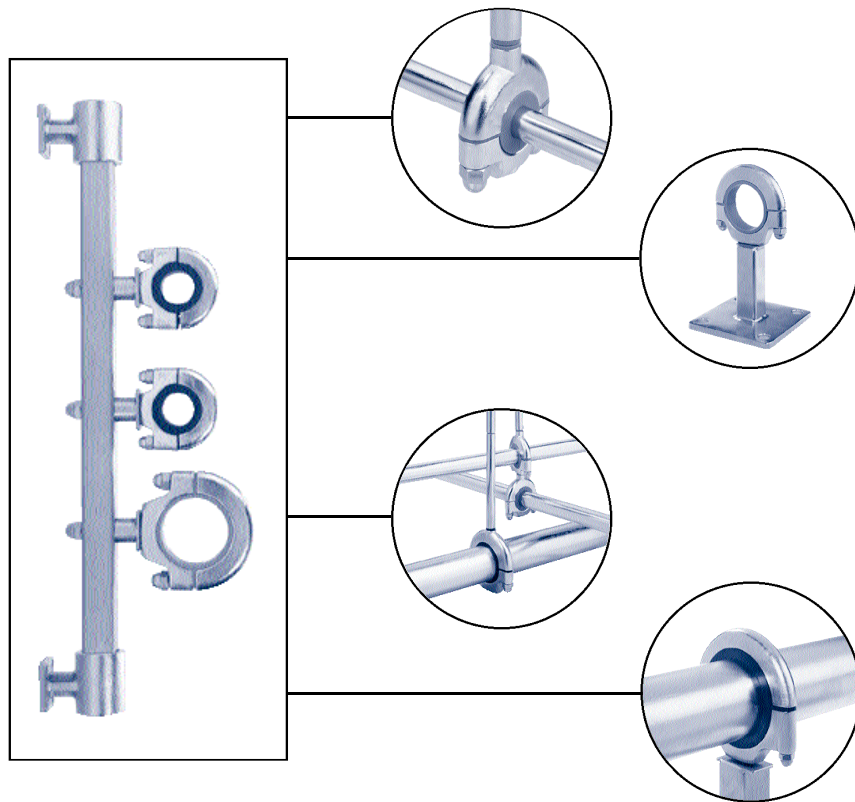


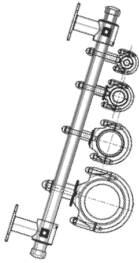
PATENT APPROVED

pipe & tubing hangers

<<for clean work areas and clean rooms>>



Features



- Type 316 stainless steel is standard. 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”.

PBM's Pipe & Tubing Hanger follows the design principles of BPE-2002

BPE-2002 Section	PBM 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 and silicone 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 are 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.

PBM Pipe and Tubing Hanger Specifications

Hanger Holding Assembly

Component	Material	Specification	Standard Finish
Holder Housing, Upper & Lower	316 stainless steel	Casting grade CF8M	--
Holder Grommet	Silicone (blue or white)	70 shore A	--
	Buna N (black)	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.

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		
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		25 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

Top Mount Support Rod Dimensions

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

Pipe / Tubing Size	Rod Diameter	Tap Diameter
1/4" tube - 2" tube	3/8"	3/8" - 16
2" pipe - 3" pipe	1/2"	1/2" - 13
4" pipe and tube	5/8"	5/8" - 11
6" pipe and tube	3/4"	3/4" - 10

Grommet Material Ratings

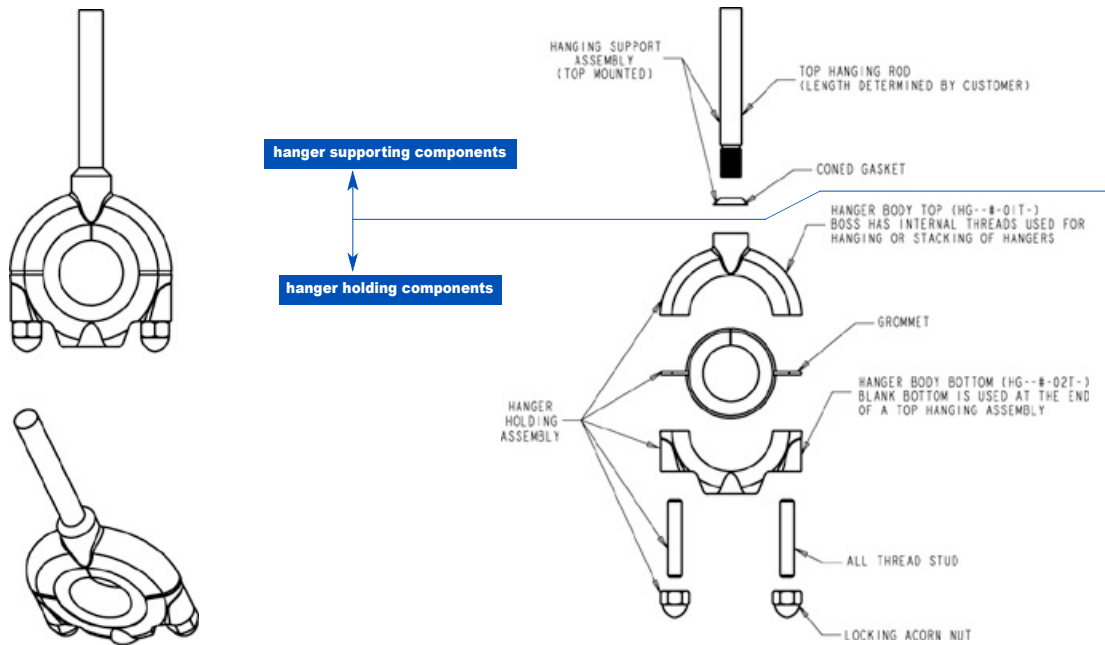
Material	Type	Temp. Rating	
Buna N	Clamp	200°F	93°C
Silicone	Clamp	400°F	204°C
PTFE	Slide	400°F	204°C

Sizing PBM Pipe and Tubing Hanger Grommets

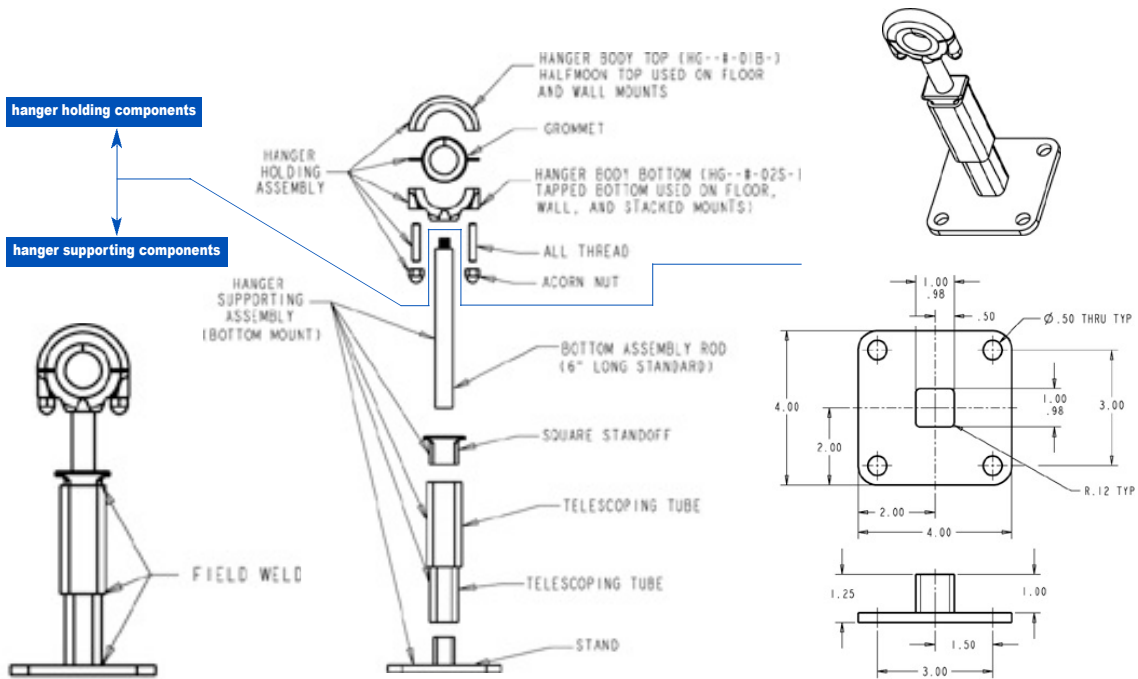
Important Note: Be sure to specify appropriate hanger sizes for pipe or tube. Industry trade standards for measuring pipe and tube outside diameter (O.D.) is shown in the following chart. Use a calliper to measure pipe/tube to ensure proper grommet size.

Size	Pipe O.D.	Tube O.D.	Copper Tube O.D.*
1/4"	0.54"	0.25"	0.375"
3/8"	0.68"	0.37"	0.500"
1/2"	0.84"	0.5"	0.625"
3/4"	1.05"	0.75"	0.875"
1"	1.32"	1.0"	1.125"
1-1/4"	1.66"	1.25"	1.375"
1-1/2"	1.90"	1.5"	1.625"
2"	2.38"	2.0"	2.125"
2-1/2"	2.88"	2.5"	2.625"
3"	3.5"	3.0"	3.125"
4"	4.5"	4.0"	4.125"
6"	6.63"	6.0"	6.125"

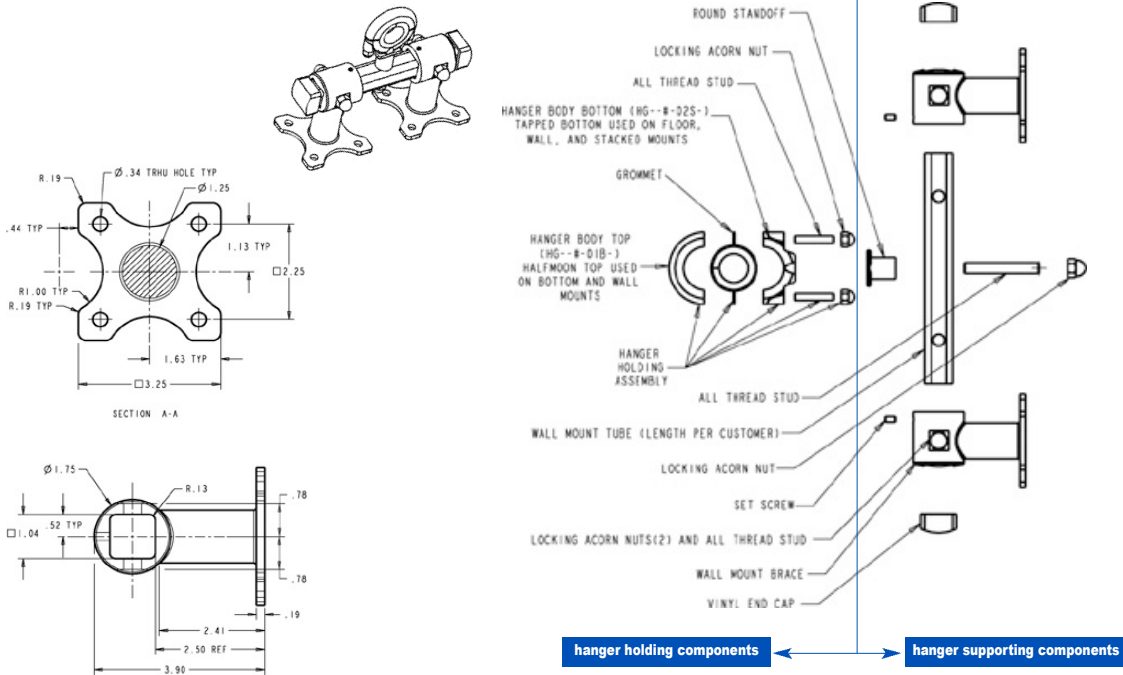
Top Hanger Assembly



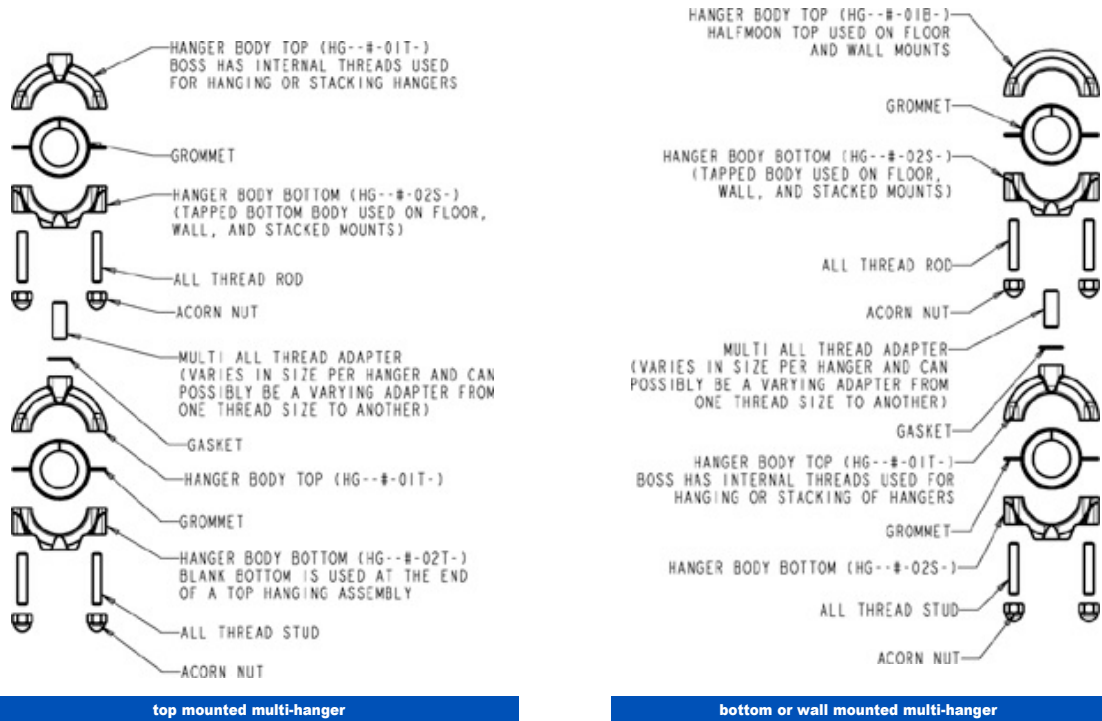
Bottom Mount Assembly



Wall Mount Assembly



Multi-Hanger Holding Assemblies



Hanger Holder Housing Dimensions

Top Mount (Hang from Ceiling) 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" 1/2", 3/4"	inches	2.22	1.25	2.02	0.63	1/4"-20	3/8"-16	.94	0.32 lbs
		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" 2"	inches	3.50	1.88	3.62	0.75	5/16"-18	3/8"-16	1.62	0.95 lbs
		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

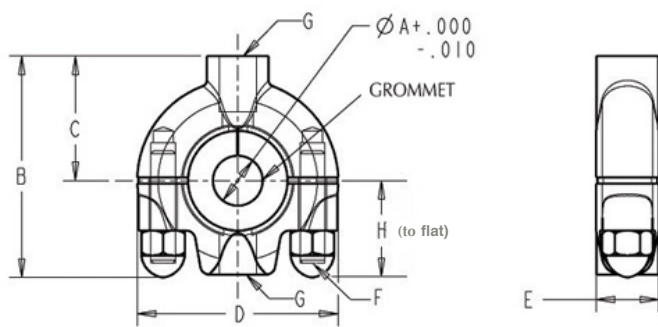
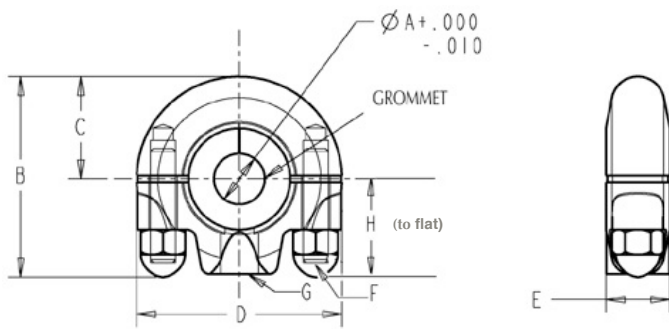
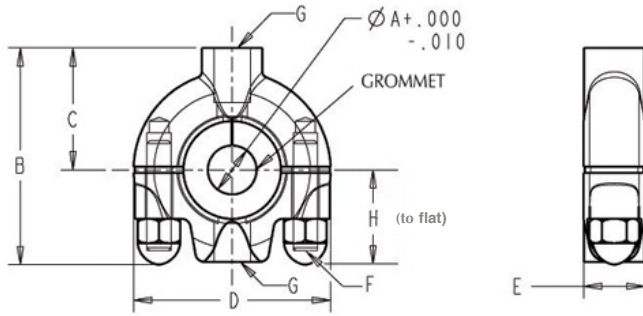
Bottom/Wall Mount (Mount from floor to wall) Housing Dimensions

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" 1/2", 3/4"	inches	1.98	1.01	2.02	0.63	1/4"-20	3/8"-16	.94	0.31 lbs
		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" 2"	inches	3.43	1.81	3.62	0.75	5/16"-18	3/8"-16	1.62	0.96 lbs
		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 (Stacking) 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" 1/2", 3/4"	inches	2.22	1.25	2.02	0.63	1/4"-20	3/8"-16	.94	0.32 lbs
		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" 2"	inches	3.5	1.88	3.62	0.75	5/16"-18	3/8"-16	1.62	0.95 lbs
		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

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	H
2-1/2"	K	K	K
3"	K	K *	K
4"	L	L	L
6"	M	M	M

* Slider Housing moves up one size

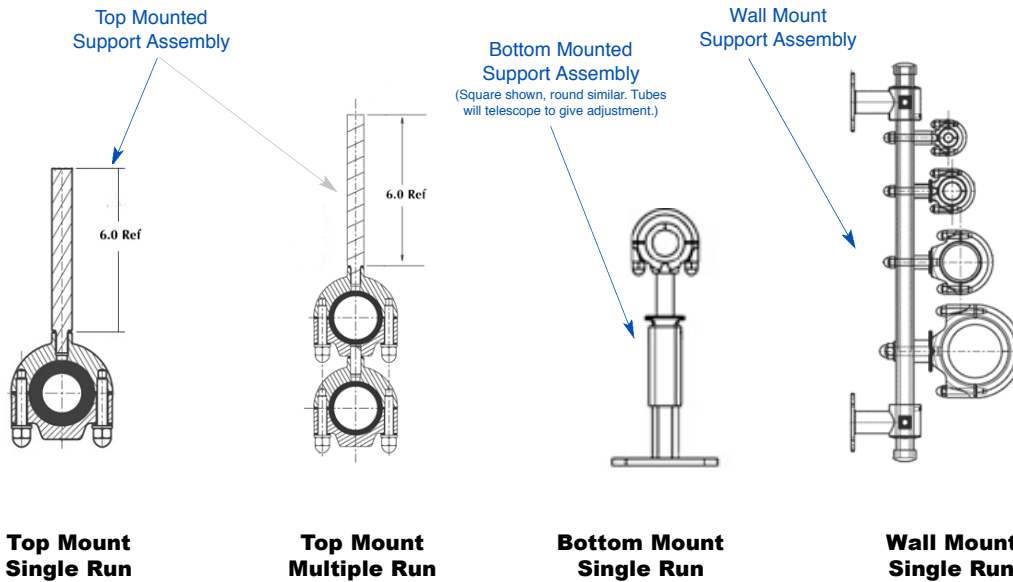
Varying all-thread adapters are used to connect two (2) different hanger holder housing sizes. Use the chart above to determine if varying adapters are required.

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 all-thread adapter is required.

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 all-thread adapter is required.

Box Quantities

Size Range	Box Qty
1/4" tube - 1-1/4" tube	24
1-1/4" pipe - 2" tube	12
2" pipe - 4" pipe	6
6" tube/pipe	1



Pipe and Tubing Supports Ordering Information Number in “()” represents part number position.

Product (1-2)		Material (3-4)		Size (5)		Hanger Style (6)		Grommet Style (7)		Grommet Material (8-9)		Hanger Type (10)		Polish Option (11-12)							
HH	Hanger Holding Assembly	H-	316 Stainless Steel	A	1/4"	T	Top Mounted from Ceiling	F	Tube Diameter	SL	Silicone, 70 Durometer	S	Single Run (1 Tapped Hole)	--	35 R ₃ Finish (Standard)						
				B	3/8"			B	Pipe Diameter					A-	20 R ₃ Mirror Finish						
				C	1/2"			B	Bottom or Wall Mount					T	Copper Tube Diam.	BU	Nitrile (Buna N), 70 Durometer	M	Multiple Run (2 Tapped Holes)	-M	35 R ₃ Finish + Electro Polish
				D	3/4"									VT	Teflon (Slider)	AM	20 R ₃ Mirror Finish + Electro Polish				
				E	1"																
				F	1.25"																
				G	1.5"																
				H	2"																
				J	2.5"																
				K	3"																
				L	4"																
				M	6"																

Ordering Example

Series	Material	Size	Hanger Style	Grommet Style	Grommet Material	Hanger Type	Polish Option
HH	H-	C	T	F	SL	S	--
Hanger Holding Assembly	316 Stainless Steel	1/2" size	Top Mount from Ceiling	Tube Diameter	Silicone, 70 Durometer	Single Run	35 R ₃ Finish

Pipe and Tubing Support Rods and Components Number in “()” represents part number position.

Product (1-2)		Material (3-4)		Size (5)		Hanger Style (6)		Length (7-9)		Polish Options (10-11)					
HS	Hanger Supporting Assembly	H-	316 Stainless Steel	A	1/4" thru 3/8"	T	Top Mounted from Ceiling	XYZ	X = Feet; YZ - Inches	--	50 R ₃ Finish (Standard)				
				D	1/2" thru 2" Tube				006		6" (base mount adjustable from 6" to 10")	A-	20 R ₃ Mirror Finish		
				H	2" Pipe thru 3"							B	Bottom Mount from Floor (Square Tube)	-M	50 R ₃ Finish + Electro Polish
				L	4" Pipe and Tube							W	Wall Mount	AM	20 R ₃ Mirror Finish + Electro Polish
				M	6" Pipe and Tube							110	1"10" (base mount adjustable from 1"10" to 3'6")		

Ordering Example

Series	Material	Size	Hanger Style	Length	Polish Option
HS	H-	D	T	006	A-
Hanger Support Assembly	316 Stainless Steel	1/2" thru 2" Tube	Top Mount from Ceiling	6"	Mechanically Polished to 20 R ₃ Mirror Finish



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Sizing PBM DIN and ISO Hanger Grommets

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 following chart. Use a calliper to measure pipe/tube to ensure proper grommet size.

Size	ISO 4200 O.D.	DIN 11850 O.D.
8 (1/4")	13.50 (.531")	10.00 (.394")
10 (3/8")	17.20 (.677")	12.00 (.472")
15 (1/2")	21.30 (.839")	19.00 (.748")
20 (3/4")	26.90 (1.059")	23.00 (.906")
25 (1")	33.70 (1.327")	29.00 (1.142")
32 (1-1/4")	42.40 (1.669")	35.00 (1.378")
40 (1-1/2")	48.30 (1.902")	41.00 (1.614")
50 (2")	60.30 (2.374")	53.00 (2.087")
65 (2-1/2")	76.10 (2.996")	70.00 (2.756")
80 (3")	88.90 (3.50")	85.00 (3.347")
100 (4")	114.30 (4.50")	104.00 (4.094")
150 (6")	154.00 (6.063")	154.00 (6.063")

Pipe and Tubing Supports Ordering Information

Number in “()” represents part number position.

Product (1-2)	Material (3-4)	Size (5)	Hanger Style (6)	Grommet Style (7)	Grommet Material (8-9)	Hanger Type (10)	Polish Option (11-12)			
HH Hanger Holding Assembly	H- 316 Stainless Steel	A 8 (1/4")	T Top Mounted from Ceiling	D DIN 11850 Diam.	SL Silicone, 70 Durometer	S Single Run (1 Tapped Hole)	--	35 R _a Finish (Standard)		
		B 10 (3/8")					I ISO 4200 Diam.	A-	20 R _a Mirror Finish	
		C 15 (1/2")	B Bottom or Wall Mount	DIN 11850 Diam.	BU Nitrile (Buna N), 70 Durometer	M Multiple Run (2 Tapped Holes)	-M	35 R _a Finish + Electro Polish		
		D 20 (3/4")					AM	20 R _a Mirror Finish + Electro Polish		
		E 25 (1")					VT	Teflon (Slider)		
		F 32 (1.25")								
		G 40 (1.5")								
		H 50 (2")								
		I 65 (2.5")								
		J 80 (3")								
		K 100 (4")								
		L 150 (6")								

Ordering Example

Series	Material	Size	Hanger Style	Grommet Style	Grommet Material	Hanger Type	Polish Option
HH	H-	C	T	D	SL	S	--
Hanger Holding Assembly	316 Stainless Steel	15 (1/2") size	Top Mount from Ceiling	DIN 11850 Diam.	Silicone, 70 Durometer	Single Run	35 R _a Finish

Pipe and Tubing Support Rods and Components

Number in “()” represents part number position.

Product (1-2)	Material (3-4)	Size (5)	Hanger Style (6)	Length (7-9)	Polish Options (10-11)	
HS Hanger Supporting Assembly	H- 316 Stainless Steel	A 8 thru 10	T Top Mounted from Ceiling	XYZ X = Feet; YZ = Inches	--	50 R _a Finish (Standard)
		D 15 thru DN 50			B Bottom Mount from Floor (Square Tube)	EXAMPLES
		H ISO 50 thru 80	W Wall Mount	006 6" (base mount adjustable from 6" to 10")	-M	50 R _a Finish + Electro Polish
		L 100 DIN + ISO			AM	20 R _a Mirror Finish + Electro Polish
		M 150 DIN + ISO			110 1"10" (base mount adjustable from 1"10" to 3"6")	

Ordering Example

Series	Material	Size	Hanger Style	Length	Polish Option
HS	H-	D	T	006	A-
Hanger Support Assembly	316 Stainless Steel	15 thru DN 50	Top Mount from Ceiling	6"	Mechanically Polished to 20 R _a Mirror Finish



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