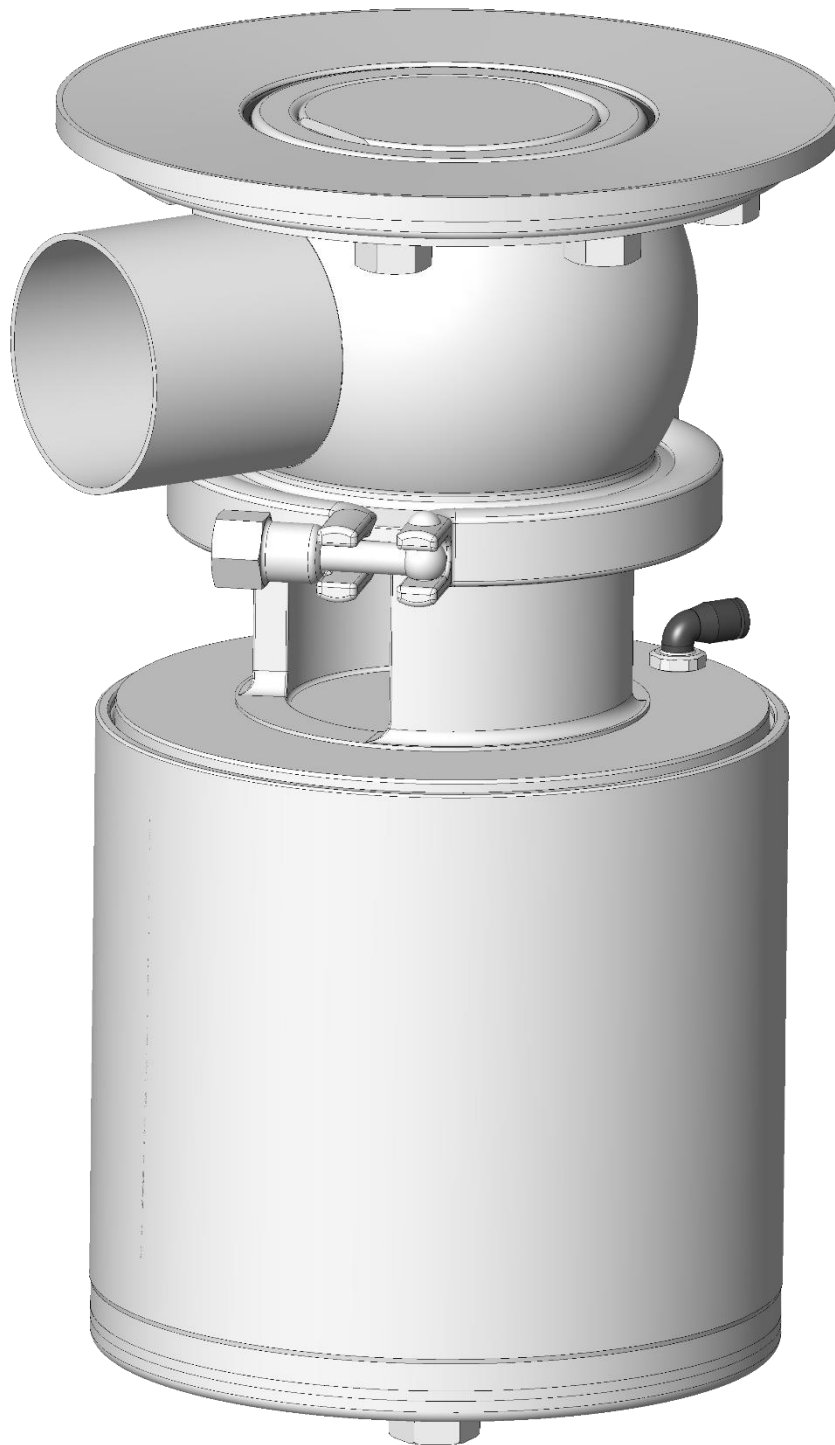

DCX3 AUTOMATIC TANK BOTTOM SHUT-OFF VALVE



www.definox.com

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1 DOCUMENT MANAGEMENT

MODIFICATIONS	INDEX	DATE	PAGES	APPROVAL
New issue	1	January 2003	/	R. GABORIT
Modification of number Ref 17 in DN80	2	June 2003	31	D. VINET
Remove o'ring R NITRILE number 44 for aseptic plate	3	January 2004	20/21/28/29/30/31	R. GABORIT
Update following standard	4	September 2009	/	G. ANDRE
Update DIN125 references	5	April 2011	25	S. FONTENIT
Add locking kit	6	October 2011	5	G. BEGAUD
Drawing modifications	7	March 2012	11/12	G. BEGAUD
Pictures to be reserved	8	July 2012	20/21/22/23	G. BEGAUD
Update long-stroke descending piston	9	November 2014	24/25	G. BEGAUD
Adding safety devices	10	October 2015	6	G. BEGAUD
Add clamp collar tightening torque	11	August 2016	16/17	G. BEGAUD
7082850 was 7815030	12	November 2018	6	F. BRUN
7010801 was 7006130 (Rep 29, 32 and 56)	13	March 2020	26/27/31/32/33/35	G. BEGAUD
7010808 was 7380607 (Rep 18 and 29)	14	April 2020	26/31/32/35	G. BEGAUD
Add of greases recommended for the actuator and the valve			4/5/13/36	
Updated visuals	15	February 2021	/	G. BEGAUD
Addition Note for the assembly or transformation of the DN125 actuator to NO	16	September 2023	14	G. BEGAUD
Update of FKM seals and seal kits	17	November 203	26/27/29/31/32/33/ 35	G. BEGAUD

2 SAFETY

2.1 IMPORTANT INFORMATION

Always read the maintenance notice before manipulating the valve



DANGER !

Failure to observe these instructions can result in serious bodily injury or loss of life.



CAUTION !

This can also result in less serious injuries or damage to the equipment.



DANGER !

Electricity can result in serious bodily injury or loss of life.



CAUTION !

This can also result in less serious injuries or damage to the equipment.

2.2 GENERAL INFORMATION



NOTE

The following advice is given to ensure optimum use of the equipment.

- The tasks must be performed in the order specified.
- A range of greases for cylinder seals and valve seals has been defined for be in phase with their nature and the regulations according to the uses (See § 7.15).

MAINTENANCE NOTICE AUTOMATIC DCX3 TANK BOTTOM COMPRESSION VALVES with floating seals, diaphragm, aseptic with elastomer seals, metal-to-metal seals or long stroke valves.

3 INTRODUCTION

Disassembling a DCX3 tank bottom compression valve is divided into 2 separate steps :

3.1 DISASSEMBLING THE VALVE

During this step the actuator and shut-off unit can be removed.

- This operation allows access to the shut-off seals (Changing the seals, see § 7.15 for lubrication) and removal of the actuator.
- It is easy to do and can be carried out on site as it does not present any special difficulties.
- It is similar to most maintenance operations carried out on this type of valve.

3.2 DISASSEMBLING THE ACTUATOR (changing inner seals)



DANGER !

- **WARNING** : This operation must be carried out with the correct tools and taking the necessary precautions (**SPRING UNDER TENSION**).
- For switching from a valve NC to NO or DA and inversely, refer to the chapter "Changing configuration".



NOTE

Note : After any maintenance operations on DEFINOX products, it is imperative to verify that the equipment is in good working order: Seals, pressure, etc.

3.2.1 Safety devices

For the maintenance of NC and NO actuators, we offer on request maintenance sets preventing unintended operation of the plug when the actuator is supplied with air.



DANGER !

RISKS

When changing seals: Risk of trapping fingers between the actuator axis and the top of the seal plate

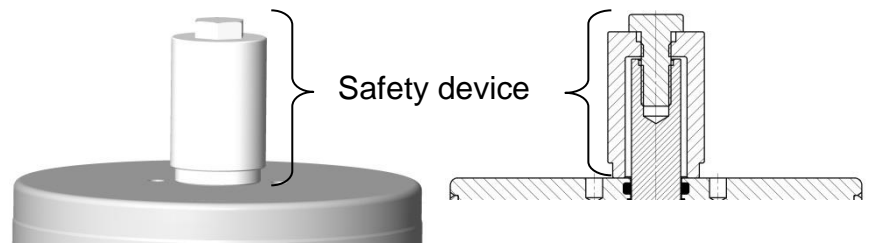


DCX3/4 NC (rod out)

SOLUTIONS

Maintenance tools for the NC actuator

DN	Reference
DN25 - 40	7814986
DN51 and DN63 – 76	7814972
DN80 – 104	7814987
DN125 - 150	7814988



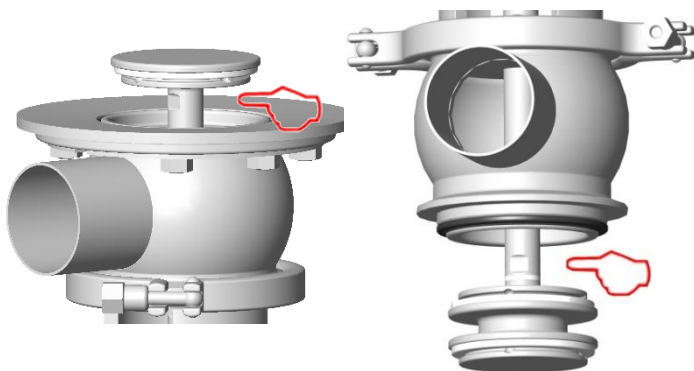
DCX3 TANK BOTTOM RISING PISTON NC (rod in)



DANGER !

RISKS

When fitting and removing the valve: Risk of trapping fingers between the valve and the valve body

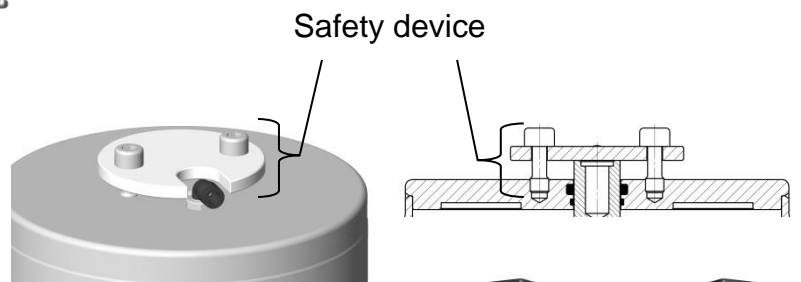


DCX4 NO (rod in)

SOLUTIONS

Maintenance tool for NO actuator

DN	Reference
DN25 – 150	7814976



A tool case reference 7082850 is available which includes the following tools:

- 7814986 ⇨ Maintenance tool for actuator NC DN25-40
- 7814972 ⇨ Maintenance tool for actuator NC DN51-76
- 7814987 ⇨ Maintenance tool for actuator NC DN80-104
- 7814976 ⇨ Maintenance tool for actuator NO DN25-150



4 DISASSEMBLING THE VALVE

Before starting the disassembly procedure, if the valve is fitted with a signalling box it may be necessary to detach the signalling unit from the actuator.

4.1 DISASSEMBLING THE SIGNALLING BOX



CAUTION !

Dismantling without disconnection

IMPORTANT : Before starting any work on the box, it is important to ensure that the air supply is closed and that the circuit is purged.



CAUTION !

Dismantling with disconnection

IMPORTANT : Before starting any work on the box, it is important to ensure that the mains supply is switched off, that the air supply is closed and that the circuit is purged.

To fit and remove the control top, refer to maintenance notice:



**ICS LED
Maintenance notice
NM-258**

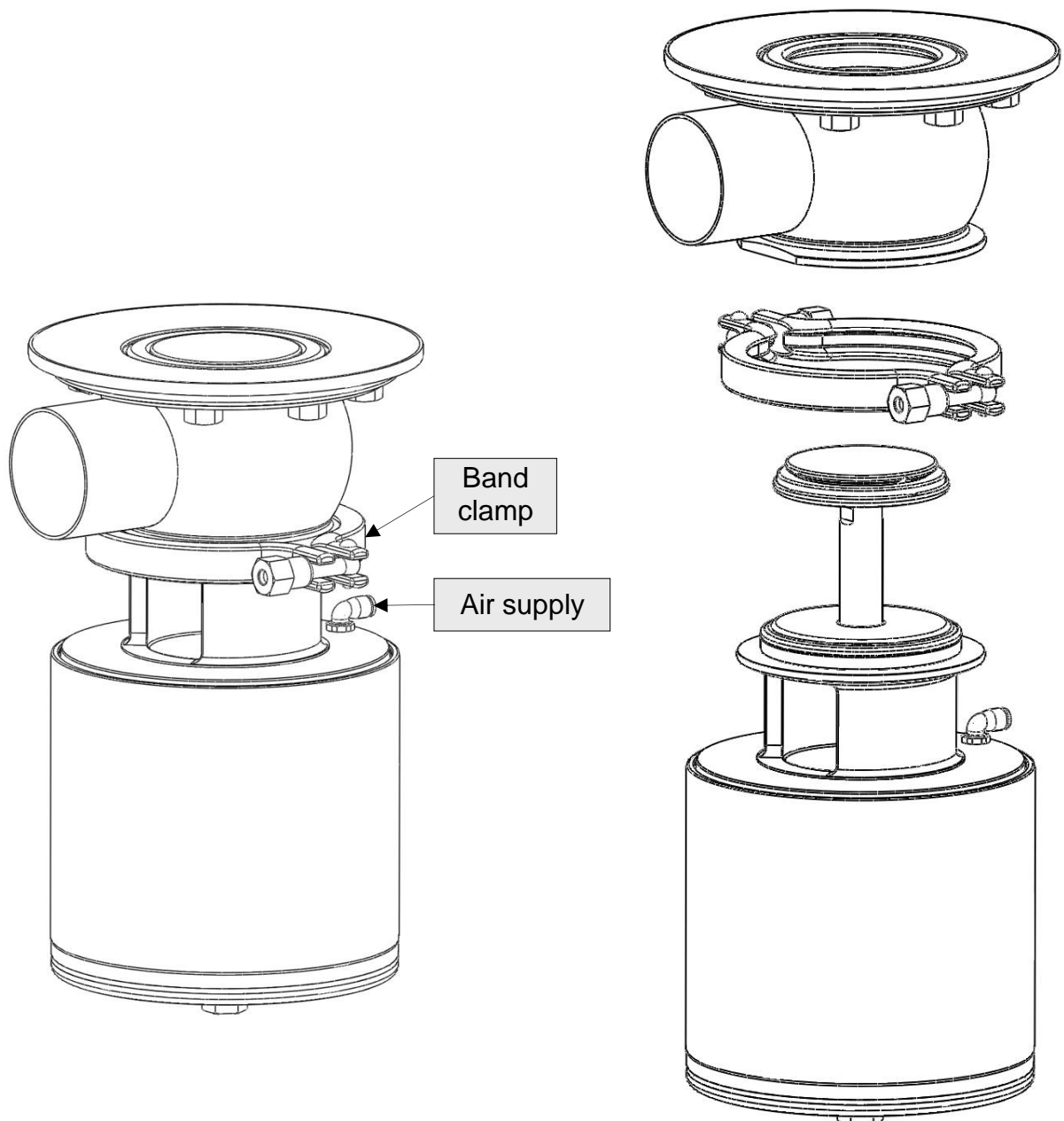
**ACS LED
Maintenance notice
NM-259**

For the previous generations control top, refer to maintenance notice:

- **NM-182 for the ICS control top**
- **NM-187 for the ACS control top**

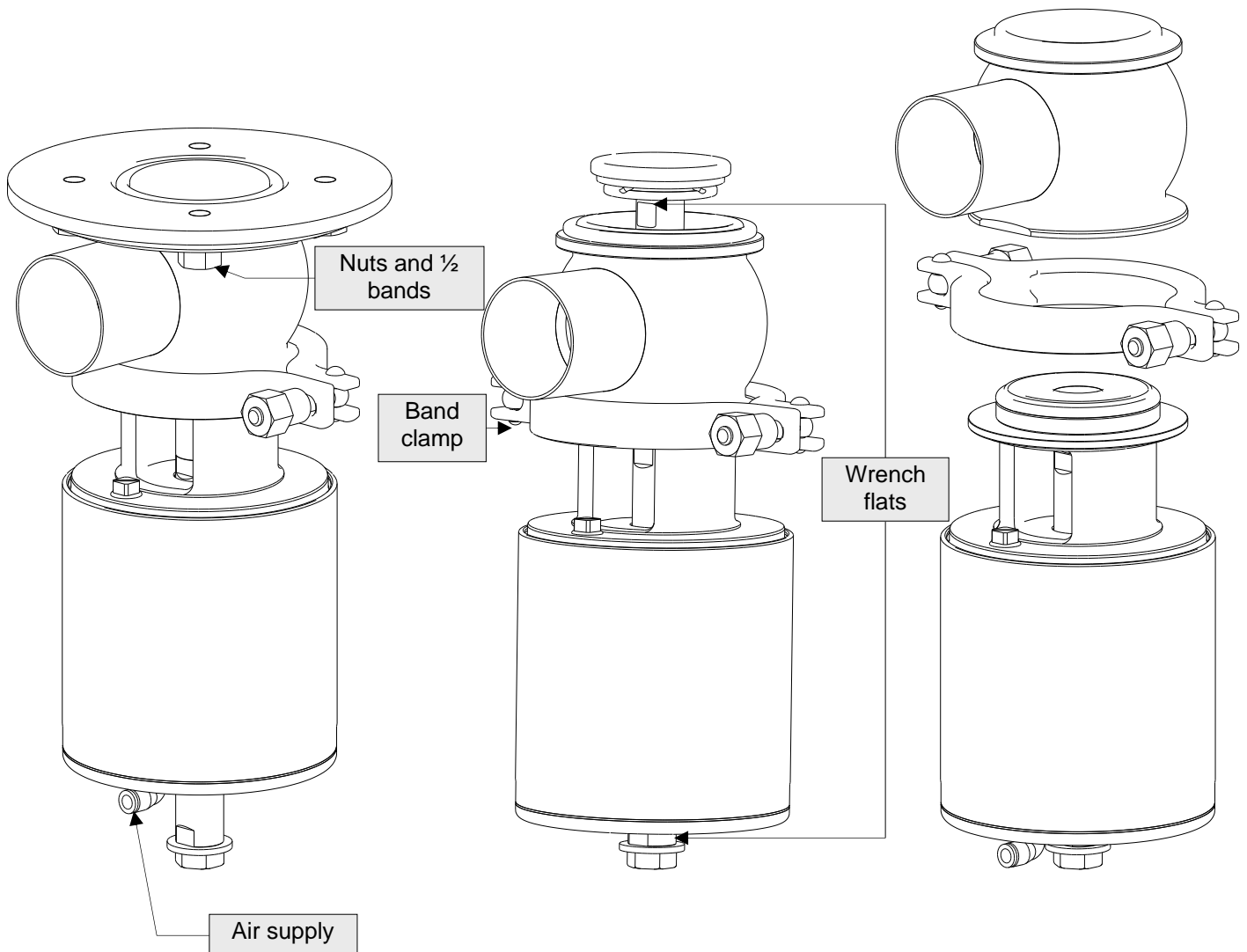
4.2 DISASSEMBLING THE DCX3 VALVE CLAMP COLLAR**4.2.1 Descending piston**

- Supply the NC actuator with air, to relieve the compression spring load on the clamp.
- Remove the clamp.
- Shut off the air to the actuator.
- Remove the actuator and shut-off unit from DCX3 body.
- Unscrew the nuts, then remove the two ½ bands and extract the body



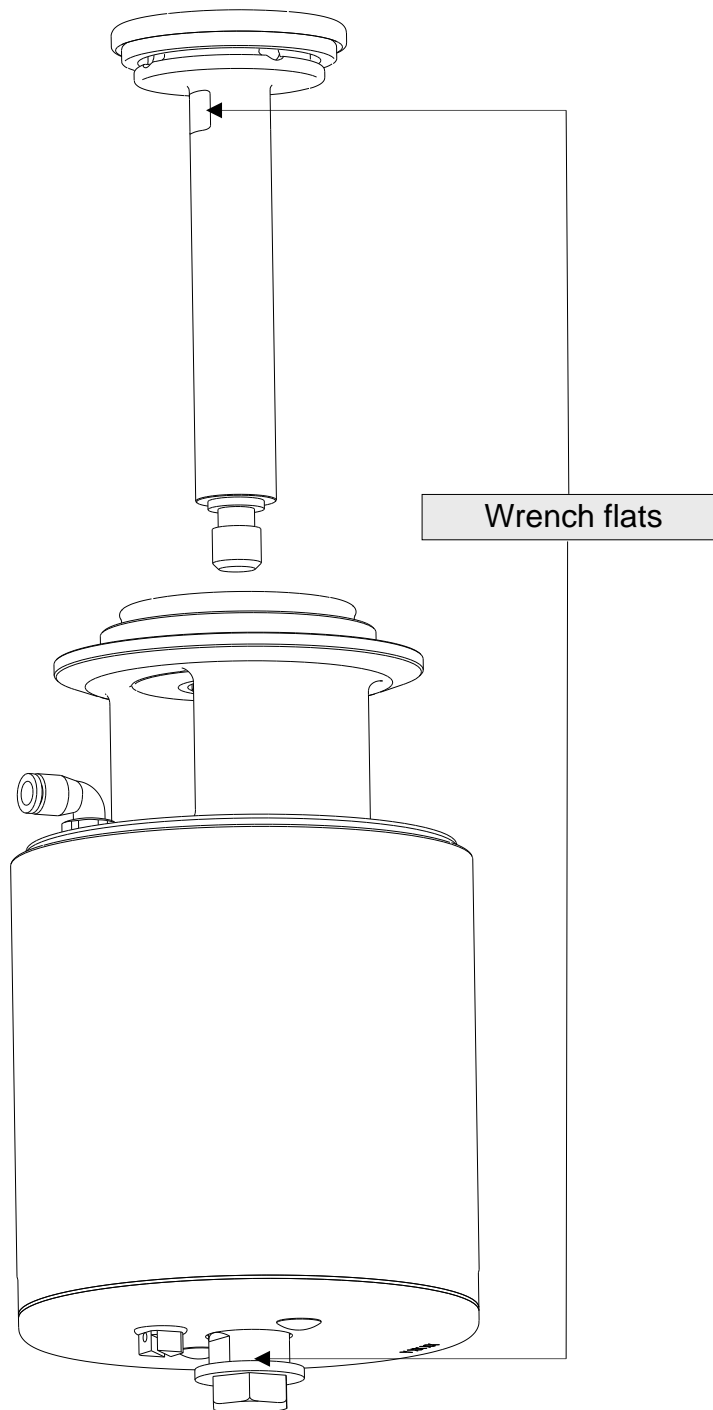
4.2.2 Rising Piston

- Unscrew the nuts, remove the two ½ bands and extract the body and shut-off unit
- Supply air to the NO actuator, then unscrew the piston using the two wrench flats.
- Shut off the air to the actuator.
- Remove the band clamp and remove the actuator and shut-off unit from DCX3 body.



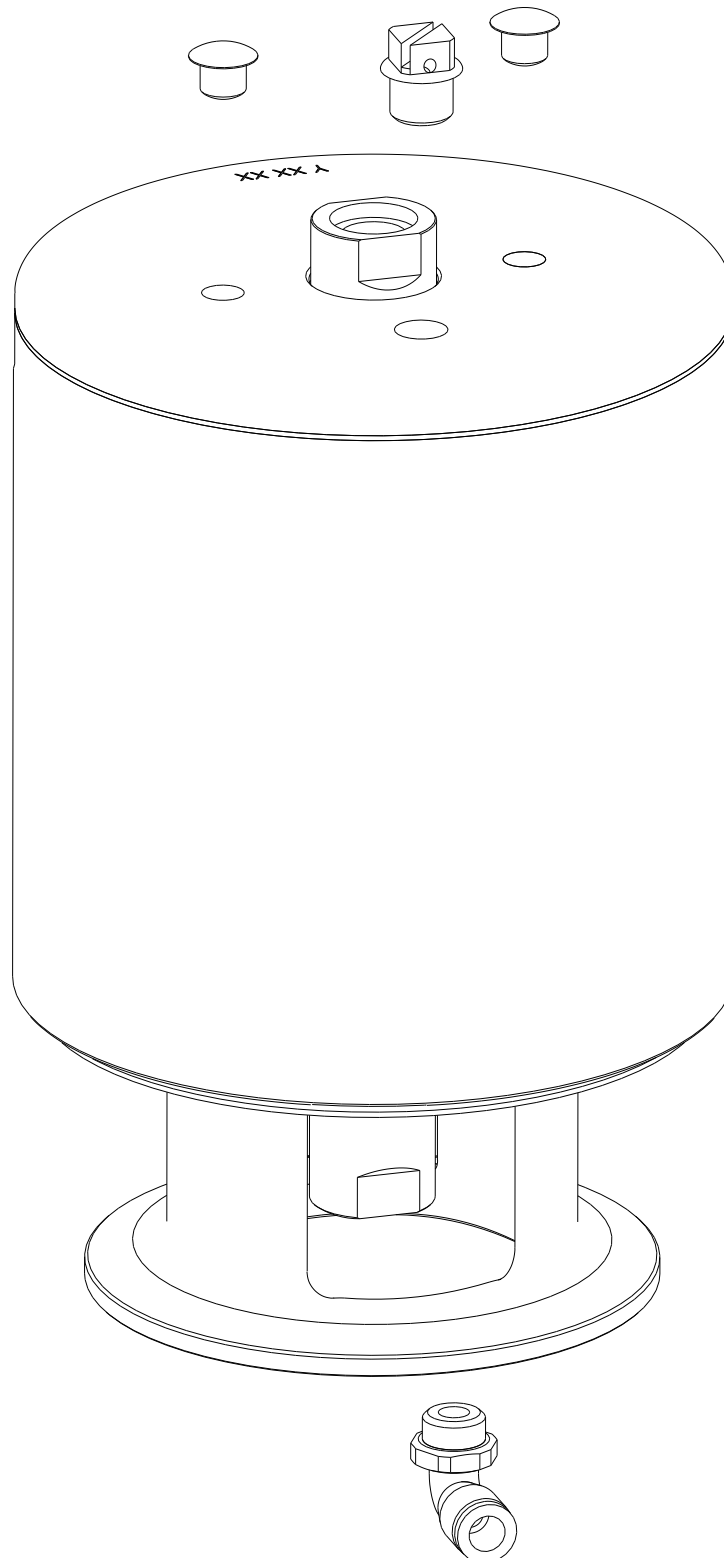
4.3 DISASSEMBLING THE DCX3 TANK BOTTOM VALVE

- The actuator rod and the DCX3 descending piston are equipped with two wrench flats used to unscrew the shut-off unit from the actuator unit. Disassembly of the rising piston is explained in the chapter "DCX3 Bank Bottom Band Clamp."



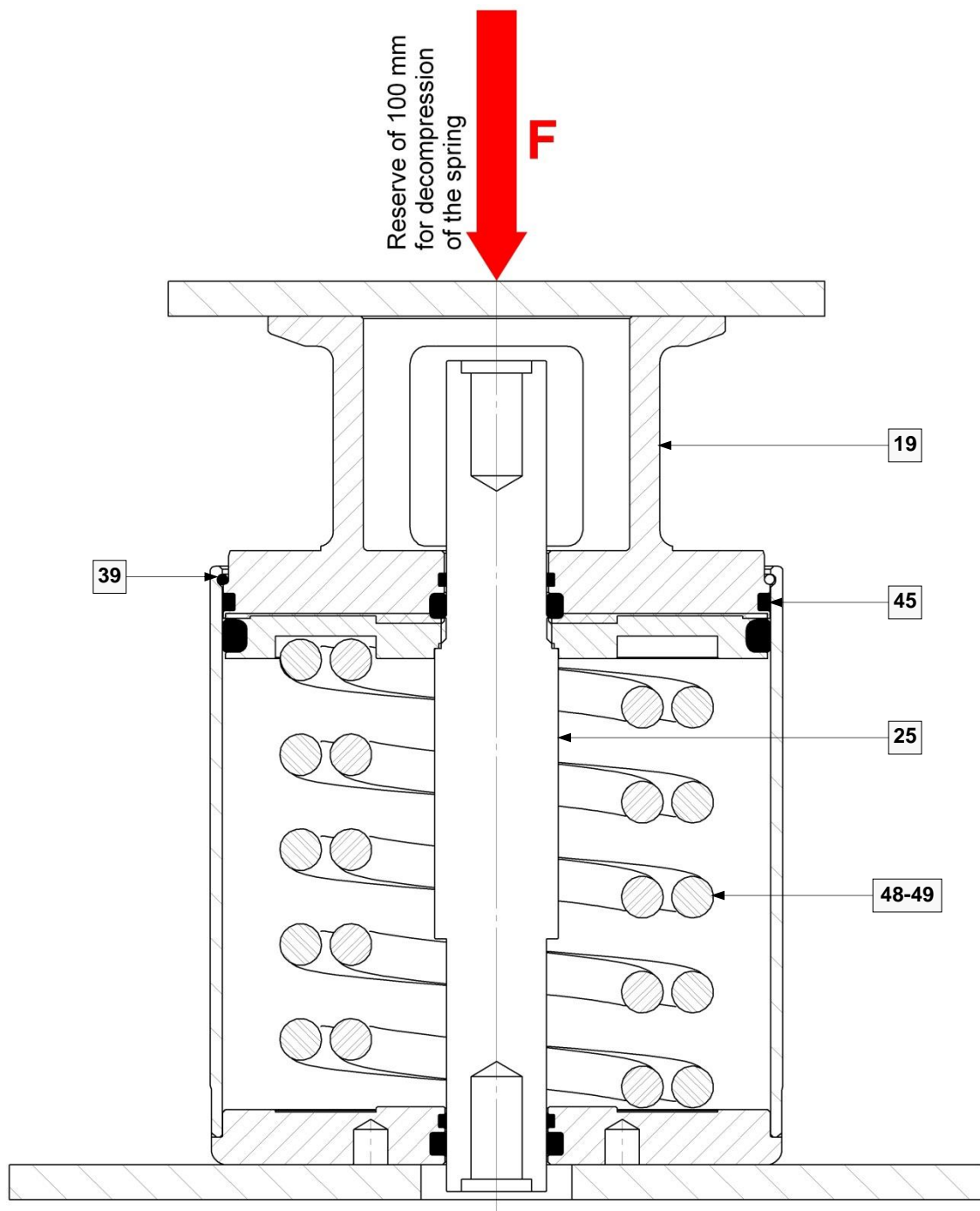
5 DISASSEMBLING THE ACTUATOR

- For all configurations (NO, NC, and DA), remove the air fitting, the screw and the plastic pistons, as well as the hex screw and the washer.



Next, remove the internal parts of the actuator. This operation is dangerous if the correct tools are not used. We advise that you use a hydraulic press or machinery according to the diagram below (take into account a 100 mm expansion range of the spring).

- The actuator is positioned vertically.
- Press down the lantern (Ref: 19).
- Remove the retainer ring (Ref: 39) from its groove using a small screwdriver.
- Release the pressure, the lantern moves upwards.
- Remove the lantern with its O-ring (Ref: 45).
- Remove the inner parts of the actuator (rod/plunger, spring, ref: 25 et 48-49).



6 CHANGING THE SEALS AND RE-ASSEMBLING

6.1 ASSEMBLING THE ACTUATOR

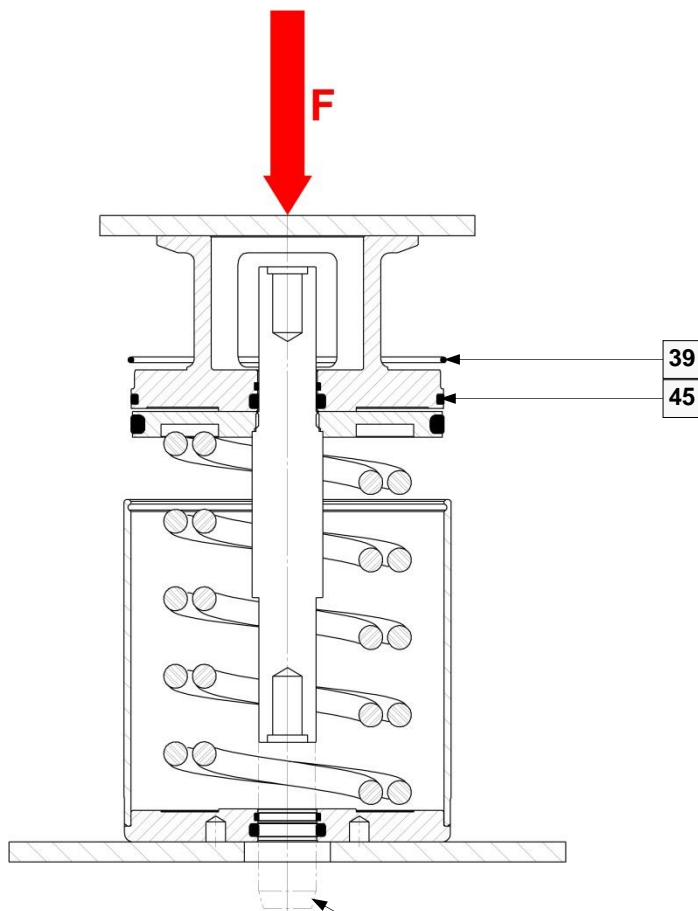


CAUTION !

CAUTION : For changing the actuator configuration from **NC** (Normally Closed) to **NO** (Normally Open) or **DA.** (Double Acting), see the following chapter.

This procedure is performed in the reverse order to dismantling. However, it is necessary to take into account the following information:

- A guide pin centred on the actuator stem ensured that the piston is properly centred in the body. It also avoids also avoids the piston jumping if the spring(s) slip(s) sideways during compression.
- Before reassembling the parts, ensure that the assembly is lubricated with an appropriate lubricant (water-resistant and temperature-resistant food grade grease → Example: 4025 H1 QUINPLEX by Lubrication Engineers, see § 7.15). Ensure that the grease used is compatible with the elastomer seals.
- Take care not to damage the lantern seal [45] when fitting it with the press,
- Ensure that the snap-ring (39) is properly positioned in the recess of the body before releasing pressure,
- Test operation of the actuator before continuing assembly.

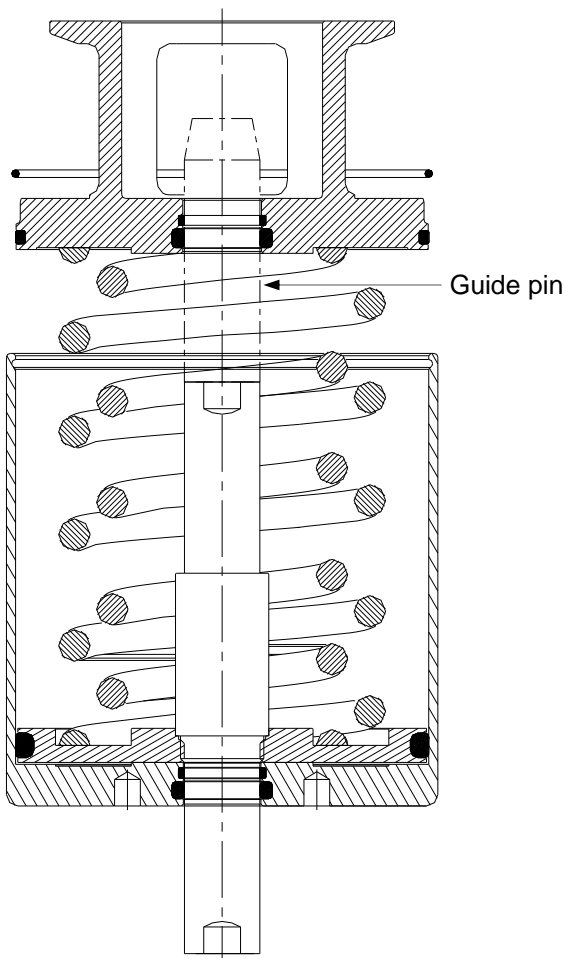


Guide pin No.	
DN	references
25 - 40	73 00453
51	73 00454
63 - 76	73 00455
80 - 125	73 00456

6.2 CHANGING ACTUATOR CONFIGURATION

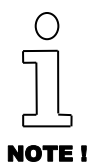
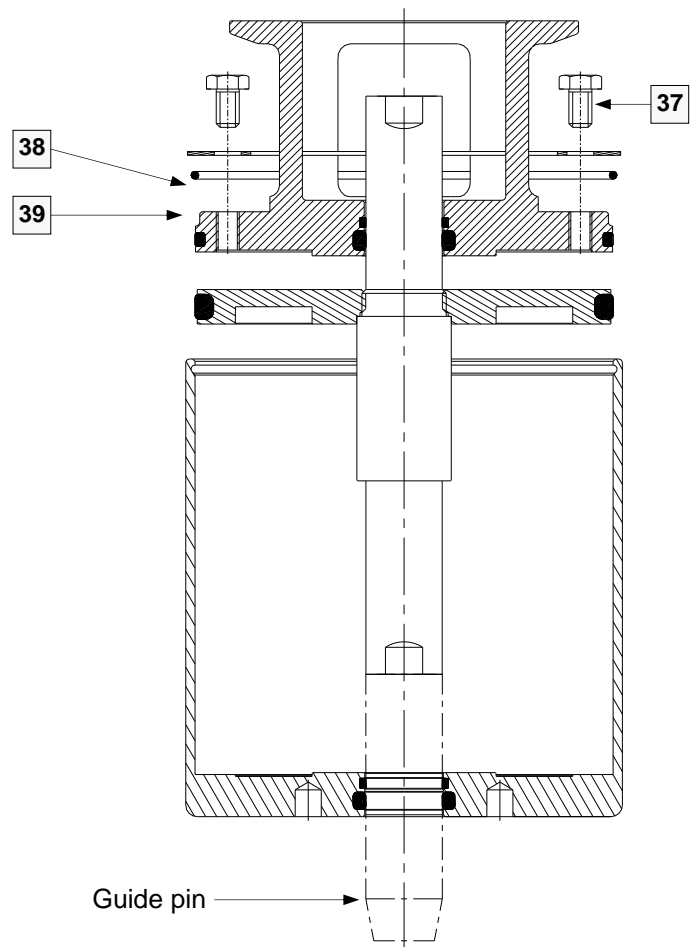
Transforming an *NC* actuator into a *NO*:

After opening the actuator, refit the stem/piston and spring assembly the other way around in the body.



Transforming an *NC* actuator into a *DA*:

After opening the actuator, remove the spring(s), and change the standard lantern with a (pierced) double-acting lantern [17], attach a holding plate [30] with screws [29] that must be installed with liquid seal.



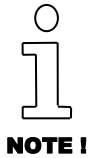
NOTE: When assembling or converting the DN125 actuator to NO, only spring [48] 7007825 must be installed.

NOTE: For your own safety, check that the snap-ring is properly positioned in its recess. If the snap-ring is damaged or deformed, it must be replaced.

6.3 REPLACING PFA SEALS

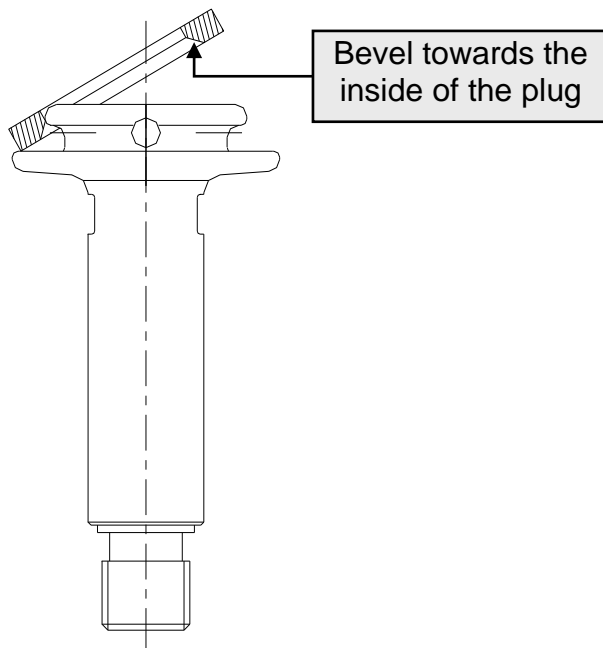
To change PFA seals, follow the guidelines given below:

- Remove the defective seal using a cutter taking care not to mark the bearing surface of the plug (protect the stainless steel surface using the edge of a steel rule or a plastic off-cut),
- Place the new seals in an oven at 284°F (+/- 3%) for 30 minutes.
 - ⇒ Do not exceed 392°F.
 - ⇒ If the temperature is too low, there is a risk that the seal will deform or tear during installation.
- Insert the seal quickly from one side of the groove, then progressively push it into its housing.

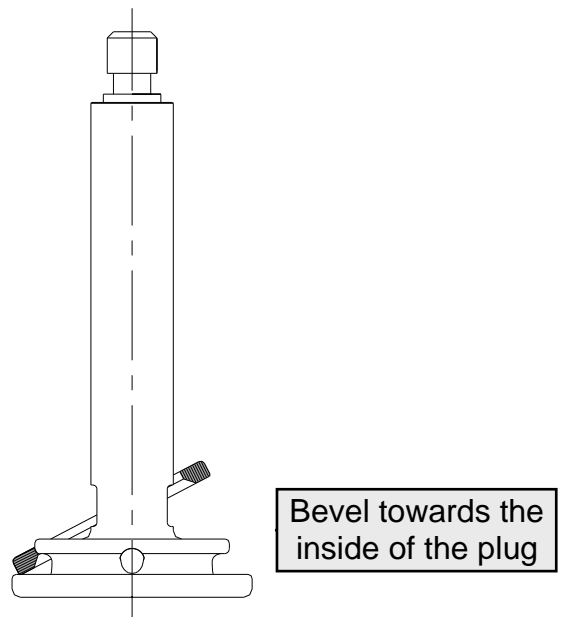


NOTE: always insert the seal on the bevelled side.

Descending piston



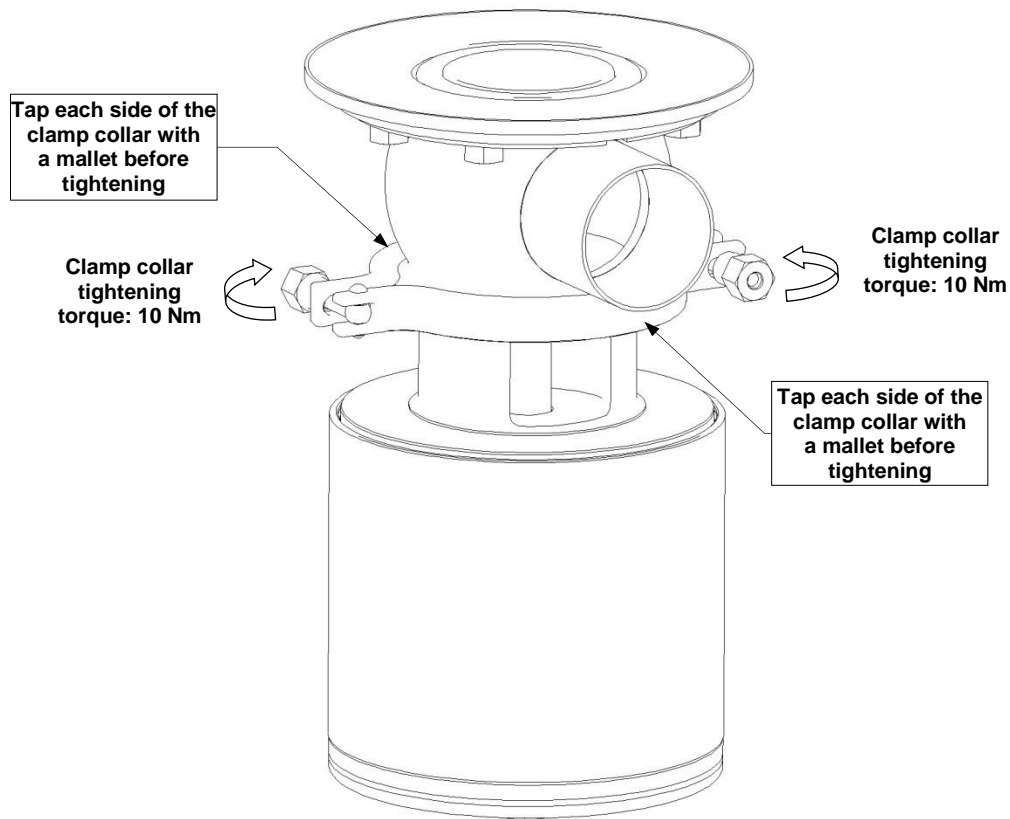
Rising piston



6.4 REASSEMBLING OF VALVES

This operation is carried out in the reverse order to disassembly. You should follow the guidelines given below:

- We recommend using a **medium thread lock compound** to lock the plug during reassembly on the actuator and retightening the plug of diaphragm valves after first usage with temperature,
- Do not forget to supply air to the actuator before tightening the clamp collars,
- Before making the final network connections, check that the valve is operating normally. If you encounter difficulties when performing the operations described here, do not hesitate to contact us,
- You can also contact us regarding maintenance for your valves either on-site or at our own premises.



6.5 REASSEMBLING OF DCX3 TANK BOTTOM DIAPHRAGM VALVE

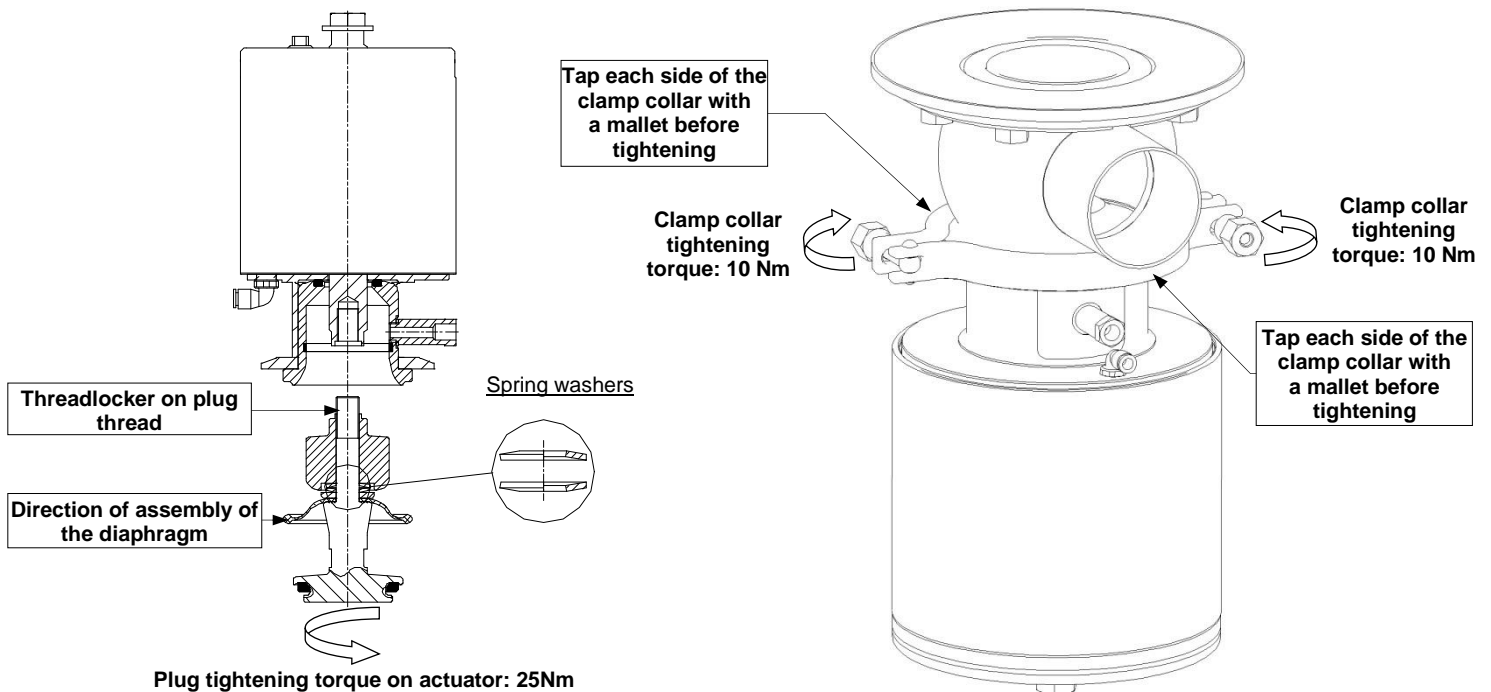
In the case of a DCX3 tank bottom valve equipped with a PTFE diaphragm, do not forget put in place the 2 spring washers that ensure the tightening of the diaphragm with a holding torque of 2.25 Nm.

- We recommend using a **medium thread lock compound** to lock the plug during reassembly on the actuator and retightening the plug of diaphragm valves after first usage with temperature,
- Do not forgot to supply air to the actuator before tightening the clamp collars,
- Before making the final network connections, check that the valve is operating normally. If you encounter difficulties when performing the operations described here, do not hesitate to contact us,
- You can also contact us regarding maintenance for your valves either on-site or at our own premises.



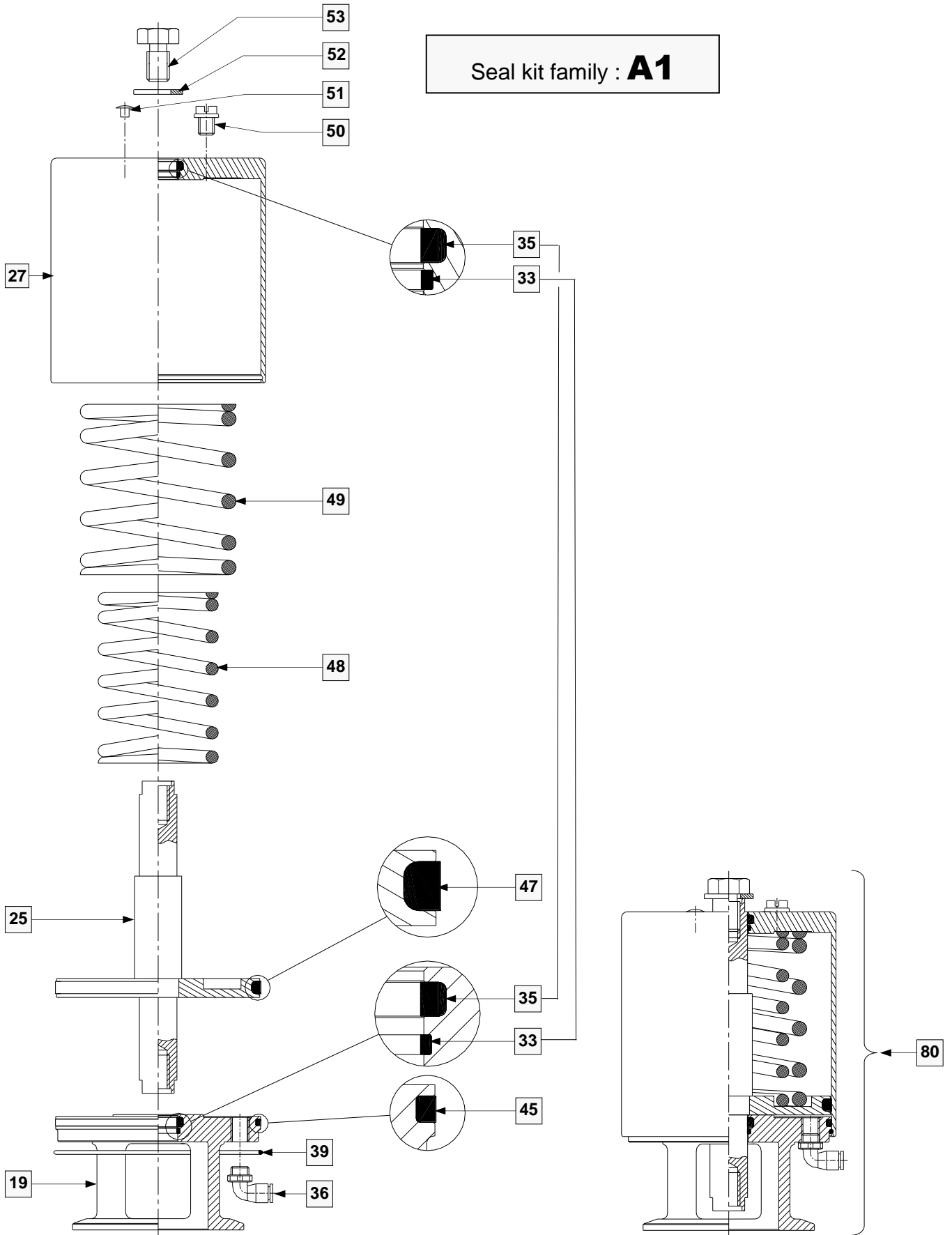
NOTE !

NOTE : *In the case of DCX3 tank bottom valve fitted with a PTFE diaphragm, do not forget to place the 2 flexible washers that hold the diaphragm.*

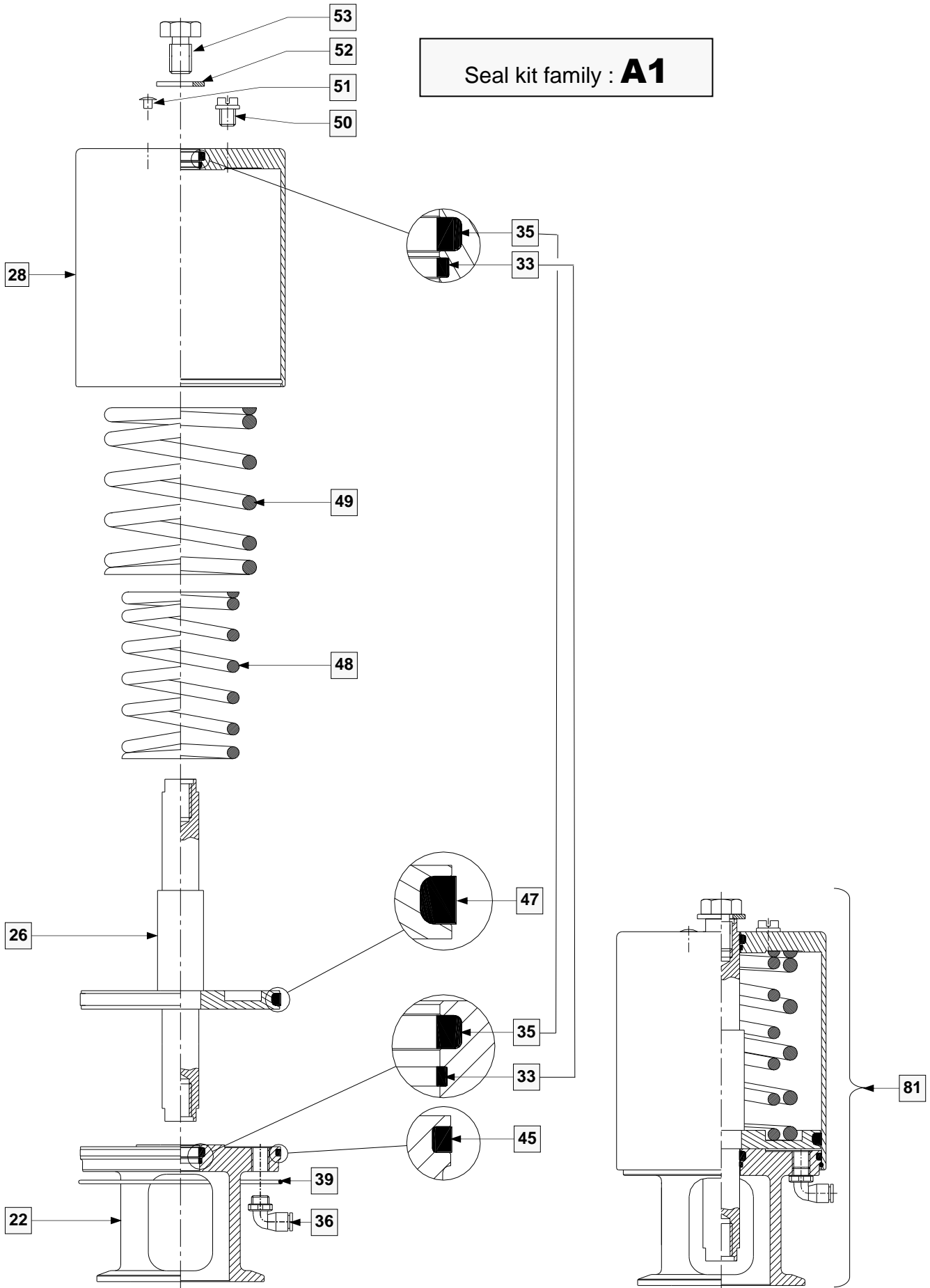


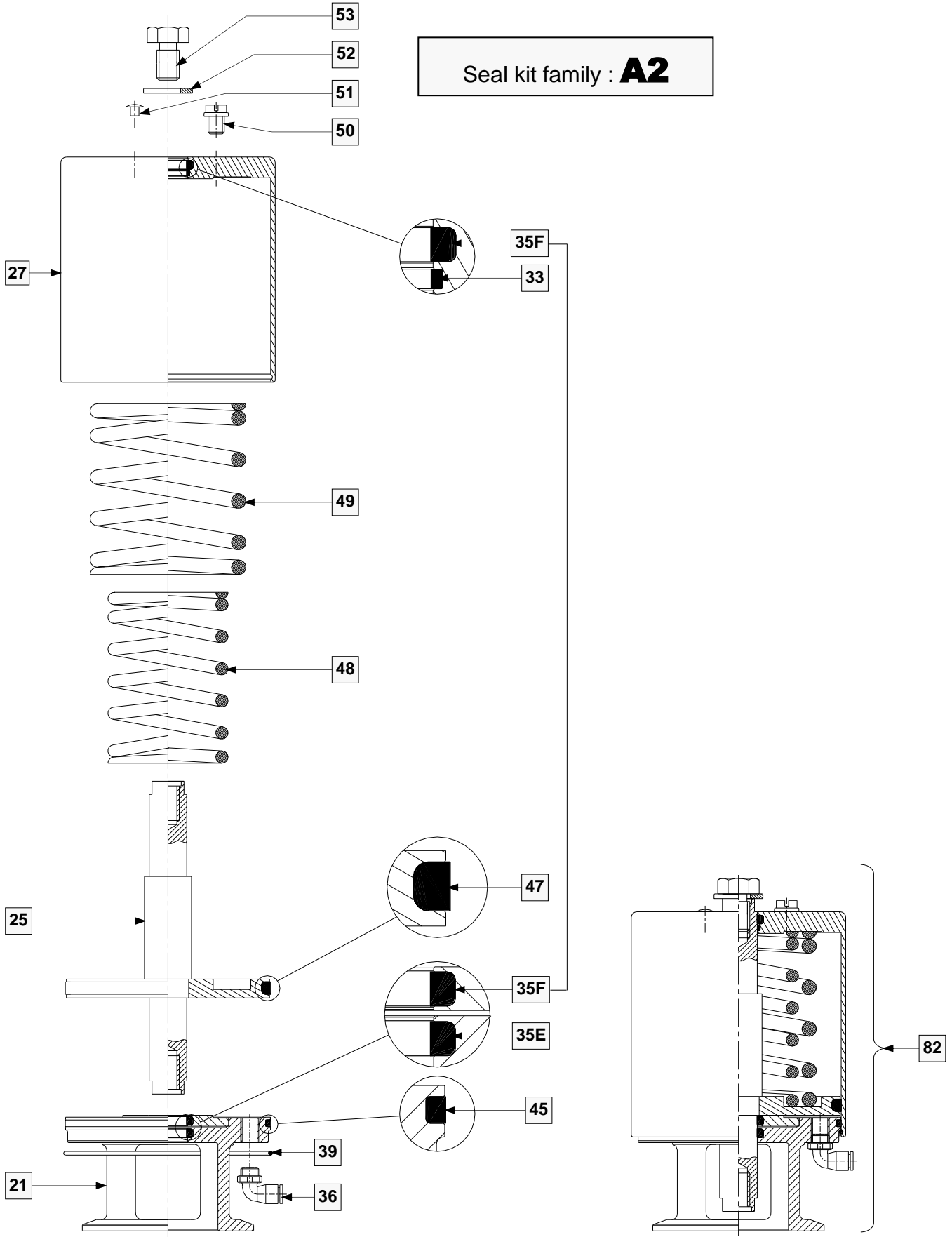
7 PARTS

7.1 STANDARD DCX3 TANK BOTTOM ACTUATOR (DCX3 PFA, diaphragm seal & elastomer seal)

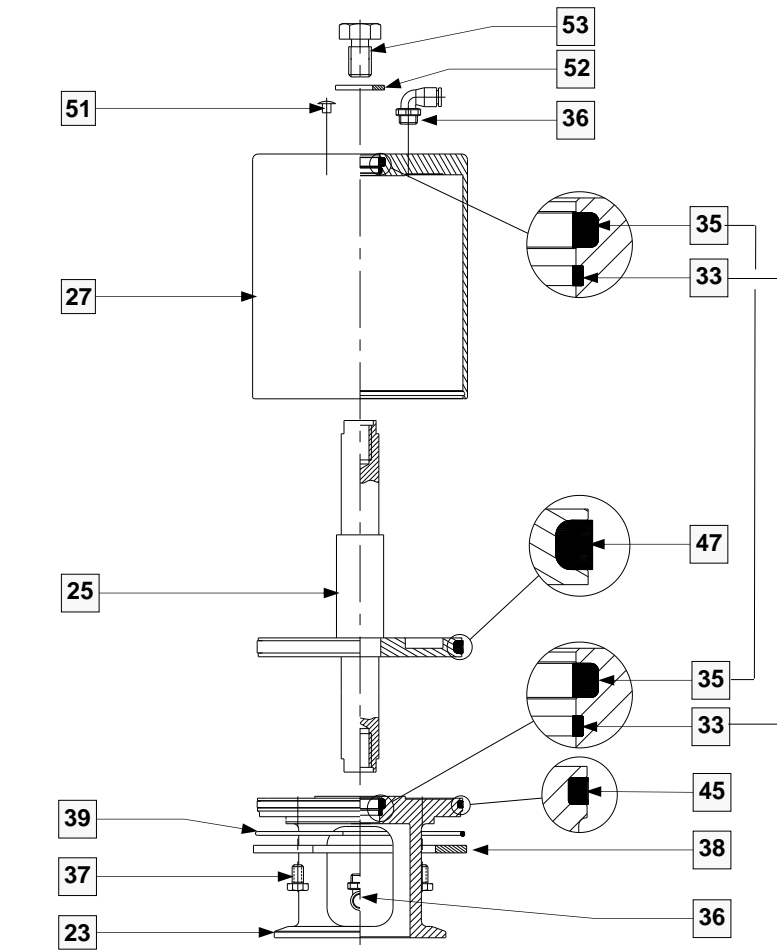


7.2 DCX3 TANK BOTTOM LONG-STROKE VALVE ACTUATOR



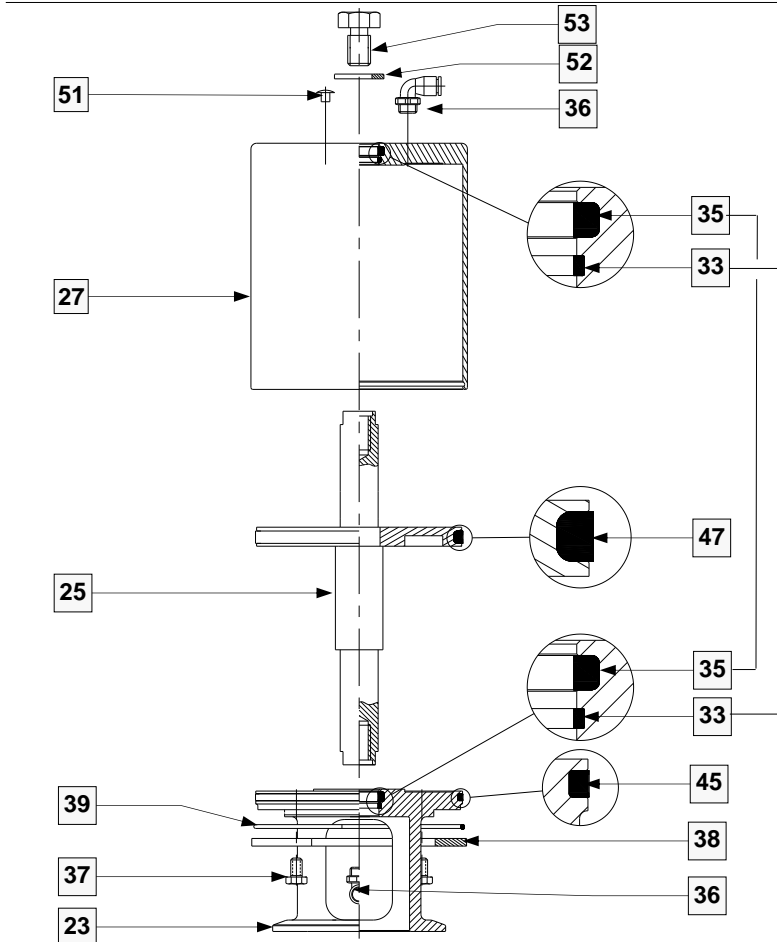
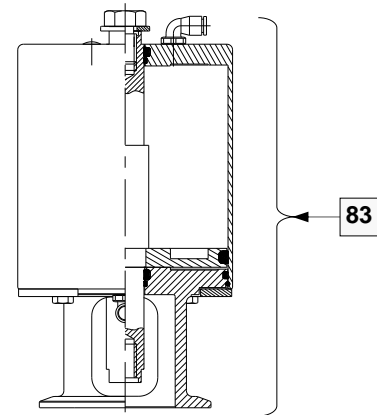
7.3 DCX3 TANK BOTTOM ASEPTIC SEAT VALVE ACTUATOR


7.4 DCX3 TANK BOTTOM D. A. VALVE ACTUATOR (DCX3 PFA, elastomer seal & diaphragm seal)



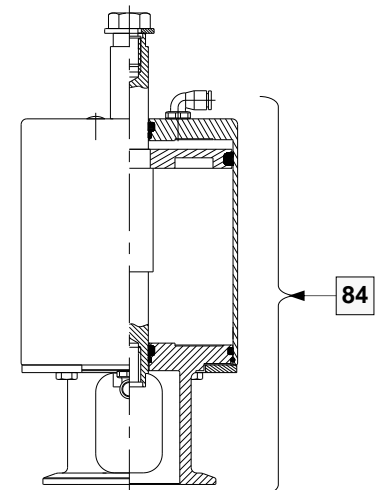
Seal kit family : **A1**

**DESCENDING
PISTON**

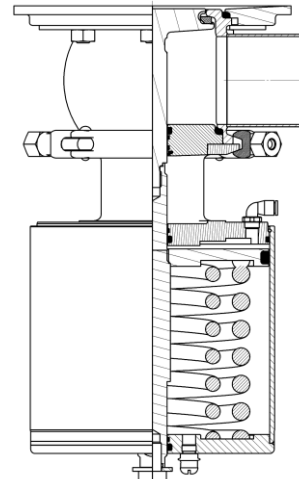
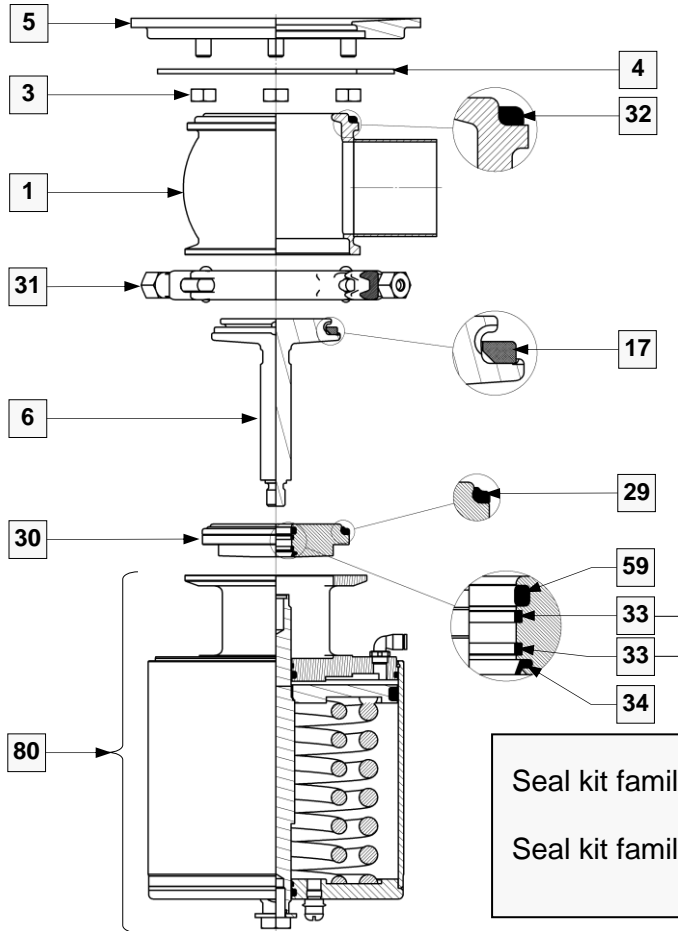


Seal kit family : **A1**

**RISING
PISTON**

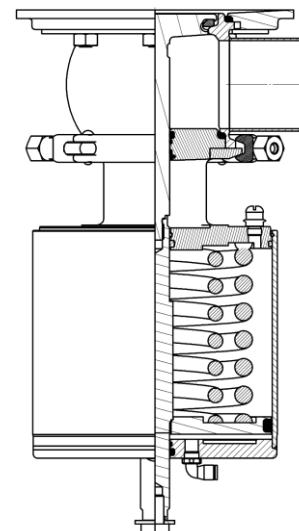
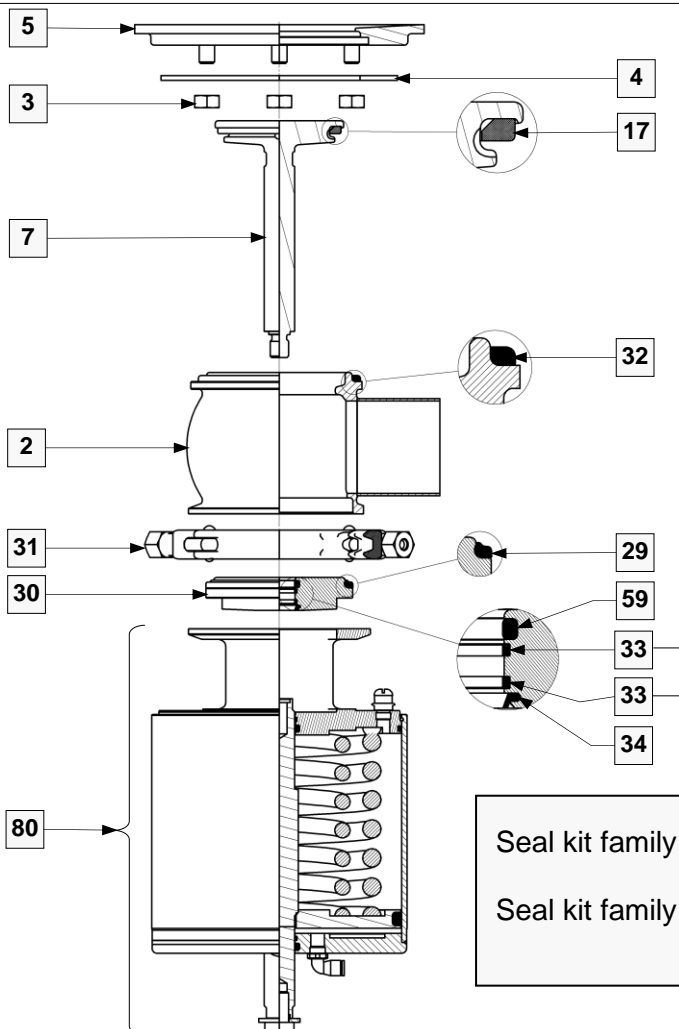


7.5 DCX3 TANK BOTTOM VALVE STANDARD



**DESCENDING
PISTON**

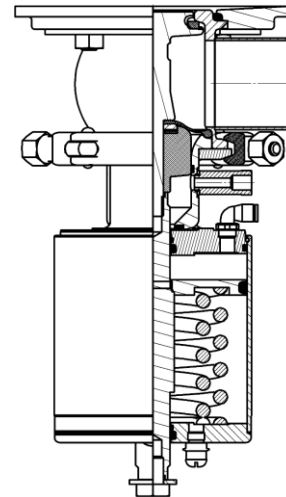
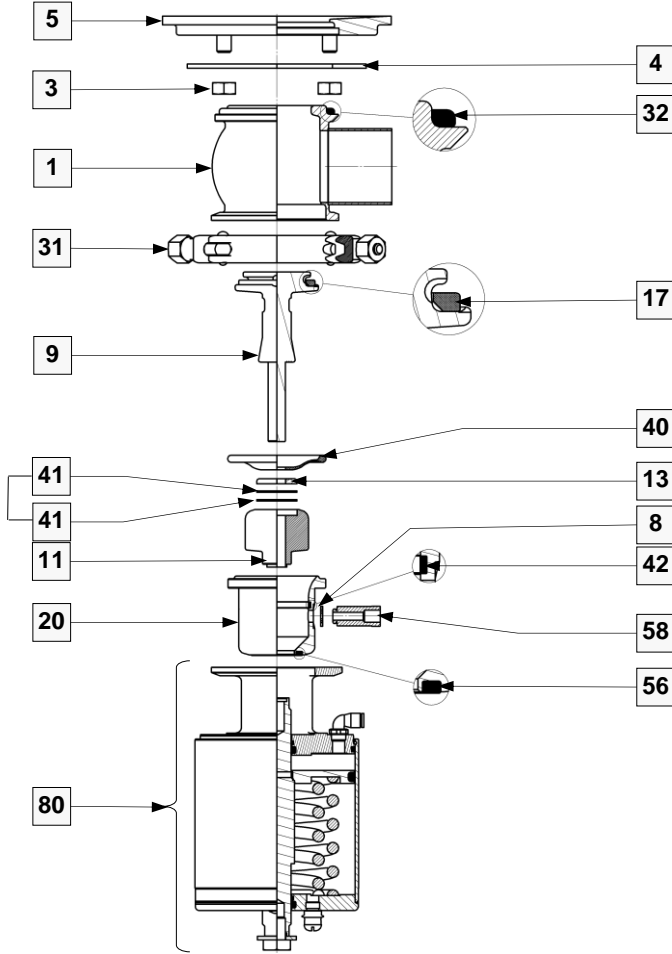
Seal kit family (complete) : **B1, B2 or B3**
 Seal kit family (Without PFA seal) : **C1, C2 or C3**
 (According to material grade)



RISING PISTON

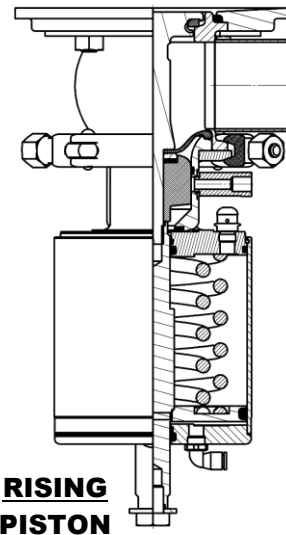
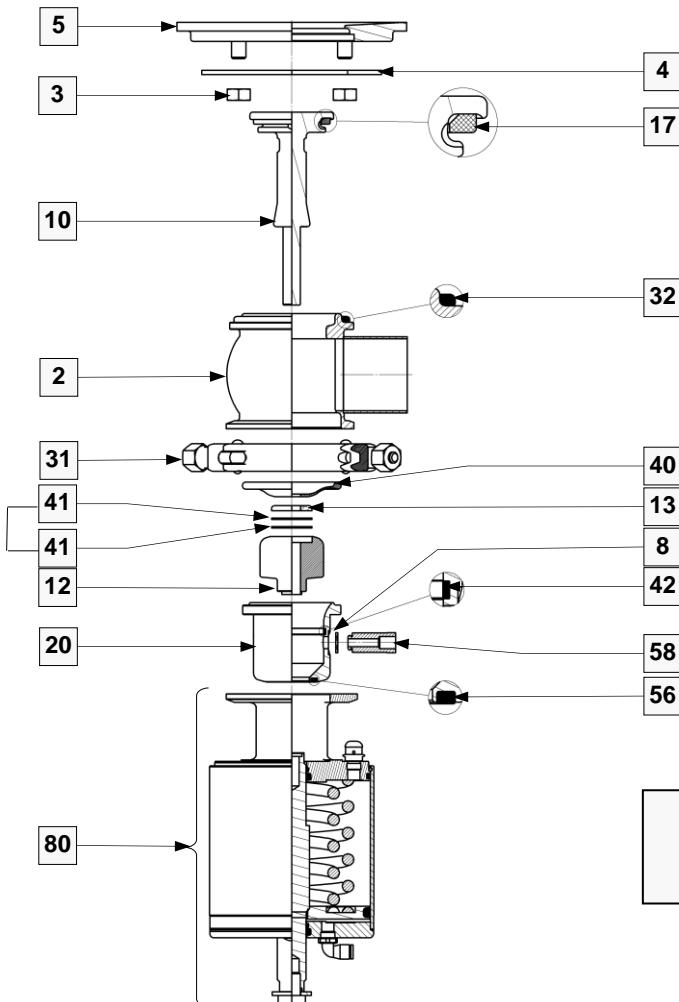
Seal kit family (complete) : **B1, B2 or B3**
 Seal kit family (Without PFA seal) : **C1, C2 or C3**
 (According to material grade)

7.6 DCX3 TANK BOTTOM DIAPHRAGM VALVE



**DESCENDING
PISTON**

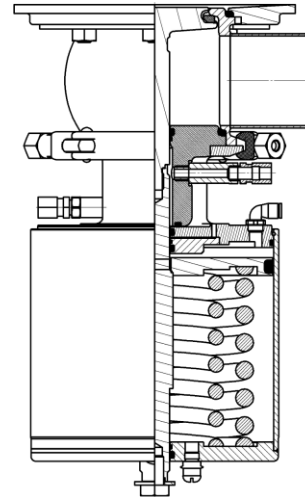
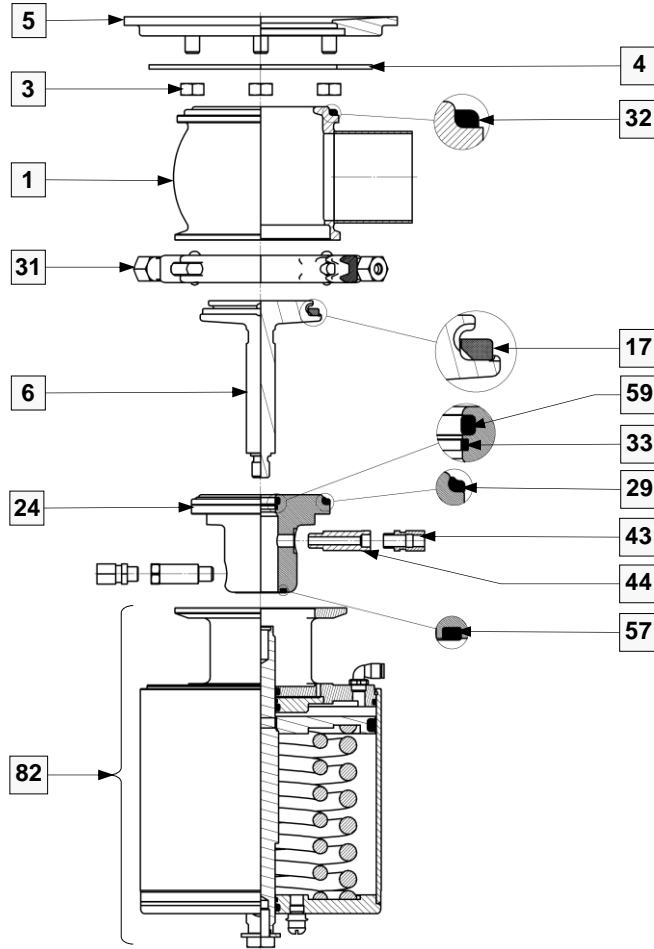
Seal kit family : **D1, D2** or **D3**
(According to material grade)



**RISING
PISTON**
**CLAPET MONTANT
OPERATEUR N.O.**

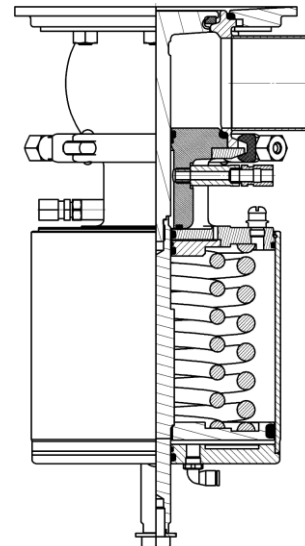
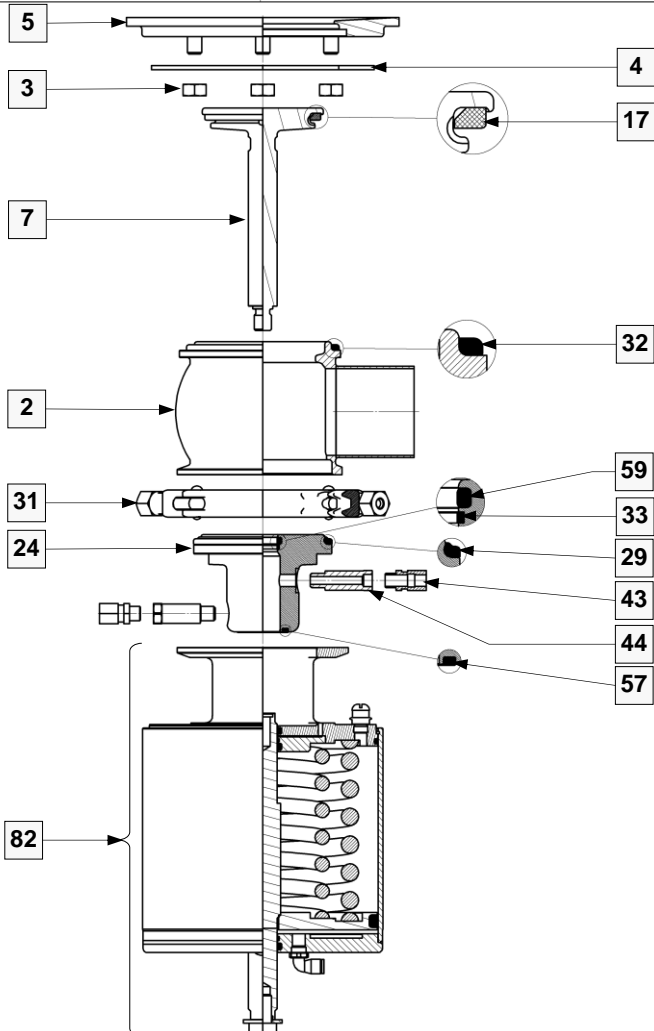
Seal kit family : **D1, D2** or **D3**
(According to material grade)

7.7 DCX3 TANK BOTTOM ASEPTIC SEAT VALVE



**DESCENDING
PISTON**

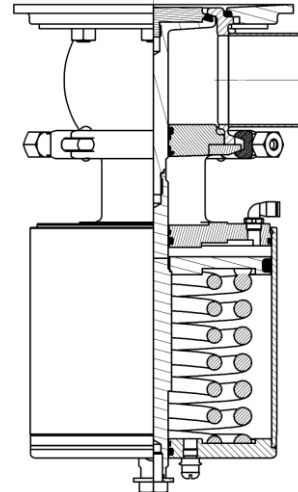
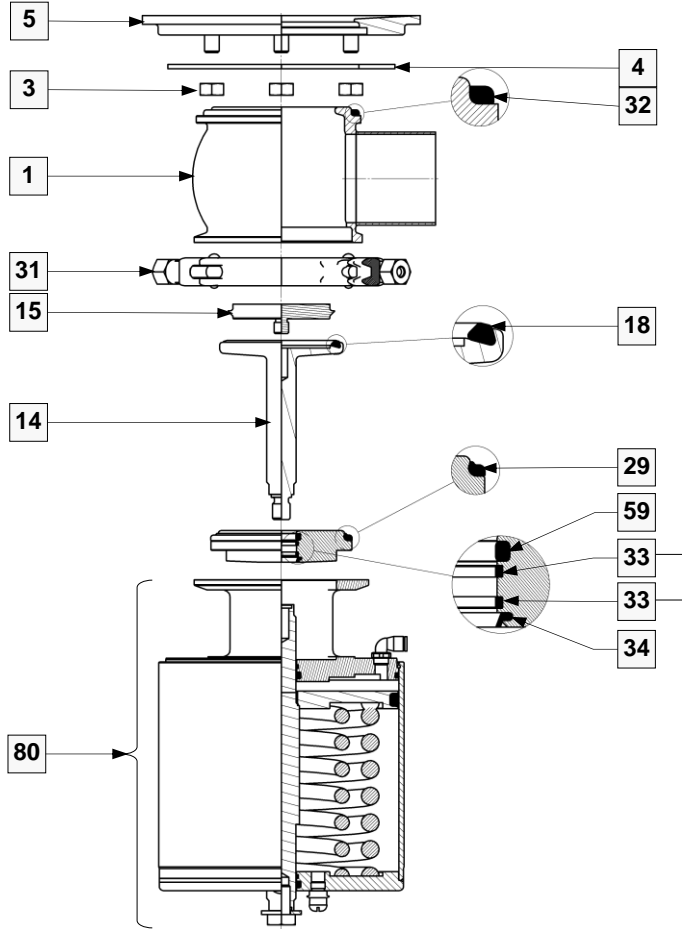
Seal kit family : **E1**



RISING PISTON

Seal kit family : **E1**

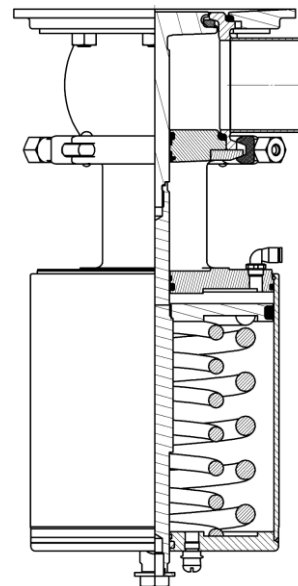
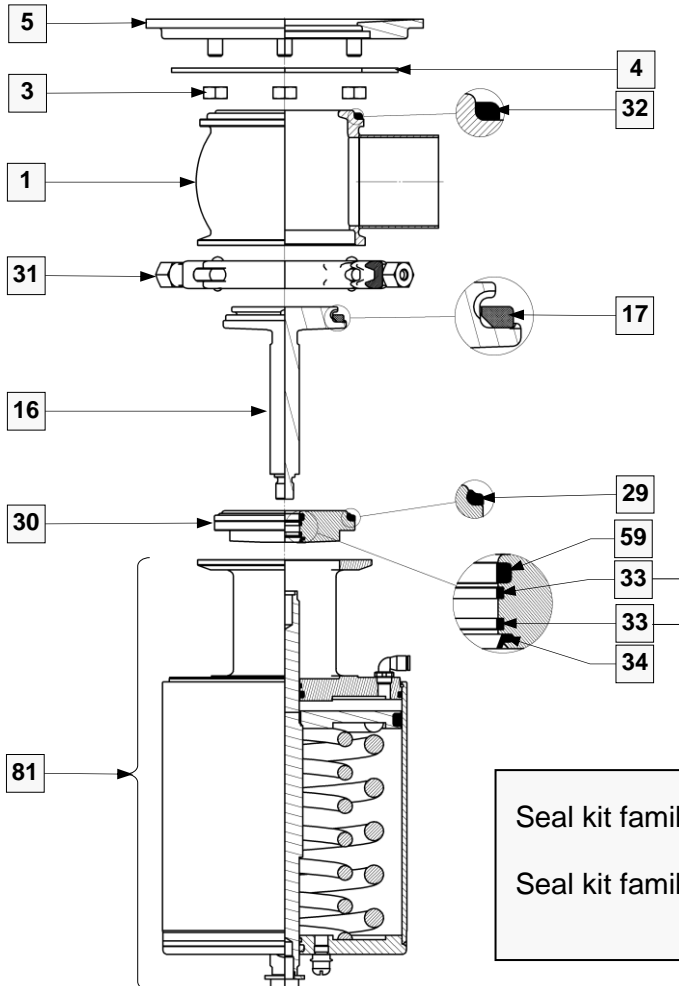
7.8 DCX3 TANK BOTTOM ELASTOMER SEAL VALVE



**DESCENDING
PISTON**

Seal kit family : **F1, F2** or **F3**
(According to material grade)

7.9 DCX3 TANK BOTTOM LONG-STROKE VALVE



**RISING
PISTON**

Seal kit family (complete) : **B1, B2** or **B3**
Seal kit family (Without PFA seal) : **C1, C2** or **C3**
(According to material grade)

7.10 LIST OF PARTS FOR DN 25 TO 51 DCX3 TANK BOTTOM AUTOMATIC VALVES

Ref.	Description	Qty	DN25 SMS	DN1" US	DN25 DIN	DN32 SMS	DN38 SMS	DN1"1/2 US	DN40 DIN	DN2" US	DN51 SMS	DN50 DIN
01	DCX3 descending body, L-shaped	1	7005868	7005883	7005873	7005878	7005885	7005888	7005892	7005904	7005899	7005906
01	DCX3 descending body, T-shaped	1	7005954	7005958	7005956	7005960	7005962	7005966	7005964	7005972	7005968	7005970
02	DCX3 rising body, L-shaped	1	7005870	7005884	7005875	7005880	7005887	7005889	7005894	7005905	7005901	7005907
02	DCX3 rising body, T-shaped	1	7005955	7005959	7005957	7005961	7005963	7005967	7005965	7005973	7005969	7005971
03	Nut	4	7006708									
04	1/2 band clamp	2	7300141						7300140			
05	Flange assembly	1	7005917						7005916			
06	Standard descending piston	1	7005871	7005876	7005881	7005890	7005895	7005902				
07	Standard rising piston	1	7005872		7005882	7005891	7005896	7005903				
08	Joint raccord de prolongateur de fuite	1	7008908									
09	Descending diaphragm piston	1			7301171							7301168
10	Rising diaphragm piston	1										7301169
11	Descending diaphragm intermediate part	1	7300062						7300063			
12	Rising diaphragm intermediate part	1							7301170			
13	Diaphragm washer	1	7300189						7005458			
14	Elastomer descending piston	1	7300707				7300119	7300120				
15	Elastomer piston plate	1	7300005						7300077			
16	Long-stroke descending piston	1					7302296	7300133				
17	Piston PFA seal	1	7005138						7005147			
18	Elastomer plug O-ring EPDM	1	7006174						7380158			
18	Elastomer plug O-ring FKM	1	7006173						7380607			
18	Elastomer plug O-ring VMQ	1	7006172						7006171			
19	Lantern for DCX3 standard valve	1	7301470						7301471			
20	Seal support plate for DCX3/4 diaphragm valve with leak	1	7301533						7301534			
21	Lantern for DCX3 aseptic seat valve	1	7301492						7301493			
22	Lantern for DCX3 long-stroke valve	1	7300101						7302799			
23	Lantern for DCX3/4 double-acting (DA.) valve	1	7301591						7301592			
24	Seal support plate for DCX3/4 aseptic bearing valve	1	7301482						7301483			
25	DCX3 stem/piston assembly	1	7005573						7005511			
26	Stem/piston assembly for DCX3 long-stroke valve	1	7300105						7300938			
27	DCX3 actuator body	1	7005572						7005512			
28	Actuator body for DCX3 long-stroke valve	1	7005572						7300942			
29	Seal support plate O-ring EPDM	1	7380158						7380159			
29	Seal support plate O-ring FKM	1	7380607						7006130			
29	Seal support plate O-ring VMQ	1	7006171						7006175			
30	Seal support plate for DCX3/4 standard valve	1	7301474						7301475			
31	Clamp collar	1	7441831						7441832			
32	Flange O-ring EPDM	1	7380159						7006193			
32	Flange O-ring FKM	1	7006130						7380609			
32	Flange O-ring VMQ	1	7006175						7006057			
33	Lantern, of body and seal support plate ring	3-4	7009993						7009972			
34	Seal support plate scraper seal	1	7006147						7006030			
35	Lantern and body O-ring NBR	2	7380808						7380152			
35E	Lantern O-ring EPDM (aseptic)	1-2	7380137						7380179			
35F	Lantern and body O-ring FKM (asept.)	2	7006157						7380899			
36	Adjustable male elbow	1-2	7010116									
37	Holding plate TH screw	4-5	7006829						7380172			
38	Holding plate	1	7300244						7300246			
39	Stainless steel snap-ring	1	7380174						7380157			
40	Diaphragm PTFE	1	7006691						7006692			
41	DCX diaphragm valve spring washer	2	7007425						7007419			
42	Diaphragm seal support plate ring	1	7003558						7009962			
43	Steam bearing straight connector	2	7008951						7009080			
44	Aseptic seat extension	2	7009080									
45	Lantern O-ring NBR	1	7380176						7380160			
45	Lantern O-ring FKM (aseptic)	1	7380178						7030412			
47	Piston Torque seal NBR	1	7380316						7380161			
47	Piston O-ring FKM (Asept. seat)	1	7380601						7006186			
48	Standard actuator spring (Small)	1	7007796						7007796			
49	Standard actuator spring (Large)	1	7007800						7007797			
50	Pierced plastic cap	1	7002496						7009954			
51	SKIFFY cap	2	7009954									
52	Actuator stem spring	1	7007415						7006797			
53	Actuator stem TH screw	1	7006806						7006814			
54	Plastic indicator (Aseptic version 3A)	1							7300810			
55	Lantern for DCX3/4 aseptic seat valve (Version 3A)	1	7300821						7300807			
56	Seal support plate O-ring, with leak collector EPDM	1	7006145						7006038			
56	Seal support plate O-ring, with leak collector FKM	1	7380624						7006128			
56	Seal support plate O-ring, with leak collector VMQ	1	7006204						7006036			
57	Seal support plate O-ring for aseptic bearing valve EPDM	2	7006145						7006038			
58	Leak collector extension	1	7009107									
59	Seal support plate O-ring EPDM (Aseptic)	1	7380137						7380179			
59	Seal support plate O-ring FKM	1	7006157						7380620			
59	Seal support plate O-ring VMQ	1	7006170						7006035			

7.11 LIST OF PARTS FOR DN 63 TO 125 DCX3 TANK BOTTOM AUTOMATIC VALVES

Rp	Désignation	Nb	DN2"1/2 US	DN63 SMS	DN65 DIN	DN3" US	DN76 SMS	DN80 ACT.104	DN4" US	DN104 SMS	DN125 DIN
01	DCX3 descending body, L-shaped	1	7005918	7005909	7005920	7005930	7005925	7005934	7005947	7005939	7300782
01	DCX3 descending body, T-shaped	1	7005976	7005974	7005978	7005988	7005980	7005982	7005986	7005984	7302066
02	DCX3 rising body, L-shaped	1	7005919	7005911	7005922	7005931	7005927	7005936	7005948	7005941	
02	DCX3 rising body, T-shaped	1	7005977	7005975	7005979	7005989	7005981	7005983	7005987	7005985	
03	Nut	6			7006708				7006705		
04	½ band clamp	2			7300139				7005951		7300781
05	Flange assembly	1			7005933				7005953		7300779
06	Standard descending piston	1	7005912		7005923		7005928	7005937		7005949	7300784
07	Standard rising piston	1	7005913		7005924		7005929	7005938		7005950	
08	Joint raccord de prolongateur de fuite	1					7008908				
09	Descending diaphragm piston	1			7811167		7811277	7301143			
10	Rising diaphragm piston	1						7301166			
11	Descending diaphragm intermediate part	1			7300064				7300065		
12	Rising diaphragm intermediate part	1						7301167			
13	Diaphragm washer	1			7005458				7005457		
14	Elastomer descending piston	1					7300123				
15	Elastomer piston plate	1			7300078			7300079		7300080	
16	Long-stroke descending piston	1	7300134				7300136			7005949	
17	Piston PFA seal	1			7005156				7005291		7300342
18	Elastomer plug O-ring EPDM	1			7006193			7006008		7006162	
18	Elastomer plug O-ring FKM	1			7380609			7380606		7006136	
18	Elastomer plug O-ring VMQ	1			7006057			7006083		7006198	
19	Lantern for DCX3 standard valve	1			7301448				7301472		7300402
20	Seal support plate for DCX3/4 diaphragm valve with leak	1			7301535				7301536		
21	Lantern for DCX3 aseptic seat valve	1			7301494				7301495		
22	Lantern for DCX3 long-stroke valve	1			7300326				7302801		7301304
23	Lantern for DCX3/4 double-acting (DA.) valve	1			7301593				7301594		
24	Seal support plate for DCX3/4 aseptic bearing valve	1			7301451				7301484		
25	DCX3 stem/piston assembly	1			7005596				7005530		7300401
26	Stem/piston assembly for DCX3 long-stroke valve	1			7300322				7301295		7301302
27	DCX3 actuator body	1			7005595				7005531		7300400
28	Actuator body for DCX3 long-stroke valve	1			7300324				7301296		7301300
29	Seal support plate O-ring EPDM	1			7006164				7006183		
29	Seal support plate O-ring FKM	1			7006131				7006063		
29	Seal support plate O-ring VMQ	1			7006180				7006184		
30	Seal support plate for DCX3/4 standard valve	2			7301449				7301476		7301477
31	Clamp collar	1			7441833				7441837		7441838
32	Flange O-ring EPDM	1			7006162				7008727		
32	Flange O-ring FKM	1			7006136				7008728		
32	Flange O-ring VMQ	1			7006198				7006143		
33	Lantern, of body and seal support plate ring	3-4			7009972				7009973		7010261
34	Seal support plate scraper seal	1			7006030				7006034		
35	Lantern and body O-ring NBR	2			7380152				7380802		
35E	Lantern O-ring EPDM (aseptic)	1-2			7380179				7006160		
35F	Lantern and body O-ring FKM (asept.)	2			7380899				7380617		
36	Adjustable male elbow	1-2					7010116				
37	Holding plate TH screw	4-5			7380172				7006722		
38	Holding plate	1			7300248				7300250		
39	Stainless steel snap-ring	1			7007770				7007785		7007772
40	Diaphragm PTFE	1			7006693				7006694		7006650
41	DCX diaphragm valve spring washer	2			7007419				7007426		
42	Diaphragm seal support plate ring	1			7009988				7010166		7009951
43	Steam bearing straight connector	2					7008951				
44	Aseptic seat extension	2					7009080				
45	Lantern O-ring NBR	1			7006118				7006049		7006001
45	Lantern O-ring FKM (aseptic)	1			7006259				7006260		
47	Piston Torque seal NBR	1			7006101				7006137		7006107
47	Piston O-ring FKM (Asept. seat)	1			7006284				7006418		
48	Standard actuator spring (Small)	1			7007726				7007761		7007825
49	Standard actuator spring (Large)	1			7007760				7007762		7007777
50	Pierced plastic cap	1					7002496				
51	SKIFFY cap	2					7009954				
52	Actuator stem spring	1			7006797				7006796		
53	Actuator stem TH screw	1			7006814				7006815		
54	Plastic indicator (Aseptic version 3A)	1			7300810				7300900		
55	Lantern for DCX3/4 aseptic seat valve (Version 3A)	1			7300811				7300816		
56	Seal support plate O-ring. with leak collector EPDM	1			7006235				7006008		
56	Seal support plate O-ring. with leak collector FKM	1			7010801				7380606		
56	Seal support plate O-ring. with leak collector VMQ	1			7006152				7006226		
57	Seal support plate O-ring for aseptic bearing valve EPDM	2			7006038				7006441		
58	Leak collector extension	1					7009107				
59	Seal support plate O-ring EPDM (Aseptic)	1			7380179				7006160		
59	Seal support plate O-ring FKM	1			7380620				7380617		
59	Seal support plate O-ring VMQ	1			7006035				7006589		

7.12 LIST OF ACTUATORS FOR DCX3 AUTOMATIC TANK BOTTOM VALVES

Ref	Description	Qty	DN25/40	DN50/51	DN63/76	DN80 ACT.104 DN104	DN125/150
80	Actuator for DCX3/4 standard and diaphragm valve	1	7100300	7100301	7100302	7100303	7100486
81	Actuator for DCX3 long-stroke valve	1	7100477	7100478	7100479	7100480	7100636
82	Actuator for DCX3/4 aseptic seat valve	1	7100487	7100488	7100489	7100490	
83	Actuator for DCX3/4 standard DA. (Double acting) valves rising piston	1	7100491	7100492	7100493	7100494	
84	Actuator for DCX3/4 standard DA. (Double acting) valves descending piston	1	7100491	7100492	7100493	7100494	

7.13 LIST OF SEAL KITS FOR DCX3 AUTOMATIC TANK BOTTOM VALVES

DESCRIPTION		DN 25-40	DN 50-51	DN 63-76	DN80 ACT.104	DN 100-104	DN 125	DN 150
Voir détail kit Chapitre suivant A	1	Actuator seal kit for DCX3/4 standard, long-stroke & DA tank bottom valves.	7070600	7070601	7070602	7070603	7070800	
	2	Actuator seal kit for DCX3/4 for aseptic seat tank bottom valve	7070536	7070537	7070538	7070539		
Voir détail kit Chapitre suivant B	1	Kit PFA/EPDM seal kit for DCX3 standard tank bottom valve (Complete)	7070746	7070747	7070748	7070749	7070750	
	2	Kit PFA/FKM seal kit for DCX3 standard tank bottom valve (Complete)	7072139	7072140	7072141	7070754	7070755	
	3	Kit PFA/FKM seal kit for DCX3 standard tank bottom valve (Complete)	7070756	7070757	7070758	7070759	7070760	
Voir détail kit Chapitre suivant C	1	EPDM seal kit for DCX3 standard tank bottom valve (Without PFA seal)	7070761	7070762	7070763	7070764		
	2	FKM seal kit for DCX3 standard tank bottom valve (Without PFA seal)	7072142	7072143	7072144	7070768		
	3	VMQ seal kit for DCX3 standard tank bottom valve (Without PFA seal)	7070769	7070770	7070771	7070772		
Voir détail kit Chapitre suivant D	1	PFA/diaphragm/EPDM seal kit for DCX3 diaphragm valve	7070773	7070774	7070775	7070776	7070777	
	2	PFA/diaphragm/FKM seal kit for DCX3 diaphragm valve	7072148	7072149	7072150	7070796	7070797	
	3	PFA/diaphragm/VMQ seal kit for DCX3 diaphragm valve	7070798	7070799	7070809	7070810	7070814	
Voir détail kit Chapitre suivant E	1	PFA/EPDM seal kit for DCX3 aseptic seat tank bottom valve	7070778	7070780	7070781	7070782	7070783	
Voir détail kit Chapitre suivant F	1	EPDM seal kit for DCX3 elastomer seal tank bottom valve	7070784	7070785	7070786		7071100	
	2	FKM seal kit for DCX3 elastomer seal tank bottom valve	7072145	7072146	7072147	7071098	7072151	
	3	VMQ seal kit for DCX3 elastomer seal tank bottom valve	7070790	7070791	7070792		7071102	

7.14 DETAILS OF SEAL SETS FOR DCX3 TANK BOTTOM VALVES

NBR actuator seal sets for **DCX3/4 standard, long-stroke & double-acting tank bottom valves:**

A1	Diamètre		DN25-38 SMS	DN51 SMS	DN63-76 SMS		
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT.104-104 DIN	DN125-150 DIN
			DN1"-1"1-2 US	DN2" US	DN3" US	DN4" US	DN6" US
N° de Pochette			7070600	7070601	7070602	7070603	7070800
Rep.	Désignation	Nb.	Référence des joints				
33	Lantern and actuator body ring	2	7009993	7009972		7009973	7010261
35	Lantern and actuator body O-ring NBR	2	7380808	7380152		7380802	
45	Lantern O-ring NBR	1	7380176	7380160	7006118	7006049	7006001
47	Piston Torque seal NBR	1	7380316	7380161	7006101	7006137	7006107

FKM/EPDM actuator seal kits for **DCX3/4 aseptic seat tank bottom valves:**

A2	Diamètre		DN25-38 SMS	DN51 SMS	DN63-76 SMS		
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT.104-104 DIN	DN125-150 DIN
			DN1"-1"1-2 US	DN2" US	DN3" US	DN4" US	DN6" US
N° de Pochette			7070536	7070537	7070538	7070539	
Rep.	Désignation	Nb.	Référence des joints				
33	Actuator body ring	1	7009993	7009972		7009973	
35E	Lantern O-ring EPDM (steam side)	1	7380137	7380179		7006160	
35F	Lantern and actuator body O-ring FKM	2	7006157	7380899		7380617	
45	Lantern O-ring FKM (except DN104)	1	7380178	7030412	7006259	7006260	
47	Piston O-ring FKM (except DN104)	1	7380601	7006186	7006284	7006418	

PFA/EPDM valve seal kits for DCX3 standard tank bottom valves (Complete):

B1	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070746	7070747	7070748	7070749	7070750	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
29	Seal support plate O-ring EPDM	1	7380158	7380159	7006164	7006183	
32	Flange O-ring EPDM	1	7380159	7006193	7006162	7008727	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring EPDM	1	7380137	7380179		7006160	

PFA/FKM valve seals for DCX3 standard tank bottom valves (Complete):

B2	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7072139	7072140	7072141	7070754	7070755	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
29	Seal support plate O-ring FKM	1	7380607	7006130	7006131	7006063	
32	Flange O-ring FKM	1	7006130	7380609	7006136	7008728	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring FKM	1	7006157	7380620		7380617	

PFA/VMQ valve seals for DCX3 standard tank bottom valves (Complete):

B3	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070756	7070757	7070758	7070759	7070760	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
29	Seal support plate O-ring VMQ	1	7006171	7006175	7006180	7006184	
32	Flange O-ring VMQ	1	7006175	7006057	7006198	7006143	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring VMQ	1	7006170	7006035		7006589	

EPDM valve seal kits for DCX3 standard tank bottom valves (Without PFA seal):

C1	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070761	7070762	7070763	7070764		
Guide	Désignation	Qty	Seal reference				
29	Seal support plate O-ring EPDM	1	7380158	7380159	7006164	7006183	
32	Flange O-ring EPDM	1	7380159	7006193	7006162	7008727	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring EPDM	1	7380137	7380179		7006160	

FKM valve seal kits for DCX3 standard tank bottom valves (Without PFA seal):

C2	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7072142	7072143	7072144	7070768		
Guide	Désignation	Qty	Seal reference				
29	Seal support plate O-ring FKM	1	7380607	7006130	7006131	7006063	
32	Flange O-ring FKM	1	7006130	7380609	7006136	7008728	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring FKM	1	7006157	7380620		7380617	

VMQ valve seal kits for DCX3 standard tank bottom valves (Without PFA seal):

C3	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070769	7070770	7070771	7070772		
Guide	Désignation	Qty	Seal reference				
29	Seal support plate O-ring VMQ	1	7006171	7006175	7006180	7006184	
32	Flange O-ring VMQ	1	7006175	7006057	7006198	7006143	
33	Seal support plate ring.	2	7009993	7009972		7009973	
34	Seal support plate scraper seal	1	7006147	7006030		7006034	
59	Seal support plate O-ring VMQ	1	7006170	7006035		7006589	

PFA/diaphragm/EPDM valve seal kits for DCX3 diaphragm tank bottom valves :

D1	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070773	7070774	7070775	7070776	7070777	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
32	Flange O-ring EPDM	1	7380159	7006193	7006162	7008727	
40	Diaphragm PTFE	1	7006691	7006692	7006693	7006694	
41	Spring washer	2	7007425	7007419		7007426	
42	Diaphragm seal support plate ring	1	7003558	7009962	7009988	7010166	
56	Seal support plate with leak collector O-ring EPDM	1	7006145	7006038	7006235	7006008	

PFA/diaphragm/FKM valve seal kits for DCX3 diaphragm tank bottom valves :

D2	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7072148	7072149	7072150	7070796	7070797	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
32	Flange O-ring FKM	1	7006130	7380609	7006136	7008728	
40	Diaphragm PTFE	1	7006691	7006692	7006693	7006694	
41	Spring washer	2	7007425	7007419		7007426	
42	Diaphragm seal support plate ring	1	7003558	7009962	7009988	7010166	
56	Seal support plate with leak collector O-ring FKM	1	7380624	7006128	7006130	7380606	

PFA/diaphragm/VMQ valve seal kits for DCX3 diaphragm tank bottom valves :

D3	Diameter	DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
		DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
		DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.		7070798	7070799	7070809	7070810	7070814	
Guide	Désignation	Qty	Seal reference				
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291	
32	Flange O-ring VMQ	1	7006175	7006057	7006198	7006143	
40	Diaphragm PTFE	1	7006691	7006692	7006693	7006694	
41	Spring washer	2	7007425	7007419		7007426	
42	Diaphragm seal support plate ring	1	7003558	7009962	7009988	7010166	
56	Seal support plate with leak collector O-ring VMQ	1	7006204	7006036	7006152	7006226	

PFA/EPDM valve seal kits for DCX3 aseptic seat tank bottom valves:

E1	Diameter		DN25-38 SMS	DN51 SMS	DN63-76 SMS			DN125 DIN
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104	DN104 DIN	DN150 DIN
			DN1"-1"1/4-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.			7070778	7070780	7070781	7070782	7070783	
Guide	Désignation	Qty	Seal reference					
17	DCX3/4 plug seal PFA	1	7005138	7005147	7005156	7005291		
29	Seal support plate O-ring EPDM	1	7380158	7380159	7006164	7006183		
32	Flange O-ring EPDM	1	7380159	7006193	7006162	7008727		
33	Seal support plate ring.	1	7009993	7009972		7009973		
57	Seal support plate O-ring EPDM	1	7380137	7380179		7006160		
56	Seal support plate O-ring EPDM	1	7006145	7006038		7006441		

EPDM valve seal kits for DCX3 elastomer seal tank bottom valves:

F1	Diameter		DN25-38 SMS	DN51 SMS	DN63-76 SMS		DN125 DIN	
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
			DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.			7070784	7070785	7070786		7071100	
Guide	Désignation	Qty	Seal reference					
18	DCX3/4 plug seal EPDM	1	7006174	7380158	7006193		7006162	
29	Seal support plate O-ring EPDM	1	7380158	7380159	7006164		7006183	
32	Flange O-ring EPDM	1	7380159	7006193	7006162		7008727	
33	Seal support plate ring.	2	7009993	7009972			7009973	
34	Seal support plate scraper seal	1	7006147	7006030			7006034	
59	Joint torique de P.P.J. EPDM	1	7380137	7380179			7006160	



FKM valve seal kits for DCX3 elastomer seal tank bottom valves:

F2	Diameter		DN25-38 SMS	DN51 SMS	DN63-76 SMS		DN125 DIN	
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
			DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.			7072145	7072146	7072147	7071098	7072151	
Guide	Désignation	Qty	Seal reference					
18	Joint torique clapet DCX3/4 FKM	1	7006173	7380607	7380609	7380606	7006136	
29	Joint torique de P.P.J. FKM	1	7380607	7006130	7006131	7006063		
32	Joint torique de bride FKM	1	7006130	7380609	7006136	7008728		
33	Segment de P.P.J.	2	7009993	7009972		7009973		
34	Joint racleur de P.P.J.	1	7006147	7006030		7006034		
59	Joint torique de P.P.J. FKM	1	7006157	7380620		7380617		

VMQ valve seal kits for DCX3 elastomer seal tank bottom valves:

F3	Diameter		DN25-38 SMS	DN51 SMS	DN63-76 SMS		DN125 DIN	
			DN25-40 DIN	DN50 DIN	DN65 DIN	DN80 ACT. 104 DIN	DN104 DIN	DN150 DIN
			DN1"-1"1-2 US	DN2" US	DN3" US		DN4" US	DN6" US
Kit No.			7070790	7070791	7070792		7071102	
Guide	Désignation	Qty	Seal reference					
18	Joint torique clapet DCX3/4 VMQ	1	7006172	7006171	7006057	7006083	7006198	
29	Joint torique de P.P.J. VMQ	1	7006171	7006175	7006180	7006184		
32	Joint torique de bride VMQ	1	7006175	7006057	7006198	7006143		
33	Segment de P.P.J.	2	7009993	7009972		7009973		
34	Joint racleur de P.P.J.	1	7006147	7006030		7006034		
59	Joint torique de P.P.J. VMQ	1	7006170	7006035		7006589		

7.15 Reference of greases

	<i>Ref.</i>	<i>Designation</i>	
Grease for actuator seals	7010662	grease cartridge 400 g (4025 H1 QUINPLEX)	
Grease for valve seals	7030668	grease cartridge 500 g (Kluber Paraliq GTE 703, NFS H1, 21 CRF § 178.3570)	

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