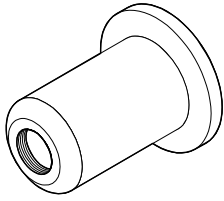


# Pressure Relief Valve

## VSA016-X

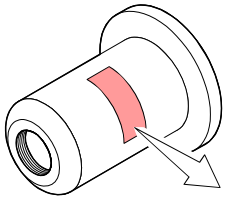


Operating Manual

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### Product Identification

In all communications with INFICON, please specify the information on the product nameplate. For convenient reference copy that information into the space provided below.



INFICON AG, FL-9496 Balzers  
 Typ: \_\_\_\_\_  
 No: \_\_\_\_\_  
 F-No: \_\_\_\_\_

### Validity

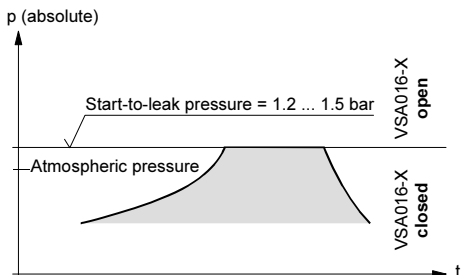
This document applies to products with part number 250-555. The part number can be taken from the product nameplate. We reserve the right to make technical changes without prior notice.

### Intended Use

The Pressure relief valve protects vacuum systems from absolute pressures >1.5 bar. Take the flow rates into consideration.

### Functional Principle

The piston prestressed with a pressure spring is lifted from the valve seat when the start-to-leak pressure is exceeded. The start-to-leak pressure range is 1.2 ... 1.5 bar (absolute).



### Safety

#### Symbols Used

**STOP DANGER**  
 Information on preventing any kind of physical injury.

**WARNING**  
 Information on preventing extensive equipment and environmental damage.

**Caution**  
 Information on correct handling or use. Disregard can lead to malfunctions or minor equipment damage.

#### Personnel Qualifications

**Skilled personnel**  
 All work described in this document may only be carried out by persons who have suitable technical training and the necessary experience or who have been instructed by the end-user of the product.

#### General Safety Instructions

- Adhere to the applicable regulations and take the necessary precautions for all work you are going to do and consider the safety instructions in this document.
  - Before beginning to work, find out whether any vacuum components are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.
- Communicate the safety instructions to all other users.

#### Liability and Warranty

INFICON assumes no liability and the warranty becomes null and void if the end-user or third parties

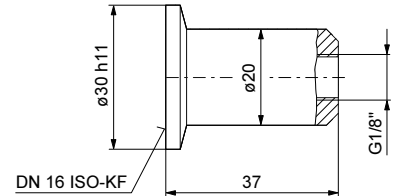
- disregard the information in this document
- use the product in a non-conforming manner
- make any kind of interventions (modifications, alterations etc.) on the product
- use the product with accessories not listed in the corresponding product documentation.

The end-user assumes the responsibility in conjunction with the process media used.

### Technical Data

Connection flange	DN 16 ISO-KF
Mounting orientation	any
Opens in the pressure range	1.2 ... 1.5 bar (abs.)
Flow rate	0 ... 6 l/min
Tightness	1×10 <sup>-9</sup> mbar l/s
Pressure range	1×10 <sup>-8</sup> mbar ... 1.2 bar (abs.)
Temperatures operation	50 °C
bakeout	150 °C
storage	-15 ... +60 °C
Materials exposed to process media	stainless steel FPM

#### Dimensions [mm]



## Installation

### Vacuum Connection

#### Caution



Caution: vacuum component  
Dirt and damages impair the function of the vacuum component.  
When handling vacuum components, take appropriate measures to ensure cleanliness and prevent damages.

#### Caution

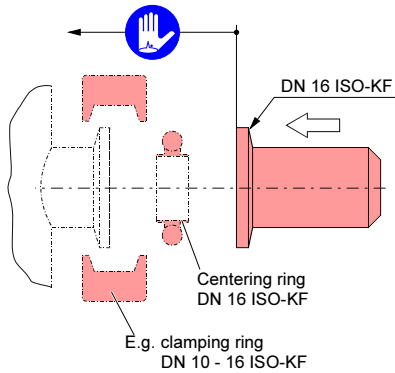


Caution: dirt sensitive area  
Touching the product or parts thereof with one's bare hands increases the desorption rate.  
Always wear clean, lint-free gloves and use clean tools when working in this area.

#### DANGER



Caution: overpressure in the vacuum system  
Injury caused by released parts and harm caused by escaping process gases can result if clamps are opened while the vacuum system is pressurized.  
Do not open any clamps while the vacuum system is pressurized. Use the type clamps which are suited to overpressure.



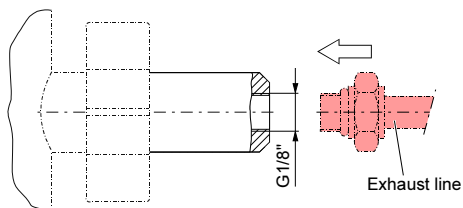
### Connecting an Exhaust Line

#### DANGER



Caution: gases  
Escaping gases can be harmful and hazardous (e.g. toxic, flammable).  
For preventing any kind of personal injury and extensive equipment damage exhaust the gases and eliminate them in accordance with the local safety regulations.

Connect the exhaust line to the G 1/8" pipe thread.



## Operation

The product is ready for operation as soon as it has been installed.

## Deinstallation

#### DANGER



Caution: contaminated parts  
Contaminated parts can be detrimental to health and environment.  
Before beginning to work, find out whether any parts are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.

#### Caution



Caution: vacuum component  
Dirt and damages impair the function of the vacuum component.  
When handling vacuum components, take appropriate measures to ensure cleanliness and prevent damages.

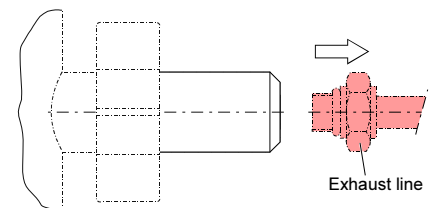
#### Caution



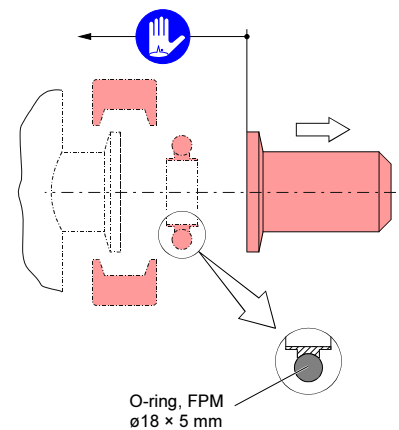
Caution: dirt sensitive area  
Touching the product or parts thereof with one's bare hands increases the desorption rate.  
Always wear clean, lint-free gloves and use clean tools when working in this area.

1 Vent the vacuum system.

2 Detach the exhaust line.



3 Detach the vacuum connection.



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## Maintenance

Under clean operating conditions, the product requires no maintenance during the rated service life.


Perform a functional test in regular intervals (opening at overpressure).

If the valve seat is not tight, clean the product.

If there are any malfunctions which cannot be remedied by cleaning, return the product to your nearest INFICON service center.


## Cleaning

STOP **DANGER**




Caution: contaminated parts  
Contaminated parts can be detrimental to health and environment.  
Before beginning to work, find out whether any parts are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.

STOP **DANGER**




Caution: safety relevant component  
Any interventions on safety relevant components can reduce their safety function.  
Do not disassemble the Pressure relief valve. Any modification of the Pressure relief valve is inadmissible.

STOP **DANGER**




Caution: compressed air  
Unprofessionally handling compressed air can cause physical injuries.  
Adhere to the relevant regulations and take the necessary precautions when handling compressed air.

STOP **DANGER**



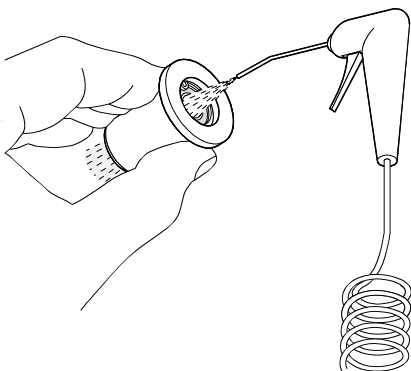
Caution: cleaning with compressed air  
Flying particles can cause eye injuries.  
Wear protective glasses.

 The compressed air must meet the following specifications:

- free of oil
- dry
- free of particles >10 µm
- 4 ... 8 bar (overpressure)

**1** Deinstall the Pressure relief valve as described in section "Deinstallation".

**2** Blow out the Pressure relief valve.



**3** Install the Pressure relief valve as described in section "Installation".


## Repair

We recommend returning the product to your nearest INFICON service center for repair.

INFICON assumes no liability and the warranty becomes null and void if any repair work is carried out by the end-user or third parties.

## Storage


! **Caution**



Caution: vacuum component  
Inappropriate storage leads to an increase of the desorption rate and/or may result in mechanical damage of the product.  
Cover the side of the product which is going to be exposed to the vacuum with grease free aluminum foil. Do not exceed the admissible storage temperature range (→ "Technical data").

## Returning the Product

! **WARNING**




Caution: forwarding contaminated products  
Contaminated parts (e.g. radioactive, toxic, caustic or microbiological hazard) can be detrimental to health and environment.  
Products returned to Inficon should preferably be free of harmful substances. Adhere to the forwarding regulations of all involved countries and forwarding companies and enclose a duly completed declaration of contamination.

Products that are not clearly declared as "free of harmful substances" are decontaminated at the expense of the customer.

Products not accompanied by a duly completed declaration of contamination are returned to the sender at his own expense.


## Disposal

STOP **DANGER**



Caution: contaminated parts  
Contaminated parts can be detrimental to health and environment.  
Before beginning to work, find out whether any parts are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.

! **WARNING**



Caution: substances detrimental to the environment  
Products or parts thereof (mechanical and electric components, operating fluids etc.) can be detrimental to the environment.  
Dispose of such substances in accordance with the relevant local regulations.

## Separating the components

After disassembling the product, separate its components according to the following criteria:

- Contaminated components  
Contaminated components (radioactive, toxic, caustic, or biological hazard etc.) must be decontaminated in accordance with the relevant national regulations, separated according to their materials, and recycled.
- Other components  
Such components must be separated according to their materials and recycled.

# Declaration of Contamination

The service, repair, and/or disposal of vacuum equipment and components will only be carried out if a correctly completed declaration has been submitted. Non-completion will result in delay.  
 This declaration may only be completed (in block letters) and signed by authorized and qualified staff.

**1 Description of product**

Type \_\_\_\_\_

Article Number \_\_\_\_\_

Serial Number \_\_\_\_\_

**2 Reason for return**

\_\_\_\_\_

\_\_\_\_\_

**3 Operating fluid(s) used (Must be drained before shipping.)**

\_\_\_\_\_

**4 Process related contamination of product:**

toxic	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>
caustic	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>
biological hazard	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)
explosive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)
radioactive	no <input type="checkbox"/>	yes <input type="checkbox"/> 2)
other harmful substances	no <input type="checkbox"/> 1)	yes <input type="checkbox"/>

2) Products thus contaminated will not be accepted without written evidence of decontamination!

The product is free of any substances which are damaging to health  
 yes

1) or not containing any amount of hazardous residues that exceed the permissible exposure limits

**5 Harmful substances, gases and/or by-products**

Please list all substances, gases, and by-products which the product may have come into contact with:

Trade/product name	Chemical name (or symbol)	Precautions associated with substance	Action if human contact

**6 Legally binding declaration:**

I/we hereby declare that the information on this form is complete and accurate and that I/we will assume any further costs that may arise. The contaminated product will be dispatched in accordance with the applicable regulations.

Organization/company \_\_\_\_\_

Address \_\_\_\_\_ Post code, place \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_

Name \_\_\_\_\_

Date and legally binding signature \_\_\_\_\_ Company stamp \_\_\_\_\_

This form can be downloaded from our website.

Copies: Original for addressee - 1 copy for accompanying documents - 1 copy for file of sender