

PRODUCT SHEET

GAS VENT

Transfer Lines

Conditioning Equipment

Automatic Gas Vent

Degasser

Phase Separator

Subcooler

Components

Filling Stations

Controlling

Due to a constant heat inleak and pressure drop between the tank and consumer points, liquid nitrogen evaporates partly to boil-off gas. The Demaco Vacuum Insulated Gas Vent increases the liquid nitrogen quality on the consumer points, by mechanical separation of gas from liquid. This conditioning equipment is self-operating and works best in limited-flow situations. Placing this item in a vacuum-insulated pipe system provides the ability to keep lines continuously filled-up with liquid, or automatically cools down the vacuum-insulated pipe after warm-up periods.

Demaco Gas Vents are available in angled and straight models and suitable for PN12 and PN16 design pressure conditions. Both models can optionally be equipped with a Johnston coupling for the GN2 blow-off. This device is able to be implemented in a clean room or other industries where condensation or ice build-up is unwanted.



BENEFITS

Due to outstanding insulation properties, thermal heat losses are kept to a minimum

Standard DN10-25 Johnston coupling

Easy to install

FEATURES

All stainless steel

High vacuum insulation

TIG and /or MAG welded according to the highest standards (ISO3834-2)

2 Standard pressure rating versions:

- Up to PN12
- Up to PN16

Male and female Johnston coupling models

Outlet provided with ball or solenoid valve and check valve

Standard design according to Pressure Equipment Directive (PED)

APPLICATION

Increase in liquid quality when placed on high points by withdrawal of boil-off gas

When piping needs to be kept cold continuously

When short cool-down reaction times are required

Automatic cool-down of VIP lines

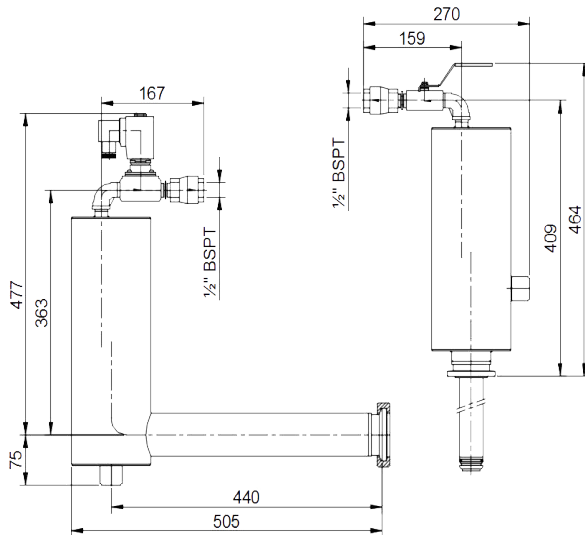
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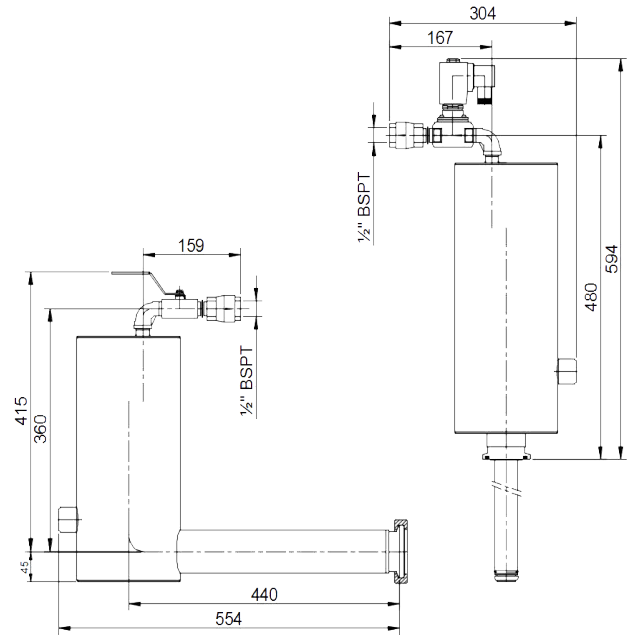
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PN12 MODEL



PN16 MODEL



INTERFACES

Johnston coupling (can be installed without welding)

Non-insulated blow-off connection for maximum connection flexibility

Available on request:

- Ice free vacuum-insulated blow-off connection by means of Johnston coupling
- Vacuum-insulated valves
- Custom interface connection

MATERIALS

Complete gas vent

1.4301/1.4306/1.4307 ~304/-304L

Ball or Solenoid valve

Stainless steel

Check valve

Stainless steel

Spacers

Epoxy reinforced glass fibre

Multi-Layer Insulation

Glass paper and Aluminium foil

Johnston coupling seal

Fe36Ni and Buna-N

DESIGN SPECIFICATIONS

Standard according to Pressure Equipment Directive (PED)

Straight (Vertical) version with DN10-25 Male Johnston coupling

Angled (Horizontal) version with DN10-25 Female Johnston coupling

Maximum allowable operating pressure PN12 or PN16

Cleanliness level: oil and grease-free, inspected for pure oxygen usage

Static vacuum with Multi-Layer Insulation

Standard testing for each individual VIP spool:

- Dimensional check
- Helium leak test ($<1 \times 10^{-9}$ mbarL/sec)
- Vacuum retention test after 24h at ambient temp (acceptance level $<2 \times 10^{-4}$ mbar)

DOCUMENTATION

By default, a standard manufacturer data book record is part of each project and contains:

As-built isometrics (if applicable)

Safety guidelines

User manuals

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