

# MACON Butterfly valves

## Butterfly valve with plain ends - 316L stainless steel

Model **64311** EPDM gasket

Model **64331** Silicone gasket

Model **64341** FKM gasket (BNIC)



### Specifications

**Dimensions:** DN40 to DN100

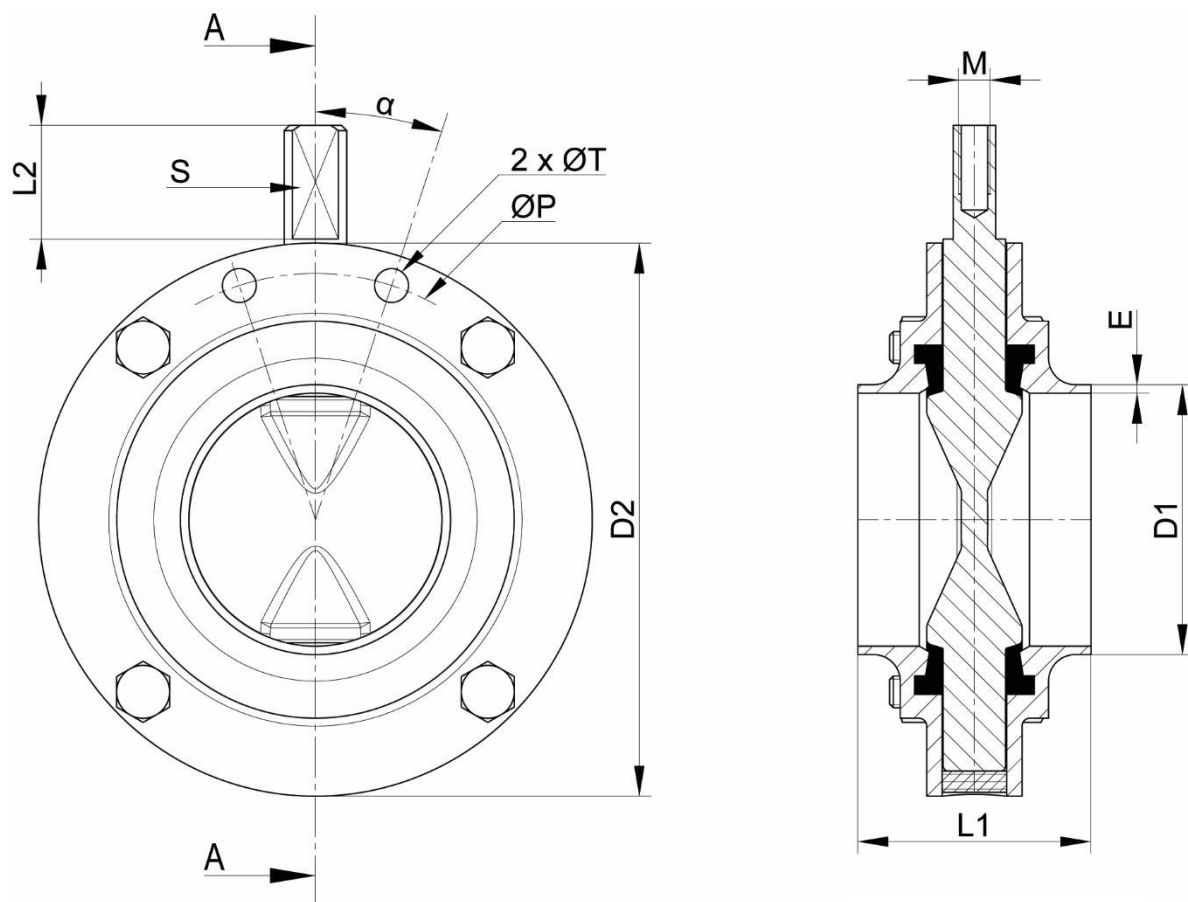
**Connections:** to be welded

**Operating pressure:**

- 12 bar from DN40 to DN70
- 10 bar from DN80 to DN100

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

**Material:** 316L stainless steel



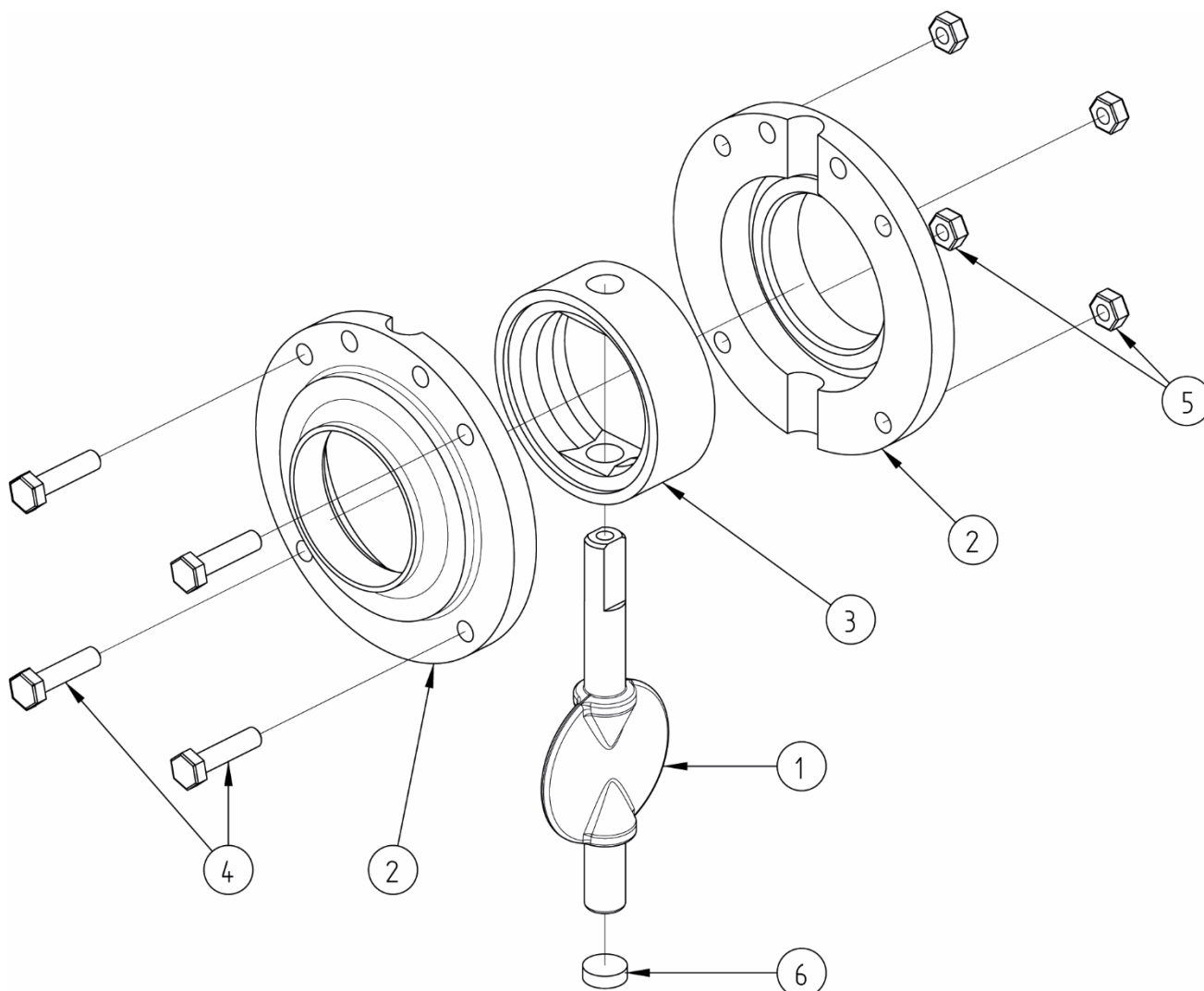
**A-A CROSS SECTION**

DN (mm)	D1 (mm)	D2 (mm)	E (mm)	L1 (mm)	L2 (mm)	S (mm)	M (mm)	ØT (mm)	ØP (mm)	α (°)	Weight (kg)
40	43	92	1.5	44	21.5	8 (f lat side)	M6	6.4	81	21	0.86
50	53	105	1.5	44	21.5	8 (f lat side)	M6	6.4	93	18	1.08
60	63.5	112	1.5	44	21.5	8 (f lat side)	M6	6.4	99	18	1.14
70	73	125	1.5	44	21.5	8 (f lat side)	M6	6.4	112	15	1.47
80	83	139	1.5	60	13.5	9.5x9.5	M6	-	-	-	2.75
100	104	162	2	64	13.5	9.5x9.5	M5	-	-	-	3.85

DN (mm)	Part number EPDM/316L	Part number Silicone/316L	Part number FKM/316L
40	664311-40	664331-40	664341-40
50	664311-50	664331-50	664341-50
60	664311-60	664331-60	664341-60
70	664311-70	664331-70	664341-70
80	664311-80	664331-80	664341-80
100	664311-100	664331-100	664341-100

**Béné Inox** – 11 chemin de la Pierre Blanche – 69800 SAINT-PRIEST – S.A.S with 240 000 € share capital – SIRENN° 311  
810 287 Tel. N°: +33 (0)4 78 90 48 22 – Fax N°: +33 (0)4 78 90 69 59 – [www.bene-inox.com](http://www.bene-inox.com) – [bene@bene-inox.com](mailto:bene@bene-inox.com)

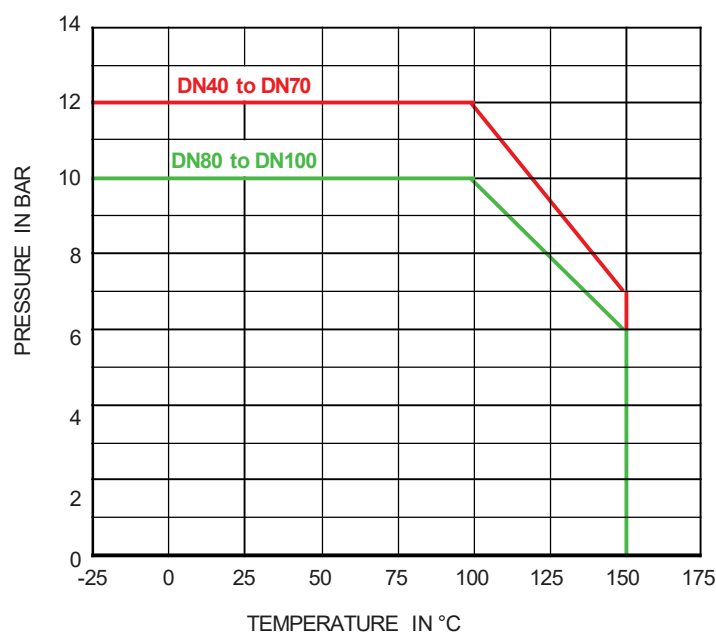
Technical information, illustrations and photographs are provided for information only, they are not contractual. Some may vary according to the tolerances accepted in the profession and the applicable standards. All instructions for use, disassembly and maintenance are recommendations only. These could also vary depending on product usage conditions, its installation environment and purchaser requirements – of which the purchaser alone is responsible for their definition.



N°	Part Name	Material
1	BUTTERFLY	AISI 316L
2	PLAIN END FLANGE	AISI 304L / AISI 316L
3	GASKET	EPDM / FKM / SILICONE
4	BOLT	A2-70 STAINLESS STEEL
5	NUT	A2-70 STAINLESS STEEL
6	SHAFT PLUG	SILICONE

## Pressure and temperature

For pressure/temperature ratings, see the graph below.

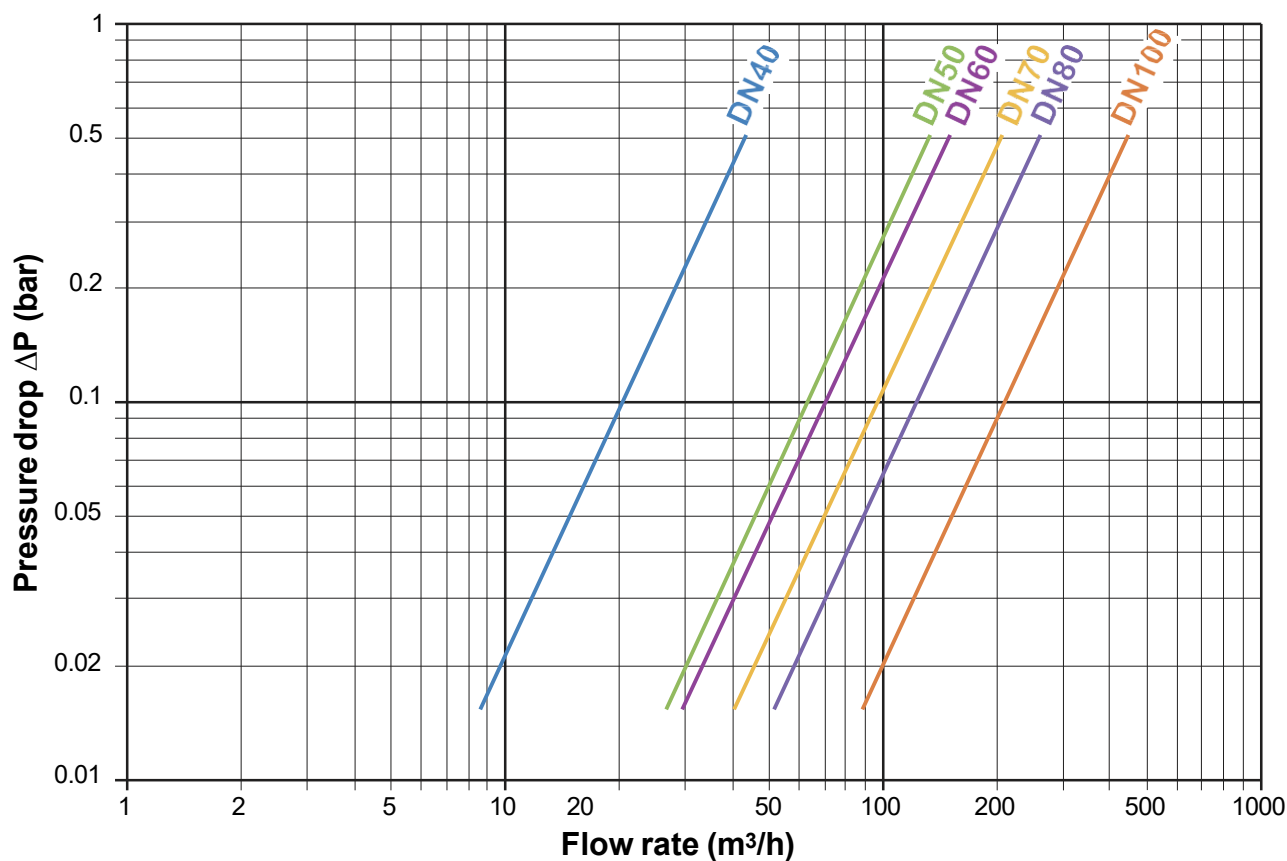


**Warning:** If the butterfly valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch the butterfly valve.

## 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.

## Pressuredrop (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 plain ends:

Welding must be carried out by qualified personnel.

You must disassemble the valve to avoid damaging the gasket **3** during welding.

Tack weld the fitted valve, or use a jig, to ensure the correct alignment of the end flanges **2**.

Disassemble the valve (gasket **3** must not be in contact with the end flanges **2**), then weld the plain end flanges **2** to the piping.

After welding, reassemble the valve.

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

Check the valve is operating correctly.

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.

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 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 the butterfly valve.

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 bolts **4** and remove the four nuts **5** holding the plain end flanges **2**.  
Separate the two plain end flanges **2** and take out the butterfly valve **1** + gasket **3** assembly.

Remove the shaft plug **6** from underneath the butterfly's shaft.  
Remove the worn gasket.



Warning: Take care not to damage the butterfly if you use a sharp tool (e.g. a cutter) to cut the gasket. Check the condition of the butterfly: it should not have any scratches on its shaft, nor dents on the disc, nor any deposit build up, etc.

How to install a new gasket:

Lightly lubricate the butterfly valve shaft (at both ends).



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) for EPDM gaskets.

For FKM or SILICONE gaskets use a “conventional” food-grade oil or grease.

First insert the longer part of the butterfly's shaft **1** into the gasket **3**, then insert the shorter part by bending the gasket. For small diameters (DN40 and DN50), bend the gasket **3** by flattening it along the butterfly **1** 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 below.



For valve's from DN63 and above, bend the seal manually without using any tools.

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

Position the four bolts **4** (with the bolt heads on the same side of the valve) and the four nuts **5**.

Tighten the four nuts in a criss-cross pattern.

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



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

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



## 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 valve

### 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

## Standards and compliance

- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU Article 4 paragraph 3 (formerly 97/23/EC Article 3 paragraph 3)
- This valve complies with EC Directive 1935/2004