

Operating Manual **DSV** Double Seal Butterfly Valve







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





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 values of the series SV1 and SVS 1 F in the nominal diameters DN 25 - 100, DN 125 - 250 and $1^{\circ} - 4^{\circ}$

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

aum

Manager Research and Development



DSV-UK2.qxp / 10.2005



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	DSV - FZ (NC = normally closed) DN 50 - 125 DSV - FZ (NC = normally closed) inch 1"-4"	- RN 01.039 - RN 01.039.1
	DSV - H (manual function) DN 50 - 125 DSV - H (manual function) inch 2"-4"	- RN 01.040 - RN 01.040.1
	Turning actuator F/L (spring/air) for feedback un	it - 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.

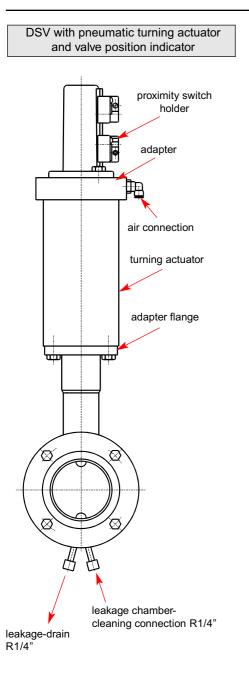
Defective turning actuators must be returned to your APV Solutions & Services company for their professional disposal and free of charge for you.

Please address to your local APV representative.

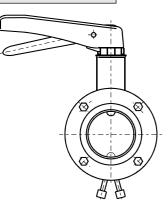




3. Mode of Operation



DSV with manual actuation



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.

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

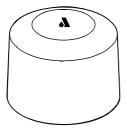
4.1 Valve position indication (for actuated valves only) Proximity switches to signal the limit position of the valve disc can

be installed if required.

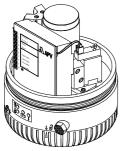
We recommend to use our APV standard proximity switches. Type: three-wire proximity switch (ref.-No. 08-60-011/93) Operating distance: 4 mm / diameter: 11 mm / length: 30 mm.

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:

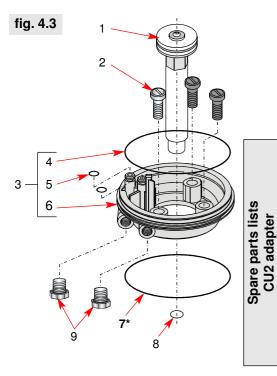
Direct Connect	CU31 Direct Connect
refNo.:	16 - 31 - 232/93
Profibus	CU31 Profibus
refNo.:	08 - 45 - 001/93
Device Net	CU31 Device Net
refNo.:	16 - 31 - 240/93
AS-interface	CU31 AS-interface 2.1
refNo.:	08 - 45 - 020/93





4. Auxiliary Equipment

adapter for DN50 - 65 and 2"- 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)

	ignation: efNo.:		CU2 adapter SV 08-48-416	-
pos.	stk.	desi	gnation	refNo.:
-	-		oter complete kit adapter	08-48-416/93 00-00-000/00
1 2	1 3		ating cam screw M5x18 ISO1207	08-60-779/93 08-60-760/15 -
3 - 4 - 5 - 6	1 1 2 1	o-rin	oter kit g 88,62 - 1,78 /NBR g 5,28 - 1,78 /NBR oter	08-60-333/93 58-06-387/83 58-06-044/83 08-60-728/93
7 * 8 9	1 1 2	o-rin	g 90 - 2 /NBR ig 13 - 2 / NBR i plug G1/8"	58-06-426/83 58-06-049/83 08-60-740/93

* scope of supply: actuator

adapter for DN80 - 125 and 4" 4.4

fig. 4.4 4 5 6 7 7 8 9 10 9

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)

		ignation: efNo.:		CU2 Adapter SVS1F 125 08-48-417	
	pos.	stk.	desi	gnation	refNo.:
		-		oter complett kit adapter	08-48-417/93 00-00-000/00
er	1 2	1 3		rating cam screw M5x18 ISO1207	08-60-780/93 08-60-760/15
OUZ AUAPIEI	3 - 4 - 5 - 6	1 1 2 1	o-rin	oter kit 1g 88,62 - 1,78 /NBR 1g 5,28 - 1,78 /NBR 1gter	- 08-60-333/93 58-06-387/83 58-06-044/83 08-60-728/93
	7 * 8 9 10 11	1 1 1 2	v-se o-rin o-rin	ng 90 - 2 /NBR al 20 x 28 x 4 / NBR ng 11 - 3 / NBR ng 13 - 2 / NBR d plug G1/8"	58-06-426/83 58-32-010/83 58-06-039/83 58-06-049/83 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!

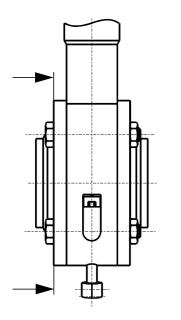
DSV valves are mounted between "flanges-DSV".

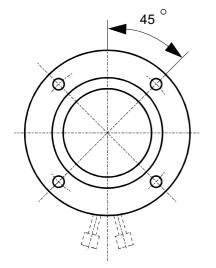


Attention: Observe welding instructions.

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.









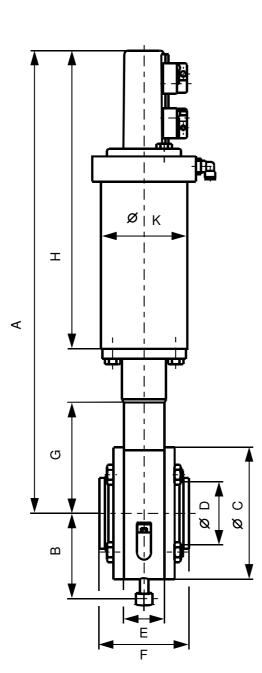
Ø | 125

0 0 0

Ξ

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6. Dimensions / Weights



dimensions in mm

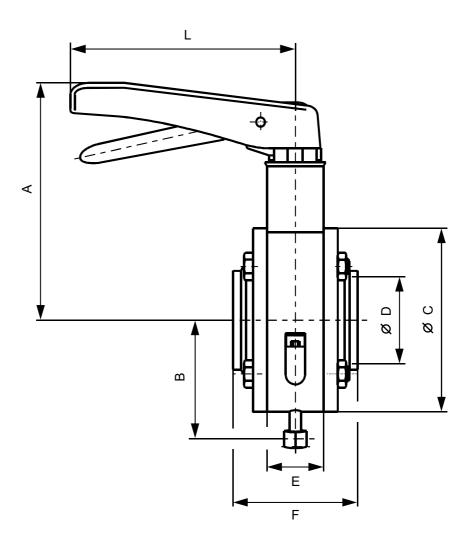
												weighs
DN	A	В	ØC	ØD	E	F	G	Н	ØК	A1	H1	in kg
50 65 80 100 125	422 432 514 525 539	84 95 105 115 125	108 130 146 166 205	50 66 81 100 125	38 38 41 41 53	86 86 89 89 101	85 95 108 119 133	295 295 344 344 344	85 85 125 125 125	464 474 556 567 581	337 337 386 386 386 386	
inch										1		^
2" 2,5" 3" 4"	422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

7





6. Dimensions / Weights



dimensions in mm

DN	Α	В	ØC	ØD	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 ⁰ C EPDM, HNBR
- short-term steam load	: 140 ⁰ C EPDM, HNBR
- opening angle butterfly valves	: 90 ⁰
min. control pressuremax. control pressure	: 6 bar : 10 bar
- air connection (for hose)	: 6 x 1
- cleaning connection	: R1/4"

(use dry and clean pneumatic air, only)

DN	l 50-65 / 2"-	3"	D	N 80-125 / 4"	,
pneumat	tic air consi	umption	pneuma	tic air consu	mption
at 6 bar o	control pres	sure	at 6 ba	control pre	ssure
turning actuat	or K 080 (F/	L) (spring/air)	turning actuat	or K 125 (F/L	.) (spring/air)
per move	ment 1,8 (NL)	per move	ment 5,5 (N	NL)
closi	ng times in	sec.	closi	ng times in s	sec.
hose length	1m	10m	hose length	1m	10m
	2,5 sec.	4,2 sec.		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: option: 	EPDM 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





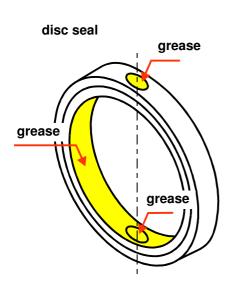
9. Maintenance

- 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.

turning actuator 10 (yl. pin (yl. pin (yl. pin (bush bearing) (jl. pin (bush bearing) (jl. pin (jl. pin

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



Translation of original manual

rev. 2





Your local contact:

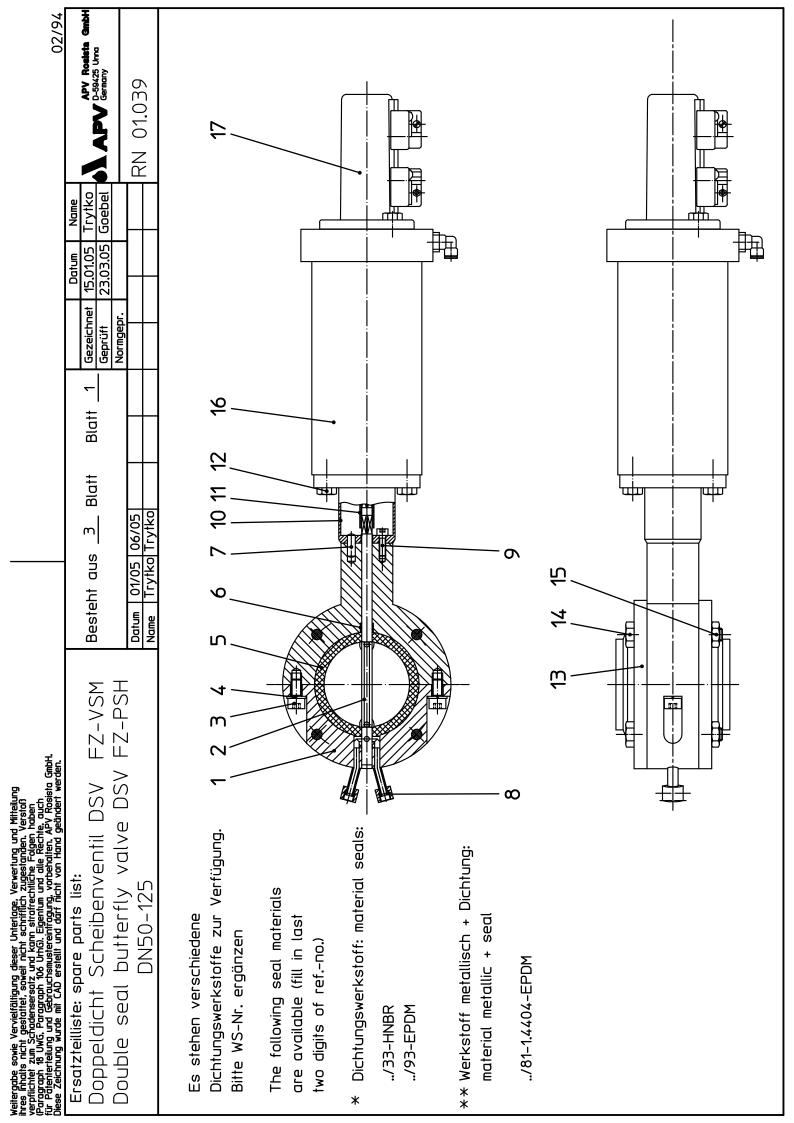
APV Zechenstraße 49 D-59425 Unna

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

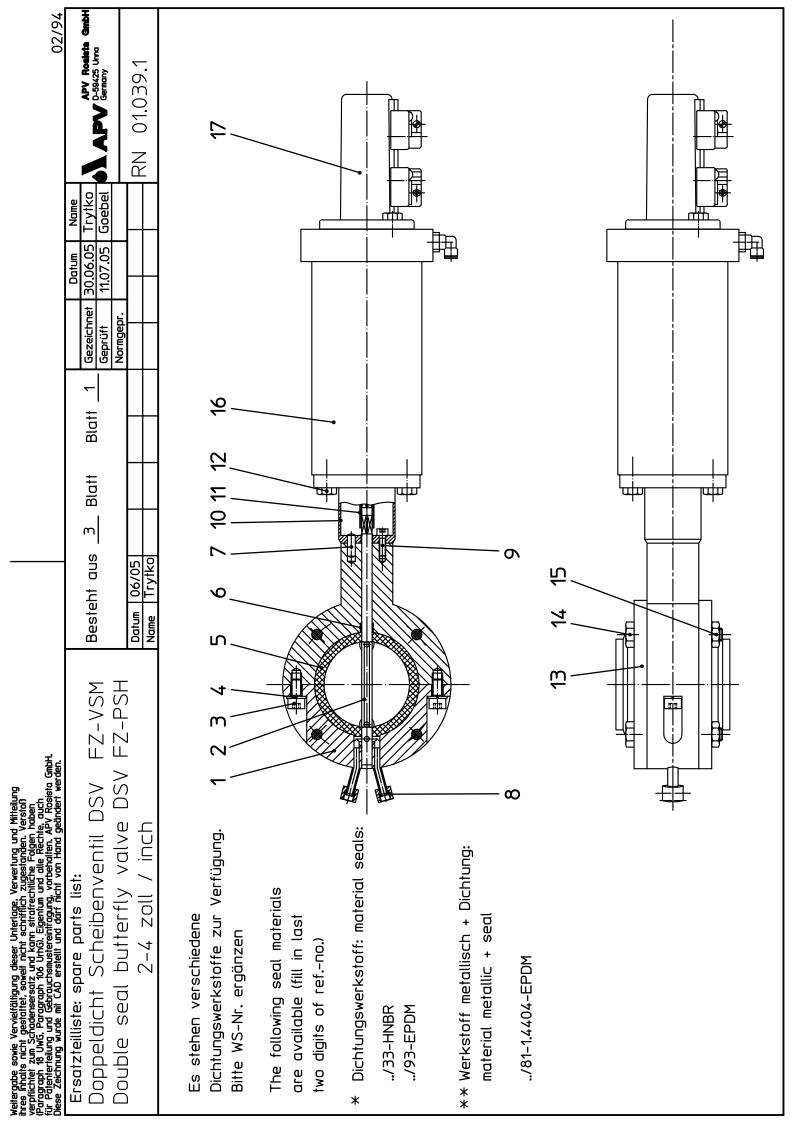
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ПСS		Ersatzteilliste: spare parts list: Doppeldicht Scheibenventil DSV	FZ-VSM		Blatt 2		Gezeichnet Geprüft Normoor	Datum Name 15.01.05 Trytko 23.03.05 Goebel	APV	APV Roeista GmbH P D-59425 Urna Germany
	שוחטר	e seul duiteitiy valve dov DN50-125		Datum C Name T	01/05 04/05 06/05 08/05 Trytka Trytka Trytka	6/05 08/05 91ka Trytka			RN 01.0	39
	apr Viitn	Benenninn	25	40	50	65 D	N 80	100	125	150
	dna IJer	description	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
		DSV-ohne Betätigung,Adapter,Flansch <mark>^K</mark> DSV-ohne Betätiauna.Adapter,Flansch	*		25-81-990/	25-81-991/	25-81-992/	25-81-993/	25-81-994/	
۲	- -									
7	<u>× –</u>	Klappe Disc			08-55-026/43	08-55-027/43	08-55-026/43 08-55-027/43 08-55-028/43	08-55-029/43	08-55-030/43	
m	2	Skt. Schraube Hex. screw			DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762 -M8x25-A2-70	din en ISO 4762din en ISO 4762din en ISO 4762 -M8x20-A2-70 -M8x25-A2-70 -M10x25-A2-70	=	DIN EN ISO 4762 -M12x30-A2-70	
4	2				DIN 7980-NIRO-A2-8	I-A2-8	DIN 7980-NIRO-A2	-A2-10	din 7980-Niro -A2-12	
Ŋ	<u>+</u>	Klappendichtung Disc seal			58-33-176/	58-33-177/	58-33-178/	28-33-179/	58-33-180/	
9	-	בי נו ו			08-01-205/52	H	08-01-206/52	II	08-01-207/52	
7	2	Zylindērstift Cvl. pin			DIN 7-M6-NIRO-A2	1-A2 6x16			DIN 7-M6-NIRD -A2 6x28	
8	2	Verschraubungsdichtung Union seal			58-01-056/93	II	II	H	II	
6	2	Skt. Schraube Hex. screw			DIN EN ISO 47	4762-M5×16-A2-70	70			
10	1				09-55-007/	II	09-55-008/	II	09-55-009/	
11	- -	Kupplung Coupling			08-52-310/12	II	08-52-311/12	08-52-312/12	08-52-313/12	
12	2	Skt. Schraube Hex. screw			DIN EN 24017-M8×16-A2-70	-M8x16-A2-70			DIN EN 24017- M10x16-A2-70	
10	2	Flansch DSV Flanae 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-M10×70-A2-70		DIN EN 24017- M12x90-A2-70	
15	4 F	Mutter . nut			DIN EN 24032- M8-A2	DIN EN 24032-M10-A2	-M10-A2		DIN EN 24032- M12-A2	
16	-	nantrieb F/L füi <u>Jator spring/air</u>			15-37-070/17	II	15-37-106/17	11	11	
17	~	원 문 문			15-33-180/93	II	II	II	II	

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25 20 50 65 N 60 100 125 Pos. 5, 6, 8 num in kompleter Dichungssatz erbititic w5-Ni. <		ארחו		Datum Name	07/05 Trytko				RN 01.0	39
Big description WS-Nt. WS-Nt			25	40	50	65 0	N 80	100	125	150
Pos. 5, 6, 8 rur in komptetten Dichtungsatz erhättich Pos. 5, 6, 8 avaitable as comptete seal kits onty. Dichtungsatiz EPDM Seal kitrinssatiz 58-34-595/nd 58-34-597/nd 58-34-598/nd Dichtungsatiz FPDM Seal kitrinssatiz HNBR Dichtungsatiz FPDM Seal kitrinssatiz FPDM Seal kitrinssatiz FPDM Dichtungsatiz HNBR Seal kitringsatiz FPDM Seal kitringsatiz	item M ⁶		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
Dichtungsaatz EPDM 58-34-595/01 58-34-597/06 58-34-597/06 58-34-598/06 Dichtungsaatz HNBR 58-34-595/06 58-34-597/06 58-34-598/06 58-34-598/06 Dichtungsaatz HNBR 58-34-595/06 58-34-596/06 58-34-598/06 58-34-598/06 Dichtungsaatz HNBR 58-34-595/06 58-34-596/06 58-34-598/06 58-34-598/06 Dichtungsaatz HNBR 58-34-596/06 58-34-596/06 58-34-598/06 58-34-598/06 Dichtungsaatz HIBR HIBR 58-34-596/06 58-34-596/06 58-34-598/06 Dichtungsaatz HIBR HIBR HIBR HIBR HIBR HIBR Dichtungsaatz HIBR HIBR HIBR HIBR HI		5, 6, 8 5, 6, 8	ungssatz erhi eal kits only	ältlich						
Dichungsaatz HNBR 58-34-595/06 58-34-595/06 58-34-598/06 Seud kif E E E E E Indication E E E E E Indin E E E E		Dichtungssatz Seal kit			58-34-595/01				58-34-599/01	
		Dichtungssatz Seat kit			58-34-595/06	58-34-596/06	58-34-597/06	58-34-598/06	58-34-599/06	



Weiterge ihres In Verpflict Paragru für Pate Diese Z	halts nic halts nic hat zun hat 2 haterteilt sichnung	Meitergabe sowie Vervielfättigung dieser Unterlage, Verwertung und Mitteilung Ihres Inhalts nicht gestattet, soweit nicht schrifflich zugestanden. Verstaß verpflichtet zum Schadensersaltz und kann strafrechtliche Falgen haben för grappen 18 UwG, Penzgraph 106 UrhG). Eigentum und alle Rechte, auch Gir Patienterteilung und Gebrauchsmustereinfragung, vorbehalten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf ficht von Hand geändert werden.	mbH. en.							02/94
	Ersatzteil Doppel	Liiste: spare parts list dicht Scheibenv	FZ-VSM		Blatt 2		Gezeichnet Geprüft Normaenr	DatumName30.06.05Trytko11.07.05Goebel		APV Roeista GmbH D-59425 Urna Germany
	וחח	seur purrerriy varve 2-4 zoll / inch		Datum C Name T	06/05 08/05 Trytko Trytko				RN 01.039.1	39.1
Pus	ορι Αίμα	Велепина	-	1,5"	2"	2,5"	'n	- ⁴		
item	Mer		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
		DSV-ohne Betätigung,Adapter,Flansch ^K DSV-ohne Betätigung,Adapter,Flansch	*			25-81-991/	25-81-996/	25-81-993/		
~	~	Gehäuse kompleit Housing complete								
2	~	Klappe Disc			08-55-026/43 08-55-027/43 08-55-032/43 08-55-029/43	08-55-027/43	08-55-032/43	08-55-029/43		
m	2	Skt. Schraube Hex. screw			DIN EN ISO 4762DIN EN ISO 4762DIN EN ISO 4762 -M8x20-A2-70 -M8x25-A2-70 -M10x25-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	"		
4	2	ם ב			DIN 7980-NIRO-A2-8	-A2-8	DIN 7980-NIRO-A2-10)-A2-10		
Ŋ	<u>ل</u>	Klappendichtung Disc seal			58-33-176/	58-33-177/	58-33-182/	58-33-179/		
9		ם. ם ו			08-01-205/52	11	08-01-206/52	II		
7	2	Zylindērstift Cvl. pin			DIN 7-M6-NIRO-A2	-A2 6x16				
80	2	Vérschraubungsdichtung Union seal			58-01-056/93	u	II	u		
6	2	Skt. Schraube Hex. screw			DIN EN ISO 4762-M5x16-A2-70	62-M5x16-A2-;	20			
10	4	Adapterflansch Adapter flanae			09-55-007/	11	09-55-008/	"		
11	۲ ۲	Kupplung Couplina			08-52-310/12	11	08-52-311/12	08-52-312/12		
12	2	Skt. Schraube Hex. screw			DIN EN 24017-M8×16-A2-70	M8x16-A2-70				
13	2	Flansch DSV Flanae DSV			09-51-582/	09-51-583/	/785-15-60	09-51-585/		
14	4	Skt. Schraube Hex. screw			DIN EN 24017- M8x70-A2-70	DIN EN 24017-	DIN EN 24017-M10×70-A2-70			
15	4	Mutter nut			DIN EN 24032-	DIN EN 24032-M10-A2	-M10-A2			
16	1	nantrieb F/L für Jator sprina/air			15-37-070/17	II	II	15-37-106/17		
17	~	治 편 문			15-33-180/93	II	II	II		

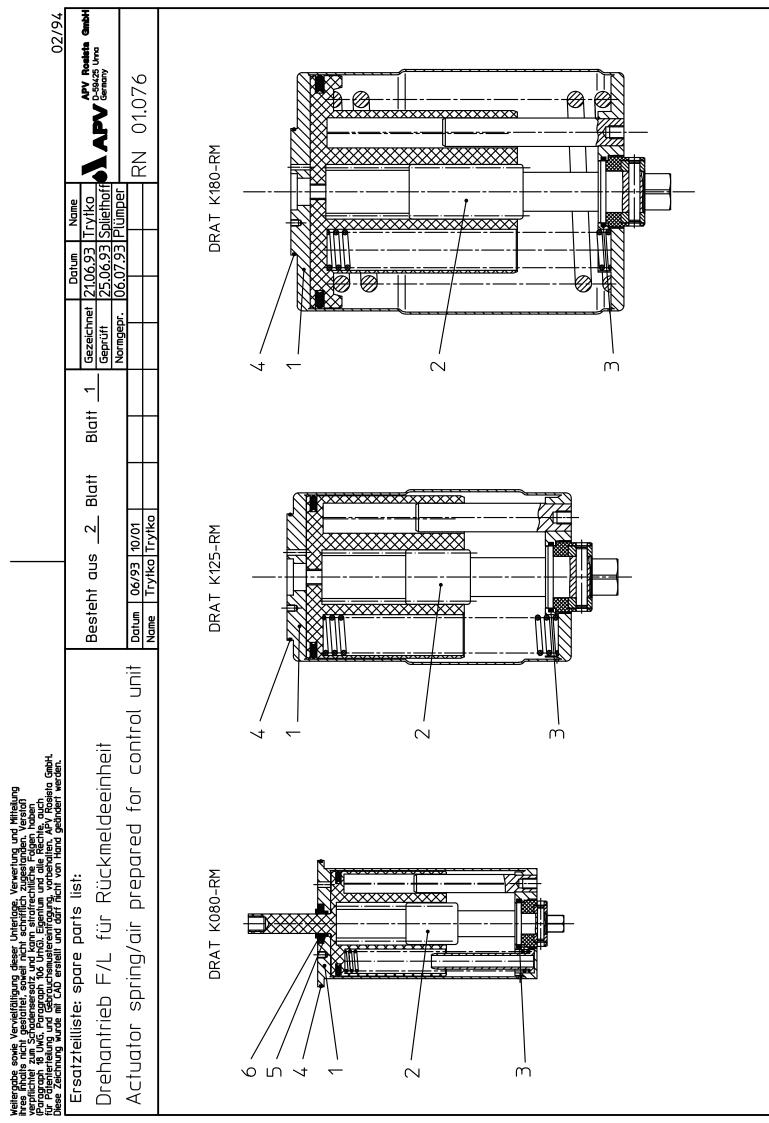
Weitergi ihres In verpflic Paragri für Patt	the sowie Vi natts nicht c ntet zum Sci niterteilung i sichnung wu	Weitergabe sowie Vervielfältigung dieser Unterlage. Verwertung und Mitteilung Ihres finhalts nicht gestattet, soweit nicht schriftflich zugestanden. Verstaß verpflichtet zum Schadensersatz und kann strafrechtliche Falgen haben für Patienteilung und gebrauchsmusstereinfragung, vorbeholten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.	GmbH. den.							02/94
	Ersatzteill Doppela	Ersatzteilliste: spare parts list: Doppeldicht Scheibenventil DSV FZ-VSM Double soal buttorfly valve DSV F7 DSH	FZ-VSN		Blatt 3		Gezeichnet Geprüft Normaenr	Datum Name 30.06.05 Trytko 11.07.05 Goebel		APV Rosista GmbH D-59/25 Unna Germany
Ĕ		ה מ ר		Datum Name	06/05 Trytko				RN 01.0	01.039.1
	ορι Αίμα	החוותההתפ		1,5"	2"	2,5*	ľm	4 "		
item	dna Wet	description	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
	6 6	Pos. 5, 6, 8 nur im kompletten Dichtungssatz erhältlich Pos. 5, 6, 8 available as complete seal kits only	itungssatz erhält seal kits only	'lich						
	1 Dicht San	Dichtungssatz EPDM			58-34-595/01	58-34-596/01	58-34-593/01	58-34-598/01		
	1 Dicht Seal	Dichtungssatz HNBR Seal kit			58-34-595/06	58-34-596/06	58-34-593/06	58-34-598/06		

weitergabe sowie Vervietigitigung dieser Unterlage, Verwertung und Mittelung prese finalts nicht gestattet, sowiet nicht schriftlich zugestanden. Verstan pergegraph 18. Uwi Schaderstenstreicht zugestanden. Und alle Regen und für Patienteilung und Gebrauchsmistereinfrogung, vorbehalten. APV Rosista GmbH. Ersatzteilliste: spare parts list: Doppeldicht Scheibenventil DSV mit Handbetätigung Double seal butterfly valve DSV with handle DN50-125	dbetätigung Besteht aus <u>3</u> Blatt Blatt _ andle <u>Datum 06/05</u>	1 Datum Name 1 Gezeichnet 30.06.05 Trytko 1 Geprüft 11.07.05 Goebel Normgepr. RN 01.04.0
Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen		
The following seal materials are available (fill in last two digits of refno.)	10	Ú 4
 Dichtungswerkstoff: material seals: /33-HNBR /93-EPDM 	6	¢
** Werkstoff metallisch + Dichtung: material metallic + seal /81-1.4404-EPDM		

Weitergabe sowie Vervielfättigung dieser Unterlage, Verwertung und Mitteilung Ihres Inhalts nicht gestattet, soweit nicht schriftlich zugestanden. Verstoß verpflichtet zum Schadensersatz und kann strafrechtliche Falgen haben für Patenterteilung und Gebruchsmustereinfragung, vorbehalten. APV Rosistig GmbH.	lung A sista GmbH.							
Diese Zeichnung wurde mit CAD erstellt und därf ñicht von Hand geände	rt werden.	-			_	ŀ	_	02/94
eilliste: Jicht	t Handbetäti <u>c</u>	bunf	Blatt 2		Gezeichnet Geprüft	Datum Name 30.06.05 Trytko 11.07.05 Goebel	VAN Vo	APV Roeista GmbH P D-59425 Unna Germany
Uouble seal buttertly valve USV with handle	with handle	Datum (96/05 09/05		Normgepr.		RN 010/0	07
CZINCNIA	_	Name	Trytko Trytko	(
Positi Tomorod Benenning	25	70	50	65 U	N 80	100	125	150
Mer	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
	ch [%] * ch		25-81-990/	25-81-991/	25-81-992/	25-81-993/	25-81-994/	
1 1 Gehäuse komplett Housing complete								
2 1 Klappe			08-55-026/43	08-55-027/43	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 4762DIN EN ISO 4762DIN EN ISO 4762 -M8x20-A2-70 -M8x25-A2-70 -M10x25-A2-70	DIN EN ISO 4762 -M8x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	II	DIN EN ISO 4762 -M12x30-A2-70	
4 2 Federring Spring ring			DIN 7980-NIRO-A2-8	-A2-8	DIN 7980-NIRO-A2-10	-A2-10	DIN 7980-NIRO -A2-12	
htung	*		58-33-176/	58-33-177/	58-33-178/	58-33-179/	58-33-180/	
ם ב			08-01-205/52	II	08-01-206/52	I	08-01-207/52	
7 2 Zylinderstift Cvl. pin			DIN 7-M6-NIRO-A2	-A2 6x16			DIN 7-M6-NIRD -A2 6x28	
			58-01-056/93	u	II	II	II	
9 2 Skt. Schraube Hex. screw			DIN EN ISO 47	4762-M5x16-A2-70	20			
10 1 Flachrundschraube Screw			M8x28					
1 Zylinderschraube Cvl. screw							DIN ISO 4762- M6x30-A2-70	
11 2 Flansch DSV Flanae 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 24032-1 M8-A2	DIN EN	24032-M10-A2		DIN EN 24032- M12-A2	
14 1 Rastscheibe DSV Lockina device DSV			08-20-200/13	II	08-20-201/13	II	08-20-202/13	
15 1 Handhebel DSV Handle DSV			08-41-310/93	II	11	08-41-311/13	08-41-312/13	

$ \begin{array}{ $	Weitergabe Neitergabe ihres Inhalt verpflichtet (Paragraph für Patente Diese Zeich	Weitergabe sowie Vervielfättigung dieser Unterlage, Verwertung und Mitteilung Ihres Inhalts nicht gestattet, soweit nicht schriftlich zugestanden. Verstaß verpflichtet zum Schadensersaltz und kann strafrechtliche Falgen haben Gür Patienterteilung und Gebrauchsmustereinfragung, vorbehalten. APV Rosisia GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.	GmbH. rden.							02/94
Design of the section of the	Dopp	tzteilliste: spare parts list: Jeldicht Scheibenventil DSV mit H	Handbetätigu				Gezeichnet Geprüft Normaaar			APV Roeleta GmbH D-58425 Uma Germany
25 40 50 65 01 100 125 Pos. 5, 6, 8 num in kompteten Dichungssatz erhittich w5-Ni.	noul		ו וומו ומוב		06/05 rytko				RN 01.0	40
Big description Fet-No. WS-Ni. WS-N	əбı v C		25	40	50	65 D	N 80	100	125	150
Pos. 5, 6, 8 rur in komptetten Dichtungsatz erhättich Pos. 5, 6, 8 avaitable as comptete seal kits onty. Dichtungsatiz EPDM Seal kitrinssatiz 58-34-595/nd 58-34-597/nd 58-34-598/nd Dichtungsatiz FPDM Seal kitrinssatiz HNBR Dichtungsatiz FPDM Seal kitrinssatiz FPDM Seal kitrinssatiz FPDM Dichtungsatiz HNBR Seal kitringsatiz FPDM Seal kitringsatiz	item Mer		WS-Nr. refno.	WS-Nr. retno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
Dichlungsaatz EPDM 58-34-595/01 58-34-597/06 58-34-598/06 Dichlungsaatz HNBR 58-34-595/06 58-34-598/06 58-34-598/06 Dichlungsaatz HNBR 58-34-595/06 58-34-596/06 58-34-598/06 Dichlungsaatz HNBR 58-34-596/06 58-34-596/06 58-34-598/06 Dichlungsaatz HNBR 58-34-596/06 58-34-596/06 58-34-598/06 Dichlungsaatz HNBR 58-34-596/06 58-34-596/06 58-34-596/06 Dichlungsaatz HNBR 58-34-596/06 58-34-596/06 58-34-596/06 Dichlungsaatz HIRR 58-34-596/06 58-34-596/06 58-34-596/06 Dichlungsaatz HIRR 58-34-596/06 58-34-596/06 58-34-596/06 Dichlungsaatz HIRR Fille Fille Fille Dichlungsaatz HIRR Fille Fille Fille D		5, 6, 8 5, 6, 8	ungssatz erhö seal kits only	iltlich						
Dichungsaatz HNBR 58-34-595/06 58-34-595/06 58-34-598/06 Seud kif E E E E E Indication E E E E E Indin E E E E		Dichtungssatz Seal kit			58-34-595/01	58-34-596/01			58-34-599/01	
		Dichtungssatz Seal kit			58-34-595/06		58-34-597/06		58-34-599/06	

Weitergal ihres Inh verpflich (Paragra für Pater Dioco Zer	Weitergabe sowie Vervielfättigung dieser Unterlage. Verwertung und Mittellung Ihres Inhalts nicht gestattet, soweit nicht schriftlich zugestanden. Verstoß verpflichtet zum Schadensersatz und kann straftechtliche Falgen haben (Paragraph 18 UWG, Paragraph 106 UrhG). Eigentum und alle Rechte, auch Diese Zeichenung und Gebrautsmustereintragung, vorbendenten. APV Rosista GmbH.	rtung und Mitteilung standen. Verstoß E Folgen haben ille Rechte, auch ihalten. Ashr Rosista Aund. Ashr Assista	t GmbH.							107/07
Ers Dop	Ersatzteilliste: spare parts list: Doppeldicht Scheibenventil C Double sent hutterflv valve	DSV mit F	DSV mit Handbetätigung PSV with handle		Blatt 2		Gezeichnet Geprüft Normgepr.	Datum Name 07.05 Trytko 11.07.05 Goebel	A APV	APV Roei D-59425 Urr Germany
)	2-4 zoll		5	Datum Name	07/05 09/05 Trytko Trytko				TRN 01.0	01.040.1
	e Titty Renenninn		۱ "۱	1,5"	2"	2,5*	" "	*		
item 20	לחס		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
	DSV-ohne Betätigung,Adapter,Flansch DSV-ohne Betätigung,Adapter,Flansch	oter,Flansch oter,Flansch	*		25-81-990/	25-81-991/	25-81-996/	25-81-993/		
~	1 Gehäuse komplett Housing complete									
7					08-55-026/43	08-55-027/43	08-55-032/43	08-55-029/43		
m	2 Skt. Schraube Hex. screw				DIN EN ISO 4762 -M8x20-A2-70	DIN EN ISO 4762DIN EN ISO 4762DIN EN ISO 4762 -M8x20-A2-70 -M8x25-A2-70 -M10x25-A2-70	DIN EN ISO 4762 -M10x25-A2-70	"		
4					DIN 7980-NIRO-A2-8)-A2-8	DIN 7980-NIRO-A2-10	1-A2-10		
ம	1 Klappendichtung Disc seal	*			58-33-176/	58-33-177/	58-33-182/	58-33-179/		
9	1 Lagerbuchse Bearina				08-01-205/52	II	08-01-206/52	11		
7	2 Zylinderstift Cvl. pin				DIN 7-M6-NIRO-A2	D-A2 6x16				
8	2 Vérschraubungsdichtung Union seal				58-01-056/93	II	II	II		
6	2 Skt. Schraube Hex. screw				DIN EN ISO 47	4762-M5x16-A2-70	70			
10	Flachrundschraube Screw				M5x28					
11	2 Flansch DSV Flanae DSV				09-51-582/	09-51-583/	09-51-584/	09-51-585/		
12	4 Skt. Schraube 4 Hex. screw				DIN EN 24017- M8x70-A2-70	DIN EN	24017-M10×70-A2-70			
13					DIN EN 24032- M8-A2	DIN EN	24032-M10-A2			
14	sche ina a				08-20-200/13	II	08-20-201/13	II		
ر ا	1 Handhebel DSV Handle DSV				08-41-310/93	II	11	08-41-311/13		
	Pos. 5, 6, 8 nur im kompletten Dichtungssatz Pos. 5, 6, 8 available as complete seal kits	etten Dichtungssatz complete seal kits	satz erhältlich kits only							
	1 Dichtungssatz Seal kit	EPDM			58-34-595/01	58-34-595/01 58-34-596/01 58-34-593/01 58-34-598/01	58-34-593/01	58-34-598/01		
	jssatz	HNBR			58-34-595/06	58-34-595/06 58-34-596/06 58-34-593/06 58-34-598/06	58-34-593/06	58-34-598/06		



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Ersatzteilliste: spare parts list: Drehantrieb F/L für Rückmeldeeinheit	einheit		Blatt 2		Gezeichnet Geprüft Normgepr.	Datum Name 21.06.93 Trytko 25.06.93 Spliethoff 06.07.93 Pliimper	VAN Vo	APV Rosista GmbH P
ator spring/air prepared	for control unit	Datum Name	06/93 10/01 Trytko Trytko				RN	01.076
e denenind Benenind Benenind	K080	Ausführung K125	K180					
gua	WS-Nr. refno.	WS-Nr. refno.	<u>≯</u> ₽	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
	* 15-37-070/17	15-37-106/17	15-37-103/17					
	 4 15-37-071/17 	15-37-105/17	15-37-104/17					
2 7 1 Spindel komplett mit Lager Shaft complete with bearing	15-24-021/13	15-24-(15-24-033/13					
	OR 32,2x3 NBR 70-75 Shore A		OR 49,5x3 NBR 70-75 Shore A					
4 1 0-Ring 0-ring	OR 90x2 NBR	70-75 Shore	A					
5 1 0-Ring	OR 15,3x2,4 NBR	BR 70-75 Sha	re A					
6 1 Druckstück Drehantrieb K080 Spacer for actuator K080	08-48-117/53							