

TECHNICAL BULLETIN



MODEL 3K00 Pressure / Vacuum Vent

OBJECTIVE

The Model 3K00 Pressure / Vacuum Vent is designed for use on atmospheric and low-pressure storage tanks where pressure and vacuum relief is required.

TECHNIQUE

Weight loaded pallets in the vent housing allow the intake of air and the escape of vapors as the tank breathes due to thermal changes and product movement in and out of the tank. The pallets open and close to permit in breathing and out breathing necessary to maintain the tank pressure within permissible limits to avoid damage to the tank.

CONSTRUCTION

Housing Material: Available in carbon steel, stainless steel, in sizes DN50 (2") through DN300 (12").

Seat Rings: Press-fitted metal seat rings in stainless steel 1.4581.

Pallets Assemblies: Replaceable stainless steel pallet assemblies are standard for all vents.

Pallet Diaphragms: Standard diaphragm material is FEP film.

SPECIAL FEATURES

The Model 3K00 is designed, manufactured and tested according to Directive 2014/34/EU (ATEX114), ISO 80079:36 and ISO 80079:37.

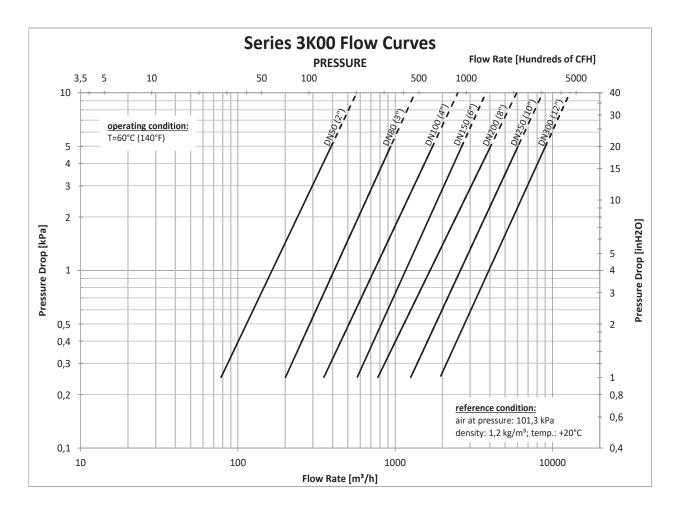
Maintains Accurate Settings: Standard settings for pressure are +5 mbar to +50 mbar and for vacuum -2,5 to -50 mbar. Other settings are available upon request.

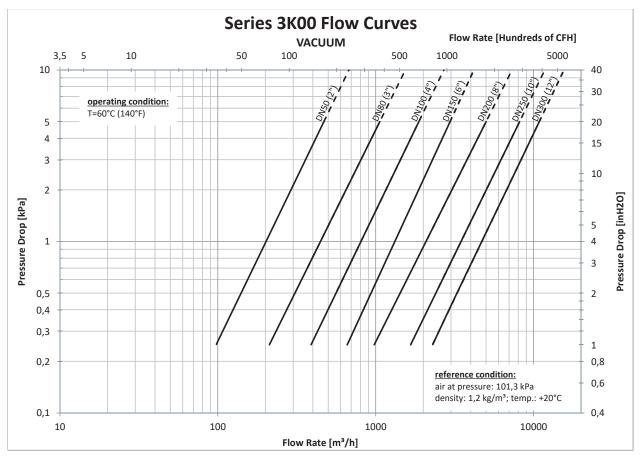
All vents are tested to Cashco high standards for both leakage and set point prior to shipment. A certified test certificate is included with each vent verifying the accuracy of both the pressure and vacuum setting and leakage. Seat leakage meets or exceeds international standards (ISO 28300, API 2000).

Condensate Drainage: Self-draining body and specially designed seat ring keeps condensate away from seating surfaces, preventing freezing, binding and clogging.

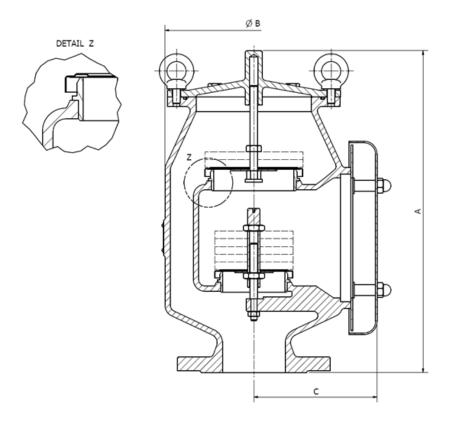
Air-Cushioned Seating: Air-cushion seating provides tight sealing to reduce evaporation losses and the release of toxic vapors. The pallets have center guiding stem to provide self alignment and tight seating.

Sizes: Available in sizes DN50 (2"), DN80 (3"), DN100 (4"), DN150 (6"), DN200 (8"), DN250 (10") and DN300 (12"). All vents have a raised face connection flange. Standard flanged bolt patterns are available to mate with DIN PN10 or ASME Class 150 flanged connections.





DIMENSIONS & WEIGHTS



| Metric Units | DN50 (2") | DN80 (3") | DN100 (4") | DN150 (6") | DN200 (8") | DN250 (10") | DN300 (12") |
|----------------|--------------|--------------|---------------|---------------|---------------|----------------|----------------|
| A [mm] | 344 | 416 | 470 | 546 | 630 | 750 | 870 |
| Ø B [mm] | 180 | 232 | 290 | 320 | 410 | 480 | 570 |
| C [mm] | 134 | 161 | 203 | 226 | 270 | 316 | 395 |
| Weight * [kg] | 22 | 30 | 45 | 70 | 114 | 172 | 238 |
| | | | | | | | |
| English Units | DN50 (2") | DN80 (3") | DN100 (4") | DN150 (6") | DN200 (8") | DN250 (10") | DN300 (12") |
| A [in] | 13.5 | 16.4 | 18.5 | 21.5 | 24.8 | 29.5 | 34.3 |
| Ø B [in] | 7.1 | 9.1 | 11.4 | 12.6 | 16.1 | 18.9 | 22.4 |
| C [in] | 5.3 | 6.3 | 8.0 | 8.9 | 10.6 | 12.4 | 15.6 |
| Weight * [lbs] | 49 | 66 | 99 | 154 | 251 | 379 | 525 |

* Without additional setting weights

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3K00 Series PRODUCT CODE 06/06/23



| POSITION 3 & 4 Size / Explosion Group | | | |
|--|--|--|--|
| IIB3 | | | |
| Code | | | |
| F9 | | | |
| FS | | | |
| G0 | | | |
| G8 | | | |
| GG | | | |
| GR | | | |
| GS | | | |
| | | | |

| POSITION 5 Operating Condition | | | |
|---|--------------------------------|------|--|
| P _{max} absolute in kPa (psi) | T _{max} in °C (⁰F) | Code | |
| 110 (16) | ≤ 60 (140) | 1 | |

POSITION 15 & 16 Set Vacuum

Code

02

03

....

49

50

Set Point

- 2.5 mbar

- 3 mbar

...

- 49 mbar

- 50 mbar

 $(1 \text{ mbar} = 0,402 \text{ in } H_2 \text{O})$

| POSITION 9 & 10 Housing Materials / Connection | | | | |
|---|----------|-------------|--|--|
| Meterial | DIN PN10 | ASME 150 RF | | |
| Material | Code | | | |
| Carbon Steel 1.0619 | 37 | 39 | | |
| Stainless Steel 1.4581 | 97 | 99 | | |

| POSITION 13 & 14 Set Pressure | | | |
|---|------|--|--|
| Set Point | Code | | |
| + 5 mbar | 05 | | |
| + 6 mbar | 06 | | |
| | | | |
| + 49 mbar | 49 | | |
| + 50 mbar | 50 | | |
| $(1 \text{ mbar} = 0,402 \text{ in } H_2 \text{O})$ | | | |

| POSITION 11 O-Ring Material | | |
|--------------------------------|------|--|
| Material | Code | |
| NBR | 1 | |
| FKM | 2 | |
| EPDM | 3 | |
| FKM/FEP Covered | 4 | |

| POSITION 17 Nameplate | |
|---------------------------|------|
| Material / Language | Code |
| Stainless Steel / German | 1 |
| Stainless Steel / English | 2 |

 POSITION 8 Hood Material

 Material
 Code

 Carbon Steel
 1 *

 Stainless Steel (1.4571)
 2

 * Available for sizes > DN100 (4")

| POSITION 12 Weight Material | | |
|--------------------------------|------|--|
| Material | Code | |
| Carbon Steel, Zinc Plated | 1 | |
| Stainless Steel (1.4571) | 2 | |

| POSITION 18 Surface Coating | | | |
|--------------------------------|------|--|--|
| Paint | Code | | |
| No Paint | 0 | | |
| Epoxy Signal Blue (RAL5005) | 1 | | |

Consult factory for different version.

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