



DOT 407 Magnetic Vacuum Breaker Owner's Manual GC60000 to GC82400



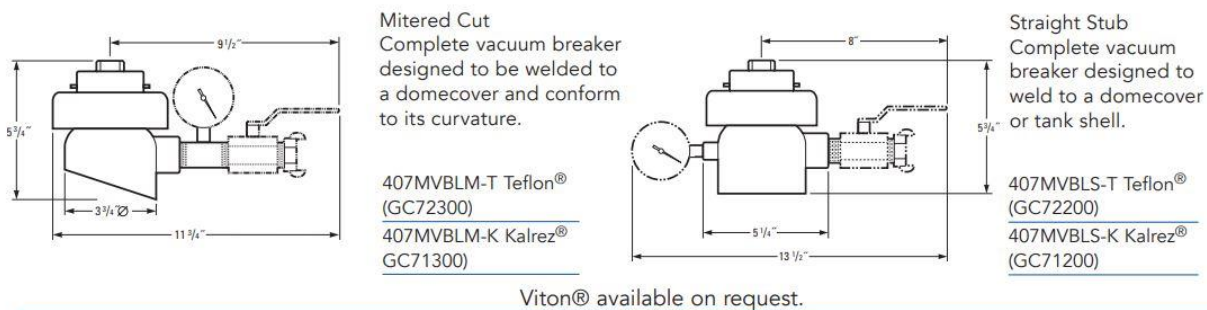
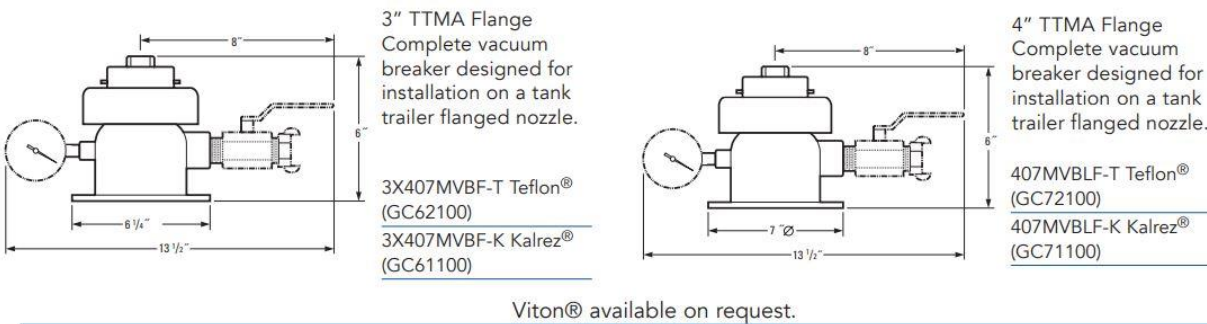
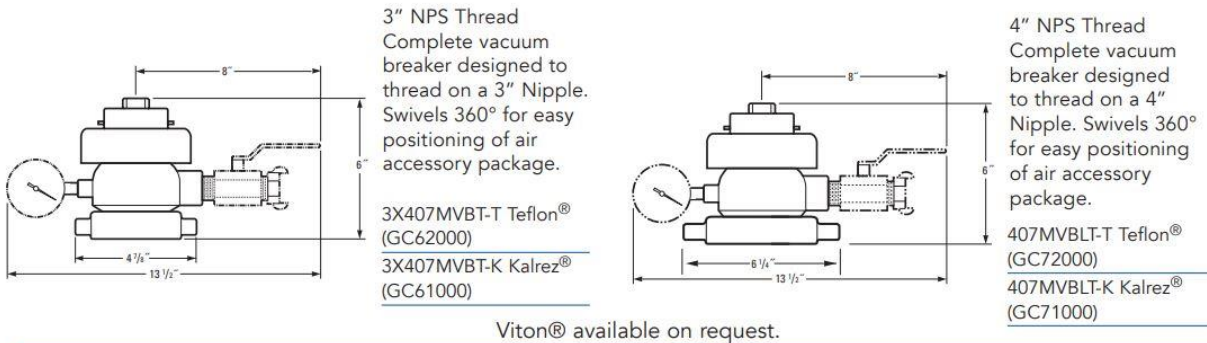
The Magnetic Vacuum Breaker is a valve designed to limit negative pressure (vacuum) in a typical tank trailer. A permanent magnetic force controls the movement of the valve poppet to open on demand at 4" Hg or greater. All working parts are kept away from the airflow paths, which promotes easy cleaning and hassle-free repairs.

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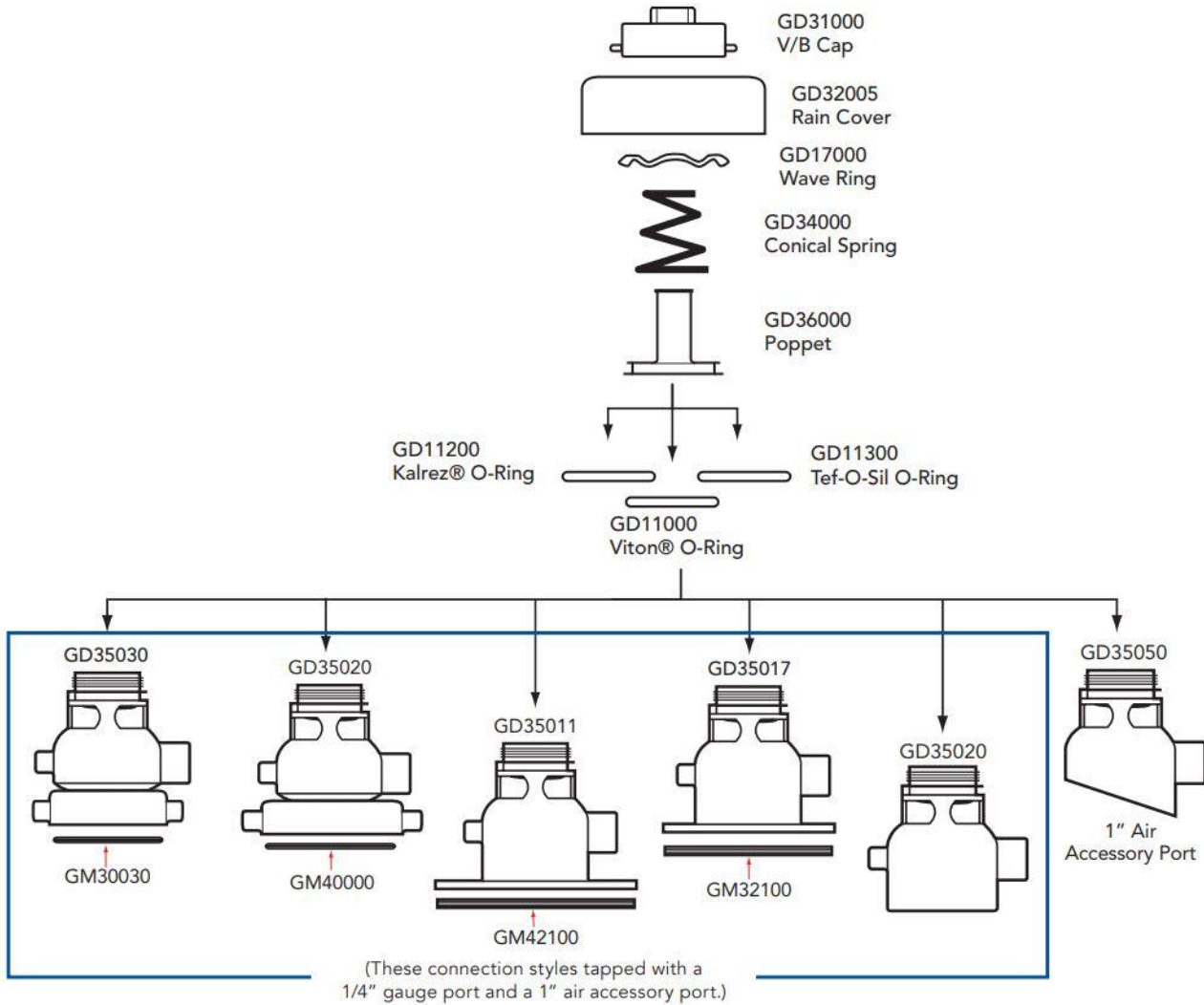
Technical Data

- 1) All pressure bearing components are constructed of corrosion resistant 316 Stainless Steel.
- 2) Standard Tef-O-Sil (Teflon® encapsulated O-Ring) seals are compatible with all ladings for packing groups 1 & 2.
- 3) Relieves vacuum at 4" Hg.
- 4) Flow rate: 12,000 SCFH at 6" Hg.
- 5) Test pressure: Seal is bubble tight from 0-50 PSI.
- 6) This product can be adapted to any application that requires low vacuum venting with a 3" or 4" male NPT, BSP, ACME, or TTMA flanged connection.



Exploded View of Product

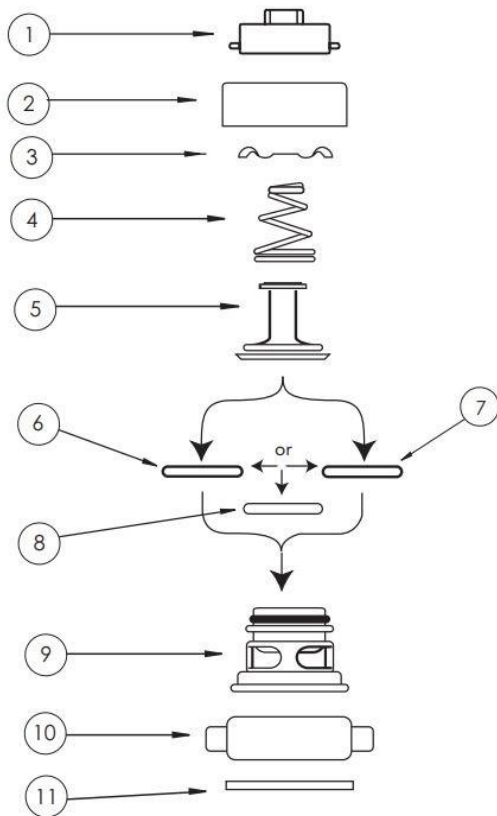
DOT 407 Magnetic Vacuum Breaker



Exploded View of Product

DOT 407 Magnetic Vacuum Breaker (Ultra Low-Profile)

MODEL	DESCRIPTION
DOT 3X407-MVB-UT (GC62010)	A standard style vacuum Breaker with a Tef-O-Sil O-Ring seal.



ITEM	PART NO.	DESCRIPTION
1	GD31000	Cap
2	GD32010	Rain Cover
3	GD17000	Wave Ring
4	GD34000	Conical Spring
5	GD36000	Poppet
6	GD11200	Kalrez® O-Ring
7	GD11300	Tef-O-Sil O-Ring
8	GD11000	Viton® O-Ring
9	GD35060	Ultralow Housing
10	GO40300	3" Swivel NPS Nut
11	GM30030	Orange DuraSeal Ring Gasket

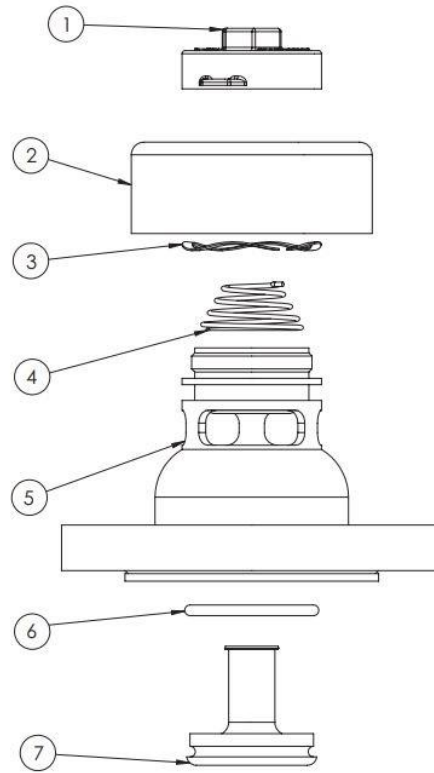
Exploded View of Product

3" ANSI Flange DOT 407 GEILINER® Magnetic Vacuum Breaker

MODEL	DESCRIPTION
GC62410	Standard DOT 407 Vacuum Breaker with 3" ANSI Flange and Teflon® lined internals.

Viton® and Kalrez® O-Rings available on request.

ITEM	PART NO.	DESCRIPTION
1	GD31600	Cap
2	GD32000	Rain Cover
3	GD17000	Wave Ring
4	GD34000	Conical Spring
5	GD35057	3" ANSI Housing, Teflon® Lined
6	GD11300	Tef-O-Sil O-Ring
7	GD36005	Poppet, Teflon® Lined



Safety

General Safety Information



WARNING: This device is under pressure that could cause injury. Do not attempt to disassemble this device unless you have been properly trained by a Girard Equipment representative. Follow all installation, maintenance, and repair instructions set forth in this manual to avoid injury.

Product Storage

- Temperature Range: -40°F to 250°F
- Humidity Range: N/A
- Altitude Range: N/A

Store device upright and in its original container to maintain a dust-free environment. We recommend that stored valves be retested every six months. The initial test date will be listed on the valve certificate.

Product Handling

Follow OSHA practices for lifting.

Disposal Requirements

Due to spring pressure, authorized personnel must disassemble the device before disposal. Use caution when disassembling the device. If authorized personnel are not present, please contact Girard Equipment.

Installation Instructions

- 1) Remove valve from packaging.
- 2) Align the valve with the tank mount.
- 3) Use Girard Equipment's GO45000 4" x 3" spanner wrench to screw the DOT 407 Magnetic Vacuum Breaker to its port.

Operation Instructions

No manual operation is required for the DOT 407 Magnetic Vacuum Breaker. This safety relief valve opens and reseats automatically.

Maintenance Instructions



Warning: This device is under pressure that could cause injury. Do not attempt to disassemble this device unless you have been properly trained by a Girard Equipment representative. Follow all installation, maintenance, and repair instructions set forth in this manual to avoid injury.

O-Ring and Gasket Maintenance

All soft goods should be replaced during regular maintenance and requalification, or if device fails an in-service STD (Start to Discharge) pressure test.

To replace the O-Rings:

- 1) Use GO45000 4" x 3" spanner wrench to unscrew the DOT 407 Magnetic Vacuum Breaker from its port.



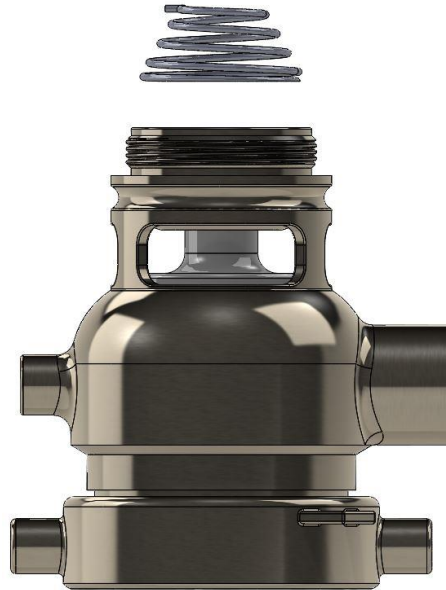
- 2) Use a 1" socket wrench to unscrew the cap and magnet assembly. **Warning: the vacuum breaker cap is under pressure. To prevent injury, the cap should be handled with care as it is removed.**



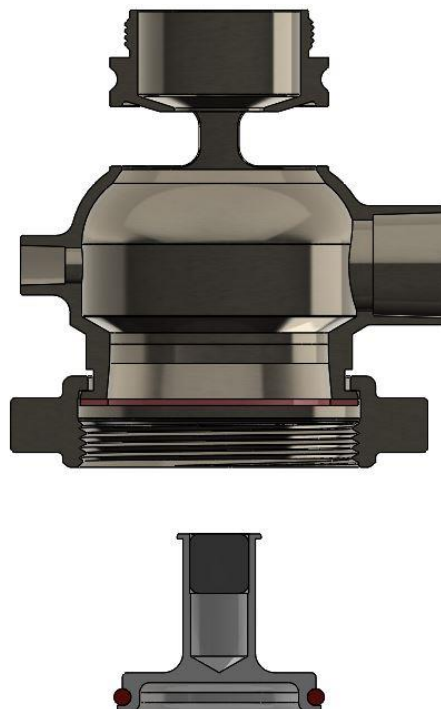
- 3) Remove the rain cover and lock ring.



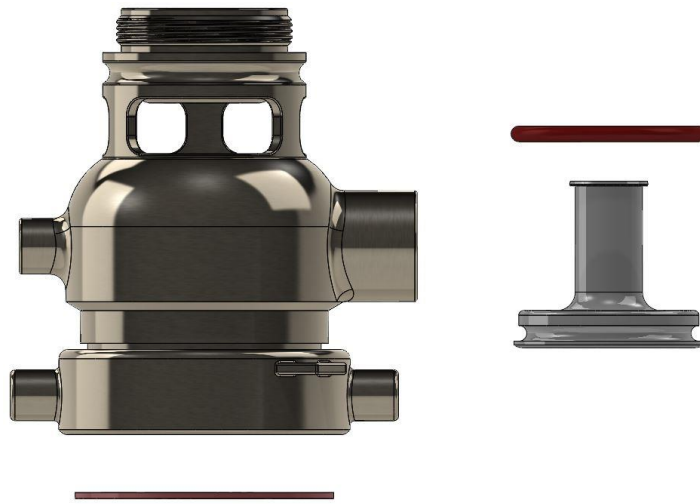
- 4) Carefully unhook the spring from around the poppet and remove it. **Warning: Spring is under compression. Use caution when removing.**



- 5) Remove poppet-magnet assembly through the bottom of the housing.



- 6) Remove and replace gasket and O-ring.



- 7) Re-assemble the components, following steps 2-6 in reverse order.
IMPORTANT: Ensure the cap is tightened to 15 ft-lbs of torque.

Test Instructions

Vacuum Test:

- 1) **Important:** Ensure the cap is tightened down to 15 ft-lbs of torque.
- 2) Mount assembly to test fixture using suitable gasket.
- 3) Vacuum is to be set at 4" ± 2" Hg and valve opened all the way.

Assembled Test:

- 1) Connect air supply to assembly and apply 50 PSIG or pressure.
- 2) Apply leak detector around perimeter of valve and ensure there are no continuous bubbles.
- 3) Remove all pressure and bleed off
- 4) Repeat test at 3 PSIG, no continuous bubbles allowed.

Troubleshooting & Repair

If device fails STD (Start to Discharge) test:

1. Replace O-ring and gasket as shown in the Maintenance Instructions section, Step 2-6.
2. Clean ceiling of poppet with industrial strength degreasing cleaner.

If device fails vacuum set pressure test:

- Replace the spring.

If device fails to reset:

- Clean ceiling of poppet with industrial strength degreasing cleaner.

If device doesn't seal properly:

1. Wipe sealing area with clean rag.
2. Install new O-Ring.
3. If problem cannot be corrected, contact a Girard Equipment representative.

Replacement Parts

Poppet O-Rings for DOT 407 Magnetic Vacuum Breakers:

TEF-O-SIL	KALREZ	VITON
GD11300	GD11200	GD11000

***For additional materials and options, contact Girard Equipment’s Engineering Department.**

Warranty

All goods manufactured by Girard Equipment, Inc. from “genuine” Girard parts are warranted to be free from defects and will be replaced free of charge if failure occurs within 5 years of date of shipment, provided that these parts have been used in accordance with seller’s recommendations. Our liability in any case shall be limited to the sale price of the product and will not extend to any consequential damage.

Contact Information

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