



BUTTERFLY VALVE SERIES

Electric Actuated Flanged Butterfly Valve

D941X

Electric actuated flanged centerline soft-seated butterfly valve for water, HVAC, wastewater and compatible industrial pipeline applications.

01 Key Specifications

Product Type	Electric actuator operated flanged centerline butterfly valve
Nominal Size	DN50-DN1200 reference range
Pressure Rating	PN6 / PN10 / PN16
Body Materials	Cast iron / Ductile iron / Carbon steel / SS304 / SS316
Disc Materials	Ductile iron with nylon coating / Carbon steel / SS304 / SS316 / Aluminum bronze
Seat Materials	EPDM / NBR / PTFE
Actuator	Electric actuator, on/off or modulating; explosion-proof options; IP67 standard / IP68 optional
End Connection	Flanged; EN 1092-1 / ASME B16.5 / GB/T 9113 options
Typical Service	Water supply / HVAC / wastewater / municipal and compatible industrial service

02 Design Features & Configuration

Flanged Body Rigid bolted connection suited to larger sizes and stable pipeline alignment.	Electric Actuation Motor-driven quarter-turn operation for remote or automated control; no compressed air required.
Centerline Design Concentric disc and stem arrangement with simple 90-degree rotation.	Soft-Seated Sealing EPDM, NBR or PTFE seat options for compatible media.
Large Diameter Range Reference size range extends to DN1200, subject to selected configuration.	Protection Options IP67 standard, IP68 optional; explosion-proof actuator options available where required.

03 Electric Actuator & Configuration

Parameter	Options / Reference
Actuator Type	Quarter-turn electric actuator (90-degree rotation)
Control Mode	On/off standard; modulating / regulating type available
Power Supply	AC 220V / AC 380V / AC 110V / DC 24V options; confirm selected actuator
Control Signal	4-20mA / 1-5V / 0-10V DC options for modulating control
Explosion-Proof	Exd II BT4 standard; Exd II CT6 available where required
Protection Class	IP67 standard; IP68 optional
Manual Override	Handwheel or declutchable manual override available on most models
Position Feedback	Open/close limit switches standard; 4-20mA position feedback option
Mounting	ISO 5211 mounting interface; confirm actuator torque and mounting dimensions

04 Materials of Construction

Component	Material Options
Body	Cast iron (HT200); ductile iron (QT450-10); carbon steel (WCB); SS304; SS316
Disc	Ductile iron with nylon coating; carbon steel; SS304; SS316; aluminum bronze
Stem	SS416 / SS304 / SS316; 2Cr13
Seat	EPDM; NBR; PTFE
O-ring / Stem Seal	NBR; EPDM; FKM
Bushing	Bronze; PTFE-lined bronze; self-lubricating bearing
Actuator Housing	Cast iron or aluminum alloy; confirm selected actuator

05 Pressure Ratings & Size Coverage

Model Series	Pressure Class	Body Material	Reference Size
D941X-6Q	PN6	Ductile iron	DN50-DN1200*
D941X-10Q / -16Q	PN10 / PN16	Ductile iron	DN50-DN1200*
D941X-10C / -16C	PN10 / PN16	Carbon steel (WCB)	DN50-DN1200*
D941X-10P / -16P	PN10 / PN16	SS304	DN50-DN1200*
D941X-10R / -16R	PN10 / PN16	SS316	DN50-DN1200*

*Reference range only. Exact size, pressure class, seat material and actuator configuration depend on the selected model.

06 Operating Temperature & Performance

Item	Reference
EPDM Seat	-40°C to +135°C reference depending on grade and medium; commonly -29°C to +120°C
NBR Seat	-23°C to +82°C reference depending on grade and medium; commonly -20°C to +80°C
PTFE Seat	Higher temperature capability where offered; confirm selected model
Shell Test	1.5 x nominal pressure; confirm approved datasheet and test standard
Seat Leakage Test	1.1 x nominal pressure; API 598 / ISO 5208 / GB/T 13927 as applicable
Operating Torque	Depends on size, pressure and medium; confirm before actuator sizing
Actuator Output	Must be verified against valve breakaway and running torque

07 Dimensions & Weight - Reference

DN	L mm	D mm	K mm	n-d	H mm	Weight kg
50	108	165	125	4-18	210	~13
65	112	185	145	4-18	225	~15.5
80	114	200	160	8-18	240	~19
100	127	220	180	8-18	260	~24
125	140	250	210	8-18	280	~30
150	140	285	240	8-22	305	~38
200	152	340	295	12-22	350	~58
250	165	405	355	12-26	400	~82
300	178	460	410	12-26	455	~115
350	190	520	470	16-26	510	~150
400	216	580	525	16-30	570	~190
500	229	715	650	20-33	700	~290
600	267	840	770	20-36	790	~400
700	292	910	840	24-36	880	~550
800	318	1025	950	24-39	980	~730
900	330	1125	1050	28-39	1080	~940
1000	410	1255	1170	28-42	1180	~1250
1200	470	1485	1390	32-48	1380	~1800

Typical reference values for flanged construction with a standard electric actuator operator. Confirm final dimensions, flange drilling, actuator height and total assembly weight on the approved drawing.

08 Standards & Certifications

Design / Manufacturing	GB/T 12238 / API 609 / BS EN 593 / ISO 10631
Face-to-Face	ISO 5752 Series 20 / EN 558-1 Series 20 / API 609 / GB/T 12221
Flange Standard	EN 1092-1 (PN6 / PN10 / PN16); ASME B16.5 Class 150; GB/T 9113
Pressure Testing	GB/T 13927 / API 598 / ISO 5208
Actuator / Protection	Electric actuator datasheet, wiring diagram and Ex certificate where applicable; IP67 / IP68 options
Product Marking	Model / nominal size / pressure class / body material
Destination Market	Request applicable conformity documents for intended service and market

09 Quality & Documentation

Pressure Test Report

Shell and seat pressure test documentation available according to selected standard.

Material Certificate

Material documentation may be supplied according to order requirements.

Actuator Documentation

Actuator datasheet, wiring diagram, control details and Ex certificate available where applicable.

Seat Documentation

Seat material grade and temperature reference can be confirmed for selected model.

Third-Party Inspection

Independent inspection support can be arranged where required.

Export Packing

Protective packing and export document support for international shipments.

10 Applications

- Water supply and distribution pipelines requiring automated operation
- Sewage treatment and wastewater systems
- HVAC chilled water, condenser water and heating water systems
- Municipal pipe networks and pump stations
- District heating and cooling systems
- Power plant circulating and cooling water systems
- Pulp and paper, mining and compatible industrial process lines
- Large-diameter automated isolation service with BMS / SCADA integration

11 Product Views



12 Frequently Asked Questions

- 01** **What is the difference between D941X, D971X and D341X?**
- D941X is flanged with an electric actuator for large-diameter remote control. D971X is a compact wafer valve with electric actuation. D341X is flanged with manual worm gear operation.
- 02** **When should I choose an electric actuator?**
- Choose electric actuation when remote open/close or modulating control is required and compressed air is unavailable, including BMS or SCADA applications.
- 03** **Can D941X be used for natural gas?**
- Do not assume a standard D941X water-service valve is suitable for natural gas. Gas service requires confirmation of valve design, seat material, certification and site safety requirements.
- 04** **Which seat material should I choose - EPDM or NBR?**
- EPDM is commonly used for water and general service. NBR is commonly used for oil and air service. Confirm compatibility with the actual medium and temperature.
- 05** **What information is required for selection?**
- Provide valve size, pressure class, medium, body and seat material, flange standard, power supply, control mode, signal, protection class and documentation requirements.

13 Ordering Information

Please provide size (DN/NPS), quantity, body material, pressure class, seat material, service medium, flange standard, actuator requirements, extended stem requirement and required quality documents. ZeMin Gas will confirm the suitable configuration before quotation.