



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

Fast Closing Valve, Series 77.1, DN 160 (ID 6")

Ordering No. 77144-CE44

Description

Flange	CF-F 160 – 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. 1700 ls ⁻¹
Pressure range	UHV to 1.2 bar (abs)
Differential pressure on the gate	
- in closing direction	≤ 2 bar
- in opening direction	≤ 0.5 bar
Max. differential pressure at opening	
- in closing direction	≤ 50 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

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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 ≤ 23 ms

Opening time app. 7 s

Weight app. 36 kg / 80 lbs

Attachments

Dimensional drawing No. 432793

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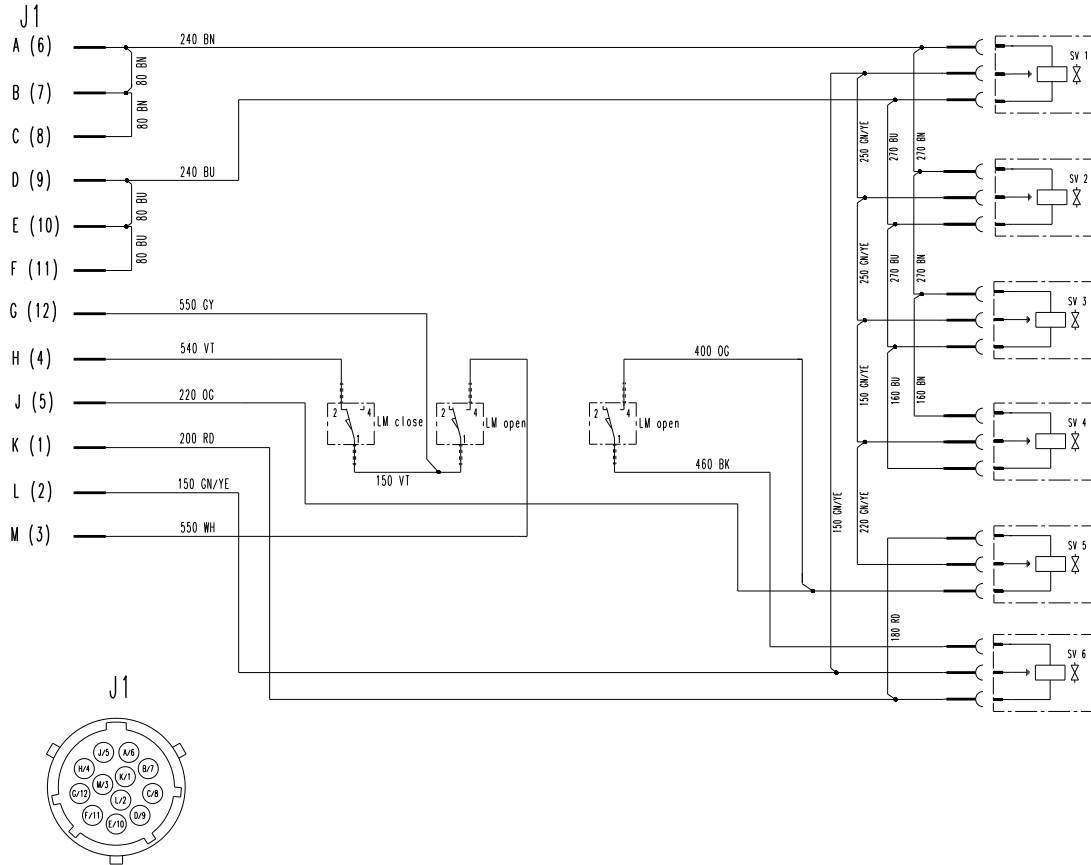
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Wiring diagram



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

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