



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

Fast Closing Valve, Series 77.1, DN 100 (ID 4")

Ordering No. 77140-CE44

Description

Flange	CF-F 100 – metric threads
Actuator	pneumatic double acting, with position indicator, with solenoid
Feedthrough	bellows

Technical data

Leak rate	
- To the outside	$< 1 \cdot 10^{-10}$ mbar ls ⁻¹
- Seat	< 30 mbar ls ⁻¹ (air, 1 bar)
Molecular flow conductance	app. 700 ls ⁻¹
Pressure range	UHV to 1.2 bar (abs)
Differential pressure on the gate	
- in closing direction	≤ 2 bar
- in opening direction	≤ 1.2 bar
Max. differential pressure at opening	
- in closing direction	≤ 180 mbar
- in opening direction	≤ 1 bar
Cycles until first service	2000
Bake-out temperature	
- Valve	$\leq 300^{\circ}\text{C}$
- Actuator	$\leq 50^{\circ}\text{C}$
- Solenoid	$\leq 50^{\circ}\text{C}$
- Position indicator	$\leq 50^{\circ}\text{C}$
Temperature difference seat/gate	$\leq 40^{\circ}\text{C}$
Heating and cooling rate	$\leq 80^{\circ}\text{C h}^{-1}$
Material	
- Body,	1.4404, 1.4435, AISI 316 L
- Mechanism (vacuum side)	1.4435, AISI 316L / 3.7035, Titanium
- Bellows	1.4404, AISI 316 L
Seal	
- Bonnet	metal
- Actuator	NBR, PTFE/Nitril
Mounting position	any, marked seat side against the air inrush direction
Solenoid	
- Supply voltage	24V / DC
Position indicator	
- Contact rating	≤ 50 V AC / DC; ≤ 1.2 A

Created by: Daniel Brandner	Release date: 2010-06-15	Page 1 of 3
Modified by: René Brulc	Release date: 2013-07-26	283768EB



VAT Vakuumentile AG
CH-9469 Haag, Schweiz

Product data sheet

Fast Closing Valve, Series 77.1, DN 100 (ID 4")

Ordering No. 77140-CE44

Radiation resistance

- Body/Gate 10^8 Gy (10^{10} rad)
- Actuator 10^4 Gy (10^6 rad)

Compressed air pressure min. - max.

5 - 8 bar / 73 - 116 psig

Volume of air cylinder

3 l / 0.11 ft³

Compressed air connection

R 1/8" (1/8" NPT for USA)

Action at power failure

- fast valve closed no change (depending on fast valve controller settings)
- fast valve open no change (depending on fast valve controller settings)

Action at compressed air failure

- fast valve closed no change
- fast valve open no change

Closing time

≤ 15 ms

Opening time

app. 7 s

Weight

app. 29 kg / 64 lbs

Attachments

Dimensional drawing No. 433510

Created by: Daniel Brandner	Release date: 2010-06-15	Page 2 of 3
Modified by: René Brulc	Release date: 2013-07-26	283768EB



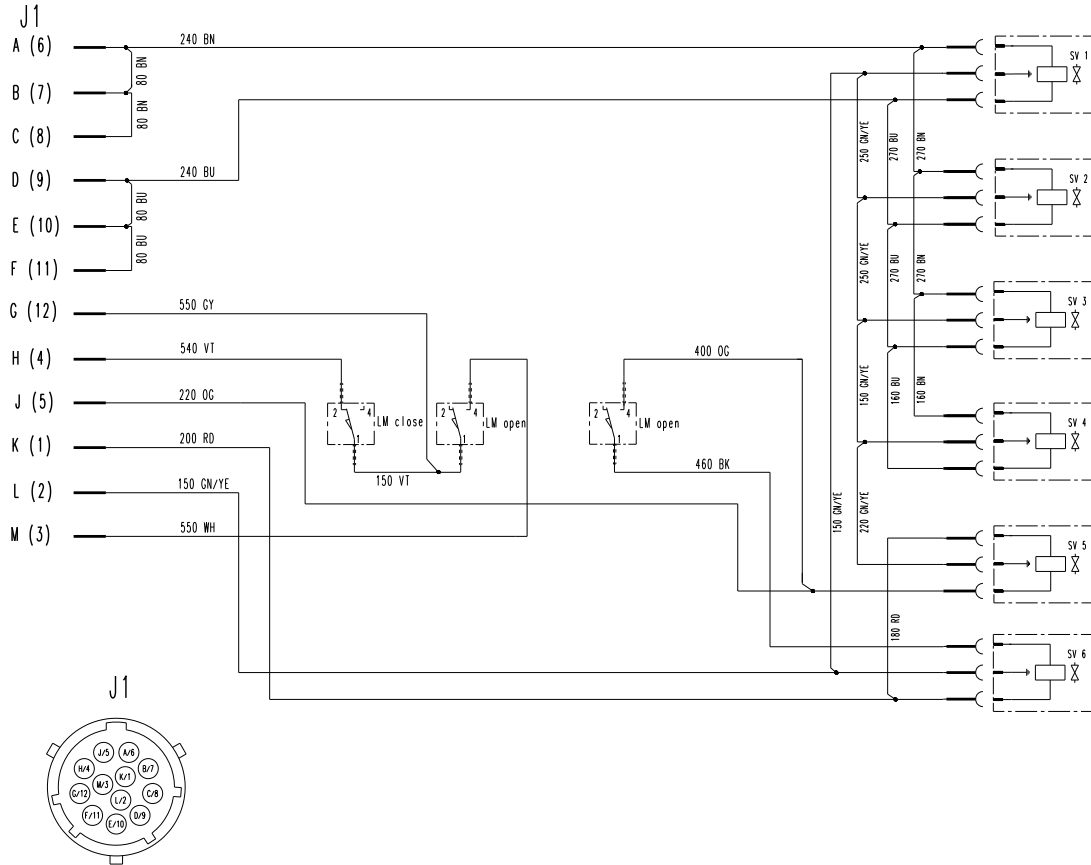
VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

Fast Closing Valve, Series 77.1, DN 100 (ID 4")

Ordering No. 77140-CE44

Wiring diagram



LM-Open = Position indicator open
LM-Close = Position indicator close

Created by: Daniel Brandner

Release date: 2010-06-15

Page 3 of 3

Modified by: René Brulc

Release date: 2013-07-26

283768EB