VAT Vakuumventile AG
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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 ½	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:

x
- 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 (±15 V DC power supply for sensor)

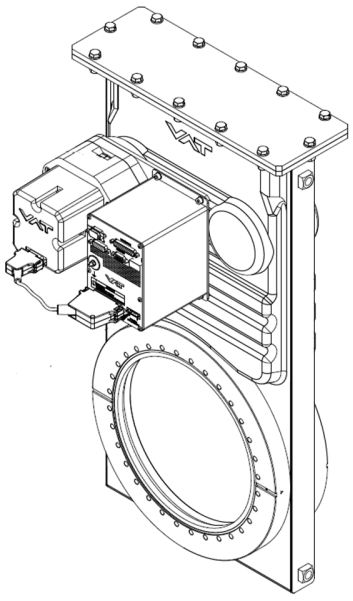
PFO = Power Failure Option (valve closes/opens automatically at power failure)

VC = Valve Cluster (for operating several valves synchronously)

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

y

	Interface	Number of sensors
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)	



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

2 Technical data

2.1 Valve unit

Pressure range at 20°C (unheated on delivery) • DN63…200 • DN250…400										1 × 10E-8 mbar to 2.0 bar (abs) 1 × 10E-8 mbar to 1.2 bar (abs)
Leak rate to outside / seat at 20°C (unheated on delivery)										1 × 10E-9 mbar ls^{-1}
Differential pressure on the gate • Valve closed - DN63…200 - DN250…400 • During closing / opening										 ≤ 2.0 bar ≤ 1.2 bar ≤ 30 mbar
Cycles until first service (unheated and under clean conditions) • Pressure control • Closing / opening										 1'000'000 200'000
Admissible operating temperature • Valve body • Actuator • Controller • Ambient										 ≤ 150°C ≤ 80°C ≤ 50°C ≤ 50°C
Mounting position (valve seat to face chamber is recommended) • DN63…350 • DN400										 any horizontal only (optional in vertical position with extended closing time, fewer cycles)
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	**63**	**80**	**100**	**160**	**200**	**250**	**320**	**350**	**400**
	inch	**2½**	**3"**	**4"**	**6"**	**8"**	**10"**	**12"**	**14"**	**16"**
Operating time	open / close	4	4	6	6	6	10	10	10	10
	Pressure control	3	3	3	5	5	9	9	9	9
Min. controllable conductance (ls^{-1}) [N_2 molecular flow]		0.65	0.8	1	1.6	2	2.5	3.2	3.5	4
Max. Conductance (ls^{-1}) [N_2 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)

2.2 Control unit

Power supply input		+24 VDC (±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® 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	RS232
Sensor	number of inputs	Refer to chapter 1
	signal voltage	0…10 V DC with linear pressure
	input resistance	Ri = 100 kΩ
	ADC resolution	0.23 mV
	sampling time	10 ms
	power supply (output)	+24 VDC / 1500 mA max. or ±15 VDC / ± 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)