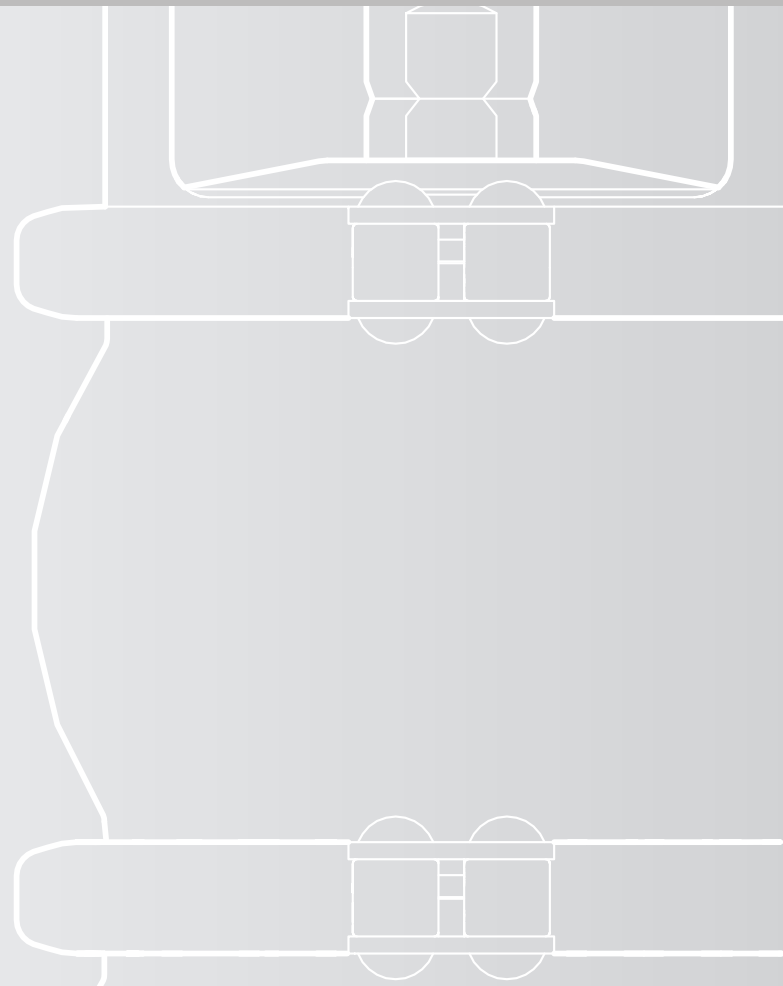




Instruction Manual

INNOVA G

Control Valve



EC Declaration of Conformity



INOXPA S.A.U.

Telers, 60
17820 - Banyoles (Spain)

hereby declare under our sole responsibility that the

Machine: **CONTROL VALVE**

Model: **INNOVA**

Type: **G**

Size: **DN 25 - DN 100 / OD 1" - OD 4"**

Serial number: **IXXXXXXXXXX to IXXXXXXXXXX**
XXXXXXXXXXIINXXX to XXXXXXXXXXXIINXXX

fulfills all the relevant provisions of the following directive:

Machinery Directive 2006/42/EC¹
Pressure Equipment Directive 2014/68/EU^{2,3}
Regulation (EC) n° 1935/2004
Regulation (EC) n° 2023/2006

and with the following harmonized standards and/or regulations:

EN ISO 12100:2010, EN ISO 13732-1:2008, EN 1672-2:2005+A1:2009,
EN ISO 14159:2008, EN 12266-1:2012, EN 19:2016

The technical file has been prepared by the signer of this document.

David Reyer Brunet
Technical Office Manager
11th January 2024



Document: 10.247.30.10EN
Revision: (0) 2024/01

¹INNOVA G with pneumatic actuator
²INNOVA G with manual or pneumatic actuator
³DN≤25 Designed and manufactured in accordance with the sound engineering practice
DN>25 Class I equipment. Conformity assessment procedure used: Module A

Declaration of Conformity



INOXPA S.A.U.

Telers, 60
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Machine:	CONTROL VALVE
Model:	INNOVA
Type:	G
Size:	DN 25 - DN 100 / OD 1" - OD 4"
Serial number:	IXXXXXXXXXX to IXXXXXXXXXX XXXXXXXXXXIINXXX to XXXXXXXXXXXIINXXX

fulfills all the relevant provisions of these regulations:

Supply of Machinery (Safety) Regulations 2008¹
Pressure Equipment (Safety) Regulations 2016^{2,3}

and with the following designated standards:

**EN ISO 12100:2010, EN ISO 13732-1:2008, EN 1672-2:2005+A1:2009,
EN ISO 14159:2008, EN 12266-1:2012, EN 19:2016**

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2. Generalities

2.1. INSTRUCTIONS MANUAL

This manual contains information about the reception, installation, operation, assembly and maintenance of control valve INNOVA G.

Carefully read the instruction prior to starting the valve, familiarize yourself with the installation, operation and correct use of the valve and strictly follow the instructions. These instructions should be kept in a safe location near the installation area.

The information published in the instruction manual is based on updated data.

INOXPA reserves the right to modify this instruction manual without prior notice.

2.2. COMPLIANCE WITH THE INSTRUCTIONS

Not following the instructions may impose a risk for the operators, the environment and the machine, and may cause the loss of the right to claim damages.

This non-compliance may cause the following risks:

- failure of important machine/plant functions,
- failure of specific maintenance and repair procedures,
- possible electrical, mechanical and chemical hazards,
- risk to the environment due to the type of substances released.

2.3. WARRANTY

The conditions of the warranty are specified in the General Sales Condition that has been delivered at the time of placing your order.



The machine may not undergo any modification without prior approval from the manufacturer.

For your safety, only use original spare parts and accessories. The usage of other parts will relieve the manufacturer of any liability.

Changing the service conditions can only be carried out with prior written authorization from INOXPA.

The non-compliance of the prescribed indications in this manual means misuse of this gear on the technical side and the personal safety and this exempts INOXPA of all responsibility in case of accidents and personal injuries and/or property damage. Also, excluded from the warranty all breakdowns caused by improper use of the gear.

Please do not hesitate to contact us in case of doubts or if further explanations are required regarding specific data (adjustments, assembly, disassembly, etc.).

3. Safety

3.1. WARNING SYMBOLS



Safety hazard for people in general and/or equipment

ATTENTION

Important instruction to prevent damage to the equipment and/or its function

3.2. GENERAL SAFETY INSTRUCTIONS



Read the instruction manual carefully before installing and starting the valve. Contact INOXPA in case of doubt.

3.2.1. During installation



Always take into account the [Technical Specifications of chapter 9](#).

The installation and use of the valve should always be in accordance with applicable regulations regarding health and safety.

Before starting up the valve, check that it is assembled correctly and its shaft is perfectly aligned. Incorrect alignment and/or excessive stress during coupling can cause serious mechanical problems in the valve.

3.2.2. During operation



Always take into account the [Technical Specifications of chapter 9](#).

NEVER exceed the specified limit values.

NEVER touch the valve and/or piping that is in contact with the fluid during operation. If the process involves hot products there is a risk of burns.

The valve contains parts that move in a linear fashion. Do not place hands or fingers in the valve closing area. This can cause serious injury.

3.2.3. During maintenance



Always take into account the [Technical Specifications of chapter 9](#).

NEVER disassemble or remove the valve until the pipes have been emptied. Bear in mind that the fluid in the pipe may be hazardous or extremely hot. Consult the regulations in effect in each country for these cases.

Inside the actuator there is a spring with an applied load. The steps specified in this manual must be followed when performing maintenance operations to avoid injury.

Do not leave loose parts on the floor.

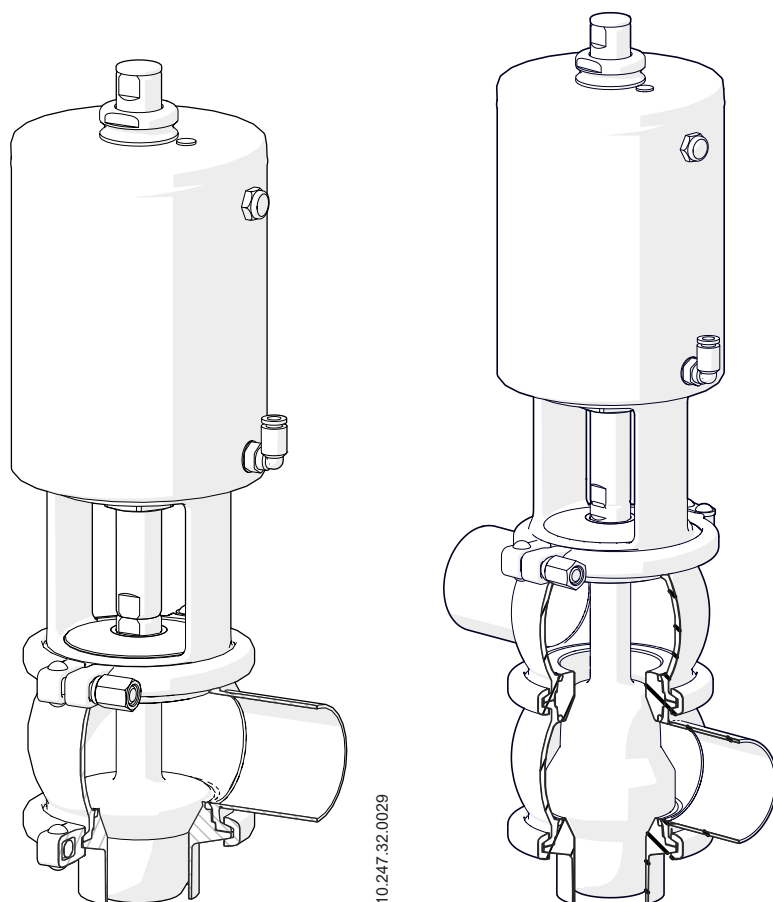
4. General Information

4.1. DESCRIPTION

The INNOVA G-type valve is a pneumatic flow control single-seat valve. The plug design enables an equal percentage flow regulation to obtain a kv factor according to the needs required. This regulation type is recommended in installations with significant flow variation or differential pressure. The valve position is controlled manually or with process parameters through the sensor position of actuation.

4.2. APPLICATION

The main functions of the INNOVA G valve are pressure control, flow control, level control, etc., in hygienic applications.



5. Installation

5.1. RECEPTION OF THE VALVE



INOXPA is not liable for any deterioration of the material caused by its transport or unpacking.

When receipt the valve, check to see whether all the parts listed on the delivery slip are present:

- complete valve,
- its components if any are supplied,
- instruction manual.

INOXPA inspects all its equipment before packaging. However, it cannot guarantee that the merchandise arrives at the user intact.

When unpacking the valve:

- remove any possible traces of packaging from the valve or its parts,
- inspect the valve or the parts that comprise it for possible damage incurred during shipping,
- take all possible precautions against damage to the valve and its components.

5.2. TRANSPORT AND STORAGE



The buyer or user shall be liable for assembly, installation, start-up and operation of the valve.

Take all possible precautions when transport and storage the valve to avoid damage it and its components.

5.3. IDENTIFICATION OF THE VALVE

Each valve is inscribed with its fabrication number. Indicate the fabrication number on all documents to refer to the valve.

 	
INOXPA S.A.U. C. TELERS, 60 - 17820 BANYOLES GIRONA (SPAIN) . www.inoxpa.com	
Type Serial Air	Size Year

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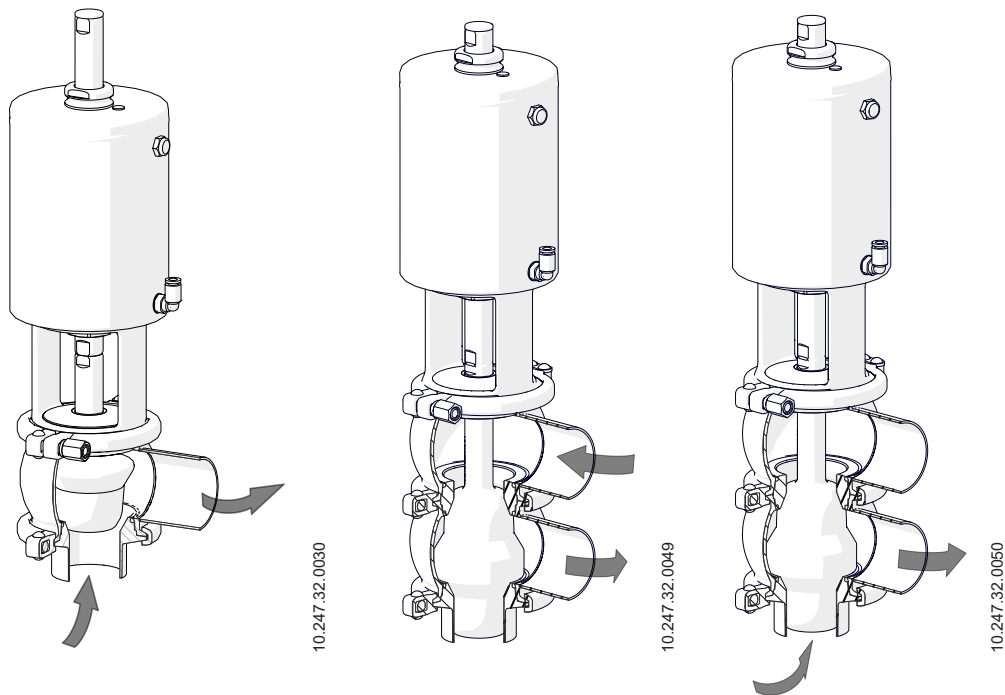
WB	G	D	0	-	0	06	52	050	12	0	K	
											Options	
											K dual regulation	
											Surface finish	
											0 ID Ra ≤ 0,8	
											1 ID Ra ≤ 0,5	
											Actuator	
											11 T1 A/S NC	
											12 T2 A/S NC	
											13 T3 A/S NC	
											14 T4 A/S NC	
											21 T1 A/S NO	
											22 T2 A/S NO	
											23 T3 A/S NO	
											24 T4 A/S NO	
											31 T1 A/A	
											32 T2 A/A	
											33 T3 A/A	
											34 T4 A/A	
											Size	
											025 DN 25, OD 1"	065 DN 65
											040 DN 40, OD 1½"	076 OD 3"
											050 DN 50, OD 2"	080 DN 80
											063 OD 2½"	100 DN 100, OD 4"
											Seals	
											43 HNBR	
											52 EPDM	
											78 FPM	
											Material	
											06 1.4404 (AISI 316L)	
											Connection	
											0 Soldar	
											1 Macho	
											7 Clamp	
											Standard pipe	
											0 DIN	
											1 OD	
											Body configuration	
											L,T 1 body	
											A,B,C,D,H,E,F,G 2 bodies	
											J,P,R,S,V,W,X,Z 3 bodies	
											Type	
											G control valve	
											Product family	
											WB INNOVA valve	

5.4. LOCATION

Place the valve leaving enough space around it to realize easily the dismantling, the inspection and the review the valve as well as in order to access to the actuator air connection's device for valves with automatic actuation even when the valve is operating. Consult in chapter 5.8. [Welding](#) the required minimum distances. The installation should allow that the removable parts are could remove easily.

5.5. DIRECTION OF FLOW

The recommended direction of flow is contrary to the movement of the valve closing so that when the valve is closing, the valve will always work against the fluid pressure. Follow these indications to avoid the water hammer, which can occur when valves close, minimising its consequences. The next figures show the recommende direction of flow as well as the direction of closing.



5.6. GENERAL INSTALLATION

After the location of the valve is defined, the valve can be joined to the pipe by welding the valve housing or using fittings.



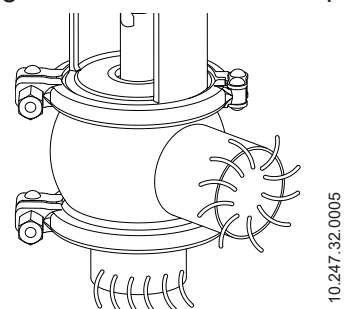
For two and three body valves, joining one of the bodies using a connector is recommended to make disassembling the valve easier.

In case of joining the valve to the pipe by fittings do not forget the seals and tighten the unions properly.

If instead, the valve is joined by welding, before starting to weld the valve bodies to the pipe disassemble the valve to prevent damage to the joints, following the instructions in chapter 8.5. [Disassembly and assembly the valve.](#)

During installation, the valve avoids using excessive force and pay special attention to:

- vibrations that may be produced on the facility,
- hermal dilation that the pipe may undergo when hot fluids are circulating,
- the weight that the pipe can support,
- excessive welding current.



5.7. CHECKING AND REVIEW

Perform the following checks before using the valve:

- check that the clamps and nuts are tightened,
- open and close the valve, applying compressed air to the actuator, several times to make sure it operates correctly and that the shaft seal is coupled smoothly to the valve body.

5.8. WELDING



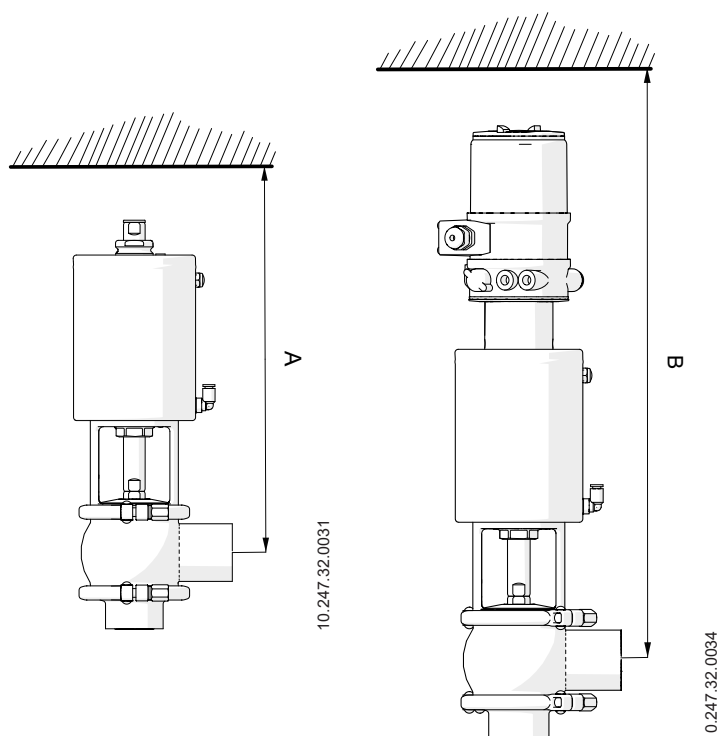
Welding work should only be done by qualified persons who are trained and equipped with the necessary equipment to perform this kind of work.

To perform the welding works:

- disassemble the valve as indicated in chapter 8.5. [Disassembly and assembly the valve](#),
- weld the valve body to the pipes maintaining the distance indicated in the following table. This will allow for the disassembly of the valve, doing the subsequent reviews and changing the necessary valve pieces like seals, bushings, etc.

	DIN - OD	A [mm]	B [mm]
A/S	25 - 1"	330	470
	40 - 1½"	340	480
	50 - 2"	400	530
	65 - 2½"	410	540
	80 - 3"	420	550
A/A	100 - 4"	440	570
	25 - 1"	300	440
	40 - 1½"	310	450
	50 - 2"	350	480
	65 - 2½"	360	490
	80 - 3"	370	500
	100 - 4"	390	520

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5.9. VALVE CONFIGURATION WITH ACTUATOR

The standard configuration of the valves is NC (normally closed).

It is possible to convert it to NO (normally open) simply by turning the valve actuator, according to chapter 8.6. [Actuator configuration](#).



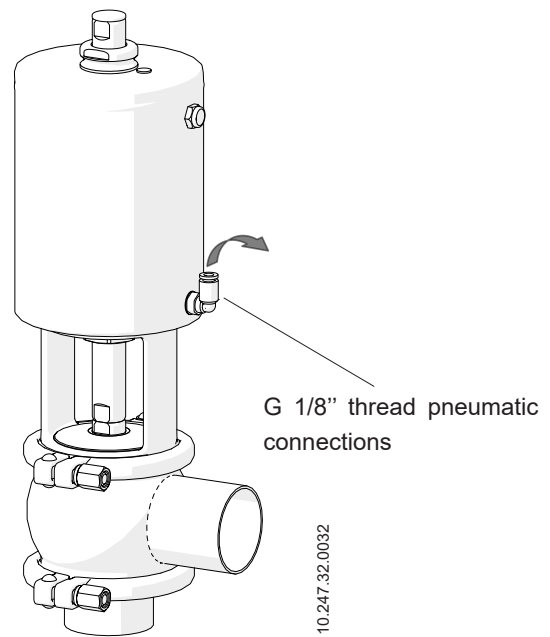
Always disconnect the compressed air before starting to disassemble the valve. Never disassemble the valve clamps directly without reading the instructions carefully, since the actuator contains a spring inside it with an applied load. Valve and actuator assembly and disassembly should only be done by qualified persons.

5.10. ACTUATOR AIR CONNECTION

To perform the air connection to the actuator:

- connect and check the air connections (G 1/8" thread for tubing Ø6 mm) with thread in accordance with double-effect or simple effect needs.
- mind the quality of the compressed air according to the specifications described in chapter 9. [Technical Specifications](#).

Depending on the configuration, the actuator may have one or two air connections.



6. Start-up



Read carefully the instructions in chapter 5. [Installation](#) before start-up the valve.



Before start-up, the persons in charge must be duly informed about how the valve works and the safety instructions to follow. This instruction manual will be available to personnel at all times.

Before putting the valve or the actuator into service the following must be taken into consideration:

- check that the piping and valve are completely free of possible traces of welding slag or other foreign particles. Clean the system if necessary,
- check to make sure the valve moves smoothly. If necessary, lubricate it with special grease or soapy water,
- check for possible leaks, and make sure the pipes and their connections are sealed and do not have any leaks,
- if the valve has been supplied with an actuator, make sure that the alignment of the valve shaft and the actuator shaft enables smooth movement,
- check that the compressed air pressure at the inlet of the actuator matches what is indicated in chapter 9. [Technical Specifications](#),
- consider the quality of the compressed air, according to the specifications described in chapter 9. [Technical Specifications](#),
- activate the valve.

ATTENTION



Do not modify the operating parameters for which the valve has been designed without prior written authorisation from INOXPA.

Do not touch the moving parts of the coupling between the actuator and the valve when the actuator is connected to the compressed air supply.



¡Burn hazard! Do not touch the valve or the pipes when hot fluids are circulating or when cleaning and/or sterilization are being carried out.

7. Operating problems

Water hammer	
Valve does not open/close	
Internal leak of product (valve closed)	
The valve plug is sticking	
POSSIBLE CAUSES	SOLUTIONS
<ul style="list-style-type: none"> The seal or guide bushing is worn, deteriorated or has gotten stuck 	Replace the seals. Replace the seals with ones made of a different material or grade that is more appropriate for the product. Lubricate with soapy water or a lubricant that is compatible with the seal material and the product.
<ul style="list-style-type: none"> Insufficient air pressure 	Replace the actuator with a larger one. Increase the compressed air pressure.
<ul style="list-style-type: none"> Incorrect configuration of control 	Adjust control top parameters according to needs
<ul style="list-style-type: none"> Normal wear of seals 	Replace the seals
<ul style="list-style-type: none"> Premature wear of the seal/affected by the product 	Replace the seals with ones made of a different material or grade that is more appropriate for the product. Reduce the pressure in the line. Lower the operating temperature.
<ul style="list-style-type: none"> Product residue has deposited on the valve seat and/or plug 	Clean frequently.
<ul style="list-style-type: none"> Excess product pressure 	Replace the actuator with a larger one. Connect an auxiliary compressed air nipple on the side of the spring to offset the excess pressure without exceeding 4 bar. Reduce the product pressure.
<ul style="list-style-type: none"> Loss of seal (vibrations) 	Tighten loose parts.
<ul style="list-style-type: none"> Product pressure exceeds the actuator specifications 	Replace the actuator with a larger one. Reduce the product pressure. Use auxiliary air on the spring side.
<ul style="list-style-type: none"> Warping of seals 	Replace the seals with ones of a different quality if they have deteriorated prematurely.
<ul style="list-style-type: none"> Actuator spring is in poor condition and/or suck (dirty) 	Replace the spring or clean.
<ul style="list-style-type: none"> The direction of flow is the same as the direction of closing 	The direction of flow should go against the direction of closing. Choke the air discharge to reduce the pressure.

8. Maintenance

8.1. GENERAL CONSIDERATIONS

This valve, just like any other machine, requires maintenance. The instructions in this chapter cover the maintenance of the valve, the identification and replacement of the spare parts and the disassembly and assembly of the valve. The instructions are aimed at maintenance personnel and those responsible for the supply of spare parts.



Read carefully the chapter [9. Technical Specifications](#).

Maintenance work should only be done by qualified persons who are trained and equipped with the necessary equipment to perform this kind of work.

All replaced material should be duly disposed or recycled according to the directives in effect in each area.

Make sure that the pipes are not under pressure before starting maintenance work..

8.2. MAINTENANCE

To perform maintenance properly is recommended:

- periodic inspection of the valve and its components,
- keeping an operational record of each valve writing down any problems,
- always having spare replacement seals in stock.

Pay special attention to the hazard warnings indicated in this manual during the performance of the maintenance work.



The valve and the pipes must never be under pressure during maintenance.

⚠ Burn hazard! Do not touch the valve or the pipes when hot fluids are circulating or when cleaning and/or sterilization are being carried out.

The time interval between each preventive maintenance may vary in accordance with the work conditions to which the valve is subject: temperature, pressure, number of operations per day, type of cleaning solutions used, etc.

8.2.1. Maintenance of the seals

REPLACING SEAL

Preventive maintenance	Replace after 12 months
Maintenance after a leak	Replace at the end of the process
Planned maintenance	Regularly check the absence of leaks and the smooth operation of the valve. Keep a record of the valve's maintenance. Use statistics for planning inspections.
Lubrication	During assembly, apply lubricants that are suitable with the material of which the seat seal is made. See the following table.

SEAL COMPONENT	LUBRICANT	NLGI DIN 51818 Class
HNBR / FPM	klübersynth UH 1 64-2403	3
EPDM / HNBR / FPM	PARALIQ GTE 703	3

8.2.2. Storage

The valves should be stored in a closed area under the following conditions:

- temperature between 15°C y 30°C,
- air humidity < 60%

Storage of the equipment outdoors is NOT allowed.

8.2.3. Spare parts

To request spare parts is necessary to indicate the type of valve, the size, the fabrication number, the position and the description of the part which can be found in chapter 9. [Technical Specifications](#).

8.3. CLEANING



The use of aggressive cleaning products such as caustic soda and nitric acid may burn the skin.

Wear rubber gloves during all cleaning procedures.

Always wear protective goggles.

8.3.1. CIP (clean-in-place) cleaning

If the valve is installed in a system with a CIP process, its disassembly will not be required. EPDM is the standard seal material that will be used for CIP cleaning, both in alkaline mediums and in acid mediums. The materials of the seal HNBR and FPM are not recommended.

Two types of solutions can be used for CIP processes:

a. alkaline solution: 1% by weight of caustic soda (NaOH) at 70°C (150°F). To make this solution:

1 kg NaOH + 100 l H₂O¹ = cleaning solution

2,2 l NaOH at 33% + 100 l H₂O = cleaning solution

b. acid solution: 0,5% by weight of nitric acid (HNO₃) at 70°C (150°F). To make this solution:

0,7 l HNO₃ at 53% + 100 l H₂O = solución de limpieza

1) only use chlorine-free water to mix with the cleaning agents

ATTENTION



Check the concentration of the cleaning solutions. An incorrect concentrations may lead to the deterioration of the valve seals.

To remove any traces of cleaning products, ALWAYS perform a final rinse with clean water at the end of the cleaning process.



Clean the entire interior and exterior of the valve before starting disassembly and assembly tasks.

8.3.2. Automatic SIP (sterilization-in-place)

Sterilization with steam is applied to all equipment including the pipping.

ATTENTION

Do NOT start the equipment during the sterilization with steam.

The parts and the materials will not be damaged if the indications specified in this manual are observed.

No cold fluid can enter the equipment until the temperature of the equipment is lower than 60°C (140°F).

Maximum conditions during the SIP process with steam or superheated water:

- a. maximum temperature: 140°C / 284°F
- b. maximum time: 30 min
- c. cooling: sterile air or inter gas
- d. materials: EPDM (the materials HNBR and FPM are not recommended)

8.4. DISASSEMBLING AND ASSEMBLING THE INNOVA G VALVE



Proceed with caution. Personal injury can occur.

Always disconnect the compressed air before starting to disassemble the valve.

Never disassemble the valve clamps directly without reading the instructions carefully, since the actuator contains a spring inside it with an applied load.

Valve and actuator assembly and disassembly should only be done by qualified persons.

The following tools are needed in order to disassembly and assembly the valve and the drives:

- 15 mm and 17 mm spanners to remove the shaft of the valve of DN25 size,
- two 17 mm spanners to remove the shaft of the valve of DN40 to DN100 size,
- 13 mm spanner for the clamps,
- appropriate tool (not piercing) to mount the seat seals,
- 30 mm socket wrench to remove the lantern.

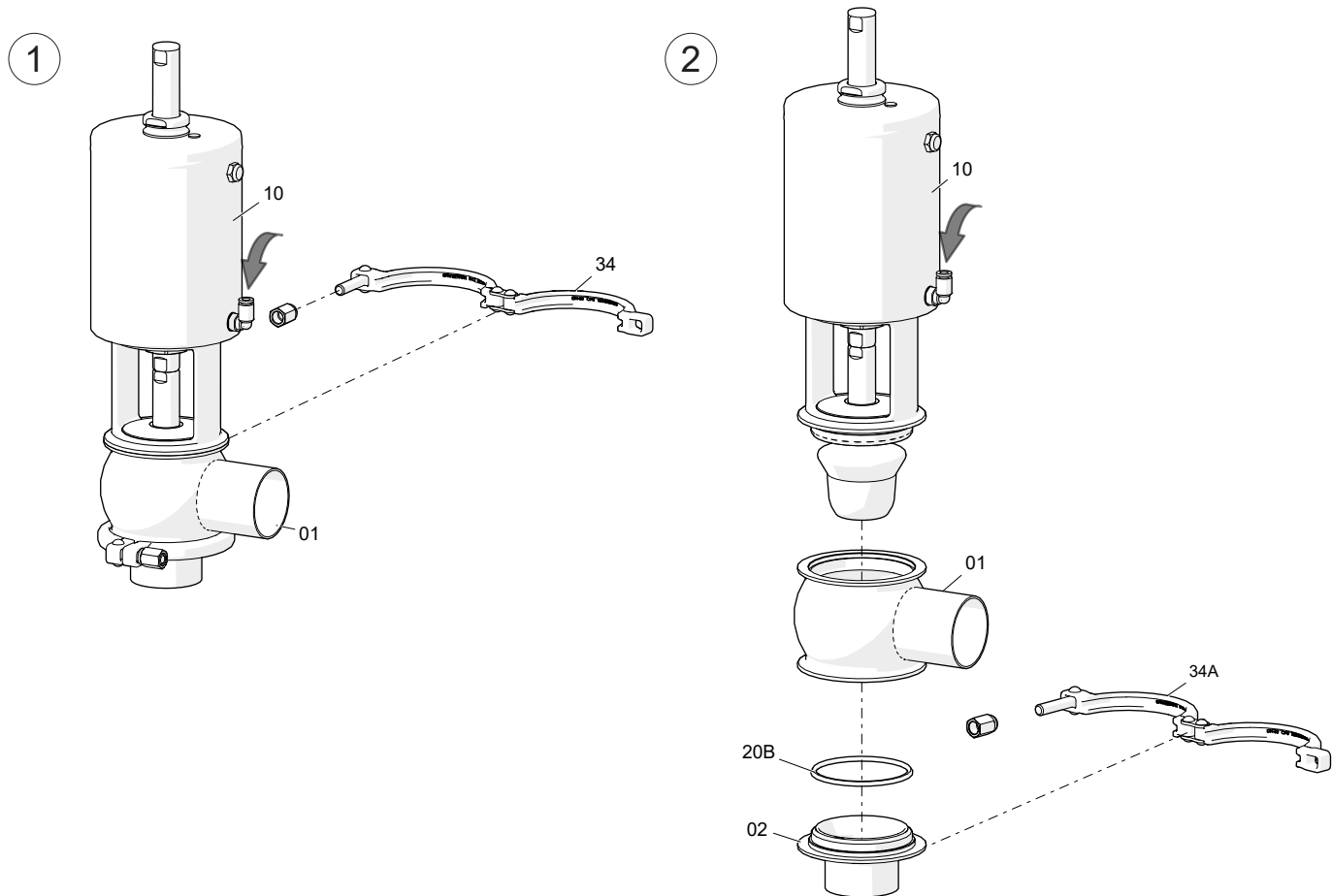
8.4.1. Disassembly

1. To the NC valves, apply compressed air to the actuator (10) so the valve shaft (08) passes to the open position.
2. Loose and separate the top clamp (34).
3. Separate the valve body (01) from the actuator (10) - lantern (32) - valve shaft(08) assembly.
4. Loose and separate the bottom clamp (34A).
5. Separate the bottom port (02) from the body valve (01).
6. Separate the O-ring (20B) from the valve bottom port (02).
7. To the NC valves, release the compressed air from the actuator (10).
8. Unscrew the valve shaft (08) from the actuator (10) shaft by two spanners.
9. Finish unscrewing the valve shaft (08) manually.
10. Remove the body cap (12), which has been housed in the lantern (21).
11. Remove the shaft seal (05), the guide bushing (17) and the O-ring (20B) from the body cap (12).
12. With a socket wrench, loose threaded guide from the actuator (10) to separate de lantern (21) from the actuator (10) and remove the pin (56).

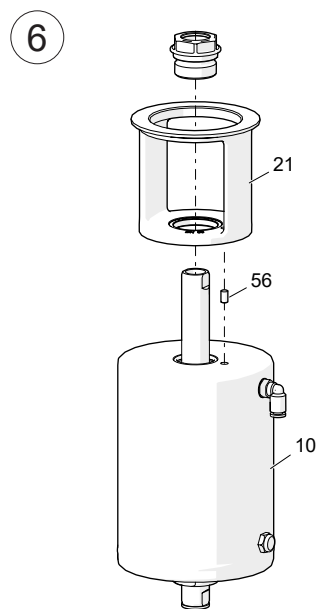
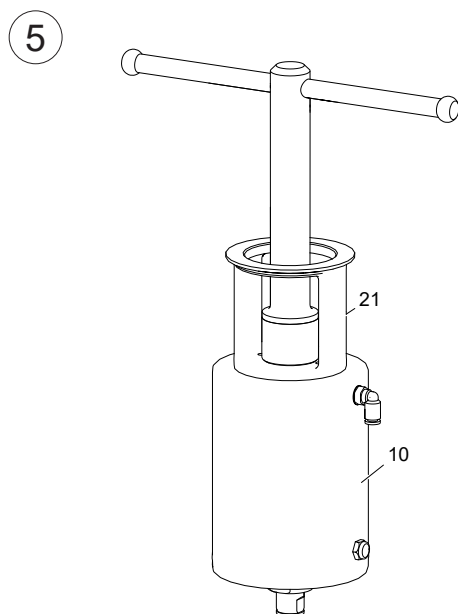
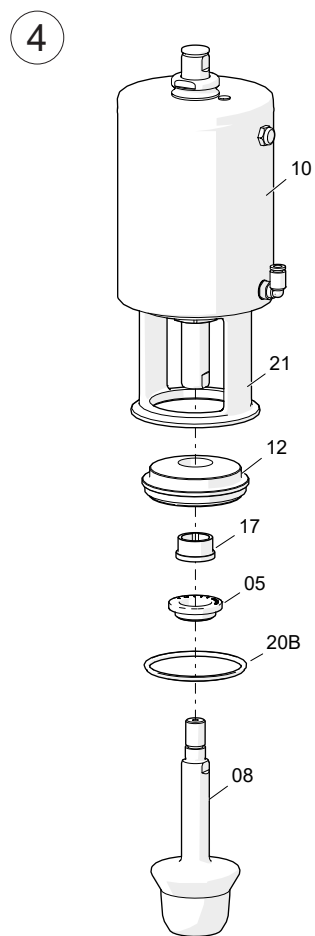
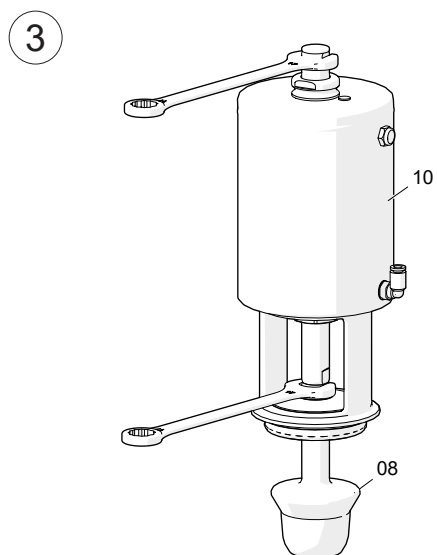
8.4.2. Assembly

1. Place the lantern (21) to the actuator (10) and fix its position with the pin (56).
2. Fix the lantern (21) to the actuator (10) with a socket wrench.
3. Place the guide bushing (17) on the body cap (12).
4. Place the shaft seal (05) and the O-ring (20B) on the body cap (12).
5. Place the body cap (12) in the lantern (21).
6. Thread the valve shaft (08) with the actuator (10) shaft by two spanners.
7. To the NC valves, apply compressed air to the actuator (10).
8. Place the actuator (10) - lantern (21) - valve shaft (08) - body cap (12) assembly on the valve body (01). The body is steerable 360°. Place the body according to the needs of the user.
9. Fit the valve body (01) with the top clamp (34).

10. To the NC valves, release the compressed air to the actuator (10).
11. Place the O-ring (20B) on the bottom port (02).
12. Place the bottom port (02) under the valve body (01) and fix it with the bottom clamp (34A).
13. Open and close the valve several times, applying compressed air to ensure the valve's assembly is correct and check that the shaft seal fits smoothly with the valve body.



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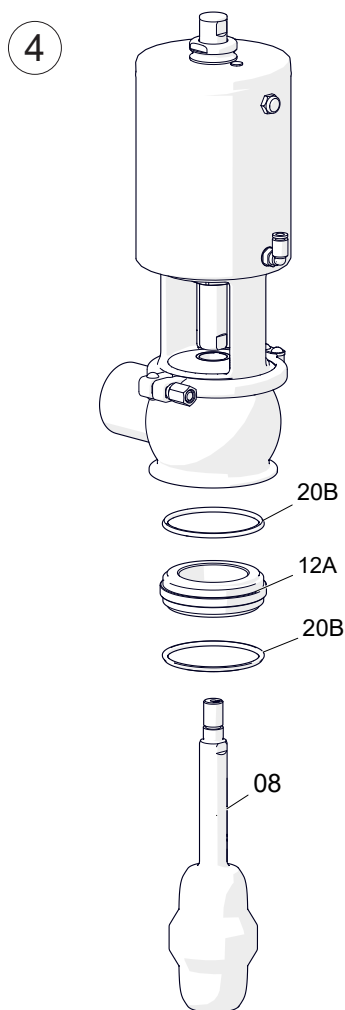
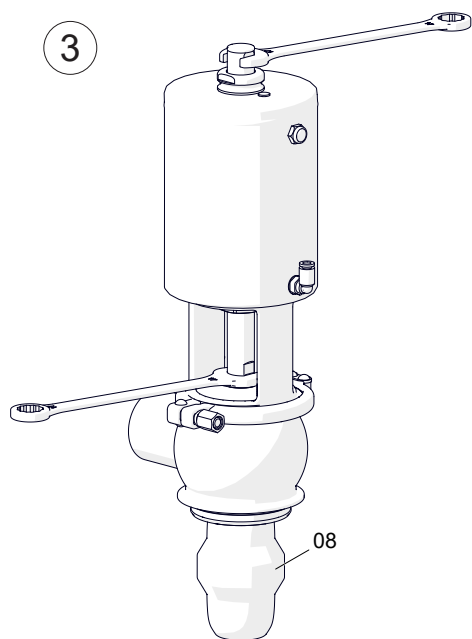
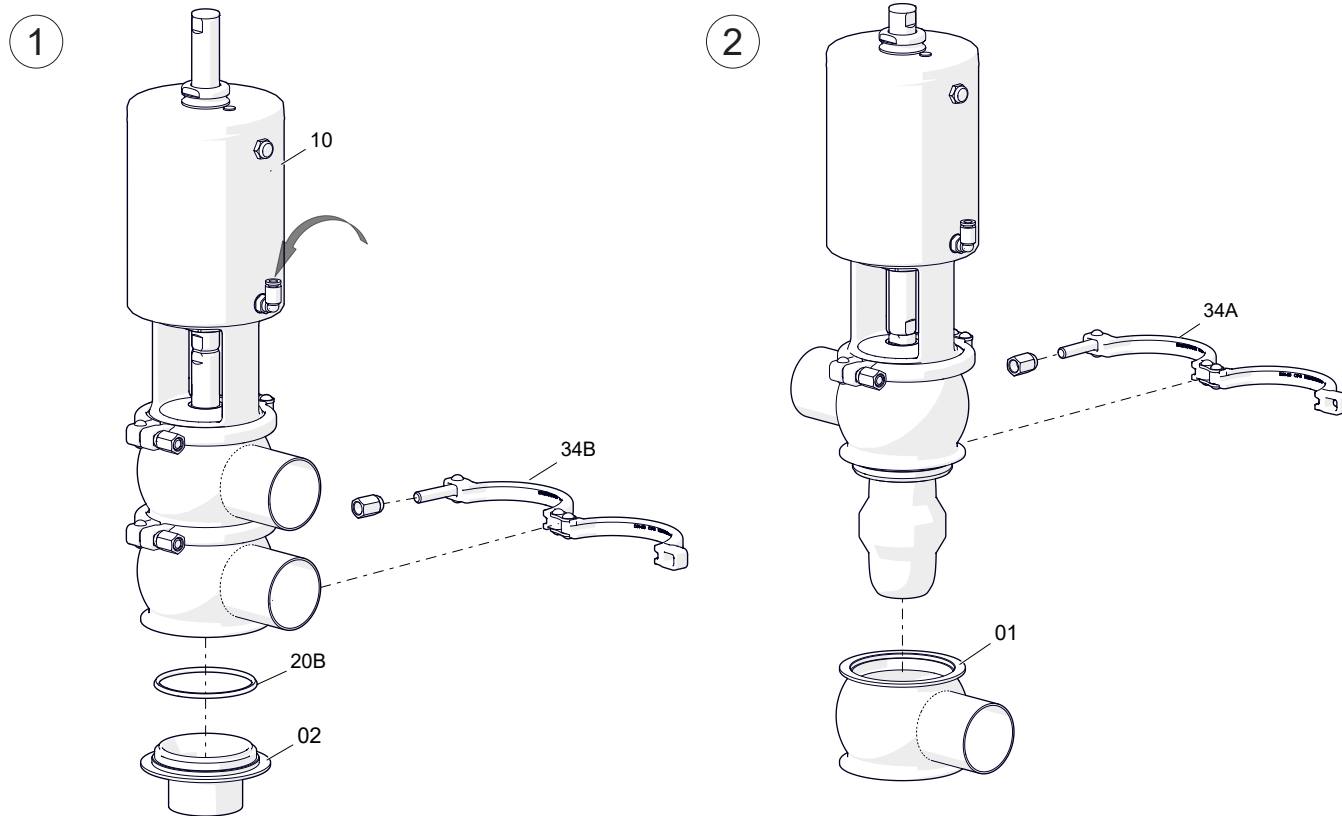
8.5. DISASSEMBLING AND ASSEMBLING THE DUAL REGULATION INNOVA G VALVE

8.5.1. Disassembly

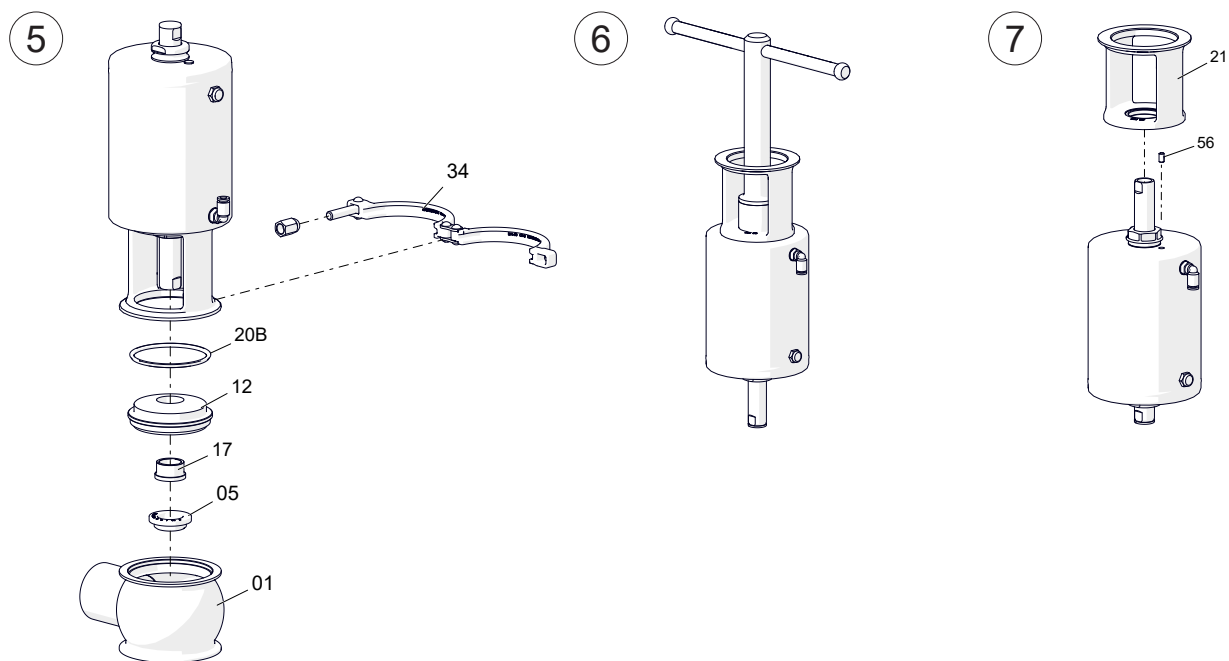
1. Apply compressed air to the actuator (10) of the NC valves so the valve shaft (08) is not touching the lower body (01A).
2. Loosen and separate the lower clamp (34B).
3. Separate the lower port (02) and O-ring (20B).
4. Release the compressed air from the actuator (10) of the NC valves.
5. Apply compressed air to the actuator (10) of the NO valves.
6. Loosen and separate the intermediate clamp (34A) to separate the lower body (01A) from the valve.
7. Use two 17 mm open-ended spanners to unscrew the valve shaft (08) from the actuator shaft (10).
8. Remove the spacer bushing (12A) and O-rings (20B).
9. Loosen and separate the upper clamp (34).
10. Separate the top body (01) from the valve.
11. Separate the top body cover (12) from the lantern (21).
12. Remove the shaft seal (05), guide bushing (17) and O-ring (20B) from the top body cover (12).
13. Using a socket spanner, loosen the actuator threaded guide (10) to separate the lantern (21) from the actuator (10) and remove the pin (56).

8.5.2. Assembly

1. Apply compressed air to the actuator (10) of the NO valves.
2. Place the lantern (21) on the actuator (10) and fix into position using the pin (56).
3. Attach the lantern (21) to the actuator (10) using a socket spanner.
4. Place the shaft seal (05), guide bushing (17) and O-ring (20B) into the top body cover (12).
5. Place the top body cover (12) onto the lantern (21).
6. Place the lower body (01) of the valve into the actuator unit (10) and secure using the upper clamp (34).
7. Place the O-rings (20B) in the spacer bushing (12A).
8. Place the spacer bushing (12A) into the lower part of the top body (01) of the valve.
9. Thread the valve shaft (08) with the actuator shaft (10) using two 17 mm open-end spanners.
10. Place the lower body (01A) and secure it using the intermediate clamp (34A).
11. Apply compressed air to the actuator (10) of the NC valves.
12. Release the compressed air from the actuator (10) of the NO valves.
13. Place the O-ring (20B) onto the lower port (02).
14. Place the lower nozzle (02) in the lower body (01) of the valve and secure it using the lower clamp (34B).
15. Open and close the valve several times by applying compressed air to ensure the valve is assembled correctly and to check the shaft joint couples smoothly to the valve body.



10.247.32.0051 - 0054



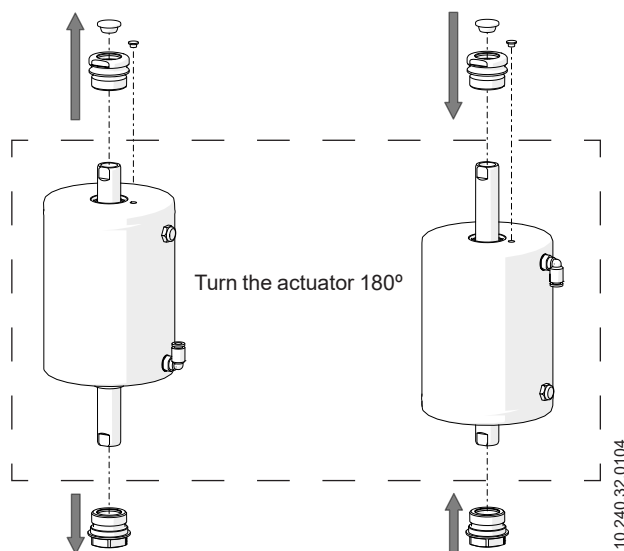
10.247.32.0055 - 0057

8.6. ACTUATOR CONFIGURATION

The standard configuration of the valves is NC (normally closed).

If the NO (normally open) valve is needed:

1. remove the threaded guide from the lower part of the actuator,
2. remove the plugs and the threaded guide from the upper part of the actuator,
3. turn the actuator 180°,
4. place the plugs and the threaded guide on the upper part of the actuator.
5. place the threaded guide on the bottom part of the actuator.



10.240.32.0104

8.7. DISASSEMBLY AND ASSEMBLY OF ADAPTER KIT OF THE CONTROL HEAD



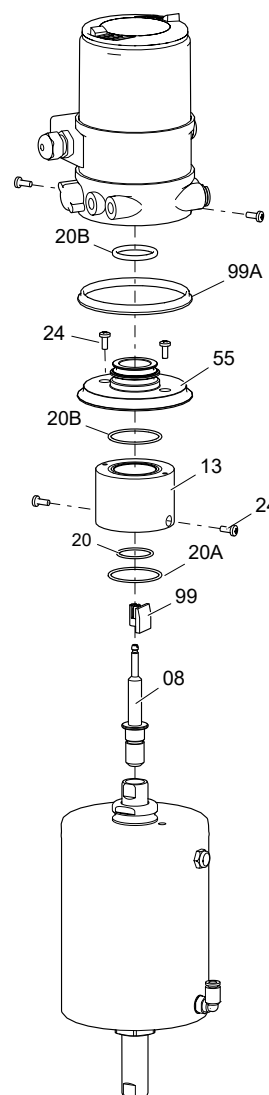
Check that the actuator is without pressure before starting the assembly or disassembly works.

8.7.1. Disassembly

1. Disconnect the compressed air supply.
2. Loose the screws and separate the control head from the actuator.
3. Unscrew the magnet (99) of the control head.
4. Remove the O-rings (20B,99A) from the control head support (55).
5. Loose the screws (24) from the control head support (55).
6. Separate the control head support (55).
7. Remove the O-ring (20B) from the control head base (13).
8. Loose the screws (24) from the control head base (13).
9. Separate the control head base (13).
10. Remove the O-rings (20,20A) from the control head base (13).
11. Unscrew the adapter shaft (08) from the actuator.

8.7.2. Assembly

1. Screw the adapter shaft (08) on the actuator shaft.
2. Place the O-rings (20,20A) on the control head base (13).
3. Place the control head base (13) on the actuator and fix it with the screws (24).
4. Place the O-ring (20B) on the control head base (13).
5. Place the control head support (55) and fix it with the screws (24).
6. Place the O-rings (20B,99A) on the control head support (55).
7. Screw the magnet (99) on the adapter shaft (08).
8. Place the control head and fix it with the screws.



10.240.32.0117

9. Technical Specifications

9.1. VALVE

Maximum working pressure	1000 kPa (10 bar)
Minimum working pressure	vacuum
Maximum working temperature	121°C (250°F) EPDM seals (for higher temperatures other grades of seals will be used)

9.2. ACTUATOR

Compressed air pressure	600 - 800 kPa (6 - 8 bar)
Compressed air quality	per ISO 8573-1:2010: <ul style="list-style-type: none"> - <u>Solid particulate content</u>: quality class 3, max. particle dimension = 5 µ, max particle density = 5 mg/m³. - <u>Water content</u>: quality class 4, max. dew point = 2°C. If the valve is used at a high altitude or under low ambient temperature conditions, the dew point must be adjusted accordingly. - <u>Oil content</u>: quality class 5, preferentially oil free, max. 25 mg oil per 1 m³ air.
Compressed air fitting	G 1/8
Compressed air consumption (litres N/cycle of P _{rel} = 6 bar)	

T1		T2		T3		T4	
A/S	A/A	A/S	A/A	A/S	A/A	A/S	A/A
1,1	1,8	2,5	4,0	3,7	6,1	5,6	10,4

9.3. MATERIALS

Parts in contact with the product	1.4404 (AISI 316L)
Other steel parts	1.4301 (AISI 304)
Seals in contact with the product	EPDM (standard) - FPM - HNBR
Internal surface finish	bright polish Ra ≤ 0,8 µm
External surface finish	matt

9.4. SIZES AVAILABLES

DIN EN 10357 serie A <small>(formerly DIN 11850 series 2)</small>	DN 25 - DN 100
ASTM A269/270 <small>(corresponds to OD tube)</small>	OD 1" - OD 4"
Connections	weld, male, clamp

9.5. WEIGHTS

INNOVA G:

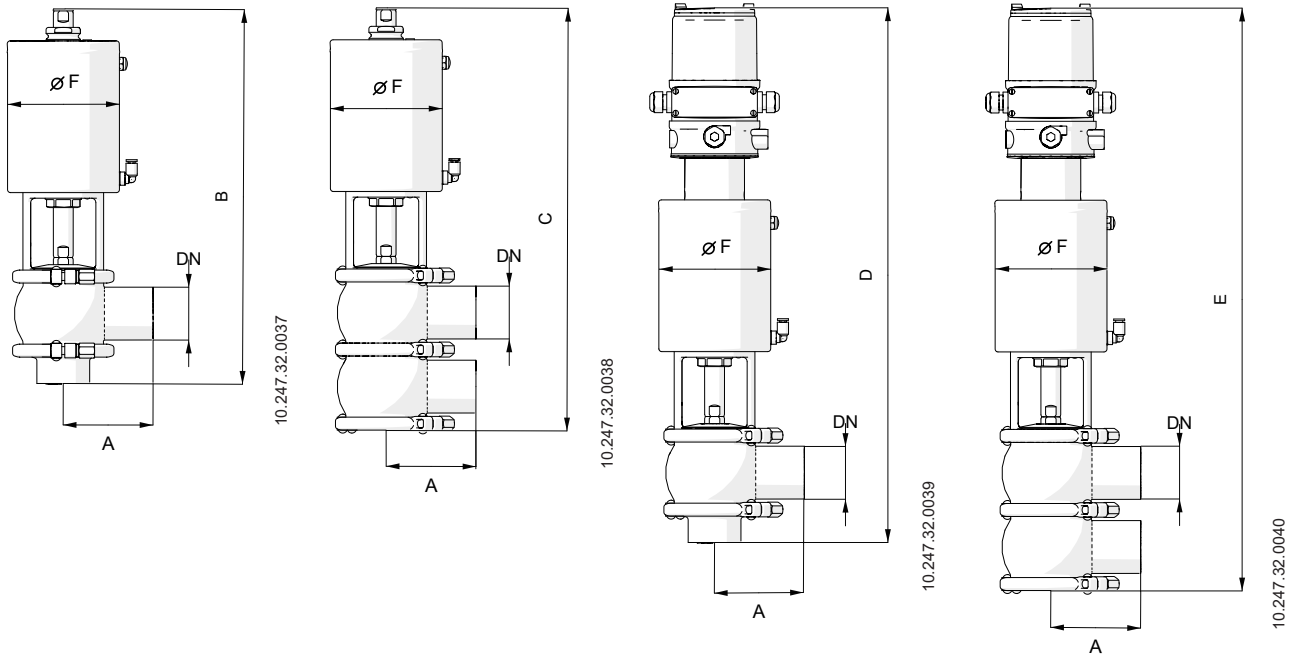
	DN	Weight [kg]							
		T1		T2		T3		T4	
		A/S	A/A	A/S	A/A	A/S	A/A	A/S	A/A
DIN	25	4,4	3,7	-	-	-	-	-	-
	40	5,5	4,8	-	-	-	-	-	-
	50	-	-	8,8	7,3	-	-	-	-
	65	-	-	-	-	14,4	11,6	-	-
	80	-	-	-	-	15,8	13,1	-	-
	100	-	-	-	-	-	-	23,4	19,2
OD	1"	4,4	3,7	-	-	-	-	-	-
	1½"	5,5	4,8	-	-	-	-	-	-
	2"	-	-	8,9	7,3	-	-	-	-
	2½"	-	-	-	-	14,5	11,7	-	-
	3"	-	-	-	-	15,7	13,0	-	-
	4"	-	-	-	-	-	-	24,1	20,0

Dual regulation INNOVA G:

	DN	Weight [kg]							
		T1		T2		T3		T4	
		A/S	A/A	A/S	A/A	A/S	A/A	A/S	A/A
DIN	25	5,2	4,5	-	-	-	-	-	-
	40	7,0	6,3	-	-	-	-	-	-
	50	-	-	11,1	9,6	-	-	-	-
	65	-	-	-	-	19,3	16,6	-	-
	80	-	-	-	-	22,0	19,2	-	-
	100	-	-	-	-	-	-	32,3	28,1
OD	1"	5,2	4,5	-	-	-	-	-	-
	1½"	7,0	6,3	-	-	-	-	-	-
	2"	-	-	11,1	9,6	-	-	-	-
	2½"	-	-	-	-	19,3	16,6	-	-
	3"	-	-	-	-	21,7	18,9	-	-
	4"	-	-	-	-	-	-	33,0	28,8

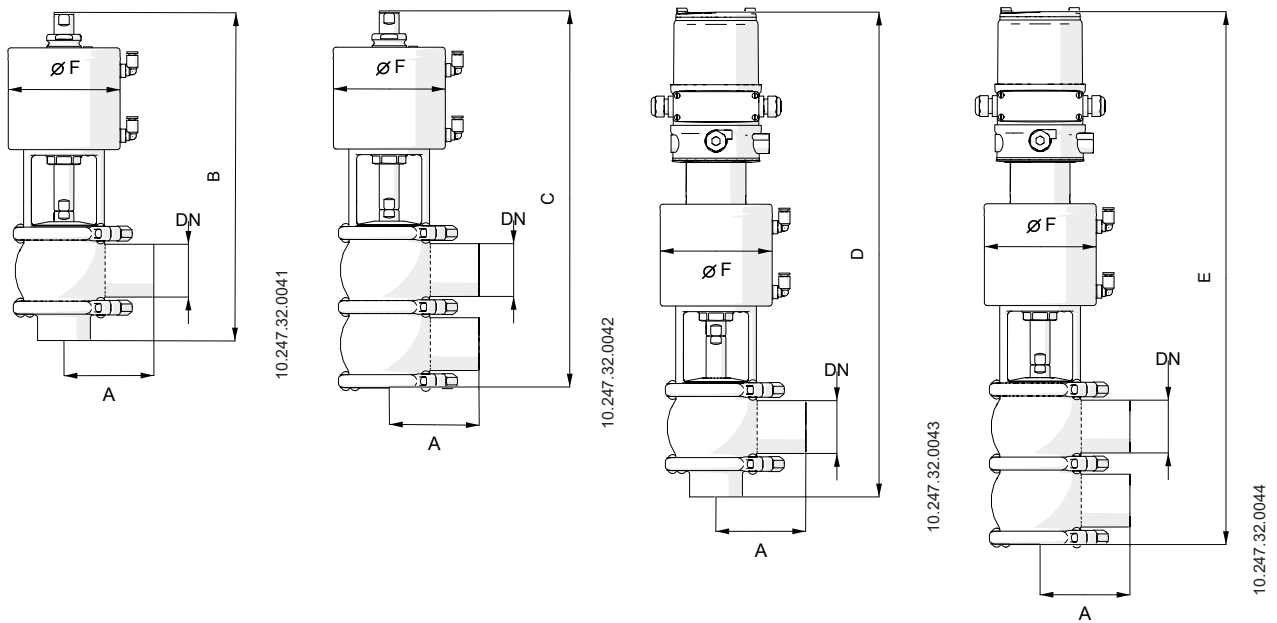
9.6. DIMENSIONS

9.6.1. INNOVA G valve with A/S actuator



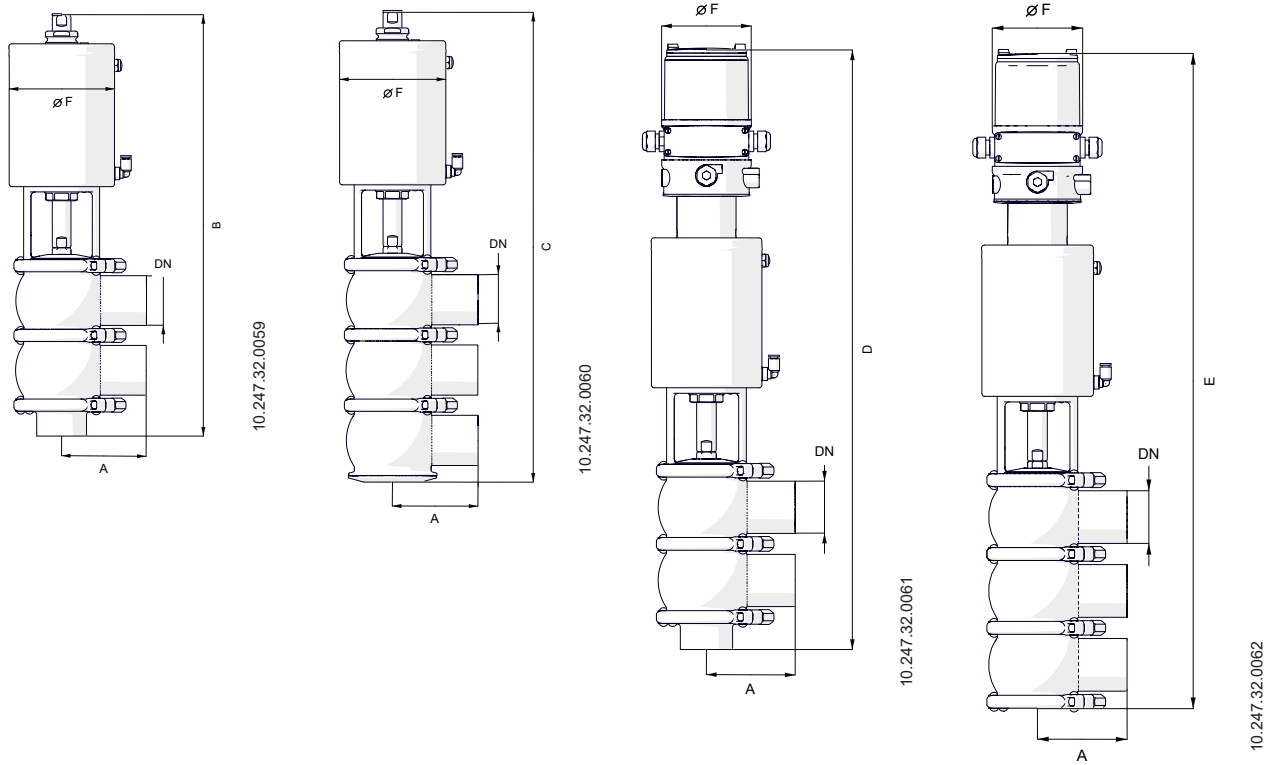
DN	Dimensions [mm]						
	A	B	C	D	E	ØF	
25	50	325	355	470	500	90	
40	85	345	385	490	530	90	
DIN	50	90	410	460	550	115	
	65	110	445	500	580	140	
	80	125	455	530	590	140	
	100	150	510	585	645	170	
	1"	50	320	350	470	495	90
OD	1½"	85	340	375	485	520	90
	2"	90	410	455	545	590	115
	2½"	110	445	490	580	625	140
	3"	125	450	515	585	650	140
	4"	150	510	580	645	715	170

9.6.2. INNOVA G valve with A/A actuator



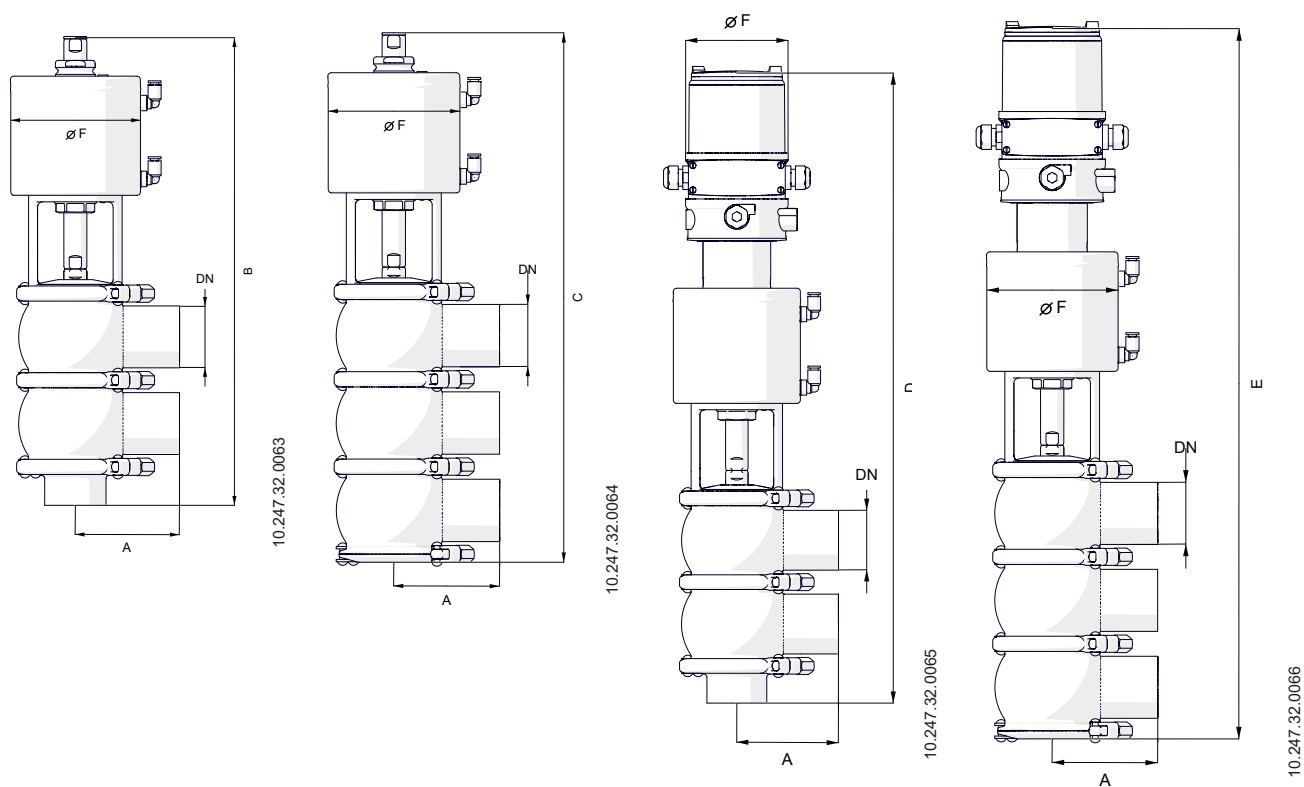
DN	Dimensions [mm]						
	A	B	C	D	E	ØF	
25	50	295	325	440	470	90	
40	85	315	355	460	500	90	
DIN	50	90	360	410	500	115	
	65	110	395	450	530	140	
	80	125	405	480	540	140	
	100	150	460	535	595	170	
	1"	50	290	320	440	465	90
OD	1½"	85	310	345	455	490	90
	2"	90	360	405	495	540	115
	2½"	110	395	440	530	575	140
	3"	125	400	465	535	600	140
	4"	150	460	530	595	665	170

9.6.3. Dual regulation INNOVA G valves with A/S actuator



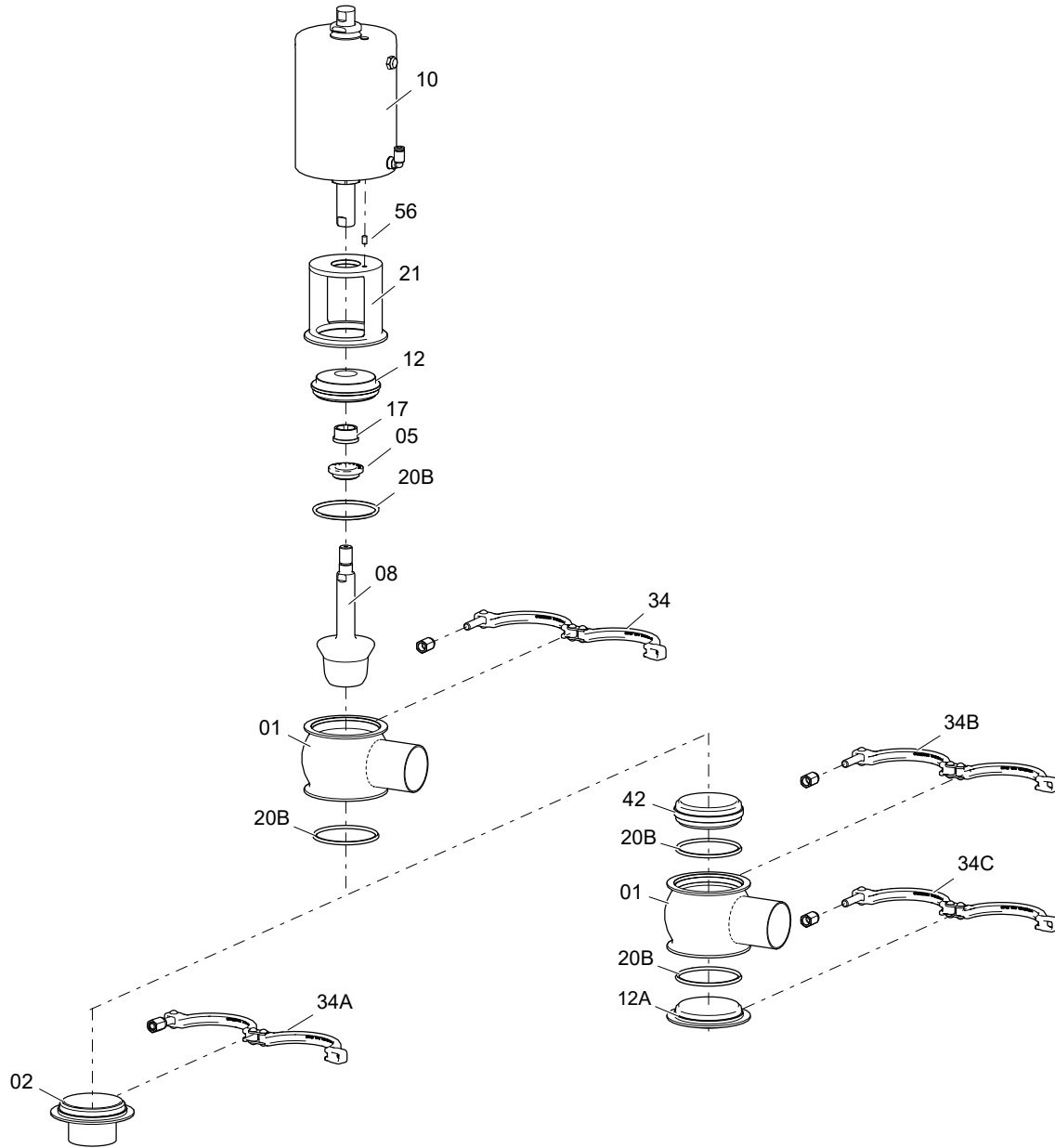
DN	Dimensions [mm]						
	A	B	C	D	E	ØF	
DIN	25	50	375	405	520	550	90
	40	85	405	445	550	590	90
	50	90	485	535	620	670	115
	65	110	535	595	675	730	140
	80	125	560	640	695	775	140
	100	150	640	710	775	845	170
OD	1"	50	370	395	515	540	90
	1½"	85	400	435	545	580	90
	2"	90	485	530	620	665	115
	2½"	110	530	575	665	710	140
	3"	125	550	615	685	750	140
	4"	150	635	700	770	835	170

9.6.4. Dual regulation INNOVA G valves with A/A actuator



DN	Dimensions [mm]						
	A	B	C	D	E	ØF	
DIN	25	50	345	375	490	520	90
	40	85	375	415	520	560	90
	50	90	435	485	570	620	115
	65	110	490	545	625	680	140
	80	125	510	590	645	725	140
	100	150	590	660	725	795	170
OD	1"	50	340	365	485	510	90
	1½"	85	370	405	515	550	90
	2"	90	435	480	570	615	115
	2½"	110	480	525	615	660	140
	3"	125	500	565	635	700	140
	4"	150	585	650	720	785	170

9.7. INNOVA G VALVE EXPLODED VIEW AND PARTS LIST

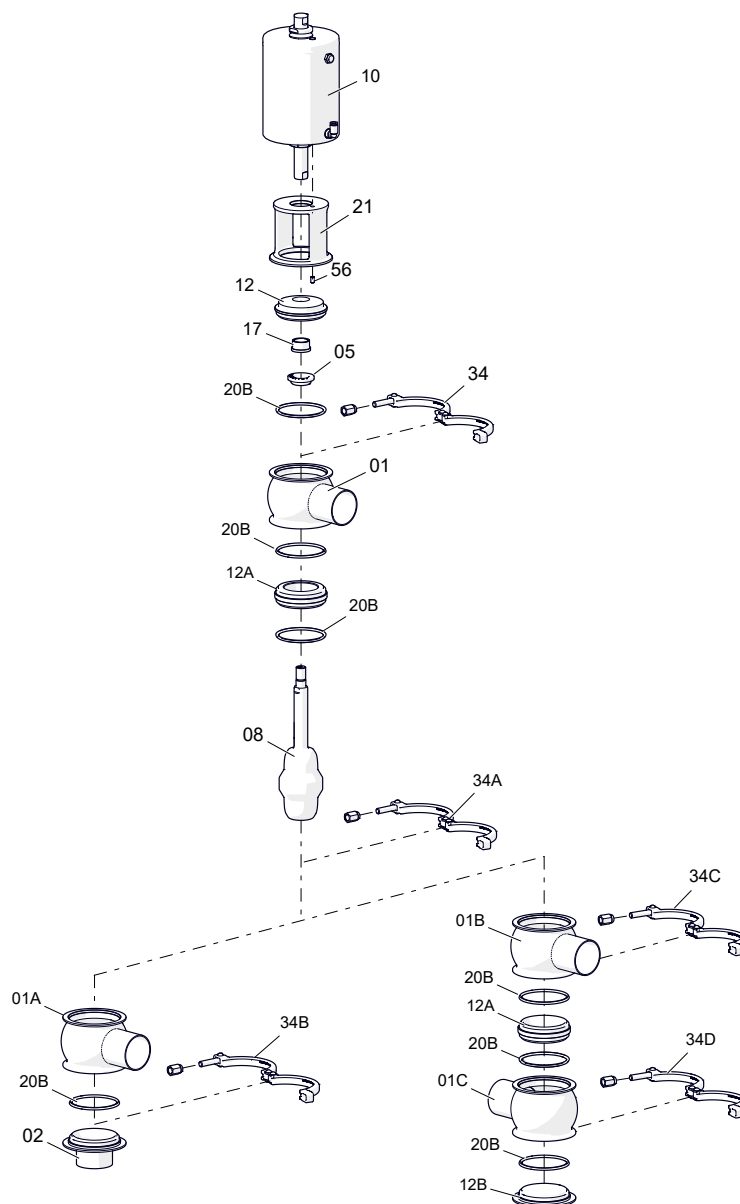


10.247.32.0036

Position	Description	Quantity		Material
		A ¹	B ²	
01	body	1	2	1.4404 (AISI 316L)
02	bottom port	1	-	1.4404 (AISI 316L)
05	shaft seal ³	1	1	EPDM / FPM / HNBR
08	shaft	1	1	1.4404 (AISI 316L)
10	actuator	1	1	1.4307 (AISI 304L)
12	top body cap	1	1	1.4404 (AISI 316L)
12A	bottom body cap	-	1	1.4404 (AISI 316L)
12B	lower body cap	-	1	1.4404 (AISI 316L)
17	guide bushing ³	1	1	PTFE
20B	O-ring ³	3	6	EPDM / FPM / HNBR
21	lantern	1	1	1.4301 (AISI 304)
34,34A,34B,34C	clamp	2	4	1.4301 (AISI 304)
56	pin	1	1	A2

1) 2 bodies (H / E / F / G)
 2) 3 bodies (J / P / R / S / V / W / X / Z)
 3) recommended spare parts

9.8. DUAL REGULATION INNOVA G VALVE EXPLODED VIEW AND PARTS LIST



10.247.32.0058

Position	Description	Quantity		Material
		A ¹	B ²	
01,01A,01B,01C	body	2	3	1.4404 (AISI 316L)
02	bottom port	1	-	1.4404 (AISI 316L)
05	shaft seal ³	1	1	EPDM / FPM / HNBR
08	shaft	1	1	1.4404 (AISI 316L)
10	actuator	1	1	1.4307 (AISI 304L)
12	top body cap	1	1	1.4404 (AISI 316L)
12A	bottom body cap	1	1	1.4404 (AISI 316L)
12B	lower bushing	-	1	1.4404 (AISI 316L)
17	guide bushing ³	1	1	PTFE
20B	O-ring ³	4	6	EPDM / FPM / HNBR
21	lantern	1	1	1.4301 (AISI 304)
34,34A,34B,34C,34D	clamp	3	5	1.4301 (AISI 304)

1) 2 bodies (H / E / F / G)

2) 3 bodies (J / P / R / S / V / W / X / Z)

3) recommended spare parts

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