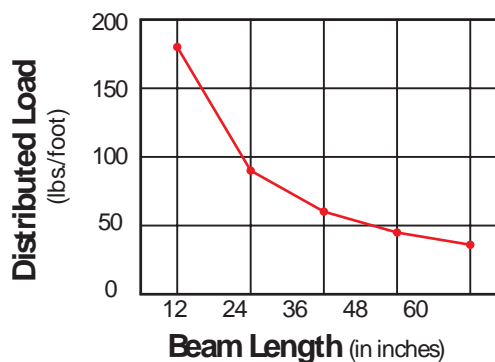
**Application #1**  
Standard Mounting

**Pipes:** Vertical  
**Strut:** Horizontal



## Beam Load \*

### Application #1



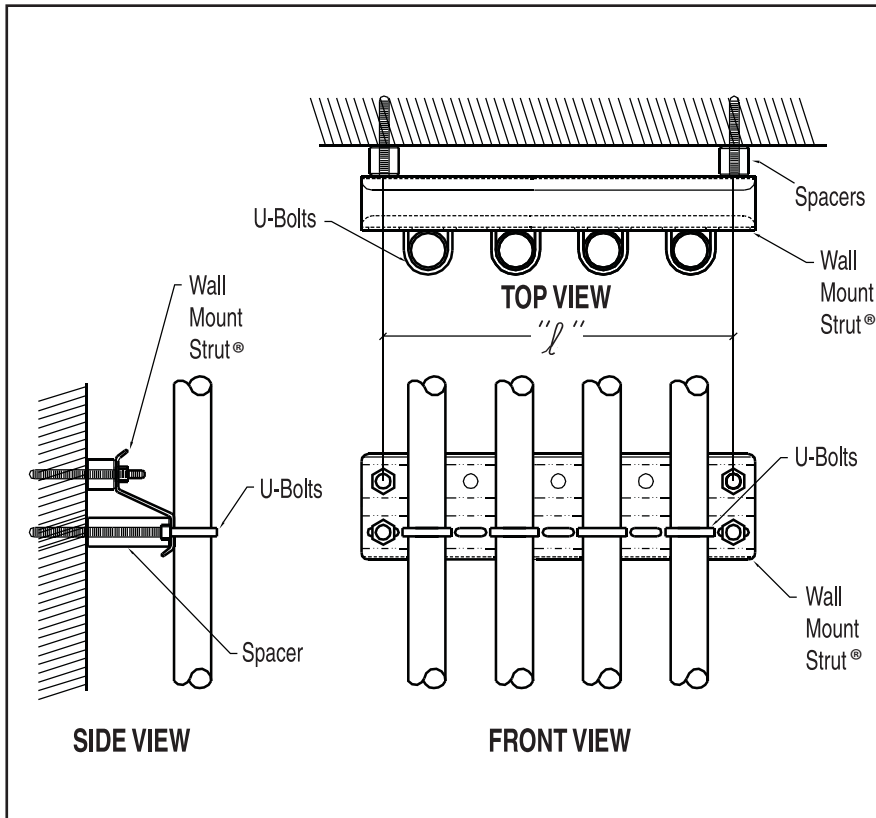
"l" =	12"	24"	36"	48"	60"
Allowable Distributed Load =	180#/ft	90#/ft	60#/ft	45#/ft	36#/ft

\*Maximum allowable distributed load. Calculations based on simply supported beam. Standard mounting requires the use of ITW Ramset/Red Head® Trubolt Wedge Type 304 Stainless Steel Anchor #WW-3836 (or equivalent) with minimum embedment of 2" and tightened to 25 ft. lbs. (33.9 Nm) dry -or- 13 ft. lbs. (17.6 Nm) with threads pre-lubricated with food grade anti-seize. Allowable loads based on anchoring in concrete rated at f'c ≥ 2500 psi.

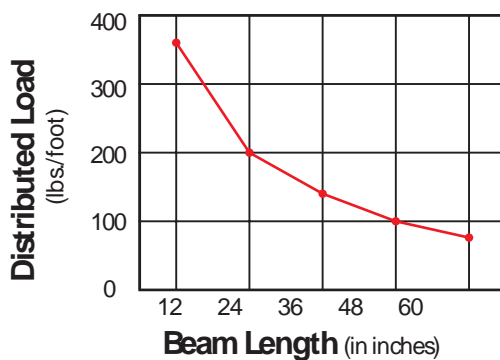
# Wall Mount Strut®

Application #2  
Heavy Duty Mounting

**Pipes:** Vertical  
**Strut:** Horizontal



## Application #2



## Beam Load\*

$l =$	12"	24"	36"	48"	60"
Allowable Distributed Load =	360#/ft	200#/ft	140#/ft	100#/ft	76#/ft

\*Maximum allowable distributed load. Calculations based on simply supported beam. Standard mounting requires the use of ITW Ramset/Red Head® Trubolt Wedge Type 304 Stainless Steel Anchor #WW-3836 (or equivalent) with minimum embedment of 2" through short Wall Spacers. In addition, heavy duty mounting also requires the use of WW-3850 (or equivalent) with minimum embedment of 1 3/4" through long Wall Spacers. All anchors are to be tightened to 25 ft. lbs. (33.9 Nm) dry -or- 13 ft. lbs. (17.6 Nm) with threads pre-lubricated with food grade anti-seize. Allowable loads based on anchoring in concrete rated at  $f'_c \geq 2500$  psi. Utilizing the long Wall Spacers with the 5/16" slots requires the enlargement of the selected slot through the use of a file, grinder, or punch.

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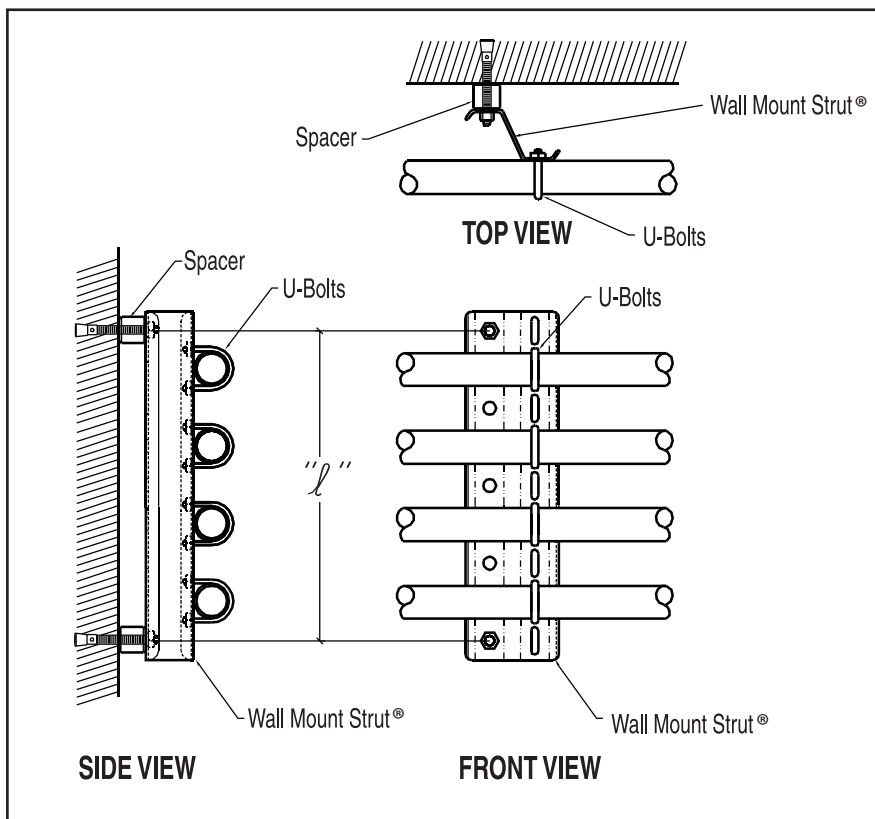
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# Wall Mount Strut®

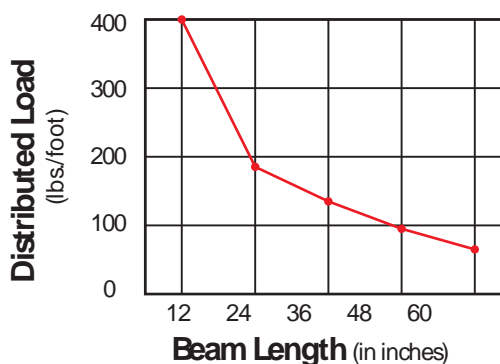
**Application #3**  
Standard Mounting

**Pipes:** Horizontal  
**Strut:** Vertical



## Column Load\*

### Application #3



$l$	12"	24"	36"	48"	60"
Allowable Distributed Load =	400#/ft	185#/ft	135#/ft	95#/ft	65#/ft

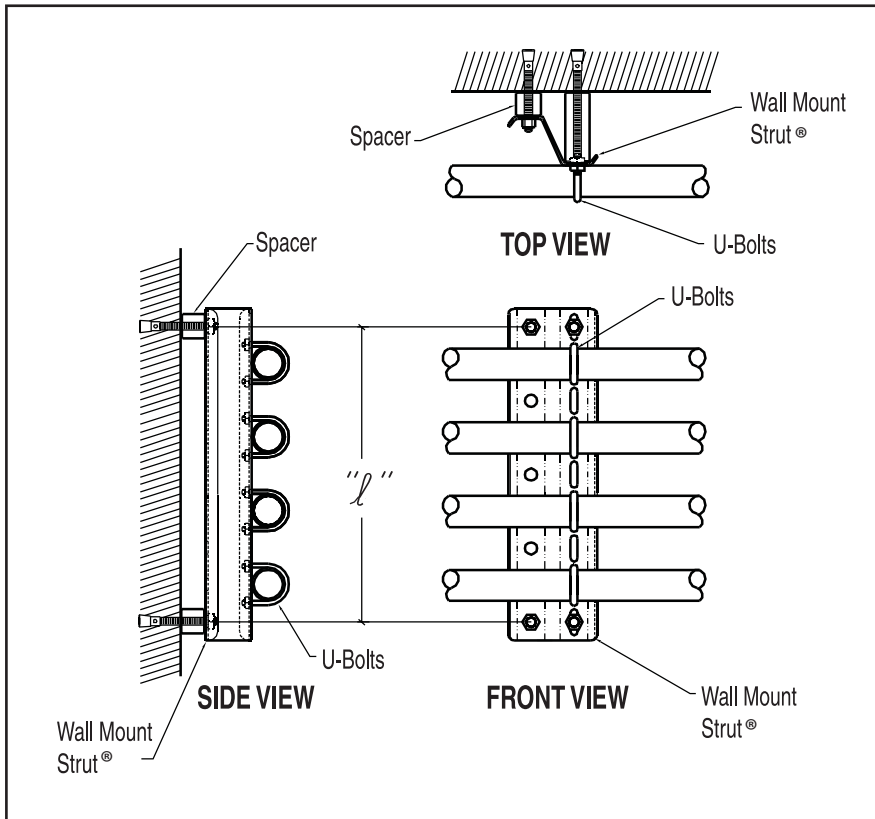
\*Maximum allowable distributed load. Calculations based on simply supported beam. Standard mounting requires the use of ITW Ramset/Red Head® Trubolt Wedge Type 304 Stainless Steel Anchor #WW-3836 (or equivalent) with minimum embedment of 2" and tightened to 25 ft. lbs. (33.9 Nm) dry -or- 13 ft. lbs. (17.6 Nm) with threads pre-lubricated with food grade anti-seize. Allowable loads based on anchoring in concrete rated at  $f'_c \geq 2500$  psi.

# Wall Mount Strut®

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Application #4  
Heavy Duty Mounting

**Pipes:** Horizontal  
**Strut:** Vertical



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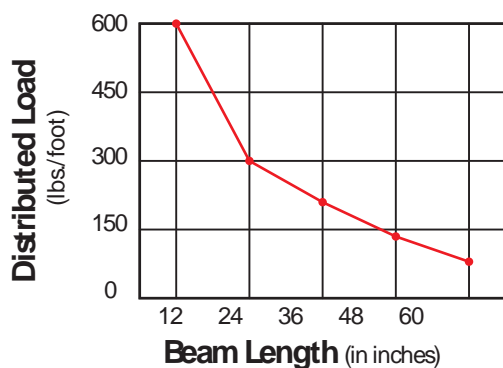
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## Application #4



## Column Load\*

$l =$	12"	24"	36"	48"	60"
Allowable Distributed Load =	600#/ft	300#/ft	210#/ft	135#/ft	80#/ft

\*Maximum allowable distributed load. Calculations based on simply supported beam. Standard mounting requires the use of ITW Ramset/Red Head® Trubolt Wedge Type 304 Stainless Steel Anchor #WW-3836 (or equivalent) with minimum embedment of 2" through short Wall Spacers. In addition, heavy duty mounting also requires the use of WW-3850 (or equivalent) with minimum embedment if 1 3/4" through long Wall Spacers. All anchors are to be tightened to 25 ft. lbs. (33.9 Nm) dry -or- 13 ft. lbs. (17.6 Nm) with threads pre-lubricated with food grade anti-seize. Allowable loads based on anchoring in concrete rated at  $f'_c \geq 2500$  psi. Utilizing the long Wall Spacers with the 5/16" slots requires the enlargement of the selected slot through the use of a file, grinder, or punch.

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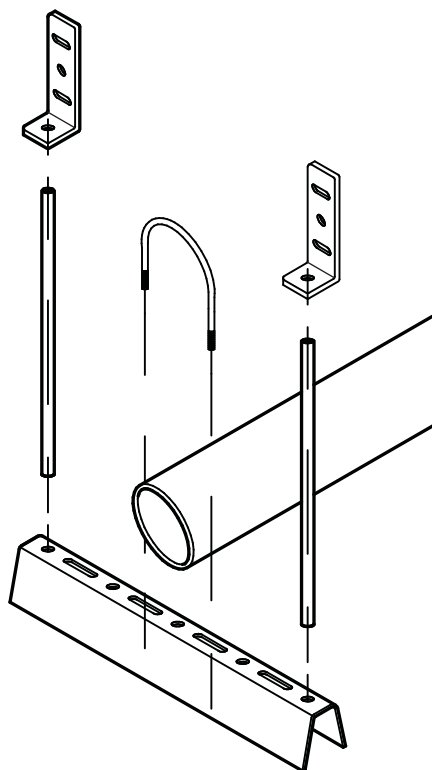
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# Trapeze Mount Strut®

For suspended applications



Trapeze Mount Strut® is installed horizontally to hang pipes or conduit from the ceiling or from overhead structures.

## L-Brackets:

L-Brackets are used for mounting Hanger Rods to the ceiling or other overhead structures. Made of 304/316 stainless steel.

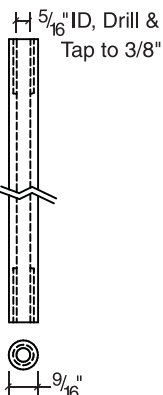
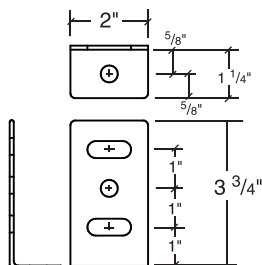
**Design load = 500 # force downward**  
**Attach to supporting member using fasteners that provide a collective working shear strength of 1,500 lbs. or more.**

## Hanger Rods:

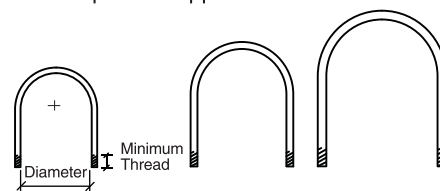
304/316 Stainless steel Hanger Rods are available in 1 meter (est. 39-3/8") long or 2 meters (est. 78-3/4") long. Each rod is internally threaded for sanitary design and ease of installation.

**Working tension for Hanger Rods is 1,150#.**

**Attach Hanger Rod to L-Bracket and Strut with 3/8" NC x 1" 304 stainless steel bolts possessing a proof strength of 15,000 psi or more.**



## U-Bolts:



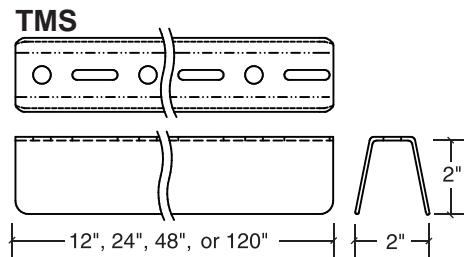
Food Grade Strut® U-bolts are fabricated to accommodate trade sizes of conduit and tubing. Each U-bolt has minimum thread to ease assembly and minimize exposed threads.

Please refer to the U-bolt Selection Chart on page 11 for Part Numbers.

All U-bolts are pre-lubricated with food grade anti-seize, and include necessary mounting hardware.

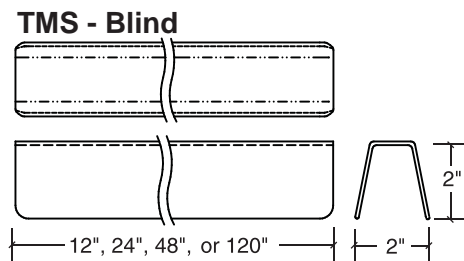
## Trapeze Mount Strut®

Trapeze Mount Strut® is made of heavy-duty 12 ga. 304/316 stainless steel and is available in lengths of 12", 24", 48", and 120" with or without holes.



**Refer to page 9 for Beam Loading Calculations.**

**Use with hardware proof tested to 15,000 psi.**



## Part Numbers

Trapeze Mount Strut®	Qty-1	Box of 5
12" Length w/ holes	<b>TMS 12</b>	<b>TMS 12 /5</b>
24" Length w/ holes	<b>TMS 24</b>	<b>TMS 24 /5</b>
48" Length w/ holes	<b>TMS 48</b>	<b>TMS 48 /5</b>
120" Length w/ holes	<b>TMS 120</b>	<b>TMS 120 /5</b>
12" Length - Blind	<b>TMSB 12</b>	<b>TMSB 12 /5</b>
24" Length - Blind	<b>TMSB 24</b>	<b>TMSB 24 /5</b>
48" Length - Blind	<b>TMSB 48</b>	<b>TMSB 48 /5</b>
120" Length - Blind	<b>TMSB 120</b>	<b>TMSB 120 /5</b>

L-Bracket P/N	Qty-1	Box of 10
L-Bracket	<b>TML</b>	<b>TML /10</b>

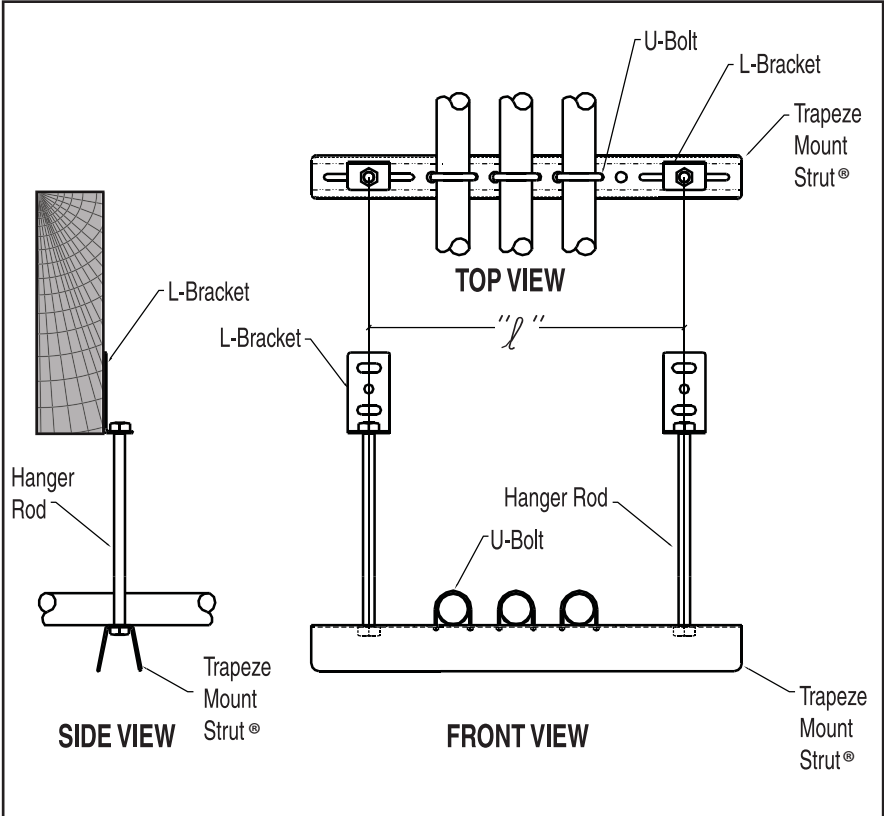
Hanger Rod P/N	Qty-1	Box of 10
1 meter Hanger Rod	<b>TMHR1</b>	<b>TMHR1 /10</b>
2 meter Hanger Rod	<b>TMHR2</b>	<b>TMHR2 /10</b>



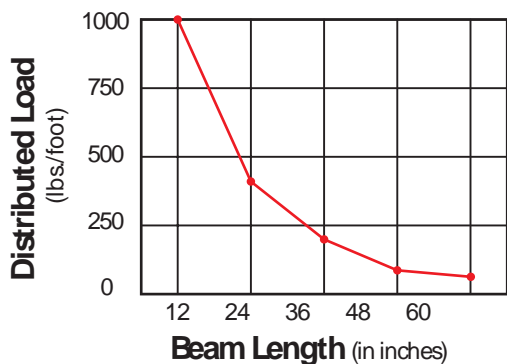
# Trapeze Mount Strut®

Application #5  
Suspended Mounting

**Pipes:** Horizontal  
**Strut:** Horizontal  
(perpendicular to pipes)



## Application #5



"l" =	12"	24"	36"	48"	60"
Allowable Distributed Load =	1,000#/ft	410#/ft	200#/ft	87#/ft	63#/ft

\*Maximum allowable distributed load. Calculations based on simply supported beam. Attach to supporting member using fasteners that provide a collective working shear strength of 1,500# or more. Attach Hanger Rod to L-bracket and strut with 3/8" NC x 1" 304 stainless steel bolts possessing a proof strength of 15,000 psi or more.

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## Beam Load\*

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# Food Grade Accessories

## Pedestals:

A Pedestal is used to mount Wall Mount Strut® or Trapeze Mount Strut® to floor, wall or overhead. Pedestals are 304/316 heavy-duty stainless steel.

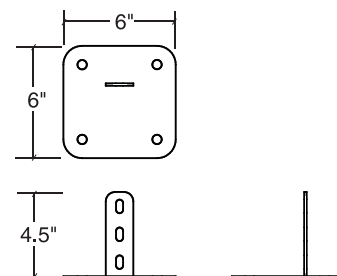
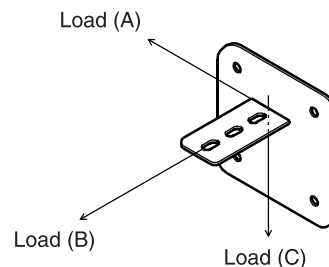
Capable of 500#\* load vertically, laterally or axially.

\*Intended for shear or tension loads only, not intended for moment or cantilever loads.

Use hardware proof tested to 15,000 psi.

### Part Number

Qty-1
PB-1



## Slider Brackets:

Slider Brackets are used to match existing pipes and components with the pre-punched holes in Food Grade Strut™.

Available in four sizes. Please refer to the U-Bolt selection guide on the following page to determine bracket size.

\*Use of Slider Brackets de-rates load carrying ability of strut by 50%.

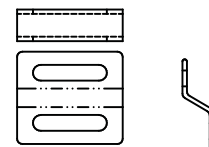
Use hardware proof tested to 15,000 psi.

### Part Numbers

Qty-1	Box of 10
SBA	SBA/10
SBB	SBB/10
SBC	SBC/10
SBD	SBD/10

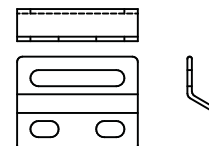
### Slider Bracket 'A':

For use with U-bolts UB-10 to UB-50.



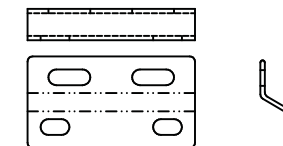
### Slider Bracket 'B':

For use with U-bolts UB-60 to UB-90.



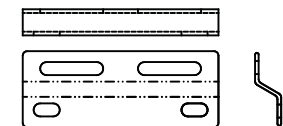
### Slider Bracket 'C':

For use with U-bolts UB-100 to UB-140.



### Slider Bracket 'D':

For use with U-bolts UB-150 to UB-170.



# U-Bolt Selection Chart

		OD Tube	Schedule Pipe	Rigid Conduit	EMT	Copper* Tube	Ocal®
Trade Size	1/2"	UB-10	UB-30	UB-30	UB-20	UB-10*	UB-40
	3/4"	UB-20	UB-40	UB-40	UB-40	UB-30*	UB-50
	1"	UB-40	UB-60	UB-60	UB-50	UB-50*	UB-70
	1-1/4"	UB-60	UB-80	UB-80	UB-70	UB-60*	UB-90
	1-1/2"	UB-70	UB-90	UB-90	UB-90	UB-80*	UB-100
	2"	UB-100	UB-110	UB-110	UB-110	UB-110*	UB-120
	2-1/2"	UB-120	UB-130	UB-130	UB-130	Custom*	UB-140
	3"	UB-140	UB-150	UB-150	UB-150	Custom*	UB-150
	3-1/2"	UB-150	UB-160	UB-160	UB-160	Custom*	UB-160
	4"	UB-160	UB-170	UB-170	UB-170	Custom*	UB-170
	Larger	Custom	Custom	Custom	Custom	Custom*	Custom

Ocal® is a registered trademark of Thomas & Betts.

\* Fastening copper tube with Food Grade Strut U-Bolts requires the use of sufficient 10 Mil pipe wrap tape to prevent metal-to-metal contact from pressure and/or vibration.

## U-Bolt Quantities per box:

U-bolts UB-10 to UB-100 are sold in a quantity of 25 per box.  
U-Bolts UB-110 to UB-170 are sold in a quantity of 10 per box.

## How to use this chart:

1. Locate the type of pipe, tubing, or conduit that will be used in the installation, listed across the top row of the chart.
2. Find the trade size of the pipe, tubing, or conduit that will be used in the installation, listed along the left side of the chart.
3. Follow the column downward and the row across to where they intersect. That number (UB-#) is the U-Bolt size that will be needed for the installation.

**For Example...** If the installer wants to attach a length of 1-1/4" Rigid Conduit to a piece of Food Grade Strut®, proceed as follows: First, locate the column labeled "Rigid Conduit." Second, locate the trade size row labeled "1-1/4." The Rigid Conduit column and the 1-1/4" row cross at "UB-80." Therefore, use a #UB-80 U-bolt for this job.

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