KIESELMANN

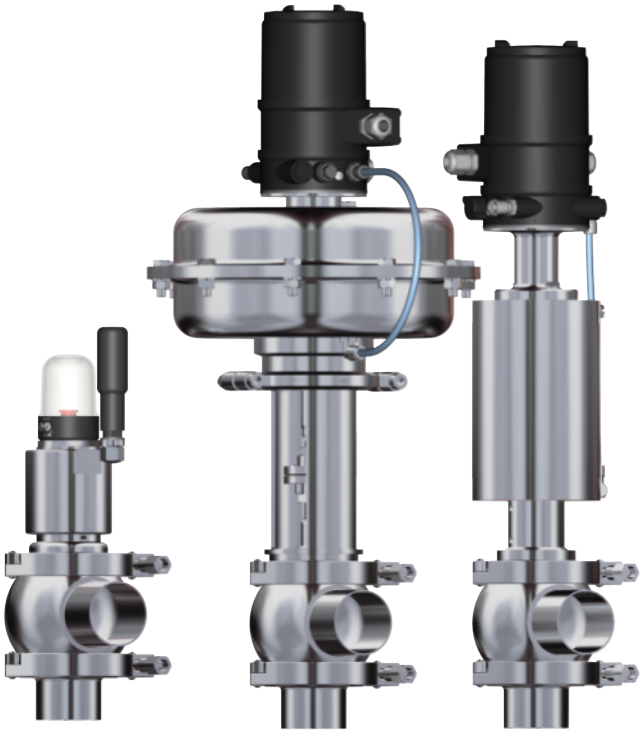
FLUID PROCESS GROUP

Translation of the original

Operating instruction

Single Stage Control Valves

Type 91xx



9 Mounting kit for positioner

9.1 Bürkert positioner Type 8692, 8694

Disassembly

NOTICE

Before reaching into the device or the equipment, please note the operating instructions and the safety instructions for the Bürkert Positioner.

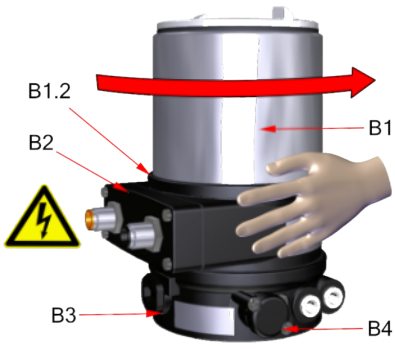
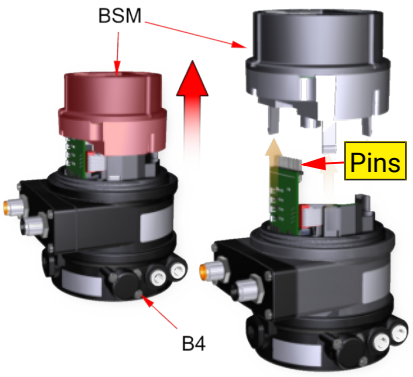
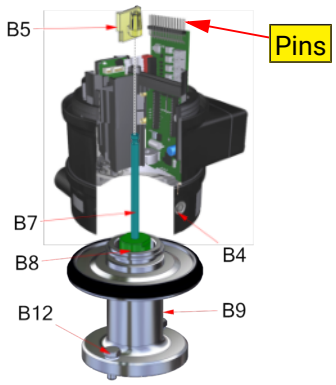
(Operating instructions for Bürkert Type 8615500120 / Type 8615500130-000)

⚠ CAUTION

Risk of breakage

Breakage of the pneumatic connection pieces due to rotational impact!

- Before reaching into the device or the equipment, disconnect the compressed-air supply at the Positioner.
- Hold the electrical connection housing when unscrewing the housing jacket.

• Hold the electrical connection housing (B2) in place. • Unscrew the housing jacket (B1) in a counter-clockwise direction and remove them. • Remove the seal (1.2). • Remove electronics module (BSM).	• Pull off the puck (B5) upwards from the shift spindle (B7). • Screw out the screws (B4) max. 6-7 turns,not unscrewed. – (when unscrew complete the sheet metal nut is destroyed and must be replaced.)	• Remove carefully the Positioner upwards. • Unscrew the screws (B12) and remove the adapter (B9). • Unscrew the spindle adapter (B8) with the stem (B7) from the actuator spindle.
		

Assembly

- Assemble in reverse order.
- Before installation, thoroughly clean and slightly lubricate mounting areas and running surfaces.
- Check the function according to the specified performance data in the operating state.

⚠ CAUTION

Risk of breakage

Breakage of the pneumatic connection pieces due to rotational impact!

– When inserting the housing jacket, do not hold the actuator but the electrical connection housing above.
– Check that the seal is correctly positioned on the housing jacket.
– Tighten the screws (B4) only lightly (maximum tightening torque: 0.5 Nm).

⚠ CAUTION

Risk of breakage

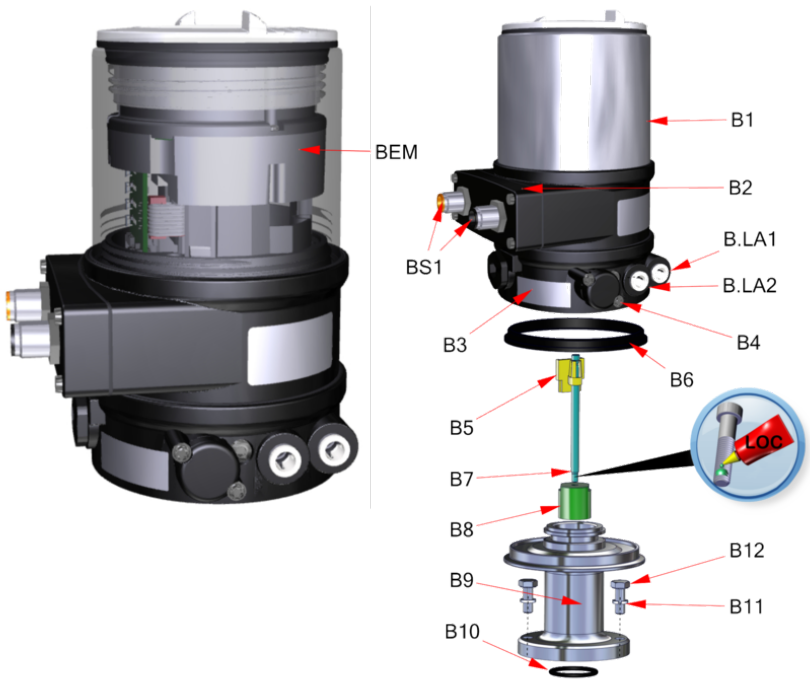
Be careful not damage the pins at the board!

– Attach electronics module carefully and press down evenly until the holders snap into place.

Art.-No.: 5200 104 561-000 (B2+B4 nickelized)
Art.-No.: 5200 104 561-100 (B2+B4 V2A)
Electro-pneumatical Positioner (the Positioner is not include in the mounting kit)

B1 = Housing body
B2 = Electrical connection
B3 = Housing actuator
B4 = Fastening screw
B5 = Puck
B6 = Seal
B7 = Spindle
B8 = Spindle adapter M4-M10
B9 = Adapter
B10 = O-ring
B11 = Disc
N12 = Screw DIN933

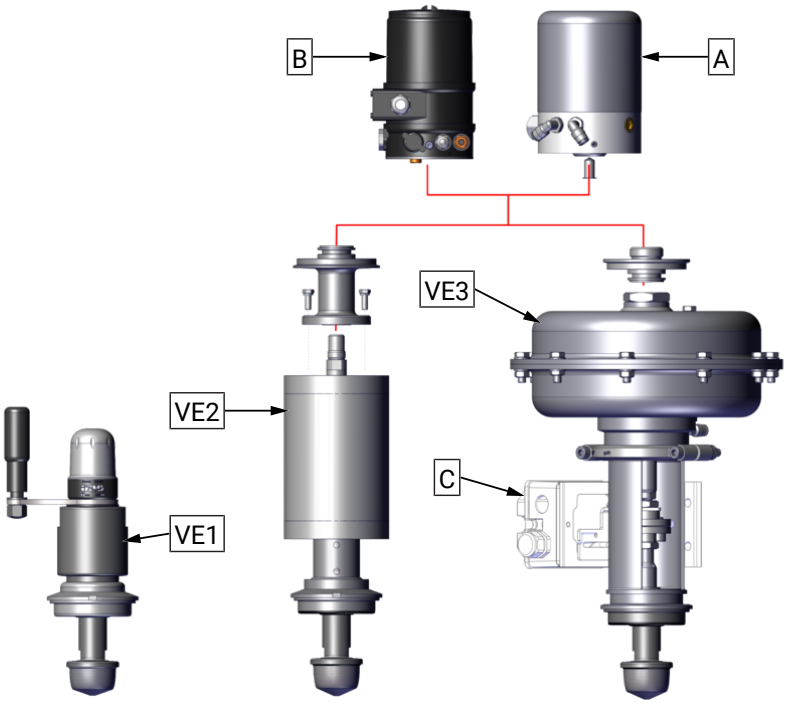
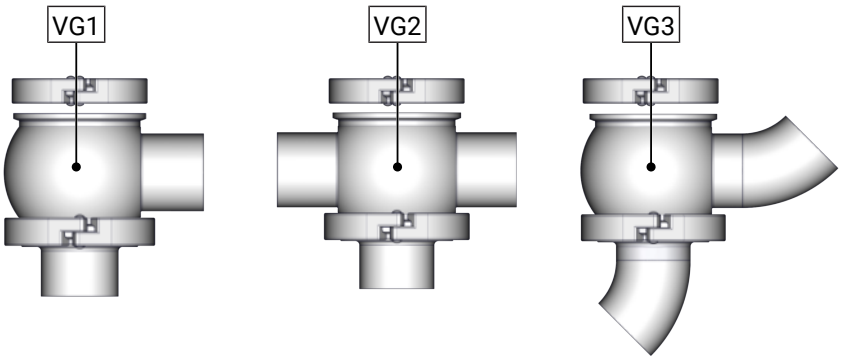
BS1 = Circular plug-in connector 24V DC (electrical connection)
BEM = Electronics Module
B.LA1 = Additional air port
B.LA2 =Additional Exhaust



10 Drawings and dimensions

10.1 Drawings

Valve structure

	Manual operation with crank handle	Pneumatic operation with piston actuator	Pneumatic operation with diaphragm actuator
A = Positioner DIGIPOS B = Positioner Bürkert Type 869x C = Positioner Samson VE1 = Valve insert manual operation VE2 = Valve insertwith pneum. piston actuator VE3 = Valve insert with diaphragm actuator			
Housing design VG1) = Angle - form (S-S) VG2) = T-Form (SS-S) VG3) = Inclined - form (S-S)			

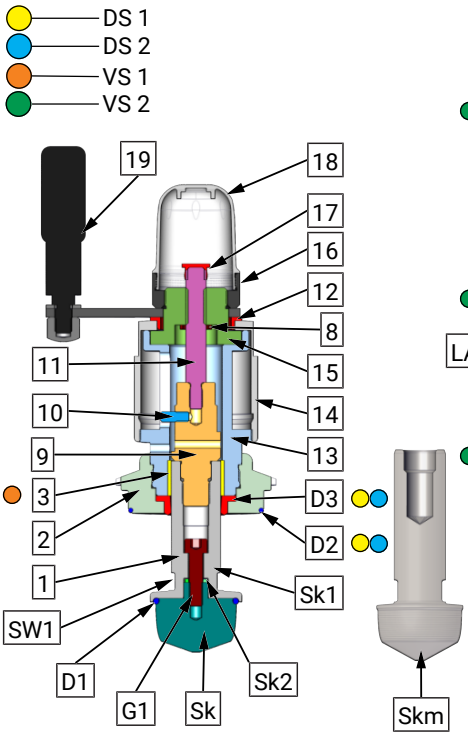
Valve inserts

- 1 = Piston
- 2 = Insert
- 3 = Plain bearing
- 4 = Lantern
- 5 = Bearing bush
- 6 = Spindle
- 7 = Insert lantern
- 8 = Valve lift stop

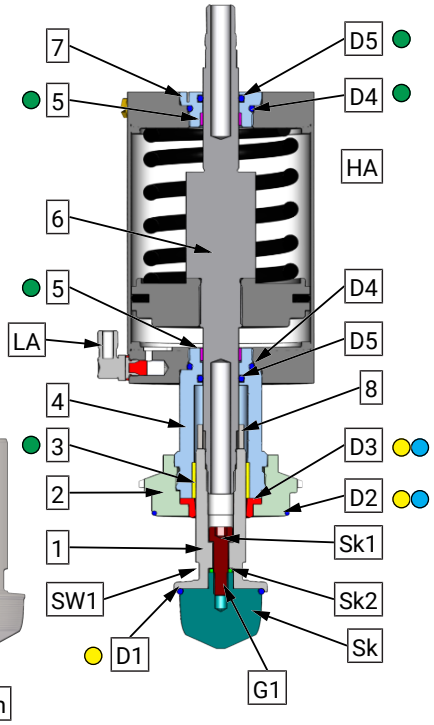
(not applicable by Inch-version)

- 9 = Piston rod
- 10 = Set screw
- 11 = Spindle
- 12 = Bearing bush
- 13 = Housing
- 14 = Housing body
- 15 = Guide nut
- 16 = Adapter
- 17 = Cap
- 18 = Hood
- 19 = Crank handle

Manual operation
with crank handle

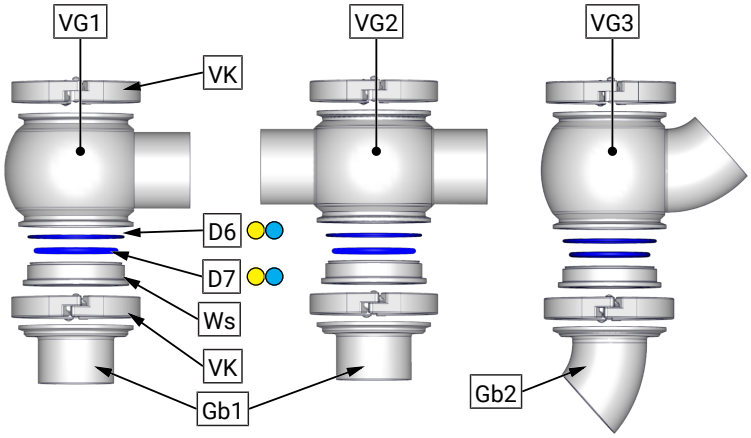


Pneumatic operation
with piston actuator



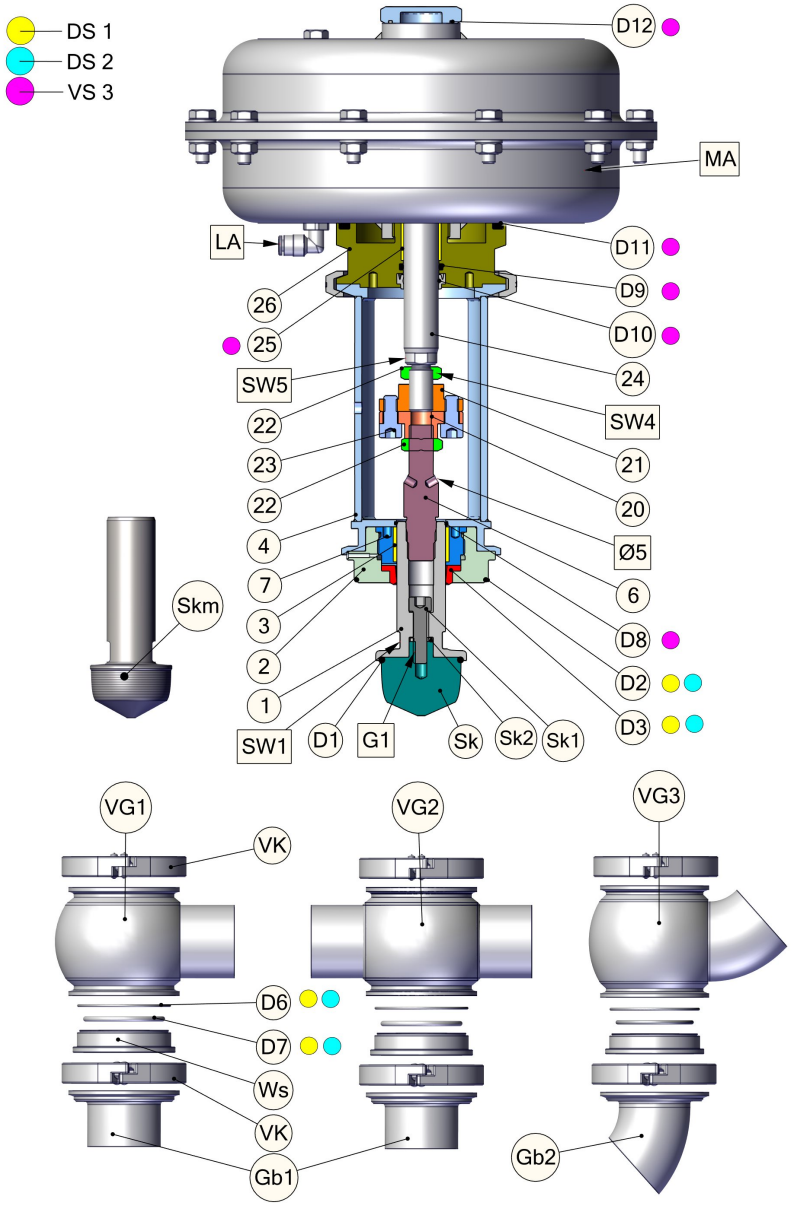
seals

- D1 = O-ring
- D2 = O-ring
- D3 = Shaft seal
- D4 = O-ring
- D5 = O-ring
- D6 = O-ring
- D7 = O-ring



- Gb1 = Housing bottom straight
- Gb2 = Housing bottom inclined
- Skm = Flow cone metallic
- Sk = Flow cone elastomer
- Sk1 = Screw
- Sk2 = Disc
- VG1 = Housing angle form
- VG2 = Housing T - form
- VG3 = Housing Inclined - form
- VK = Clamp coupling
- Ws = Interchangeable seat
- G1 = Secure with threaded connection "removable" (e.g. Loctite 243).
- SW = Wrench size
- PHA = pneum. Actuator

Pneumatic operation with diaphragm actuator



- 1 = Piston
- 2 = Insert
- 3 = Bearing bush
- 4 = Lantern
- 5 = --
- 6 = Spindle
- 7 = Insert lantern
- 8 - 19 = - -
- 20 = Coupling lower
- 21 = Coupling upper
- 22 = Nut
- 23 = Screw
- 24 = Schaft
- 25 = Plain bearing
- 26 = Adapter flange

seals

- D1 = O-ring
- D2 = O-ring
- D3 = Shaft seal
- D4 -5 = --
- D6 = O-ring
- D7 = O-ring
- D8 = O-ring
- D9 = O-ring
- D10 = Lip seal
- D11 = O-ring
- D12 = O-ring

- Gb1 = Housing bottom straight
- Gb2 = Housing bottom inclined

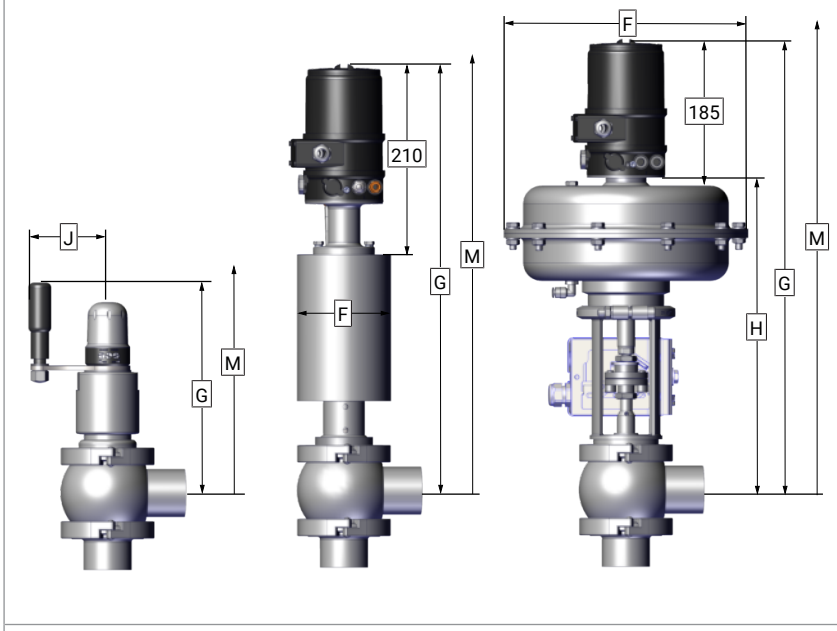
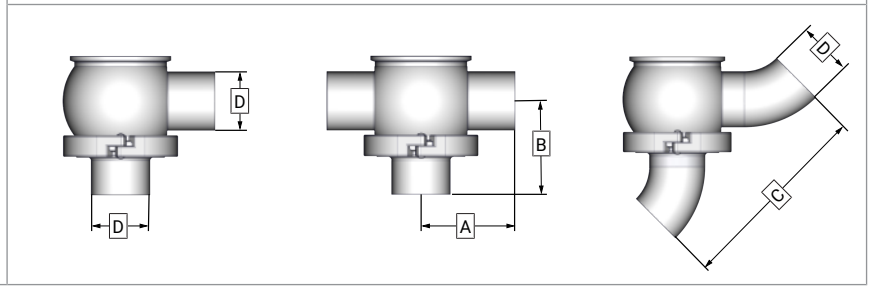
- MA = Diaphragm actuator
- Skm = Flow cone metallic
- Sk = Flow cone elastomer
- Sk1 = Screw
- Sk2 = Disc
- VG1 = Housing angle form
- VG2 = Housing T - form
- VG3 = Housing Inclined - form
- VK = Clamp coupling
- Ws = Interchangeable seat

- G1 = Secure with threaded connection "removable" (e.g. Loctite 243).

SW = Wrench size

Wrench size	DN = Nominal diameter OD = Outside diameter						
	DN 25 OD 1 “	DN 40 OD 1½ “	DN 50 OD 2 “	DN 65 OD 2½ “	DN 80 OD 3 “	DN 100 OD 4 “	DN 125 OD 5 “
SW1	-	24					
SW2	17						
SW3	11						
SW4	17						
SW5	22						

10.2 Dimensions

Valve kind: Kind of actuation: Actuator:	Manual operation with crank handle (manual)	Pneumatic operation with piston actuator (H104 / H129 / H267 / H230)	Pneumatic operation with diaphragm actuator (M02 / M2 / M4 / M10)
			
			

Dimensions											
Nominal width	**D**	**A**	**B**	**C**	**E**	**Actuator**	**F**	**G***	**H****	**Y**	**M**
DN 20	Ø 23 x 1,5	65	65	-	-	H104	Ø 104	446	-	-	~520
DN 25	Ø 29 x 1,5	75	75	82	57	manual	-	~224	-	88	-
OD 1	Ø25.4x1.25				54	H104	Ø 104	459	-	-	~530
						H129	Ø 129	459	-	-	~530
						M02	Ø 165	437	287	-	~540
						M2	Ø 270	487	334	-	~600
DN 40	Ø 41 x 1,5	85	85	129	69	manual	-	~230	-	88	-
OD 1"	Ø38,1 x 1,65				66.1	H104	Ø 104	466	-	-	~540
						H129	Ø 129	466	-	-	~540
						M02	Ø 165	443	293	-	~540
						M2	Ø 270	493	340	-	~650
DN 50	Ø 53 x 1,5	85	85	150	81	manual	-	~236	-	88	-
OD 2	Ø50,8 x 1,65				79	H104	Ø 104	472	-	-	~570
						H129	Ø 129	472	-	-	~570
						H167	Ø 167	472	-	-	~570
						M2	Ø 270	505	355	-	~510
						M4	Ø 270	494	341	-	~650
DN 65	Ø 70 x 2,0	105	105	188	97	manual	-	~244		88	
OD 2"	Ø63,5 x 1,65				91.5	H129	Ø 129	480	-	-	~600
						H167	Ø 167	480	-	-	~600
						H190	Ø 190	480	-	-	~600
						H230	Ø 230	480	-	-	~600
						M2	Ø 270	511	358	-	~660
						M4	Ø 270	511	358	-	~660
						M10	Ø 400	598	445	-	~720
DN 80	Ø 85 x 2,0	115	115	222	112	manual	-	~252	-	88	-
OD 3	Ø76.2x1.65				104	H129	Ø 129	487	-	-	~620
						H167	Ø 167	487	-	-	~620
						H190	Ø 190	487	-	-	~620
						H230	Ø 230	487	-	-	~620
						M2	Ø 270	519	366	-	~670
						M4	Ø 270	519	366	-	~670
						M10	Ø 400	606	453	-	~740
DN 100	Ø 104 x 2,0	130	130	250	131	manual	-	~261	-	88	-
OD 4	Ø101,6 x 2,0				129	H129	Ø 129	497	-	-	~650
						H167	Ø 167	497	-	-	~650
						H190	Ø 190	497	-	-	~650
						H230	Ø 230	497	-	-	~650
						M4	Ø 270	540	387	-	~690
						M10	Ø 400	619	466	-	~770
DN 125	Ø 129 x 2,0	160	160	-	-	manual	-	~274	-	88	-
						H190	Ø 190	510	-	-	~690
						H230	Ø 230	510	-	-	~690
						M4	Ø 270	553	400	-	~700
						M10	Ø 400	632	479	-	~880

*	Dimension G: actuator with top-mounted positioner
**	Dimension H: positioner mounted on NAMUR interface

11 Wearing parts

11.1 Overview - Seal and wearing parts kits

Wear parts kit - in product contact		Material:	Designation
DS 1	a b c	Elastomer / EPDM Elastomer / HNBR Elastomer / FKM	in product contact wearing part set elastomer sealing at the regulation cone
DS 2	a b c	metallic / EPDM metallic / HNBR metallic / FKM	in product contact wearing part set metallic sealing at the regulation cone

Wear parts kit - Actuator	Material:	
VS 1		Wearing parts set for manual operation valves (without positions from the wearing part set - in product contact)
VS 2		Wearing parts set for pneumatic operation valves with piston actuator (without positions from the wearing part set - in product contact)
VS 3		Wearing parts set for pneumatic operation valves with diaphragm actuator (without positions from the wearing part set - in product contact)

Pos.	Designation	DS 1 a / b / c	DS 2 a / b / c	VS 1	VS 2	VS 3
D1	O-ring (EPDM / HNBR / FKM)	x				
D2	O-ring (EPDM / HNBR / FKM)	x	x			
D3	Seal (EPDM / HNBR / FKM)	x	x			
D4	O-ring (NBR)				x	
D5	O-ring (HNBR)				x	
D6	O-ring (EPDM / HNBR / FKM)	x	x			
D7	O-ring (EPDM / HNBR / FKM)	x	x			
D8	O-ring					x
D9	O-ring					x
D10	Scraper ring (NBR)					x
D11	O-ring					x
D12	O-ring					x
3	Plain bearing (XSM)			x	x	
5	Plain bearing (XSM)				x	
13	Scraper ring (NBR)			x		
25	Plain bearing (XSM)					x

Wearing part set DS1 (elastomeric sealing)

DN OD	K_{VS} Value	Seat-Ø	Wear parts kit **DS 1a EPDM**	Wear parts kit **DS 1b HNBR**	Wear parts kit **DS 1c FKM**
20	0.2	ø 5	9110 010 200-K990	9110 010 200-O990	9110 010 200-S990
25	0.4	ø 6	9110 010 400-K990	9110 010 400-O990	9110 010 400-S990
	1.0				
1“	1.6	ø 12	9110 012 000-K990	9110 012 000-O990	9110 012 000-S990
	2.5				
	4.0				
	7.0	ø 22	9110 017 000-K990	9110 017 000-O990	9110 017 000-S990
	10.0				
40	4.0	ø 12	9110 024 000-K990	9110 024 000-O990	9110 024 000-S990
	7.0	ø 22	9110 027 000-K990	9110 027 000-O990	9110 027 000-S990
1½“	10				
	18	ø 31	9110 029 100-K990	9110 029 100-O990	9110 029 100-S990
50	10	ø 22	9110 035 100-K990	9110 035 100-O990	9110 035 100-S990
	18	ø 31	9110 039 100-K990	9110 039 100-O990	9110 039 100-S990
2“	26	ø 46	9110 033 300-K990	9110 033 300-O990	9110 033 300-S990
	40				
65	18	ø 31	9110 049 100-K990	9110 049 100-O990	9110 049 100-S990
	26	ø 46	9110 043 300-K990	9110 043 300-O990	9110 043 300-S990
2½“	40				
	52	ø 60	9110 047 300-K990	9110 047 300-O990	9110 047 300-S990
	68				
80	26	ø 46	9110 053 300-K990	9110 053 300-O990	9110 053 300-S990
	40				
3“	68	ø 60	9110 057 300-K990	9110 057 300-O990	9110 057 300-S990
	52	ø 72	9110 055 400-K990	9110 055 400-O990	9110 055 400-S990
	85				
	100	ø 81	9110 053 300-K990	9110 053 300-O990	9110 053 300-S990
100	40	ø 46	9110 065 300-K990	9110 065 300-O990	9110 065 300-S990
	52	ø 60	9110 067 300-K990	9110 067 300-O990	9110 067 300-S990
4“	68				
	85	ø 72	9110 065 400-K990	9110 065 400-O990	9110 065 400-S990
	100	ø 81	9110 063 500-K990	9110 063 500-O990	9110 063 500-S990
	120	ø 95	9110 061 700-K990	9110 061 700-O990	9110 061 700-S990
125	85	ø 72	9110 075 400-K990	9110 075 400-O990	9110 075 400-S990
	100	ø 81	9110 073 500-K990	9110 073 500-O990	9110 073 500-S990
5“	120	ø 95	9110 071 700-K990	9110 071 700-O990	9110 071 700-S990
	160	ø 125	9110 075 500-K990	9110 075 500-O990	9110 075 500-S990

Wearing part set DS2 (metallic sealing)

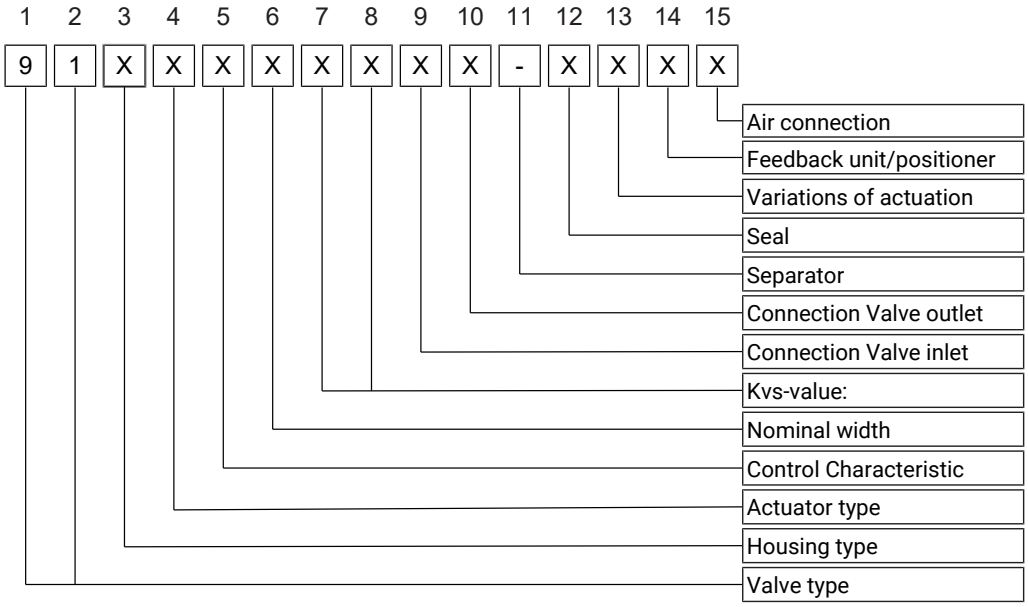
DN OD	K_{VS} Value	Seat-Ø	Wear parts kit **DS 2a EPDM**	Wear parts kit **DS 2b HNBR**	Wear parts kit **DS 2c FKM**
25 1“	0.4 1.0	ø 6	9110 010 400-M990	9110 010 400-Q990	9110 010 400-U990
	1.6 2.5 4.0	ø 12	9110 012 000-M990	9110 012 000-Q990	9110 012 000-U990
	7.0 10.0	ø 22	9110 017 000-M990	9110 017 000-Q990	9110 017 000-U990
40 1½“	4.0	ø 12	9110 024 000-M990	9110 024 000-Q990	9110 024 000-U990
	7.0 10	ø 22	9110 027 000-M990	9110 027 000-Q990	9110 027 000-U990
	18	ø 31	9110 029 100-M990	9110 029 100-Q990	9110 029 100-U990
50 2“	10	ø 22	9110 035 100-M990	9110 035 100-Q990	9110 035 100-U990
	18	ø 31	9110 039 100-M990	9110 039 100-Q990	9110 039 100-U990
	26 40	ø 46	9110 033 300-M990	9110 033 300-Q990	9110 033 300-U990
65 2½“	18	ø 31	9110 049 100-M990	9110 049 100-Q990	9110 049 100-U990
	26 40	ø 46	9110 043 300-M990	9110 043 300-Q990	9110 043 300-U990
	52 68	ø 60	9110 047 300-M990	9110 047 300-Q990	9110 047 300-U990
80 3“	26 40	ø 46	9110 053 300-M990	9110 053 300-Q990	9110 053 300-U990
	68	ø 60	9110 057 300-M990	9110 057 300-Q990	9110 057 300-U990
	52 85	ø 72	9110 055 400-K990	9110 055 400-Q990	9110 055 400-U990
	100	ø 81	9110 053 300-M990	9110 053 300-Q990	9110 053 300-U990
100 4“	40	ø 46	9110 065 300-M990	9110 065 300-Q990	9110 065 300-U990
	52 68	ø 60	9110 067 300-M990	9110 067 300-Q990	9110 067 300-U990
	85	ø 72	9110 065 400-M990	9110 065 400-Q990	9110 065 400-U990
	100	ø 81	9110 063 500-M990	9110 063 500-Q990	9110 063 500-U990
	120	ø 95	9110 061 700-M990	9110 061 700-Q990	9110 061 700-U990
125 5“	85	ø 72	9110 075 400-M990	9110 075 400-Q990	9110 075 400-U990
	100	ø 81	9110 073 500-M990	9110 073 500-Q990	9110 073 500-U990
	120	ø 95	9110 071 700-M990	9110 071 700-Q990	9110 071 700-U990
	160	ø 125	9110 075 500-M990	9110 075 500-Q990	9110 075 500-U990

Wearing part set - Actuator

Kind of actuation		Wear parts kit Actuator 1	Wear parts kit Actuator 2	Wear parts kit Actuator 3
manual actuator	-	9111 000 000-991		
Linear actuator	ø104 ø129 ø167 ø190 ø230		9112 000 001-991 9112 000 002-991 9112 000 003-991 9112 000 004-991 9112 000 005-991	
Diaphragm actuator	M02 M2 M4 M10			9115 000 000-991 9115 000 002-991 9115 000 004-991 9115 000 006-991

12 Classification

12.1 Structure of Order Number



Valve type

91xx xxx xxx-xxxx	**Pos. 1**	**Pos. 2**
Valve Type: Control valve	9	1

Housing type

91Xx xxx xxx-xxxx	**Pos. 3**
Angle valve (L)	1
T-valve (T)	2
- Inclined (S)	3
Double body (LL)	4
Double body (LT)	5
Double body (TL)	6
Double body (TT)	7

Actuator type

91xX xxx xxx-xxxx	**Pos. 4**
Manual actuator	1
Piston Actuator (FC)	2
Piston Actuator (FO)	3
Piston Actuator (DA)	4
Diaphragm Actuator (FC)	5
Diaphragm Actuator (FO)	6
Diaphragm Actuator (DA)	7
Electric actuator (FC)	8
Electric actuator (FO)	9

Control Characteristic

91xx Xxx xxx-xxxx	Pos. 5
DN, equal percentage	0
DN, linear	1
OD, equal percentage	2
OD, linear	3

Valve size

91xx xXx xxx-xxxx		Pos. 6
DN	OD	
DN 20	-	0
DN 25	OD 1"	1
DN 40	OD 1 1/2"	2
DN 50	OD 2 "	3
DN 65	OD 2 1/2"	4
DN 80	OD 3 "	5
DN 100	OD 4 "	6
DN 125	-	7
-	-	8
-	-	9

Kvs-value:

91xx xxX Xxx-xxxx						
K_{vs} (m³/h)	Pos. 7	Pos. 8		K_{vs} (m³/h)	Pos. 7	Pos. 8
0.4	0	4		40	5	3
1.0	1	0		52	7	3
1.6	2	0		68	9	3
2.5	3	0		85	5	4
4.0	4	0		100	3	5
7.0	7	0		120	1	7
10	5	1		160	5	5
18	9	1				
26	3	3				

Connection Valve inlet

91xx xxx xXx-xxxx	Pos. 9			Pos. 9
Connection			Connection	
Welding end	0		Clamp tongue joint DIN 11853-3	A
Union (K/M) DIN 11851	1		APV groove flange	B
Thread DIN 11851	2		APV plain flange	C
KK-Small groove flange	3		Flange PN 6	D
KK-Small plain flange	4		Flange PN10	E
Hygienic - Lap-joint flange DIN 11853-2	5		Flange PN10/16 DIN 1092-1	F
Hygienic - Groove flange DIN 11853-2	6		VARIVENT®-groove flange	G
Clamp DIN 32676	7		VARIVENT®-lap-joint flange	H
Hygienic-Clamp DIN 11853-3	8		Union (K/M) SMS 1145	Y
-	9		Threaded end SMS 1145	K

Connection Valve outlet

91xx xxx xx X -xxxx	Pos. 10			Pos. 10
Connection			**Connection**	
Welding end	0		Clamp tongue joint DIN 11853-3	A
Union (K/M) DIN 11851	1		APV groove flange	B
Thread DIN 11851	2		APV plain flange	C
KK-Small groove flange	3		Flange PN 6	D
KK-Small plain flange	4		Flange PN10	E
Hygienic - Lap-joint flange DIN 11853-2	5		Flange PN10/16 DIN 1092-1	F
Hygienic - Groove flange DIN 11853-2	6		VARIVENT®-groove flange	G
Clamp DIN 32676	7		VARIVENT®-lap-joint flange	H
Hygienic-Clamp DIN 11853-3	8		Union (K/M) SMS 1145	Y
-	9		Threaded end SMS 1145	K

Separator

91xx xxx xxx - xxxx	Pos. 11
KIESELMANN Valve	-

Seat Sealing/

Manual actuator	
91xx xxx xxx- X xxx	Pos. 12
EPDM	K
Metal / EPDM	M
HNBR	O
Metal / HNBR	P
FKM	S
Metal / FKM	U

Pneumatic Actuator / Electric Actuator	
91xx xxx xxx- X xxx	Pos. 12
EPDM	K
Metal / EPDM	M
HNBR	O
Metal / HNBR	P
FKM	S
Metal / FKM	U

Variations of actuation

91xx xxx xxx-x**X**xx				
Piston Actuator	**Pos. 13**		**Diaphragm Actuator**	**Pos. 13**
Manual actuator	0		FPG Diaphragm actuator M02	0
KIESELMANN Piston actuator Ø104	1		FPG Diaphragm actuator M1	1
KIESELMANN Piston actuator Ø129	2		FPG Diaphragm actuator M2	2
KIESELMANN Piston actuator Ø167	3		FPG Diaphragm actuator M3	3
KIESELMANN Piston actuator Ø190	4		FPG Diaphragm actuator M4	4
KIESELMANN Piston actuator Ø230	5		FPG Diaphragm actuator M9	5
-	6		FPG Diaphragm actuator M10	6
-	7		SAMSON Diaphragm actuator 3277	7
-	8		Electric Actuator	8
-	9		-	9

Feedback unit / Type of positioner

91xx xxx xxx-xx**X**x					
Manual actuator	**Pos. 14**	**Pneumatic actuator**	**Pos. 14**	**Electric Actuator**	**Pos. 14**
without	0	BÜRKERT Typ 8692	0	manuell Standard	0
Inductive sensor	1	BÜRKERT Typ 8792	1	HORA	1
-	2	GUTH DigiPos	2	-	2
-	3	SAMSON Typ 3725	3	-	3
-	4	BÜRKERT Typ 8694 IO-Link	4	-	4
-	5	SIEMENS SIPART P2	5	-	5
-	6	SAMSON Typ 3730-4	6	-	6
-	7	SAMSON Typ 3730-2	7	-	7
-	8	-	8	-	8
-	9	-	9	-	9

Air Connection Design

91xx xxx xxx-xxxX	
Air Connecting	**Pos. 15**
manuell	0
VA-Air connecting	1
-	2
-	...
-	9

Electrical actuator sizes

[Selection valid if an electric actuator (8 or 9) has been selected in position 4].

91xx xxx xxx-xxxX	
Electrical actuator sizes	**Pos. 15**
manuell Standard	0
HORA MC103/24	1
HORA MC253/24	2
HORA MC403/24	3
HORA MC1003/24	4
HORA MC1503/24	5
-	6
-	...
-	9

13 Appendix

13.1 Declaration of incorporation

CE

Declaration of incorporation

Translation of the original

Manufacturer / authorised representative:

KIESELMANN GmbH
Paul-Kieselmann-Str. 4-10
75438 Knittlingen
Germany

Authorised representative:
(for compiling technical documents)

Achim Kauselmann
(Documentation / Development)
KIESELMANN GmbH
Paul-Kieselmann-Str. 4-10
75438 Knittlingen
Germany

Product name	Function
pneum. Lift actuators	Stroke movement
pneum. Rotary actuators	Rotary movement
Ball valves	Media cutoff
Butterfly valves	Media cutoff
Single seat valves	Media cutoff
Flow control valves	Control of liquefied media
Throttle valve	Control of liquefied media
Overflow valve	Definition of fluid pressure
Double seat valve	Media separation
Bellow valves	Sampling of liquids
Sampling valves	Sampling of liquids
Two way valves	Media cutoff
Tankdome fitting	Prevention of overpressure and vacuum, Tank cleaning
Safety valve	Prevention of overpressure

The manufacturer hereby states that the above product is considered as an incomplete machine in the sense defined in the Directive 2006/42/EC on Machinery. The above product is exclusively intended to be installed into a machine or an incomplete machine. The said product does not yet conform to all the relevant requirements defined in the Directive on Machinery referred to above for this reason.

The specific technical documents listed in Appendix VII, Part B, have been prepared. The Authorized Agent empowered to compile technical documents may submit the relevant documents if such a request has been properly justified.

Commissioning of an incomplete machine must not only carried out if it has been determined that the respective machine into which the incomplete machine is to be installed conforms to the regulations set out in the Directive on Machinery referred to above.

The above product conforms to the requirements of the directives and harmonized standards specified below:

- Directive 2014/68/EU
- DIN EN ISO 12100 Safety of machinery

Knittlingen, 21.09.2017

i.V. Uwe Heisswolf
Head of Development

KIESELMANN
FLUID PROCESS GROUP