SPXFLOW

INSTRUCTION MANUAL

APV DA4 DPF

DOUBLE SEAT MIX PROOF VALVE WITH STEAM BARRIER

FORM NO.: H344049 REVISION: GB-0

READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS PRODUCT.

APV®

SPXFLOW®

CE Declaration of Conformity
UKCA Declaration of Conformity

We,

DESIGN CENTER/MANUFACTURER: **SPX Flow Technology Germany GmbH**
Gottlieb-Daimler-Str. 13, D-59439 Holzwickede

MANUFACTURING FACILITY: **SPX Flow Technology Poland sp. z o.o.**
Rolbieskiego 2, 85-862 Bydgoszcz, Poland

AUTHORIZED REPRESENTATIVE: (for UKCA) **SPX Flow Europe Ltd.**
Building A, Compass House, Manor Royal
Crawley, RH10 9PY

declare under our sole responsibility that the

APV double seal and double seat valves of the series
SD4, SDT4, SDU4, SDMS4, SDMSU4, SDTMS4, SWcip4, DSV, DA4, DA4 DPF, D4 SL, DU4 SL, DT4 SL, DP4 SL, D4, DA3, DA3SLD, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2

APV butterfly valves of the series SV1, SVS1F, SV2, SVS2F, SVL, SVSL, SVE, SVSE

APV ball valves of the series BLV1

APV single seat, diaphragm and spring loaded valves of the series
S2, SW4, SWhp4, SW4DPF, SWmini4, SWT4, SWS4, MF4, MS4, MSP4, AP/T1, CPV, RG4, RG4DPF, RGMS4, RGE4, RGE4DPF, RGEMS4, PR2, PRD2, SI2, UF/R3, UF/R4, VRA/H

and the valve manifolds installed thereof

meet the requirements of the Machinery Directive 2006/42/EC
& EN ISO 12100-2010, DIN EN ISO 14159-2008-07, DIN EN 1672-2-2009-07.

Holzwickede, November 2022

ppa. B. Ariatabar

Dr.-Ing. Behdad Ariatabar, Design Center Lead - Valves

meet the requirements of the Supply of Machinery (Safety) Regulations 2008 No. 1597
& BS harmonized standards.

Crawley, November 2022

Ewout Roozendaal, Director Global Pricing

Content

1. General Terms

This instruction manual should be read carefully by the competent operating and maintenance personnel.

We point out that we will not accept any liability for damage or malfunctions resulting from the non-compliance with this instruction manual.

Descriptions and data given herein are subject to technical changes.

2. Safety

2.1 Symbols

Caution!
The technical safety symbol draws your attention to important directions for operating safety. You will find it wherever the activities described are bearing health hazards and risks for persons and / or material assets.

Important Note!
Critical technical information

2.2 Safety Instructions

Opening of the actuators and upper shafts is strictly forbidden. Danger to health and life!

Actuators and upper shafts which are no longer used and/or are defective must be disposed in professional manner.

Defective actuators and upper shafts must be returned to your SPX FLOW company for their professional disposal and free of charge for you.

Please address to your local SPX FLOW company.

- Never touch the valve or pipelines during hot liquid or sterilisation processes!
- Disconnect electric and pneumatic connections, e.g. before maintenance.
- Before any maintenance work, depressurize the line and cleaning system and discharge the lines if possible.

2. Safety

- Observe Service Instructions to ensure safe maintenance of the valve.

- Connections which are not used must be sealed by a plug!

- The safe discharge of the cleaning liquids must be ensured.

- The valves must be assembled, disassembled and reassembled only by persons who have been trained in the valves or by SPX FLOW service team members. If necessary, contact your local SPX FLOW representative.

3. Intended Use

The intended use as field of application of the double seat mix proof valve is the safe shut-off of pipeline sections and the separation of incompatible liquids in the food and beverage industries as well as in pharmaceutical and chemical applications.

Caution! The standard DA4 DPF valve must not be used in explosive atmospheres.

Caution! Arbitrary, structural changes at the valves may affect safety as well as the intended functionality of the valves and are not permitted.

SPX FLOW Valves are intended for use in the food and beverage industries, as well as in pharmaceutical and chemical applications.

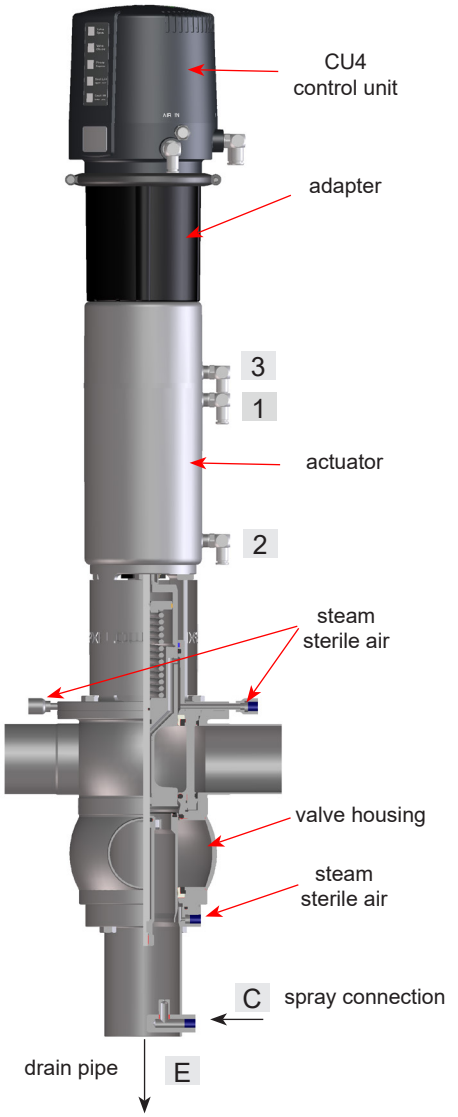
SPX FLOW Valves (without safety function) are allocated to Category 1 and are evaluated as per Conformity Assessment Module A of the Pressure Equipment Directive 2014/68/EU. According to Article 13, the following allocation applies for the fluids processed in the valves.
Product media – Fluid group 2 – valves in all dimensions.
CIP-cleaning liquids – Fluid group 1 – valves in the dimensions ≤ DN100/4“ can be used at temperatures up to 140 °C, valves in the dimensions > DN100/4“ at temperatures up to 100 °C.

Authorizations and External Approvals
To view the certifications for this and other innovative SPX FLOW products, visit
https://www.spxflow.com/en/apv/about-us/certifications/

It is within the responsibility of the plant operator to evaluate and verify the suitability of SPX FLOW products for the intended purpose and service conditions, as well as to determine and follow the applicable laws for the intended applications and areas of application.

4. Mode of Operation

fig. 4.1



4.1. General terms

Due to its construction and mode of operation as well as to the use of high quality stainless steel and adequate seal materials, the DA4 DPF double seat mix proof valve is suited for applications in the food and beverage industries as well as in pharmaceutical and chemical applications.

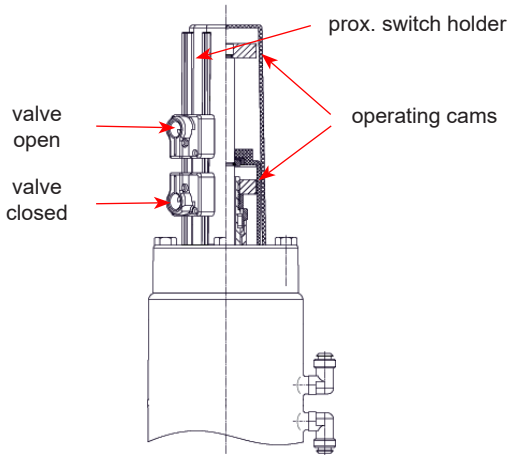
- The DA4 DPF valve separates two line passages by two balanced and independently operating valve shafts with an intervening leakage chamber.
- The product-averted areas behind the shaft seals and the leakage chamber can be subjected to (flushed with) steam, sterile condensate or sterile air. For the process integration of the supply and drain valves as well as for subjects of monitoring protection, please contact your local SPX Flow distribution partner.
- For detailed steam / sterile air barrier configurations, please contact your local SPX Flow distribution partner.
- The valve opens from the top to the bottom in a low-leakage design.
- Leakages are discharged via the drain pipe (E) in depressurized state.
- The pneumatic actuator opens the valve via the air connection (1). The spring force resets the valve into the “closed” safe position.
- The standard DA4 DPF double seat mix proof valve is equipped with a CU43 control unit.
- Cleaning of the seat and shaft seal areas is controlled via the air connections.

  2 = to lift upper shaft
  3 = to lift lower shaft

- The spray connection (C) cleans the leakage chamber.
- As an option, the closed and open positions of the DA4 DPF can be detected via proximity switches.

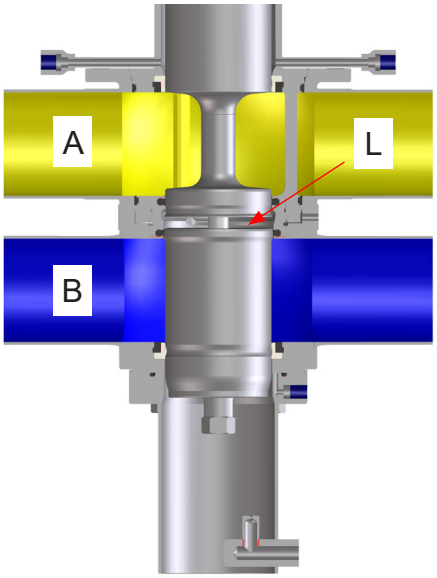
fig. 4.1.2.

DA4 with valve position indication



4. Mode of Operation

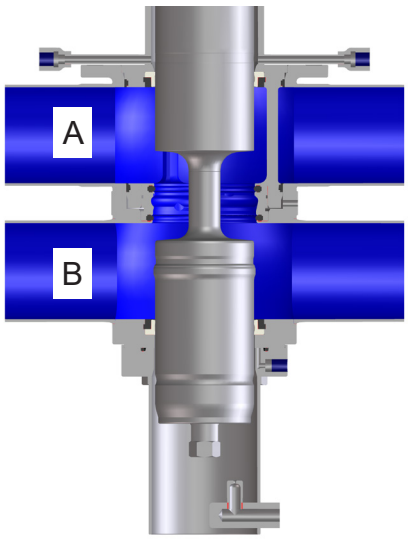
fig. 4.2.



4.2. Valve in "closed" position

The lower and upper valve shaft are in closed position and safely separate the different liquids A and B. The leakage chamber L, which is situated between the two valve shafts, provides for a free and depressurized discharge to the bottom. The valve shafts are balanced and protected against pressure hammer.

fig. 4.3.



4.3. Valve in "open" position

The upper valve shaft is pressed against the seal of the lower valve shaft by control of the actuator.
First, the leakage chamber L is closed against the product chamber. Then the two valve shafts move downwards into the open position. The connection between the two pipelines A and B is established.

5. Control Units / Valve Position Indication

CU4 control unit

5.1. Control unit and adapter

An adapter is required to assemble the control unit on the DA4 DPF valve.
The following different designs are available:

	Designation	
Ø Air connection	**6 mm**	**1/4" OD**
CU4 Control Unit		
Direct Connect	CU43-D4 Direct Connect H336955	CU43-D4 Direct Connect 1/4"OD H336960
Direct Connect M12	CU43-D4-M12 Direct Connect H341343	CU43-D4-M12 Direct Connect 1/4"OD H341352
AS-interface extended	CU43-D4 AS-i extended H336957	CU43-D4 AS-i extended 1/4"OD H336962
AS-interface extended M12	CU43-D4-M12 AS-i extended H338897	CU43-D4-M12 AS-i extended 1/4"OD H338901
Adapter	CU4 adapter D4 H337098	
CU4plus Control Unit		
Direct Connect	CU43plus-D4 Direct Connect H342452	CU43plus-D4 1/4"OD Direct Connect H342453
Direct Connect M12	CU43plus-D4-M12 Direct Connect H342472	CU43plus-D4-M12 Direct Connect 1/4"OD H342473
AS-interface extended V2	CU43plus-D4-V2 AS-i extended H338822	CU43plus-D4-V2 AS-i extended 1/4"OD H338826
AS-interface extended V2 M12	CU43plus-D4-V2-M12 AS-i extended H338867	CU43plus-D4-V2-M12 AS-i extended 1/4"OD H338871
Adapter	CU4plus adapter D4 V2 H341891	

5.2. Valve position indication

Proximity switches to signal the closed and open position of the DA4 DPF valve can be installed at the proximity switch holder.

We recommend using one of these standard types:
three-wire proximity switch
operating distance: 5 mm
diameter: 11 mm
operating voltage: 10–30 V DC
pnp pulse-shifting, closing function
"non-flush" installation

Recommendation:
Proximity switch 24V DC, PNP, 11 mm DIA. (5 m cable): H16223
Proximity switch 24V DC, PNP, 11 mm DIA. (cable box): H16432

If the customer decides to use valve position indicators other than those listed above, SPX FLOW cannot assume any liability for the functionality of the valve.

6. Cleaning

In the cleaning process of DA4 DPF valves, distinction is made between three areas: Flow areas, Seal surfaces and seat area, and Leakage chamber.

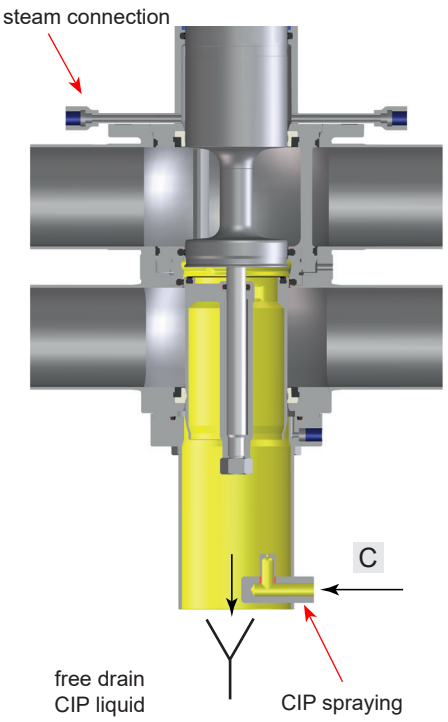
6.1. Flow areas

The CIP-fluid cleans the upper and lower passages of the valve during CIP.

6.2. Seal surfaces and seat area

The seal surfaces of the upper area (upper shaft and seat seal) and the lower area (lower shaft and seat seal) are flushed and cleaned when the individual valve shafts are lifted during cleaning. The seat area and leakage chamber are also cleaned during this process.

fig. 6.3.



6.3. Leakage chamber

CIP spraying cleans the leakage chamber. The cleaning connection is at item C in fig. 6.3.

CIP spraying does not produce pressure build-up in the leakage chamber. SPX FLOW recommends performing CIP-spraying in the closed valve position; however, it can also be done in the open valve position.

6.4. Cleaning recommendation

Cleaning steps	Seat lifting cycle	CIP spraying
pre-flushing	–	3 x 10 sec.
caustic flushing 80°C	3 x 5 sec.	3 x 10 sec.
intermediate flushing	2 x 5 sec.	2 x 10 sec.
acid flushing	3 x 5 sec.	3 x 10 sec.
subsequent flushing	2 x 5 sec.	2 x 10 sec.

- The lifting cycles refer to a cleaning pressure of p = 2-5 bar.
- Depending on the pressure ratio, cleaning temperatures, cleaning steps and degree of soiling, different cycles must be adjusted.
- Flushing quantities per CIP spraying cycle:
  DN 40-100/1,5-4" about 1,2 ltr/10s
- Cleaning pressure at CIP cleaning connection: min. 2 bar
  max. 5 bar

Caution!
The cleaning liquid applied must be compatible with the respective seal material.

6. Cleaning

6.5. Flushing quantity in ml per lifting cycle / 5 sec.

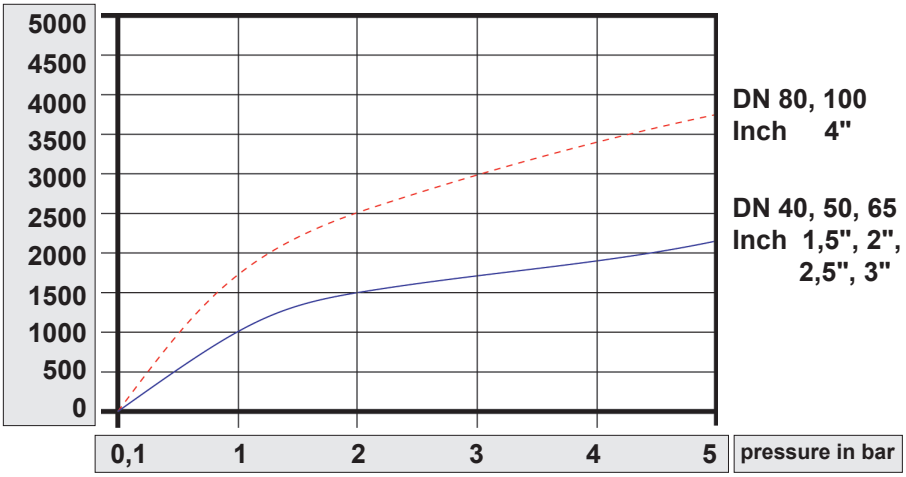
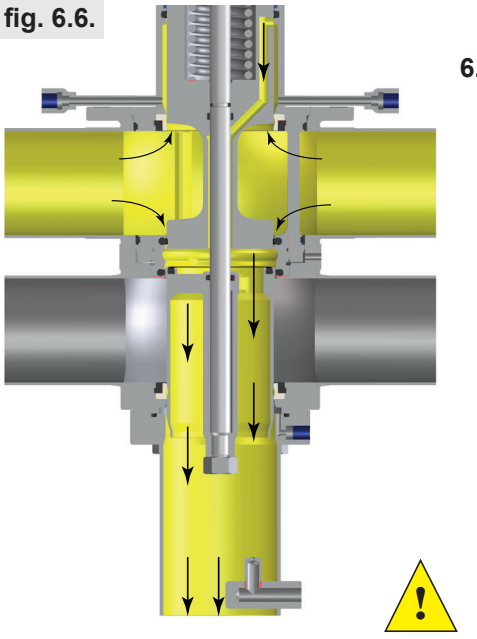


fig. 6.6.



6.6. Cleaning of upper area (fig. 6.6.)

The upper valve shaft is lifted via connection (2), as shown in fig. 4.1 on page 8.

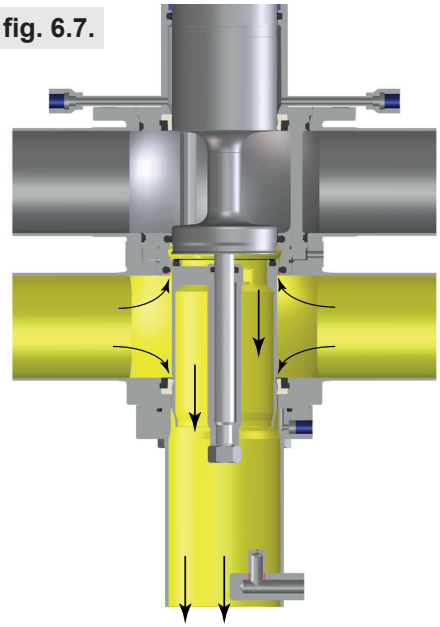
Through the lifting of the upper valve shaft, the cleaning fluid flushes over the upper seat seal and the upper valve seat into the leakage chamber and cleans this area. The cleaning fluid is drained off to the bottom in a depressurized state.

Simultaneously, the upper shaft seal and the outer surface of the upper valve shaft are cleaned. The cleaning fluid is guided into the leakage chamber and drained off to the bottom.

The lifting stroke is limited by a metallic stop.

Caution! The supply valves must be in closed position. Flush free the supply lines after every lifting cycle of the upper valve shaft.

fig. 6.7.



6.7. Cleaning of lower area (fig. 6.7.)

The lower valve shaft is lifted via connection (3), as shown in fig. 4.1 on page 8.

By lifting the lower valve shaft, the cleaning fluid flushes over the lower seat seal into the leakage chamber and cleans this area. The cleaning fluid is drained off to the bottom in a depressurized state.

Simultaneously, the lower shaft seal and the outer surfaces of the lower valve shaft are cleaned. The cleaning fluid is drained off to the bottom in a depressurized state.

The lifting stroke is limited by a metallic stop.

7. Installation and Commissioning

- The valve must be installed in vertical position to ensure that fluids can drain off freely from the valve housing and the leakage chamber.

Caution! Leakages and fluid losses from seat lifting and CIP spraying must be safely collected and drained!

- The valve housing can be welded directly into the pipeline (completely removable valve insert).

Note! Observe welding instructions.

- Observe heights of installation and dismantling!

Caution!
Before first startup:

- Actuate the valve by applying compressed air. The opening, closing and seat lifting processes must run smoothly.
- Check the function of the control unit or valve position indication.
- Check for possible leakages during commissioning. Replace defective seals.

7.1. Welding Instructions

- Before welding the valve, remove the valve insert from the housing.

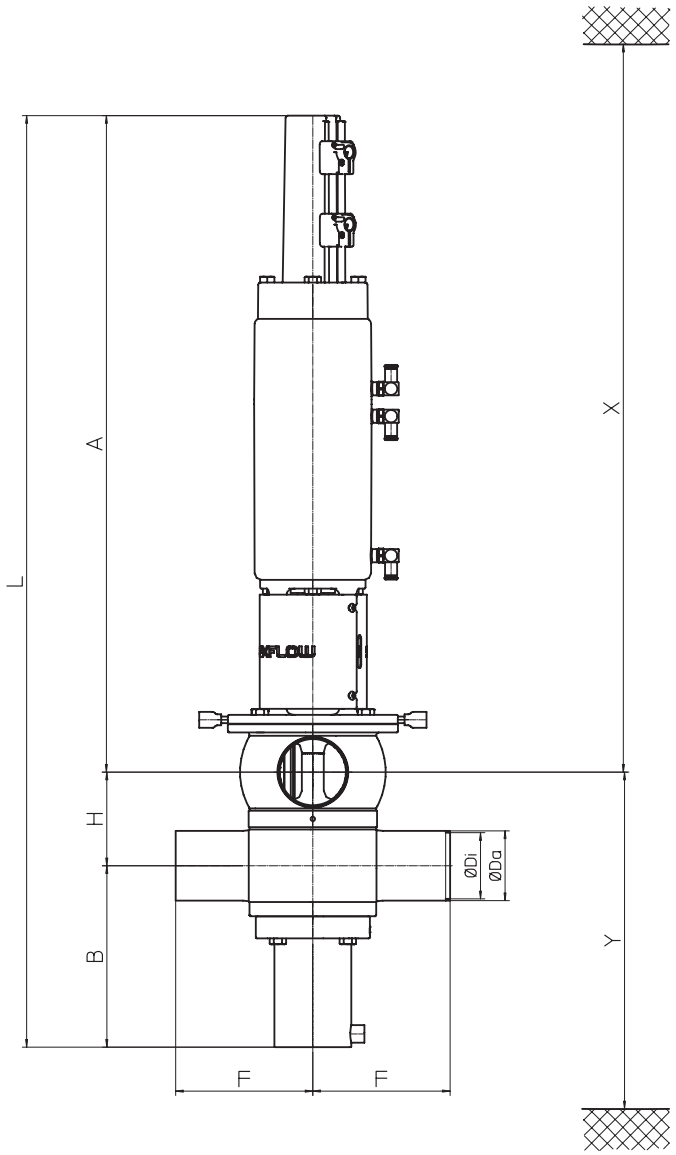
Caution! Handle and store the valve insert carefully to avoid damaging the part.

- It is not necessary to remove the lower shaft seal as it can be destroyed during removal.
- Welding should only be carried out by certified welders (DIN EN ISO 9606-1) (seam quality DIN EN ISO 5817).
- The welding of the valve housings must be undertaken in such a way that the valve body is not deformed.
- The preparation of the weld seam up to 3 mm thickness must be carried out as a square butt joint without air. Consider shrinkage!
- TIG orbital welding is recommended.

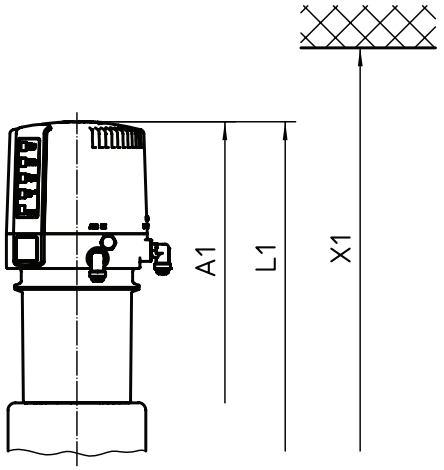
Caution! After welding the valve housing or mating flanges, and after performing any work on the piping, do not operate the valves until the corresponding areas of the installation and piping have been cleaned and welding residue has been removed. If the piping is not cleaned before operation, welding residue and dirt particles can settle in the valves and cause damage to the valves and seals.

- If these welding instructions are not followed, any resulting damage will not be covered by the warranty.
- Welding directives for aseptic applications shall be drawn from the AWS/ANSI Directives and EHEDG Guidelines.

8. Dimensions / Weights

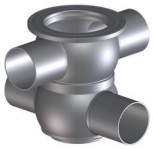


CU4 control unit



housing configuration

DA44



DA43

DA42

DA41 1-8

DA41 1-7

DA41 1-6

Dimensions in mm										install. dimen. min. in mm			weights in kg with CU
DN	A	A1	B	Ø Da	Ø Di	F	H	L	L1	X*	X1*	Y*	
40	589	672	154	41	38	125	63	806	889	810	895	237	16,8
50	593	676	160	53	50	125	75	828	911	840	925	255	17,9
65	601	684	168	70	66	125	91	860	943	880	965	279	19
80	678	761	175,5	85	81	142,5	106	959,5	1042,5	980	1070	301,5	19,1
100	688	771	168	104	100	142,5	125	981	1064	1035	1120	313	31,8
Inch													
1,5"	588	671	152,4	38,1	34,8	125	63	803,4	886,4	815	895	235,4	16,8
2"	594	677	158,8	50,8	47,6	125	75	827,8	910,8	845	925	253,8	17,9
2,5"	598	681	165,15	63,5	60,3	125	85,3	848,45	931,45	870	950	270,45	18,9
3"	604	687	154,45	76,1	72,9	125	97,9	856,35	939,35	900	980	272,35	19,1
4"	689	772	166,8	101,6	97,6	142,5	125	980,8	1063,8	1040	1120	311,8	31,8

***Minimum installation and valve insert removal dimensions**

9. Technical Data

9.1. General data

Product-wetted parts	1.4404, 316L (DIN EN 10088)	
Other parts	**1**.4301,304 (DIN EN 10088)	
Seals		
standard	EPDM/ PTFE compound	
options	HNBR/ PTFE compound	
	FPM/ PTFE compound	
Max. line pressure	10 bar	
Max. operating temperature	135 °C	EPDM, HNBR
		*FPM
Short-term load	140 °C	EPDM, HNBR
		*FPM
		*no steam
Tightening torque for stop sleeve	10 Nm	
Tightening torque for safety nuts at lower and upper valve shaft	40 Nm	
Spray connection	PP (polypropylene)	
Ø Cleaning connection DN 40–100/1,5-4"	8 x 1 mm	
Ø Air connection	6 x 1 mm, 1/4" OD	
Max. pneumatic air pressure	8 bar	
Min. pneumatic air pressure	5 bar	

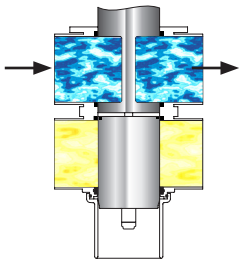
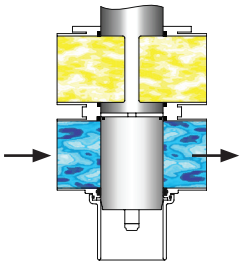
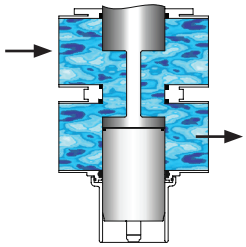
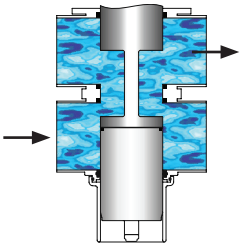
9.2. Compressed air quality

Quality class	acc. to DIN ISO 8573-1
Content of solid particles	quality class 3, max. size of solid particles per m³ 10000 of 0,5 µm < d < 1,0 µm 500 of 1,0 µm < d < 5,0 µm
Content of water	quality class 3, max. dew point temperature -20°C For installations at lower temperatures or at higher altitudes, consider additional measures to reduce the pressure dew point accordingly.
Content of oil	quality class 1, max. 0,01 mg/m³

The oil applied must be compatible with Polyurethane elastomer materials.

9. Technical Data

9.3. Kvs values in m³/hr

				
DN				
40	48	44	24	24
50	91	75	48	46
65	184	150	74	74
80	205	170	131	126
100	335	246	170	156
Inch				
1,5"	42	38	24	23
2"	83	71	46	46
2,5"	147	122	67	67
3"	183	160	83	82
4"	329	237	167	156

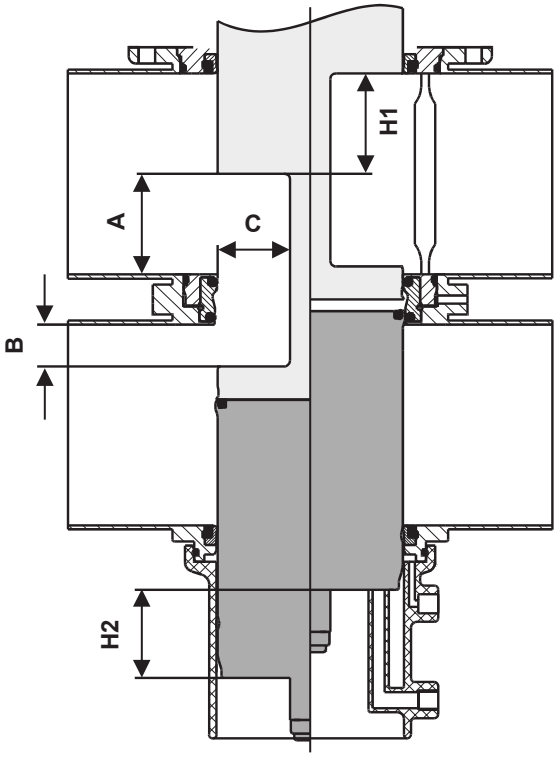
9.4. Air consumption / Switching times

		Air consumption at 5 bar			Switching times in seconds at 5 bar / CU43	
		Actuator	Seat lift actuator			
DN	Inch	NL/stroke valve open	NL/stroke upper seat lift	NL/stroke lower seat lift	Open	Closed
40	1,5"	1,7	3,4	0,3	1,5	1,8
50	2"	1,8	3,4	0,3	1,5	1,8
65	2,5"	2,0	3,4	0,3	1,7	2,0
	3"	2,0	3,4	0,3	1,7	2,0
80	4"	3,7	7,7	0,4	2,6	3,3
100		3,7	7,7	0,4	2,6	3,3

9. Technical Data

9.5. Valve stroke / Opening cross section

valve open | valve closed



Dimensions in mm					
DN	A	B	C	stroke H1 upper shaft	stroke H2 lower shaft
40	4	5	21,2	34	28
50	11	10	21,2	39	33
65	21	16	21,2	45	39
80	31	21	35,2	50	44
100	50	21	35,2	50	44
Inch					
1,5"	4	5	21,2	34	28
2"	11	10	21,2	39	33
2,5"	15	16	21,2	45	39
3"	28	16	21,2	45	39
4"	50	21	35,2	50	44

10. Maintenance

Note!
The maintenance intervals are different depending on the application and must be determined by the operator performing regular checks.

- Compressed air is not required to remove the valve.

Caution!
Do not clean the valve with products containing abrasive or polishing substances. Abrasive and polishing agents are especially harmful to the upper and lower shaft.

Required tools for standard maintenance:

- 1 x wrench SW13, SW24, SW30, SW32
- 1 x wrench SW36
- 2 x wrench SW17
- 1 x Allen key SW3, SW6
- pick tool for O-ring and rubber seal removal
- disassembly and assembly tool for lower shaft seal, see page 25
- assembly tool for middle seal, see page 26
- 2 long M8 hex screws for safe removal of valve insert

- For valve maintenance SPX FLOW offers complete seal kits (see spare parts lists).

Caution!
The use of seal materials being compatible with the product, application and CIP liquids must be ensured. In case of doubt, contact your local SPX FLOW representative.

- For seal replacement instructions, see pages 20 and 21.

- Provide all seals with a thin layer of grease before their installation!
  Recommendation:
  Assembly grease for EPDM, HNBR and FPM (Viton)
  0,75 kg/tin - ref.-No. 000 70-01-019/93; H147382
  60 g/tube - ref.-No. 000 70-01-018/93; H147381

- Provide all screws and threaded parts with grease before their installation.
  Recommendation: Klüber paste UH1 84-201
  60 g/Tube - ref.-No. 000 70-01-016/93; H147379

  Recommendation for actuator:
  Pneumatic grease:
  25 ml/tube - ref.-No. 000 70-01-008/93; H164725

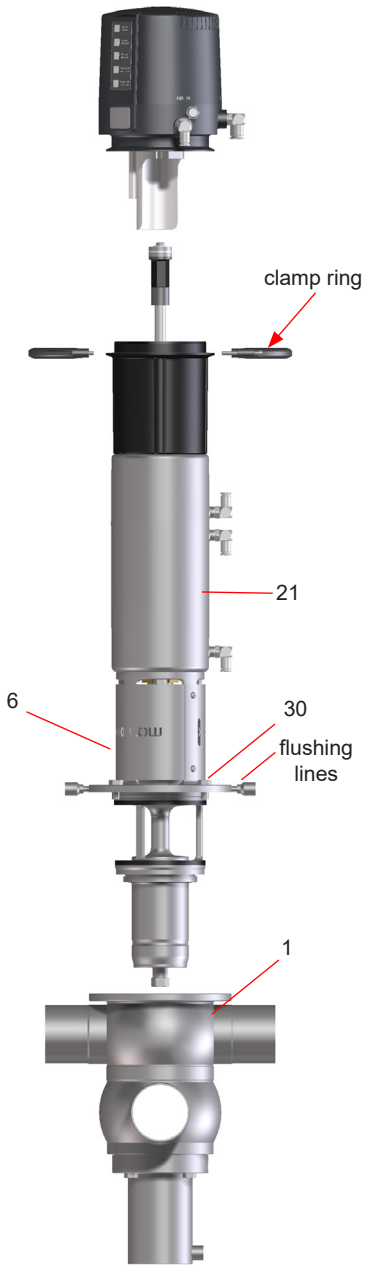
- For valve assembly instructions, see page 21.

11. Service Instructions

The item numbers refer to the spare parts drawings
DIN and Inch designs: RN 502.047.02

For the Disassembly/Assembly tools, see chapter 13.

fig. 11.1.



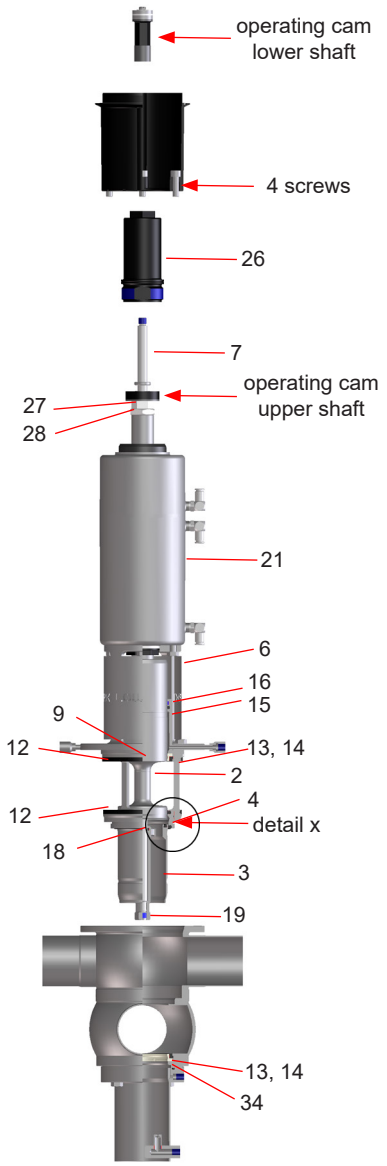
11.1. Removal from the line system

Caution!

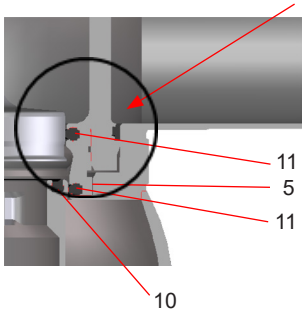
1. Shut off the line pressure in the product and cleaning lines and the supply lines for steam / sterile condensate and sterile air and discharge the lines if possible.
2. Release the connections of the supply lines.
3. Remove the compressed air lines from the valve actuator (21).
4. Release the 2 screws at the clamp rings and lift the control unit off the adapter.
5. Design with proximity switch holder:
   Release the screws at the proximity switch holder and lift off the proximity switch holder.
6. Remove the flange screws (30) in the yoke (6). For additional safety, replace two flange screws with longer screws that are partially threaded into the flange. Once these longer screws are in place, the other two flange screws can be safely removed.
7. Screw one flange screw (30) into the threaded bore of the yoke (6) to lift the complete valve insert. Do not remove the screw. It helps to re-install the valve insert.
8. Carefully lift the valve insert vertically out of the valve housing (1).
9. Dismantle the spray connection (36). Release the fittings to the spray connection, release the 4 hex. screws (35). Detach the spray connection and remove the O-ring (34).

11. Service Instructions

fig. 11.2.



detail x

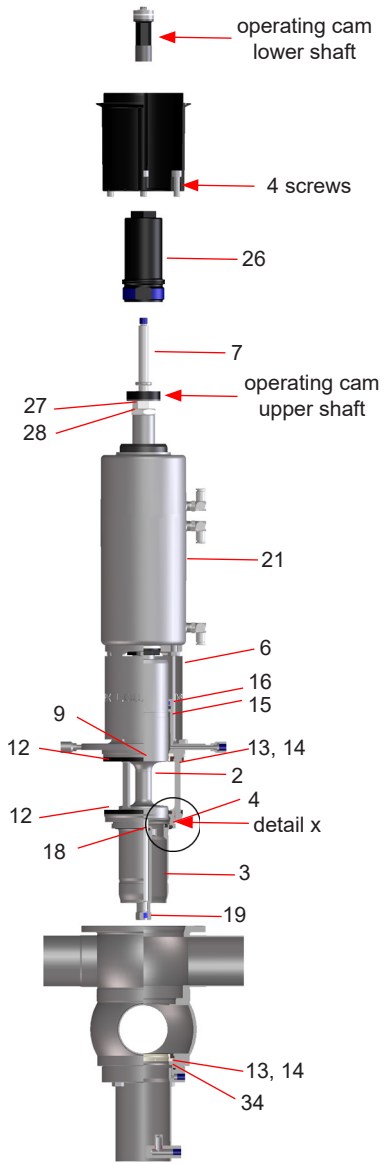


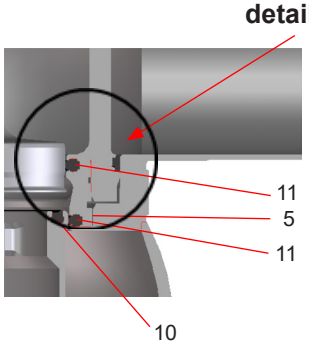
11.2. Removal of product-wetted parts

1. Remove the operating cam from the guide rod (7).
2. In order to take off the adapter, remove the 4 screws.
3. Remove the lower and upper housing seal (12) from the valve seat (4).
4. Release the lower safety nut (19). Hold the lower shaft (3) with an SW17 wrench to keep it from turning.
5. After removing the nut (19), lift off the lower shaft (3).
6. Place the point of the pick tool along the side of the middle seal (10) and pull it out of the groove. Take the quad ring (18) out of the groove.
7. Remove the stop screw (26).
8. Take the guide rod (7) out through the top of the actuator and remove the O-ring (9).
9. Remove the operating cam at the upper shaft.
10. Unscrew the safety nut (27). Hold up the lock washer (28) with a SW30 key to keep it from turning. Remove the lock washer.
11. Lift off the actuator (21) with yoke (6).
12. Press the upper valve shaft (2) with seat ring (5) to the bottom out of the valve seat (4).
13. Slide the seat ring (5) over the balancer of the upper valve shaft (2).
14. Remove the seat seals (11) from the grooves.
15. Removing the upper shaft seal (13, 14)
    Place the point of a tool along the side of the seat seal (13) and pull it out of the valve seat, then remove the PTFE seal (14).
16. Remove the quad ring (15) and guide ring (16) from the groove of the valve seat (4).
17. Removing the lower shaft seal from the housing
    Place the point of the disassembly tool along the side of the seat seal (13) and pull it out through the top of the housing. Then remove the PTFE seal (14) through the top of the housing, using the mandril of the assembly tool, see page 25.

11. Service Instructions

fig. 11.3.





11.3. Installation of product-wetted seals and assembly of the valve

Note! Make sure that all seals and bearing surfaces in the product area are slightly greased before their installation.

1. Install the lower shaft seal (13, 14) in the lower housing flange.
2. Place the quad ring (15) and the guide ring (16) in the valve seat (4).
3. Installing the upper shaft seal (13, 14) in the valve seat (4). Insert the PTFE ring (14), first. Then press the seat seal (13), the wide side to the front, into the groove between the PTFE seal (14) and the valve seat (4).
4. Install the upper and lower housing seals (12).
5. Press the upper and lower seat seal (11) into the seat ring (5).

Note! The seal shoulder must fit properly into the groove.

6. Slide the seat ring (5) (the larger diameter to the bottom) from the top over the balancer of the upper valve shaft (2).
7. Slide the valve seat (4) over the balancer of the upper valve shaft (2) in the same way.
8. Insert the upper valve shaft (2) with seat ring (5) and valve seat (4) through the yoke (6) and actuator (21) until it stops.
9. Align key and fasten the upper valve shaft (2) with the lock washer (28) and safety nut (27). Hold the lock washer with a SW30 wrench to keep the safety nut (27) from turning.
   Tightenting torque: Md = 40 Nm

Caution! Overtightening of the safety nut could result in thread damage on the upper shaft.

10. Screw the operating cam on the upper shaft.
11. Insert the middle seal (10) into the lower shaft (3) using the assembly tool (see page 21).
12. Assembling without the assembly tool:
    Press the slightly greased seal into the groove at four locations. Then push in the four loops of seal with a blunt object. Vent the seal groove.
13. Insert the quad ring (18) in the lower shaft (3).
14. Install the O-ring (9) at the guide rod (7).
15. Ensure the key is secure on the guide rod. Slide in the guide rod (7) from the top through the actuator (21) until it stops.
16. Screw in the stop screw (26) until it stops.
    Tightening torque Md = 10 Nm
    The stop screw must be flush with the top of the piston.

Note! Check the position of the lower seat seal (11).

11. Service Instructions

11.3. Installation of product-wetted seals and assembly of the valve

17. Slide the lower valve shaft (3) on the guide rod (7). Align key and fasten it with the safety nut (19).
Tightening torque: Md = 40 Nm

18. Fasten the adapter on the actuator with the 4 screws and ensure that the air fittings on the control unit will align properly with the air fittings on the DA4 DPF valve.

19. Screw the operating cam on the guide rod (7).

11. Service Instructions

fig. 11.4.

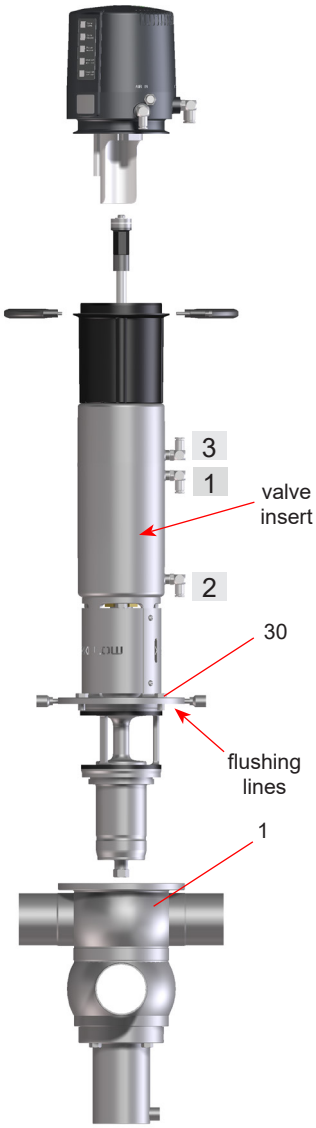
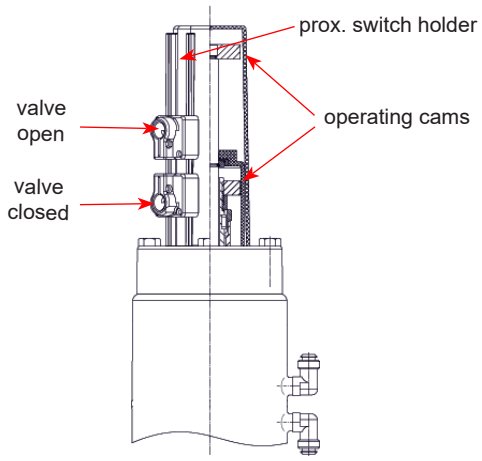


fig. 11.4.1.

DA4 DPF with valve position indication



11.4. Installation of the valve insert

1. Place the O-ring (34) in the groove of the spray connection (36) and screw it on the valve housing (1) with the 4 hex. screws (35). Connect the fittings to the spray connection.
2. Carefully place the valve insert in the valve housing (1) until the screw stops.
3. Remove the jacking screw and carefully press the valve insert into the housing (1).
4. Connect supply lines.
5. Place the control unit on the adapter. Make sure that the control unit is centered on the adapter.
6. Place the clamp ring and fasten it with the screws.
7. Assemble the compressed air lines.
   Air connection 1: to open valve
   Air connection 2: to lift upper shaft
   Air connection 3: to lift lower shaft
8. Check the valve position indicators

   Closed valve position feedback – sensor 1 controlled
   To adjust Hall sensor 1, ensure that the valve is in the closed position, the solenoid / manual override are not activated. The direction of adjustment of Hall sensor 1 has to be done against the closing direction of the DA4 DPF valve. Turn the adjustment screw clockwise until the signal is lost. Then turn the adjustment screw anti-clockwise. When the LED appears, we recommend additional 2 x 360° turns of the adjustment screw to tolerate hysteresis and small variations.

   Open valve position feedback – sensor 2 controlled
   To adjust Hall sensor 2, first activate the solenoid valve 1, either manually or electrically. The direction of adjustment of Hall sensor 2 has to be done against the opening direction of the DA4 DPF valve. Turn the adjustment screw anti-clockwise until the signal is lost. Then turn the adjustment screw clockwise. When the LED signal appears, we recommend additional 2 x 360° turns of the adjustment screw to tolerate hysteresis and small variations.
9. Design with proximity switch holder:
   Set the adapter (33) and the proximity switch holder (32) in position and fasten them with the screws (35).

   Closed valve position
   The adjustment of the proximity switch has to be done against the closing direction of the DA4 DPF valve. First slide the proximity switch in closing direction until the signal of the proximity switch LED disappears. Then slowly slide against the closing direction. When the LED signal appears, shift another 2mm to permit hysteresis and small variations.

   Open valve position
   The adjustment of the proximity switch has to be done against the opening direction of the DA4 DPF valve. First slide the proximity switch in opening direction until the signal of the proximity switch LED disappears. Then slowly slide against the opening direction. When the LED signal appears, shift another 2mm to permit hysteresis and small variations.

12. Maintenance of Actuator

The item numbers refer to the spare parts drawings
DIN and Inch designs: RN 502.047.01

fig. 12.1

12.1 Removing the actuator screws

1. Remove yoke cover and yoke.
2. Unscrew the two actuator screws (20) with an SW36 socket wrench.
3. Remove the V-seals (24) and O-rings (23).

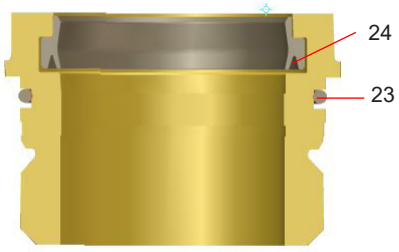
12.2 Installing the seals and assembling the actuator

1. Install the slightly greased O-rings (23) and V-seals (24) in the actuator screws (20) (fig. 12.2). Check the correct installation position of the V-seal (24).

   Recommendation for actuator:
   Pneumatic grease
   (25 ml /tube - ref.-No. 000 70-01-008/93; H164725)

2. Place the assembly tool (H338580) on the end of the piston rod. Screw the actuator screws (20) with a socket wrench SW36 over the piston rod at both sides of the actuator and fasten them.
3. Re-install yoke and yoke cover.

fig. 12.2

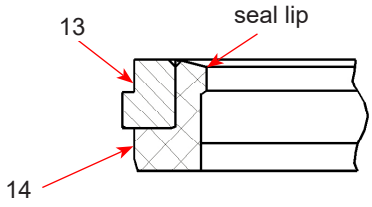


actuator screw

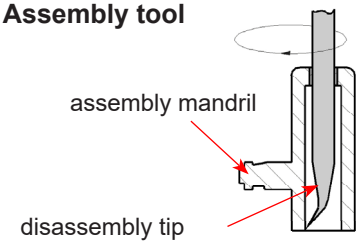
Assembly tool for actuator screw (H338580)

13. Assembly Instructions and Tools for Seals

Seal



Assembly tool



13.1. Lower shaft seal (pos. 13, 14)

For a simple disassembly and assembly of the lower shaft seal (13, 14) the universal tool (ref.-No. 000 51-13-100/17; H171889) can be used. This tool is especially recommended for valves of the small series (DN 40-65, 1,5”-3”) as access to the lower shaft seal from the top is impossible as a result of the narrow seat.

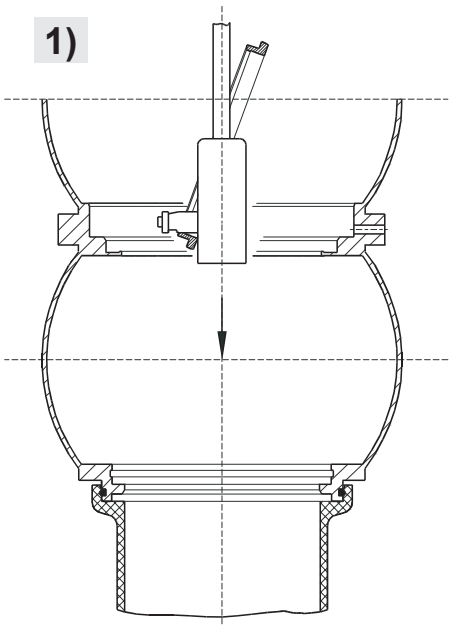
Caution! Do not damage the seal lip of the PTFE seal during assembly.
To avoid injuries the disassembly tip must be covered by the assembly mandril if not used.

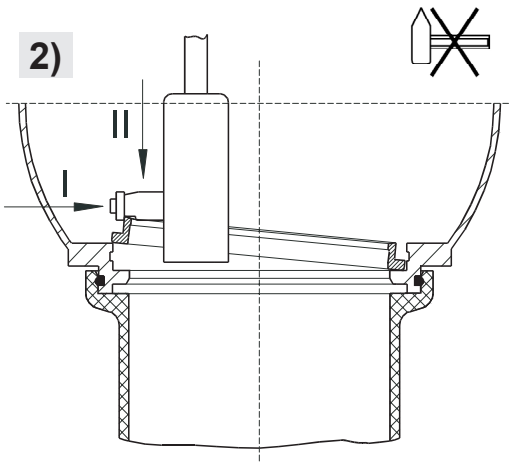
13.2. PTFE seal (fig. 1, 2)

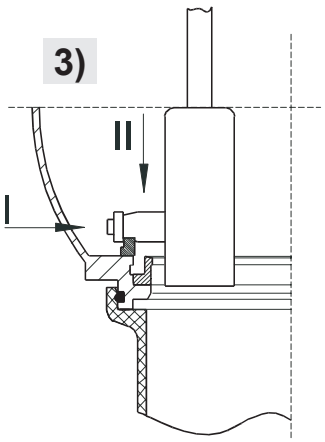
1. Press the PTFE ring (14) into an oval shape.
2. Introduce the PTFE ring (14) from the top using the assembly tool, the wide side to the front, through the intermediate ring of the housing into the lower housing (fig. 1).
3. Pull the PTFE ring (14) into a round shape with the assembly mandril (fig. 2/I) and press it into the groove. Do not knock or beat (fig. 2/II)!

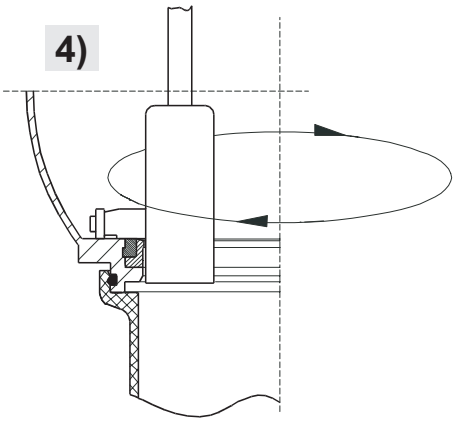
13.3. Seat seal (fig. 1, 3, 4)

1. Slightly grease the seal (13).
2. Use the assembly tool to insert the seat seal (13) from the top, the wide side to the front, through the intermediate ring of the housing into the lower housing ball (fig. 1).
3. Position the seat seal (13) using the groove of the assembly mandril (fig. 3/I).
4. Press in the seat seal (13) at one spot between the housing flange and the PTFE seal (14) (fig. 3/II).
5. Slide the assembly mandril around the seat seal (13) to insert the seal completely into the groove (fig. 4). Make sure the seat seal (13) fits evenly in the groove.

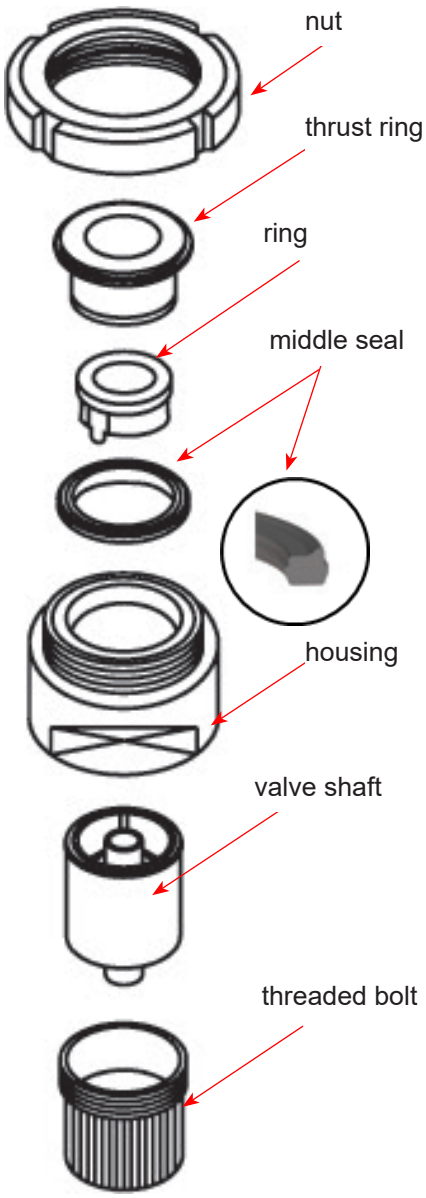








13. Assembly Instructions and Tools for Seals



13.4 Middle Seal

The assembly tool consists of:

- nut
- thrust ring
- ring with venting tip
- housing
- threaded bolt

Installation of the middle seal in the valve shaft

1. Insert the valve shaft into the housing making sure that the seal groove is in the housing.
2. Use the threaded bolt to clamp the shaft into the housing. Clamp the housing into a vice.
3. Slightly grease the middle seal with assembly grease. Then install the seal on the ring.
4. Insert the ring with the installed seat seal into the housing. Make sure that the venting tip is positioned in the seal groove.
5. Insert the thrust ring around the ring in the housing. Screw on the nut and tighten it with a hook spanner until it stops.
6. Release the nut. Take the ring and thrust ring off the housing.
7. Take the housing out of the vice. Take off the threaded bolt. Detach the valve shaft from the housing.

Make sure the middle seal fits evenly.

Assembly tool for middle seal			
DN	Inch	Designation	Reference number
40 50 65	1,5" 2" 2,5" 3"	DA3 - 62	51 - 13 - 210/17 H207310
80 100	4"	DA3 - 92	51 - 13 - 211/17 H207311

14. Trouble Shooting

Failure	Valve position		Required seal replacement
	closed	open	
Leakage at upper housing flange	x	x	upper housing seal (12)
Leakage from the leakage bore between the connecting ports	x	x	lower housing seal (12) and seat seals (11)
Leakage from the yoke	x	x	upper shaft seal (13, 14) and seal of flushing chamber (15)
Leakage from the inside of the lower valve shaft	x		seat seals (11) and upper shaft seal (13, 14)
Leakage from the inside of the lower valve shaft		x	middle seal (10)
Leakage at the outside of the lower valve shaft (remove spray connection for this purpose)	x	x	lower shaft seal (13, 14)

The position numbers refer to the spare parts drawing.

15. Spare Parts Lists

The reference numbers of the spare parts for the different valve designs and sizes are included in the attached spare parts drawings with corresponding lists.

Please indicate the following data to place an order for spare parts:

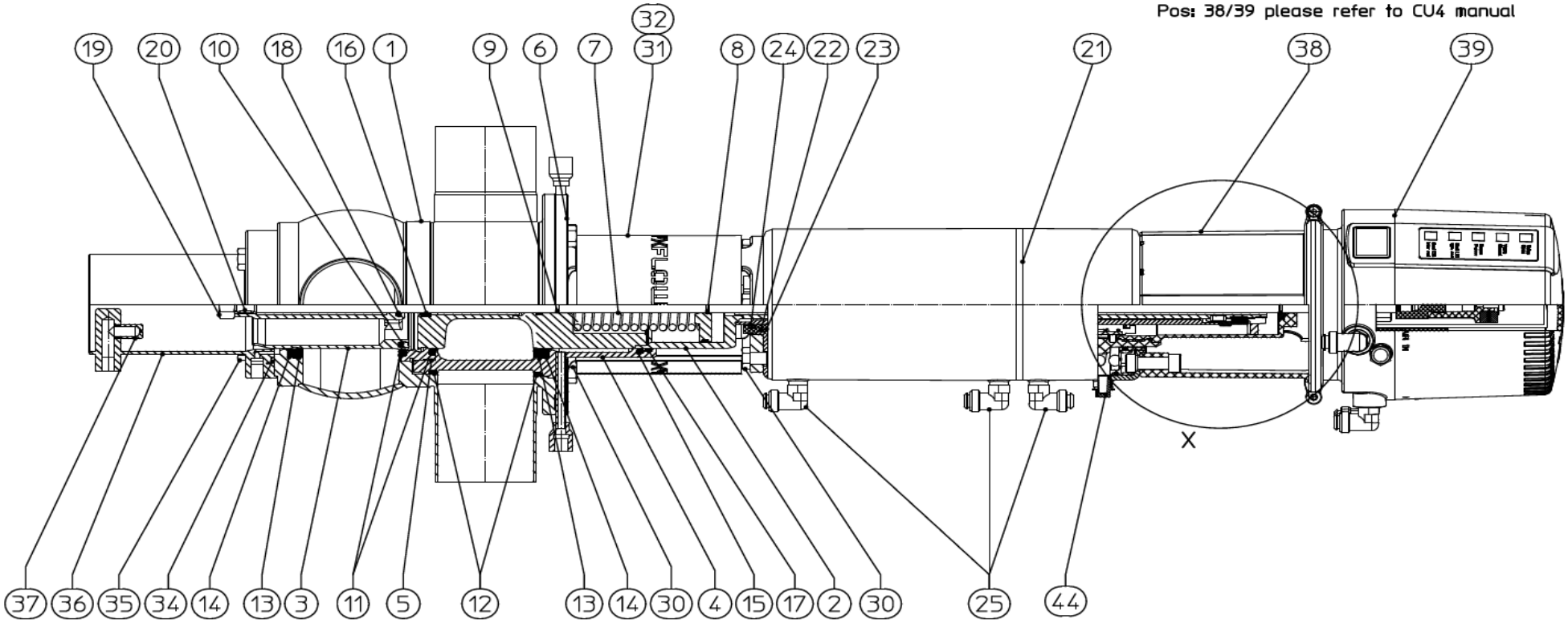
- number of required parts
- reference number
- designation

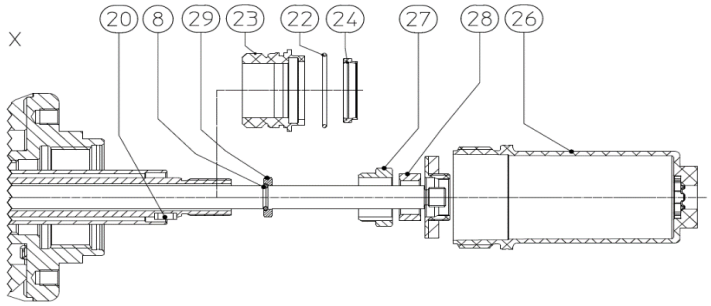
Data are subject to change.

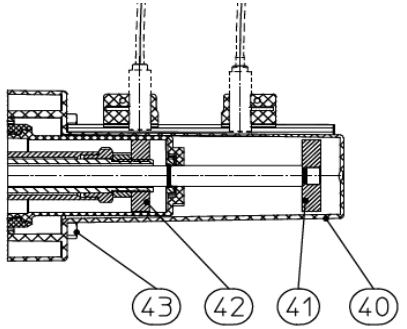
Spare Parts list

Double seat mix proof valve DA4 DPF

Date:	15.02.21	29.06.21			SPX FLOW
Name:	C.Keil	C.Keil			
Reviewed:					
Date:					Page 1 of 12
Name:					RN 502.047.02
Reviewed:					







Spare parts list

Double seat mix proof valve DA4 DPF - 1,5"

Date:	15.02.21	29.06.21			SPX FLOW
Name:	C.Keil	C.Keil			
Reviewed:					
Date:					Page 2 of 12
Name:					RN 502.047.02
Reviewed:					

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 1,5"		1.4404	H341364
		Valve Housing DA43 DPF 1,5"		1.4404	on request
		Valve Housing DA42 DPF 1,5"		1.4404	on request
		Valve Housing D41 1-8 DPF 1,5"		1.4404	on request
		Valve Housing D41 1-7 DPF 1,5"		1.4404	on request
		Valve Housing D41 1-6 DPF 1,5"		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341275
3	1	Lower valve shaft		1.4404	H335369
4	1	Valve seat DA4 DPF - 40/1,5"		1.4404	H341383
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod - 40/1,5"	8, 9, 19, 20	1.4404	H341304
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/34	22, 23, 24	1.4301	H335475
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - DN40

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
Reviewed:					
Date:					Page 3 of 12
Name:					**RN 502.047.02**
Reviewed:					

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 40		1.4404	H341363
		Valve Housing DA43 DPF 40		1.4404	on request
		Valve Housing DA42 DPF 40		1.4404	on request
		Valve Housing D41 1-8 DPF 40		1.4404	on request
		Valve Housing D41 1-7 DPF 40		1.4404	on request
		Valve Housing D41 1-6 DPF 40		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341275
3	1	Lower valve shaft		1.4404	H335369
4	1	Valve seat DA4 DPF - 40/1,5"		1.4404	H341383
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod 40/1,5"	8, 9, 19, 20	1.4404	H341304
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/34	22, 23, 24	1.4301	H335475
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - DN50

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
Reviewed:					
Date:					Page 4 of 12
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Reviewed:					

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 50		1.4404	H341365
		Valve Housing DA43 DPF 50		1.4404	on request
		Valve Housing DA42 DPF 50		1.4404	on request
		Valve Housing D41 1-8 DPF 50		1.4404	on request
		Valve Housing D41 1-7 DPF 50		1.4404	on request
		Valve Housing D41 1-6 DPF 50		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341276
3	1	Lower valve shaft		1.4404	H335370
4	1	Valve seat DA4 DPF - 50/2"		1.4404	H341384
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod - 50/2"	8, 9, 19, 20	1.4404	H341305
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/39	22, 23, 24	1.4301	H335474
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - 2"

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
Reviewed:					
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pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 2"		1.4404	H341366
		Valve Housing DA43 DPF 2"		1.4404	on request
		Valve Housing DA42 DPF 2"		1.4404	on request
		Valve Housing D41 1-8 DPF 2"		1.4404	on request
		Valve Housing D41 1-7 DPF 2"		1.4404	on request
		Valve Housing D41 1-6 DPF 2"		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341276
3	1	Lower valve shaft		1.4404	H335370
4	1	Valve seat DA4 DPF - 50/2"		1.4404	H341384
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod - 50/2"	8, 9, 19, 20	1.4404	H341305
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/39	22, 23, 24	1.4301	H335474
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - 2,5"

Date:	15.02.21	29.06.21		
Name:	C.Keil	C.Keil		
Reviewed:				

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pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 2,5"		1.4404	H341368
		Valve Housing DA43 DPF 2,5"		1.4404	on request
		Valve Housing DA42 DPF 2,5"		1.4404	on request
		Valve Housing D41 1-8 DPF 2,5"		1.4404	on request
		Valve Housing D41 1-7 DPF 2,5"		1.4404	on request
		Valve Housing D41 1-6 DPF 2,5"		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341278
3	1	Lower valve shaft		1.4404	H335371
4	1	Valve seat DA4 DPF - 2,5"		1.4404	H337919
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod - 2,5"	8, 9, 19, 20	1.4404	H341307
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/45	22, 23, 24	1.4301	H334430
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - DN65

Date:	15.02.21	29.06.21		
Name:	C.Keil	C.Keil		
Reviewed:				

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pos. item	Quantity	Description, product contacted seals with reference number		included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing	DA44 DPF 65		1.4404	H341367
		Valve Housing	DA43 DPF 65		1.4404	on request
		Valve Housing	DA42 DPF 65		1.4404	on request
		Valve Housing	D41 1-8 DPF 65		1.4404	on request
		Valve Housing	D41 1-7 DPF 65		1.4404	on request
		Valve Housing	D41 1-6 DPF 65		1.4404	on request
2	1	Upper valve shaft		16, 20, 28	1.4404	H341277
3	1	Lower valve shaft			1.4404	H334422
4	1	Valve seat DA4 DPF - 65			1.4404	H339062
5	1	Seat ring - 62			1.4404	H334441
6	1	Yoke DA4 DPF - 62			1.4404	H337918
7	1	Guide Rod - 65		8, 9, 19, 20	1.4404	H341306
8	2	Retainer ring			1.4301	H14883
9	1	O-ring 9.25 x 1,78			EPDM	H148388
10	1	Middle seal	58-33-998/93		EPDM	H327602
	1	Middle seal	58-33-998/33		HNBR	H332652
	1	Middle seal	58-33-998/73		FPM	H332653
11	2	Seat seal	58-33-044/93		EPDM	H149618
	2	Seat seal	58-33-044/33		HNBR	H168900
	2	Seat seal	58-33-044/71		FPM	H326355
12	2	Housing seal	58-33-542/93		EPDM	H77543
	2	Housing seal	58-33-542/33		HNBR	H170075
	2	Housing seal	58-33-542/71		FPM	H326353
13	2	Seat seal	58-33-493/93		EPDM	H77515
	2	Seat seal	58-33-493/33		HNBR	H166678
	2	Seat seal	58-33-493/71		FPM	H326354
14	2	Shaft seal			PTFE	H335232
15	1	Quad ring			EPDM	H150898
16	1	Guide ring			Iglidur A500	H320447
17	1	Piston ring			Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/45	22, 23, 24	1.4301	H334430
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - 3"

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
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Reviewed:					

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 3"		1.4404	H341369
		Valve Housing DA43 DPF 3"		1.4404	on request
		Valve Housing DA42 DPF 3"		1.4404	on request
		Valve Housing D41 1-8 DPF 3"		1.4404	on request
		Valve Housing D41 1-7 DPF 3"		1.4404	on request
		Valve Housing D41 1-6 DPF 3"		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341280
3	1	Lower valve shaft		1.4404	H335372
4	1	Valve seat DA4 DPF - 3"		1.4404	H341385
5	1	Seat ring - 62		1.4404	H334441
6	1	Yoke DA4 DPF - 62		1.4404	H337918
7	1	Guide Rod - 3"	8, 9, 19, 20	1.4404	H341309
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-998/93		EPDM	H327602
	1	Middle seal 58-33-998/33		HNBR	H332652
	1	Middle seal 58-33-998/73		FPM	H332653
11	2	Seat seal 58-33-044/93		EPDM	H149618
	2	Seat seal 58-33-044/33		HNBR	H168900
	2	Seat seal 58-33-044/71		FPM	H326355
12	2	Housing seal 58-33-542/93		EPDM	H77543
	2	Housing seal 58-33-542/33		HNBR	H170075
	2	Housing seal 58-33-542/71		FPM	H326353
13	2	Seat seal 58-33-493/93		EPDM	H77515
	2	Seat seal 58-33-493/33		HNBR	H166678
	2	Seat seal 58-33-493/71		FPM	H326354
14	2	Shaft seal		PTFE	H335232
15	1	Quad ring		EPDM	H150898
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H334863

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-100/45	22, 23, 24	1.4301	H334430
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 62	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 75 x 2,5		EPDM	H77047
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 62		1.4301	H311337
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø62		EPDM	H343853
		Seal kit DA4 DPF-Ø62		HNBR	H343855
		Seal kit DA4 DPF-Ø62		FPM	H343854

Spare parts list

Double seat mix proof valve DA4 DPF - DN80

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
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pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 80		1.4404	H341370
		Valve Housing DA43 DPF 80		1.4404	on request
		Valve Housing DA42 DPF 80		1.4404	on request
		Valve Housing D41 1-8 DPF 80		1.4404	on request
		Valve Housing D41 1-7 DPF 80		1.4404	on request
		Valve Housing D41 1-6 DPF 80		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341279
3	1	Lower valve shaft		1.4404	H335373
4	1	Valve seat DA4 DPF - 80		1.4404	H341386
5	1	Seat ring - 92		1.4404	H335872
6	1	Yoke DA4 DPF - 92		1.4404	H341388
7	1	Guide Rod - 80	8, 9, 19, 20	1.4404	H341308
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-997/93		EPDM	H327985
	1	Middle seal 58-33-997/33		HNBR	H332649
	1	Middle seal 58-33-997/73		FPM	H332648
11	2	Seat seal 58-33-045/93		EPDM	H149619
	2	Seat seal 58-33-045/33		HNBR	H168901
	2	Seat seal 58-33-045/73		FPM	H153318
12	2	Housing seal 58-33-642/93		EPDM	H77583
	2	Housing seal 58-33-642/33		HNBR	H170074
	2	Housing seal 58-33-642/73		FPM	H77582
13	2	Seat seal 58-33-643/93		EPDM	H77586
	2	Seat seal 58-33-643/33		HNBR	H166682
	2	Seat seal 58-33-643/71		FPM	H336388
14	2	Shaft seal		PTFE	H335934
15	1	Quad ring		EPDM	H148387
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H335702

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-125/50	22, 23, 24	1.4301	H335883
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 92	32	1.4301	H341316
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 97 x 2,5		EPDM	H144726
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 92		1.4301	H313665
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø92		EPDM	H343856
		Seal kit DA4 DPF-Ø92		HNBR	H343858
		Seal kit DA4 DPF-Ø92		FPM	H343857

Spare parts list

Double seat mix proof valve DA4 DPF - DN100

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
Reviewed:					
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pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 100		1.4404	H341371
		Valve Housing DA43 DPF 100		1.4404	on request
		Valve Housing DA42 DPF 100		1.4404	on request
		Valve Housing D41 1-8 DPF 100		1.4404	on request
		Valve Housing D41 1-7 DPF 100		1.4404	on request
		Valve Housing D41 1-6 DPF 100		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341281
3	1	Lower valve shaft		1.4404	H335374
4	1	Valve seat DA4 DPF - 100/4"		1.4404	H341387
5	1	Seat ring - 92		1.4404	H335872
6	1	Yoke DA4 DPF - 92		1.4404	H341388
7	1	Guide Rod - 100/4"	8, 9, 19, 20	1.4404	H341310
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-997/93		EPDM	H327985
	1	Middle seal 58-33-997/33		HNBR	H332649
	1	Middle seal 58-33-997/73		FPM	H332648
11	2	Seat seal 58-33-045/93		EPDM	H149619
	2	Seat seal 58-33-045/33		HNBR	H168901
	2	Seat seal 58-33-045/73		FPM	H153318
12	2	Housing seal 58-33-642/93		EPDM	H77583
	2	Housing seal 58-33-642/33		HNBR	H170074
	2	Housing seal 58-33-642/73		FPM	H77582
13	2	Seat seal 58-33-643/93		EPDM	H77586
	2	Seat seal 58-33-643/33		HNBR	H166682
	2	Seat seal 58-33-643/71		FPM	H336388
14	2	Shaft seal		PTFE	H335934
15	1	Quad ring		EPDM	H148387
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H335702

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-125/50	22, 23, 24	1.4301	H335883
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 92	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 97 x 2,5		EPDM	H144726
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 92		1.4301	H313665
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø92		EPDM	H343856
		Seal kit DA4 DPF-Ø92		HNBR	H343858
		Seal kit DA4 DPF-Ø92		FPM	H343857

Spare parts list

Double seat mix proof valve DA4 DPF - 4"

Date:	15.02.21	29.06.21			**SPX FLOW**
Name:	C.Keil	C.Keil			
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pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
1	1	Valve Housing DA44 DPF 4"		1.4404	H341372
		Valve Housing DA43 DPF 4"		1.4404	on request
		Valve Housing DA42 DPF 4"		1.4404	on request
		Valve Housing D41 1-8 DPF 4"		1.4404	on request
		Valve Housing D41 1-7 DPF 4"		1.4404	on request
		Valve Housing D41 1-6 DPF 4"		1.4404	on request
2	1	Upper valve shaft	16, 20, 28	1.4404	H341281
3	1	Lower valve shaft		1.4404	H335374
4	1	Valve seat DA4 DPF - 100/4"		1.4404	H341387
5	1	Seat ring - 92		1.4404	H335872
6	1	Yoke DA4 DPF - 92		1.4404	H341388
7	1	Guide Rod - 100/4"	8, 9, 19, 20	1.4404	H341310
8	2	Retainer ring		1.4301	H14883
9	1	O-ring 9.25 x 1,78		EPDM	H148388
10	1	Middle seal 58-33-997/93		EPDM	H327985
	1	Middle seal 58-33-997/33		HNBR	H332649
	1	Middle seal 58-33-997/73		FPM	H332648
11	2	Seat seal 58-33-045/93		EPDM	H149619
	2	Seat seal 58-33-045/33		HNBR	H168901
	2	Seat seal 58-33-045/73		FPM	H153318
12	2	Housing seal 58-33-642/93		EPDM	H77583
	2	Housing seal 58-33-642/33		HNBR	H170074
	2	Housing seal 58-33-642/73		FPM	H77582
13	2	Seat seal 58-33-643/93		EPDM	H77586
	2	Seat seal 58-33-643/33		HNBR	H166682
	2	Seat seal 58-33-643/71		FPM	H336388
14	2	Shaft seal		PTFE	H335934
15	1	Quad ring		EPDM	H148387
16	1	Guide ring		Iglidur A500	H320447
17	1	Piston ring		Iglidur A500	H335702

pos. item	Quantity	Description, product contacted seals with reference number	included in spare parts (pos.)	Material	Part no.
18	1	Quad ring 12,37 x 2,62		EPDM	H311646
19	1	Safety nut M10 x 1		A2	H118903
20	2	Square key DIN6885 - A - 3x3x10		A2	H335171
21	1	Actuator DA4-125/50	22, 23, 24	1.4301	H335883
22	2	O-ring 30 x 2,5		NBR	H337897
23	2	Actuator screw		Iglidur J350	H334376
24	2	V-seal		NBR	H334379
25	3	W-union G1/8" Ø6mm		hard nickel plated	H208825
26	1	Stop screw		Grivory	H334382
27	1	Lock washer D4		1.4301	H335172
28	1	Safety nut D3		1.4301	H147640
29	1	Thrust ring		1.4057	H123151
30	8	Hex. screw M8 x 16		A2	H78772
31	1	Yoke cover DA4 - 92	32	1.4301	H341315
32	4	Savetix head screw M4 x 8washer M4 as set		1.4301	H336707
34	1	O-ring 97 x 2,5		EPDM	H144726
35	1	Hexagon screw M8 x 25		A2-70	H120284
36	1	spray connection DEX3 - 92		1.4301	H313665
37	1	full-beam nozzle		1.4305	H205562
38	1	CU4 D4 adapter cmpl.		PA6.6 GF30	H337098
	1	CU4plus D4 V2 adapter cmpl.		black	H341891
39		Control Units see on Page 12			
40	1	Prox. Switch holder D4 cmpl.		PA 6.6 GF30	H336751
41	1	Operating cam D4 bottom		1.4523 / 444FR	H334386
42	1	Operating cam D4 top		1.4523 / 444FR	H334387
43	1	Hexagon screw M8 x 40		A2-70	H336675
44	1	VENTING PLUG G-1/8"		PE-HARD	H16218
		Pos. 9,10,11,12,13,14,15,17,18,34 available as complete seal kits only			
		Seal kit DA4 DPF-Ø92		EPDM	H343856
		Seal kit DA4 DPF-Ø92		HNBR	H343858
		Seal kit DA4 DPF-Ø92		FPM	H343857

Spare parts list

Double seat mix proof valve DA4 DPF- Control Units

Date:	15.02.21				SPX FLOW
Name:	C.Keil				
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pos. item	Quantity	Description, product contacted seals with reference number	air connections	Material	Part no.
		Standard Control Units (Hall-Sensors)			
31	1	CU43 D4 Direct Connect	6 mm	PA6.6 GF30 black	H336955
	1	CU43 D4 Direct Connect M12-8pin	6 mm	PA6.6 GF30 black	H341343
	1	CU43 D4 Direct Connect	1/4" OD	PA6.6 GF30 black	H336960
	1	CU43 D4 Direct Connect M12-8pin	1/4" OD	PA6.6 GF30 black	H341352
	1	CU43 D4 AS-i standard	6 mm	PA6.6 GF30 black	H338152
	1	CU43 D4 AS-i standard M12	6 mm	PA6.6 GF30 black	H338899
	1	CU43 D4 AS-i standard	1/4" OD	PA6.6 GF30 black	H338153
	1	CU43 D4 AS-i standard M12	1/4" OD	PA6.6 GF30 black	H338903
	1	CU43 D4 AS-i extended	6 mm	PA6.6 GF30 black	H336957
	1	CU43 D4 AS-i extended M12	6 mm	PA6.6 GF30 black	H3389897
	1	CU43 D4 AS-i extended	1/4" OD	PA6.6 GF30 black	H336962
	1	CU43 D4 AS-i extended M12	1/4" OD	PA6.6 GF30 black	H338901

pos. item	Quantity	Description, product contacted seals with reference number	air connections	Material	Part no.
		Plus Control Units (Linear-Sensors)			
31	1	CU43 plus D4 V2 Direct Connect	6 mm	PA6.6 GF30 black	H342452
	1	CU43 plus D4 V2 Direct Connect M12-8pin	6 mm	PA6.6 GF30 black	H342472
	1	CU43 plus D4 V2 Direct Connect	1/4" OD	PA6.6 GF30 black	H342453
	1	CU43 plus D4 V2 Direct Connect M12-8pin	1/4" OD	PA6.6 GF30 black	H342473
	1	CU43 plus D4 V2 AS-i extended	6mm	PA6.6 GF30 black	H338822
	1	CU43 plus D4 V2 AS-i extended M12	6mm	PA6.6 GF30 black	H338867
	1	CU43 plus D4 V2 AS-i extended	1/4" OD	PA6.6 GF30 black	H338826
	1	CU43 plus D4 V2 AS-i extended M12	1/4" OD	PA6.6 GF30 black	H338871

APV DA4 DPF

DOUBLE SEAT MIX PROOF VALVE WITH STEAM BARRIER

SPXFLOW

SPX FLOW

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