

# Butterfly valve accessories

Model **61327** 1/4 turn (90°) stainless steel, double-acting type pneumatic actuator



## Specifications

**Dimensions:** For DN25 to DN104 (1" to 4") valves

**Operating pressure:** 4.5 to 8 bar

**Operating temperature:** -20°C to +80°C

**Torque:** 40 Nm at 6 bar

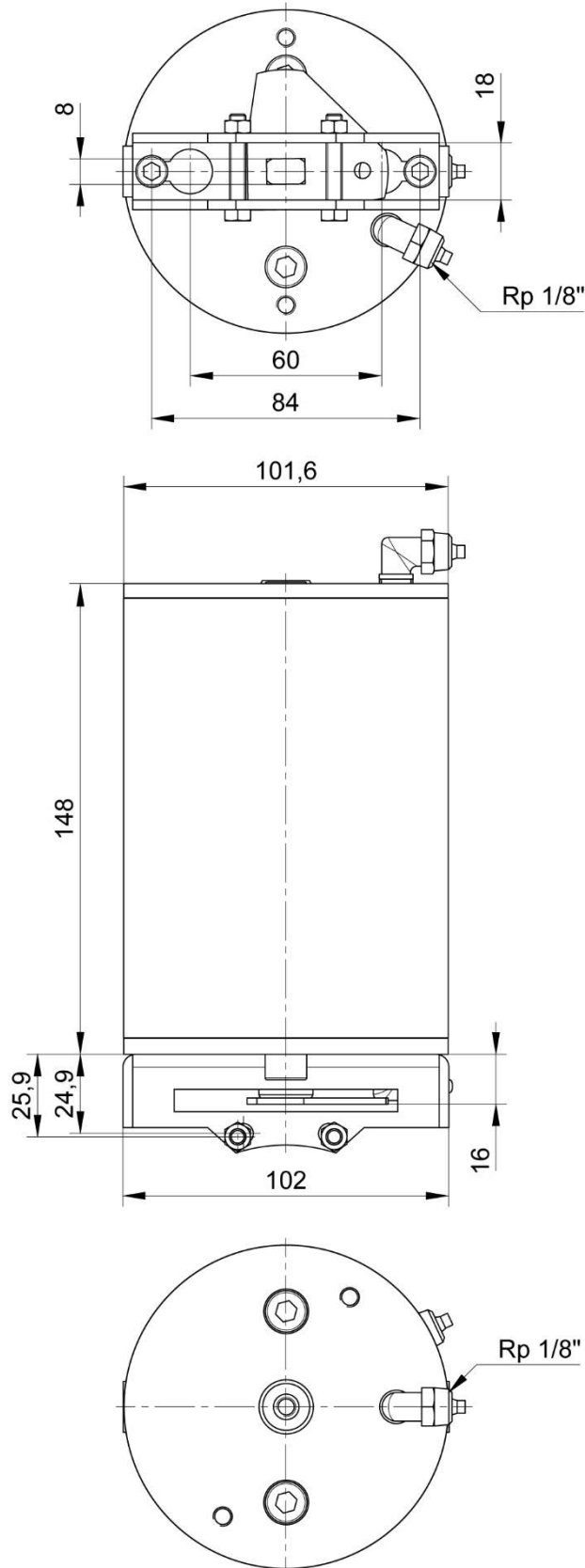
**Opening/closing time:** 1.5 to 3.5 seconds  
(depending on the compressed air flow rate)

**Material:** Stainless steel

**Double-acting type actuator:**

Closed by compressed air/Opened by compressed air

DN 25 to 76 valves

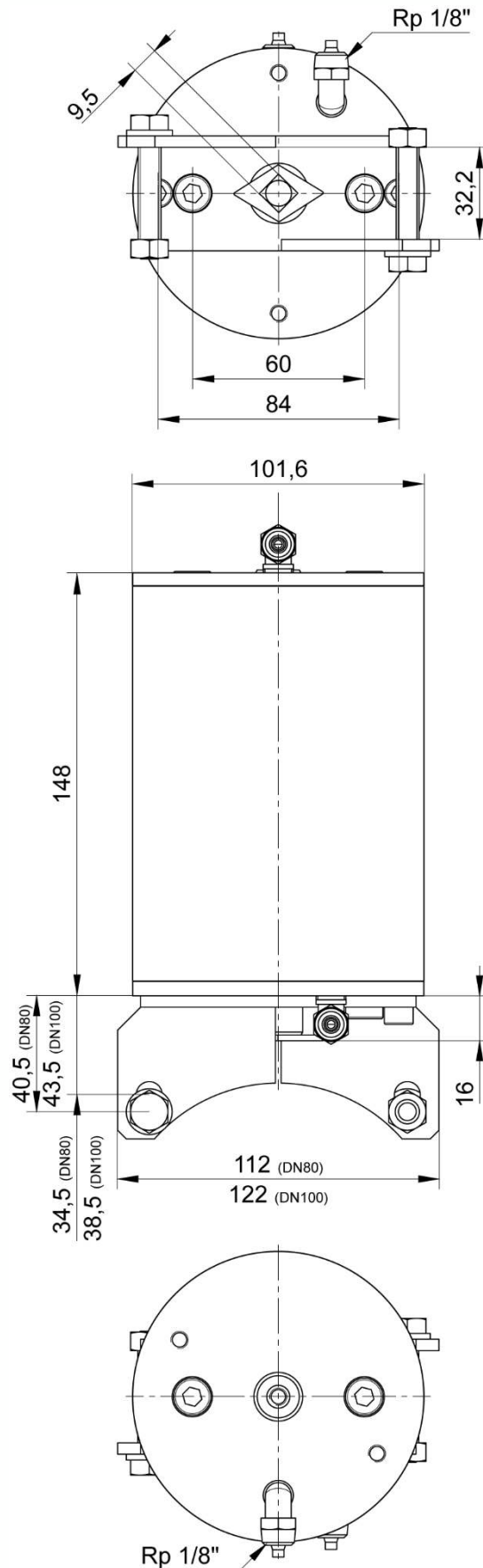


Valve DN (mm)	Valve NB (Inches)	Weight (kg)	Part number
25 to 76	1" to 3"	3.90	261327-70SG

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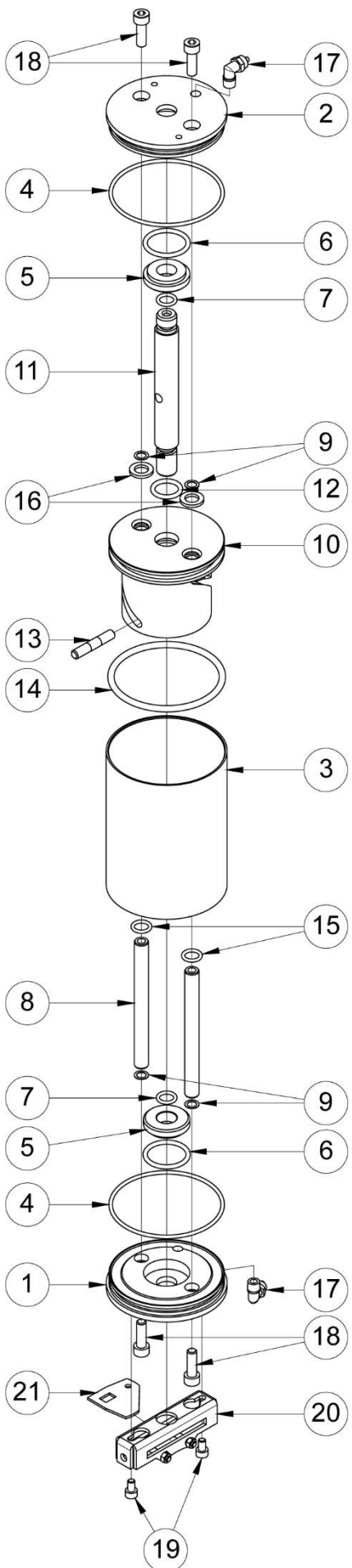
DN 80 to 104 valves



Valve DN (mm)	Valve NB (inches)	Weight (kg)	Part number
80	3"1/2	4.00	261327-80SG
100 and 104	4"	4.10	261327-104SG

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N°	Part Name	Material
1	LOWER CAP	AISI 303/304
2	UPPER CAP	AISI 303/304
3	CYLINDER	AISI 304/304L
4	O-RING (HOUSING/BODY)	NBR
5	FRICTION RING	DELTRIN (POM-H)
6	O-RING (FRICTION RING/CAP)	NBR
7	O-RING (SHAFT/FRICTION RING)	NBR
8	SPACER	AISI 304/AISI 304L
9	SEALING WASHER	NYLON
10	PISTON	HIGH-DENSITY POLYETHYLENE (HDPE)
11	PISTON SHAFT	AISI 304/AISI 304L
12	O-RING (PISTON/SHAFT)	NBR
13	PIN	AISI 304/AISI 304L
14	O-RING (PISTON/CYLINDER)	NBR
15	O-RING (PISTON/INTERNALLY THREADED ROD)	NBR
16	STOP WASHER	NYLON
17	PNEUMATIC CONNECTOR FOR Ø6 PIPING	NICKEL-PLATED BRASS
18	M8 CHC BOLT	A2
19	M6 CHC BOLT	A2
20	BUTTERFLY VALVE FIXING BRACKET	AISI 304/AISI 304L
21	POSITION INDICATOR	AISI 304/AISI 304L

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# Assembly and maintenance instructions

## Installation

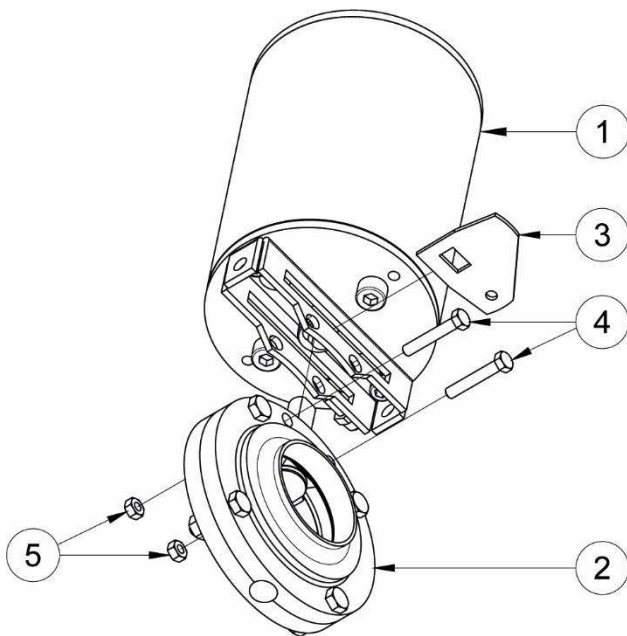
You can install the pneumatic actuator in any position.

Check that there is enough space to install the pneumatic actuator and to carry out maintenance operations where you are planning to install it.

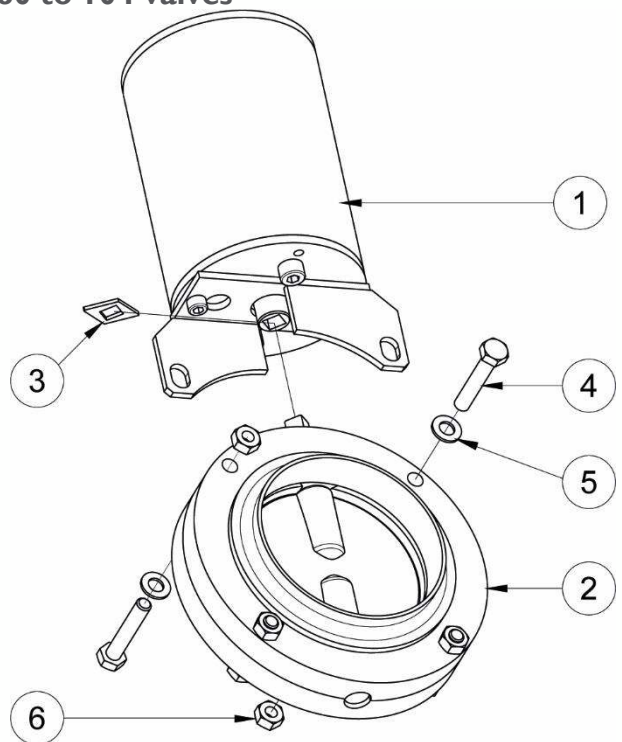
### Pneumatic actuator installation:

Before installing your pneumatic actuator you should lubricate the air supply network as this will improve the actuator's life span. Follow the instructions below to install the pneumatic actuator with fixing bracket.

#### DN 25 to 76 valves



#### DN 80 to 104 valves



Slide the position indicator **3** into the slot in the actuator's fixing bracket **1**.

Close the butterfly valve **2**, push the butterfly's shaft into the position indicator **3** and the actuator's shaft **1** until the holes in the fixing bracket are lined up with those on the butterfly valve **2**.

Fix the assembly into place with the 2 bolts **4** and the 2 nuts **5** which are supplied with the actuator **1**.

Unscrew the butterfly valve's upper bolts (you will not need to use these 2 bolts).

Place the position indicator **3** on the butterfly valve's shaft **2**.

Close the butterfly valve **2**, push the butterfly's shaft into the actuator's shaft **1** until the fixing bracket's holes are lined up with those on the butterfly valve **2**.

Fix the assembly into place with the 2 bolts **4**, the 2 nuts **6** and the 2 washers **5** which are supplied with the actuator **1** (position the washers **5** on the same side as the fixing bracket).

**IMPORTANT: The piping network must be empty of fluid and not pressurised** as during this operation you will partially disassemble the valve so the network will no longer be fully sealed.

N°	Part Name
1	ACTUATOR
2	BUTTERFLY VALVE
3	POSITION INDICATOR
4 - 5 - 6	FIXING BOLTS, NUTS AND WASHERS

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The actuator turns 1/4 turn (90°) clockwise to close the valve and 1/4 turn (90°) anti-clockwise to open it.

## Maintenance

The pneumatic actuator does not require any specific maintenance if it is used in normal operating conditions.

If the pneumatic actuator is never opened or closed during normal operation then you should regularly open and close the pneumatic actuator to check that it is still working correctly.

You may need to change some of the actuator's parts due to wear and tear as this could cause a leak or or malfunction.

If this is the case see the "Assembly / Disassembly" section below and the "Spare Parts" section on page 8.

## Assembly / Disassembly

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



Warning: Do not connect/disconnect the actuator if it is pressurised or linked to a compressed air network as you could seriously injure yourself if the air supply cuts off or if the actuator is accidentally activated.

Warning: If the actuator is used at temperatures above 60°C then people could burn themselves if they touch it.

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

First, remove the pneumatic actuator from the valve.

Unscrew the bolts **19** and remove the fixing bracket **20** and the position indicator **21**.

Remove the pneumatic connector **17**, then unscrew the 2 bolts **18** from the lower cap **1** so you can remove it.

Remove the cylinder **3**.

Remove the 'shaft **11** – piston **10** – pin **13**' assembly, remove the pin **13** to disconnect the piston **10** and to be able to access the o-ring **12**.



Warning: Remove the pin **13** from the piston shaft **11** **very carefully**.

You only need to disassemble the spacers **8** from the upper cap **2** if there is an air leak coming from this area. If this is the case, change the sealing washers **9**.

If you have disassembled the spacers **8** then you must change the washers **9**.

Warning: You must be careful not to scratch the spacers **8** with pliers where the o-rings **15** will come into contact with them when the actuator opens and closes.

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Remove the friction rings **5** from the caps **1** and **2** to access the o-rings **6**.  
You will only need to change the friction rings if they are damaged.

Clean and inspect all of the parts of the pneumatic actuator.

If you have completely disassembled the pneumatic actuator, you will need to change all of its sealing parts: o-rings **4, 6, 7, 12, 14** and **15**.

You should also change any other worn parts (see page 8, “Spare parts” section).

Follow the disassembly steps in reverse order to reassemble the pneumatic actuator while taking note of the additional information provided below.

Before starting the reassembly make sure the o-rings are well greased.

Reassemble the ‘shaft **11** – piston **10** – pin **13**’ assembly onto the ‘upper cap **2** – spacer **8**’ assembly. When you reassemble the piston **10** onto the shaft **11**, make sure that you put the parts the right way round and that the pin **13** is centred correctly. If the pin is not centred correctly it will come into contact with the spacers **8** and stop the actuator from working correctly.

Grease the inside of the cylinder **3** where the o-rings will come into contact with its surface. This will make it easier to reassemble it and reassemble it onto the other assembly.

Before you insert the spacers **8** into the bore holes in the cap, make sure that you have already put a sealing washer **9** into each of them to ensure that the system is fully sealed.

Position the lower cap **1** so that you close the actuator and tighten the bolts **18**.

Check that the bolts **18** are tightened correctly on both sides of the actuator.

Screw the compressed air connector **17** back onto the cap so that you can check the actuator is working correctly and that there are no leaks.

Reassemble the fixing bracket **20** and the position indicator **21**.

#### Actuator connection:

Connect the actuator to the compressed air network using a 1/8" tapered thread connector (part number **150986-618**) and a Ø6x4 flexible pipe (e.g. Rilsan). Depending on your compressed air network and your process, you could use a different connector such as an air flow restrictor instead of this one.

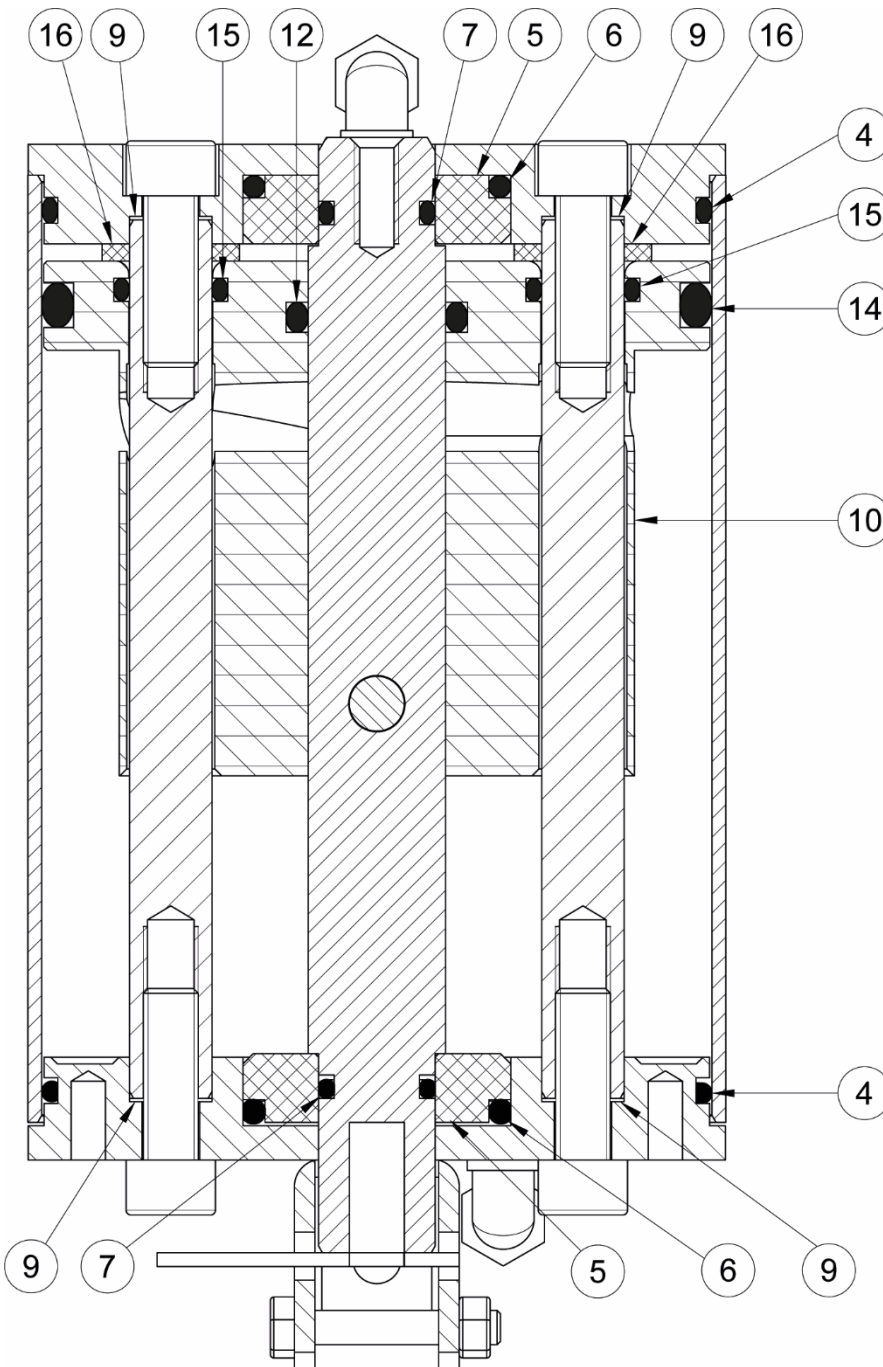
The actuator can also be connected to the network using an electro-pneumatic control unit (see model **61330**).

Air volume	Open valve	Closed valve
<b>Chamber 1</b> (for valve opening)	294 cm <sup>3</sup>	13 cm <sup>3</sup>
<b>Chamber 2</b> (for valve closing)	232 cm <sup>3</sup>	513 cm <sup>3</sup>



## Spare parts

Double-acting type pneumatic actuator spare parts:



N°	Part number	Material	Quantity
4	JTO913N	NBR	2
5	BAGNS2	DELTRIN (POM-H)	2
6	JTO24N	NBR	2
7	JTO10N	NBR	2
9	JPN12805	NYLON	4
10	PISNS01	High-density polyethylene	1
12	JTO16N	NBR	1
14	JTO44N	NBR	1
15	JTO10N	NBR	2
16	RDL201225	Nylon	2