



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

PRODUCT DATA SHEET

Series 655, DN 250 mm (I.D. 10")

Ordering No. 655-...-.....

1 Description

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

This "Product Data Sheet" is valid for the valve ordering number(s):

Sample picture only. Specified product

DN		Ordering numbers											
mm	inch	blank aluminum				hard anodized aluminum							
		ISO-F		JIS		ISO-F		JIS					
250	10	65548-PA	x	y	65548-JA	x	y	65548-PH	x	y	65548-JH	x	y

<p>Controller configurations:</p> <p>G = basic version</p> <p>A = with SPS</p> <p>H = with PFO</p> <p>C = with SPS and PFO</p> <p>T = basic version with VC master</p> <p>V = with SPS and VC master</p> <p>U = with PFO and VC master</p> <p>W = with SPS, PFO and VC master</p>	<p>Interface</p> <p>H = RS232</p> <p>E = Logic (analog / digital)</p> <p>Q = DeviceNet®</p> <p>F = Profibus</p> <p>K = RS485</p> <p>X = EtherCAT</p> <p>S = VC slave (without interface)</p>	<p>Number of sensors</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p>
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SPS = Sensor Power Supply (±15V DC power supply for sensor)	
PFO = Power Failure Option (valve closes / opens automatically at power failure)	
VC = Valve Cluster (for operating several valves synchronously)	



may differ in size, flange and options.

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Replaced by:	Replacement for:	979644EA
Modification No.	Modification No.	



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2 Technical data

2.1 Valve unit

Pressure range (unheated on delivery)		
<ul style="list-style-type: none"> Aluminum FKM Aluminum, FFKM Aluminum, hardanodized 		<p>1 × 10E-8 mbar to 1.2 bar (abs) 1 × 10E-7 mbar to 1.2 bar (abs) 1 × 10E-6 mbar to 1.2 bar (abs)</p>
Leak rate valve seat (unheated on delivery)		
<ul style="list-style-type: none"> Aluminum FKM Aluminum, FFKM Aluminum, hardanodized 		<p>1 × 10E-9 mbar ls⁻¹ 1 × 10E-6 mbar ls⁻¹ 1 × 10E-4 mbar ls⁻¹</p>
Leak rate valve body (unheated on delivery)		
<ul style="list-style-type: none"> Aluminum FKM Aluminum, FFKM Aluminum, hardanodized 		<p>1 × 10E-9 mbar ls⁻¹ 1 × 10E-7 mbar ls⁻¹ 1 × 10E-5 mbar ls⁻¹</p>
Cycles until first service (unheated and under clean conditions)		
<ul style="list-style-type: none"> Pressure control Closing / opening 		<p>2'000'000 50'000</p>
Admissible operating temperature		
<ul style="list-style-type: none"> Valve body Ambient 		<p>≤ 120°C ≤ 50°C</p>
Mounting position (valve seat on chamber side recommended)		
<ul style="list-style-type: none"> DN250 		any
Process side materials	valve body	Aluminium EN AW-6061 T651 hard anodized
	Bonnet	Aluminium EN AW-6061 T651 hard anodized
	Plate	Aluminium EN AW-6061 T651 hard anodized
	Connection screw for gate	Stainless steel A4-80, Ni-PTFE coated
	Actuator shaft	Stainless steel 1.4435 (316L)
	Gate suspension disc	Stainless steel 1.4435 (316L)
Seals	Plate, body, bonnet, rotary feedthrough	FKM (e.g. Viton®) FFKM (optional)

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DN (nominal I. D.)	mm		250	
	inch		10"	
Operating time (s):				
Open to close / Close to open (s)			1	
Pressure control (throttling) (s)			0.5	
Min. controllable conductance (ls ⁻¹) [N ₂ molecular flow]			2	
Max. Conductance (ls ⁻¹) [N ₂ molecular flow]			22'000	
Max. differential pressure on the plate in closed position (mbar)		from chamber to pump	1'200	
Max. differential pressure on the plate in closed position (mbar)		from pump to chamber	50	
Max. differential pressure during operation (mbar)			5	
Weight (approx.)	kg		36	
	lbs		79	

2.2 Control unit

Power supply input		+24 VDC (±10%) @ 0.5 V pk-pk max.
Power consumption		110W max with optional SPS + 40 W with optional PFO + 10 W 3 W max. (from DeviceNet® to DeviceNet® Interface board of valve)
Ambient	temperature	0 °C to +50 °C max. (<35 °C recommended)
	humidity	0 to 95% RH, non-condensing
Interface	remote	Refer to chapter 1
	service port	USB
Sensor	number of inputs	Refer to chapter 1
	signal voltage	0...10 V DC with linear pressure
	input resistance	R _i = 100 kΩ
	ADC resolution	0.09 mV
	sampling rate	2 ms
	power supply (output)	+24 VDC / 1'500 mA max. or ±15 VDC / ± 1'200 mA max. (with SPS option)
Pressure control accuracy		5 mV or 0.1% of setpoint, the higher value applies
Protective system		IP 20

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2.3 General data

Weight	Refer to chapter: 2.1
Dimensional drawing	Refer to dimensional drawing of specific valve ordering number (available on request)

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