



PLUG VALVE SERIES

Flanged Sleeve Plug Valve

X43F

Non-lubricated quarter-turn plug valve for natural gas, LPG, oil, steam, chemical and compatible industrial service, with flanged ends and PTFE sleeve sealing.

01 Key Specifications

Product Type	Sleeve-type non-lubricated plug valve, quarter-turn, flanged
Nominal Size	DN15-DN400
Pressure Rating	PN10 / PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300 / 600 / 900
Body Materials	WCB carbon steel / CF8 (SS304) / CF8M (SS316) / CF3 / CF3M
Sleeve Material	PTFE standard; reinforced PTFE where offered
Plug Material	Stainless steel; Monel option where offered
Operation	Manual lever / worm gear / pneumatic actuator / electric actuator
Typical Service	Natural gas / LPG / oil / steam / chemical and compatible industrial media

02 Design Features & Configuration

Sleeve-Type Non-Lubricated

PTFE sleeve seals the plug without grease injection, reducing routine maintenance and process contamination risk.

Self-Cleaning Wiping Action

The plug wipes the sealing surface during each 90-degree rotation, helping control buildup from viscous or scaling media.

Cavity-Free Construction

The sleeve/plug arrangement minimizes trapped process media around the plug.

Flanged Connection

Rigid bolted pipeline connection suitable for larger sizes and serviceable installations.

Quarter-Turn Operation

Fast 90-degree open/close motion with compact operating mechanism.

Automation Options

Pneumatic and electric actuators can be supplied for remote or automated control.

03 Materials of Construction

Component	Standard Material	Options
Body / Cover	ASTM A216 WCB carbon steel	CF8 / CF8M / CF3 / CF3M; WC1 / WC6 / WC9 where offered
Plug	Stainless steel	Monel / F6 / F316 / F304L / F316L
Sleeve	PTFE	Reinforced PTFE where offered
Stem / Adjusting Washer	Stainless steel	F6 / F316 / F304L / F316L
Gasket / Shim	Flexible graphite + stainless steel spiral wound	Confirm for selected model
O-ring	FKM / Viton where fitted	Confirm for selected medium
Bolts / Nuts	ASTM A193-B7 / A194-2H	Stainless grades where offered

04 Pressure Ratings & Temperature

Pressure Classes	PN10 / PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300 / 600 / 900
PTFE Sleeve	-29 C to +180 C reference
Reinforced PTFE	Higher temperature range where offered
Pressure-Temperature	Final limits depend on sleeve material, pressure class, body material and selected configuration

05 Operation & Connection Options

Flange Standards	ASME B16.5 / EN 1092-1 / GB/T 9113
Manual Lever	Typical for small and medium sizes
Worm Gear	Used where additional mechanical advantage is required
Pneumatic Actuator	Double-acting or spring-return options
Electric Actuator	On/off or modulating control; confirm voltage and signal

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	150	6.0
20	3/4 in	150	105	75	4-14	155	7.0
25	1 in	160	115	85	4-14	165	9.0
32	1-1/4 in	180	140	100	4-18	180	12.0
40	1-1/2 in	200	150	110	4-18	195	15.0
50	2 in	230	165	125	4-18	215	20.0
65	2-1/2 in	290	185	145	4-18	240	28.0
80	3 in	310	200	160	8-18	265	38.0
100	4 in	350	220	180	8-18	295	52.0
125	5 in	400	250	210	8-18	330	72.0
150	6 in	480	285	240	8-22	365	95.0
200	8 in	600	340	295	12-22	420	145.0

Dimensions are reference values for the supplied X43F data. Actual dimensions vary with pressure class, flange standard, body construction and operation type. Confirm final dimensions on the approved drawing.

07 Standards & Testing

Design / Manufacturing	API 599 / API 6D / GB/T 12240 / GB/T 22130
Face-to-Face	ASME B16.10 / GB/T 12221 / EN 558
Flange Standard	ASME B16.5 / EN 1092-1 / GB/T 9113
Pressure Testing	API 598 / API 6D / GB/T 13927
Pressure-Temperature	ASME B16.34
Fire-Safe	API 607 / API 6FA only where the selected design has valid qualification evidence

08 Quality & Documentation

Pressure Test Report

Shell and seat pressure testing documentation may be supplied for the selected order.

Dimensional Inspection

Key valve dimensions can be verified against the approved drawing.

Third-Party Inspection

Third-party inspection can be coordinated according to order requirements.

Material Certificate

EN 10204 2.2 / 3.1 documentation available where specified.

Sleeve Material Record

PTFE sleeve grade and temperature rating can be documented for the selected configuration.

Export Documentation

Protective packing and shipment documents can be arranged for export supply.

09 Applications

- Natural gas and LPG distribution pipelines
- Oil and gas gathering, transport and refining equipment
- Petroleum, chemical and petrochemical process lines
- Coal gas, coke oven gas and industrial gas systems
- HVAC and general industrial isolation service
- Viscous, scaling or dirty media where self-cleaning action is beneficial
- Flow diversion and multi-way service where the selected model is offered

10 Product Views



11 Frequently Asked Questions

What is the difference between X43F and X13F?

X43F uses flanged ends and covers larger sizes and higher pressure classes. X13F uses threaded ends and is intended for compact small-bore piping.

Can X43F be used for natural gas?

The supplied product information includes natural gas and LPG among typical services. Final pressure, temperature, leakage and anti-static requirements should be confirmed for the selected project.

Why use a sleeve-type plug valve?

The PTFE sleeve provides non-lubricated sealing and a wiping action that can be advantageous in viscous, scaling or dirty service.

Can X43F be automated?

Yes. Pneumatic and electric actuator options are available. Confirm required torque, power or air supply, fail position and control signal before ordering.

12 How to Order

Send the valve size and quantity, body material, pressure class, flange standard and facing, sleeve material, service medium and operating temperature, operation method, port configuration, and required quality documentation. ZeMin Gas can support configuration confirmation before quotation.

Note: Technical data in this datasheet is based on the product information supplied for X43F. Final dimensions, materials, ratings and documentation should be confirmed against the approved quotation and drawing for the selected model.