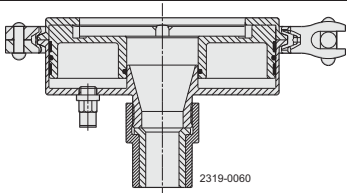


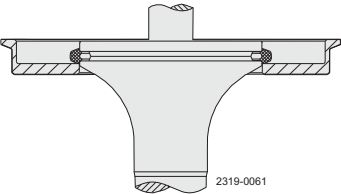
The valve is designed so that internal leakages do not result in the products becoming mixed.
Internal leakage in the valve is externally visible.
Study the instructions carefully.
Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 3

Item no.	Item no.	Item no.	Item no.	Tool for radial sealing, lower plug
1½" + 2"	2½" + 3"	4"	6"	
9613-4260-01	9316-4260-02	9613-4260-03	9613-4260-04	

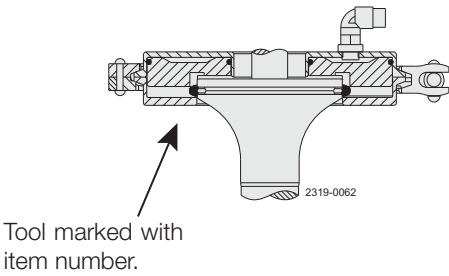
Step 4

Place lower tool part.



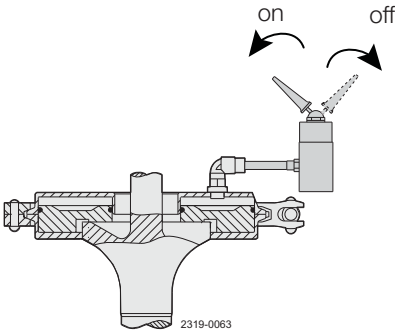
Step 5

- 1. Place upper tool part including piston.
- 2. Clamp the two tool parts together.



Step 6

- 1. Supply compressed air.
- 2. Release compressed air.
- 3. Remove tool parts.



6 Maintenance

The valve is designed so that internal leakages do not result in the products becoming mixed.

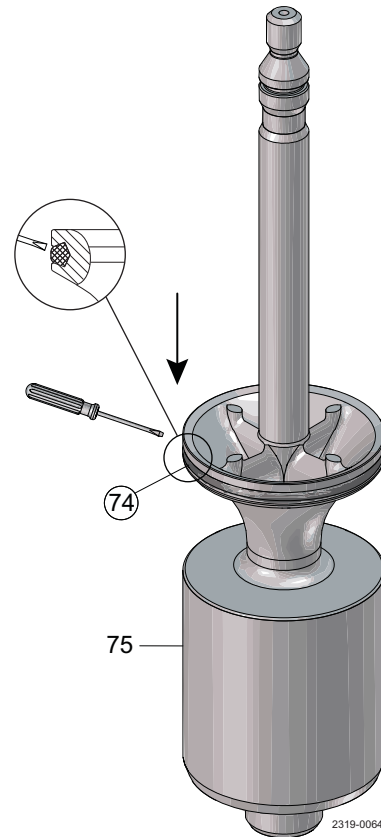
Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 7

Inspect the seal to ensure it does not twist in the groove, and press in the 4 outsticking points with a screwdriver



The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

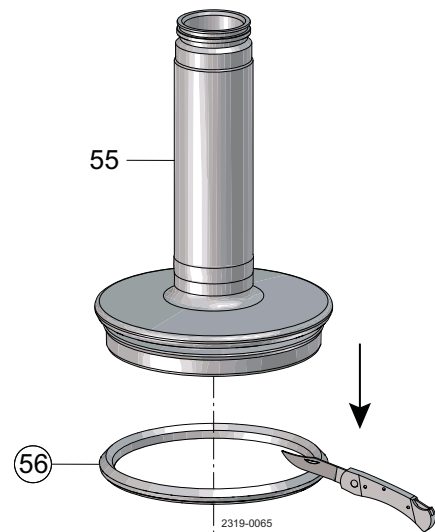
Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

6.4 Upper plug, replacement of axial seal

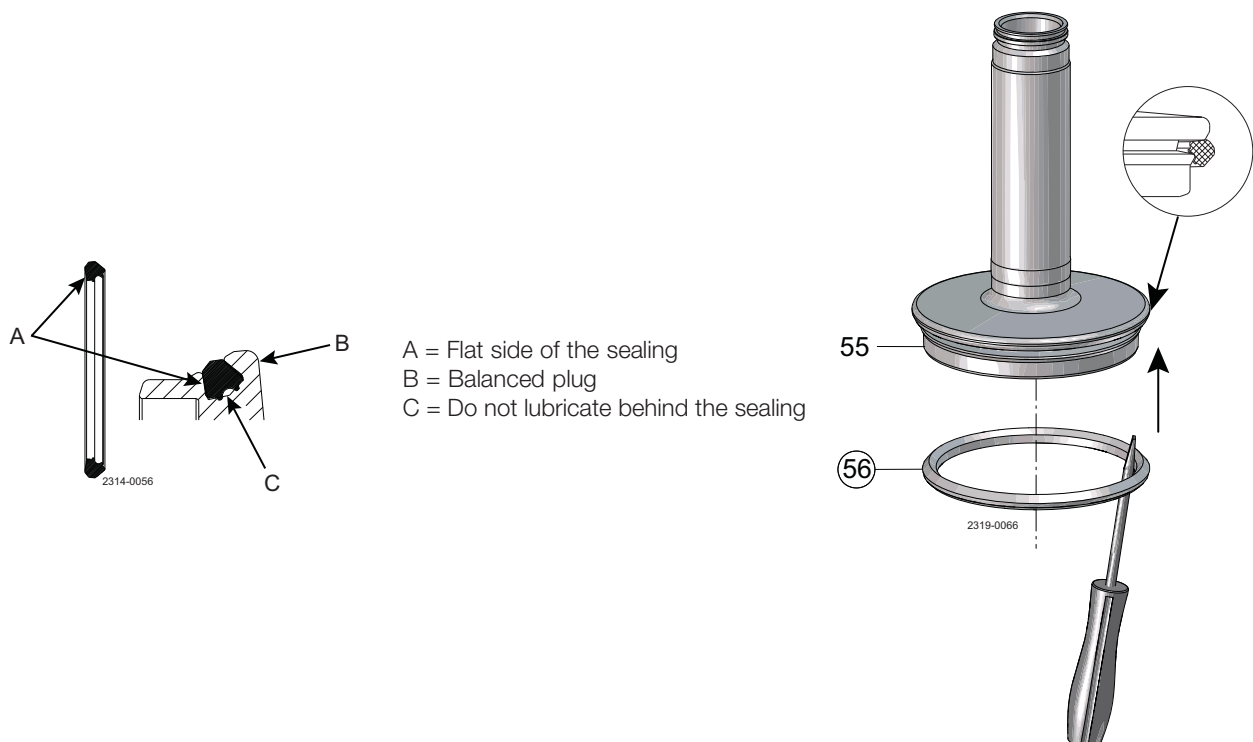
Step 1

Remove old seal ring (56) using a knife, screwdriver or similar. Be careful not to scratch the plug.



Step 2

Pre-mount seal ring as shown on drawing.



Carefully lubricate sealings with suitable soap or lubricant (Klüber Paraliq GT 703), before pre-mounting.

6 Maintenance

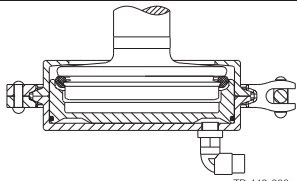
The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

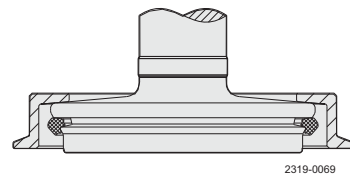
Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 3

Item no.	Item no.	Item no.	Item no.	Tool for axial sealing, upper plug
1½" + 2"	2½" + 3"	4"	6"	
9613-0505-01	9613-0505-02	9613-0505-08	9613-0505-03	

Step 4

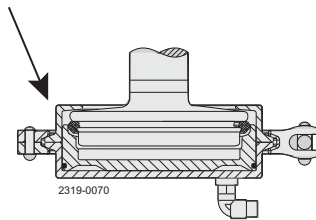
Place tool part 1.



Step 5

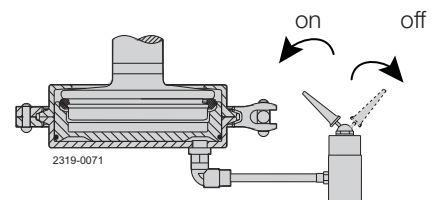
1. Place tool part 2 including piston.
2. Clamp the two tool parts together.

Tooling marked with item number



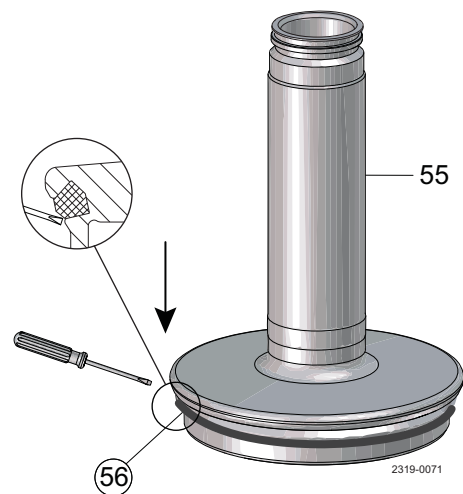
Step 6

1. Supply compressed air.
2. Release compressed air.
3. Rotate the tool 45° in relation to the plug.
4. Supply compressed air.
5. Release compressed air and remove tool.



Step 7

1. Inspect the seal.
2. Release air at 3 different positions of the circumference.



The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

6.5 Assembly of valve

Step 1

A

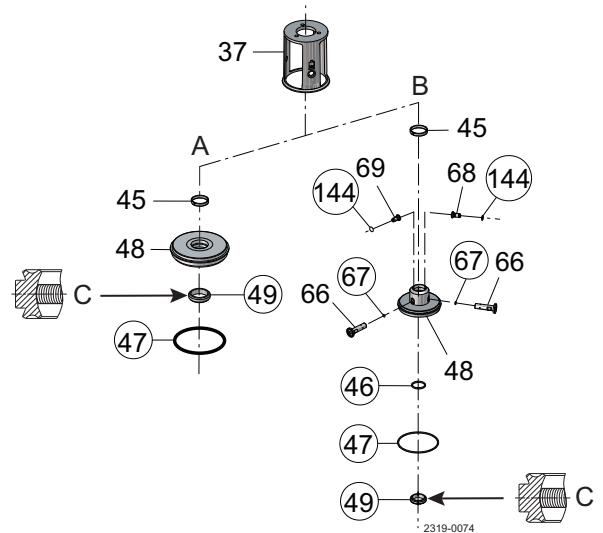
Assembly of upper sealing element

1. Fit o-ring (47) (do not twist), and lip seal (49) in upper sealing element (48) (Lubricate with Klüber Paraliq GT 703).
- NOTE:** The o-ring should be gently pressed into the groove.
2. Fit guide ring (45) in upper sealing element.
 3. Fit upper sealing element in intermediate piece (37).

B

Assembly of upper sealing element, CIP OD spindle/balancer

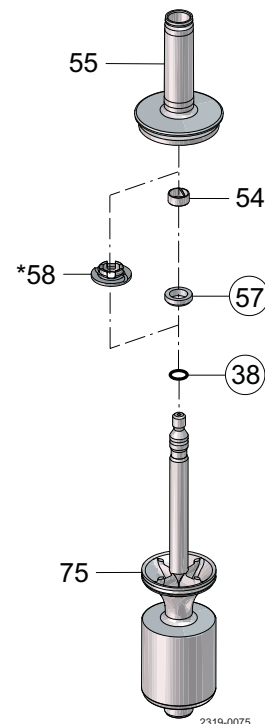
1. Fit o-ring (47) (do not twist), lip seal (49) and o-ring (46) in upper sealing element (48) (lubricate with Klüber Paraliq GT 703)
- NOTE:** The o-ring should be gently pressed into the groove.
2. Fit guide ring (45) in upper sealing element.
 3. Fit upper sealing element in intermediate piece (37).
 4. Place o-rings (67+144) and mount flushing tubes (66). Be sure to align nozzles (68 + 69) towards recess.



C = Lubricate with Klüber Paraliq GT 703 on ID

Step 2

1. Place guide ring (54) and lip seal (57) in upper plug or nozzle (58) by SpiralClean in leakage chamber.
 2. Mount o-ring (38) in lower plug.
 3. Press lower plug (75) rapidly into upper plug (55) through the lip seal.
- Note:** Do not damage the lips when lower plug (75) with o-ring (38) passes the lip seal.



6 Maintenance

The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

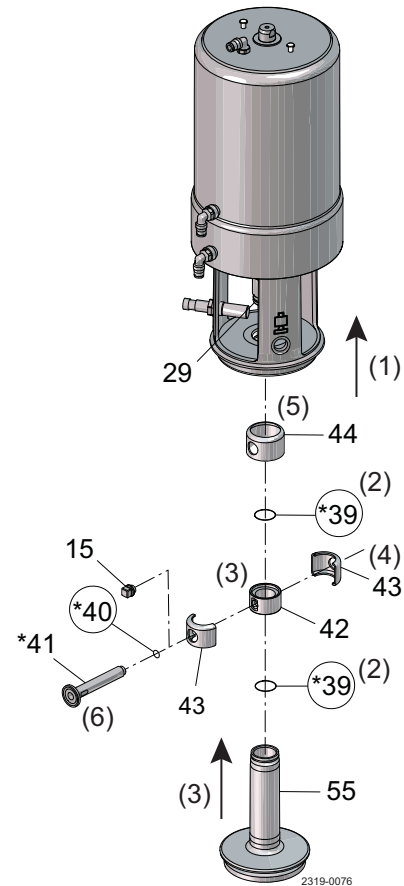
Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 3

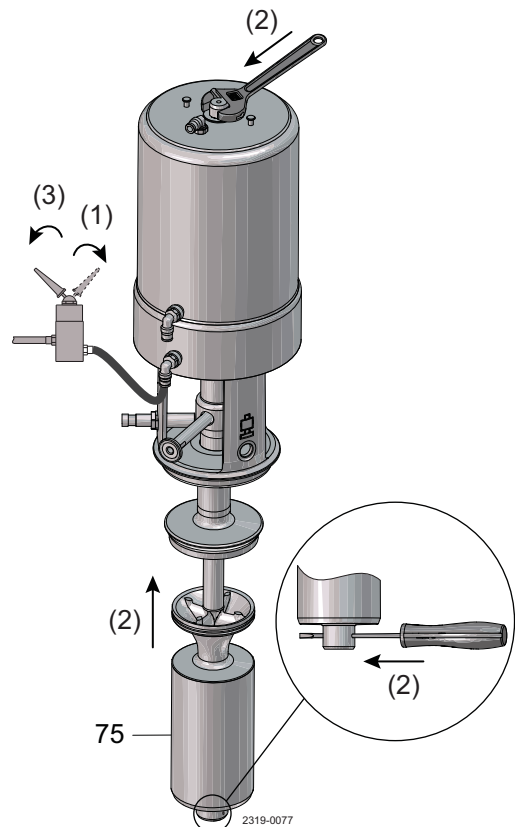
Place coupling system and upper plug according to illustrations.

1. Push lock (44) up over piston rod (29).
2. If SpiralClean in leakage chamber: place o-rings (39) in groove on upper plug (55) and piston rod (29).
3. Place spindle liner (42) on piston rod (29). Fit upper plug (55).
4. Mount clamps (43) on spindle liner (42).
5. Fit lock (44).
6. Fit plug (15) or flushing tube (41) and o-ring (40) if SpiralClean in leakage chamber.



Step 4

1. Supply compressed air for air connection AC1
2. Insert lower plug (75) and tighten
3. Release compressed air



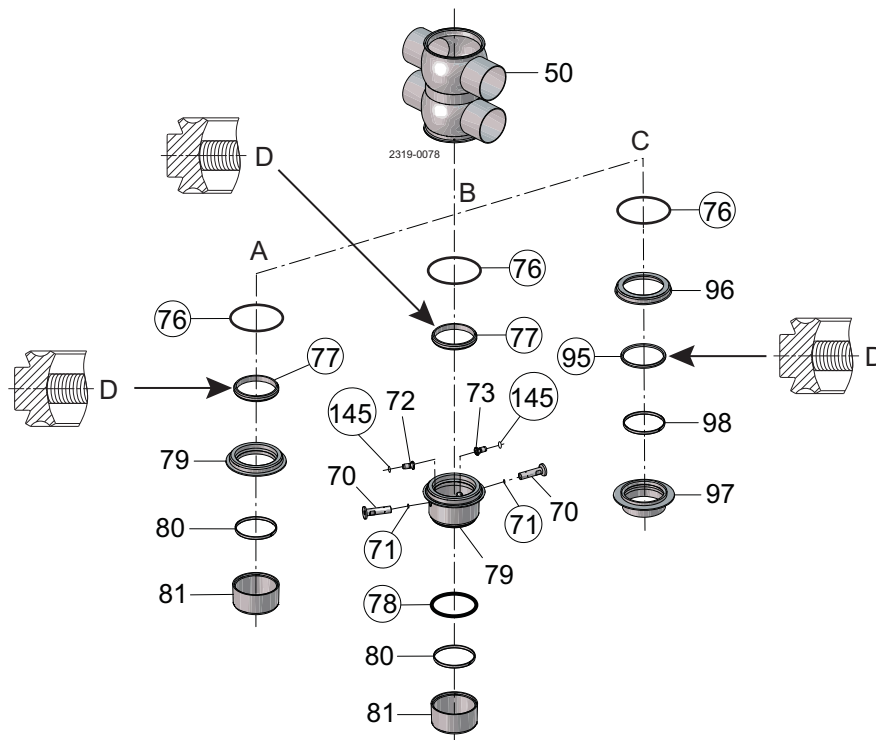
The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 5



D = Lubricate with Klüber Paraliq GT 703 on ID

A - Assembly of lower sealing element

1. Fit lip seal (77) and o-ring (76) (do not twist the o-ring) and press it gently into the groove (lubricate with Klüber Paraliq GT 703)
2. Fit guide ring (80) into sealing element (79)

B - Assembly of lower sealing element with CIP OD balancer

1. Fit o-ring (76) (do not twist), lip seal (77) and o-ring (78) in lower sealing element (lubricate with Klüber Paraliq GT 703).
Note! The o-ring (76) should be gently pressed into the groove.
2. Fit guide ring (80) in lower sealing element.
3. Place o-rings (71+ 145) and mount flushing tubes (70). Be sure to align nozzles (72 + 73) towards recess.

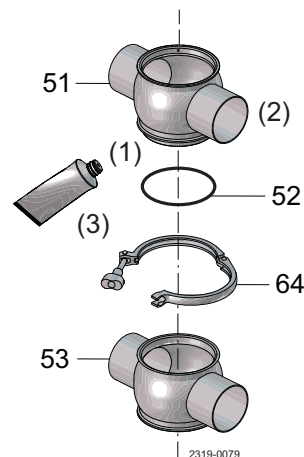
C - Assembly lower sealing element with flush OD balancer

1. Fit o-ring (76) (do not twist the o-ring) in upper part of sealing element (lubricate with Klüber Paraliq GT 703).
Note! The o-ring should be gently pressed into the groove.
2. Place guide ring (98) in lower part of sealing element (97).
3. Fit lip seal (95) in sealing element (97).
4. Place upper part of sealing element (96) on top of lower part of sealing element (97).

Step 5B

Only applicable when bodies are clamped

1. Fit o-ring (52) into groove in upper body (51)
Lubricate with Klüber Paraliq GT 703)
2. Mount upper body (51) in lower (53)
3. Fit and tighten clamp (64), greasing of clamp and clamp nut recommended.
(Maximum torque for clamp not 10Nm/7,4 lbf-ft)



6 Maintenance

The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

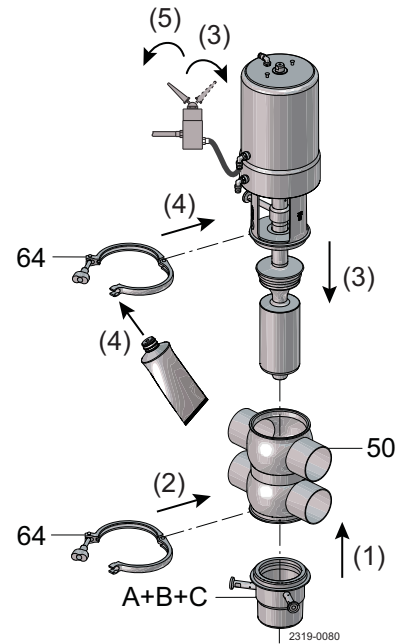
Step 6

- **Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.
- **Always** supply compressed air, before demounting the valve.

1. Fit lower sealing element (A, B or C)
2. Fit and tighten lower clamp (64)
3. Supply compressed air and mount the actuator together with the internal valve parts from valve body (50)
4. Fit and tighten upper clamp (64). Lubricating of clamp and clamp nut recommended!
(Maximum torque for clamp nut: 10Nm/7.4 lbf-ft)
5. Release compressed air.

Note!

Supply compressed air before mounting the valve.



6 Maintenance

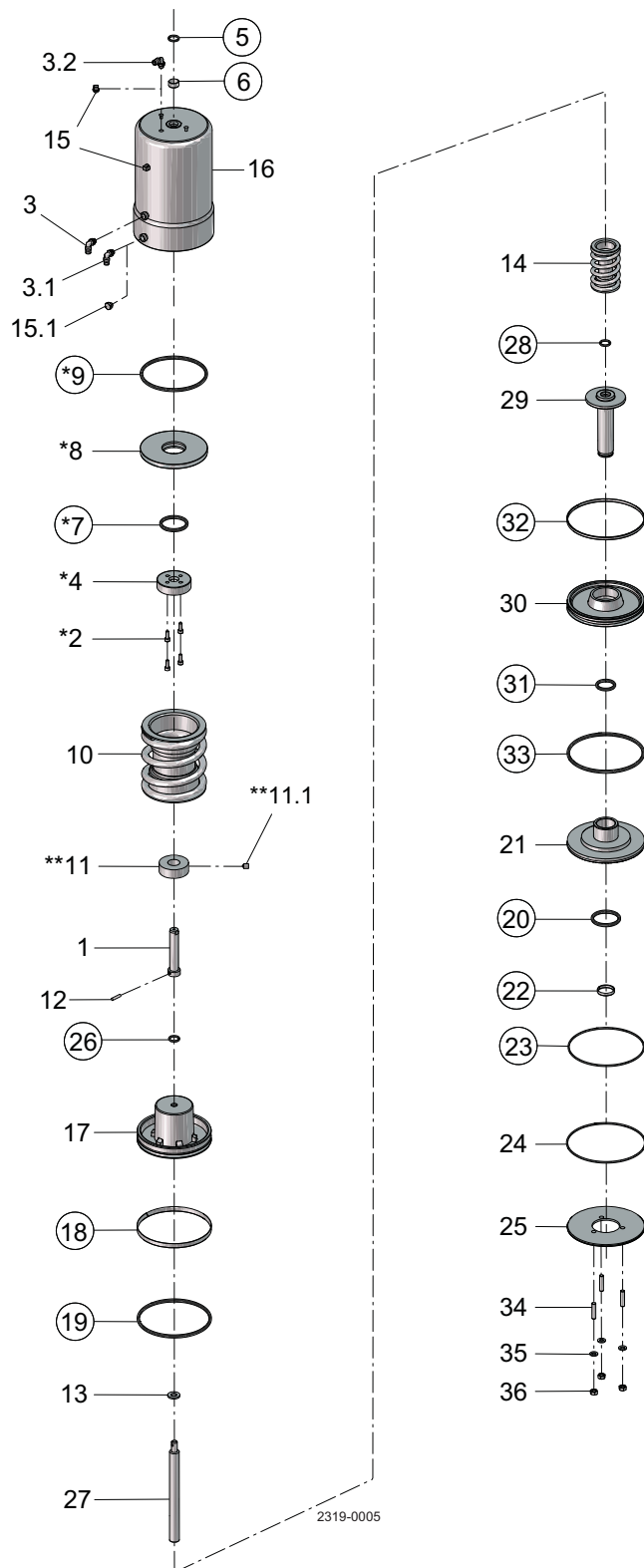
The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

6.6 Dismantling of actuator



The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 1

1. Dismantle the valve in accordance with instructions in section 6.1 General maintenance

Pay special attention to the warnings!

2. The actuator is now ready for service. Please see drawing when dismantling according to steps 2 to 6 on this page.

Note! The actuator is maintenance free but repairable.

Step 2

1. Remove nuts (36) and washers (35).
 2. Pull out intermediate piece (37) from the actuator.
 3. Remove cover disk (25).
 4. Remove retaining ring (24).
-

Step 3

1. Remove piston rod (29), bottom (21) and lower piston (30).
 2. Separate the three parts.
 3. Remove o-rings (20, 22 and 23) from bottom, o-rings (33 and 31) and guide ring (32) from lower piston as well as o-ring (28) from piston rod.
 4. Remove spring assembly (14).
-

Step 4

1. Remove inner stem (27), main piston (17) and distance spacer and screw (11/11.1) (only on 1½" and 2").
Remove guide ring (18) and o-ring (19)
 2. Remove spring assembly (10).
-

Step 5

Note! Not on actuator 1½" and 2"

1. Unscrew screws (2) (are glued!).
 2. Remove stop (4).
 3. Remove upper piston (8). Remove o-rings (7 and 9).
-

Step 6

1. Remove o-ring (5) and guide ring (6).
-

6 Maintenance

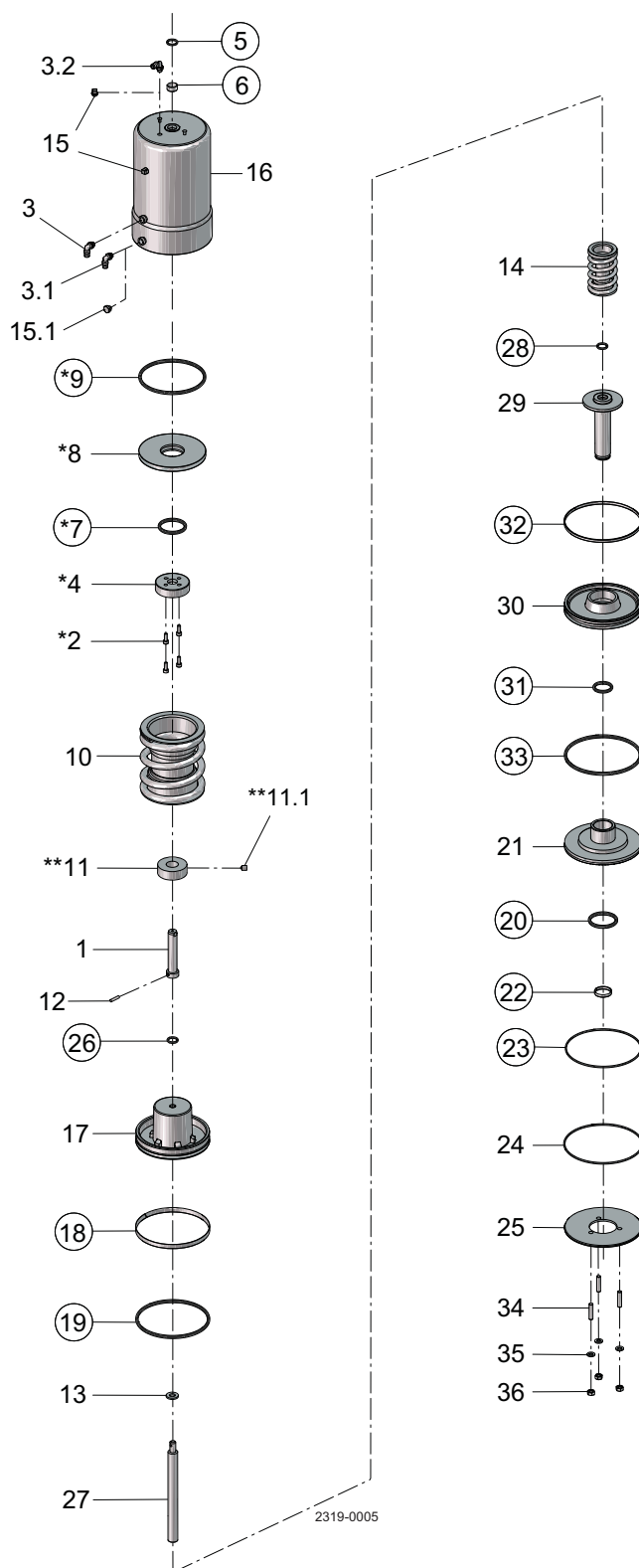
The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

6.7 Assembly of actuator



The valve is designed so that internal leakages do not result in the products becoming mixed.

Internal leakage in the valve is externally visible.

Study the instructions carefully.

Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Step 1

Please see drawing when reassembling according to steps 2 to 6 on this page.

Note! The actuator is maintenance free but repairable.

Step 2

1. Fit guide ring (6) and o-ring (5).
-

Step 3

Note! Not on actuator 1½" and 2"

1. Fit o-rings (7 and 9). Place upper piston (8).
 2. Fit stop (4).
 3. Tighten screws (2). (Secure with glue)
-

Step 4

1. Place spring assembly (10).
 2. Fit o-ring (19) and guide ring (18). Mount distance spacer (11) and screw (11.1) (only on 1½" and 2"), main piston (17) and inner stem (27).
-

Step 5

1. Fit spring assembly (14).
 2. Fit o-ring (28) in piston rod, fit o-rings (33 and 31) and guide ring (32) in lower piston and fit o-rings (20, 22 and 23) in bottom.
 3. Fit piston rod (29), lower piston (30) and bottom (21).
 4. Mount the three parts.
-

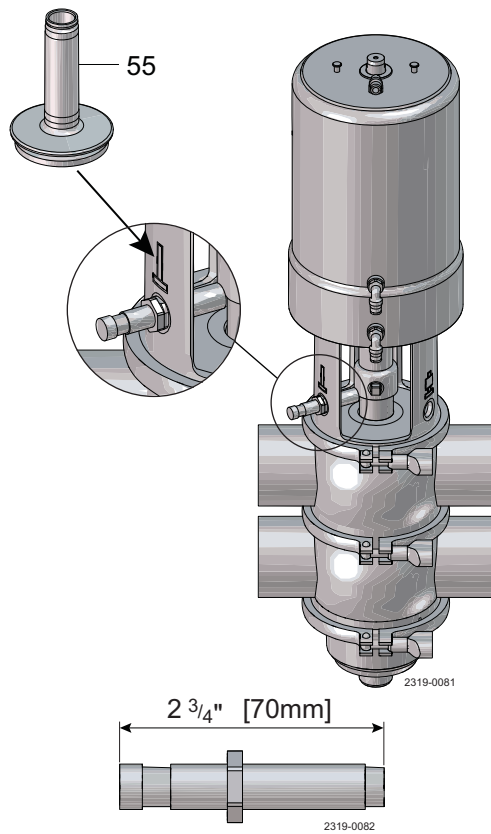
Step 6

1. Fit retaining ring (24).
2. Fit cover disk (25).
3. Mount intermediate piece (37) on actuator.
4. Fit and tighten nuts (36) and washers (35).

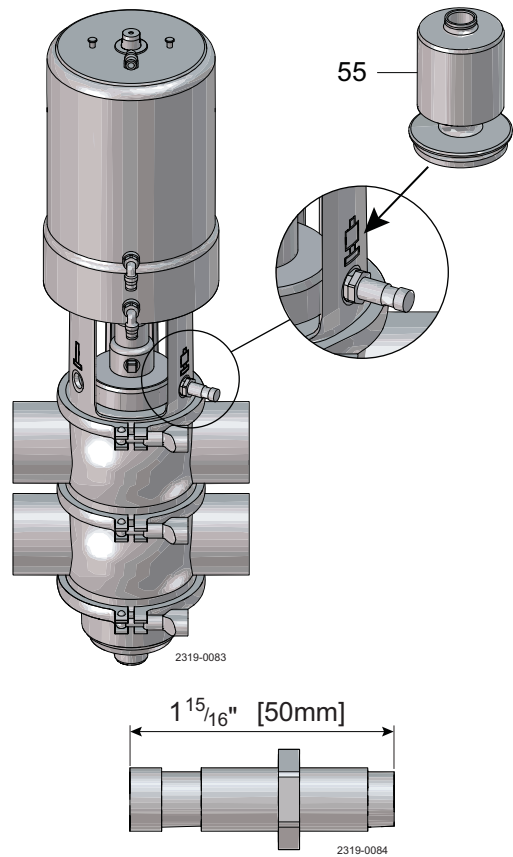
6 Maintenance

*The valve is designed so that internal leakages do not result in the products becoming mixed.
Internal leakage in the valve is externally visible.
Study the instructions carefully.
Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.*

Placement of external sensor and sensor type



External sensor - unbalanced plug



External sensor - balanced plug

7.1 Technical data

Data	
Max. product pressure	145 psi
Min. product pressure	Full vacuum
Recommended min. pressure for SpiralClean	29 psi
Temperature range	23°F - 257°F (Depending on rubber quality)
Air pressure	116 psi
Materials	
Product wetted steel parts	Acid-resistant steel AISI 316
Other steel parts	Stainless steel AISI 304
Product wetted parts	EPDM, HNBR, NBR or FPM
Other seals	CIP seals: EPDM
Actuator seals	NBR
Surface finish	Internal bright (polished) Ra < 0.8 (32 μ")/external matt (blasted Ra < 1.6/64μ") Internal/external bright (internal polished) Ra < 0.8 (32 μ")

Note!

The Ra-values are only for the internal surface.

Recommended minimum pressure for SpiralClean: 30 psi/flow rate 4.2 gpm

Formula to estimate CIP flow during seat lift (for liquids with comparable viscosity and density to water)

$$Q = C_v \cdot \sqrt{\Delta p}$$

Q = CIP - flow (gpm)

Cv = Cv value from the above table

Δp = CIP pressure (psi)

Assumption: density = 1

Size	1½"	2"	½"	3"	4"	6"
Cv-value - upper seat-lift [gpm/psi]	2.9	2.9	4.3	4.3	5.3	6.3
Cv-value - lower seat-lift [gpm/psi]	2.2	2.2	3.6	3.6	4.9	6.1
Air consumption - upper seat-lift *[cubic inches]	12	12	24	24	38	38
Air consumption - lower seat-lift *[cubic inches]	6.7	6.7	8	8	13	13
Air consumption - main movement *[cubic inches]	52	52	99	99	170	170
Cv-value SpiralClean - spindle CIP [gpm/psi]	0.14	0.14	0.14	0.14	0.14	0.14
Cv-value SpiralClean - external CIP of leakage chamber [gpm/psi]	0.29	0.29	0.34	0.34	0.34	0.34

For further information concerning cleaning of the valve, please see section 4.2 Recommended cleaning, step 5, 6, 7 & 8.

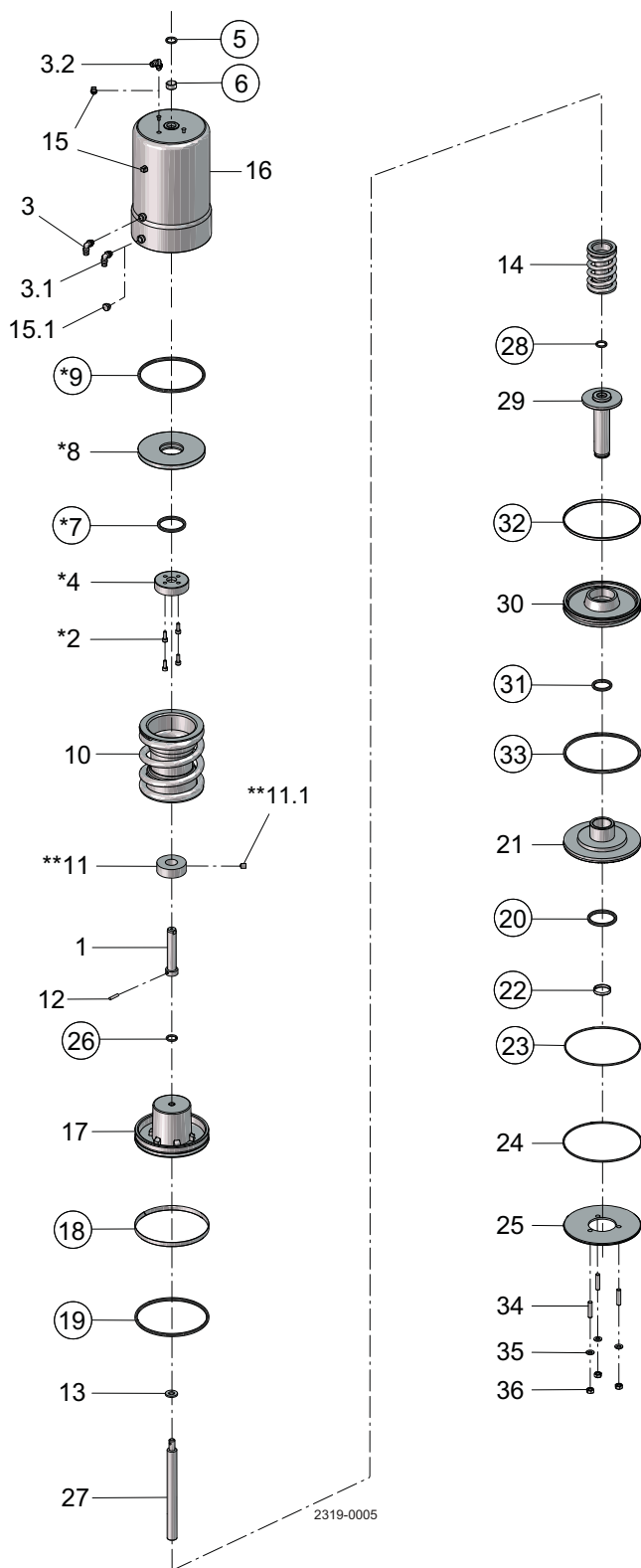
Noise

5¼ Ft above the exhaust the noise level of a valve actuator will be approximately 77db(A) without noise damper and approximately 72 db(A) with damper - Measured at 102 psi air-pressure.

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

8.1 Actuator



= actuator service kit

* = not used in actuator 1½" - 2"

** = not used in actuator 2½", 3", 4 and 6"

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

Parts list

Pos.	Qty	Denomination
1	1	Upper stem
2	4	Screw
3	1	Air fitting blue
3.1	1	Air fitting red
3.2	1	Air fitting yellow
4	1	Stop for upper piston
5	1	O-ring, NBR
6	1	Guide ring, Turcite
7	1	O-ring, NBR
8	1	Upper piston
9	1	O-ring, NBR
10	1	Spring assembly
11	1	Distance spacer
11.1	1	Screw
12	1	Pin
13	1	Washer
14	1	Spring assembly
15	2	Plug
15.1	1	Plug
17	1	Main piston
18	1	Guide ring, Turcite
19	1	O-ring, NBR
20	1	O-ring, NBR
21	1	Bottom
22	1	Guide ring, Turcite
23	1	O-ring, NBR
24	1	Retaining ring
25	1	Cover disk
26	1	O-ring, NBR
27	1	Inner stem
28	1	O-ring
29	1	Piston rod
30	1	Lower piston
31	1	O-ring, NBR
32	1	Guide ring, Turcite
33	1	O-ring, NBR
34	3	Bolt
35	3	Washer
36	3	Nut

Service kits

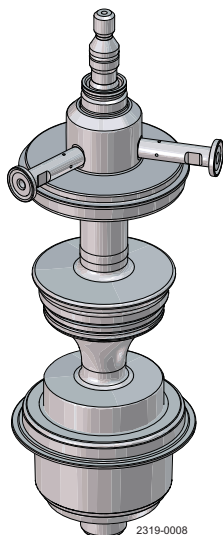
Denomination	1½"	2"	2½"	3"	4"	6"
	Seat ø53.3	Seat ø53.3	Seat ø81.3	Seat ø81.3	Seat ø100.3	Seat ø115.3
Service kits						
Actuator service kit	9611-92-6414	9611-92-6414	9611-92-6415	9611-92-6415	9611-92-6416	9611-92-6416

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

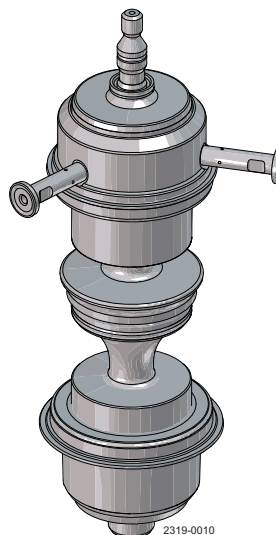
8.2 Plug setup overview

Plug setup 3



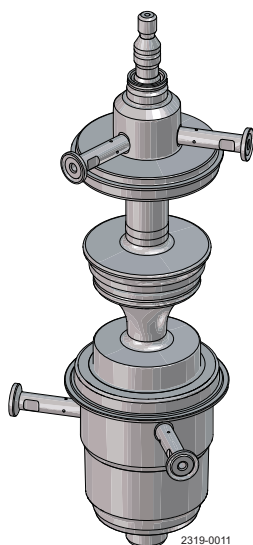
Upper: Unbalanced with SpiralClean OD spindle
Lower: Balanced (blue bottom)
See page 70

Plug setup 4



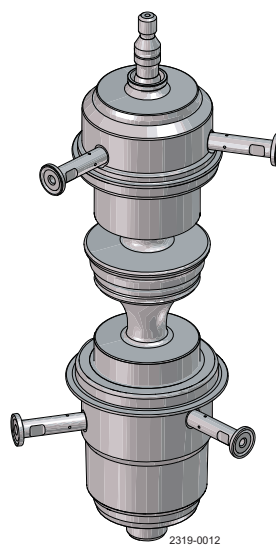
Upper: Balanced with SpiralClean OD balancer
Lower: Balanced (blue bottom)
See page 74

Plug setup 5



Upper: Unbalanced with SpiralClean OD spindle
Lower: Balanced with SpiralClean OD balancer (blue bottom)
See page 78

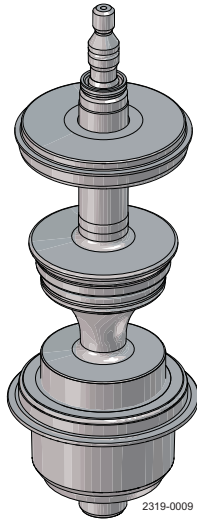
Plug setup 6



Upper: Balanced with SpiralClean OD balancer
Lower: Balanced with SpiralClean OD balancer (blue bottom)
See page 82

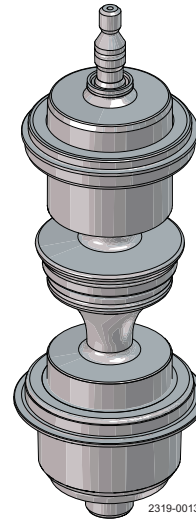
For spare parts please refer to spare parts catalogue.

Plug setup 11



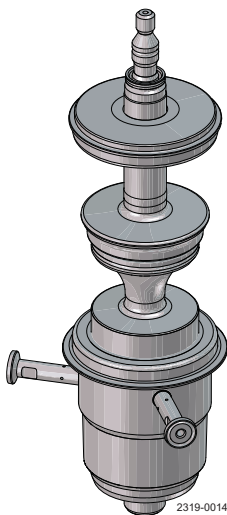
Upper: Unbalanced
Lower: Balanced (blue bottom)
See page 86

Plug setup 12



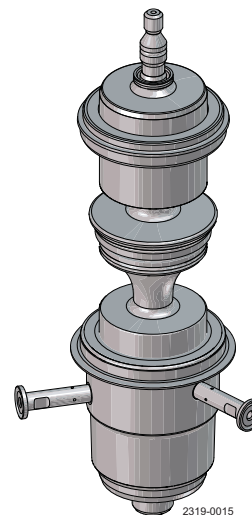
Upper: Balanced
Lower: Balanced (blue bottom)
See page 90

Plug setup 13



Upper: Unbalanced
Lower: Balanced with SpiralClean OD balancer (blue bottom)
See page 94

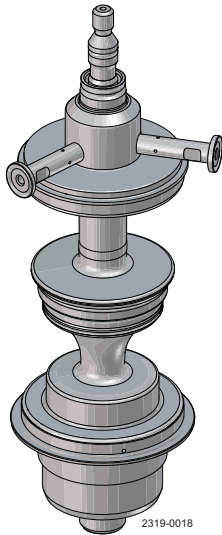
Plug setup 14



Upper: Balanced
Lower: Balanced with SpiralClean OD balancer (blue bottom)
See page 98

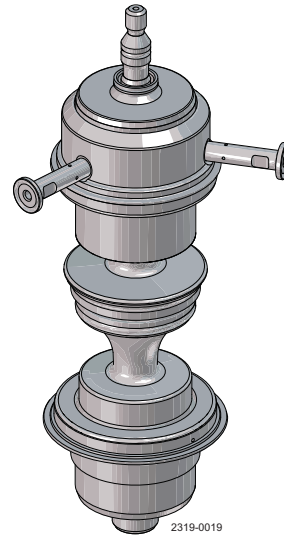
For spare parts please refer to spare parts catalogue.

Plug setup 17



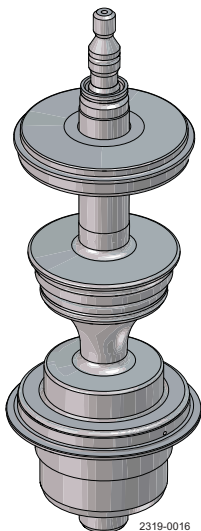
Upper: Unbalanced with SpiralClean OD spindle
Lower: Flush OD Balancer (steel bottom)
See page 102

Plug setup 18



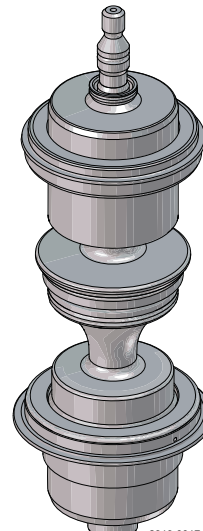
Upper: Balanced with SpiralClean OD balancer
Lower: Flush OD Balancer (steel bottom)
See page 106

Plug setup 19



Upper: Unbalanced
Lower: Flush OD Balancer (steel bottom)
See page 110

Plug setup 20

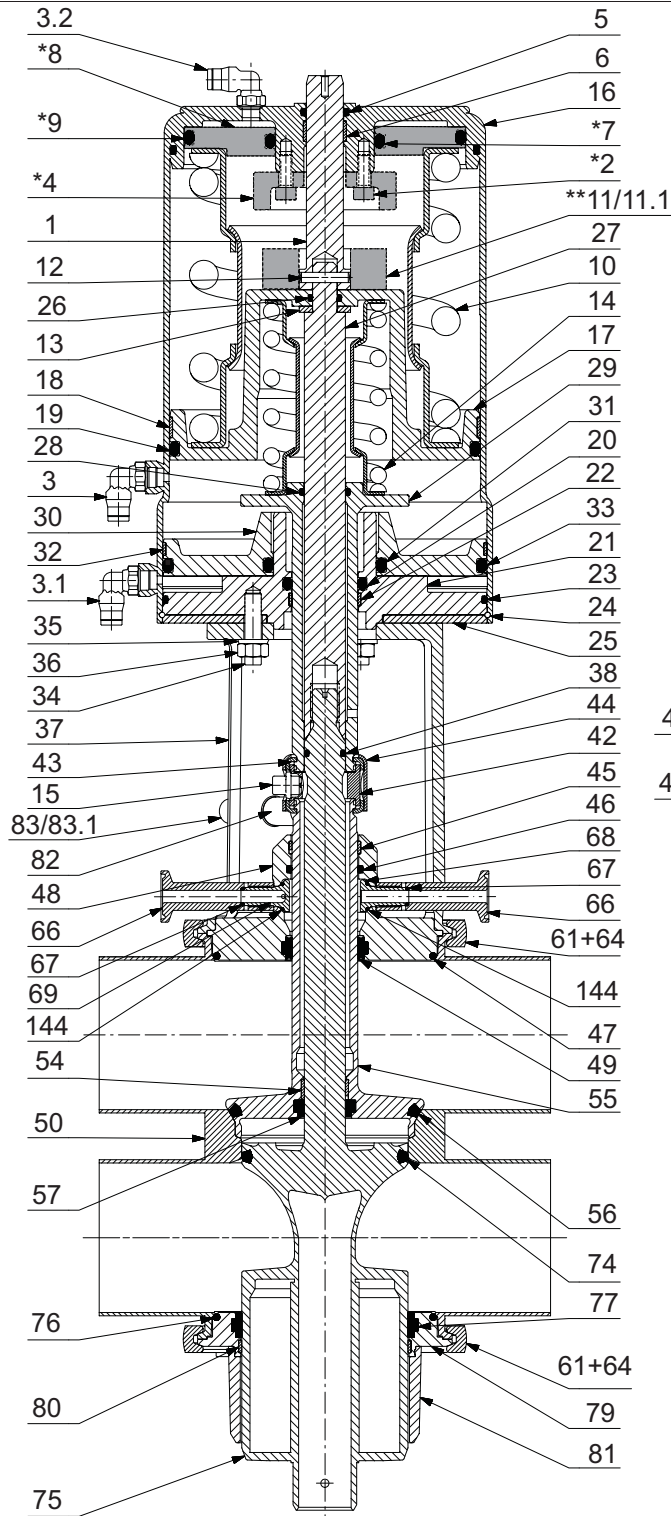


Upper: Balanced
Lower: Flush OD Balancer (steel bottom)
See page 114

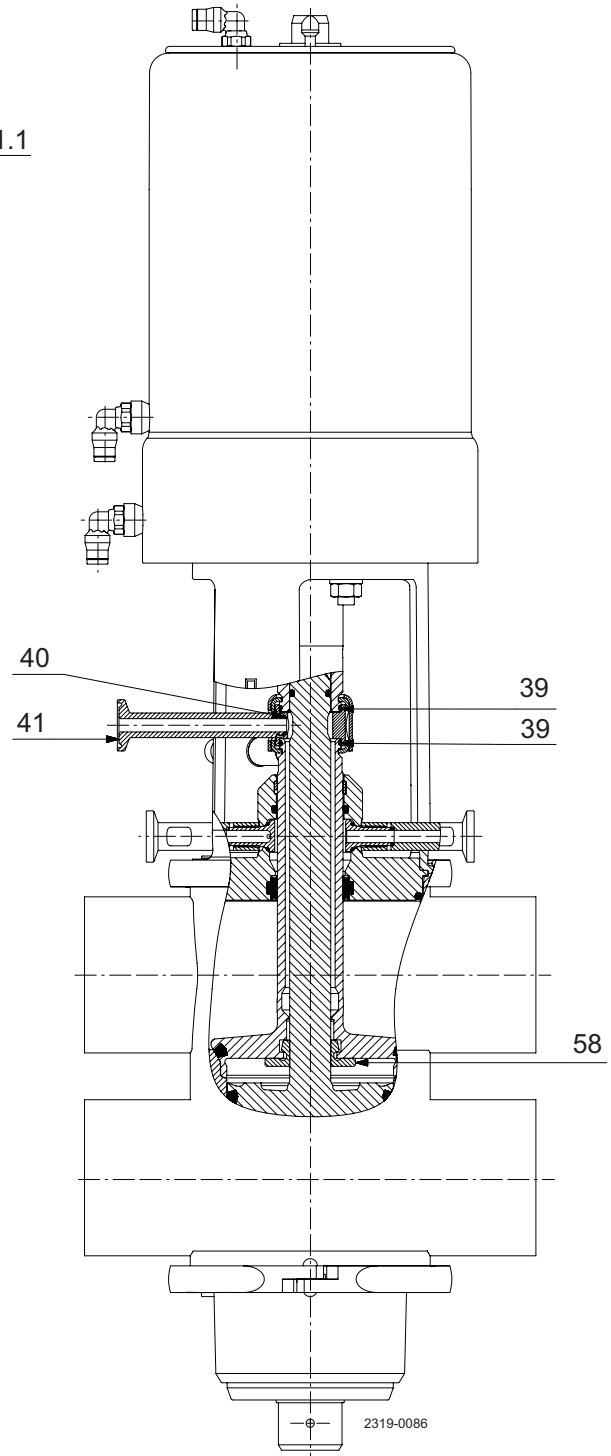
8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

8.3 Plug setup 3



without SpiralClean in leakage chamber



with SpiralClean in leakage chamber

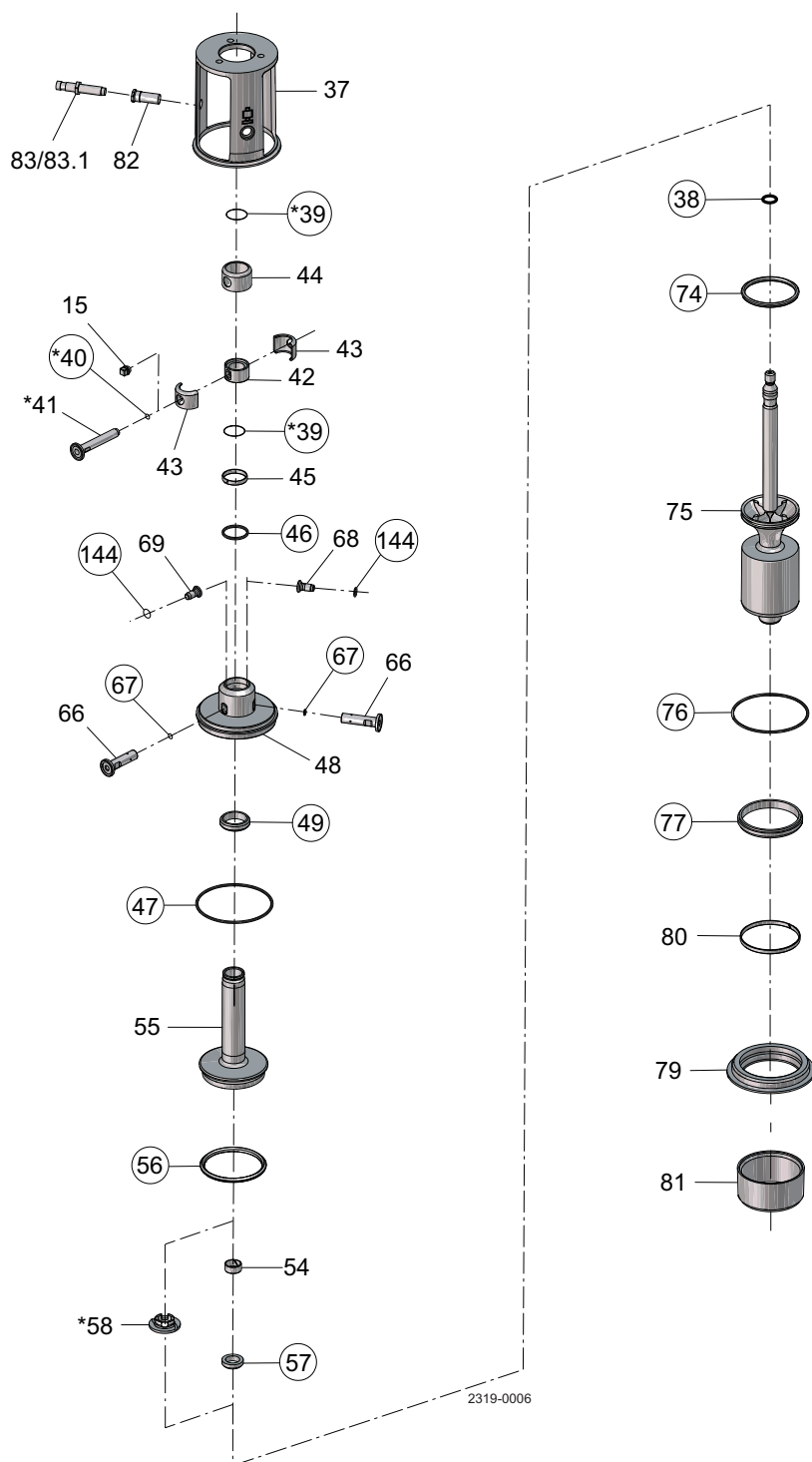
■ = Parts not used in all actuators

* = Not used in 1½" and 2"

** = Not used in 2½", 3", 4" and 6"

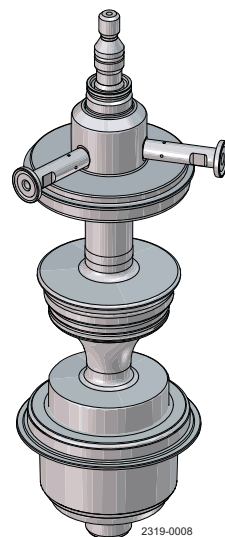
8 Parts list and service kits

For spare parts please refer to spare parts catalogue.



○ = wear parts

★ = with SpiralClean in leakage chamber



8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

Parts list

Pos.	Qty	Denomination
15	1	Plug
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
52	1	O-ring
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover
82	1	Bolt for indication
83	1	Sensor for indication
83.1	1	Cable for sensor for indication
144	2	O-ring

Service kits

Denomination	2" seat ø53.3	2½" seat ø81.3	3" seat ø81.3	4" seat ø100.3	6" seat ø115.3
Service kit, EPDM	9611-92-8001	9611-92-8005	9611-92-8005	9611-92-8009	9611-92-8013
Service kit, NBR	9611-92-8002	9611-92-8006	9611-92-8006	9611-92-8010	9611-92-8014
Service kit, FPM	9611-92-8003	9611-92-8007	9611-92-8007	9611-92-8011	9611-92-8015
Service kit, HNBR	9611-92-8004	9611-92-8008	9611-92-8008	9611-92-8012	9611-92-8016

For mixed size housings, the service kit is determined by the smallest size connection on the valve.

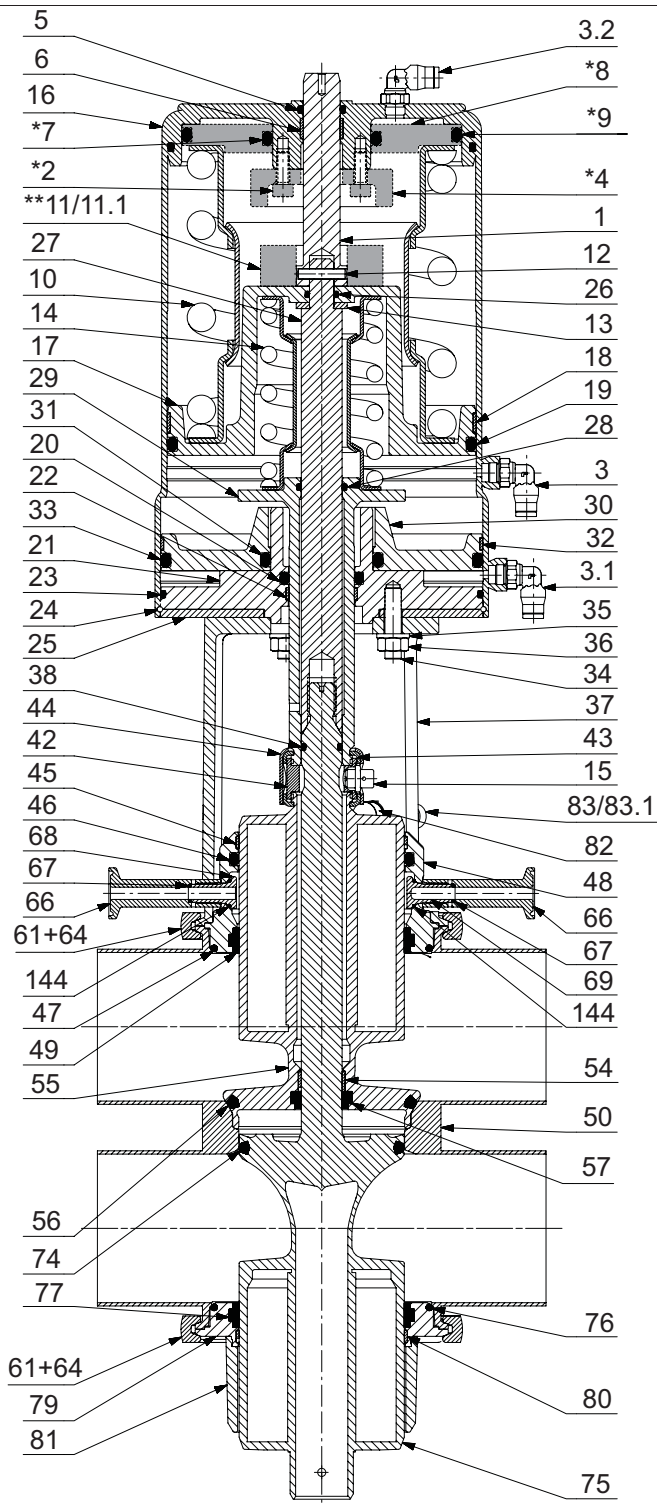
One exception is any housing with 6" connections will always refer to the 6" service kits listed below:

Service kit, EPDM	9611-92-8125	9611-92-8129	9611-92-8129	9611-92-8133
Service kit, NBR	9611-92-8126	9611-92-8130	9611-92-8130	9611-92-8134
Service kit, FPM	9611-92-8127	9611-92-8131	9611-92-8131	9611-92-8135
Service kit, HNBR	9611-92-8128	9611-92-8132	9611-92-8132	9611-92-8136

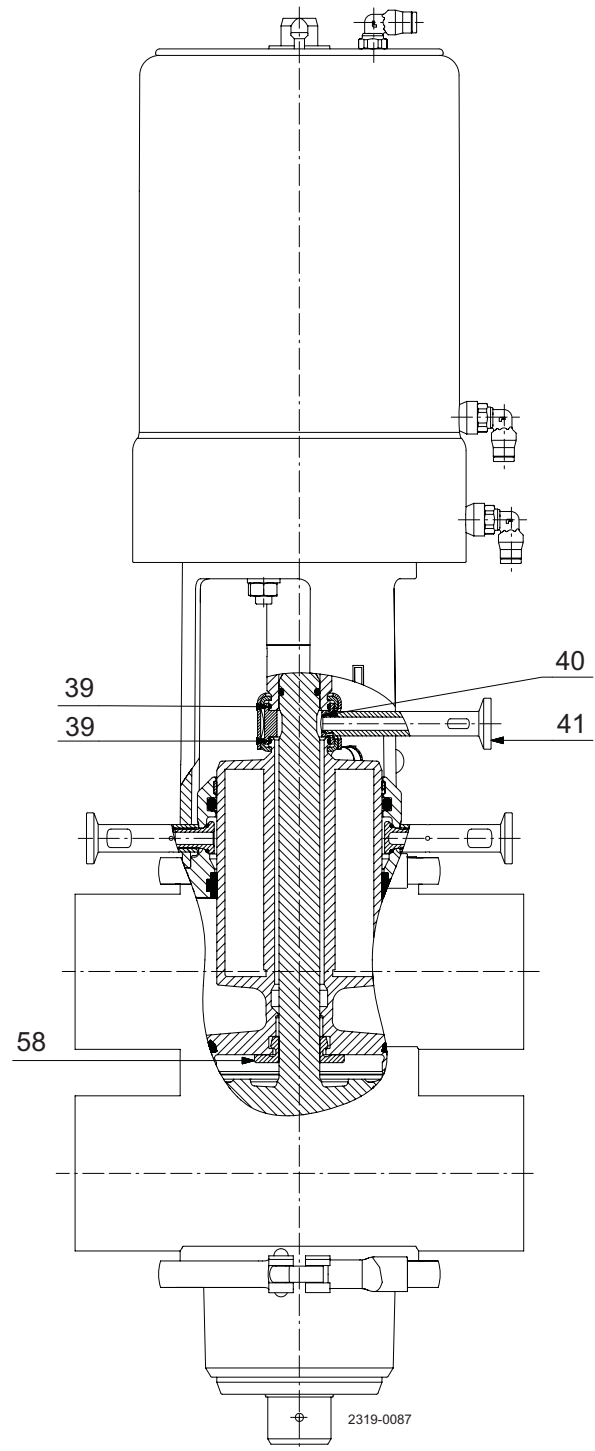
8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

8.4 Plug setup 4



without SpiralClean in leakage chamber



with SpiralClean in leakage chamber

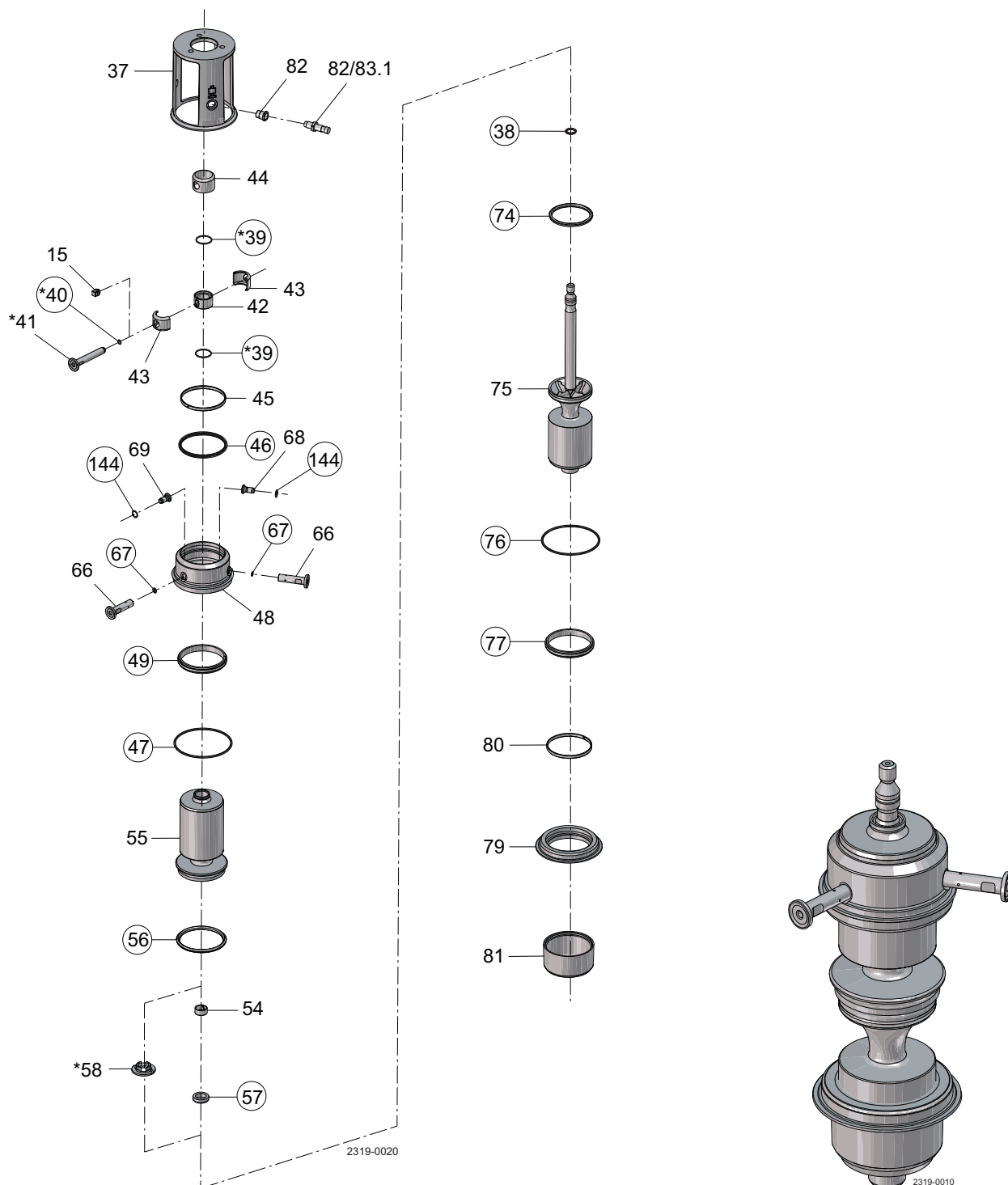
■ = Parts not used in all actuators

* = Not used in 1½" and 2"

** = Not used in 2½", 3", 4" and 6"

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.



8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

Parts list

Pos.	Qty	Denomination
15	1	Plug
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
52	1	O-ring
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover
82	1	Bolt for indication
83	1	Sensor for indication
83.1	1	Cable for sensor for indication
144	2	O-ring

Service kits

Denomination	1½" Seat ø53.3	2" Seat ø53.3	2½" Seat ø81.3	3" Seat ø81.3	4" Seat ø100.3	6" Seat ø115.3
Service kit, EPDM	9611-92-8017	9611-92-8021	9611-92-8025	9611-92-8025	9611-92-8029	9611-92-8033
Service kit, NBR	9611-92-8018	9611-92-8022	9611-92-8026	9611-92-8026	9611-92-8030	9611-92-8034
Service kit, FPM	9611-92-8019	9611-92-8023	9611-92-8027	9611-92-8027	9611-92-8031	9611-92-8035
Service kit, HNBR	9611-92-8020	9611-92-8024	9611-92-8028	9611-92-8028	9611-92-8032	9611-92-8036

For mixed size housings, the service kit is determined by the smallest size connection on the valve.

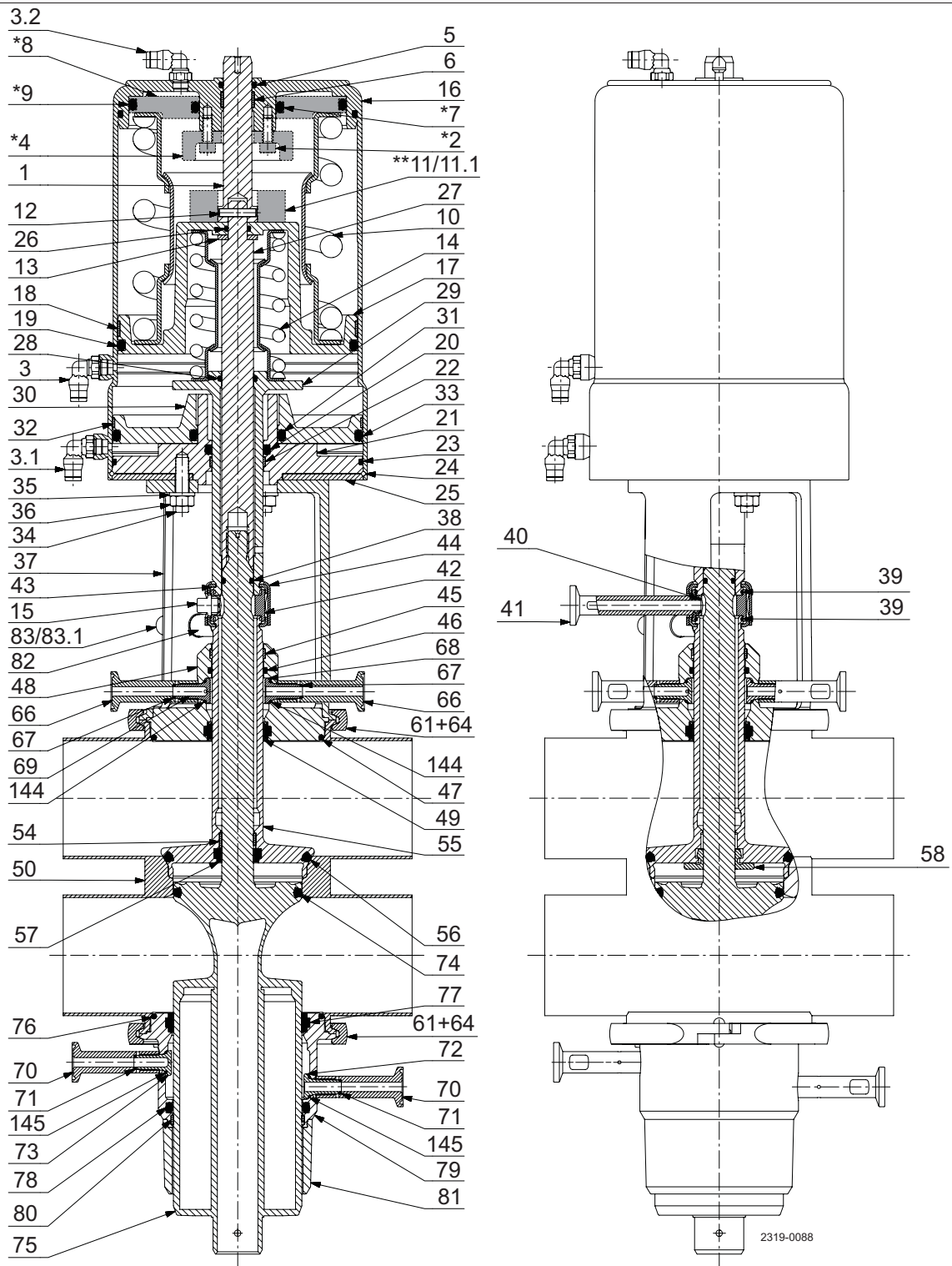
One exception is any housing with 6" connections will always refer to the 6" service kits listed below:

Service kit, EPDM	9611-92-8137	9611-92-8141	9611-92-8145	9611-92-8145	9611-92-8149
Service kit, NBR	9611-92-8138	9611-92-8142	9611-92-8146	9611-92-8146	9611-92-8150
Service kit, FPM	9611-92-8139	9611-92-8143	9611-92-8147	9611-92-8147	9611-92-8151
Service kit, HNBR	9611-92-8140	9611-92-8144	9611-92-8148	9611-92-8148	9611-92-8152

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

8.5 Plug setup 5



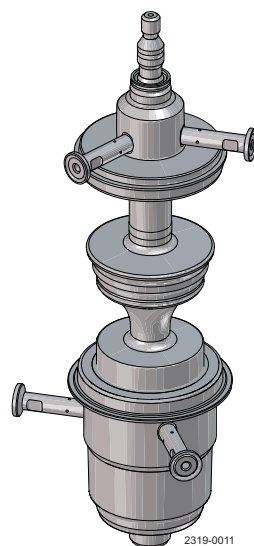
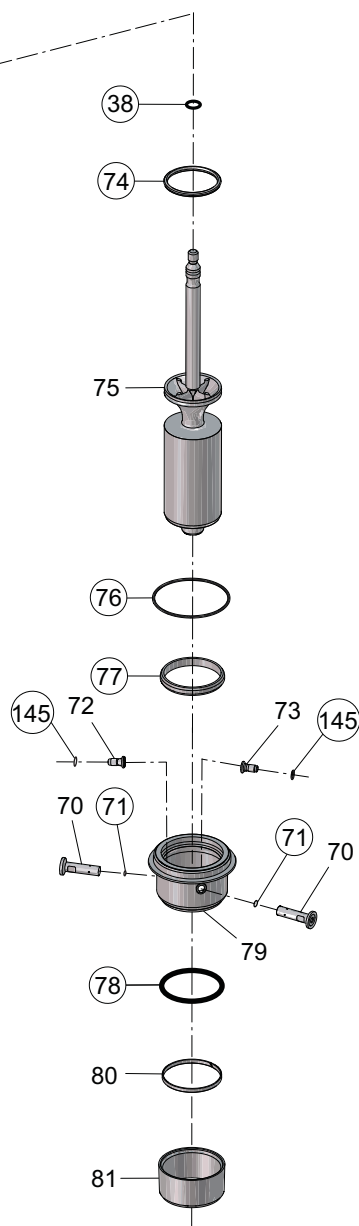
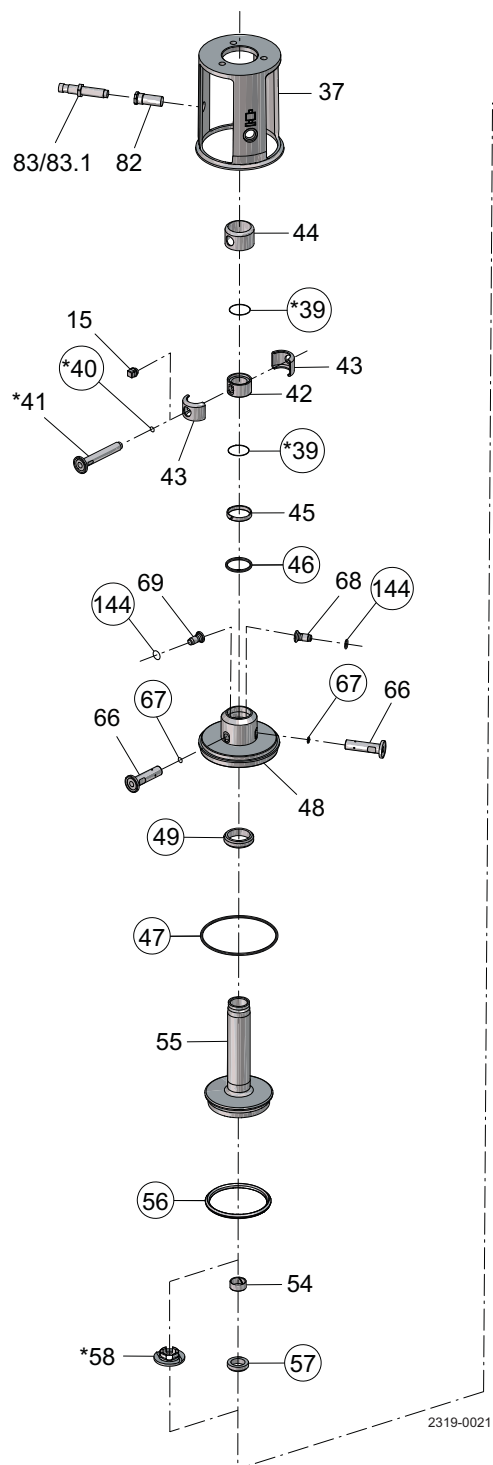
without SpiralClean in leakage chamber

with SpiralClean in leakage chamber

- = Parts not used in all actuators
- * = Not used in 1½" and 2"
- ** = Not used in 2½", 3", 4" and 6"

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.



○ = wear parts

* = with SpiralClean in leakage chamber

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

Parts list

Pos.	Qty	Denomination
15	1	Plug
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
52	1	O-ring
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover
82	1	Bolt for indication
83	1	Sensor for indication
83.1	1	Cable for sensor for indication
144	2	O-ring
145	2	O-ring

Service kits

Denomination	2" Seat ø53.3	2½" Seat ø81.3	3" Seat ø81.3	4" Seat ø100.3	6" Seat ø115.3
Service kit, EPDM	9611-92-8037	9611-92-8041	9611-92-8041	9611-92-8045	9611-92-8049
Service kit, NBR	9611-92-8038	9611-92-8042	9611-92-8042	9611-92-8046	9611-92-8050
Service kit, FPM	9611-92-8039	9611-92-8043	9611-92-8043	9611-92-8047	9611-92-8051
Service kit, HNBR	9611-92-8040	9611-92-8044	9611-92-8044	9611-92-8048	9611-92-8052

For mixed size housings, the service kit is determined by the smallest size connection on the valve.

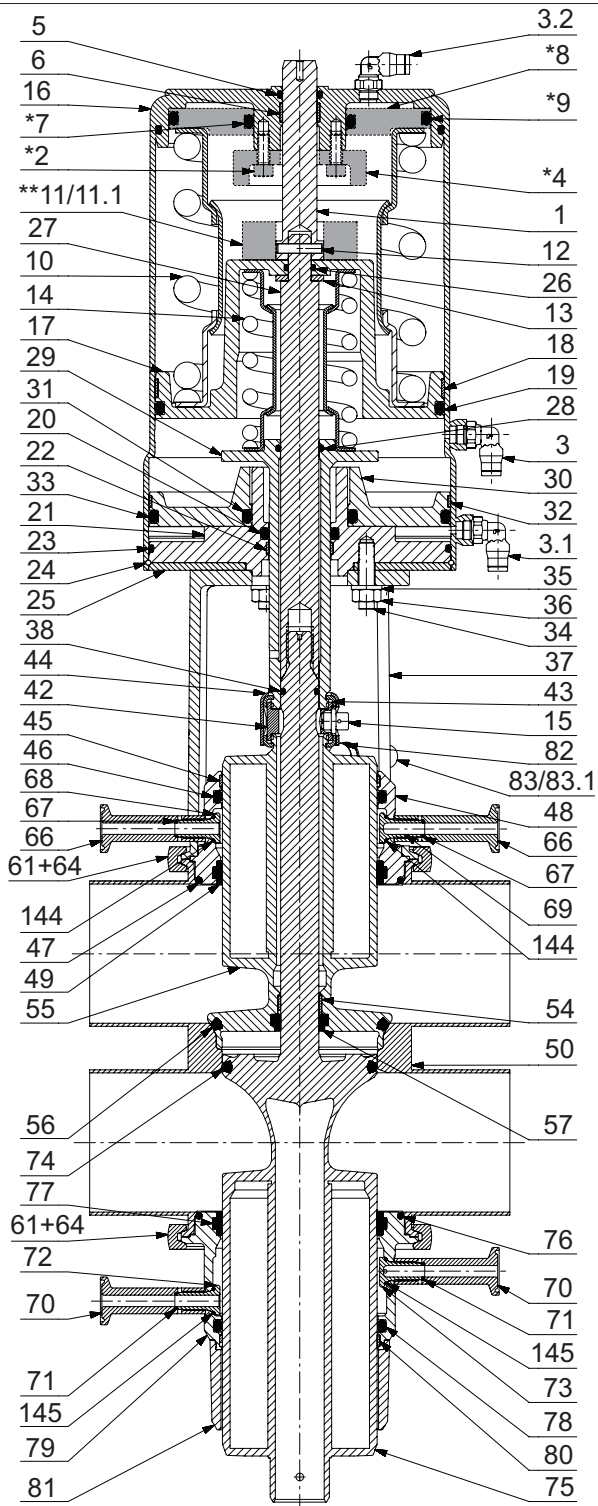
One exception is any housing with 6" connections will always refer to the 6" service kits listed below:

Service kit, EPDM	9611-92-8153	9611-92-8157	9611-92-8157	9611-92-8161
Service kit, NBR	9611-92-8154	9611-92-8158	9611-92-8158	9611-92-8162
Service kit, FPM	9611-92-8155	9611-92-8159	9611-92-8159	9611-92-8163
Service kit, HNBR	9611-92-8156	9611-92-8160	9611-92-8160	9611-92-8164

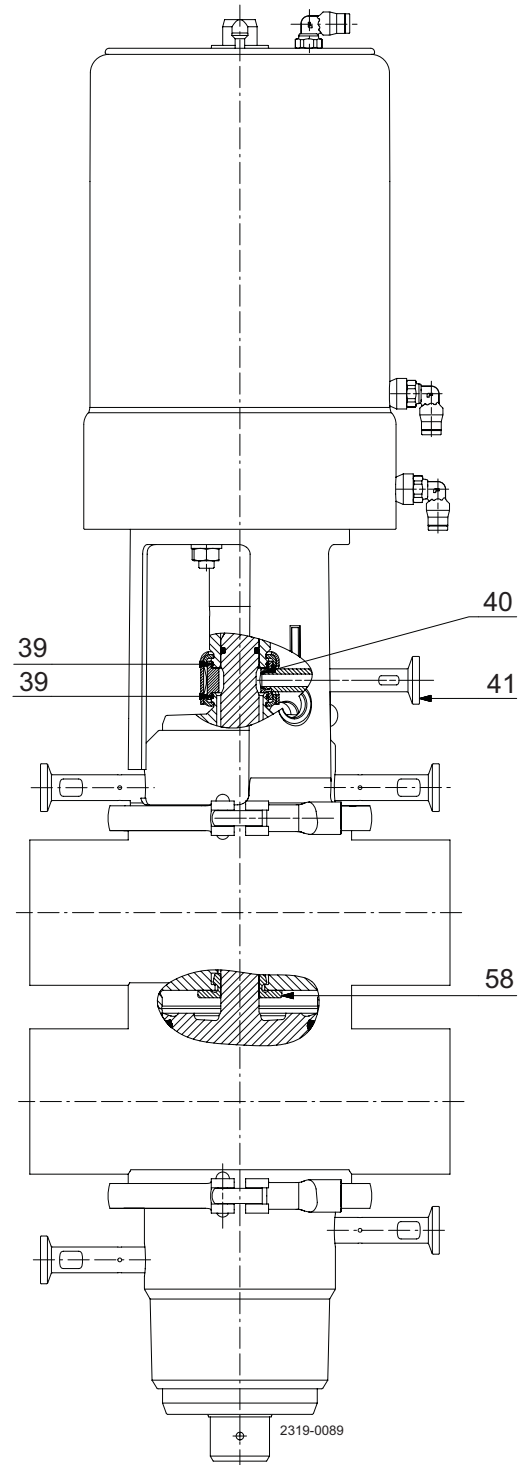
8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

8.6 Plug setup 6



without SpiralClean in leakage chamber



with SpiralClean in leakage chamber

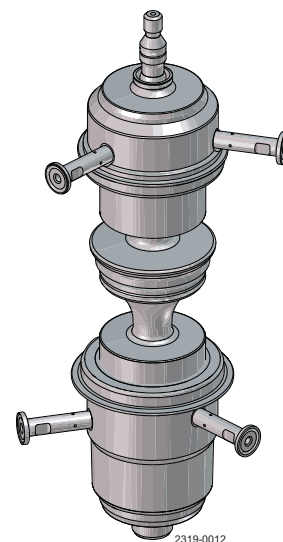
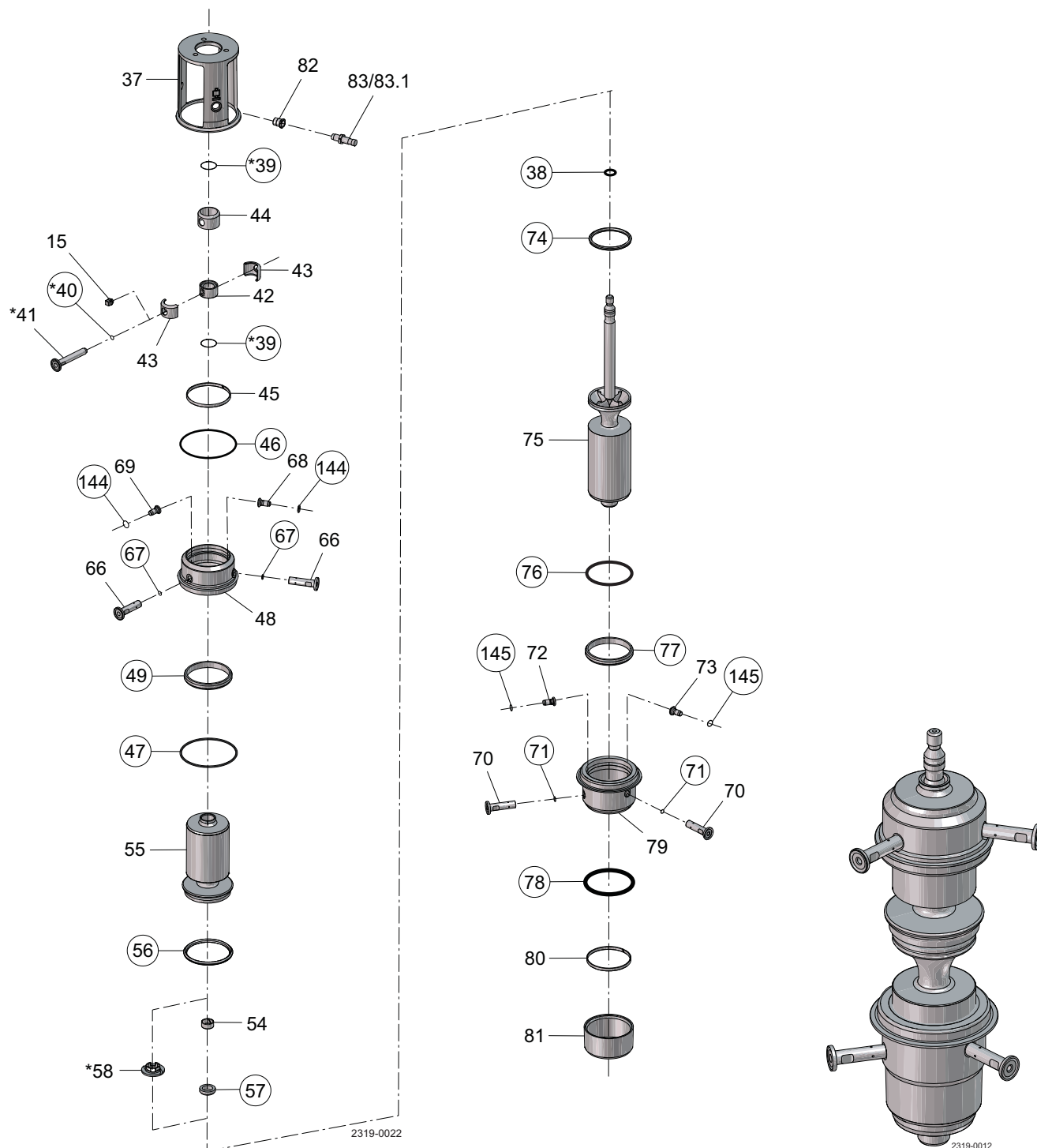
■ = Parts not used in all actuators

* = Not used in 1½" and 2"

** = Not used in 2½", 3", 4" and 6"

8 Parts list and service kits

For spare parts please refer to spare parts catalogue.



8 Parts list and service kits

For spare parts please refer to spare parts catalogue.

Parts list

Pos.	Qty	Denomination
15	1	Plug
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
52	1	O-ring
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover
82	1	Bolt for indication
83	1	Sensor for indication
83.1	1	Cable for sensor for indication
144	2	O-ring
145	2	O-ring

Service kits

Denomination	1½" Seat ø53.3	2" Seat ø53.3	2½" Seat ø81.3	3" Seat ø81.3	4" Seat ø100.3	6" Seat ø115.3
Service kit, EPDM	9611-92-8053	9611-92-8057	9611-92-8061	9611-92-8061	9611-92-8065	9611-92-8069
Service kit, NBR	9611-92-8054	9611-92-8058	9611-92-8062	9611-92-8062	9611-92-8066	9611-92-8070
Service kit, FPM	9611-92-8055	9611-92-8059	9611-92-8063	9611-92-8063	9611-92-8067	9611-92-8071
Service kit, HNBR	9611-92-8056	9611-92-8060	9611-92-8064	9611-92-8064	9611-92-8068	9611-92-8072

For mixed size housings, the service kit is determined by the smallest size connection on the valve.

One exception is any housing with 6" connections will always refer to the 6" service kits listed below:

Service kit, EPDM	9611-92-8165	9611-92-8169	9611-92-8173	9611-92-8173	9611-92-8177
Service kit, NBR	9611-92-8166	9611-92-8170	9611-92-8174	9611-92-8174	9611-92-8178
Service kit, FPM	9611-92-8167	9611-92-8171	9611-92-8175	9611-92-8175	9611-92-8179
Service kit, HNBR	9611-92-8168	9611-92-8172	9611-92-8176	9611-92-8176	9611-92-8180