

## Series 01.0

### Main applications

General purpose valve for isolation in UHV or other demanding applications



### Ordering information

**Valve with manual actuator**  
turning handle

DN		Ordering numbers		
mm	inch	ISO-KF	CF-F metric threads	CF-F UNF threads
25	1	01028-KE01	–	–
40	1½	01032-KE01	01032-CE01	01032-UE01
50	2	01034-KE01	–	–

with position indicator: 010 . . . . E08

**Valve with pneumatic actuator**  
single acting with closing spring (NC)  
without solenoid valve  
without position indicator

DN		Ordering numbers		
mm	inch	ISO-KF	CF-F metric threads	CF-F UNF threads
25	1	01028-KE11	–	–
40	1½	01032-KE11	01032-CE11	01032-UE11
50	2	01034-KE11	–	–

without solenoid valve, with position indicator: 010 . . . . E21

with solenoid valve, with position indicator: 010 . . . . E41 (specify control voltage)

**Valve with pneumatic actuator**  
double acting  
without solenoid valve  
without position indicator

DN		Ordering numbers		
mm	inch	ISO-KF	CF-F metric threads	CF-F UNF threads
25	1	01028-KE14	–	–
40	1½	01032-KE14	01032-CE14	01032-UE14
50	2	01034-KE14	–	–

without solenoid valve, with position indicator: 010 . . . . E24

with solenoid valve, with position indicator: 010 . . . . E44 (specify control voltage)

## Features

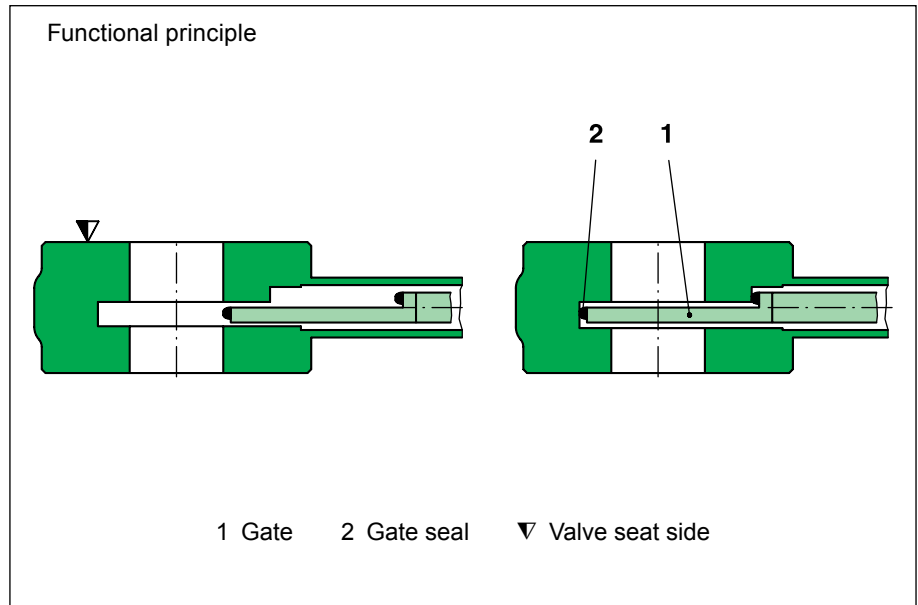
Body material: stainless steel

Modular design: see next page

Bellows sealed, unlubricated mechanism

Vulcanized seal (no dead volumes at the gate seal): see glossary

MONOVAT system: see glossary



## Technical data

Leak rate	
– Valve body	$< 5 \cdot 10^{-10}$ mbar ls <sup>-1</sup>
– Valve seat	$< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>
Pressure range	$1 \cdot 10^{-10}$ mbar to 2 bar (abs)
Differential pressure on the gate	$\leq 2$ bar
Differential pressure at opening	$\leq 30$ mbar
Cycles until first service	50 000
Temperature <sup>1)</sup>	
– Valve body	$\leq 250$ °C open, $\leq 200$ °C closed
– Manual actuator	$\leq 250$ °C
– Pneumatic actuator	$\leq 200$ °C
– Solenoid valve	$\leq 50$ °C
– Position indicator	$\leq 80$ °C
Heating and cooling rate	$\leq 50$ °C h <sup>-1</sup>
Material	
– Valve body	AISI 304 (1.4301), AISI 316L (1.4435)
– Gate	AISI 304 (1.4301)
– Bellows	AISI 316L (1.4435)
Seal	
– Bonnet	metal
– Gate	FKM (Viton®)
Feedthrough	bellows
Mounting position	any
Solenoid valve	
– Actuator with closing spring	24 VDC, 9.0 W (others on request)
– Actuator double acting	24 VDC, 5.4 W (others on request)
Position indicator: contact rating	
– Voltage	$\leq 250$ VAC $\leq 50$ VDC
– Current	$\leq 5$ A $\leq 3$ A
Valve position indication	visual (mechanical)

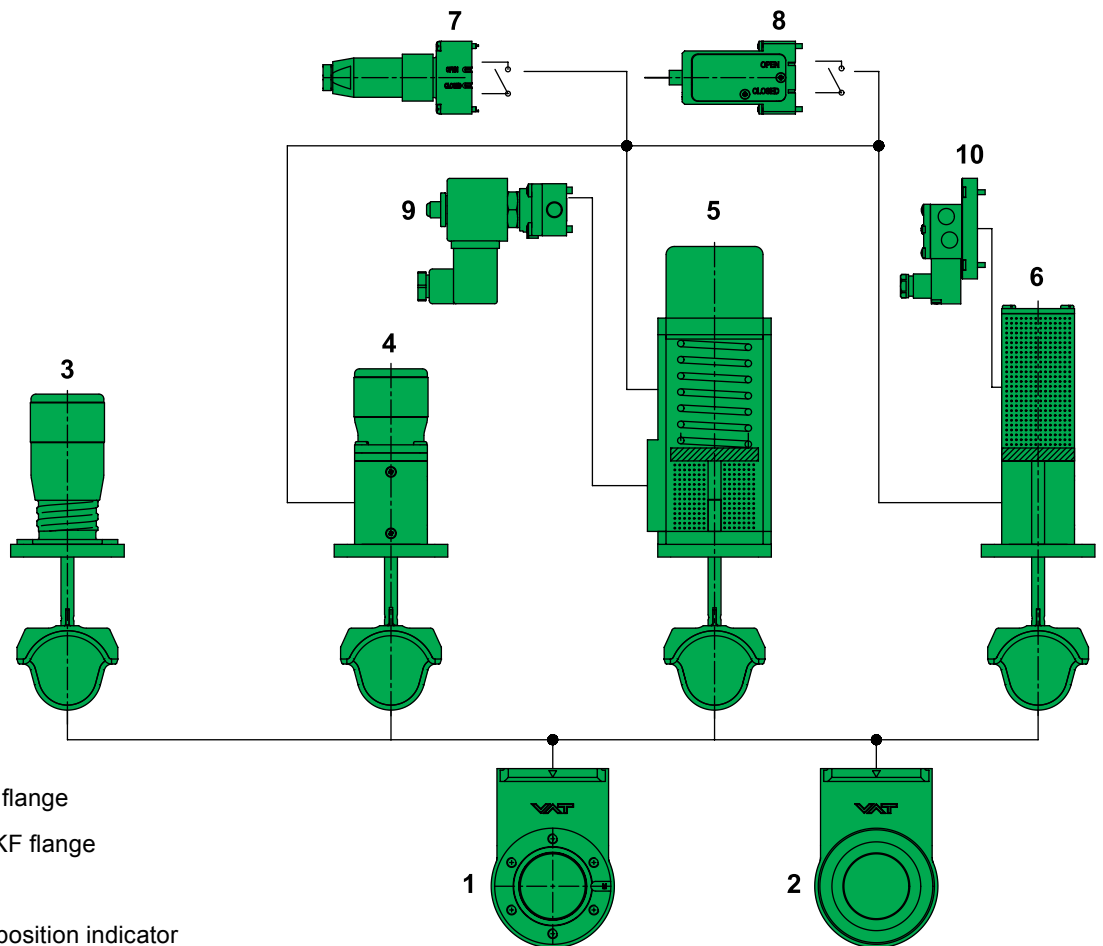
<sup>1)</sup> Maximum values: depending on operating conditions and sealing materials

Further technical data on next page →

Continued Technical data

DN (nominal I. D.)		Standard flanges	Conductance (molecular flow) (depending on A-dimen- sion and flange type)		Valve with manual actuator			Valve with pneumatic actuator								
					Turns per stroke	Weight		Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing or opening time	Weight			
mm	inch	ISO-KF	CF-F	n		kg	lbs	bar	psi	l	ft <sup>3</sup>		s	w. closing spring		double acting
			ls <sup>-1</sup>	ls <sup>-1</sup>									kg	lbs	kg	lbs
25	1	See pages 19–21	38	–	5	1.5	3.3	5–7	73–102	0.1	0.004	0.7	4.2	9.26	2.2	4.85
40	1½		160	220	5	1.5	3.3	5–7	73–102	0.1	0.004	0.7	4.2	9.26	2.2	4.85
50	2		160	–	5	1.5	3.3	5–7	73–102	0.1	0.004	0.7	4.2	9.26	2.2	4.85

## Modular design



- 1 Valve body with CF-F flange
- 2 Valve body with ISO-KF flange
- 3 Manual actuator
- 4 Manual actuator with position indicator
- 5 Pneumatic actuator, single acting with closing spring (NC)
- 6 Pneumatic actuator, double acting, mechanically locked
- 7 Position indicator for 80 °C (standard)
- 8 Position indicator for 200 °C (option)
- 9 3/2-way solenoid valve
- 10 4/2-way solenoid valve

## Options

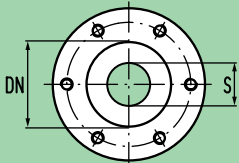
### Actuator

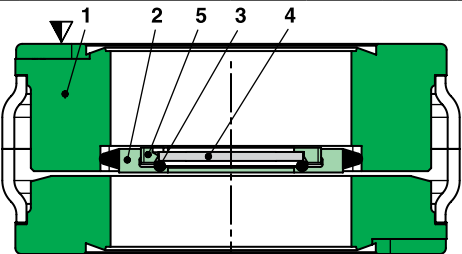
- Solenoid valve for impulse actuation:  
last valve position is maintained at power failure
- Solenoid valve separate, for external mounting
- Other solenoid valve voltage (standard: 24 VDC)
- Manual emergency operation on solenoid valve lockable
- Manual actuator with position indicator
- Bakeable position indicator with connection cable 0.3 m:  
actuator bakeable to max. 200 °C, contact rating: ≤50 VAC/DC, ≤1 A
- Pneumatic actuator, single acting with opening spring (NO)
- Special bellows for 1 million cycles

### Valve


- Customer specified flanges
- Insert version (without body, for integration into the vacuum system)
- Other sealing materials
- With protective ring: see series 17
- Special gate for the installation of various foils or orifices
- Window in gate (Dia. 1):  
window screwed into gate, window material: e. g. borosilicate, elastomer seal

Dia. 1





1 Valve body      4 Window  
2 Gate            5 Screwed window retainer  
3 Elastomer seal    ▽ Valve seat side



DN valve	mm	25	40	50
	inch	1	1 ½	2
Optically free diameter «S»	mm	21	21	21
	inch	0.82	0.82	0.82
Thickness of glass	mm	1.5	1.5	1.5
	inch	0.06	0.06	0.06

### Ordering information for options:

Ordering No. of valve-X (e. g. 01032-CE44-X, X = special bellows for 1 million cycles)

## Spare parts

- **Seals**  
on request (specify fabrication number of valve)

## Accessories

- **Flange connections**  
for installation of the valve: see series 31 and 33

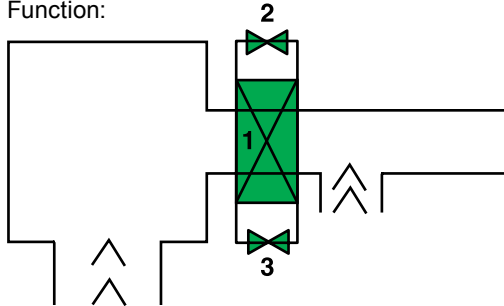
## Special versions

for gas analysis



Pressure reduction of the process gas by means of two bypass valves with orifice

Function:



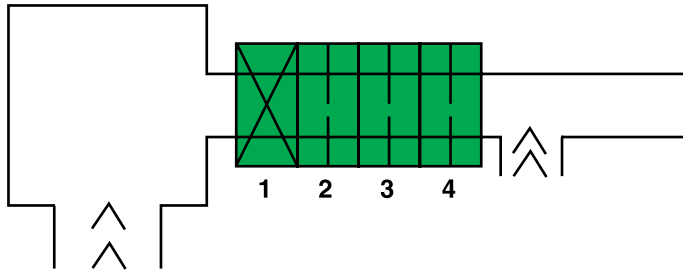
1: Vacuum-tight valve with manual or pneumatic actuator

2, 3: Bypass valves with manual or pneumatic actuator and application specific, easily exchangeable orifice



Pressure reduction of the process gas by means of maximum three gate valves with orifice

Function:



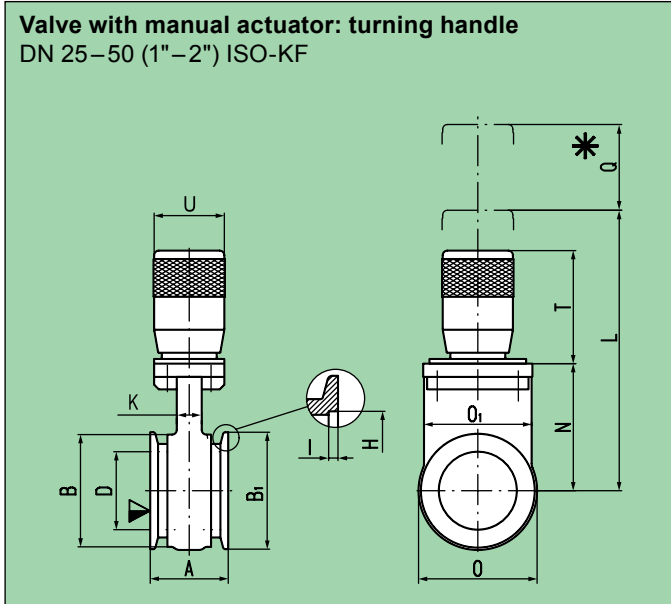
1: Vacuum-tight valve with manual or pneumatic actuator

2, 3, 4: One to three gate valves, each rotated by 90°, with manual or pneumatic actuator and application specific, easily exchangeable orifice

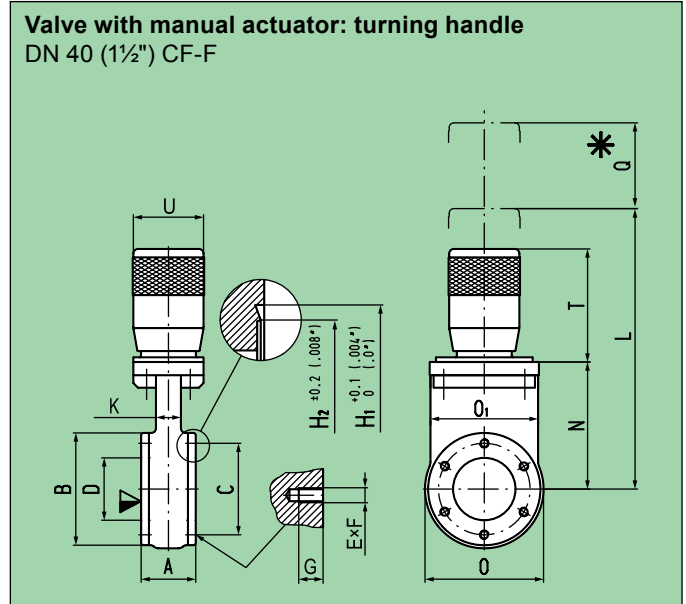
Details see pages 234 + 235.

### Dimensions

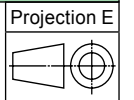
Valve with manual actuator: turning handle  
DN 25–50 (1"–2") ISO-KF



Valve with manual actuator: turning handle  
DN 40 (1½") CF-F



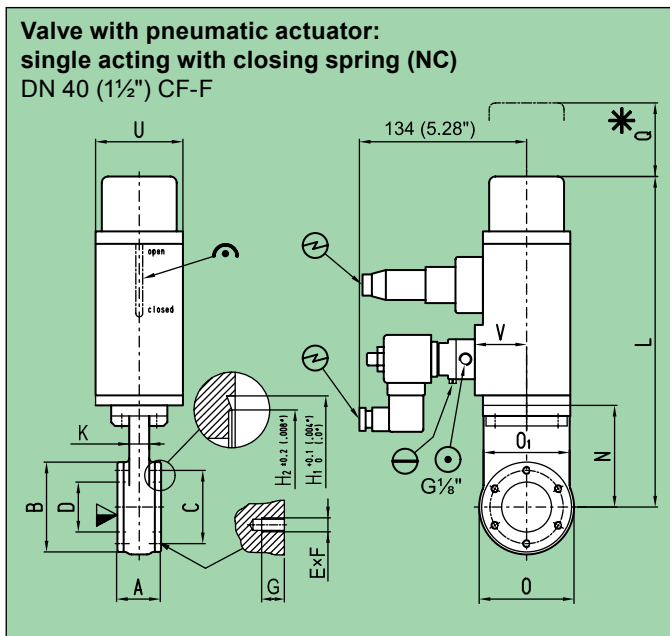
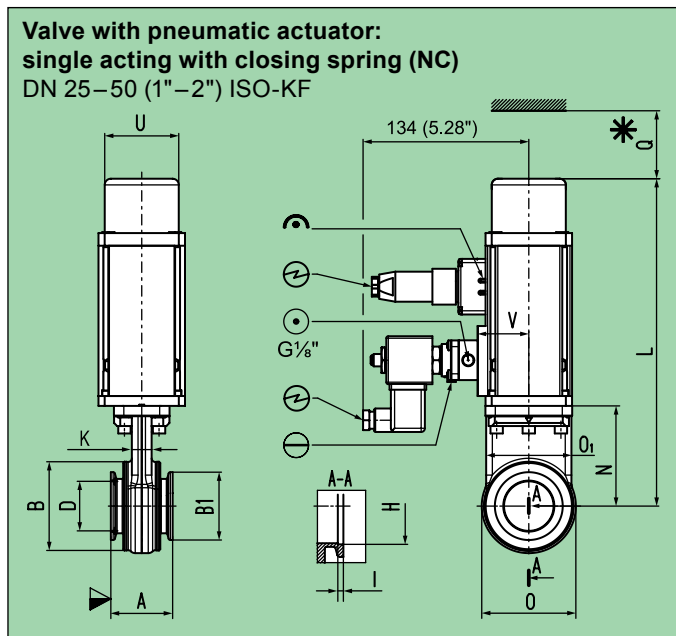
- ▼ Valve seat side
- \* Required for dismantling



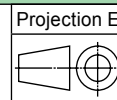
DN	mm inch	25 1	40 1½	50 (ID 40) 2 (ID 1.57)
A	mm inch	50 1.97	50 1.97	50 1.97
B	mm inch	72 2.83	72 2.83	72 2.83
B1	mm inch	40 1.57	55 2.16	75 2.95
D	mm inch	25 0.98	40 1.57	40 1.57
H	mm inch	26.20 1.03	41.20 1.62	52.20 2.05
I	mm inch	3 0.12	3 0.12	3 0.12
K	mm inch	16 0.63	16 0.63	16 0.63
L	mm inch	198 7.80	198 7.80	198 7.80
N	mm inch	82 3.23	82 3.23	82 3.23
O	mm inch	76 2.99	76 2.99	76 2.99
O1	mm inch	70 2.76	70 2.76	70 2.76
Q	mm inch	55 2.17	55 2.17	55 2.17
T	mm inch	73 2.87	73 2.87	73 2.87
U	mm inch	45 1.77	45 1.77	45 1.77

DN	mm inch	40 1½		
A	mm inch	35 1.38		
B	mm inch	72 2.83		
C	mm inch	58.70 2.31		
D	mm inch	40 1.57		
E x F		6 x M6 6 x ¼" -28 UNF		
G	mm inch	7 0.28		
H1	mm inch	48.30 1.90		
H2	mm inch	42 1.65		
K	mm inch	16 0.63		
L	mm inch	198 7.80		
N	mm inch	82 3.23		
O	mm inch	76 2.99		
O1	mm inch	70 2.76		
Q	mm inch	55 2.17		
T	mm inch	73 2.87		
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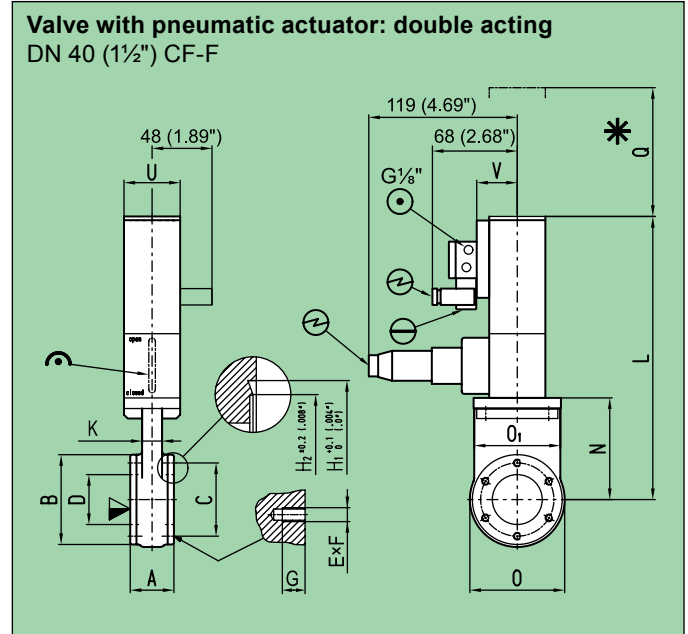
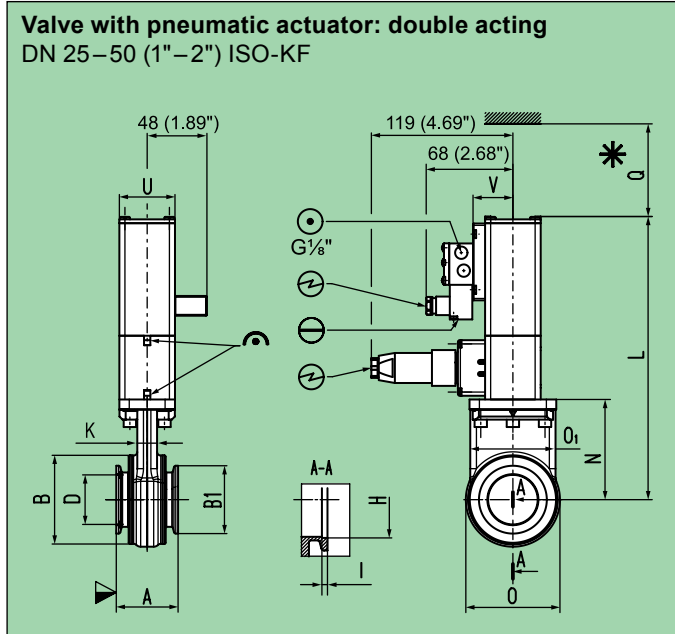
- ▽ Valve seat side
- ⊙ Compressed air connection
- ↻ Mechanical position indication
- \* Required for dismantling
- ⊖ Electrical connection
- ⊖ Emergency operation



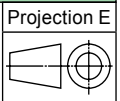
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I	mm inch	3 0.12	3 0.12	3 0.12
K	mm inch	16 0.63	16 0.63	16 0.63
L	mm inch	266 10.47	266 10.47	266 10.47
N	mm inch	82 3.23	82 3.23	82 3.23
O	mm inch	76 2.99	76 2.99	76 2.99
O1	mm inch	70 2.76	70 2.76	70 2.76
Q	mm inch	55 2.17	55 2.17	55 2.17
U	mm inch	45 1.77	45 1.77	45 1.77
V	mm inch	42 1.65	42 1.65	42 1.65

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L	mm inch	266 10.47		
N	mm inch	82 3.23		
O	mm inch	76 2.99		
O1	mm inch	70 2.76		
Q	mm inch	55 2.17		
U	mm inch	70 2.75		
V	mm inch	42 1.65		

Dimensions



- ▽ Valve seat side
- \* Required for dismantling
- ⊙ Compressed air connection
- ⊖ Electrical connection
- ⊕ Mechanical position indication
- ⊖ Emergency operation



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U	mm inch	45 1.77	45 1.77	45 1.77
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