Installation & Operating Manual

Butterfly Valves

For more information, please contact your local SBS representative.

Contents

1. Introduction
2. Technical Data
3. Valve Features
4. Valve Installation
5. Approvals Classification
6. Troubleshooting
7. Warranty

1. Introduction

- The CORE range of Butterfly Valves can be used to start / stop or regulate flow in a pipework system.
- The CORE butterfly valves are available in a variety of connection types, with differing seat / disc materials and approvals for specific applications. Please consult your CORE representative directly with any queries on product suitability.
- The CORE range of Butterfly Valves have been classified in accordance with PED 2014/68/EU.

2. Technical Data

Valve Type	Size Range	Connection Type	Temperature Rating	Pressure Rating (Max)	Seat	Disc
CORE 125 Wafer Type	DN50 – DN300	PN10 / PN16 ASA150	-10°C – 110°C	16 bar	EPDM	SS 316
CORE 140 Lugged & Tapped	DN50 – DN300	PN16	-10°C – 110°C	16 bar	EPDM	SS 316

3. Valve Features

- The CORE range of butterfly valves can be used for both simple on / off control and flow regulation within a pipework system.
- The CORE range of butterfly valves can be used in conjunction with a range of electric or pneumatic actuators to enable control. Please contact us directly for further details of actuator options and to ensure the correct sizing of actuator.
- Compact construction results in low weight, less space in storage and installation.
- The central shaft position, 100% bidirectional bubble tight shut off makes installation acceptable at any direction.
- Full bore body gives low resistance to flow.
- No cavities in the flow passage, easy to clean and disinfect for potable water system etc.
- Liner creates seal with mating flanges so no media is in contact with the valve body.
- ISO 5211 top flange for easy fitting of actuators.

- Low operating torques results in easy operation and economical actuator sizing.
- PTFE lined bearing on shaft allows for low friction & wear without using lubricants.
- Lining bonded to the body to ensure no corrosion between body and lining, longer life, suitable for vacuum service, eg.at the suction side of the pump, suitable for end of line use.
- Inserted lining to the body, liner easy to replace, no corrosion between body and lining, suitable for end of line use.
- The CORE range of butterfly valves can be used in conjunction with gearboxes for ease of operation. The gear box is fitted with a lockable position indicator. We always recommend that butterfly valves of 8” and above are fitted with gearboxes.

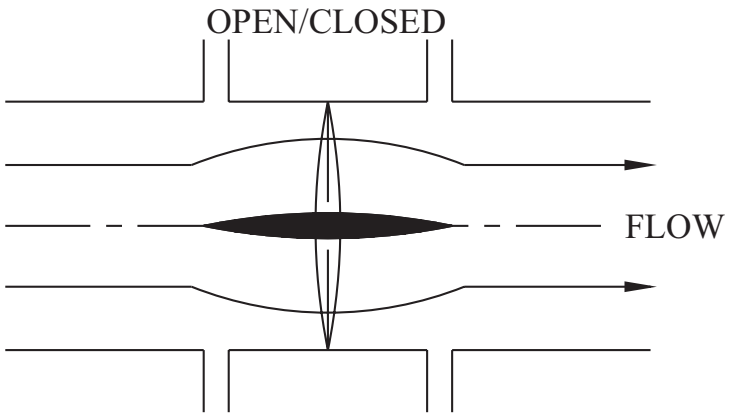
4. Valve Installation

- We recommend that the installer adheres to the installation requirements as specified by the Water Supply Water Fittings Regulations 1999.
- Butterfly valves should be sited to ensure ease of access.
- It is the responsibility of the installer to ensure the valve is suitable for service conditions e.g., temperature, pressure, and service media.
- Consideration should always be given to galvanic corrosion during installation.
- It is the responsibility of the installer to ensure that the valve, and adjoining pipework is suitably supported to avoid any undue stresses being applied to the valve.
- It is not necessary to use gaskets between the valve and adjoining flange face. Sealing of the butterfly valve is against the raised face of the valve seat.
- Butterfly valves can be installed in either horizontal or vertical pipework systems.
- Single flanged wafer type, double flanged wafer type and lugged type butterfly valves can be installed as end of line valves. In this case maximum pressure is 50% of the normal pressure rating.
- We recommend that all PN16 & PN 25 rated butterfly valves of sizes 8” and above are fitted with gearboxes to allow ease of operation.
- We provide technical documentation to ensure the correct bolt tightening sequence is adhered to. Failure to follow this may result in difficulty to operate the valve when in situ. For further details please refer to our Bolt Tightening Sequence Technical Guidance.

- **Isolating, tight shut off (On/Off)**

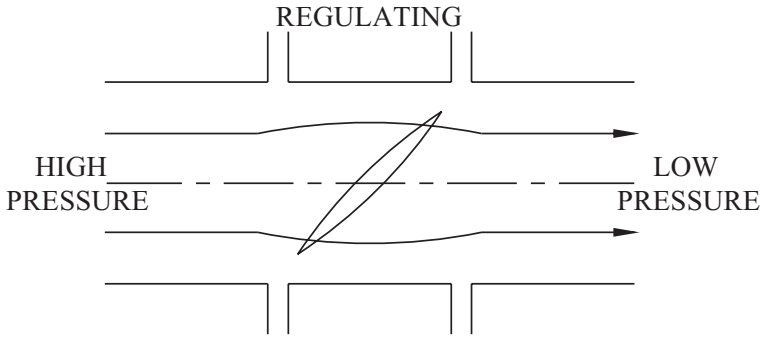
The butterfly valve is used in the fully open position or fully closed position. With an isolating valve part of a system can be isolated, thus preventing flow or leakage into the downstream conduit. The advantage of our range of butterfly valves is its reliable seal when the valve is closed and low flow resistance when the valve is open. The CORE range of butterfly valves are designed for a minimum of ten thousand operations.

The design of a slim and streamlined disc shape results in low pressure losses and reduced energy costs for the end user.



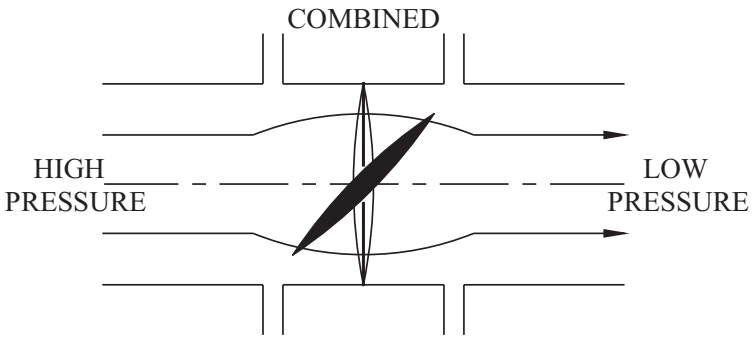
- **Regulating Valves**

The butterfly valve is used in a partly open position to regulate the pressure, flow or temperature of a process.
The CORE range is ideal for regulating due to the excellent linear flow characteristic and its finely graduated notch plate and locking lever.



- **Combined Regulating and Isolating Valve**

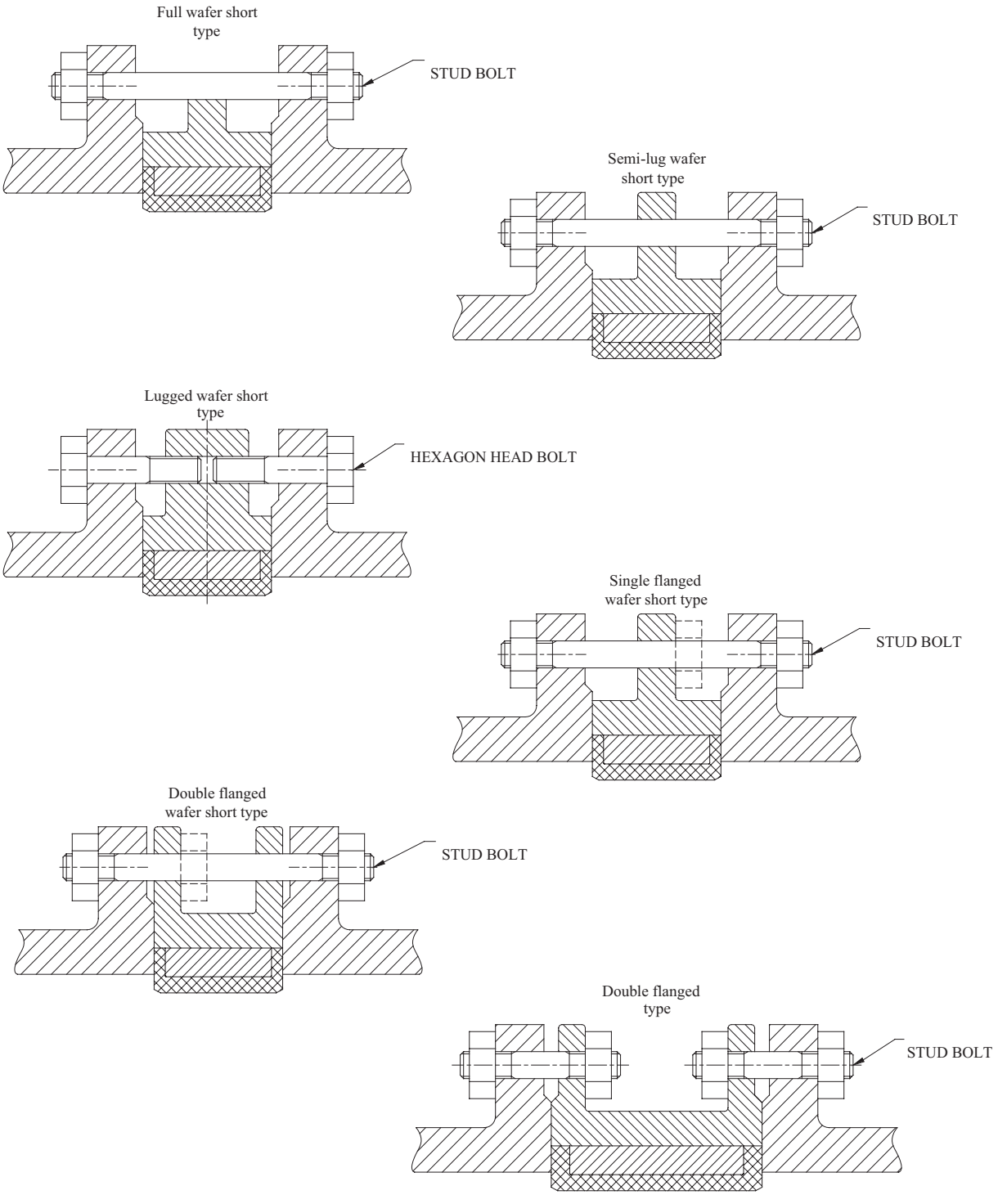
The CORE range can also be used for a combined function because the valves are 100% tight shut off in the closed position as well as being suitale for regulating duties in the open position.



CORE butterfly valves are designed for installation between flanges. They are easily installed or removed form pipeline systems. It is important the correct body type style is selected for the designed installation requirments.

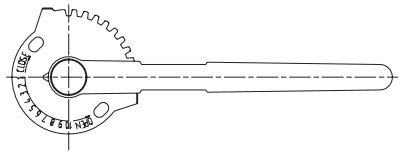
Body Type / Valve Installation Requirements	Full wafer short type	Semi lugged wafer short type	Lugged wafer short type	Single flanged wafer short type	Double flanged wafter short type	Double flanged type
Clamping between flanges	OK	OK		OK	OK	
Installation between flanges and for downstream pipe dismantling			OK	OK	OK	OK
Valve bolted at end of the line flange			OK	OK	OK	OK
Bolting directly to hull			OK			OK
Suitable to insulation of pipes	OK	OK	OK	OK	OK	OK

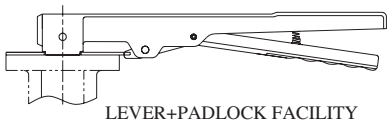
Installation for Different Body Types



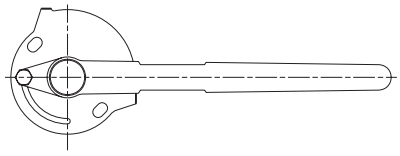
Lever Operation

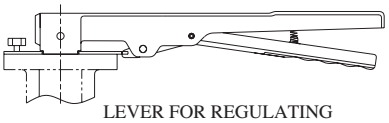
Levers are available for DN50 to DN300 (2” to 12”) but it is recommended that gear operation be used on sizes DN200 (8”) and larger sizes.



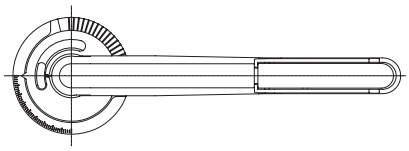


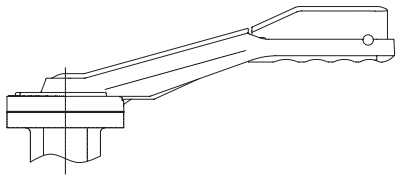
LEVER+PADLOCK FACILITY





LEVER FOR REGULATING





STANDARD LEVER

Gear Operation

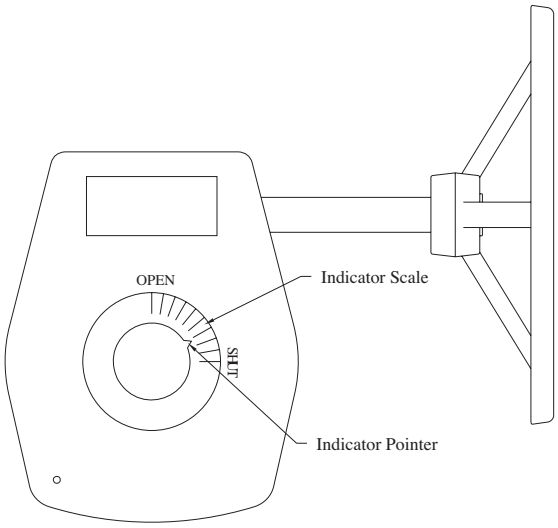
The gear box is available for all sizes from DN50 to DN2000 (2” to 80”)

The gearbox housing from DN50 to DN300 (2” to 12”) is die cast aluminium. This is aesthetically pleasing and offers a very light weight construction.

It is fitted with an accurate position indicator which is lockable making gearbox extremely good for controlling and setting memory stops.

The housing for DN350 (14”) and above sizes are cast iron

For all gearboxes the drive stem and worm stem is made from carbon steel and the worm gear is ductile iron.



Storage

Valves must be stored with the disc in the semi open position for protection of liner. If valves have to be installed long before scheduled commissioning of the system, it is advisable to lubricate the liner with suitable lubricant. If valves are to be stored for long periods it is essential they are kept away from direct sunlight, heat or damp conditions to prevent ageing of the liner. When storing or transporting large butterfly valves (above DN800), please place shaft horizontally so that the disc weight can be balanced.

Removal and Maintenance

To remove the valves, isolate the line upstream. Position the valve disc so it is almost in the closed position, unscrew and remove all bolts to allow clearance to remove valve. If the valve requires maintenance, it is advised you contact the sales office for advice as not all models are easily dismantled.

5. Approvals Classification

- Please contact CORE representative Quality Department for further details of any specific product approvals and accreditations.

6. Troubleshooting

- CORE's range of Butterfly Valves do not require any routine maintenance.
- A full risk assessment should be undertaken prior to any works taking place.

7. Warranty

- For further details about the CORE range's warranty period, please contact your CORE representative.