SPXFLOW

INSTRUCTION MANUAL

APV DELTA DKR2

DOUBLE SEAT BALL VALVE WITH CLEANING CONNECTION

FORM NO.: H170755 REVISION: UK-9

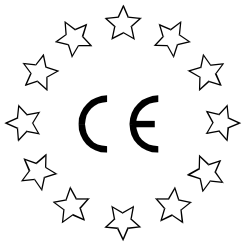
READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS PRODUCT.

Scan for DKR2 Valve Maintenance Video

APV®

UK

SPXFLOW



Declaration of Conformity
for Valves and Valve Manifolds

SPX FLOW Technology Rosista GmbH, Gottlieb-Daimler-Str. 13, D-59439 Holzwickede
herewith declares that the

APV double seal and double seat valves of the series
SD4, SDT4, SDU4, SDMS4, SDMSU4, SDTMS4, SWcip4, DSV,
DA3, DA3SLD, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2
in the nominal diameters DN 25 - 150, ISO 1“ – 6“ and 1 Sh5 - 6 Sh5

APV butterfly valves of the series SV1 and SVS1F, SVL and SVSL
in the nominal diameters DN 25 - 100, DN 125 - 250 and ISO 1“ – 4“

APV ball valves of the series KHI, KHV
in the nominal diameters DN 15 - 100

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, VRA/H
in the nominal diameters DN 10 - 150, ISO 1/2“ – 4“ and 1 Sh5 - 6 Sh5

and the valve manifolds installed thereof

meet the requirements of the Directives 2006/42/EC (superseding 89/392/EEC
and 98/37/EC) and ProdSG (superseding GPSG - 9.GPSGV).

For official inspections, SPX FLOW Technology Rosista GmbH presents
a technical documentation according to Appendix VII of the Machinery Directive,
this documentation consisting of documents of the development and construction,
description of measures taken to meet the conformity and to correspond with
the basic requirements on safety and health, incl. an analysis of the risks,
as well as an operating manual with safety instructions.

The conformity of the valves and valve manifolds is guaranteed.

Authorised person for the documentation:
SPX FLOW Technology Rosista GmbH, Frank Baumbach,
Gottlieb-Daimler-Str. 13, D-59439 Holzwickede

January 2017

ppa. Baumbach

Manager Research and Development

APV®

Table of Contents :

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 operating manual.

Descriptions and data given herein are subject to technical changes.

2. Safety Instructions

The valve must be assembled, operated, dismantled, maintained and serviced only by competent, trained personnel.
Please contact your local SPX FLOW site if necessary.

DANGER!

- The technical safety symbol draws your attention to important directions of operating safety. You will find it wherever the activities described are bearing risks of personal injury.

- ***Do not reach into the open valve ball or yoke!***
  Risk of injury by sudden valve operation!
  In dismantled valve state, there is the risk of bruising at movable valve parts.

- During valve operation, operating leakages spirt out to the bottom.
- If the cleaning connection is not used, it must be sealed by a plug or operating leakages must be discharged.

- Regular maintenance of the valve including replacement of all seals must be scheduled in order to prevent leakages and liquid emersion.
- Remove the turning actuator before the replacement of seals.

- Before any maintenance work, the line and cleaning system must be depressurized and discharged if possible.
- Electric and pneumatic connections must be separated.
- Observe service instructions to ensure safe maintenance of the valve.

2. Safety Instructions

- **DANGER!**
  Welded actuators are preloaded by spring force.

  Opening of the actuators is strictly forbidden.
  Danger to life!

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

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

  Contact your local SPX FLOW company.

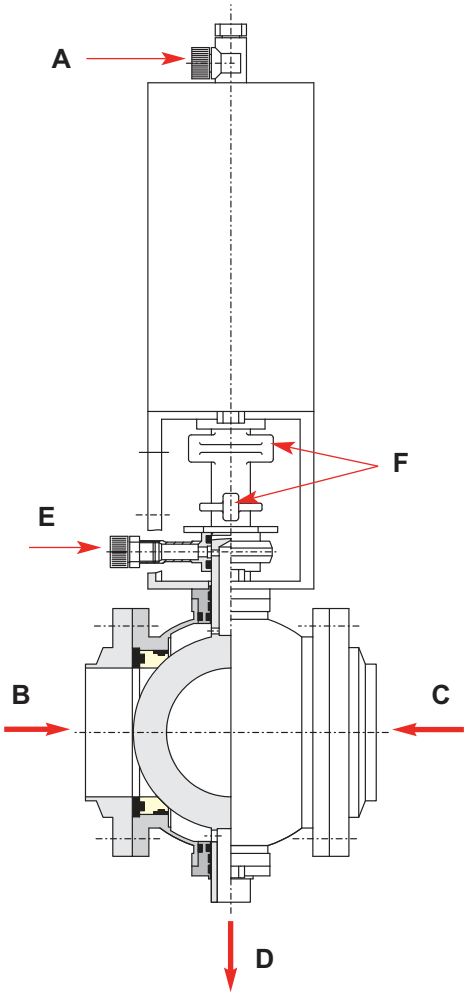
3. Intended Use

The intended use as field of application of the double seat ball valve is the shut-off of pipeline sections.

Unauthorized, constructional changes at the valve influence safety and the intended functionality of the valves and are **not** permissible.

Authorizations and External Evaluations:
ATEX (Directive 2014/34/EU)

4. Mode of Operation



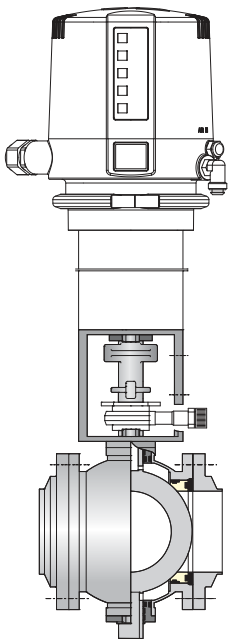
4.1. General

Due to the use of high-quality stainless steel and seal materials complying with the specified requirements, the double seat ball valve DELTA DKR2 is applicable in the food and beverage industries as well as in the chemical and pharmaceutical industries.

The field of application of the DELTA DKR2 valve comprises the separation of two line sections with different fluids **(B** and **C)** by two independent seals with intermediate leakage chamber and free drain **(D)** to the atmosphere.

Actuation by the pneumatic turning actuator with air connection at **(A)**, reset into the limit position "closed" by spring force.

- The free opening cross section has the same dimension as the nominal diameter of the pipeline.
- Smooth valve passage without diversion of the fluid.
- Cleaning of the leakage chamber by supply of cleaning liquids via the cleaning connection **(E)**.
- During the operating process, operating leakages drain off from the leakage drain **(D)**. If a cleaning line is not connected, the cleaning connection **(E)** must be sealed by a plug or operating leakages draining from **(E)** must be discharged.
- The cleaning nozzle **(E)** can be used to flush the leakage chamber with water, or with CIP liquids and clean it with water, for fast emptying, to vent or to sterilize the leakage chamber with steam.
- DKRX special valves are available, for example for highly viscous products with extended leakage drain or for horizontal installation.



5. Auxiliary Equipment

5.1. Valve position indication

Switches to signal the limit position of the valve ball can be installed in the yoke area if requested.

We recommend to use APV standard proximity switches.
Type: three-wire proximity switch (ref.-No. 08-60-011/93; H16223)
Operating distance: 5 mm / diameter : 11 mm / length: 30 mm

Feedback complete with support and proximity switch (ref.-No. 15-33-023/33; H32725) for a limit position.

If the customer decides to us a different valve position indicator, we cannot take over any liability for a faultless function.

5.2. CONTROL UNIT (CU, fig. 5.2.)

Units with feedback switches and solenoid valves for the pneumatic control of the valve to be assembled on the actuator are also available in fieldbus technology.
The assembly of the control unit on the prepared variant of the turning actuator is possible.

For the start-up as well as assembly and disassembly of the different designs, the corresponding operating manuals must be observed.

fig. 5.2..

Control Unit CU4

Control Unit CU3

The following different designs are available:

CU4 - Direct Connect ref.-No.; ID-No.	CU41 - T - Direct Connect 08-45-101/93; H320461
CU4 - AS-interface 62 Slaves ref.-No.; ID-No.	CU41 - T - AS-i extended 08-45-111/93; H320468
CU4 - AS-interface 31 Slaves ref.-No.; ID-No.	CU41 - T - AS-i standard 08-45-251/93; H324674
CU3 - Profibus ref.-No.; ID-No.	CU31-Profibus 08-45-001/93; H315495
CU3 - Device Net ref.-No.; ID-No.	CU31 Device Net 16-31-240/93; H209422

- For the assembly of a control unit on the DKR2 valve, an adapter is required.

		adapter
DN 25 - 65 ; 1” - 2,5”	**designation** ref.-No.; ID-No.	CU4-T-adapter 08-48-601/93; H320475
DN 80 - 125 ; 3” - 4”	**designation** ref.-No.; ID-No.	CU4-Tmax-adapter 08-48-611/93; H321987
DN 25 - 65 ; 1” - 2,5”	**designation** ref.-No.; ID-No.	CU2 - adapter K080 08-48-416/93; H209431
DN 80 - 125 ; 3” - 4”	**designation** ref.-No.; ID-No.	CU2 - adapter DKR80-100 08-48-417/93; H209432

5. Auxiliary Equipment

5.3. Turning actuator for control unit

- For the installation of a control unit on the DKR2 valve a special turning actuator and an adapter are required.
  The standard actuator must be replaced.

Turning actuator for control unit	
turning actuator K080 F/L DN25 - 65 ; 1” - 2,5”	**ref.-No.: 000 - 15 - 37 - 070/17 ID-No.: H123937**
turning actuator K125 F/L DN80 - 100 ; 3” - 4”	**ref.-No.: 000 - 15 - 37 - 106/17 ID-No.: H128942**
turning actuator K180 F/L DN 125	**ref.-No.: 000 - 15 - 37 - 103/17 ID-No.: H134034**

5.4. Operating leakage reduction

During the opening and closing process of the valve, a certain quantity of liquids is lost as operating leakage (see technical data).
Through a reconstruction of the valve, a reduction by about 40 % can be achieved.
Complete retrofit kits to reduce the quantity of operating leakages are available **(see page 17)**.

5.5. Operating leakage drain

To discharge operating leakages via a pipeline, retrofit kits with weld end are available **(see page 18)**.

6. Cleaning

6.1. Cleaning recommendation

The valve passage is cleaned by the cleaning liquid during cleaning of the connected pipelines.

Several switching (“cycling”) of the valve during pipeline cleaning is beneficial for the cleaning of the leakage chamber.

Depending on the degree and contents of soiling, the cleaning liquids, times and processes for the individual application must be scheduled.

The compatibility of the individually selected cleaning processes and liquids with the respectively used cleaning seals must be verified.

cleaning step	CIP - spraying
pre-flushing	2 x 10 sec.
caustic flushing 80° C	3 x 10 sec.
intermediate flushing	2 x 10 sec.
acid flushing	3 x 10 sec.
final flushing	2 x 10 sec.
	(with a break of 10 sec. each)

- The flushing times refer to a **cleaning pressure of p = 3 - 5 bar**.
- The flushing times indicated for the individual cleaning steps are reference values, only. In specific applications these times must be adjusted depending on the product, the pressure ratio and the degree of soiling.
- The flushing quantity per CIP spraying cycle amounts to about 1 litre at a cleaning pressure of 3 - 5 bar.

7. Installation

- The valve must be installed in vertical position.
  Operating leakages are freely drainable to the bottom and the leakage chamber drains off.
- For deviating installations (e.g. valve in horizontal position), special valves are available.
- If several valves are connected parallelly in one pipeline, a passage of the operating leakage to the cleaning connection of adjacent valves must be avoided.
  Installation of a shut-off device or a check valve in front of each cleaning connection is required.
- Cleaning connection with hose 8 x 1.
- **Attention: Observe welding instructions 7.1.**

7. Installation

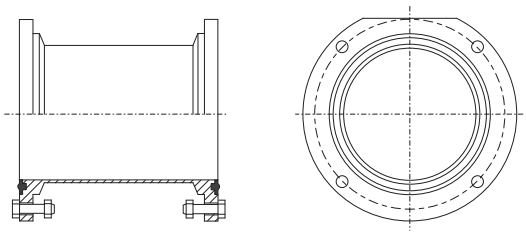
7.1. Welding Instructions

- Welding should only be carried out by certified welders (DIN EN ISO 9606-1) (seam quality DIN EN ISO 5817).
- Welding of the mating flanges must be undertaken in such a way that deformation strain cannot be transferred.
- TIG orbital welding is best!
- Before welding of the valve, all sensitive parts must be removed! Dismantle the valve ball housing with seals from the mating flanges.
- To simplify welding, fitting parts can be supplied as assembly inserts.
- The preparation of the weld seam up to 3 mm thickness can be carried out as a square butt joint without air. (Consider shrinkage!)
- After welding of the mating flanges and after work at the pipelines, the corresponding parts of the installation or pipelines must be cleaned from welding residues and soiling. If these cleaning instructions are not observed, welding residues and dirt particles can settle in the valve and cause damage or can be transferred to other parts of the installation.
- Any damage resulting from the non-observance of these welding instructions is not subject to our guarantee.

7.2.

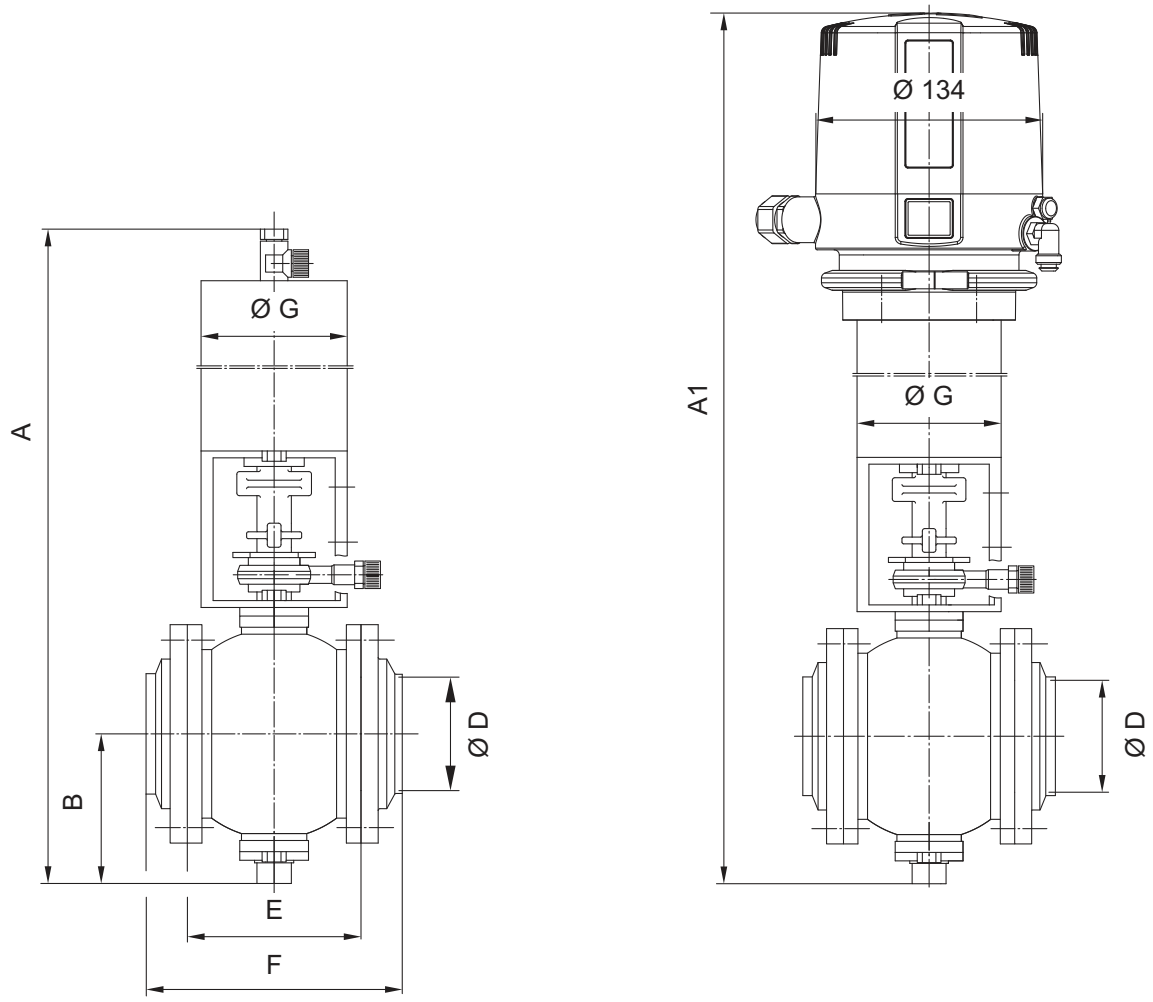
Assembly inserts for the double seat ball valves are available:

fig. 7.2. assembly insert



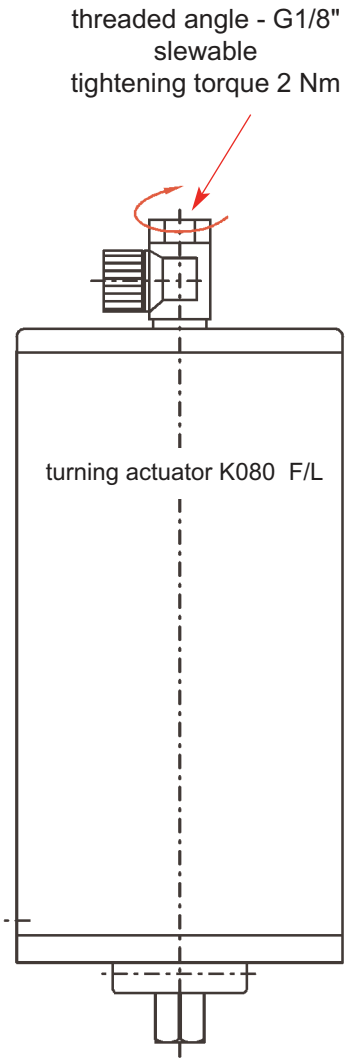
DN	inch	ref.-No.:	ID-No.:
25	1”	000 08-48-250/	H207954
40	1,5”	000 08-48-251/	H207955
50	2”	000 08-48-252/	H207956
65	2,5”	000 08-48-253/	H207957
80		000 08-48-254/	H207959
	3”	000 08-48-257/	H207958
100	4”	000 08-48-255/	H167623
125		000 08-48-256/	H167624

8. Dimensions / Weights



dimensions in mm								weights in kg
DN	**A**	**A1**	**B**	**Ø D**	**E**	**F**	**Ø G**	
25	384	534	55	26	60,5	109	85	5,7
40	408	558	65	38	61,0	109	85	6,5
50	425	575	75	50	79,0	127	85	7,4
65	448	599	87	66	100,3	149	85	9,2
80	543	695	103	81	123	171	135	18,0
100	572	724	117	100	150	198	135	21,5
125	663		142	125	190	244	189	40,0
inch								
1”	384	534	55	22,6	60,5	109	85	5,7
1,5”	408	558	65	34,9	61,0	109	85	6,5
2”	425	575	75	47,6	79,0	127	85	7,4
2,5”	448	599	87	60,3	100,3	149	85	9,2
3”	543	695	103	72,9	123	171	135	18,0
4”	572	724	117	97,6	150	198	135	21,5

9. Technical Data



9.1. General data

- max. line pressure : **10 bar**
- max. operating temperatures : **135° C EPDM, HNBR * VMQ, * FPM**
- short-term load : **140° C EPDM, HNBR * VMQ, * FPM * (no steam)**
- throughput cleaning at 3bar admission pressure : **about 5 - 10 l/min.**
- turning actuator
  min. control pressure : **6 bar**
  max. control pressure : **10 bar**
  turning agle : **90°**
- air connection (for hose) : **6 x 1**
  threaded angle - G1/8"
  slewable : **tightening torque 2 Nm**
- spray connection : **G1/8"**
- cleaning connection
  for hose : **8 x 1**

9.2. Compressed air quality:

quality class according to ISO 8573-1

- **content of solid particles:** quality class 3,
  max. quantity of solid particles per m³
  10000 von 0,5µm < d ≤1,0µm
  500 von 1,0µm < d ≤ 5,0µm
- **content of water:** quality class 4,
  max. dew point temperature + 3°C
  For installations at lower temperatures or at higher altitudes, additional measures must be considered to reduce the pressure dew point accordingly.
- **content of oil:** quality class 1,
  max. 0,01mg/m³

The oil applied must be compatible with Polyurethane elastomer materials.

9. Technical Data

	DN inch	25 1”	40 1,5”	50 2”	65 2,5”	80 3”	100 4”	125
9.3. max. tightening torque in Nm	(M)	10	15	22	25	40	65	95
9.4. operating leakage at about 5 bar in l (opening and closing process)	(Qs)	0,7	1,2	1,4	2,0	4,0	4,2	6,0
9.5. operating leakage at about 5 bar in l with operating leakage reducer	(Qs)	0,4	0,7	0,8	1,2	2,4	2,5	3,6
9.6. pneumatic air consumption at 6 bar NL	(V)	1,8	1,8	1,8	2,8	5,5	5,5	5,5

10. Materials

-	housing, valve ball, shafts		**1.4404 (DIN EN 10088)**
-	ball seal		**PTFE**
-	flange seal	standard **option**	**EPDM** **HNBR, FPM, VMQ**
-	housing seal	standard **option**	**EPDM** **HNBR, FPM**
-	O-rings		**FPM, NBR**
	Actuator		
-	yoke, actuator		**1.4301 (DIN EN 10088)**
-	coupling	**or**	**1.4301 / 1.4308** **1.4057 / 1.4059** **(DIN EN 10088)**
-	indicator		**PE-solid**
-	piston		**Polyacatal POM**
-	spindle bearing		**Polyamide PA 12**
-	air connection		**Polyamide PA 6.6**

11. Maintenance

Scan for DKR2 Valve Maintenance Video

- The **maintenance intervals** depend on the specific application and should be determined by the user carrying out **temporary checks**.
- Storage of spare seals by the customer is recommended. For the valve maintenance, we supply complete set of seals (see spare parts lists).
- If damaged seals are exchanged, generally all seals should be replaced.
- Assembly and adjustment of turning actuator according to service instructions.
- Dismantling and installation of seals according to service instructions.
- Lightly grease all seals before their installation.
- The inner parts of the turning actuator do not require maintenance.

Attention! Use food-grade grease which is suited for the respective seal material, only.

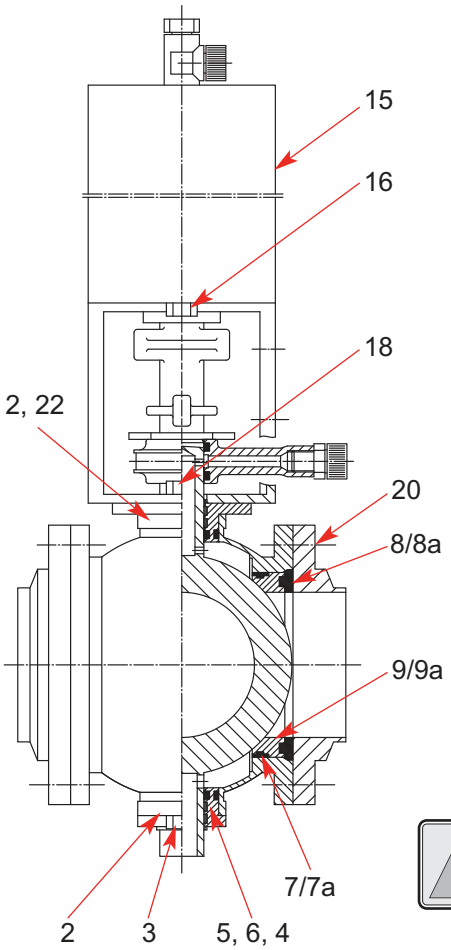
APV assembly grease for **EPDM, FPM, HNBR and NBR**
(750 g/tin - ref.-No. 000 70-01-019/93; H147382)
(60 g/tube - ref.-No. 000 70-01-018/93; H147381)
or
APV assembly grease for **VMQ**
(600 g/tin - ref.-No. 000 70-01-017/93; H147380)
(60 g/tube - ref.-No. 000 70-01-016/93; H147379)

! **Do not use** grease containing **mineral oil with EPDM** seals.

! **Do not use Silicon**e-based grease **with VMQ** seals.

Less suited grease types can influence function and life time.

12. Service Instructions



The item numbers refer to the spare parts drawing (DN-design: RN 01.071; inch-design: RN 01.074)

12.1. Dismantling from the line system

1. Shut off connecting lines, let off line pressure and discharge if possible.
2. Disconnect pneumatic and electric connections.
3. Dismantle cleaning line.
4. Screw off valve position indicator.
5. Remove flange screws **(20)**.
6. Detach ball valve from the flanges.

12.2. Dismantling of seals and guide bands

1. Detach flange seals **(8/8a)**.
2. Take off turning actuator **(15)** after removal of screws **(16)**.
3. Release screws **(18)** and yoke, coupling, indicator and spray connection.

Danger! Do not replace seals before removal of turning actuator from the valve.

4. Pull out PTFE ball seals **(9/9a)** with appertaining housing seals **(7)**.

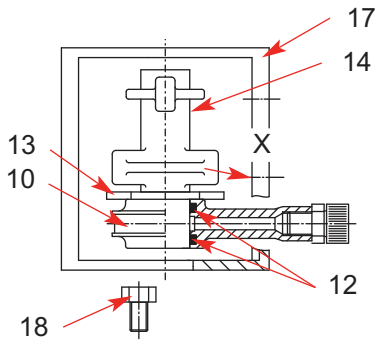
   To pull the ball seals out, half open the ball by hand and grasp alternately behind the seal!

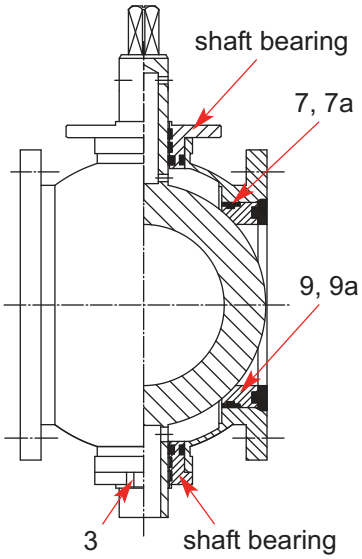
Attention! Ball and ball seal are sensitive to mechanical damage, the surfaces must not be touched by tools.

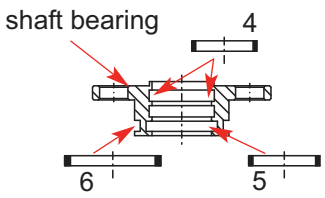
5. Having released the screws **(3)**, slide both shaft bearings **(2/22)** out of the housing and replace O-rings **(5, 6)** and guide bands **(4)**.

Attention! With dismantled shaft bearings and seals, the housing with ball must not be subject to vibrations.

12. Service Instructions







12.3. Installation of seals and guide bands

1. Slightly grease O-rings **(5, 6)** and guide bands **(4)** before their installation in the shaft bearings **(2/22)**.

2. Push upper and lower shaft bearing **(2)** with a little grease in the housing, insert screws **(3)**, but do not fasten them.

3. Slightly grease housing seals **(7, 7a)** before their installation on the PTFE ball seals **(9, 9a)**.

4. Turn valve ball into ***open position*** by hand and install ball seals with a little grease at both sides.

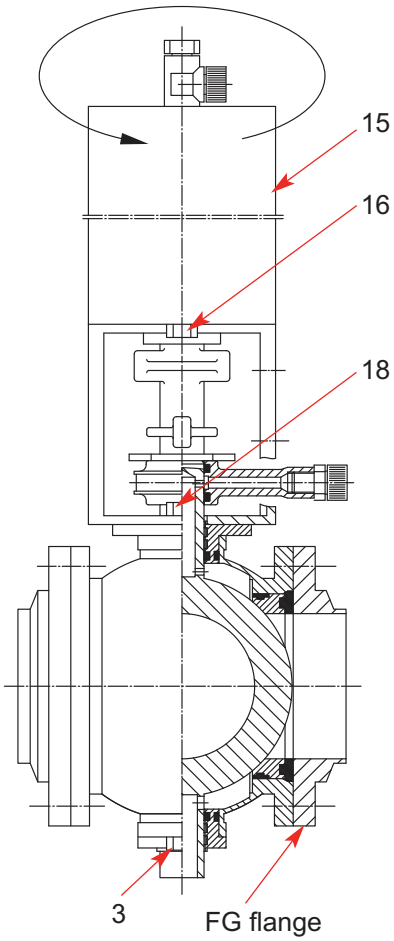
5. Slightly grease O-rings **(12)** and insert them in the spray connection **(10)**.

12.4. Assembly of valve

1. To ensure a safe handling of the valve, clamp the lower bearing flange into a vice with protective cheeks. Turn the ball into "**open position**".
   Place yoke **(17)**, spray connection **(10)**, indicator **(13)** and coupling **(14)** on the ball housing. The lower coupling cam must point to the lower yoke bore **(x)** and the indicator must point into flow direction.

2. Screw in screws **(18)**, but do not fasten them.

12. Service Instructions



12.5. Adjustment of operating position

Attention! For a safe, perfect and fast adjustment of the operating position, we recommend to use two separate FG flanges.

12.5.1. Adjustment of operating position <u>with</u> FG flanges

Install the ball seals as described in **12.3.**
Assemble the valve as described in **12.4.**
Turn the ball into its exact open position.

1. Control actuator **(15)** with pneumatic air **(min. 6 bar)** and place it on the yoke.
2. Screw in screws **(16)**, but do not fasten them.

Danger! Do not reach into the open valve after installation of the actuator!
Risk of injury by sudden operation of the valve.

3. Screw down FG flanges at the housing. The ball must be in its exact open position during this procedure.
4. Release both screws **(3)** of the shaft bearing (ball centers between the seals) and retighten them.
5. Slightly turn the actuator in anticlockwise direction to adjust the play in the connecting parts.

! The ball must keep its exact open position during this procedure !

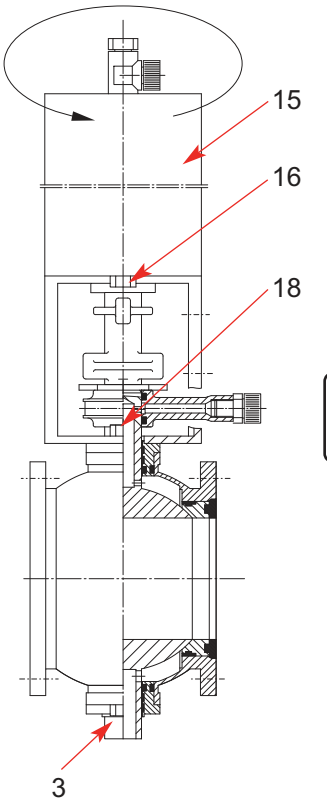
Danger! Do not reach into the open valve.
Risk of injury by sudden operation of the valve.

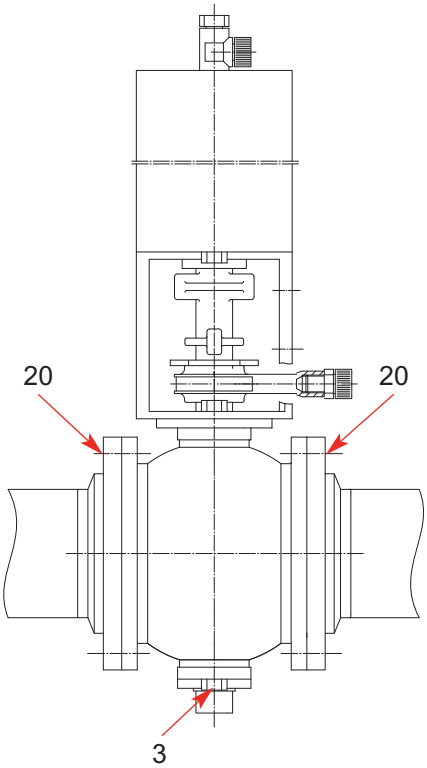
6. At first, tighten the screws **(18)** and then tighten the screws **(16)**. Operate the turning actuator several times to check the operating accuracy of the ball in "open position".
7. Shut off the air supply to the turning actuator and dismantle the FG flanges.
8. Insert the valve in closed position between the flanges into the pipeline and fasten it with the screws **(20)**.

Tightening torque:	M8	Md = 16 Nm
	M10	Md = 40 Nm.

9. Connect pneumatic air line with turning actuator.
10. Connect cleaning line.
11. Attach valve position indicators.

12. Service Instructions





12.5.2. Adjustment of operating position without FG flanges *1) *2)

If FG flanges are not available, the ball can, in exceptional cases, be adjusted as follows
(Attention! Failure of adjustement is possible.):
Install the ball seals as described in **12.3.**
Assemble the valve as described in **12.4.**
Turn the ball into its exact open position.

1. Control actuator **(15)** with pneumatic air **(min. 6 bar)** and place it on the yoke.

2. Screw in screws **(16)**, but do not tigthen them.

Danger! Do not reach into the open valve after installation of the actuator!
Risk of injury by sudden operation of the valve.

! The ball must be in its exact open position !

3. Slightly turn the actuator in anticlockwise direction to adjust the play in the connecting parts.

! The ball must not move during this procedure !
(exact open position)
At first, tighten the screws **(18)** and then tighten the screws **(16)**.
Operate the turning actuator several times to check the operating accuracy of the ball.

4. Shut off the air supply to the turning actuator and insert the valve in closed position into the line system. Fasten it with the screws **(20)**.

5. Centering of ball (absolutely necessary)
To center the ball between the seal rings, proceed as follows:
1) Release screws **(3)** by about ¼ turn.
2) Release one screw **(18)** by about ¼ turn.
3) Release second screw **(18)** by about ¼ turn and retighten it immediately.

Attention! Hold the turning actuator fast during this process. Bring up holding moment in clockwise direction (top view of actuator).

6. Tighten screw **(18)** and, then, screw **(3).**

7. Tightening torque: Md = 16 Nm M8
Md = 40 Nm M10

8. Connect pneumatic air line with turning actuator.

9. Connect cleaning line.

10. Attach valve position indicator.

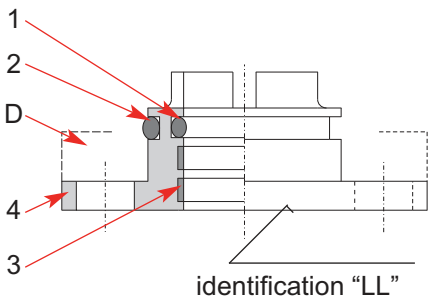
***1) We recommend the procedure according to 12.5.1.**

***2) For DKRX special valves for horizontal installation, the adjustment according to 12.5.2 is not suited!**

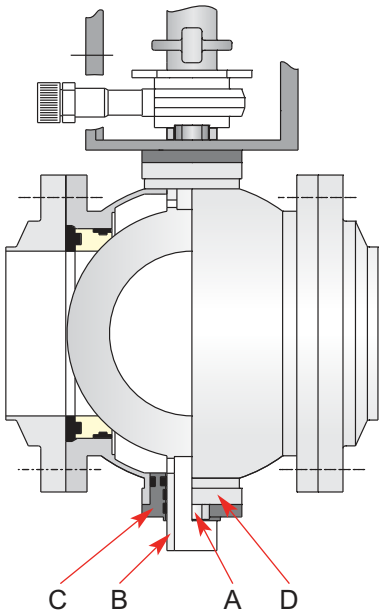
13. Service Instructions

13.1. Leakage reduction for DKR ball valve

If the valve is not dismantled from the pipeline for the installation of the leakage reduction, it must be guaranteed that the corresponding pipeline is **depressurized!**



Leakage reducer compl.			
DN, inch		**ref.-No.**	**ID-No.**
25, 1”		15-28-143/59	H138695
40 - 65, 1,5” - 2,5”		15-28-144/59	H138696
80, 100, 3”, 4”		15-28-145/59	H138697
125		15-28-146/59	H138698
single parts			
		ref.-No.	**ID-No.**
	Pos. 1	58-06-078/83	H76943
	Pos. 2	58-06-119/83	H76961
DN, inch			
25 - 65; 1” - 2,5”	Pos. 3 2x	08-39-079/93	H14879
80, 100; 3”, 4”	Pos. 3 3x	08-39-079/93	H14879
125	Pos. 3 1x	08-01-160/93	H13836
25; 1”	Pos. 4	15-28-143/47	H125803
40 - 65; 1,5” - 2,5”	Pos. 4	15-28-144/47	H125802
80, 100; 3”, 4”	Pos. 4	15-28-145/47	H125804
125	Pos. 4	15-28-146/47	H131160



13.1.1 Installation of the leakage reducer

1. Remove the two hexagon screws **(A)** and pull out the shaft bearing **(C)** by careful turning.

2. If the leakage reducer is not equipped with the guides **(3)** and the two O-rings **(1, 2)**, these parts can carefully be dismantled from the shaft bearing **(C)** and used.

3. Lightly grease O-rings **(1, 2)** before their installation.

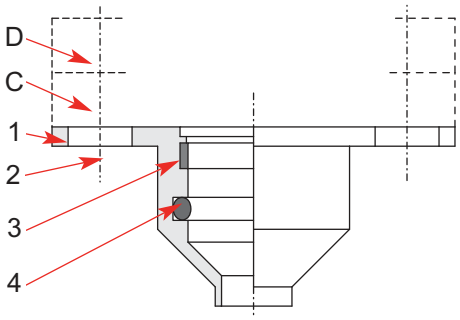
! Do not use grease containing mineral oil for EPDM seals !!

4. Slide the complete leakage reducer instead of the shaft bearing over the shaft pivot **(B)** and tighten it with the hexagon screws **(A)** at the housing flange **(D)**.

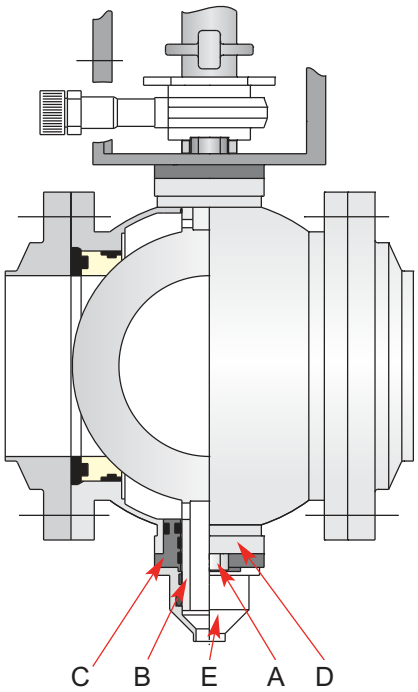
13. Service Instructions

13.2. Leakage connection (drain) for DKR ball valve

If the valve is not dismantled from the pipeline for the installation of the leakage drain, it must be guaranteed that the corresponding pipeline is **depressurized!**



Leakage connection compl.			
DN, inch		**ref.-No.**	**ID-No.**
25 - 65, 1” - 2,5”		16-37-020/59	H112046
80 - 125, 3” - 4” with 2 spare screws		16-37-024/59	H132625
single parts			
		ref.-No.	**ID-No.**
DN, inch			
25 - 65; 1” - 2,5”	Pos. 1	16-37-020/47	H112045
80 - 125; 3”, 4”	Pos. 1	16-37-024/47	H132490
80 - 125; 3”, 4”	Pos. 2	65-01-132/15	H78809
25 - 125; 1” - 4”	Pos. 3	08-39-079/93	H14879
25 - 125; 1” - 4”	Pos. 4	58-06-078/83	H76943



13.2.1. Installation of leakage drain

1. Lightly grease O-ring **(4)** in the leakage drain.
2. Remove the two hexagon screws **(A)** and push the leakage connection **(E)** over the shaft pivot **(B)** against the shaft bearing **(C)**.

! **Do not use grease containing mineral oil for EPDM seals !**

3. With DN 25 to 65 tighten the shaft bearing **(C)** together with the leakage connection at the housing flange **(D)** by the hexagon screws **(A)**.
4. With DN 80 to 125 use the hexagon screws **(2)** supplied with the leakage connection for fastening purposes.
5. As shown in the illustration, the **leakage drain** can be designed with weld end, optionally with round thread or other connections.

14. Detection of Seal Damage

Failure	*Remedy*
Valve is closed and controlled with air	
Leakage at pipeline flange	**Replace seal (8).**
Leakage from the leakage drain	**1. Check adjustment of valve ball according to Service Instructions 12.5. 2. Replace seals (8, 9, 7).**
Valve is open	
Leakage from the leakage drain	**1. Check adjustment of valve ball according to Service Instructions 12.5. 2. Replace seals (8, 9, 7).**
Valve is closed and leakage during cleaning via the spray connection	
Leakage at spray connection	**Replace o-rings (12).**
Leakage at shaft bearings	**Replace guide bands (4) and o-rings (5, 6) according to Service Instructions 12.3.**

If damaged seals are exchanged, generally replace all seals. For valve maintenance we supply complete seal kits (see spare parts lists).

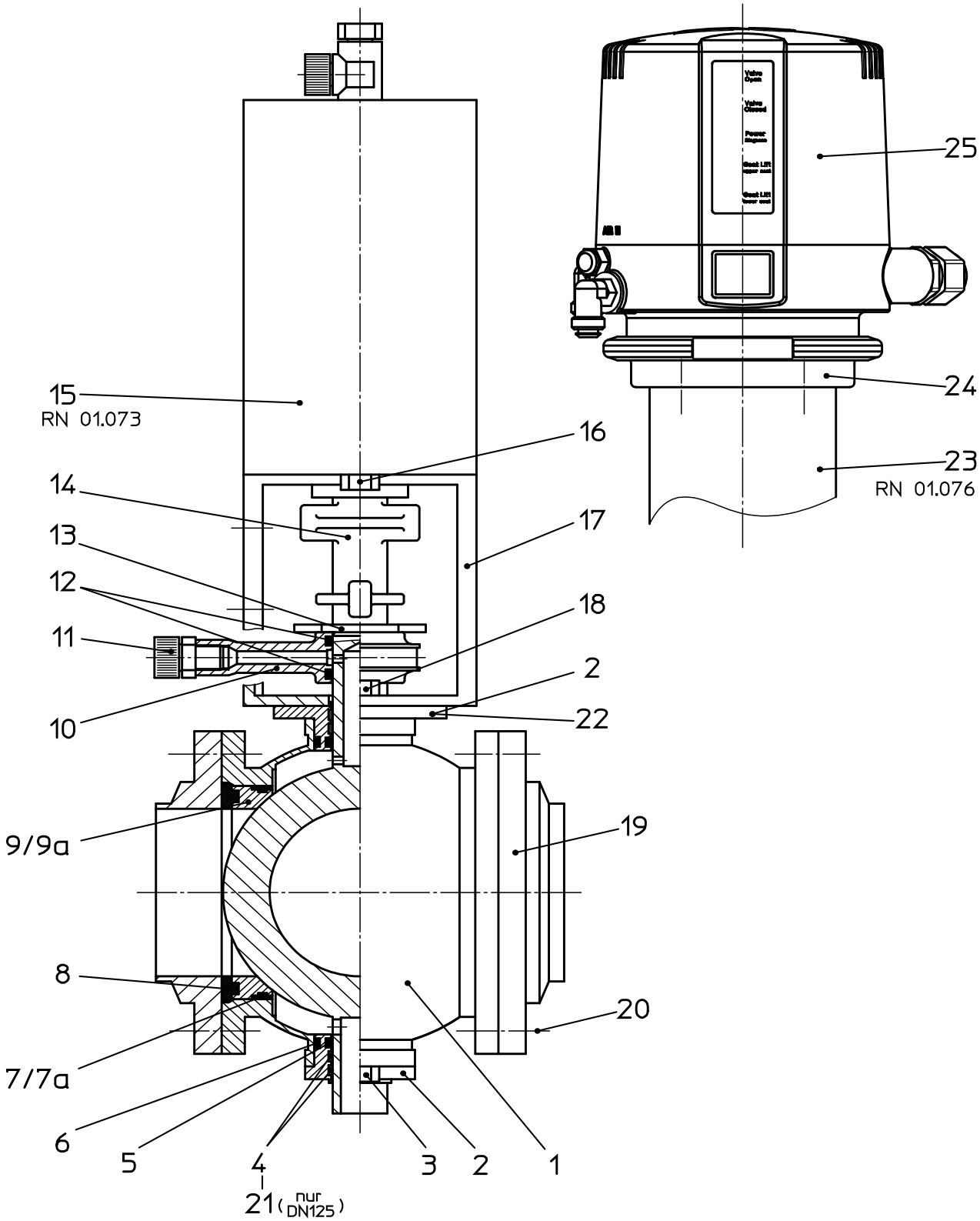
15. Spare Parts Lists

(see annex)

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

Please indicate the following data to place an order for spare parts:
- number of required parts
- reference number / ID number
- designation

subject to change



Datum:	17.02.14	31.10.14								
Name:	Trytko	Trytko								
Geprüft:										

Ersatzteilliste: spare parts list

Ventil DKR -FZ-CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

Blatt 1 von 10

RN 01.071

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN25 WS-Nr. ref.-no.	1" WS-Nr. ref.-no.	DN40 WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	DN50 WS-Nr. ref.-no.	2" WS-Nr. ref.-no.
1	1	Ventilkörper Valve body	1.4404	31-08-277/47 H67774		31-08-377/47 H67782		31-08-427/47 H67789	
2		Wellenlager Bearing	1.4404	15-28-124/47 2x H31774				15-28-124/47 1x H31774	
3	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-080/15 M8x12 H78770					
4	4	Führungsband Guide	Turcite	08-39-079/93 H14879					
5	2	O-Ring O-ring OR 20,2x3	NBR 70-75 Shore A	58-06-078/83 H76943	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 20,2x3	FPM 70-75 Shore A	58-06-078/73 H125656	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
6	2	O-Ring O-ring OR 28x3	NBR 70-75 Shore A	58-06-119/83 H76961	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 28x3	FPM 70-75 Shore A	58-06-119/73 H122837	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
7	2	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-292/93 H77439				58-33-392/93 H77464	
	2	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-292/33 H170017				58-33-392/33 H170018	
	2	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-292/73 H77438				58-33-392/73 H77463	
8	2	Flanschdichtung Seal flange	EPDM FDA-konform	58-32-277/93 H77280		58-32-377/93 H77292		58-32-427/93 H77303	
	2	Flanschdichtung Seal flange	HNBR FDA-konform	58-32-277/33 H172130		58-32-377/33 H172131		58-32-427/33 H172132	
	2	Flanschdichtung Seal flange	FPM FDA-konform	58-32-277/73 H77279		58-32-377/73 H77291		58-32-427/73 H77302	
	2	Flanschdichtung Seal flange	VMQ FDA-konform	58-32-277/13 H77278		58-32-377/13 H77290		58-32-427/13 H77301	
9	2	Kugeldichtung Ball seal	PTFE	58-32-291/23 H77281		58-32-391/23 H77293		58-32-441/23 H77304	

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN25 WS-Nr. ref.-no.	1" WS-Nr. ref.-no.	DN40 WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	DN50 WS-Nr. ref.-no.	2" WS-Nr. ref.-no.
10	1	Spritzanschluß CIP connection	PA12	08-52-136/92 H162806					
11	1	G-Verschraubung Union G1/8" 8x1	PVDF-schwarz	08-63-003/13 H16388					
12	2	O-Ring O-ring OR 20,2x3	NBR	58-06-078/83 H76943					
13	1	Zeiger Position indicator	PE-HART	08-29-021/93 H14634					
14	1	Kupplung Coupling	1.4308	08-52-050/13 H15865					
15	1	Drehantrieb F/L Actuator spring/air in Eizelverpackung / with individual packaging	1.4301	15-31-055/17 H315054					
16	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-080/15 M8x12 H78770					
17	1	Laterne Yoke	1.4301	15-40-164/17 H33846		15-40-166/17 H33848			
18	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-079/15 M8x14 H78768					
19	2	Flansch FG1 Flange FG1	1.4404	09-51-277/42 H18722	09-51-314/42 H18732	09-51-377/42 H108883	09-51-414/42 H18751	09-51-427/42 H18761	09-51-464/42 H18768
20	8	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-081/15 M8x16 H78772				65-01-083/15 M8x20 H78776	
21									
22	1	Wellenlager Bearing	1.4404					15-28-210/42 H207855	
23	1	Drehantrieb F/L für RME Actuator s/a for control-unit in Eizelverpackung / with individual packaging	1.4301	15-37-070/17 H315055					
24	1	CU-T-Adapter CU-T-adapter	PA6.6 GF30 schwarz	08-48-601/93 H320475					
25	1	Control-Unit Control-Unit	PA6.6 GF30 schwarz	siehe Betriebsanleitung CU see manual CU					

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN25 WS-Nr. ref.-no.	1" WS-Nr. ref.-no.	DN40 WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	DN50 WS-Nr. ref.-no.	2" WS-Nr. ref.-no.
		Pos. 4, 5, 6, 7, 8, 9,12 nur im kompletten Dichtungssatz erhältlich Item 4, 5, 6, 7, 8, 9,12 available as complete seal kits only							
	1	Dichtungssatz Seal kit	FPM	58-34-279/00 H144802		58-34-280/00 H144803		58-34-281/00 H143070	
	1	Dichtungssatz Seal kit	EPDM	58-34-279/01 H115598		58-34-280/01 H115599		58-34-281/01 H115600	
	1	Dichtungssatz Seal kit	VMQ	58-34-279/02 H115604		58-34-280/02 H132686		58-34-281/02 H115606	
	1	Dichtungssatz Seal kit	HNBR	58-34-279/06 H204102		58-34-280/06 H204097		58-34-281/06 H315848	

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				
Datum:				
Name:				
Geprüft:				

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D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN65 WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	DN80 WS-Nr. ref.-no.	DN100 WS-Nr. ref.-no.	4" WS-Nr. ref.-no.
1	1	Ventilkörper Valve body	1.4404	31-08-477/47 H67796		31-08-552/47 H203406	31-08-527/47 H67803	31-08-627/47 H67811	
2	1	Wellenlager Bearing	1.4404	15-28-124/47 H31774		15-28-125/47 H31775			
3	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-080/15 M8x12 H78770		65-01-129/15 M10x14 H78805			
4		Führungsband Guide	Turcite	08-39-079/93 4x H14879		08-39-079/93 6x H14879			
5	2	O-Ring O-ring OR 20,2x3	NBR 70-75 Shore A	58-06-078/83 H76943	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 20,2x3	FPM 70-75 Shore A	58-06-078/73 H125656	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
6	2	O-Ring O-ring OR 28x3	NBR 70-75 Shore A	58-06-119/83 H76961	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 28x3	FPM 70-75 Shore A	58-06-119/73 H122837	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
7	2	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-492/93 H77512		58-32-545/93 H171283	58-32-545/93 H171283	58-33-642/93 H77583	
	2	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-492/33 H168759		58-32-545/33 H318537	58-33-542/33 H170075	58-33-642/33 H170074	
	2	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-492/73 H77511		58-32-545/73 H205932	58-33-542/73 H77542	58-33-642/73 H77582	
7a	2	Gehäusedichtung Housing seal	VMQ FDA-konform	Gehäusedichtung VMQ nur bei DN80 einsetzen Housing seal VMQ only to be used for DN80			58-32-545/13 H177054		
8	2	Flanschdichtung Seal flange	EPDM FDA-konform	58-32-477/93 H77314		58-32-555/93 H77332	58-32-544/93 H176414	58-32-627/93 H77339	
	2	Flanschdichtung Seal flange	HNBR FDA-konform	58-32-477/33 H172133		58-32-555/33 H172144	58-32-527/33 H172134	58-32-627/33 H172135	
	2	Flanschdichtung Seal flange	FPM FDA-konform	58-32-477/73 H77313		58-32-555/73 H77331	58-32-527/73 H77324	58-32-627/73 H77338	
	2	Flanschdichtung Seal flange	VMQ FDA-konform	58-32-477/13 H77312		58-32-555/13 H77330	58-32-544/13 H177052	58-32-627/13 H77337	

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

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SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

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pos. item	Menge quantity	Beschreibung description	Material material	DN65 WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	DN80 WS-Nr. ref.-no.	DN100 WS-Nr. ref.-no.	4" WS-Nr. ref.-no.
9	2	Kugeldichtung Ball seal	PTFE virginal	58-32-491/23 H77315		58-32-566/23 H203407	58-32-541/23 H77326	58-32-641/23 H77340	
9a	2	Kugeldichtung Ball seal	PTFE virginal	Kugeldichtung nur bei DN80 in EPDM und VMQ Ventilausführung einsetzen Ball seal only to be used for DN80 in EPDM and VMQ valve design			58-32-540/23 H176929		
10	1	Spritzanschluß CIP connection	PA12	08-52-136/92 H162806					
11	1	G-Verschraubung Union G1/8" 8x1	PVDF-schwarz	08-63-003/13 H16388					
12	2	O-Ring O-ring OR 20,2x3	NBR	58-06-078/83 H76943					
13	1	Zeiger Position indicator	PE-HART	08-29-021/93 H14634		08-29-022/93 H14635			
14	1	Kupplung Coupling	1.4308	08-52-050/13 H15865		08-52-217/17 H16020			
15	1	Drehantrieb F/L Actuator spring/air	1.4301	15-31-055/17 H315054		15-31-057/17 H105502			
16	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-080/15 M8x12 H78770		65-01-129/15 M10x14 H78805			
17	1	Laterne Yoke	1.4301	15-40-166/17 H33848		15-40-168/17 H33850			
18	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-079/15 M8x14 H78768		65-01-131/15 M10x18 H78807			
19	2	Flansch FG1 Flange FG1	1.4404	09-51-477/42 H18782	09-51-514/42 H18791	09-51-552/42 H18809	09-51-527/42 H18801	09-51-627/42 H18824	09-51-664/42 H18831
20		Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-083/15 8xM8x20 H78776			65-01-083/15 16xM8x20 H78776		
21									
22	1	Wellenlager Bearing	1.4404	15-28-210/42 H207855		15-28-211/42 H207856			

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

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SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

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RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN65 WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	DN80 WS-Nr. ref.-no.	DN100 WS-Nr. ref.-no.	4" WS-Nr. ref.-no.
23	1	Drehantrieb F/L für RME Actuator spring/air for control-unit	1.4301	15-37-070/17 H315055		15-37-106/17 H128942			
24	1	CU-T-Adapter CU-T-adapter	PA6.6 GF30 schwarz	08-48-601/93 H320475					
	1	CU-Tmax-Adapter CU-Tmax-adapter	PA6.6 GF30 schwarz			08-48-611/93 H321987			
25	1	Control-Unit Control-Unit	PA6.6 GF30 schwarz	siehe Betriebsanleitung CU see manual CU					
		Pos. 4, 5, 6, 7, 7a, 8, 9, 9a, 12 nur im kompletten Dichtungssatz erhältlich Item 4, 5, 6, 7, 7a, 8, 9, 9a, 12 available as complete seal kits only							
	1	Dichtungssatz Seal kit	FPM	58-34-282/00 H142042		58-34-286/00 H312413	58-34-283/00 H144805	58-34-284/00 H142041	
	1	Dichtungssatz Seal kit	EPDM	58-34-282/01 H115601		58-34-286/01 H311038	58-34-283/01 H115602	58-34-284/01 H115603	
	1	Dichtungssatz Seal kit	VMQ	58-34-282/02 H115607		58-34-286/02 H313054	58-34-283/02 H115608	58-34-284/02 H115609	
	1	Dichtungssatz Seal kit	HNBR	58-34-282/06 H315702		58-34-286/06 H323052	58-34-283/06 H204106	58-34-284/06 H314158	

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN125 WS-Nr. ref.-no.					
1	1	Ventilkörper Valve body	1.4404	31-08-677/47 H130796					
2	1	Wellenlager Bearing	1.4404	15-28-180/47 H130778					
3	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-130/15 M10x16 H78806					
4									
5	2	O-Ring O-ring OR 20,2x3	NBR 70-75 Shore A	58-06-078/83 H76943	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 20,2x3	FPM 70-75 Shore A	58-06-078/73 H125656	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
6	2	O-Ring O-ring OR 28x3	NBR 70-75 Shore A	58-06-119/83 H76961	bei Ventilen mit Dichtungswerkstoff EPDM, HNBR und VMQ einsetzen to be used for valves with seal material EPDM, HNBR, VMQ				
	2	O-Ring O-ring OR 28x3	FPM 70-75 Shore A	58-06-119/73 H122837	nur bei Ventilen mit Dichtungswerkstoff FPM verwenden to be used only for valves with seal material FPM.				
7	2	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-692/93 H77608					
	2	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-692/33 H172125					
	2	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-692/73 H77607					
8	2	Flanschdichtung Seal flange	EPDM FDA-konform	58-32-677/93 H77351					
	2	Flanschdichtung Seal flange	HNBR FDA-konform	58-32-677/33 H172136					
	2	Flanschdichtung Seal flange	FPM FDA-konform	58-32-677/73 H77350					
	2	Flanschdichtung Seal flange	VMQ FDA-konform	58-32-677/13 H77349					
9	2	Kugeldichtung Ball seal	PTFE	58-32-691/23 H130779					

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN125 WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
10	1	Spritzanschluß CIP connection	PA12	08-52-136/92 H162806					
11	1	G-Verschraubung Union G1/8" 8x1	PVDF-schwarz	65-01-132/15 H78809					
12	2	O-Ring O-ring OR 20,2x3	NBR	58-06-078/83 H76943					
13	1	Zeiger Position indicator	PE-HART	08-29-022/93 H14635					
14	1	Kupplung Coupling	1.4308	08-52-247/17 H163814					
15	1	Drehantrieb F/L Actuator spring/air	1.4301	15-31-923/17 H32589					
16	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-129/15 M10x14 H78805					
17	1	Laterne Yoke	1.4301	15-40-168/17 H33850					
18	2	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-132/15 M10x20 H78809					
19	2	Flansch FG1 Flange FG1	1.4404	09-51-677/42 H18839					
20	16	Skt. Schraube Hex. Screw DIN EN 24017-A2-70	1.4301	65-01-133/15 H78811					
21	2	Lagerbuchse Bearing	Kunstoff	08-01-160/93 H13836					
22	1	Wellenlager Bearing	1.4404	15-28-212/42 H207857					
23	1	Drehantrieb F/L für RME Actuator spring/air for control-unit	1.4301	15-37-103/17 H134034					
24	1	CU-Tmax-Adapter CU-Tmax-adapter	PA6.6 GF30 schwarz	08-48-611/93 H321987					
25	1	Control-Unit Control-Unit	PA6.6 GF30 schwarz	siehe Betriebsanleitung CU see manual CU					

Ersatzteilliste: spare parts list

Ventil DKR -FZ -CU 1+2S
Double seat ball valve 1+2S
DN25-125; 1-4 zoll / inch

Datum:	17.02.14	31.10.14		
Name:	Trytko	Trytko		
Geprüft:				

Datum:				
Name:				
Geprüft:				

APV
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D-59425 Unna Germany

Blatt 10 von 10

RN 01.071

pos. item	Menge quantity	Beschreibung description	Material material	DN125 WS-Nr. ref.-no.					
		Pos. 5, 6, 7, 8, 9,12, 21 nur im kompletten Dichtungssatz erhältlich Item 5, 6, 7, 8, 9 12, 21 available as complete seal kits only							
	1	Dichtungssatz Seal kit	FPM	58-34-285/00 H144806					
	1	Dichtungssatz Seal kit	EPDM	58-34-285/00 H131585					
	1	Dichtungssatz Seal kit	VMQ	58-34-285/00 H133015					
	1	Dichtungssatz Seal kit	HNBR	58-34-285/00 H329097					

Ersatzteilliste: spare parts list

Drehantrieb K080, K125, K180 F/L
Actuator K080, K125, K180 spring/air

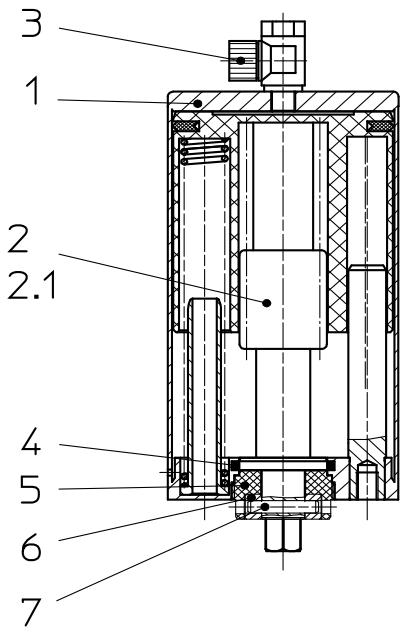
Datum:	22.11.12	12.03.14		
Name:	Trytko	Trytko		
Geprüft:	Goebel			

Datum:				
Name:				
Geprüft:				

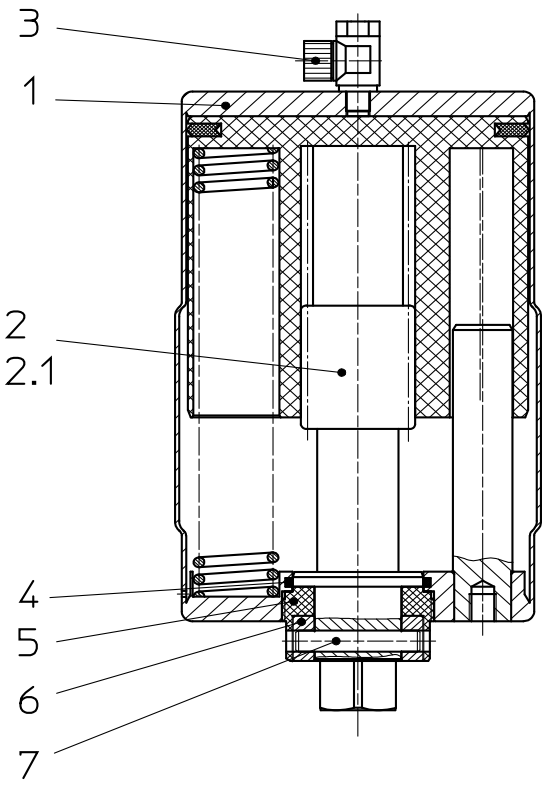
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.073

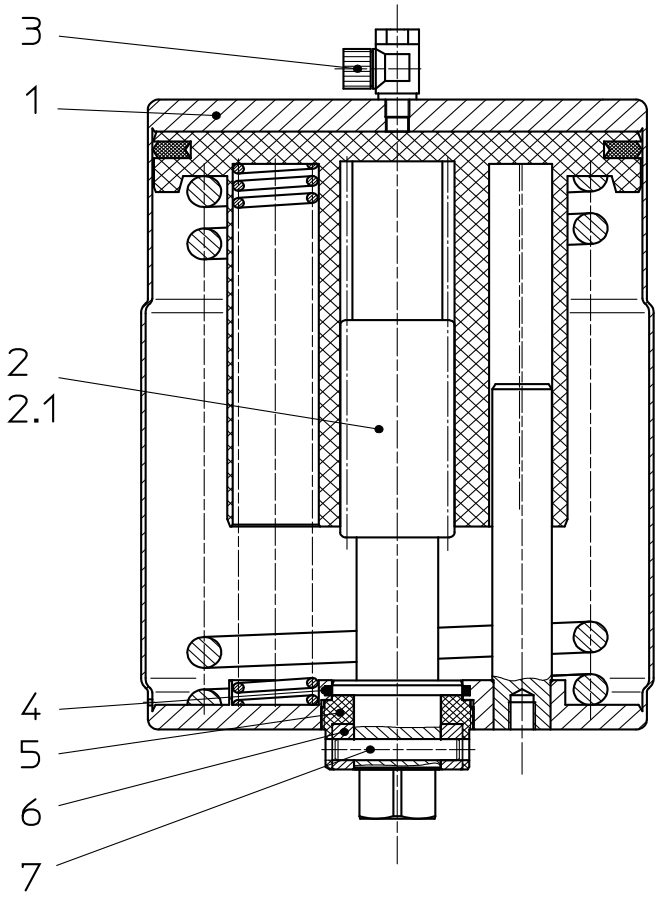
DRAT K080



DRAT K125



DRAT K180



Ersatzteilliste: spare parts list

Drehantrieb K080, K125, K180 F/L
Actuator K080, K125, K180 spring/air

Datum:	22.11.12	12.03.14		
Name:	Trytko	Trytko		
Geprüft:	Goebel			

Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.073

pos. item	Menge quantity	Beschreibung description	Material material	K080 WS-Nr. ref.-no.	K125 WS-Nr. ref.-no.	K180 WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
	1	Drehantrieb komplett Actuator complete	1.4301 matt-glänzend	15-31-055/17 H105500	15-31-057/17 H105502	15-31-923/17 H32589			
	1	Drehantrieb komplett Actuator complete	1.4301 poliert	15-31-055/13 H135919	15-31-057/13 H131940	15-31-923/13 H32588			
1	1	Drehantrieb Schweißteil Actuator welded	1.4301	15-31-054/17 H105499	15-31-056/17 H105501	15-31-922/17 H32587			
2	1	Spindel komplett mit Lager Shaft complete with bearing	1.4301	15-24-021/13 H31494	15-24-031/13 H31502	15-24-033/13 H31504			
2.1	1	Spindel Shaft	1.4301	15-24-020/13 H31493	15-24-030/13 H31501	15-24-032/13 H31503			
3	1	Winkelverschraubung G1/8" schwenkbar Elbow union G1/8" slewable	Polyamid/ Glasf	08-63-221/93 H16371					
4	1	O-Ring O-ring	NBR	58-06-130/83 32,2x3 H76965					
	1	O-Ring O-ring	FPM		58-06-222/73 49,5x3 H77000				
5	1	Lager für Drehantrieb Bearing for actuator	POM	15-28-002/34 H31673					
	1	Lager für Drehantrieb Bearing for actuator	PA12		15-28-009/63 H31684				
6	1	Stellring Adjust ring	1.4301	67-08-007/13 H79757	67-08-008/13 H79758				
7	1	Zyl. Kerbstift DIN EN ISO 8740-V2A Cyl. pin	1.4305	67-15-035/13 5x26 H79916	67-15-036/13 8x45 H79917				

Ersatzteilliste: spare parts list

Drehantrieb K080, K125, K180 F/L für Rückmeldeeinheit
Actuator K080, K125, K180 spring/air for control unit

Datum:	28.03.13	08.05.14		
Name:	Trytko	Trytko		
Geprüft:				

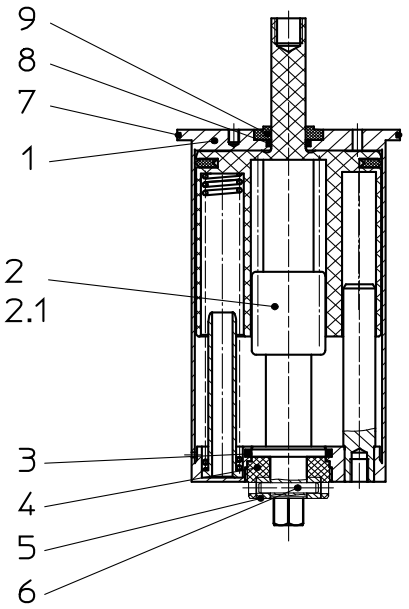
Datum:				
Name:				
Geprüft:				

SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

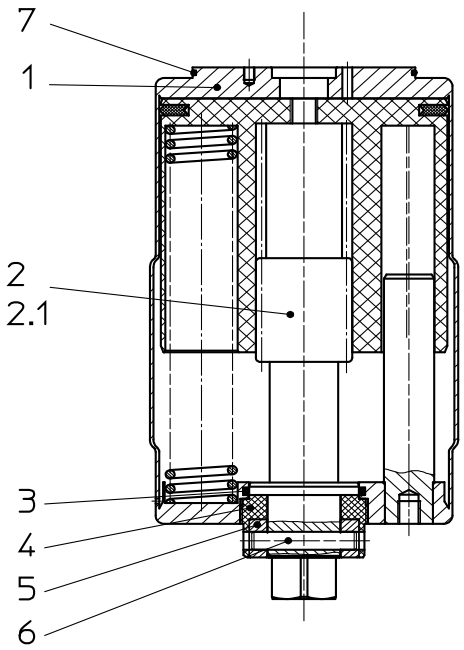
Blatt 1 von 2

RN 01.076

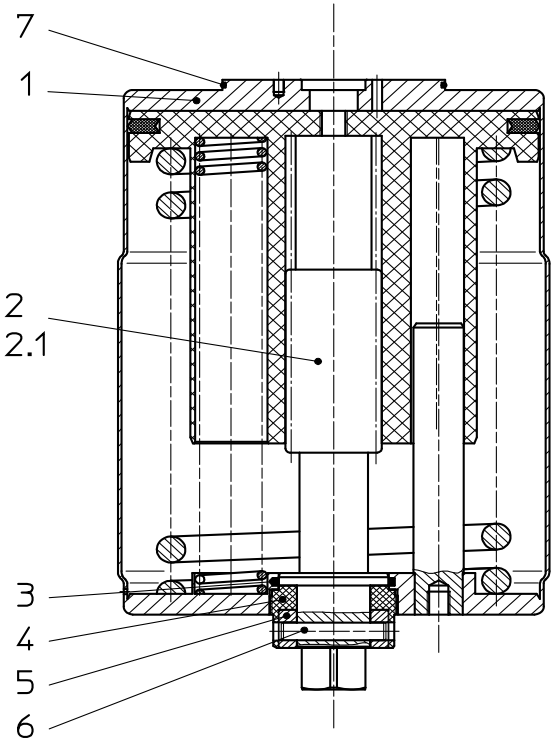
DRAT K080-RM



DRAT K125-RM



DRAT K180-RM



Ersatzteilliste: spare parts list

Drehantrieb K080, K125, K180 F/L für Rückmeldeeinheit
Actuator K080, K125, K180 spring/air for control unit

Datum:	28.03.13	08.05.14		
Name:	Trytko	Trytko		
Geprüft:				

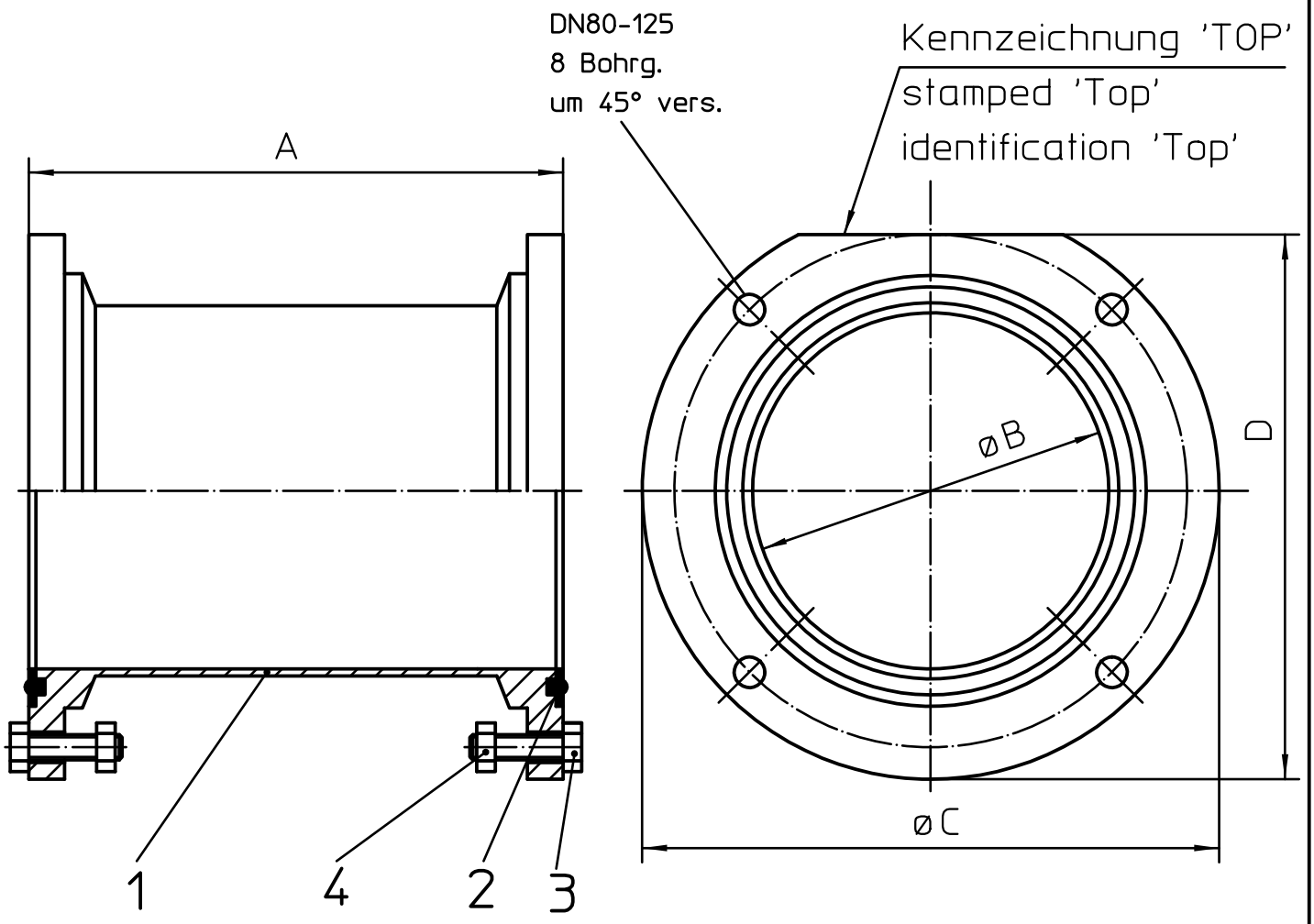
Datum:				
Name:				
Geprüft:				

APV
SPX Flow Technology Rosista GmbH
D-59425 Unna Germany

RN 01.076

pos. item	Menge quantity	Beschreibung description	Material material	K080 WS-Nr. ref.-no.	K125 WS-Nr. ref.-no.	K180 WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
	1	Drehantrieb komplett Actuator complete	1.4301 matt-glänzend	15-37-070/17 H123937	15-37-106/17 H128942	15-37-103/17 H134034			
	1	Drehantrieb komplett Actuator complete	1.4301 poliert	15-37-070/13 H316969	15-37-106/13 H327700	15-37-103/13 H328071			
1	1	Drehantrieb Schweißteil Actuator welded	1.4301	15-37-071/17 H123936	15-37-105/17 H128940	15-37-104/17 H134503			
2	1	Spindel komplett mit Lager Shaft complete with bearing	1.4301	15-24-021/13 H31494	15-24-031/13 H31502	15-24-033/13 H31504			
2.1	1	Spindel Shaft	1.4301	15-24-020/13 H31493	15-24-030/13 H31501	15-24-032/13 H31503			
3	1	O-Ring OR 32,3x3 O-ring	NBR	58-06-130/83 H76965					
	1	O-Ring OR 49,5x3 O-ring	FPM		58-06-222/73 H77000				
4	1	Lager für Drehantrieb Bearing for actuator	POM	15-28-002/34 H31673					
	1	Lager für Drehantrieb Bearing for actuator	PA12		15-28-009/63 H31684				
5	1	Stellring Adjust ring	1.4301	67-08-007/13 H79757	67-08-008/13 H79758				
6	1	Zyl. Kerbstift DIN EN ISO 8740-V2A Cyl. pin	1.4305	67-15-035/13 5x26 H79916	67-15-036/13 8x45 H79917				
7	1	O-Ring OR 90x2 O-ring	NBR	58-06-426/83 H143352					
8	1	O-Ring OR 15,3x2,4 O-ring	NBR	58-06-052/83 H107914					
9	1	Druckstück Drehantrieb Thrust ring turning actuator	Hostaform	08-48-117/53 H105080					

10/95



DN	WS-Nr.	A	B	C	D
25/1"	08-48-250/..	61,5	26	83	74
40/1,5"	08-48-251/..	61,5	38	100	91
50/2"	08-48-252/..	79,5	50	110	101
65/2,5"	08-48-253/..	100,8	66	127	118
3"	08-48-257/..	123,5	72,9	134	125
80	08-48-254/..	123,5	81	142	133
100/4"	08-48-255/..	150,5	100	162	153
125	08-48-256/..	190,5	125	190	177

../59 = EP-1.4404 matt-glänzend
EP-1.4404 satin-finish
EP-1.4404-mat

Datum:	25.7.96	16.5.02	27.1.03								
Name:	Janning	Trytko	Trytko								
geprüft:	Goe/Pl	Plümper									

Montageeinsatz DKR kpl

Installation Aid DKR / Insert de montage DKR complet

APV Rosista GmbH
D-59425 Unna
Germany

Blatt 1 von 1

RN 268.07

APV DELTA DKR2

DOUBLE SEAT BALL VALVE
WITH CLEANING CONNECTION

SPXFLOW

SPX FLOW

Design Center
Gottlieb-Daimler-Straße 13
D-59439 Holzwickede, Germany
P: (+49) (0) 2301-9186-0
F: (+49) (0) 2301-9186-300

SPX FLOW

Production
Stefana Rolbieskiego 2
PL- Bydgoszcz 85-862, Poland
P: (+48) 52 566 76 00
F: (+48) 52 525 99 09

ISSUED 10/2016 - Translation of original manual

Scan for DKR2 Valve Maintenance Video