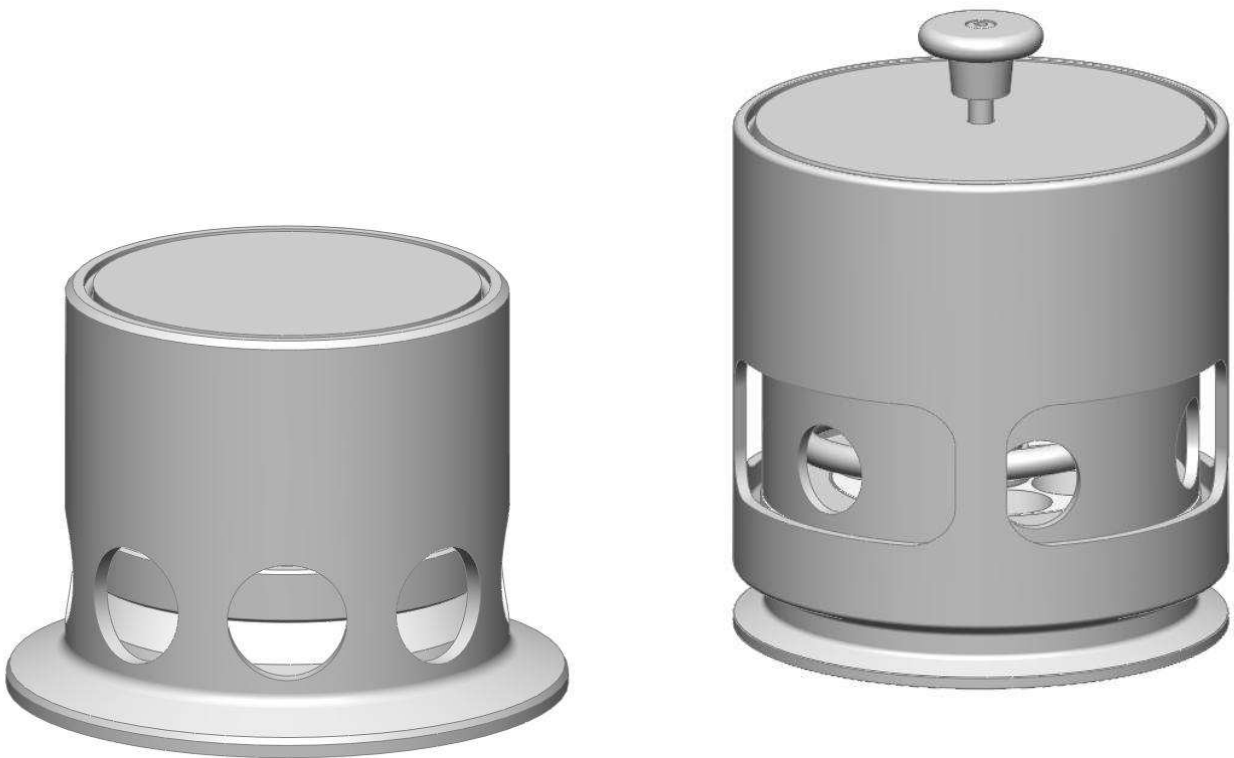


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# PRESSURE VACUUM VALVE

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## 1 CHANGE MANAGEMENT

CHANGES	INDEX	DATE	PAGE(S)	INITIALS
New version	1	September 06	/	R. GABORIT
Update	2	September 08	/	G. ANDRE
Update of snap-ring [14] for DN4"	3	September 09	14	N. CROZIER

## 2 **SAFETY**

### 2.1 **IMPORTANT INFORMATION**

Always read the maintenance notice before manipulating the pressure vacuum 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.

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**MAINTENANCE NOTICE Pressure/vacuum valve.**

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### **3 INTRODUCTION**

The disassembly process for pressure/ vacuum valves is carried out in a single step:

This operation enables access to the seals (Changing the seals).

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

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



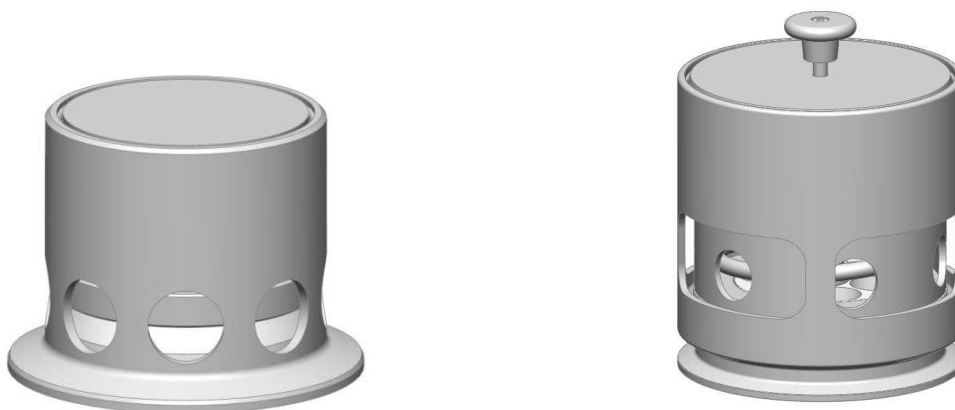
**DANGER!**

**CAUTION:** This operation must be performed using a special tool ensuring that the necessary precautions are taken (**STRESSED SPRING**).



**NOTE**

**NOTE:** After carrying out any maintenance work on DEFINOX products it is essential that you check the correct function of the equipment concerned : tightness, pressure, etc...



## 4 DISMANTLING THE 2" AND 2"1/2 PRESSURE VACUUM VALVE

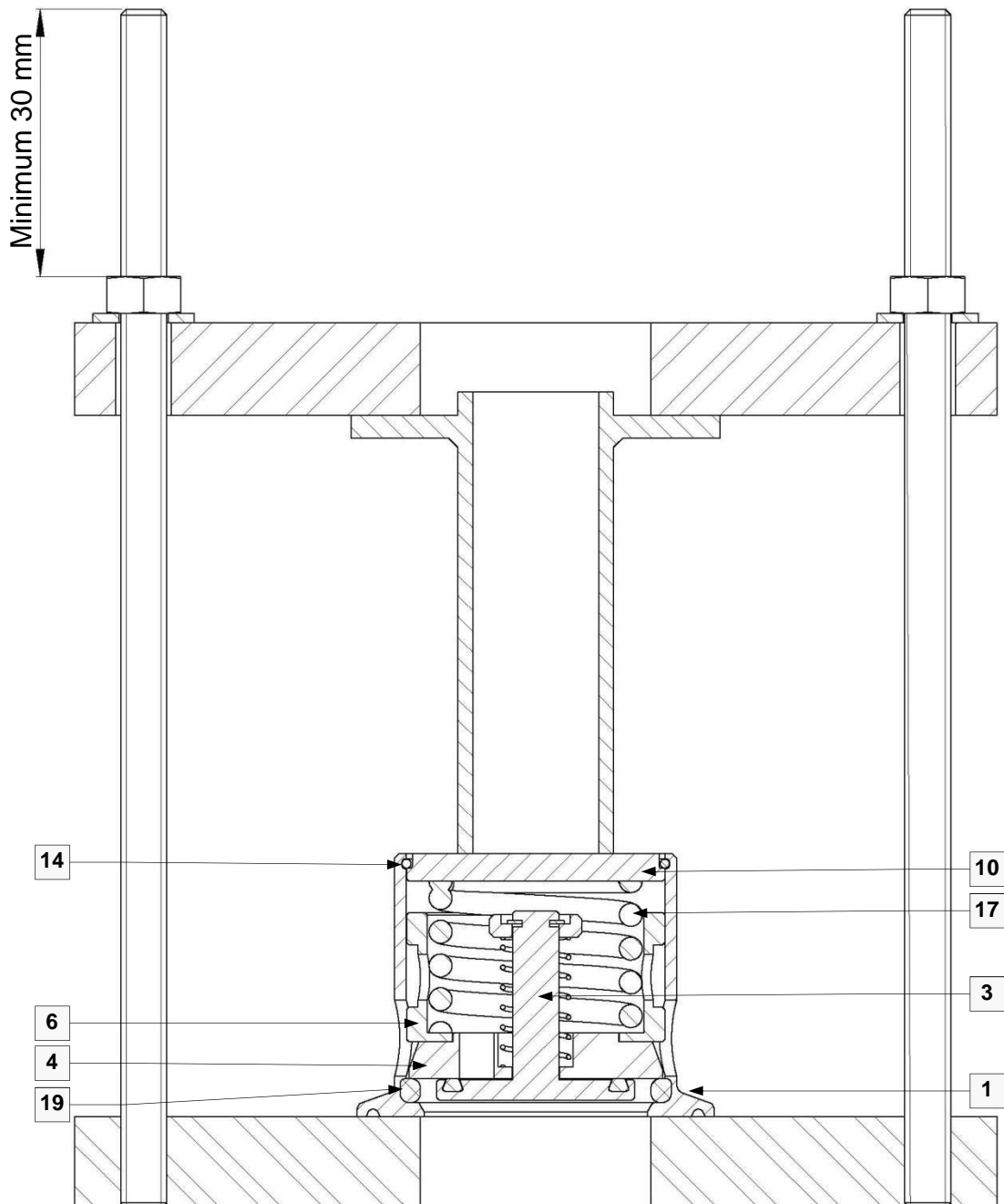
### 4.1 DISMANTLING THE 2" AND 2"1/2 VALVE



**CAUTION:** This is a hazardous operation if performed without using the correct tools. We recommend using a hydraulic press or a tool of the type shown in the diagram opposite (this tool must be made to accommodate a spring expansion of 60 mm).

With the valve placed vertically:

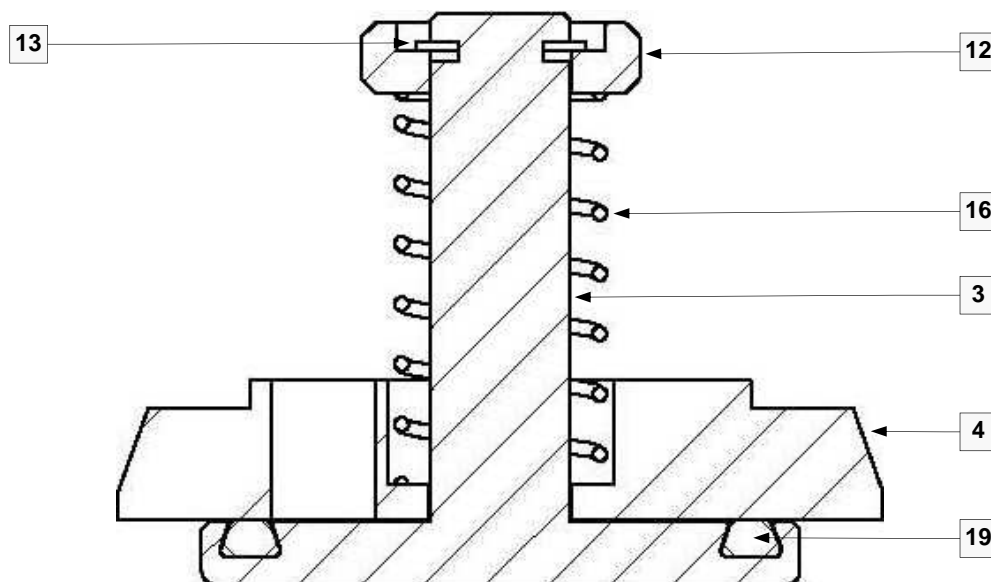
- Push down the cap [10] to remove the snap-ring.
- Remove the snap-ring [14] from its recess using a small screwdriver.
- Release the pressure to allow the cap to rise back.
- Remove the cap and the spring [17].
- Remove the valve guide [6] and the vacuum/seat valve assembly [3-4] from the valve body [1] and the O-ring [19].



**4.2 DISMANTLING THE VACUUM/SEAT VALVE ASSEMBLY**

With the vacuum/seat valve assembly placed vertically:

- Push down the washer [12] to remove the stop washer [13] from the vacuum valve [3] using a small screwdriver.
- Release the pressure to allow the washer [12] to rise back so that the spring [16] can be removed.
- Remove the seat [4].
- Remove the body O-ring [19] from the vacuum valve [3].



## 5 DISMANTLING THE 4" PRESSURE VACUUM VALVE

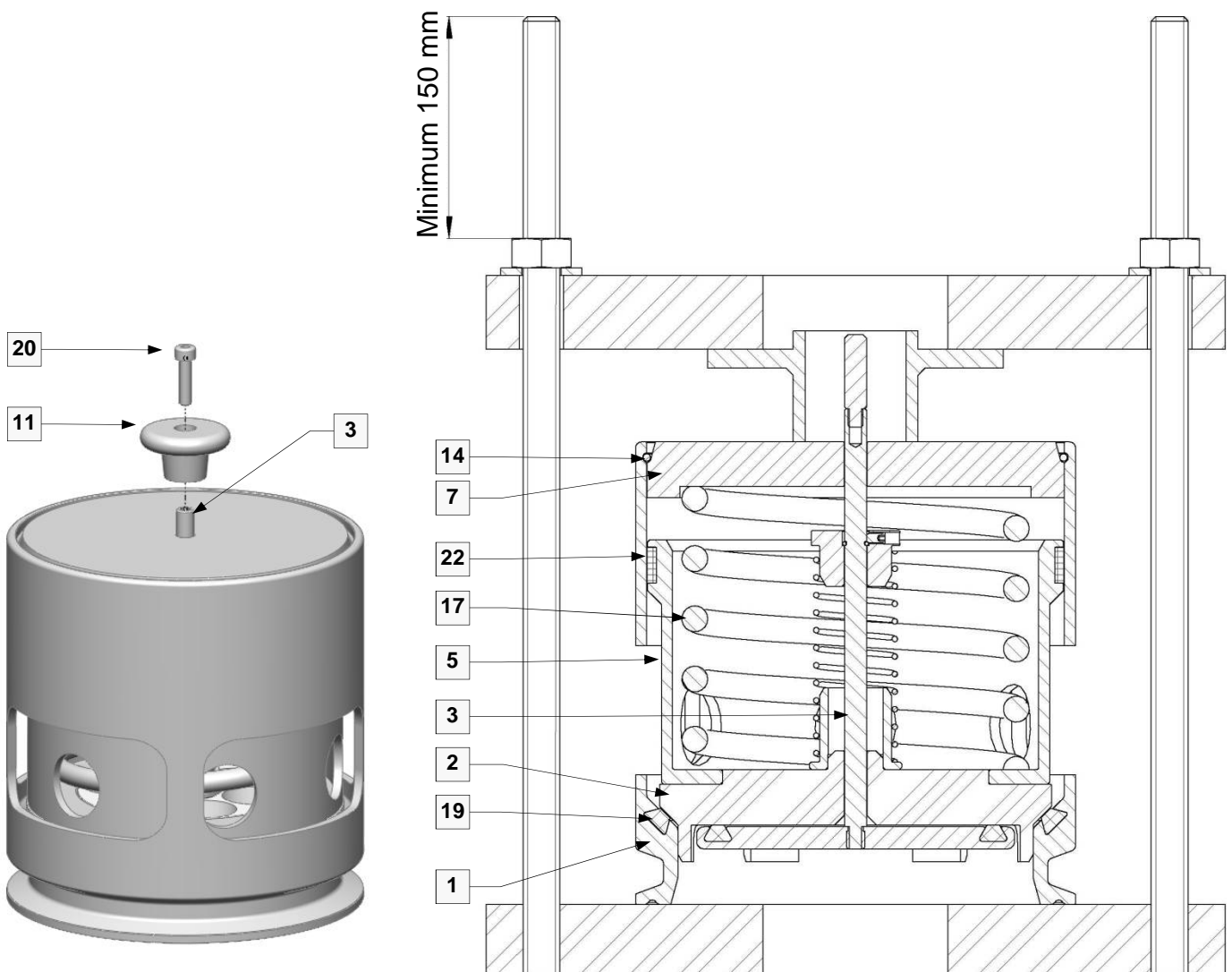
### 5.1 DISMANTLING THE 4" VALVE



**CAUTION:** This is a hazardous operation if performed without using the correct tools. We recommend using a hydraulic press or a tool of the type shown in the diagram opposite (this tool must be made to accommodate a spring expansion of 150 mm).

With the valve placed vertically:

- Remove the screw [20] to extract the end of the valve [11].
- Push down the end of the pressure valve [7] to remove the snap-ring.
- Remove the snap-ring [14] from its recess using a small screwdriver.
- Release the pressure to allow the end of the pressure valve to rise back up.
- Remove the end of the pressure valve, the spring [17], the pressure valve piston [5] and the ring [22].
- Remove the vacuum/pressure valve assembly [3-2] from the valve body [1] and the O-ring [19].

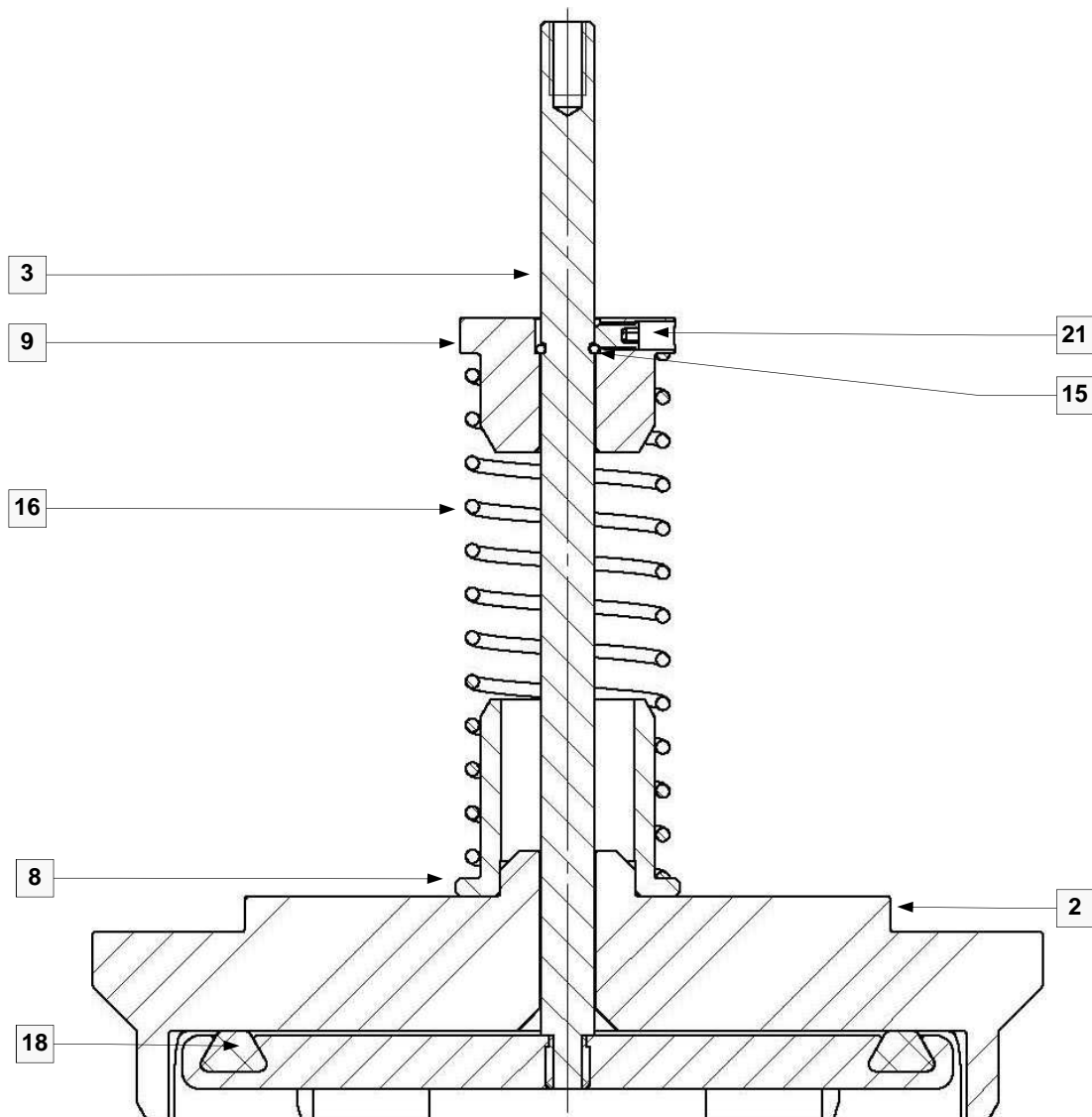




## 5.2 DISMANTLING THE VACUUM/PRESSURE VALVE ASSEMBLY

With the vacuum/pressure valve assembly placed vertically:

- Release the STHC screw [21], push down the pressure valve guide [9] to remove the snap-ring [15] from the vacuum valve [3] using a small screwdriver.
- Release the pressure to allow the pressure valve guide [9] to rise back up so that the spring [16] and vacuum valve seat [8] can be removed.
- Remove the pressure valve [2].
- Remove the O-ring [18] from the vacuum valve [3].



## 6 REASSEMBLING THE VALVES

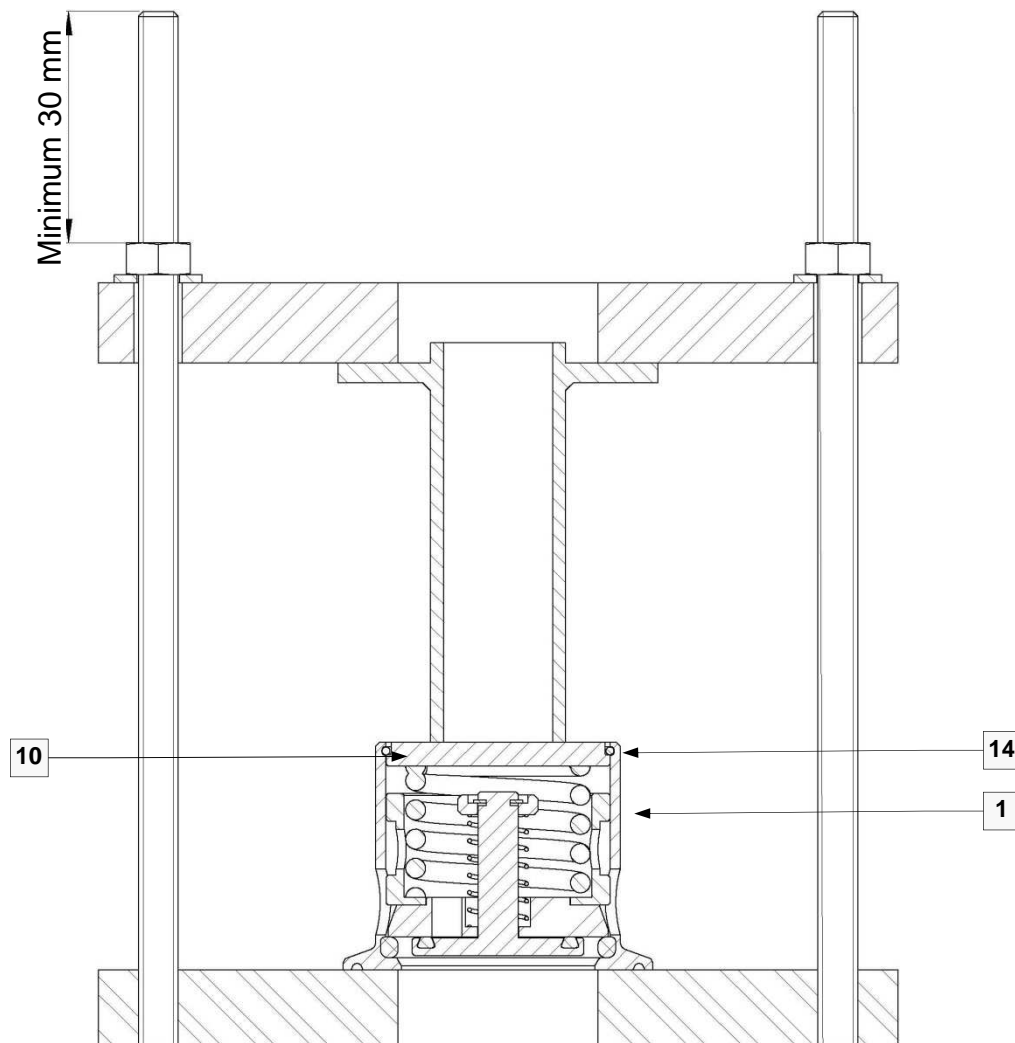
### 6.1 INTRODUCTION

Our valve components are listed and referenced in the “Parts catalogue” section of our folder and our CD-ROM, together with the information necessary for ordering your spare parts.

### 6.2 REASSEMBLING THE 2" 2"1/2 PRESSURE VACUUM VALVE

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

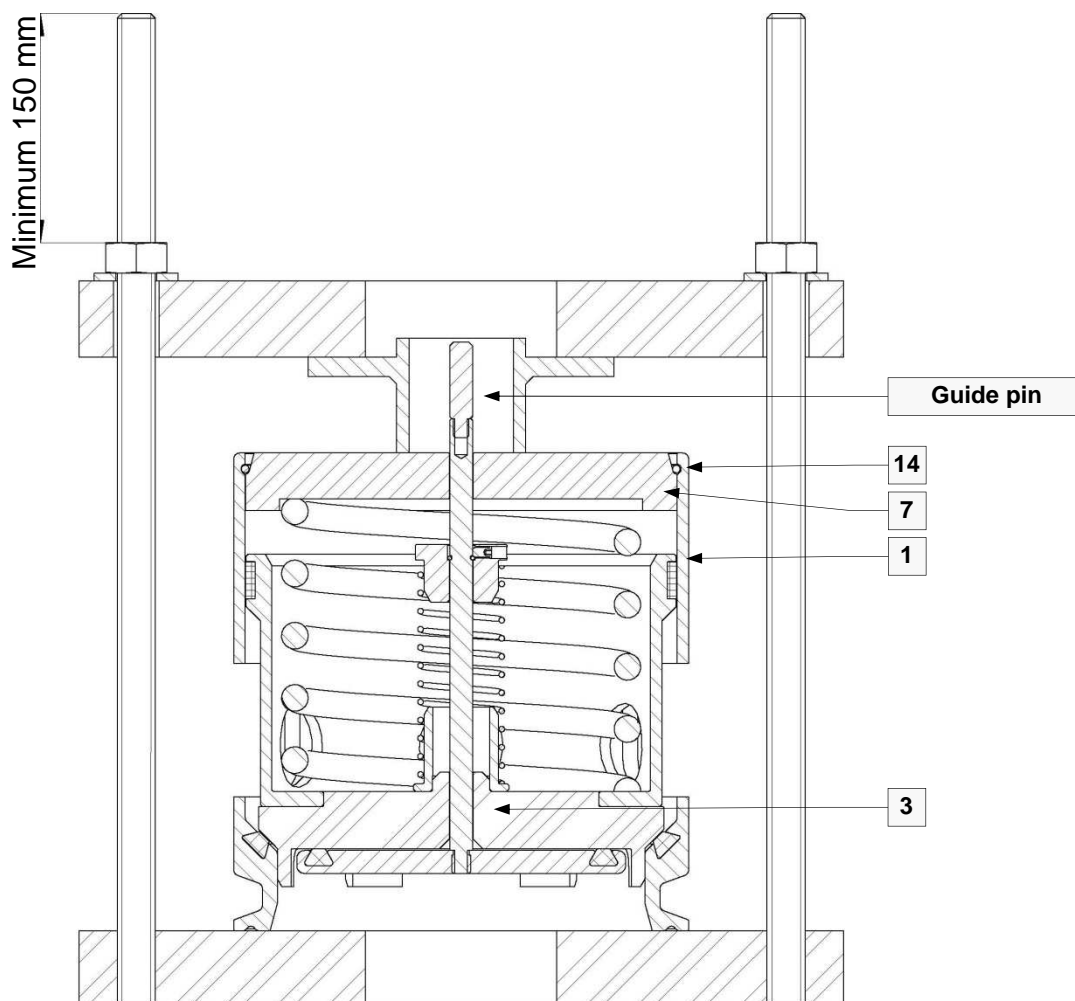
- Before reassembling the parts, ensure that the assembly is lubricated with an appropriate lubricant (water-resistant and temperature-resistant food grade grease → Example: 4025 H1 QUINPLEX by Lubrication Engineers). Ensure that the grease used is compatible with the elastomer seals.
- Check that the cap [10] is properly positioned in the valve body [1].
- Ensure that the snap-ring [14] is properly positioned in the recess of the valve body [1] before releasing the pressure.
- Activate the valve to check that it operates correctly.



**6.3 REASSEMBLING THE 4" PRESSURE VACUUM VALVE**

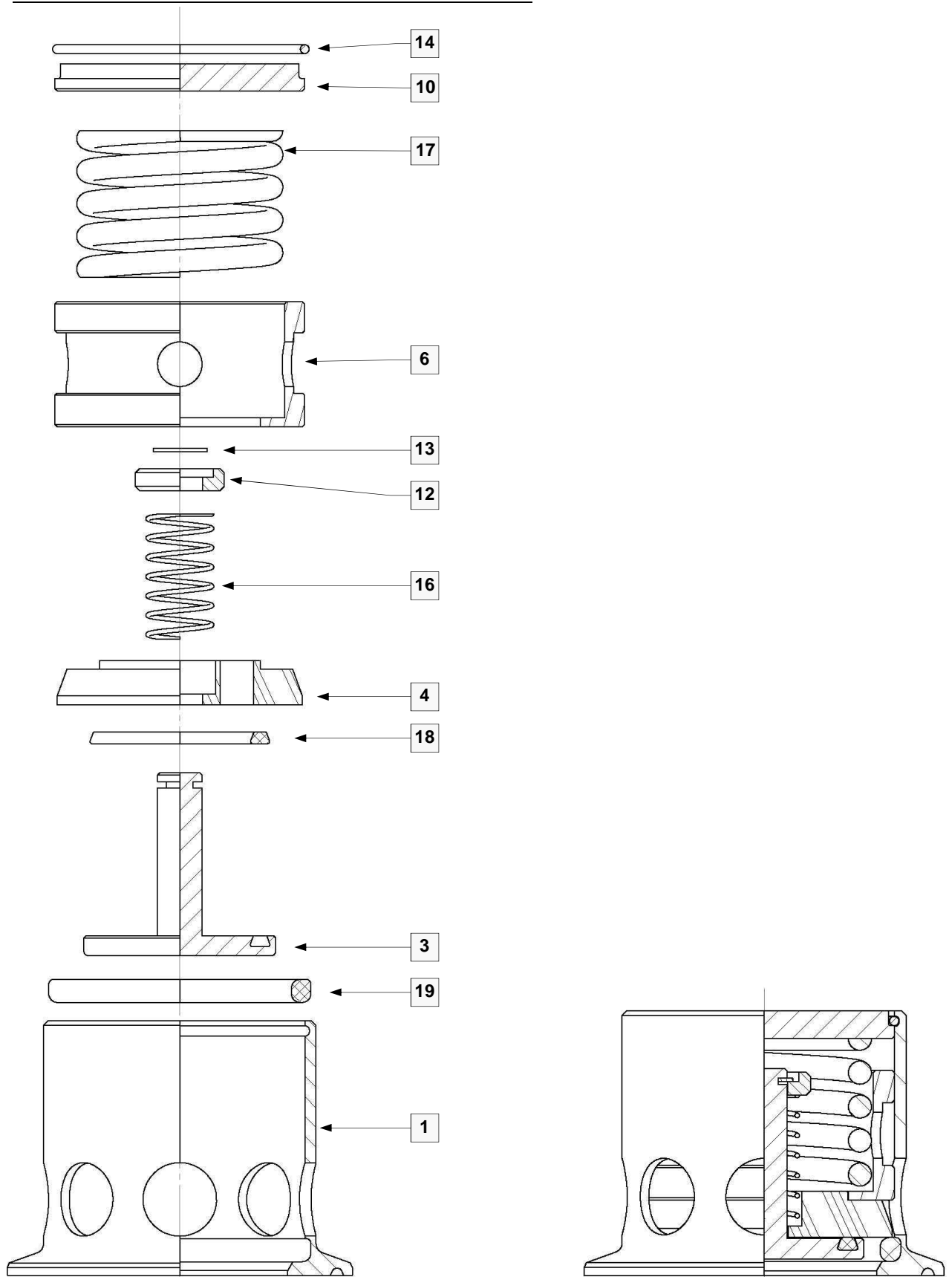
This procedure is performed in the reverse order to dismantling. However, it is necessary to take into account the following information:

- A guide pin centred on the vacuum valve stem [3] ensures that the end of the pressure valve [7] is properly centred in the body of the valve [1].
- 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). Ensure that the grease used is compatible with the elastomer seals.
- Ensure that the snap-ring [14] is properly positioned in the recess of the valve body before releasing the pressure.
- Activate the valve to check that it operates correctly.

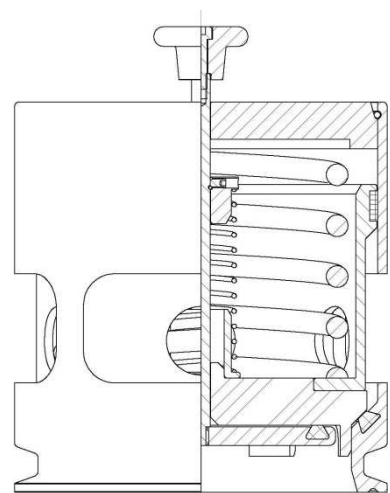
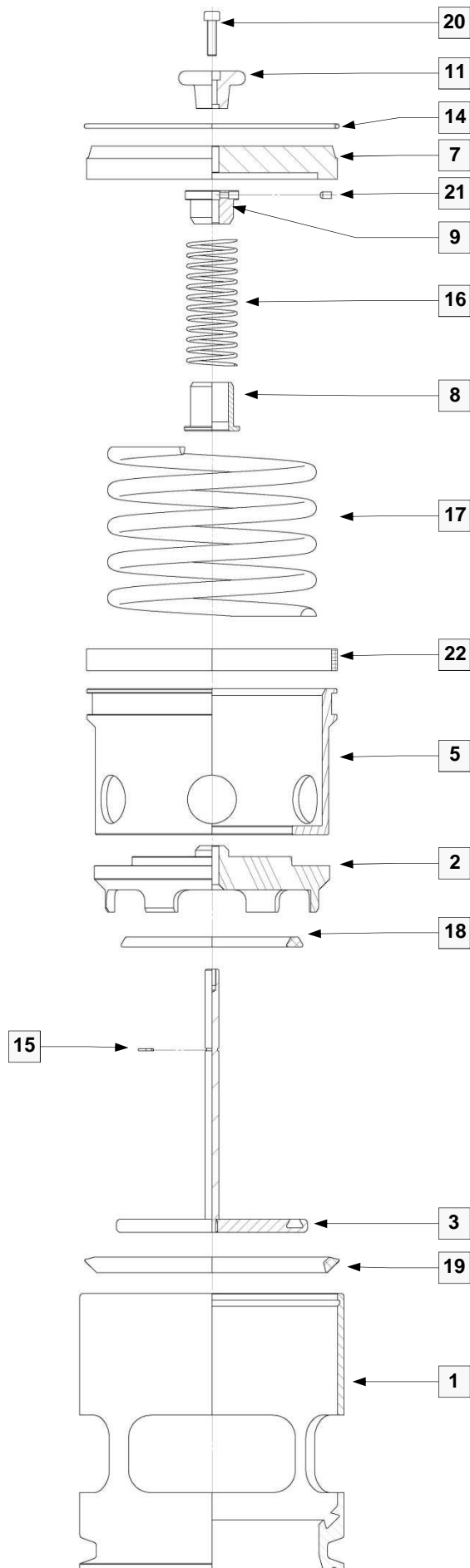


**7 PARTS**

**7.1 DN2" AND DN 2"1/2 PRESSURE VACUUM VALVE**



7.2 4" PRESSURE VACUUM VALVE



**7.3 LIST OF PARTS FOR PRESSURE VACUUM VALVES**

Ref	Part name	Qty	DN 2"	DN 2"1/2	DN 4"
01	Valve body	1	7201706	7201731	7201385
02	Pressure valve plug	1			7201389
03	Vacuum valve plug	1	7201708	7201708	7201391
04	Seat	1	7201709	7201709	
05	Pressure vacuum valve piston	1			7201390
06	Valve guide	1	7201758	7201758	
07	Pressure vacuum valve base	1			7201388
08	Vacuum valve plug seat	1			7201396
09	Guide Pressure vacuum valve	1			7201392
10	Cap	1	7201237	7201237	
11	Pressure vacuum valve end	1			7201386
12	Washer	1	7201401	7201401	
13	Stop washer	1	7503028	7503028	
14	Snap-ring	1	7007764	7007764	7007889
15	Pressure vacuum valve stem ring	1			7007788
16	Vacuum spring	1	7007866	7007866	7007814
17	Pressure spring	1	See attached table		
18	Plug seal	1	7006094	7006094	7006073
19	Body seal	1	7380612	7380612	7006095
20	Vacuum valve CHC screw	1			7380341
21	Pressure vacuum valve guide STHC screw	1			7006848
22	Pressure vacuum valve piston ring	1			7009983

Diameter			DN2"	DN2"1-2	DN4"	
Ref	Part name	Qty	Reference for spring / pressure in bar			
17	Pressure spring	1	7007816	0.7	7007824	0.2
			7007817	1	7601117	0.5
			7007818	1.4	7007808	1
			7007819	1.8	7007803	1.3
			7007869	2	7007794	1.7
			7007820	2.5	7007789	2
			7020021	3	7007829	2.8

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