VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

All-Metal RF Gate Valve, Series 47.2, DN 200 (ID 8")

Ordering No. 47146-CE44-AIX1

Description

Flange	DN 200 CF-F
Actuator	extended, pneumatic double acting, with position indicator, with 4/2 way solenoid
Feedthrough	bellows
RF - contact	circular ID 200 mm

Technical data

Leak rate	
- To the outside	$< 1 \cdot 10^{-10}$ mbar ls^{-1}
- Seat	$< 5 \cdot 10^{-10}$ mbar ls^{-1}
Molecular flow conductance	$8100 ls^{-1}$
Pressure range	UHV to 2 bar (abs)
Test pressure	1 bar
Differential pressure on the gate	
- in closing and opening direction	1 bar
Max. differential pressure at opening	
- in closing and opening direction	500 mbar, 1 bar with reduced lifetime
Cycles until first service	5'000
Bake-out temperature	
- Valve	≤ 300°C
- Actuator	≤ 140°C (for app. 100h)
- Solenoid	≤ 50°C
- Position indicators	≤ 80°C
Heating and cooling rate	≤ 25°C h^{-1}
Material	
- Body	1.4404, AISI 316 L
- Flange	1.4429 ESU, AISI 316LN ESR
- Gate	1.4435, AISI 316 L
- Mechanism (in contact with media)	1.4435, AISI 316 L
- Bellows	1.4435, AISI 316 L
- RF-contact	1.4310, AISI 301 silver plated
Seal	
- Bonnet	metal
- Gate	metal
- Actuator	EPDM
Mounting position	any with beam tube horizontal

Position indicator	
- 1 switch each for «open» and «closed»	
- Contact rating	≤ 50 V AC / DC, 1.2 A
4/2 way solenoid	
- voltage	48V DC
- power consumption	14 W
Radiation resistance	
- Valve	10^8 Gy (10^{10} rad)
- Actuator	10^6 Gy (10^8 rad)
- Solenoid	10^4 Gy (10^6 rad)
- Coil	10^6 Gy (10^8 rad)
- Position indicator	10^6 Gy (10^8 rad)
Compressed air pressure min. - max.	4 - 8 bar / 55 - 110 psig
Volume of air cylinder	9.3 l / 0.33 ft^3
Compressed air connection	R 1/8"
Action at power failure	
- Valve closed	no change
- Valve open	valve closes
Action at compressed air failure	
- Valve closed	no change
- Valve open	no change
Closing time	18 s
Opening time	18 s
Weight	app. 153 kg / 336 lbs

Dimensions

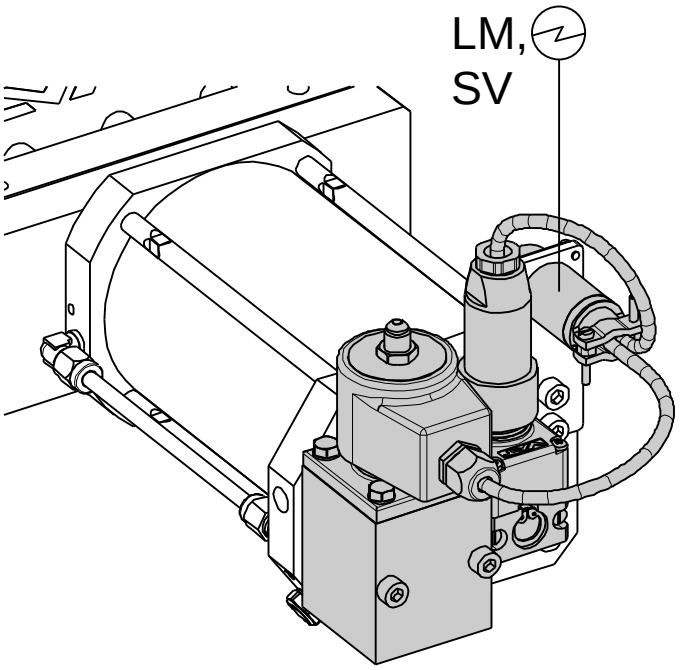
Dimensional drawing No. 541659

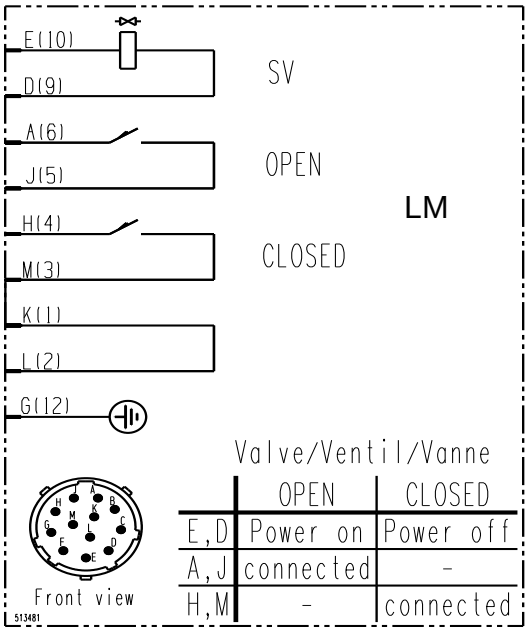
Comments

AIX = flanges 316LN material
4 x M8 holes for attachment
actuator E6 Gy
position indicator E6 Gy
4/2 way solenoid E4 Gy, coil E6 Gy
common12 pin Burndy connector* for solenoid and position indicator, fixed to the cylinder cover

*The connector is supplied by the customer

Wiring diagram





shematic, not to scale

⊖ LM Electrical connection for position indicator

⊖ SV Electrical connection for solenoid