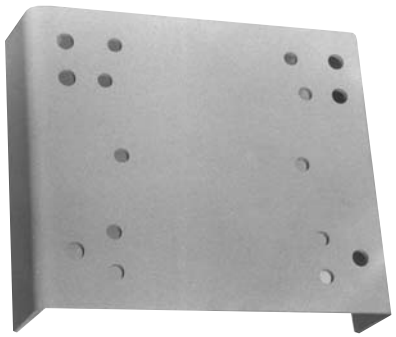
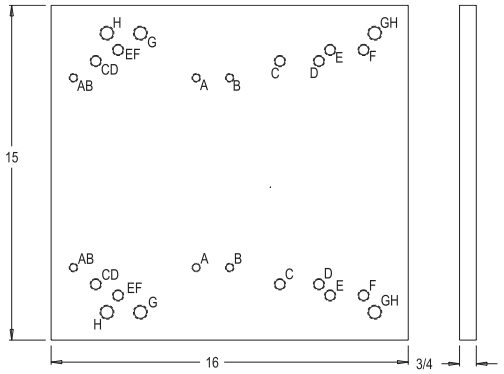
Hydraulic Accessories Section

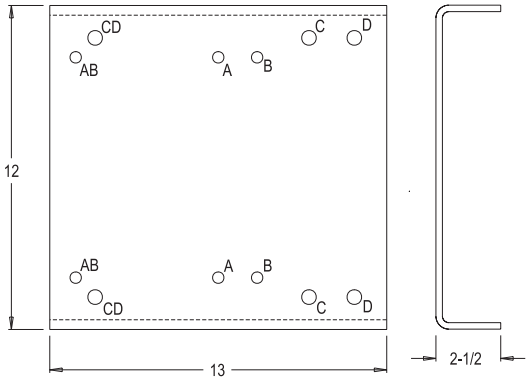
MOTOR BASE PLATES





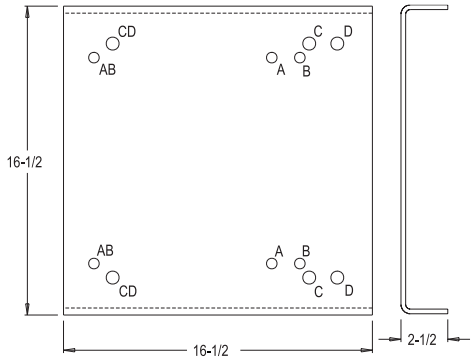
VESCOR
Part Number 5130
Weight 51#

Tap Size	Holes	Motor Frame	Tap Size	Holes	Motor Frame
A-3/8-16NC	4	213TC	E-1/2-13NC	4	284TC/TSC
B-3/8-16NC	4	215TC	F-1/2-13NC	4	286TC/TSC
C-1/2-13NC	4	254TC	G-5/8-11NC	4	324TC/TSC
D-1/2-13NC	4	256TC	H-5/8-11NC	4	326TC/TSC



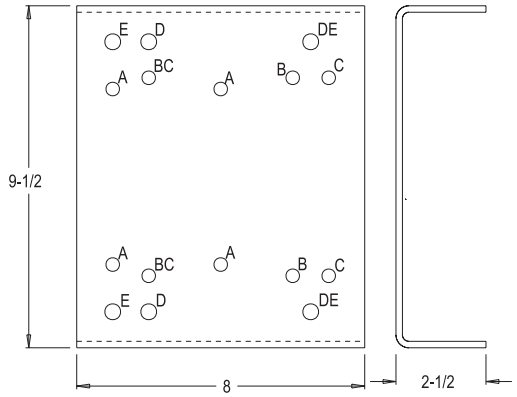
Diameter	Holes	Motor Frame
A - .437	4	213TC
B - .437	4	215TC
C - .562	4	254TC
D - .562	4	256TC

VESCOR
Part Number 5131
Weight 15#



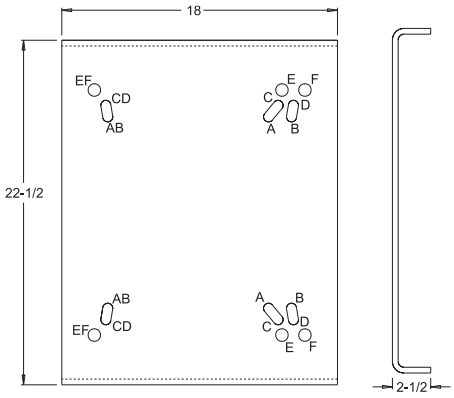
Diameter	Holes	Motor Frame
A - .562	4	284TC/TSC
B - .562	4	286TC/TSC
C - .687	4	324TC/TSC
D - .687	4	326TC/TSC

VESCOR
Part Number 5132
Weight 34#



Diameter	Holes	Motor Frame
A - .375	4	56C
B - .375	4	143TC
C - .375	4	145TC
D - .437	4	182TC
E - .437	4	184TC

VESCOR
Part Number 5135
Weight 6#

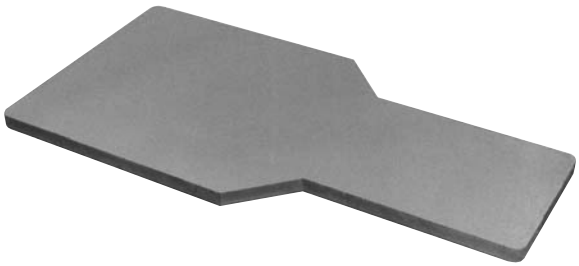


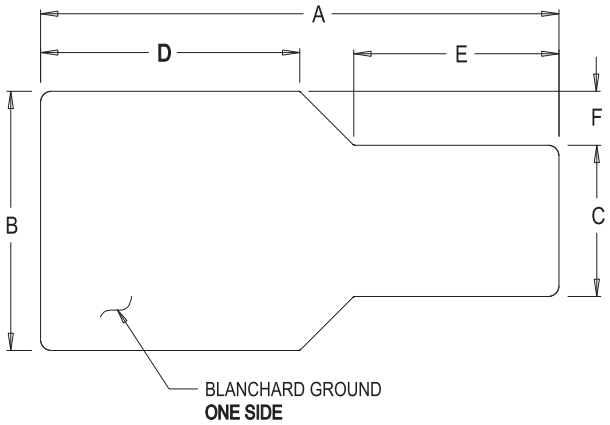
Diameter	Holes	Motor Frame
A - .656	4	324TC/TSC
B - .656	4	324TC/TSC
C - .656	4	364TC/TSC
D - .812	4	365TC/TSC
E - .812	4	405TC/TSC

VESCOR
Part Number VPM324
Weight 51#

NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Mounting Plates

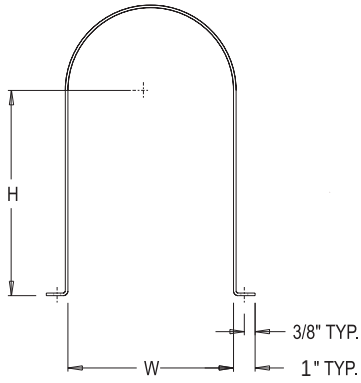


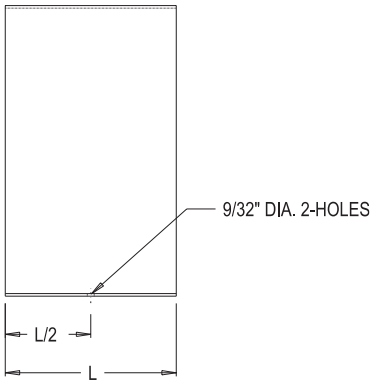


Style	Vescor Part Number	A	B	C	D	E	F	Material	Shipping Weight
10	**5269**	24”	12”	7”	12”	9 1/2”	2 1/2”	3/4” x 12” x 24”	50#
20	**5270**	27”	13”	9”	13 1/2”	11 1/2”	2”	3/4” x 13” x 27”	65#
30	**5271**	35”	16”	11”	17 1/2”	15”	2 1/2”	3/4” x 16” x 35”	95#
40	**5291**	38”	18”	14 1/2”	18”	13 3/4”	1 3/4”	7/8” x 18” x 38”	120#

Standard non-stock item

Coupling Guards





Motor Frame	Vescor Part Number	Dimensions (nominal) H	W	L	Weight lbs.
143/145	**CG-145**	3 1/2”	3 1/2”	3 3/4”	1#
182/184	**CG-184**	4 1/2”	4”	4 1/4”	1 1/4#
213/215	**CG-215**	5 1/4”	4 1/2”	4 3/4”	1 1/2#
254/256	**CG-256**	6 1/4”	5”	5 1/4”	2#
284/286	**CG-286**	7”	5 1/2”	5 3/4”	2 1/2#
324/326	**CG-326**	8”	6”	6 1/4”	2 3/4#
364/365	**CG-365**	9”	6”	6 1/4”	3 1/2#
404/405	**CG-405**	10”	7 1/2”	8”	5#
444/445	**CG-445**	11”	9 1/2”	9”	7#

TANK MAGNETS

Vescor Tank Magnets Pay Off For You because they pick-up material that ordinary filters miss. Tank Magnets help maintain clean oil. The cleaner the oil can be kept in your reservoirs, the less your troubles will be and the greater your savings will be.

REGULAR TANK MAGNETS – This Heavy Duty model uses 5/8" solid steel rod, furnished with a 5" support rod. However, these support rods can be ordered any length desired, either shorter or longer than 5" to suit the reservoir. Heavy Duty comes with the end threaded 5/8"-18 NF. The support rod can also be furnished with special threads or with special means of attachment brazed on. Pipe plugs are optional and are furnished in 2 1/2" NPT size. When a Tank-Magnet is ordered with a pipe plug, the unit is shipped assembled so all that is required is to unwrap it and screw it into position. The recommended opening that will accommodate the unit is a 2 1/2" pipe flange or a hole approximately 2 1/4" in diameter. If desired, it can be installed in the cover of any opening larger than this.

Construction – The magnetic unit of the Vescor® Tank Magnet is exceptionally efficient. Each section is composed of a larger doughnut shaped ceramic magnet and two disc shaped pole pieces. This unique design adds the area of the discs to the area of the magnets to give the greatest amount of magnetic surface possible. This design also permits the hydraulic fluid to flow in and around the magnets and discs, thus allowing the oil to come in intimate contact with the magnets and discs to facilitate the removal of ferrous particles.

SLIM LINE TANK MAGNETS consists of Alnico V Magnets encased in a non-magnetic tube with the major difference between it and regular tank magnet being that it is only 5/8" in diameter. This means that it can be put through a hole tapped for 3/4" pipe plug and can be used where mounting space is a premium. Slim Line Tank Magnets come in two types, the **Slim Line** and **Extra Sturdy Slim Line**, with standard aluminum or optional stainless steel housings. The aluminum housing series are numbered SL-11, etc. for the Slim Lines and SLX-11, etc. for the Extra Sturdy lines. To designate the stainless steel housing units, SS is added after the appropriate catalog number, i.e., SLX-13 SS.

Construction – **Magnetic units** - Basically the same for all types of Slim Lines, the magnetic units vary only in length. Support rods - All Slim Lines are normally furnished with a 5" long support rod, but can be furnished with any length, either longer or shorter than the standard 5" length. **Housing** - Slim Lines come with aluminum housing for use with ordinary hydraulic fluids. For use where conditions might cause problems such as water glycols or phosphate esters, a stainless steel housing is provided. **Mounting** - Pipe plugs for mounting in the reservoir top are optional and are furnished in any size from 3/4" NPT to 3" NPT, with a 1 1/4" NPT or larger being recommended. Units come completely assembled and ready for installation.

Application – For greatest protection - Use a size such, that the magnetic unit extends from 1" off the floor of the reservoir to the top of the oil level.

For lowest cost - Use a standard unit of any series for all sizes of reservoirs. Position it 1" from the bottom of the reservoir with proper length support rod.

No maintenance is needed except for periodic cleaning, with cleaning once a month recommended. To clean, remove from the reservoir, wipe with a clean cloth and reinstall.

WHICH ONE SHOULD I USE?

STANDARD

When . . .
- The support rod is short
- The magnetic unit is small
- Normal use can be expected
- Cost is important

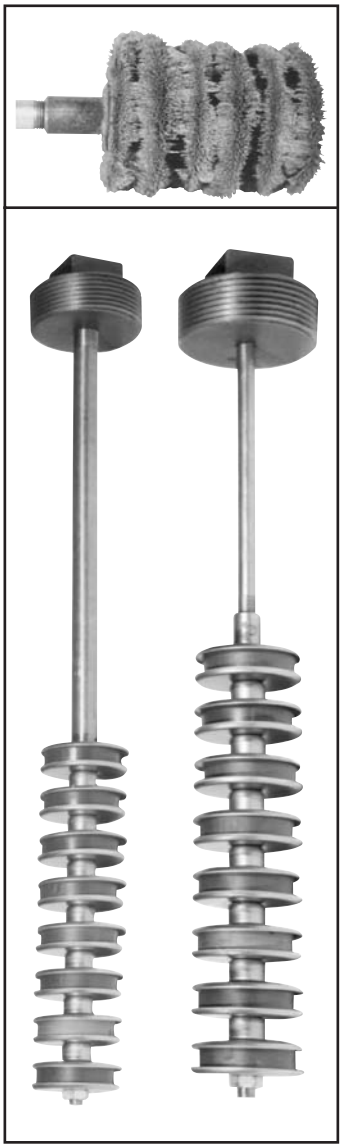
HEAVY DUTY

When . . .
- The support rod is long
- The magnetic unit is large
- Abuse in shipping or operation is expected
- A little more can be spent

CLEANING

Cleaning a Tank Magnet couldn't be easier. An ordinary air hose using shop compressed air does the job in seconds.

STANDARD MAGNETS



Cat. No. HDM-13 with 9" support rod and 2 1/2" pipe plug HEAVY DUTY

Cat. No. TM-14 with 5" support rod and 2 1/2" pipe plug STANDARD

SLIME LINE MAGNETS

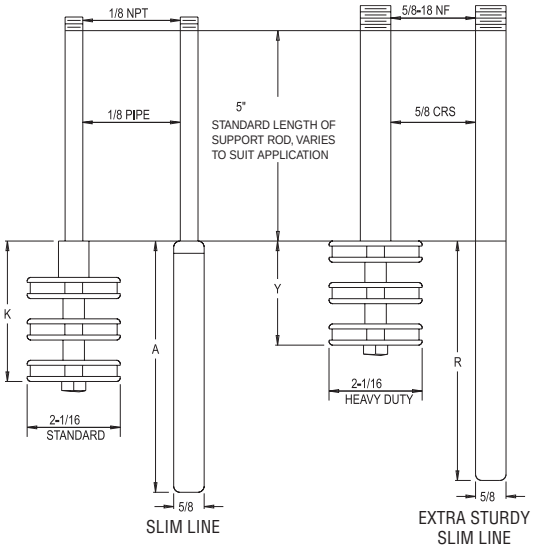
Cat. No. SL-18-5 With 5"support rod and 1 1/4" pipe plug STANDARD

Cat. No. SLX-18 With 5" support rod and 1 1/4" pipe plug HEAVY DUTY

TANK MAGNETS

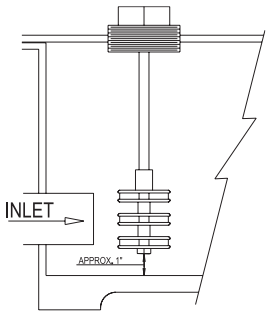
STANDARD / HEAVY DUTY

Reservoir Capacity (gallons)	Standard Part No.	Standard K Dimension	Heavy Duty Part No.	Heavy Duty Y Dimension	No. of Magnets
0-10	**TM- 6**	1⅝"	**HDM- 6**	⅞"	1
10-30	**TM- 7**	2 11/16"	**HDM- 7**	1 15/16"	2
30-60	**TM- 9**	3¾"	**HDM- 8**	3"	3
60-100	**TM-10**	4 3/16"	**HDM- 9**	4 1/16"	4
100-150	**TM-11**	5⅞"	**HDM-10**	5⅛"	5
150-210	**TM-12**	6 5/16"	**HDM-11**	6 3/16"	6
210-280	**TM-13**	8"	**HDM-12**	7¼"	7
280-350	**TM-14**	9 1/16"	**HDM-13**	8 5/16"	8



SLIM LINE / EXTRA STURDY SLIM LINE

Slim Line Part No.	Slim Line A Dimension	Extra Sturdy Slim Line Catalog No.	Extra Sturdy Slim Line R Dimension
SL-11	6"	**SLX-11**	5¾"
SL-13.5	8½"	**SLX-13**	8¼"
SL-16	11"	**SLX-16**	10¾"
SL-18.5	13½"	**SLX-18**	13¼"
SL-21	16"	**SLX-21**	15¾"
SL-23.5	18½"	**SLX-23**	18¼"
SL-26	21"	**SLX-26**	20¾"
SL-28.5	23½"	**SLX-28**	23¼"
SL-31	26"	**SLX-31**	25¾"

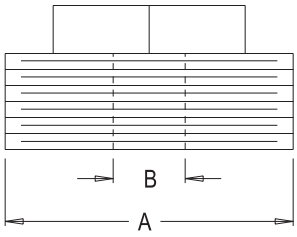


WHEN ORDERING BE SURE TO:

- List number of the magnetic unit
- Give part number of plug (if plug is desired)
- Give length of support rod (if other than standard 5")
- Add SS to unit number if stainless steel housings are desired

Our experienced design engineers are available to give you quick and efficient help on any problems you may have with magnetic applications or with special designs.

Pipe Plugs for Tank Magnets

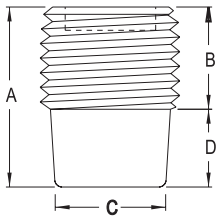


Vescor Part Number	Dimensions A NPT	Dimensions B Thread	Use with Magnet
PM-125	1¼" NPT	⅛" NPT	SL Series
PM-125X	1¼" NPT	⅝-18NF	SLX Series
PM-250	2½" NPT	⅛" NPT	TM Series
PM-250HD	2½" NPT	⅝"-18NF	HDM Series

Square Head Magnetic Plugs

Vescor Magnetic Drain Plugs attract and hold abrasive, ferrous metal particles preventing their circulation through hydraulic system. By holding these particles Vescor Magnetic Plugs prevent excessive wear to a hydraulic systems components.

Vescor Part Number	Nominal Pipe Size	Dimensions A	B	C	D	Body Material
4044041	½" NPTF	.96	.57	.56	.38	Steel
4054121	¾" NPTF	1.11	.62	.62	.45	Steel



Specifications:

- Steel Body Material
- Permanent magnet fastened to plug body
- Ceramic magnet
- Readily available from stock

SIGHT LEVEL GAUGES

ALG Series

Part Numbers				Dimensions		
Back Mount Gauges		Front Mount Gauges				
Sight Only	with Thermometer	Sight Only	with Thermometer	A Mounting Centers	B Sight Glass	C Overall Length
ALG-3	ALG-3T	N/A	N/A	3”	1 1/2”	4 5/8”
ALG-5	ALG-5T	FMALG-5	FMALG-5T	5”	3 1/2”	6 5/8”
ALG-10	ALG-10T	FMALG-10	FMALG-10T	10”	8 1/2”	11 5/8”

VESCOR Standard Fluid Sight Level Gauges are available in three sizes 3”, 5” and 10”. Gauges are available with or without thermometer in standard back mount design or optional front mount design.

Benefits and Features:

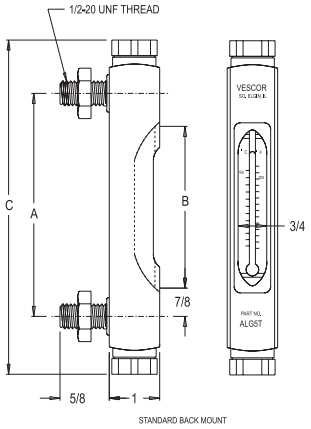
- Provides positive check of fluid level and temperature
- Rugged aluminum construction
- Durable pyrex glass tube
- 70 PSI max. pressure
- Thermometer with readings in centigrade and fahrenheit
- Buna-N O’-ring seals
- 250° F maximum temperature
- Minimum protrusion from reservoir

Mounting Information

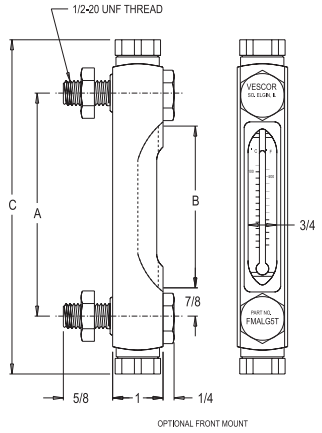
- Standard back mount gauges require access to reservoir. (2) 17/32 diameter holes to match mounting centers are required.
- Standard front mount gauges do not require access to reservoir. Gauge can be installed from the outside on (2) 1/2-20 tapped holes (when wall thickness permits) or (2) 1/2-20 hex nuts welded inside reservoir to match mounting centers.

Ordering Information

- Order sight level gauge by VESCOR part numbers
- For Viton seals add suffix -V (i.e. ALG5T-V)
- For EPDM seals add suffix -EP (i.e. ALG5T-EP)

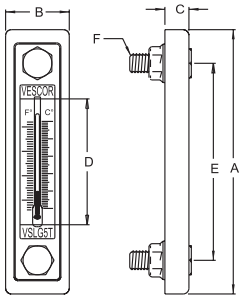


STANDARD BACK MOUNT



OPTIONAL FRONT MOUNT

VSLG (economy) Series



VESCOR VSLG5T (Economy) Series Sight Level Gauges are available in standard 5” size. Standard gauges are available with thermometer only and with standard front mount design.

Benefits and Features:

- Low Cost
- Steel body
- Durable black finish
- Trogamid protection glass
- Available from stock
- Provides positive check of fluid level and temperature
- Galvanized steel mounting bolts
- Thermometer readings in centigrade and fahrenheit
- Buna-N O’Ring seals

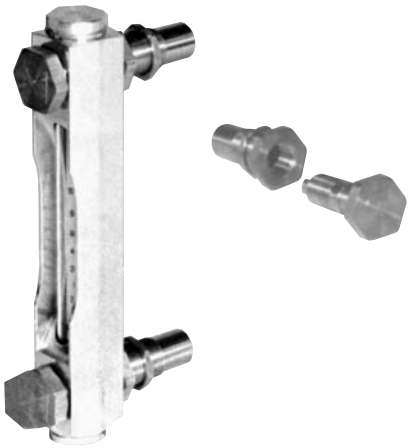
Mounting Information

Standard front mount gauge do not require access to reservoir. Gauge can be installed from the outside on (2) 1/2-13NC tapped holes (when wall thickness permit) or (2) 1/2-13NC hex nut welded inside reservoir to match mounting hole centers.

Ordering Information -Order sight level gauge by VESCOR part number

Vescor Part Number	Dimensions					
	A	B	C	D	E	F
VSLG5T	6.97	1.88	.71	2.88	5.00	1/2-13NC

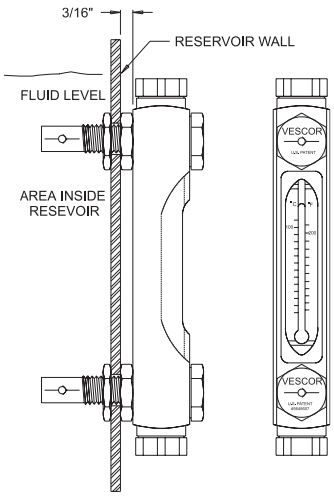
SGC Series



VESCOR QUICK CHANGE SIGHT GAGE CHECK® Check valve provides the necessary means to replace the sight gage quickly and easily.

Benefits and Features:

- Ideal for new reservoir applications
- May be field installed with slight modification to existing reservoir
- Compatible with most types of hydraulic oil
- Minimal spillage of fluid
- Readily available from stock
- Provides positive shut-off of fluid to sight gage
- Sight gage can be removed and replaced without draining reservoir
- Low cost



Mounting Information:

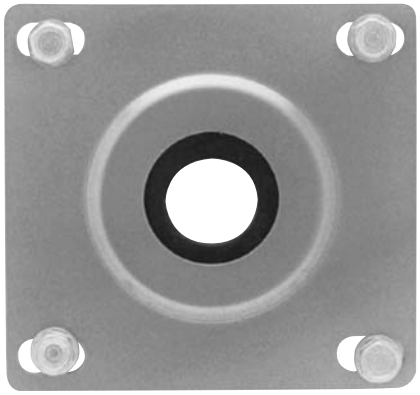
- **Existing reservoir applications**
  Access to reservoir is required. (2) 21/32 diameter holes to match mounting centers are required. From inside reservoir install check portion of sight gage check. From out side reservoir install sight gage. Sight Gage may now be removed and/or changed at any time without draining reservoir.
  (Note-reservoir may have to be drained to a level below lowest mounting hole for initial installation.)
- **New reservoir applications**
  Before filling reservoir drill (2) 21/32 diameter holes to match mounting centers. From inside install check portion of Sight Gage Check. From outside reservoir install sight gage. Fill reservoir. Sight Gage may now be removed and/or changed at any time without draining reservoir.

Ordering Information:

- Order Quick Change Sight Gage Check by VESCOR Part Number

Vescor Part Number	Description
SGC5	5” Front Mount Sight Gage with Quick Change Sight Gage Check
SGC10	10” Front Mount Sight Gage with Quick Change Sight Gage Check

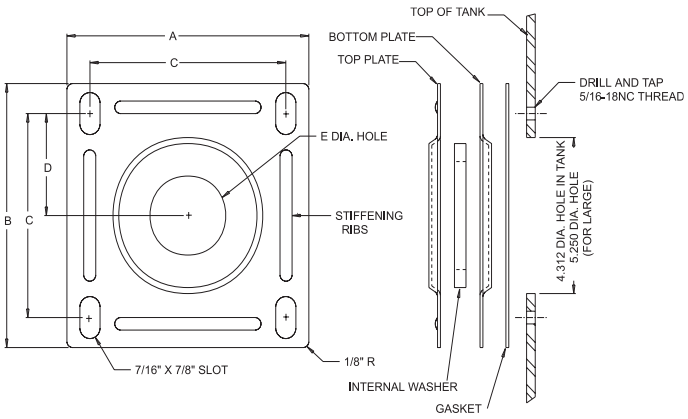
SUCTION FLANGES FOR PIPE/TUBING



- VESCOR Suction Flanges are designed to seal suction lines passing through the top plate of a hydraulic reservoir or similar application
- VESCOR Suction Flanges also allow access for removal of suction elements for inspection and cleaning

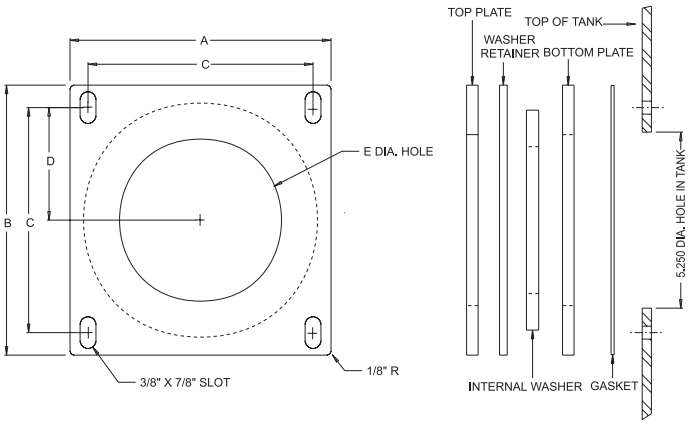
Each Suction Flange Assembly Includes:

1. (1) Top plate
2. (1) Internal washer
3. (1) Bottom plate
4. (1) Gasket
5. (4) 5/16-18 thread forming screws



Vescor Part Numbers 5100-5179 and 5880-5891

Vescor Part Number	Flange Dimensions (inches) A	B	C	D	E	Pipe Size
5100	5¼"	5½"	4¼"	2⅛"	1 3/16"	½"
5101	5¼"	5½"	4¼"	2⅛"	1 3/16"	¾"
5102	5¼"	5½"	4¼"	2⅛"	1¾"	1"
5103	5¼"	5½"	4¼"	2⅛"	1¾"	1¼"
5104	5¼"	5½"	4¼"	2⅛"	2½"	1½"
5105	5¼"	5½"	4¼"	2⅛"	2½"	2"
5187	7¼"	7½"	6¼"	3⅛"	3⅛"	1½"
5188	7¼"	7½"	6¼"	3⅛"	3⅛"	2"
5178	7¼"	7½"	6¼"	3⅛"	3¾"	2½"
5179	7¼"	7½"	6¼"	3⅛"	3¾"	3"
5180	7¼"	7½"	6¼"	3⅛"	4¾"	3½"
5181	7¼"	7½"	6¼"	3⅛"	4¾"	4"



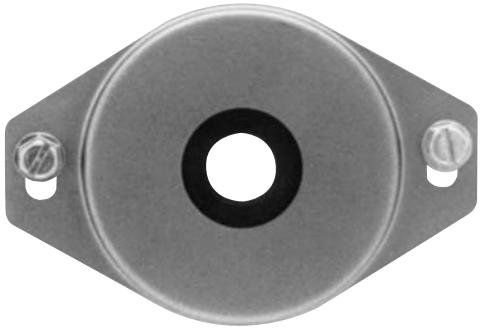
Vescor Part Numbers 5180-5181

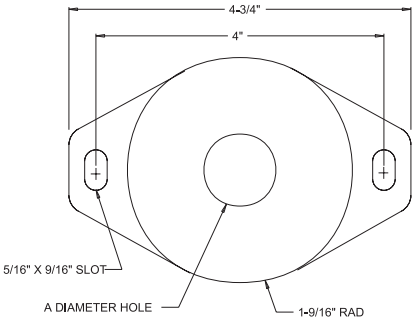
Vescor Part Number	Flange Dimensions (inches) A	B	C	D	E	Tube Size O.D.
5891	5¼"	5½"	4¼"	2⅛"	1 3/16"	⅛"
5880	5¼"	5½"	4¼"	2⅛"	1 3/16"	½"
5881	5¼"	5½"	4¼"	2⅛"	1 3/16"	⅝"
5882	5¼"	5½"	4¼"	2⅛"	1 3/16"	¾"
5883	5¼"	5½"	4¼"	2⅛"	1¾"	1"
5884	5¼"	5½"	4¼"	2⅛"	1¾"	1¼"
5885	5¼"	5½"	4¼"	2⅛"	2½"	1½"

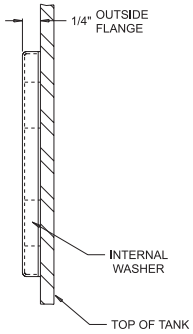
Return Flanges for Pipe and Tube

Each Return Flange Assembly Includes:

1. (1) Flange
2. (1) Internal washer
3. (2) 1/4-20 thread forming screws







Return Flanges for Pipe

Vescor Part Number	A Diameter Hole	Pipe Size
5110	1 3/16"	1/2"
5111	1 3/4"	3/4"
5112	1 3/4"	1"
5113	2 1/2"	1 1/4"
5114	2 1/2"	1 1/2"
5115	2 1/2"	2"

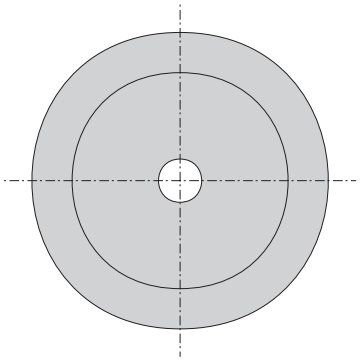
Return Flanges for Tube

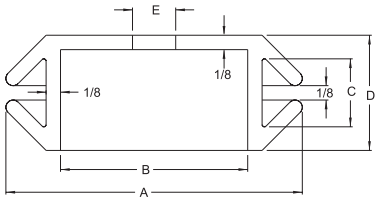
Vescor Part Number	A Diameter Hole	Tube Size O.D.
5772	1 3/16"	3/8"
5765	1 3/16"	1/2"
5766	1 3/16"	5/8"
5767	1 3/16"	3/4"
5768	1 3/4"	1"
5769	2 1/2"	1 1/4"
5770	2 1/2"	1 1/2"
5771	2 1/2"	2"

Rubber Grommets for Reservoir Downpipes

Material Specifications: BUNA-N

1. Drill hole in tank top per cutout size "F"
2. Snap in grommet.
3. Blank size with 'E' hole shall be furnished. Maximum O.D. limited to 'B' dimension.

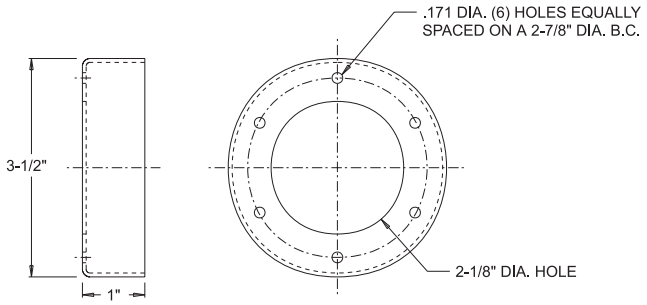




Vescor Part Number	Dimensions A	B	C	D	E	Cutout Size F
131499	1 7/8"	25/32"	5/8"	1"	1/4"	1 1/8"
131599	2 3/8"	1 13/64"	5/8"	1"	1/4"	1 7/16"
131699	3"	1 27/32"	5/8"	1"	3/8"	2 1/16"
131799	3 1/2"	2 13/32"	5/8"	1"	1/2"	2 5/8"
131899	4 1/2"	3 1/2"	11/16"	1 3/16"	1/2"	3 7/8"

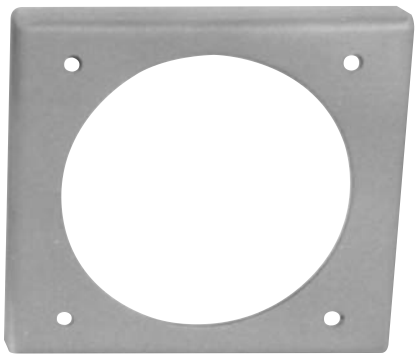
Filler Breather Riser

- VESCOR® Filler Breather Weld Riser is designed to raise filler breathers 1” above the mounting surface of the reservoir
- Eliminate the need to drill and tap tank top. Just weld in place
- Prevent contamination from entering reservoir
- Round design
- Use with VESCOR® bayonet filler breathers

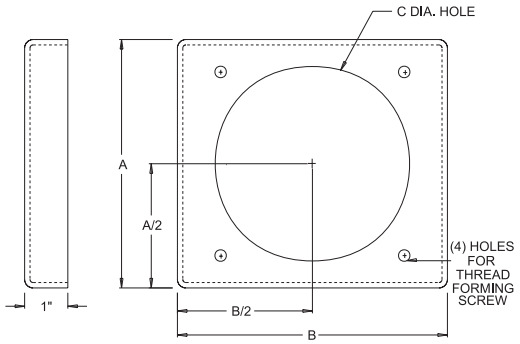


Vescor Part Number	Style	Description
5275	Round	Filler Breather Weld Riser

Suction Flange Riser

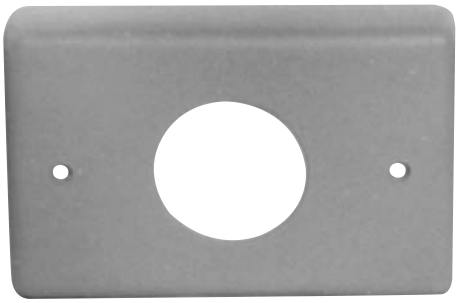


- VESCOR® Suction Flange Risers are designed to raise suction flanges 1” above the mounting surface of the reservoir
- Prevents contamination from entering the reservoir
- Use with VESCOR® Suction Flanges

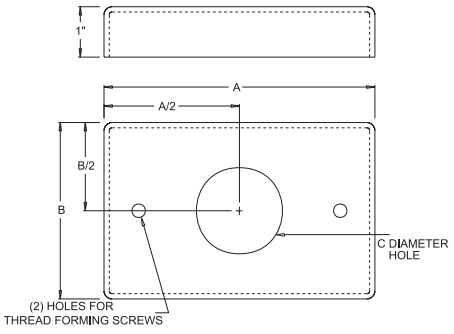


Vescor Part Number	A Dimension	B Dimension	C Diameter	Use with Pipe/Tube
5150	5¾”	6¼”	4½”	½” to 2”
5151	7¾”	8¼”	6½”	1½” to 4”

Return Flange Riser



- VESCOR® Return Flange Risers are designed to raise return flanges 1” above the mounting surface of the reservoir
- Prevents contamination from entering reservoir
- Use with VESCOR® Return Flanges



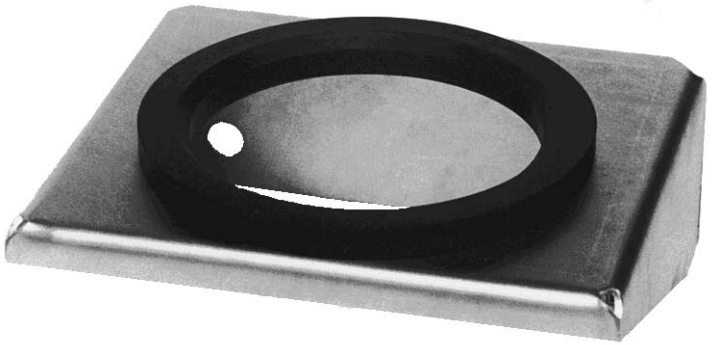
Vescor Part Number	A Dimension	B Dimension	C Diameter	Use with Pipe	Use with Tube
5156	5⅜”	3½”	1 13/16”	½” to 1½”	⅜” to 1½”
5157	5⅜”	4”	2 9/16”	2”	2”

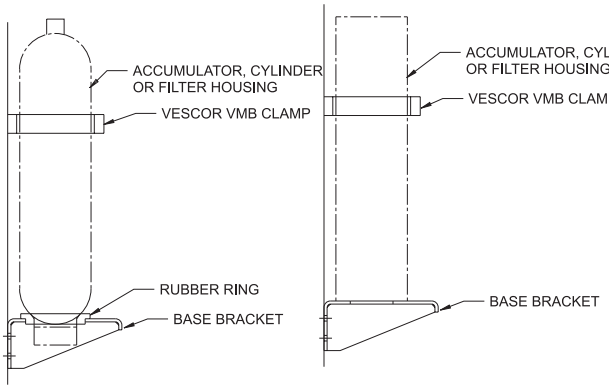
ACCUMULATOR BRACKETS/CLAMPS

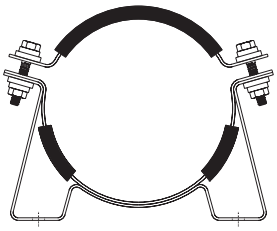
Vescor® Mounting Brackets have been designed to provide single yet secure mounting of accumulators, cylinders and filter housings at the place of installation.

Special features include:

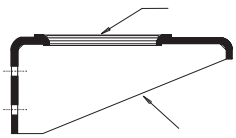
- Rubber cushioning to reduce vibration and noise.
- Compensation for thermal expansion and contraction.
- Exclusively designed for all types of accumulators and filter housings.
- Painted to resist corrosion.
- Special sizes and designs are available on request.
- Optional rubber ring to accommodate bladder accumulators

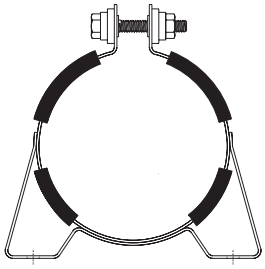






Type 2

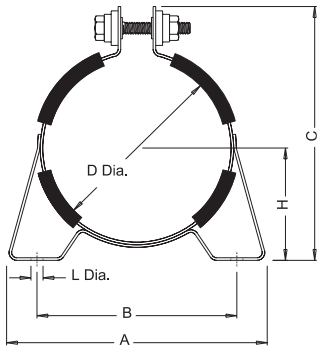




Type1

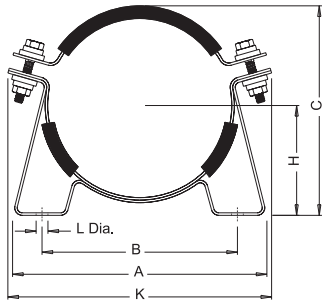
Specifications

Vescor Part Number	Dimensions in Inches A	B	C	D	H	K	L	Width	Weight lbs
CLAMP – TYPE 1									
VMB-42	5.43	3.94	5.91	4.25	2.52	-	.35	1.18	1.6
VMB-45	5.35	3.94	6.50	4.49	2.87	-	.35	1.18	1.6
VMB-50	6.89	5.35	6.90	4.96	3.03	-	.35	1.18	1.8
VMB-57	6.69	5.35	7.52	5.75	3.27	-	.35	1.18	2.0
VMB-66	7.28	6.02	8.31	6.58	3.64	-	.35	1.18	2.0
VMB-87	10.00	8.50	10.47	8.74	4.72	-	.35	1.18	2.5
CLAMP – TYPE 2									
VMB-81	10.24	8.19	9.06	8.11	4.65	10.83	.59	1.58	3.5
VMB-84	10.63	8.50	9.37	8.39	4.84	11.22	.59	1.58	3.8
VMB-86	10.55	8.50	9.53	8.62	4.84	11.22	.59	1.58	3.8
VMB-89	10.63	8.50	9.57	8.90	4.84	11.61	.59	1.58	3.8
VMB-113	13.07	11.02	12.40	11.26	6.42	13.98	.59	1.58	4.7
VMB-122	13.07	11.02	13.15	12.21	6.69	14.96	.59	1.58	4.7
VMB-141	16.81	14.37	15.08	14.13	7.68	16.69	.59	1.58	5.5



Single Bolt Clamp Type 1

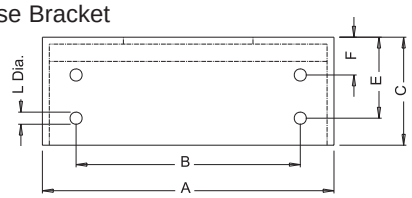
Vescor Part Number	Dimensions in Inches A	B	C	D	E	F	G	H	L	Weight lbs.
BASE BRACKET										
VMB-47	10.24	7.87	3.94	4.72	2.95	1.38	8.86	3.62	.67	5.5
VMB-53	10.63	7.09	3.94	5.31	3.15	1.57	9.84	4.84	.67	14.4
VMB-67	10.24	7.87	3.94	6.69	2.95	1.38	8.86	4.84	.67	5.3
VMB-75	13.00	8.66	7.87	7.48	5.51	2.36	13.39	6.69	.87	41.5
VMB-83	15.35	10.63	9.45	8.31	7.09	2.36	15.35	7.68	.87	44.4
RUBBER RING										
VMB-425	5.91	4.72	4.25	4.69	.79	.59	Use with VMB-47 Base Bracket			
VMB-625	7.87	6.69	6.26	6.65	.79	.59	Use with VMB-67 Base Bracket			
VMB-787	9.84	8.66	7.87	8.27	.98	.79	Use with VMB-83 Base Bracket			

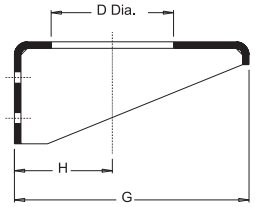


Double Bolt Clamp Type 2

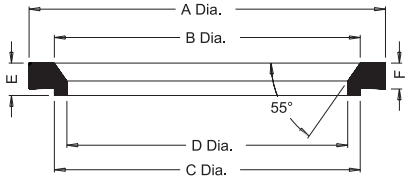
(Note: Base Bracket and Rubber Rings must be ordered as separate items)

Base Bracket





Rubber Ring



Nominal diameter required for bladder accumulators

Accumulator Size	Vescor Clamp	Qty.	Dia. (in.)	Base Bracket
1.0 quart	VMB-45	1	4.5	-
2.0 quart	VMB-45	1	4.5	-
1.0 gallon	VMB-66	1	6.7	VMB-47
2.5 gallon	VMB-89	1	9.0	VMB-67
5.0 gallon	VMB-89	2	9.0	VMB-67
7.5 gallon	VMB-89	2	9.0	VMB-67
10 gallon	VMB-89	2	9.0	VMB-67
15 gallon	VMB-89	3	9.0	VMB-67
25 gallon	VMB-141	3	14.25	VMB-83
40 gallon	VMB-141	3	14.25	VMB-83

Note: All dimensions and weights are for general information only. Since products are in continual state of refinement, please verify all critical dimensions with our engineering department.

Nominal diameter required for piston type accumulators

Note:*No Rubber Ring

Accumulator Size	Vescor Clamp	Qty.	Dia. (in.)	Base* Bracket
1.0 quart	VMB-45	1	4.5	-
2.0 quart	VMB-45	1	4.5	-
1.0 gallon	VMB-45	2	4.5	-
1.0 gallon	VMB-57	2	5.5	-
1.0 gallon	VMB-66	1	7.0	VMB-47
1.5 gallon	VMB-45	2	4.5	-
1.5 gallon	VMB-57	2	5.5	-
1.5 gallon	VMB-66	1	7.0	VMB-47
2.0 gallon	VMB-45	2	4.5	-
2.5 gallon	VMB-57	2	5.5	-
2.5 gallon	VMB-66	1	7.0	VMB-47
2.5 gallon	VMB-81	1	8.0	VMB-67
3.0 gallon	VMB-57	2	5.5	-
3.0 gallon	VMB-66	1	7.0	VMB-47
3.0 gallon	VMB-81	1	8.0	VMB-67
4.0 gallon	VMB-57	3	5.5	-
4.0 gallon	VMB-66	1	7.0	VMB-47
4.0 gallon	VMB-81	1	8.0	VMB-67
5.0 gallon	VMB-57	3	5.5	-
5.0 gallon	VMB-66	2	7.0	VMB-47
5.0 gallon	VMB-81	1	8.0	VMB-67
5.0 gallon	VMB-89	1	9.0	VMB-47
7.5 gallon	VMB-66	2	7.0	VMB-67
7.5 gallon	VMB-81	2	8.0	VMB-67
7.5 gallon	VMB-89	1	9.0	VMB-67
10.0 gallon	VMB-81	2	8.0	VMB-67
10.0 gallon	VMB-89	2	9.0	VMB-67
15.0 gallon	VMB-81	2	8.0	VMB-67
15.0 gallon	VMB-69	2	9.0	VMB-67
17.5 gallon	VMB-89	3	9.0	VMB-67
20.0 gallon	VMB-81	3	8.0	VMB-67
20.0 gallon	VMB-89	3	9.0	VMB-67
23.0 gallon	VMB-89	3	9.0	VMB-67
25.0 gallon	VMB-89	4	9.0	VMB-67

FILLER BREATHER BAYONET STYLE

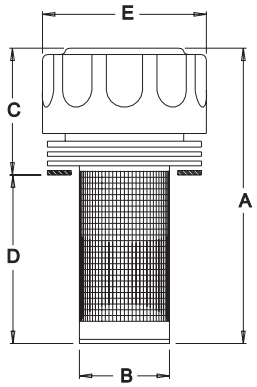
VESCOR® Filler Breathers are designed to be used as a filler port for tanks, hydraulic power units or other fluid containers. These units also lets the tank breathe while keeping out airborne particles.

Features

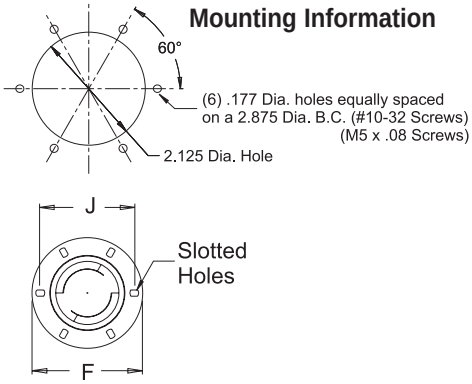
1. Bayonet Nickel-Chrome Plated Steel Cap - large capacity. Twist to lock removable cap breathes and filters air. Air vents are concealed allowing for outdoor applications. Fluted finger inserts for easy gripping. (except for non vented style)
2. 40 or 10 Micron Filtration (except for non vented style)
3. Safety Chain - prevents loss of cap
4. Heavy Duty Cork-Neoprene Gaskets provide a positive seal between flanges
5. Zinc Plated Flange - bayonet flange (SAE J829)
6. Customer Specified Strainer Baskets
   - 4" nylon strainer with solid dome bottom to prevent punchout
   - 3" stainless steel strainer, 30 mesh, 1-15/16 diameter large area for rapid filling
7. Thread Forming Screws - prevents particles from entering reservoir during installation by forming threads instead of cutting them

Options: Locking tabs

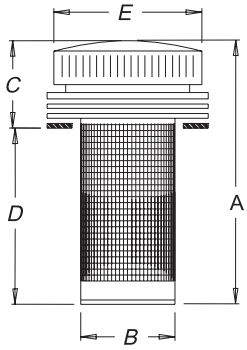
Standard Bayonet Style



Mounting Information



Non Vented Bayonet Style



Technical and Dimensional Details- Standard Bayonet Type

Air Filtration		Air Flow Capacity	Oil Transfer Rate	Bayonet Flange						
Nominal Level	Media			A	B	C	D	E	F	J
10 Micron	Foam	15CFM	115GPM	6.1	1.9	2.3	3.8	3.0	3.25	2.88
40 Micron	Foam	25CFM	192 GPM	6.1	1.9	2.3	3.8	3.0	3.25	2.88

Dimensional Details - Non Vent Bayonet Style

A	B	C	D	E	F	J
5.1	1.9	1.3	3.8	3.0	3.25	2.88

Standard Filler Breathers

Vescor Part Number	Micron Rating	Cap Style	Breather	Strainer Basket Type
5201	40	Std.	Non-Pres	Nylon
5204	10	Std.	Non-Pres	Nylon
5208	40	Blank	Non-Pres	Nylon
5212	10	Blank	Non-Pres	Nylon
5216	40	Std.	Non-Pres	Stainless Steel
5220	10	Std.	Non-Pres	Stainless Steel
5224	40	Blank	Non-Pres	Stainless Steel
5228	10	Blank	Non-Pres	Stainless Steel

Non-Vented Filler Breathers

Vescor Part Number	Style Cap	Breather Style	Type Strainer Basket
5232	Non vented	Non vented	Nylon
5227	Non vented	Non vented	Stainless

Pressurized Filler Breathers-Standard Bayonet Style

Vescor Part Number	Micron Rating	Cap Style	Breather	Strainer Basket Type
5201-5P	40	Std.	5PSI-Pres	Nylon
5205	10	Std.	5PSI-Pres	Stainless

Metric Mounting Filler Breathers-Standard Bayonet Style

Vescor Part Number	Micron Rating	Cap Style	Breather	Strainer Basket Type
5203	40	Std.	Non-Pres	Nylon
5207	40	Blank	Non-Pres	Nylon

Ordering Information Options

- For Locking Tabs add -LT to part number (3/8" dia. hole to accept padlock) (not available in non vented breathers)

FILLER BREATHER

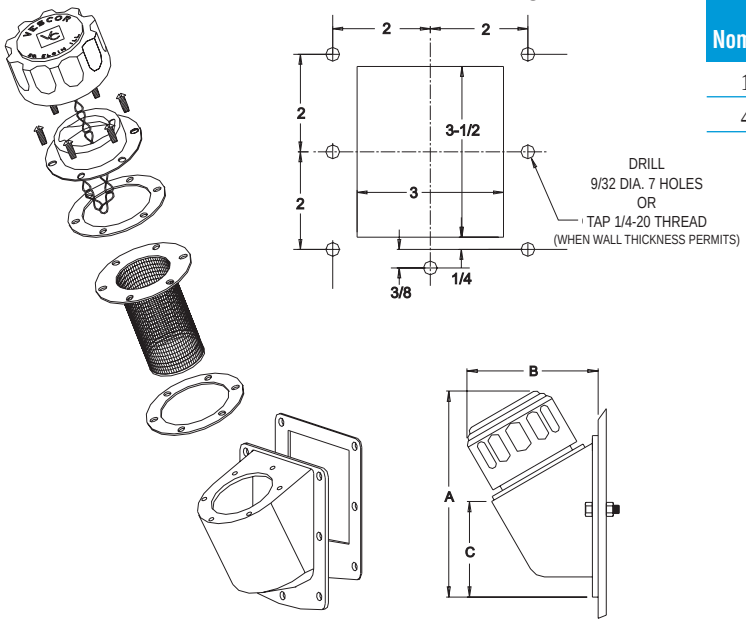
Side Mount

VESCOR® Side Mount Filler Breathers are designed to be used where top surfaces are not readily available for locating a filler port. This unit easily mounts on vertical tank walls. These units filter the fluid as it is added and also lets the tank breathe while keeping out airborne particles.

Features

1. Nickel-Chrome Plated Steel Cap-large capacity. Twist to lock removable cap breathes and filters air. Air vents are concealed allowing for outdoor applications. Fluted finger insertions for easy gripping.
2. 40 or 10 micron filtration
3. Safety Chain-prevents loss of cap
4. Heavy Duty Cork-Neoprene Gaskets provide a positive seal between flanges.
5. Zinc Plated Flange - bayonet type. (SAEJ829)
6. 3" Stainless Steel Strainer - 30 mesh, 1-15/16 diameter. Large area for rapid filling.
7. Thread Forming Screws - prevents particles from entering reservoir during installation by forming threads instead of cutting them.
8. Tough Glass-Reinforced Nylon Housing.
9. Includes (7) 1/4-20NC x 1" Bolts and Nuts for mounting

Mounting Information



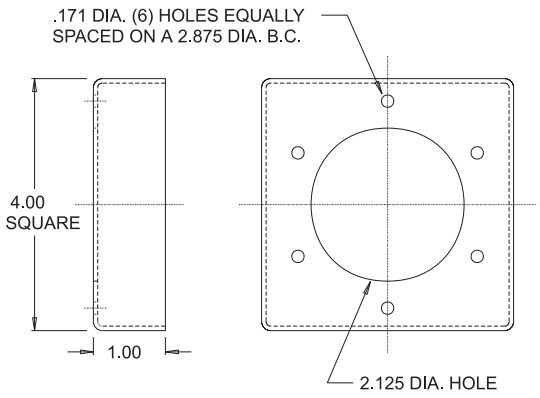
Technical and Dimensional Details

Air Filtration		Air Flow Capacity	Oil Transfer Rate	Bayonet Flange		
Nominal Level	Media			A	B	C
10 Micron	Foam	15CFM	115 GPM	6.1	3.9	3.2
40 Micron	Foam	25CFM	192 GPM	6.1	3.9	3.2

Side Mount Filler Breathers

Vescor Part Number	Micron Rating	Cap Style	Breather	Strainer Basket Type
SM-5201	40	Std.	Non-Pres	Stainless
SM-5204	10	Std.	Non-Pres	Stainless
SM-5208	40	Blank	Non-Pres	Stainless
SM-5212	10	Blank	Non-Pres	Stainless

Filler Breather Weld Riser-Stainless Steel



- VESCOR® Filler Breather Weld Riser is designed to raise filler breathers 1" above the mounting surface of the reservoir
- Eliminate the need to drill and tap tank top. Just weld in place
- Prevent contamination from entering reservoir
- Square design
- Use with VESCOR® filler breathers
- 316 Stainless steel

Filler Breather Riser

Vescor Part Number	Style	Description
5275SS	Square	316 Stainless Steel

AIR BREATHERS

VESCOR® Air Breathers and Air Breathers with Silencers are used at the point of air intake to provide 99+% efficient filtration at 10 microns (per SAE fine dust test)

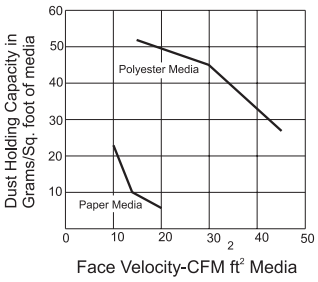
VESCOR® Air Breathers stop airborne dirt from entering the reservoir as the oil is removed. They provide clean, filtered air to replace the oil.

Tube silencers in housing decreases noise from 5 to 15 dB. Moisture-resistant polyester cloth element handles hot air and oil mist. Rugged, all steel weather hood.

Replacement Filters for the use with VESCOR® Air Breathers are specifically designed to withstand strong pulsations of air. Easy to replace. Model number with "P" include polyurethane prefilter to increase dust loading capacity 40 to 50%.

Replacement Elements

Influence of Face Velocity on Dust Holding Capacity



Dust Removal Efficiency

Dust removal efficiency of polyester media at face velocity of:

15CFM/FT^2 - Media _____

30CFM/FT^2 - Media ----------

45CFM/FT^2 - Media _.-.-.-.-.-.-.-.-.-.-

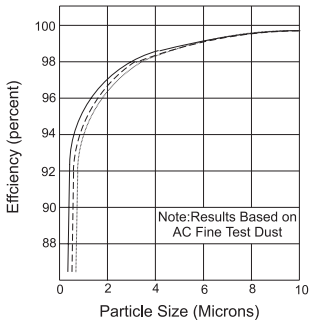
Dust removal efficiency of paper media at face velocity of:

15CFM/FT^2 - Media _____

30CFM/FT^2 - Media ----------

45CFM/FT^2 - Media _.-.-.-.-.-.-.-.-.-.-

POLYESTER

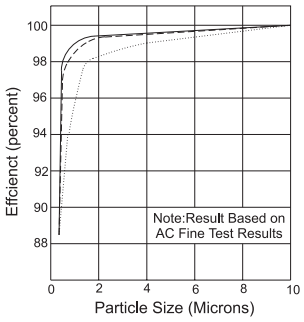


- high temperature plastisol endcaps
- reinforced with epoxy coated steel wire on both sides of polyester
- nominally 99+% efficient at 10 microns
- washable-lukewarm water and mild detergent
- dust loading capacity is increased 40-50% with polyurethane prefilter

ADVANTAGES

- less maintenance, longer life
- more durable
- moisture resistant
- handles hot air and oil mist

PAPER



- plastisol endcaps
- heavy duty industrial strength paper
- nominally 99+% efficient at 10 microns
- reinforced with heavy gauge zinc plated expanded metal
- dust loading capacity is increased 40-50% with polyurethane prefilter

ADVANTAGES

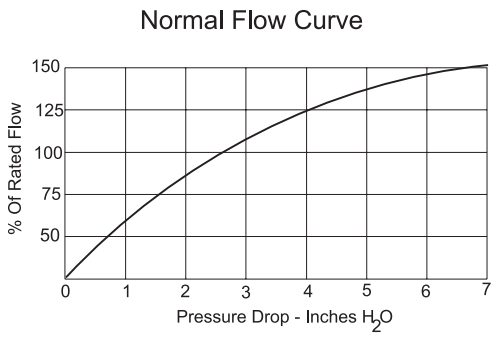
- less expensive
- more surface area per given size
- higher efficiency

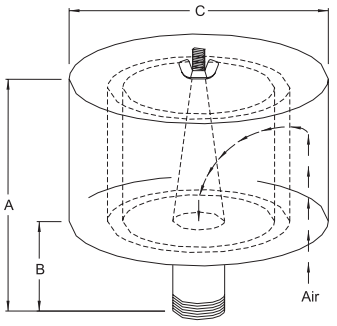
Vescor Part Numbers				Effective Surface Area of Element in Square Feet		Dimensions		
Polyester Element	Paper Element	Wire Mesh Element	Flow CFM	Polyester	Paper	ID	OD	HT
E19P	**E18P**	**E18S**	100	1.5	3.0	3"	4¾"	4¾"
E31P	**E30P**	**E30S**	195	2.3	5.7	3⅜"	5¼"	4¾"
E231P	**E230P**	**E230S**	300	4.5	10.9	3¾"	5¾"	9½"

Series AB

Features:

- Fully drawn weatherhood – no welds to rust or vibrate apart
- Low entrance velocity between base and cover minimizes pressure drop.
- Center yoke bracket located for minimal flow restriction
- Durable heavy gauge steel base with low pressure drop pipe design
- Durable carbon steel construction with baked enamel finish



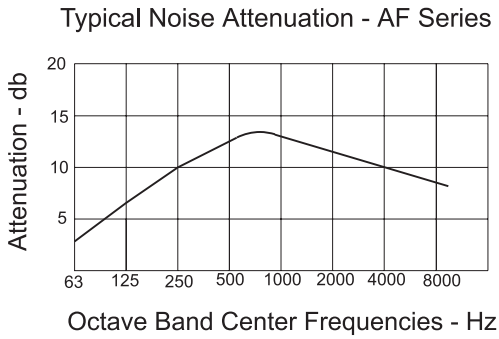


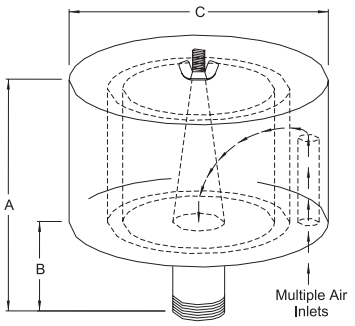
Vescor Model Numbers AB Series			Effective Surface Area of Element in Square Feet		Application CFM			Dimensions		
Polyester Element	Paper Element	Wire Mesh Element	Polyester	Paper	Pulsating Flow	Continuous Flow	NPT Connection	A	B	C
AB-E19P-125	AB-E18P-125	AB-E18S-125	1.5	3.0	60	80	1¼"	6½"	1½"	6"
AB-E19P-150	AB-E18P-150	AB-E18S-150	1.5	3.0	60	80	1½"	6½"	1½"	6"
AB-E31P-200	AB-E30P-200	AB-E30S-200	2.3	5.7	60	135	2"	7¼"	2¼"	7¾"
AB-E31P-250	AB-E30P-250	AB-E30S-250	2.3	5.7	80	195	2½"	7½"	2½"	7¾"
AB-E231P-300	AB-E230P-300	AB-E230S-300	4.5	10.9	300	300	3"	13"	3"	10"

Series AF (with Silencers)

Features:

- Fully drawn weatherhood – no welds to rust or vibrate apart
- Tubular silencing design - tubes positioned to maximize attenuation and air flow while minimizing pressure drop
- Durable carbon steel construction with baked enamel finish
- Low pressure drop center bracket and pipe design
- Interchangeable elements





Vescor Model Numbers AF Series			Effective Surface Area of Element in Square Feet		Application CFM			Dimensions		
With Polyester Element	With Paper Element	With Wire Mesh Element	Polyester	Paper	Pulsating Flow	Continuous Flow	NPT Connection	A	B	C
AF-E19P-125	AF-E18P-125	AF-E18S-125	1.5	3.0	60	60	1¼"	6½"	1½"	6"
AF-E19P-150	AF-E18P-150	AF-E18S-150	1.5	3.0	60	80	1½"	6½"	1½"	6"
AF-E31P-200	AF-E30P-200	AF-E30S-200	2.3	5.7	60	135	2"	7¼"	2¼"	10"
AF-E19P-250-9T	AF-E18P-250-9T	AF-E18S-250-9T	1.5	3.0	60	100	2½"	8¼"	3¼"	6"
AF-E231P-300	AF-E230P-300	AF-E230S-300	4.5	10.9	200	300	3"	12½"	2½"	10"

ORDERING INFORMATION

Example: **AB - E19P - 150**

- AB: FILTER SERIES
- E19P: ELEMENT PART NO.
  - ODD #'S = POLYESTER
  - EVEN #'S = PAPER
  - P = POLYURETHANE FOAM
  - PREFILTER INCLUDED
- 150: CONNECTION SIZE
  - 125 = 1¼" NPT
  - 150 = 1½" NPT
  - 200 = 2½" NPT
  - 250 = 2½" NPT
  - 300 = 3" NPT

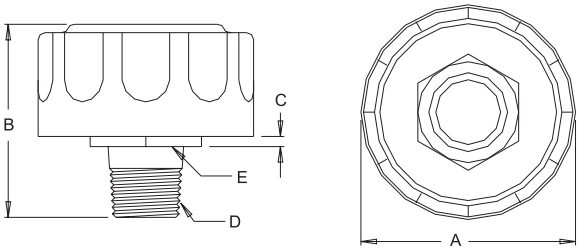
NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Screw-in Breather

VESCOR® Screw-In Breathers insure free flow of air into hydraulic tanks or other fluid containers. These units let the tank breathe while keeping out airborne particles. Connection is ¾" NPT (male) for direct connection to standard ¾₄" NPT (female) threaded pipe ports.

Features

- Nickel-Chrome Plated Cap - large capacity. Cap breathes and filters air. Air vents are concealed allowing for outdoor applications.Fluted finger inserts for easy gripping
- 40 Micron Filtration
- ¾" NPT (male) Connection



Screw-In Breathers

Vescor Part Number	Micron Rating	Cap Style	Breather	NPT Thread
V-5213	40	Blank	Screw-In	¾"

Technical and Dimensional Details

Air Filtration		Air Flow Capacity	Oil Transfer Rate	Dimensions				
Nominal Level	Media			A	B	C	D NPT	E Hex
40 Micron	Foam	30CFM	192 GPM	3.0	2.7	.50	¾"	1.38

Mounting Information

Any standard 3/4" NPT (female) threaded pipe port

Miniature Tank Breathers

VESCOR® Miniature Tank Breathers are designed to replace more costly, less efficient breathers and to improve the filtering performance of the breather vent.

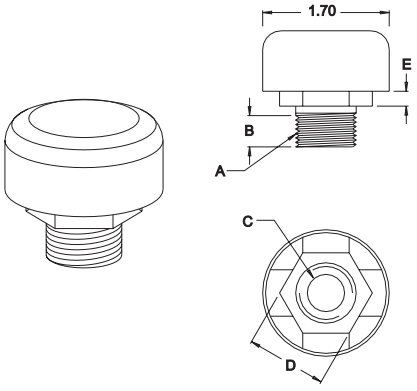
It is fitted with a 100 nominal, 48u absolute nylon monofilament screen. The screen and frame are of one-piece molded construction.

The nylon screen has self cleaning action. Pulsation of the screen shakes loose dirt and contaminants contacting the screen so that it falls away from the breather.

Features

- All nylon construction - corrosion resistant
- Available in ¼", ⅜", ½" and ¾" male pipe threaded fittings
- 10 micron filter screen (48u absolute)
- Black in color for high visibility
- Self cleaning
- Low cost

Vescor Part Number	NPT Size	Style Cap Color	Breather
PMB-02-10	¼"	Blank Black	Mini
PMB-05-10	⅜"	Blank Black	Mini
PMB-03-10	½"	Blank Black	Mini
PMB-07-10	¾"	Blank Black	Mini



Dimensional Details

Vescor Part Number	A NPT	B Thread Length	C Hole Dia.	D Hex	E Flat
PMB-02-10	¼"	.40	.29	1.10	.58
PMB-05-10	⅜"	.40	.40	1.10	.20
PMB-03-10	½"	.48	.52	1.10	.20
PMB-07-10	¾"	.54	.70	1.10	.20

Mounting Information

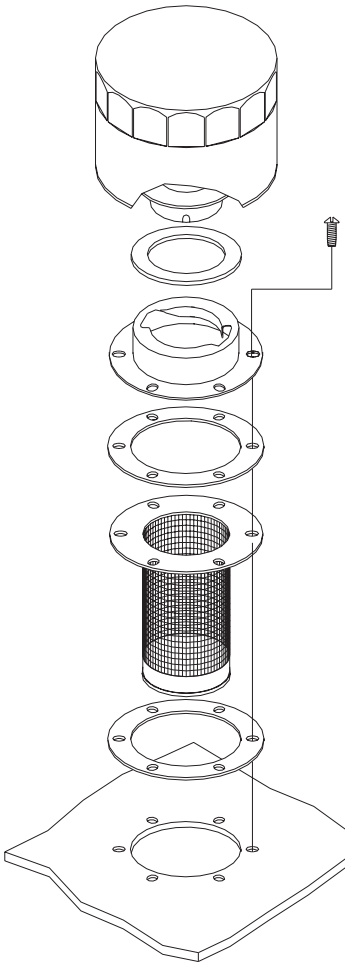
PMB-02-10 Any standard ¼" NPT (female) threaded pipe port
PMB-05-10 Any standard ⅜" NPT (female) threaded pipe port
PMB-03-10 Any standard ½" NPT (female) threaded pipe port
PMB-07-10 Any standard ¾" NPT (female) threaded pipe port

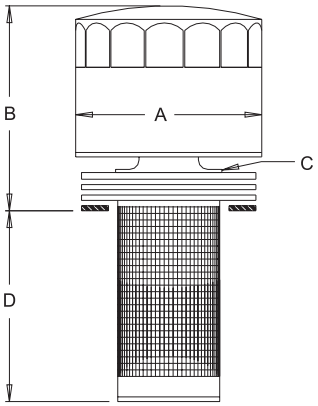
AIR BREATHER FILTER

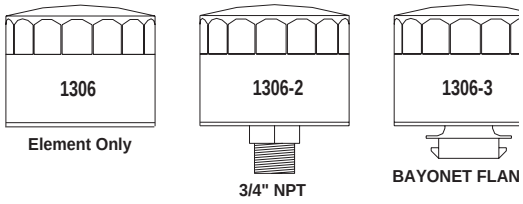
VESCOR® Air Breather Filter protects your hydraulic system from ingesting airborne particles. These breathers feature a large pleated surface area which remove airborne particles 3 micron and above with exceptional dirt holding capacity that extends the life of the breather and thus the length of time between servicing

Features

- 3 micron and above filtration
- High capacity air flow
- Customer specified adapters: Bayonet flange (SAE J829) 3/4" NPT (male)
- Heavy Duty Cork-Neoprene Gaskets provide a positive seal between flanges
- Adapters allow easy spin-on, spin-off changing of the air breather
- 4" Nylon Basket (assembly model only)







Technical and Dimensional Details

Part Number	Description	Normal Capacity	Air Flow PSI Drop	A Dia.	B Dim.	C Adapter	D Dim.
1306	Air Breather Filter Element Only	40 SCFM	.4 PSI at 20 SFM 1.25 PSI at 40 SCFM	3.75	3.25	N/A	N/A
1306-2	Air Breather with 3/4 NPT Adapter	40 SCFM		3.75	4.38	3/4" NPT (Male)	N/A
1306-3	Air Breather with Bayonet Flange Adapter	40 SCFM		3.75	4.50	SAE Bayonet	N/A
1306-4*	Air Breather Bayonet Fill Assembly	40 SCFM		3.75	4.50	SAE Bayonet	3.80

***NOTE: 1306-4 includes (1) air breather filter, (1) cap gasket, (1) flange gasket, (1) flange SAE J829, (1) 4" nylon strainer basket, (1) tank gasket, (6) mounting screws**

Mounting Information

3/4" NPT (male) Adapter - Any standard 3/4" NPT (female) threaded pipe port
SAE Bayonet Flange Adapter - Any mating SAE bayonet flange adapter

DES-CASE BREATHERS

Attack the cause of oil contamination

Industry spends millions of dollars annually treating the negative effects of oil contamination. Des-Case Breather attacks the cause as opposed to treating the problem of contamination.

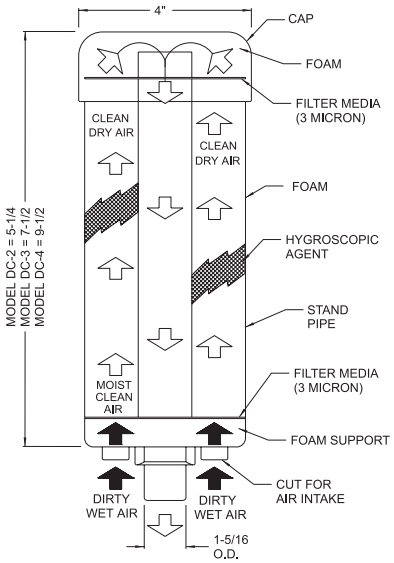
Designed and developed by filtration engineers, the hygroscopic breather is a unique, patented air filter and water vapor removal system. It will virtually eliminate moisture and particulate contamination in industrial equipment reservoirs such as hydraulic tanks and gear boxes.

Unique Filtration Process

Moisture and particulate accumulation are major factors of oil contamination in industrial equipment. Neglected, these detriments restrict equipment efficiency, causing machine downtime and significant expense in replacement oil, parts and repair labor.

Des-Case breathers incorporate a proven, field tested design. They prevent water and contaminants from entering fluid reservoirs as differential pressures occur through thermal expansion and contraction of the fluid, or during the filling or emptying process.

Manufactured with a hygroscopic agent, Des-Case breathers utilize the entire filter area, and have the capability of extracting water vapor from the air as it is drawn through the unit. Accompanying solid particulate is then removed by a patented polyester fabric filter, allowing only clean, dry air to enter the system.



Change to Des-Case™ for Maximum Machine Performance

Hygroscopic breather elements are state-of-the-art in design and function, and are industry's best choice for assuring maximum machine performance.

Des-Case offers these cost-savings benefits:

- Elimination of water-contaminated oil which leads to additive stripping
- Less abrasive particles to prolong machine operating life
- Elimination of rust-forming condensation
- Longer oil and oil filter life
- Elimination of sludge deposits

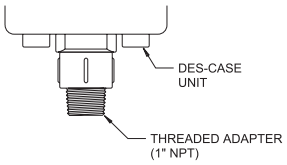
Resilient Construction . . . Multiple Application

Every Des-Case hygroscopic breather is manufactured in a durable, shock absorbing clear plastic casing with resilient qualities to withstand the customary abuse associated with heavy manufacturing equipment. The units are disposable, and are manufactured entirely of environmentally safe components.

Des-Case disposable hygroscopic breathers are manufactured in three sizes DC2, DC3 and DC4 to accommodate different mounting space requirements. All three models are rated for 20 cfm of air in and out of the tank or reservoir (the equivalent of 150 gpm fluid level change in the reservoir). The patented air flow design produces a partial regeneration of the hygroscopic agent and a back flushing (cleaning) of the particulate filter when the air leaves the reservoir.

Ordering Information

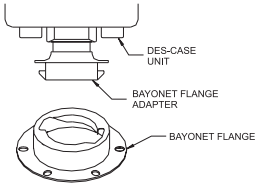
Type 1 (Screw-In) 1" NPT



Ordering Information

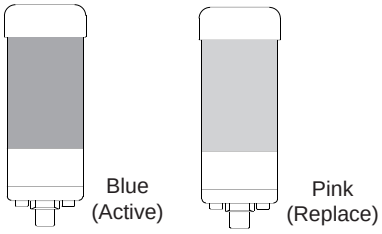
Part No.	Description
DC-2-1	DC2 Breather with 1" Adapter
DC-3-1	DC3 Breather with 1" Adapter
DC-4-1	DC4 Breather with 1" Adapter

Type 2 Bayonet Type



Ordering Information

Part No.	Description
DC-2-B	DC2 Breather w/Bayonet Flange Adapter Assembly
DC-3-B	DC3 Breather w/Bayonet Flange Adapter Assembly
DC-4-B	DC4 Breather w/Bayonet Flange Adapter Assembly



Color Visually Indicates Unit Condition

To activate the unit, the protruding air intake nipples must be opened. The more nipples cut, the greater the breathing capacity.

Every Des-Case breather will remain effective as long as the hygroscopic agent's color in the transparent unit remains **BLUE**. A light **PINK** color indicates 100% saturation and the need to replace the unit.

Low Unit Cost . . . Long Shelf Life. . . Varied Industrial and Commercial Applications

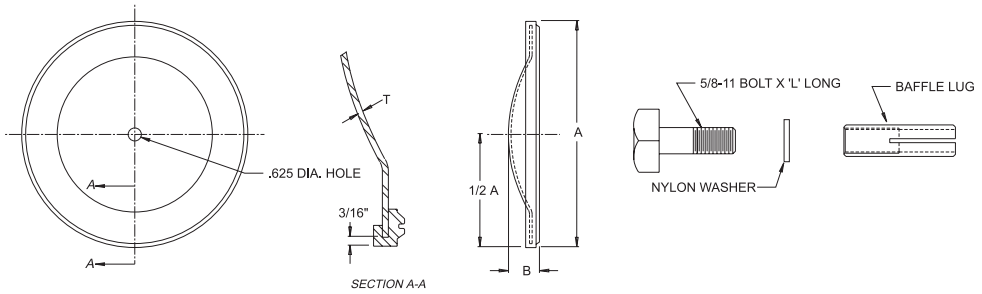
Des-Case hygroscopic breathers are readily available and the modest price of these units is insignificant when compared to the costs associated with machine down time, replacement parts and labor. Each Des-Case breather is packaged and shipped in an airtight container for long-lasting shelf life.

Manufactured in the U.S.A., Des-Case units have excellent field test records and are utilized in a wide range of industries-food processing, automotive manufacturing, paper mills, transportation, robotics, power generation and many more.

Design Flexibility Permits Easy Installation Regardless of Equipment Location

Des-Case hygroscopic breathers are designed for installation on most equipment regardless of location. For installation in difficult areas. Des-Case offers (2) mounting options for ease of installation and unit maintenance.

Steel/Stainless Endcovers



End Cover Size	*Endcover Kit without Drain Part No.	*Endcover Kit with 3/4" NPT Drain Part No.	+Endcover Only without Drain Part No.	+Endcover Only with Drain Part No.	*Endcover Kit with #12 SAE Drain Part No.	+Endcover Only with #12 SAE Drain Part No.
			STEEL ENDCOVERS			
10"	5067	5068	5070	5072	5053-D	5053
12"	5080	5080-D	5085	5086-D	5054-D	5054
14"	5065	5066	5071	5073	5055-D	5055
16"	5087	5087-D	5089	5090-D	5056-D	5056
18"	5091	5091-D	5095	5094-D	5057-D	5057

End Cover Size	*Endcover Kit without Drain Part No.	*Endcover Kit with 3/4" NPT Drain Part No.	+Endcover Only without Drain Part No.	+Endcover Only with Drain Part No.
		STAINLESS STEEL ENDCOVERS		
•10"	5067-SS	5067-D-SS	5070-SS	5072-D-SS
12"	5080-SS	5080-D-SS	5085-SS	5085-D-SS
•14"	5065-SS	5065-D-SS	5071-SS	5071-D-SS
16"	5087-SS	5087-D-SS	5089-SS	5089-D-SS
•18"	5091-SS	5091-D-SS	5095-SS	5095-D-SS

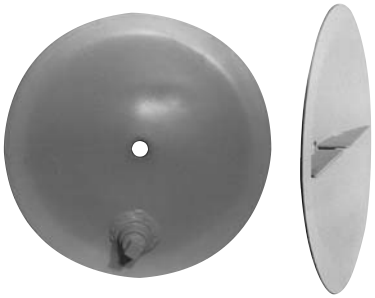
End Cover Size	Dimensions A	B	T	L	H Access Hole Dia.
10"	$10^{3}/_{4}$"	$1^{7}/_{8}$"	10 GA	$1^{1}/_{4}$"	8"
12"	$12^{5}/_{8}$"	$2^{1}/_{8}$"	7 GA	$1^{3}/_{4}$"	10"
14"	$14^{5}/_{8}$"	$2^{7}/_{16}$"	7 GA	$1^{3}/_{4}$"	12"
16"	$16^{5}/_{8}$"	$2^{11}/_{16}$"	7 GA	2"	14"
18"	$18^{5}/_{8}$"	$2^{15}/_{16}$"	7 GA	$2^{1}/_{2}$"	16"

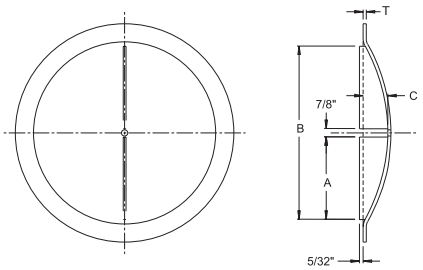
•Non-Stock Items

*NOTE: Endcover Kit Includes – (1) endcover, (1) buna-n gasket, (1) 5/8-11 bolt, (1) nylon washer, (1) baffle lug
+NOTE: Endcover Only Includes – (1) endcover, (1) buna-n gasket

Recommended Torque=15ft/lb

Endcovers with Flow Restrictors





Vescor Endcovers with flow restrictors are a 1 piece unit to restrict the flow of fluid around baffle and end-cover dome.

Benefits

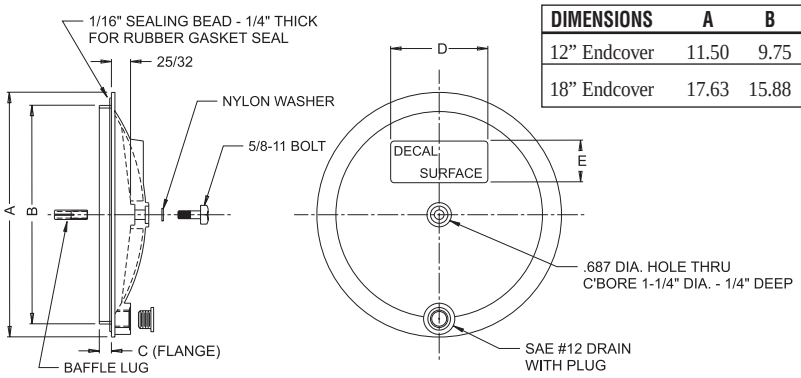
- Available in 12", 14", 16", 18" standard endcover sizes
- Easily replaces existing endcover
- Unique 1 piece design, no drilling required
- Readily available from stock
- Uses standard endcover gasket

Recommended Torque:15 ft/lb

NOTE: Stainless Steel Also Available Upon Request

End Cover Size	Dimensions A	B	C	T	Endcover Openings	Steel Endcover w /Restrictor with Drain	Steel Endcover w/Restrictor without Drain	Steel Endcover w/Restrictor w/SAE #12 Drain
12"	$4^{1}/_{2}$"	$9^{7}/_{8}$"	$1^{1}/_{2}$"	7 GA.	10"	5080-R	50800-R	50540
14"	5"	$11^{7}/_{8}$"	$1^{1}/_{2}$"	7 GA.	12"	5065-R	5066-R	50550
16"	$5^{5}/_{8}$"	$12^{1}/_{8}$"	$1^{3}/_{4}$"	7 GA.	$12^{1}/_{4}$"	5087-R	50870-R	50560
18"	$7^{1}/_{2}$"	$15^{7}/_{8}$"	$2^{1}/_{4}$"	7 GA.	16"	5091-R	50910-R	50570

Aluminum Endcovers



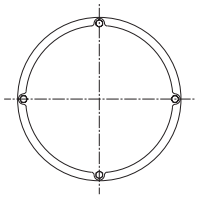
DIMENSIONS	A	B	C	D	E	WT
12" Endcover	11.50	9.75	.75	3	2	2.75
18" Endcover	17.63	15.88	.75	7	3	5.75

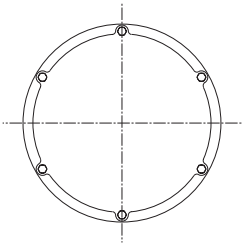
Recommended Torque: 15ft/lb

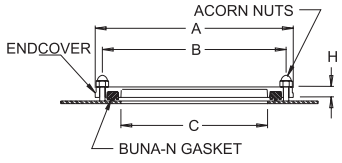
End Cover Size	*Endcover Kit No. for All Parts	Baffle Lug Part No.	Aluminum Endcover Gasket (Buna-N) Part No.	+Aluminum Endcover Part No.	Nylon Washer Part No.	5/8-11 Bolt Part No.	Drain Plug Part No.
12"	136899	5084	835484	835487	5083	5082	12HP50N
18"	136999	5084	835485	835489	5083	5082	12HP50N

*NOTE: Endcover kits includes – (1) aluminum door, (1) buna-n gasket, (1) baffle lug,(1) nylon washer, (1) 5/8-11 bolt, (1) #12 sae drain plug
+NOTE: Aluminum endcover includes – (1) endcover, (1) gasket, (1) drain plug

DIN Type Endcovers







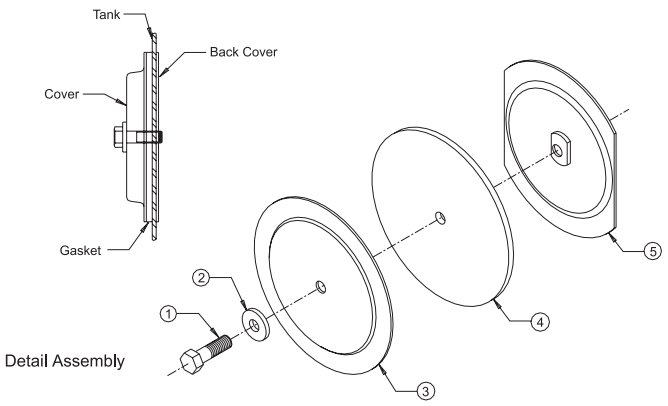
Endcover Type	*Endcover Kit No. for All Parts	M10 Acorn Nut Part No.	DIN Type Endcover Gaskets (Buna-N) Part No.	DIN Type Endcover Part No.	Dimensions A Dia.	B B.C.	C Cutout	H
324	136699	108499	V-6701	DIN324	350mm 13.78in	324mm 12.75in	248mm 9.76in	18mm .70in
449	136799	108499	V-6702	DIN449	475mm 18.70in	449mm 17.68in	383mm 15.08in	18mm .70in

*NOTE: Endcover kit includes – (1) din type door, (1) buna-n gasket, (4) or (6) acorn nuts. Endcover includes (1) din type door and (1) buna-n gasket

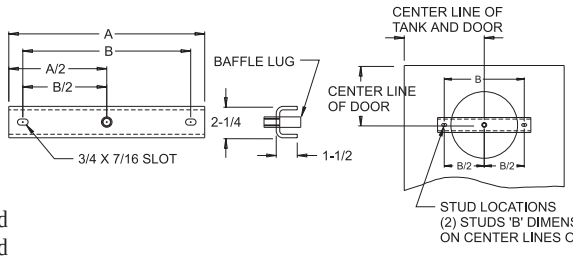
6" Endcover

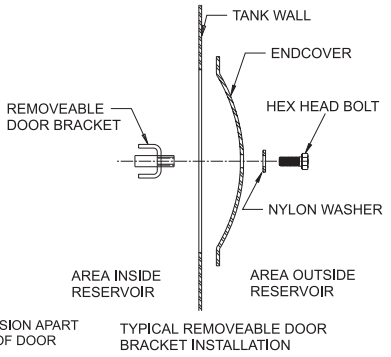
6" Door
Available as Assembly Only
Part Number 1917
Each assembly includes:
1. (1) 3/8" x 1-1/4" long hex head bolt
2. (1) Nylon Washer
3. Cover
4. Buna-N Gasket
5. Back Cover with Weld Nut

Access Opening Dia = 4 5/8"



Removable Endcover Brackets





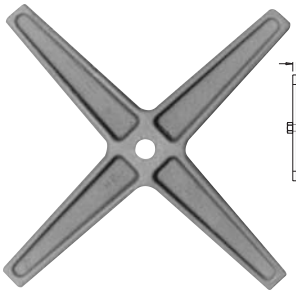
VESCOR® Removable Endcover Brackets are used when a baffle is unavailable to mount endcover and access to inside of reservoir is required.

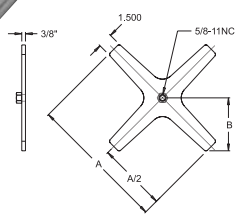
Each Removable Endcover Bracket Includes:

(1) Removable Endcover Bracket
*(2) Studs 3/8" x 3/4" long,
*(2) 3/8" hex nuts, *(2) lockwashers
*When installed by VESCOR®

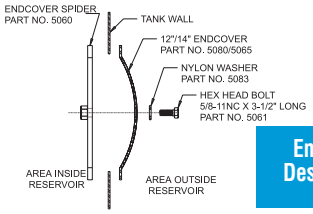
Endcover Diameter	Access Hole Diameter	Vescor Part Number	Dimensions (inches)			
			A	A/2	B	B/2
10"	8"	**V-5393**	12"	6"	10"	5"
12"	10"	**V-5392**	14"	7"	12"	6"
14" / 16"	12" / 12¼"	**V-5390**	16¼"	8⅛"	14¼"	7⅛"
18"	16"	**V-5391**	20"	10"	18"	9"

Removable Endcover Spider Kit





TYPICAL REMOVABLE ENDCOVER SPIDER INSTALLATION



VESCOR® Removable Spiders are used when a baffle is unavailable to mount endcover and access to inside of reservoir is required.

Benefits:

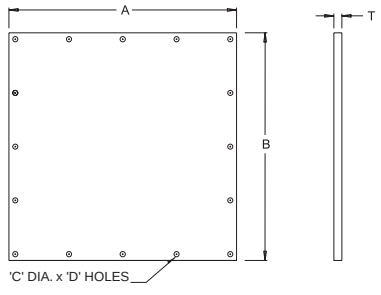
- No welding of studs to mount
- Quick and easy endcover installation
- Available for 12" and 14" endcovers only

Available as kit only – Each kit includes:

(1) endcover with gasket (1) hex head bolt
(1) removable endcover spider (1) nylon washer

Endcover Description	Access Hole Diameter	Vescor Part Number	Dimensions (inches)		
			A	A/2	B
12" w/ no drain	10"	**5060-12-S**	14"	7"	5⁵⁄₁₆"
14" w/ no drain	12"	**5060-14-S**	14"	7"	5⁵⁄₁₆"
12" w/ 3/4" NPT drain	10"	**5060-12-N-S**	14"	7"	5⁵⁄₁₆"
14" w/ 3/4" NPT drain	12"	**5060-14-N-S**	14"	7"	5⁵⁄₁₆"
12" w/ #12 SAE drain	10"	**5060-12-S-S**	14"	7"	5⁵⁄₁₆"
14" w/ #12 SAE drain	12"	**5060-14-S-S**	14"	7"	5⁵⁄₁₆"

Multiple Bolt Endcovers



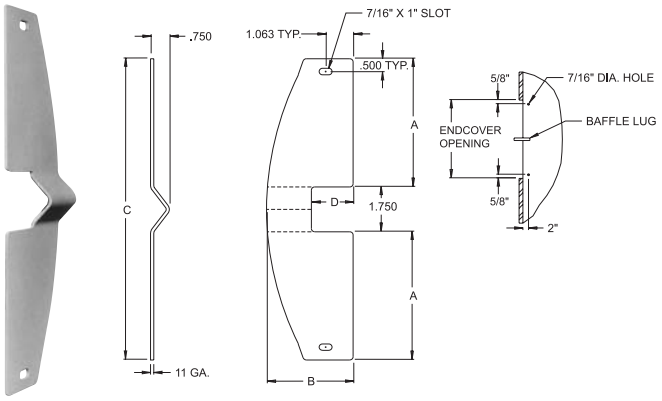
VESCOR® Multi Bolt Endcovers can be used on hydraulic reservoirs when a baffle is unavailable to mount a standard endcover and access to reservoir is required.

Benefits:

- Available in 3 sizes
- Multi-bolt for positive sealing
- Weld studs from exterior of reservoir
- Readily available from stock
- Buna-N gasket available from stock

Endcover Size	Access Hole Size	Vescor Part Number	Dimensions (inches)			Qty.		Buna-N Gasket Part Number
			A	B	C	D	T	
18" x 18"	16" x 16"	**5334**	18"	18"	7⁄16"	16	1⁄4"	**5335**
12" x 14"	10" x 12"	**5283**	14"	12"	7⁄16"	16	1⁄4"	**5079**
24" x 24"	22" x 22"	**5338**	24"	24"	7⁄16"	24	1⁄4"	**5339**

Baffle Extensions

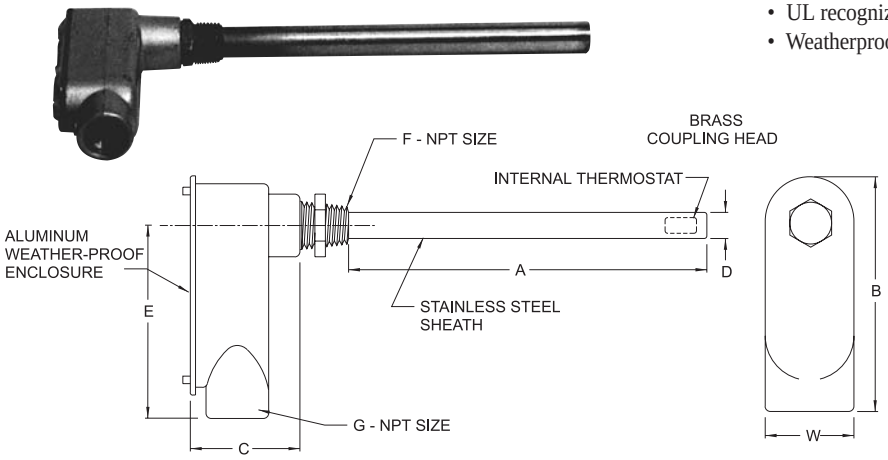


VESCOR® Baffle Extensions are used to extend baffle into endcover dome to restrict the flow of fluid around endcover area. Unique design allows for installation over existing baffle lug.

Installation:
Drill (2) 7/16" dia. holes in baffle as shown. Bolt baffle extension with 3/8-16 bolts. Adjust extension to desired position.

Vescor Part Number	End Cover Size	Dimensions A	B	C	D
3924	12"	4"	4"	9¾"	2"
3925	14"	5"	4"	11¾"	2½"
3926	16"	5⅜"	4¼"	12"	2 11/16"
3927	18"	7"	4¾"	15¾"	3½"

Immersion Heaters

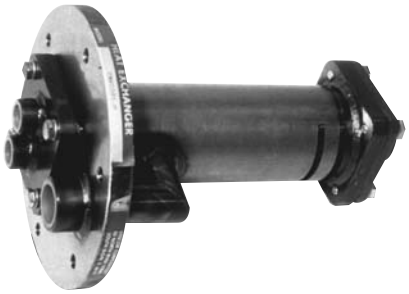


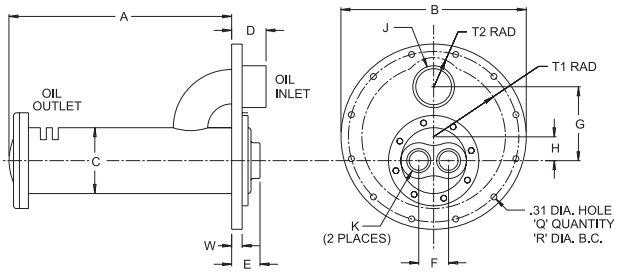
Features
- Keeps oil at 60° to 70° F.
- Automatic built-in fixed setting thermostat normally closed
- Will not burn oil
- UL recognized and CSA certified
- Weatherproof wiring enclosure (NEMA 4)

Notes
1. Heaters must be mounted horizontally and immersed at all times.
2. Heaters over 10 amps, 480 volt, or three phase, must be used with a contactor. See instruction sheet.
3. Three phase available on ET 8 models. Add -3 to the model number. Example: ET 8-2502-3.
4. For tanks larger then 500 gallon use multiple heaters or consult factory for information on higher wattage heaters.
5. Amps = Watts ÷ Volts for single phase.
6. Amps = Watts ÷ (Volts x 1.73) for three phase.

Vescor Part Number	Reservoir Size - Gals	Wattage	Volts	NPT Size F	G	Dimensions A	B	C	D	E	W
ET 2-121	up to 10	125	120	½"	½"	7"	4.5"	2.2"	.62"	3.6"	1.3"
ET 2-251	up to 25	250	120	½"	½"	8"	4.5"	2.2"	.62"	3.6"	1.3"
ET 2-252	up to 25	250	240	½"	½"	8"	4.5"	2.2"	.62"	3.6"	1.3"
ET 3-501	25-50	500	120	¾"	¾"	12.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 3-502	25-50	500	240	¾"	¾"	12.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 3-504	25-50	500	480	¾"	¾"	12.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 3-1001	50-100	1000	120	¾"	¾"	22.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 3-1002	50-100	1000	240	¾"	¾"	22.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 3-1004	50-100	1000	480	¾"	¾"	22.6"	5.1"	2.5"	.75"	4.1"	1.5"
ET 8-2502	100-250	2500	240	2"	1¼"	23"	8.2"	3.7"	1.9"	6.7"	2.8"
ET 8-2504	100-250	2500	480	2"	1¼"	23"	8.2"	3.7"	1.9"	6.7"	2.8"
ET 8-5002	250-500	5000	240	2"	1¼"	44"	8.2"	3.7"	1.9"	6.7"	2.8"
ET 8-5004	250-500	5000	480	2"	1¼"	44"	8.2"	3.7"	1.9"	6.7"	2.8"

IN TANK-COOLERS (WATER COOLED)





- In-tank design minimizes space requirements and reduces plumbing
- Internal aluminum fins dramatically increase performance
- Removable end bonnets allow water passage servicing
- Steel shell for high strength
- T1 & T2 Radii represent required reservoir cutout

Options

SAE or BSPF connections available

Internal oil flow bypass-relief (Surge-Cushion®) Surge-Cushion is a registered trademark.

The Surge-Cushion® is a patented protective device designed to internally bypass a portion of the oil flow during cold start conditions, or when sudden flow surges temporarily exceed the maximum flow allowed for a given cooler. This device may replace an external bypass valve, but it is not intended to bypass the total oil flow.

Model	A	B	C	D NPT or SAE	D BSPF	E	F	G	H	J NPT or BSPF	J SAE	K NPT or BSPF	Q	R	T1	T2	W
TMWC001	8.58	6.75	2.55	1.28	1.52	1.59	1.12	2.44	.50	3/4"	#12	3/8"	6	5.60	2.25	.79	.53
TMWC002	18.58	6.75	2.55	1.28	1.52	1.59	1.12	2.44	.50	3/4"	#12	3/8"	6	5.60	2.25	.79	.53
TMWC003	8.15	9.75	3.52	1.50	1.93	1.50	1.62	3.94	1.28	1 1/2"	#24	1"	12	8.94	4.00	-	.63
TMWC004	18.15	9.75	3.52	1.50	1.93	1.50	1.62	3.94	1.28	1 1/2"	#24	1"	12	8.94	4.00	-	.63
TMWC005	12.50	10.38	5.05	1.62	2.05	2.16	2.38	4.68	1.19	1 1/2"	#24	1 1/2"	12	9.62	4.38	1.12	.66
TMWC006	24.50	10.38	5.05	1.62	2.05	2.16	2.38	4.68	1.19	1 1/2"	#24	1 1/2"	12	9.62	4.38	1.12	.66

All all dimensions in inches. Tank gasket is included. BSPF Threads are 55°Full Form Whitworth.

NOTE: We reserve the right to make reasonable design changes without notice. Certified drawings are available upon request.

SPECIFICATIONS

Materials

Shell - Steel
Tubes - Copper
Fins - Aluminum
Tubesheets - Steel
Baffles - Steel
End Bonnets - Cast Iron
Gaskets - Nitrile Rubber/ Cellulose Fiber

Ratings

Operating Pressure - PSI
Shellside - 75
Tubeside- 150
Test Pressure - PSI
Shellside - 75
Tubeside- 150
Max. Temperature - 250°F

Maximum Flow Rates

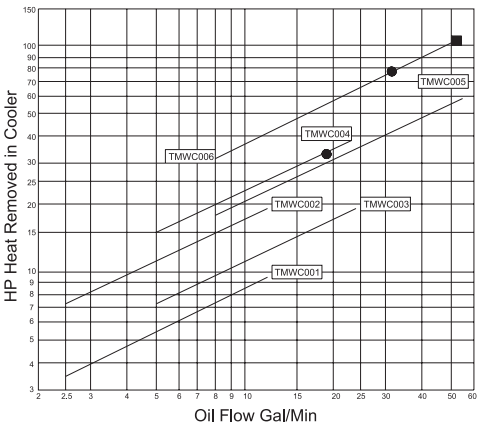
Model Size	Shell Side (GPM)	Tube Side (GPM)
TMWC001/002	20	6
TMWC003/004	65	12
TMWC005/006	100	28

How To Order

_____ - _____ - _____

Model Series	Connections	Surge-Cushion®
TMWC001 to TMWC006	P = NPT Conn. S = SAE Oil Conn. M = Metric Conn.	Omit - No Surge-Cushion® "R" – Surge-Cushion®

Cooler Performance Curves



Cooler Selection Procedure

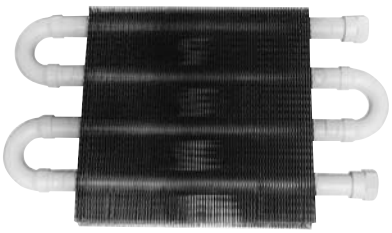
1. Curves are based on a 40°F approach temperature, a 2:1 oil to water ratio and an average oil viscosity of 100 SSU. Example: oil leaving cooler at 125°F with 85°F cooling water (125°F - 85°F = 40°F). The 2:1 oil to water ratio means that for every GPM of oil circulated, a minimum of 1/2 GPM of water must be circulated to obtain the curve results.
2. Oil pressure drop coding: ● = 5 PSI, ■ = 10 PSI. Curves having no pressure drop symbol indicate that the oil pressure drop is less than 5 PSI to the highest oil flow rate for that curve. Multiply curve oil pressure drop by Correction B.
3. Corrections for approach temperature and oil viscosity:

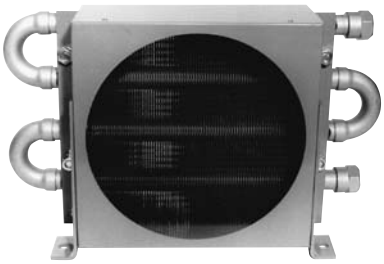
$$\text{HP Heat Removed in Cooler} = \text{HP}_{\text{actual}} \times \left\{ \frac{40°\text{F}}{\text{Oil out°F - Water in °F}} \right\} \times \text{Correction A}$$

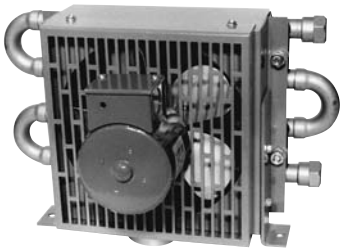
VISCOSITY CORRECTIONS

Avg. Oil SSU	A	B
50	0.84	0.6
100	1.00	1.0
200	1.14	2.0
300	1.24	3.1
400	1.31	4.1
500	1.37	5.1

AIR OIL COOLERS







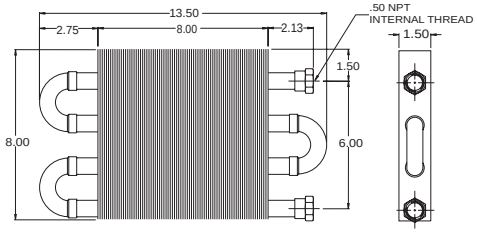
Many hydraulic power units recommend the operating temperature of the oil should not exceed 160° F. Excessive temperature can cause the oil to oxidize, forming gum, varnish, resins, sludge and acids. These by-products shorten the life of the oil, can cause valves to stick and cause erratic operation of the system. Also, excessive heat reduces the efficiency of the hydraulic system while consuming more energy. **Use Air Oil Coolers to Cool:** Fluid Power Systems, Gear Drives, Machine Tools, Torque Converters, Hydraulic Presses.

VESCOR® Air Oil Coolers Come Complete

• Ready for installation • Readily available from stock • Low cost - highly efficient designs

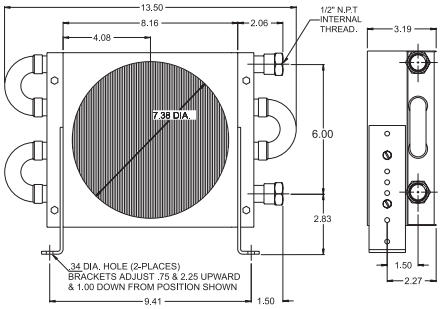
Oil Cooler

- Highly Efficient Design
- Rugged construction Resists Vibration



Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOC-5-P	0.3-2	1.0	3.0

TEFC Rear Mounted Oil Cooler

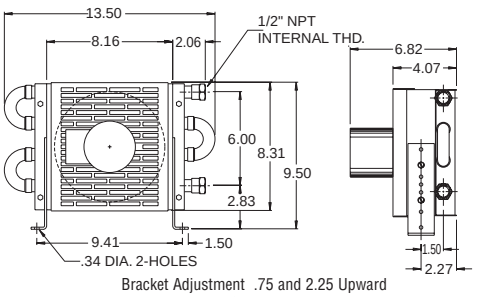


Bracket Adjustment .75 and 2.25 Upward
1.00 Downward (from position shown)

- Uses air stream from fan of electric motor
- Sized to fit popular electric motor frame sizes
- Durable powder painted cabinet
- Maximizes efficiency with contoured air side fins and internal oil turbulators
- Includes motor gasket and mounting bracket
- Fits Nema Frame sizes 48 thru 184T

Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOCS-5-P	0.3-2	1.0	6.0

Forced Air Oil Cooler

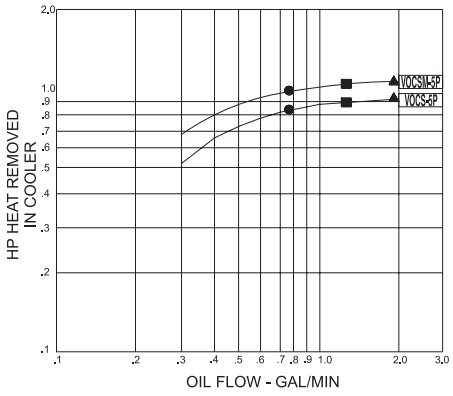


Bracket Adjustment .75 and 2.25 Upward
1.00 Downward (from position shown)

- Compact, highly efficient design with contoured side fins and internal oil turbulators
- Rugged construction resists vibration and stress
- Eliminates sewer and water costs
- Mounting bracket included for easy installation

Order Data / Specifications			
Vescor Part Number	Flow Range GPM	HP Heat Removed	Shipping Weight
VOCSM-5-P	0.3-2	1.0	13.0

PERFORMANCE CURVES



1. VOC-5-P Performance: D-Rate VOCS-DP Curve by 25% (When used behind TEFC motor)
2. Curves are based in a 40°F approach temperature (oil out °F-amb air °F)
3. Oil Press Drop Coding
   - ● = 5 P.S.I.
   - ■ = 10 P.S.I.
   - ▲ = 20 P.S.I.
4. Average Oil Viscosity = 100 SSU for performance rating
5. All Models Above:
   Maximum Pressures — 200 P.S.I.
   Maximum Temperature — 350°F

NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Replacement Parts

Door Size	Buna-N Gasket Part No.	EPDM Gasket Part No.	Aluminum Door Gasket (Buna-N) Part No.	5/8"-11 Bolt Part No.	Nylon Washer Part No.	Baffle Lug Part No.	*Removable Door Bracket Part No.	*Baffle Extension Part No.	Magnetic Drain Plug NPT 3/4" Part No.
10"	5069	EP-5069	N/A	5062	5083	5084	V-5393	N/A	4054121
12"	5081	EP-5081	835484	5082	5083	5084	V-5392	3924	4054121
14"	5074	EP-5074	N/A	5082	5083	5084	V-5390	3925	4054121
16"	5088	EP-5088	N/A	5058	5083	5084	V-5390	3926	4054121
18"	5092	EP-5092	835485	5093	5083	5084	V-5391	3927	4054121

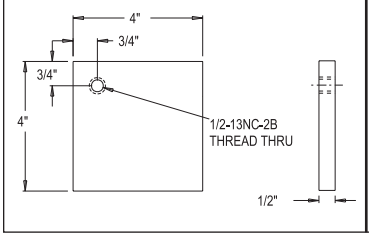
Description	Part No.
T Handle for L & T Tank Covers	68-10-101-10
Channel Gasket for L & T Tank Covers	CH201
Door Prop for L & T Tank Covers	DP100
Foam Gasket for Non-Jic W/Removable Top	99915
Foam Gasket Set for Non-Jic W/Removable Top	5300-5302
Neoprene Gasket for Vari-Paks 8 to 25 Gal.	99905
Channel Gasket for Vari-Paks 2 to 5 Gal.	CH201-VP
Cover Plate for Non-Jic W/Removable Top	5300-2-1
Filler Breather (Bayonet Flange 40 micron)	5201
Sight Gauge with thermometer (5" Center)	ALG5T
Sight Gauge with thermometer (10" Center)	ALG10T
Side Mount Filler Breather (40 micron)	SM-5201
Miniature Tank Breather (3/4" NPT)	PMB-07-10
Channel Gasket for 215145, 215146	5145G
Channel Gasket for 215147-49, 215173	5147G
Channel Gasket for 215174-76	5174G

Door Size	Drain Plug 3/4" NPT Part No.	Drain Plug #12 SAE Part No.
10"	CSPP750	12HP50N
12"	CSPP750	12HP50N
14"	CSPP750	12HP50N
16"	CSPP750	12HP50N
18"	CSPP750	12HP50N

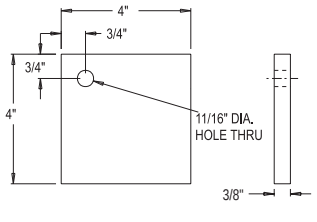
Cover Plates Vari Paks	Part No.
Style A	99908
Style B	99909
Style C	99910
Style D	99911
Style E	99907

Din Type Endcovers			
Endcover Type	Endcover Part No.	Gasket Part No.	M10 Acorn Nuts Part No.
324	DIN324	V-6701	108499
449	DIN449	V-6702	108499

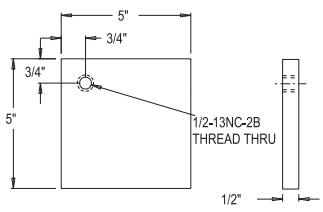
Foot Mounting Pad
Containment Tray
Part Number V-7378



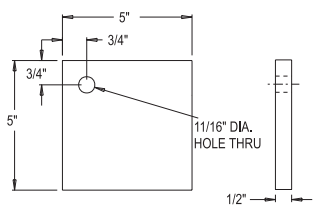
Foot Pad
Overhead Reservoir Base
Part Number V-7379



Foot Mounting Pad
Containment Tray
Part Number V-7380



Foot Pad
Overhead Reservoir Base
Part Number V-7381



Replacement Parts

Filler Breathers - SAE Bayonet Flange

Vescor Part Number	Tank	Strainer	Flange	Chain	Flange	Mounting	Cap
5201	1319	1300	1321	1304	1310	1303	1327
5204	1319	1300	1321	1304	1310	1303	1326
5208	1319	1300	1321	1304	1310	1303	1329
5212	1319	1300	1321	1304	1310	1303	1328
5216	1319	1325	1325	1304	1310	1303	1327
5220	1319	1325	1325	1304	1310	1303	1326
5224	1319	1325	1325	1304	1310	1303	1329
5228	1319	1325	1325	1304	1310	1303	1328
5201-5P	1319N	1300	1321N	1304	1310	1303	1330
5205	1319N	1325	1321N	1304	1310	1303	1330
5203	1319	1300	1321	1304	1310	1303M	1327
5207	1319	1300	1321	1304	1310	1313M	1329

Vescor Part Number	Description
1320	Cap Gasket
5275	Filler Breather Weld Riser
5275SS	Filler Breather Weld Riser 316 Stainless

Filler Breathers – Screw-In

Vescor Part Number	Micron Rating	NPT Thread
V-5213	40	3/4”

Filler Breathers - Side Mount

Vescor Part Number	Tank Gasket	Strainer Basket	Flange Gasket	Chain	Flange SAE J829	Mounting Screws	Cap	1/4-20 Bolts and Nuts	Housing Gasket
SM-5201	1319	1325	1321	1304	1310	1303	1327	1355	1354
SM-5204	1319	1325	1321	1304	1310	1303	1326	1355	1354
SM-5208	1319	1325	1321	1304	1310	1303	1329	1355	1354
SM-5212	1319	1325	1321	1304	1310	1303	1328	1355	1354

Filler Breathers - Non Vented

Vescor Part Number	Tank Gasket	Strainer Basket	Flange Gasket	Chain	Flange SAE J829	Mounting Screws	Cap
5232	1319	1300	1321	1304	1310	1303	FCS5557
5227	1319	1325	1321	1304	1310	1303	FCS5557

Large Air Breathers Replacement Elements

Vescor Model Numbers		
Polyester Element	Paper Element	Wire Mesh Element
E19P	E18P	E18S
E31P	E30P	E30S
E231P	E230P	E230S

Air Breather Filter

Vescor Part Number	Tank Gasket	Strainer Basket	Flange Gasket	Chain	Flange SAE J829	Mounting Screws	Filter Element	Adapters
1306-2	N/A	N/A	N/A	N/A	N/A	N/A	1306	1311
1306-3	N/A	N/A	N/A	N/A	N/A	N/A	1306	1312
1306-4	1319	1300	1321	N/A	1310	1303	1306	1312

Miniature Tank Breathers

Vescor Part Number	NPT Thread
PMB-02-10	1/4”
PMB-05-10	3/8”
PMB-03-10	1/2”
PMB-07-10	3/4”

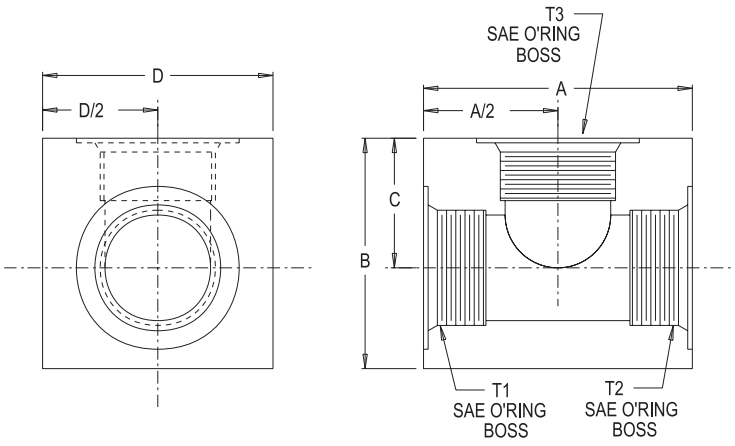
Large Air Breathers

Vescor Model Numbers AF Series		
Polyester Element	Paper Element	Wire Mesh Element
AF-E19P-125	AF-E18P-125	AF-E18S-125
AF-E19P-150	AF-E18P-150	AF-E18S-150
AF-E31P-200	AF-E30P-200	AF-E30S-200
AB-E31P-250	AF-E30P-250	AF-E30S-250
AF-E231P-300	AF-230P-300	AF-E230S-300

Large Air Breathers

Vescor Model Numbers AB Series		
Polyester Element	Paper Element	Wire Mesh Element
AB-E19P-125	AB-E18P-125	AB-E18S-125
AB-E19P-150	AB-E18P-150	AB-E18S-150
AB-E31P-200	AB-E30P-200	AB-E30S-200
AB-E31P-250	AB-E30P-250	AB-E30S-250
AB-E231P-300	AB-230P-300	AB-E230S-300

SAE Straight Thread Tee



MATERIAL: C1117 C.R.S. Bar

Max. 3000 PSI Working Pressure

Vescor Part Number	Thread T1	Thread T2	Thread T3	T1 SAE Number	T2 SAE Number	T3 SAE Number	Dimensions A	B	C	D
1040	2½-12	2½-12	2½-12	-32	-32	-32	5.000	4.000	2.187	4.000
1041	2½-12	2½-12	1⅞-12	-32	-32	-24	5.000	3.500	2.000	4.000
1042	2½-12	1⅞-12	2½-12	-32	-24	-32	5.000	4.000	2.187	4.000
1043	2½-12	1⅞-12	1⅞-12	-32	-24	-24	4.125	3.500	2.000	3.500
1044	1⅞-12	1⅞-12	2½-12	-24	-24	-32	4.125	3.500	2.000	3.500
1045	1⅞-12	1⅞-12	1⅞-12	-24	-24	-24	4.125	3.500	2.000	3.500
1046	1⅞-12	1⅞-12	1⅝-12	-24	-24	-20	4.125	3.500	2.000	3.500
1047	1⅞-12	1⅝-12	1⅞-12	-24	-20	-24	4.125	3.500	2.000	3.500
1048	1⅞-12	1⅝-12	1⅝-12	-24	-20	-20	4.125	3.500	2.000	3.500
1049	1⅝-12	1⅝-12	1⅞-12	-20	-20	-24	3.500	2.750	1.625	2.750
1050	1⅝-12	1⅝-12	1⅝-12	-20	-20	-20	3.500	2.750	1.625	2.750
1051	1⅝-12	1⅝-12	1 5/16-12	-20	-20	-16	3.500	2.750	1.625	2.750
1052	1⅝-12	1 5/16-12	1⅝-12	-20	-16	-20	3.500	2.750	1.625	2.750
1053	1⅝-12	1 5/16-12	1 5/16-12	-20	-16	-16	3.500	2.750	1.625	2.750
1054	1 5/16-12	1 5/16-12	1⅝-12	-16	-16	-20	3.250	2.500	1.500	2.500
1055	1 5/16-12	1 5/16-12	1 5/16-12	-16	-16	-16	3.250	2.500	1.500	2.500
1056	1 5/16-12	1 5/16-12	1 5/16-12	-16	-16	-12	3.250	2.500	1.500	2.500
1057	1 5/16-12	1 1/16-12	1 5/16-12	-16	-12	-16	3.250	2.500	1.500	2.500
1058	1 5/16-12	1 1/16-12	1 5/16-12	-16	-12	-12	3.250	2.500	1.500	2.500
1059	1 1/16-12	1 1/16-12	1 5/16-12	-12	-12	-16	3.000	2.125	1.312	2.125
1060	1 1/16-12	1 1/16-12	1 1/16-12	-12	-12	-12	3.000	2.125	1.312	2.125
1061	1 1/16-12	1 1/16-12	⅞-14	-12	-12	-10	3.000	2.125	1.312	2.125
1062	1 1/16-12	⅞-14	⅞-14	-12	-10	-12	3.000	2.125	1.312	2.125
1063	1 1/16-12	⅞-14	⅞-14	-12	-10	-10	3.000	2.125	1.312	2.125
1064	⅞-14	1 1/16-12	⅞-14	-10	-12	-10	2.875	2.000	1.312	2.000
1065	⅞-14	⅞-14	⅞-14	-10	-10	-10	2.875	2.000	1.312	2.000
1066	⅞-14	⅞-14	¾-16	-10	-10	-8	2.875	2.000	1.312	2.000
1067	⅞-14	¾-16	⅞-14	-10	-8	-10	2.875	2.000	1.312	2.000
1068	⅞-14	¾-16	¾-16	-10	-8	-8	2.875	2.000	1.312	2.000
1069	¾-16	¾-16	⅞-14	-8	-8	-10	2.625	1.750	1.125	1.750
1070	¾-16	¾-16	¾-16	-8	-8	-8	2.625	1.750	1.125	1.750
1071	¾-16	¾-16	9/16-18	-8	-8	-6	2.625	1.750	1.125	1.750
1072	¾-16	9/16-18	¾-16	-8	-6	-8	2.625	1.750	1.125	1.750
1073	¾-16	9/16-18	9/16-18	-8	-6	-6	2.625	1.750	1.125	1.750
1074	9/16-18	9/16-18	⅞-14	-6	-6	-10	2.625	1.750	1.125	1.750
1075	9/16-18	9/16-18	9/16-18	-6	-6	-6	2.625	1.750	1.125	1.750

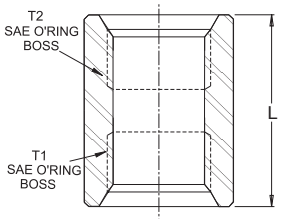
NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

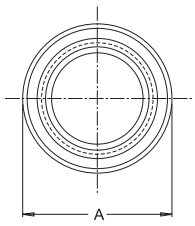
SAE O'Ring Boss Full Couplings

MATERIAL: C1117 C.R.S. Bar

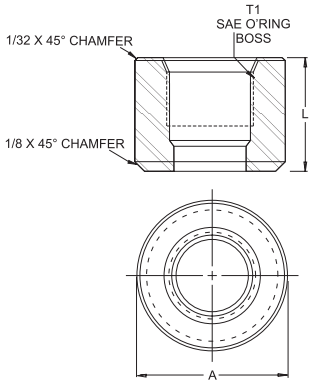
Max. 3000 PSI Working Pressure

Vescor Part Number	L Length	A Diameter	Thread T1	T1 SAE Number	Thread T2	T2 SAE Number
1020	1.500	.875	7/16–20 UNF-2B	-4	7/16–20 UNF-2B	-4
1021	1.375	1.000	9/16–18 UNF-2B	-6	9/16–18 UNF-2B	-6
1022	1.500	1.250	3/4–16 UNF-2B	-8	3/4–16 UNF-2B	-8
1023	1.750	1.500	7/8–14 UNF-2B	-10	7/8–14 UNF-2B	-10
1024	2.000	1.625	1 1/16–12 UNF-2B	-12	1 1/16–12 UNF-2B	-12
1025	2.000	2.000	1 3/16–12 UNF-2B	-14	1 3/16–12 UNF-2B	-14
1026	2.000	2.000	1 5/16–12 UNF-2B	-16	1 5/16–12 UNF-2B	-16
1027	2.500	2.500	1 5/8–12 UNF-2B	-20	1 5/8–12 UNF-2B	-20
1028	2.500	2.500	1 7/8–12 UNF-2B	-24	1 7/8–12 UNF-2B	-24
1029	2.750	3.250	2 1/2–12 UNF-2B	-32	2 1/2–12 UNF-2B	-32
1030	1.500	1.250	3/4–16 UNF-2B	-8	9/16–18 UNF-2B	-6
1031	1.750	1.500	7/8–14 UNF-2B	-10	3/4–16 UNF-2B	-8
1032	2.000	1.625	1 1/16–12 UNF-2B	-12	7/8–14 UNF-2B	-10
1033	2.000	2.000	1 5/16–12 UNF-2B	-16	1 1/16–12 UNF-2B	-12
1034	2.500	2.500	1 5/8–12 UNF-2B	-20	1 5/16–12 UNF-2B	-16
1035	2.500	2.500	1 7/8–12 UNF-2B	-24	1 5/8–12 UNF-2B	-20
1036	2.000	1.625	1 1/16–12 UNF-2B	-12	3/4–16 UNF-2B	-8
1037	2.750	3.500	2 1/2–12 UNF-2B	-32	1 7/8–12 UNF-2B	-24





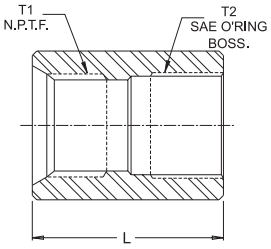
SAE Half Couplings



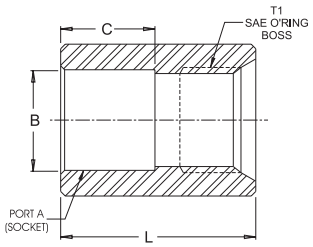
MATERIAL: Steel-C1117 C.R.S. Bar, Stainless Steel-Grade 316

Max. 3000 PSI Working Pressure

Vescor Steel Part Number	Vescor Stainless Steel Part Number	L Length	A Diameter	Thread T1	T1 SAE Number
V-6206	**V-8906**	.750	.875	7/16-20 UNF-2B	-4
V-6207	**V-8907**	.750	1.000	1/2-20 UNF-2B	-5
V-6208	**V-8908**	.750	1.000	9/16-18 UNF-2B	-6
V-6209	**V-8909**	.750	1.250	3/4-16 UNF-2B	-8
V-6210	**V-8910**	.875	1.500	7/8-14 UNF-2B	-10
V-6211	**V-8911**	1.000	1.625	1 1/16-12 UNF-2B	-12
V-6212	**V-8912**	1.000	2.000	1 3/16-12 UNF-2B	-14
V-6213	**V-8913**	1.250	2.000	1 5/16-12 UNF-2B	-16
V-6214	**V-8914**	1.250	2.500	1 5/8-12 UNF-2B	-20
V-6215	**V-8915**	1.250	2.500	1 7/8-12 UNF-2B	-24
V-6216	**V-8916**	1.375	3.250	2 1/2-12 UNF-2B	-32



SAE/NPT COUPLING



SAE/SOCKET WELD COUPLING

SAE / NPT Full Couplings

MATERIAL: Steel-ASTM A-105, Stainless Steel-Grade 316 — Max. 3000 PSI Working Pressure

Vescor Steel Part Number	Vescor Stainless Steel Part Number	L Length	A Diameter	Thread T1	Nominal Pipe Size	Thread T2	T2 SAE Number
1000	**11600**	1.875	1.125	½-14 N.P.T.F.	½"	9/16-18 UNF-2B	-6
1001	**11601**	1.875	1.125	½-14 N.P.T.F.	½"	¾-16 UNF-2B	-8
1002	**11602**	2.000	1.375	¾-14 N.P.T.F.	¾"	⅞-14 UNF-2B	-10
1003	**11603**	2.000	1.375	¾-14 N.P.T.F.	¾"	1 1/16-12 UNF-2B	-12
1004	**11604**	2.375	1.750	1-11½ N.P.T.F.	1"	1 3/16-12 UNF-2B	-14
1005	**11605**	2.375	1.750	1-11½ N.P.T.F.	1"	1 5/16-12 UNF-2B	-16
1006	**11606**	2.625	2.250	1¼-11½N.P.T.F.	1¼"	1⅝-12 UNF-2B	-20
1007	**11607**	3.000	2.500	1½-11½ N.P.T.F.	1½"	1⅞-12 UNF-2B	-24
1008	**11608**	3.375	3.000	2-11½ N.P.T.F.	2"	2½-12 UNF-2B	-32

SAE / Socket Weld Full Couplings

MATERIAL: Steel-ASTM A-105, Stainless Steel-Grade 316 — MAX. 3000 PSI Working Pressure

Vescor Steel Part Number	Vescor Stainless Steel Part Number	L Length	A Diameter	Thread T1	T1 SAE Number	Port A Socket For Pipe Size	Dimensions B	Dimensions C
1080	**11680**	1.875	1.125	9/16–18 UNF-2B	-6	½" Pipe	.855	.625
1081	**11681**	1.875	1.125	¾–16 UNF-2B	-8	½" Pipe	.855	.625
1082	**11682**	2.000	1.375	⅞–14 UNF-2B	-10	¾" Pipe	1.065	.750
1083	**11683**	2.000	1.375	1 1/16–12 UNF-2B	-12	¾" Pipe	1.065	.750
1084	**11684**	2.375	1.750	1 3/16–12 UNF-2B	-14	1" Pipe	1.330	1.000
1085	**11685**	2.375	1.750	1 5/16–12 UNF-2B	-16	1" Pipe	1.330	1.000
1086	**11686**	2.625	2.250	1⅝–12 UNF-2B	-20	1¼" Pipe	1.675	1.000
1087	**11687**	3.000	2.500	1⅞–12 UNF-2B	-24	1½" Pipe	1.915	1.000
1088	**11688**	3.375	3.250	2½–12 UNF-2B	-32	2" Pipe	2.406	1.250

4 BOLT FLANGE FITTINGS

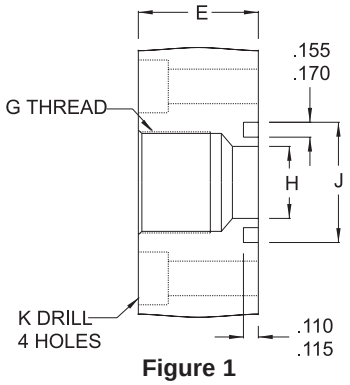
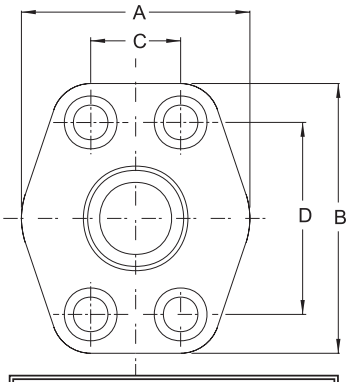


Figure 1



Refer to page 77 for metric mounting options

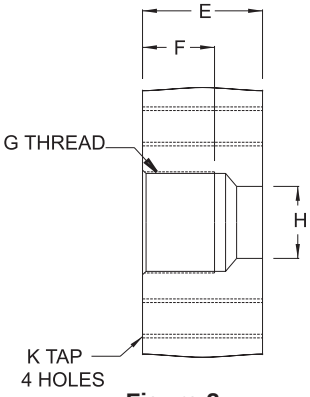


Figure 2

O'Ring Part No. Fig. 1	Flat Face Part No. Fig. .2	Pipe Size	Pad Size	A	B	C	D	E	G Thread NPTF	H	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61									**3000 PSI NPTF THREAD**							
W43-8-8-U	**W104-8-8**	.50	.50	1.81	2.17	.688	1.500	1.25	.50	.50	1.000	1.005	.344	5/16-18	210	5/16-18x1.50
W43-12-12-U	**W104-12-12**	.75	.75	2.06	2.69	.875	1.875	1.25	.75	.75	1.250	1.255	.406	3/8-16	214	3/8-16x1.50
W43-16-16-U	**W104-16-16**	1.00	1.00	2.31	2.88	1.031	2.062	1.50	1.00	1.00	1.560	1.565	.406	3/8-16	219	3/8-16x1.75
W43-20-20-U	**W104-20-20**	1.25	1.25	2.88	3.25	1.188	2.312	1.50	1.25	1.25	1.750	1.755	.469	7/16-14	222	7/16-14x1.75
W43-24-24-U	**W104-24-24**	1.50	1.50	3.25	3.81	1.406	2.750	1.75	1.50	1.50	2.115	2.125	.531	1/2-13	225	1/2-13x2.00
W43-32-32-U	**W104-32-32**	2.00	2.00	3.81	4.13	1.688	3.062	1.75	2.00	2.00	2.490	2.500	.531	1/2-13	228	1/2-13x2.00
W43-40-40-U	**W104-40-40**	2.50	2.50	4.28	4.63	2.000	3.500	2.00	2.50	2.50	2.995	3.005	.531	1/2-13	232	1/2-13x2.25
W43-48-48-U	**W104-48-48**	3.00	3.00	5.16	5.44	2.438	4.188	2.25	3.00	3.00	3.615	3.625	.656	5/8-11	237	5/8-11x2.50

Part Numbers with "U" Suffix include Bolt Kit and O-Ring

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	G Straight Thread	H	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61									**3000 PSI SAE STRAIGHT THREAD**							
W46-12-12-U	–	.75	.75	2.06	2.69	.875	1.875	1.25	1 1/16-12	.75	1.250	1.255	.406	–	214	3/8-16x1.50
W46-16-16-U	–	1.00	1.00	2.31	2.88	1.031	2.062	1.50	1 5/16-12	1.00	1.560	1.565	.406	–	219	3/8-16x1.75
W46-20-20-U	–	1.25	1.25	2.88	3.25	1.188	2.312	1.50	1 5/8-12	1.25	1.750	1.755	.469	–	222	7/16-14x1.75
W46-24-24-U	–	1.50	1.50	3.25	3.81	1.406	2.750	1.75	1 7/8-12	1.50	2.115	2.125	.531	–	225	1/2-13x2.00

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	G Thread NPTF	H	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61									**3000 PSI NPTF THREAD REDUCING**							
W43-12-16-U	–	.75	1.00	2.88	2.75	1.031	2.062	1.50	.75	1.00	1.560	1.565	.406	–	219	3/8-16x1.75
W43-16-20-U	–	1.00	1.25	3.25	3.12	1.188	2.312	1.50	1.00	1.25	1.750	1.755	.469	–	222	7/16-14x1.75
W43-20-24-U	–	1.25	1.50	3.81	3.69	1.406	2.750	1.75	1.25	1.50	2.115	2.125	.531	–	225	1/2-13x2.00
W43-24-32-U	–	1.50	2.00	4.13	4.00	1.688	3.062	1.75	1.50	2.00	2.490	2.500	.531	–	228	1/2-13x2.00

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

4 BOLT FLANGE FITTINGS

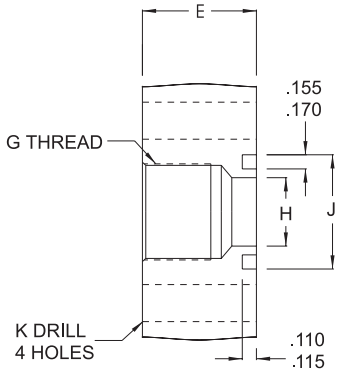
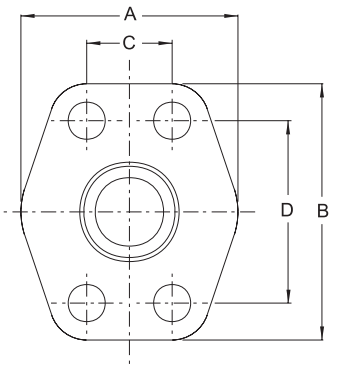


Figure 1



Refer to page 77 for metric mounting options

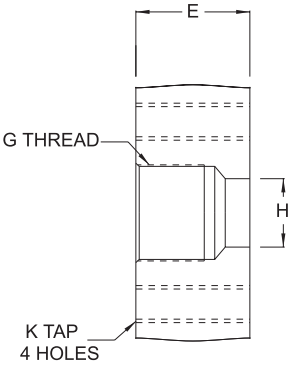


Figure 2

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	G Thread NPTF	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62									**6000 PSI NPTF THREAD**							
W44-8-8-U	**W45-8-8**	.50	.50	1.940	2.300	.718	1.594	1.25	.500	.50	1.000	1.005	.344	5/16-18	210	5/16-18x200
W44-12-12-U	**W45-12-12**	.75	.75	2.500	2.950	.937	2.000	1.25	.750	.75	1.250	1.255	.406	3/8-16	214	3/8-16x2.00
W44-16-16-U	**W45-16-16**	1.00	1.00	2.750	3.190	1.093	2.250	1.50	1.000	1.00	1.560	1.565	.469	7/16-14	219	7/16-14x2.50
W44-20-20-U	**W45-20-20**	1.25	1.25	3.060	3.750	1.250	2.625	1.50	.1.250	1.25	1.750	1.755	.531	1/2-13	222	1/2-13x2.50
W44-24-24-U	**W45-24-24**	1.50	1.50	3.750	4.440	1.437	3.125	1.75	1.500	1.50	2.115	2.125	.656	5/8-11	225	5/8-11x3.00
W44-32-32-U	**W45-32-32**	2.00	2.00	4.500	5.250	1.750	3.812	1.75	.2.000	2.00	2.490	2.500	.781	3/4-10	228	3/4-10x3.00

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

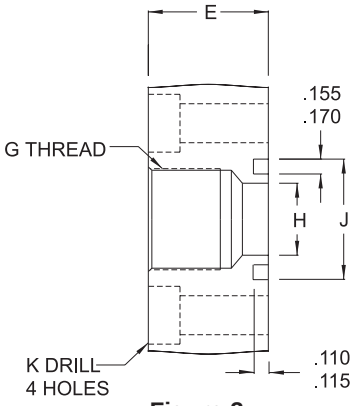
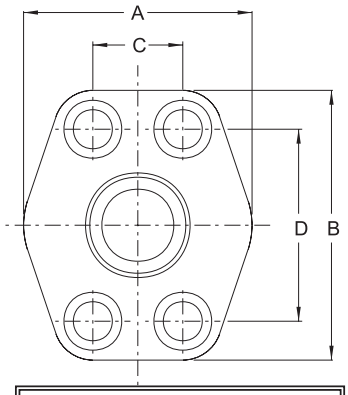


Figure 3



Refer to page 77 for metric mounting options

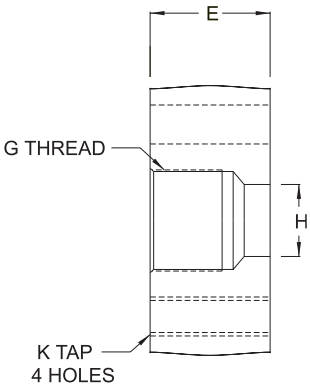


Figure 4

O'Ring Part No. Fig. 3	Flat Face Part No. Fig. 4	Pipe Size	Pad Size	A	B	C	D	E	G Straight Thread	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62									**6000 PSI SAE STRAIGHT THREAD**							
W48-12-12-U	**W49-12-12**	.75	.75	2.50	2.95	.937	2.000	1.25	1 1/16-12	.75	1.250	1.255	.406	3/8-16	214	3/8-16x1.75
W48-16-16-U	**W49-16-16**	1.00	1.00	2.75	3.19	1.093	2.250	1.50	1 5/16-12	1.00	1.560	1.565	.409	7/16-14	219	7/16-14x1.75
W48-20-20-U	**W49-20-20**	1.25	1.25	3.06	3.75	1.250	2.625	1.50	1 5/8-12	1.25	1.750	1.755	.531	1/2-13	222	1/2-13x2.00
W48-24-24-U	**W49-24-24**	1.50	1.50	3.75	4.44	1.437	3.125	1.75	1 7/8-12	1.50	2.115	2.125	.656	5/8-11	225	5/8-11x2.25
W48-32-32-U	**W49-32-32**	2.00	2.00	4.50	5.25	1.750	3.812	1.75	2 1/2-12	2.00	2.490	2.500	.781	3/4-10	228	3/4-10x1.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

4 BOLT FLANGE FITTINGS

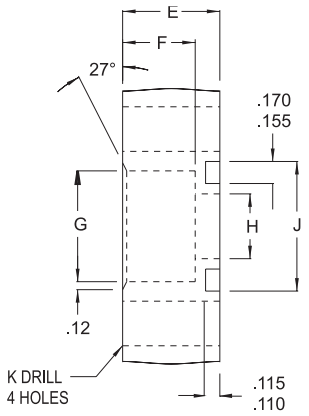
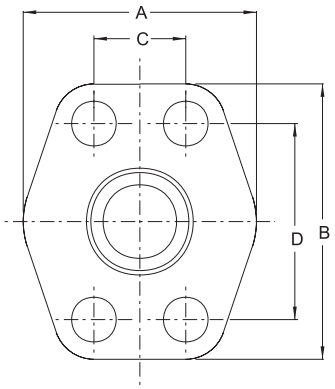


Figure 1



Refer to page 77 for
metric mounting options

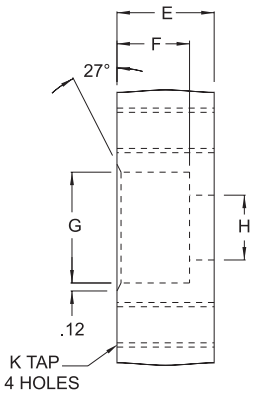


Figure 2

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Dia.	H Dia.	J Dia. Min.	J DIA. Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61										**3000 PSI FLAT SOCKET-PIPE**							
W4-8-8-U	**W61-8-8**	.50	.50	1.813	2.125	.688	1.500	.75	.560	.855	.50	1.000	1.005	.344	5/16-18	210	5/16-18x1.50
W4-12-12-U	**W61-12-12**	.75	.75	2.063	2.563	.875	1.875	.75	.560	1.062	.75	1.250	1.255	.406	3/8-16	214	3/8-16x1.50
W4-16-16-U	**W61-16-16**	1.00	1.00	2.313	2.750	1.031	2.063	.88	.630	1.326	1.00	1.560	1.565	.406	3/8-16	219	3/8-16x1.75
W4-20-20-U	**W61-20-20**	1.25	1.25	2.875	3.125	1.188	2.313	.94	.690	1.672	1.25	1.750	1.755	.469	7/16-14	222	7/16-14x1.75
W4-24-24-U	**W61-24-24**	1.50	1.50	3.250	3.688	1.406	2.750	1.19	.750	1.922	1.50	2.115	2.125	.531	1/2-13	225	1/2-13x2.25
W4-32-32-U	**W61-32-32**	2.00	2.00	3.813	4.000	1.688	3.063	1.38	.875	2.406	2.00	2.490	2.500	.531	1/2-13	228	1/2-13x2.50
W4-40-40-U	**W61-40-40**	2.50	2.50	4.281	4.500	2.000	3.500	1.75	1.00	2.906	2.50	2.995	3.005	.531	1/2-13	232	1/2-13x2.75
W4-48-48-U	**W61-48-48**	3.00	3.00	5.156	5.313	2.438	4.188	2.12	1.25	3.547	3.00	3.615	3.625	.656	5/8-11	237	5/8-11x3.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Dia.	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61										**3000 PSI FLAT SOCKET-PIPE REDUCING FLANGES**							
W4-8-12-U	–	.50	.75	2.063	2.563	.875	1.875	.75	.560	.855	.75	1.250	1.255	.406	–	214	3/8-16x1.50
W4-12-16-U	–	.75	1.00	2.313	2.750	1.031	2.063	.88	.630	1.062	1.00	1.560	.565	.406	–	219	3/8-16x1.75
W4-16-20-U	–	1.00	1.25	2.875	3.125	1.188	2.313	.94	.690	1.326	1.25	1.750	1.755	.469	–	222	7/16-14x1.75
W4-20-24-U	–	1.25	1.50	3.250	3.688	1.406	2.750	1.19	.750	1.672	1.50	2.115	2.125	.531	–	225	1/2-13x2.25
W4-24-32-U	–	1.50	2.00	3.813	4.000	1.688	3.063	1.38	.875	1.922	2.00	2.490	2.500	.531	–	228	1/2-13x2.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
										500 PSI FLAT SOCKET-PIPE							
W72-48-48-U	–	3.00	3.00	5.12	5.31	2.438	4.188	1.38	1.12	3.547	3.00	3.615	3.625	.656	–	237	5/8-11x2.50
W72-56-56-U	–	3.50	3.50	5.50	6.00	2.750	4.750	1.44	1.19	4.047	3.50	4.095	4.115	.656	–	241	5/8-11x2.75
W72-64-64-U	–	4.00	4.00	6.00	6.38	3.062	5.125	1.50	1.25	4.578	4.00	4.595	4.615	.656	–	245	5/8-11x2.75

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

4 BOLT FLANGE FITTINGS

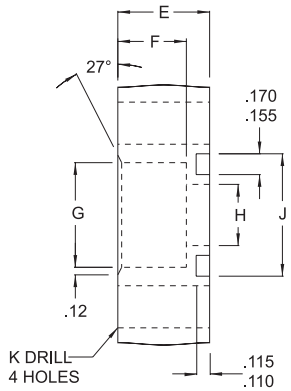
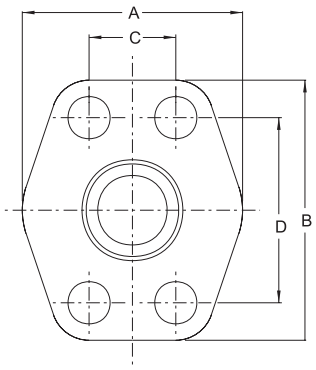


Figure 1



Refer to page 77 for
metric mounting options

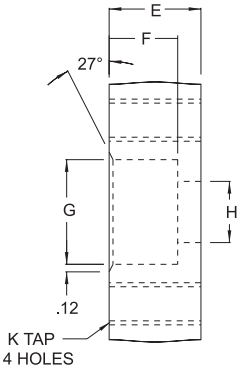


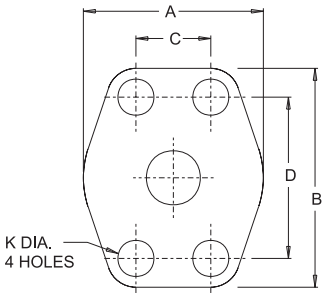
Figure 2

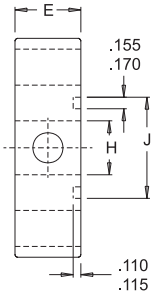
O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Dia.	H Dia.	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62										**6000 PSI FLAT SOCKET PIPE**							
W59-8-8-U	**W60-8-8**	.50	.50	1.94	2.30	.718	1.594	1.25	.560	.855	.50	1.000	1.005	.344	5/16-18	210	5/16-18x2.00
W59-12-12-U	**W60-12-12**	.75	.75	2.50	2.95	.937	2.000	1.25	.560	1.063	.75	1.250	1.255	.406	3/8-16	214	3/8-16x2.00
W59-16-16-U	**W60-16-16**	1.00	1.00	2.75	3.19	1.093	2.250	1.50	.630	1.328	1.00	1.560	1.565	.469	7/16-14	219	7/16-14x2.50
W59-20-20-U	**W60-20-20**	1.25	1.25	3.06	3.75	1.250	2.625	1.50	.690	1.672	1.25	1.750	1.755	.531	1/2-13	222	1/2-13x2.50
W59-24-24-U	**W60-24-24**	1.50	1.50	3.75	4.44	1.437	3.125	1.75	.750	1.922	1.50	2.115	2.125	.656	5/8-11	225	5/8-11x3.00
W59-32-32-U	**W60-32-32**	2.00	2.00	4.50	5.25	1.750	3.812	1.75	.875	2.406	2.00	2.490	2.500	.781	3/4-10	228	3/4-10x3.00

Part Numbers with "U" Suffix include Bolt Kit and O-Ring

Part No. Fig. 3	Pad Size	A	B	C ±.010	D ±.010	E	H	J Dia. Min.	J Dia. Max.	K Dia.
CODE 62				**O-RING SPACER**						
ASX-12-GP	0.750	2.50	2.95	0.937	2.000	1.250	0.750	1.250	1.256	0.406
ASX-16-GP	1.000	2.75	3.19	1.093	2.250	1.500	1.000	1.560	1.565	0.469
ASX-20-GP	1.250	3.06	3.75	1.250	2.625	1.500	1.250	1.750	1.755	0.531
ASX-24-GP	1.500	3.75	4.44	1.437	3.125	1.750	1.500	2.115	2.125	0.656
ASX-32-GP	2.000	4.50	5.25	1.750	3.812	1.750	2.000	2.490	2.500	0.781
CODE 61				**O-RING SPACER**						
AS-8-GP	0.500	1.813	2.125	0.688	1.500	0.88	0.500	1.000	1.005	0.344
AS-12-GP	0.750	2.063	2.563	0.875	1.875	0.88	0.750	1.250	1.255	0.406
AS-16-GP	1.000	2.313	2.750	1.031	2.063	0.88	1.000	1.560	1.565	0.406
AS-20-GP	1.250	2.875	3.125	1.188	2.313	0.94	1.250	1.750	1.755	0.469
AS-24-GP	1.500	3.250	3.688	1.406	2.750	1.19	1.500	2.115	2.125	0.531
AS-32-GP	2.000	3.813	4.000	1.688	3.063	1.38	2.000	2.490	2.500	0.531

Figure 3





4 BOLT FLANGE FITTINGS

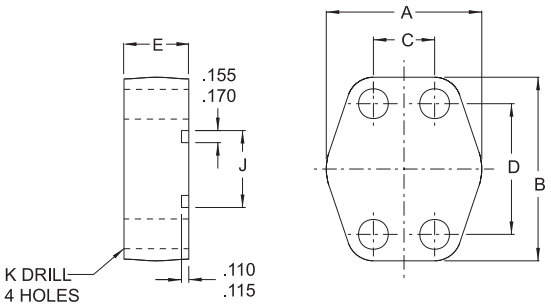


Figure 1

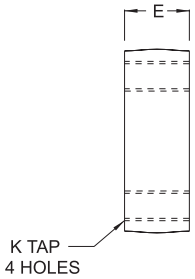


Figure 2

Refer to page 77 for metric mounting options

O'Ring Part No. Fig. 1	Flat Face Part Fig. 2	Pad Size	A	B	C	D	E	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61						**3000 PSI BLANKING**							
W36-8-8-U	**W37-8-8**	.50	1.813	2.125	.688	1.500	.750	1.000	1.005	.344	5/16-18	210	5/16-18x1.50
W36-12-12-U	**W37-12-12**	.75	2.063	2.563	.875	1.875	.750	1.250	1.255	.406	3/8-16	214	3/8-16x1.50
W36-16-16-U	**W37-16-16**	1.00	2.313	2.750	1.031	2.063	.880	1.560	1.565	.406	3/8-16	219	3/8-16x1.75
W36-20-20-U	**W37-20-20**	1.25	2.875	3.125	1.188	2.313	.940	1.750	1.755	.469	7/16-14	222	7/16-14x1.75
W36-24-24-U	**W37-24-24**	1.50	3.250	3.688	1.406	2.750	1.190	2.115	2.125	.531	1/2-13	225	1/2-13x2.25
W36-32-32-U	**W37-32-32**	2.00	3.813	4.000	1.688	3.063	1.440	2.490	2.500	.531	1/2-13	228	1/2-13x2.50
W36-40-40-U	**W37-40-40**	2.50	4.281	4.500	2.000	3.500	1.815	2.995	3.005	.531	1/2-13	232	1/2-13x2.75
W36-48-48-U	**W37-48-48**	3.00	5.156	5.313	2.438	4.188	2.190	3.615	3.625	.656	5/8-11	237	5/8-11x3.50

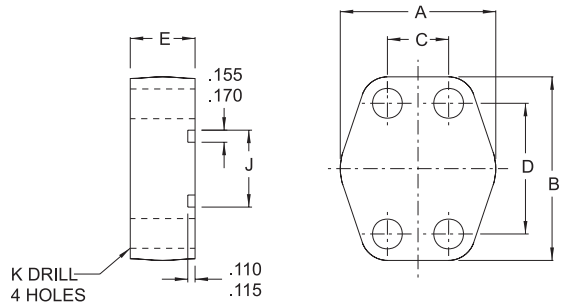


Figure 3

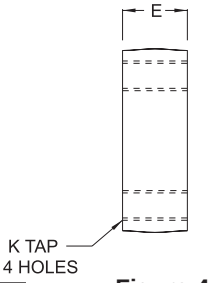


Figure 4

Refer to page 77 for metric mounting options

O'Ring Part No. Fig. 3	Flat Face Part Fig. 4	Pad Size	A	B	C	D	E	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62						**6000 PSI BLANKING**							
W38-8-8-U	**W39-8-8**	.50	1.94	2.30	.718	1.594	.870	1.000	1.005	.344	5/16-18	210	5/16-18x1.50
W38-12-12-U	**W39-12-12**	.75	2.50	2.95	.937	2.000	1.250	1.250	1.255	.406	3/8-16	214	3/8-16x1.50
W38-16-16-U	**W39-16-16**	1.00	2.75	3.19	1.093	2.250	1.500	1.560	1.565	.469	7/16-14	219	7/16-14x1.75
W38-20-20-U	**W39-20-20**	1.25	3.06	3.75	1.250	2.625	1.565	1.750	1.755	.531	1/2-13	222	1/2-13x1.75
W38-24-24-U	**W39-24-24**	1.50	3.75	4.44	1.437	3.125	1.815	2.115	2.125	.656	5/8-11	225	5/8-11x2.25
W38-32-32-U	**W39-32-32**	2.00	4.50	5.25	1.750	3.812	1.815	2.490	2.500	.781	3/4-10	228	3/4-10x2.00
W38-40-40-U	**W39-40-40**	2.50	5.87	6.87	2.312	4.875	2.060	2.995	3.005	.906	7/8-9	232	7/8-9x3.50
W38-48-48-U	**W39-48-48**	3.00	7.00	8.50	2.812	6.000	2.620	3.615	3.625	1.156	1 1/8-7	237	1 1/8-7x4.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

4 BOLT FLANGE FITTINGS

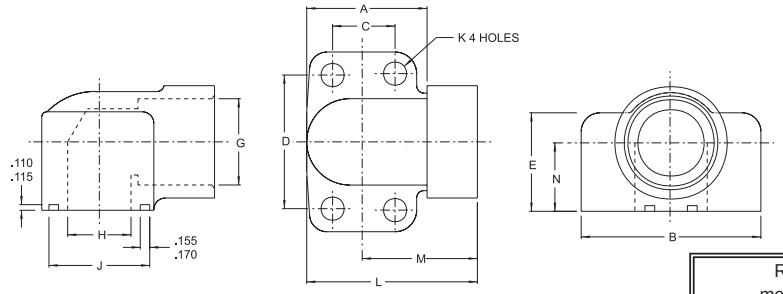


Figure 1

Refer to page 77 for metric mounting options

O'Ring Part No. Fig.1	Pad Size	A	B	C	D	E	G Thread NPT	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	L	M	N	Mounting Hardware O'Rings	Mounting Hardware SHCS
CODE 61							**3000 PSI ELBOW SAE STRAIGHT THREAD**										
W164-12-12-U	.75	1.69	2.56	.875	1.875	1.25	1 1/16-12	.75	1.250	1.255	.406	–	2.28	1.44	.875	214	3/8-16x2.00
W164-16-16-U	1.00	1.94	2.75	1.031	2.062	1.50	1 5/16-12	1.00	1.560	1.565	.406	–	2.62	1.66	1.062	219	3/8-16x2.25
W164-20-20-U	1.25	2.19	3.12	1.188	2.312	1.81	1 5/8-12	1.25	1.750	1.755	.469	–	3.00	1.91	1.188	222	7/16-16x2.75
W164-24-24-U	1.50	2.56	3.69	1.406	2.750	2.00	1 7/8-12	1.50	2.115	2.125	.531	–	3.33	2.05	1.312	225	1/2-13x3.00
W164-32-32-U	2.00	3.06	4.33	1.688	3.062	2.50	2 1/2-12	2.00	2.490	2.500	.531	–	3.81	2.28	1.656	228	1/2-13x3.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

O'Ring Part No. Fig.1	Pad Size	A	B	C	D	E	G Straight Thread	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	L	M	N	Mounting Hardware O'Rings	Mounting Hardware SHCS
CODE 61							**3000 PSI ELBOW NPTF THREAD**										
W168-12-12-U	.75	1.69	2.56	.875	1.875	1.25	.75	.75	1.250	1.255	.406	–	2.28	1.44	.875	214	3/8-16x2.00
W168-16-16-U	1.00	1.94	2.75	1.031	2.062	1.50	1.00	1.00	1.560	1.565	.406	–	2.62	1.66	1.062	219	3/8-16x2.25
W168-20-20-U	1.25	2.19	3.12	1.188	2.312	1.81	1.25	1.25	1.750	1.755	.469	–	3.00	1.91	1.188	222	7/16-14x2.75
W168-24-24-U	1.50	2.56	3.69	1.406	2.750	2.00	1.50	1.50	2.115	2.125	.531	–	3.33	2.05	1.312	225	1/2-13x3.00
W168-32-32-U	2.00	3.06	4.33	1.688	3.062	2.50	2.00	2.00	2.490	2.500	.531	–	3.81	2.28	1.656	228	5/8-11x3.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

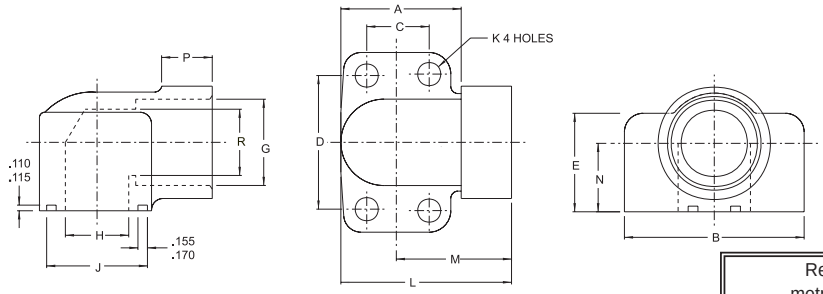


Figure 1

Refer to page 77 for metric mounting options

O'Ring Part No. Fig.1	Pad Size	A	B	C	D	E	G	H	J Min.	J Max.	K Drill Dia.	K Tap UN-2B	L	M	N	P	R	Mounting Hardware O'Rings	Mounting Hardware SHCS
CODE 61								**3000 PSI ELBOW SOCKET WELD**											
W176-12-12-U	.75	1.69	2.56	.875	1.875	1.25	1.062	.75	1.250	1.255	.406	–	2.28	1.44	.875	0.56	0.75	214	3/8-16x2.00
W176-16-16-U	1.00	1.94	2.75	1.031	2.062	1.50	1.328	1.00	1.560	1.565	.406	–	2.62	1.66	1.062	0.56	1.00	219	3/8-16x2.25
W176-20-20-U	1.25	2.19	3.12	1.188	2.312	1.81	1.672	1.25	1.750	1.755	.469	–	3.00	1.91	1.188	0.62	1.25	222	7/16-14x2.75
W176-24-24-U	1.50	2.56	3.69	1.406	2.750	2.00	1.922	1.50	2.115	2.125	.531	–	3.28	2.05	1.312	0.69	1.50	225	1/2-13x3.00
W176-32-32-U	2.00	3.06	4.33	1.688	3.062	2.50	2.406	2.00	2.490	2.500	.531	–	3.81	2.28	1.656	.075	2.00	228	1/2-13x3.50

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

4 BOLT FLANGE FITTINGS

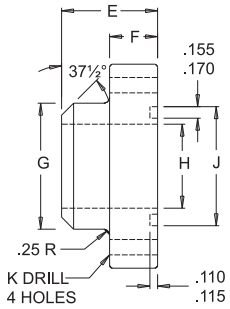
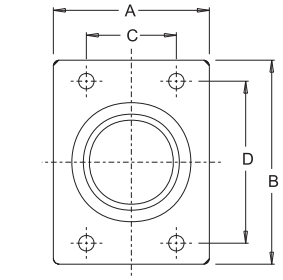


Figure 1



Refer to page 77 for metric mounting options

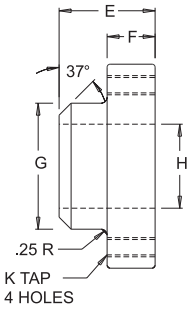


Figure 2

O'Ring Part No. Fig. 1	Flat Face Part No. Fig. .2	Pipe Size	Pad Size	A	B	C	D	E	F	G Pipe O.D.	H Pipe I.D.	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61										**BUTT WELD-SCHED 40 PIPE**							
W35-12-U	W34-12	.75	.75	1.69	2.56	.875	1.875	1.185	.625	1.050	.82	1.250	1.255	.406	3/8-16	214	3/8-16 x 1.25
W35-16-U	W34-16	1.00	1.00	1.94	2.75	1.031	2.062	1.250	.56	1.315	1.04	1.560	1.565	.406	3/8-16	219	3/8-16 x 1.25
W35-20-U	W34-20	1.25	1.25	2.19	3.12	1.188	2.312	1.440	.62	1.660	1.38	1.750	1.755	.469	7/16-14	222	7/16-14 x 1.50
W35-24-U	W34-24	1.50	1.50	2.56	3.69	1.406	2.750	1.750	.81	1.900	1.61	2.115	2.125	.531	1/2-13	225	1/2-13 x 1.75
W35-32-U	W34-32	2.00	2.00	3.06	4.00	1.688	3.062	2.000	1.06	2.375	2.06	2.490	2.500	.531	1/2-13	228	1/2-13 x 2.00
W35-40-U	W34-40	2.50	2.50	3.56	4.50	2.000	3.500	2.310	1.12	2.875	2.46	2.995	3.005	.531	1/2-13	232	1/2-13 x 2.00
W35-48-U*	W34-48 *	3.00	3.00	4.19	5.31	2.438	4.188	2.750	1.62	3.500	3.06	3.615	3.625	.656	5/8-11	237	5/8-11 x 2.75

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Pipe O.D.	H Pipe I.D.	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61										**BUTT WELD-SCHED 80 PIPE**							
W24-12-U	W23-12	.75	.75	1.69	2.56	.875	1.875	1.185	.625	1.050	.742	1.250	1.255	.406	3/8-16	214	3/8-16 x 1.25
W24-16-U	W23-16	1.00	1.00	1.94	2.75	1.031	2.062	1.250	.56	1.315	.957	1.560	1.565	.406	3/8-16	219	3/8-16 x 1.25
W24-20-U	W23-20	1.25	1.25	2.19	3.12	1.188	2.312	1.440	.62	1.660	1.278	1.750	1.755	.469	7/16-14	222	7/16-14 x 1.50
W24-24-U	W23-24	1.50	1.50	2.56	3.69	1.406	2.750	1.750	.81	1.900	1.500	2.115	2.125	.531	1/2-13	225	1/2-13 x 1.75
W24-32-U	W23-32	2.00	2.00	3.06	4.00	1.688	3.062	2.000	1.06	2.375	1.939	2.490	2.500	.531	1/2-13	228	1/2-13 x 2.00
W24-40-U	W23-40	2.50	2.50	3.56	4.50	2.000	3.500	2.310	1.12	2.875	2.323	2.995	3.005	.531	1/2-13	232	1/2-13 x 2.00
W24-48-U*	W23-48 *	3.00	3.00	4.19	5.31	2.438	4.188	2.750	1.62	3.500	2.900	3.615	3.625	.656	5/8-11	237	5/8-11 x 2.75

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Pipe O.D.	H Pipe I.D.	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 61										**BUTT WELD-SCHED 160 PIPE**							
W27-12-U	W25-12	.75	.75	1.69	2.56	.875	1.875	1.185	.625	1.050	.614	1.250	1.255	.406	3/8-16	214	3/8-16 x 1.25
W27-16-U	W25-16	1.00	1.00	1.94	2.75	1.031	2.062	1.250	.560	1.315	.815	1.560	1.565	.406	3/8-16	219	3/8-16 x 1.25
W27-20-U	W25-20	1.25	1.25	2.19	3.12	1.188	2.312	1.440	.620	1.660	1.160	1.750	1.755	.469	7/16-14	222	7/16-14 x 1.50
W27-24-U	W25-24	1.50	1.50	2.56	3.69	1.406	2.750	1.750	.810	1.900	1.337	2.115	2.125	.531	1/2-13	225	1/2-13 x 1.75
W27-32-U	W25-32	2.00	2.00	3.06	4.00	1.688	3.062	2.000	1.06	2.375	1.689	2.490	2.500	.531	1/2-13	228	1/2-13 x 2.00
W27-40-U	W25-40	2.50	2.50	3.56	4.50	2.000	3.500	2.310	1.12	2.875	2.125	2.995	3.005	.531	1/2-13	232	1/2-13 x 2.00
W27-48-U*	W25-48 *	3.00	3.00	4.19	5.31	2.438	4.188	2.750	1.62	3.500	2.624	3.615	3.625	.656	5/8-11	237	5/8-11 x 2.75

*note-bar stock material Part Numbers with "U" Suffix include Bolt Kit and O'Ring

4 BOLT FLANGE FITTINGS

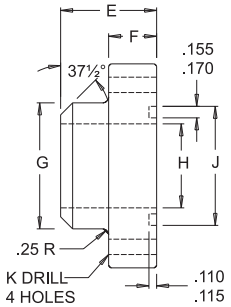
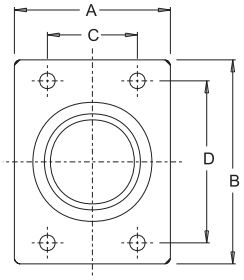


Figure 1



Refer to page 77 for metric mounting options

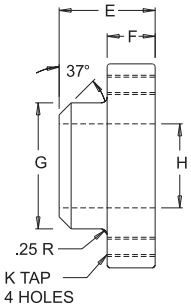


Figure 2

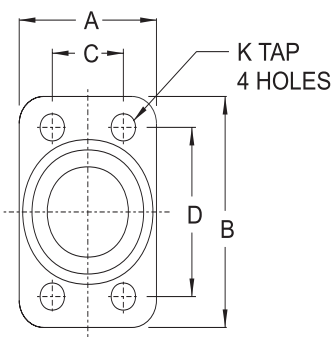
O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Pipe O.D.	H Pipe I.D.	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62										**BUTT WELD-SCHED 80 PIPE**							
W28-12-U	–	.75	.75	1.94	2.81	.937	2.000	1.42	0.83	1.050	0.742	1.250	1.255	0.406	3/8-16	214	3/8-16 x 1.50
W28-16-U	–	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.957	1.560	1.565	0.469	7/16-14	219	7/6-14 x 1.50
W28-20-U	–	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.278	1.750	1.755	0.531	1/2-13	222	1/2-13 x 2.00
W28-24-U	–	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.500	2.115	2.125	0.656	5/8-11	225	5/8-11 x 2.25
W28-32-U	–	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.939	2.490	2.500	0.781	3/4-10	228	3/4-10 x 2.75
W28-40-U*	–	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.323	2.995	3.005	0.940	7/8-9	232	7/8-9 x 3.00
W28-48-U*	–	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.900	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 x 4.00

Part Numbers with "U" Suffix include Bolt Kit and O'Ring

O'Ring Part No. Fig.1	Flat Face Part No. Fig. 2	Pipe Size	Pad Size	A	B	C	D	E	F	G Pipe O.D.	H Pipe I.D.	J Min	J Max	K Drill Dia.	K Tap UN-2B	Mounting Hardware O'Ring	Mounting Hardware SHCS
CODE 62										**BUTT WELD-SCHED 160 PIPE**							
–	**W29-12**	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.614	1.250	1.255	.406	3/8-16	214	3/8-16 x 1.50
–	**W29-16**	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.815	1.560	1.565	.469	7/16-14	219	7/16-14 x 1.50
–	**W29-20**	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.160	1.750	1.755	.531	1/2-13	222	1/2-13 x 2.00
–	**W29-24**	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.337	2.115	2.125	.656	5/8-11	225	5/8-11 x 2.25
–	**W29-32**	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.689	2.490	2.500	.781	3/4-10	228	3/4-10 x 2.75
–	**W29-40***	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.125	2.995	3.005	.940	7/8-9	232	7/8-9 x 3.00
–	**W29-48***	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.624	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 x 4.00

*note-bar stock material

Part No. Fig. 1	Pad Size	A	B	C	D	E	F	G	H	J	K Tap UNC-2B
CODE 61					**3000 PSI TANK PILOT**						
W22-12	.75	1.69	2.56	.875	1.875	1.18	.62	1.375	.75	1.06	3/8-16
W22-16	1.00	1.94	2.75	1.031	2.062	1.25	.56	1.500	1.00	1.12	3/8-16
W22-20	1.25	2.19	3.12	1.188	2.312	1.44	.62	1.750	1.25	1.20	7/16-14
W22-24	1.50	2.56	3.69	1.406	2.750	1.75	.81	2.125	1.50	1.62	1/2-13
W22-32	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.500	2.00	1.88	1/2-13
W22-40	2.50	3.56	4.50	2.000	3.500	2.31	1.12	3.250	2.50	2.19	1/2-13



Refer to page 77 for metric mounting options

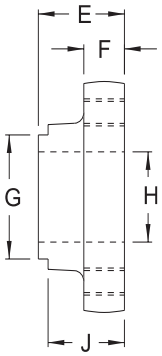
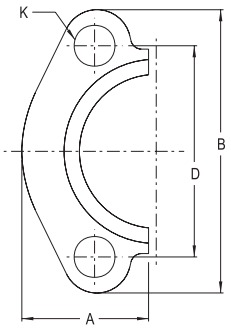


Figure 1

SAE J518 Split Flanges



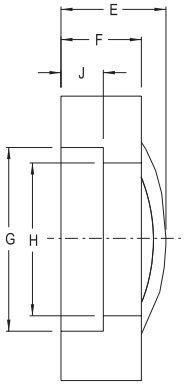


Figure 1

Refer to page 77 for metric mounting options

Code 61 Split Flange–Fig.1												
Part No.	Flange Size	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	Mounting Hardware O'Ring	HHCS
8 SF-0	.50	.86	2.12	1.50	0.75	.50	1.219	.955	.245	.344	210	5/16-18x1.25
12 SF-0	.75	.98	2.56	1.875	.88	.56	1.531	1.265	.245	.406	214	3/8-16x1.25
16 SF-0	1.00	1.11	2.75	2.062	.94	.62	1.781	1.515	.295	.406	219	3/8-16x1.25
20 SF-0	1.25	1.39	3.12	2.312	.88	.56	2.031	1.720	.295	.469	222	7/16-14x1.50
24 SF-0	1.50	1.58	3.69	2.750	1.00	.62	2.406	2.000	.295	.531	225	1/2-13x1.50
32 SF-0	2.00	1.86	4.00	3.062	1.03	.62	2.844	2.470	.355	.531	228	1/2-13x1.50
40 SF-0	2.50	2.09	4.50	3.500	1.50	.75	3.344	2.950	.355	.531	232	1/2-13x1.75
48 SF-0	3.00	2.53	5.31	4.188	1.62	.88	4.031	3.580	.355	.656	237	5/8-11x2.00
56 SF-0	3.50	2.70	6.00	4.750	1.12	.88	4.531	4.030	.422	.656	241	5/8-11x2.00

Code 62 Split Flange–Fig.1												
Part No.	Flange Size	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	Mounting Hardware O'Ring	HHCS
12SFX-0	.75	1.14	2.81	2.00	1.12	.75	1.656	1.280	.325	.406	214	3/8-16x1.50
16SFX-0	1.00	1.33	3.19	2.250	1.31	.94	1.906	1.530	.355	.469	219	7/16-14x1.75
20SFX-0	1.25	1.48	3.75	2.625	1.50	1.06	2.156	1.750	.385	.531	222	1/2-13x1.75
24SFX-0	1.50	1.83	4.44	3.125	1.69	1.19	2.531	2.030	.475	.656	225	5/8-11x2.25
32SFX-0	2.00	2.20	5.25	3.812	2.06	1.44	3.156	2.660	.475	.781	228	3/4-10x2.75

Each Kit Includes: (2) split flanges halves, (4) hex head bolt and lock washers, (1) buna-n o'ring

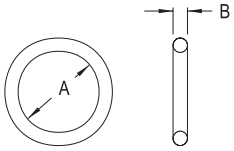
Metric Mounting Options

Code 61 Metric Mounting Option		
Pad Size	Metric Drilled Bolt Holes	Metric Tapped Bolt Holes
8	8.5 mm	M8 x 1.25
12	10.5 mm	M10 x 1.50
16	10.5 mm	M10 x 1.50
20	10.5 mm	M10 x 1.50
24	12.5 mm	M12 x 1.75
32	12.5 mm	M12 x 1.75
40	12.5 mm	M12 x 1.75
48	16.5 mm	M16 x 2.00
56	16.5 mm	M16 x 2.00
64	16.5 mm	M16 x 2.00

Code 62 Metric Mounting Option		
Pad Size	Metric Drilled Bolt Holes	Metric Tapped Bolt Holes
8	8.5 mm	M8 x 1.25
12	10.5 mm	M10 x 1.50
16	12.5 mm	M12 x 1.75
20	14.5 mm	M14 x 2.00
24	16.5 mm	M16 x 2.00
32	21.0 mm	M20 x 2.50

All items in our SAE Flange line are available with Metric Mounting options. Listed here are the standard metric drilled hole diameters and metric tapped holes which are provided both for Code 61 and Code 62 applications.

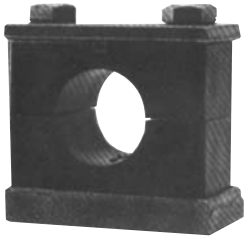
O'Ring Information



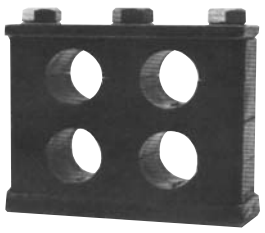
90 Durometer Buna-N O'Ring for Split Clamp Heads			
O'Ring	Size	A(in.)	B(in.)
210	0.50	0.75	0.139
214	0.75	1.00	0.139
219	1.00	1.31	0.139
222	1.25	1.60	0.139
228	2.00	2.25	0.139
232	2.50	2.75	0.139
237	3.00	3.38	0.139
241	3.50	3.88	0.139
245	4.00	4.38	0.139

Also available in viton

CUSHION CLAMPS

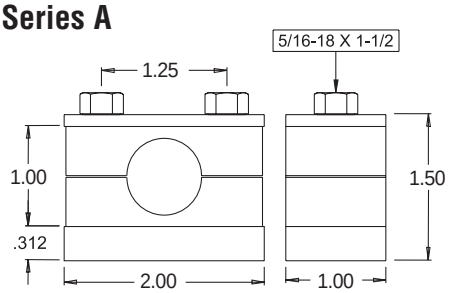


VESCOR® CUSHION CLAMP SYSTEMS are a product of the U.S.A.!
With polypropylene cushions and quality steel hardware. Cushions are precisely molded to conform without distortion during installation and the solid cushion design resists crushing while absorbing shock and suppressing vibration and noise. Cushions are temperature rated up to 110°F and remain stable in applications subjected to light acids, solvents, fuels, minerals oils, alcohol, paints and salt water. Vescor Heavy Duty **Cushion Clamp systems are available from ½" thru 2½" O.D. In Single, Stack and Twin Custom Systems to 4½" O.D.**



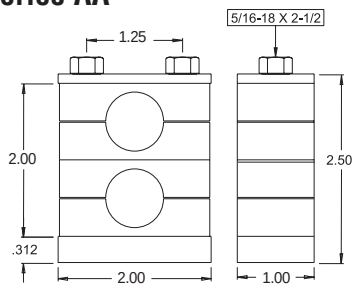
Single and Single Stack Cushion .125 thru .750

Series A



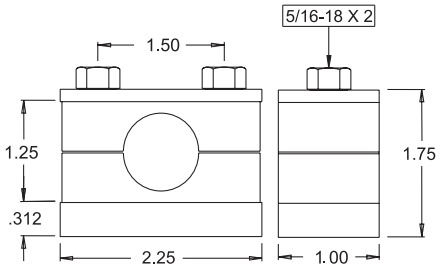
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.250	**25T**	⅛" (.405)	**12P**	.500	**50H**
.375	**37T**	¼" (.540)	**25P**	.562	**56H**
.500	**50T**	⅜" (.675)	**37P**	.625	**62H**
.625	**62T**	–	–	.687	**68H**
.750	**75T**	–	–	.750	**75H**

Series AA



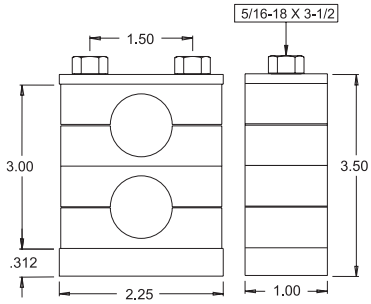
Single and Single Stack Cushion .375 thru 1.00

Series B



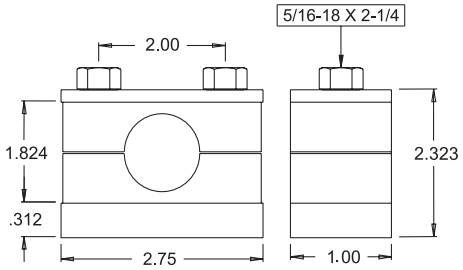
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.375	**37T**	½" (.840)	**50P**	.750	**75H**
.500	**50T**	¾" (1.050)	**75P**	.812	**81H**
.625	**62T**	–	–	.875	**87H**
.750	**75T**	–	–	.937	**93H**
.875	**87T**	–	–	1.00	**100H**
1.00	**100T**	–	–	–	–

Series BB



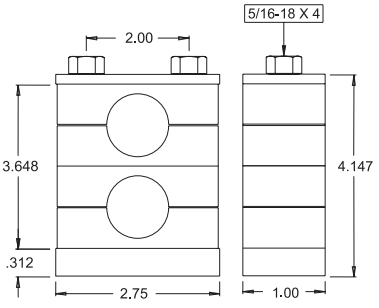
Single and Single Stack Cushion .500 thru 1.50

Series N



Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.750	**75T**	½" (.840)	**50P**	1.063	**106H**
.875	**87T**	¾" (1.050)	**75P**	1.125	**112H**
1.00	**100T**	1" (1.315)	**100P**	1.187	**118H**
1.25	**125T**	–	–	1.250	**125H**
1.50	**150T**	–	–	1.312	**131H**
–	–	–	–	1.375	**137H**
–	–	–	–	1.437	**143H**
–	–	–	–	1.500	**150H**

Series NN

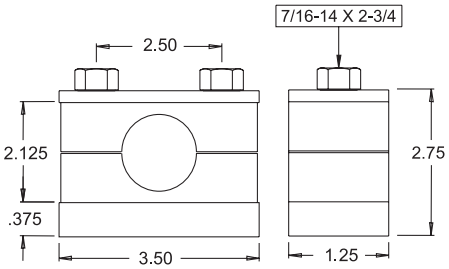


HOW TO ORDER
Example: single cushion A - 25T - H
single stack NN - 112H - 150T - H

_____ – _____ – _____
Series Part Number H = All hardware
C = Cushion set only

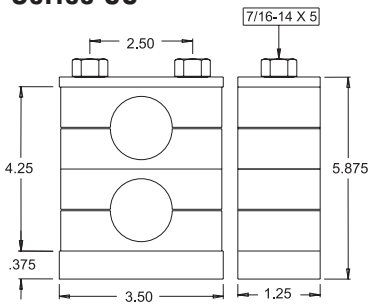
Single and Single Stack Cushion .50 thru 1.50

Series C



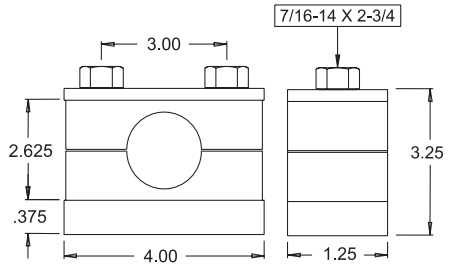
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.750	**75T**	½" (.840)	**50P**	1.063	**106H**
.875	**87T**	¾" (1.050)	**75P**	1.125	**112H**
1.00	**100T**	1" (1.315)	**100P**	1.187	**118H**
1.25	**125T**	–	–	1.250	**125H**
1.50	**150T**	–	–	1.312	**131H**
–	–	–	–	1.375	**137H**
–	–	–	–	1.437	**143H**
–	–	–	–	1.500	**150H**

Series CC



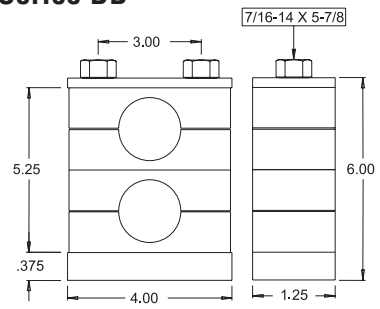
Single and Single Stack Cushion .75 thru 2.00

Series D



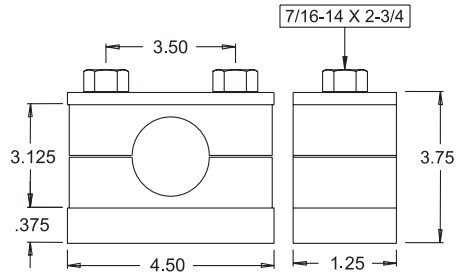
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
1.00	**100T**	¾" (1.050)	**75P**	1.563	**156H**
1.25	**125T**	1" (1.315)	**100P**	1.625	**162H**
1.50	**150T**	1¼" (1.660)	**125P**	1.687	**168H**
1.75	**175T**	1½" (1.900)	**150P**	1.750	**175H**
2.00	**200T**	–	–	1.812	**181H**
–	–	–	–	1.875	**187H**
–	–	–	–	1.937	**193H**
–	–	–	–	2.000	**200H**

Series DD



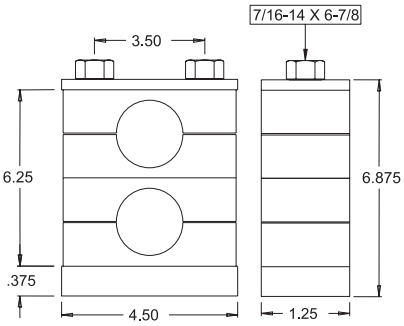
Single and Single Stack Cushion .75 thru 2.50

Series E



Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
1.50	**150T**	¾" (1.050)	**75P**	2.063	**206H**
1.75	**175T**	1" (1.315)	**100P**	2.125	**212H**
2.00	**200T**	1¼" (1.660)	**125P**	2.187	**218H**
2.25	**225T**	1½" (1.900)	**150P**	2.250	**225H**
2.50	**250T**	2" (2.375)	**200P**	2.312	**231H**
–	–	2½" (2.875)	**250P**	2.375	**237H**
–	–	–	–	2.437	**243H**
–	–	–	–	2.500	**250H**

Series EE



HOW TO ORDER

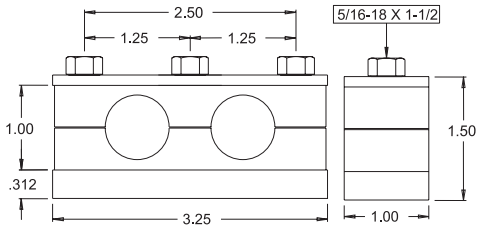
Example: single cushion D - 125T - H
single stack EE - 175T - 200T - H

_____ – _____ – _____
Series Part Number H = All hardware
C = Cushion set only

NOTE: WITH VESCORS' POLICY OF CONSTANTLY IMPROVING ITS PRODUCTS, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

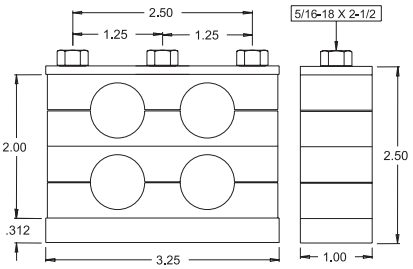
Twin and Twin Stack Cushion .50 thru 1.50

Series F



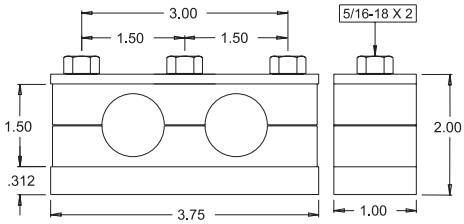
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.250-.250	**2525T**	⅛x⅛ (.405)	**1212P**	.500-.500	**5050H**
.375-.375	**3737T**	¼x¼ (.540)	**2525P**	.563-.563	**5656H**
.375-.500	**3750T**	⅜x⅜ (.675)	**3737P**	.625-.625	**6262H**
.375-.625	**3762T**	–	–	.687-.687	**6868H**
.375-.750	**3775T**	–	–	.750-.750	**7575H**
.500-.500	**5050T**	–	–	–	–
.500-.625	**5062T**	–	–	–	–
.500-.750	**5075T**	–	–	–	–
.625-.625	**6262T**	–	–	–	–
.625-.750	**6275T**	–	–	–	–
750-.750	**7575T**	–	–	–	–

Series FF



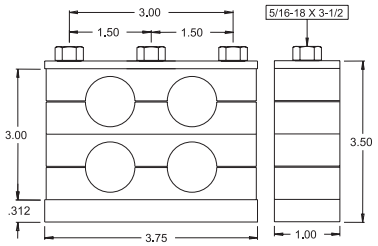
Twin and Twin Stack Cushion .375 thru 1.00

Series G



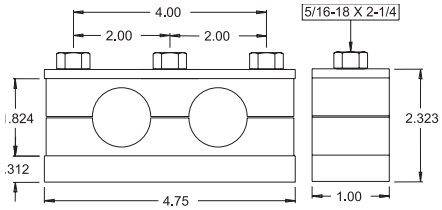
Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.375-1.00	**3710T**	½x½ (.840)	**5050P**	.750-.750	**7575H**
.500-1.00	**5010T**	¾x¾ (1.050)	**7575P**	.812-.812	**8181H**
.625-1.00	**6210T**	–	–	.875-.875	**8787H**
.750-.750	**7575T**	–	–	.937-.937	**9393H**
.750-1.00	**7510T**	–	–	1.00-1.00	**1010H**
1.00-1.00	**1010T**	–	–	–	–

Series GG



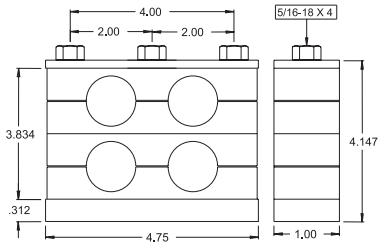
Twin and Twin Stack Cushion .500 thru 1.50

Series L



Tube O.D.	Part No.	Pipe Size O.D.	Part No.	Hose O.D.	Part No.
.750-.750	**7575T**	½x½ (.840)	**5050P**	1.063-1.063	**106106H**
.875-.875	**8787T**	¾x¾ (1.050)	**7575P**	1.125-1.125	**112112H**
.875-1.00	**8710T**	1x1 (1.315)	**1010P**	1.187-1.187	**118118H**
.875-1.25	**8712T**	–	–	1.250-1.250	**125125H**
.875-1.50	**8715T**	–	–	1.312-1.312	**131131H**
1.00-1.00	**1010T**	–	–	1.375-1.375	**137137H**
1.00-1.25	**1012T**	–	–	1.437-1.437	**143143H**
1.00-1.50	**1015T**	–	–	1.500-1.500	**150150H**
1.25-1.25	**1212T**	–	–	–	–
1.25-1.50	**1215T**	–	–	–	–
1.50-1.50	**1515T**	–	–	–	–

Series LL



HOW TO ORDER

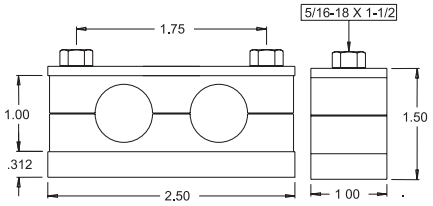
Example: twin cushion L - 7575T - 7575P - H
twin stack FF - 5050T - 2525P - H

_____ – _____ – _____
Series Part Number H = All hardware
C = Cushion set only

CUSHION CLAMPS

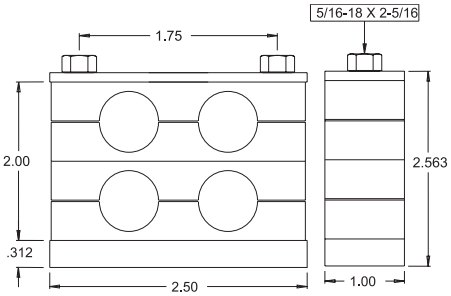
Mini Twin and Mini Twin Stack Cushion .125 thru 5.00

Series M



Tube O.D.	Part No.	Pipe Size O.D.	Part No.
.250-.250	**2525T**	⅛x⅛ (.405)	**1212P**
.375-.375	**3737T**	¼x¼ (.540)	**2525P**
.500-.500	**5050T**	–	–

Series MM

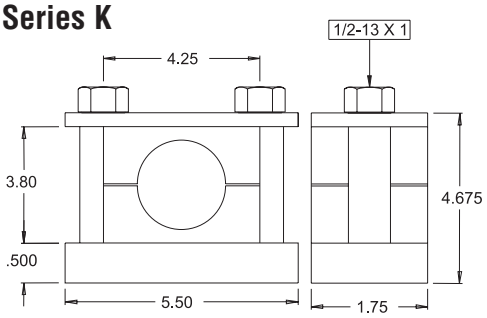


HOW TO ORDER
Example: mini twin cushion M - 5050T - H
mini twin stack MM - 25250T - 3737T - H

_____ – _____ – _____
Series | Part Number | H = All hardware, C = Cushion set only

Single Cushion 2.50 thru 3.00

Series K



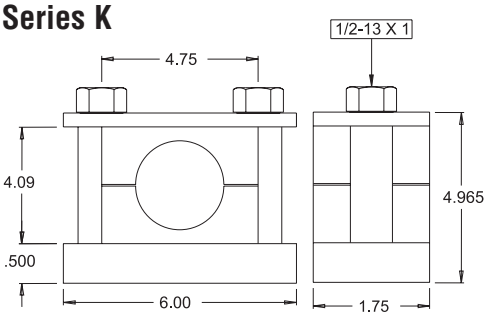
Tube O.D.	Part No.	Pipe Size O.D.	Part No.
2.50	**250T**	2½ (2.875)	**250P**
3.00	**300T**	–	–

HOW TO ORDER Example: K - 250P - H

K _____ – _____ – _____
Series K | Part Number | H = All hardware, C = Cushion set only

Single Cushion 3.00 thru 3.50

Series K



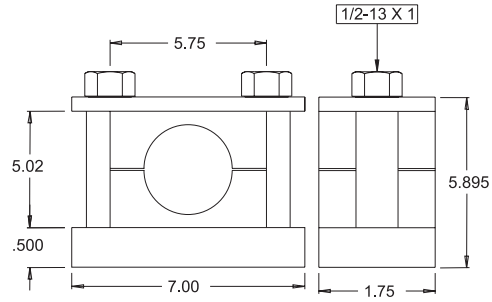
Tube O.D.	Part No.	Pipe Size O.D.	Part No.
–	–	3” (3.50)	**300P**
3.50	**350T**	–	–

HOW TO ORDER Example: K - 300P - H

K _____ – _____ – _____
Series K | Part Number | H = All hardware, C = Cushion set only

Single Cushion 4.00 thru 4.50

Series K



Tube O.D.	Part No.	Pipe Size O.D.	Part No.
4.00	**400T**	4” (4.50)	**400P**
4.50	**450T**	–	–

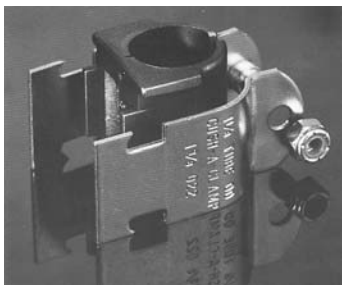
HOW TO ORDER Example: K - 400P - H

K _____ – _____ – _____
Series K | Part Number | H = All hardware, C = Cushion set only

CUSH-A-CLAMPS

CUSH-A-CLAMP® channel mounted clamping systems are ideal for multiple line runs, while absorbing shock and vibration, reducing unwanted noise and preventing galvanic corrosion.

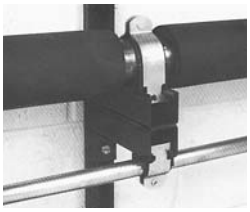
The Clamp features a unique shoulder stud which is securely fastened to one clamp half. This "Controlled-Squeeze™" design eliminates over-tightening and rotation while a nylon-insert nut assures a positive lock. Clamps are available in steel (with electrodichromate finish) and stainless steel. Fits any standard 1⅝" wide channel.

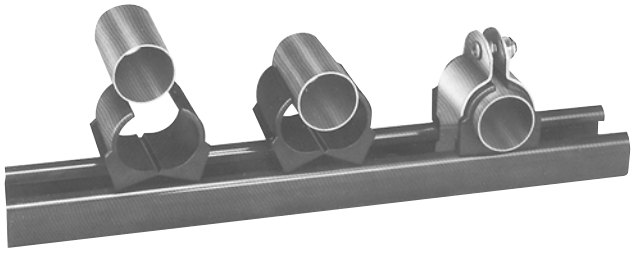


The Cushion is manufactured from a thermoplastic elastomer, it's built tough to withstand the effects of most oils, chemicals and industrial cleaning compounds, in temperatures from -50°F to 275°F. A patented "Living Hinge" allows the cushion to be spread apart for quick, easy installation, interlock edges and channel locator legs insure that the cushion remains in place.

Wide Size Ranges are available in tube sizes from ¼" to 6⅛", pipe sizes from ¼" to 6". Special sizes available, consult factory.

Installation - one man, one tool time savings. Retrofits can be added without disassembling your present system.





A patented "Living Hinge" allows the cushion to be spread apart for quick, easy installation on sizes from ¼" through 1⅝"

ORDERING INFORMATION

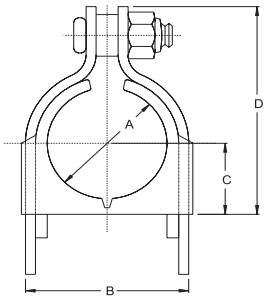
Ordering CUSH-A-CLAMP® assemblies is fast and easy. Refer to the installation chart, select your specific application, then order the appropriate assembly part number. All pipe series and tube series above 1⅜" are furnished without the controlled-squeeze shoulder bolt. These sizes feature a threaded stud securely fastened to one clamp half. CUSH-A-CLAMP® assemblies are available individually packaged in sizes up to and including 2⅛", upon request.

*Tube O.D. is Cushion I.D. All parts are marked for easy identification and packaged for small lot or bulk use.

Part Numbers are "coded" to designate Tube or Pipe series, cushion size and clamp size.

Example:

Tube Series	Pipe Series
004 (Cushion Size ¼")	009 (Cushion Size ¼")
T (Tubing Assembly)	N (Pipe Assembly)
008 (Clamp Size ½")	012 (Clamp Size ¾")



For stainless steel, substitute "NS" for "T" or "N"

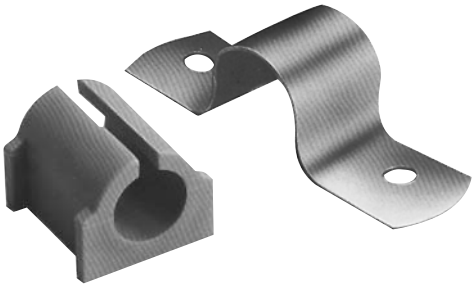
Design load defection data available on request

Assembly Part Number	Tube Series *Copper and Steel Tubing	Copper Water Pipe (nom.)	Pipe Series Assembly Part Number	Pipe Series Nominal Pipe Size	Dimensions A	B	C	D
004T008	¼"	–	–	–	.25	.62	.27	.98
006T010	⅜"	¼"	–	–	.37	.82	.33	1.13
008T012	½"	⅜"	–	–	.50	.94	.40	1.34
–	–	–	**009N012**	¼"	.54	.98	.43	1.34
010T014	⅝"	½"	–	–	.62	1.06	.46	1.54
–	–	–	**011N014**	⅜"	.67	1.13	.49	1.54
012T016	¾"	⅝"	–	–	.75	1.20	.52	1.68
–	–	–	**014N018**	½"	.84	1.29	.58	1.82
014T018	⅞"	¾"	–	–	.87	1.31	.58	1.82
016T020	1"	–	–	–	1.00	1.44	.65	1.95
–	–	–	**017N022**	¾"	1.05	1.57	.70	2.08
018T022	1⅛"	1"	–	–	1.12	1.57	.70	2.08
020T024	1¼"	–	–	–	1.25	1.70	.77	2.21
–	–	–	**021N026**	1"	1.31	1.76	.81	2.34
022T026	1⅜"	1¼"	–	–	1.37	1.82	.83	2.34
024N028	1½"	–	–	–	1.50	1.95	.90	2.47
026N030	1⅝"	1½"	–	–	1.62	2.07	.96	2.60
–	–	–	**027N032**	1¼"	1.66	2.17	.99	2.73
028N032	1¾"	–	–	–	1.75	2.20	1.02	2.73
030N034	1⅞"	–	–	–	1.87	2.32	1.09	2.86

Assembly Part Number	Tube Series *Copper and Steel Tubing	Copper Water Pipe (nom.)	Pipe Series Assembly Part Number	Pipe Series Nominal Pipe Size	Dimensions A	B	C	D
–	–	–	**030N034**	1½"	1.90	2.35	1.09	2.86
032N036	2"	–	–	–	2.00	2.45	1.15	3.04
034N040	2⅛"	2"	–	–	2.12	2.57	1.27	3.23
038N044	2⅜"	–	**038N044**	2"	2.37	2.82	1.41	3.67
040N046	2½"	–	–	–	2.50	2.94	1.46	3.79
042N048	2⅝"	2½"	–	_	2.62	3.07	1.53	3.92
046N052	2⅞"	–	**046N052**	2½"	2.87	3.32	1.66	4.17
050N054	3"	–	–	–	3.00	3.57	1.78	4.42
050N056	3⅛"	3"	–	–	3.12	3.57	1.78	4.42
053N060	3⅝16"	–	–	–	3.31	3.96	1.90	4.75
056N062	3½"	–	**056N062**	3"	3.50	3.95	1.97	4.79
058N064	3⅝"	3½"	–	–	3.62	4.20	2.03	4.11
064N072	4"	–	**064N072**	3½"	4.00	4.45	2.28	5.42
066N074	4⅛"	4"	–	–	4.12	4.57	2.34	5.54
069N076	4⅝16"	–	_	–	4.34	4.96	2.40	5.84
072N080	4½"	–	**072N080**	4"	4.50	4.95	2.53	5.92
082N090	5⅛"	5"	–	–	5.12	5.57	2.84	6.54
–	–	–	**089N096**	5"	5.56	6.01	3.06	6.92
098N106	6⅛"	6	–	–	6.12	6.57	3.34	7.54
–	–	–	**106N114**	6"	6.62	7.07	3.59	8.23

Omega Series™

The Omega Series™ clamp assembly retains, guides, protects and uniformly spaces line runs. Attached with two standard fasteners to any flat surface, the Omega Series™ clamp eliminates the use of special channels, providing a savings in both space and cost. They go up fast, lines are rigid and look neat.



The Clamp — Available in steel (with Electrodichromate finish) and stainless steel

The Cushion — Manufactured from a thermoplastic elastomer, it's built tough to withstand the effects of most oils, chemical and industrial cleaning compounds, in temperatures from -50°F to 275°F. Interlock edge insures that the cushion remains in place.

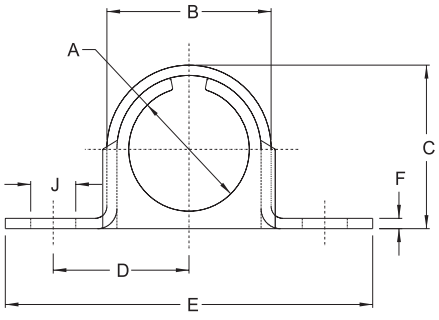
ORDERING INFORMATION

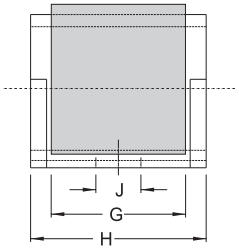
Assembly Part Number	Copper and Steel Tubing O.D.	Copper Water Pipe (nom.)	Nominal Pipe Size	Dimensions A	B	C	D	E	F	G	H	J
004M007	¼"	–	–	.25	.53	.48	.60	1.81	.06	.62	.78	.20
006M008	⅜"	¼"	–	.37	.62	.62	.65	1.90	.06	.62	.81	.20
008M011	½"	⅜"	¼"	.50	.82	.75	.80	2.20	.06	.75	.98	.26
010M013	⅝"	½"	⅜"	.62	.94	.87	.86	2.32	.06	.75	.98	.26
012M015	¾"	⅝"	–	.75	1.03	1.01	.90	2.41	.06	.75	.98	.26
014M017	⅞"	¾"	½"	.87	1.18	1.03	.98	2.56	.06	.75	.98	.26
016M019	1"	–	–	1.00	1.31	1.25	1.04	2.68	.06	.75	.98	.26
018M020	–	–	¾"	1.05	1.31	1.25	1.04	2.68	.06	.75	.98	.26
018M021	1⅛"	1"	–	1.12	1.44	1.33	1.11	2.82	.06	.75	.98	.26
020M024	1¼"	–	–	1.25	1.65	1.47	1.20	3.00	.08	1.25	1.56	.26
021M026	–	–	1"	1.31	1.76	1.71	1.26	3.12	.08	1.25	1.56	.26
022M026	1⅜"	1¼"	–	1.37	1.76	1.71	1.26	3.12	.08	1.25	1.56	.26
024M028	1½"	–	–	1.50	1.93	1.88	1.42	3.65	.08	1.25	1.56	.26
026M030	1⅝"	1½"	–	1.62	2.07	2.00	1.48	3.77	.08	1.25	1.56	.26
027M032	–	–	1¼"	1.66	2.21	2.12	1.55	3.90	.10	1.25	1.56	.33
028M032	1¾"	–	–	1.75	2.21	2.12	1.55	3.90	.10	1.25	1.56	.33
030M034	1⅞"	–	1½"	1.87	2.33	2.25	1.61	4.02	.10	1.25	1.56	.33
032M036	2"	–	–	2.00	2.46	2.38	1.67	4.15	.10	1.25	1.56	.33
034M040	2⅛"	–	–	2.12	2.71	2.62	1.80	4.40	.10	1.25	1.56	.33
038M044	2⅜"	–	2"	2.37	2.96	2.88	1.94	4.71	.10	1.25	1.56	.33
082M090	5⅛"	–	–	5.12	5.83	6.75	3.41	7.64	.10	1.25	1.56	.40

Note: Fasteners not included

To order Omega Series™ assemblies, select your specific application from the chart below and order the appropriate part number.

When ordering stainless steel, substitute "MS" for "M" in the part number



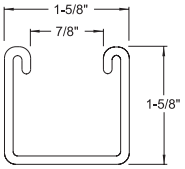


Channels

Standard lengths 10'0" (Special lengths available for a small cutting charge)

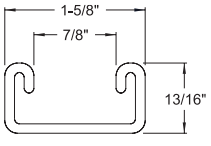
Z-1000

Material: Low-gauge carbon steel
Finish: Green painted
Weight: 190 lbs/C ft



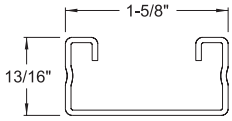
Z-3300

Material: Low-gauge carbon steel
Finish: Green painted
Weight: 135 lbs/C ft



Z-1000 Stainless

Material: Stainless Steel
Weight: 82 lbs/C ft



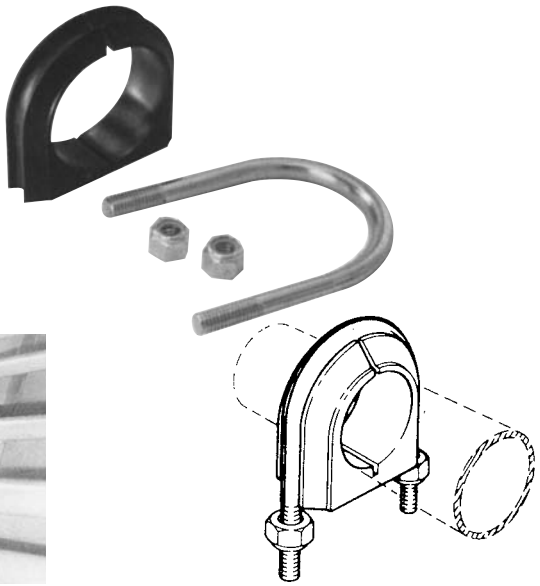
U-Bolt Series

Designed for the tough jobs, the U-Bolt Series secures pipe runs to any flat surface. The cushion design provides total load distribution, allowing the U-Bolt to become a full contact hanger, eliminating knife-edge loading.

The U-Bolt traps and secures the cushion in place to prevent lateral movement, while nylon insert locknuts provide a positive lock. Available in electro-galvanized steel or 316 stainless steel.

Material

U-Bolt-steel with electro-galvanized finish or 316 stainless
Cushion-Thermoplastic elastomer.



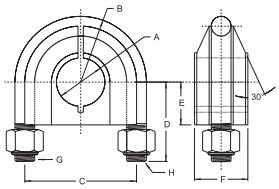
Specify steel or 316 stainless steel when ordering

U-Bolt Series conforms to MIL-S-901D for shock testing

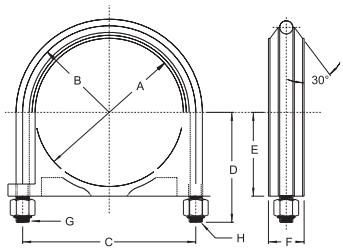
* 8" thru 12" features a two-piece cushion design

ORDERING INFORMATION

Assembly Part Number	Nominal Pipe Size	A Dia.	B Radius	C	D	E	F	G	H
UB1/2PA	½"	.84	.80	1.60	1.50	.67	.68	¼"	¼-20 UNC-2B
UB3/4PA	¾"	1.05	.90	1.80	1.60	.78	.68	¼"	¼-20 UNC-2B
UB1PA	1	1.31	1.02	2.05	1.70	.91	.68	¼"	¼-20 UNC-2B
UB1-1/4PA	1¼"	1.66	1.27	2.55	2.10	1.08	1.24	⅜"	⅜-16 UNC-2B
UB1-1/2PA	1½"	1.90	1.40	2.80	2.20	1.19	1.24	⅜"	⅜-16 UNC-2B
UB2PA	2"	2.37	1.67	3.35	2.50	1.45	1.24	⅜"	⅜-16 UNC-2B
UB2-1/2PA	2½"	2.87	1.95	3.90	3.00	1.69	1.24	½"	½-13 UNC-2B
UB3PA	3"	3.50	2.27	4.55	3.30	2.00	1.24	½"	½-13 UNC-2B
UB3-1/2PA	3½"	4.00	2.52	5.05	3.90	2.50	1.24	½"	½-13 UNC-2B
UB4PA	4"	4.50	2.75	5.50	3.90	2.50	1.24	½"	½-13 UNC-2B
UB5PA	5"	5.56	3.25	6.56	4.50	3.03	1.24	½"	½-13 UNC-2B
UB6PA	6"	6.62	3.87	7.75	5.40	3.56	1.44	⅝"	⅝-11 UNC-2B
UB8PA	8"*	8.62	4.85	9.82	6.40	4.56	1.44	⅝"	⅝-11 UNC-2B
UB10PA	10"*	10.75	6.08	12.16	7.70	5.68	1.65	¾"	¾-10 UNC-2B
UB12PA	12"*	12.75	7.13	14.25	8.70	6.68	1.65	¾"	¾-10 UNC-2B



1/2" through 6" assembly

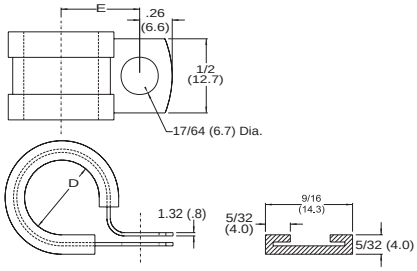


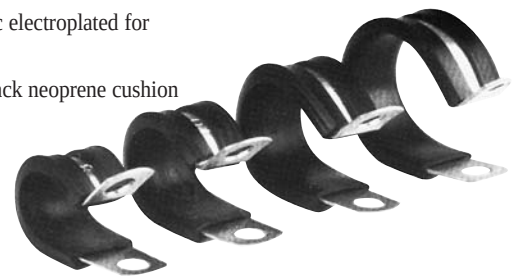
8" through 12" assembly

SPN Series

Features

- Light to medium duty steel clamp
- Neoprene cushion for electrical insulation and vibration absorption
- Neoprene meets specifications MIL R-30065 and MAMS-3209
- Steel clamps are zinc electroplated for corrosion resistance
- Color-Silver with black neoprene cushion





ORDERING INFORMATION

Assembly Part Number	Holding Dia. D	E inches (mm)	Assembly Part Number	Holding Dia. D	E inches (mm)
SPN-3	3/16 (4.8)	3/8 (9.5)	**SPN-10**	5/8 (15.9)	19/32 (15.1)
SPN-4	1/4 (6.4)	13/32 (10.3)	**SPN-11**	11/16 (17.5)	5/8 (15.9)
SPN-5	5/16 (7.9)	7/16 (11.1)	**SPN-12**	3/4 (19.1)	3/4 (19.1)
SPN-6	3/8 (9.5)	15/32 (11.9)	**SPN-14**	7/8 (22.2)	1 13/16 (20.6)
SPN-7	7/16 (11.1)	1/2 (12.7)	**SPN-16**	1 (25.4)	7/8 (22.2)
SPN-8	1/2 (12.7)	17/32 (13.5)	**SPN-18**	1 1/8 (28.6)	15/16 (23.8)
SPN-9	9/16 (14.3)	9/16 (14.3)	**SPN-20**	1 1/4 (31.8)	1 (25.4)

Cush-A-Strip

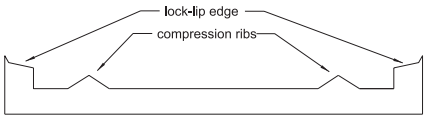
Material — Manufactured from a thermoplastic elastomer, Cush-A-Strip is designed for use from -50°F to 275°F.

Easy Stocking —Packaged in 20 foot rolls in an E-Z dispenser box for convenience in handling and storage

Easy Measuring — Marked in 1/4" increments for fast measuring and cutting, while eliminating waste.

No-Slip Security — Lock-lip edges insure that Cush-A-Strip will remain in place with a balanced grip.

Clamps — Available with a standard bolt and elastic stop nut in steel (electrodichromate) and stainless steel, in sizes ranging from 1/4" tube to 6" pipe.



Clamp Part Number	Tube Size O.D.	Pipe Size (nom.)	Cutting Schedule in Inches
1/2 S008	1/4"	–	7/8"
5/8 S010	3/8"	–	1 1/8"
3/4 S012	1/2"	1/4"	1 1/2"
7/8 S014	5/8"	3/8"	2"
1 S016	3/4"	–	2 1/4"
1-1/8 S018	7/8"	1/2"	3"
1-1/4 S020	1"	3/4"	3 1/4"
1-3/8 S022	1 1/8"	–	3 5/8"
1-1/2 S024	1 3/16"	–	3 7/8"
1-1/2 S024	1 1/4"	1"	4"
1-5/8 S026	1 3/8"	–	4 1/2"
1-3/4 S028	1 1/2"	–	4 7/8"
1-7/8 S030	1 5/8"	1 1/4"	5 1/4"
2 S032	1 3/4"	–	5 1/2"

Clamp Part Number	Tube Size O.D.	Pipe Size (nom.)	Cutting Schedule in Inches
2-1/8 S034	1 7/8"	1 1/2"	6"
2-1/4 S036	2"	–	6 3/8"
2-3/8 S038	2 1/8"	–	6 3/4"
2-1/2 S040	2 1/4"	–	7 1/4"
2-5/8 S042	2 3/8"	2"	7 1/2"
2-3/4 S044	2 1/2"	–	8"
3 S048	2 3/4"	–	8 3/4"
3-1/8 S050	2 7/8"	2 1/2"	9 1/4"
3-1/4 S054	3"	–	9 1/2"
3-3/4 S060	3 1/2"	3"	11"
4-1/4 S068	4"	3 1/2"	12 1/4"
4-3/4 S076	4 1/2"	4"	14"
5-3/4 S092	–	5"	15 1/2"
6-7/8 S110	–	6"	18 1/2"

Reference Data

Maximum Space Between Pipe Supports			
Nominal Pipe Size in.	Maximum Span ft.	Nominal Pipe Size in.	Maximum Span ft.
1/4	2	3	12
3/8	3	3 1/2	13
1/2	4	4	14
3/4	5	5	16
1	7	6	17
1 1/2	9	8	10
2	10	10	22
2 1/2	11	–	–

As a general rule clamp spacing should not exceed 60 diameters. If severe vibration is present, clamp spacing distance should be reduced.

Schedule 40: Steel Pipe				
Nominal Pipe Size in.	Outside Diameter in.	Inside Diameter in.	Pipe Weight lbs./ft.	Pipe & Water Weight lbs./ft.
3/8	0.675	0.493	0.57	0.653
1/2	0.840	0.622	0.85	0.982
3/4	1.050	0.824	1.13	1.360
1	1.315	1.049	1.68	2.054
1 1/4	1.660	1.380	2.27	2.913
1 1/2	1.900	1.610	2.72	3.602
2	2.375	2.067	3.65	5.105
2 1/2	2.875	2.469	5.79	7.866
3	3.500	3.068	7.58	10.78
3 1/2	4.000	3.548	9.11	13.39
4	4.500	4.026	10.80	16.31
5	5.563	5.047	14.60	23.26
6	6.625	6.065	19.00	31.51
8	8.625	7.981	28.60	50.29
10	10.750	10.020	40.50	74.65
12	12.750	11.938	53.60	102.00

Schedule 80: Steel Pipe				
Nominal Pipe Size in.	Outside Diameter in.	Inside Diameter in.	Pipe Weight lbs./ft.	Pipe & Water Weight lbs./ft.
3/8	0.675	0.423	0.74	0.801
1/2	0.840	0.546	1.09	1.191
3/4	1.050	0.742	1.47	1.668
1	1.315	0.957	2.17	2.481
1 1/4	1.660	1.278	2.27	2.913
1 1/2	1.900	1.500	2.72	3.602
2	2.375	1.939	5.03	6.309
2 1/2	2.875	2.323	7.66	9.497
3	3.500	2.900	10.30	13.16
3 1/2	4.000	3.364	12.50	16.35
4	4.500	3.826	15.00	19.98
5	5.563	4.813	20.80	28.69
6	6.625	5.761	28.60	39.89
8	8.625	7.625	43.40	63.20
10	10.750	9.564	64.30	95.40
12	12.750	11.376	88.50	132.50

Product Range

Marzocchi gear pumps are available in three different groups (1A, 2A, 3A). Different pump displacements within each group, ranging between 0.083 cu. in./rev and 3.170 cu. in./rev, can be obtained by changing the thickness of the gear tooth band.

Within the same group, different flanges, shafts, inlet and pressure ports are available.

The following items are also available (consult factory).

- pumps with integrated maximum pressure valve
- hi-pressure pumps
- bi-rotational pumps
- hydraulic motors (both uni-directional and bi-directional)
- modular multiple pumps.

Gear pumps, especially Marzocchi gear pumps, are very versatile thanks to the wide range of available operating speeds. Maximum values are indicated in product tables and vary according to the different models, whereas minimum values are divided by groups and are show in Table A.

Special Version

The following special-use models are available (consult factory).

V– hi-temperature or special fluid

TR– inlet port backpressure up to max. 90 psi absolute

W– low lubricating fluids (groups 1, 2 and 3 only)

VW– low lubricating fluids working at high temperatures or special fluids

Refer to Table B to aid in selecting the pump best suited to your needs. Please call our Sales Department for your application requirements and any special use not included in this catalog. Marzocchi's twenty years of experience

TABLE A

Group	Minimum Rotation Speed (rpm)
1A - 2A	500
3A	400

TABLE B

For values under the aforementioned ones, uniformity of the gear pumps' performance (i.e. - hydro-mechanical and volumetric efficiency) cannot be ensured.

Type	Fluid Composition	Max Pressure (PSI)	Max Speed (RPM)	Temperature (°F)
Standard	mineral oil based hydraulic fluid to ISO-DIN	see product tables	see product tables	5-176
V	mineral oil based hydraulic fluid to ISO-DIN	see product tables	see product tables	14-230
W	water glycol and water emulsion in oil max 50% of water	1500	1000	max 140
VW	glycol water, phosphoric	1500	1000	14-230

How to Order

1A — **Frame Size**
1A=SAE AA
2A=SAE A
3A=SAE B

D — **Rotation**
D=Right hand
S=Left hand

4 — **Shaft Types**
AC=Straight keyed
1A=1/2" dia.
2A=5/8" dia.
3A=7/8" dia.
AS= Splined
1A=9 tooth
2A=9 tooth
3A=13 tooth

AC — **Port Type**
1A-2A Omit=SAE Straight Thread
3A Omit=SAE Flange Port
3A STP=SAE Straight Thread

RO — **Options**
RO= High Pressure (Standard)

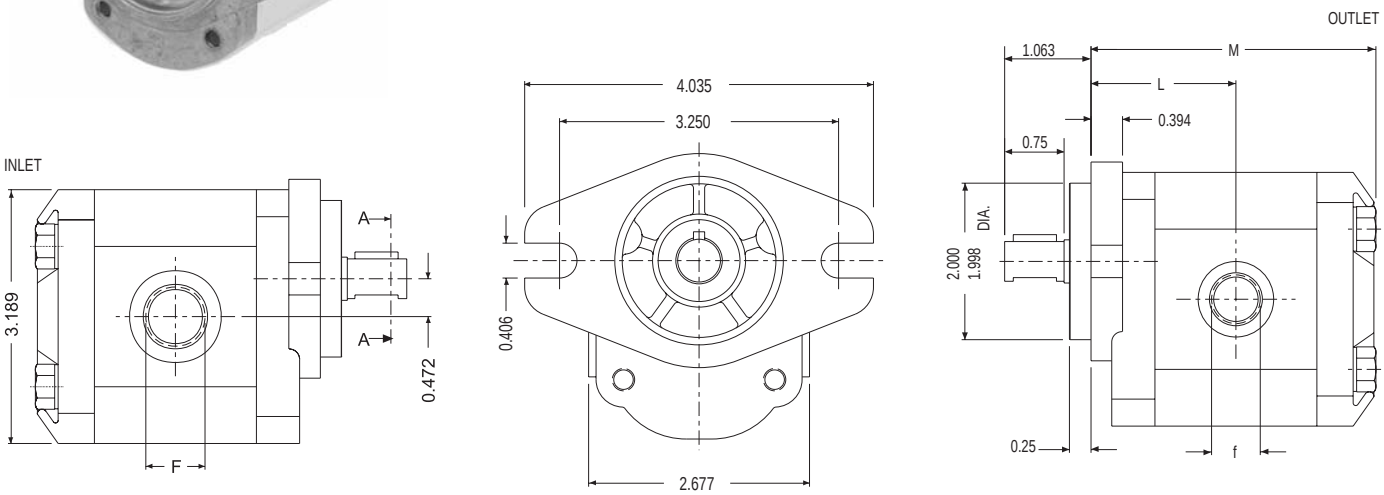
Frame	Code	Pump Rev's	Motor
1A	**2**	1.3cc (0.083cu.in)	-
	3	2.0cc (0.125cu.in)	-
	4	2.7cc (0.167cu.in)	Yes
	5	3.4cc (0.209cu.in)	Yes
	6	4.1cc (0.250cu.in)	Yes
	7	5.1cc (0.313cu.in)	-
	9	6.1cc (0.376cu.in)	-
2A	**9**	6.3cc (0.389cu.in)	-
	10	7.0cc (0.428cu.in)	Yes
	13	9.5cc (0.584cu.in)	Yes
	16	11.3cc (0.701cu.in)	Yes
	20	14.0cc (0.857cu.in)	Yes
	25	17.8cc (0.973cu.in)	Yes
	30	20.8cc (1.285cu.in)	Yes
3A	**33**	22.5cc (1.321cu.in)	-
	40	26.4cc (1.585cu.in)	-
	50	33.7cc (2.025cu.in)	Yes
	60	39.4cc (2.378cu.in)	-
	66	42.7cc (2.642cu.in)	Yes
	80	51.4cc (3.170cu.in)	Yes

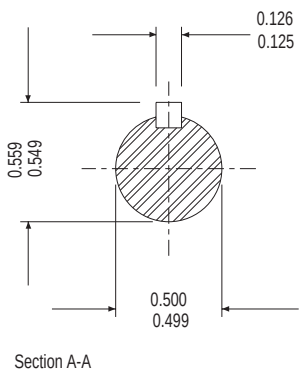
Series 1A RO

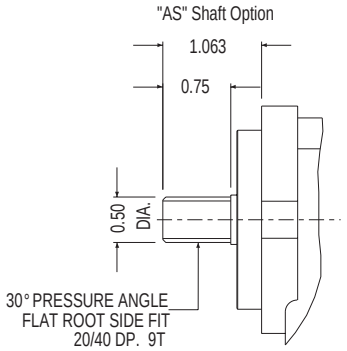
Features

1. Mounting flange 50-2 (SAE AA) in compliance with (SAE J744c)
2. "F" and "f" ports are machined in compliance with threaded port with with o-ring seal in truncated housing SAE J1926/1 (ISO 11926-1)

Options: • "AS": splined shaft machined in compliance with ANSI B92.1a.







Vescor Part No.	Displacement in³/rev	Flow @1725 rpm GPM	Flow @ 3450 rpm GPM	Max Pressure P_1 PSI	Max Pressure P_2 PSI	Max Pressure P_3 PSI	Max Speed rpm	Dimensions M IN	Dimensions L IN	Dimensions F UNF-2B	Dimensions f UNF-2B
1AD2ACRO	0.083	0.623	1.247	3600	4000	4200	6000	3.228	1.654	3/4-16	9/16-18
1AD3ACRO	0.125	0.935	1.870	3600	4000	4200	6000	3.307	1.693	3/4-16	9/16-18
1AD4ACRO	0.167	1.247	2.494	3600	4000	4200	5000	3.386	1.732	3/4-16	9/16-18
1AD5ACRO	0.209	1.558	3.117	3400	3800	4000	5000	3.465	1.772	3/4-16	9/16-18
1AD6ACRO	0.250	1.870	3.740	3400	3800	4000	4000	3.543	1.811	3/4-16	9/16-18
1AD7ACRO	0.313	2.338	4.675	3200	3600	3800	3500	3.661	1.870	3/4-16	9/16-18
1AD8ACRO	0.376	2.805	5.611	3200	3600	3800	3000	3.780	1.983	3/4-16	9/16-18

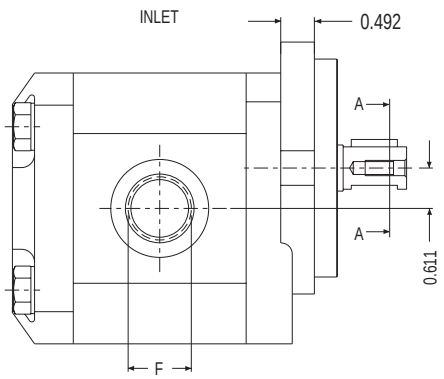
P1=max. continuous pressure **P2**- max. intermittent pressure **P3**=max. peak pressure

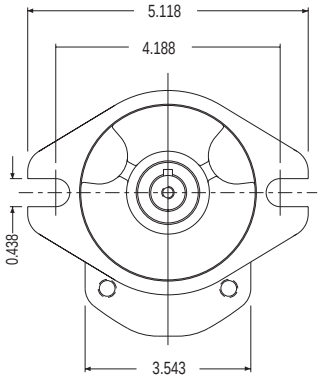
Series 2A RO

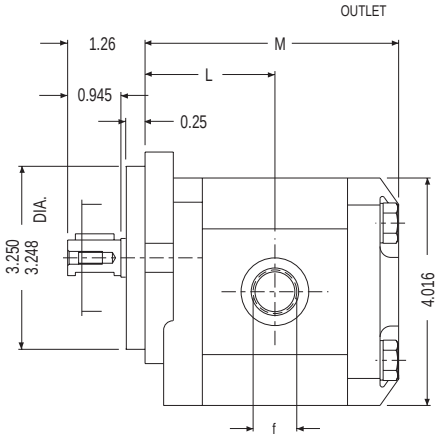
Features

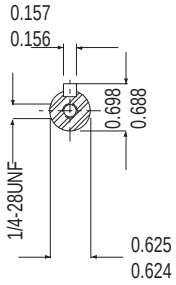
1. Mounting flange 82-2 (SAE A) in compliance with (SAE J744c)
2. "F" and "f" ports are machined in compliance with threaded port with with o-ring seal in truncated housing SAE J1926/1 (ISO 11926-1)

Options: • "AS": splined shaft machined in compliance with ANSI B92.1a.

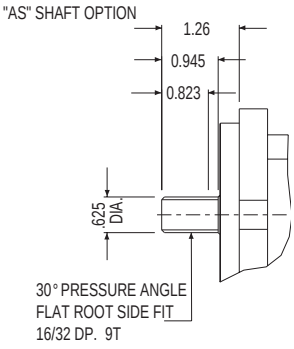








Section A-A



Vescor Part No.	Displacement in³/rev	Flow @1725 rpm GPM	Flow @ 3450 rpm GPM	Max Pressure P_1 PSI	Max Pressure P_2 PSI	Max Pressure P_3 PSI	Max Speed rpm	Dimensions M IN	Dimensions L IN	Dimensions F UNF-2B	Dimensions f UNF-2B
2AD6ACRO	0.273	2.04	4.07	3900	4200	4500	4000	3.701	1.791	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD9ACRO	0.389	2.91	5.81	3900	4200	4500	4000	3.819	1.850	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD10ACRO	0.428	3.20	6.40	3900	4200	4500	4000	3.858	1.870	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD13ACRO	0.584	4.36	8.72	3900	4200	4500	4000	4.016	1.949	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD16ACRO	0.701	5.23	10.47	3900	4200	4500	4000	4.134	2.008	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD20ACRO	0.857	6.40	12.79	3600	3900	4200	3200	4.291	2.087	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD22ACRO	0.973	7.27	14.54	3600	3900	4200	2800	4.409	2.146	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD25ACRO	1.090	8.14	16.28	3600	3900	4200	2500	4.528	2.205	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD30ACRO	1.285	9.59	19.19	3200	3500	3800	2200	4.724	2.303	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD34ACRO	1.441	10.76	21.51	3200	3500	3800	2000	4.882	2.382	$1^{1}/_{16}$-12	$^{7}/_{8}$-14
2AD40ACRO	1.713	12.79	25.58	2800	3000	3300	1800	5.157	2.520	$1^{1}/_{16}$-12	$^{7}/_{8}$-14

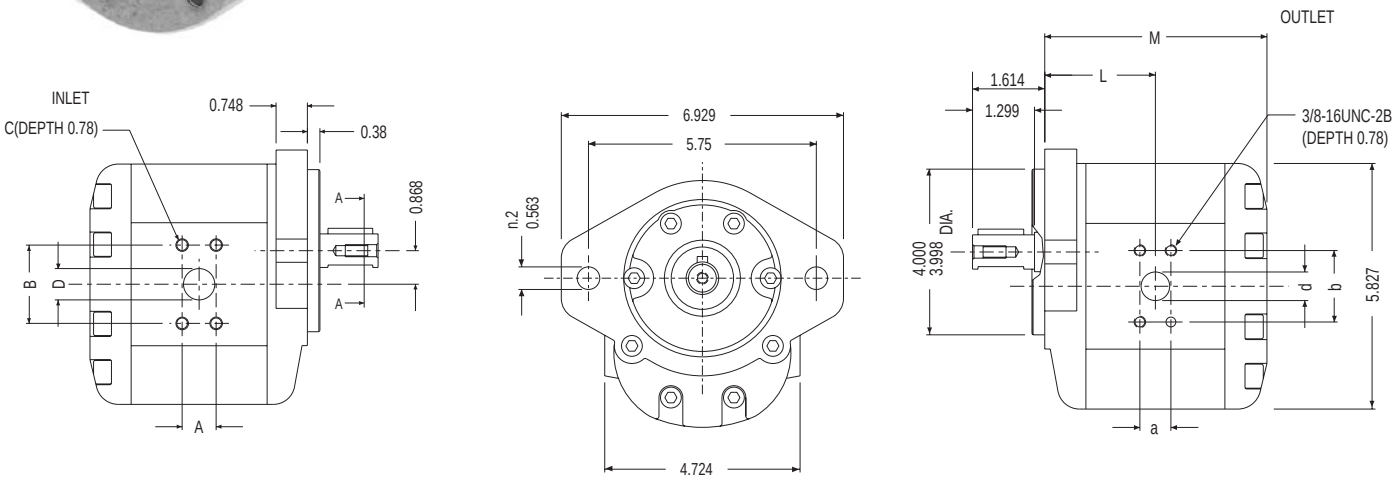
P1=max. continuous pressure **P2**- max. intermittent pressure **P3**=max. peak pressure

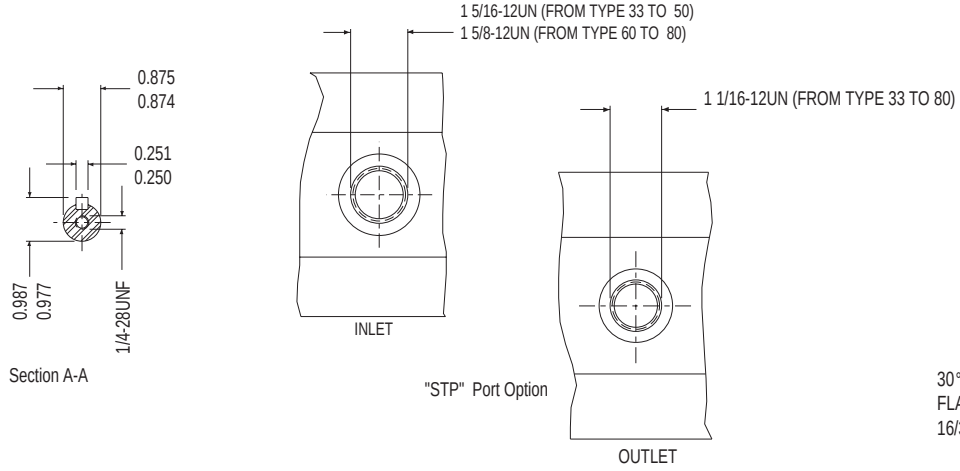
Series 3A RO

Features

1. Mounting flange 101-2 (SAE B) in compliance with (SAE J744c) bores machined in compliance with four-bolt split flange type SAE J518
2. "F" and "f" ports are machined in compliance with threaded port with with o-ring seal in truncated housing SAE J1926/1 (ISO 11926-1)

Options:
- "STP": ports are machined in compliance with threaded port with o-ring seal in truncated housing SAE J1926/1 (ISO 11926-1).
- "AS": splined shaft machined in compliance with ANSI B92.1a.





Vescor Part No.	Displacement in³/rev	Flow @1725 rpm GPM	Flow @3450 rpm GPM	Max Pressure P_1 PSI	P_2 PSI	P_3 PSI	Max Speed rpm	Dimensions M in	L in	A	a	B	b	C UNF-2B	D	d
3AD33ACRO	1.321	9.86	19.73	3900	4200	4500	3500	5.177	2.579	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75
3AD40ACRO	1.585	11.84	23.67	3900	4200	4500	3300	5.295	2.638	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75
3AD50ACRO	2.025	15.12	30.25	3900	4200	4500	3300	5.492	2.736	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75
3AD60ACRO	2.378	17.75	35.51	3600	3900	4200	3000	5.650	2.815	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75
3AD66ACRO	2.642	19.73	39.45	3600	3900	4200	2800	5.768	2.874	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75
3AD80ACRO	3.170	23.67	47.35	3600	3900	4200	2500	6.004	2.992	1.03	0.88	2.06	1.87	3/8-16	1.06	0.75

P1=max. continuous pressure **P2**- max. intermittent pressure **P3**=max. peak pressure