



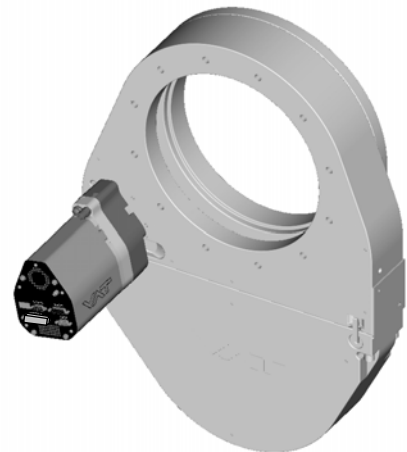
VAT Vakuumentile AG  
CH-9469 Haag, Schweiz

**PRODUCT DATA SHEET**  
**Series 650, DN 250 (I.D. 10")**  
**Ordering No. 65048-JACL-0001**

## 1 Description

This product is a throttling pendulum valve with isolation functionality. It is intended to use for downstream pressure control applications.

Flange		DN 250 (10 "), JIS	
Actuator	type	<ul style="list-style-type: none"> <li>stepper motor for pendulum plate movement</li> <li>pneumatic for isolation function</li> </ul>	
	position	B1	
Controller	type	integrated (on actuator)	
	interface	CC-Link	
	number of sensor inputs	1	
	options	PFO,SPS <sup>1)</sup>	
	firmware version	650C.1E.15	
Feedthrough	actuator and sealing ring	double sealed	
Seals	sealing ring (body)	Viton	
	sealing ring (plate)	Viton	
	rotary feedthrough	atmosphere	Viton
		vacuum	Viton
	shaft feedthrough	atmosphere	Viton
		vacuum	Viton
bonnet		Viton	



Sample picture only. Specified product may differ in size, flange and options.

1)none = no option, PFO = power failure option, SPS = sensor power supply

Editor: Kaiser Benno	Date: 2010-07-06	Page 1 of 4
Replaced by:	Replacement for:	<b>284930EA</b>
Modification No.	Modification No.	



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## 2 Technical data

### 2.1 Valve unit

Pressure range at 20°C		1 x 10E-8 mbar to 1.2 bar (abs)
Leak rate at 20°C	to outside (global)	1 x 10E-9 mbar l/s
	seat	1 x 10E-9 mbar l/s
Max. differential pressure on plate during isolation (in both directions)		1200 mbar in either direction
Max. differential pressure on plate during opening		5 mbar
Cycles until first service (preventive maintenance)	throttling (open – max. throttle – open)	1'000'000 (unheated and under clean conditions)
	isolation (open – closed – open)	200'000 (unheated and under clean conditions)
Admissible operating temperature		10°C to +150°C
Mounting position		any (valve seat on chamber side is recommended)
Process side materials	body	Aluminium AA6082 (3.2315)
	plate	Aluminium AA6082 (3.2315)
	sealing ring	Aluminium AA6082 (3.2315) stainless steel: 304 (1.4301 or 1.4303), 420C (1.3541), 631 (1.4568)
	other parts	stainless steel: 301 (1.4310), 304 (1.4301 or 1.4303), 316L (1.4435 or 1.4404), 316Ti (1.4571), 1.4122, A2 (304)
Seals	body	Viton
	plate	Viton
	rotary feedthrough atmosphere side	Viton
	rotary feedthrough vacuum side	Viton
	shaft feedthrough atmosphere side	Viton
	shaft feedthrough vacuum side	Viton
	bonnet	Viton

Editor: Kaiser Benno	Date: 2010-07-06	Page 2 of 4
Replaced by:	Replacement for:	<b>284930EA</b>
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Min. controllable conductance (N <sub>2</sub> molecular flow)		15 l/s
Max. conductance (N <sub>2</sub> molecular flow)		22000 l/s
Actuating time	full open to close (throttling)	0.9 s typ.
	close (throttling) to full open	0.9 s typ.
	full open to close (isolated)	3 s typ.
	close (isolated) to full open	4 s typ.

## 2.2 Control unit

Power supply input		+24 VDC (±10%) @ 0.5 V pk-pk max.
Power consumption		96 W
Ambient	temperature	0 °C to +50 °C max. (<35 °C recommended)
	humidity	0 to 95% RH, non-condensing
Interface	remote	CC-Link
	local (service port)	RS232
Sensor	number of inputs	1
	input	0-10 VDC / Ri>100 kΩ
	ADC resolution	0.23 mV
	sampling time	10 ms
Compressed air pressure (isolation function)		4 - 7 bar / 55 - 100 psi (above ATM)
Pressure control accuracy		0.1% of sensor full scale
Firmware		650C.1E.15

## 2.3 General data

Weight		approx. 29 kg
Dimensional drawing		406942

Editor: Kaiser Benno	Date: 2010-07-06	Page 3 of 4
Replaced by:	Replacement for:	<b>284930EA</b>
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### 3 Initial configuration

Interface	station number	1
	transmission rate	10Mbps
	operation settings mode	1 occupied station, 8 expanded cycles
Communication settings	pressure range	0...100'000
	position range	0...100'000
Valve position	after start up	close
	in case of power failure	close
	in case of network failure	close
Control settings	control mode	adaptive
	gain factor	1
	valve speed	1000
	sensor delay	0 s
	setpoint ramp	1 s
	baud rate	600
	parity	even
	stop bit	1
	close input	not inverted
	open input	not inverted
	2nd answer	disabled

Editor: Kaiser Benno	Date: 2010-07-06	Page 4 of 4
Replaced by:	Replacement for:	<b>284930EA</b>
Modification No.	Modification No.	