

Hi-Clean pipe & tube hangers



 **STAUFF**®
PROCESS PRODUCTS

For clean work areas and process piping.

ROUNDED HYGIENIC SERIES - HH

Supports: For use with Process, Food and Pharmaceutical Applications

PATENT APPROVED



- Clamp design is patent approved.
- Type 316 stainless steel is standard, type 304 also available. No corrosion or painting.
- All exposed metallic holder surfaces are 35 R_a or better.
- All non-metallic materials are FDA compliant.
- No exposed threaded pipe support components.
- Only closed sections such as round, square or rectangular tube steel are used with end caps which close the sections.
- Exposed threads or bolts and anchor bolts are concealed by locking acorn nuts.
- Edges and inside corners are chamfered or rounded for cleanliness and safety.
- Optional grommets allow for either tube or pipe “clamping” or “sliding”.

Pipe & Tube Hanger follows the design principles of BPE

BPE-2002 SECTION	HANGER DESIGN PRINCIPLE
SD-3.1.1	The hanger surfaces are rounded and cleanable.
SD-3.1.2	The use of horizontal surfaces is minimized.
SD-3.1.3	The hangers are drainable and free of surfaces where liquids could collect. The grommet around the tubing or piping is leak tight and the rounded surfaces of the assembly are conducive to spillage removal and drainage of periodic washdown fluids.
SD-3.1.5	The hanger surfaces are accessible to cleaning solutions.
SD-3.1.6	The hanger surfaces have no exposed threads. The use of acorn nuts covers the fastener threads.
SD-3.3.1	Hangers are supplied in a polished condition, if requested by the customer.
SD-3.4.1	Standard material of construction is 316 stainless and cast CF8M.
SD-3.4.2	The nitrile, silicone, and teflon grommet materials are compliant with 21CFR 177.
SD-3.7.6	Hanger surfaces are self draining and horizontal surfaces are minimized.
SD-3.8 (a)	Hanger surfaces are stainless steel or FDA compliant elastomers. There is no plating or coating that could chip or flake.
SD-3.8 (b)	Hanger finish is polished. Electro-polishing is also available.
SD-3.8 (c)	The hangers, and their gasketing and grommets, are suitable for washdown. The use of silicon for grommets and gasketing is compatible with steam cleaning.
SD-3.8 (d)	Burrs are removed as part of normal manufacturing operations

REFERENCE SPECIFICATIONS

MSS SP-69	Manufacturers Standardization Society Standard Practice: Pipe Hangers and Supports - Selection and Application.
MSS SP-77	Manufacturers Standardization Society Standard Practice: Guidelines for Pipe Support Contractual Relationships - Relationships and Responsibilities of the Pipe Hanger Contractor with the Purchaser's Engineer or the Pipe Fabricator and/or Erector
MSS SP-89	Pipe Hangers and Supports - Fabrication and Installation Practices.

Hanger Holding Assembly

COMPONENT	MATERIAL	SPECIFICATION	STANDARD FINISH
Holder Housing, Upper & Lower	316 stainless steel	Casting grade CF8M	35 Ra
Holder Grommet	Silicone (blue)	70 shore A	--
Slider Grommet	PTFE	50-65 shore D	--
Acorn Nuts, Locking	18-8 stainless steel		--
Mounting Stud	18-8 stainless steel		Threaded (not exposed)

PTFE grommet is bored to allow pipe/tube to slide.

Note: Other materials available on request. Consult factory for details.

Hanger Support Assembly

COMPONENT	MATERIAL	SPECIFICATION	STANDARD FINISH
Top Mount Support Rod	316 series stainless		50 Ra Mill
Bottom Mount Base Plate	316 series stainless	Casting grade CF8M	35 Ra
Bottom Assembly Rod	316 series stainless		50 Ra Mill
Square Telescoping Tubing	316 series stainless		35 Ra
Square Stand Off	316 series stainless	Casting grade CF8M	35 Ra
Wall Mount Bracket	316 series stainless	Casting grade CF8M	35 Ra
Wall Mount Tube	316 series stainless		35 Ra
Round Stand Off	316 series stainless	Casting grade CF8M	35 Ra
Wall Mount Tube Cap	PVC vinyl		--
Multiple Run Connector	316 series stainless		Threaded (not exposed)
Top Mount Support Rod Coned Gasket	Silicone	70 durometer hardness	As molded

Note: Other materials available on request. Consult factory for details.

Top Mount Support Rod Dimensions

PIPE / TUBING SIZE	ROD DIAMETER	TAP DIAMETER
1/4" tube - 2" tube	3/8", 1/2"	3/8" - 16 UNC
2" pipe - 3" pipe	1/2"	1/2" - 13 UNC
4" pipe and tube	5/8"	5/8" - 11 UNC
6" pipe and tube	3/4"	3/4" - 10 UNC

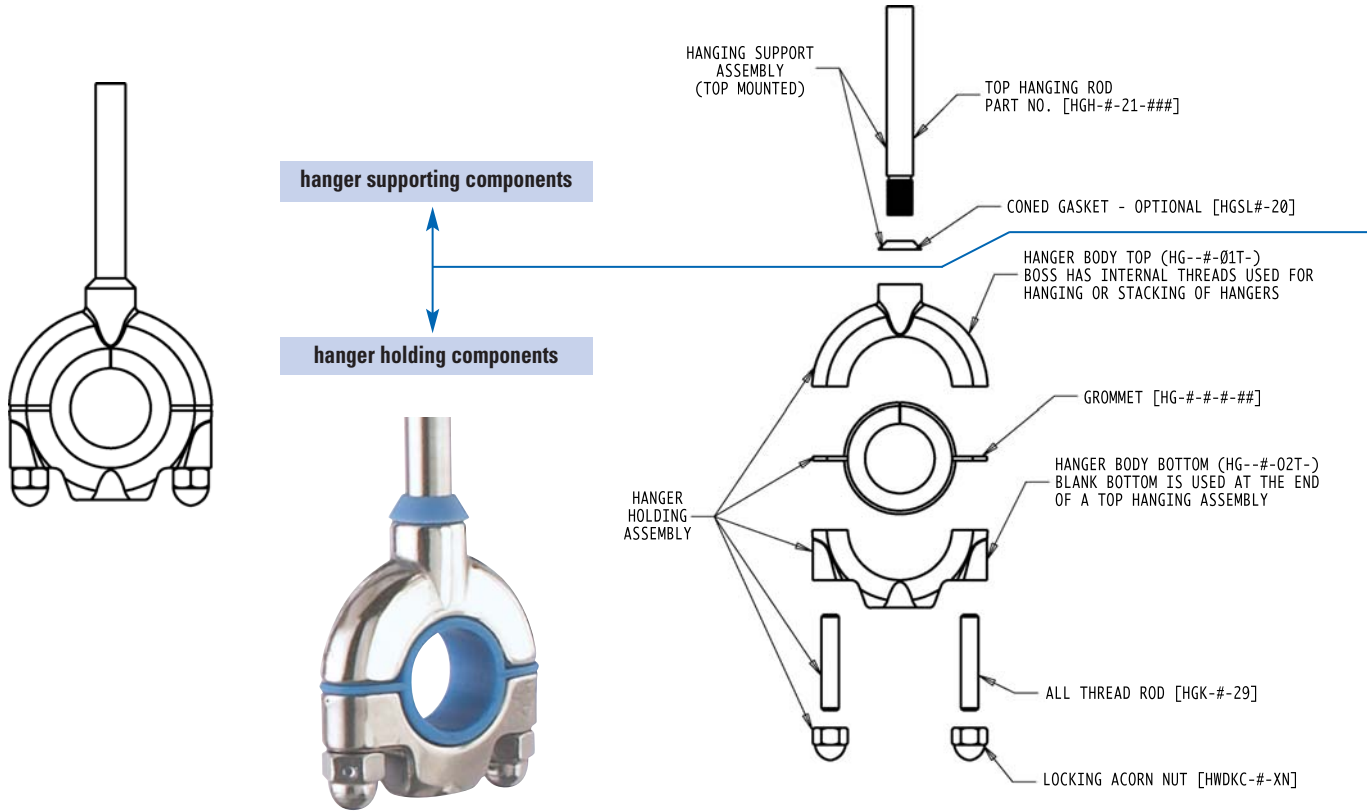
Top Mount Support Rods come in 6", 12", and 24" Standard Lengths.
Custom lengths available.

Grommet Material Ratings

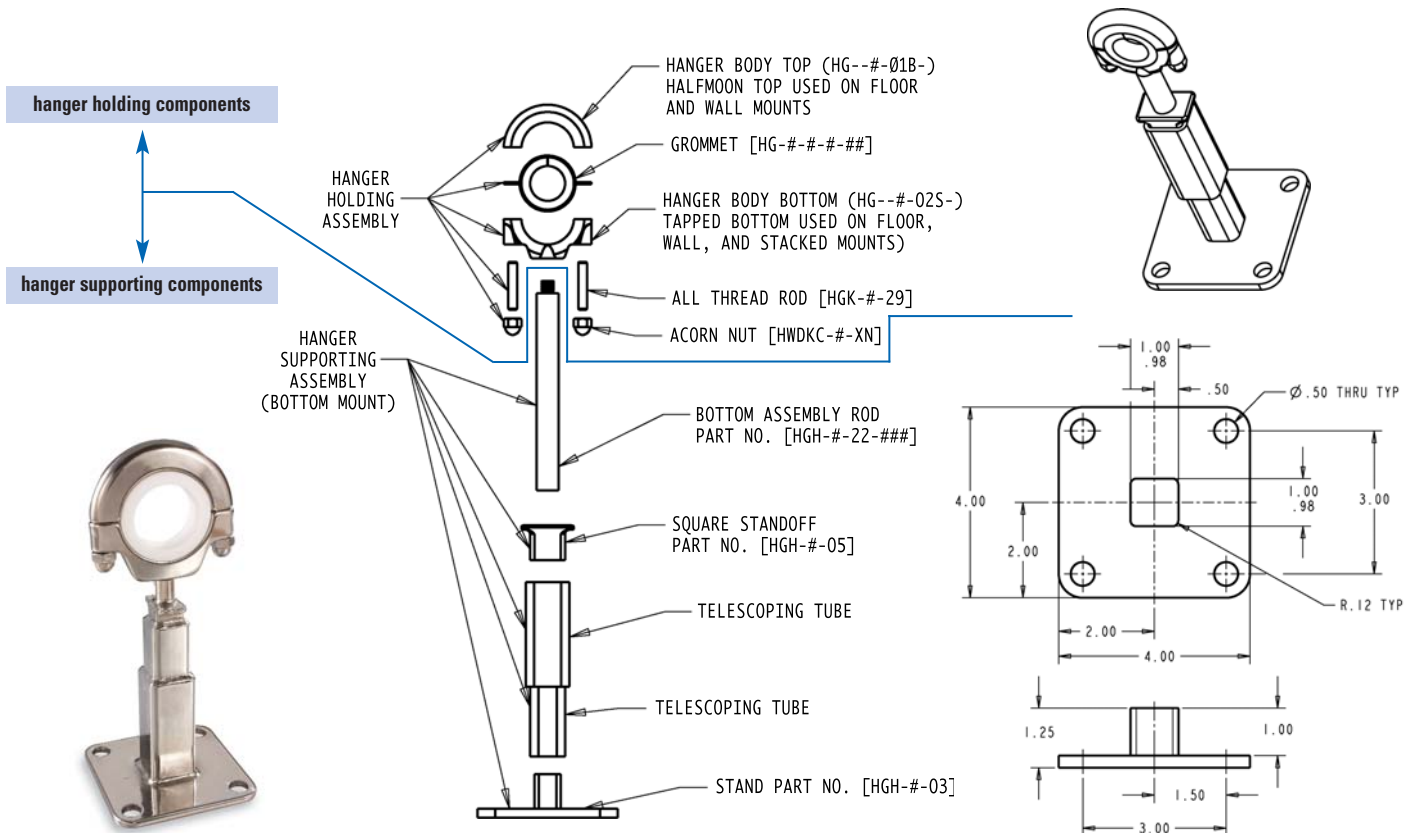
MATERIAL	TYPE	TEMP. RATING	
Silicone	Clamp	400°F	204°C
PTFE	Slide	400°F	204°C

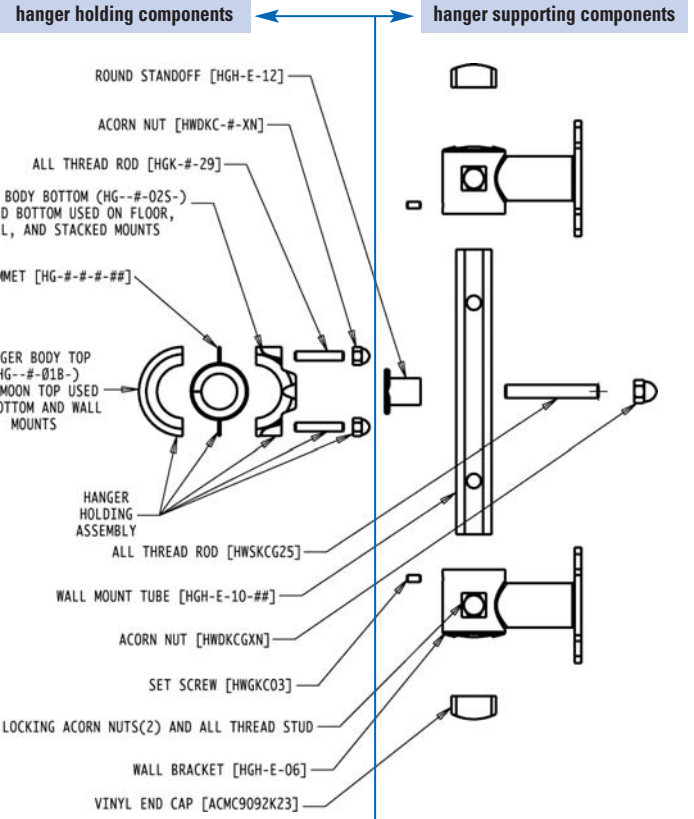
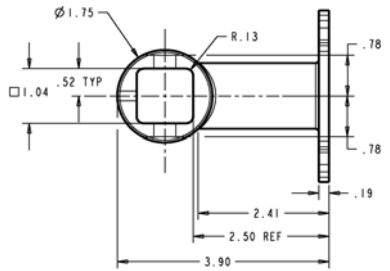
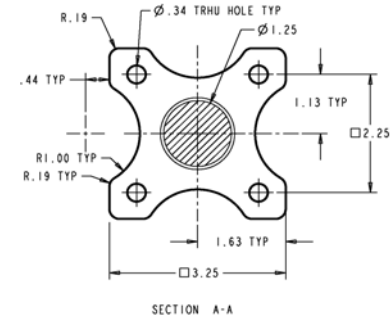
Note: Other materials available on request. Consult factory for details.

Top Mount Assembly



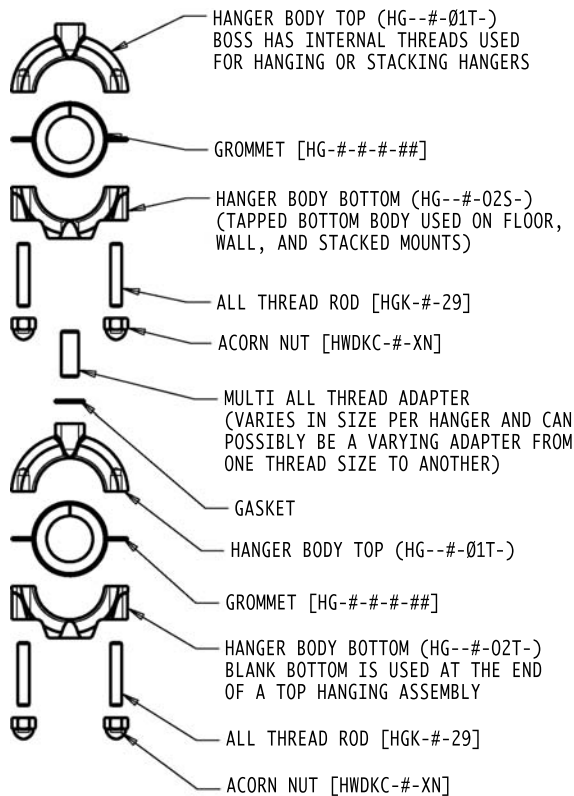
Bottom Mount Assembly



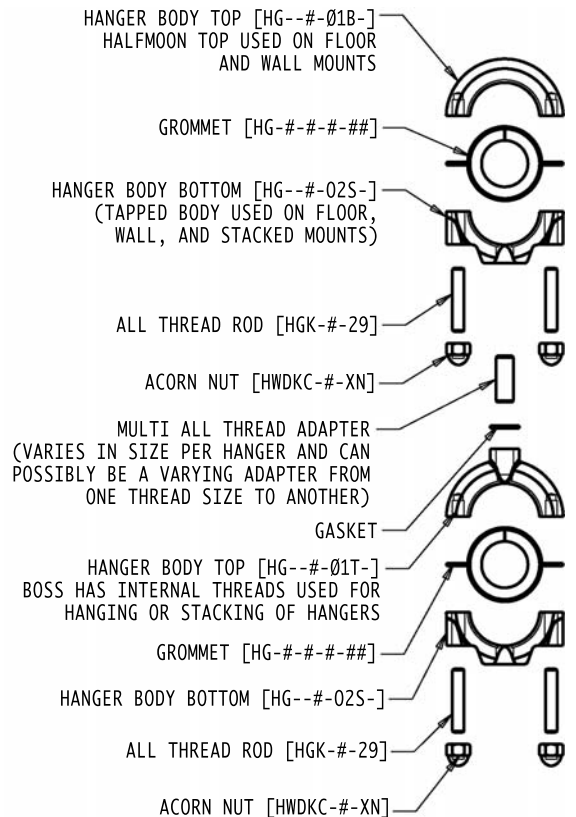


Multi-Hanger Holding Assemblies

Top Mounted Multi-Hanger



Bottom or Wall Mounted Multi-Hanger



Top Mount Housing Dimensions

GROMMET SIZE*		DIMENSIONS								APPROX. WEIGHT
PIPE	TUBE	UNITS	B	C	D	E	F	G	H	
1/4", 3/8" 1/2"	1/4", 3/8"	inches	2.22	1.25	2.02	0.63	1/4"-20	3/8"-16	.94	0.32 lbs
	1/2", 3/4"	mm	56.39	31.7	51.3	16.00			23.88	0.145 kg
3/4", 1"	1", 1-1/4"	inches	2.72	1.50	2.52	0.63	1/4"-20	3/8"-16	1.15	0.44 lbs
		mm	69.08	38.1	64.0	16.00			29.21	0.2 kg
1-1/4" 1-1/2"	1-1/2"	inches	3.50	1.88	3.62	0.75	5/16"-18	3/8"-16	1.62	0.95 lbs
	2"	mm	88.9	47.75	91.95	19.10			41.15	0.43 kg
2", 2-1/2" 3"	2-1/2" 3"	inches	5.07	2.63	5.25	0.88	5/16"-18	1/2"-13	2.44	1.97 lbs
		mm	128.8	66.80	133.4	22.4			61.98	0.89 kg
4"	4"	inches	6.62	3.50	6.75	1.00	3/8"-16	5/8"-11	3.12	3.35 lbs
		mm	168.1	88.90	171.5	25.40			79.25	1.52 kg
6"	6"	inches	8.88	4.50	9.00	1.25	1/2"-13	3/4"-10	4.38	7.41 lbs
		mm	225.6	114.3	228.6	31.75			111.25	3.36 kg

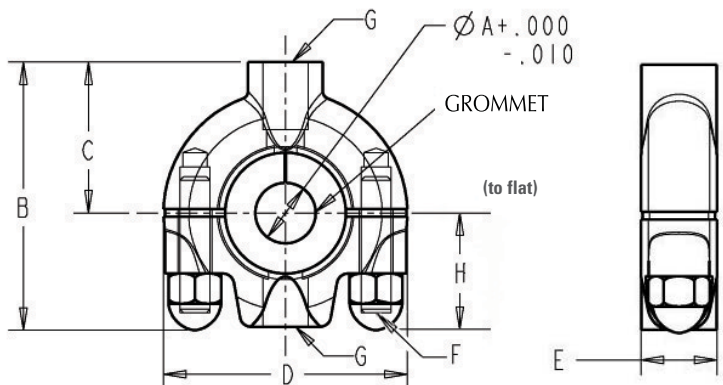
Bottom/Wall Mount Housing Dimensions

GROMMET SIZE*		DIMENSIONS								APPROX. WEIGHT
PIPE	TUBE	UNITS	B	C	D	E	F	G	H	
1/4", 3/8" 1/2"	1/4", 3/8"	inches	1.98	1.01	2.02	0.63	1/4"-20	3/8"-16	.94	0.31 lbs
	1/2", 3/4"	mm	50.30	25.60	51.3	16.0			23.88	0.14 kg
3/4", 1"	1", 1-1/4"	inches	2.48	1.26	2.52	0.63	1/4"-20	3/8"-16	1.15	0.44 lbs
		mm	63.00	32.00	64.0	16.0			29.21	0.2 kg
1-1/4" 1-1/2"	1-1/2"	inches	3.43	1.81	3.62	0.75	5/16"-18	3/8"-16	1.62	0.96 lbs
	2"	mm	87.1	46.00	91.95	19.1			41.15	0.44 kg
2", 2-1/2" 3"	2-1/2" 3"	inches	5.07	2.63	5.25	0.88	5/16"-18	1/2"-13	2.44	1.99 lbs
		mm	128.8	66.8	133.4	22.4			61.9	0.90 kg
4"	4"	inches	6.50	3.38	6.75	1	3/8"-16	5/8"-11	3.12	3.38 lbs
		mm	165.1	85.80	171.5	25.4			79.25	1.53 kg
6"	6"	inches	8.88	4.50	9.00	1.25	1/2"-13	3/4"-10	4.38	7.36 lbs
		mm	225.6	114.3	228.6	31.75			111.25	3.33 kg

Multiple-Run Housing Dimensions

GROMMET SIZE*		DIMENSIONS								APPROX. WEIGHT
PIPE	TUBE	UNITS	B	C	D	E	F	G	H	
1/4", 3/8" 1/2"	1/4", 3/8"	inches	2.22	1.25	2.02	0.63	1/4"-20	3/8"-16	.94	0.32 lbs
	1/2", 3/4"	mm	56.39	31.75	51.3	16.0			23.88	0.145 kg
3/4", 1"	1", 1-1/4"	inches	2.72	1.5	2.52	0.63	1/4"-20	3/8"-16	1.15	0.44 lbs
		mm	69.08	38.1	64.0	16.0			29.21	0.2 kg
1-1/4" 1-1/2"	1-1/2"	inches	3.5	1.88	3.62	0.75	5/16"-18	3/8"-16	1.62	0.95 lbs
	2"	mm	88.9	47.75	91.95	19.1			41.15	0.43 kg
2", 2-1/2" 3"	2-1/2" 3"	inches	5.07	2.63	5.25	0.88	5/16"-18	1/2"-13	2.44	1.97 lbs
		mm	128.8	66.8	133.4	22.4			61.98	0.89 kg
4"	4"	inches	6.62	3.5	6.75	1	3/8"-16	5/8"-11	3.12	3.35 lbs
		mm	168.1	88.9	171.5	25.4			79.25	1.52 k
6"	6"	inches	8.88	4.50	9.00	1.25	1/2"-13	3/4"-10	4.38	7.41 lbs
		mm	225.6	114.3	228.6	31.75			111.25	3.36 kg

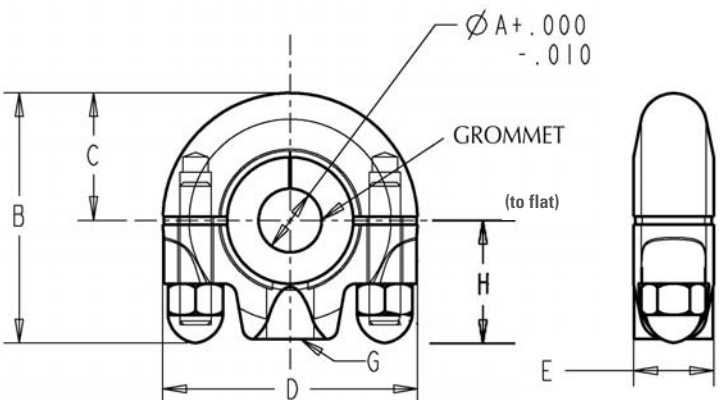
Top Mount



There are six different housing size codes that accommodate pipe and tube sizes from 1/4" - 6". The housing size codes are "C, E, H, K, L, and M". Dimensions of housing codes can be seen on tabulated drawings to the left.

LINE SIZE	HOUSING SIZE CODE		
	TUBING	PIPE	COPPER TUBE
1/4"	C	C	C
3/8"	C	C	C
1/2"	C	C *	C
3/4"	C	E	C
1"	E	E *	E
1-1/4"	E	H	E
1-1/2"	H	H	H
2"	H	K	K *
2-1/2"	K	K	K
3"	K	K *	K
4"	L	L	L
6"	M	M	M

Bottom/Wall Mount

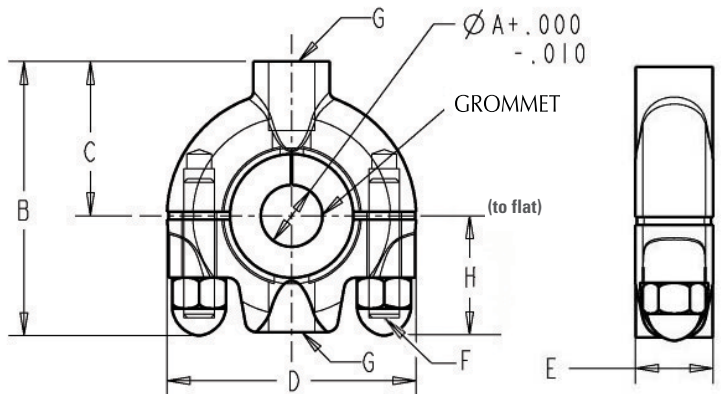


* Slider Housing moves up one size

Stainless rod adapters are used to connect two (2) different hanger holder housing sizes. Use the chart above to determine if varying adapters are required.

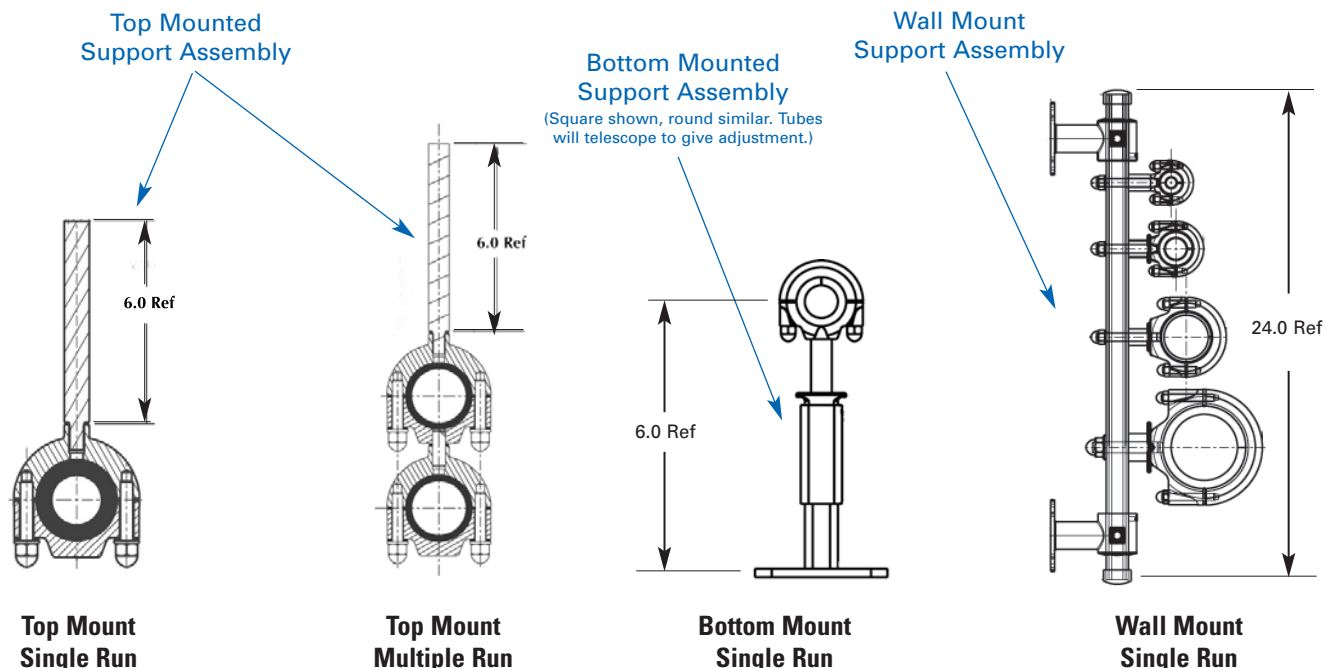
For example, if you wish to hang a 1-1/2" tube holder from a 2" tube holder, since the housings are the same size (size code "H"), a standard adapter is required.

Multiple-Run



If you wish to hang a 1-1/2" tube holder from a 3" tube holder, the housings are different size codes (1-1/2" tube = code H, 3" tube = code K), therefore a varying adapter is required.

Stainless rod (50 Ra) can be used to connect any hanger housing, specify distance between centers.



Pipe and Tube Supports Ordering Information

Product	Material	Size	Hanger Style	Grommet Style	Grommet Material	Hanger Type	Packaging		
HH Hanger Holding Assembly	H- 316 Stainless	A	T	Top Mounted from Ceiling	F	SL	S-	K Individual Kits BX Box Quantity XX Special	
		B			T				Tube Diameter
		C	B	Bottom or Wall Mount	B	VT	M-		
		D			T				Pipe Diameter
		E			D				
		F			I				
	G								
	H								
	J								
	K								
	L								
	M								

For polish options please contact factory.

Ordering Example

Series	Material	Size	Hanger Style	Grommet Style	Grommet Material	Hanger Type	Packaging
HH	H-	C	T	F	SL	S-	K
Hanger Holding Assembly	316 Stainless Steel	1/2" size	Top Mount from Ceiling	Tube Diameter	Silicone, 70 Durometer	Single Run	Individual Kits

Pipe and Tubing Support Rods and Components Ordering Information

Product	Material	Size	Hanger Style	Rod Diameter	Length
HS Hanger Supporting Assembly	H- 316 Stainless Steel	D	T-	3/8- 3/8" ØD	XXX Length in Inches
		H	B-		
		L	B-	5/8- 5/8" ØD	
		M	W-	3/4- 3/4" ØD	
				*SQ- Telescoping Mount	

* Bottom mount assemblies according to requirements.

Ordering Example

Series	Material	Size	Hanger Style	Rod Diameter	Length
HS	H-	D	T-	1/2-	006
Hanger Support Assembly	316 Stainless Steel	1/4" thru 2" Tube	Top Mount from Ceiling	1/2" Rod Diameter	6"

Grommet Sizing

	Size		Tube OD		Copper Tube OD		Pipe OD		DIN 11850	ISO 4200
	Inch	Metric	Inch	mm	Inch	mm	Inch	mm	OD mm	OD mm
A	1/4"	8	.25	6.4	.375	9.5	.54	13.7	10	13.5
B	3/8"	10	.375	9.5	.5	12.7	.68	17.3	12	17.2
C	1/2"	15	.5	12.7	.625	15.9	.84	21.3	19	21.3
D	3/4"	20	.75	19.1	.875	22.2	1.05	26.7	23	26.9
E	1"	25	1	25.4	1.125	28.6	1.32	33.5	29	33.7
F	1-1/4"	32	1.25	31.8	1.375	34.9	1.66	42.2	35	42.4
G	1-1/2"	40	1.5	38.1	1.625	41.3	1.9	48.3	41	48.3
H	2"	50	2	50.8	2.125	54.0	2.38	60.5	53	60.3
J	2-1/2"	65	2.5	63.5	2.625	66.7	2.88	73.2	70	76.1
K	3"	80	3	76.2	3.125	79.4	3.5	88.9	85	88.9
L	4"	100	4	101.6	4.125	104.8	4.5	114.3	104	114.3
M	6"	150	6	152.4	6.125	155.6	6.63	168.4	154	154

Important Note: Be sure to specify appropriate hanger sizes for pipe or tube. Industry trade standards for measuring pipe and tube outside diameter (O.D.) is shown in the chart above. Use a calliper to measure pipe/tube to ensure proper grommet size.

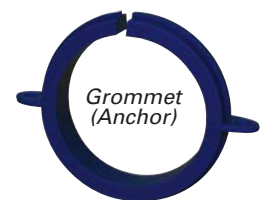
Grommet (Anchor)

Housing Size	Imperial Size	Metric Size	Tube OD	Copper Tube OD	Pipe OD	DIN 11850 OD	ISO 4200 OD
C	1/4"	8	HGSLAF08	HGSLBF08	HGSLCF08	HGSLBF08	HGSLCF08
	3/8"	10	HGSLBF08	HGSLCF08	HGSLBB08	HGSLBD08	HGSLBB08
	1/2"	15	HGSLCF08	HGSLCT08	HGSLCB08	HGSLDF08	HGSLCB08
	3/4"	20	HGSLDF08	HGSLDT08		HGSLDT08	
E	3/4"	20			HGSLDB08		HGSLDB08
	1"	25	HGSLEF08	HGSLET08	HGSLEB08	HGSLET08	HGSLEB08
	1-1/4"	32	HGSLFF08	HGSLFT08		HGSLFT08	
H	1-1/4"	32			HGSLFB08		HGSLFB08
	1-1/2"	40	HGSLGF08	HGSLGT08	HGSLGB08	HGSLGT08	HGSLGB08
	2"	50	HGSLHF08	HGSLHT08		HGSLHT08	
K	2"	50			HGSLHB08		HGSLHB08
	2-1/2"	65	HGSLJF08	HGSLJT08	HGSLJB08		HGSLKF08
	3"	80	HGSLKF08	HGSLKT08	HGSLKB08		HGSLKB08
L	4"	100	HGSLLF08	HGSLLT08	HGSLLB08	HGSLLT08	HGSLLB08
M	6"	150	HGSLMF08		HGSLMB08	HGSLMF08	HGSLMF08

Standard Material for Grommets is Silicone, 70 Durometer. Other Materials are available. Please Consult Factory for details.

Slider Grommet (Guide)

Grommet Size	Size	Tube Part Number	Pipe Part Number	Copper Tube Part Number
C	1/4"			
	3/8"			
	1/2"	HGVTCF24	HGVTGB24	
	3/4"	HGVTDF24		HGVTDT24
E	3/4"		HGVTDB24	
	1"	HGVTEF24	HGVTEB24	HGVTET24
H	1-1/4"		HGVTFB24	
	1-1/2"	HVTFGF24	HVTFGB24	
	2"	HVTHF24		
K	2"		HGVTHB24	HGVTHT24
	2-1/2"	HGVTJF24	HGVTJB24	HGVTJT24
	3"	HGVTKF24	HGVTKB24	HGVTKT24
L	4"	HGVTLF24	HGVTLB24	HGVTLT24
M	6"	HGVTMF24	HGVTMB24	HGVMTT24



Standard Material for Slider Grommets is Teflon. Other Materials are available. Please Consult Factory for details.



Housing

HOUSING SIZE	SIZE	HANGER BODY TOP	HANGER BODY BOTTOM, UNTAPPED	"HALFMOON" BODY TOP	HANGER BODY BOTTOM, TAPPED
C	1/4" T thru 3/4" T	HGH-C-01T-	HGH-C-02T-	HGH-C-01B-	HGH-C-02S-
E	3/4" P thru 1-1/4" T	HGH-E-01T-	HGH-E-02T-	HGH-E-01B-	HGH-E-02S-
H	1-1/4" P thru 2" T	HGH-H-01T-	HGH-H-02T-	HGH-H-01B-	HGH-H-02S-
K	2" P thru 3" P	HGH-K-01T-	HGH-K-02T-	HGH-K-01B-	HGH-K-02S-
L	4" T, P	HGH-L-01T-	HGH-L-02T-	HGH-L-01B-	HGH-L-02S-
M	6" T, P	HGH-M-01T-	HGH-M-02T-	HGH-M-01B-	HGH-M-02S-

The Hanger Body Top is used for the Top Hanger Assembly. The Hanger Body Bottom, Untapped is used for the Top Hanger Assembly. The "Halfmoon" Body Top is used for the Bottom Mount Assembly and Wall Mount Assembly. The Hanger Body Bottom, Tapped is used for the Bottom and Wall Mount Assembly, and Multi-Mount Assembly.

Standard Material for Housings is T316 Stainless Steel. Standard Surface Finish is 35 Ra. Other Materials are available. Please Consult Factory for details.

Connecting Stud



HOUSING SIZE	ALL THREADED ROD PART NUMBER
C	HGK-C-29
E	HGK-E-29
H	HGK-H-29
K	HGK-K-29
L	HGK-L-29
M	HGK-M-29

Standard Material for All Thread Rod is 18-8 Stainless Steel.

Acorn Nut



HOUSING SIZE	ACORN NUT PART NUMBER
C	HWDKCEXN
E	HWDKCEXN
H	HWDKCFXN
K	HWDKCFXN
L	HWDKCGXN
M	HWDKCIXN

Standard Material for Acorn Nut is 18-8 Stainless Steel.

Packaging Options

Box Qty

Housing Size	Box Qty	P/N adder
C	24	-BX
E	24	-BX
H	12	-BX
K	6	-BX
L	6	-BX
M	1	-BX

Part no. example: HHH-HTBSLS-BX

Sold as box quantities
Polished components are separated



Individual Packaging

P/N adder is -K



Part no. example: HHH-HTBSLS-K
Hangers loosely assembled and poly bagged

Housings and grommets packaged separately

Housings only

Housing Size	Box Qty	P/N Top Mount	P/N Bottom Mount	P/N Multi mount
C	24	HHH-CT---S-BX	HHH-CB---S-BX	HHH-CB---M-BX
E	24	HHH-ET---S-BX	HHH-EB---S-BX	HHH-EB---M-BX
H	12	HHH-HT---S-BX	HHH-HB---S-BX	HHH-HB---M-BX
K	6	HHH-KT---S-BX	HHH-KB---S-BX	HHH-KB---M-BX
L	6	HHH-LT---S-BX	HHH-LB---S-BX	HHH-LB---M-BX

Sold as box quantities and includes mounting hardware, no grommets.
Adding grommets separately improves stock availability.

Grommets

Housing Size	Pkg qty	P/N adder
C	12	-12
E	12	-12
H	12	-12
K	6	-6
L	6	-6

Sold as package quantities.



HI-CLEAN™ PLASTIC SERIES

Supports: For use with Process, Food and Pharmaceutical Applications

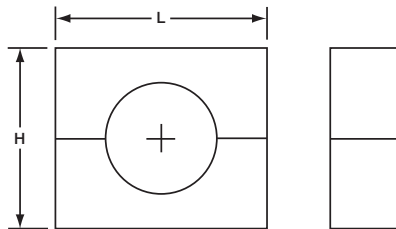
Specifications

- Smooth Clamping Surface for Sanitary, Clean in Place (CIP) Installations
- Body Material
 - Polypropylene (PP-Blue)
 - Santoprene (SA-Natural)
 - UHMW (special order)
- Support Hardware
 - 304 Stainless Steel (V2A)
 - 316 Stainless Steel (V4A)
 - Zinc Plated Carbon Steel (special order)
- Modular Design for Multiple Mounting Configurations
- Santoprene (SA) is FDA Compliant



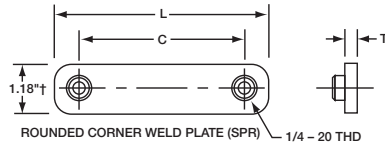
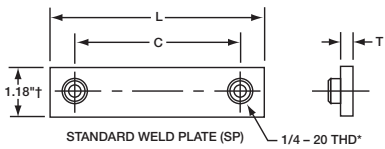
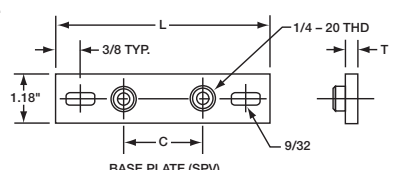
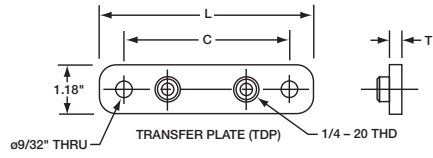
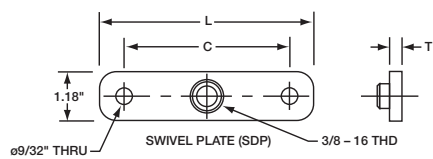
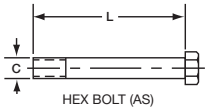
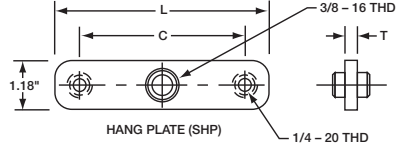
Hi-Clean Support Bodies

GRP	SIZE	O. D.	H	L	POLYPROPYLENE	SANTOPRENE
3	1/4" T	0.25"	1.40"	1.96"	306,4 PPC	306,4 SAC
	3/8" T	0.375"			309,5 PPC	309,5 SAC
	1/2" T	0.50"			312,7 PPC	312,7 SAC
	3/4" T	0.75"			319 PPC	319 SAC
	1/2" P	0.84"			321,3 PPC	321,3 SAC
	1" T	1.00"			325,4 PPC	325,4 SAC
6	1/4" T	0.25"	2.53"	3.38"	606,4 PPC	606,4 SAC
	1/2" T	0.50"			612,7 PPC	612,7 SAC
	5/8" T	0.625"			616 PPC	616 SAC
	3/4" T	0.75"			619 PPC	619 SAC
	1/2" P	0.84"			621,3 PPC	621,3 SAC
	7/8" T	0.875"			622 PPC	622 SAC
	1" T	1.00"			625,4 PPC	625,4 SAC
	3/4" P	1.05"			626,9 PPC	626,9 SAC
	1 1/4" T	1.25"			632 PPC	632 SAC
	1" P	1.315"			633,7 PPC	633,7 SAC
	1 1/2" T	1.50"			638 PPC	638 SAC
	1 1/4" P	1.66"			642 PPC	642 SAC
	1 1/2" P	1.90"			648,3 PPC	648,3 SAC
	2" T	2.00"			650,8 PPC	650,8 SAC
7L	2" T	2.00"	4.26"	5.04"	750,8L PPC	750,8L SAC
	2" P	2.375"			760,3L PPC	760,3L SAC
	2 1/2" T	2.50"			763,5L PPC	763,5L SAC
	2 1/2" P	2.875"			773L PPC	773L SAC
	3" T	3.00"			776,2L PPC	776,2L SAC
8	4" T	4.00"	4.56"	5.75"	8102 PPC	8102 SAC
9L	6" T	6.00"	7.52"	8.85"	9152L PPC	9152L SAC

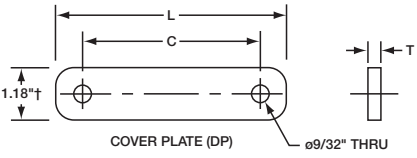
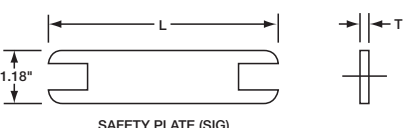
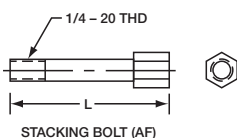


P = Pipe T = Tube

Other sizes and materials available on request.

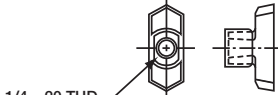
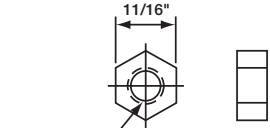

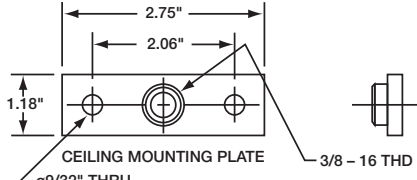
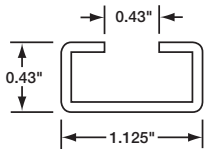
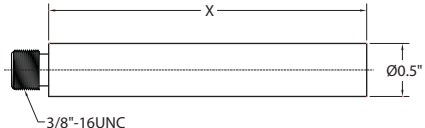
	GROUP	PART #	DIMENSIONS		
			L	C	T
ROUNDED CORNER WELD PLATE (SPR)  ROUNDED CORNER WELD PLATE (SPR) 1/4 - 20 THD For Weld in Place Use	3	SPR3 U W4	1.97"	1.30"	0.11"
	6	SPR6 U W4	3.48"	2.60"	0.11"
	7L	SPR7L U W4	5.00"	4.25"	0.11"
	8	SPR8 U W4	5.75"	4.72"	0.19"
	9L	*	*	*	*
WELD PLATE (SP) * SP9L has 3/8-16 UNC Thread † SP9L width is 1.38"  STANDARD WELD PLATE (SP) 1/4 - 20 THD* For Weld in Place Not Recommended for Hygenic Use	3	SP3 U W4 HC	1.97"	1.30"	0.11"
	6	SP6 U W4 HC	3.48"	2.60"	0.11"
	7L	SP7L U W4	5.00"	4.25"	0.11"
	8	SP8 U W4 HC	5.75"	4.72"	0.19"
	9L	SP9L U W4	8.75"	7.67"	0.31"
ELONGATED BASE PLATE (SPV)  BASE PLATE (SPV) 1/4 - 20 THD 9/32 For Bolt or Weld in Place	3	SPV3 U W4 HC	3.07"	1.30"	0.11"
	6	SPV6 U W4 HC	4.52"	2.60"	0.11"
	7L	SPV7L U W4	6.50"	4.25"	0.11"
	8	*	—	—	—
	9L	*	—	—	—
TRANSFER PLATE (TDP) * TDP9L has ø7/16" THRU  TRANSFER PLATE (TDP) 1/4 - 20 THD ø9/32" THRU For Stacking Different Group Sizes	3/6	TDP3-6 U W4	3.38"	2.60"	0.11"
	6/7	TDP6-7L U W4	5.00"	4.25"	0.11"
	7L/3	TDP3-7L U W4	5.00"	4.25"	0.11"
	8	*	—	—	—
	9L	*	—	—	—
SWIVEL PLATE (SDP) * SDP9L has ø7/16" THRU  SWIVEL PLATE (SDP) 3/8 - 16 THD ø9/32" THRU For Hanging	3	SDP3 U W4	1.89"	1.30"	0.20"
	6	SDP6 U W4	3.38"	2.60"	0.20"
	7L	SDP7L U W4	5.00"	4.25"	0.20"
	8	SDP8 U W4	5.75"	4.72"	0.25"
	9L	*	—	—	—
HEX BOLT (ASDP)  HEX BOLT (AS)	3	AS3 U W4 HC	1.50"	1/4"-20 UNC	—
	6	AS6 U W4 HC	2.75"	1/4"-20 UNC	—
	7L	AS7L U W4	4.375"	1/4"-20 UNC	—
	8	AS8 U W4 HC	4.875"	1/4"-20 UNC	—
	9L	AS9L U W4	8.00"	3/8"-16 UNC	—
HANG PLATE (SHP)  HANG PLATE (SHP) 1/4 - 20 THD 3/8 - 16 THD For Hanging	3	SHP3 U W4	1.95"	1.30"	0.20"
	6	SHP6 U W4	3.38"	2.60"	0.20"
	7L	SHP7L U W4	5.00"	4.25"	0.20"
	8	SHP8 U W4	5.75"	4.72"	0.25"
	9L	*	—	—	—

* Consult factory

	GROUP	PART #	DIMENSIONS		
			L	C	T
COVER PLATE (DP) * DP9L has $\varnothing 7/16"$ THRU † DP9L width is 1.38" 	3	DP3 W4 HC	1.89"	1.30"	0.11"
	6	DP6 W4 HC	3.38"	2.60"	0.11"
	7L	DP7L W4	5.00"	4.25"	0.11"
	8	DP8 W4 HC	5.67"	4.72"	0.19"
	9L	DP9L W4	8.75"	7.67"	0.16"
SAFETY PLATE (SIG) 	3	SIG3 W4 HC	1.85"	—	0.03"
	6	SIG6 W4 HC	3.34"	—	0.03"
	7L	SIG7L W4	5.00"	—	0.03"
	8	*	—	—	0.03"
	9L	*	—	—	—
STACKING BOLT (AF) 	3	AF3 UW4 HC	1.73"	—	—
	6	AF6 UW4 HC	2.91"	—	—
	7L	AF7L UW4	4.57"	—	—
	8	*	—	—	—
	9L	*	—	—	—

* Consult factory

Accessories for Hi-Clean Support Installation

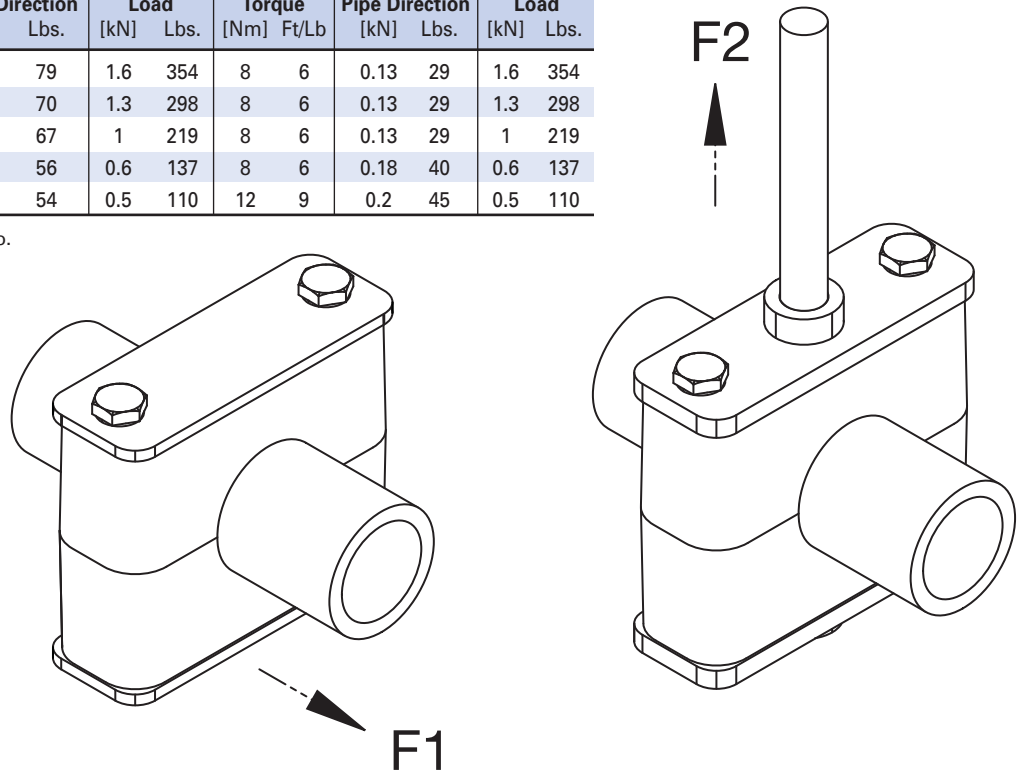
 <p>1/4 - 20 THD</p> <p>HEXAGON RAIL NUT</p> <p>For use with DIN Rail</p> <p>PART#: SM1-8/1D-UW4</p> <p>* Group 3-8 only</p>	 <p>3/8 - 16 THD</p> <p>HEX LOCK NUT</p> <p>PART#: SLN-UW4</p>	 <p>CLAMP SPACER (SEG)</p> <p>PART#: SEG-X-SAC-XXX</p> <p>STAUFF GROUP TUBE / PIPE-O.D.</p> <p>Use For "Sliding" Installations</p>
 <p>2.75"</p> <p>2.06"</p> <p>1.18"</p> <p>3/8 - 16 THD</p> <p>CEILING MOUNTING PLATE</p> <p>$\varnothing 9/32"$ THRU</p> <p>PART#: SCP-UW4</p>	 <p>0.43"</p> <p>1.125"</p> <p>STANDARD LENGTH: 3/3' OR 6.6'</p> <p>DIN MOUNTING RAIL</p> <p>PART#: TS11-1-W4 (3.3')</p> <p>PART#: TS11-2-W4 (6.6')</p>	<p>Support Rod</p>  <p>X</p> <p>0.5"</p> <p>3/8"-16UNC</p> <p>Refer to ordering information on page 8.</p> <p>PART#: HSH-XX-XX-XXX</p>

Hi-Clean Clamps Maximum Load in Pipe Direction (F1) Hanging Load Rating for Hang Plate / Swivel Plate Assemblies (F2)

HI-CLEAN SERIES

STAUFF Group	Hexagon Hex Bolt (AS)	Polypropylene				Santoprene							
		Tightening Torque [Nm] Ft/Lb		Max Load in Pipe Direction [kN] Lbs.		Tightening Torque [Nm] Ft/Lb		Max Load in Pipe Direction [kN] Lbs.					
3	1/4"-20UNC	8	6	0.35	79	1.6	354	8	6	0.13	29	1.6	354
6	1/4"-20UNC	8	6	0.31	70	1.3	298	8	6	0.13	29	1.3	298
7L	1/4"-20UNC	8	6	0.3	67	1	219	8	6	0.13	29	1	219
8	1/4"-20UNC	8	6	0.25	56	0.6	137	8	6	0.18	40	0.6	137
9L	1/4"-20UNC	12	9	0.24	54	0.5	110	12	9	0.2	45	0.5	110

Safety Factor for Hanging Loads is a 4:1 Ratio.
Due to Flow Behavior in Santoprene, it is recommended to use Locktite on Hexagon Hex Bolt (AS) threads in conjunction with the Tightening Torque.



Technical Notes

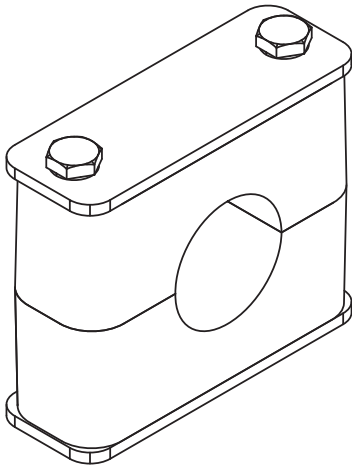
Properties of Clamp Body Materials

MATERIAL PROPERTIES	POLYPROPYLENE PP Color: Blue	SANTOPRENE SA Color: Natural
MECHANICAL PROPERTIES		
Flexural Deflection	36 N/mm ²	
Impact Resistance	no failure	
Compressive Strength	Hardness: 66 Shore D	Hardness: 50 Shore D
Modulus of Elasticity	1073 N/mm ²	10 N/mm ²
Tensile Stress	25 N/mm ²	27.6 N/mm ²
THERMAL PROPERTIES		
Maximum Temperature	-22° to +215° F	-40° to +425° F
- Brief Exposure	-30° to +102° C	-40° to +218° C
Operating Temperature	-22° to +194° F	-40° to +275° F
- Continuous Exposure	-30° to +90° C	-40° to +135° C
CHEMICAL PROPERTIES		
Weak Acids, Solvents	conditionally consistent	conditionally consistent
Benzine, Mineral Oils	conditionally consistent	conditionally consistent
Alcohol, Other Oils, Seawater	consistent	consistent

Contact factory for further information.

Weld Plate / Cover Plate Assembly

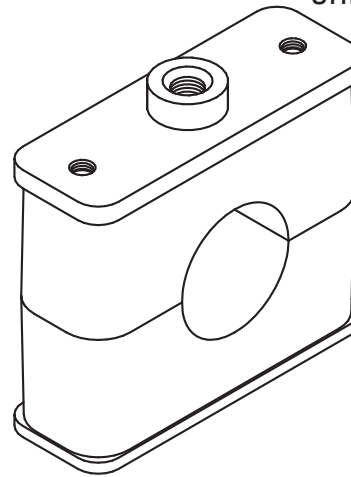
Example:
SPR XXXX PPC DP AS U W4



- Consisting of:**
- 1x Weld Plate (SPR)
 - 1x Polypropylene Clamp Body (2 Halves) (XXXX PPC)
 - 1x Cover Plate (DP)
 - 2x Hex Head Bolts (AS)

Hang Plate / Cover Plate Assembly

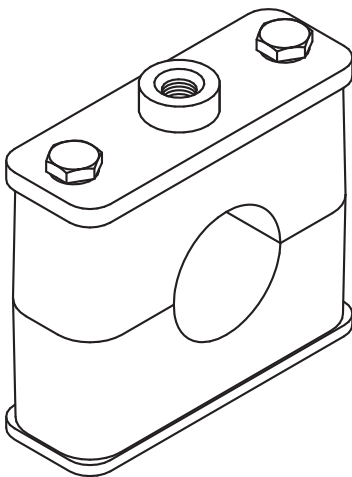
Example:
SHP XXXX SAC DP AS U W4



- Consisting of:**
- 1x Hang Plate (SHP)
 - 1x Santoprene Clamp Body (2 Halves) (XXXX SAC)
 - 1x Cover Plate (DP)
 - 2x Hex Head Bolts (AS)

Rounded Weld Plate / Swivel Plate Assembly

Example:
SPR XXXX PPC SDP AS U W4

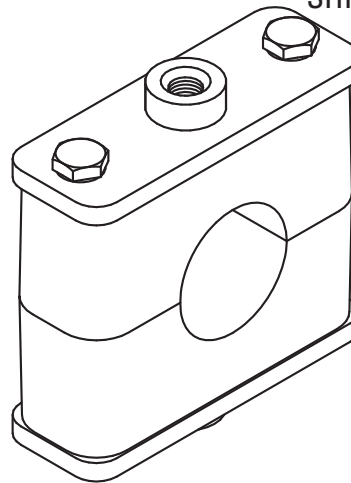


- Consisting of:**
- 1x Weld Plate (SPR)
 - 1x Polypropylene Clamp Body (2 Halves) (XXXX PPC)
 - 1x Swivel Plate (SDP)
 - 2x Hex Head Bolts (AS)

Hang Plate / Swivel Plate Assembly

For multi run hanger assemblies.

Example:
SHP XXXX SAC SDP AS U W4



- Clamp Consisting of:**
- 1x Hang Plate (SHP)
 - 1x Santoprene Clamp Body (2 Halves) (XXXX SAC)
 - 1x Swivel Plate (SDP)
 - 2x Hex Head Bolts (AS)

MOUNTING TYPE	GROUP	SIZE	MATERIAL	ASSEMBLY	THREAD TYPE	MATERIAL CODE	PACKAGING
SPR Weld plate	3	see size chart on page 11 XX, X	PPC Polypropylene	DP AS cover plate/ hex bolt	U UNC threads (standard)	W4- 304 stainless (V2A)	K Individual Kits
SHP Hang plate	6		SAC Santoprene	SDP swivel plate	M Metric threads	W5- 316 stainless (V4A)	Omit Assembly components packaged loose
SPV Elongated Base Plate	7L		Indicates tube/pipe mm OD size	other materials available	SIG stacking lock plate		
	8			TDP transfer plate (stacking different group sizes)			
* other mounting options available	9L			AF SIG stacking lock plate/ stack bolt (stacking same group size)			

* Rail mounting assemblies available Spacer insert available for thermal expansion (Guide) For hanger rods, see part numbers on page 8.



Talcahuano



Calama



Servicios de EXIMTEC

- Venta de equipos.
- Cálculos y selección de componentes oleohidráulicos.
- Diseño de circuitos y controles.
- Asistencia técnica a fabricantes de maquinaria.
- Ingeniería para proyectos de re-potenciamiento en sistemas oleohidráulicos.
- Estudios para reemplazos de sistemas motrices electro-mecánicos por sistemas oleohidráulicos.
- Enfoque multidisciplinario con especialistas en oleohidráulica, electrónica, mecánica y electricidad.
- Instalaciones y puesta en marcha.
- Servicio post-venta en terreno.
- Programas de mantenimiento preventivo.
- Diagnósticos para mantención predictiva.
- Repuestos originales en stock.
- Reparaciones en taller autorizado.
- Banco de pruebas con registro electrónico.
- Inspecciones de motores hidráulicos con fibra óptica.
- Reemplazos de componentes en terreno.
- Planos isométricos de tuberías oleohidráulicas y de lubricación.
- Instalación de piping en terreno.
- Pruebas de presión de tuberías.
- Flushing de tuberías oleohidráulicas.
- Análisis de contaminación de aceite.
- Cursos de capacitación a clientes.

REPRESENTANTE Y
DISTRIBUIDOR

HÄGGLUNDS

Motores alto torque - Centrales Hidráulicas

GS-HYDRO

Tuberías oleohidráulicas (piping)
con flanges sin soldaduras

DENISON Hydraulics

Motores - Bombas - Válvulas Hidráulicas

Parker

Oleohidráulica industrial y móvil

MOOG

Industrial Controls Division

Servo válvulas y Controles

SUN hydraulics
CORPORATION

Válvulas cartridge y bloques

STAUFF

Filtros oleohidráulicos, accesorios y válvulas

BUBENZER
BREMSSEN

Frenos electrohidráulicos

TE Thermal
Transfer Products
A ThermoSys Company

Intercambiadores de calor

EXIMTEC LTDA.

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