

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.

DANGER

Caution: overpressure in the vacuum system >1 bar

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.

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.

Caution

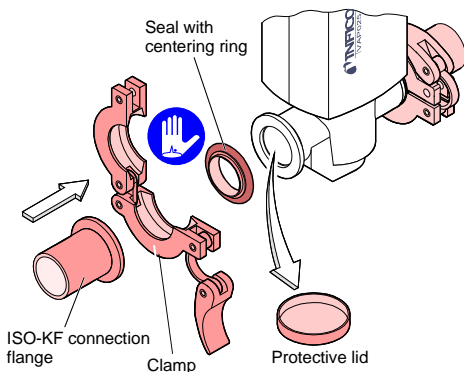
Caution: vacuum component

Dirt and damages impair the function of the vacuum component.

When handling vacuum components, take appropriate measures to ensure cleanliness and prevent damages.



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



Compressed Air Connection

Skilled personnel

The compressed air 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

The compressed air must meet the following specifications:

- free of oil
- dry
- free of particles >5 µm
- 3 ... 7 bar (overpressure)

Caution

The plastic tube must meet the following specifications:

- bursting pressure ≥10 bar overpressure
- material: PA soft or PU.

Caution

To ensure leak tightness of the instant push-in fitting

- cut the plastic tube square
- make sure the outside of the plastic tube is not damaged.

Caution

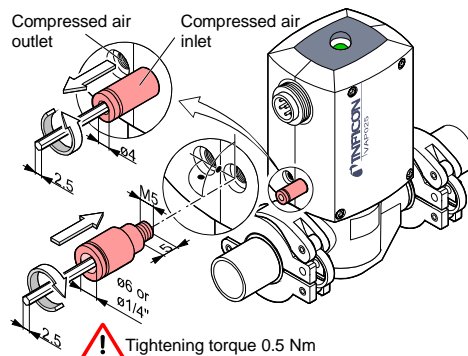
Caution: plastic thread

The plastic thread is damaged by tilting or overturning the instant push-in fitting.

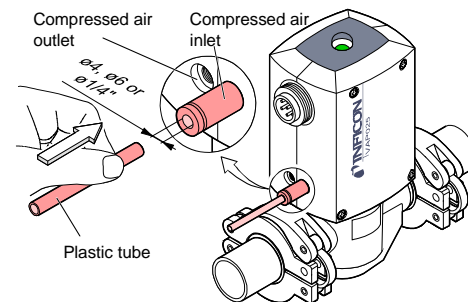
- use the enclosed instant push-in fitting (with extra-long thread) only.
- screw in the instant push-in fitting without tilting it and without exceeding the tightening torque of 0.5 Nm.

Compressed Air Inlet

For connection of a ø6 mm or ¼" plastic tube, exchange the instant push-in fitting.

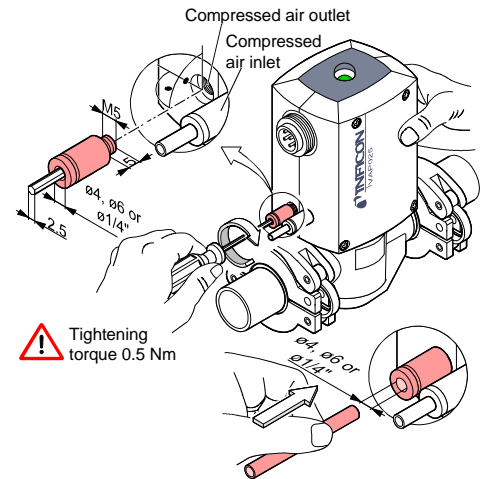


Push the tube into the instant push-in fitting until the mechanical stop is reached. Check that it is correctly mounted by slightly pulling.



Compressed Air Outlet

Screw in the enclosed instant push-in fitting for exhausting the compressed air if necessary. Push the tube into the instant push-in fitting until the mechanical stop is reached. Check that it is correctly mounted by slightly pulling.



Power Connection

Skilled personnel

The electrical connection, in accordance with the VDE 0100 guidelines, may be made only by a licensed electrician, qualified as per VDE 0105. The line cables shall be isolated from the line supply during all electrical work.

WARNING

Caution: mains voltage

The pilot valve can get destroyed if a wrong mains voltage is applied.

The local mains power rating must correspond with the nominal voltage of the pilot valve (see product nameplate). If they do not correspond, exchange the pilot valve (→ Further Information).

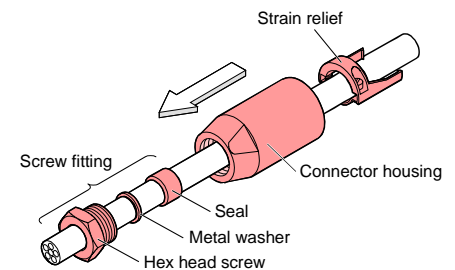
Caution

The cable must meet the following specifications:

- flexible
- conductor cross-section ≤0.75 mm²
- cable cross-section ≤10 mm
- 6-pole without protective conductor or 7-pole with protective conductor.

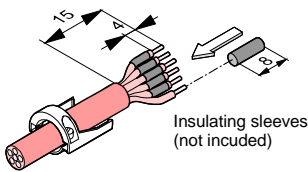
Preparing the connector

- Slide the screw fitting, connector housing, and strain relief on the cable.

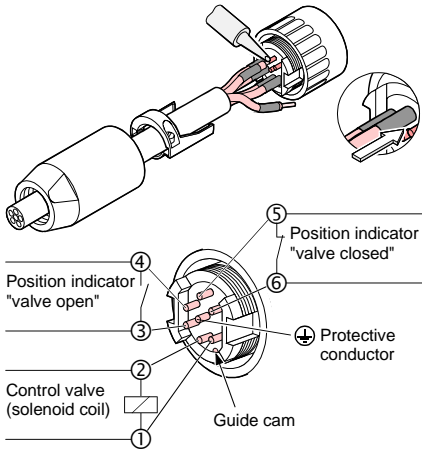


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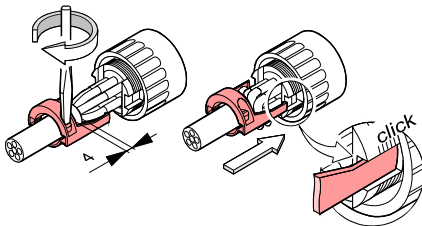
- 2 Skin the cable and mount the insulating sleeves if required.



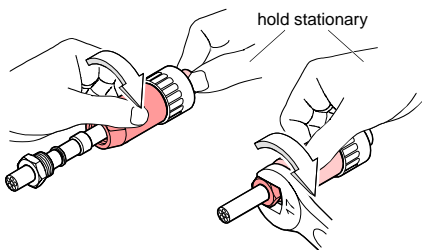
- 3 Solder the cable. Slide the insulating sleeve over the soldered connection. The polarity of the pilot valve (solenoid coil) need not be taken into consideration.



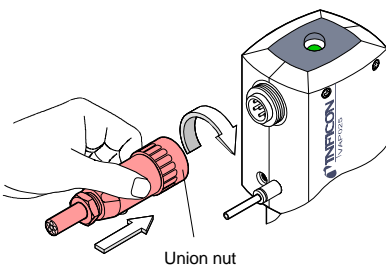
- 4 Tighten the strain relief and insert it (it will catch).



- 5 Reassemble the connector and tighten the screw fitting (width across 17 mm).



- 6 Plug in the connector and secure it with the union nut.



Operation

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

Valve position	Compressed air	Control valve	Position indicator
closed	available	deactivated	
	not available	activated	
	not available	deactivated	
open	available	activated	

Pressure range

DN 16+25 ISO-KF: 1×10^8 mbar ... 4 bar (absolute)
 DN 40 ISO-KF: 1×10^8 mbar ... 2.5 bar (absolute)

Pressure difference Δp in closing direction

Caution

Caution: pressure difference Δp

At $\Delta p > 4$ bar (DN 16+25 ISO-KF) and $\Delta p > 2$ bar (DN 40 ISO-KF) the valve may no longer be tight. Avoid bigger pressure differences.

Pressure difference Δp in opening direction

Caution

Caution: pressure difference Δp

With $\Delta p > 2$ bar (DN 16+25 ISO-KF) and $\Delta p > 1.5$ bar (DN 40 ISO-KF) the valve is opened. Avoid bigger pressure differences.

Opening against a pressure difference Δp

Caution

Caution: pressure difference Δp

With $\Delta p > 4$ bar (DN 16+25 ISO-KF) and $\Delta p > 2$ bar (DN 40 ISO-KF) the valve cannot open. Avoid bigger pressure differences.

Deinstallation

Power Connection

Skilled personnel

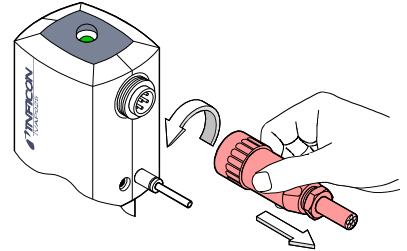
The electrical power must be disconnected by a skilled electrician.

Caution



The control system must be disconnected from the power source before any connection to the product is made or interrupted.

Loosen the connector and unplug it.



Compressed Air Connection

Skilled personnel



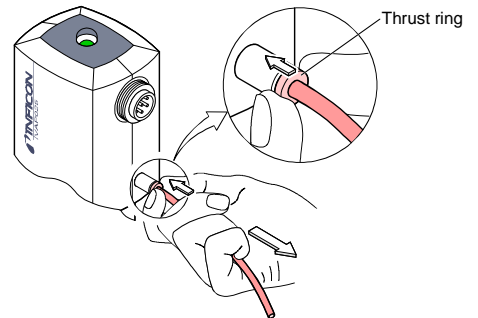
The compressed air may only be disconnected by persons who have suitable technical training and the necessary experience or who have been instructed by the end-user of the product.

DANGER



Caution: compressed air
 Physical injury can result if a pressurized compressed air line is disconnected.
 Before doing any work, turn off the compressed air supply and relieve the compressed air lines.

Pull out the tube while depressing the thrust ring.



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

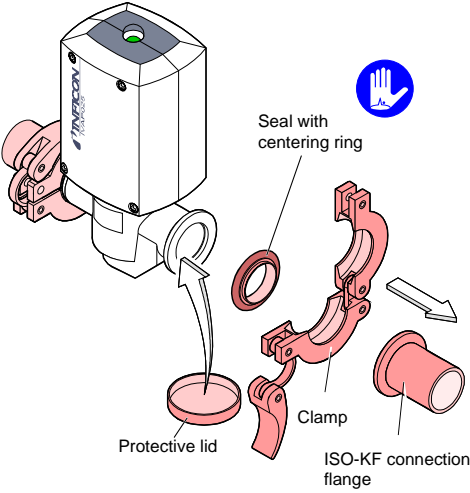


Caution: vacuum component
 Dirt and damages impair the function of the vacuum component.
 When handling vacuum components, take appropriate measures to ensure cleanliness and prevent damages.

Caution

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.

Vent the vacuum system and disassemble the small flange connection. Place the protective lid.



Further Information

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

The Operating manual sina49e1

- can be downloaded from our website or
- ordered at Inficon.

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 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

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
- 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 lib

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.

We also declare that the equipment mentioned below complies with the provisions of the Directive relating to electrical equipment designed for use within certain voltage limits 73/23/EEC and the Directive relating to electromagnetic compatibility 89/336/EEC.

Inline Valve

pneumatically actuated
bellows sealed
with position indicator and pilot valve
VIP016-040-X

Part numbers

250-310	250-330	250-350
250-311	250-331	250-351
250-312	250-332	250-352
250-313	250-333	250-353

Standards

Harmonized and international/national standards and specifications:

- EN 292-2
- DIN EN 60 204-1
- ISO 9803
- ISO 1609
- ISO 4414
- DIN 28 403
- DIN 28 404
- DIN 2501-1
- DIN 24 558

Signatures

Inficon AG, Liechtenstein
Balzers, 14 February 2001

Hans-Christoph Gehlhar
Product management
Components and valves

Balzers, 14 February 2001

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