



BALL VALVE SERIES

Pneumatic Actuated Flanged Floating Ball Valve
Q641F

Pneumatic quarter-turn flanged floating ball valve for natural gas, LPG and compatible gas service, with double-acting or spring-return actuator options.

01 Key Specifications

Product Type	Pneumatic actuated flanged floating ball valve, quarter-turn
Connection	Flanged; ASME B16.5 / EN 1092-1 / GB/T 9113 options
Size Reference	DN15-DN200; exact combinations vary by model
Pressure Classes	PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300 options
Body Materials	Carbon steel / SS304 / SS316 / SS316L
Seat Materials	PTFE / reinforced PTFE (RPTFE) / PPL
Actuator	Double-acting or spring-return pneumatic actuator
Typical Service	Natural gas / LPG / compatible gas service subject to model confirmation

02 Design Features & Configuration

Floating Ball Design

Line pressure loads the ball against the downstream seat to provide reliable shut-off.

Flanged Body

Bolted flange connection supports installation, removal and maintenance without cutting the pipe.

Pneumatic Actuation

Compressed-air quarter-turn actuation provides fast automated operation.

Fail-Safe Option

Spring-return actuator can be configured fail-close or fail-open according to process requirements.

Antistatic Option

Antistatic design is available for gas-service applications where specified.

Fire-Safe Option

Fire-safe configuration can be specified where valid qualification is required.

03 Pneumatic Actuator Configuration

Actuator Type	Quarter-turn pneumatic actuator; scotch yoke or rack-and-pinion
Action Mode	Double-acting or spring-return single-acting
Fail-Safe Action	Fail-close or fail-open, depending on spring-return configuration
Air Supply	Typically 4-7 bar (60-100 psi); confirm for selected actuator
Accessories	Solenoid valve, limit switch box, filter regulator, positioner, quick exhaust valve
Manual Override	Handwheel or declutchable manual override option
Mounting	ISO 5211 mounting flange; actuator torque sizing to be verified

04 Materials of Construction

Component	Carbon Steel Bodies	Stainless Steel Bodies
Body / End Cap	WCB / A105 carbon steel	SS304 / SS316 / SS316L
Ball	Stainless steel; hard-chrome or ENP option where offered	SS304 / SS316 / SS316L
Stem	Stainless steel	SS304 / SS316
Seat	PTFE / RPTFE / PPL	PTFE / RPTFE / PPL
Body Gasket	PTFE; graphite where offered	PTFE; graphite where offered
Stem Packing	PTFE; graphite where offered	PTFE; graphite where offered
O-ring / Secondary Seal	NBR / FKM	NBR / FKM

05 Pressure Ratings & Temperature

Pressure Classes	PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300
PTFE Seat	-29 C to +180 C reference
RPTFE Seat	-29 C to +180 C reference
PPL Seat	-29 C to +300 C reference
Gas-Service Note	Confirm body material, seat/seal, actuator/accessory Ex rating and applicable gas standard

06 Typical Reference Dimensions

DN	NPS	L mm	D mm	R mm	Wt	H mm	Weight kg
15	1/2 in	130	95	65	4-14	180	4.5
20	3/4 in	150	105	75	4-14	190	5.5
25	1 in	160	115	85	4-14	205	7.5
32	1-1/4 in	180	140	100	4-18	225	10.5
40	1-1/2 in	200	150	110	4-18	245	13.5
50	2 in	230	165	125	4-18	270	18.0
65	2-1/2 in	290	185	145	4-18	300	26.0
80	3 in	310	200	160	8-18	335	37.0
100	4 in	350	220	180	8-18	375	55.0
125	5 in	400	250	210	8-18	420	80.0
150	6 in	480	285	240	8-22	470	115.0
200	8 in	600	340	295	12-22	540	190.0

Dimensions are reference values for a flanged floating ball valve with standard pneumatic actuator. Actual dimensions depend on pressure class, flange standard, actuator size, manual override and accessory package. Confirm final dimensions on the approved drawing.

07 Standards & Testing

Design / Manufacturing	GB/T 12237 / API 608 / ISO 17292 may be referenced; confirm declared design basis
Flange Standards	ASME B16.5 / EN 1092-1 / GB/T 9113
Face-to-Face	ASME B16.10 / EN 558 / GB/T 12221 as applicable
Pressure Testing	GB/T 13927; API 598 / ISO 5208 where confirmed
Fire-Safe	API 607 / API 6FA only where the selected design has valid qualification
Gas-Service Standards	EN 331 / EN 13774 may be relevant; confirm certification scope

08 Quality & Documentation

Pressure Test Report

Shell and seat pressure-test report can be supplied for the selected order.

Material Certificate

EN 10204 2.2 / 3.1 documentation available where specified.

Actuator Documentation

Actuator datasheet, air-consumption data and accessory list available on request.

Dimensional Inspection

Key dimensions can be checked against the approved drawing.

Ex Documentation

Accessory Ex certificates available where explosion-proof accessories are selected.

Third-Party Inspection

SGS / BV / TUV inspection can be coordinated on request.

09 Applications

- Natural gas distribution and industrial gas pipelines requiring automated shut-off
- City gas and station piping where a floating-ball pneumatic valve is suitable
- Gas pressure-regulating and metering stations
- Emergency shut-off applications using spring-return fail-safe actuators
- Skid-mounted systems and compact gas stations
- SCADA-controlled or unmanned installations using pneumatic actuation
- LPG transfer and distribution systems, subject to material and pressure-temperature confirmation

10 Product Views



11 Frequently Asked Questions

Can Q641F be used for natural gas?

Yes, when the selected model is confirmed for gas service, including body and seat materials, antistatic requirement, actuator/accessory Ex rating, fire-safe requirement and applicable project standard.

Double-acting or spring-return - which should I choose?

Double-acting actuators use air to open and close. Spring-return actuators move to a defined fail-safe position if air is lost, making them suitable where fail-close or fail-open action is required.

What air supply is required?

A typical reference is 4-7 bar (60-100 psi), but the exact pressure and air consumption must be confirmed for the selected actuator.

What accessories can be supplied?

Solenoid valves, limit switch boxes, filter regulators, positioners, quick exhaust valves and manual override devices can be supplied according to the selected configuration.

12 How to Order

Send the valve size and quantity, body material, pressure class, flange standard and facing, seat material, service medium and operating temperature, actuator action (double-acting or spring-return), fail-safe mode, air supply pressure, control accessories, manual override requirement, and required inspection documents.

Note: Technical data in this datasheet is based on the product information supplied for Q641F. Final dimensions, materials, ratings, actuator sizing, gas-service suitability and documentation should be confirmed against the approved quotation and drawing for the selected model.