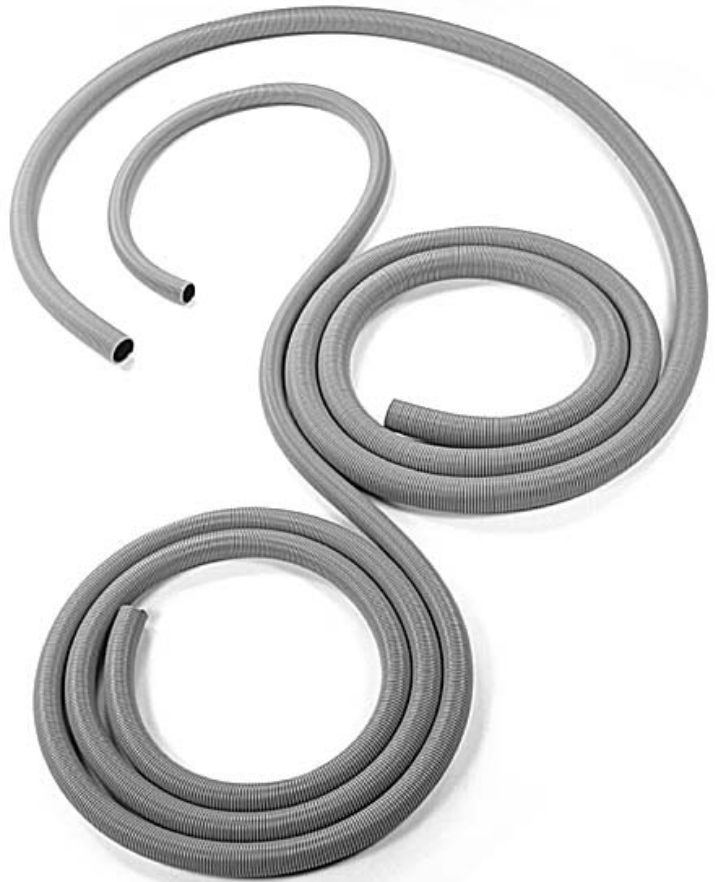


# 5

*Section*

## **Vacuum System Accessories**



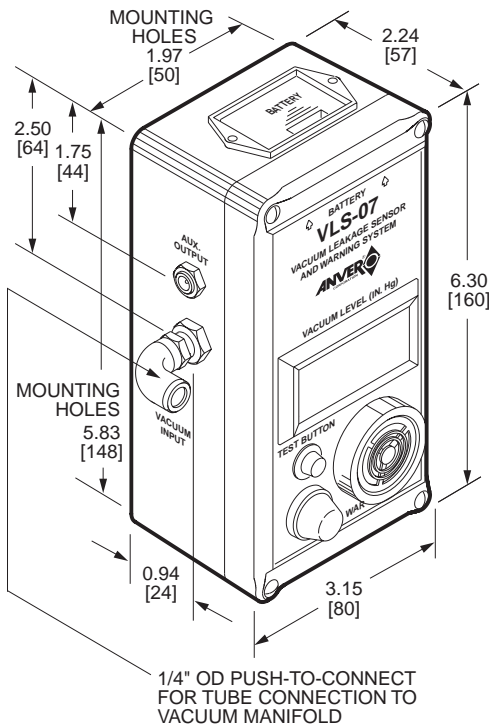
# Vacuum Leakage Sensing Systems

## VLS-07 Vacuum Leakage Sensor



Bulletin No. 132 00 205

Revision: E • Control No. 908130

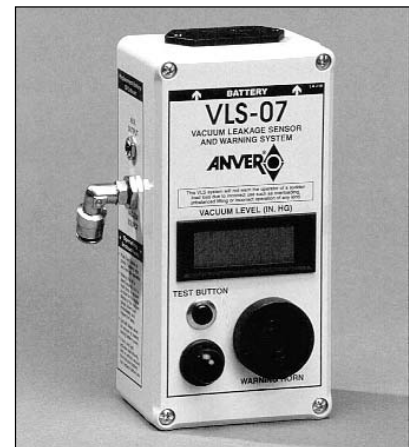


### The Latest in Solid State Vacuum Leakage Detection

The VLS-07 monitors the vacuum level automatically. If vacuum is lost during a lift a loud horn sounds, and a red light flashes to warn the operator. The VLS-07 monitors vacuum level even if the operator is not looking at the lifter, a useful and popular option.

The VLS-07 is a battery powered unit consisting of a pressure sensor, an audible warning horn, red warning light, and test switch, all controlled by a solid state microchip. All ANVER Vacuum Lifters, Vacuum Tilters and Specialty Vacuum Lifting Machinery can be equipped with a VLS-07 Solid State Vacuum Leakage Sensor and Warning System. The system is packaged in a rugged polycarbonate enclosure with a 1/4" push-to-connect fitting for tubing connections.

During each lifting cycle the programmed 'intelligent' processor senses the peak vacuum level. From this point, a 10% loss



of vacuum with a leakage rate of less than 1½ in. Hg per second from that peak level will trigger the horn and light, informing the operator of a leak. The alarm will not sound on the detach cycle as with other primitive systems using preset switches. Even the smallest leak anywhere in the system will be detected. The VLS-07 system automatically monitors the vacuum level for the operator.

### Features

- Advanced Solid State Circuitry with Micro-Controller
- Precise, Reliable, Board Mounted Vacuum Transducer
- LCD Digital Display of Vacuum Level in Inches of Hg
- Audible Warning Horn
- Bright Flashing Red LED Warning Light
- Push-to-Connect Vacuum Source Port to Connect to Vacuum Manifold
- Auxiliary Output Jack to Connect to Optional VLS-07- AUX-S Auxiliary Siren/Alarm
- Easy Access to Battery Compartment
- Low Battery "Chirp" Indicator
- Light / Horn / LCD Test Button
- Powered by One Standard 9V Lithium Battery (included)

### Principle Of Operation

The VLS-07 Vacuum Leakage Sensor is a vacuum level differential detector which is pre-programmed to activate the alarm at a 10% reduction in vacuum with a leakage rate of less than 1.5 inches Hg per second. The alarm will continue until a sufficient increase in vacuum is achieved, indicating no additional leakage is present, or the indicated vacuum level drops below 5 inches Hg. The horn, LED (red light) and LCD (digital display) can be tested by pressing and holding the "Test Button" for approximately 3 seconds. The unit is also equipped with a low battery indicator which will cause the horn to "chirp" and the LED to flash when battery power is low. The battery should be replaced immediately with a standard 9V lithium battery. The auxiliary output jack on the VLS-07 is an open collector output which can be connected directly to the VLS-07-AUX-S (auxiliary siren/strobe), or to another I/O device, such as an emergency stop function on a CNC control, through a solid state relay. The unit is provided with Mounting Holes for 4 #10 Self-Tapping Screws.

### Warning

The VLS-07 is designed to be a warning device for vacuum leakage detection. When properly installed on an ANVER vacuum lifter, the operator will be warned of a slow vacuum leakage and should have adequate time to safely lower the attached load. If the alarm signal is ignored and the lifting operation is continued, the vacuum loss may adversely affect the vacuum "hold", possibly resulting in serious injury to the operator. The VLS-07 is not designed for nor effective in detecting fast leaks or sudden failures of the vacuum system.

**THIS VACUUM LEAKAGE WARNING DEVICE WILL NOT PROVIDE TIMELY WARNING TO THE OPERATOR THAT A REDUCTION IN VACUUM HAS OCCURRED DUE TO INCORRECT USE OF A VACUUM LIFTER, SUCH AS OVERLOADING, LIFTING OVERSIZED LOADS, UNBALANCED LIFTING OR IMPROPER OPERATION OF ANY KIND.**

**Ordering Information:** Order by the Part No.

For more information on the VLS-07-AUX-S reference Bulletin No. 132 00 343

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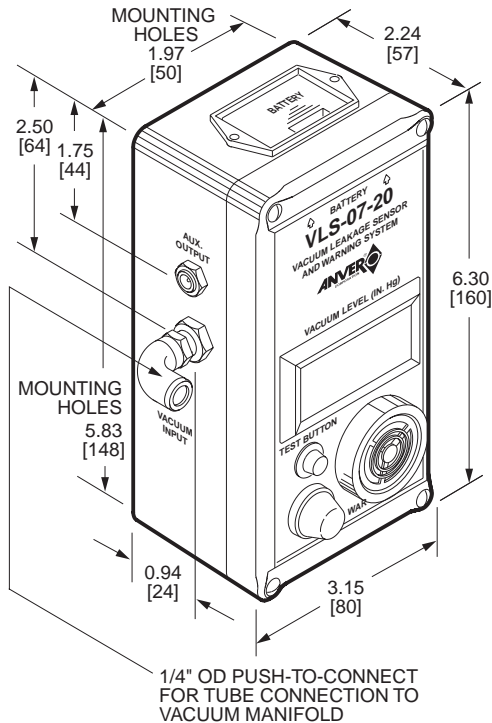
# Vacuum Leakage Sensing Systems

## VLS-07-20 Vacuum Leakage Sensor



Bulletin No. 132 00 342

Revision: B • Control No. 909130

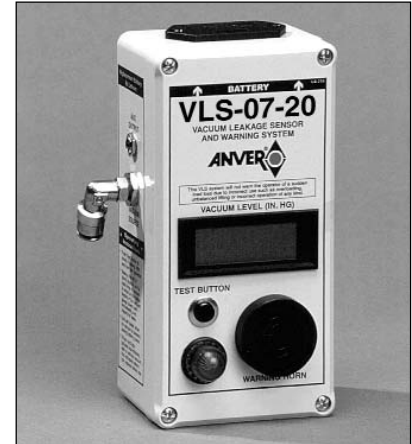


### The Latest in Solid State Vacuum Leakage Detection

The VLS-07-20 monitors the vacuum level automatically. If vacuum is lost during a lift a loud horn sounds, and a red light flashes to warn the operator. The VLS-07-20 monitors vacuum level even if the operator is not looking at the lifter, a useful and popular option.

The VLS-07-20 is a battery powered unit consisting of a pressure sensor, an audible warning horn, red warning light, and test switch, all controlled by a solid state microchip. All ANVER Vacuum Lifters, Vacuum Tilters and Specialty Vacuum Lifting Machinery can be equipped with a VLS-07-20 Solid State Vacuum Leakage Sensor and Warning System. The system is packaged in a rugged polycarbonate enclosure with a 1/4" push-to-connect fitting for tubing connections.

During each lifting cycle the programmed 'intelligent' processor senses the peak vacuum level. From this point, a 20% loss



of vacuum with a leakage rate of less than 1½ in. Hg per second from that peak level will trigger the horn and light, informing the operator of a leak. The alarm will not sound on the detach cycle as with other primitive systems using preset switches. Even the smallest leak anywhere in the system will be detected. The VLS-07-20 system automatically monitors the vacuum level for the operator.

### Features

- Advanced Solid State Circuitry with Micro-Controller
- Precise, Reliable, Board Mounted Vacuum Transducer
- LCD Digital Display of Vacuum Level in Inches of Hg
- Audible Warning Horn
- Bright Flashing Red LED Warning Light
- Push-to-Connect Vacuum Source Port to Connect to Vacuum Manifold

- Auxiliary Output Jack to Connect to Optional VLS-07- AUX-S Auxiliary Siren/Alarm
- Easy Access to Battery Compartment
- Low Battery "Chirp" Indicator
- Light / Horn / LCD Test Button
- Powered by One Standard 9V Lithium Battery (included)

Contact Factory for application information

### Principle Of Operation

The VLS-07-20 Vacuum Leakage Sensor is a vacuum level differential detector which is pre-programmed to activate the alarm at a 20% reduction in vacuum with a leakage rate of less than 1.5 inches Hg per second. The alarm will continue until a sufficient increase in vacuum is achieved, indicating no additional leakage is present, or the indicated vacuum level drops below 5 inches Hg. The horn, LED (red light) and LCD (digital display) can be tested by pressing and holding the "Test Button" for approximately 3 seconds. The unit is also equipped with a low battery indicator which will cause the horn to "chirp" and the LED to flash when battery power is low. The battery should be replaced immediately with a standard 9V lithium battery. The auxiliary output jack on the VLS-07-20 is an open collector output which can be connected directly to the VLS-07-AUX-S (auxiliary siren/strobe), or to another I/O device, such as an emergency stop function on a CNC control, through a solid state relay. The unit is provided with Mounting Holes for 4 #10 Self-Tapping Screws.

### Warning

The VLS-07-20 is designed to be a warning device for vacuum leakage detection. When properly installed on an ANVER vacuum lifter, the operator will be warned of a slow vacuum leakage and should have adequate time to safely lower the attached load. If the alarm signal is ignored and the lifting operation is continued, the vacuum loss may adversely affect the vacuum "hold", possibly resulting in serious injury to the operator. The VLS-07-20 is not designed for nor effective in detecting fast leaks or sudden failures of the vacuum system.

**THIS VACUUM LEAKAGE WARNING DEVICE WILL NOT PROVIDE TIMELY WARNING TO THE OPERATOR THAT A REDUCTION IN VACUUM HAS OCCURRED DUE TO INCORRECT USE OF A VACUUM LIFTER, SUCH AS OVERLOADING, LIFTING OVERSIZED LOADS, UNBALANCED LIFTING OR IMPROPER OPERATION OF ANY KIND.**

**Ordering Information:** Order by the Part No.

For more information on the VLS-07-AUX-S reference Bulletin No. 132 00 343

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# Vacuum Leakage Sensing Systems

## VLS-07-AUX-S Auxiliary Siren/Alarm



**Bulletin No. 132 00 343**  
Revision: A • Control No. 909130



VLS-07-AUX-S

VLS-07

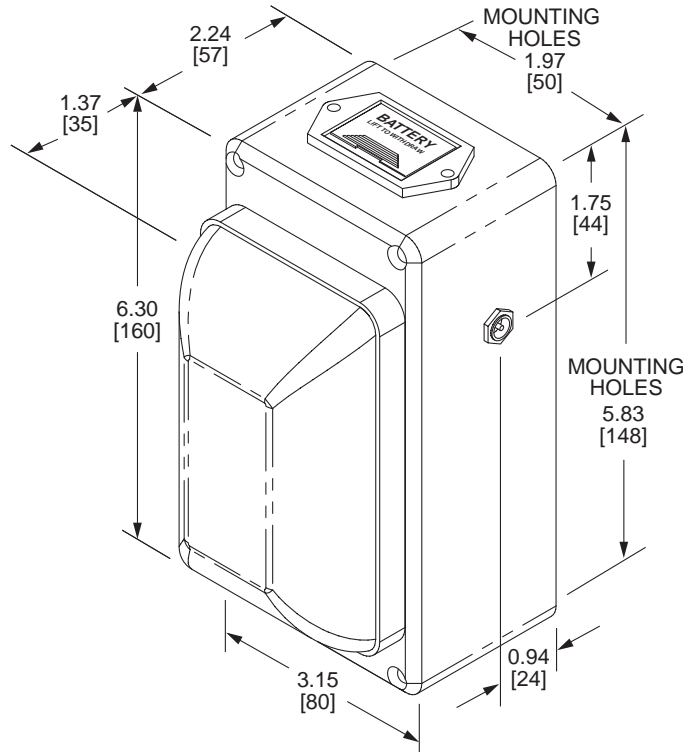
### ANVER VLS-07-AUX-S Auxiliary Siren/Alarm

The VLS-07-AUX-S is a peripheral device designed to be connected to the VLS-07 vacuum leakage sensor. When the VLS-07 warning is activated the VLS-07-AUX-S sounds a loud, 105db(A) siren and the flashing strobe is initiated. This add-on device is ideal for noisy environments, where the lifter is at a distance from the operator or where other personnel may be in the general area of use.

This device has a self contained, easily accessible 9V battery and plugs directly into the Aux Output Port on the side of the VLS-07 unit with a signal cable 25" [63.5 cm] long (included).

### Ordering Information:

.....  
Order by the Part No.  
.....



# Vacuum System Accessories

## Vacuum Leakage Sensing Systems



### VLS-07-20 Leakage Sensor

The VLS-07 Vacuum Leakage Sensor is also available for Lifters where some vacuum loss is acceptable as long as the vacuum level is within the safe operating range. The VLS-07-20 is set to sound at a 20% loss of vacuum from peak level instead of 10%. These systems are recommended for handling semi-porous to porous loads, on systems using foam vacuum pads, or where the vacuum pump is pre-set to regenerate vacuum after a 15% vacuum loss. If the pump fails to restart or if the leakage is too great, the alarm will sound informing the operator of a possible problem.



ANVER Item No.	Description
VLS-07	Vacuum Leakage Sensor and Warning Device
VLS-07-20	Vacuum Leakage Sensor and Warning Device, Special 20% Version
VLS-07-AUX-S	Auxiliary Alarm for VLS-07

**NOTE:**

The **VLS-01** and **VLS-02** are no longer manufactured by or available from ANVER. Retrofit Kits are available to Repair/Upgrade the VLS-01 and VLS-02. Contact factory for details.

# Vacuum Filters and Vacuum Mufflers



## Metal Filters with Snap-On Covers



### FLT-3 Plastic Filter Assemblies

ANVER'S FLT-3 Series Plastic Filters are specifically designed for use with high air flow vacuum lifting systems. By comparing the vacuum level on the filter and the vacuum level on the vacuum attachment head, the operator can monitor the filter status at a glance. A reduction differential in vacuum level provides an indication of when the filter element needs to be cleaned or replaced. The FLT-3 is a lightweight high-flow filter, with replaceable filter elements, and is available with either 1 1/2" or 2" slip-in hose ports.

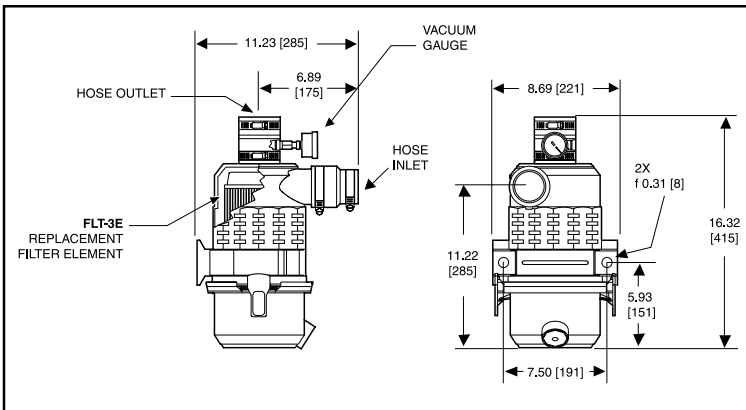
### FLT-4 Metal Filter Assemblies

ANVER'S FLT-4 Series vacuum filters feature durable steel construction and industry-standard filter elements. The filter element protects the vacuum pump under normal operating conditions. These filters are ideally suited for most of today's material handling equipment applications.

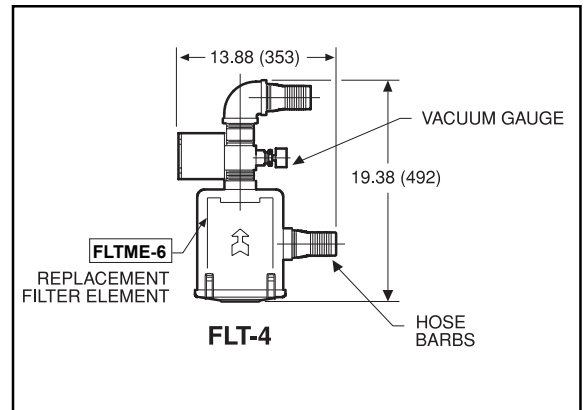
#### Features:

- High carbon steel construction
- Snap-on fasteners for easy element inspection and replacement
- Industry-standard sizes make these filters interchangeable with other brands
- Includes a 10 micron standard filter element
- Perfect for OEM use
- Factory-inspected seals for 100% airtight systems
- Includes an ANVER Vacuum Gauge for monitoring the filter status

ANVER Item No.	Description
FLT-3-1.5A	Filter Assembly, FLT-3 with Gauge and Adapters for 1.5" (38.1 mm) Hose
FLT-3-2.0A	Filter Assembly, FLT-3 with Gauge and Adapters for 2" (50.8 mm) Hose
FLT-3E	Filter Element, for FLT-3 Series Filters, 10 Micron
FLT-4-1.5A	Filter Assembly, FLT-4 with Gauge, Bracket, and Adapters for 1.5" (38.1 mm) Hose
FLT-4-2.0A	Filter Assembly, FLT-4 with Gauge, Bracket, and Adapters for 2" (50.8 mm) Hose
FLT-4-1.5A-BV	Filter Assembly, FLT-4 with Bleeder Valve and Hardware for 1.5" (38.1 mm) Hose
FLT-4-2.0A-BV	Filter Assembly, FLT-4 with Bleeder Valve and Hardware for 2" (50.8 mm) Hose
FLT-4-1.5A-RV	Filter Assembly, FLT-4 with Vacuum Relief Valve and Hardware for 1.5" (38.1 mm) Hose
FLT-4-2.0A-RV	Filter Assembly, FLT-4 with Vacuum Relief Valve and Hardware for 2" (50.8 mm) Hose



FLT-3 Series Filter Assemblies



FLT-4 Series Filter Assemblies

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# Vacuum Filters and Mufflers



## Metal Construction Vacuum Filters



### FLTM Series

ANVER Metal Vacuum Filters have proven to be well suited for industrial applications where they are exposed and metal piping of the manifold is used. Used in a variety of vacuum applications, this line of high quality rugged filters boasts durable steel construction and industry-standard filter elements.

The filter element protects the vacuum pump under normal operating conditions. The quick-release fasteners facilitate inspection and replacement of the filter cartridge. Each unit is tested to ensure a complete seal. The inlet and outlet ports have female threads. These are exact replacements for filters used by premium European pump manufacturers. They are black and are perfect for OEM use.

#### Design Features:

- High Carbon Steel Construction
- Snap-on Fasteners for Easy Element Replacement
- Industry Standard Sizes: Interchangeable With Most Makes
- 10 Micron Standard Treated Filter Element

Unstamped and Unmarked for OEM Use - Insures Future Replacement Business  
Factory Inspected Seals for 100% Airtight Systems

#### Cleaning Requirements:

Check filter regularly. A vacuum gauge is helpful in determining the need for replacement.

Replace when clogged or damaged. The Snap-off lid makes this easy and efficient.

#### Application:

Vacuum Material Handling Equipment and Automation Systems  
Printing and Paper Making Machinery  
Woodworking Machinery  
Vacuum Heat Treatment Systems

ANVER Item No.	Competitor's Filter Number*	Port Size (NPT)	Max. Flow scfm (l/min.)	Overall Dia. in. (mm)	Height in. (mm)	Weight lb (kg)	Replacement Element Number	Competitor's Element Number*
FLTM-3/8	N/A	3/8"	14 (396)	3.10 (78.7)	2.99 (76.2)	0.6 (0.3)	FLTME-1	N/A
FLTM-1/2	PSF.5	1/2"	18 (510)	4.00 (101.6)	3.39 (86.4)	1.2 (0.6)	FLTME-2	PSF.5RE
FLTM-3/4	PSF.75	3/4"	21 (595)	4.00 (101.6)	3.39 (86.4)	1.2 (0.6)	FLTME-2	PSF.5RE
FLTM-1.25S	N/A	1-1/4" (Short Style)	84 (2380)	5.31 (134.9)	3.84 (97.5)	2.4 (1.1)	FLTME-3	N/A
FLTM-1.25T	N/A	1-1/4" (Tall Style)	84 (2380)	6.80 (172.7)	6.14 (157.5)	3.7 (1.7)	FLTME-5	PSF1.5RE
FLTM-1.5	PSF1.5	1-1/2"	112 (3172)	6.80 (172.7)	7.32 (185.4)	4.4 (2.0)	FLTME-5	PSF1.5RE
FLTM-2.0	PSF2.0	2"	175 (4955)	7.90 (200.7)	10.16 (295.1)	8.2 (3.7)	FLTME-6	PSF2.0RE

Replacement Element Number	Outside Diameter in. (mm)	Inside Diameter in. (mm)	Overall Height in. (mm)	Competitor's Element Number*
FLTME-1	1.97" (50)	0.93" (23.5)	2.28" (58)	N/A
FLTME-2	2.52" (64)	1.49" (38)	2.72" (69)	PSF.5RE
FLTME-3	3.86" (98)	2.36" (60)	2.79" (71)	N/A
FLTME-5	5.00" (127)	2.52" (64)	4.92" (125)	PSF1.5RE
FLTME-6	5.91" (150)	3.46" (88)	8.35" (212)	PSF2.0RE

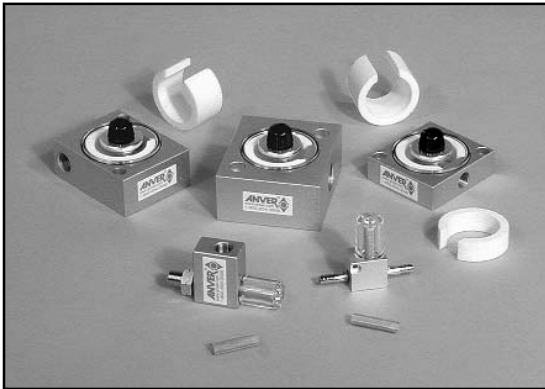
\*NOTE: These filters and elements are exact replacement for the competitor's metal filters.

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# Vacuum Filters and Mufflers



## ANVER CVM Series

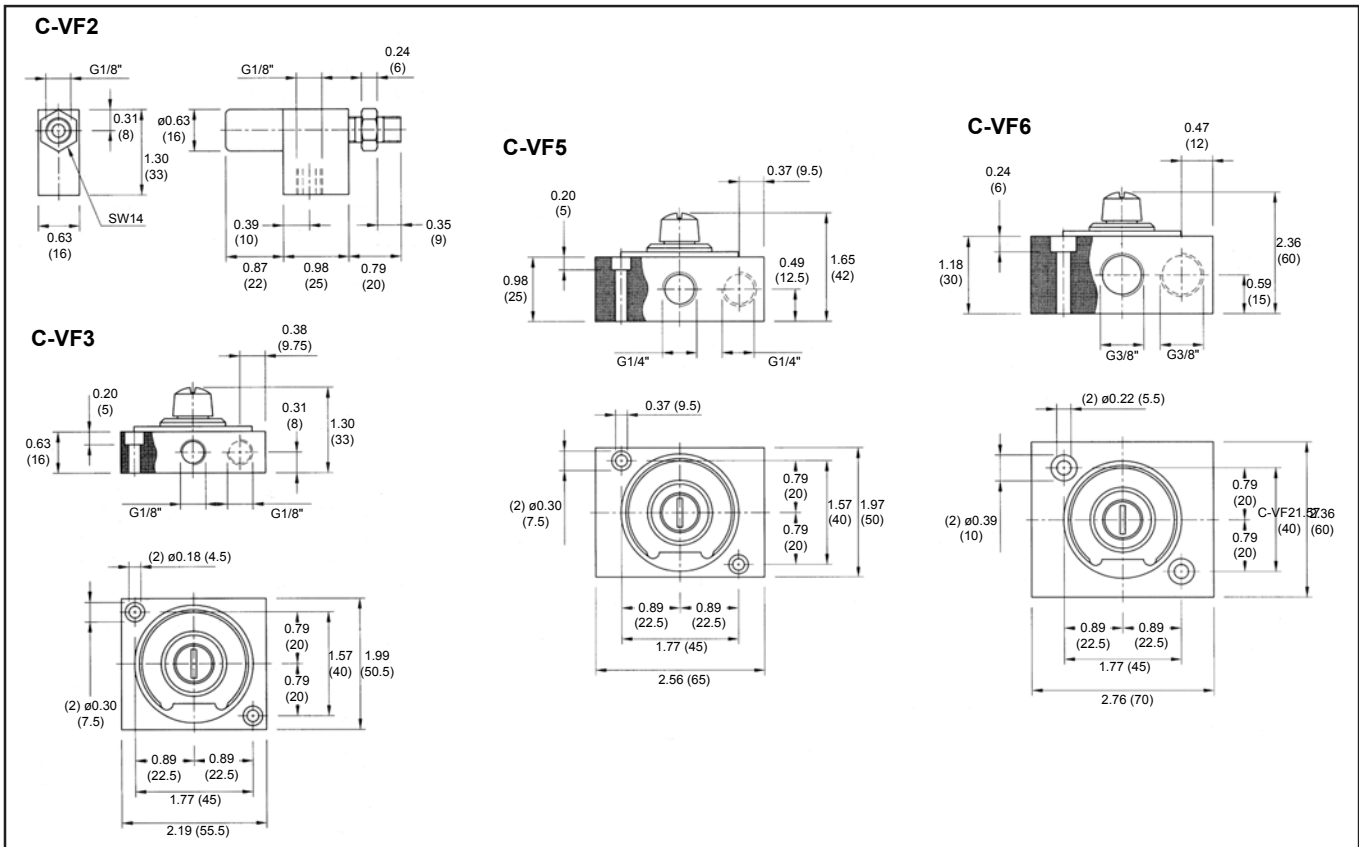


### Replacement Vacuum Filters

Popular Style Replacement Vacuum Filters now with even Lower Prices! A great value for top quality replacement filters without paying for the name brand price.

Media: Non-Corrosive Air  
 Operating Vacuum: 0 to -960 mbar  
 Maximum Pressure: 5 bar  
 Operating Temperature: 32° to 140° F (0 to 60° C)  
 Filtration: 120 µm (C-VF2)  
 130 µm (C-VF3, C-VF-5, C-VF-6)

ANVER Item No.	For Ejector	Male Connector	Material Housing	Material Filter Element	Inner Volume in. <sup>3</sup> (cm <sup>3</sup> )	Weight oz. (g)	Replacement Filter Element
C-VF2	CV-05,-10 MCA-05	G 1/8"	Aluminum	Acrylic, SS	0.21 (3.5)	1.59 (45)	C-VF2E
C-VF3	CV-05,-10 MCA-05	G 1/8"	Aluminum	PC, Polyvinyl	0.79 (13)	3.17 (90)	C-VF3E
C-VF5	CV-15 MCA-10/13	G 1/4"	Aluminum	PC, Polyvinyl	1.43 (23.5)	5.29 (150)	C-VF5E
C-VF6	CV-20	G 3/8"	Aluminum	PC, Polyvinyl	2.01 (33)	8.29 (235)	C-VF6E



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# Vacuum Filters and Mufflers



## Plastic In-Line Type



### FLTP Series

These are absolutely great vacuum filters for use with vacuum pumps and vacuum systems. They are 100% airtight, even after repeated element changes; you can easily see when the element needs changing; they do not corrode or rust; and the element works well even on fine dust.

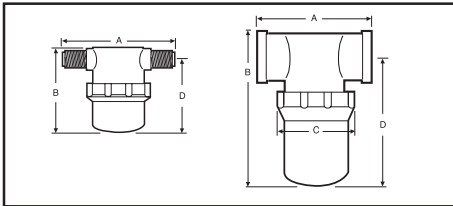
These filters are used to protect valves, pumps, ejectors, etc., from dust and other harmful particles. In-line filters are designed to be serviced without removing the entire unit from the line.

You can simply remove the bowl by hand and clean or change the filter element. The transparent polycarbonate bowl allows you to easily monitor the filter condition.

ANVER vacuum filters range in size from 1/4" to 1-1/2" NPT and are constructed from FDA approved black nylon. If space permits, use of the longer size bowl will require fewer element changes.

### Vacuum Filters are designed for years of reliable, leak-proof use:

- FDA approved Black Nylon Body is corrosion and rust proof, and shock-proof
- Buna-N Gasket seals the bowl to the housing
- 70-140 micron polyethylene filter element
- Transparent polycarbonate bowl shows condition of filter
- Pressure rating from full vacuum to 150 psi
- Maximum temperature 125° F (50° C) at 100 psi



ANVER Item No.	Competitor's Filter Number*	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	Filter area in. <sup>2</sup> (cm <sup>2</sup> )	Pipe Thread NPT	Replacement Element Number	Competitor's Element No.**
FLTP-1/8F	PPSF .125-X10	3.1 (78.7)	2.4 (61)	1.9 (48.3)	2.0 (50.8)	4.27 (27.5)	1/8" NPT Female	FLTPE-1	PPX10RE3
FLTP-1/4M	-	3.1 (78.7)	2.4 (61)	1.9 (48.3)	2.0 (50.8)	4.27 (27.5)	1/4" NPT Male	FLTPE-1	PPX10RE3
FLTP-1/4F	PPSF .25-X10	3.1 (78.7)	2.4 (61)	1.9 (48.3)	2.0 (50.8)	4.27 (27.5)	1/4" NPT Female	FLTPE-1	PPX10RE3
FLTP-3/8M	-	3.1 (78.7)	2.4 (61)	1.9 (48.3)	2.0 (50.8)	4.27 (27.5)	3/8" NPT Male	FLTPE-1	PPX10RE3
FLTP-3/8FS	PPSF .375-X10	3.1 (78.7)	2.4 (61)	1.9 (48.3)	2.0 (50.8)	4.27 (27.5)	3/8" NPT Female	FLTPE-1	PPX10RE3
FLTP-3/8F	-	3.6 (91.4)	5.1 (129.5)	2.9 (73.6)	4.4 (111.8)	19 (122.6)	3/8" NPT Female	FLTPE-2	PPX35RE3
FLTP-1/2F	PPSF .5-X35	3.6 (91.4)	5.1 (129.5)	2.9 (73.6)	4.4 (111.8)	19 (122.6)	1/2" NPT Female	FLTPE-2	PPX35RE3
FLTP-3/4F	PPSF .75-X35	3.6 (91.4)	5.4 (137.2)	2.9 (73.6)	4.6 (116.9)	19 (122.6)	3/4" NPT Female	FLTPE-2	PPX35RE3
FLTP-1F	PPSF 1.0-X50	4.9 (124.5)	6.4 (162.6)	4.0 (101.6)	5.6 (142.2)	33 (212.9)	1" NPT Female	FLTPE-3	PPX50RE3
FLTP-1.5F	-	5.2 (132.1)	8.1 (209.9)	4.0 (101.6)	6.9 (175.3)	39 (251.6)	1-1/2" NPT Female	FLTPE-4	N/A

\*NOTE: ANVER Plastic Filters and Elements are Direct Replacements for the competitor's filters.

\*\*ANVER replacement elements are 1 piece while the competitor's elements are 3 pieces.

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# Vacuum Filters and Mufflers



## Disposable Vacuum Filters

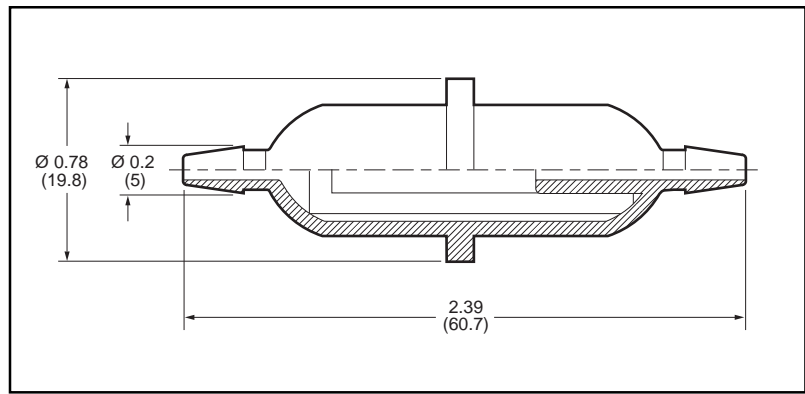
### In-Line Barbed Vacuum Filters

Miniature Quick Change Replacement In-Line Barbed Vacuum Filters. Small, Lightweight and Available with either 10 Micron or 25 Micron Filter Elements.

Simply throw them away when used and replace with a new filter. These In-Line Barbed Vacuum Filters are inexpensive and small enough to be a disposable item.

- Maximum operating pressure of 0.45 MPa (65 psi)
- Weight is only 4 grams (0.14 ounce)

Inner material: Porous polyethylene  
Outer material: Solid polyethylene



#### ANVER Item No.

#### Description

X-7438

Filter, 10 Micron, for 1/4" (6.35 mm) Tubing

X-7439

Filter, 25 Micron, for 1/4" (6.35 mm) Tubing

# Vacuum Filters and Mufflers



## Drum Vacuum Filters

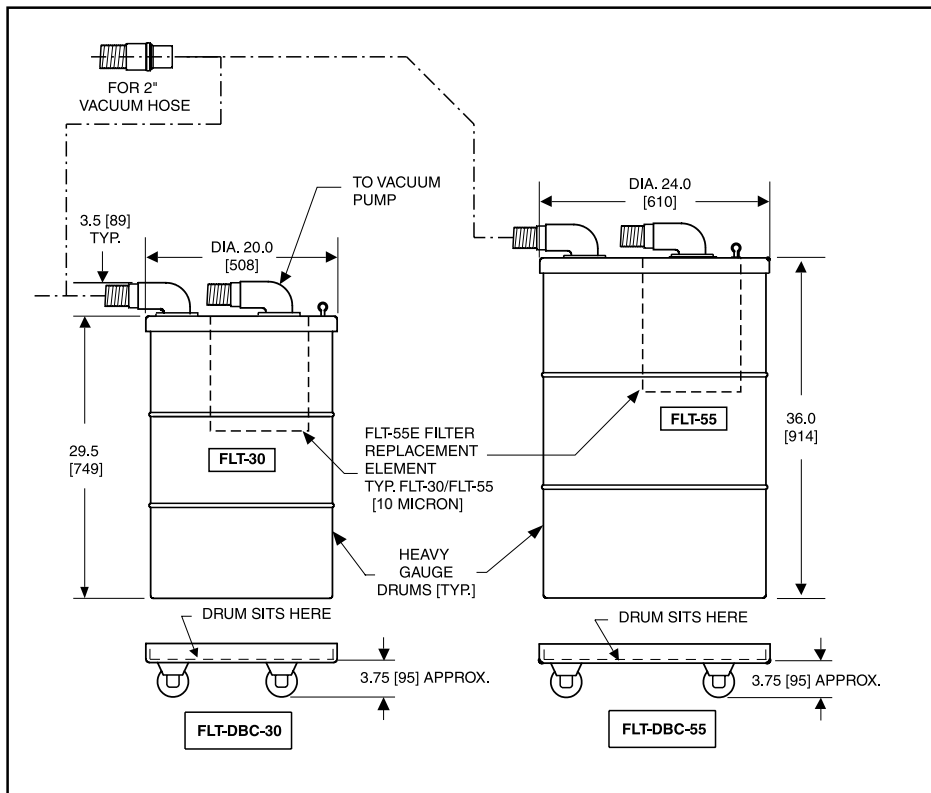


### For Vacuum Tube Lift Systems and other High-Flow Applications

ANVER Drum Filters are specially designed for use with vacuum tube lift systems but are suitable for many other applications. The drums are constructed of very heavy-gauge material to withstand the high vacuum levels typical with a vacuum system. A hose cuff slips inside the fitting on the filter cover. Model FLT-30 is suitable for vacuum levels up to 18" of Hg while Model FLT-55 is rated up to a maximum vacuum level of 12" Hg. Rugged steel stands that accommodate the filters and the pumps are available. An optional base with casters is available to facilitate moving the filter.

Note: Do not place these drum filter heads on other drums in your facility, as they may not have heavy-duty walls as do the ANVER drum filters. This may cause the drums to implode, causing sudden vacuum loss.

ANVER Item No.	Description
FLT-30	Filter, Drum 30 Gallon
FLT-55	Filter, Drum 55 Gallon
FLT-55E	Filter Element, for FLT-55 & FLT-30 (10 Micron)
FLT-DBC-30	Drum Base With Casters for FLT-30
FLT-DBC-55	Drum Base with Casters for FLT-55
ST-3	Floor Mount Generator Stand
ST-W1	Generator Wall Mount Bracket



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## Vacuum Exhaust Mufflers



### Porous Plastic Mufflers

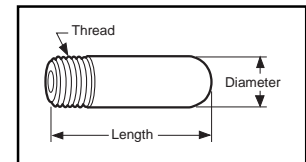
ANVER Porous Plastic Exhaust Mufflers are available in several styles to meet your noise reduction requirements. They all feature standard NPT threads and reduce exhaust noise to within OSHA standards. ANVER Exhaust Mufflers can be used on vacuum pumps, small compressors, pneumatic valves, air motors, rotary/impact air tools, or other similar equipment. (Actual noise reduction depends on application, port size, and working pressure.)

#### Features:

- Reduces noise levels to within OSHA standards
- One-piece design helps prevent "Blow-out"
- Inert material is non-corrosive
- Internal ribs provide structural integrity

#### Specifications:

Materials: High Density Polyethylene (HDPE)  
 Maximum Temperature: 180°F (82°C)  
 Maximum Operating Pressure: 150 psig  
 Decibel Rating: 60-80 dB(A)



ANVER Item No.	Competitor's Filter Number	Thread NPT	Diameter in. (mm)	Length in. (mm)	Filter Size Microns	Weight oz. (g)
M-1032/30	N/A	10-32	0.30 (7.6)	0.94 (24)	30	0.01 (0.28)
M-18/30	N125FF	1/8"	0.50 (12.7)	1.15 (29)	30	0.03 (0.85)
M-18/100	N125	1/8"	0.50 (12.7)	1.15 (29)	100	0.03 (0.85)
M-14/30	N250FF	1/4"	0.66 (16.8)	1.40 (35.6)	30	0.10 (2.84)
M-14/100	N250	1/4"	0.66 (16.8)	1.40 (35.6)	100	0.10 (2.84)
M-38/30	N375FF	3/8"	0.95 (24.1)	2.70 (68.6)	30	0.20 (5.67)
M-38/100	N375	3/8"	0.95 (24.1)	2.70 (68.6)	100	0.20 (5.67)
M-12/30	N500FF	1/2"	0.95 (24.1)	2.70 (68.6)	30	0.30 (8.50)
M-12/100	N500	1/2"	0.95 (24.1)	2.70 (68.6)	100	0.30 (8.50)
M-34/30	N750FF	3/4"	1.53 (38.8)	5.80 (147)	30	0.60 (17.01)
M-34/100	N750	3/4"	1.51 (38.3)	5.82 (148)	100	0.60 (17.01)
M-10/30	N1000FF	1"	1.89 (48.0)	6.61 (168)	30	1.20 (34.02)
M-10/100	N1000	1"	1.89 (48.0)	6.61 (168)	100	1.20 (34.02)

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# Vacuum Filters and Mufflers



## Vacuum Exhaust Mufflers



### Compact Plastic Exhaust Mufflers

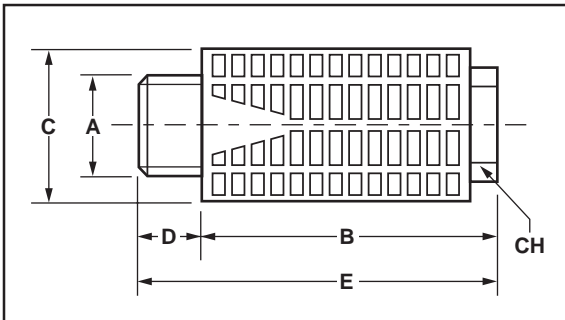
ANVER Compact Exhaust Mufflers are supplied standard on our single stage air powered vacuum pumps. They are also practical for quieting air valves, rotary or impact tools, air motors, and other similar machinery.

#### Features:

- Reduces Noise Levels to within OSHA Standards
- Polyethelene Element is Impervious to Solvents
- Exhaust May Be Directed Away From Personnel
- Minimal Pressure Drop - Does Not Impede Equipment Performance
- Plastic Construction Prevents Damage From Inadvertent Cross Threading

#### Specifications:

Standard Materials: Nylon Housing and Baffle, Polyethelene Element  
 Maximum Temperature: 194°F (90°C)  
 Maximum Operating Pressure: 150 psig



ANVER Item No.	A Thread G	B Body Length in. (mm)	C Overall Width in. (mm)	D Thread Length in. (mm)	E Overall Length in. (mm)	CH Hex in. (mm)	Filter Size in Microns	Weight oz. (g)	Used for Generator #
JMU17	G 1/8" NPT	1.11 (28)	0.62 (16)	0.23 (6)	1.32 (33)	0.39 (9)	50	0.1 (2.8)	N/A
JMU19	G 1/4"	1.42 (36)	0.77 (20)	0.29 (7)	1.69 (43)	0.50 (13)	50	0.2 (5.7)	JB12 JB15
JMU21	G 3/8" NPT	1.85 (47)	0.96 (24)	0.41 (10)	2.22 (56)	0.66 (17)	50	0.4 (11.3)	N/A
JMU24	G 1/2"	1.81 (46)	0.96 (24)	0.40 (10)	2.22 (56)	0.66 (17)	50	0.4 (11.3)	JB20
JMU25	G 1/2"	2.90 (74)	1.25 (32)	0.50 (13)	3.40 (86)	1.57 (40)	50	N/A	JB25

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# Vacuum Filters and Mufflers



## Vacuum Exhaust Mufflers



### Metal Canister Type

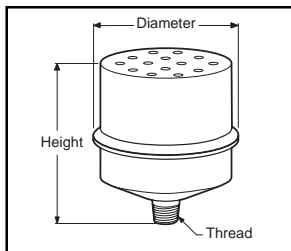
We developed these mufflers for some of our smaller fractional horsepower electric vacuum pumps and they work great. They really quiet the pumps without losing too much performance from back pressure. In fact, there usually is no noticeable performance loss at all. Typical applications include quieting air exhausting from vacuum pumps, small compressors, air motors, air stirrers, air mixers, air cylinders, and other similar machinery. In the right application, these mufflers are quite impressive and economical.

#### Features:

- Reduces Noise Levels to within OSHA Standards
- Activated Carbon Element Purifies Exhaust Air
- Disposable Unit Eliminates Maintenance
- Steel Housing And Brass Fitting Provide Durability for Industrial Applications

#### Specifications:

Materials: Electroless Nickel Plated CRS Housing, Brass Fittings, Activated Carbon Adsorption Media  
 Maximum Temperature: 200° F (93° C)  
 Decibel Rating: 60-63 dB(A) (Actual noise reduction depends on application, port size, and working pressure.)



ANVER Item No.	Thread NPT	Diameter in. (mm)	Height in. (mm)	Max. Operating Pressure	Color	Weight oz. (g)
M-14/5	1/4"	3.00 (76)	2.13 (54)	90 psi	Silver	4 (113)
M-12/5	1/2"	4.00 (102)	4.38 (111)	150 psi	Blue	12 (340)

### General List of Contaminants Removed by Canister Mufflers:

Contaminant	Initial Removal Efficiency	% of Carbon Weight Absorbed for Individual Contaminants (1)	Contaminant	Initial Removal Efficiency	% of Carbon Weight Absorbed for Individual Contaminants (1)
Oil Mist	99.99%	50-60%	Rust	To 0.5 microns	N/A
Oil Aerosols	99.99%	50-60%	Smoke Particles	To 0.5 microns	N/A
Oil Vapors	99.99%	50-60%	Bacteria	To 0.5 microns	N/A
Hydrocarbon Vapors	99.99%	50-60%	Odors	Until Noticeable	N/A
Fat Vapors	99.99%	40-60%	Organic Solvent Vapors	Until Noticeable	15-45%
Moisture Droplets	99.99%	30-50%	Trace Organic Vapors	Until Noticeable	15-45%
Dirt	To 0.5 microns	N/A	Toxic Vapors	Until Noticeable	15-45%
Atmospheric Dust	To 0.5 microns	N/A	Water Vapors	Limited (2)	30-50%
Fine Particles	To 0.5 microns	N/A	Bulk Liquid Water	Not Removed	N/A
Pipe Scale	To 0.5 microns	N/A	Bulk Liquid Oil	Not Removed	N/A

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# Vacuum Filters and Mufflers



## Exhaust Mufflers



### Heavy Duty Quality Exhaust Mufflers

These attractive, quality exhaust mufflers feature a rugged, heavy-duty construction. The top and bottom covers are cast aluminum with a metal perforated housing for heat resistance. The tie rods and nuts are zinc-plated steel. At an in-line pressure of 90 psi, these mufflers reduce the noise level by 17-22 decibels with little impairment of operating efficiency. They are supplied with NPT male connections.

#### Specifications:

Maximum Pressure: 125 psi  
Maximum Temperature: 300° F (149° C)

ANVER Item No.	Thread NPT	Description
MU-VB112	1-1/2"	Exhaust Muffler for Regenerative Vacuum Pumps
MU-VB2	2"	Exhaust Muffler for Regenerative Vacuum Pumps



# Vacuum System Accessories



## Flow-Through Silencers



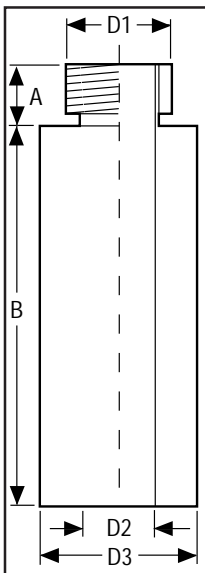
ANVER Flow-Through Silencers avoid clogging by passing debris directly through the silencer. Each silencer is tuned in proportion to its exhaust flow and contains a dense felt liner to absorb exhaust noise minimizing the excess noise to a gentle, low frequency flow of air.

This flow-through design allows debris to easily pass through the silencer. Making them perfect for venturi pumps that are prone to ingesting dirt and debris.

### Specifications:

Standard Materials: Anodized AL - 6061 black, polyurethane foam  
 Maximum Temperature: 176°F (80°C)  
 Maximum Operating Pressure: 150 PSI  
 Color: Black

(Actual noise reduction will depend on application, port size, and working pressure.)



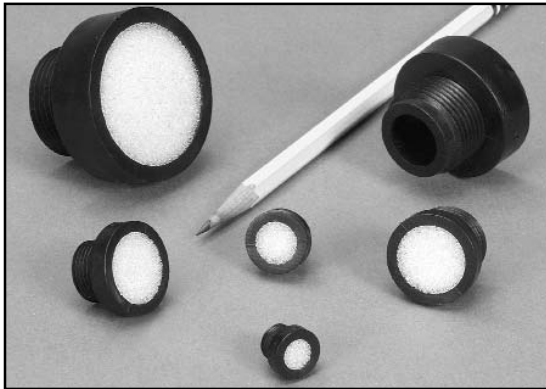
ANVER Item No.	Thread BSP	A in. (mm)	B in. (mm)	D1 Thread	D2 in. (mm)	D3 in. (mm)	Weight oz. (g)
FTS-0.125	1/8	0.31 (8)	2.75 (70)	1/8	0.19 (5)	0.75 (19)	0.6 (17)
FTS-0.250	1/4	0.31 (8)	2.75 (70)	1/4	0.27 (7)	0.98 (25)	0.9 (25)
FTS-0.375	3/8	0.43 (11)	2.75 (70)	3/8	0.43 (11)	0.94 (24)	1.2 (34)
FTS-0.500	1/2	0.51 (13)	2.95 (75)	1/2	0.51 (13)	1.65 (42)	1.6 (45)
FTS-0.750S	3/4	0.59 (15)	2.95 (75)	3/4	0.71 (18)	1.65 (42)	2.5 (71)
FTS-1.5	1-1/2	0.69 (17.5)	6.3 (160)	1-1/2	1.32 (33.5)	2.24 (57)	7.6 (215)



# Vacuum System Accessories



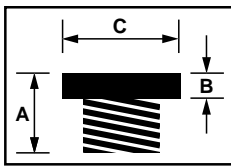
## Silent Breather Vents



These simple low cost Breather Vents work well in many applications where metal vents were used in the past. They will not corrode, rust or break down while being economical. The treads have a bit of give being plastic and thus seal well. The threads never seize in place and can be screwed in by hand. The Vents are perfect for OEM use. Made in Black they look good on industrial machinery and are essentially trouble free once installed.

These Breather Vents incorporate a solid base of HDPE Plastic and a porous disc of polyethelene. The disc has an average pore size of 60-80 microns. They can be used for low pressure applications of 1 to 5 psi delta P.

The breathers can be cleaned with mineral spirits and are not effected by most acids and bases. Corrosion does not occur in most cases.

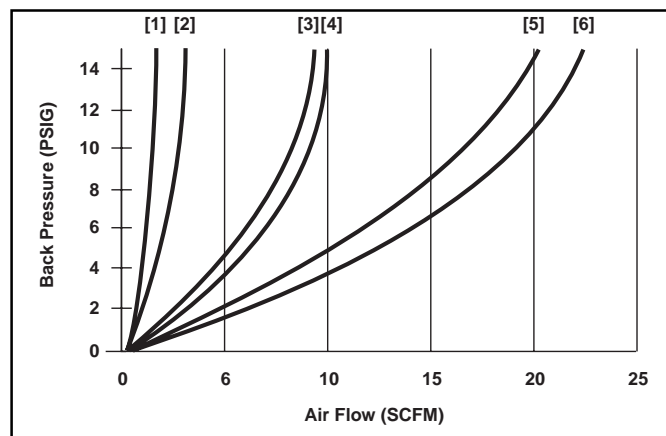


Some uses are: Tank venting, computer cabinet venting, gear box vents, and vacuum relief or pressure equalization. They can be used on single-acting cylinders or the upper end of hydraulic cylinders. Temperature range is -60° to 150° F (-76° to 302° C). Sizes are 1/8" NPT through 1" NPT. BSP threads are also available on request.

ANVER Item No.	Chart Indicator	Size NPT*	A** in. (mm)	B** in. (mm)	C** in. (mm)
ABV-1/8	1	1/8"	0.4062 (10.3)	0.3125 (7.9)	0.5000 (12.7)
ABV-1/4	2	1/4"	0.5000 (12.7)	0.2187 (5.6)	0.6562 (16.7)
ABV-3/8	3	3/8"	0.6562 (16.7)	0.2187 (5.6)	0.9375 (23.8)
ABV-1/2	4	1/2"	0.6562 (16.7)	0.2187 (5.6)	0.9375 (23.8)
ABV-3/4	5	3/4"	1.125 (28.6)	0.5000 (12.7)	1.500 (38.1)
ABV-1	6	1"	1.125 (28.6)	0.6250 (15.9)	1.875 (47.6)

\* BSP also available, call factory \*\* Dimensions are nominal

Note: Breather Vents are not intended for use as Mufflers. Do not install in Exhaust Ports of Valves.



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## Vacuum Hose



### High Flow Plastic Vacuum Hose - HP Series

**Features:**

ANVER HP Series Plastic Vacuum Hose provides excellent flexing characteristics and abrasion resistance. It is ideal for porous load handling applications that require low to medium vacuum and high air flow. The smooth inner surface minimizes both pressure drop and loss of flow.

**Applications:**

Recommended for vacuum material handling systems utilizing vacuum pumps with large diameter ports.

**Specifications:**

Vacuum: 29" Hg

Temperature: -40° to 140° F

Color: Medium blue exterior shell over a black interior

ANVER Item No.	Inside Dia. in. (mm)	Length ft (m)	Features	Hose Connections
HP150-25	1½ (38)	25 (7.6)	Light Blue	1½" Cuff to 2" Barb 1½" Connector 1½" Cuff
HP150-50	1½ (38)	50 (15.2)	Light Blue	1½" Cuff to 2" Barb 1½" Connector 1½" Cuff
HP150-20SD	1½ (38)	20 (6.1)	Static Dissipative	1½" Cuff to 2" Barb 1½" Connector 1½" Cuff
HP200-25	2 (51)	25 (7.6)	Light Blue	2" Cuff to 1½" Barb 2" Connector 2" Cuff
HP200-50	2 (51)	50 (15.2)	Light Blue	2" Cuff to 1.5" Barb 2" Connector 2" Cuff
HP-200-20SD	2 (51)	20 (6.1)	Dissipative	2" Cuff to 1.5" Barb 2" Connector 2" Cuff

Length available in the above noted lengths or by the foot.

**NOTE:**

To order These Hose Styles by the foot, use the following Part numbers:

HP150-SP: (standard blue 1 1/2")

HP200-SP: (standard blue 2")

HP150-SD: (static dissipative 1 1/2")

HP200-SD: (static dissipative 2")

# Vacuum System Accessories



## Vacuum Hose Connections



The fewer the number of leaks in your vacuum handling system, the greater the lifting capacity you will have with your vacuum pad attachment. This is where these quality vacuum hose connection accessories really pay for themselves. By selecting and using these connectors with ANVER High Flow vacuum hose, you can achieve virtually airtight connections throughout your system. Wherever you have connections, we recommend that plastic cuffs be used on all hose ends that are clamped onto our metal barbed fittings. Teflon tape should be used to seal these fittings.

ANVER makes it simple to get the most out of your High-Flow Vacuum Hose applications with this line of durable, easy-to-use Connection Accessories. We offer everything from a simple hose cuff or barb to our special filter fittings to our unique diverter valve. Sometimes, a small amount of money spent on these accessories can save you from having to buy a larger, much more expensive vacuum pump.

ANVER Item No.	Description	Hose Clamp	Vacuum Hose
HPC150-2-CUFF	Cuff, for 1-1/2" (38.1 mm) Vacuum Hose to 2" (50.8 mm) Barb	Not Necessary	1½" I.D.
HPC150-CON	Connector, for 1-1/2" (38.1 mm) Light Blue Vacuum Hose	Not Necessary	1½" I.D.
HPC150-CUFF	Cuff, Standard for 1-1/2" (38.1 mm) Blue Vacuum Hose	CLP-20-W	1½" I.D.
HPC200-150-CUFF	Cuff, for 2" (50.8 mm) Vacuum Hose to 1-1/2" (38.1 mm) Barb	CLP-20-W	2" I.D.
HPC200-CON	Connector, Hose for 2" (50.8 mm) Vacuum Hose	Not Necessary	2" I.D.
HPC200-CUFF	Cuff, Vinyl Screw for 2" (50.8 mm) Vacuum Hose	CLP-20-W	2" I.D.

### Metal Hose Barbs:

ANVER Item No.	Description	Vacuum Hose	Clamps for Hose
AA100P	Hose Barb, 1" NPT X 1" (25.4 mm) Hose (Galvanized)	1" I.D. (FT Series) 1" I.D. (HS Series)	CLP-12-W CLP-16-W
AA112P	Hose Barb, 1-1/2" NPT X 1-1/2" (38.1 mm) Hose (Galvanized)	1½" I.D. (FT Series)	CLP-20-W
AA112X200P	Hose Barb, 1-1/2" NPT X 2" (50.8 mm) Hose (Galvanized)	2" I.D. (FT Series) 2" I.D. (HS Series)	CLP-36-W CLP-36-W
AA114P	Hose Barb, 1-1/4" NPT X 1-1/4" (31.8 mm) Hose (Galvanized)	1¼" I.D. (FT Series) 1¼" I.D. (HS Series)	CLP-16-W CLP-20-W
AA200P	Metal Hose Barb, 2" NPT X 2" (50.8 mm) Hose (Galvanized)	2" I.D. (FT Series) 2" I.D. (HS Series)	CLP-36-W CLP-36-W

### Special Fittings for ANVER Filters:

ANVER Item No.	Description
FLT-3-CWG	2" (50.8 mm) Hose X 2" (50.8 mm) Hose Cuff with Vacuum Gauge Assembly for FLT-3 Filter Assembly



### Three Way Diverter Valve:

The ANVER Three-way Diverter Valve is designed to allow you to attach two Vacuum Tube Lifters to one vacuum pump. This valve lets you run multiple tube lifters off the same vacuum source and eliminates the hassle of disconnecting one to connect another. Simply leave all your connections intact and use the manual lever to direct the vacuum to the desired system.

Part No.: DV-2-3W-2.0A

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### High Flow Reinforced Plastic Vacuum Hose - FT Series

**Features:**

High strength fiber reinforced PVC hose cover bonded to coated spring steel helix. This vacuum hose offers excellent flexibility for use with vacuum pad attachments that require bending in tight areas.

**Applications:**

Excellent for all Commercial or Industrial vacuum handling applications where medium to high vacuum flow is required. The flexibility of the hose makes it suitable for “high bend” applications without wall collapse under vacuum. Due to its flexibility, this hose shrinks along its length under vacuum. Therefore, hose clamps are required.

**Specifications:**

Vacuum: 29" Hg  
 Temperature: -20° to 150° F (-29° to 66° C)  
 Color: Grey

ANVER Item No.	Inside Diameter in. (mm)	Features	Fittings for Hose	Clamps for Hose
FTSVF100	1 (25.4)	Wire Reinforced, Grey	1" Barb x 3/4" NPT 1" Barb x 1" NPT	CLP-12-W
FTSVF125	1¼ (31.2)	Wire Reinforced, Grey	1¼" Barb x 1¼" NPT	CLP-16-W
FTSVF150	1½ (38.1)	Wire Reinforced, Grey	1½" Barb x 1½ NPT	CLP-20-W
FTSVF200	2 (50.1)	Wire Reinforced, Grey	2" Barb x 1½" NPT 2" Barb x 2" NPT	CLP-32-W
FTSVF250	2½ (63.5)	Wire Reinforced, Grey	N/A	CLP-32-W
FTSVF300	3 (76.2)	Wire Reinforced, Grey	N/A	N/A

Orders cut to length.

## Vacuum Hose



### Wire-Reinforced, High Vacuum/Moderate Flow Clear Plastic Vacuum Hose: HS Series

**Construction:**

FDA approved clear PVC surrounding a Steel wire helix for reinforcement.

**Features:**

- Full vacuum rating
- Non-kinking/non-collapsible
- Clear PVC allows visual line inspection
- Glass smooth interior to reduce loss of flow
- Chemical resistant
- Grounding capable through wire
- No shrink characteristic under vacuum

**Application:**

Durable, rigid hose for full vacuum handling in non- and semi-porous applications requiring high vacuum and moderate air flow. Vacuum material handling applications throughout industry.

**Specifications:**

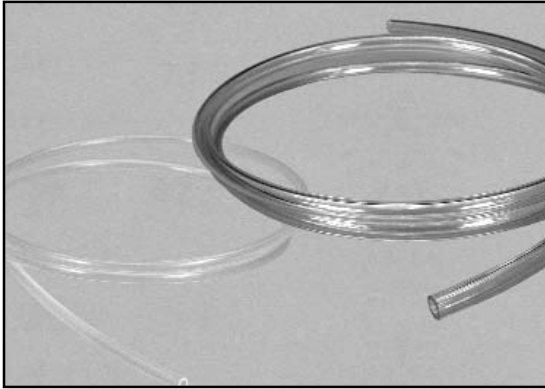
Working Pressure: 70 psi to 250 psi

Temperature Range: +25°F to +150°F (-4°C to 65°C)

Minimum Bend Radius: 1" to 4" (25.4 mm to 101.6

mm) - depending upon the hose diameter

ANVER Item No.	Inside Diameter in. (mm)	Features	Fittings for Hose	Clamps for Hose
HS30	1/4 (6.4)	Clear PVC, Steel Reinforced, Heavy Wall	1/4" Barb x 1/8" NPT 1/4" Barb x 1/4" NPT 1/4" Barb x 3/8" NPT	CLP-03-W
HS45	3/8 (9.5)	Clear PVC Steel, Reinforced, Heavy Wall	3/8" Barb x 1/8" NPT 3/8" Barb x 1/4" NPT 3/8" Barb x 3/8" NPT 3/8" Barb x 1/2" NPT	CLP-04-W
HS50	1/2 (12.7)	Clear PVC, Steel Reinforced, Heavy Wall	1/2" Barb x 1/4" NPT 1/2" Barb x 3/8" NPT 1/2" Barb x 1/2" NPT 1/2" Barb x 3/4" NPT	CLP-05-W
HS75	3/4 (19.1)	Clear PVC, Steel Reinforced, Standard Wall	3/4" Barb x 1/2" NPT 3/4" Barb x 3/4" NPT	CLP-10-W
HS100	1 (25.4)	Clear PVC, Steel Reinforced, Standard Wall	1" Barb x 3/4" NPT 1" Barb x 1" NPT	CLP-16-W
HS114	1 1/4 (31.8)	Clear PVC, Steel Reinforced, Standard Wall	1 1/4" Barb x 1 1/4" NPT	CLP-20-W
HS200	2 (50.8)	Clear PVC, Steel Reinforced, Standard Wall	2" Barb x 1 1/2" NPT 2" Barb x 2" NPT	CLP-36-W



### Tubing for Push-To-Connect Fittings PC Series (Clear)

**Construction:**  
Clear Urethane

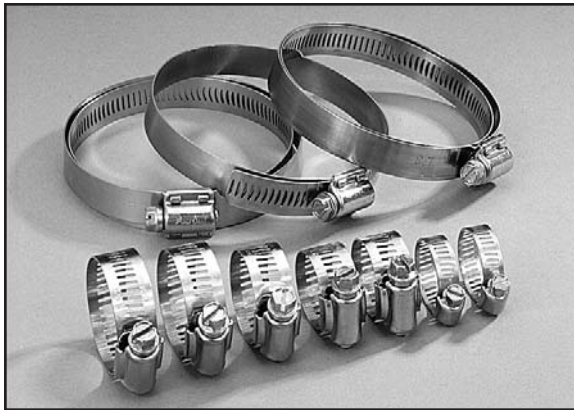
**Features:**  
Non-kinking  
Clear Urethane allows visual line inspection  
Smooth interior to reduce loss of flow

**Application:**  
Durable hose for use with Push-to-Connect fittings and connectors. Useful in vacuum material handling applications throughout the industry.

**Specifications:**  
Working Pressure: 1.5MPa at 20° C  
Temperature Range: -20° to 60° C (-4° to 140° F)  
[Water: 0° to 40° C (32° to 100° F), no freezing]  
Minimum Bend Radius: PC-T532: 0.5" (13 mm), PC-T14: 1.2" (30 mm)

ANVER Item No.	Inside Diameter in. (mm)	Outside Diameter in. (mm)	Features
PC-T532	0.095 (2.4)	5/32 (4.0)	Clear Urethane
PC-T532B	0.095 (2.4)	5/32 (4.0)	Blue Urethane
PC-T14	0.175 (4.4)	1/4 (6.4)	Clear Urethane
PC-T14B	0.175 (4.4)	1/4 (6.4)	Blue Urethane
PC-T38	0.200 (5.0)	3/8 (9.5)	Clear Urethane

## Vacuum Hose Clamps



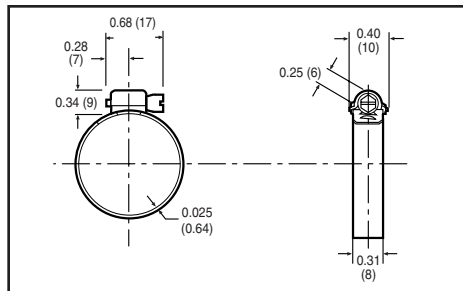
### Reusable Stainless Steel Clamps with Worm Drive Mechanism

#### Features:

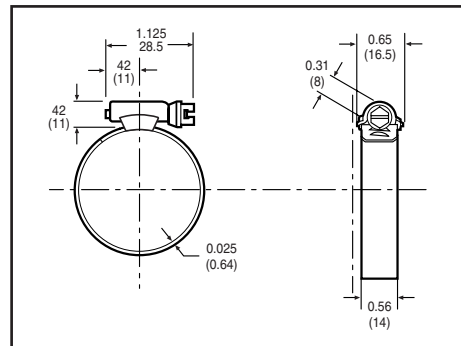
- Lightweight compact design
- Stainless Steel construction
- Reusable! Allows for attach/re-attach
- Installation requires a screwdriver or hex head wrench
- High sealing pressure with only 10-15 in/lb of torque

#### Application:

These hose clamps have been designed for vacuum or medium pressure line connections and should be used in conjunction with ANVER vacuum hose and hose barbs.



Narrow Body Styles (N)



Standard Body Styles (S)

ANVER Item No.	Fits Hose I.D. in. (mm)	Body Style	Vacuum Hose	Fittings for Hose
CLP-03-W	1/4 (6.4)	N	1/4" I.D. Hose (HS Series)	1/4" Barb x 1/8" NPT 1/4" Barb x 1/4" NPT 1/4" Barb x 3/8" NPT
CLP-04-W	3/8 (9.5)	N	3/8" I.D. Hose (HS Series)	3/8" Barb x 1/8" NPT 3/8" Barb x 1/4" NPT 3/8" Barb x 3/8" NPT 3/8" Barb x 1/2" NPT
CLP-05-W	1/2 (12.7)	N	1/2" I.D. Hose (HS Series)	1/2" Barb x 1/4" NPT 1/2" Barb x 3/8" NPT 1/2" Barb x 1/2" NPT 1/2" Barb x 3/4" NPT
CLP-08-W	1/2 (12.7)	S	1/2" I.D. Hose (HS Series)	1/2" Barb x 1/4" NPT 1/2" Barb x 3/8" NPT 1/2" Barb x 1/2" NPT 1/2" Barb x 3/4" NPT
CLP-10-W	3/4 (12.7)	S	3/4" I.D. Hose (HS Series)	3/4" Barb x 1/2" NPT 3/4" Barb x 3/4" NPT
CLP-12-W	3/4 - 1 (19.1 - 25.4)	S	1" I.D. Hose (FT Series)	1" Barb x 3/4" NPT 1" Barb x 1" NPT
CLP-16-W	1 - 1 1/4 (25.4 - 31.8)	S	1" I.D. Hose (HS Series) 1" I.D. Hose (HS Series) 1 1/4" I.D. Hose (FT Series)	1" Barb x 3/4" NPT 1" Barb x 1" NPT 1 1/4" Barb x 1 1/4" NPT
CLP-20-W	1 1/4 - 1 1/2 (31.8 - 38.1)	N	1 1/4" I.D. Hose (HS Series) 1 1/2" I.D. Hose (FT Series)	1 1/4" Barb x 1 1/4" NPT 1 1/2" Barb x 1 1/2" NPT
CLP-32-W	1-9/16 - 2 (39.7 - 50.8)	S	2" I.D. Hose (HS Series) 2" I.D. Hose (HS Series) 2" I.D. Hose (FT Series) 2" I.D. Hose (FT Series)	2" Barb x 1 1/2" NPT 2" Barb x 2" NPT 2" Barb x 1 1/2" NPT 2" Barb x 2" NPT



D Series Tube Clamps

### Lift Tube Clamps

ANVER Vacuum Lift Tube Clamps are just the thing for attaching vacuum lift tubes to either the Top Swivel or Lower Lifting Head. They are a combination wire clamp and hose clamp and work great for this application. These clamps allow you to simply stretch the Lift Tube on and directly clamp it without cutting the wire out of the Vacuum Lift Tube. (This cutting of the wire procedure is not recommended by ANVER, although some of our competitors who use regular clamps do use this procedure). The wire of the clamp meshes with the wire of the lift tube for a tight, secure, airtight grip. An optional wrap of duct tape is sometimes useful to cover the sharp parts of the clamp worm drive.



TB Series Tube Clamps

ANVER Item No.	Description
CLP-100-D	Lift Tube Clamp, for 100mm Lift Tubes
CLP-120-D	Lift Tube Clamp, for 120mm Lift Tubes
CLP-140-D	Lift Tube Clamp, for 140mm Lift Tubes
CLP-160-D	Lift Tube Clamp, for 160mm Lift Tubes
CLP-180-TB	Lift Tube Clamp, for 180mm Lift Tubes
CLP-200-TB	Lift Tube Clamp, for 200mm Lift Tubes
CLP-250-TB	Lift Tube Clamp, for 250mm Lift Tubes



### Rubber Clamping Bands

Stretching an ANVER seamless Rubber Clamping Band over the vacuum lift tube clamp makes for a clean, professional transition.

We usually recommend two clamps, top and bottom, if room permits. This is usually the case for the 160 mm size and larger lift tubes. ANVER Vacuum Lift Tube Clamps can be reused as they feature a worm gear tightening mechanism.

ANVER also offers a complete line of vacuum hose clamps that have been designed for use on vacuum or medium pressure line connections and for use in conjunction with ANVER vacuum hose and hose barbs

ANVER Item No.	Description
RCB-090/100	Rubber Clamping Band for VT90 & VT100
RCB-120/140	Rubber Clamping Band for VT120 & VT140
RCB-160/180	Rubber Clamping Band for VT160 & VT180
RCB-200/250	Rubber Clamping Band for VT200 & VT250





### Electro-Less Nickel-Plated for Corrosion Resistance

#### Construction:

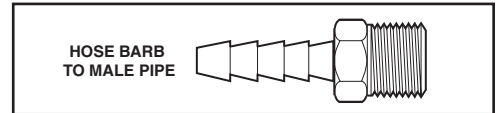
- All fitting threads meet Dry Seal Standards
- Made from CA 360 and CA 345 brass
- Top quality Electro-Less Nickel Plated Finish
- Meet functional requirements of SAE J512, ASME and ASA
- NPT or metric sizes available
- Precision Machined

#### Applications:

ANVER plated fittings have been designed for vacuum or medium pressure line connections and are used in conjunction with ANVER wire reinforced vacuum hose and worm gear drive hose clamps.

#### Specifications:

Max. Pressure: 1000 psi  
 Vacuum: 30 in. Hg  
 Temperature: -65° to 250° F



ANVER Item No.	Description	Vacuum Hose	Clamps for Hose
A1212B	Hose Barb, 1/2" NPT x 1/2" (12.7 mm) Hose (Electro-Less Nickel Plated)	1/2" I.D (HS Series) 1/2" I.D (HS Series)	CLP-05-W CLP-08-W
A1234B	Hose Barb, 1/2" NPT x 3/4" (19.1 mm) Hose (Electro-Less Nickel Plated)	3/4" I.D (HS Series)	CLP-10-W
A1238B	Hose Barb, 1/2" NPT x 3/8" (9.5 mm) Hose (Electro-Less Nickel Plated)	3/8" I.D (HS Series)	CLP-04-W
A1412B	Hose Barb, 1/4" NPT x 1/2" (12.7 mm) Hose (Electro-Less Nickel Plated)	1/2" I.D (HS Series) 1/2" I.D (HS Series)	CLP-05-W CLP-08-W
A1414B	Hose Barb, 1/4" NPT x 1/4" (6.4 mm) Hose (Electro-Less Nickel Plated)	1/4" I.D (HS Series)	CLP-03-W
A1438B	Hose Barb, 1/4" NPT x 3/8" (9.5 mm) Hose (Electro-Less Nickel Plated)	3/8" I.D (HS Series)	CLP-04-W
A1814B	Hose Barb, 1/8" NPT x 1/4" (6.4 mm) Hose (Electro-Less Nickel Plated)	1/4" I.D (HS Series)	CLP-03-W
A1838B	Hose Barb, 1/8" NPT x 3/8" (9.5 mm) Hose (Electro-Less Nickel Plated)	3/8" I.D (HS Series)	CLP-04-W
A3412B	Hose Barb, 3/4" NPT x 1/2" (12.7 mm) Hose (Electro-Less Nickel Plated)	1/2" I.D (HS Series) 1/2" I.D (HS Series)	CLP-05-W CLP-08-W
A341B	Hose Barb, 3/4" NPT x 1" (25.4 mm) Hose (Electro-Less Nickel Plated)	1" I.D (HS Series) 1" I.D (FT Series)	CLP-16-W CLP-12-W
A3434B	Hose Barb, 3/4" NPT x 3/4" (19.1 mm) Hose (Electro-Less Nickel Plated)	3/4" I.D (HS Series)	CLP-10-W
A3812B	Hose Barb, 3/8" NPT x 1/2" (12.7 mm) Hose (Electro-Less Nickel Plated)	1/2" I.D (HS Series) 1/2" I.D (HS Series)	CLP-05-W CLP-08-W
A3814B	Hose Barb, 3/8" NPT x 1/4" (6.4 mm) Hose (Electro-Less Nickel Plated)	1/4" I.D (HS Series)	CLP-03-W
A3838B	Hose Barb, 3/8" NPT x 3/8" (9.5 mm) Hose (Electro-Less Nickel Plated)	3/8" I.D (HS Series)	CLP-04-W

# Vacuum System Accessories



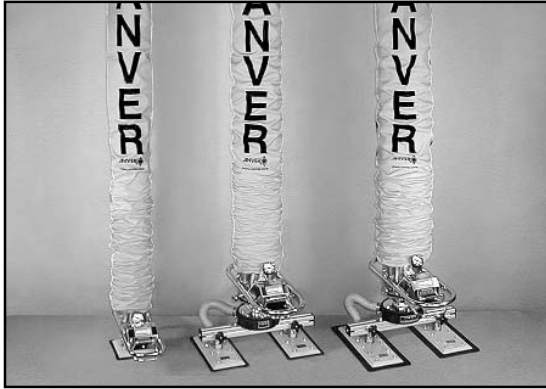
## Vacuum Hose Barb Fittings

ANVER Item No.	Description	Vacuum Hose	Clamps for Hose
A3812B	Hose Barb, 3/8" NPT x 1/2" (12.7 mm) Hose (Electro-Less Nickel Plated)	1/2" I.D (HS Series) 1/2" I.D (HS Series)	CLP-05-W CLP-08-W
A3814B	Hose Barb, 3/8" NPT x 1/4" (6.4 mm) Hose (Electro-Less Nickel Plated)	1/4" I.D (HS Series)	CLP-03-W
A3838B	Hose Barb, 3/8" NPT x 3/8" (9.5 mm) Hose (Electro-Less Nickel Plated)	3/8" I.D (HS Series)	CLP-04-W



# Ergonomic Vacuum Tube Lifters

## Vacuum Lifting Tubes and Lifting Tube Covers



ANVER Vacuum Lifting Tubes feature Heavy-Duty Steel-Wire Reinforced Construction. They are Surrounded by a Double Cloth, then Film Wrapped, making for a long lasting economical choice in a Vacuum Lifting Tube.

ANVER vacuum lifting tubes not only make your vacuum tube lifting system safer by reducing the danger of vacuum leakage, they also make maintenance less expensive. As the leading North American manufacturer of Vacuum Tube Lifting Systems, ANVER can offer these high quality replacement vacuum lifting tubes at prices substantially lower than those of smaller competitors or expensive imported brands. The use of ANVER Vacuum Tube Lifting Clamps and Rubber Clamping Bands along with our new Lifting Tube Covers allow you to easily complete the installation of replacement lift tubes with a professional appearance.

- ANVER is the #1 supplier of Vacuum Lifting Tubes and Vacuum Tube Lifting Systems in North America. Our sales volume equals top value for you.
- Replacements are available for all vacuum tube lifter brands, foreign and domestic, including spin-on adapter styles.
- All ANVER Vacuum Lifting Tubes are now available with Lift Tube Covers for Maximum Protection.
- ANVER has the lowest prices in the industry, due to our high production volume.
- We can reduce your Lift Tube Replacement Costs substantially.
- Top quality for lasting value.
- Usually Shipped in 24 hours packed in individual boxes.

Lift Tube Model Number	Dia. in. (mm)	Length ft. & in. (m)	Package Dim. in. (cm)	Shipping Wt. lb (kg)	Lift Tube Cover Number
LT090-2.5	3.54" (90)	8' 3" (2.5)	5 x 5 x 62" (13 x 13 x 157)	11 (5)	LTC100-2.5
LT090-4.0	3.54" (90)	13' 2" (4.0)	5 x 5 x 62" (13 x 13 x 157)	15 (7)	LTC100-4.0
LT100-2.5	4.0" (100)	8' 3" (2.5)	6 x 6 x 40" (15 15 102)	8 (4)	LTC100-2.5
LT100-4.0	4.0" (100)	13' 2" (4.0)	6 x 6 x 50" (15 x 15 x 127)	14 (6)	LTC100-4.0
LT120-2.5	4.7" (120)	8' 3" (2.5)	6 x 6 x 40" (15 x 15 x 102)	10 (5)	LTC120-2.5
LT120-4.0	4.7" (120)	13' 2" (4.0)	6 x 6 x 54" (15 x 15 x 137)	15 (7)	LTC120-4.0
LT130-3.0	5.0" (130)	10' 0" (3.0)	6 x 6 x 51" (15 x 15 x 130)	15 (7)	LTC140-4.0
LT130-4.6	5.0" (130)	15' 0" (4.6)	6 x 6 x 61" (15 15 102)	20 (9)	LTC140-4.0
LT140-2.5	5.5" (140)	8' 3" (2.5)	8 x 8 x 40" (20 x 20 x 102)	12 (5)	LTC140-2.5
LT140-4.0	5.5" (140)	13' 2" (4.0)	8 x 8 x 54" (20 x 20 x 137)	19 (9)	LTC140-4.0
LT160-2.5	6.3" (160)	8' 3" (2.5)	8 x 8 x 40" (20 x 20 x 102)	14 (6)	LTC160-2.5

7042301 This spec sheet was adapted for print from our website. Additional information and photos are available at [www.anver.com](http://www.anver.com).

# Ergonomic Vacuum Tube Lifters



## Vacuum Lifting Tubes and Lifting Tube Covers

Lift Tube Model Number	Dia. in. (mm)	Length ft. & in. (m)	Package Dim. in. (cm)	Shipping Wt. lb (kg)	Lift Tube Cover Number
LT160-4.0	6.3" (160)	13' 2" (4.0)	8 x 8 x 54" (20 x 20 x 137)	21 (10)	LTC160-4.0
LT180-2.5	7.0" (180)	8' 3" (2.5)	8 x 8 x 40" (20 x 20 x 102)	16 (7)	LTC180-2.5
LT180-3.0	7.0" (180)	10' 0" (4.0)	8 x 8 x 54" (20 x 20 x 137)	22 (10)	LTC180-3.0
LT180-4.0	7.0" (180)	13' 2" (4.0)	8 x 8 x 54" (20 x 20 x 137)	22 (10)	LTC180-4.0
LT200-2.5	7.9" (200)	8' 3" (2.5)	9.5 x 9.5 x 61" (24 x 24 x 152)	23 (10)	LTC200-2.5
LT200-4.0	7.9" (200)	13' 2" (4.0)	9.5 x 9.5 x 61" (24 x 24 x 152)	29 (13)	LTC200-4.0
LT250-2.5	9.8" (250)	8' 3" (2.5)	14 x 14 x 60" (36 x 36 x 155)	30 (14)	LTC250-2.5
LT250-4.0	9.8" (250)	13' 2" (4.0)	14 x 14 x 70" (36 x 36 x 178)	40 (18)	LTC250-4.0

ANVER Vacuum Lifting Tubes are manufactured with an orange or yellow outside wrapping. ANVER has also supplied tubes over the years in a variety of other colors including white, black, grey and blue as different fabrics and coatings became available. We reserve the right to change the color as we continually try to improve the product. Currently, orange and ANVER safety yellow are our main colors. Thank You

### Guidelines for Replacing Vacuum Lifter Tubes

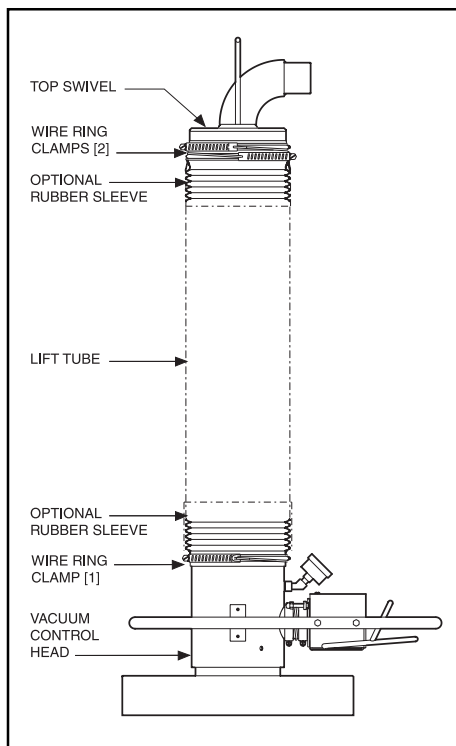
#### Vacuum Lift Head and Swivel Preparation

Before installing the replacement vacuum lifter tube, be sure the vacuum head and swivel head are clean and free from any previous residue.

#### Replacement Vacuum Lift Tube Installation

Before attempting lift tube replacement, pre-stretch the tube lengthwise as much as possible. Smooth and pull outward on the tube ends, removing any tendency to curl inward. Clamping the top swivel and control head in a bench vice or having an assistant help during tube installation is highly recommended. Slide rubber sleeves (optional) and wire ring clamps (see diagram) over the ends of the vacuum tube and temporarily tighten the lift tube over the top swivel and gradually pull tube all around until the top of the tube is even with the top surface of the nylon ring. A screwdriver used as a lever and needle-nose pliers help to ease the tube into position. Secure the top of the tube to the swivel with two clamps ensuring that the wire rings on the clamp sit evenly within the crests of the tube without crossing over. In a similar manner, attach the other end of the vacuum tube to the lift head. Secure in place with one or two wire ring clamps depending on size. Take special care to position the tube evenly all around, ensuring that all holes in the vacuum head are covered by the tube. When replacing the vacuum tube on the VT-160 size only, be sure to position the lower clamp below the raised band on the vacuum head to provide the best possible attachment between control head and vacuum tube. ANVER offers seamless Rubber Sleeves to conceal the wire clamps if so desired. Their use is optional but they make for a cleaner transition.

**Note:** Use extreme caution not to puncture the outer wall of the tube during preparation and installation procedures. Doing so will weaken the tube and may cause vacuum leakage. If the vacuum tube wall is accidentally punctured, cut away the damaged end and reattach to the lift head or swivel. A very serious personal injury or unit failure may result if the tube is not correctly installed. ANVER recommends replacement of all vacuum lift tubes on multiple tube lifter systems.



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# Ergonomic Vacuum Tube Lifters



## Vacuum Lifting Tubes and Lifting Tube Covers

Lift Tube Model Number	Dia. in. (mm)	Length ft. & in. (m)	Package Dim. in. (cm)	Shipping Wt. lb (kg)	Lift Tube Cover Number
LT160-4.0	6.3" (160)	13' 2" (4.0)	8 x 8 x 54" (20 x 20 x 137)	21 (10)	LTC160-4.0
LT180-2.5	7.0" (180)	8' 3" (2.5)	8 x 8 x 40" (20 x 20 x 102)	16 (7)	LTC180-2.5
LT180-3.0	7.0" (180)	10' 0" (4.0)	8 x 8 x 54" (20 x 20 x 137)	22 (10)	LTC180-3.0
LT180-4.0	7.0" (180)	13' 2" (4.0)	8 x 8 x 54" (20 x 20 x 137)	22 (10)	LTC180-4.0
LT200-2.5	7.9" (200)	8' 3" (2.5)	9.5 x 9.5 x 61" (24 x 24 x 152)	23 (10)	LTC200-2.5
LT200-4.0	7.9" (200)	13' 2" (4.0)	9.5 x 9.5 x 61" (24 x 24 x 152)	29 (13)	LTC200-4.0
LT250-2.5	9.8" (250)	8' 3" (2.5)	14 x 14 x 60" (36 x 36 x 155)	30 (14)	LTC250-2.5
LT250-4.0	9.8" (250)	13' 2" (4.0)	14 x 14 x 70" (36 x 36 x 178)	40 (18)	LTC250-4.0

ANVER Vacuum Lifting Tubes are manufactured with an orange or yellow outside wrapping. ANVER has also supplied tubes over the years in a variety of other colors including white, black, grey and blue as different fabrics and coatings became available. We reserve the right to change the color as we continually try to improve the product. Currently, orange and ANVER safety yellow are our main colors. Thank You

### Guidelines for Replacing Vacuum Lifter Tubes

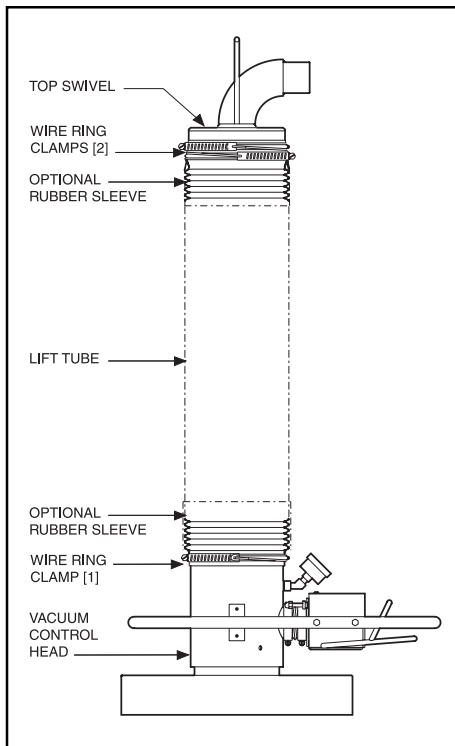
#### Vacuum Lift Head and Swivel Preparation

Before installing the replacement vacuum lifter tube, be sure the vacuum head and swivel head are clean and free from any previous residue.

#### Replacement Vacuum Lift Tube Installation

Before attempting lift tube replacement, pre-stretch the tube lengthwise as much as possible. Smooth and pull outward on the tube ends, removing any tendency to curl inward. Clamping the top swivel and control head in a bench vice or having an assistant help during tube installation is highly recommended. Slide rubber sleeves (optional) and wire ring clamps (see diagram) over the ends of the vacuum tube and temporarily tighten the lift tube over the top swivel and gradually pull tube all around until the top of the tube is even with the top surface of the nylon ring. A screwdriver used as a lever and needle-nose pliers help to ease the tube into position. Secure the top of the tube to the swivel with two clamps ensuring that the wire rings on the clamp sit evenly within the crests of the tube without crossing over. In a similar manner, attach the other end of the vacuum tube to the lift head. Secure in place with one or two wire ring clamps depending on size. Take special care to position the tube evenly all around, ensuring that all holes in the vacuum head are covered by the tube. When replacing the vacuum tube on the VT-160 size only, be sure to position the lower clamp below the raised band on the vacuum head to provide the best possible attachment between control head and vacuum tube. ANVER offers seamless Rubber Sleeves to conceal the wire clamps if so desired. Their use is optional but they make for a cleaner transition.

**Note:** Use extreme caution not to puncture the outer wall of the tube during preparation and installation procedures. Doing so will weaken the tube and may cause vacuum leakage. If the vacuum tube wall is accidentally punctured, cut away the damaged end and reattach to the lift head or swivel. A very serious personal injury or unit failure may result if the tube is not correctly installed. ANVER recommends replacement of all vacuum lift tubes on multiple tube lifter systems.



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# Ergonomic Vacuum Tube Lifters

## Lift Tube Covers



ANVER Armadillo™ Vacuum Lift Tubes feature Super-Duty Steel-Wire Reinforced Construction. They are built with a Reinforced Black Rubber Wrap, making them longer lasting than standard plastic coated Vacuum Lifting Tubes. These Tubes are truly industrial grade and long wearing in the toughest conditions.

ANVER vacuum lifting tubes not only make your vacuum tube lifting system safer by reducing the danger of vacuum leakage, they also make maintenance less expensive. As the leading North American manufacturer of Vacuum Tube Lifting Systems, ANVER can offer these high quality replacement vacuum lifting tubes at prices substantially lower than those of smaller competitors or expensive imported brands. The use of ANVER Vacuum Tube Lifting Clamps and Rubber Clamping Bands along with our new Lifting Tube Covers allow you to easily complete the installation of replacement lift tubes with a professional appearance.

- ANVER is the #1 supplier of Vacuum Lifting Tubes and Vacuum Tube Lifting Systems in North America. Our sales volume equals top value for you.
- Replacements are available for all vacuum tube lifter brands, foreign and domestic, including spin-on adapter styles.
- All ANVER Vacuum Lifting Tubes are now available with Lift Tube Covers for Maximum Protection.
- ANVER has the lowest prices in the industry, due to our high production volume.
- We can reduce your Lift Tube Replacement Costs substantially.
- Top quality for lasting value.
- Usually Shipped in 24 hours packed in individual boxes.

Lift Tube Model Number	Dia. in. (mm)	Length ft. & in. (m)	Package Dim. in. (cm)	Shipping Wt. lb (kg)	Lift Tube Cover Number
LTA090-2.5	3.54" (90)	8' 3" (2.5)	5.5 x 5.5 x 48" (14 x 14 x 122)	11 (5)	LTC100-2.5
LTA090-4.0	3.54" (90)	13' 2" (4.0)	5.5 x 5.5 x 55" (14 x 14 x 140)	15 (7)	LTC100-4.0
LTA100-2.5	4.0" (100)	8' 3" (2.5)	5.5 x 5.5 x 48" (14 x 14 x 122)	8 (4)	LTC100-2.5
LTA100-4.0	4.0" (100)	13' 2" (4.0)	5.5 x 5.5 x 55" (14 x 14 x 140)	14 (6)	LTC100-4.0
LTA120-2.5	4.7" (120)	8' 3" (2.5)	5.5 x 5.5 x 55" (14 x 14 x 140)	10 (5)	LTC120-2.5
LTA120-4.0	4.7" (120)	13' 2" (4.0)	5.5 x 5.5 x 63" (14 x 14 x 160)	15 (7)	LTC120-4.0
LTA130-3.0	5.0" (130)	10' 0" (3.0)	5.5 x 5.5 x 63" (14 x 14 x 160)	15 (7)	LTC130-3.0
LTA130-4.6	5.0" (130)	15' 0" (4.6)	5.5 x 5.5 x 63" (14 x 14 x 160)	20 (9)	LTC130-4.6
LTA140-2.5	5.5" (140)	8' 3" (2.5)	7.5 x 7.5 x 48" (19 x 19 x 122)	12 (5)	LTC140-2.5
LTA140-4.0	5.5" (140)	13' 2" (4.0)	7.5 x 7.5 x 56" (19 x 19 x 142)	19 (9)	LTC140-4.0
LTA160-2.5	6.3" (160)	8' 3" (2.5)	7.5 x 7.5 x 48" (19 x 19 x 122)	14 (6)	LTC160-2.5

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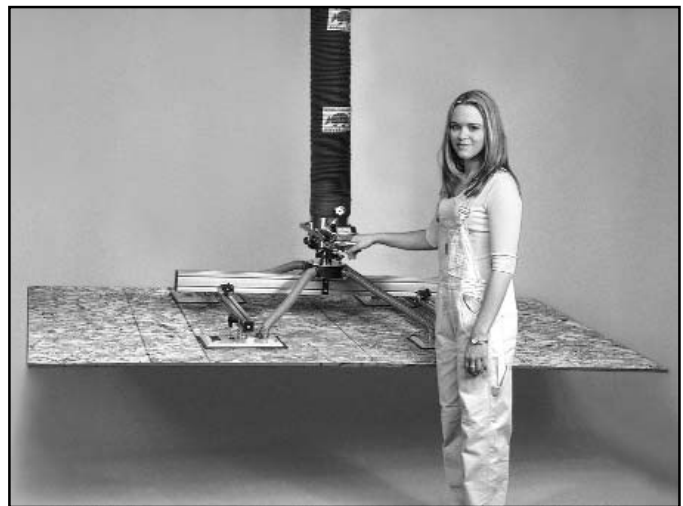
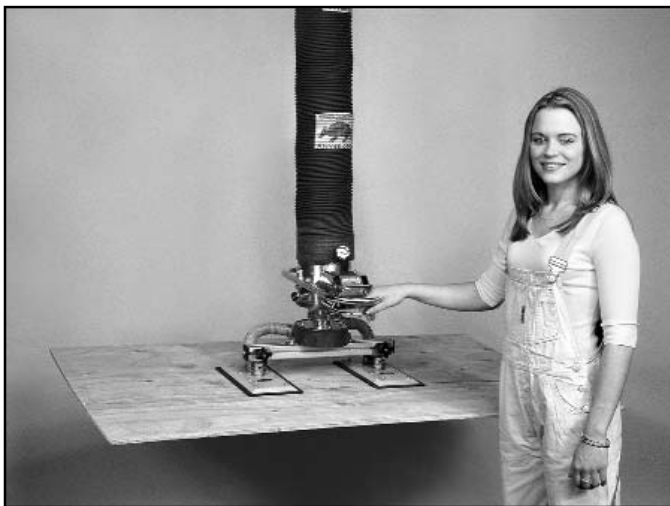
# Ergonomic Vacuum Tube Lifters



## Lift Tube Covers

Lift Tube Model Number	Dia. in. (mm)	Length ft. & in. (m)	Package Dim. in. (cm)	Shipping Wt. lb (kg)	Lift Tube Cover Number
LTA160-4.0	6.3" (160)	13' 2" (4.0)	7.5 x 7.5 x 61" (19 x 19 x 155)	21 (10)	LTC160-4.0
LTA180-2.5	7.0" (180)	8' 3" (2.5)	7.5 x 7.5 x 48" (19 x 19 x 122)	16 (7)	LTC180-2.5
LTA180-4.0	7.0" (180)	13' 2" (4.0)	7.5 x 7.5 x 61" (19 x 19 x 155)	22 (10)	LTC180-4.0
LTA200-2.5	7.9" (200)	8' 3" (2.5)	9 x 9 x 68" (23 x 23 x 173)	23 (10)	LTC200-2.5
LTA200-4.0	7.9" (200)	13' 2" (4.0)	9 x 9 x 68" (23 x 23 x 173)	29 (13)	LTC200-4.0
LTA250-2.5	9.8" (250)	8' 3" (2.5)	13 x 13 x 66" (33 x 33 x 168)	30 (14)	LTC250-2.5
LTA250-4.0	9.8" (250)	13' 2" (4.0)	13 x 13 x 66" (33 x 33 x 168)	40 (18)	LTC250-4.0

ANVER Armadillo™ Vacuum Lifting Tubes are manufactured with a Black outside wrap. We also make tubes with an orange or yellow outside wrapping. ANVER has also supplied tubes over the years in a variety of other colors including white, black, grey and blue as well as different fabrics and coatings. We reserve the right to change the color as we continually change to improve our products. Currently, black, orange and ANVER safety yellow are our main colors. Thank You.



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## Vented Ball Vacuum Valves



### Vented Ball Valves with Locking Handles

**Features:**

- ANVER Ball Valves are Vented for easy manual vacuum release
- Forged body design, extends the life of the ball valve
- Optimum flow design. Blow-out proof stem
- Now supplied with a Locking Handle for added safety
- Nickel Plated with a Chrome Plated appearance
- More economical and compact than 3-way valves

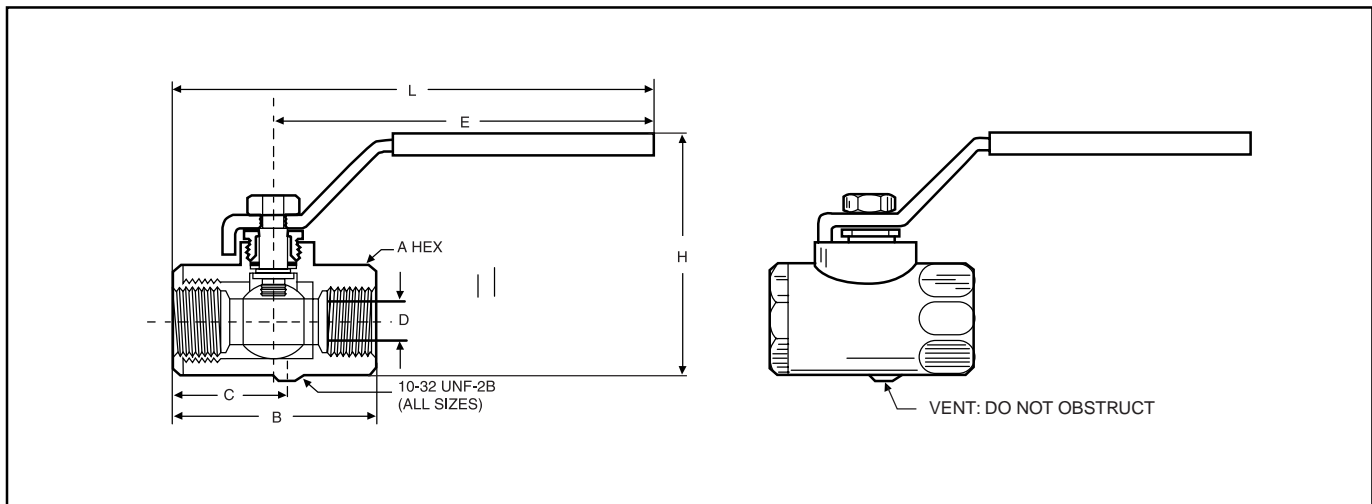
**Specifications:**

Max. Pressure: 250 psi  
 Max. Vacuum: 29 in. Hg  
 Temperature: 0° to 250° F (-18° to 121° C)

**Applications:**

Ball Valves are manual on/off control valves, suitable for all vacuum applications, where manual control is desired or needed. The ball valve's vented design ensures easy release of light loads by preventing entrapment of residual vacuum under vacuum pads. Additionally, the user is able to release selectively, making this ball valve ideal for use with hold-down or clamping devices.

ANVER Item No.	Pipe Thread	A Hex in. (mm)	B in. (mm)	C in. (mm)	E in. (mm)	H in. (mm)	L in. (mm)	D Flow in. (mm)
BVV-38F	3/8" NPT	0.94 (23.8)	2.03 (51.6)	1.11 (28.2)	3.91 (99.3)	2.47 (62.7)	4.90 (124.5)	0.375 (9.5)
BVV-12F	1/2" NPT	1.06 (27.7)	2.20 (55.9)	1.23 (31.2)	3.91 (99.3)	2.58 (65.5)	5.00 (127.0)	0.500 (12.7)
BVV-34F	3/4" NPT	1.38 (34.9)	2.98 (75.9)	1.69 (42.9)	4.35 (110.5)	2.85 (72.4)	5.84 (148.3)	0.685 (17.4)
BVV-1F	1.0" NPT	1.63 (41.3)	3.37 (85.6)	1.99 (50.8)	4.35 (110.5)	3.10 (78.7)	6.04 (153.4)	0.875 (22.2)







### Sleeve Valves for Vacuum or Pressure Applications

#### Features

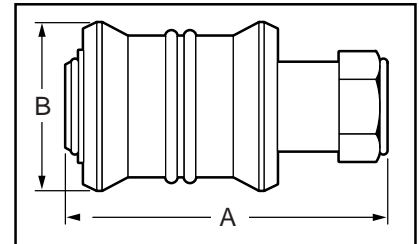
- Anodized Aluminum Sleeve for long life
- Chrome Plated Brass Body for corrosion resistance
- Finger Tip ON/OFF Control
- Smooth, but not loose, transition

#### Applications:

ANVER Slide Valves are manually controlled 3-Way functioning valves that vent the downstream vacuum or pressure when in the OFF position, providing a simple, effective means of controlling the vacuum or pressure generation. These slide valves have been field proven for long life and maintenance free operation and are ideal for use where intermittent vacuum or pressure control by the operator is required.

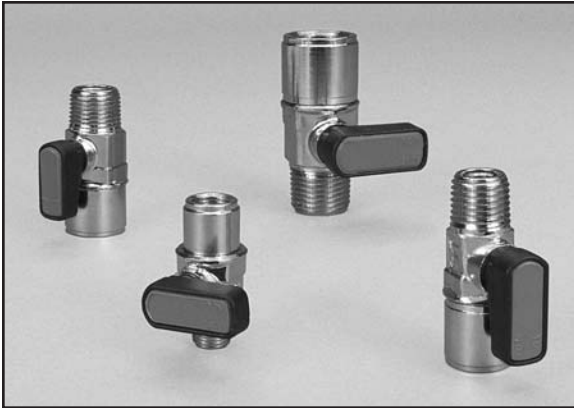
#### Vacuum Slide Valve Specifications:

Max. Pressure: 150 psi (10 bar)  
 Max. Vacuum: 29 in. Hg (980 mbar)  
 Temperature: 0° to 160°F  
 (-18°C - +70°C)



ANVER Item No.	Thread Female	A in. (mm)	B in. (mm)
SV-18	1/8" NPTF	1.89 (48)	0.98 (25)
SV-14	1/4" NPTF	2.28 (58)	1.18 (30)
SV-38	3/8" NPTF	2.75 (70)	1.38 (35)
SV-12	1/2" NPTF	3.15 (80)	1.57 (40)
SV-12BL	1/2" NPTF	3.15 (80)	1.57 (40)

## Miniature Ball Vacuum Valves



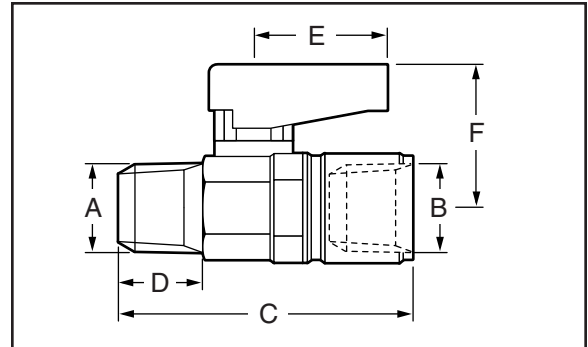
### Miniature Ball Valves

#### Features:

- ANVER Miniature Ball Valves have a Chrome Plated Brass Body for corrosion resistance
- A Captured Stem provides for airtight operation
- The Teflon Ball Seat accommodates a variety of fluids
- Compact Size
- Economically Priced

#### Applications:

- Manual 2-Way Function provides basic ON/OFF control of pressure or vacuum.



#### Specifications:

Max Pressure: 250 psi (17 bar)

Max Vacuum: 29" Hg (980 mbar)

Temperature: 0 to 160°F (-18° to +70°C)

ANVER Item No.	A Male Thread	B Female Thread	Orifice in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
BVC-18-MF	1/8" NPT	1/8" NPT	0.217 (5.5)	1.45 (37.0)	0.354 (9.0)	0.75 (19.0)	0.83 (21.0)
BVC-14-MF	1/4" NPT	1/4" NPT	0.217 (5.5)	1.81 (46.0)	0.551 (14.0)	0.75 (19.0)	0.83 (21.0)
BVC-38-MF	3/8" NPT	3/8" NPT	0.315 (8.0)	1.81 (46.0)	0.709 (18.0)	0.75 (19.0)	0.83 (21.0)
BVC-12-MF	1/2" NPT	1/2" NPT	0.394 (10.0)	2.36 (60.0)	0.870 (22.0)	1.02 (26.0)	1.20 (30.5)

### Automatic Sensing Valves or Flow Sensing Valves

ANVER stocks a large number of accessories for our small vacuum cup and suction cup lines. Automatic Flow Sensing Valves are available for all universal style vacuum cups and suction cups, and are best used in applications in which the vacuum cup does not fully cover the load, or is leaking air for other reasons. **These are only suitable for clean, dust-free applications as they become restricted easily.**

A float inside the valve seals the air passage from the cup to which it is attached, and prevents vacuum loss throughout the rest of the vacuum system. These valves are effective only on non-porous loads; a blow-off system is recommended to ensure that unwanted debris is purged after each cycle.

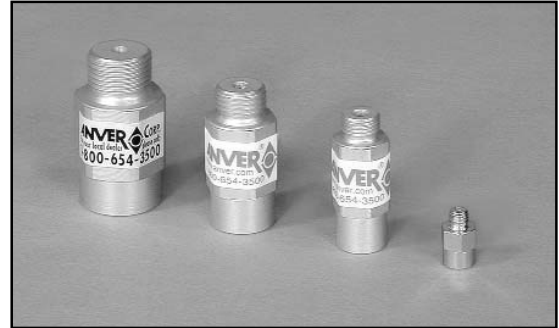
They can be used in any orientation on the cup, or in-line. The vacuum system needs enough capacity to close all ASV's when open to atmosphere.

Vacuum level is not as important, as flow to the vacuum system needs to be airtight; a filter is recommended. Using a flow meter, the valves can be adjusted.

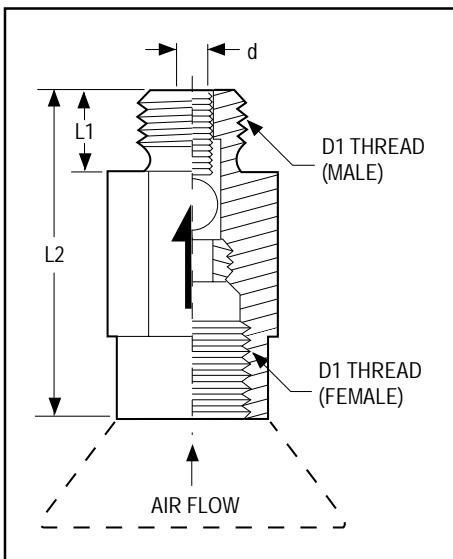
The valve is normally open; it closes when flow becomes excessive.

**Note: Experience has shown that these valves are not suitable for dirty or dusty environments, as they clog easily.**

If your application is dusty, save yourself aggravation by using filters between the cups and the vacuum pump. You can use a larger main pump with a larger, easily changed filter, or use our inline air-powered VR Vacuum Pumps with smaller vacuum filters on each cup line.



ANVER Item No.	"d" Diameter in. (mm)	"D1" Thread	"L1" Length in. (mm)	"L2" Length in. (mm)	Hex Size in. (mm)
ASVM5	0.08 (2)	M5	0.18 (4.5)	0.57 (15)	0.32 (8)
ASV18	0.16 (4)	1/8" BSPP	0.26 (6.5)	1.42 (36)	0.51 (13)
ASV14	0.16 (4)	1/4" BSPP	0.33 (8.5)	1.50 (38)	0.67 (17)
ASV38	0.16 (4)	3/8" BSPP	0.47 (12)	1.65 (42)	0.87 (22)



#### NOTES:

The SLSA 1 and 2 suspensions can be used on the ASV18. The SLSA-2 fits on the ASV18 with an adapter but is sometimes a little too large for small cups. For this reason, the SLSA 1 can also be used as an alternative.

The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world.



# Vacuum System Accessories

## Electric Solenoid Air Valves



Electrically controlled valves, Series 3/2 A-EVC, for vacuum and compressed air applications

**Three body styles to choose from:**

- Manifold Mount A-DI: For mounting directly to a Mounting Plate. Gaskets and screws are included. Ports 1 and 2: 0.07", Port 3: M5.
- Body Ported A-DP: All body ports are M5.
- A-DG: G 1/8 male output port for mounting directly to suction cups, air cylinder, or the pilot port of a larger valve. Ports 1 and 3 are M5.

### Specifications

Nominal Dia. inch (mm):	0.031 (0.8 mm)	0.063 (1.6 mm)	0.090 (2.3 mm)
Flow SCFM (l/min.):	0.7 (20)	1.4 (40)	1.7 (48)
Pressure Range:	-14.5 to 101.5	-14.5 to 101.5	-14.5 to 14.5
Cycle Frequency in Hz:	>160	>160	>160
Rated Life Cycles:	100,000,000	100,000,000	100,000,000
Weight: ounce (g):	2 (56.7)	2 (56.7)	2 (56.7)
Supply VDC:	24	24	24
Medium:	Compressed air and vacuum, Filtration 40 micron, Non-lubricated		
Design:	Seat valve 3/2 N.O./N.C., Electrically operated, Manual control		
Working Temperature:	Solenoid 0.6W: -0.4°F to 149°F • Solenoid 2.5W: -0.4° to 122°F Nickel, AL, SS, POM, Brass,		
Material:	BR, CR		
Safety Classification:	With DIN socket IP65		



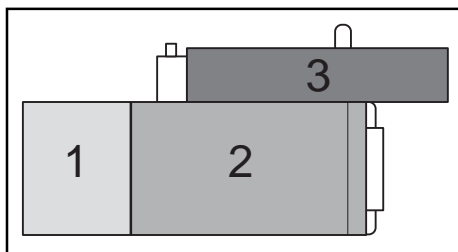
9040201 This spec sheet was adapted for print from our website. Additional information and photos are available at [www.anver.com](http://www.anver.com).

36 Parmenter Road • Hudson MA 01749 USA • 978-568-0221 • 800-654-3500 • FAX 978-568-1570 • [www.anver.com](http://www.anver.com) • E-Mail: [sales@anver.com](mailto:sales@anver.com)

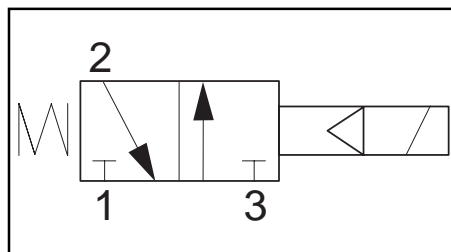
# Vacuum System Accessories



## Electric Solenoid Air Valves



E = Electric Contacts (Plug-In)  
D = DIN Connector



ANVER Item No.	Exact Replacement for Competitor's Solenoid Number	Valve Body (1)	Nominal Diameter	24V DC Solenoid Wattage (2)	Electrical Connector (3)	Valve Type
A-0100005	01.00..005	2/3 Interface	A-DI=0.8	0.6 W	E	A-DI 08 2406 SE
A-0100008	01.00..008	3/2 Interface	A-DI=0.8	0.6 W	LD	A-DI 08 2406 SD
A-0100011	01.00..011	3/2 M5	A-DP=0.8	0.6 W	EL	A-DP 08 2406 SE
A-0100014	01.00..014	3/2 M5	A-DP=0.8	0.6 W	DL	A-DP 08 2406 SD
A-0100012	01.00..012	3/2 M5	A-DP=1.6	2.5 W	EL	A-DP 16 2425 SE
A-0100015	01.00..015	3/2 M5	A-DP=1.6	2.5 W	DL	A-DP 16 2425 SD
A-0100013	01.00..013	3/2 M5	A-DP=2.3	2.5 W	EL	A-DP 23 2425 SE
A-0100016	01.00..016	3/2 M5	A-DP=2.3	2.5 W	DL	A-DP 23 2425 SD
A-0100040	01.00..040	3/2 G 1/8	A-DG=1.6	2.5 W	EL	A-DG 16 2425 SE
A-0100041	01.00..041	3/2 G 1/8	A-DG=1.6	2.5 W	DL	A-DG 16 2425 SD

Please order by Item No.

Example: For Valve Type A-DI 08 2406 SE, order Item No. A-0100005



### Relief Valves for Regenerative Vacuum Pumps

Vacuum handling of non-porous loads may cause a vacuum pump to 'dead-head'. Most vacuum pumps are not designed for operation under this condition. ANVER Vacuum Relief Valves are designed to protect the vacuum pump from internal damage by preventing this situation. These valves allow a small amount of air into the vacuum pump which cools the pump. The valves work by opening to atmosphere at a predetermined vacuum level. All relief valves can be set to provide the proper protection for our vacuum pumps. The relief valve can be mounted anywhere in the system manifold.

#### Features:

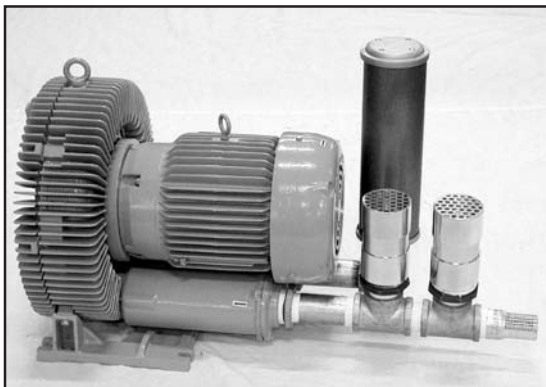
- Rugged all plated steel construction for long life
- Valves can be reset by user as needed
- Vibration resistant - Hold their settings
- Operational range from 7 in. to 16 in. of Hg (For lower levels, as low as 2 in. of Hg, vacuum relief valves must be used in parallel)

ANVER Item No.	Use with Vacuum Pump Model No.	Overall Height in. (mm)	Diameter in. (mm)	Thread Size
VRV-112	VB3HF, VB4HF, VB7HV, VB8HF, VB9HV	6.00 (152.4)	2.12 (51.9)	1-1/2" FNPT
VRV-2	VB4HF, VB7HV, VB9HV	7.38 (180.8)	2.19 (55.7)	2" FNPT
VRV-3	VB8HF	6.56 (160.7)	3.75 (91.9)	3" FNPT

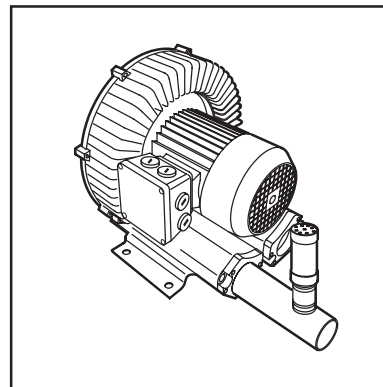
**Setting Information:** In most cases, initial settings for the valve should be set slightly below the pump's maximum vacuum level. Application type and user preferences determine what the maximum level should be. Load capacity must be adjusted accordingly, based on achieved vacuum at the vacuum attachment point.

**Need more Flow?:** If you need to get to a lower vacuum level or flow rate than the operational range from 7 in. to 16 in. of Hg you can double them up as the photo above shows. Using a vacuum gauge and flow meter is recommended to set the valves in critical applications.

**Pressure Applications:** If you are using an ANVER Vacuum Pump as a blower, we can offer these relief valves as Pressure Relief Valves instead. They are dimensionally identical and similar in price.



Example of Valves Used in Parallel



Vacuum Application



### Adjustable Miniature Vacuum Relief Valves

Top Quality All Plated Metal Mini Vacuum Relief Valves for Mid Range Vacuum Pumping Systems!

Adjustable with a Locking Nut. A Top Selling Item used in many Vacuum Applications!

#### Features:

- Adjustable Cracking Level
- Locking Jam Nut
- Optimum Flow Design for vacuum applications
- Spring Loaded - operates in any position
- Nickel Plated Steel body, Stainless Steel spring
- Dependable, durable construction proven over years of use
- Prevents vacuum pump burn out by allowing air to enter

#### Applications:

ANVER's Mini Relief Valves are suitable for all vacuum applications, where vacuum relief is required to keep an electric pump operating at a cool temperature or to keep from puckering a load surface by producing too high a vacuum. The check valves can operate in any position, making them suitable for most applications. A vacuum gauge is recommended to check that your vacuum level is at the correct setting.

ANVER Item No.	Description
VRV-050	1/2" Thread
VRV-075	3/4" Thread

## Vacuum Check Valves



### Features that make CheckVac valves the best for vacuum applications:

- One-piece airtight aluminum body in a compact design. No seams means no leakage – two-piece valves that screw together risk possible leakage. The anodized aluminum body will not crack as may plastic valves when being screwed into a fitting.
- Optimum flow design for all vacuum applications – a very large Flow Rate (CV). This allows more suction flow and eliminates the major source of flow restriction in most vacuum systems. This is an easy performance upgrade which offers the best results for the money.
- Spring loaded, so they operate in any orientation. The low cracking pressure allows you to get the most performance from your pumps; does not waste your pump's power opening the check valve.
- Precision internal plastic valve with stainless steel springs – eliminates corrosion from water contamination.

**Application:** For Industrial Vacuum Applications Requiring High Flow:

ANVER one-way vacuum check valves are suitable for all vacuum applications, where vacuum loss prevention is required. The check valves can operate in any position, making them suitable for all vacuum needs. We designed them to be leakproof, and to have a low cracking pressure and the highest flow available. Made in the USA by ANVER.

**Note:** On the 3/8" check valve we used a 1/2" check valve with adaptors. This allows for a maximized flow rate (CV) in this popular size. Try it on any 3/8" hoses system; you will find that the reduced restriction is worth the minimal added cost of adaptors. The 1" is a 1 1/4" with adaptors and the 1 1/2" is a 2" with adaptors. Again, the reason for this is to maximize flow.

**Remember:** The main restriction of a vacuum system is at the check valve. You can utilize a smaller pump if you increase flow at this point. This is the most economical way to increase a vacuum system's performance.

### CheckVac Aluminum Vacuum Check Valve Specifications:

**Maximum Pressure:** 230 psi **Temperature:** 0° to 200° F (-18° to 93° C) **Seals:** Nitrile Butadiene Rubber

ANVER Item No.	Pipe Thread	Height in. (mm)	Hex Size in. (mm)	Cracking Pressure		Flow Rate (Cv)
				in. Hg (mm Hg)	psi	
CV14F14F	1/4" NPT (Female) X	1.38 (34.9)	11/16 (17.5)	0.58 (14.73)	0.28 (± 0.14)	4.0
CV38F38F	3/8" NPT (Female) X	2.825 (71.8)	1.00 (25.4)	0.60 (15.24)	0.30 (± 0.14)	9.7
FB12X38 (Adapter for CV12F12F)	1/2" NPT (Male) 3/8" NPT (Female)	0.56 (14.3)	N/A	N/A	N/A	N/A
CV12F12F	1/2" NPT (Female) X 1/2" NPT (Female)	2.44 (61.9)	1.00 (25.4)	0.60 (15.24)	0.30 (± 0.14)	10.4
CV34F34F	3/4" NPT (Female) X 3/4" NPT (Female)	2.75 (69.9)	1.187 (30.2)	0.52 (13.21)	0.26 (± 0.14)	10.8
CV114F114F	1 1/4" NPT (Female) X 1 1/4" NPT (Female)	3.38 (85.9)	2.00 (51.8)	0.14 (3.56)	0.07 (+0.14/-0.05)	28
CV2F2F	2" NPT (Female) X 2" NPT (Female)	5.00 (127.0)	N/A	0.35 (8.89)	0.17 (± 0.14)	63
CV12M12F	1/2" NPT (Male) X 1/2" NPT (Female)	1.6 (40)	1.2 (30.2)	0.60 (15.24)	0.30 (± 0.14)	4.7

\* **Cracking Pressure** refers to the minimum **pressure differential** needed between the inlet and outlet of the valve to lift the plunger off its seat to generate flow.

**NOTE:** These check valves were designed and built specifically for our vacuum lifting systems, and have been proven in actual vacuum system installations. Ordinary check valves designed for compressed air systems are unsuitable for use in vacuum systems and can adversely affect your system.





### Large Capacity Double Disc Series Vacuum Check Valves

ANVER is proud to introduce a new line of check valves for high capacity situations. These revolutionary check valves are best suited for large applications where the lowest possible pressure loss is important.

#### Features:

- Long Lasting - Air-Foil designed wing support conditions the flow profile resulting in a more laminar, less turbulent flow, extending the life of the valve.
- Protective coating secures valves against atmospheric corrosion.
- Carbon Steel Body & Aluminum Discs are standard material. Other materials are available upon request.
- Fasteners and Pins are 316 Stainless Steel
- Maximum Operating Pressure at 60°F is 150 PSI.
- Optional spring is available to return levers into positions, please contact factory for more information.

ANVER Item No.	Thread Size NPT	Diameter in. (mm)	Length in. (mm)	Height in. (mm)	Valve Coefficient - Cv @ 1 psi in GPM (@ 1 psi in l/min)	Valve Cross Section Area ft <sup>2</sup>	Weight lb. (kg)
CV-6-CA	1" NPT	1.3 (33)	3.5 (89)	1.6 (41)	35 (133)	0.0035	0.5 (0.23)
CV-7-CA	1-1/4" NPT	1.7 (43)	3.5 (89)	2.0 (51)	62 (235)	0.0071	0.7 (0.32)
CV-8-CA	1-1/2" NPT	1.9 (48)	4.0 (102)	2.3 (58)	80 (303)	0.0081	1.1 (0.50)
CV-9-CA	2" NPT	2.4 (61)	4.0 (102)	2.8 (71)	135 (511)	0.0153	1.5 (0.68)
CV-10-CA	2-1/2" NPT	2.9 (74)	5.0 (127)	3.3 (84)	299 (1132)	0.0235	2.4 (1.09)
CV-11-CA	3" NPT	3.5 (89)	5.5 (140)	3.9 (99)	582 (2203)	0.0373	3.6 (1.63)
CV-12-CA	4" NPT	4.5 (114)	6.0 (152)	4.9 (124)	940 (3558)	0.0702	5.5 (2.49)
CV-13-CA	5" NPT	5.6 (142)	7.0 (178)	6.1 (155)	1500 (5678)	0.1015	9.6 (4.35)
CV-14-CA	6" NPT	6.6 (168)	8.0 (203)	7.1 (180)	2700 (10221)	0.1557	14 (6.35)

Other material options include:

- Aluminum Body and Discs
- Carbon Steel Body and Stainless Steel Discs
- Brass Body and Discs
- Stainless Steel Body and Discs
- EPDM, Silicone or Viton® Seals

## Precision Vacuum Gauges



### Unique Combination Panel or Back Mount Style with a Modern Hi-Tech Look

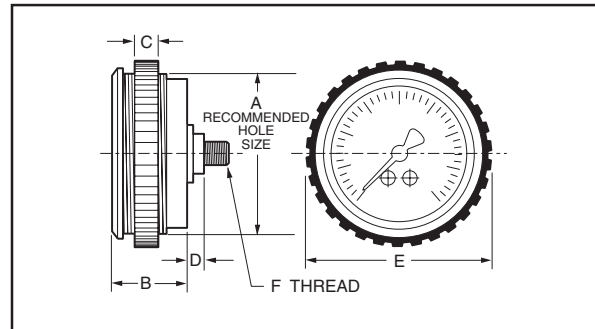
ANVER Vacuum and Pressure Gauges are some of the finest available for this price on the market today. They are precise, reliable and have a handsome chrome bezel. Their modern hi-tech look adds an air of quality to any machinery that features them. They perform well, look great, and cost no more than a multitude of lesser quality vacuum gauges on the market.

These vacuum and pressure gauges are excellent for any vacuum application in which vacuum and/or pressure levels need to be accurately monitored.

These gauges feature two mounting options within a single gauge style, offering a solution for all your application requirements: They can be center back or panel mounted, or can be mounted below the bezel with an extension. (350 models Series feature single mounting options.)

#### Features:

- Accuracy 2.5% of full scale
- Black ABS plastic case with Chromed Bezel
- Acrylic window with Dust-Proof Seal
- Coiled Safety Bourdon Tube
- White dial with black pointer
- Dual scale 0 to -30 in. Hg, 0 to -100 kPa  
(For Pressure Gauge: 0 to 100 psi, 0 to 700 kPa)
- Proven quality: Used on all ANVER Vacuum Equipment



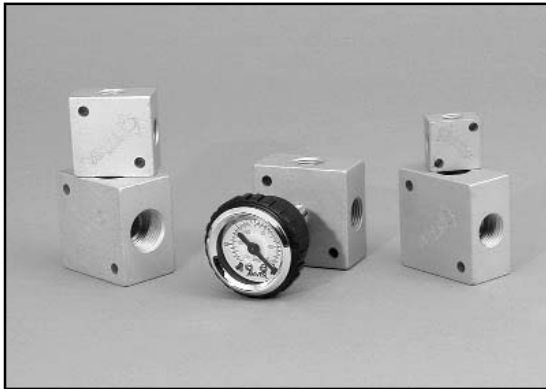
ANVER Item No.	Competitor's Gauge No.	Description	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F Thread	Weight lb. (Kg)	NPT to G Adapter
VG150-18PBM	15.110	Vacuum Gauge, 1-1/2" Dial x 1/8 NPT thread, combination center or panel back mount	1.58 (40)	1.26 (32)	0.39 (10)	0.27 (7)	1.96 (50)	1/8" NPT Male	0.13 (0.06)	G1/8" to 1/8" NPT
VG200-14PBM	20.110	Vacuum Gauge, 2" Dial x 1/4 NPT thread, combination center or panel back mount	2.00 (51)	1.26 (32)	0.39 (10)	0.27 (7)	2.36 (60)	1/4" NPT Male	0.16 (0.07)	G1/4" to 1/4" NPT
VG250-14PBM	25.310	Vacuum Gauge, 2-1/2" Dial x 1/4 NPT thread, combination center or panel back mount	2.50 (64)	1.26 (32)	0.39 (10)	0.27 (7)	2.83 (72)	1/4" NPT Male	0.18 (0.08)	G1/4" to 1/4" NPT
PG200-14PBM	N/A	Pressure Gauge, 2" Dial x 1/4 NPT thread, combination center or panel back mount	2.00 (51)	1.26 (32)	0.39 (10)	0.27 (7)	2.36 (60)	1/4" NPT Male	0.16 (0.07)	G1/4" to 1/4" NPT
VG350-14PBM	N/A	Vacuum Gauge, 3-5/8" Dial x 1/4 NPT thread, panel back mount	3.63 (92)	1.26 (32)	N/A	0.23 (6)	3.83 (97)	1/4" NPT Male	0.40 (0.18)	G1/4" to 1/4" NPT
VG350-14CBM	N/A	Vacuum Gauge, 3-5/8" Dial x 1/4 NPT thread, center back mount	3.63 (92)	1.28 (32.5)	N/A	0.31 (8)	3.96 (100)	1/4" NPT Male	0.54 (0.25)	G1/4" to 1/4" NPT

► This spec sheet was adapted for print from our website. Additional information and photos are available at [www.anver.com](http://www.anver.com). 0101501

# Vacuum System Accessories



## Vacuum Manifold Blocks

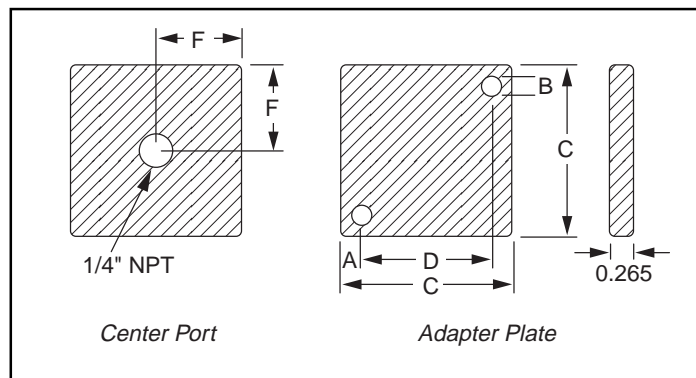
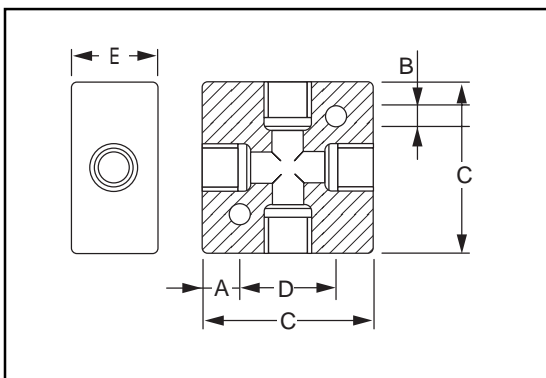


### Features:

- Compact and lightweight
- Made from Anodized Aluminum
- Through holes provided for mounting
- Four standard sizes available
- 1/4" NPT Gauge Port is standard with MBC Series
- Adapter Plate for mounting on flat surfaces available for all manifolds
- Make precise, professional installations easy

### Application:

ANVER quality manifolds have been designed to provide efficient distribution connections for vacuum or medium pressure systems.



ANVER Item No.	Pipe Thread	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	Adapter Part No.
MB-18F Manifold Only	1/8"NPT	0.157 (4)	0.18 (4.5)	0.99 (25)	0.66 (17)	0.59 (15)	0.49 (12.5)	MBAP-1
MB-14F Manifold Only	1/4"NPT	0.26 (7)	0.22 (5.5)	1.57 (40)	1.00 (26)	0.78 (20)	0.78 (20)	MBAP-2
MBC-14F with Center Port 1/4" NPT	1/4"NPT	0.26 (7)	0.22 (5.5)	1.57 (40)	1.00 (26)	0.78 (20)	0.78 (20)	MBAP-2
MB-38F Manifold Only	3/8"NPT	0.31 (8)	0.22 (5.5)	1.97 (50)	1.33 (34)	0.98 (25)	0.98 (25)	MBAP-3
MBC-38F with Center Port 1/4" NPT	3/8"NPT	0.31 (8)	0.22 (5.5)	1.97 (50)	1.33 (34)	0.98 (25)	0.98 (25)	MBAP-3
MB-12F Manifold Only	1/2"NPT	0.31 (8)	0.22 (5.5)	1.97 (50)	1.33 (34)	1.18 (30)	0.98 (25)	MBAP-3
MBC-12F with Center Port 1/4" NPT	1/2"NPT	0.31 (8)	0.22 (5.5)	1.97 (50)	1.33 (34)	1.18 (30)	0.98 (25)	MBAP-3

This spec sheet was adapted for print from our website. Additional information and photos are available at [www.anver.com](http://www.anver.com). 6070201