

# 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 tank and consumer points, liquid nitrogen partly evaporates 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 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 Pressure Equipment Directive (PED)

### APPLICATION

Increase of 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

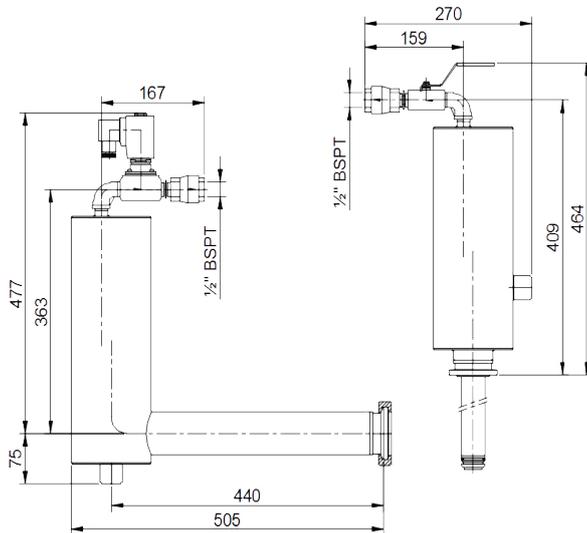
→ [www.demaco.nl](http://www.demaco.nl)

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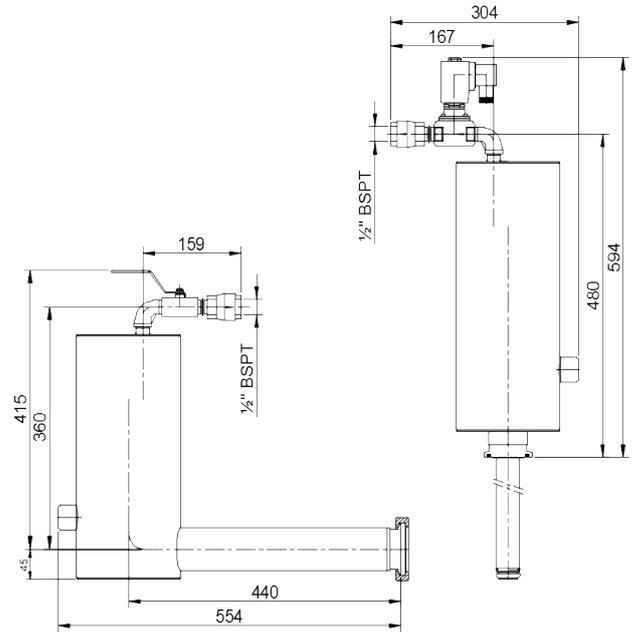
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### PN12 MODEL



### PN16 MODEL



#### INTERFACES

Johnston coupling (can be installed without welding)

Non-insulated blow-off connection for maximum connection flexibility

On request available:

- 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 fiber

Multi-Layer Insulation

Glass paper and Aluminum foil

Johnston coupling seal

Fe36Ni and Buna-N

#### DESIGN SPECIFICATIONS

Standard according 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

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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