

SERIES 16240

Side-Mount Vacuum Relief Vent



PROTECTOSEAL

- Sizes 2" (DN 50) through 14" (DN 350)
- Settings achieved by weight loading
- Reduces costly evaporation losses
- Leakage rate of less than 1 SCFH of air at 90% of set point
- Patented, FEP film "Air-Cushioned Seating"
- Low-leak pallet design - certified test reports
- Conforms with European ATEX Directive 94/9/EC
- Factory tested / certified for leakage and correct settings
- Available in Aluminum, Ductile Iron, Stainless Steel, Carbon Steel, and Alloy C / C276



SERIES 16240

OBJECTIVE

The Protectoseal Series 16240, Vacuum Relief Vent provides vacuum relief to maintain tank's vapor space within safe operating parameters. Vent is designed to be mounted to a horizontally positioned pipe flange.

TECHNIQUE

A pallet in the vent housing retards air intake as the tank normally breathes in due to atmospheric temperature changes or due to emptying the tank. The pallet opens and closes to permit only the intake relief necessary to avoid tank damage under normal operating conditions.

Peripheral pallet assembly guides and center pallet stem guides insure proper alignment of pallet assembly on the seat and smooth lifting and reseating action.

Optimized Performance Vents™

Protectoseal's "Optimized Performance Vents" incorporate patented features that provide the optimum overall vent performance with regard to sealing, set point, flow and resealing (blow down).

SPECIAL FEATURES

Fast Inspection, Easy Maintenance. Design and light weight of entire unit permits easy, convenient handling for inspection and maintenance.

Maintains Accurate Pressure Settings. Set points are accurate to within +/- 3% across the entire range of available settings.

Air-Cushioned Seating. A flat, smooth diaphragm of FEP film is supported on both sides of an annular channel to form a floating air seal with the seat. An outer support rim assures proper seating.

Automatic Condensate Drainage. Self-draining housing body and drip rings keep condensate away from seating surfaces. Vent is protected from freezing, binding and clogging.

Low-Leakage. Vent leakage is no more than 1 SCFH at 90% of the set pressure. Pressure tested against leakage through castings and gasketed joints.

Sizes Available. Available in 2" (DN 50) through 14" (DN 350) sizes. Aluminum flanged to mate with 125# ANSI and DIN PN 16 flat face flanges. All other materials mate with 150# ANSI and DIN PN 16 raised face flanges. Other drilling patterns are also available upon special request.

PRO-FLOW III® Sizing and Selection Software. Use PRO-FLOW III® to select the correct size unit for pressure and vacuum relief calculated in accordance with API 2000, ISO 28300, NFPA 30 and OSHA 1910.106.

CONSTRUCTION

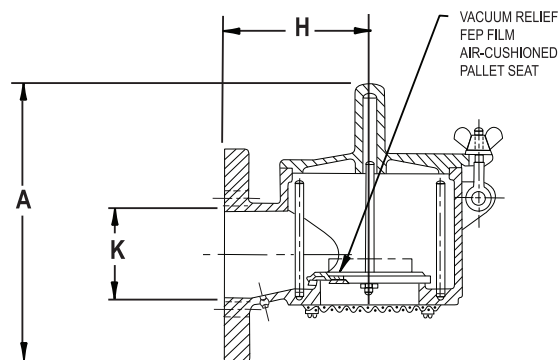
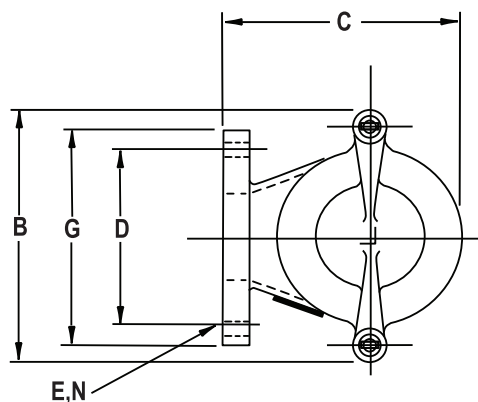
A comprehensive range of materials is offered as shown in the chart below. Non-metallic (thermoplastic resin & FRP) construction available. Other materials and features can be furnished upon request.

Available Options.

- Alternate diaphragm materials
- Material certifications for castings
- Lower than standard minimum vacuum setting
- Higher than standard maximum vacuum setting
- Mounting connections added to vacuum port
- Steam jacketing available
- Electronic indication of vent opening
- FEP coating
- Kynar® coating (*Kynar® is a Registered Trademark of Arkema, Inc.*)
- Special cleaning & packaging for the storage of ultrapure liquids

| Series | Housing | Pallet | Pallet Diaphragm | Weight Material |
|---------|--------------|----------|------------------|-----------------|
| 16240 | Aluminum 356 | Aluminum | FEP Film | Steel or Lead |
| C16240 | Ductile Iron | 316 S.S. | FEP Film | Steel or Lead |
| CS16240 | Cast Steel | 316 S.S. | FEP Film | Steel or Lead |
| F16240 | 316 S.S. | 316 S.S. | FEP Film | S.S. or Lead |
| RE16240 | Aluminum 356 | 316 S.S. | FEP Film | Steel or Lead |
| M16240 | Alloy C | C276 | FEP Film | C276 or Lead |

Note: Aluminum flanged to mate with 125# ANSI and DIN PN 16 flat face flanges. All other materials mate with 150# ANSI and DIN PN 16 raised face flanges.



Dimensions shown are for reference only, contact Factory for certified drawings.

DIMENSIONS & ORDERING INFORMATION

| Cat. No.* | Flange K | Ht. A | Width B | Length C | H | B.C. D | Dia. G | Dia. E | Holes N |
|-----------|-------------|----------|------------|-------------|-------|-----------|-----------|-----------|------------|
| 16240D2 | 2" | 12¼" | 9⅞" | 9" | 5¼" | 4¾" | 6 | ¾" | 4 |
| 16240DN2 | DN50 | 311mm | 244mm | 229mm | 133mm | 125mm | 165mm | 18mm | 4 |
| 16240D3 | 3" | 13¼" | 9⅞" | 10⅝" | 5½" | 6" | 7½" | ¾" | 4 |
| 16240DN3 | DN75 | 337mm | 251mm | 264mm | 140mm | 160mm | 200mm | 18mm | 8 |
| 16240D4 | 4" | 15¼" | 9" | 12⅞" | 6½" | 7½" | 9" | ¾" | 8 |
| 16240DN4 | DN100 | 387mm | 229mm | 308mm | 165mm | 180mm | 220mm | 18mm | 8 |
| 16240D6 | 6" | 15¾" | 11" | 15⅝" | 8⅝" | 9½" | 11" | ⅞" | 8 |
| 16240DN6 | DN150" | 400mm | 279mm | 391mm | 213mm | 240mm | 285mm | 22mm | 8 |
| 16246D8 | 8" | 16¼" | 13½" | 15½" | 8½" | 11¾" | 13½" | ⅞" | 8 |
| 16246DN8 | DN200 | 413mm | 343mm | 394mm | 216mm | 295mm | 340mm | 22mm | 12 |
| 16248D10 | 10" | 17¼" | 15¼" | 19¼" | 10½" | 14¼" | 16" | 1" | 12 |
| 16248DN10 | DN250 | 438mm | 400mm | 489mm | 267mm | 355mm | 405mm | 26mm | 12 |
| 16250D12 | 12" | 19¾" | 18¼" | 21¾" | 12" | 17" | 19" | 1" | 12 |
| 16250DN12 | DN300 | 502mm | 476mm | 552mm | 305mm | 410mm | 460mm | 26mm | 12 |
| 16252D14 | 14" | 22¼" | 21" | 21" | 12" | 18¾" | 21" | 1⅞" | 12 |
| 16252DN14 | DN350 | 565mm | 533mm | 533mm | 305mm | 470mm | 520mm | 26mm | 16 |

* Cat. No. designates Aluminum Housing & Pallets, please refer to chart on the reverse for other materials of construction.

PRESSURE AND/OR VACUUM SETTINGS (Consult factory for settings outside of STANDARD range.)

| Flange Size | STANDARD MINIMUM SETTINGS | | | | | | STANDARD MAXIMUM SETTINGS | | | | | |
|-------------|---------------------------|---------|------|----------------------|---------|------|---------------------------|---------|-----|----------------------|---------|-------|
| | VACUUM | | | | | | PRESSURE | | | VACUUM | | |
| | Aluminum | | | Other Materials | | | All Materials | | | All Materials | | |
| | oz./in. ² | in.W.C. | kPa | oz./in. ² | in.W.C. | kPa | oz./in. ² | in.W.C. | kPa | oz./in. ² | in.W.C. | kPa |
| 2" / DN50 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 45.00 | 77.85 | 19.39 |
| 3" / DN75 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 36.00 | 62.28 | 15.51 |
| 4" / DN 00 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 47.00 | 81.31 | 20.25 |
| 6" / DN150 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 32.00 | 55.36 | 13.79 |
| 8" / DN200 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 32.00 | 55.36 | 13.79 |
| 10" / DN250 | 0.50 | 0.87 | 0.22 | 0.75 | 1.30 | 0.32 | n/a | n/a | n/a | 27.00 | 46.71 | 11.63 |
| 12" / DN300 | 0.50 | 0.87 | 0.22 | 0.75 | 1.20 | 0.32 | n/a | n/a | n/a | 29.00 | 50.17 | 12.49 |
| 14" / DN350 | 0.50 | 0.87 | 0.22 | 0.75 | 1.20 | 0.32 | n/a | n/a | n/a | 23.00 | 39.79 | 9.91 |



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