

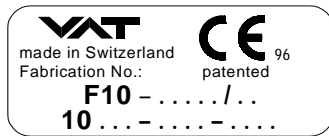
# UHV Gate Valve

with manual actuator  
 special gate with VITON O-ring

This manual is valid for the valve ordering numbers:

- 10836- . E01/08
- 10840- . E01/08
- 10844- . E01/08
- 10846- . E01/08

The respective product identification is given on each valve in the following way (or similar):



Explanation of symbols:



Read declaration carefully before you start any other action!



Keep body parts and objects away from the valve opening!



Attention!



Hot surfaces; do not touch!



Product is in conformity with EC guidelines, if applicable!



Loaded springs and/or air cushions are potential hazards!



Disconnect electrical power and compressed air lines. Do not touch parts under voltage!



Wear gloves!



Read these «**Installation, Operating & Maintenance Instructions**» and the enclosed «**General Safety Instructions**» carefully before you start any other action!



## Installation, Operating, and Maintenance Instructions Series 10.8, DN 63 - 200 (2½" - 8")

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Imprint:

**Manufacturer** VAT Vakuumentile AG, CH-9469 Haag, Switzerland

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### Technical data

Pressure range	1 x 10 <sup>-10</sup> mbar to 1 bar (abs)
Differential pressure on the gate	1 bar in either direction
Max. differential pressure at opening	30 mbar
Admissible temperature: Valve	< 250°C open, 200°C closed
Manual actuator	< 250°C
Position indicator	< 80°C (option)
Position indicator	< 250°C (option)
Position indicator: Contact rating	5 A / 250 V AC, 3 A / 50 V DC (option)

Further data according to VAT catalogue «Vacuum Valves 2000».

### Electrical connection (option)



Do not touch any electrically charged parts!

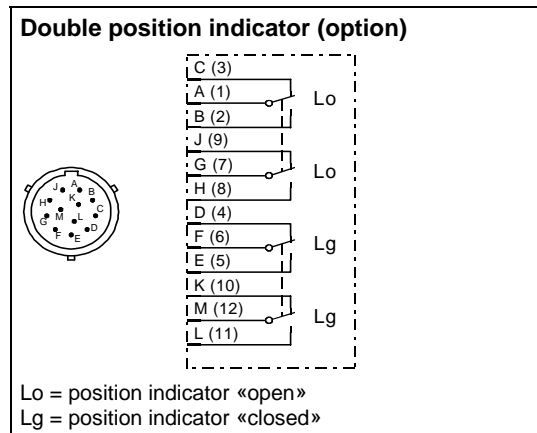
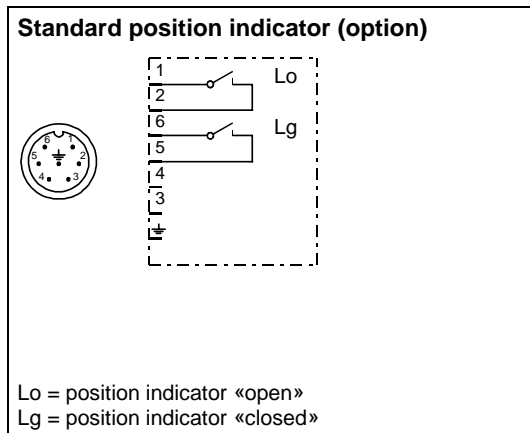


Electrical power may only be connected if

- valve has been installed into the vacuum system
- moving parts cannot be touched

The socket for the position indicator is supplied with the valve.

Wire position indicator according to the following diagrams:

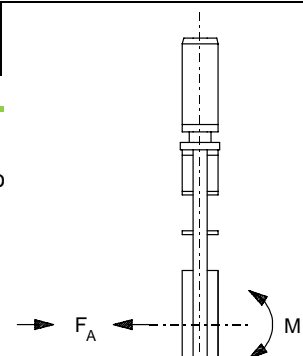


### Admissible forces

Forces from evacuating the system, from the weight of other components, and from baking can lead to deformation of the valve body and to malfunction of the valve. The stress has to be relieved by suitable means, e.g. bellows sections. The following forces are admissible:

DN (nom. I.D.)	Axial tensile or compressive force «FA»	Bending moment «M»
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mm	inch	N	lbf	Nm	lbf • ft
63	2½	2000	448	80	59
100	4	2500	560	100	74
160	6	3000	672	150	110
200	8	3000	672	150	110

If a combination of both forces («FA» and «M») occurs, the values mentioned above are invalid. Please contact VAT for more information.

### Trouble shooting

Leak at gate:                      Clean valve seat and gate!  
    Replace gate if damaged!

Leak at body:                      Flanges leaktight?  
    Replace bonnet seal!

### Repairs

Contact VAT for repairs or maintenance. The fabrication No. (F10- . . . . . / . . . . .) marked on the valve body has always to be specified. It has to be individually decided whether the work can be performed by the customer or has to be carried out by VAT.

All supplies (e. g. electrical power) have to be disconnected for removal/installation of the valve from/into the system.



Keep fingers and objects away from the valve opening!

Products returned to VAT for repair have to be free of harmful substances such as e.g. toxic, caustic or micro-biological ones. For radioactively contaminated products the customer has to fill in the VAT form «Contamination and Radiation Report» and to send it with the product. The form is available at VAT. The maximum permissible values indicated in the form must not be exceeded.

## Maintenance

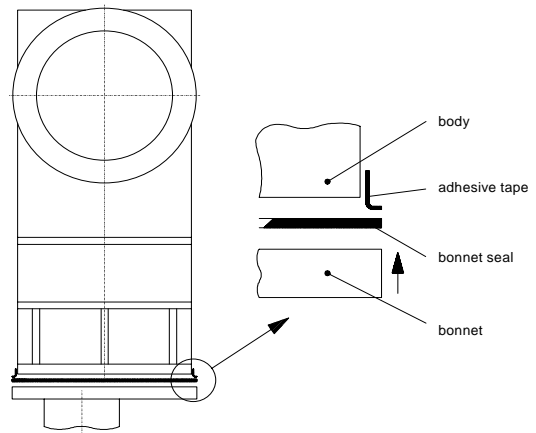
### Replacement of actuator/mechanism assembly

The figures in brackets refer to the drawing on page 5

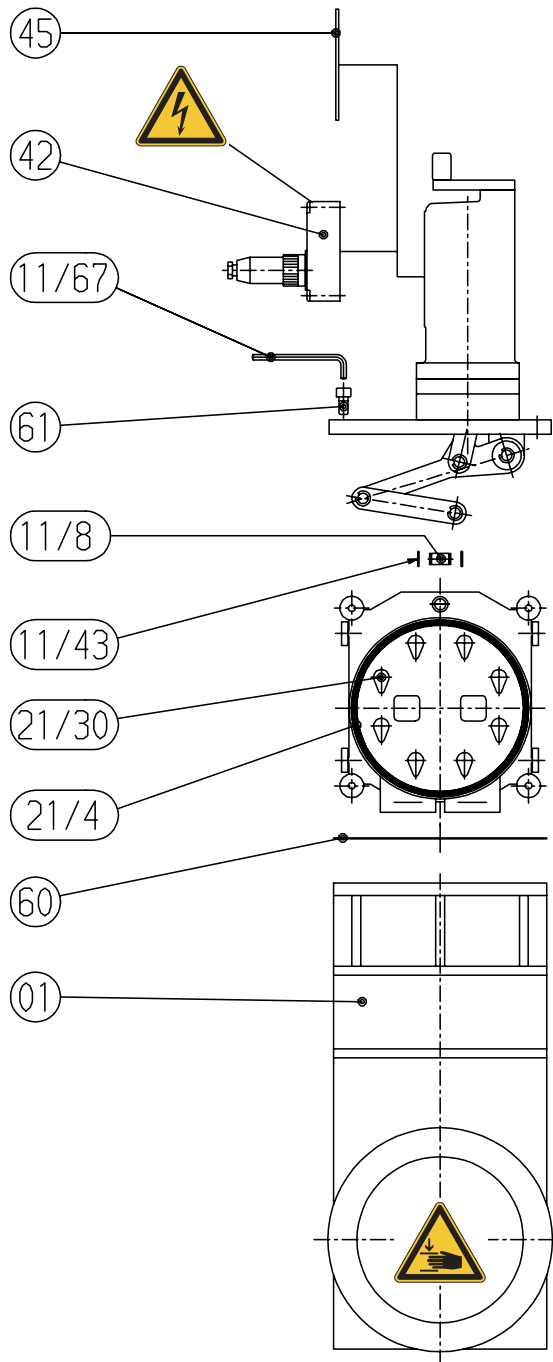
- Vent chambers and open valve
- Disconnect compressed air and electrical power from valve
- Remove screws (61) from bonnet in crosswise order
- Withdraw actuator/mechanism assembly carefully from body
- Check and clean sealing surfaces of bonnet and valve seat
- Put new bonnet seal (60) on body or bonnet (depending on mounting position). For «actuator downwards» assembling according to drawing beside.
- Reassemble in reverse direction

**Note!** Tighten screws in crosswise order!

Torque: DN 63 - 160	20 Nm / 15 lbf · ft
DN 200	40 Nm / 30 lbf · ft

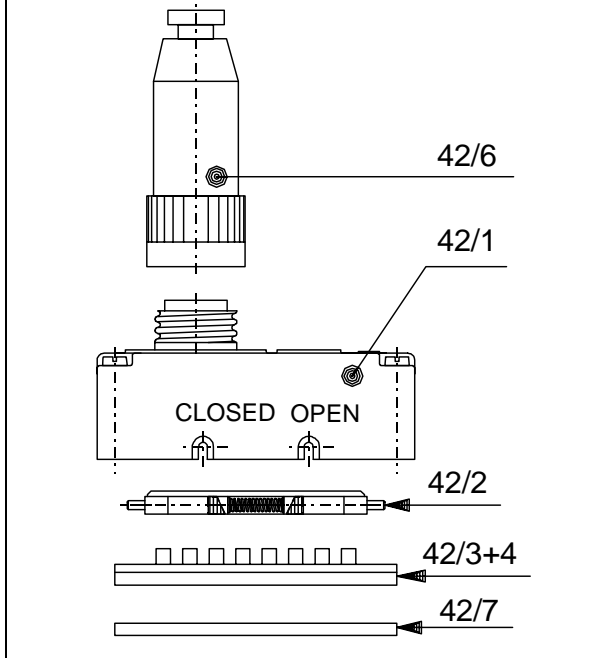


**Spare parts**



Item	Description	DN	Part No.
	Seal kit, consisting of: - gate-o-ring (21/4) - bonnet seal (60)	63	97814-R1
		100	97609-R1
		160	99048-R1
		200	97618-R1
21/30	1 set of locking balls	8 pcs 63	N-6121-044
		12 pcs 100	N-6121-044
		16 pcs 160	N-6121-044
		16 pcs 200	N-6121-052
60	Bonnet seal	63	63215-01
		100	63216-01
		160	93160-01
		200	63217-01

**Position indicator kit: open/closed (standard) (option)**



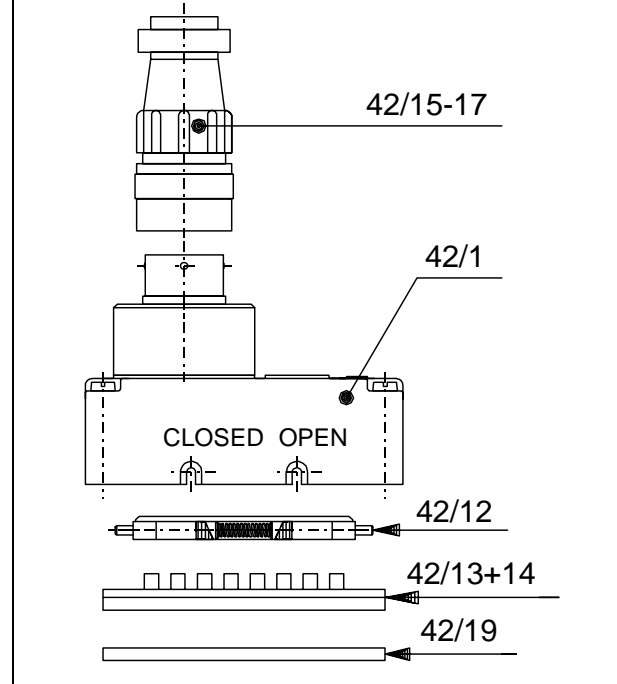
**DN 63 - 160**

Item	Description	Qty.	Part No.
	Position indicator kit	1	82861-R2
42/1	Position indicator	1	73649-R1
42/2	Slider	1	73638-R1
42/3	Strip	1	70987-01
42/4	Driving pin	2	70988-01
42/6	Plug	1	N-8504-002
42/7	Distance piece	2	82860-01

**DN 200**

Item	Description	Qty.	Part No.
	Position indicator kit	1	81045-R1
42/1	Position indicator	1	73649-R1
42/2	Slider	1	73638-R1
42/3	Strip	1	70987-01
42/4	Driving pin	2	70988-01
42/6	Plug	1	N-8504-002

**Position indicator kit: open/closed with double position indicator (option)**



**DN 63 - 160**

Item	Description	Qty.	Part No.
	Position indicator kit	1	85304-R1
42/1	Position indicator	1	85259-R1
42/12	Slider	1	73638-R1
42/13	Strip	1	70987-01
42/14	Driving pin	2	70988-01
42/15	Bushing	12	N-E503-100
42/16	Plug	1	N-E503-023
42/17	Cable pull relief	1	N-E503-043
42/19	Distance piece	2	82860-01

**DN 200**

Item	Description	Qty.	Part No.
	Position indicator kit	1	85304-R1
42/1	Position indicator	1	85259-R1
42/12	Slider	1	73638-R1
42/13	Strip	1	70987-01
42/14	Driving pin	2	70988-01
42/15	Bushing	12	N-E503-100
42/16	Plug	1	N-E503-023
42/17	Cable pull relief	1	N-E503-043



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#### Warranty

Each product sold by VAT Vakuumentile AG (VAT) is warranted to be free from the manufacturing defects that adversely affect the normal functioning thereof during the one-year period immediately following delivery thereof by VAT, provided that the same is properly operated under conditions of normal use and that regular, periodic maintenance and service is performed or replacements made, in accordance with the instructions provided by VAT. The foregoing warranty shall not apply to any product or component that has been repaired or altered by anyone other than an authorized VAT representative or that has been subject to improper installation or abuse, misuse, negligence or accident. VAT shall not be liable for any damage, loss, or expense, whether consequential, special, incidental, direct or otherwise, caused by, arising out of or connected with the manufacture, delivery (including any delay in or failure to deliver), packaging, storage or use of any product sold or delivered by VAT shall fail to conform to the foregoing warranty or to the description thereof contained herein, the purchaser thereof, as its exclusive remedy, shall upon prompt notice to VAT of any such defect or failure and upon the return of the product, part or component in question to VAT at its factory, with transportation charges prepaid, and upon VAT's inspection confirming the existence of any defect inconsistent with said warranty or any such failure, be entitled to have such defect or failure cured at VAT's factory and at no charge therefor, by replacement or repair of said product, as VAT may elect. VAT MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, EXPRESS OR IMPLIED, (INCLUDING NO WARRANTY OR MERCHANTABILITY), EXCEPT FOR THE FOREGOING WARRANTY AND THE WARRANTY THAT EACH PRODUCT SHALL CONFORM TO THE DESCRIPTION THEREOF CONTAINED HEREIN, and no warranty shall be implied by law.

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