APV
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Operating Manual

DSV

Double Seal Butterfly Valve

Read and understand this manual prior to operating or servicing this product.

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Declaration of Conformity for Valves and Valve Manifolds

APV Rosista GmbH, Zechenstr. 49, D-59425 Unna-Königsborn
as manufacturer with sole responsibility declares that the

double seat valves of the series D2, SD4, SDT4, SDM4, SWcip4, DSV, DA3, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2
in the nominal diameters DN 25 - 150, 1" – 6" and 1 Sh5 - 6 Sh5

butterfly valves of the series SV1 and SVS 1 F
in the nominal diameters DN 25 - 100, DN 125 - 250 and 1" – 4"

ball cocks of the series KH, KHV
in the nominal diameters DN 15 - 100

single seat, diaphragm and spring loaded valves of the series S2, SW4, SWmini4, SWT4, M3, MF3, M4, MF4, MP4, MS4, AP1, APT1, CPV, RG4, RGM4, RGE4, RGEM4, PR2, PR3, PR4, SI2, UF3, VRA,VRAH
in the nominal diameters DN 10 - 150, 1/2" – 4" and 1 Sh5 - 6 Sh5

and the valve manifolds installed thereof

meet the requirements of the Directives 89/392/EEC (amendment 93/44/EEC), replaced by 98/37/EC and GSG - 9.GSGV.

For official inspections, APV Rosista GmbH presents a technical documentation according to appendix V 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 remaining risks as well as an operating manual with safety instructions.

The conformity of the valves and valve manifolds is guaranteed.

D-59425 Unna-Königsborn, June 04, 2008
APV Rosista GmbH

ppa. Baumbach

Manager Research and Development

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DSV - FZ (NC = normally closed) DN 50 - 125 - RN 01.039
DSV - FZ (NC = normally closed) inch 1”-4” - RN 01.039.1

DSV - H (manual function) DN 50 - 125 - RN 01.040
DSV - H (manual function) inch 2”-4” - RN 01.040.1

Turning actuator F/L (spring/air) for feedback unit - RN 01.076

1. General Terms

This operating 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

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.
- Disconnect electrical and pneumatic connections
- Depressurize the line and cleaning system and discharge the lines, if possible, before any maintenance work.
- Do not reach into the open valve!
  Risk of bruising at movable parts of the valve.
- Risk of injury by sudden valve operation in dismantled valve state.
- Observe Service Instructions to ensure safe maintenance of the valve.
- During the actuating process, operating leakages spurt out to the bottom.
- Close cleaning connection and leakage drain which are not used by a plug.

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

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

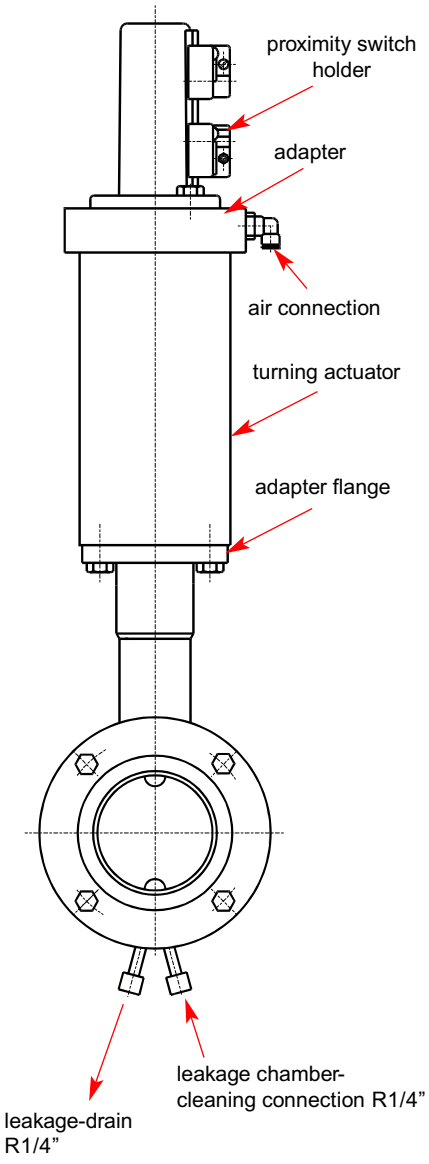
Turning actuators which are no longer used and / or defective must be disposed in professional manner.

Defective turning actuators must be returned to your APV Solutions & Services company for their professional disposal and free of charge for you.

Please address to your local APV representative.

3. Mode of Operation

DSV with pneumatic turning actuator and valve position indicator



Due to the use of high quality stainless steel and adequate seal materials, the double seal butterfly valve DSV is suited for applications in the food and beverage industries as well as in the pharmaceutical and chemical industries.

The function of the double seal butterfly valve is to shut off line sections.
It is exclusively suited for applications in the CIP area, whereby the valve is subject to defined cleaning and flushing processes.

Valves of the DSV series are remote controlled by a pneumatic actuator. Reset by spring force into the limit position closed.

Extension of operating time of actuated valves by pneumatic air throttle or adjusting screw in the Control Unit CU3 to optimize the flow behaviour.

The valve opens and closes by turning the valve disc by 90°.

Smooth valve passage without diversion of line flow.

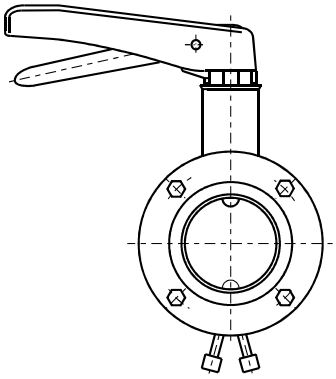
The opening diameter complies with the size of the inner line diameter.

Cleaning of the product-wetted valve surface is performed during cleaning of the pipeline.

Leakage arising in the area of the butterfly valve seal flow out in depressurized state via the leakage drain.

The leakage chamber in the area of the double valve disc can be cleaned via a cleaning connection.

DSV with manual actuation



As option, the DSV-valve is available in manual design.
The two final positions of the valve are fixed by locking of the handle. The handle must be unlocked for change-over.

4. Auxiliary Equipment

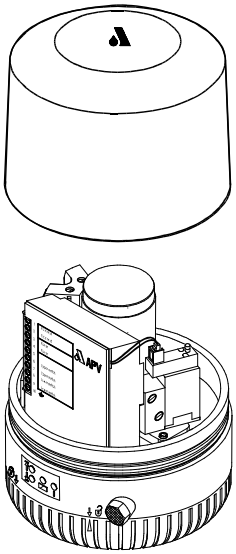
4.1 Valve position indication (for actuated valves only)

Proximity switches to signal the limit position of the valve disc can be installed if required.

We recommend to use our APV standard proximity switches.
Type: three-wire proximity switch (ref.-No. 08-60-011/93)
Operating distance: 4 mm / diameter: 11 mm / length: 30 mm.

Using a valve position indicator other than APV type, we cannot accept any liability for faulty function.

fig. 4.2



4.2 Control Unit fig. 4.2 (for actuated valves only)

Units with feedback switch and solenoid valve for the pneumatic control of the valve to be assembled on the turning actuator are also available in field bus technology. The assembly of a Control Unit CU3 on the turning actuator is possible.

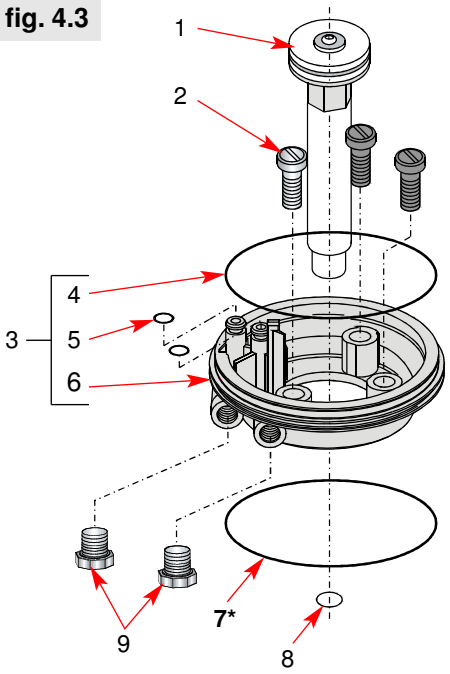
The following different designs are at disposal:

Direct Connect ref.-No.:	CU31 Direct Connect 16 - 31 - 232/93
Profibus ref.-No.:	CU31 Profibus 08 - 45 - 001/93
Device Net ref.-No.:	CU31 Device Net 16 - 31 - 240/93
AS-interface ref.-No.:	CU31 AS-interface 2.1 08 - 45 - 020/93

4. Auxiliary Equipment

adapter for DN50 - 65 and 2”- 3”

fig. 4.3



4.3 Adapter for CONTROL UNIT (fig. 4.3)

An adapter is required to install the Control Unit on the DSV valve.

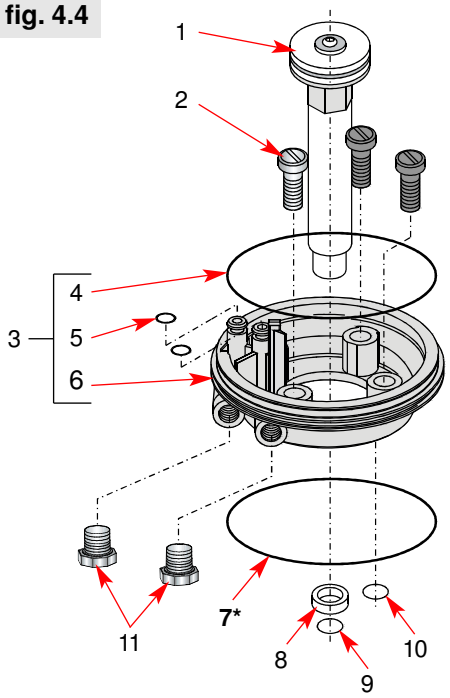
Adapter for the nominal diameters DN50 - 65 und 2” - 3”:
ref.-No.: 000 - 08 - 48 - 416/93
(CU2 adapter SVS1F, DKR)

	Designation: ref.-No.:		CU2 adapter SVS1F, DKR 08-48-416/93
Spare parts lists CU2 adapter	**pos.**	**stk.**	**designation**	**ref.-No.:**
	-	-	adapter complete	08-48-416/93
	-	-	seal kit adapter	00-00-000/00
	1	1	operating cam	08-60-779/93
	2	3	cyl. screw M5x18 ISO1207	08-60-760/15
				-
	3	1	adapter kit	08-60-333/93
	- 4	1	o-ring 88,62 - 1,78 /NBR	58-06-387/83
	- 5	2	o-ring 5,28 - 1,78 /NBR	58-06-044/83
	- 6	1	adapter	08-60-728/93
	7*	1	o-ring 90 - 2 /NBR	58-06-426/83
	8	1	o-ring 13 - 2 / NBR	58-06-049/83
	9	2	blind plug G1/8”	08-60-740/93

*** scope of supply: actuator**

adapter for DN80 - 125 and 4”

fig. 4.4



4.4 Adapter for CONTROL UNIT (Bild 4.4)

Adapter for the nominal diameters DN80 - 125 and 4”:
ref.-No.: 000 - 08 - 48 - 417/93
(CU2 adapter SVS1F 125-250, DKR 80-100)

	Designation: ref.-No.:		CU2 Adapter SVS1F 125-250, DKR 80-100 08-48-417/93
Spare parts lists CU2 Adapter	**pos.**	**stk.**	**designation**	**ref.-No.:**
	-	-	adapter complett	08-48-417/93
	-	-	seal kit adapter	00-00-000/00
	1	1	operating cam	08-60-780/93
	2	3	cyl. screw M5x18 ISO1207	08-60-760/15
				-
	3	1	adapter kit	08-60-333/93
	- 4	1	o-ring 88,62 - 1,78 /NBR	58-06-387/83
	- 5	2	o-ring 5,28 - 1,78 /NBR	58-06-044/83
	- 6	1	adapter	08-60-728/93
	7*	1	o-ring 90 - 2 /NBR	58-06-426/83
	8	1	v-seal 20 x 28 x 4 / NBR	58-32-010/83
	9	1	o-ring 11 - 3 / NBR	58-06-039/83
	10	1	o-ring 13 - 2 / NBR	58-06-049/83
	11	2	blind plug G1/8”	08-60-740/93

*** scope of supply: actuator**

5. Installation

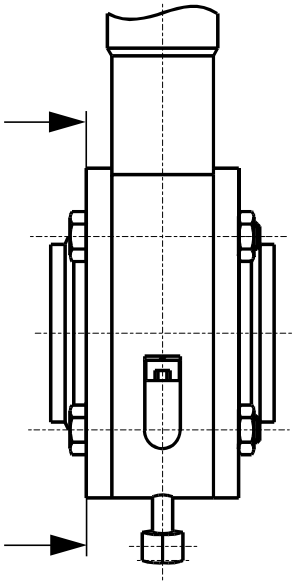
The DSV valve is designed only for the upright installation position with actuator vertically to the top!

DSV valves are mounted between "flanges-DSV".

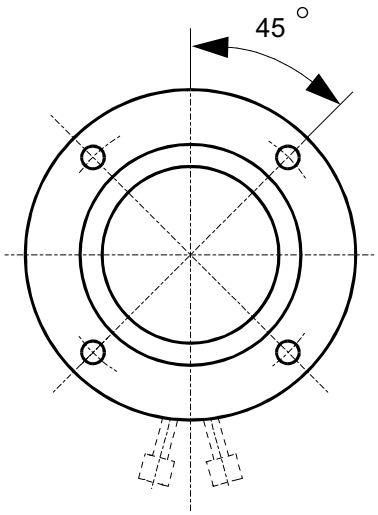
Attention: Observe welding instructions.

5.1 Welding Instructions

- Observe the bore position (see fig.) during the welding of the mating flanges - DSV.

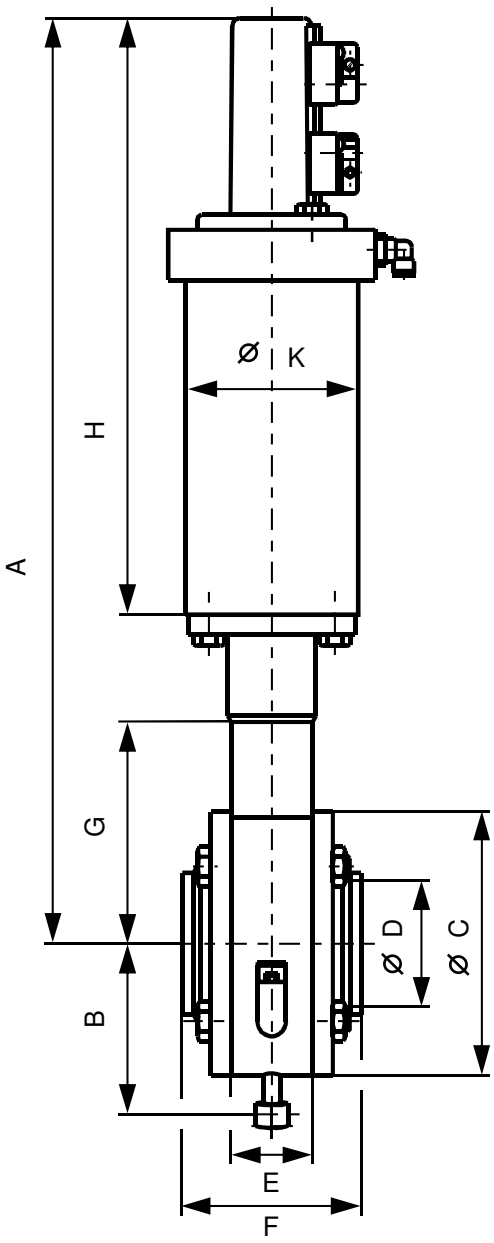


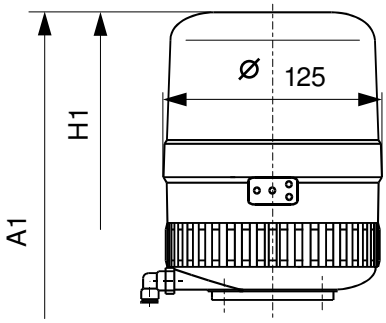
- Welding may only be carried out by certified welders (EN 287-1). (seam quality EN 25817 "B").
- The welding of the mating flanges must be undertaken in such a way that deformation strain cannot arise.
- TIG orbital welding is best!
- Before welding, all sensitive parts of the valve must be removed! Remove the valve core with seals from between the mating flanges.
- 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 be carried over to other parts of the installation.



- Any damage resulting from the non-observance of these welding instructions is not subject to our guarantee.

6. Dimensions / Weights

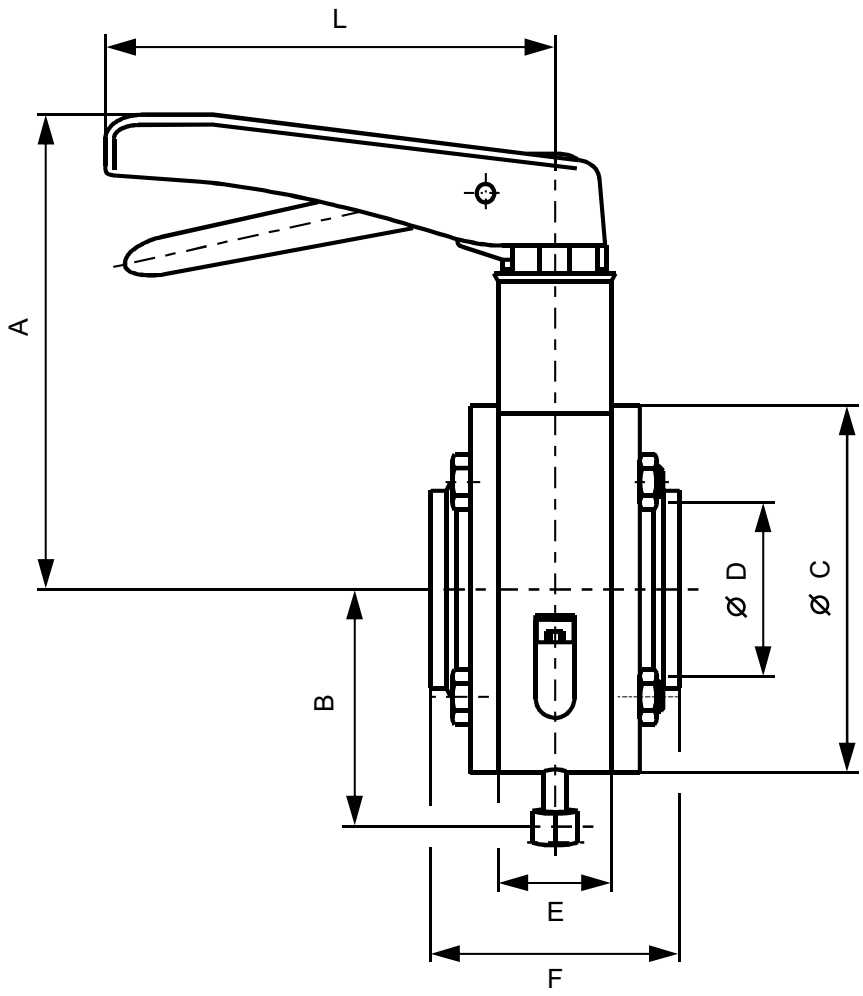




dimensions in mm

DN	A	B	Ø C	Ø D	E	F	G	H	Ø K	A1	H1	weighs in kg
50	422	84	108	50	38	86	85	295	85	464	337	
65	432	95	130	66	38	86	95	295	85	474	337	
80	514	105	146	81	41	89	108	344	125	556	386	
100	525	115	166	100	41	89	119	344	125	567	386	
125	539	125	205	125	53	101	133	344	125	581	386	
inch												
2”	422	84	108	47,8	38	86	85	295	85	464	337	
2,5”	432	95	130	60,5	38	86	95	295	85	474	337	
3”	465	105	146	72,1	41	89	108	344	125	487	386	
4”	525	115	166	97,6	41	89	119	344	125	567	386	

6. Dimensions / Weights



dimensions in mm

DN	A	B	Ø C	Ø D	E	F	L	weights in kg
50	148	84	108	50	38	86	165	
65	158	95	130	66	38	86	165	
80	167	105	146	81	41	89	165	
100	178	115	166	100	41	89	178	
125	214	125	205	125	53	101	285	
inch								
2”	148	84	108	47,8	38	86	165	
2,5”	158	95	130	60,5	38	86	165	
3”	167	105	146	72,1	41	89	165	
4”	178	115	166	97,6	41	89	178	

7. Technical Data

- max. line pressure DN 50-125/1”-4” : **10 bar**
- max. operating temperature : **135° C EPDM, HNBR**
- short-term steam load : **140° C EPDM, HNBR**
- opening angle butterfly valves : **90°**
- min. control pressure : **6 bar**
- max. control pressure : **10 bar**
- air connection (for hose) : **6 x 1**
- cleaning connection : **R1/4”**

(use dry and clean pneumatic air, only)

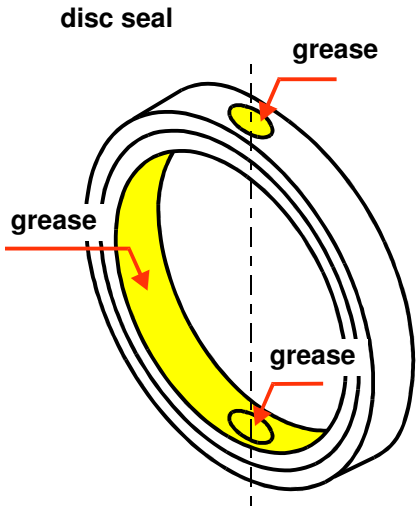
DN 50-65 / 2”-3” **pneumatic air consumption** **at 6 bar control pressure** **turning actuator K 080 (F/L) (spring/air)** **per movement 1,8 (NL)**		
	closing times in sec.	
hose length	**1m**	**10m**
	2,5 sec.	**4,2 sec.**

DN 80-125 / 4” **pneumatic air consumption** **at 6 bar control pressure** **turning actuator K 125 (F/L) (spring/air)** **per movement 5,5 (NL)**		
	closing times in sec.	
hose length	**1m**	**10m**
	5,5 sec.	**8 sec.**

8. Materials

- valve disc **1.4462 / 1.4404**
- housing (not product-wetted) **1.4301**
- mating flange - DSV DN 50 - 100 **1.4404**
- DSV seal
  standard: **EPDM**
  option: **HNBR**
- bush bearing **Cu**
- yoke, actuator **1.4301**
- coupling **1.4301 / 1.4308**
- piston **polyacetal POM**
- spindle bearingr **polyamid PA 12**
- air connection **polyamid PA 6.6**

9. Maintenance



- The maintenance intervals depend on the application of the valve and should be determined by the operator carrying out regular visual checks of the valve.

- The double seal butterfly valve possesses only a few wear parts: disc seal and bush bearings.

- The customer is recommended to hold spare seals and bush bearings on stock.
  For valve maintenance APV supplies complete seal kits including seal grease (pl. see spare parts lists).

- If damaged seals are exchanged, generally replace all seals and bush bearings.

- Slightly grease all seals before their installation.
  Grease the disc seal according to the illustration - especially the cross holes.

- Assembly of the valve and change of the valve design FZ (normally closed) or FO (normally open) according to Service Instructions.

- Installation of turning actuator according to Service Instructions.

- The inner parts of the turning actuator do not need service.

Attention! Use food-grade grease and special grease being suited for the respective seal material, only.

Recommendation:
APV-food-grade grease for **EPDM and HNBR**
(0,75 kg /can - ref. No. 000 70-01-019/93)
(60 g /tube - ref. No. 000 70-01-018/93)

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

10. Service Instructions

10.1 Dismantling from the line system

DANGER !

a. Shut off connecting lines, discharge line pressure and drain lines if possible.

b. Disconnect electric and pneumatic connections.

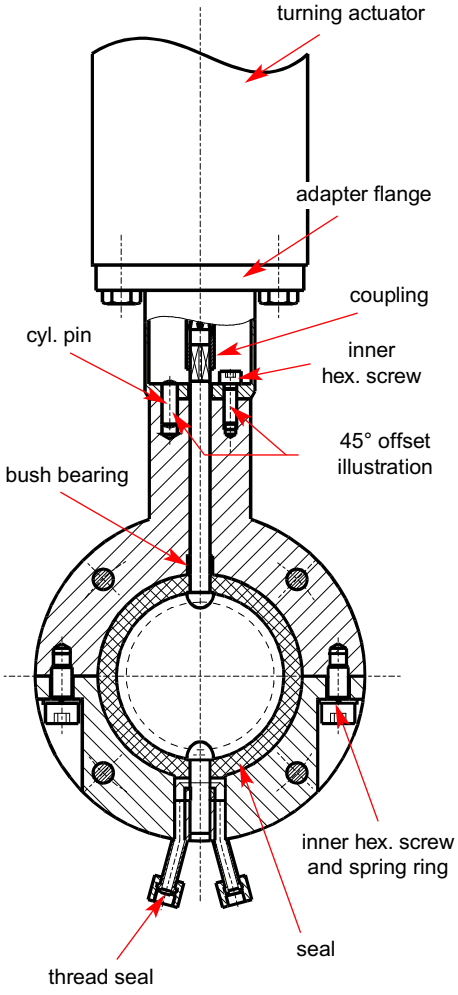
c. Release the clamp connection at the proximity switch holder. Pull out proximity switch.

d. Separate cleaning connecting lines and leakage drain lines.

e. Remove the hex. Screws **(14)** from the mating flange.

f. Take out double seal butterfly valve from between the flanges.

Attention! Dismantling of the valve from the line system is only possible in closed valve state.



10.2 Dismantling of turning actuator with valve position indicator The item numbers refer to the spare parts lists.

- Remove the fastening screw **(12)** at the adapter flange **(10)**. Detach turning actuator to the top.
- **Turning actuator with Control Unit**
  Disassembly of the turning actuator is carried out as described in paragraph Turning Actuator.
  The Control Unit need not be removed from the turning actuator.
- For further dismantling of the valve, remove coupling and adapter flange.

10.3 Dismantling of manual actuation

- Screw off the fastening screw at the handle and detach the handle to the top.

10. Service Instructions

10.4 Dismantling of inner parts

Disc seal, disc DSV and bush bearing

- Remove the inner hex. screw **(3)** from the valve housing and disperse the housing halves. Pull disc seal with disc DSV out of the valve housing. Remove the bush bearing from the valve housing.

10.5 Replacement of seals

- Turn the disc DSV **(2)** in the disc seal **(5)** into the open position.
- Slightly pressing it, the disc seal **(5)** is deformed in its longitudinal axis and can be slid over the short bearing spindle.
- Remove the disc seal from the actuating spindle.
- Clean the valve disc DSV **(2)**.
- Grease the holes of the new disc seal as described in **chapter 9** and introduce the long actuating spindle of the disc DSV.
- Turn the disc DSV in the disc seal into open position.
- By a slight pressing, the disc seal is deformed in its longitudinal axis and can be slid over the short bearing spindle.

10.6 Installation of the inner parts

- Introduce bush bearings **(6)** into the upper housing half.
- Insert the disc DSV being in open position with disc seal into the upper housing half.
- Adjust the lower housing half and fasten the two housing halves with the screws alternately crosswise.

Attention! While tightening the screws, the valve disc **(2)** must not be within the disc seal **(5)**. The valve disc must be in **open** position.

10. Service Instructions

10.7 Attachment of turning actuator

- Place the adapter flange **(10)** on the upper housing and fasten it with the inner hex. screws **(9)**.
- Place the coupling **(11)** on the square of the actuating spindle of the disc DSV **(2)**.
- Place the turning actuator **(16)** on the adapter flange and tighten it with the screws **(12)**.

10.8 Assembly of feedback units (proximity switches)

- Valve position indication **OPEN**:
  Installation of the feedback unit in the **lower** proximity switch holder.
- Valve position indication **CLOSED**:
  Installation of the feedback unit in the **upper** proximity switch holder.
- Insert the proximity switch into the proximity switch holder until stop and fasten it with the clamp union.

10.9 Assembly of manual actuation

- Place the handle on the square of the DSV disc and tighten it with the fastening screws.
  DSV disc and handle are in line.

11. 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.

subject to modifications

BA DSV 0000002
ID-No.: H 3 1 5 8 4 1

UK

Translation of original manual

rev. 2

WHERE IDEAS MEET INDUSTRY

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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
DN50-125

Besteht aus 3 Blatt Blatt 1

	Datum	Name
Gezeichnet	15.01.05	Trytko
Geprüft	23.03.05	Goebel
Normgepr.		

Datum	01/05	06/05								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039

Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen

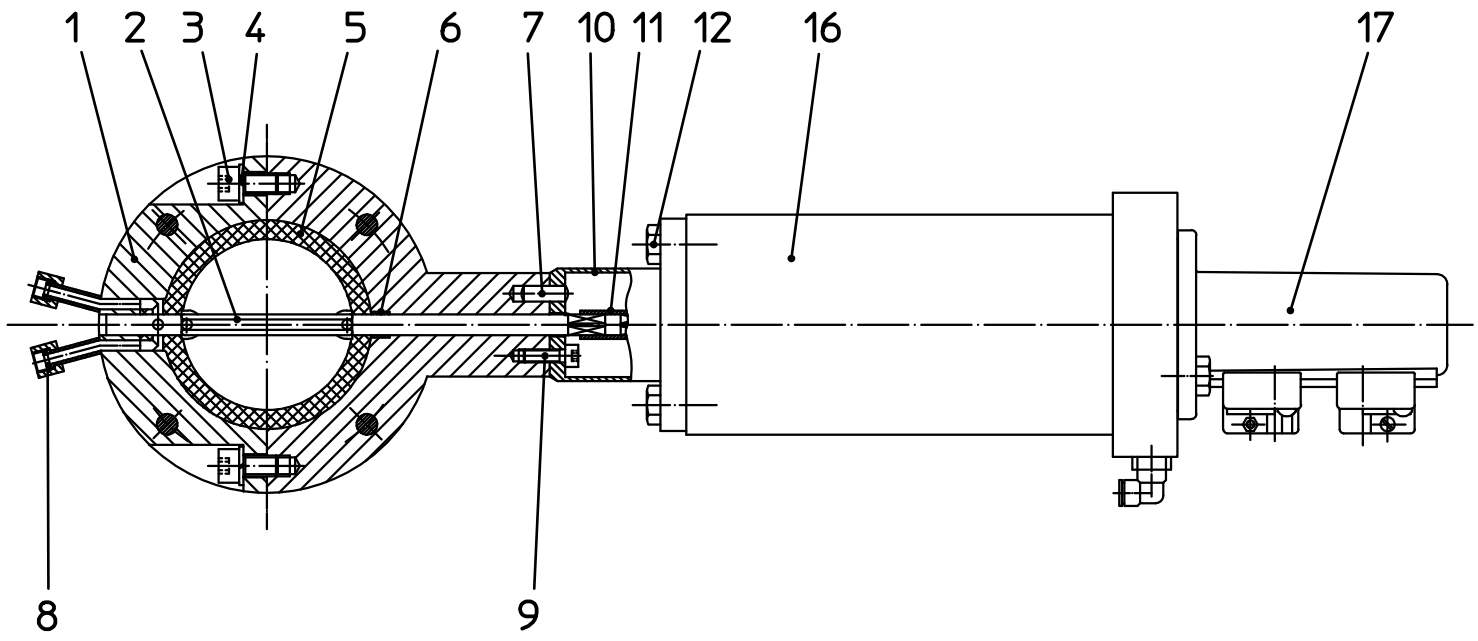
The following seal materials are available (fill in last two digits of ref.-no.)

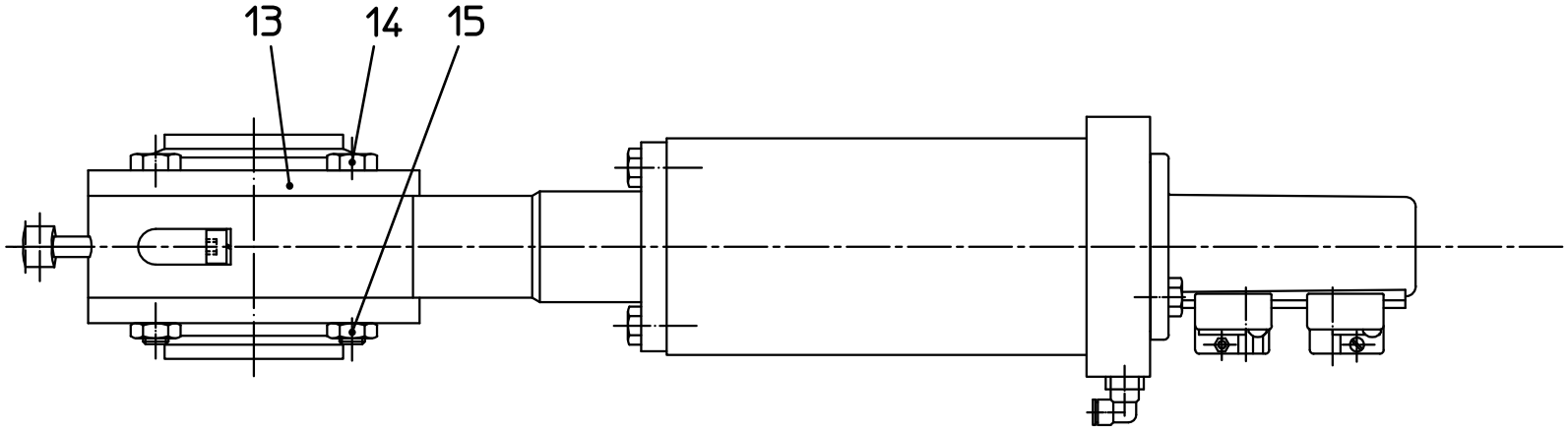
* Dichtungswerkstoff: material seals:

../33-HNBR
../93-EPDM

** Werkstoff metallisch + Dichtung: material metallic + seal

../81-1.4404-EPDM





Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
DN50-125

Blatt 2

	Datum	Name
Gezeichnet	15.01.05	Trytko
Geprüft	23.03.05	Goebel
Normgepr.		

Datum	01/05	04/05	06/05	08/05					
Name	Trytko	Trytko	Trytko	Trytko					

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039

Pos. item	Menge quantity	Benennung description	DN 25 WS-Nr. ref.-no.	40 WS-Nr. ref.-no.	50 WS-Nr. ref.-no.	65 WS-Nr. ref.-no.	80 WS-Nr. ref.-no.	100 WS-Nr. ref.-no.	125 WS-Nr. ref.-no.	150 WS-Nr. ref.-no.
		DSV-ohne Betätigung,Adapter,Flansch ** DSV-ohne Betätigung,Adapter,Flansch			25-81-990/	25-81-991/	25-81-992/	25-81-993/	25-81-994/	
1	1	Gehäuse komplett Housing complete								
2	1	Klappe Disc			08-55-026/43	08-55-027/43	08-55-028/43	08-55-029/43	08-55-030/43	
3	2	Skt. Schraube Hex. screw			DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	=	DIN EN ISO 4762 -M12x30-A2-70	
4	2	Federring Spring ring			DIN 7980-NIRO-A2-8		DIN 7980-NIRO-A2-10		DIN 7980-NIRO -A2-12	
5	1	Klappendichtung * Disc seal			58-33-176/	58-33-177/	58-33-178/	58-33-179/	58-33-180/	
6	1	Lagerbuchse Bearing			08-01-205/52	=	08-01-206/52	=	08-01-207/52	
7	2	Zylinderstift Cyl. pin			DIN 7-M6-NIRO-A2 6x16				DIN 7-M6-NIRO -A2 6x28	
8	2	Verschraubungsdichtung Union seal			58-01-056/93	=	=	=	=	
9	2	Skt. Schraube Hex. screw			DIN EN ISO 4762-M5x16-A2-70					
10	1	Adapterflansch Adapter flange			09-55-007/	=	09-55-008/	=	09-55-009/	
11	1	Kupplung Coupling			08-52-310/12	=	08-52-311/12	08-52-312/12	08-52-313/12	
12	2	Skt. Schraube Hex. screw			DIN EN 24017-M8x16-A2-70				DIN EN 24017-M10x16-A2-70	
13	2	Flansch DSV Flange DSV			09-51-042/	09-51-043/	09-51-044/	09-51-045/	09-51-046/	
14	4	Skt. Schraube Hex. screw			DIN EN 24017-M8x70-A2-70	DIN EN 24017-M10x70-A2-70			DIN EN 24017-M12x90-A2-70	
15	4	Skt. Mutter Hex. nut			DIN EN 24032-M8-A2	DIN EN 24032-M10-A2			DIN EN 24032-M12-A2	
16	1	Drehantrieb F/L für RME Actuator spring/air for control unit			15-37-070/17	=	15-37-106/17	=	=	
17	1	VSM Drehantrieb RME m. INI-Halter PSH turning actuator RME with INI-holder			15-33-180/93	=	=	=	=	

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
DN50-125

Blatt 3

	Datum	Name
Gezeichnet	07.07.05	Trytko
Geprüft		
Normgepr.		

Datum	07/05
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039

Pos. item	Menge quantity	Benennung description	DN 25 WS-Nr. ref.-no.	40 WS-Nr. ref.-no.	50 WS-Nr. ref.-no.	65 WS-Nr. ref.-no.	80 WS-Nr. ref.-no.	100 WS-Nr. ref.-no.	125 WS-Nr. ref.-no.	150 WS-Nr. ref.-no.
		Pos. 5, 6, 8 nur im kompletten Dichtungssatz erhältlich Pos. 5, 6, 8 available as complete seal kits only								
	1	Dichtungssatz EPDM Seal kit			58-34-595/01	58-34-596/01	58-34-597/01	58-34-598/01	58-34-599/01	
	1	Dichtungssatz HNBR Seal kit			58-34-595/06	58-34-596/06	58-34-597/06	58-34-598/06	58-34-599/06	

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
2-4 zoll / inch

Besteht aus 3 Blatt Blatt 1

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039.1

Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen

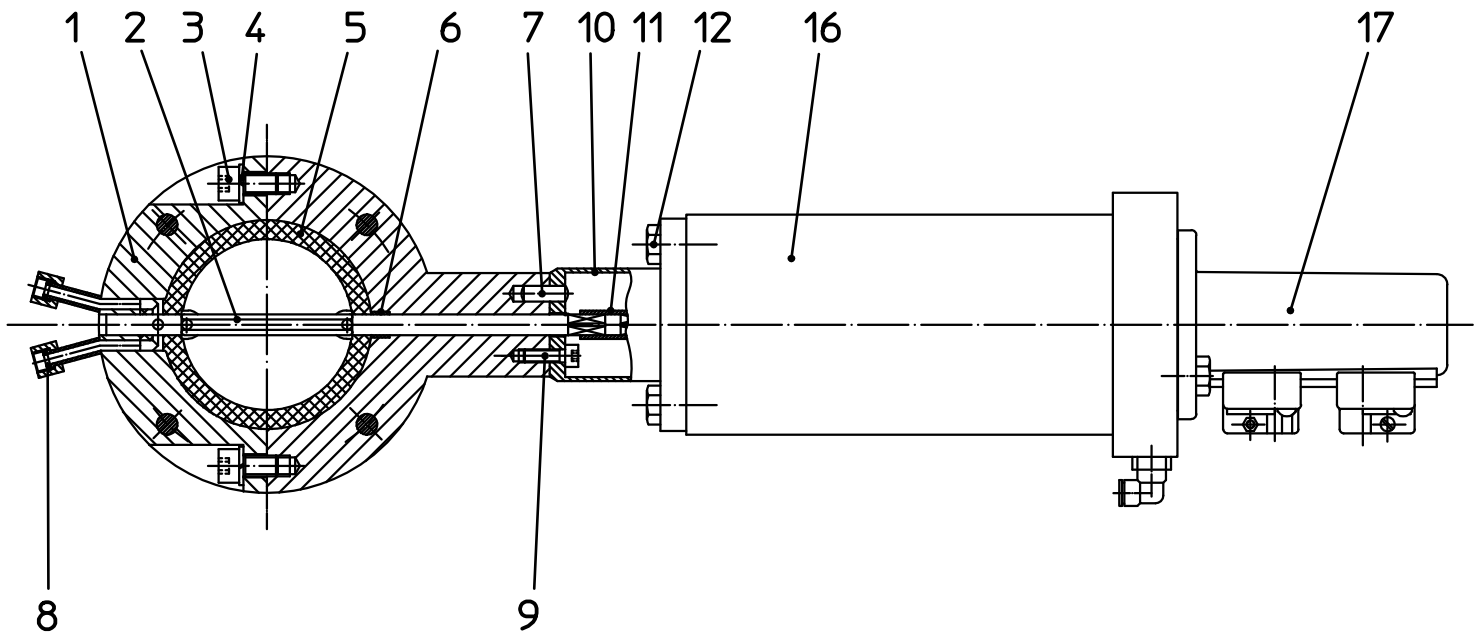
The following seal materials are available (fill in last two digits of ref.-no.)

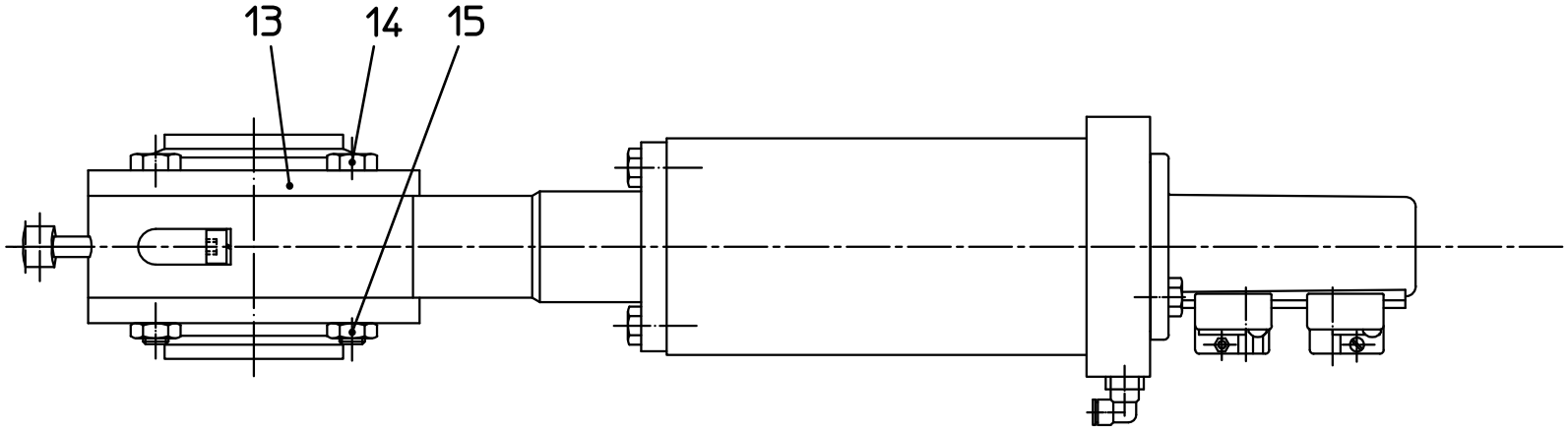
* Dichtungswerkstoff: material seals:

../33-HNBR
../93-EPDM

** Werkstoff metallisch + Dichtung: material metallic + seal

../81-1.4404-EPDM





Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
2-4 zoll / inch

Blatt 2

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05	08/05								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039.1

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		DSV-ohne Betätigung,Adapter,Flansch ** DSV-ohne Betätigung,Adapter,Flansch			25-81-990/	25-81-991/	25-81-996/	25-81-993/		
1	1	Gehäuse komplett Housing complete								
2	1	Klappe Disc			08-55-026/43	08-55-027/43	08-55-032/43	08-55-029/43		
3	2	Skt. Schraube Hex. screw			DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	=		
4	2	Federring Spring ring			DIN 7980-NIRO-A2-8		DIN 7980-NIRO-A2-10			
5	1	Klappendichtung * Disc seal			58-33-176/	58-33-177/	58-33-182/	58-33-179/		
6	1	Lagerbuchse Bearing			08-01-205/52	=	08-01-206/52	=		
7	2	Zylinderstift Cyl. pin			DIN 7-M6-NIRO-A2 6x16					
8	2	Verschraubungsdichtung Union seal			58-01-056/93	=	=	=		
9	2	Skt. Schraube Hex. screw			DIN EN ISO 4762-M5x16-A2-70					
10	1	Adapterflansch Adapter flange			09-55-007/	=	09-55-008/	=		
11	1	Kupplung Coupling			08-52-310/12	=	08-52-311/12	08-52-312/12		
12	2	Skt. Schraube Hex. screw			DIN EN 24017-M8x16-A2-70					
13	2	Flansch DSV Flange DSV			09-51-582/	09-51-583/	09-51-584/	09-51-585/		
14	4	Skt. Schraube Hex. screw			DIN EN 24017- M8x70-A2-70	DIN EN 24017-M10x70-A2-70				
15	4	Skt. Mutter Hex. nut			DIN EN 24032- M8-A2	DIN EN 24032-M10-A2				
16	1	Drehantrieb F/L für RME Actuator spring/air for control unit			15-37-070/17	=	=	15-37-106/17		
17	1	VSM Drehantrieb RME m. INI-Halter PSH turning actuator RME with INI-holder			15-33-180/93	=	=	=		

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV FZ-VSM
Double seal butterfly valve DSV FZ-PSH
2-4 zoll / inch

Blatt 3

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05									
Name	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.039.1

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		Pos. 5, 6, 8 nur im kompletten Dichtungssatz erhältlich Pos. 5, 6, 8 available as complete seal kits only								
	1	Dichtungssatz EPDM Seal kit			58-34-595/01	58-34-596/01	58-34-593/01	58-34-598/01		
	1	Dichtungssatz HNBR Seal kit			58-34-595/06	58-34-596/06	58-34-593/06	58-34-598/06		

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Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV mit Handbetätigung
Double seal butterfly valve DSV with handle
DN50-125

Besteht aus 3 Blatt Blatt 1

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.040

Es stehen verschiedene
Dichtungswerkstoffe zur Verfügung.
Bitte WS-Nr. ergänzen

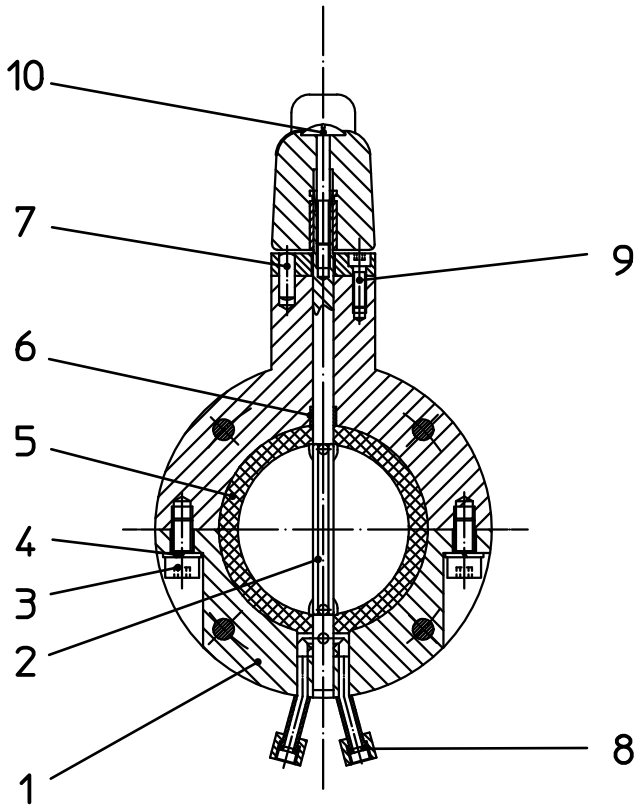
The following seal materials
are available (fill in last
two digits of ref.-no.)

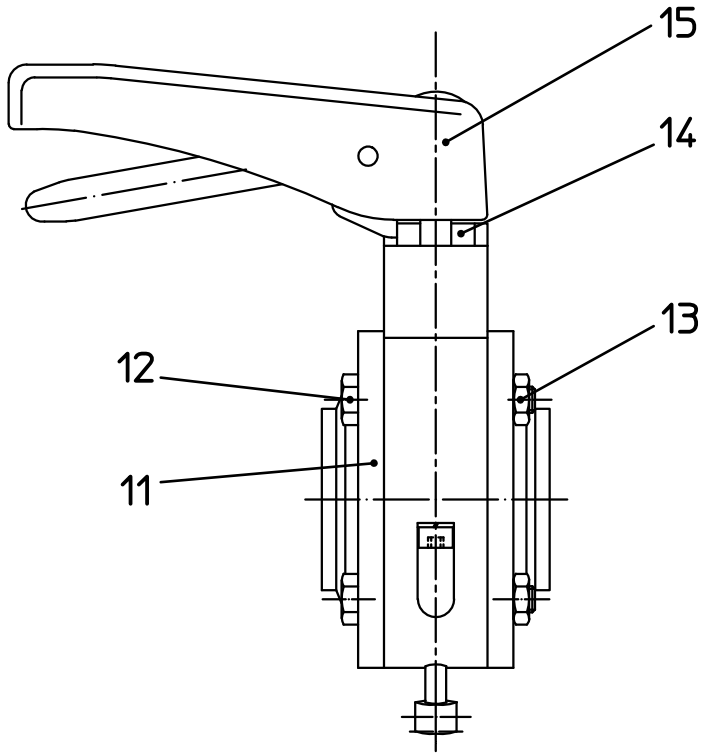
* Dichtungswerkstoff: material seals:

../33-HNBR
../93-EPDM

** Werkstoff metallisch + Dichtung:
material metallic + seal

../81-1.4404-EPDM





Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV mit Handbetätigung
Double seal butterfly valve DSV with handle
DN50-125

Blatt 2

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05	09/05								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.040

Pos. item	Menge quantity	Benennung description	DN 25 WS-Nr. ref.-no.	40 WS-Nr. ref.-no.	50 WS-Nr. ref.-no.	65 WS-Nr. ref.-no.	80 WS-Nr. ref.-no.	100 WS-Nr. ref.-no.	125 WS-Nr. ref.-no.	150 WS-Nr. ref.-no.
		DSV-ohne Betätigung,Adapter,Flansch ** DSV-ohne Betätigung,Adapter,Flansch			25-81-990/	25-81-991/	25-81-992/	25-81-993/	25-81-994/	
1	1	Gehäuse komplett Housing complete								
2	1	Klappe Disc			08-55-026/43	08-55-027/43	08-55-028/43	08-55-029/43	08-55-030/43	
3	2	Skt. Schraube Hex. screw			DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	=	DIN EN ISO 4762 -M12x30-A2-70	
4	2	Federring Spring ring			DIN 7980-NIRO-A2-8		DIN 7980-NIRO-A2-10		DIN 7980-NIRO -A2-12	
5	1	Klappendichtung * Disc seal			58-33-176/	58-33-177/	58-33-178/	58-33-179/	58-33-180/	
6	1	Lagerbuchse Bearing			08-01-205/52	=	08-01-206/52	=	08-01-207/52	
7	2	Zylinderstift Cyl. pin			DIN 7-M6-NIRO-A2 6x16				DIN 7-M6-NIRO -A2 6x28	
8	2	Verschraubungsdichtung Union seal			58-01-056/93	=	=	=	=	
9	2	Skt. Schraube Hex. screw			DIN EN ISO 4762-M5x16-A2-70					
10	1	Flachrundschraube Screw			M8x28					
	1	Zylinderschraube Cyl. screw							DIN ISO 4762-M6x30-A2-70	
11	2	Flansch DSV Flange DSV			09-51-042/	09-51-043/	09-51-044/	09-51-045/	09-51-046/	
12	4	Skt. Schraube Hex. screw			DIN EN 24017-M8x70-A2-70	DIN EN 24017-M10x70-A2-70			DIN EN 24017-M12x90-A2-70	
13	4	Skt. Mutter Hex. nut			DIN EN 24032-M8-A2	DIN EN 24032-M10-A2			DIN EN 24032-M12-A2	
14	1	Rastscheibe DSV Locking device DSV			08-20-200/13	=	08-20-201/13	=	08-20-202/13	
15	1	Handhebel DSV Handle DSV			08-41-310/93	=	=	08-41-311/13	08-41-312/13	

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV mit Handbetätigung
Double seal butterfly valve DSV with handle
DN50-125

Blatt 3

	Datum	Name
Gezeichnet	30.06.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	06/05									
Name	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.040

Pos. item	Menge quantity	Benennung description	DN 25 WS-Nr. ref.-no.	40 WS-Nr. ref.-no.	50 WS-Nr. ref.-no.	65 WS-Nr. ref.-no.	80 WS-Nr. ref.-no.	100 WS-Nr. ref.-no.	125 WS-Nr. ref.-no.	150 WS-Nr. ref.-no.
		Pos. 5, 6, 8 nur im kompletten Dichtungssatz erhältlich Pos. 5, 6, 8 available as complete seal kits only								
	1	Dichtungssatz EPDM Seal kit			58-34-595/01	58-34-596/01	58-34-597/01	58-34-598/01	58-34-599/01	
	1	Dichtungssatz HNBR Seal kit			58-34-595/06	58-34-596/06	58-34-597/06	58-34-598/06	58-34-599/06	

02/94

Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV mit Handbetätigung
Double seal butterfly valve DSV with handle
2-4 zoll / inch

Besteht aus 2 Blatt Blatt 1

	Datum	Name
Gezeichnet	07.07.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	07/05
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.040.1

Es stehen verschiedene
Dichtungswerkstoffe zur Verfügung.
Bitte WS-Nr. ergänzen

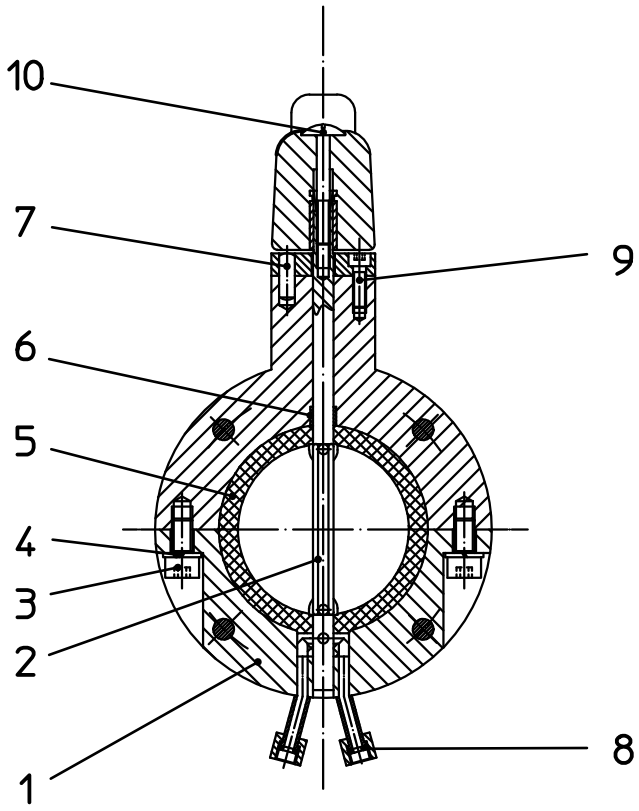
The following seal materials
are available (fill in last
two digits of ref.-no.)

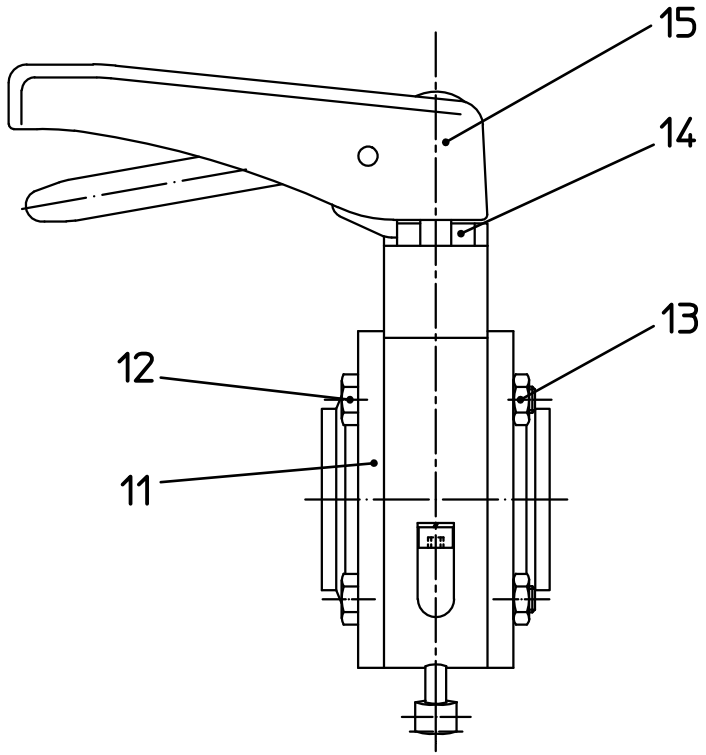
* Dichtungswerkstoff: material seals:

../33-HNBR
../93-EPDM

** Werkstoff metallisch + Dichtung:
material metallic + seal

../81-1.4404-EPDM





Ersatzteilliste: spare parts list:

Doppeldicht Scheibenventil DSV mit Handbetätigung
Double seal butterfly valve DSV with handle
2-4 zoll / inch

Blatt 2

	Datum	Name
Gezeichnet	07.07.05	Trytko
Geprüft	11.07.05	Goebel
Normgepr.		

Datum	07/05	09/05								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.040.1

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		DSV-ohne Betätigung,Adapter,Flansch ** DSV-ohne Betätigung,Adapter,Flansch			25-81-990/	25-81-991/	25-81-996/	25-81-993/		
1	1	Gehäuse komplett Housing complete								
2	1	Klappe Disc			08-55-026/43	08-55-027/43	08-55-032/43	08-55-029/43		
3	2	Skt. Schraube Hex. screw			DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	=		
4	2	Federring Spring ring			DIN 7980-NIRO-A2-8		DIN 7980-NIRO-A2-10			
5	1	Klappendichtung * Disc seal			58-33-176/	58-33-177/	58-33-182/	58-33-179/		
6	1	Lagerbuchse Bearing			08-01-205/52	=	08-01-206/52	=		
7	2	Zylinderstift Cyl. pin			DIN 7-M6-NIRO-A2 6x16					
8	2	Verschraubungsdichtung Union seal			58-01-056/93	=	=	=		
9	2	Skt. Schraube Hex. screw			DIN EN ISO 4762-M5x16-A2-70					
10		Flachrundschraube Screw			M5x28					
11	2	Flansch DSV Flange DSV			09-51-582/	09-51-583/	09-51-584/	09-51-585/		
12	4	Skt. Schraube Hex. screw			DIN EN 24017- M8x70-A2-70	DIN EN 24017-M10x70-A2-70				
13	4	Skt. Mutter Hex. nut			DIN EN 24032- M8-A2	DIN EN 24032-M10-A2				
14	1	Rastscheibe DSV Locking device DSV			08-20-200/13	=	08-20-201/13	=		
15	1	Handhebel DSV Handle DSV			08-41-310/93	=	=	08-41-311/13		
		Pos. 5, 6, 8 nur im kompletten Dichtungssatz erhältlich Pos. 5, 6, 8 available as complete seal kits only								
	1	Dichtungssatz EPDM Seal kit			58-34-595/01	58-34-596/01	58-34-593/01	58-34-598/01		
	1	Dichtungssatz HNBR Seal kit			58-34-595/06	58-34-596/06	58-34-593/06	58-34-598/06		

Ersatzteilliste: spare parts list:

Drehantrieb F/L für Rückmeldeeinheit

Actuator spring/air prepared for control unit

Besteht aus 2 Blatt Blatt 1

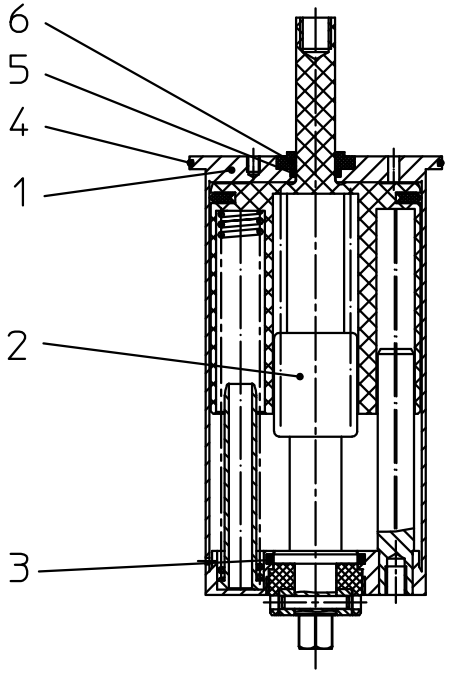
	Datum	Name
Gezeichnet	21.06.93	Trytko
Geprüft	25.06.93	Spliethoff
Normgepr.	06.07.93	Plümper

Datum	06/93	10/01								
Name	Trytko	Trytko								

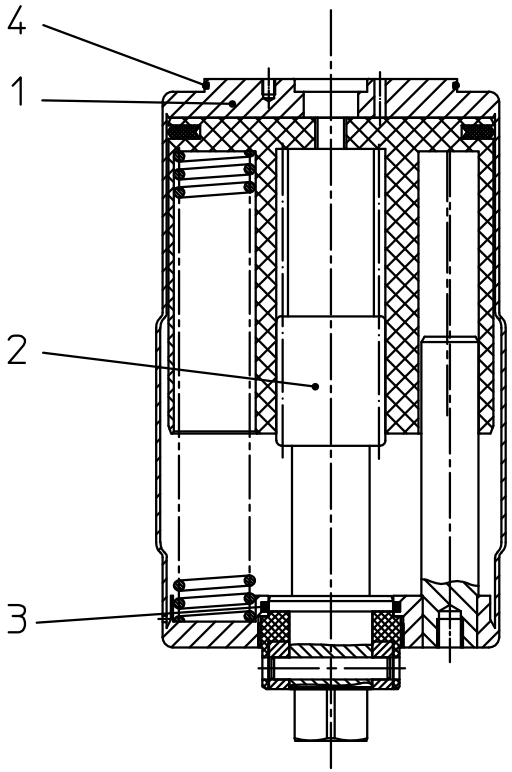
APV Rosista GmbH
D-59425 Unna
Germany

RN 01.076

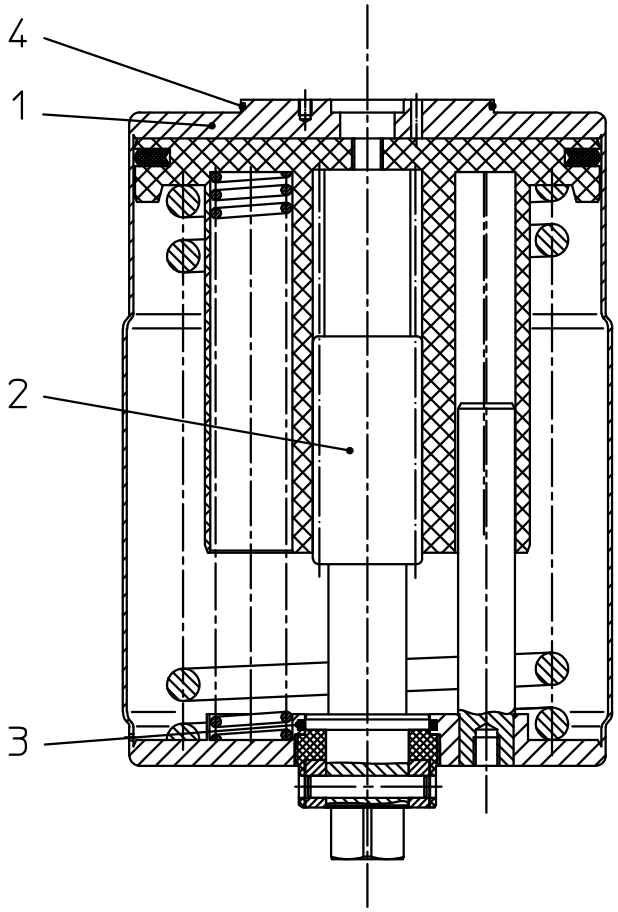
DRAT K080-RM



DRAT K125-RM



DRAT K180-RM



Ersatzteilliste: spare parts list:

Drehantrieb F/L für Rückmeldeeinheit

Actuator spring/air prepared for control unit

Blatt 2

	Datum	Name
Gezeichnet	21.06.93	Trytko
Geprüft	25.06.93	Spliethoff
Normgepr.	06.07.93	Plümper

Datum	06/93	10/01									
Name	Trytko	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.076

Pos. item	Menge quantity	Benennung description	Ausführung 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.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
	1	Drehantrieb-komplett * Actuator-complete	15-37-070/17	15-37-106/17	15-37-103/17					
1	1	Drehantrieb-geschweißt * Actuator-welded	15-37-071/17	15-37-105/17	15-37-104/17					
2	1	Spindel komplett mit Lager Shaft complete with bearing	15-24-021/13	15-24-031/13	15-24-033/13					
3	1	O-Ring O-ring	OR 32,2x3 NBR 70-75 Shore A	OR 49,5x3 NBR 70-75 Shore A						
4	1	O-Ring O-ring	OR 90x2 NBR 70-75 Shore A							
5	1	O-Ring O-ring	OR 15,3x2,4 NBR 70-75 Shore A							
6	1	Druckstück Drehantrieb K080 Spacer for actuator K080	08-48-117/53							