



CHECK VALVE SERIES

Flanged Lift Check Valve

H41H

Automatic non-return valve for steam, water, oil and compatible industrial service, with flanged ends and guided lift-disc construction.

01 Key Specifications

Product Type	Lift check valve, automatic non-return, flanged ends
Nominal Size	DN15-DN400
Pressure Rating	PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300
Body Materials	Ductile iron / WCB carbon steel / CF8 (SS304) / CF8M (SS316)
Sealing Surface	Cr13 stainless steel; Stellite hard-faced option where offered
Operation	Automatic - no external operator
Installation	Horizontal pipeline, bonnet upright; spring-loaded option for other orientations
Typical Service	Steam / water / oil and compatible industrial media

02 Design Features & Configuration

Automatic Non-Return Forward flow lifts the disc; reverse flow closes the valve automatically.	Guided Lift Disc Short vertical disc stroke gives quick closing response and stable seat alignment.
Cr13 Sealing Surface Wear-resistant metal-to-metal sealing for steam, water, oil and compatible service.	Flanged Connection Rigid bolted connection with project-specific flange standard and facing.
Horizontal Installation Standard gravity-assisted configuration installs with bonnet upright.	Spring-Loaded Option Available where faster closing or vertical-pipeline installation is required.

03 Materials of Construction

Component	Standard Material	Options
Body / Bonnet	Ductile iron or WCB carbon steel	CF8 (SS304) / CF8M (SS316)
Disc	Cr13 stainless steel	Stellite hard-facing where offered
Seat Surface	Cr13 stainless steel	Stellite hard-facing where offered
Guide / Stem	Cr13 stainless steel	SS304 / SS316 where offered
Spring	SS304 / SS316	High-temperature alloy where required
Gasket	Graphite + SS spiral wound	Confirm for selected model
Bonnet Bolts	ASTM A193-B7 / A194-2H	Other grades by material configuration

04 Pressure Ratings & Temperature

Pressure Classes	PN16 / PN25 / PN40 / PN64; ASME Class 150 / 300
Ductile Iron	-20 C to +300 C reference
WCB Carbon Steel	-29 C to +425 C reference
CF8 (SS304)	-40 C to +600 C reference
CF8M (SS316)	-40 C to +650 C reference

Pressure derating applies as operating temperature increases. Final limits must be confirmed for the selected body material, sealing surface and spring configuration.

05 Operation & Installation

Standard Configuration	Horizontal pipeline with bonnet upright; gravity assists disc closing
Spring-Loaded Configuration	Horizontal or vertical pipeline; spring assists closing and reduces response time
Cracking Pressure	Depends on disc weight, spring force and valve size; confirm for selected model
Flow Direction	Install with the body arrow pointing in the normal flow direction

06 Typical Reference Dimensions

DN	NPS	L mm	D mm	R mm	N x Ø	H mm	Weight kg
15	1/2 in	130	95	65	4-14	85	2.5
20	3/4 in	150	105	75	4-14	95	3.5
25	1 in	160	115	85	4-14	105	5.0
32	1-1/4 in	180	140	100	4-18	120	8.0
40	1-1/2 in	200	150	110	4-18	135	11.0
50	2 in	230	165	125	4-18	155	16.0
65	2-1/2 in	290	185	145	4-18	180	23.0
80	3 in	310	200	160	8-18	200	32.0
100	4 in	350	220	180	8-18	230	46.0

Dimensions are reference values for the supplied H41H data. Actual dimensions vary with pressure class, flange standard, material and spring configuration. Confirm final dimensions on the approved drawing.

07 Standards & Testing

Design / Manufacturing	GB/T 12236 / GB/T 12224 / ASME B16.34 / API 594 where applicable
Flange Standard	ASME B16.5 / EN 1092-1 / GB/T 9113
Face-to-Face	ASME B16.10 / GB/T 12221
Pressure Testing	API 598 / GB/T 13927
Pressure-Temperature	ASME B16.34
Marking	Model, nominal size, pressure class, body material and flow-direction arrow

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 where required by the order.

Material Certificate

EN 10204 2.2 / 3.1 documentation available where specified.

Cracking Pressure Test

Available on request for spring-loaded configurations.

Export Documentation

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

09 Applications

- Pump discharge lines for reverse-flow protection
- Compressor discharge lines
- Steam headers and auxiliary steam systems
- Water, condensate and boiler feedwater pipelines
- Fuel oil and lubricating oil systems
- HVAC chilled water, condenser water and heating-water systems
- General industrial pipelines requiring automatic non-return protection

10 Product Views



11 Frequently Asked Questions

What is the difference between H41H and H44H?

H41H is a lift check valve with guided vertical disc movement and a short closing stroke. H44H is a swing check valve with a hinged disc and a longer closing stroke.

Can H41H be installed vertically?

The standard gravity-closing version is intended for horizontal installation with the bonnet upright. A spring-loaded configuration can be specified where vertical installation is required.

How is the correct flow direction determined?

Install the valve with the body arrow pointing in the direction of normal forward flow.

Can H41H be used for gas service?

The supplied information focuses on steam, water, oil and compatible industrial media. Gas service should be confirmed for the selected model, material, pressure, leakage requirement and applicable project standard.

12 How to Order

Send the valve size and quantity, body material, pressure class, flange standard, sealing-surface requirement, service medium and operating temperature, installation orientation, spring-loaded requirement, 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 H41H. Final dimensions, materials, ratings and documentation should be confirmed against the approved quotation and drawing for the selected model.