

MACON Butterfly valves

Butterfly valve with male end/square flange with round holes - 316L stainless steel

- Model **64321** EPDM gasket
- Model **64335** Silicone gasket
- Model **64345** FKM gasket (BNIC)



Specifications

Dimensions: DN40 to DN70

Connection: MACON threading/square flange

Operating pressure: 10 bar

Temperature: -20°C to +150°C (depending on the gasket)

Material: 316L stainless steel

(for the parts that can come into contact with the transported fluid)

ISO 9001

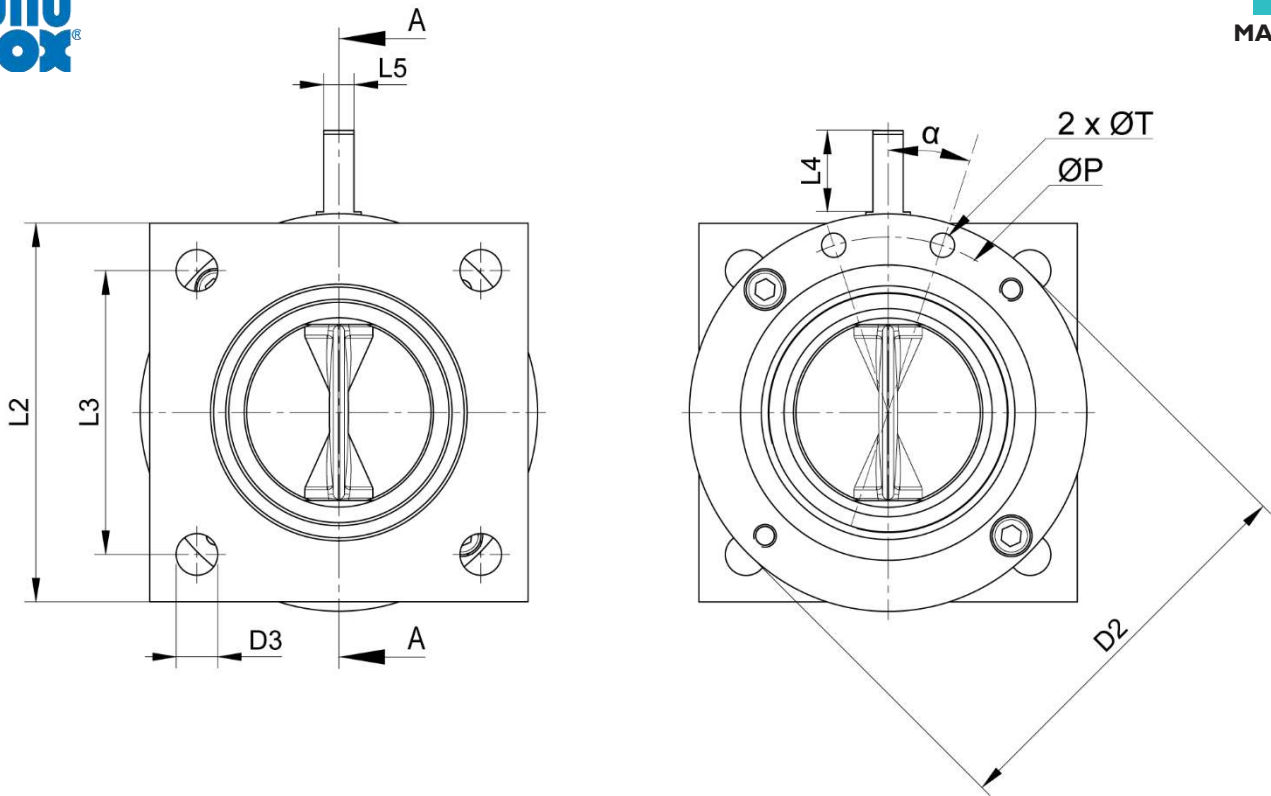
BUREAU VERITAS
Certification



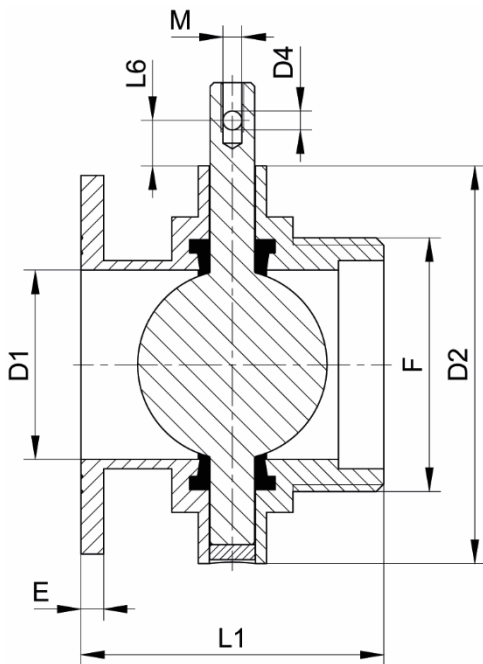
Béné Inox – 11 chemin de la Pierre Blanche – 69800 SAINT-PRIEST – S.A.S with 240 000 € share capital – SIREN N° 311 810 287
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64321/64335/64345-B VI 124



DN (mm)	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	E (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	M (mm)	ØT (mm)	ØP (mm)	α (°)
40	40	90	11	5	6	74	100	75	21.5	8	11.5	M6	6.4	81	21
50	50	105	11	5	6	80	100	75	21.5	8	11.5	M6	6.4	96	18
60	60	112	13	5	8	80	120	82	21.5	8	11.5	M6	6.4	99	18
70	70	125	13	5	8	82	120	90	21.5	8	11.5	M6	6.4	112	15



COUPE A-A

DN (mm)	F (mm)	Weight (kg)	Part number EPDM/316L	Part number Silicone/316L	Part number FKM/316L
40	M55x3	1.60	664321-40	664335-40	664345-40
50	M67x3	1.93	664321-50	664335-50	664345-50
60	M79x3.5	2.40	664321-60	664335-60	664345-60
70	M79x3.5	2.70	664321-70	664335-70	664345-70

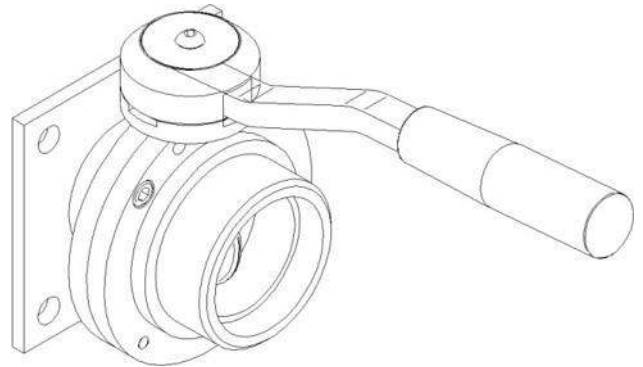
N.B.: The part numbers shown in this table are not final valve part numbers - they just make it possible to differentiate between valve models with different gasket types.

Complete valve part numbers are listed on the following page.

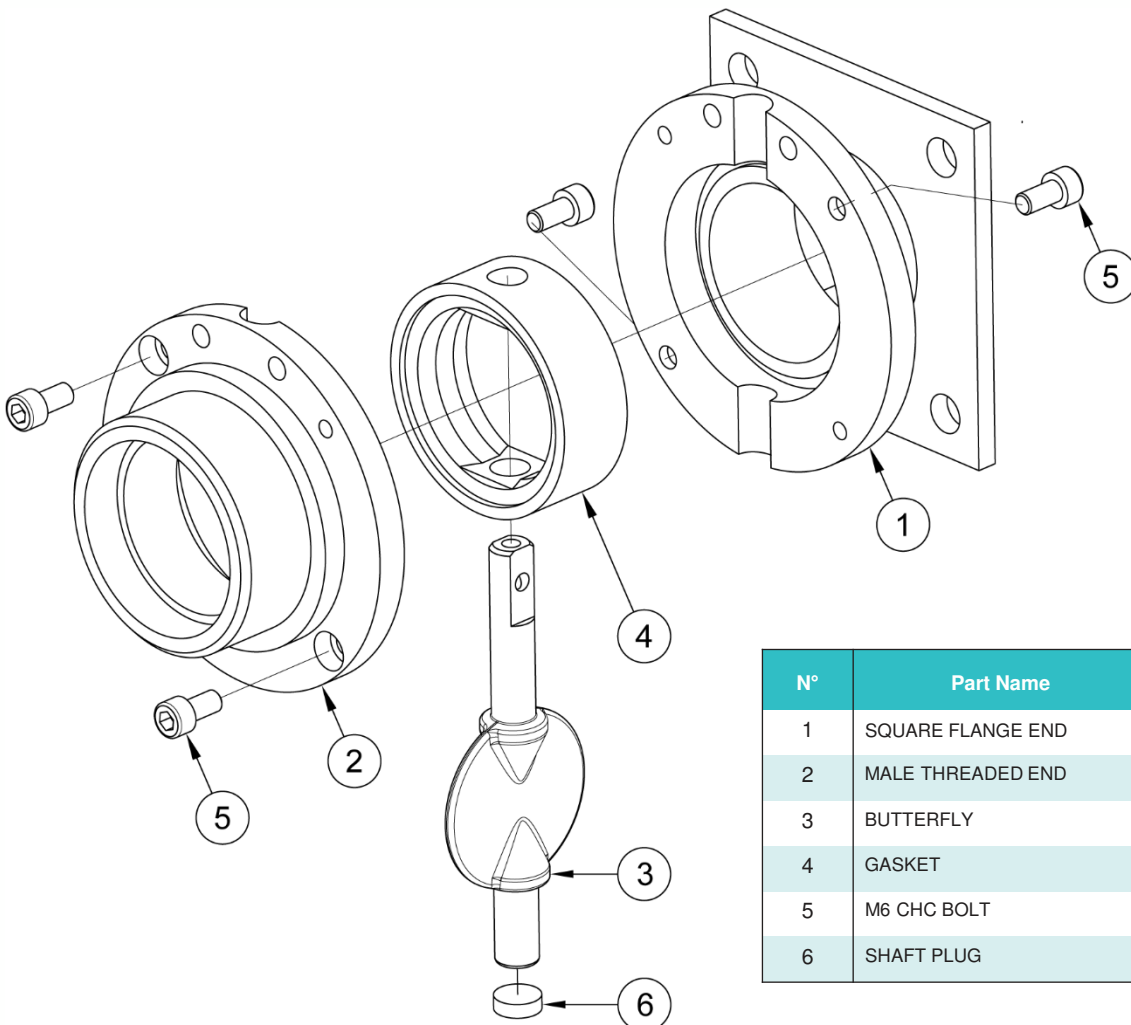
This valve is delivered assembled with a handle as standard.

Depending on the type of handle you require you can choose from the following part numbers:

- Plastic handle model **61324 (261324-2576)**
- Stainless steel handle model **61347 (261347-2576)**



DN (mm)	Part number Plastic handle with EPDM gasket	Part number Plastic handle with Silicone gasket	Part number Plastic handle with FKM gasket	Part number Stainless steel handle with EPDM gasket	Part number Stainless steel handle with Silicone gasket	Part number Stainless steel handle with FKM gasket
40	664321-40PP	664335-40PP	664345-40PP	664321-40PI	664335-40PI	664345-40PI
50	664321-50PP	664335-50PP	664345-50PP	664321-50PI	664335-50PI	664345-50PI
60	664321-60PP	664335-60PP	664345-60PP	664321-60PI	664335-60PI	664345-60PI
70	664321-70PP	664335-70PP	664345-70PP	664321-70PI	664335-70PI	664345-70PI



N°	Part Name	Material
1	SQUARE FLANGE END	AISI 316L
2	MALE THREADED END	AISI 316L
3	BUTTERFLY	AISI 316L
4	GASKET	EPDM/SILICONE/FKM
5	M6 CHC BOLT	A2-70
6	SHAFT PLUG	EPDM

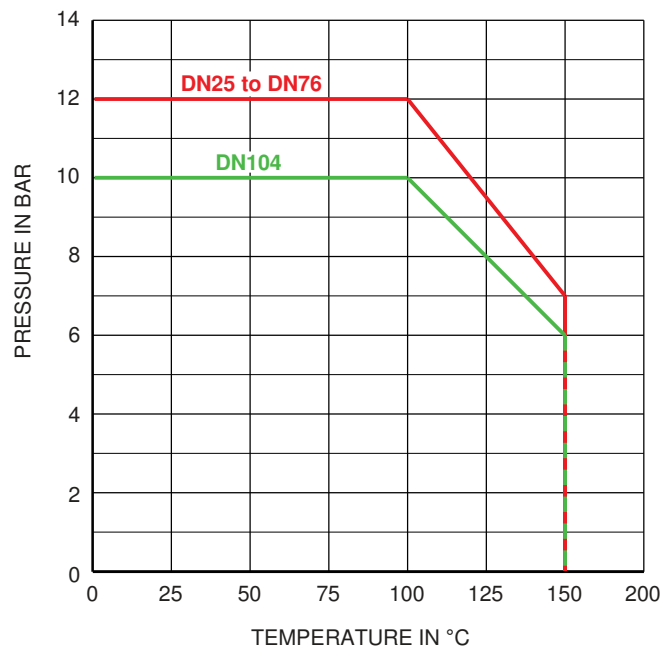
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Use

Pressure and temperature

For pressure/temperature ratings, see the graph below.



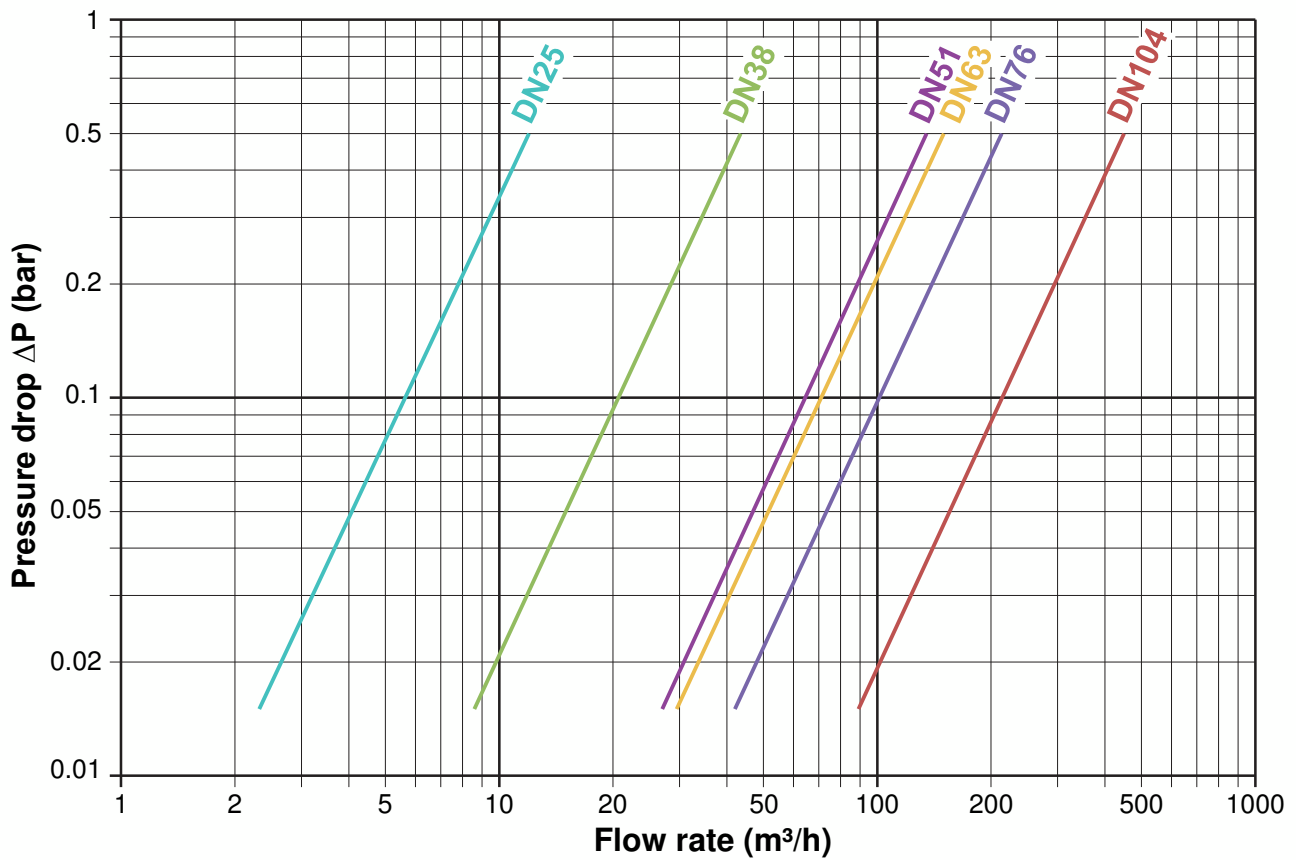
Warning: If the butterfly valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch it.

Fluids

This valve is suitable for non-abrasive and non-coagulable fluids, as long as the fluids are chemically compatible with the valve parts that they can come into contact with.

Pressure drop

Pressure drop diagram:



Assembly and maintenance instructions

Installation

You can install the butterfly valve in any position. However, check that all fluids can flow through it freely, so that no fluid remains inside the valve when it is in use.

Check that there is enough space to move the valve's handle and to carry out maintenance operations where you are planning to install the valve.

Check that all piping is perfectly aligned and that the piping support structure is dimensioned so that the valve is not subject to any external stresses. The piping support structure must only support the pipes, not the butterfly valve.

How to install a valve with a square flange:

You can attach the valve onto a square flange on a tank using a flange gasket and four bolts. See the "Square flange accessories" section.

On its other side you can attach the valve onto a pipe using a compatible MACON connection: female threaded end + nut + gasket.

You must order these connection parts separately:

- female threaded ends: model **64113** (for welding) and model **64125** (for flexible hose connection)
- lock nuts: model **64114**
- connection gaskets: model **64116** (NR SBR) and model **64117** (FKM gasket - BNIC certified)

Clean the installation and check that the equipment is clean and free from foreign bodies that could damage the valve.

Pressure test the installation according to the relevant standards (e.g. EN 12266-1), but do not exceed the valve's specifications.

Maintenance

You may need to change some of the valve's parts due to wear and tear, or if a fluid has damaged the valve and caused a leak or malfunction.

The user can decide if the butterfly valve's gaskets should be changed during preventative maintenance and at what frequency, taking into account the conditions in which they will use the butterfly valve.

If this is the case see the "Assembly / Disassembly" section below.

Assembly / Disassembly

The maintenance and removal/installation of the butterfly valve must be carried out by personnel who are qualified and trained for this type of intervention.



Warning: Before you work on the butterfly valve, check that the installation has been stopped and that the piping is empty and is not pressurised.

Warning: If the butterfly valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch it.

Warning: Beware of hazardous materials - follow the instructions provided by the suppliers.

Remove the handle or the actuator (see the relevant product data sheet).

Unscrew the CHC bolts **5** from each side of the valve's ends **1** and **2** in a criss-cross pattern.

Separate the valve ends **1** and **2** and take out the butterfly **3** + gasket **4** assembly. Remove the shaft plug **6** from underneath the butterfly's shaft.

Remove the worn gasket **4**.



Warning: Take care not to damage the butterfly if you use a sharp tool (e.g. a cutter) to cut the gasket!

Warning: Check the condition of the butterfly – there should not be any scratches on the shaft, any dents on the disc nor any deposit build up, etc.

How to install a new gasket:

Lightly lubricate the butterfly's shaft **3** (at both ends of the disk).



Warning: Grease based products are generally not suitable for EPDM gaskets – only use soapy water or food-grade silicone grease (e.g. Klüber Paralic GTE703) with EPDM gaskets.

Warning: For FKM or SILICONE gaskets use a 'conventional' food-grade oil or grease.

First insert the longer part of the butterfly's shaft **3** into the gasket **4**, then insert the shorter part by bending the gasket. For small diameters (between DN40 and DN50), bend the gasket **4** by flattening it along the butterfly **3** while levering it with a non-sharp round tool (e.g. a screwdriver with a blade that has been cut/filed, rounded and polished). See the photos on page 8.



Warning: If you do not carry out this operation correctly the gasket may tear.



For valve sizes DN60 and above, bend the gasket manually without using any tools.

Once the gasket **4** has been fitted to the butterfly **3**, insert the assembly between the valve's two end flanges **1** and **2**, with the longer part of the butterfly's shaft on the side with the two actuator mounting holes. Leave the butterfly slightly open.

Screw the four bolts **5** onto each side of the valve in a criss-cross pattern.

Refit the shaft plug **6** under the butterfly's shaft.

Reassemble the handle or the actuator onto the valve.

Pressure test the valve and check that it can be opened and closed before you put the installation back into service.

Butterfly valve accessories

Here is a list of all of our butterfly valve accessories:

Butterfly valve gaskets

Model **61317**: EPDM gasket for butterfly valves

Model **61318**: Silicone gasket for butterfly valves

Model **61319**: FKM gasket for butterfly valves

Butterfly valve butterflies

Model **61316**: Butterfly for butterfly valves

Butterfly valve handles

Model **61320**: Stainless steel lever with plastic handle for butterfly valves Ø25 to Ø76

Model **61322**: Plastic handle with trigger for butterfly valves Ø25 to Ø76

Model **61343**: Plastic multi-position handle with trigger for butterfly valves Ø25 to Ø76

Model **61344**: Stainless steel multi-position handle with trigger for butterfly valves Ø25 to Ø76

Model **61323**: Stainless steel multi-position pull tab handle for butterfly valves Ø25 to Ø104

Model **61345**: Stainless steel lockable pull tab handle for butterfly valves Ø25 to Ø104

Model **61346**: Stainless steel open/closed position pull tab handle for butterfly valves Ø25 to Ø104

Model **61324**: Stainless steel lever with plastic handle for butterfly valves Ø25 to Ø76

Model **61347**: Stainless steel lever and handle for butterfly valves Ø25 to Ø76

Micrometric handles for flow adjustment

Model **61325**: Micrometric handle for flow adjustment for butterfly valves Ø25 to Ø104

Pneumatic actuators

Model **61326**: Spring return 1/4-turn pneumatic actuator

Model **61327**: Double-acting type 1/4-turn pneumatic actuator

Model **61301**: **Small size** spring return 1/4-turn pneumatic actuator

Model **61302**: **Small size** double-acting type 1/4-turn pneumatic actuator

Pneumatic and electric actuators

Model **61520**: Aluminium pneumatic actuator with fixing bracket - spring return or double-acting type
Model **61521**: Stainless steel pneumatic actuator with fixing bracket - spring return or double-acting type

Model **61523**: Electric actuator UMA with fixing bracket - IP65

Model **61527**: Electric actuator ER+ with fixing bracket - IP66
Model **61528**: Fail-safe electric actuator ER+ with fixing bracket - IP66
Model **61529**: Positioner electric actuator ER+ with fixing bracket - IP66

Model **61531**: Electric actuator VR with fixing bracket - IP68
Model **61532**: Fail-safe electric actuator VR with fixing bracket - IP68
Model **61533**: Positioner electric actuator VR with fixing bracket - IP68

Square flange accessories

Model **64146**: Gaskets for square flanges with round holes - NR SBR
Model **64148**: Gaskets for square flanges with round holes - FKM (BNIC)
Model **64147**: Gaskets for square flanges with round holes - NR SBR
Model **64149**: Gaskets for square flanges with round holes - FKM (BNIC)

Model **64143**: Square flange with oblong holes for welding - 304 stainless steel
Model **64144**: Square flange with threaded holes for welding - 304 stainless steel
Model **64145**: Square flange with round holes for welding - 304 stainless steel

Standards and compliance

- This valve complies with the European Pressure Equipment Directive (PED) 2014/68/EU (Article 4 paragraph 3). It does not have CE marking.
- This valve complies with EC Directive 1935/2004.
- The FKM gasket is BNIC certified.