Slim Wafer Swing Check Valves

Manufacturers of Nozzle Check, Silent and Swing Check Valves for Optimum Surge Protection
Why Series SLM Wafer Swing Check Valves?

Robust Design
A self-acting, single plate, wafer type Swing Check valve which provides high quality and reliability within a simplified construction.

Available in both Carbon Steel and Stainless Steel.

Steel options available in a variety of coatings

Low Headloss
The low inertia Disc is designed to open and close under low differential pressure conditions.

The short pattern design and straight flow path minimises pressure drop across the valve.

Economical Design
The low weight and short face to face dimensions provide an economical, space saving solution.

Additionally, flange gaskets are typically not required due to the built in, body seal O-Rings

Versatile Design
The CheckFlo valve can be installed between flanges of different standards.

The valve can be installed in a horizontal or vertical position but is not recommended for a vertical installation with a downward flow.

Standard Resilient Soft Seat
Soft seats available in a variety of materials combined with a gravity assisted disc help to ensure a positive shutoff which creates a bubble tight seal

Series SLM Wafer Swing Check Valves Features and Benefits

- **Compact Design** - Short face to face wafer design makes for economical design of pump stations.

- **Virtually Maintenance Free** – The valve has only one moving part resulting in minimal wear and long service life.

- **Surge protection** – Spring loaded option with a quick dynamic response minimises damaging water hammer.

- **Ease of installation** – A wafer design with an e-bolt that easily fits between two flanges and can easily be located and adjusted via the eyebolt.

- **Tight shutoff** – This is accomplished by means of a dynamic soft O-Ring sealing design or metal-to-metal seating for high temperatures

- **Highly customisable** – CheckFlo Series SLM is designed to suit a wide variety of applications and can be supplied in a wide variety of materials, seat designs and pressure ratings to suit the client’s application.

- **Technical support** – We provide assistance with surge analysis and protection strategies for specific critical velocity and valve response requirements.

CheckFlo Series SLM Swing Check Valves are part of a range of other leading CheckFlo products which include:

- **CheckFlo Series DGB** High Performance Nozzle Check Valves
- **CheckFlo Series BCB** Silent Check Valves
- **CheckFlo Series BWB** Tilting Disc Check Valves
- **CheckFlo Series GBB** Foot Check Valves
**Weights & Dimensions Wafer Design**

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<tr>
<th>Size DN mm</th>
<th>A mm All Sizes</th>
<th>B mm PN 16</th>
<th>C mm PN 16</th>
<th>B mm PN 25</th>
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**WAFER SWING CHECK VALVES**

Series SLM Wafer Swing Check Valves Weights and Dimensions

**DESIGN TYPE**
Wafer Swing Check Valve Design

**ACCEPTABLE MEDIA**
Potable Water, Sea Water, Waste Water, Food Stuff, All kinds of Oil, Weak Acids and Alkaline Liquids

**OPERATING PRESSURE RANGE**
PN16, PN 25 and PN 40

**OPERATING TEMPERATURE RANGE**
Nitrile Max. 80°C
EPDM Max. 120°C
PTFE Max. 180°C
Metal to Metal Max. 180°C

**SIZE RANGE**
DN50 to DN600

**MATERIALS OF CONSTRUCTION**
- Steel Fusion Bonded Epoxy Coated to 300 microns.
- All Stainless Steel 304 or 316
- Steel Galvanised
- Steel Nickel Plated
- Steel Epoxy Coated with Stainless Steel Disc
- Steel Epoxy Coated with Nickel Plated Disc

**FLANGE CONNECTIONS**
Flanged SABS 1123 or EN 1092 or ANSI B16.5

**DESIGN AND MANUFACTURE**
Design and Manufacture and Face to Face : API 16D
Testing in accordance to: API 598
## WAFER SWING CHECK VALVES

### Series SLM Spring Loaded Swing Check Valves

#### Weights and Dimensions Wafer Design

#### Design Type
- Spring Loaded Wafer Swing Check Valve Design

#### Acceptable Media
- Potable Water, Sea Water, Waste Water, Food stuff, All kinds of Oil, Weak Acids and Alkaline Liquids

#### Operating Pressure Range
- PN16, PN 25 and PN 40

#### Operating Temperature Range
- Nitrile Max. 80°C
- EPDM Max. 120°C
- PTFE Max. 180°C
- Metal to Metal Max. 180°C

#### Size Range
- DN50 to DN600

#### Materials of Construction
- Steel Fusion Bonded Epoxy Coated to 300 microns.
- All Stainless Steel 304 or 316
- Steel Galvanised
- Steel Nickel Plated
- Steel Epoxy Coated with Stainless Steel Disc
- Steel Epoxy Coated with Nickel Plated Disc

#### Flange Connections
- Flanged SABS 1123 or EN 1092 or ANSI B16.5

#### Design and Manufacture
- Design and Manufacture and Face to Face: API 6D
- Testing in accordance to: API 598

### Design and Manufacture

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Series SLM Swing Check Valves Performance Characteristics

All Sizes and Pressure Ratings

The curves shown on the diagram represent pressure drop related to water at 20° C.

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\[ Q = Kv \times \sqrt{\frac{\Delta P}{SG}} \]

Q: Flow rate m³/hour
ΔP: Pressure Drop bar
SG: Specific Gravity
(1 for water)
Kv: Flow coefficient
Typical Installation Close to Bends
and other Pipeline Components

Position of Valve in Horizontal
Application. Note position of
Eyebolt and Disc relative to
flow

Horizontal Installation

WAFER SWING CHECK VALVES
Series SLM Swing Check Valves Installation Guidelines

The valve can be installed either vertically or horizontally. When installed in a horizontal application, the vertical axis of the valve should be perpendicular to the horizontal plane and the Eyebolt should be at a perfect right angle to the horizontal plane as indicated.

In a vertical installation, the flow should always be from the bottom upwards as indicated. Please consult our technical office for a vertical flow where the flow is downward as we can provide our Series DGB Nozzle Check Valves for these applications.

Swing Check valves should be at least two (2) pipe diameters away from a bend or any other restriction and three (3) to five (5) diameters from the pump outlet to ensure minimise any potential turbulence.

Horizontal Installation

Vertical Installation

Typical Pump Installation

2 x Pipe DN

5 x Pipe DN
Considerations when Selecting a Check Valve

Performance
CheckFlo provides one of the widest ranges of Check valves. All our Check valve designs have been developed to carefully take into account varying performance and surge protection requirements versus initial capital cost. Our entire range of CheckFlo check valves are designed to be virtually maintenance free.

Each design has only one moving part. In addition, each valve’s flow path and disc design is such that it minimises flutter and wear during full flow thereby further reducing the need for maintenance. All CheckFlo designs are either supplied in a soft seat or metal to metal seated design to suit the most severe applications.

Initial Cost
All CheckFlo Check Valves are 100% locally manufactured. They are designed to balance initial cost with long term performance. CheckFlo Wafer Swing Check valves provide a short face to face and a wafer design to reduce cost without compromising performance. We keep stock across the size range but any out of stock CheckFlo valves have short lead times.

Why CheckFlo?
The CheckFlo range of Check Valves provide the most comprehensive and cost effective response to backflow protection and water hammer protection. Our Check Valves are complemented by the AirFlo Variable Orifice range of Air Valves. These two product ranges work in harmony to provide holistic surge and water hammer protection on any pipeline application. All our products are backed up by excellent technical and after sales support – try us!

Model Numbers

Valve Series No:
- SLM Slim Wafer Swing Check Valve
- BGB Nozzle Check Valve
- AGB Silent Check Valve
- BCB Swing Check Valve
- BWB Tilting Disc Check Valve

Valve Size:
- 50 - DN50
- 80 - DN80
- 100 - DN100
- 150 - DN150
- 200 - DN200
- 250 - DN250
- 300 - DN300
- 400 - DN400
- 450 - DN450
- 500 - DN500
- 600 - DN600

Pressure Rating:
- 16 - PN16
- 25 - PN25
- 40 - PN40
- 64 - PN64

Seal/Seat
- E - Soft Seal - EPDM
- N - Soft Seal - Nitrile
- P - Soft Seal PTFE
- M - Metal to Metal Seal S/Steel - 304 or 316

Valve Construction
- SA - Steel Construction Epoxy Coated
- SG - Steel Construction Galvanised
- SN - Steel Construction Nickel Plated
- SC - Steel Construction Epoxy Coated S/Steel Disc
- SK - Steel Construction Epoxy Coated Nickel Plated Disc
- C3 - All Stainless Steel 304
- C6 - All Stainless Steel 316

Closing Characteristic
- S - Spring Loaded
- N - Standard
Variable Orifice Air Valves

Series ESP Model SA Variable Orifice Air Valve is a triple function valve with automatic surge protection for use in potable and strained raw water applications.

Valves are manufactured in fusion bonded epoxy coated Steel. The top cover, jointing and internal trim are in Stainless Steel 304 or 316.

Valves are available in sizes DN25 to DN300 and for pressure ratings PN10 to PN100.

Variable Orifice Air Valves

Series ERP Variable Orifice Air Valves is a compact, triple function valve design with automatic surge protection for Sewer and Slurry applications.

Valves are manufactured in Stainless Steel 304 or 316 as standard or epoxy coated Steel with Stainless Steel 304 or 316 trim. Flush ports are optional extras.

Valves are available in sizes DN50 to DN300 and for pressure ratings PN16 and PN25.

Nozzle Check Valves

CHECKFLO Nozzle Check Valves are available in the reliable Central Shaft design as well as the Annular Disc design for superior surge protection and efficient low head pipeline operation.

Valves are available in a variety of materials and trim options in both short and long face to face dimensions.

Valves are available in sizes DN50 to DN1200 and for pressure ratings PN10 to PN63.

Mechanical Couplings

REXUS KII Couplings, Flange Adaptors and Dismantling Joints are of a robust design available in both a wide range and dedicated fit.

All Couplings are available in Fusion Bonded Epoxy Coated Steel or in all Stainless Steel 304 or 316.

Couplings are available in sizes 40mm to 1600mm and for pressure ratings PN10 to PN40.