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Клапаны регулирующие баттерфляй Siemens VKF41

производственное предприятие
ВИКТОРИЯ

ACVATIX™

Butterfly valves PN6, PN10, PN16 VKF41..

- **Grey cast iron housing EN-GJL-250**
- **DN 40…200**
- **k_{vs} 50…4000 m^3/h**
- **For fitting between PN 6, PN 10, PN 16 counter-flanges to ISO 7005**
- **Metallic tight-closing**
- **Angle of rotation 90°**
- **No maintenance required**
- **Can be fitted with type SAL..T10 and SAL..T40 electromotoric actuators**

Use

For use as a control or shut-off valve in heating, ventilation and air conditioning systems, e.g.:

- In closed circuits
- For 2-position controls (open/closed)
- For boiler and chiller sequencing circuits
- To open or close the flow to a heat exchanger or to complete plant sections
- In applications where minimal leakage through the fully closed valve is allowable

Type summary

Product number	DN	k_{vs} [m^3/h]	Leakage rate in % of k_{vs}-value	Velocity of water flow [1]			
					SAL31..T10 SAL81..T10	SAL61..T10	SAL31..T40 SAL81..T40	SAL61..T40
VKF41.40	40	50	0.22		4	2.5	-	-
VKF41.50	50	80	0.14					
VKF41.65	65	200	0.09					
VKF41.80	80	400	0.06					
VKF41.100	100	760	0.04					
VKF41.125	125	1000	0.04					
VKF41.150	150	2100	0.02		2.5	1.5	4	4
VKF41.200	200	4000	0.01					

[1] Recommended maximum velocity of flow and the butterfly valve fully open

k_{vs} Nominal flow rate of cold water (5…30 °C) through the fully open butterfly valve by a differential pressure of 100 kPa (1 bar)

Accessories

Designation	Product number	Stock number		Description
Mounting set	**ASK33N**	**S55845-Z101**		For mounting SAL..T10 actuators on VKF41.., DN 40…200 and SAL..T40 actuators on VKF41.., DN 150…200

Ordering

Example:

Product number	*Stock number*	*Designation*	*Quantity*
VKF41.50	VKF41.50	Butterfly valve VKF41.50 including centering sleeves	1
SAL31.03T10	S55162-A109	Actuator SAL31.03T10	1
ASK33N	S55845-Z101	Mounting set ASK33N	1

Delivery

Butterfly valve, actuator and mounting set are packed separately.
4 centering sleeves are supplied with each butterfly valve, for fitting the valve between PN 10 and PN 16 flanges.

Revision numbers

See overview, page 8.

Equipment combinations

	Mounting set		Electromotoric actuator SAL..T10	SAL..T40
Butterfly valve	**SAL..T10**[1)]	SAL..T40	Δp_s [kPa]	
VKF41.40	ASK33N		500	-
VKF41.50				
VKF41.65				
VKF41.80				
VKF41.100				
VKF41.125			300	
VKF41.150		ASK33N	250	400
VKF41.200			125	300

Δp_s Maximum permissible differential pressure at which the motorized butterfly valve will close securely against the pressure (close off pressure)

Actuator overview

Product number	Operating voltage	Positioning signal	Spring return	Positioning time	Positioning force	Data sheet
SAL31.00T10	AC 230 V	3-position	No	120 s	10 Nm	N4502
SAL31.00T40				120 s	40 Nm	
SAL31.03T10				30 s	10 Nm	
SAL81.00T10	AC/DC 24 V			120 s	10 Nm	
SAL81.00T40				120 s	40 Nm	
SAL81.03T10				30 s	10 Nm	
SAL61.00T10		DC 0…10 V DC 4…20 mA 0…1000 Ω		120 s	10 Nm	
SAL61.00T40				120 s	40 Nm	
SAL61.03T10				30 s	10 Nm	

Mechanical design

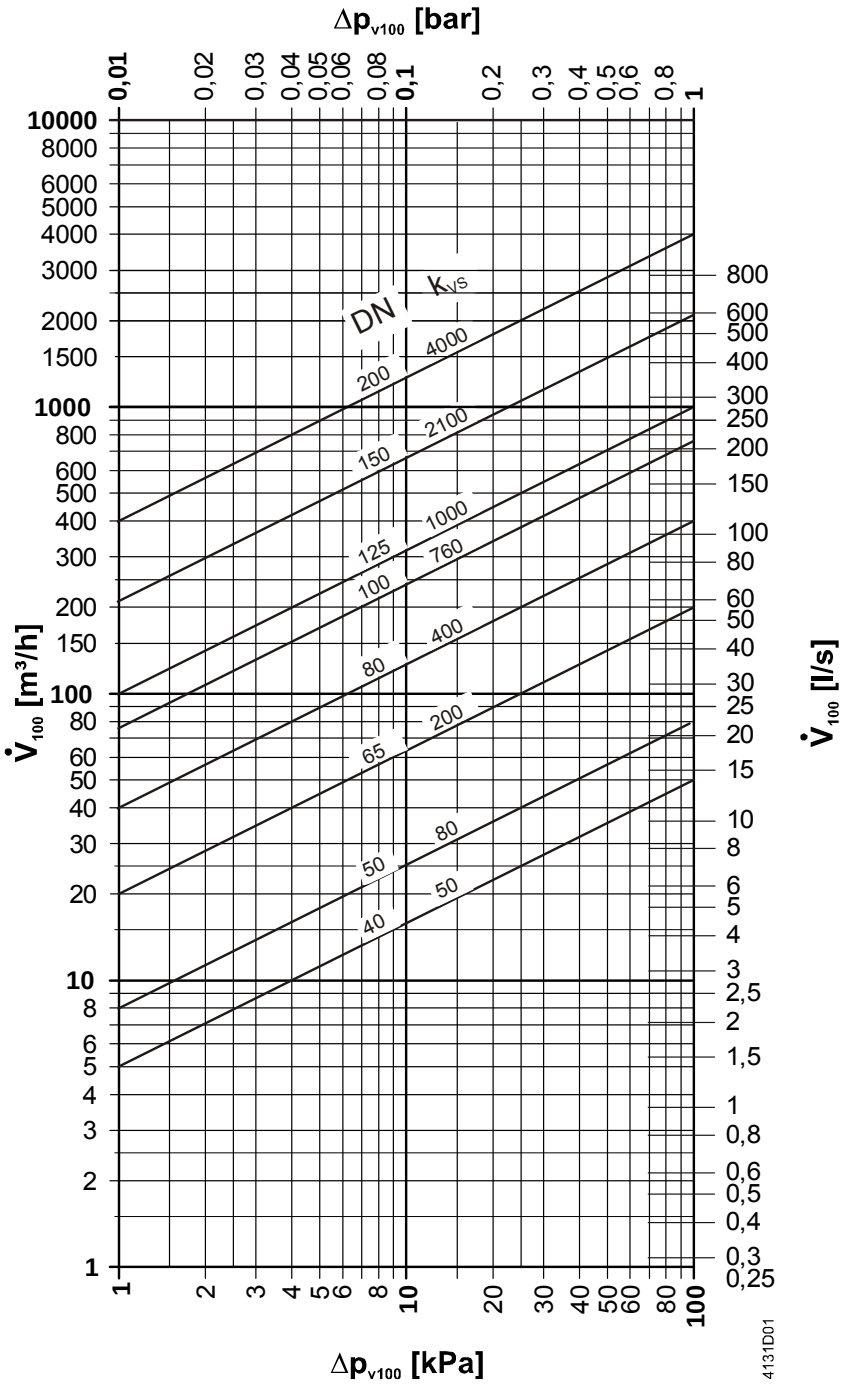
Butterfly valve

Stainless steel disk and shaft. The valve disk closes against an end-stop. The position of the valve disc is indicated by a notch on the front of the shaft.

Mounting set

In all cases, a mounting set is required to assemble the actuators on a VKF41.. valve.

Flow diagram



Δp_{v100} = Differential pressure across the fully open butterfly valve by a volume flow $\dot{V}_{100}$

$\dot{V}_{100}$ = Volume flow through the fully open butterfly valve

100 kPa = 1 bar ≈ 10 mWC

1 m^3/h = 0.278 l/s water at 20 °C

Engineering notes

The VKF41.. butterfly valves can accommodate flow in either direction.

In heating systems, the valve should preferably be installed in the return, where the seal will be exposed to lower temperatures, so extending its service life.

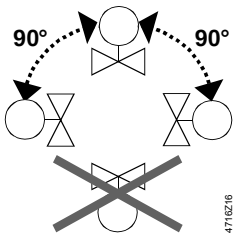
Warning ⚠ To avoid pressure shocks on the butterfly valve, the VKF41.. must be driven to its fully open position (either manually or via positioning signal Y1) prior to activating the pump(s).

Mounting notes

The Mounting Instructions 4 319 8927 0 are enclosed in the product packaging.

⚠ VKF41.. butterfly valves can be mounted in PN 6, PN 10, PN 16 applications.

Orientation — Upright to horizontal



The valve, actuator and mounting set are easily assembled directly on site. There is no need for special tools or calibration.

Commissioning notes

The butterfly valve must be commissioned only with the mounting set and actuator correctly assembled.

- Disk rotated clockwise: Increasing flow
- Disk rotated anti-clockwise: Decreasing flow

Maintenance

The VKF41.. butterfly valves require no maintenance.

Caution ⚠ Before performing any service work on the valve, actuator or mounting set:

- Switch off the pump and power supply
- Close the main shut-off valves in the pipework
- Release pressure in the pipes and allow them to cool down completely

If necessary, disconnect electrical connections from terminals.

The valve must be re-commissioned only with the correctly mounted actuator.

Disposal

Do not dispose of the device as household waste.

- Special handling of individual components may be mandated by law or make ecological sense.
- Observe all local and currently applicable laws and regulations.

Warranty

The technical data given for these applications is valid only in conjunction with the Siemens actuators as detailed under "Equipment combinations", page 3.
All terms of the warranty will be invalidated by the use of actuators from other manufacturers.

Technical data

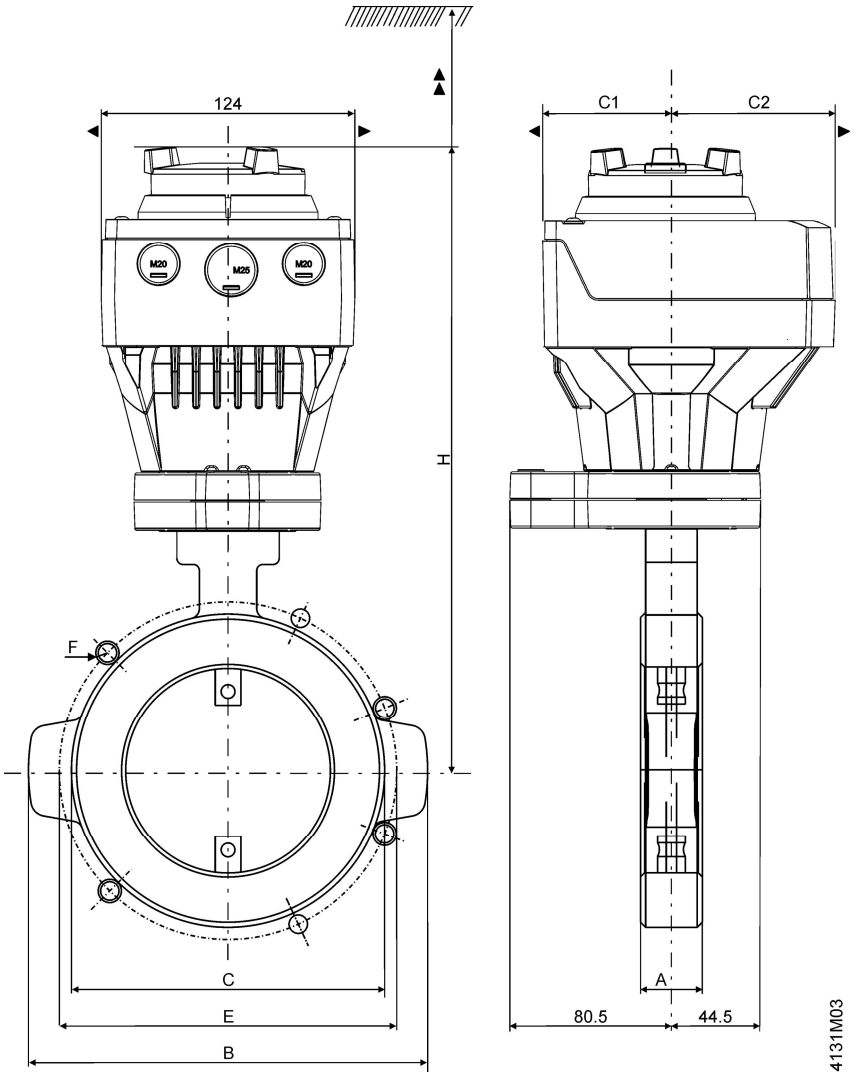
Operating data	PN class		PN 16 to EN1333
	Permissible operating pressure		1600 kPa (16 bar)
	Leakage rate		refer to "Type summary", page 2
	Permissible media		chilled water, low temperature hot water, high temperature hot water, brine, softened water, water with anti-freeze; recommendation: water treatment to VDI2035
	Medium temperature		-10…120 °C
	Flanged connection for pipes		PN 6, PN 10, PN 16 to ISO7005
	Angle of rotation		90° (to end stop)
Standards, directives and approvals	Pressure Equipment Directive		PED 2014/68/EU
	Pressure-carrying accessories		Scope: Article 1, section 1 Definitions: Article 2, section 5
	Fluid group 2:	DN 40…50	without CE-marking as per article 4, section 3 (sound engineering practice) [1]
		DN 65…200	Category I, Modul A, with CE-marking as per article 14, section 2
	EU Conformity (CE)	DN 65…200	A5W00006521 [2]
	EAC Conformity		Eurasia Conformity
Environmental compatibility	The product environmental declaration CE1E4131de [2] contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).		
Materials	Housing		grey cast iron EN-GJL-250
	Shaft		stainless steel 1.4104
	Valve disc		stainless steel 1.4016
	Shaft seal		EPDM O-rings
Dimensions			refer to "Dimensions"
Weight			refer to "Dimensions"

[1] Valves where PS x DN < 1000, do not require special testing and cannot carry the CE label.
[2] The documents can be downloaded from http://siemens.com/bt/download

Dimensions

Dimensions in mm

VKF41.. with
SAL..T10 and ASK33N
SAL..T40 and ASK33N



► > 100 mm: minimum clearance from the wall or ceiling

►► > 200 mm: minimum clearance for mounting, connection, operation, maintenance etc

Type	DN	A	B	C	E	F	E	F	H	kg
			ø	ø	PN 6		PN 10, PN 16		SAL..T10 SAL..T40	[kg]
VKF41.40	40	30	130	87	100	M12 (4x)	110	M16 (4x)	275	1.72
VKF41.50	50	30	140	97	110	M12 (4x)	125	M16 (4x)	280	1.94
VKF41.65	65	30	160	117	130	M12 (4x)	145	M16 (4x)	287.5	2.37
VKF41.80	80	30	175	133	150	M16 (4x)	160	M16 (8x)	295	2.63
VKF41.100	100	30	195	153	170	M16 (4x)	180	M16 (8x)	305	2.92
VKF41.125	125	40	225	183	200	M16 (8x)	210	M16 (8x)	325.5	5.25
VKF41.150	150	40	255	208	225	M16 (8x)	240	M20 (8x)	338	6.29
VKF41.200	200	40	310	263	280	M16 (8x)	295	M20 (8x) for PN 10 M20 (12x) for PN 16	363	8.44

DN = Nominal size
H = Total actuator height plus minimum distance to the wall or the ceiling for mounting, connection, operation, maintenance etc.

Revision numbers

Type	Valid from rev. no.	Type	Valid from rev. no.	Type	Valid from rev. no.
VKF41.40	/01	VKF41.80	/01	VKF41.150	/01
VKF41.50	/01	VKF41.100	/01	VKF41.200	/01
VKF41.65	/01	VKF41.125	/01		