

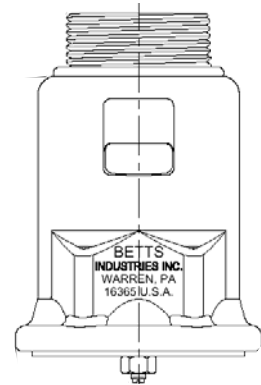
Vents

Betts Pressure/Vacuum Normal Vent.....	255
Betts Inbreathing and Outbreathing Vents.....	255-256
Trident Combination Vent.....	256
Betts Emergency Drain Plug.....	257
Betts Push Vents.....	257-258
Betts Vapor Valves.....	258-259
Runovent and Olsen Vents.....	259
Civacon 1985 and 1986 Vent Repair Kits.....	259
Girard MC307 Pressure Relief Vent and Magnetic Vacuum Breaker.....	260
Girard MC407 Pressure Magnetic Vacuum Breaker and Retro Model.....	261
Girard DOT 307 and 407 Vents.....	262
Girard Geiliner Vents.....	263
Girard IBC Vent/Fill Cap.....	264
Girard International Tank Container Vent.....	264
Girard Special "Weld In" DOT 407 Pressure Relief Valve.....	265
Girard 3" DOT 307 Hydraulic Vapor Recovery Adapter.....	265
Vapor Recovery Adapter.....	266
Girard MC307 and PV300 Pressure Relief Vent Accessories.....	267-268
Rupture Discs.....	268
Girard Sanitary Vent.....	269

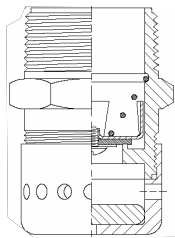
Betts Pressure/Vacuum Normal Vent

A normal vent designed for use on MC306 & DOT406 cargo tanks. Model 6496 has a pressure setting per 178.346-3(b)(2) of "not less than 1 PSIG" and a vacuum setting per 178.346-3(c)(2) "no more than 6 ounces" which allows for efficient recovery of vapors during closed system loading and offloading. Unique roll over protection retains product at any attitude of rollover. Vent is flow tested and marked.

NOTE: While normal vents provide limited vapor venting during loading/unloading, it is recommended that positive vapor valves (typically air operated) be provided when loading/unloading with the manhole closed. If positive vapor valves are not used, insure normal vent is functioning properly or open manhole cover before beginning loading/unloading. Failure to do so may result in head reversals or other tank failure.



**Dual Purpose Vent
Roll Over Protection
Compact Design
Interior Mount**

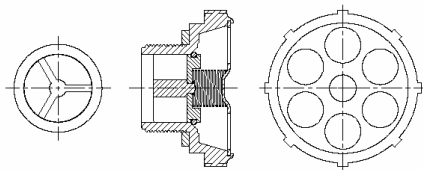
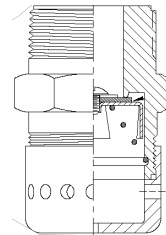


**Betts Outbreathing Vent with Overturn Disc
S.P. Outbreathing 1-1/4" I.P.S.**

The all new Single- Purpose Vents offer many advantages for use where ease of cleaning is important or where additional venting is required. May be installed singly or in multiples. This vent has been flow tested and marked in accordance with Nat. Fire Protection Assn. No. 385 (1964) Par. 2263 and No. 407 (1964) Par. 616.

Betts Inbreathing Vent 1-1/4 I.P.S.

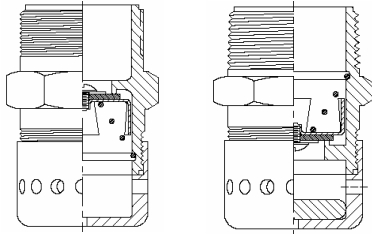
Intake Vent is designed to be used with Exhaust Vent or for additional venting requirements. High capacity, ease of cleaning, few parts are outstanding features. Vents are installed inside manhole cover and protected by means of a weatherhood. This vent has been flow tested and marked in accordance with Nat. Fire Protection Assn. No. 385 (1964) Par. 2263 and No. 407 (1964) Par. 616.



Betts Inbreathing Vent 1 5/8 -12 Threaded

Designed to supplement the 6238AL vent to provide additional inbreathing capacity when required. This vent may be used singly or in multiples according to requirements.

NOTE: While this vent does provide additional inbreathing capacity, it is recommended that positive vents, which will open with the emergency valve, be provided when discharging product with the manhole closed.

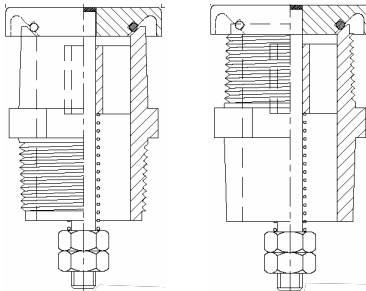
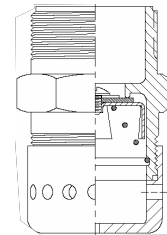


Combination Vent Package

Combination Vent Packages, consisting of Betts all new single-purpose vents, are available for all combination manholes with fill. Each vent provides 0.44 sq. in. of venting area. They are easily cleaned, have high capacity, and are available in a variety of materials. These vents have been flow tested and marked in accordance with Nat. Fire Protection Assn. No. 385 (1964) Par. 2263 and No. 407 (1964) Par. 616.

Inbreathing Vent - 1⁵/₈-12 Threaded

This vent is to be used with Exhaust Vent No. 3008, as shown on Page 87-1. Vent is installed under fill cover; protected from weather and damage. Vent is easily cleaned and available in a variety of material. This vent has been flow tested and marked in accordance with Nat. Fire Protection Assn. No. 385 (1964) Par. 2263 and No. 407 (1964) Par. 616.



Exterior

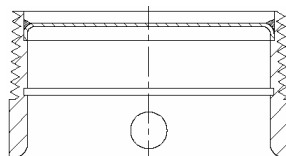
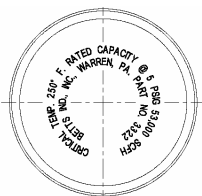
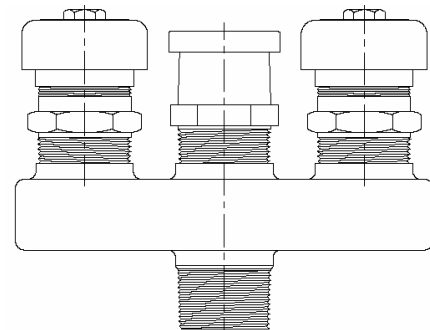
Interior

Inbreathing Vent - 1⁵/₈-12 Threaded

This Pressure-Actuated Vent is rated at 10,000 cubic feet of air per hour at 5 PSIG. It is designed to provide the pressure-actuated emergency venting as required by DOT MC-306, NFPA No. 385, and No. 407. This model may be installed from the tank exterior in such devices as manhole covers or pipe caps. The PAV 125 has been flow tested and marked in accordance with DOT MC-306 Par. 178.341-4(e), NFPA 385 Par. 2263, and NFPA 407 Par. 616.

Trident Combination Vent

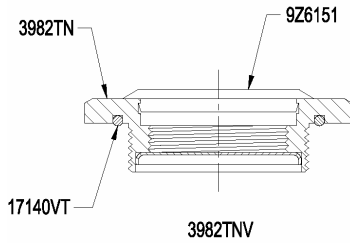
The Trident provides three-way venting plus overturn protection. It is designed to provide the pressure-actuated emergency venting plus inbreathing (vacuum) and Outbreathing (pressure). The Trident can be disassembled for cleaning. The pressure-actuated emergency venting has been flow tested and marked in accordance with D.O.T. MC306 Para. 178.341-4 N.F.P.A. 385 Para. 2263, and N.F.P.A. 407 Para. 616.



Fusible Plug (1-1/4" and 2" I.P.S.)

Fusible Plugs provide a means of emergency venting which depends only on temperature. Plugs are designed to melt and blow out at a maximum temperature of 250° F. These Fusible Plugs have been flow tested and marked in accordance with Nat. Fire Protection Assn. No. 385 (1964) Par. 2263 and No. 407 (1964) Par. 616 and DOT MC306 Par. 78.341-4.

Emergency Drain Plug



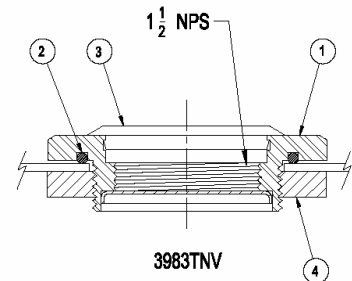
Emergency Drain Plugs provide a place to install a 1 1/2 N.P.T. pipe for the emergency unloading of an overturned tank. When a 1 1/2 N.P.T. pipe is screwed into this plug a disc is forced out of the way allowing product to travel through the 1 1/2 pipe. Shut off valves or hose connections to control product flow are at the option of the user.

Note: Manhole assemblies produced after Sept 1, 1992 that were ordered with the Emergency Drain Plug have the threaded ring welded to the underside of cover.

Description	Material	External Thd.	Internal Thd.	Wt.	Part No.
Emergency Drain Plug	Steel Tin Plated	2" NPS	1 1/2" NPS	10 oz.	3982TN
O-Ring	Viton				17140VT
Cap Plug	Polyethylene				9Z6151

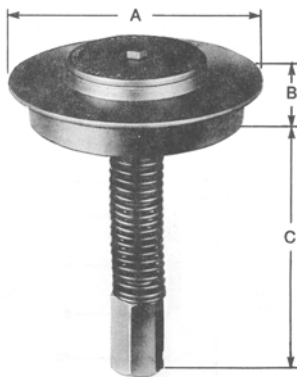
Retrofit Kit is also available for use on manhole which had the Emergency Drain Plug and were produced prior to Sept. 1992. These assemblies did not have a threaded ring welded to the underside of the cover.

Instructions for using Emergency Drain Plugs Remove cap plug 9Z6151. Install 1-1/2" N.P.T. pipe nipple with control valve on end. This operation will force a soldered in disc out of the way allowing product to flow through 1-1/2" nipple.



Retrofit Kit 3983TNV includes the following:

	Description	Material	Part No.
1	Emergency Drain Plug	Steel Tin Plated	3982TN
2	O-Ring	Viton	17140VT
3	Cap Plug	Polyethylene	9Z6151
4	Retainer Nut	Steel Tin Plated	3980TN



3-1/2" Push Vent

The Betts 3-1/2" Push Vent can be mounted to a 3" TTMA weld flange. It comes standard with a Teflon Encapsulated Silicone O-Ring seat, and a built flange for mounting our Vapor Recovery Hood.

An adaptor to fit Wheaton's emergency valve is available. See Appendix L-1 for a full parts breakout

A	B	C	Disc Travel	Mounting		
				B.C.	N.H.	S.H.
6 9/16	1 3/4	7 3/4	1 1/2 "	4 7/8	8	3/8-16



5" Push Vent

The Betts 5" push vent provides positive venting for bottom loading with the fill covers closed. Materials used are aluminum with stainless steel trim for greater versatility.

Emission collection hoods are easily installed. No hot work is required to install the vapor recovery hood at a later date.

Adaptor to fit Wheaton emergency valve stem available upon request
See **Appendix L-2** for a full parts breakout

Vapor System Inbreathing and Outbreathing Vent

A supplemental vent designed for installation in tank vehicle vapor recovery system to provide venting protection in the event the vapor recovery system should be closed or blocked while discharging product from the tank. This vent mounts to a 4" TTMA flange.

See **Appendix L-3 & L-4** for a full parts breakout



EASILY INSTALLED
ADDS TANK PROTECTION
THRU AREA - SIX SQUARE
INCHES



3-1/2" Aluminum Vapor Valve Air Operated Sequential Interlock

Betts 3-1/2" Sequential Vapor Valves are designed for use as positive vapor recovery valves on cargo tanks during loading and unloading. Sequential interlock design allows the vapor valve to be plumbed in series with the emergency valve to insure the vapor valve is open before the emergency valve. Vapor valves can also be plumbed to operate independently of the emergency valves, if desired. Internal interlock device guarantees that all vapor valves and emergency valves will close fully when air pressure is released, regardless of their location in the plumbing system.

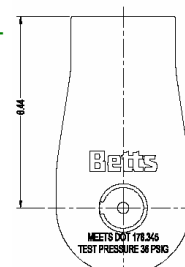
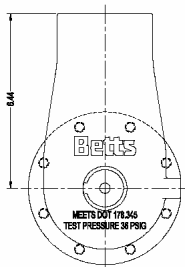
Available in two configurations - bolted design mounts in 20" offset PAF manhole cover using eight 3/8-16UNC bolts (included), while threaded design mounts in 16" offset PAF manhole. Both versions meet all requirements for

loading/unloading venting devices on MC306 and DOT406 cargo tanks and are tested and marked with a test pressure of 36 psig in accordance with 49CFR178.345-5(f).

Inward opening action prevents loss of lading due to surge pressure during a roll-over accident. All moving parts are internal to minimize chance of freeze-ups during cold weather. Aluminum bodies with stainless trim minimize corrosion and PTFE seals in contact with vapors insure compatibility with a wide variety of products.

4" Aluminum Vapor Valve Air Operated Sequential Interlock available upon request.

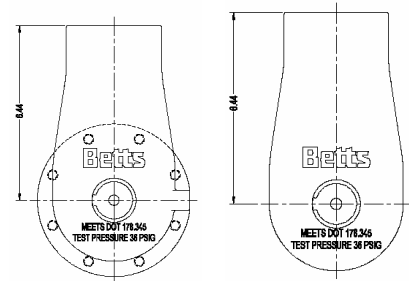
For ordering information please refer to **Appendix S-34 & S-35**
See **Appendix K-36** for a full parts breakout



3-1/2" Aluminum Vapor Valve Air Operated

Betts 3-1/2" Vapor Valves are designed for use as positive vapor recovery valves on cargo tanks during loading and unloading.

Available in two configurations - bolted design mounts in 20" offset PAF manhole cover using eight 3/8-16UNC bolts (included), while threaded design mounts in 16" offset PAF manhole. Both versions meet all requirements for loading/unloading venting devices on MC306 and DOT406 cargo tanks and are tested and marked with a test pressure of 36 psig in accordance with 49CFR178.345-5 (f).



Inward opening action prevents loss of lading due to surge pressure during a roll-over accident. All moving parts are internal to minimize chance of freeze-ups during cold weather. Aluminum bodies with stainless trim minimize corrosion and PTFE seals in contact with vapors insure compatibility with a wide variety of products.

For ordering information please refer to **Appendix S-34**
See **Appendix K-35** for a full parts breakout



Air Operated Vapor Valve and Hood

A combination vapor valve and emission collection hood designed to mount on manhole cover (Model AV46202AL) or in tank shell (Model AV46254AL) using a mounting pad. The outside cylinder insure the tank lading will not enter the air system through the actuating cylinder. Vapor valves are aluminum with stainless trim. **Viton or PTFE/Silicon O-Ring seals are available.**
See **Appendix K-34** for a full parts breakout

Betts 5" Vent Clamp

Part# **BET26235SL**

Stainless Steel clamp used in conjunction with Betts 5" push vent. **Also available in 3".**



Civacon 1985 and 1986 Vent Repair Kits and Parts

DBL carries kits and replacement parts for numerous Civacon vents. For a full parts breakout on the vents we carry parts for **please refer to Appendix L-5 & L-6**

Runovent

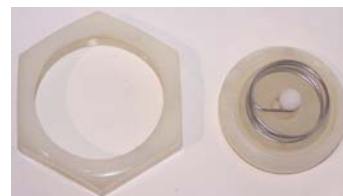
Sanitary three piece plastic vent designed for use in milk hauling operations. Internal baffle system prevents milk from spilling out.



Part#	Description
SANROVA	Runovent Complete
SANROVB	Runovent Inner Baffle
SANROVC	Runovent Cap
SANROVS	Runovent Outer Sleeve

Olson Vent Assembly and Plastic Nut

Spring loaded vent with plastic nut designed to be installed in top of milk tankers. Dual poppet design allows for normal vacuum and venting operations while preventing spilling.



Part#	Description
SANOLSONN	Plastic Nut
SANOLSONNV	Vent Assembly

Girard MC 307 Pressure Relief Vent



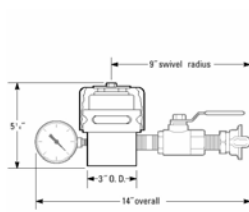
The MC 307 Pressure Relief Vent is a stainless steel, pressure actuated unit that is engineered to limit excessive internal pressure to 130 percent of tank design. The standard model vent set at 25 PSIG will exhaust 26,700 SCFH at 32.5 PSIG and conforms to the emergency venting requirement code for MC 307 tanks having a total exposed surface area up to 700 square feet.

The stainless steel valve seat is equipped with a replaceable Tef-O-Sil "O-Ring." The unit doubles as an unloading device, since the valve body is tapped 3/4" N.P.T. to accommodate the addition of inlet fittings for air unloading of transports. Provision is also made for a pressure gauge to be attached to the vent body.

An optional incorporation of a small vacuum section in the valve seat is also available upon request. It should be noted that this section, due to its limited size, may not be adequate enough to prohibit tank implosion. For additional vacuum protection, refer to "Girard Magnetic Vacuum Breakers" for tank transports.

The entire vent is designed to be easily removed from the tank vehicle for inspection and/or cleaning.

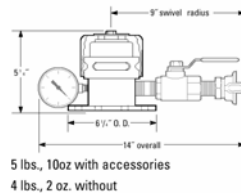
For replacement parts and details on valve seal kits please refer to **Appendix L-8**



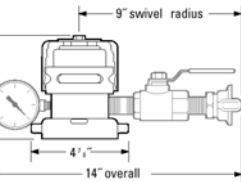
MC-307ST(WV*)
Stub end vent. Lower housing terminates in a straight stub end. Welds to the dome cover.

5 lbs., 10oz with accessories
4 lbs., 2 oz. without

MC-307MT(WV*)
Same as the above, but the stub end is on an 18 degree angle to conform to the curvature of the dome cover. Note: 3/4" & 1/4" N.P.T. tap are not available in this style.



MC-307FT(WV*)
Vent with a 3" TTMA drilled tank truck flange. Mounts to a 3" TTMA drilled companion flange on the transport. Supplied with a Teflon® envelope flange gasket.



MC-307BT(WV*)
Vent with a 3" swivel nut. Mounts on a 3" nipple and seals against a solid Teflon® gasket.

Girard MC 307 Magnetic Vacuum Breaker

The Girard Equipment 3" Magnetic Vacuum Breaker is a valve designed to prevent negative pressure (vacuum) from developing and imploding a typical tank transport. Girard Equipment uses a permanent magnetic force along with conventional springs to control the movement of the valve seat. Permanent magnetization within the valve, holds the seat tightly closed during transit and allows movement only on demand of 2" Hg, or greater. The unit is equipped with either a "Tef-O-Sil" "O" Ring, Viton "O" Ring, or a Kalrez gasket to meet the requirements for bubble-tightness given in docket HM-183.

For replacement parts and details on valve seal kits please refer to **Appendix L-9**

3MVB-SX Complete vacuum breaker with stub end outlet.

Designed to be welded in the dome of the transport.

3MVB-SX Complete vacuum breaker with stub end outlet.

Designed to be welded in the dome of the transport.

3MVB-FX Complete vacuum breaker with 3" TTMA drilled flange outlet.

Designed for installation on the flanged nozzle in the transports.

3MVB-TX Complete vacuum breaker with a 3" N.P.T. swivel nut outlet.

Designed for attachment to a tank truck "cleanout" nipple.



SEAT TYPE (substitute letter code for "X")

Teflon® Seat with a Tef-O-Sil "O" Ring.	T
Teflon® Seat with a Kalrez® Gasket.	K
Teflon® Seat with Viton® Gasket	V

Girard MC 407 Magnetic Vacuum Breaker



The new 3" DOT407 Magnetic Vacuum Breaker is a valve designed to limit negative pressure (vacuum) in a typical tank trailer.

The new 3" DOT407 Magnetic Vacuum Breaker can be used to upgrade any tank trailer currently using older style 3" magnetic breakers, as well as, be specified on newer DOT407 tank trailers.

A permanent magnetic force controls the movement of the valve poppet to open on demand of 4" Hg or greater.

All working parts are kept away from the airflow paths, which promotes easy cleaning and hassle-free repairs.

The valve body is cast with a 1" female port inlet to accept a variety of air inlet fittings. The 1" air inlet also allows for higher flow rate when air unloading, significantly reducing unloading time. A 1/4" female port is standard to accept a gauge. Maintenance is achieved without the need for special tools. The o-ring seal can be removed, inspected and replaced within minutes. The unit is equipped with either: a "Tef-O-Sil", or a Kalrez O-Ring seal.

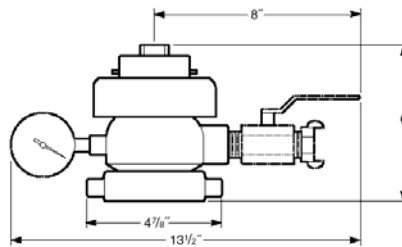
See **Appendix L-10** for a full parts breakout

3X407MVBTX

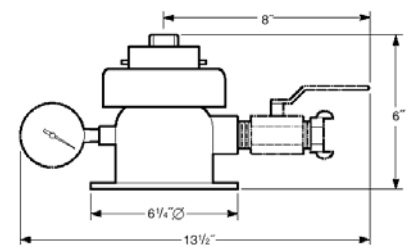
Complete vacuum breaker with a 3" swivel connection. Designed to be attached to a 3" NPT tank trailer nipple.

3X407MVBFX

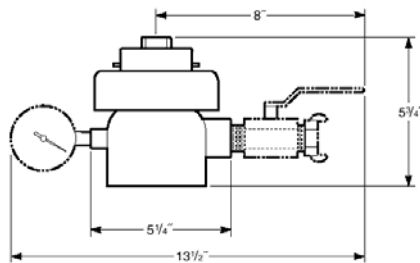
Complete vacuum breaker with a 3" TTMA flanged connection. Designed for installation on a tank trailer flanged nozzle.



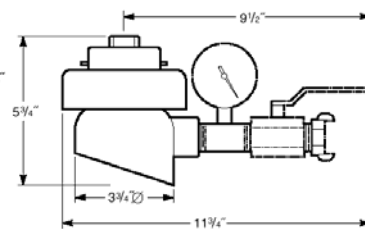
3X407MVBTX



3X407MVBFX



407MVBLSX



407MVBLSX

407MVBLSX

Complete vacuum breaker with a straight stub connection. Designed to be welded to either a domecover or the tank shell.

407MVBLSX

Complete vacuum breaker with a mitred connection. Designed to be welded to a domecover and conform to it's curvature.

SEAT TYPE	(substitute letter code for "X")
T	Teflon® "Tef-O-Sil" O-Ring.
K	Kalrez™ O Ring.

Girard MC 407 Magnetic Vacuum Breaker (Retro Model)

Part# 3X407MVB-RT

The 3X407MVB-RT Magnetic Vacuum Breaker is specially intended for "retrofitting" older tanks using the older 3MVB design that are permanently welded to the tank trailers dome cover.

Fitting the tank trailer with this design requires little effort. The inlet connection is specially machined to fit to the lower housing of the 3MVB (part # 201007-1).

Simply thread the Vacuum Breaker onto the existing lower housing (see photo on right) and you will have completed the installation.

The new design is low enough to fit under the overturn protection of most trailers. Comes standard with a "Teflon O-Ring seal.



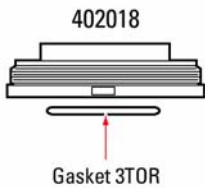
For a full list of replacement parts and parts breakout diagrams please refer to **Appendix L-11** for details.

Girard 3" DOT 407 Pressure Relief Vent

Girard Equipment, Inc.'s Three Inch DOT 407 Vents allows you to upgrade virtually any MC 307 or MC 312 tank to DOT 407 or DOT 412 venting. All the benefits of the 400 Series Vents without expensive hot-work. Flow rates are slightly less than our standard DOT 407 Vents, but are more than sufficient for most tanks.

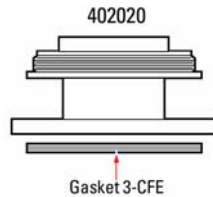
The stainless steel valve seat seals on a Teflon encapsulated silicone "O" Ring. This "O" Ring provides complete chemical resistance and a bubble-tight seal to meet the latest DOT requirements. The unit also meets the surge requirements of 178.345-10 (b) (3).

Replacement parts available, please see **Appendix L-12** for a full parts breakdown and for additional specs.



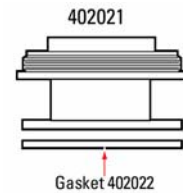
DOT3X407T

Vent with a 3" N.P.S. female pipe thread. Attaches to a 3" pipe nipple and seals against a solid Teflon "O" Ring Gasket.



DOT3X407F

Vent to mount on a 3" TTMA flange. Supplied with a Teflon envelope flange gasket.



DOT3X407AF

Vent to mount on a 3" ANSI flange. Supplied with a Teflon envelope flange gasket and a 1/4" NPT "Tell-Tale" indicator tap.

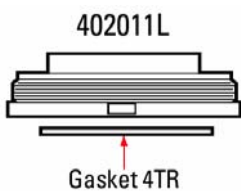
Girard 4" Low Profile DOT 407 Vent



Girard Equipment, Inc.'s Low Profile DOT 407 Vents combine a low profile, light weight design with increased flow rates to meet the most demanding needs of virtually any DOT 407, DOT 412, MC 307 and MC 312 tank. See the table below for specific flow rates.

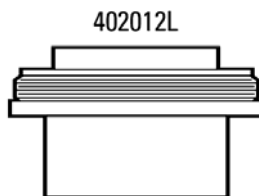
The stainless steel valve seat seals on a Teflon encapsulated silicone "O" Ring. This "O" Ring provides complete chemical resistance and a bubble-tight seal to meet the latest DOT requirements. The unit also meets the surge requirements of 178.345-10 (b) (3).

Replacement parts available, please see **Appendix L-13** for a full parts breakdown and for additional specs.



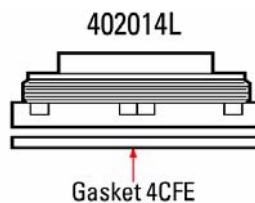
DOT407LT

Vent with a 4" N.P.S. female pipe thread. Attaches to a 4" pipe nipple and seals against a solid Teflon Ring gasket.



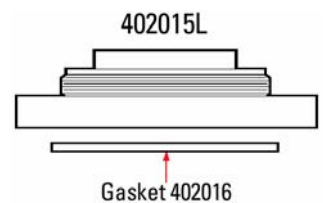
DOT 407LS

Stub end vent. Lower housing terminates in a straight stub end. Designed to be welded to the tank shell.



DOT407LF

Vent to mount on a 4" TTMA flange. Supplied with a 3/8"-16 removable thread inserts and a Teflon envelope flange gasket.



DOT407LAF

Vent to mount on a 4" ANSI flange. Supplied with a Teflon envelope flange gasket and a 1/4" NPT "Tell-Tale" indicator tap.

“Geiliner” Vents
GE-DOT3X407-ATFL



Girard Equipment, Inc.'s Teflon lined Pressure Relief Valve is designed to protect against aggressive ladings that normally would chemically attack stainless steel.

All wetted surfaces are lined with a 1/8" thick Teflon liner. The valve seat seals on a Teflon encapsulated silicone "O" Ring. This "O" Ring provides complete chemical resistance and a bubble-tight seal. The vent is designed to be easily removed from the tank for inspection and/or cleaning.



Vent to mount on a 3" ANSI Flange. Supplied with a Teflon liner and a valve seat.



GE-DOT407-LAFTL

Vent to mount on a 4" ANSI Flange. Supplied with a Teflon® liner and a valve seat.

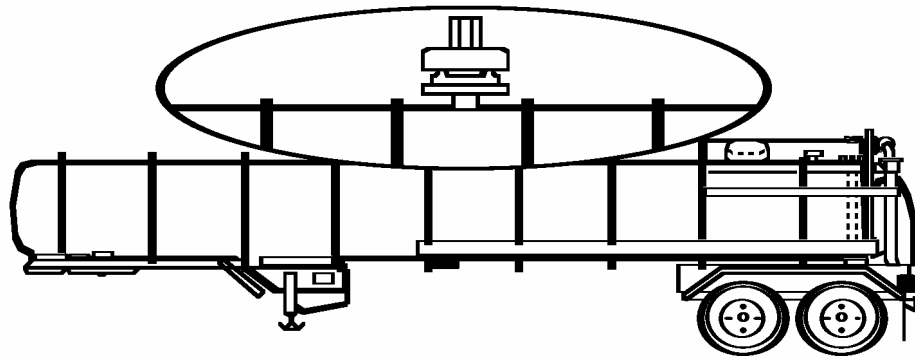
When ordering, please specify pressure setting.



GE-PV-300-2AFTL

Vent to mount on a 2" ANSI Flange. Supplied with a Teflon liner and a valve seat.

When ordering, please specify pressure setting.



For a complete parts breakdown for ordering replacement parts and for seeing further product specifications please refer to **Appendix L-14**

Girard IBC Vent/Fill Cap

The Girard IBC Vent/Fill Cap will forever change the way IBC's (Intermediate Bulk Containers) are filled, cleaned and repaired. The venting device consists of a dual-acting pallet for both pressure and vacuum relief and is housed deep inside the vent body to prevent damage of valve seat while in transit and during handling. The fusible element is made from an advanced engineered polymer that is heat sensitive and will provide total venting capacity in the event of a fire. The entire unit can be easily repaired in the field or sent back to Girard Equipment for reconditioning. The device can be hermetically sealed to help ensure precious cargoes from being tampered with or compromised.



Features	Girard IBC Vent/Fill Cap	The Competitions 5 in 1
Fill Cap	X	X
Pressure Relief	X	X
Vacuum Relief	X	X
Fusible Vent	X	X
Rollover Protection	X	X
Tamper evident provision	X	
Clean in Place	X	
Repair in Place	X	
Fill in Place	X	
Suited for High Purity Chemicals and also food grade products	X	

For further details on ordering replacement parts please refer to **Appendix L-15**

Girard Intermodal Tank Container Vent

3 Different Styles

IM Our standard vent with a 2-1/2" BSP male threaded inlet. Available with, or without vacuum section. *Please specify when ordering.*

IMF* Vent with flanged inlet. Supplied with tapping for pressure gauge mount. Available with, or without vacuum section.

IMF-TL* Teflon-Lined Vent designed to be used with, or without a rupture disc. Flanged inlet is standard. Optional Teflon-coated spring is available upon request.

Girard Equipment Inc.'s Intermodal Tank Container Pressure/Vacuum Relief Vents are made from 316 Stainless Steel and are electrochemically polished to reduce the probability of contamination. Maximum venting capacity is achieved through a standard 2-1/2" BSP male thread inlet. Seals are arranged so that there is metal contact between the pressure pallet and the valve body following initial seal contact. This promotes longer seal life, as well as, minimize leakage even following total seal failure, as would occur in a fire.

Our new Teflon Lined (IMF-TL) Relief Valve is designed to be used without a rupture disc between the vent and the cargo space. All internal wetted parts are lined with a 1/8" Teflon liner protecting it from being chemically attacked.

The vents are designed to accept a variety of seals from different manufacturer's around the world, so you will never be far away from replacement parts.

All Pressure/Vacuum Relief Vents are fully manufactured, tested and certified by Girard Equipment, Inc. who has been producing tank pressure control devices for over 30 years.

For a full parts breakout and dimensions please refer to **Appendix L-16**

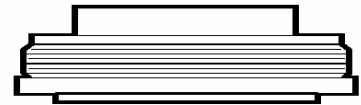


Special "Weld In" DOT 407 Pressure Relief Valve

Girard's Special Low Profile "Weld-In" (LW) Series DOT 407 Vent combines an ultra-low profile, light weight design with high flow rates to meet the most demanding needs of virtually any tank. See the table below for specific flow rates. The LW Vent welds directly to your manlid, thus avoiding expensive hot-work to the shell of your tank, and is low enough to be "retro-fitted" to most any tank, without having to alter the overturn protection.

For replacement parts please see **Appendix K-18** for a full parts breakdown and for additional specs.

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Girard's Hydraulic Vapor Recovery Adaptors are easy to clean and maintain in place.

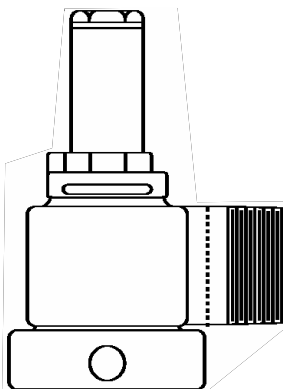
Girard 3" DOT 307 Hydraulic Vapor Recovery Adaptor

Girard Equipment's hydraulically operated vapor recovery adaptor is manufactured from T316 stainless steel investment castings and is electro-polished for easy cleaning.

The standard unit can be supplied with a 3" straight threaded female swivel outlet for mounting on a 3" clean-out nipple and one or two 2" N.P.T. outlets to allow for both top and bottom vapor recovery.

The adaptor is closed in transit and opens consecutively with the tanks' hydraulic internal valve using the existing hydraulic hand pump.

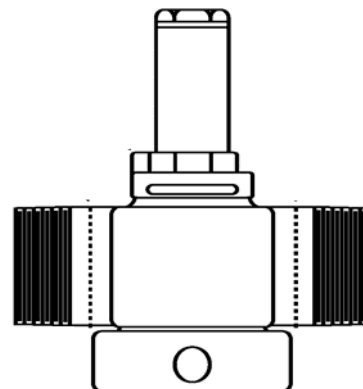
The external hydraulic cylinder is completely isolated from the tanks' lading. The main sealing surface is a Teflon Encapsulated O-ring (Tef-O-Sil), which is compatible with most chemicals. The adaptor is designed to be "Cleaned-In-Place", without removing the assembly from the tank trailers pipe work. This feature also allows for the operator to remove the cylinder to either replace or repair as needed. A fluorescent orange indicator provides positive visual confirmation that the valve is open and can be seen from ground level. An additional provision has been added to enable the use of a variety of valve position sensors. This assembly has an effective flow-through area of 2", which should be more than adequate to handle most industrial vapor recovery applications. The unit can also double as an air-unloading device.



GVRA-B2

Mounts on a 3" Tank Nozzle.
2" NPT Male Outlet.

Hydraulic Cylinder completely isolated from tank lading.
Shear Section on Outlet



GVRA-BXT

Mounts on a 3" Tank Nozzle.
2" NPT Male Outlet.

2 Outlets (TEE), for both top and bottom vapor recovery.
Shear Section on Outlets.

See **Appendix L-17** for a full parts breakout



Girard 3" x 2" Vapor Recovery Adapter

Part# 3X2VRA

The new 3" x 2" Vapor Recovery Adapter is designed for use on an existing 3" tank nozzle. The swivel connection allows easy positioning in confined spaces. The fixed 3" male NPT section could accommodate a 3" cap (solid or fusible). Adapter comes standard with a 2" full-port ball valve, dust cap and chain.

Girard 3" Vapor Recovery Adapter

Part# 3VRA

This 90° Vapor Recovery Adapter with a 3" NPT Swivel inlet is used to safely recover vapors in a "Closed Loop" loading and unloading situation.



Girard Vapor Recovery Adapter Options



**Air Operated
Vapor Recovery Adapter**



**Vapor Recovery Adapter
With Liquid Level Sensor**

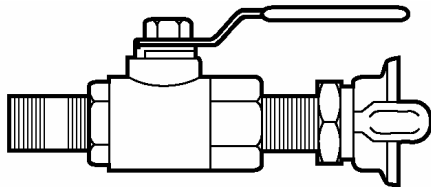
Girard MC307 and PV300 Pressure Relief Vent Accessories



Stainless Steel Liquid Filled Gauge
Part# 202019 0-60 PSI
Part# 202019A 0-100 PSI/0-7 Bar
1/4" Inlet, stainless steel (liquid glycerin filled) pressure gauge.



Blanking Caps
For capping off pressure vent and vacuum breaker lower housings.



3/4" X 2" Stainless Steel Nipple
Part# 202016

3/4" Universal Male
Part# 20218S (Stainless)
Part# 202108 (Mal. Iron)

3/4" Stainless Steel Ball Valve
Part# 202017

3/4" Universal Blank End
Part# AMO (Not Shown)

3" Air Unloading Assembly
Part# 3ADS

Can be fitted to an Acid/Chemical Tank Trailer for air, or nitrogen purging. 360° swivel for ease of handling.



3" Vapor Recovery Adaptor (shown on 3" pipe nipple)
Part# 3VRA

Used to safely recover vapors during "closed loop" loop unloading.



3" Solid Cap
Part# 3-SC
Straight thread, seals on gasket, large sealing tabs, seals on an extra thick Teflon gasket, Swivel hook for attaching cable or chain.



3" Stainless Polymer Fusible
Part# 3-SPF
Chemically inert thermoplastic polymer used to join two piece cap together, fully repairable, large seal tabs, seals on an extra thick Teflon gasket.



4" Solid Cap
Part# 4-SC
Straight thread, seals on gasket, large sealing tabs, seals on an extra thick Teflon gasket, Swivel hook for attaching cable or chain.



4" Stainless Fusible
Part# 4-SF
4" fusible cap, extra thick Teflon gasket (standard), large seal tabs.



Reducer
Part# 3X2S
To reduce from 3" NPT Female to a 2" NPT Male thread.



3 X 3 Adaptor
Part# 3X3S
This heavy duty adapter can be used to restore 3" NPT (tapered) nipples like those found on tank trailers clean-out nipples, nose lines, and valve outlets that have been damaged due to "cross threading". Also, threads that are galled, out of round, or partially stripped can be renewed without the need for costly work on the trailer.

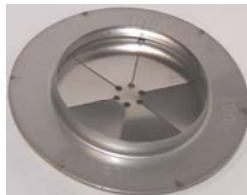
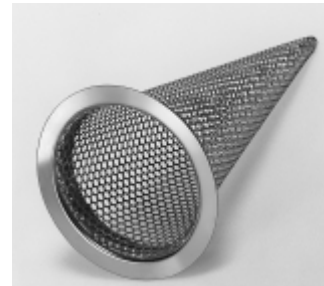


Universal Spanner Wrench
Part# NSW
A light weight, universal spanner type wrench for pin lug fittings and pipe caps. Fits sizes: 3" and 4". Cast in malleable iron.

3" Stainless Steel Cone Strainer
Part# 3C6

Installs into a 3" opening (i.e. quick connect female, 3" x 3" adapter) and prevents large objects from entering the cargo pumps intake line. The cone-shaped design allows the strainer to be filled with 75% of material before restricting flow. Standard stainless steel screens are available in number 6 mesh (shown).

(Number 50 and number 100 mesh are also available, upon request).



2-1/2" 50# Rupture Disc
Part# MISRD2.5-50
Stainless Steel 2-1/2" rupture disc designed to release at 50# with Teflon gasket.



Girard Sani-Vent

This venting device consists of dual-acting pallet to protect from over-pressurization and vacuum conditions in sanitary tank trailers.

Electrochemically polished surfaces make the unit more easily cleanable to inhibit the growth of bacteria and other foreign contaminants.

Ideal uses for this product are; liquid food grade products, high purity chemicals, pharmaceutical products, etc.

The housing flap can be opened by hand for loading or the sampling of the product. The entire unit can be hermetically sealed and fastened to the container to guard against unauthorized tampering of the payload.

For replacement parts please refer to **Appendix L-7**

