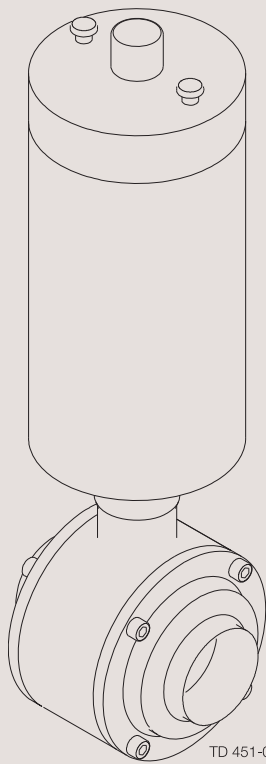


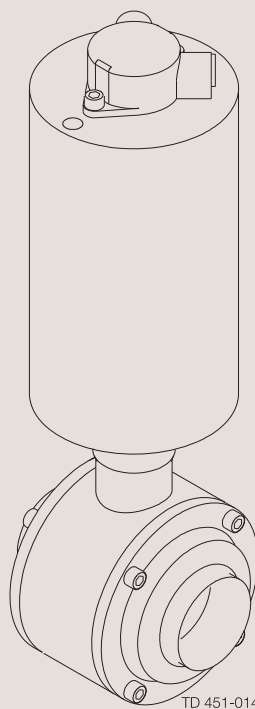


# Instruction Manual

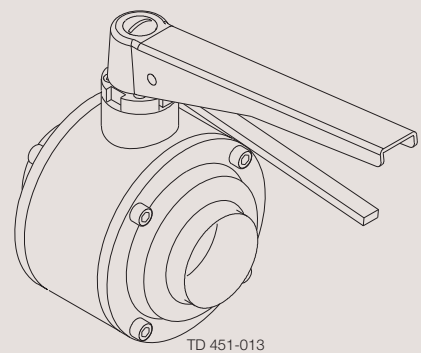
## SBV Sanitary Ball Valve



TD 451-015



TD 451-014



TD 451-013

ESE01782-EN6 2015-04

Original manual



The information herein is correct at the time of issue but may be subject to change without prior notice

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# 1 EC Declaration of conformity

Revision of Declaration of Conformity 2009-12-29

The Designated Company

Alfa Laval Kolding A/S

Company Name

Albuen 31, DK-6000 Kolding, Denmark

Address

+45 79 32 22 00

Phone No.

hereby declare that

Valve

Designation

SBV

Type

is in conformity with the following directive with amendments:

- Machinery Directive 2006/42/EC
- Regulation (EC) No 1935/2004
- The valve is in compliance with the Pressure Equipment Directive 97/23/EC and was subjected to the following assessment procedure Module A. Diameters  $\geq$  DN125 may not be used for fluids group 1.

The person authorised to compile the technical file is the signer of this document

QHSE Manager, Quality, Health and safety & Environment

Title

Annie Dahl

Name

Kolding

Place

2013-12-03

Date



Signature



*Unsafe practices and other important information are emphasized in this manual.  
Warnings are emphasized by means of special signs.*

### 2.1 Important information

**Always read the manual before using the valve!**

#### WARNING

Indicates that special procedures must be followed to avoid serious personal injury.

#### CAUTION

Indicates that special procedures must be followed to avoid damage to the valve.

#### NOTE

Indicates important information to simplify or clarify procedures.

### 2.2 Warning signs

General warning:



Caustic agents:



### 2.3 Safety precautions

#### Installation:

**Always** observe the technical data (see chapter 6 Technical data).  
**Always** release compressed air after use.



#### Operation:

**Always** observe the technical data (see chapter 6 Technical data).  
**Never** touch the valve or the pipelines when processing hot liquids or when sterilizing.



**Always** handle lye and acid with great care.



#### Maintenance:

- **Always** observe the technical data (see chapter 6 Technical data).
- **Always** release compressed air after use.
- The valve must **never** be hot when servicing it.
- The valve/actuator and the pipelines must never be pressurised when servicing the valve/ actuator.
- **Never** stick your fingers through the valve ports if the valve is supplied with compressed air.



#### Transportation:

**Always** secure that compressed air is released.  
**Always** secure that all connections is disconnected before attempt to remove the valve from the installation.  
**Always** drain liquid out of valves before transportation.  
**Always** use predesigned lifting points if defined.  
**Always** secure sufficient fixing of the valve during transportation - if special designed packaging material is available it must be used.

### 3 Installation

---

*The instruction manual is part of the delivery.  
Study the instructions carefully.  
The items refer to parts list and service kits section.*

---

#### 3.1 Unpacking/delivery

---

##### Step 1

##### CAUTION

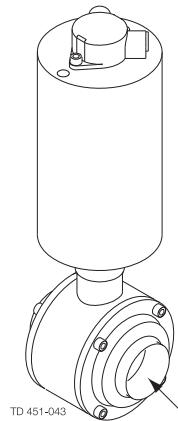
Alfa Laval cannot be held responsible for incorrect unpacking.

##### Check the delivery:

1. Complete valve.
  2. Delivery note.
- 

##### Step 2

1. Clean the valve for possible packing materials.
2. Inspect the valve for visible transport damage.
3. Avoid damaging air and pipe connections.



#### 3.2 General installation

---

##### Step 1



**Always** read the technical data thoroughly.  
See chapter 6 Technical data



**Always** release compressed air after use.

##### CAUTION

Alfa Laval cannot be held responsible for incorrect installation.

For further information on installation of valves, please see Guidelines for installation of valve clusters and other installations, ESE00041

---

##### Step 2

Avoid stressing the valve as this can cause deformation of the sealing area and malfunction of the valve (leakage or faulty indication).

Pay special attention to:

- Vibrations
- Thermal expansion of the tubes
- Excessive welding
- Overloading of the pipelines

##### Fittings:

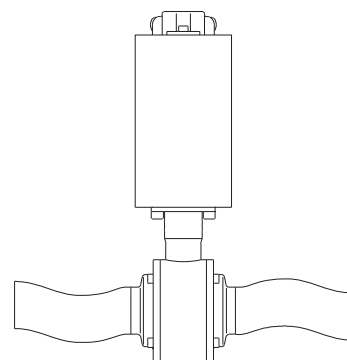
Ensure that the connections are tight.

##### Air connection of actuator:

Connect compressed air correctly.

**Pay special attention to warnings!**

---



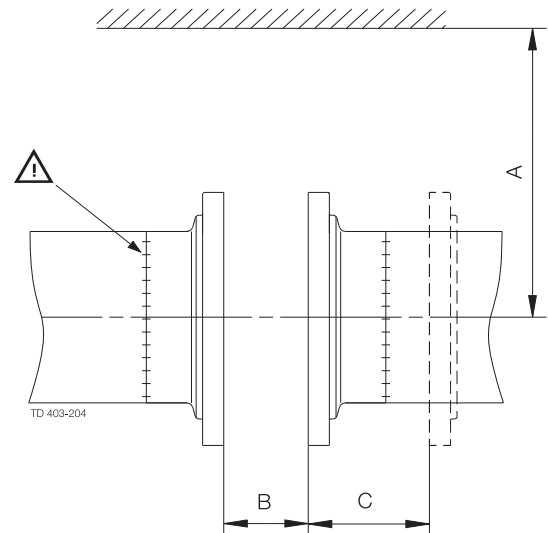
Study the instructions carefully.

## 3.3 Welding

### Step 1

1. Dismantle the flanges in accordance with the instructions in section 4 Operation. Remove seal rings and O-rings.
2. Weld the flanges into the pipe lines. Keep distance B between flanges.
3. If welding both flanges, ensure that the flanges can be moved axially minimum C mm to allow for valve maintenance.
4. Maintain the minimum clearance A so that the actuator or handle can be removed.
5. Assemble the valve in accordance with the instructions in section 4 Operation after the welding.

Size	A (mm) (inch)		B (mm) (inch)	C (mm) (inch)
	Manual Actuated			
DN/OD 25	317	507	34	30
DN 25	(12.5)	(20.0)	(1.3)	(1.2)
DN/OD 38	325	515	40	30
DN 40	(12.8)	(20.3)	(1.6)	(1.2)
DN/OD 51	335	524	50	30
DN 50	(13.2)	(20.6)	(2.0)	(1.2)
DN/OD 63.5	345	535	56	40
DN 65	(13.6)	(21.1)	(2.2)	(1.6)
DN/OD 76.1	356	546	70	40
DN 80	(14.0)	(21.5)	(2.75)	(1.6)
DN/OD 101.6	406	595	100	40
DN 100	(16.0)	(23.4)	(3.9)	(1.6)



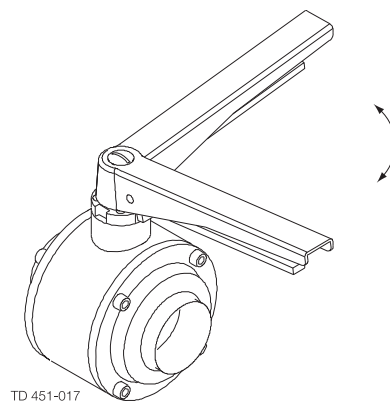
**NOTE:** Valves with adapter and ThinkTop: add 200 mm (7.9 inch) to dimension A

### Step 2

#### Pre-use check:

Open and close the valve several times to ensure that the ball moves smoothly against the seal rings.

**Pay special attention to the warnings!**



### 3 Installation

---

Study the instructions carefully.

---

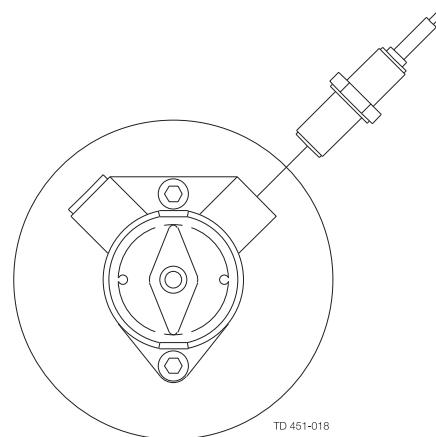
#### 3.4 Indication and control equipment (optional extras)

---

##### **CAUTION!**

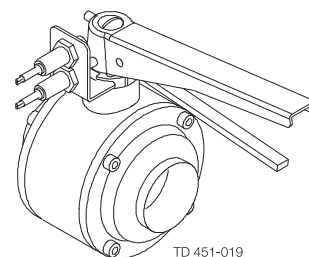
The indication and control equipment must be electrically installed by authorized personnel only.

- Inductive proximity switches:  
(See the instructions on the unit).
- ThinkTop®:  
(See the separate instruction manual).



##### **Manual valves:**

Manual valves with optional handle for inductive proximity switches are designed for the mounting of one or two M12 feedback sensors for open and/or closed position detection. Feedback sensors should be installed and adjusted according to the specification on the unit.

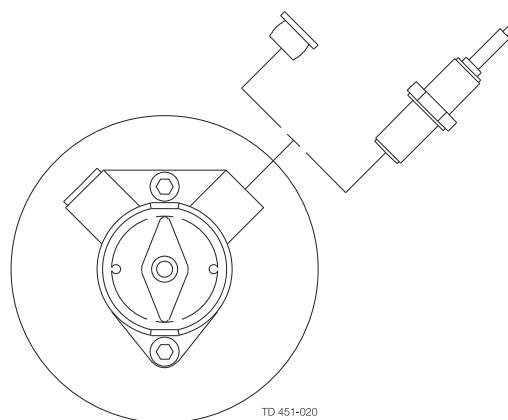


##### **Valves with standard actuator:**

Valves with standard actuator are prepared for the mounting of one or two M12 feedback sensors on the position indicator.

##### **Mounting:**

1. Remove the red plastic cap for the desired valve position.
2. Tighten the sensor unit gently.
3. Install the unit according to product specification.

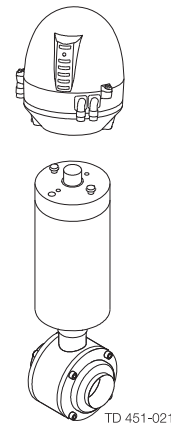




Study the instructions carefully.

---

**Valves with ThinkTop® adapter:**  
Follow the instructions in the manual.



---

### 3.5 Recycling information

---

#### Unpacking

- Packing material consists of wood, plastics, cardboard boxes and in some cases metal straps.
- Wood and cardboard boxes can be reused, recycled or used for energy recovery.
- Plastics should be recycled or burnt at a licensed waste incineration plant.
- Metal straps should be sent for material recycling.

#### Maintenance

- During maintenance oil and wear parts in the machine are replaced.
- All metal should be sent for material recycling.
- Worn out or defective electronic parts should be sent to a licensed handler for material recycling.
- Oil and all non metal wear parts must be taken care of in agreement with local regulations.

#### Scrapping

- At end of use, the equipment shall be recycled according to relevant, local regulations. Beside the equipment itself, any hazardous residues from the process liquid must be considered and dealt with in a proper manner. When in doubt, or in the absence of local regulations, please contact the local Alfa Laval sales company.
-

## 4 Operation

Study the instructions carefully and pay special attention to the warnings!  
The valve is automatically or manually operated by means of an actuator or a handle.

### 4.1 Operation

#### Step 1



**Always** read the technical data thoroughly.  
(see chapter 6 Technical data)

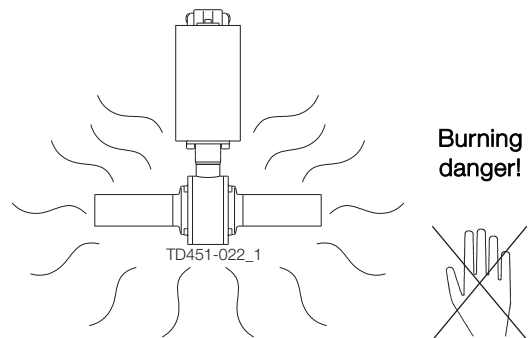
#### CAUTION

Alfa Laval cannot be held responsible for incorrect operation.

#### Step 2



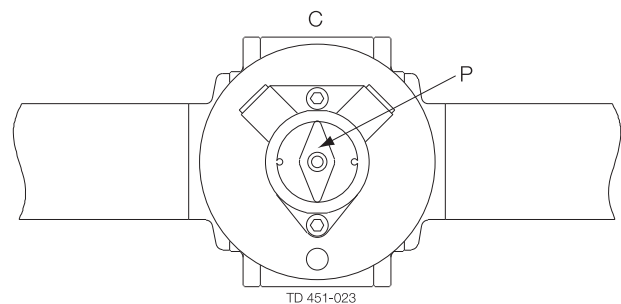
**Never** touch the valve or the pipelines when processing hot liquids or when sterilising.



#### Operation by means of actuator:

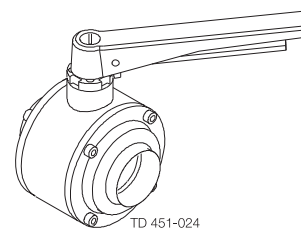
Automatic on/off operation by means of compressed air. The position indicator on the actuator reflects the ball bore position. In vertical position the valve is open - in horizontal position the valve is closed.

C: Closed position  
P: Position indicator



#### Operation by means of handle:

1. Press handle arms together while rotating it.  
The position of the handle reflects the position of the ball bore. For correct mounting of handle, please see Step 5.



*Pay attention to possible break-down.*

*Study the instructions carefully.*

*NC = Normally closed.*

*NO = Normally open.*

## 4.2 Fault finding

### NOTE

Study the maintenance instructions carefully before replacing worn parts - see section 5.1 General maintenance

Problem	Cause/result	Repair
Internal leakage (normal wear)	Worn valve seat Worn flange O-rings	Replace the product wetted seals
Internal leakage (too early)	Worn valve seat Worn flange O-rings Many activations High pressure and/or temperature Aggressive media	Replace the product wetted seals Consider selecting another elastomer sealing material Change operating conditions
External leakage (normal wear)	Worn flange O-rings Worn stem sealing unit	Replace all seals
External leakage (too early)	Damaged or worn flange O-rings Damaged or worn stem sealing unit Many activations High pressure and/or temperature Aggressive media	Replace all seals Select another elastomer sealing material grade Change operating conditions
Valve cannot be activated or is difficult to operate	Too low air pressure. Incorrect elastomer material (swelling)	Check and correct air pressure Select another elastomer sealing material grade
Valve is NO (normally open), should be NC (normally closed)	90° displacement of the actuator	Remove actuator, turn valve into desired pressureless position and remount actuator

## 4 Operation

The valve is designed for cleaning in place (CIP). CIP = Cleaning In Place.  
Study the instructions carefully and pay special attention to the warnings!  
NaOH = Caustic Soda.  
HNO<sub>3</sub> = Nitric acid.

### 4.3 Recommended cleaning

#### Step 1



**Always** handle lye and acid with great care.

**Caustic danger!**



**Always** use  
rubber gloves!

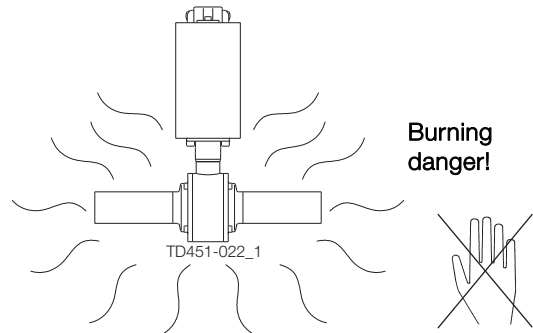


**Always** use  
protective goggles!

#### Step 2



**Never** touch the valve or the pipelines when sterilising.



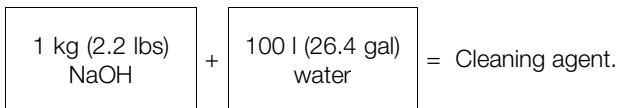
**Burning  
danger!**

#### Step 3

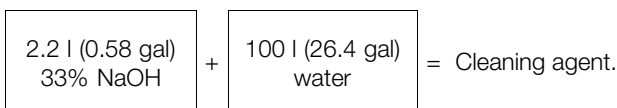
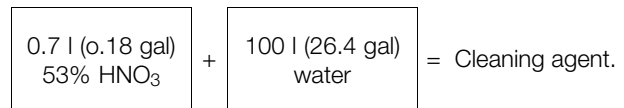
**Examples of cleaning agents:**

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C



2. 0.5% by weight HNO<sub>3</sub> at 70° C (158°F)



#### Step 4

1. Avoid excessive concentration of the cleaning agent.  
⇒ Dose gradually
2. Adjust the cleaning flow to the process.  
⇒ Sterilisation of milk/viscous liquids  
⇒ Increase the cleaning flow
3. **Always** rinse well with clean water after the cleaning.

**Always rinse!**



Clean water    Cleaning agents

#### CAUTION!

The cleaning agents must be stored/disposed of in accordance with current rules/directives.

*The valve is designed for cleaning in place (CIP). CIP = Cleaning In Place.  
Study the instructions carefully and pay special attention to the warnings!  
NaOH = Caustic Soda.  
HNO<sub>3</sub>= Nitric acid.*

---

To secure optimum cleaning of the cavity between valve seats and ball during the cleaning cycle, please follow the recommendations below

**In-line cleaning:**

**Manual valves:**

Rotate the ball 20-45° from open position a number of times in the beginning of each cleaning cycle. Adjust duration and number of cycles to the process.

**Valves with air actuator:**

Rotate the ball 20-45° from open position a number of times in the beginning of each cleaning cycle.

Proposal – initial position: valve open: 1 sec. air release followed by 1 sec. activation. Repeat three times.

Adjust solenoid timing and number of cycles to the process.

**Caution:** Rotation angles larger than 45° from open position might cause pressure shocks and should therefore be avoided!

**Valves with cavity cleaning feature (optional):**

The cavity is additionally to be cleaned by connecting the cavity cleaning connections to the cleaning circuit. Caution: To avoid the risk of mixing product and CIP, the valve cavity should never be cleaned when there is product in the product line.

---

## 5 Maintenance

Maintain the valve and the actuator carefully.  
Study the instructions carefully and pay special attention to the warnings!  
Always keep service kits in stock.

### 5.1 General maintenance

#### Step 1



**Always** read the technical data thoroughly.  
See chapter 6 Technical data



**Always** release compressed air after use.

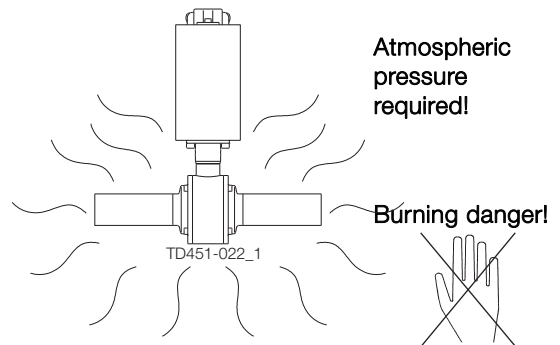
#### NOTE

All scrap must be stored/discharged in accordance with current rules/directives.

#### Step 2



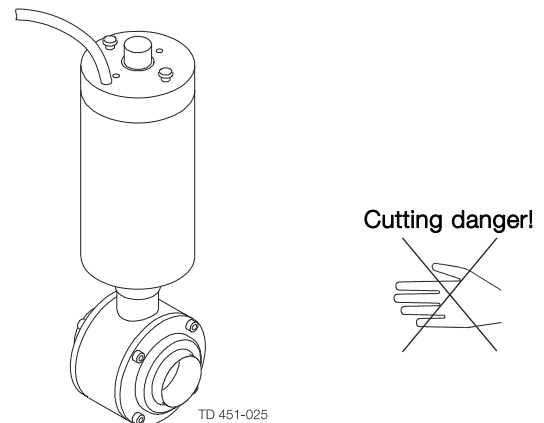
**Never** service the valve when it is hot.  
The valve/actuator and the pipelines must **never** be pressurised when servicing the valve/actuator.



#### Step 3



**Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.



#### Recommended spare parts:

Service kits - see section 7 Parts list/service kits  
Order service kits from the service kits list - see section 7 Parts list/service kits

	Product wetted seals	Valve stem seals
Preventive maintenance	Replace after 12 months	Replace all seals after 24 month
Maintenance after leakage (leakage normally starts slowly)	Replace at the end of the day	Replace by the end of the day
Planned maintenance	<ul style="list-style-type: none"> <li>- Regular inspection for leakage and smooth operation</li> <li>- Keep a record of the valve</li> <li>- Use the statistics for planning of inspections</li> </ul>	<ul style="list-style-type: none"> <li>- Regular inspection for leakage and smooth operation</li> <li>- Keep a record of the valve</li> <li>- Use the statistics for planning of inspections</li> </ul>

**NOTE!** The actuator is maintenance-free.

Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list/service kits.

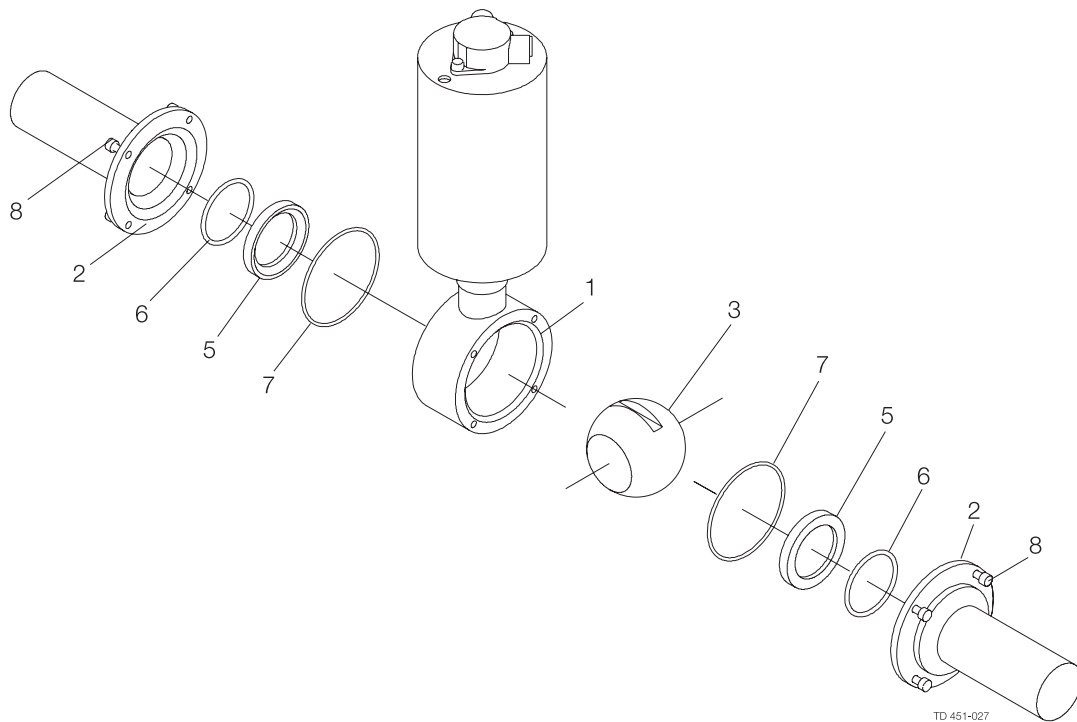
### 5.2 Replacement of product wetted seals

#### Step 1

1. Study the instructions carefully. The items refer to the parts list and service kits section. Service kit: 2 pcs. valve seat (5), 2 pcs. O-ring (6), 2. pcs. O-ring (7).
2. Loosen and remove flange screws (8) and remove valve from pipe line (be careful not to drop the ball if the valve is in closed position).
3. Remove ball (3) and check for excessive wear or damage.
4. Remove valve seat (5) and O-rings (6), (7) from flange (2).

#### Step 2

1. Insert new O-rings (6), (7) and valve seat (5) in flange (2).
2. **CAUTION!** NC valves: Ball should be turned to "closed" position before fitting the actuator without compressed air (be careful not to drop the ball).  
NO valves: Ball should be turned to "open" position before fitting acuator.
3. Insert valve body (1) between flanges (2).
4. Tighten screws (8) until metallic stop.



## 5 Maintenance

Study the instructions carefully. The items refer to the parts list and service kits section.

### 5.3 Replacement of all seals

#### Disassembly of valve:

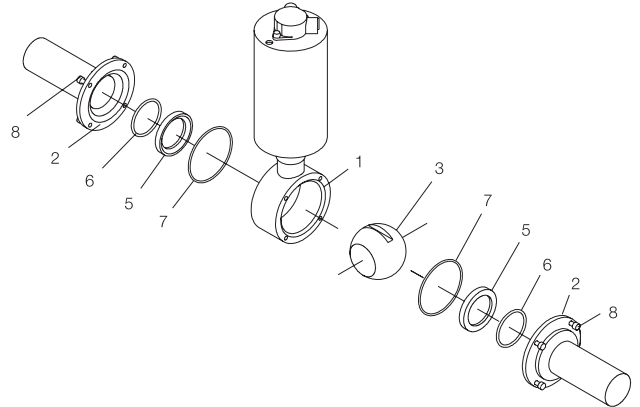
##### Step 1

Release all compressed air (actuated valves only).

##### Step 2

1. Loosen and remove flange screws (8) and remove valve from pipe line (be careful not to drop the ball if the valve is in closed position.)
2. Remove ball (3) and check for excessive wear or damage.
3. Remove valve seat (5) and O-rings (6), (7) from flange (2).

Release all compressed air (actuated valves only).



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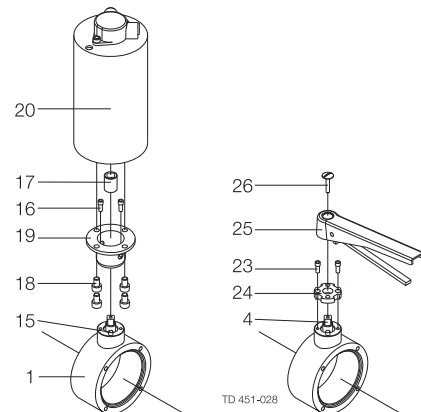
##### Step 3

#### Actuated valves

1. Loosen screws (18) and remove actuator (20) and coupling (17).
2. Loosen screws (16) and remove bonnet (19)

#### Manual valves

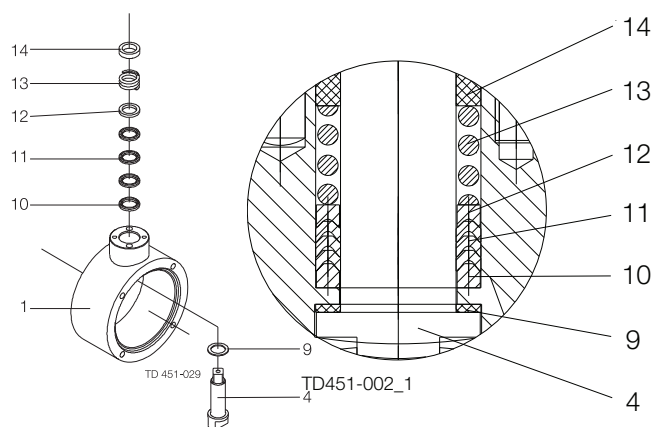
1. Loosen screw (26) and remove handle (25).
2. Loosen screws (23) and remove top plate (24).



TD 451-028

##### Step 4

1. Remove slide bearing (14) and spring (13).
2. Remove stem (4) and sliding ring (9) through the valve body (1).
3. Remove stem gasket unit (10), (11) and (12).



TD 451-029

TD451-002\_1

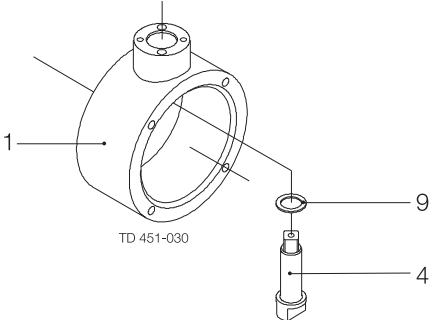


Study the instructions carefully. The items refer to the parts list and service kits section.

**Step 5**

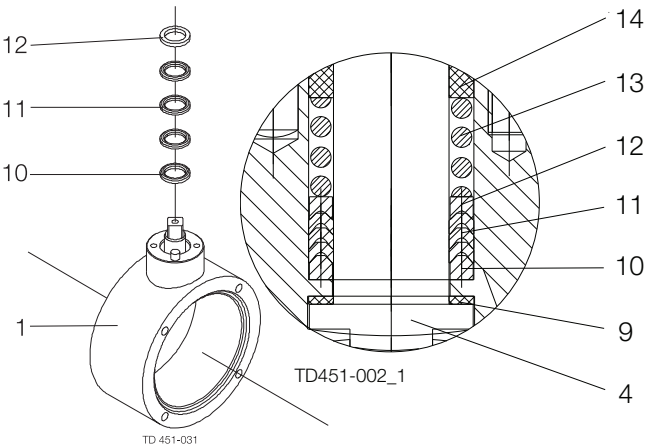
**Reassembly of valve:**

Place the new sliding ring (9) on stem (4) and mount stem unit in valve body (1)



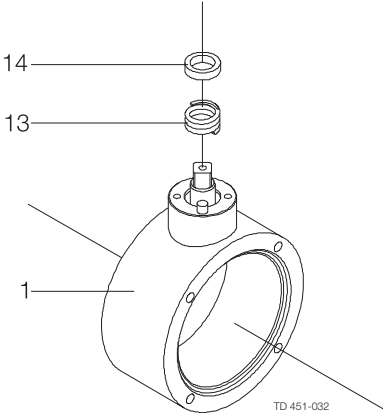
**Step 6**

Insert new gasket unit (10), (11) and (12) in valve body. Use the mounting tool and be careful not to damage the stem gaskets.



**Step 7**

Place spring (13) and new slide bearing (14) on stem (4).



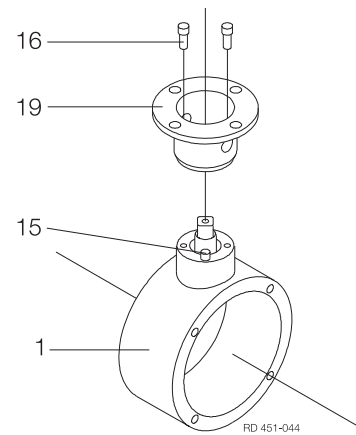
## 5 Maintenance

Study the instructions carefully. The items refer to the parts list and service kits section.

### Step 7a

#### Actuated valves

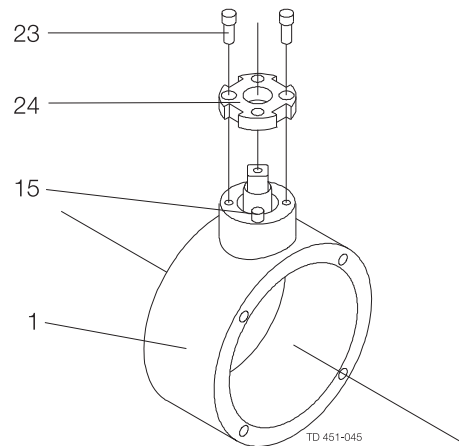
1. Mount bonnet (19) on valve body (1) with screws (16)
2. Align bonnet (19) with the two pins (15).



### Step 7b

#### Manual valves

1. Mount top plate (24) on valve body (1) with screws (23)
2. Align top plate (24) with the two pins (15).

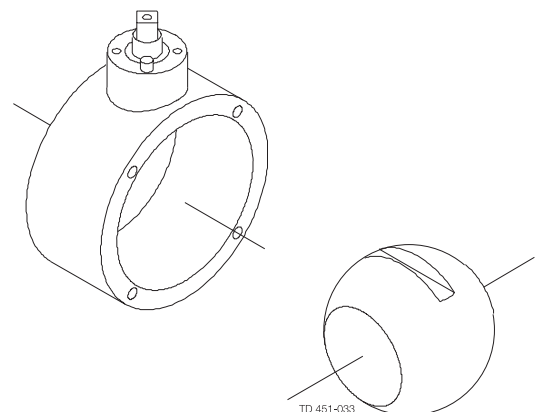


### Step 8

#### Fit ball

#### CAUTION!

- **NC valves:** Ball should be turned to “closed” position before fitting the actuator without compressed air (be careful not to drop the ball).
- **NO valves:** Ball should be in “open” position before fitting actuator.



Study the instructions carefully. The items refer to the parts list and service kits section.

**Step 9**

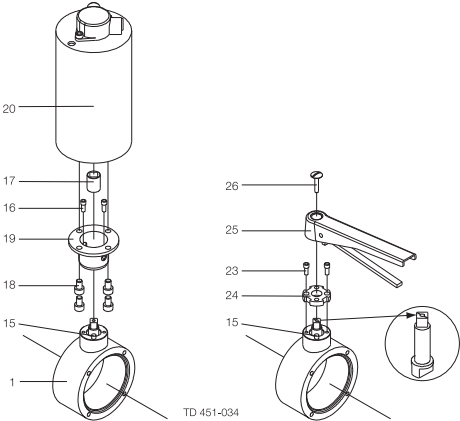
Actuated valves:

**Actuated valves**

- 1. Mount coupling (17) and actuator (20) on bonnet (19) with screws (18)
- 2. Align position indicators on actuator and stem.

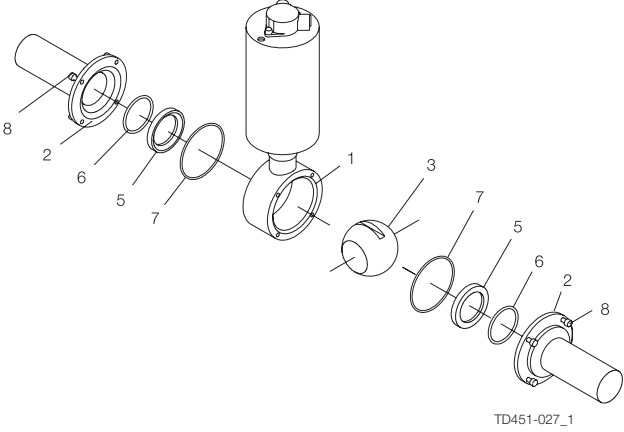
**Manual valves**

- 1. Mount handle (25) on stem (4) with screw (26)
- 2. Align handle with position indicator on stem.



**Step 10**

- 1. Align handle with position indicator on stem.
- 2. Insert valve body (1) between flanges (2).
- 3. Insert valve body (1) between flanges (2).
- 4. Open and close the valve several times to ensure proper operation.



## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.*

*Inform the personnel about the technical data.*

*NC = Normally closed.*

*NO = Normally open.*

### 6.1 Technical data

A precision made ball with a bore is positioned inside the valve body between two flanges and two PTFE valve seats. A 90° rotation of the valve stem is transferred to the ball and thereby opening or closing the valve.

A special selected PTFE material grade secures long lifetime of the product wetted seals.

Reliable valve stem sealing is achieved by the use of spring loaded and self adjusting seal rings. SBV is operated by a pneumatic actuator or manually operated by means of a handle with lockable positions. The valve is assembled with screws for easy inspection and maintenance.

Valve	
Max. product pressure	1600 kPa (10 bar) (232 PSI)
Max. recommended pressure during activation	600 kPa (6 bar)
Min. product pressure	Full vacuum
Temperature range	-10° C to + 130° C (14°to 266° F) (EPDM).
Air consumption ø104: 0.5 NI	Air consumption ø104: 0.5 NI
Air consumption ø129: 0.75 NI	Air consumption ø129: 0.75 NI
Max. sterilisation temperature, short time	+ 150° C (302° F)
Actuator	
Operating pressure	600 - 1000 kPa (6 - 10 bar) (87 - 145 PSI)
Temperature range	+4° C to +60° C (39.2 to 140 F)
Materials	
Product wetted steel parts	AISI 316L
Other steel parts	AISI 304
Surface quality, product wetted parts	Ra < 0.8µm
External surface finish	Semi bright
External surface finish, actuator	Semi bright (brushed)
Product wetted seals	PTFE, EPDM
Other seals	PTFE, NBR

### Weight (kg)

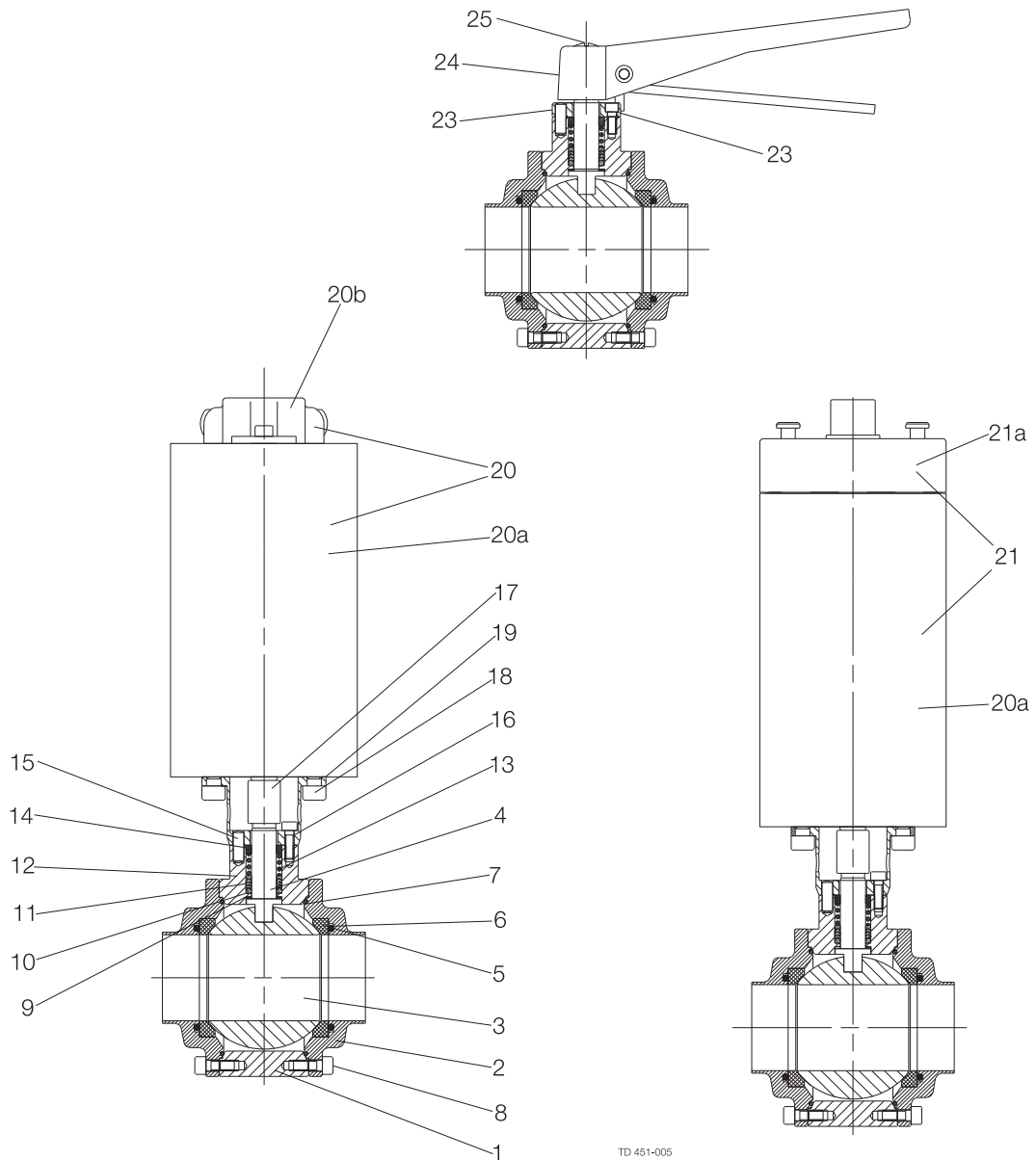
Size	Inch tubes						DIN tubes					
	DN/OD 25	DN/OD 28	DN/OD 51	DN/OD 63.5	DN/OD 76.1	DN/OD 101.6	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
Manual (kg)	2.3	3.4	4.8	7	13.5	27	2	3.1	4.5	6.4	12.3	24
Actuated (kg)	6.7	7.8	9.2	11.4	17.9	35.8	6.4	7.5	8.9	10.8	17.9	32
ThinkTop® adapter (kg)	8.6	9.7	11.1	13.3	19.8	37.7	8.3	9.4	10.8	12.7	19.8	34.7

### Noise

One meter away from - and 1.6 meter above the exhaust the noise level of a valve actuator will be approximately 77db(A) without noise damper and approximately 72 db (A) with damper - Measured at 7 bars air-pressure.

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.  
NC = Normally closed.  
NO = Normally open.*

### 7.1 SBV Sanitary Ball Valve



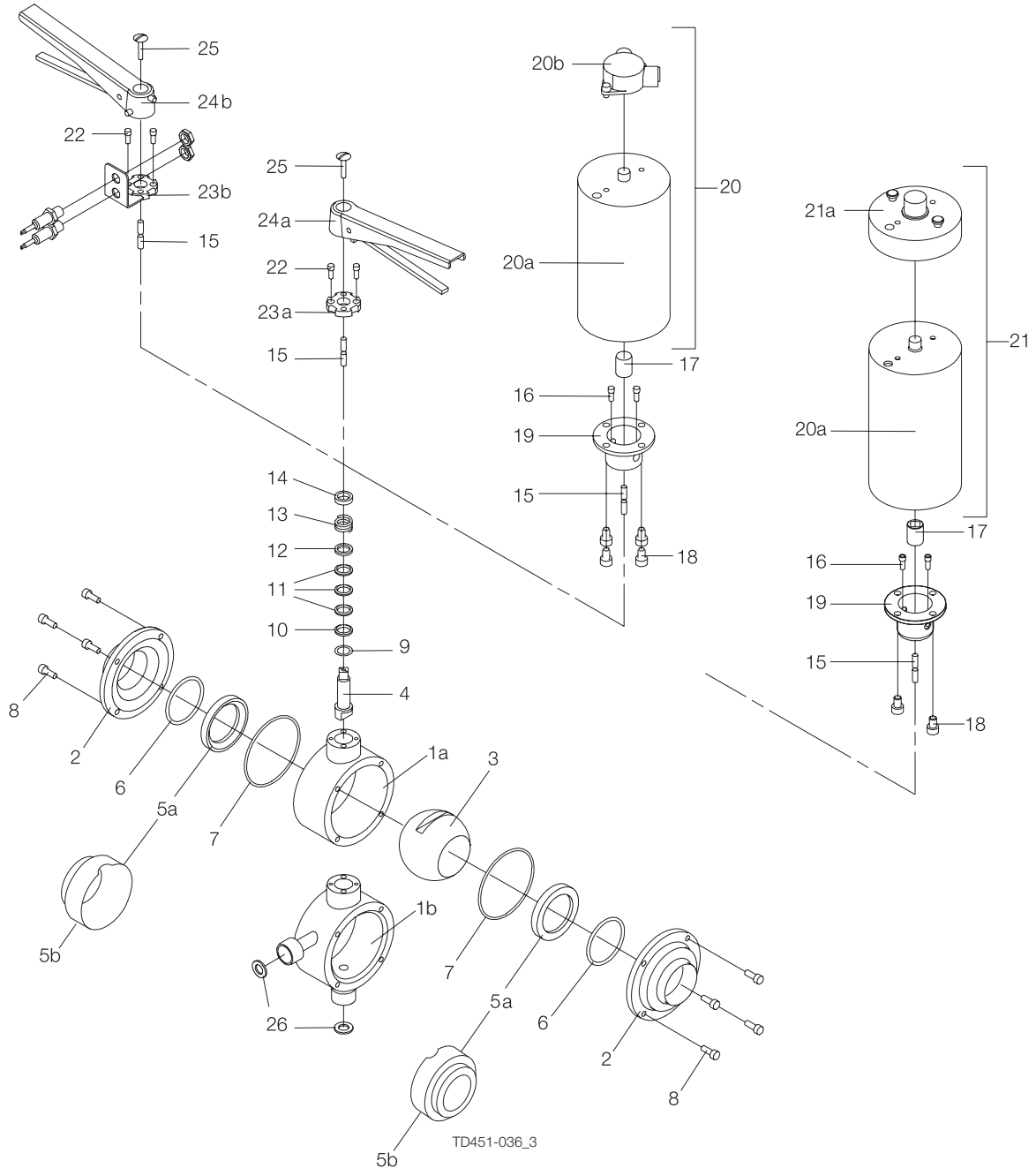
## 7 Parts list/service kits

It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.

NC = Normally closed.

NO = Normally open.

### 7.2 SBV Sanitary Ball Valve for Inch tube



## 7 Parts list/service kits

It is important to observe the technical data during installation, operation and maintenance.

Inform the personnel about the technical data.

NC = Normally closed.

NO = Normally open.

### Parts list

Pos.	Qty	Denomination
1a	1	Valve body
2	2	Flange
3	1	Ball
4	1	Stem
5a	2	Valve seat
5b	2	Valve seat
6	2	O-ring
7	2	O-ring
8	8	Flange
9	1	Sliding ring
10	1	Support ring
11	3	V-rings
12	1	Pressure ring
13	1	Spring
14	1	Slide bearing
15	2	Pin
16	2	Screw (act.)
17	1	Coupling
18	2	Screw
19	1	Bonnet
20	1	Actuator complete, standard version
20a		Actuator
20b	1	Position indicator complete
21		Actuator complete, ThinkTop version
21a	1	ThinkTop adapter complete
22	2	Screw (man.)
23a	1	Top plate
23b		Top plate
24a	1	Handle
24b		Handle
25	1	Screw
26	2	Seal for valves with cavity cleaning connections **

### Service kits

Denomination	DN25	DN38	DN51	DN63.5	DN76.1	DN101.6
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#### Service Kits for Product wetted parts

□	Service kit, EPDM (std.) ....	9612647701	9612647709	9612647717	9612647725	9612647733	9612647741
□	Service kit, NBR .....	9612647702	9612647710	9612647718	9612647726	9612647734	9612647742
□	Service kit, Q .....	9612647703	9612647711	9612647719	9612647727	9612647735	9612647743
□	Service kit, FPM .....	9612647704	9612647712	9612647720	9612647728	9612647736	9612647744

#### Service Kits for Cavity fillers

○	Service kit, EPDM (std.) ....	9612647801	9612647809	9612647817	9612647825	9612647833	9612647841
○	Service kit, NBR .....	9612647802	9612647810	9612647818	9612647826	9612647834	9612647842
○	Service kit, Q .....	9612647803	9612647811	9612647819	9612647827	9612647835	9612647843
○	Service kit, FPM .....	9612647804	9612647812	9612647820	9612647828	9612647836	9612647844

### Service kits

Denomination	DN25	DN38	DN51	DN63.5	DN76.1	DN101.6
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#### Service Kits for All seals

♦	Service kit, EPDM (std.) * ..	9612647705	9612647713	9612647721	9612647729	9612647737	9612647745
♦	Service kit, NBR * .....	9612647706	9612647714	9612647722	9612647730	9612647738	9612647746
♦	Service kit, Q * .....	9612647707	9612647715	9612647723	9612647731	9612647739	9612647747

## 7 Parts list/service kits

*It is important to observe the technical data during installation, operation and maintenance.*

*Inform the personnel about the technical data.*

*NC = Normally closed.*

*NO = Normally open.*

Denomination	DN25	DN38	DN51	DN63.5	DN76.1	DN101.6
♦ Service kit, FPM * .....	9612647708	9612647716	9612647724	9612647732	9612647740	9612647748

### Service Kits for Cavity fillers

* Service kit, EPDM (std.) * ..	9612647805	9612647813	9612647821	9612647829	9612647837	9612647845
* Service kit, NBR * .....	9612647806	9612647814	9612647822	9612647830	9612647838	9612647846
* Service kit, Q * .....	9612647807	9612647815	9612647823	9612647831	9612647839	9612647847
* Service kit, FPM * .....	9612647808	9612647816	9612647824	9612647832	9612647840	9612647848

\* Including mounting tool for stem gasket unit

\*\* Not included in service kits

Parts marked with □♦○★ are included in the service kits.

Recommended spare parts: Service kits.

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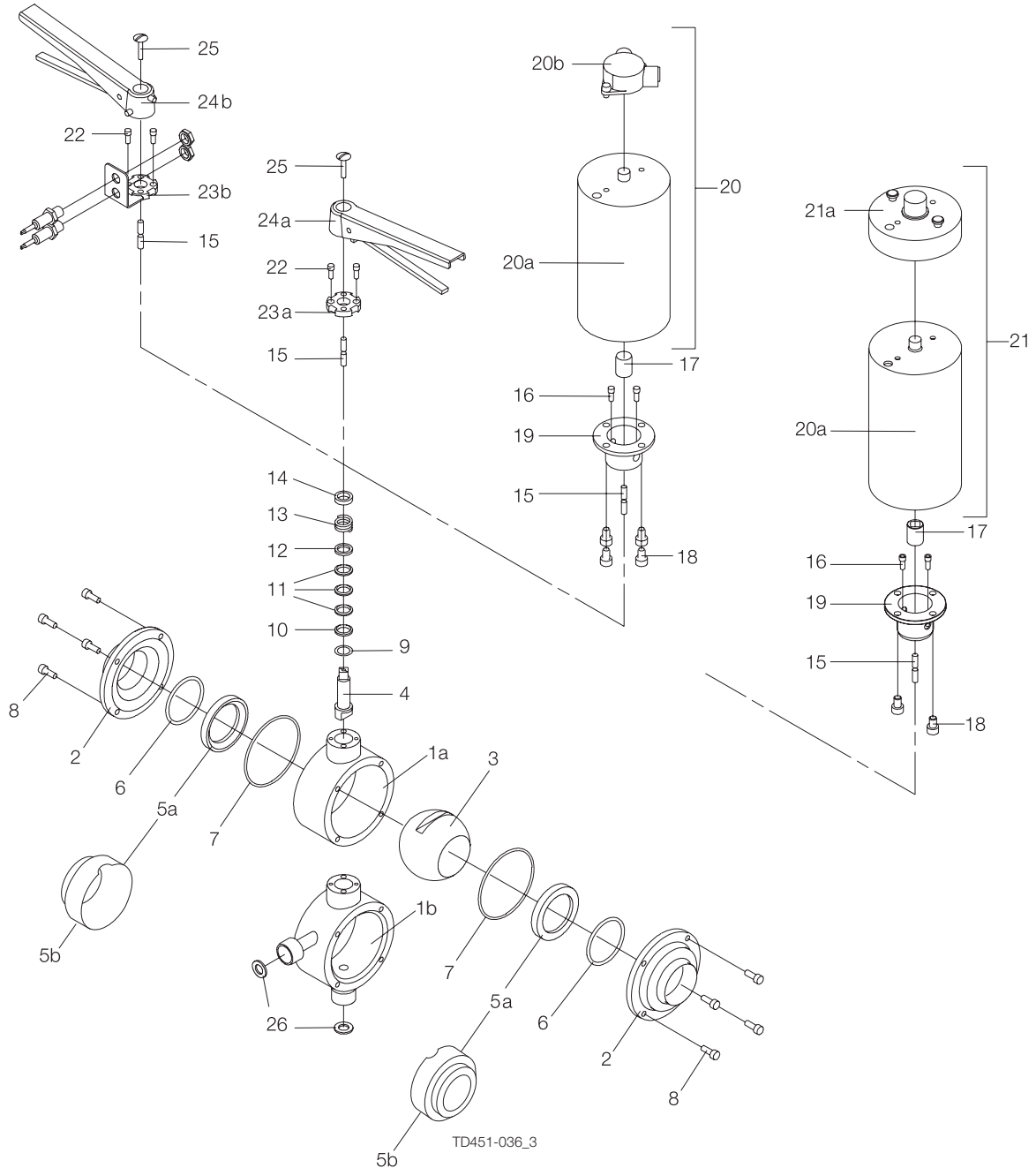
## 7 Parts list/service kits

It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.

NC = Normally closed.

NO = Normally open.

### 7.3 SBV Sanitary Ball Valve for DIN tube



## 7 Parts list/service kits

It is important to observe the technical data during installation, operation and maintenance.

Inform the personnel about the technical data.

NC = Normally closed.

NO = Normally open.

### Parts list

Pos.	Qty	Denomination
1a	1	Valve body
2	2	Flange
3	1	Ball
4	1	Stem
5a	2	Valve seat
5b	2	Valve seat
6	2	O-ring
7	2	O-ring
8	8	Flange
9	1	Sliding ring
10	1	Support ring
11	3	V-rings
12	1	Pressure ring
13	1	Spring
14	1	Slide bearing
15	2	Pin
16	2	Screw (act.)
17	1	Coupling
18	2	Screw
19	1	Bonnet
20	1	Actuator complete, standard version
20a		Actuator
20b	1	Position indicator complete
21		Actuator complete, ThinkTop version
21a	1	ThinkTop adapter complete
22	2	Screw (man.)
23a	1	Top plate
23b		Top plate
24a	1	Handle
24b		Handle
25	1	Screw
26	2	Seal for valves with cavity cleaning connections **

### Service kits

Denomination	DN25	DN40	DN50	DN65	DN80	DN100
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#### Service Kits for Product wetted parts

□	Service kit, EPDM (std.) ....	9612647749	9612647757	9612647765	9612647773	9612647781	9612647789
□	Service kit, NBR .....	9612647750	9612647758	9612647766	9612647774	9612647782	9612647790
□	Service kit, Q .....	9612647751	9612647759	9612647767	9612647775	9612647783	9612647791
□	Service kit, FPM .....	9612647752	9612647760	9612647768	9612647776	9612647784	9612647792

#### Service Kits for Cavity Fillers

○	Service kit, EPDM (std.) ....	9612647849	9612647857	9612647865	9612647873	9612647881	9612647889
○	Service kit, NBR .....	9612647850	9612647858	9612647866	9612647874	9612647882	9612647890
○	Service kit, Q .....	9612647851	9612647859	9612647867	9612647875	9612647883	9612647891
○	Service kit, FPM .....	9612647852	9612647860	9612647868	9612647876	9612647884	9612647892

### Service kits

Denomination	DN25	DN40	DN50	DN65	DN80	DN100
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#### Service Kits for All seals

♦	Service kit, EPDM (std.) * ..	9612647753	9612647761	9612647769	9612647777	9612647785	9612647793
♦	Service kit, NBR * .....	9612647754	9612647762	9612647770	9612647778	9612647786	9612647794
♦	Service kit, Q * .....	9612647755	9612647763	9612647771	9612647779	9612647787	9612647795

## 7 Parts list/service kits

*It is important to observe the technical data during installation, operation and maintenance.*

*Inform the personnel about the technical data.*

*NC = Normally closed.*

*NO = Normally open.*

Denomination	DN25	DN40	DN50	DN65	DN80	DN100
♦ Service kit, FPM * .....	9612647756	9612647764	9612647772	9612647780	9612647788	9612647796

### Service Kits for Cavity fillers

* Service kit, EPDM (std.) * ..	9612647853	9612647861	9612647869	9612647877	9612647885	9612647893
* Service kit, NBR * .....	9612647854	9612647862	9612647870	9612647878	9612647886	9612647894
* Service kit, Q * .....	9612647855	9612647863	9612647871	9612647879	9612647887	9612647895
* Service kit, FPM * .....	9612647856	9612647864	9612647872	9612647880	9612647888	9612647896

\* Including mounting tool for stem gasket unit

\*\* Not included in service kits

Parts marked with ♦♦♦ are included in the service kits.

Recommended spare parts: Service kits.

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**How to contact Alfa Laval**

Contact details for all countries are continually updated on our website.

Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information directly.

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