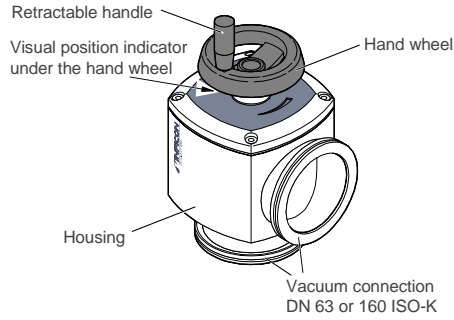


Description

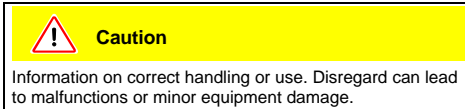
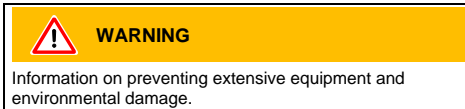


Functional Principle

The Angle valve is opened by turning the hand wheel counter-clockwise and closed by turning the hand wheel clockwise.

Safety

Symbols Used



Dimensions in mm

General Safety Instructions

- Adhere to the applicable regulations and take the necessary precautions for the process media used. Consider possible reactions between the materials and the process media.
- 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 end-users or third parties

- disregard the information in this document
- use the product in a non-conforming manner
- make any kind of changes (modifications, alterations etc.) to the product
- use the product with accessories, options and add-ons not listed in the corresponding product documentation.

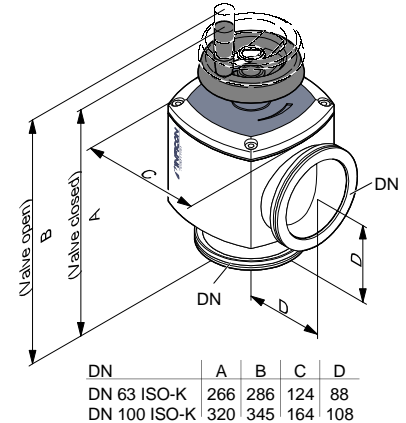
The end-user assumes the responsibility in conjunction with the process media used.

Technical Data

Vacuum connection	DN 63 ISO-K	DN 100 ISO-K
Flange load	300 Nm	
Stroke of valve plate	20 mm	25 mm
Conductance ¹⁾	130 l/s	300 l/s
Tightness	1x10 ⁻⁹ mbar l/s (He)	
Pressure range	1x10 ⁻⁸ mbar ... 1.5 bar (abs.)	
Bursting pressure	4 bar	
Pressure difference Δp in closing direction in opening direction Opens to a pressure difference Δp	1.5 bar 1.5 bar 1.5 bar	
Temperatures ambience bakeout housing aluminum stainless steel spindle drive	5 °C ... 60 °C 150 °C 150 °C 60 °C	
Installation angle Flow direction	any, easily accessible any	
Materials housing aluminum stainless steel bellows / valve plate pressure spring seals cover spindle protective lids packing material hand wheel	3.2373.62 1.4305 1.4541 / 1.4301 1.1200 FPM gray cast iron 20 1.4305 PE carton box, PE, PU special-Technopolymer	
Weight housing aluminum stainless steel	3.6 kg 6.5 kg	6.1 kg 11.1 kg

¹⁾ For air with molecular flow

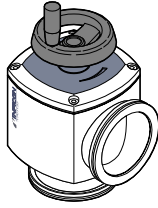
Dimensions



Angle Valve

manually actuated
bellows sealed
with spindle drive

VAH063 ... 100-A/X

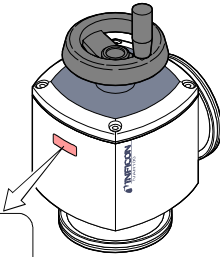


Instruction Sheet
incl. Manufacturer's Declaration

sima43e1_a (0111)

Product Identification

In all communications with Inficon, please specify the information given on the product nameplate. For convenient reference copy that information into the nameplate replica below.



Inficon, LI - 9496 Balzers

Typ: _____
No: _____
F-No: _____



Validity

This document applies to products with the following part numbers:

Aluminum housing:
250-470 (DN 63 ISO-K)
250-480 (DN 100 ISO-K)

Stainless steel housing:
250-475 (DN 63 ISO-K)
250-485 (DN 100 ISO-K)

The part number can be taken from the product nameplate.

If not indicated otherwise in the legends, the illustrations in this document correspond to Angle valves with the DN 100 ISO-K vacuum connection. They apply to Angle valves with the DN 63 ISO-K vacuum connection by analogy.


We reserve the right to make technical changes without prior notice.


Intended Use


The angle valves are used as shut-off and venting devices for vacuum applications.


Installation


Vacuum Connection


 **Skilled personnel**


 The vacuum connection may only be established by persons who have suitable technical training and the necessary experience or who have been instructed by the end-user of the product.

 **Caution**

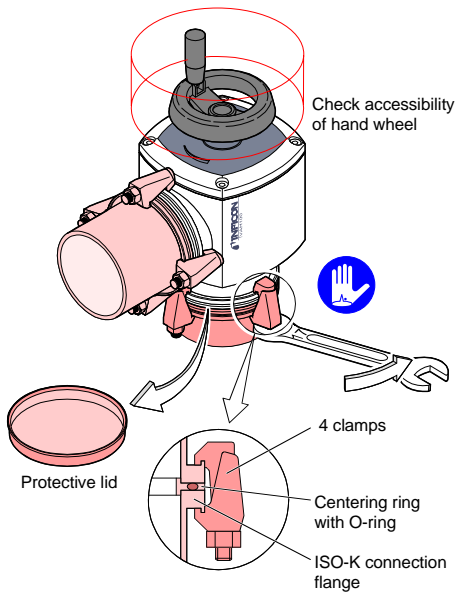
 Caution: dirt sensitive area
Touching the product or parts thereof with bare hands increases the desorption rate.
Always wear clean, lint-free gloves and use clean tools when working in this area.

 **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.

 Keep the protective lids.

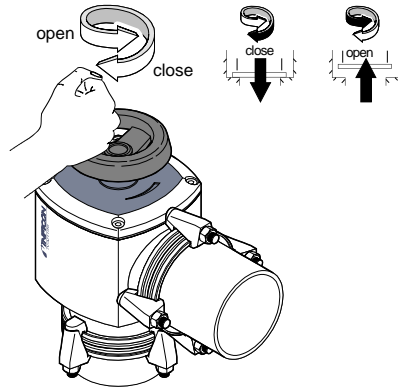
Remove the protective lids and install the valve to the vacuum system by means of the clamping flange fittings. Any installation angle and flow direction may be chosen.



Operation


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


Operation



Pressure range: 1×10^{-8} mbar ... 1.5 bar (absolute)

Pressure difference Δp in closing direction


 **Caution**


 Caution: pressure difference Δp

Closing direction

At $\Delta p > 1.5$ bar may no longer be tight.
Avoid pressure differences $\Delta p > 1.5$ bar

Pressure difference Δp in opening direction


 **Caution**


 Caution: pressure difference Δp

Opening direction

At $\Delta p > 1.5$ bar the valve is opened.
Avoid pressure differences $\Delta p > 1.5$ bar.

Opening against a pressure difference Δp

 **Caution**


 Caution: pressure difference Δp


Opening


At $\Delta p > 1.5$ bar the valve cannot open.
Avoid pressure differences $\Delta p > 1.5$ bar.


Deinstallation


Vacuum Connection


 **Skilled personnel**


 The vacuum connection may only be disassembled by persons who have suitable technical training and the necessary experience or who have been instructed by the end-user of the product.


 **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.

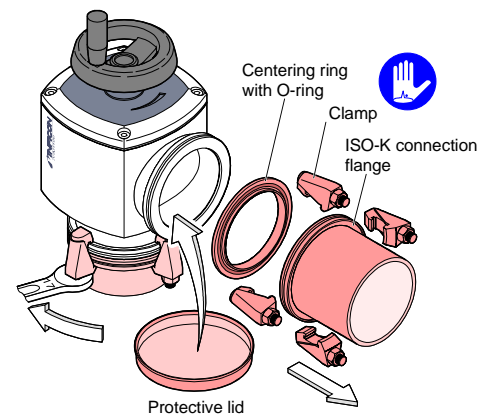
 **Caution**

 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 bare hands increases the desorption rate.
Always wear clean, lint-free gloves and use clean tools when working in this area.

Vent the vacuum system and disassemble the clamping flange connection. Place the protective lids.



Further Information

Refer to the Operating manual with regard to maintenance, repair, and spare parts.

The Operating manual sina43e1 can

- be downloaded from our website or
- ordered at Inficon



(0111)

Original: German sina43d1 (0110)

Returning the Product

WARNING

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

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.

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 disposed of.
- 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.

- Description of product**
Type _____
Article No. _____
Serial No. _____
- Reason for return**

- Operating fluid(s) used**

- Process related contamination of product:**

toxic	no <input type="checkbox"/>	yes <input type="checkbox"/>
corrosive	no <input type="checkbox"/>	yes <input type="checkbox"/>
biological hazard	no <input type="checkbox"/>	yes <input type="checkbox"/> *)
explosive	no <input type="checkbox"/>	yes <input type="checkbox"/> *)
radioactive	no <input type="checkbox"/>	yes <input type="checkbox"/> *)
other harmful substances	no <input type="checkbox"/>	yes <input type="checkbox"/>

*) 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
- 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 manufacturer	Chemical name (or symbol)

Dangerous material class	Measures in case of spillage	First aid in case of contact
- 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 _____

 Company stamp _____

 Date and legally binding signature _____

This form can be downloaded from our website.
Copies: Original for addressee
1 copy for accompanying documents
1 copy for file of sender

Manufacturer's Declaration

as defined by the Directive relating to machinery 98/37/EC, Appendix IIb

We, Inficon, hereby declare that putting the incomplete equipment mentioned below into operation is not permitted until evidence is given that the system into which that incomplete equipment shall be installed is in accordance with the provisions of the EC Directive relating to machinery.

Angle Valve

manually actuated
bellows sealed
with spindle drive
VAH063 ... 100-A/X

Part numbers

250-470
250-480
250-475
250-485

Standards

Harmonized and international/national standards and specifications:
• DIN 28 404

Signatures

Inficon AG, Liechtenstein
12 April 2000

Robert Polacek

Robert Polacek
Product management
Components and valves

12 April 2000

Hugo Frei

Hugo Frei
Product development
Components and valves



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