



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

# PRODUCT DATA SHEET

Series 642, DN 63 - 400 mm (I.D. 2.5" - 16")

Ordering No. 642..-.....-.....

## 1 Description

This product is a control gate 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):

DN		Ordering numbers					
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP (T) ASA (A)	JIS	
63	2 1/2	64236-PE x y	64236-CE x y	64236-UE x y	64236-TE x y	64236-JE x y	
80	3	64238-PE x y	64238-CE x y	64238-UE x y	64238-TE x y	64238-JE x y	
100	4	64240-PE x y	64240-CE x y	64240-UE x y	64240-TE x y	64240-JE x y	
160	6	64244-PE x y	64244-CE x y	64244-UE x y	64244-TE x y	64244-JE x y	
200	8	64246-PE x y	64246-CE x y	64246-UE x y	64246-TE x y	64246-JE x y	
250	10	64248-PE x y	64248-CE x y	64248-UE x y	64248-TE x y	64248-JE x y	
320	12	64250-PE x y	on request	on request	64250-TE x y	64250-JE x y	
350	14	-	-	-	-	64251-JE x y	
400	16	64252-PE x y	on request	on request	64252-AE x y	64252-JE x y	

Controller

configurations:

- G = basic version
- A = with SPS
- H = with PFO
- C = with SPS and PFO
- T = basic version with VC master
- V = with SPS and VC master
- U = with PFO and VC master
- W = with SPS, PFO and VC master

SPS = Sensor Power Supply  
(±15VDC power supply for sensor)

PFO = Power Failure Option  
(valve closes/opens automatically  
at power failure)

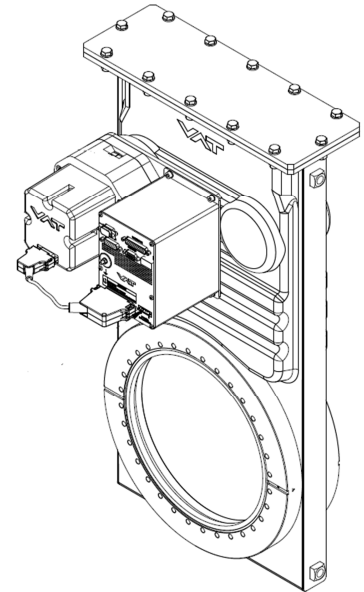
VC = Valve Cluster  
(for operating several valves  
synchronously)

Example: 64240-PEGG  
= Valve with ISO-F DN 100 flanges  
RS232 interface, for 1 sensor

Interface

- G = RS232 1
- H = RS232 2
- C = Logic 1
- E = Logic 2
- P = DeviceNet® 1
- Q = DeviceNet® 2
- D = Profibus 1
- F = Profibus 2
- J = RS485 1
- K = RS485 2
- Y = Ethernet 1
- Z = Ethernet 2
- L = CC-Link 1
- N = CC-Link 2
- I = EtherCAT 1
- X = EtherCAT 2
- S = VC slave (without interface)

Number of  
sensors



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

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## 2 Technical data

### 2.1 Valve unit

Pressure range at 20°C (unheated on delivery)		<ul style="list-style-type: none"> <li>DN63...200</li> <li>DN250...400</li> </ul>										
Leak rate to outside / seat at 20°C (unheated on delivery)		1 × 10E-8 mbar to 2.0 bar (abs) 1 × 10E-8 mbar to 1.2 bar (abs)										
Differential pressure on the gate		<ul style="list-style-type: none"> <li>Valve closed <ul style="list-style-type: none"> <li>- DN63...200</li> <li>- DN250...400</li> </ul> </li> <li>During closing / opening</li> </ul>										
Cycles until first service (unheated and under clean conditions)		<ul style="list-style-type: none"> <li>Pressure control</li> <li>Closing / opening</li> </ul>										
Admissible operating temperature		<ul style="list-style-type: none"> <li>Valve body</li> <li>Ambient</li> </ul>										
Mounting position (valve seat to face chamber is recommended)		<ul style="list-style-type: none"> <li>DN63...350</li> <li>DN400</li> </ul>										
Process side materials		body / plate		Stainless steel: 304 (1.4301)								
		other parts		Stainless steel: 301 (1.4310), 304 (1.4301), 420 (1.4034), 420D (1.4037), 430 (1.4016)								
Seals		plate		FKM (e.g. Viton®)								
		rotary feed through		FKM (e.g. Viton®)								
		bonnet		FKM (e.g. Viton®) (DN63...200 vulcanized)								
DN (nominal I. D.)		mm	<b>63</b>	<b>80</b>	<b>100</b>	<b>160</b>	<b>200</b>	<b>250</b>	<b>320</b>	<b>350</b>	<b>400</b>	
		inch	<b>2½</b>	<b>3"</b>	<b>4"</b>	<b>6"</b>	<b>8"</b>	<b>10"</b>	<b>12"</b>	<b>14"</b>	<b>16"</b>	
Operating time		open / close		4	4	6	6	6	10	10	10	
		Pressure control		3	3	3	5	5	9	9	9	9
Min. controllable conductance (ls <sup>-1</sup> ) [N <sub>2</sub> molecular flow]				0.65	0.8	1	1.6	2	2.5	3.2	3.5	4
Max. Conductance (ls <sup>-1</sup> ) [N <sub>2</sub> molecular flow]				440	800	1'700	5'000	1'2000	22'000	30'000	40'000	50'000
Weight (approx.)		kg		14	14	17	28	34	62	112	120	155
		lbs		31	31	37	62	75	136	246	264	340
Valve position indication		Visual (mechanical and on controller)										

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### 2.2 Control unit

Power supply input		+24 VDC ( $\pm 10\%$ ) @ 0.5 V pk-pk max.
Power consumption		55 W (standard) with optional SPS + 36 W with optional PFO + 10 W 3 W max. (from DeviceNet <sup>®</sup> to DeviceNet <sup>®</sup> 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	RS232
Sensor	number of inputs	Refer to chapter 1
	signal voltage	0...10 V DC with linear pressure
	input resistance	R <sub>i</sub> = 100 k $\Omega$
	ADC resolution	0.23 mV
	sampling time	10 ms
	power supply (output)	+24 VDC / 1500 mA max. or $\pm 15$ VDC / $\pm 1'000$ mA max. (with SPS option)
Pressure control accuracy		5 mV or 0.1% of setpoint, the higher value applies
Protective system		IP 20

### 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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