

# Vulcanised Liner Butterfly Valve

Premium HVAC performance



## Introducing Vulcanised Liner Butterfly Valves

The WATTS Hydraulics vulcanised-liner butterfly valve VULCAIN is engineered for long-term reliability and high performance across modern HVAC systems, combining a permanently bonded EPDM liner with an optimised, thermally efficient body profile and robust service pressure 16 bar construction.

Its fixed liner provides full corrosion and wear protection while eliminating seat movement, ensuring leak-free sealing, effortless installation and superior longevity compared to loose-liner designs.

A universal oblong flange pattern for Wafer and U shape type bodies, extended insulation-friendly neck, and smooth, low-torque disc deliver energy-efficient operation, high-velocity flow capability, and easy integration with manual, gearbox, and actuated configurations.

Conformal to EN 593, EN 12266-1, EN 1092-1/2 and EN 558 Series 20, the valve guarantees full system compatibility and interchangeability, while its maintenance-free construction, premium GGG40/CF8M/EPDM construction materials and two-year product guarantee make it a dependable choice for a wide variety of HVAC applications.

### Product Sizing Summary

#### Wafer Type

##### - Simple, compact, economical

A lightweight valve designed to be clamped between two flanges using through-bolts. Ideal for standard HVAC applications where downstream pipe removal is not required.

#### Lug Type

##### - Secure mounting and isolation capability

Features threaded lugs that allow each flange to be bolted independently. Suitable for dead-end service and applications where downstream piping may need to be removed without shutting down the system.

#### U-Shape Type

##### - Reinforced body for larger HVAC systems

A stronger, full-bodied wafer-style design with added rigidity and flange support. Best suited for larger diameters and HVAC networks using collared or profiled flanges.

<b>Wafer type</b>	<b>PN10/16</b>	
	DN50 - DN600	
<b>Lug Type</b>	<b>PN10/16</b>	<b>PN10 or PN16</b>
	DN50 - DN150	DN200 - DN600
<b>U-Shape Type</b>	<b>PN10/16</b>	
	DN150 - DN600	

### HVAC Applications

#### Chilled water systems

Provides stable, leak-free sealing with no liner movement, even under fluctuating temperatures and pressure conditions.

#### Heating hot water systems

Resists heat and maintains long-term elasticity, ensuring reliable shutoff and reduced maintenance in hot water systems.

#### Condenser water circuits (cooling towers)

Withstands high flow velocities and abrasive conditions without liner erosion or seat displacement.

#### District heating and cooling networks

Delivers durable sealing performance over long pipe runs, with service pressure 16 bar strength and zero risk of liner blow-out.

#### Fan coil unit (FCU) & air handling unit (AHU) isolation

Compact, low-torque design enables easy installation and dependable isolation in tight plantroom spaces.

#### Pump discharge isolation

Handles high-velocity flow and pressure fluctuations without wear, ensuring safe and reliable pump protection.

#### Bypass loops & variable-flow circuits

Smooth disc and fixed liner provide stable operation during rapid flow changes, preventing turbulence-related wear.

#### Boiler and chiller plant room

Insulation-friendly long neck minimises heat loss and prevents condensation, improving plantroom energy efficiency.

#### Hydraulic balancing and zone isolation

Accurate, repeatable sealing ensures stable system control and prevents leakage that disrupts balancing.

## Product Features

### Optimised Body Profile

- **Oblong flange design**  
Wafer and U-shape universal PN10/PN16 compatibility for simplified installation and reduced SKU complexity.
- **Thermally efficient body profile**  
Minimises heat loss to improve HVAC system performance and energy efficiency.
- **Extended neck design**  
Allows full insulation coverage, eliminating thermal bridging and ideal for HVAC applications.
- **Allows full insulation thickness**  
Avoiding exposed metal that causes thermal bridging.

### Easy Installation & Operation

- **Open or closed disc installation**  
Enables fast, trouble-free mounting with no risk of seat damage.
- **10-position locking handle**  
Provides flexible, precise manual flow control.
- **ISO 5211 actuator connection**  
Ensures easy integration with gearboxes and automated actuators.



### Durable Construction & Safety

- **Anti-ejection shaft design**  
Delivers a high level of safety under all operating conditions.
- **Secure circlip retention**  
Prevents shaft blowout for safe performance in both pressure and vacuum.
- **Stainless two-piece shaft**  
Ensures long-term reliability with corrosion-resistant construction.
- **Service pressure 16 bar pressure rating** provides robust performance suitable for demanding HVAC and industrial systems.

### Vulcanised (Bonded) EPDM Liner

- **EDPM Liner**  
Provides complete corrosion and wear protection for the body and shaft, ensuring longer service life and reliable, leak-free operation.
- **Permanent bond**  
Zero risk of seat displacement or blow-out, even in vacuum service.
- **Easier installation**  
Especially with collared flanges (rubber compresses without folding.)
- **Enhanced rubber sides**  
For easier mounting and enhanced sealing
- **No leakage**  
Due to uniform compression and double watertightness.
- **Longer service life**  
Compared to loose-liner valves.

### High-Performance Flow Characteristics

- **High-velocity capability**  
Handles rapid flow rates without premature wear, ideal for dynamic HVAC circuits and pump discharge lines. One of the best Kv on the market.
- **Smooth stainless disc**  
Ensures low friction and stable performance in high-flow and variable-flow conditions.
- **Low operating torque**  
Reduces actuator size and cost while improving reliability across changing pressure differences.

## Certifications

Compatible with all major HVAC and industrial piping systems

- **EN 593 valve design**

Ensures assured quality and compliance with recognised European standards.

- **EN 12266-1 pressure testing**

Guarantees proven tightness and reliability in all operating conditions.

- **EN 1092-1 and -2 flange compatibility**

Provides seamless integration with major HVAC and industrial piping systems.

- **EN 558 20 Series**

Delivers full interchangeability with leading valve brands for easy replacement and standardisation.

- **ISO 5211 top connection**

Provides universal actuator compatibility for quick, standardised mounting of electric or pneumatic drives.

## Warranty & Reliability

- **Two-year product guarantee**

Provides peace of mind with assured long-term reliability.

- **Premium epoxy coated**

Blue RAL5015 minimal thickness 150µm GGG40, CF8M, and EPDM construction – delivers durable performance ideal for critical, long-life HVAC installations.

For more technical information please consult our technical datasheet or speak to your sales representative.



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