Instruction Manual

INNOVA R

Double Seat Valve

Translation of the original instructions 10.253.30.01EN · (0) 2025/09

EC Declaration of conformity

INOXPA S.A.U.
Telers, 60
17820 - Banyoles (Spain)

hereby declares under our sole responsibility that the

Machine:	**DOUBLE SEAT VALVE**
Model:	**INNOVA**
Type:	**R**
Size:	**DN 40 - DN 100 / OD 1½" - OD 4"**
Serial number:	**IXXXXXXXXX** to **IXXXXXXXXX** **XXXXXXXXXIINXXX** to **XXXXXXXXXIINXXX**

fulfills all the relevant provisions of the following directive:

Machinery Directive 2006/42/EC
Pressure Equipment Directive 2014/68/EU [1]
Regulation (EC) No 1935/2004
Regulation (EC) No 2023/2006

and with the following harmonised 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 Reyero Brunet
Technical Office Manager
2 September 2025

Document: 10.253.30.02EN
Revision: (0) 2025/09

[1] DN≤25 Designed and manufactured in accordance with good engineering practices
DN>25 Class I equipment. Conformity assessment procedure used: Module A

Declaration of conformity

INOXPA S.A.U.
Telers, 60
17820 - Banyoles (Spain)

hereby declares under our sole responsibility that the

Machine:	**DOUBLE SEAT VALVE**
Model:	**INNOVA**
Type:	**R**
Size	**DN 40 - DN 100 / OD 1½" - OD 4"**
Serial number:	**IXXXXXXXXX** to **IXXXXXXXXX** **XXXXXXXXXIINXXX** to **XXXXXXXXXIINXXX**

fulfills all the relevant provisions of the following directive:

Supply of Machinery (Safety) Regulations 2008
Pressure Equipment (Safety) Regulations 2016[1]

and with the following harmonised 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 Reyero Brunet
Technical Office Manager
2 September 2025

Document: 10.253.30.03EN
Revision: (0) 2025/09

[1] DN≤25 Designed and manufactured in accordance with good engineering practices
DN>25 Class I equipment. Conformity assessment procedure used: Module A

1. Table of contents

2. General considerations

2.1. INSTRUCTION MANUAL

This manual contains information regarding taking delivery of, installing, operating, assembling, disassembling and maintaining the INNOVA R double seat valve.

Read the instructions carefully, familiarise yourself with how the valve works and operates, and follow the instructions closely before starting up the valve. These instructions should be kept in a set location and close to where it is installed.

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

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

2.2. REGARDING COMPLIANCE WITH THE INSTRUCTIONS

Failing to comply with these instructions may prove hazardous for operators, the environment, the equipment and the installations, and may lead to losing the right to claim for damages.

Failing to comply with these instructions could lead to the following risks in particular:

- a fault with the main functions of the equipment and/or plant,
- specific maintenance and repair procedure errors,
- potential electrical, mechanical and chemical risks,
- potential environmental harm from released substances.

2.3. WARRANTY

The warranty conditions are specified in the General Terms and Conditions of Sale provided when ordering.

The equipment cannot be modified in any way without first checking with the manufacturer. Use original spare parts and accessories for your own safety. The manufacturer will no longer be liable should other parts be used.
Any potential change to the service conditions requires written authorisation from INOXPA.

Failure to comply with the instructions in this manual means the equipment has been used incorrectly from a technical and personal safety point of view, exempting INOXPA of any liability in the event of accidents or personal injury and/or material damage. Every fault resulting from improper equipment use will not be covered by the warranty either.

Please do not hesitate to contact us if you have any queries or require more in-depth explanations about specific data (adjustments, assembly, disassembly, and so on).

3. Safety

3.1. WARNING SYMBOLS

General warning of danger to persons and/or the valve

ATTENTION A safety instruction to prevent damage to the equipment and/or its functions

3.2. GENERAL SAFETY INSTRUCTIONS

Read the instruction manual carefully before installing and starting up the valve. If in doubt, contact INOXPA.

3.2.1. During installation

Always consider the Technical specifications of section 9.
Valve installation and use must always be in accordance with the applicable health and safety regulations.
Check the valve was assembled correctly with the shaft perfectly aligned before starting it up. Misalignment and/or excessive forces when fixing the valve may cause serious mechanical problems.

3.2.2. During operation

Always consider the Technical specifications of section 9.
NEVER exceed the specified threshold values.
NEVER touch the valve and/or pipes in contact with the fluid during operation. There is a burn risk if operating with hot products.
The valve contains parts that move in a straight line. Do not place hands or fingers in the valve closing area as it may result in serious injuries.

3.2.3. During maintenance

Always consider the Technical specifications of section 9.
NEVER disassemble the valve until the pipes have been emptied. Bear in mind that the fluid in the pipes may be hazardous or extremely hot. Consult the regulations in effect in each country for these cases.
There is a loaded spring inside the actuator. Follow the steps specified in this manual to avoid any harm when performing maintenance operations.
Do not leave loose parts on the floor.

4. General information

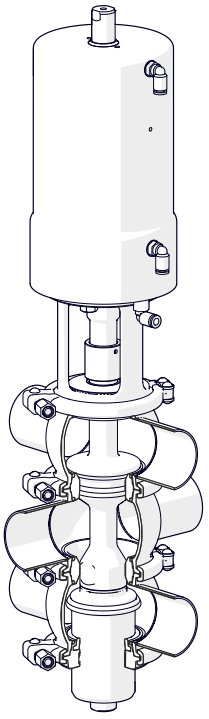
4.1. DESCRIPTION

The INNOVA R valve is a pneumatic double seat diverter valve for hygienic applications with a mixproof function between the upper and intermediate body.

At atmospheric pressure, a leak detection chamber forms between the seats of both upper shafts, enabling safe separation between two products, one of which is usually a cleaning agent (CIP). The leak detection chamber is cleaned by separate activation of the seats during the CIP stage of the installation.

4.2. APPLICATION

The INNOVA R pneumatic valve is a hygienic valve suitable for applications in the food, beverage, pharmaceutical and chemical industries.



10.253.32.0021

5. Installation

5.1. RECEPTION OF THE VALVE

INOXPA are not liable for any material wear during shipping or unpacking.

Check all the parts listed on the delivery note are there when taking delivery of the valve:
- the complete valve,
- its components if supplied,
- the instruction manual.

INOXPA inspect every valve before packaging, but cannot guarantee the shipped goods will reach the user intact.

During unpacking, ensure to:
- take every possible precaution to avoid damaging the valve and its components,
- remove any possible remnants of the packaging for the valve or its parts,
- inspect the valve or its component parts to detect potential damage caused during shipping.

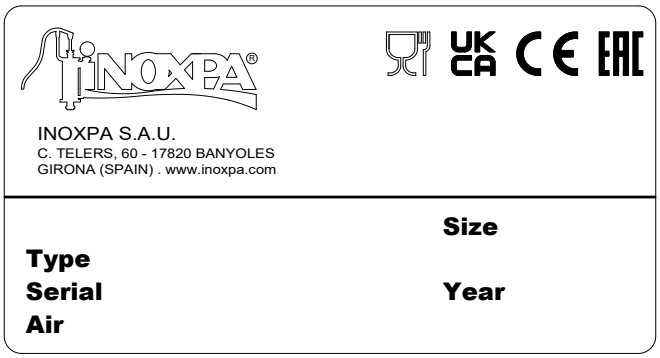
5.2. TRANSPORTATION AND STORAGE

The buyer or user will be responsible for assembling, installing, starting up and operating the valve.

Take every precaution to avoid damage to the valve and its components during transportation and/or storage.

5.3. IDENTIFYING THE VALVE

The valve comes with a label containing the characteristics, including the serial number of the valve. State the serial number on every document when referring to the valve.



WB	R	J	0	-	0	06	52	050	11	0	

Options

0	ID Ra ≤ 0.8
1	ID Ra ≤ 0.5

Actuator

11	T1 S/E NC
12	T2 S/E NC
13	T3 S/E NC

Size

040	DN 40, OD 1½”	076	OD 3”
050	DN 50, OD 2”	080	DN 80
063	OD 2½”	100	DN 100, OD 4”
065	DN 65		

Seals

43	HNBR
52	EPDM
78	FPM

Material

06	1.4404 (AISI 316L)

Connection

0	Welded

Standard pipes

0	DIN
1	OD

Body configuration

J,P,R,S V,W,X,Z	3 bodies

Type

R	Mixproof routing valve

Product family

WB	INNOVA valve

5.4. LOCATION

Place the valve with enough space around it to make disassembling, inspecting and checking the valve easy, and to enable access to the actuator air connection device, even when the valve is in operation. See the section 5.7. Welding for the minimum clearances required. The installation must allow for easy disassembly of removable parts.

5.5. GENERAL INSTALLATION

Once the valve location is defined, it can be attached to the pipes by welding the valve body or by using accessories (connectors).

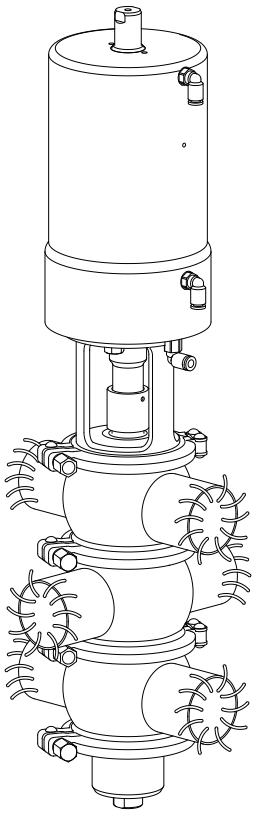
If using accessories to attach the valve to the pipes, remember the seals and tighten the connections correctly.

On the other hand, if attached by welding, disassemble the valve to prevent damage to the seals by following the instructions in the section 8.4. Disassembling and assembling the valve before welding the valve body to the pipes.

While assembling the valve, avoid adding too much stress and pay attention to:

- any vibrations that may occur in the installation,
- the potential thermal expansion of pipes caused by the flow of hot fluids,
- the weight the pipes can bear,
- excessive welding current.

The design of the bodies means the valve can drained fully in the vertical position. If the valve is placed in other positions, horizontal or tilted, install the valve with the bottom port facing downwards.



5.6. CHECKING AND INSPECTING

Check the following before using the valve:

- the clamps and nuts are tightened well.
- if it comes with a pneumatic drive, apply compressed air three or four times, checking that the valve opens and closes freely.

5.7. WELDING

Only qualified and trained persons equipped with the necessary means can perform welding work.

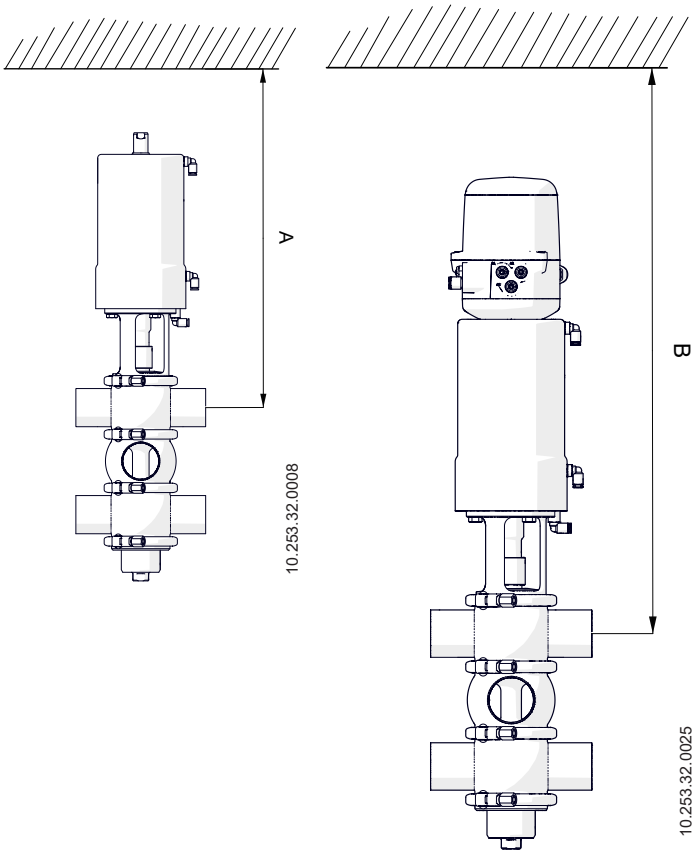
Every weld must be “full penetration”, with no pitting, folds, crevices, cracks and misalignments and can have an interior surface finish as welded in accordance with AWS/ANSI D 18.1. The weld discolouration once welded must be weld 1, 2 or 3 as shown in AWS/ANSI D 18.2.

To perform welding work:

- disassemble the valve following the instructions in the section 8.4. Disassembling and assembling the valve,
- weld the valve body to the pipes, maintaining the clearance indicated in the table below. This will enable disassembly of the valve, subsequent inspections and replacement of any necessary valve parts, such as seals, guides, and so on.

Valve size	A [mm]	B [mm]
DN 40 / OD 1½”	565	725
DN 50 / OD 2”	600	755
DN 65 / OD 2½”	735	890
DN 80 / OD 3”	780	925
DN 100 / OD 4”	900	1060

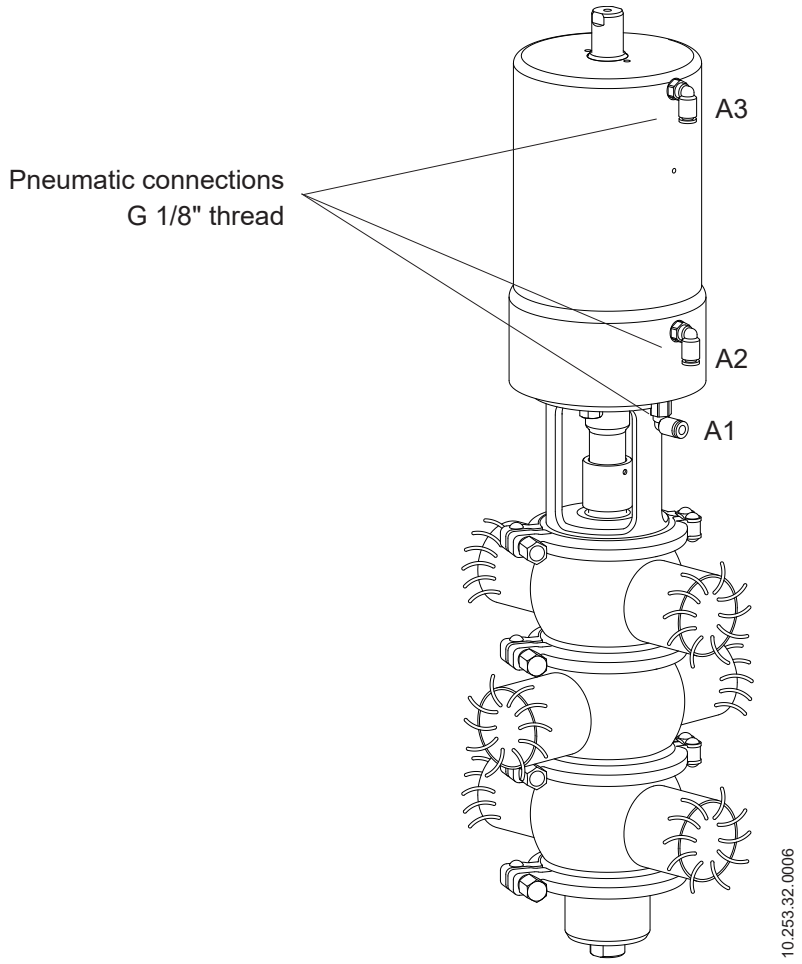
10.250.14.0004



5.8. CONNECTING THE AIR TO THE ACTUATOR

To connect the air to the actuator:

- connect and inspect the compressed air connections (G 1/8'' thread for a Ø6 mm pipe) depending on double-acting or single-acting requirements.
- consider the quality of the compressed air in accordance with the specifications described in the section 9. Technical specifications.



6. Start-up

Read the instructions in the section 5. Installation carefully before starting up the valve.

Those responsible must be informed about how the valve works and what safety instructions to follow as required before start-up. This instruction manual is to be available to staff at all times.

Consider the following before starting up the valve and the actuator:

- confirm there is absolutely no potential welding slag or other foreign particles inside the pipes and valve. Clean the system if necessary,
- check the valve moves smoothly. Lubricate with special grease or soapy water if needed,
- monitor for potential leaks, confirming all pipes and connections are sealed with no leaks,
- if the valve came supplied with an actuator, ensure the alignment of the valve shaft and the actuator shaft enables smooth movement,
- check the compressed air pressure at the actuator inlet matches what is indicated in the section 9. Technical specifications,
- confirm the quality of the compressed air complies with the specifications outlined in the section 9. Technical specifications,
- start up the valve.

ATTENTION

Do not modify the operating parameters for which the valve was 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 or sterilisation is being performed.

7. Troubleshooting

The upper shaft does not rise with impulses	The individual seats do not clean	Internal leak of product (valve closed)	Valve plug with jerky movement	PROBABLE CAUSES	SOLUTIONS
			•	The seal or guide bushing is worn, deteriorated or jammed	Replace the seals. Replace the seals with others of a different material or quality and more suitable for the product. Lubricate with soapy water or a lubricant compatible with the seal material and the product.
		•		Normal seal wear	Replace the seals.
		•		Premature wear of the seal affected by the product	Replace the seals with others of a different material or quality and more suitable for the product. Reduce the line pressure. Lower the operating temperature.
		•		Product residue deposited on the seat and/or plug	Clean frequently.
			•	Product pressure exceeds actuator specifications	Reduce the product pressure.
•				Excessive product pressure in the body	Reduce the product pressure.
		•		Loss of seal (vibrations)	Tighten loose parts.
•	•			Insufficient time for impulses	Adjust the time in the control system
•				Insufficient air pressure	Increase the compressed air pressure

8. Maintenance

8.1. GENERAL CONSIDERATIONS

Just like any other machine, this valve requires maintenance. The instructions in this section cover the maintenance of the valve, the identification and replacement of spare parts, and the disassembly and assembly of the valve. The instructions were drafted for maintenance staff and those responsible for spare part supply.

Read the section 9. Technical specifications carefully.
Only qualified, trained persons equipped with the necessary means for the work can perform maintenance.
All replaced material must be disposed of and recycled as required in accordance with current guidelines in each area.
Ensure pipes are not pressurised before starting maintenance work.

8.2. MAINTENANCE

Recommendations for proper maintenance:

- regular inspection of the valve and its components,
- keep an operation log for each valve, noting every incident,
- always have spare seals in stock.

Pay particular attention to the danger indications in this manual while performing maintenance.

The valve and the pipes must never be pressurised during maintenance.
Burn hazard! Do not touch the valve or the pipes when hot fluids are circulating or when cleaning or sterilisation is being performed.

Preventive maintenance service intervals vary depending on valve operating conditions: temperature, pressure, number of operations per day, type of cleaning solutions used, and so on.

8.2.1. Maintaining the seals

SEAL REPLACEMENT	
Preventive maintenance	Replace every 12 months
Maintenance after a leak	Replace at the end of the process
Scheduled maintenance	Regularly check there are no leaks and the valve operates smoothly. Keep a log of the valve maintenance. Use statistics to schedule inspections.
Lubrication	Apply seal material-compatible lubricants during assembly. See the table below.

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

8.2.2. Storage

Valves should be stored in the following conditions in an enclosed space:
- temperature from 15ºC to 30ºC,
- air humidity < 60%

The equipments CANNOT be stored outdoors.

8.2.3. Spare parts

Ordering spare parts requires stating the type of valve, the size, the manufacturing number, the position and the description of the part, which is in the section 9. Technical specifications.

8.3. CLEANING

Using cleaning products such as caustic soda and nitric acid can burn the skin.
Wear rubber gloves during cleaning procedures.
Always wear safety glasses.

8.3.1. CIP (Clean-in-place) cleaning

The valve will not need to be disassembled if it is installed into a system with a CIP process. The standard seal material that will be used for CIP cleaning both with alkaline and acidic media is EPDM. HNBR and FPM seal materials are not recommended.

Two types of solutions can be used for CIP processes:

a. **an alkaline solution**: 1% by weight of caustic soda (NaOH) at 70ºC (150ºF). To make this cleaning solution:
   1 kg NaOH + 100 litres of H_2O[1] = cleaning solution
   2.2 litres of 33% NaOH + 100 litres of H_2O = cleaning solution

b. **an acidic solution**: 0.5% by weight of nitric acid (HNO_3) at 70ºC (150ºF). To make this cleaning solution:
   0.7 litres of 53% HNO_3 + 100 litres H_2O = cleaning solution

1) only use chloride-free water when making cleaning solutions

ATTENTION

Monitor the cleaning solution concentrations. The wrong concentration can cause the valve seals to deteriorate.

ALWAYS rinse with clean water to remove cleaning agent residues when completing the cleaning process.

Clean the valve inside and out before starting disassembly and assembly work.

8.3.2. Automatic SIP (sterilisation-in-place)

The steam sterilisation process is used on the entire equipment, including the pigging.

ATTENTION

DO NOT start up the equipment during the steam sterilisation process.
The parts and materials will not be damaged if the specifications in this manual are followed.
No cold fluid can enter the equipment until the temperature is below 60°C (140°F).

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

a. maximum temperature: 140ºC / 284ºF
b. maximum time: 30 minutes
c. cooling: sterile air or inert gas
d. materials: EPDM (HNBR and FPM materials are not recommended)

8.4. DISASSEMBLING AND ASSEMBLING THE VALVE

Proceed with caution. Personal injury can occur.
Always disconnect the compressed air before starting to disassemble the valve.
Never simply disassemble the valve clamps before reading the instructions carefully because there is a loaded spring inside the actuator.
Only qualified staff should assemble and disassemble the valve.

Assembling and disassembling the valve and drives requires the following tools:

- an open-ended spanner to unscrew the upper valve shaft from the lower valve shaft:
- a 13 mm spanner to separate the lantern from the actuator,

Valve size	DN 40 OD 1½	DN 50 OD 2”	DN 65/80 OD 2½” - 3”	DN 100 OD 4”
Actuator	17 mm			
Intermediate shaft	26 mm		36 mm	
Lower shaft	19 mm		41 mm	

- a No. 2 Allen key to loosen the valve sleeve stud bolt,
- a suitable (non-piercing) tool to disassemble and assemble the seat seals.

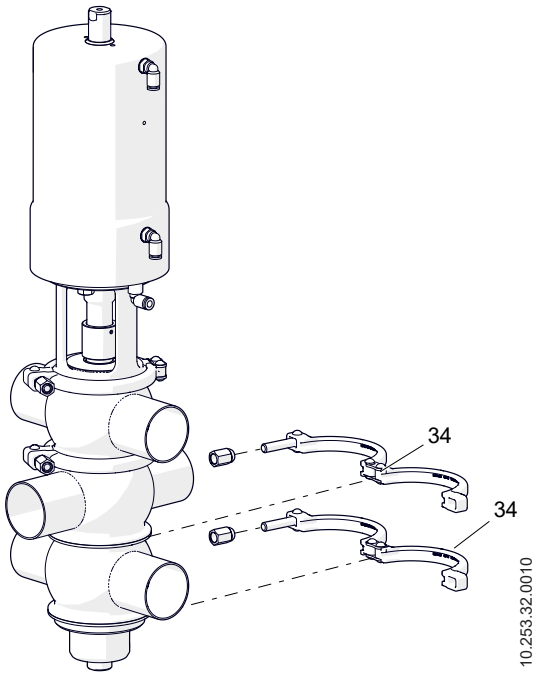
8.4.1. Disassembly

1. With the valve in the idle position, disassemble both lower clamps (34).
2. Separate the lower body cover (12B) from the valve lower body (01).
3. Remove the belt guide (11), lower shaft seal (05B) and O-ring (20B) from the lower body cover (12B).
4. Separate the lower body (01) from the rest of the valve and allow the spacer bushing (12C) to fall until it stops against the lower shaft (08B).
5. Apply compressed air to the actuator A3 connection to place the valve into the lower CIP position.
6. Unscrew the lower shaft (08B) using two open-end spanners.
7. Remove the spacer bushing (12C).
8. Remove the O-rings (20B) from the spacer bushing (12C).
9. Remove the conical seat seal (05C) from the lower shaft (08B), following the instructions in the section 8.5. Replacing the seat sealReplacing the seat seal.
10. Remove the O-ring (20C) from the lower shaft (08B).
11. Release the compressed air from the actuator A3 connection to put the valve into the idle position.
12. Apply compressed air to the actuator A2 connection to put the valve into the open position.
13. Disassemble the two upper clamps (34).
14. Remove the intermediate and upper body (01) of the valve.
15. Remove the spacer bushing (12A) located between the intermediate and upper body (01) of the valve.
16. Remove the O-rings (20B) from the spacer bushing (12A).
17. Release the compressed air from the actuator A2 connection to put the valve into the idle position.
18. Apply compressed air to the actuator A3 connection to place the valve into the lower CIP position.
19. Unscrew the intermediate shaft (08A) using two open-end spanners.
20. Remove the radial seat seal (05E) from the intermediate shaft (08A).
21. Release the compressed air from the actuator A3 connection to put the valve into the idle position.
22. Use a No. 2 Allen key to loosen the stud bolt (23A) fixing the shaft sleeve (35) to the upper shaft (08).
23. Slide the fixing sleeve (35) towards the actuator (10) so the fixing core (55) of the shaft is visible.
24. Disassemble both parts of the fixing core (55) from the upper shaft (08).
25. Disassemble the upper shaft (08).
26. Remove the conical seat seal (05C) and the flat seat seal (05D) from the upper shaft (08) following the instructions in the section. 8.5. Replacing the seat seal
27. Remove the inner guide bushing (17A) and the inner seal (05A) from the upper shaft (08).
28. Remove the upper body cover (12) from the lantern (21).
29. Remove the shaft fixing sleeve (35) and the stud bolt (23A).
30. Remove the guide bushing (17), upper shaft seal (05) and O-ring (20B) from the upper body cover (12).
31. Remove the lantern (21) by loosening the screws (23) attaching it to the actuator (10).

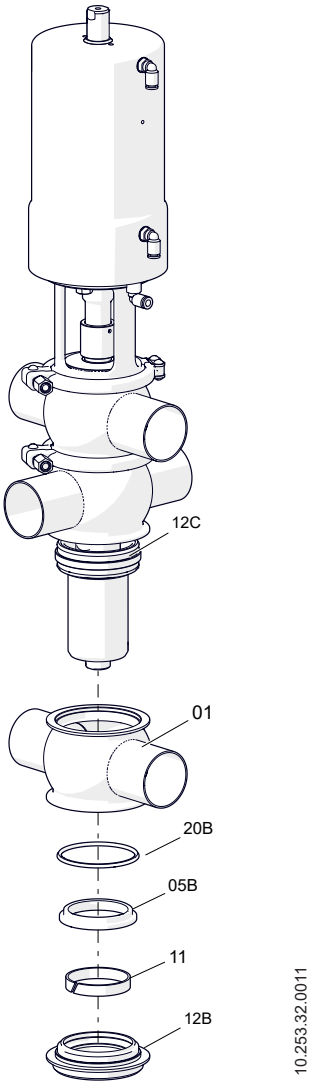
8.4.2. Assembly

1. Mount the shaft fixing sleeve (35).
2. Mount the lantern (21) to the actuator (10) by tightening the screws (23).
3. Mount the guide bushing (17), upper shaft seal (05) and O-ring (20B) into the upper body cover (12).
4. Mount the upper body cover (12) into the lantern (21).
5. Mount the conical seat seal (05C) and the flat seat seal (05D) on the upper shaft (08) according to the instructions in the section 8.5. Replacing the seat seal.
6. Mount the inner guide bushing (17A) and the inner seal (05A) onto the upper shaft (08).
7. Mount the upper shaft (08) to the actuator (10).
8. Place both parts of the shaft fixing core (55).
9. Slide the fixing sleeve (35) until it covers the fixing core (55) and secure it with the stud bolt (23A) using the No. 2 Allen key.
10. Fit the radial seat seal (05E) onto the intermediate shaft (08A) according to the instructions in the section 8.5. Replacing the seat seal.
11. Apply compressed air to actuator A3 connection to put the actuator into the lower CIP position.
12. Using the appropriate open-ended spanner, screw the lower shaft (08A) of the valve into the upper shaft of the actuator (10), using the 17 mm open-ended spanner to hold it and prevent it from rotating.
13. Release the compressed air from the actuator A3 connection to put the valve into the idle position.
14. Apply compressed air to the actuator A2 connection to put the valve into the open position.
15. Place the O-rings (20B) in the spacer bushing (12A).
16. Place the spacer bushing (12A) between the intermediate and upper body (01) of the valve and use the clamp (34) to secure both bodies.
17. Place this unit into the lantern (21) and use the clamp (34) to secure it.
18. Release the compressed air from the actuator A2 connection to put the valve into the idle position.
19. Apply compressed air to the actuator A3 connection to place the valve into the lower CIP position.
20. Place the O-ring (20C) onto the lower shaft (08B).
21. Fit the conical seat seal (05C) onto the lower shaft (08B) according to the instructions in the section 8.5. Replacing the seat seal.
22. Place the O-rings (20B) on the spacer bushing (12C).
23. Place the spacer bushing (12C) in the intermediate body (01).
24. Screw the lower shaft (08B) using two open-end spanners.
25. Release the compressed air from the actuator A3 connection to put the valve into the idle position.
26. Place the lower body (01) of the valve and use the clamp (34) to secure it.
27. Place the belt guide (11), the lower shaft seal (05B) and the O-ring (20B) into the lower body cover (12B).
28. Place the lower body cover (12B) on the lower body (01) of the valve and use the clamp (34) to secure it.

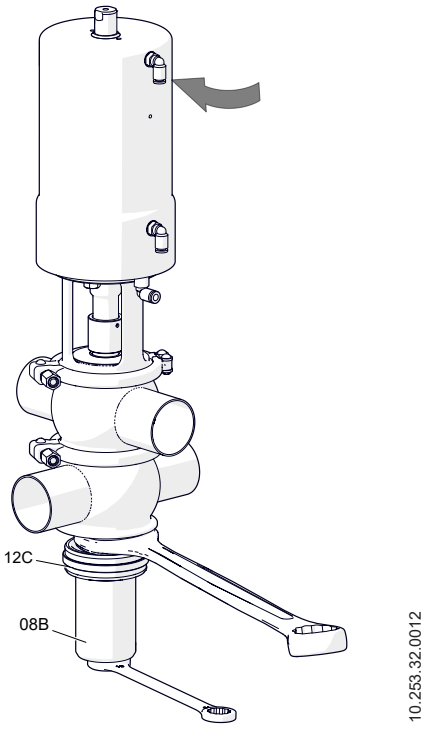
1


34
34
10.253.32.0010

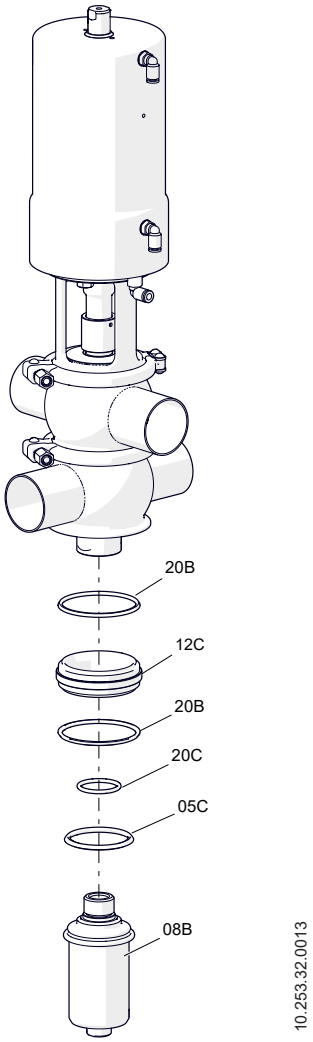
2


12C
01
20B
05B
11
12B
10.253.32.0011

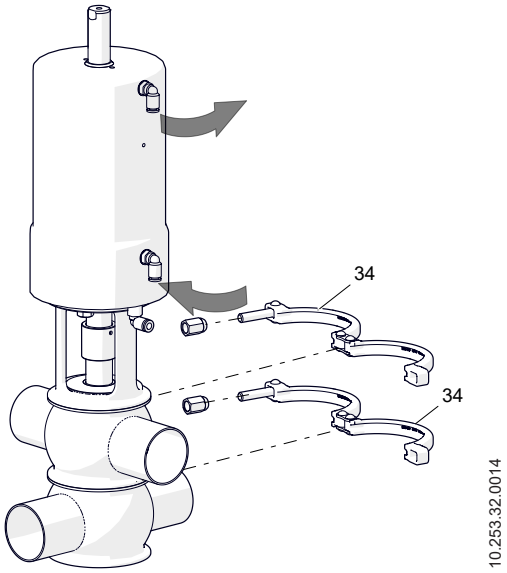
3


12C
08B
10.253.32.0012

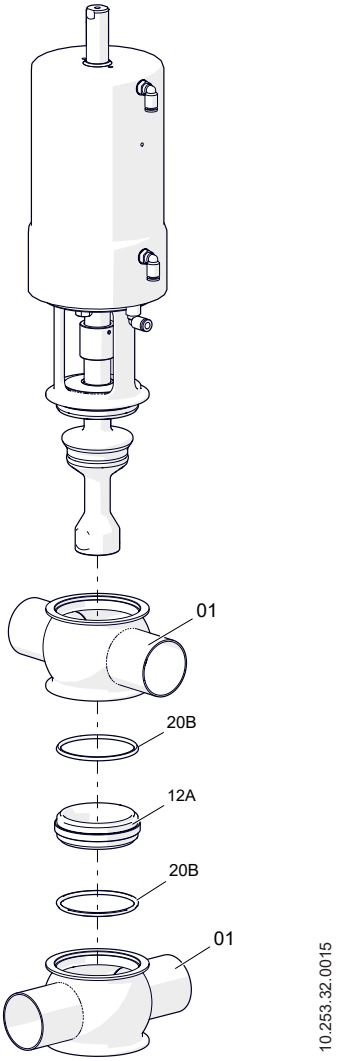
4


20B
12C
20B
20C
05C
08B
10.253.32.0013

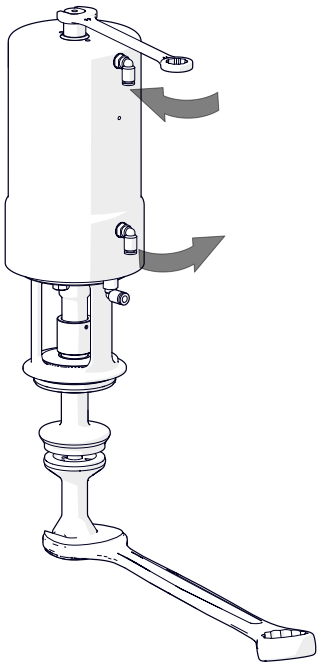
5


34
34
10.253.32.0014

6

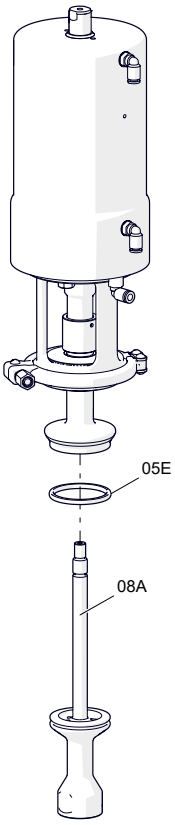

01
20B
12A
20B
01
10.253.32.0015

7



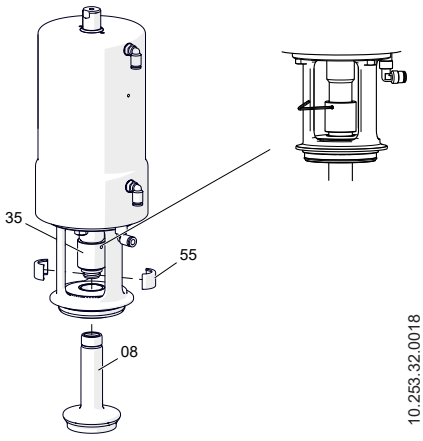
10.253.32.0016

8



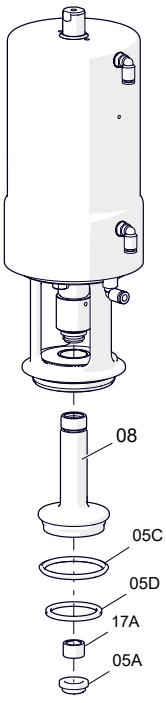
10.253.32.0017

9



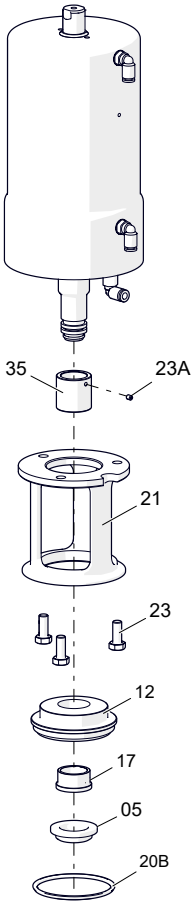
10.253.32.0018

10



10.253.32.0019

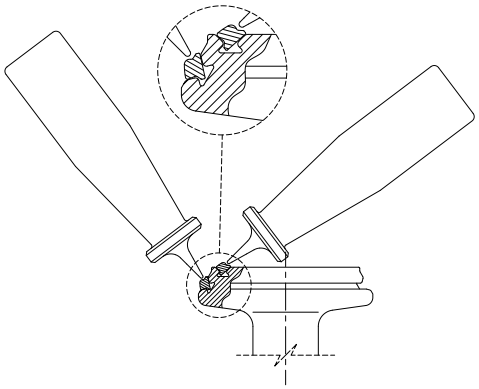
11

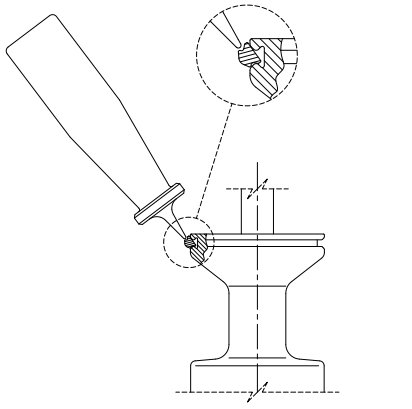


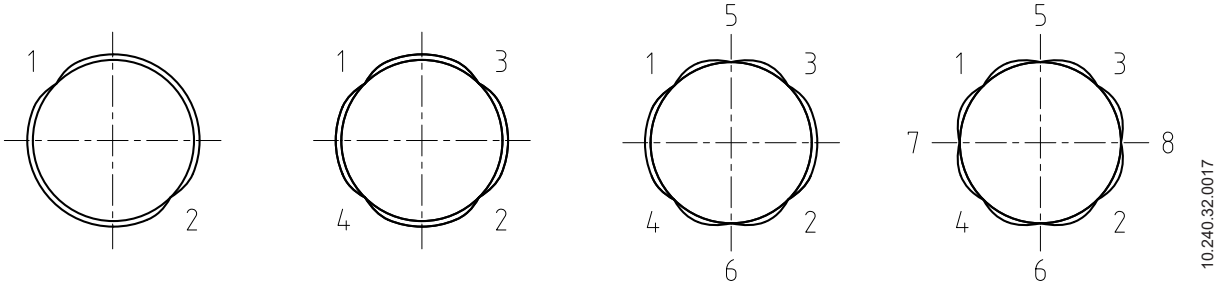
10.253.32.0020

8.5. REPLACING THE SEAT SEAL

1. Put the plug shaft in a vertical position — using a vice for example — so the shaft remains stable and no damage occurs to the seat seals housing surface. Do not apply too much pressure to the shaft if using a vice.
2. Use a screwdriver or a hook-shaped sharp tool to remove the used seals. Ensure the seal housing surfaces do not become damaged.
3. Lubricate the new seat seals with soapy water if necessary to make installation easier.
4. Insert each seal into the plug shaft seat housing so one of their ends is inside the housing. The seal should preferably fit in the part of the section with the largest diameter, as shown in the images.
5. Then using an appropriate tool (non-piercing), press on the end of the seal yet to be fitted into the housing, as shown in the image.
6. This operation should be performed around the entire diameter, using the tool in the **1-2-3-4-5-6-7-8** sequence as shown in the lower image. Always press on opposite sides. On reaching the final step of this sequence, repeat the process until the seal is completely inside the housing.
7. Press the seal with your fingers to ensure it is placed properly. Ensure nothing protrudes because the seal has been placed incorrectly.

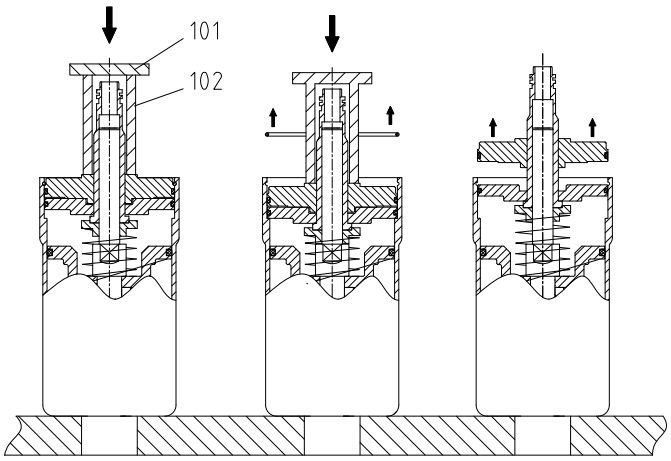






8.6. DISASSEMBLING AND ASSEMBLING THE ACTUATOR

8.6.1. Disassembly

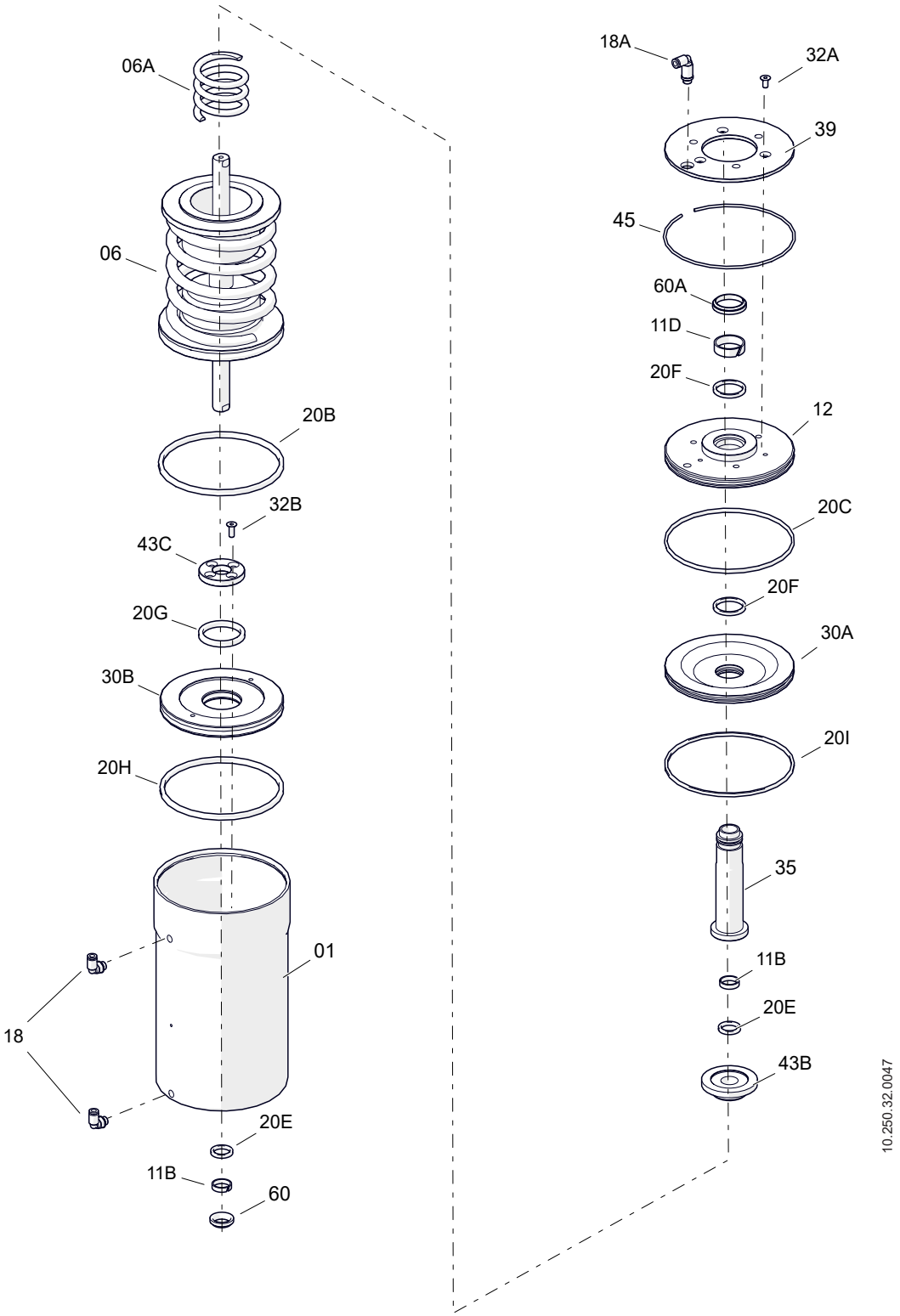


1. Remove the air connectors (18,18A).
2. Remove the screws (32A) and the back cover (39) from the actuator.
3. Place the actuator onto the press base or into the lathe clamp and place a thick tube (102) and a shim (101) onto the free end of the actuator.
4. Apply force to the shim. Once the cover (12) is 15-20 mm lower, remove the retention ring (45). There must be enough clearance in order to be able to disassemble it.
5. Gradually reduce the force on the shim until the spring no longer exerts pressure. The actuator base (12) will now be free.
6. Remove the actuator base (12), the lower piston (30A) and the shaft sleeve (35).
7. Remove the O-rings (20C,20F), the guide (11D) and the scraper (60A) from the actuator base (12).
8. Remove the O-rings (20F,20I) from the lower piston (30A).
9. Remove the O-ring (20E) and the guide (11B) from the shaft sleeve (35).
10. Remove the spring base (43B) and the lower spring (06A).
11. Remove the spring unit (06).
12. Remove the O-ring (20B) from the spring unit (06).
13. Disassemble the upper piston stop (43C) by removing the screws (32B) attaching it to the actuator body (01).
14. Remove the upper piston (30B) from the actuator body (01).
15. Disassemble the scraper (60), guide (11B) and O-ring (20E) from the actuator body (01).

Do not disassemble the spring unit (06) as there is a loaded spring inside.
Only qualified staff should assemble and disassemble the valves and/or actuator.

8.6.2. Assembly

1. Fit the scraper (60), the guide (11B) and the O-ring (20E) to the actuator body (01).
2. Place the upper piston (30B) inside the actuator body (01).
3. Fit the upper piston stop (43C) by threading the screws (32B) attaching it to the actuator body (01).
4. Fit the O-ring (20B) on the spring unit (06).
5. Fit the O-ring (20E) and guide (11C) onto the shaft sleeve (35).
6. Fit the O-rings (20F,20I) onto the lower piston (30A).
7. Fit the actuator base (12) O-rings (20C,20F), guide (11D) and scraper (60A).
8. Insert the spring unit (06) into the actuator body (01).
9. Insert the lower spring (06A), lower spring base (43B), shaft sleeve (35) and lower piston (30A) into the actuator body (01).
10. Fit the actuator base (12) into the body (01).
11. Apply force to the shim to lower the actuator base (12) by 15-20 mm.
12. Place the retention ring (45).
13. Gradually reduce the force applied until the tool stops touching the actuator base (12).
14. Place the actuator back cover (39) and use the screws (32A) to secure it.
15. Install the air connectors (18,18A).
16. Apply compressed air to check the actuator works correctly.


06A
06
20B
32B
43C
20G
30B
20H
01
18
20E
11B
60
18A
32A
39
45
60A
11D
20F
12
20C
20F
30A
20I
35
11B
20E
43B
10.250.32.0047

9. Technical specifications

9.1. VALVE

Maximum operating pressure	1000 kPa (10 bar)
Minimum operating pressure	Vacuum
Maximum operating temperature	121ºC (250ºF) for standard EPDM seals (another type of seals are used for higher temperatures)

9.2. ACTUATOR

Compressed air pressure	600 - 800 kPa (6 - 8 bar)
Compressed air quality	in accordance with ISO 8573-1:2010: - Solid particle content: quality class 3, maximum size = 5 µ, maximum particle density = 5 mg/m^3. - Water content: quality class 4, maximum dew point = 2ºC. The dew point needs to be adapted if the valve is used at high altitude or when the ambient temperature is low. - Oil content: quality class 5, preferably oil-free, maximum oil content = 25 mg/m^3.
Compressed air connection	G 1/8

Compressed air consumption (N litres/cycle at P_{rel} = 6 bar)

Actuator	Main movement	Upper CIP	Lower CIP
T1	3.6	0.6	0.6
T2	8.5	1.7	1.1
T3	15.2	2.7	1.7

Actuator	T1	T2	T3
Valve	DN 40 - 50	DN 65 - 80	DN 100
	OD 1½" - 2"	OD 2½" - 3"	OD 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

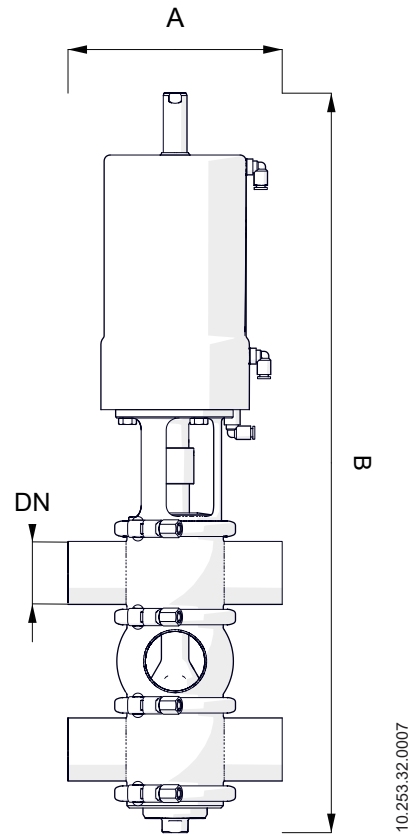
9.4. AVAILABLE SIZES

DIN EN 10357 series A (previously DIN 11850 series 2)	DN 40 - DN 100
ASTM A269/270 (suitable for an OD pipe)	OD 1½" - OD 4"
Connections	welded

9.5. WEIGHTS

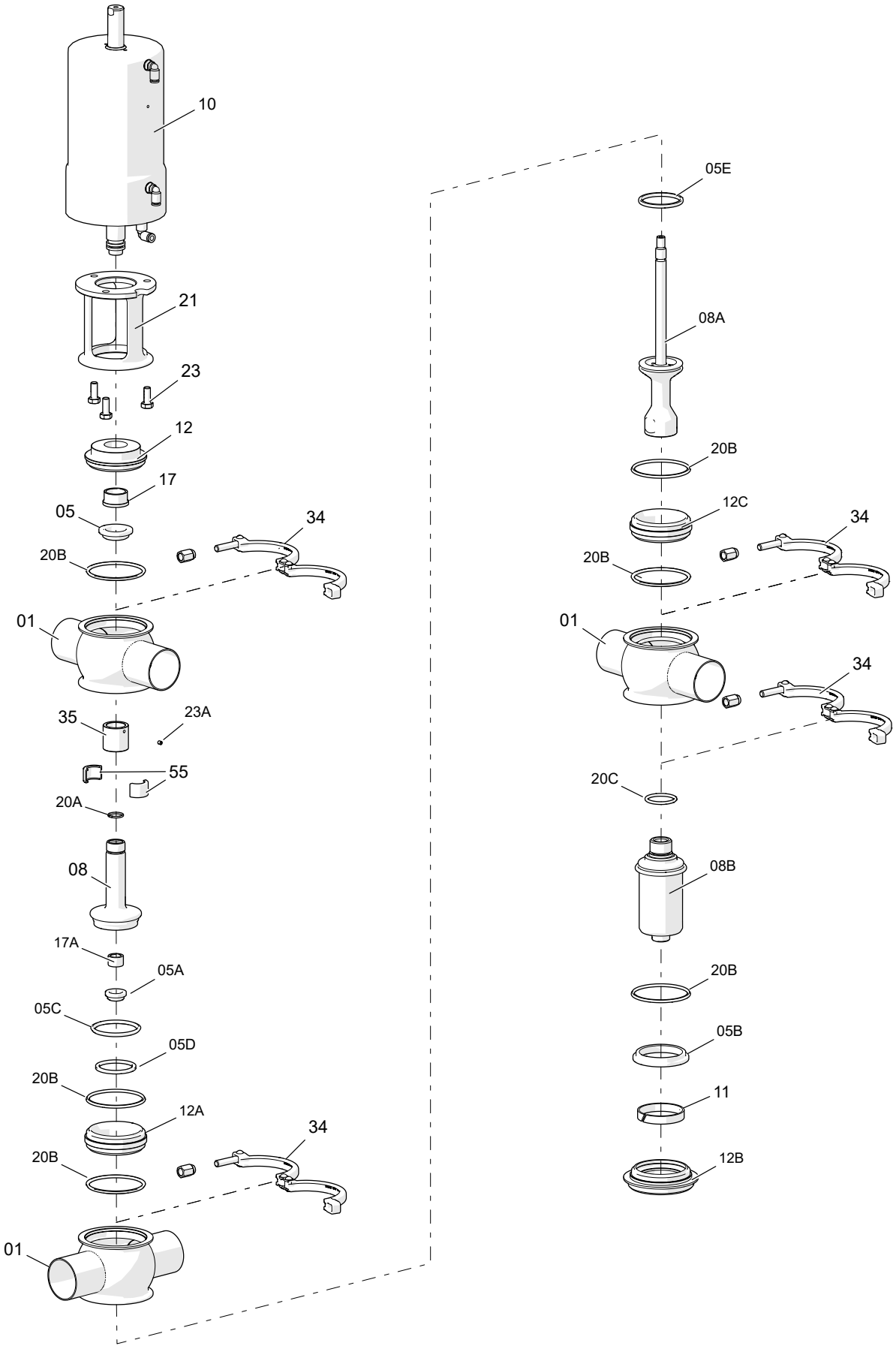
	DN	Weight [kg]
DIN	**40**	15
	50	18
	65	31
	80	35
	100	52
OD	**1½”**	15
	2”	18
	2½”	31
	3”	35
	4”	52

9.6. DIMENSIONS



	DN	Dimensions [mm]		
		A	B	ØF
DIN	**40**	170	605	125
	50	180	645	125
	65	220	800	161
	80	250	845	161
	100	300	970	193
OD	**1½”**	170	600	125
	2”	180	640	125
	2½”	220	790	161
	3”	250	830	161
	4”	300	965	193

9.7. EXPLODED VIEW AND PARTS LIST



Position	Description	Quantity	Material
01	Valve body	3	1.4404 (AISI 316L)
05 / 05A / 05B	Shaft seal*	3	EPDM / FPM / HNBR
05C / 05D / 05E	Conical / flat / radial seat seal*	3	EPDM / FPM / HNBR
08	Upper shaft	1	1.4404 (AISI 316L)
08A	Intermediate shaft	1	1.4404 (AISI 316L)
08B	Lower shaft	1	1.4404 (AISI 316L)
10	Actuator	1	1.4301 (AISI 304)
11	Shaft guide	1	PTFE
12	Upper body cover	1	1.4404 (AISI 316L)
12A	Spacer bushing	1	1.4404 (AISI 316L)
12B	Lower body cover	1	1.4404 (AISI 316L)
12C	Spacer bushing	1	1.4404 (AISI 316L)
17	Guide bushing*	1	PTFE
17A	Upper shaft inner guide bushing	1	PTFE
20A / 20B / 20C	O-ring*	8	EPDM / FPM / HNBR
21	Lantern	1	1.4301 (AISI 304)
23	Hex screw	3	A2
23A	Threaded stud bolt	1	A2
34	Clamp	4	1.4301 (AISI 304)
35	Shaft fixing sleeve	1	1.4301 (AISI 304)
55	Shaft fixing core	2	1.4301 (AISI 304)

* recommended spare parts

NOTES

NOTES

How to get in touch with INOXPA S.A.U.:
The contact details for each country in our website are constantly updated.
Details available from www.inoxpa.com.

INOXPA S.A.U.
Telers, 60 - 17820 - Banyoles - Spain

10.253.30.01EN · (0) 2025/09