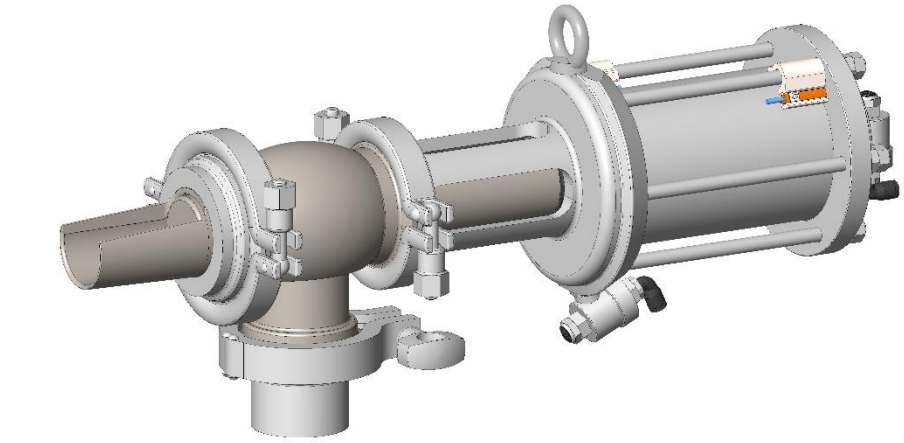
POWDER SAMPLER VALVE



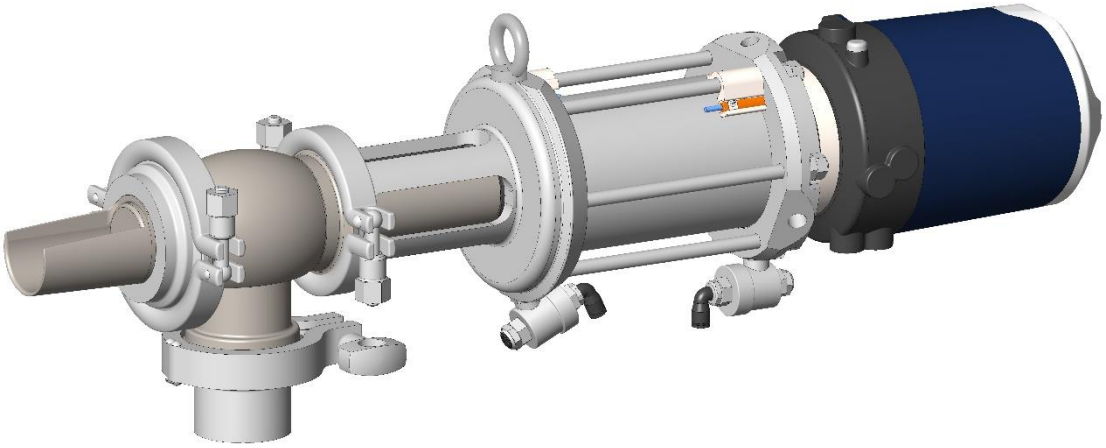


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TABLE OF CONTENTS

1 MANAGEMENT OF EVOLUTIONS

CHANGES	INDEX	DATE	PAGES	INITIALS
New edition.	1	April 2018	/	G.BEGAUD
MAJ	2	September 2018	/	G.BEGAUD
Modification of the visuals and order of assembly	3	October 2018	/	G.BEGAUD
MAJ	4	April 2020	/	M.GLEMIN
Addition of piston rod table	5	April 2021	16	M.GLEMIN
Update + addition of notes on pages 6 and 17	6	June 2023	/	C.GUILLET
Segment 7060095 was 7010166	7	October 2023	15	C.GUILLET

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 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 result in less serious injuries or damage to the equipment.

2.2 GENERAL INFORMATIONS

NOTE

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

- The tasks must be performed in the order specified.

3 INTRODUCTION

WARNING: Before carrying out any maintenance work, check with the supervisor that the installation is stopped and drained (pipes empty and de-pressurised, pumps stopped, tanks shut off or empty, etc.).

3.1 DISASSEMBLING THE VALVE: (Remove the shut-off sub-assembly from the housing).

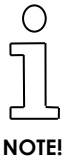
This operation enables access to the isolation seals (Changing the seals) and the removal of the pneumatic jack.

This is a straightforward procedure and can be performed on-site as it does not present any problems.

This is the case in most maintenance operations on this type of valve.

3.2 DISASSEMBLING THE AIR JACK: (Changing the internal seals)

WARNING: This operation must be carried out with suitable tools and with the necessary precautions.



N.B.: After any maintenance work on DEFINOX products, it is imperative to check the proper functioning of the equipment concerned: Sealing, pressure, etc.

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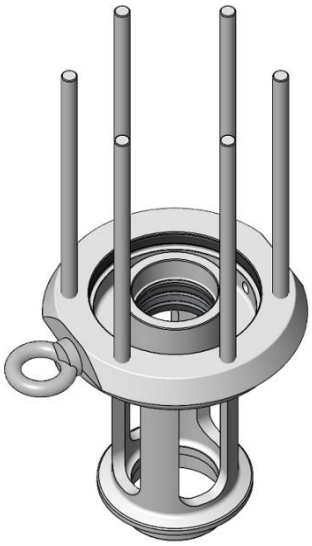
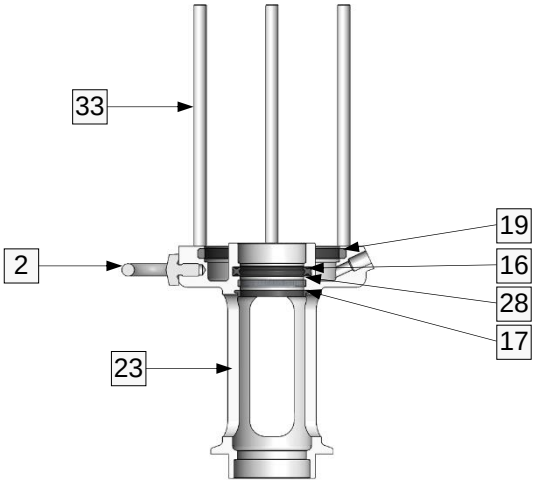
WARNING: Ensure that the greases used are compatible with the elastomer seals.

4 ASSEMBLY OF POWDER SAMPLER VALVE



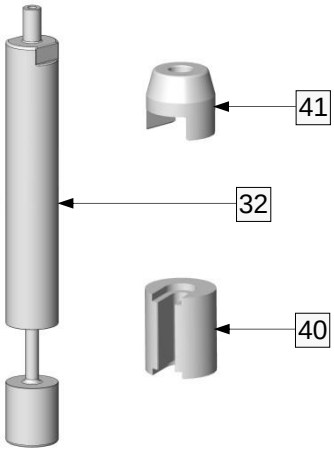


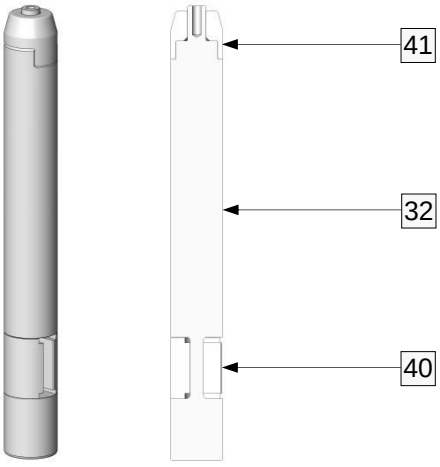
- Screw the tie rods [33] into the lantern [23] with a drop of thread locker.
- Screw the lifting ring [2] into the lantern [23] with a drop of thread locker.

NOTE!

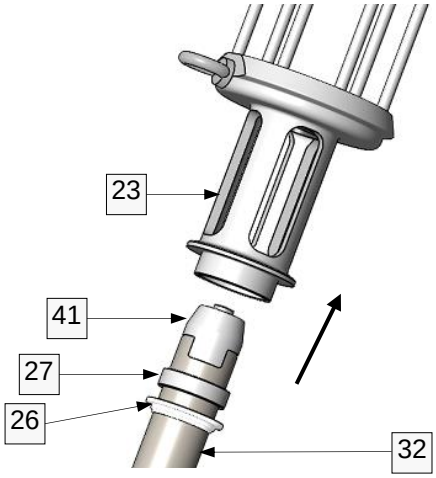
N.B.: Lifting ring [2] to be used only for handling and holding the valve without tension. It must only be connected to an element in the same pipe as the valve (same vibration, if any).

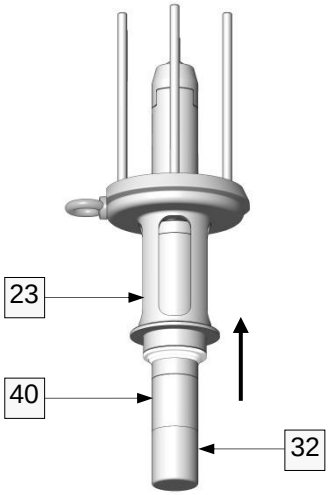
- Put the seals [16], [17] and [19] in place by coating them with grease and the ring [28] in their place.



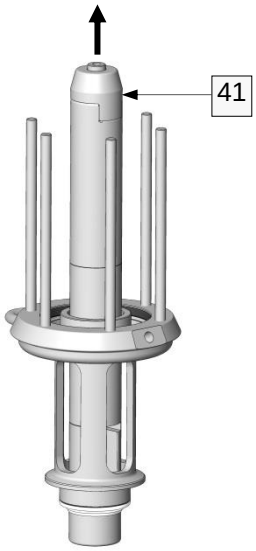


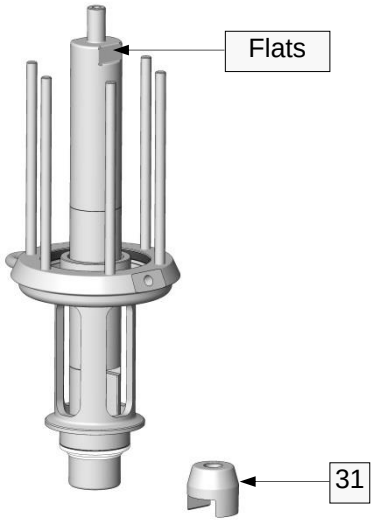
- Position the special tooling [40] and [41] for mounting the piston rod [32] in the lantern [23].



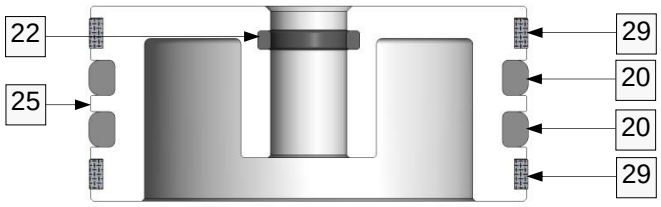


- Place the PFA scraper seal [26] and the ring [27] on the piston rod [32] and fit the assembly using the specific tools [40] and [41] into the lantern [23].

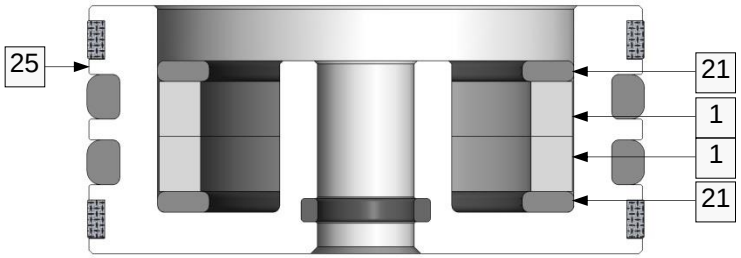




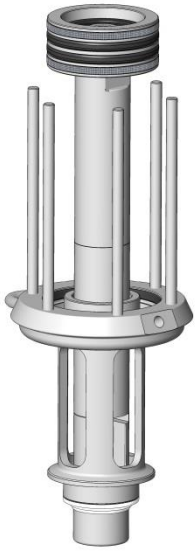
- Draw out the specific tool [41] to be able to remove it and have the flats of the piston rod accessible.

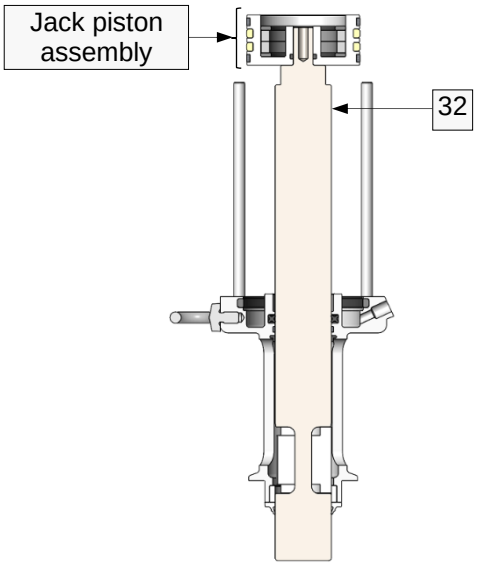


- Grease the 2 seals [20] and the seal [22] well before mounting them on the jack piston [25] as well as the 2 rings [29].

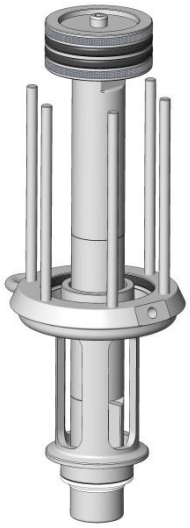


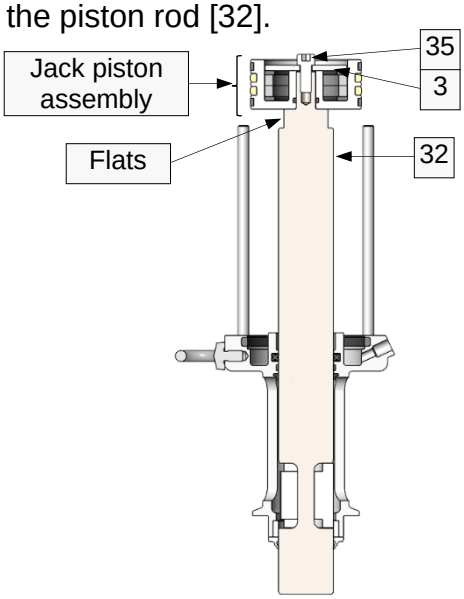
- Place a first seal [21] inside the jack piston [25], then 2 ring magnets [1] and then a second seal [21].



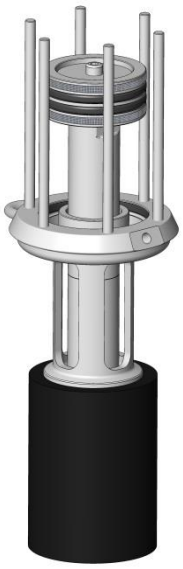


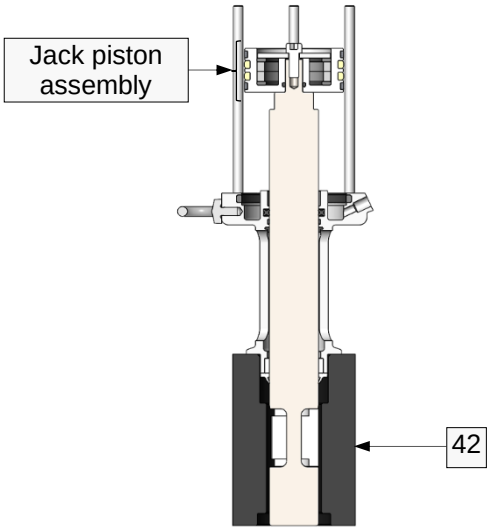
- Position the jack piston assembly on the piston rod [32].



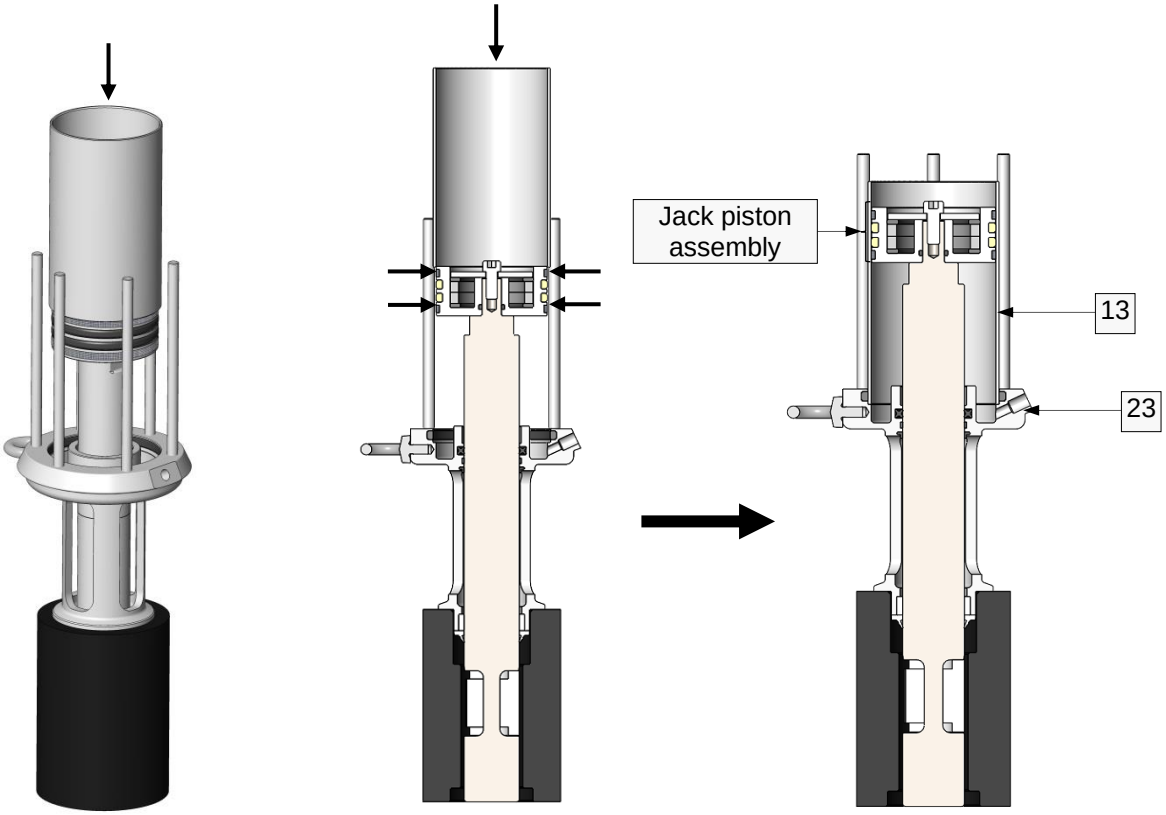


- Position the thrust washer [3] in the jack piston assembly and tighten the CHC screw [35] using spanners and the flats of the piston rod [32].

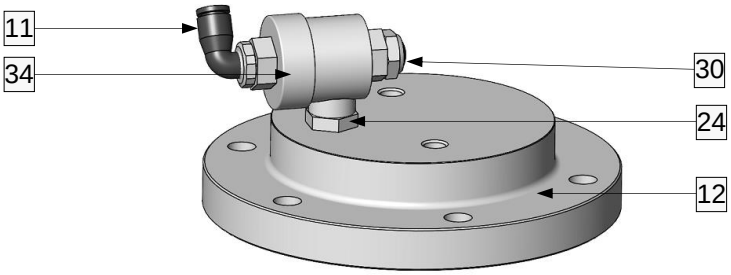




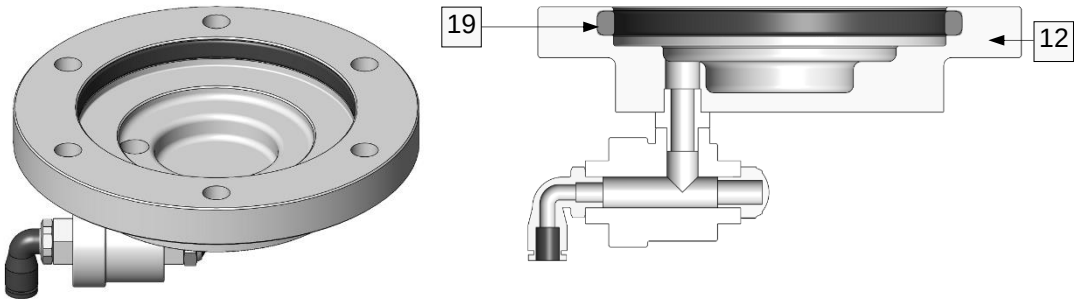
- Use the retracted rod maintenance base [42] to lower the jack piston assembly to its lowest point.



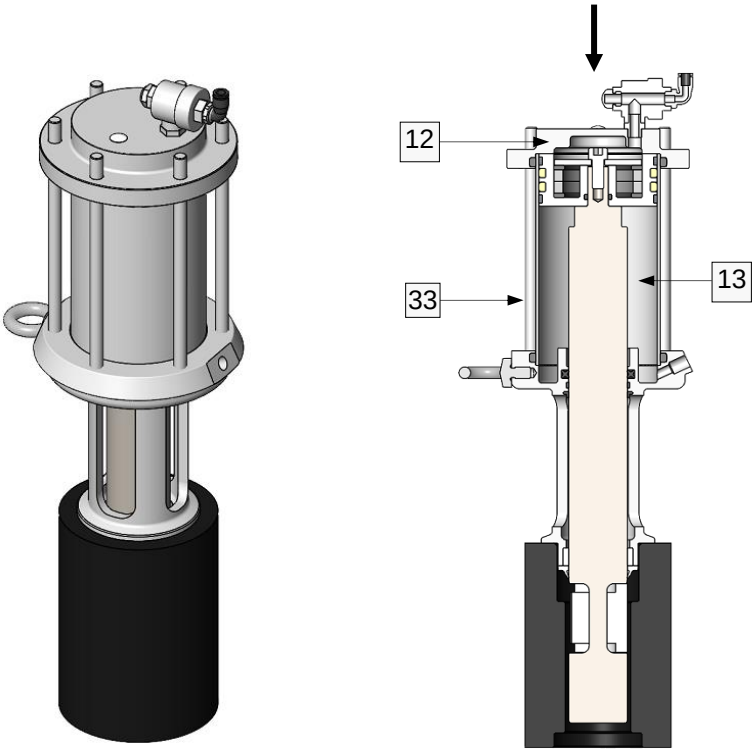
- Thoroughly grease the inside of the piston barrel [13] to slide it onto the piston rod assembly holding the rings [29] and position it in the lantern [23].



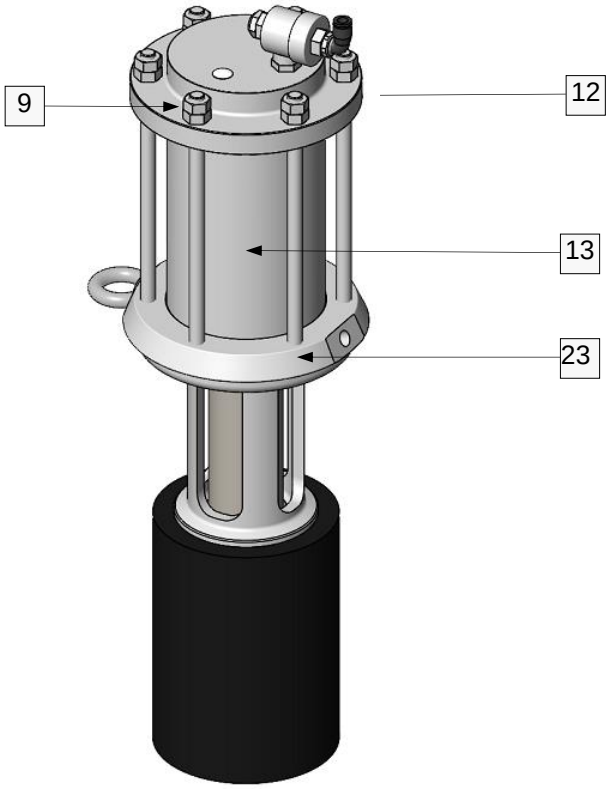
- Mount the angle fitting [11] and the muffler [24] on the bleed valve [34], then mount the assembly with the nipple [24] on the jack base [12].



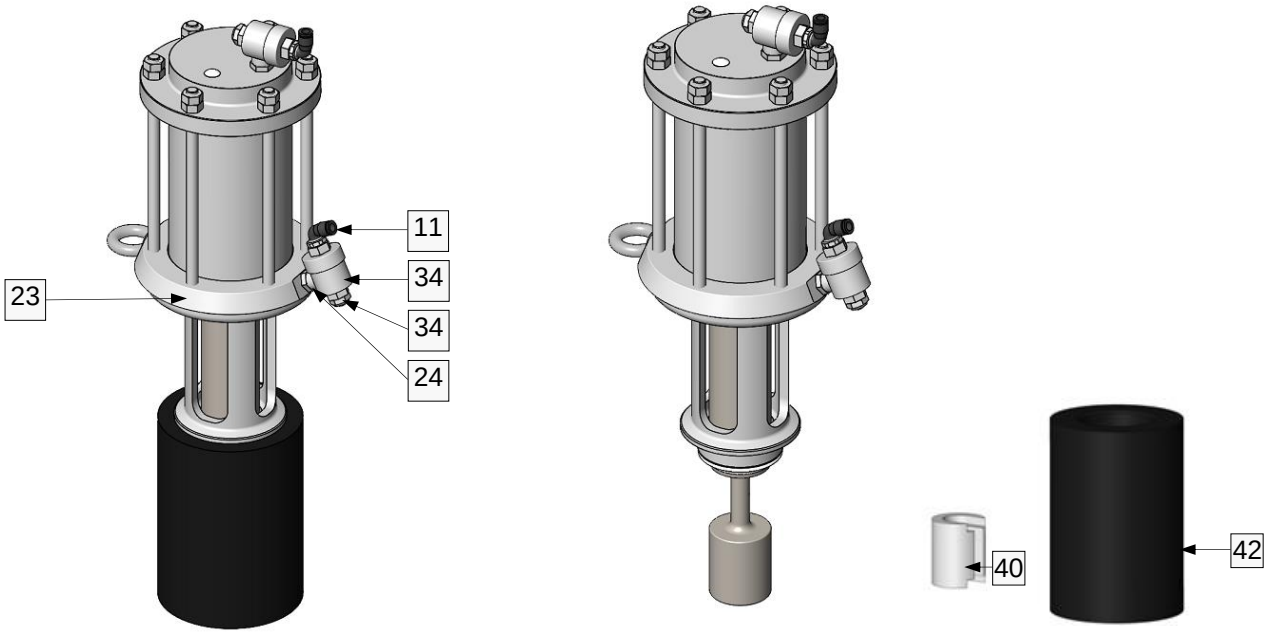
- Install the seal [19] after greasing it in the jack base [12].



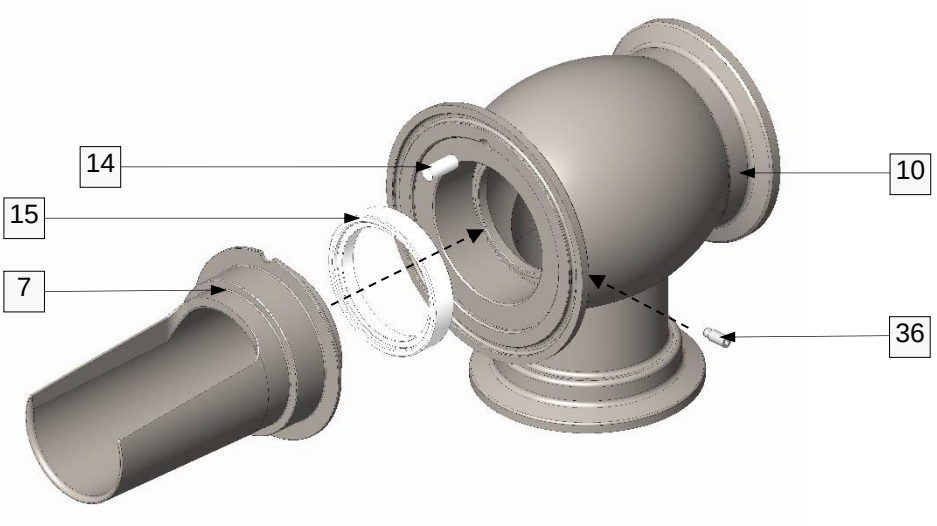
- Position the jack bottom [12] on the jack barrel [13] and the tie rods [33].



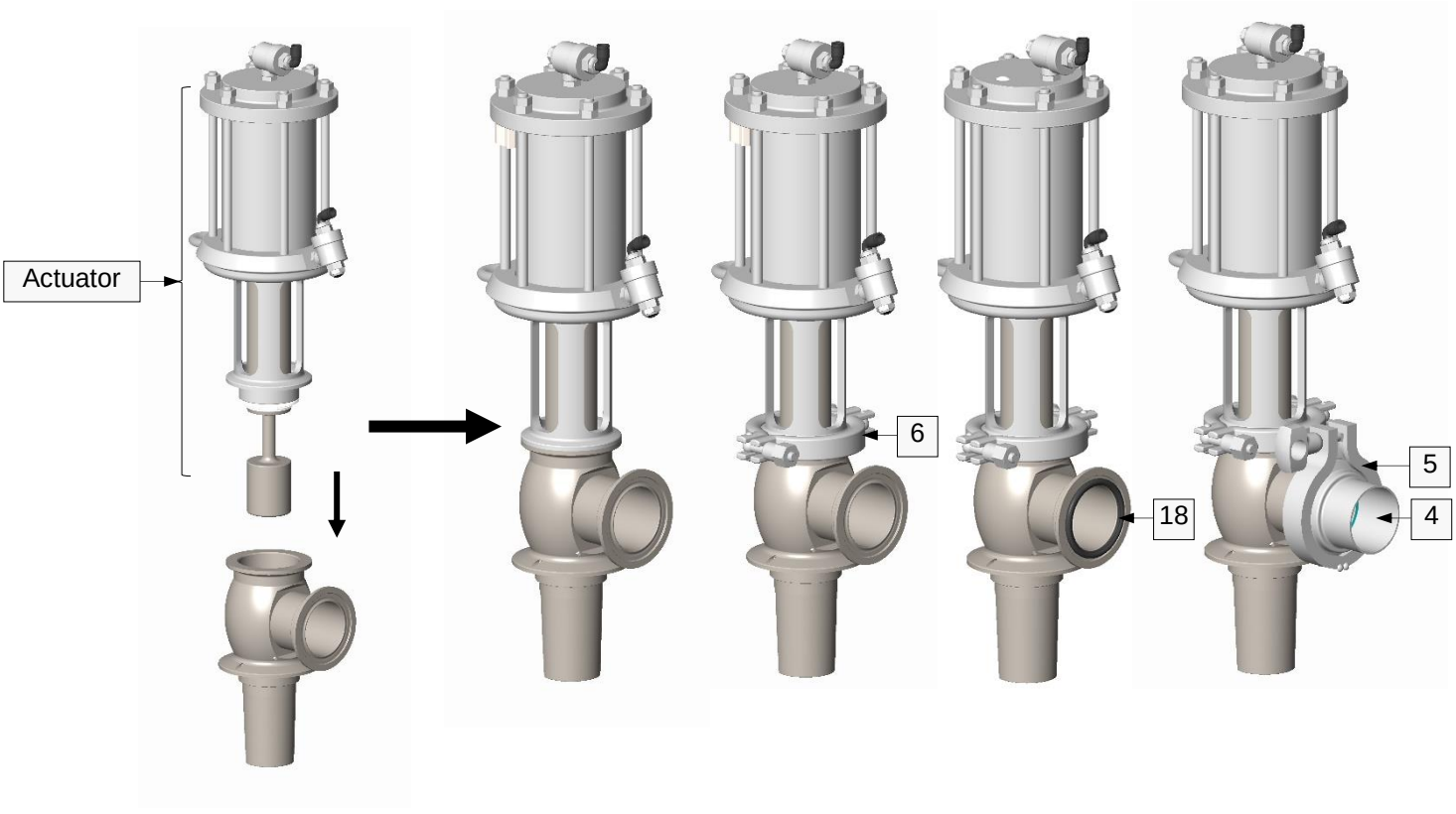
- Finish fitting the jack barrel [13] with the jack base [12] into the lantern [23], tightening the greased double nuts [9].



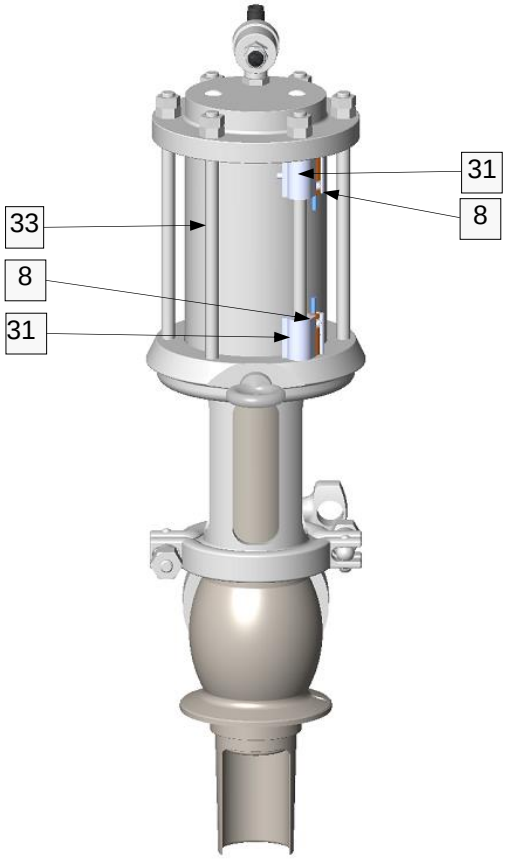
- Mount the angle fitting [11] and the silencer [24] on the bleed valve [34], then mount the assembly with the nipple [24] on the lantern [23].
- Remove the retracted maintenance base [42] so that the special tooling [40] can also be removed.



- Glue the pin [14] to the housing [10] (mallet assembly).
- Grease the seal [15] well before positioning it in the housing [10].
- Insert the scooper [7] into the housing [10],
- Tighten the locking screw [36] in the housing [10] to secure the assembly (torque 0.4Nm)

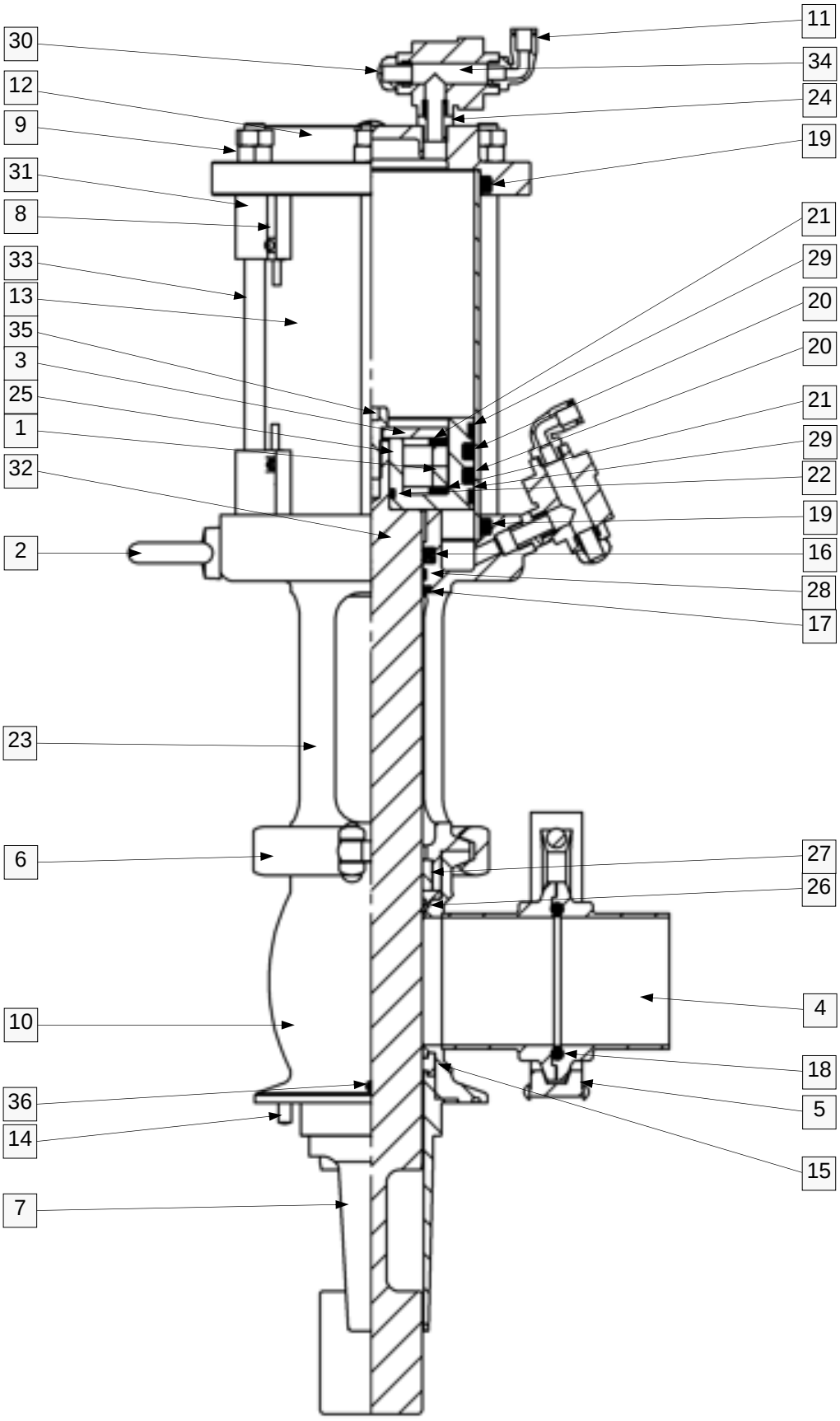


- Insert the actuator into the housing assembly.
- Secure the body and actuator assembly with the clamp [6].
- Grease the seal [18] well before fitting it to the assembly with a clamp [5] and a clamp [4].



- Assemble the detector holders [31] with the magnetic detectors [8] and attach them to the tie rods [33].

4.1 SPARE PARTS FOR POWDER SAMPLER VALVE

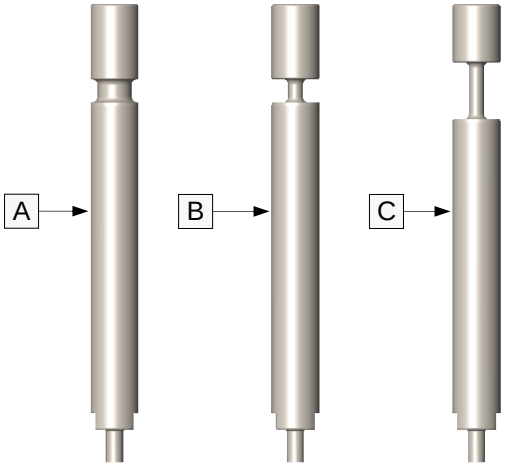


4.2 SPARE PARTS TABLE FOR POWDER SAMPLER VALVE

Rep	Description	Nb	References
1	Magnet	2	7030596
2	Lifting ring	1	7010971
3	Reinforced stop	1	7230161
4	Clamp	1	7040188
5	Clamp collar	1	7816586
6	Clamp collar	1	7441831
7	Scoop	1	7818426
8	Magnetic detector	2	7008368
9	Nut	12	7006707
10	Housing assembly	1	7818508
11	Adjustable male elbow	2	7010116
12	Jack base (model without housing)	1	7230322
13	Jack barrel	1	7230150
14	Pin	1	7007233
15	Seal **PEEK**	1	7818315
16	Four-lobe gasket **HNBR**	1	7011126
17	Scraper seal **HNBR**	1	7011125
18	O-ring **FP75**	1	7381004
19	O-ring **NBR**	2	7006072
20	O-ring **HNBR**	2	7013626
21	O-ring **NBR**	2	7011711
22	O-ring **NBR**	1	7380352
23	Lantern	1	7817109
24	Nipple	2	7008966
25	Piston jack	1	7230159
26	Scraper seal **PFA**	1	7816748
27	Ring **ERTALYTE**	1	7820004
28	Segment	1	7009962
29	Segment	2	7060095
30	Muffler	2	7008965
31	Sensor holder	2	7008347
32	Piston rod	1	See table 4.3 (Piston rods)
33	Jack tie-rod	6	7230173
34	Bleed valve	2	7008964
35	CHC Screw	1	7380306
36	Locking screw	1	7818431

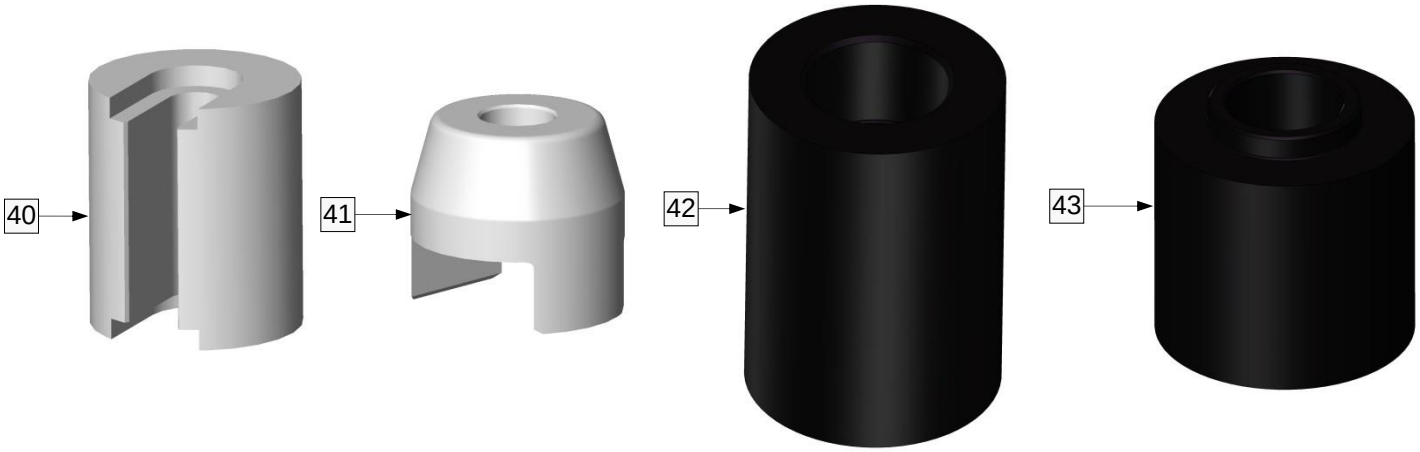
4.3 PISTON RODS

Rep.	Descriptions	References
A	PEV powder piston rod 11cm3	7818010
B	PEV powder piston rod 22cm3	7818920
C	PEV powder piston rod 54cm3	7817426



4.4 PART NUMBERS OF SPECIFIC TOOLS FOR THE POWDER SAMPLE VALVES

Rep.	Description	Nb.	Seal reference
40	Section enlarger tool	1	7817174
41	Powder sampler valve inlet cone tool	1	7816599
42	PEV POWDER maintenance base with retracted rod	1	7817428
43	PEV POWDER maintenance base with extended rod	1	7817429



4.5 PART NUMBER OF SEALS KITS FOR VALVE POWDER SAMPLER

4.5.1 POWDER SAMPLE VALVE actuator seals kit

Kit N°			7071847
Rep.	**Description**	**Nb.**	**Seal reference**
16	Four-lobe gasket **HNBR**	1	7011126
17	Scraper seal **HNBR**	1	7011125
19	O-ring **NBR**	2	7006072
20	O-ring **HNBR**	2	7013626
21	O-ring **NBR**	2	7011711
22	O-ring **NBR**	1	7380352

4.5.2 POWDER SAMPLER VALVE process seals kit

Kit N°			7072513
Rep.	**Description**	**Nb.**	**Seal reference**
15	Seal **PEEK**	1	7818315
18	O-ring **FP75**	1	7381004
26	Scraper seal **PFA**	1	7816748
27	Ring **ERTALYTE**	1	7820004

NOTE!

N.B.: During the valve's first year of use, it is important to monitor it carefully and carry out regular preventive maintenance. We recommend checking it every 20,000 cycles. This number of cycles should be adjusted according to the behaviour of the valve and the environment in which it operates. Contact us for further information.

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