

ENVALVE VK SERIES

motor-driven single and double butterfly valves



[Motorized/pneumatic control valves](#) [Fittings](#)

Description

The updated Envalve butterfly valves form a modular system for the automatic shut-off, control, and mixing of fluid flows. The product line is structured based on valve configuration and functional level, making it clear at a glance which model is suitable for the application.

The butterfly valves are made of high-quality PVC and come standard with an EPDM rubber seal.

The seal is optionally available in Viton® FPM, making the Envalve suitable for a wide range of (aggressive) fluids and applications.

Product Line Structure

Valve Configuration (VK11, VK21, VK22)

- o VK11: single butterfly valve with one actuator, suitable for shutting off and regulating fluid flows
- o VK21: double butterfly valve with a single actuator and mechanical coupling, suitable for mixing and control
- o VK22: double butterfly valve with independently controlled actuators, suitable for precise and stable control

Functionality level (Basic, Digital, Smart)

- o Basic: 3-point control, open-close control
- o Digital: analog control (4-20 mA / 0-10 V) with position-based feedback signal, suitable for precise control and manual operation via open and close buttons, and equipped with a digital display
- o Smart: intelligent control with linear control characteristic, 200% control, adjustable run time, and maximum control over flow and mixing

Overview of product variants

- o Envalve VK11 Basic
- o Envalve VK11 Digital
- o Envalve VK11 Smart
- o Envalve VK21 Basic
- o Envalve VK21 Digital
- o Envalve VK22 Smart

Advantages of the design

- o free flow direction with no preferred side
- o compact and robust design with a minimal number of components
- o equipped with a visual position indicator and LED indication
- o position-based feedback signal available on Digital and Smart models



Additional benefits of the Digital version

- o full control over the entire flow range
- o suitable for applications where precise control is essential

Specific to VK22 Smart

- o no mechanical coupling, maximum design freedom for dual-valve configurations
- o simplified and highly accurate control and mixing characteristics
- o full utilization of the Kv value of both valves thanks to optimized flow
- o adjustable run time tailored to the control system

Description by model

Envalve VK11

The VK11 consists of a single butterfly valve and a single actuator and is used as a shut-off or control valve for an individual fluid flow.

- o VK11 Basic: on-off applications or simple control
- o VK11 Digital: actuator with digital display and feedback signal. Analog control (4-20 mA / 0-10V)
- o VK11 Smart: stable and highly accurate control via intelligent control, suitable for applications where maximum control over the flow is required

Envalve VK21

The VK21 consists of two mechanically linked butterfly valves and is used for mixing and controlling two fluid flows.

- o VK21 Basic: simple mixing applications, such as EC control
- o VK21 Digital: mixing valve with digital display and feedback signal. Analog control (4-20 mA / 0-10V)

Envalve VK22 Smart

The VK22 Smart consists of two independently controlled butterfly valves regulated via an intelligent PCB. This results in a simplified and highly accurate control characteristic. This version is suitable for applications requiring maximum control over flow rate and mixing ratio, such as in precise EC control.

Thanks to the independent control and the absence of a mechanical coupling, the VK22 Smart offers maximum flexibility in design and installation. It is also possible to utilize the full Kv value of the mixing valves, thereby optimizing flow.

Mixed-size valves for customized flow control

Envalve series also includes models with mixed-sized valves. These combine two different valve diameters, for example, to achieve specific mixing ratios or meet installation requirements. This solution is used when standard valves of the same size do not optimally match the desired mixing ratio, capacity, or piping configuration. Thanks to custom alignment and configuration, the valves can be seamlessly integrated into new or existing systems.

Technical information on valves

VALVE TYPE	DN	GLUE	ACTUATOR TORQUE	KV VALUE		WEIGHT
				m ³ /h	L/min	
	-	mm	Nm			kg
20G	15	20	20	7	117	1,0
25G	20	25	20	13	217	1,0
32G	25	32	20	17	283	1,0
40G	32	40	20	33	550	1,3
50G	40	50	50	53	883	3,0
63F	50	63	20	77	1285	3,2
75F	65	75	20	102	1700	3,8
90F	80	90	50	213	3550	7,1
110F	100	110	80	354	5900	8,2
125F	110	125	80	591	9850	10,3
160F	150	160	200	1122	18700	18,7
200F	200	200	200	1830	30500	26,0

Technical information on actuators

ENVALVE ACTUATORS		
VOLTAGE	24V AC/DC (On request: 230V AC)	
SEALING	IP67	
AMBIENT TEMPERATURE	-20 °C to +80 °C	
MECHANICAL MOUNTING	ISO5211	
CONTROL	Basic	3-point SPDT
	Digital	(0)4-20mA/ (0)2-10V DC
HEATING ELEMENT	Integrated into the actuator to prevent condensation	
HOUSING MATERIAL	ABS plastic	
CERTIFICATIONS*	CE (EMC + RoHS)	

* The compliance process for UL and CSA certification is currently underway



Envalve VK11 & VK21 Basic

ACTUATOR	INPUT	RUN TIME	DRIVING FORCE	WEIGHT
	3-punt	Sec/90°	Nm	kg
B20*	✓	10/ 120	20	0,6
B50*	✓	12/ 120	50	1,9
B80	✓	10/ 120	80	2,2
B110	✓	10/ 120	110	2,2
B200	✓	25/ 120	200	6,0

Envalve VK11 & VK21 Digital

ACTUATOR	INPUT		OUTPUT		RUN TIME	DRIVING FORCE	WEIGHT
	(O)4-20mA	(O)2-10V	4-20mA	2-10V			
					Sec/90°	Nm	kg
S20*	✓	On request	✓	On request	10	20	0,6
S50*	✓	✓	✓	✓	12	50	1,9
S80	✓	✓	✓	✓	10	80	2,2
S110	✓	✓	✓	✓	10	110	2,2
S200	✓	✓	✓	✓	25	200	6,0

Envalve VK11 & VK22 Smart

ACTUATOR	INPUT			OUTPUT		RUN TIME**	DRIVING FORCE	WEIGHT
	3-punt	(O)4-20mA	(O)2-10V	4-20mA	2-10V			
						Sec/90°	Nm	kg
S20*	✓	✓	✓	✓	✓	15/ 36/ 90/ 130	20	0,6
S50*	✓	✓	✓	✓	✓	15/ 36/ 90/ 130	50	1,9
S80	✓	✓	✓	✓	✓	15/ 36/ 90/ 130	80	2,2
S110	✓	✓	✓	✓	✓	15/ 36/ 90/ 130	110	2,2
S200	✓	✓	✓	✓	✓	25/ 36/ 90/ 130	200	6,0

* We supply these Envalve actuators as standard with a pre-assembled cable featuring an IP67-rated, weatherproof, plug-and-play connector. The actuator is equipped with a male connector. Female connectors are available separately or with a pre-determined cable length of 5 or 10 meters. The other end of this cable can be connected to the PLC in the control cabinet. Actuators without an asterisk (*) can be connected in a junction box on the actuator itself.

** On the Smart PCB, the run time can be set to 36, 90, or 130 seconds

Technical Information Smart PCB

SMART PCB (Optional)	
POWER SUPPLY	24V DC
RATED POWER	4,8 W
RATED CURRENT	200mA
MOUNTING	DIN-rail
WEIGHT	0,1 kg
DIMENSIONS [L x W x H]	90 mm x 72 mm x 61 mm

Technical Information Smart PCB

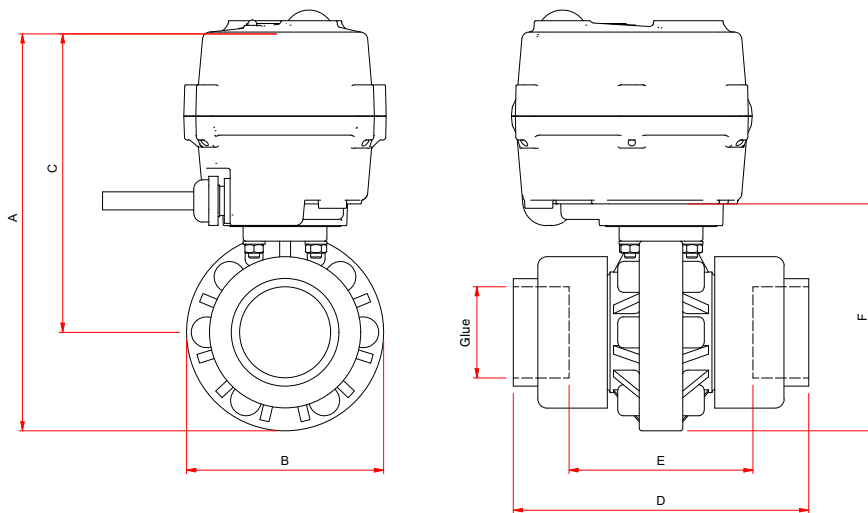
	VALVES VK 20 TO 50	VALVES VK 63 TO 200
CONNECTION	stub sleeve + union nuts	flange + flanges
HOUSING MATERIAL	PVC-U	PVC-U
SEAL MATERIAL	EPDM (option: Viton® FPM)	EPDM (option: Viton® FPM)
MAX, MEDIUM PRESSURE	0 to 6 bar	0 to 10 bar
AMBIENT TEMPERATURE	-10 to +60 °C	0 to +60 °C



Envalve dimensions

VALVE	A	B	C	D	E	F	G	H	I	J	HoH
20	177	80	137	112	80	89	300	234	194	184	220
25	177	80	137	118	80	89	300	234	194	187	220
32	177	80	137	124	81	89	300	234	194	190	220
40	194	96	146	138	86	106	316	251	203	197	220
50	200	108	146	162	101	112	328	257	203	209	220
63	276	165	193	125	49	186	346/495	282/364	219/281	220/197	220/330
75	301	186	208	141	53	213	515	417	324	194	330
90	357	200	257	162	60	236	530	440	340	204	330
110	381	220	271	193	71	260	550	464	354	220	330
125	417	250	292	244	106	295	565	504	379	245	330
160	448	286	305	252	80	326	615/745	536	393	249	330/460
200	557	316	399	298	86	386	782	645	487	272	460

Envalve VK11



Envalve VK21

