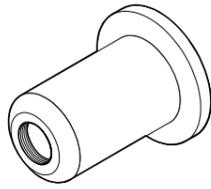




Pressure relief valve 21224-KEXX-000.



Operating Manual

601461EA (2013-05)

Product Identification

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



Validity

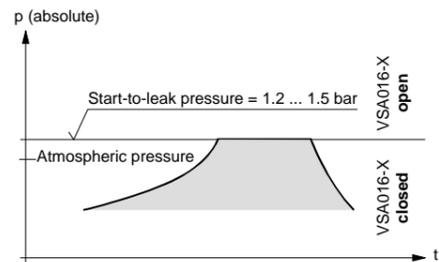
This document applies to products with part number 21224-KEXX-000.
The part number can be taken from the product nameplate.
We reserve the right to make technical changes without prior notice.

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

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

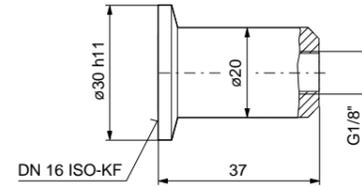
- disregard the information in this document
- use the product in a non-conforming manner
- make any kind of interventions (modifications, alterations etc.) on the product
- use the product with accessories not listed in the corresponding product documentation.

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 x 10 ⁻⁹ mbar l/s
Pressure range	1 x 10 ⁻⁹ mbar ... 1.2 bar (abs.)
Temperatures operation	50 °C
Temperatures bakeout	150 °C
Temperatures storage	-15 ... +60 °C
Materials exposed to process media	stainless steel FPM

Dimensions [mm]



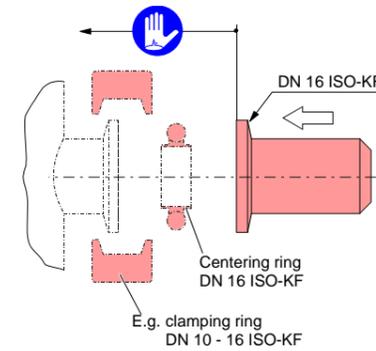
Installation

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.

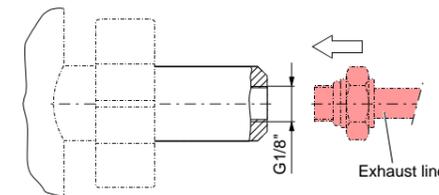
STOP DANGER
Caution: overpressure in the vacuum system
Injury caused by released parts and harm caused by escaping process gases can result if clamps are opened while the vacuum system is pressurized.
Do not open any clamps while the vacuum system is pressurized. Use the type clamps which are suited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



Connecting an Exhaust Line

STOP 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

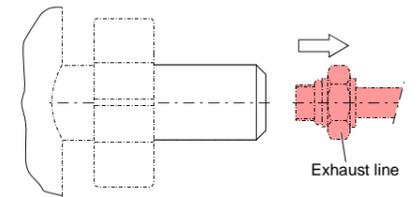
STOP DANGER
Caution: contaminated parts
Contaminated parts can be detrimental to health and environment.
Before beginning to work, find out whether any parts are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.

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.

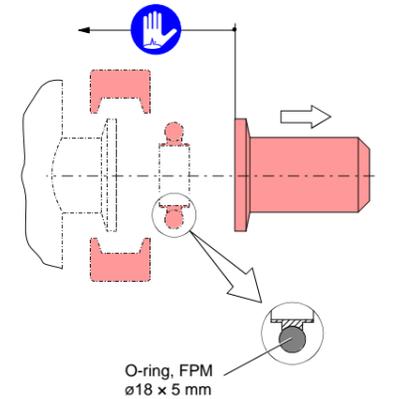
Caution
Caution: dirt sensitive area
Touching the product or parts thereof with one's bare hands increases the desorption rate.
Always wear clean, lint-free gloves and use clean tools when working in this area.

1 Vent the vacuum system.

2 Detach the exhaust line.



3 Detach the vacuum connection.



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 VAT 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

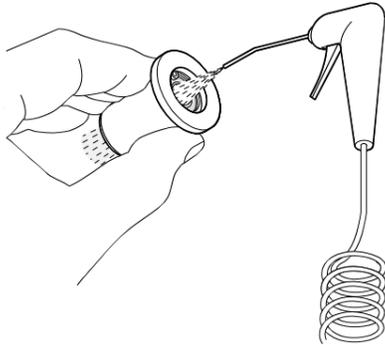
 Caution: cleaning with compressed air
Flying particles can cause eye injuries.
Wear protective glasses.

 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 VAT service center for repair.

VAT 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 VAT 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. The form can be downloaded from our website www.vatvalve.com.

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.