

MACON Butterfly valves

Butterfly valve with plain end/male end - 316L stainless steel

Model **64312** EPDM gasket

Model **64332** Silicone gasket

Model **64342** FKM gasket (BNIC)



Specifications

Dimensions: DN40 to DN100

Connection: to be welded/MACON thread

Operating pressure:

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

Temperature: -20°C to +150°C

(depending on the gasket)

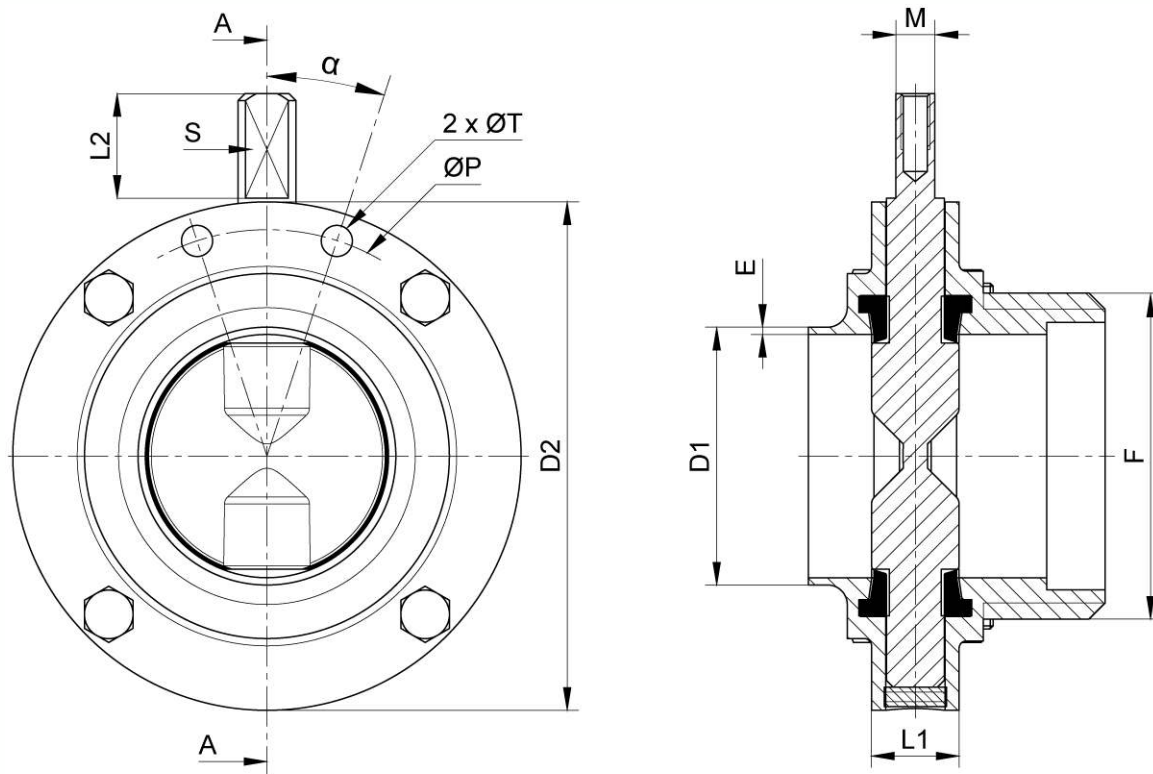
Material: 316L stainless steel



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64312/64332/64342-B VI 124



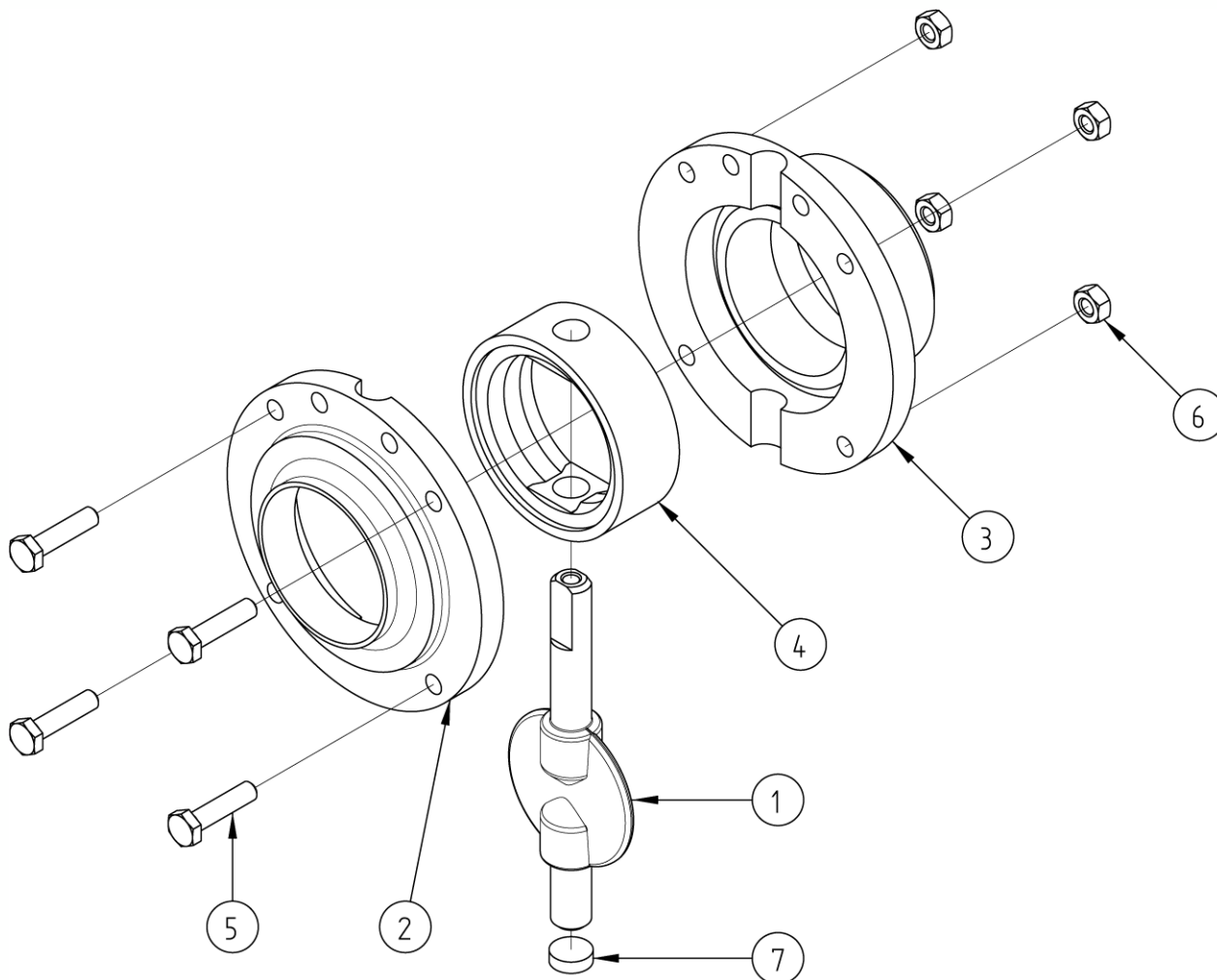
COUPE A-A

DN (mm)	D1 (mm)	D2 (mm)	F (mm)	E (mm)	L1 (mm)	L2 (mm)	S (mm)	M (mm)	ØT (mm)	ØP (mm)	α (°)	Weight (kg)
40	43	92	M55x3	1.5	44	21.5	8 (flat side)	M6	6.4	81	21	1.15
50	53	105	M67x3	1.5	44	21.5	8 (flat side)	M6	6.4	93	18	1.44
60	63.5	112	M79x3.5	1.5	44	21.5	8 (flat side)	M6	6.4	99	18	1.60
70	73	125	M90x3.5	1.5	44	21.5	8 (flat side)	M6	6.4	112	15	1.99
80	83	139	M102x4	1.5	60	13.5	9.5x9.5 (square)	M6	-	-	-	3.48
100	104	162	M125x4	2	64	13.5	9.5x9.5 (square)	M5	-	-	-	4.52

DN (mm)	Part number EPDM/316L	Part number Silicone/316L	Part number FKM/316L
40	664312-40	664332-40	664342-40
50	664312-50	664332-50	664342-50
60	664312-60	664332-60	664342-60
70	664312-70	664332-70	664342-70
80	664312-80	664332-80	664342-80
100	664312-100	664332-100	664342-100

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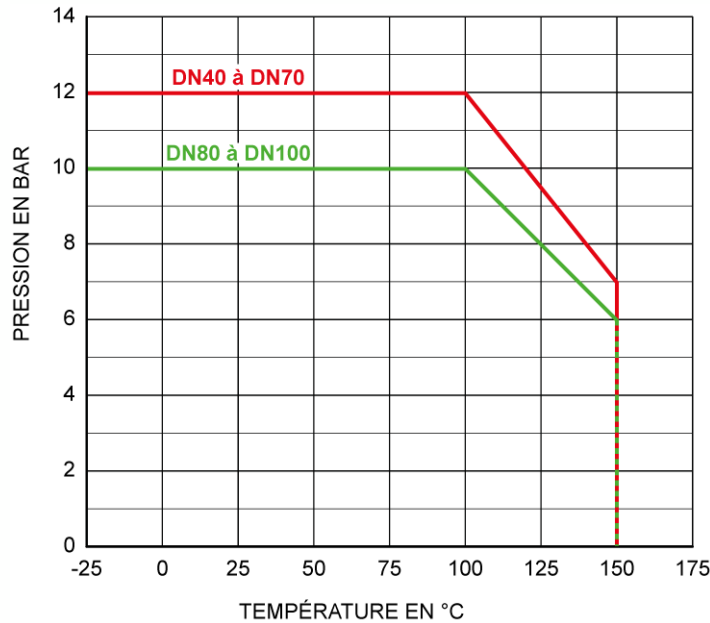


N°	Part Name	Material
1	BUTTERFLY	AISI 316L
2	PLAIN END FLANGE	AISI 316L
3	MALE END PART	AISI 316L
4	GASKET	EPDM / FKM / SILICONE
5	BOLT	A2-70
6	NUT	A2-70
7	SHAFT PLUG	SILICONE

Use

Pressure and temperature

For pressure/temperature ratings, see the graph below.

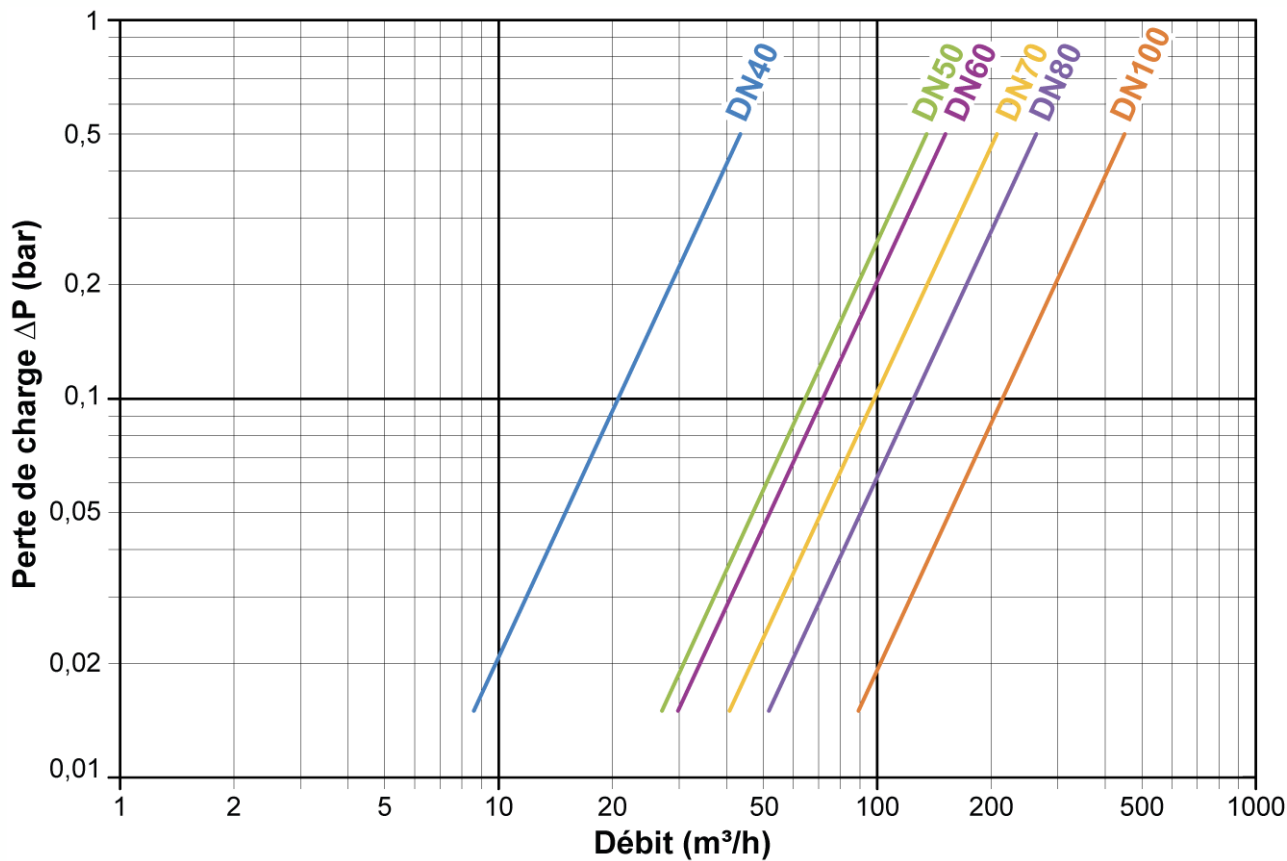


Warning: If the butterfly valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch it.

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 (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 butterfly 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 plain end and a threaded end:

Welding must be carried out by qualified personnel.

You must disassemble the valve to avoid damaging the gasket **4** during welding.

Tack weld the fitted valve or use a jig to make sure that the end flanges **2** and **3** are aligned correctly.

Disassemble the valve (gasket **4** must not be in contact with the end flange **2**), then weld the plain end flange **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 butterfly 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 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 bolts **5** and remove the four nuts **6** holding the end flanges **2** and **3**.

Separate the two end flanges **2** and **3** and take out the butterfly **1** + gasket **4**.

Remove the shaft plug **7** 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.

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 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) 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 **1** into the gasket **4**, then insert the shorter part by bending the gasket. For small diameters (DN40 and DN50), bend the gasket **4** 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 gasket manually without using any tools.

Once the gasket **4** has been fitted to the butterfly, insert the assembly between the valve's two end flanges **2** and **3**, 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 **5** (with the bolt heads on the same side of the valve) and the four nuts **6**. Tighten the four nuts in a criss-cross pattern. Refit the shaft plug **7** 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.

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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.