



BUTTERFLY VALVE SERIES

Pneumatic Wafer Butterfly Valve

D671X

Pneumatic actuated wafer centerline soft-seated butterfly valve for automated water, HVAC, wastewater and compatible industrial pipeline applications.

01 Key Specifications

Product Type	Pneumatic actuated wafer centerline butterfly valve
Nominal Size	DN50-DN600 reference range
Pressure Rating	PN10 / PN16
Body Materials	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	Double-acting or spring-return pneumatic actuator
End Connection	Wafer mounting between flanges; 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

Wafer Ultra-Thin Body

Compact body saves installation space, weight and material cost.

Pneumatic Actuation

Fast quarter-turn automation using compressed air.

Fail-Safe Option

Spring-return actuator can provide fail-close or fail-open action.

Centerline Design

Concentric disc and stem arrangement with simple 90-degree rotation.

Soft-Seated Sealing

EPDM, NBR or PTFE seat options for compatible media.

Control Accessories

Solenoid valve, limit switch, filter regulator and positioner options.

03 Pneumatic Actuator Configuration

Parameter	Options / Reference
Actuator Type	Pneumatic quarter-turn actuator; rack-and-pinion or scotch-yoke design
Action Mode	Double-acting or spring-return single-acting
Fail-Safe Action	Fail-close or fail-open, depending on process requirement
Air Supply	Typically 2-8 bar (double-acting) or 4-8 bar (spring-return); confirm selected actuator
Control Accessories	Solenoid valve, limit switch box, air filter regulator, positioner, quick exhaust valve
Position Feedback	Open/close indication; 4-20mA position feedback option where required
Manual Override	Manual override available for selected actuator configurations
Mounting	ISO 5211 mounting interface; confirm torque and mounting dimensions

04 Materials of Construction

Component	Material Options
Body	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

05 Pressure Ratings & Size Coverage

Model Series	Pressure Class	Body Material	Reference Size
D671X-10Q / -16Q	PN10 / PN16	Ductile iron	DN50-DN600*
D671X-10C / -16C	PN10 / PN16	Carbon steel (WCB)	DN50-DN600*
D671X-10P / -16P	PN10 / PN16	SS304	DN50-DN600*
D671X-10R / -16R	PN10 / PN16	SS316	DN50-DN600*

*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
Stroke Time	Typically 1-5 seconds depending on actuator size, air supply and accessories
Actuator Torque	Must be verified against valve breakaway and running torque

07 Dimensions & Weight - Reference

DN	L mm	Flange OD mm	H mm	Weight kg
50	43	165	210	~9.5
65	46	185	225	~11.5
80	46	200	240	~14.0
100	52	220	260	~18.0
125	56	250	280	~23.0
150	56	285	305	~29.0
200	60	340	350	~44.0
250	68	405	400	~62.0
300	78	460	455	~85.0
350	78	520	510	~110
400	102	580	570	~145
450	114	640	630	~185
500	127	715	700	~240
600	154	840	790	~340

Reference values for wafer valve construction with a standard pneumatic actuator. Confirm final dimensions, bolt pattern, 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 / Mounting	EN 1092-1 / ASME B16.5 / GB/T 9113 options; ISO 5211 actuator mounting
Pressure Testing	GB/T 13927 / API 598 / ISO 5208
Actuator & Accessories	Pneumatic actuator with applicable accessory certification where required
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, air consumption and accessory information available.

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
- 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
- Industrial process lines carrying compatible media
- Emergency shut-off applications using spring-return actuator configurations

11 Product Views



12 Frequently Asked Questions

01 What is the difference between D671X, D371X and D971X?

D671X uses a pneumatic actuator for fast automated operation and optional fail-safe action. D371X uses a manual worm gear. D971X uses an electric actuator for remote control where compressed air is not available.

02 When should I choose a spring-return actuator?

Choose spring-return when the valve must automatically move to a safe position after loss of air supply. Confirm whether fail-close or fail-open action is required by the process.

03 Can D671X be used for natural gas?

Do not assume a standard D671X water-service valve is suitable for natural gas. Gas service requires confirmation of valve design, seat material, certification and project-specific 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, concentration and temperature.

05 What information is required for actuator selection?

Provide valve size, pressure, medium, required action mode, air supply pressure, fail-safe requirement, stroke time and control accessory requirements.

13 Ordering Information

Please provide size (DN/NPS), quantity, body material, pressure class, seat material, service medium, actuator action mode, air supply pressure, fail-safe requirement and required control accessories. ZeMin Gas will confirm the suitable configuration before quotation.