

# 3/2-Way Valve 7081

## DN 15 up to DN 50

SCHUBERT & SALZER  
**CONTROL SYSTEMS**

**Pneumatically operated 3/2-way valve in stainless steel for the control of neutral, slightly aggressive and highly aggressive media.**

- compact design
- Unaffected by lightly contaminated media
- For temperatures from -30°C up to +200°C
- Working pressure up to 40 bar
- Versatile actuators

### Technical Information

Body material	Stainless steel 1.4408
Nominal sizes	DN 15 to DN 50
Connections	Pipe thread acc. ISO 228-1 G 1/2" - 2" NPT thread 1/2" - 2"
Nominal pressure	PN 40
Max. fluid temperature: with metal bonnet	-30°C up to +170°C, opt. +200°C
with plastic bonnet	-30°C up to +135°C
with diaphragm actuator	-30°C up to +200°C
Ambient temperature	-30°C up to +60°C
Viscosity of the media	maximum 600 mm <sup>2</sup> /s (600cSt)
Leakage acc. EN 12266-1	leakage class A

\*: Please consider further temperature versions and limits in technical bulletin 32



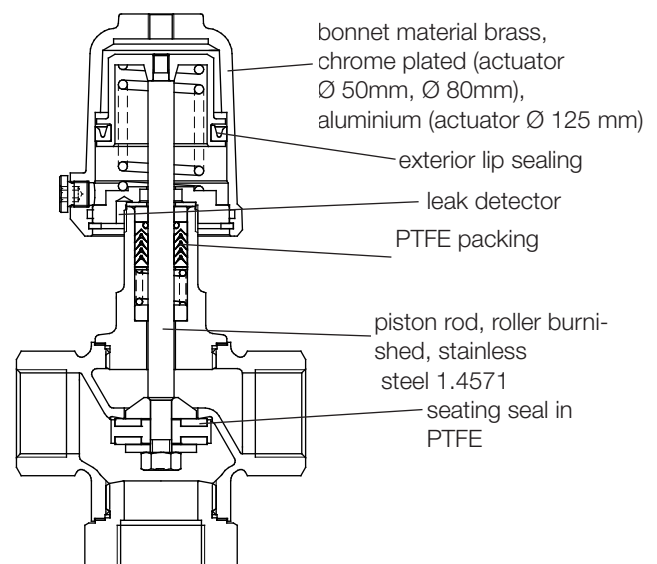
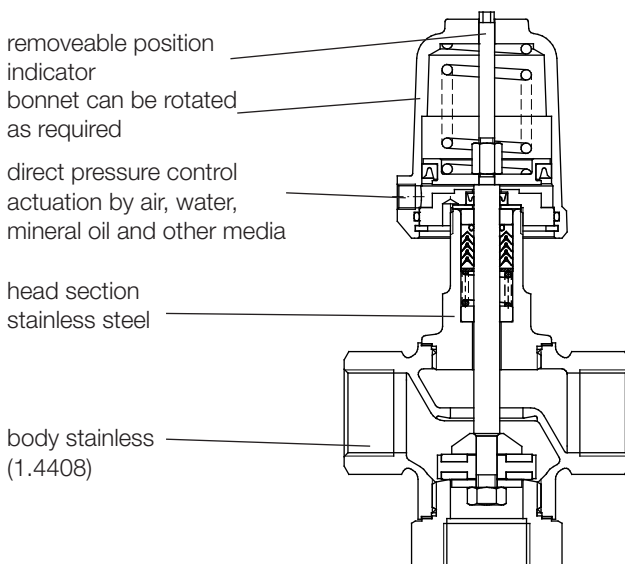
**TÜVRheinland®**  
TA-Luft zertifiziert

### Options

- limit switches
  - inductive proximity switch
  - electrical switch
- pilot valve
- additional manual operation
- version free of oil and grease

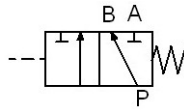
**distributing function: function 3**  
**mixing function: function 4**  
**shut - off function: function 7**

**actuator normally open: function 6**

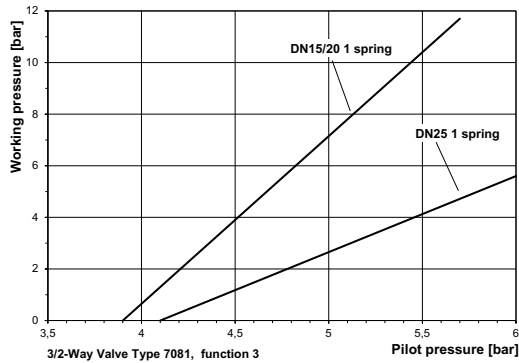


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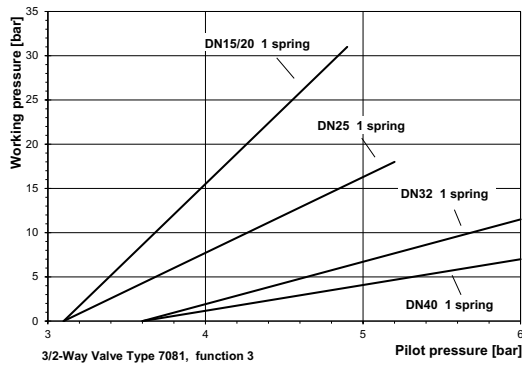
## 3/2-Way Valve, Distributing function (3)



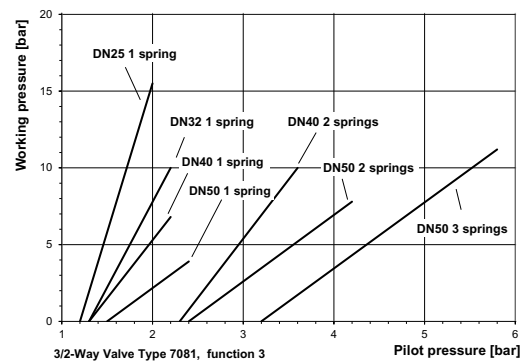
Actuator diameter 50 mm



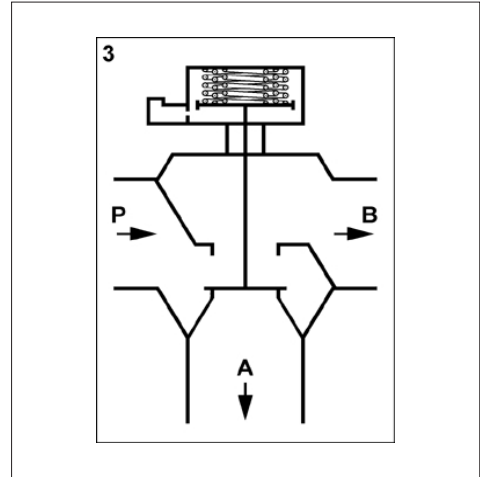
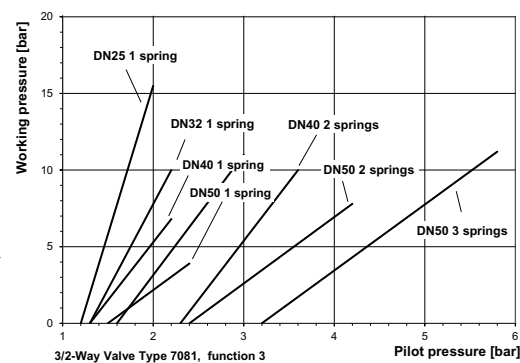
Actuator diameter 80 mm



Actuator diameter 125 mm



Actuator diameter 250 mm



### max. Pilot pressure, function 3

Nominal size DN	Actuator Ø mm	Springs *	max. Pilot pressure (bar)
15/20	50	1	9
15/20	80	1	7
25	50	1	9
25	80	1	7
25	125	1	2,9
32	80	1	7
32	125	1	3
40	80	1	7,7
40	125	1	3
40	125	2	3,9
50	125	1	5,6
50	125	2	6,6
50	125	3	7,4
50	250	4	3,6

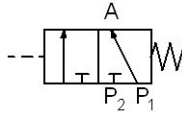
\* standard spring configuration  
1 spring

### Attention:

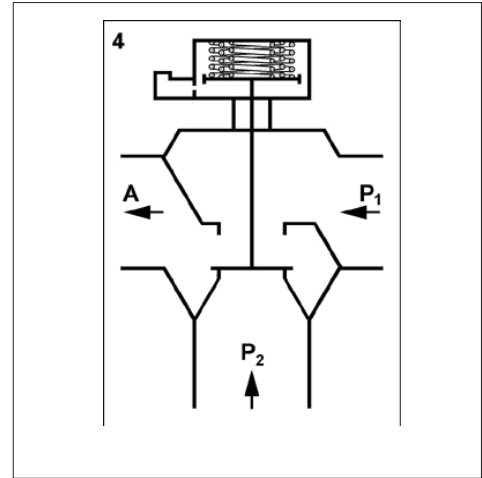
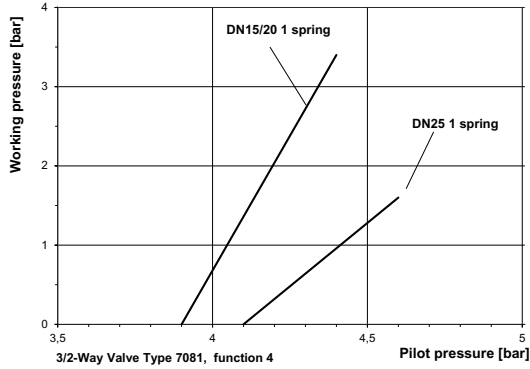
The maximum pilot pressure must not be exceeded since otherwise the piston rod would be damaged.

# 3/2-Way Valve 7081

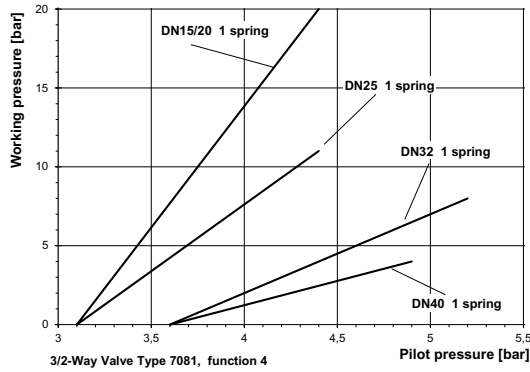
## 3/2-Way Valve, Mixing function (4)



Actuator diameter 50 mm



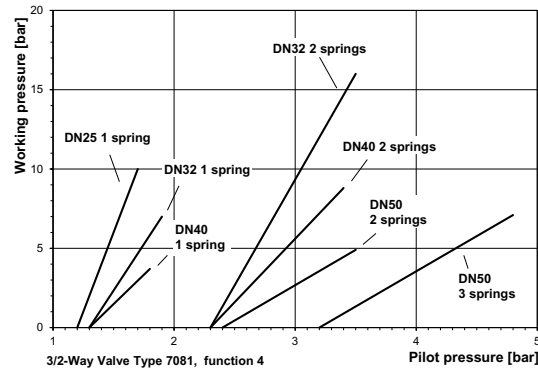
Actuator diameter 80 mm



### max. Pilot pressure, function 4

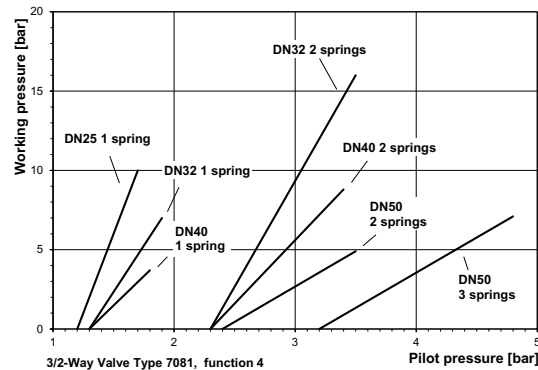
Nominal size DN	Actuator r Ø mm	Springs *	max. Pilot pressure (bar)
15/20	50	1	9,9
15/20	80	1	7,3
25	50	1	9,9
25	80	1	7,3
25	125	1	2,9
32	80	1	7,7
32	125	1	3
32	125	2	3,9
40	80	1	7,7
40	125	1	3
40	125	2	3,9
40	250	4	2,4
50	125	1	5,7
50	125	2	6,6
50	125	3	7,4
50	250	8	4,8

Actuator diameter 125 mm



\* standard spring configuration  
1 spring

Actuator diameter 250 mm

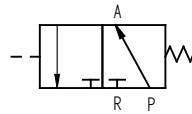


### Attention:

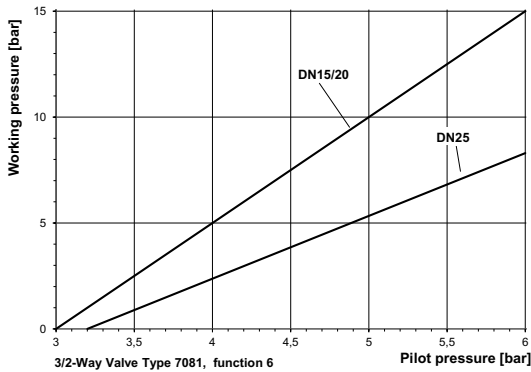
The maximum pilot pressure must not be exceeded since otherwise the piston rod would be damaged

# 3/2-Way Valve 7081

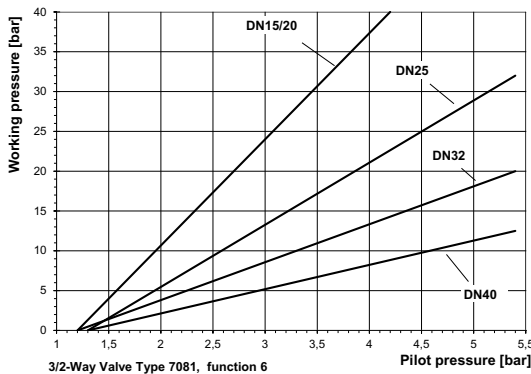
## 3/2-Way Valve, Actuator: normally open (6)



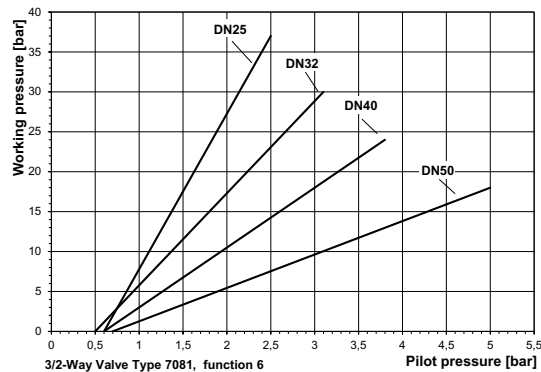
Actuator diameter 50 mm



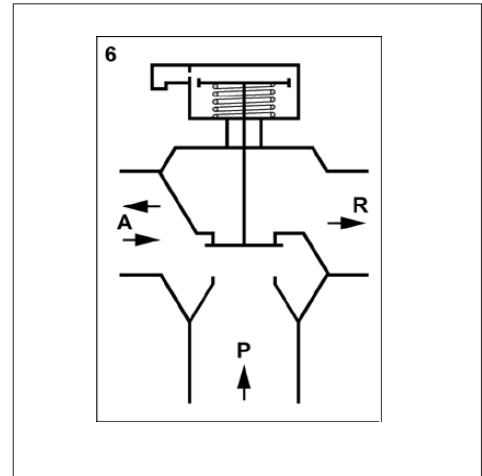
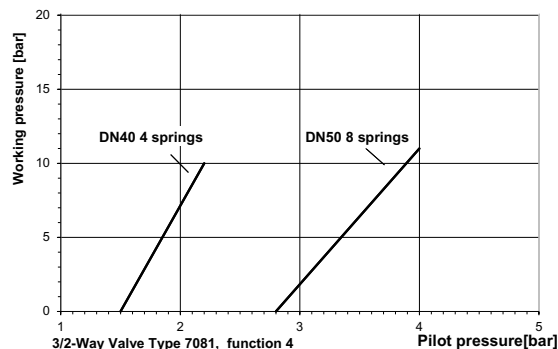
Actuator diameter 80 mm



Actuator diameter 125 mm



Actuator diameter 250 mm



### max. Pilot pressure, function 6

Nominal size DN	Actuator Ø mm	max. Pilot pressure (bar)
15/20	50	7
15/20	80	4,8
25	50	7
25	80	6
25	125	3
32	80	6
32	125	3,6
40	80	6
40	125	4,3
50	125	5,5

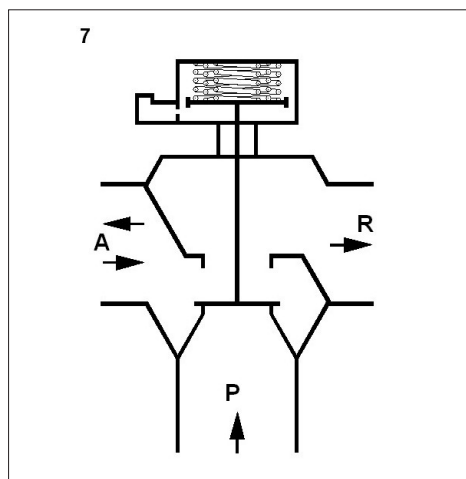
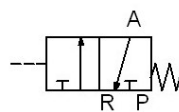
### Attention:

The maximum pilot pressure must not be exceeded since otherwise the piston rod, or as the case may be, the seating seal would be damaged.

# 3/2-Way Valve 7081

## 3/2-Way Valve, shut - off function, spring to close (7)

Nominal Size DN	Diff. Pressure max. (bar)	Pilot pressure (bar)	Actuator Ø mm	Springs *
DN15/20	3	4,0 - 9,9	D50	1
DN15/20	7	5,1 - 10	D50	2
DN25	3,5	5,4 - 10	D50	2
DN15/20	20	3,1 - 7,4	D80	1
DN25	11	3,2 - 7,4	D80	1
DN25	16	4,0 - 8,0	D80	2
DN25	20	4,8 - 9,0	D80	3
DN32	8	3,8 - 7,8	D80	1
DN32	11	4,6 - 8,5	D80	2
DN32	14	5,7 - 9,5	D80	3
DN40	5	4,7 - 8,5	D80	2
DN32	16	2,3 - 3,9	D125	2
DN40	3	1,5 - 3,0	D125	1
DN40	8	2,4 - 3,9	D125	2
DN40	12	3,2 - 4,6	D125	3
DN50	4,5	2,6 - 6,5	D125	2
DN50	7	3,4 - 7,4	D125	3
DN50	8,5	2,3 - 4,3	D250	6
DN50	11	2,8 - 4,8	D250	8



## Ordering Number System

1 2 3 4 5 6 7 8 9 10 11 12

7 0 8 1 / V S

1 - 6 : Please quote all 6 sections.  
7 - 12: Quote only if required.

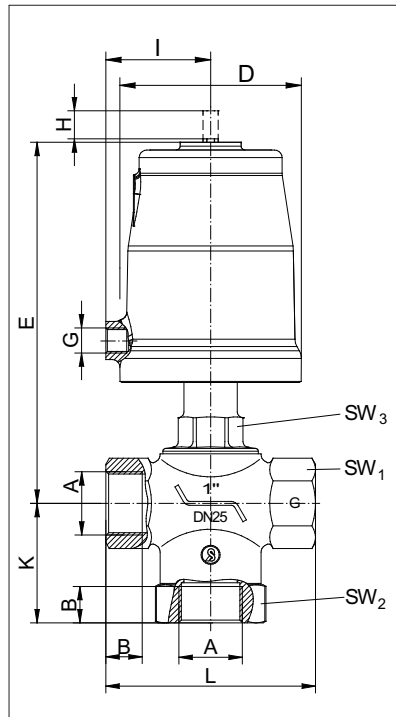
Type      Size

Symbol: "V": Valve  
"A": Actuator (valve without body)  
"R": Repair kit (sealings)

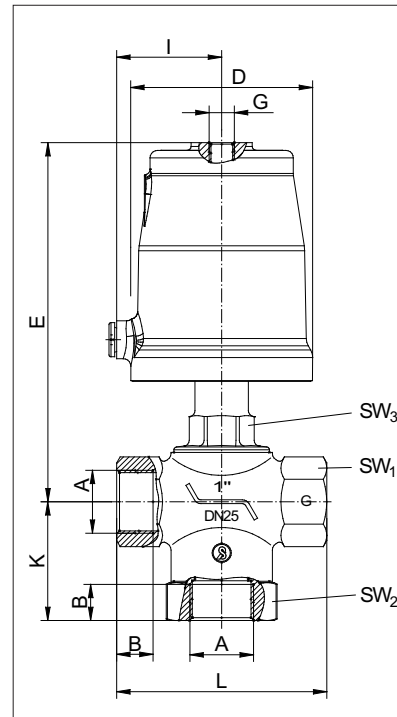
1. Body type	2. Connection	3. Body material	4. Seating seal	5. Pilot function	6. Actuator
3 3/2-way, diverting 4 3/2-way, mixing 6 3/2-way, spring opens 7 3/2-way, shut-off function	0 BSP-thread acc. ISO 228-1 5 NPT-thread	2 stainless steel 1.4408	0 PTFE	0 spring closes (function 3, 4 and 7 only) 1 spring opens (function 6 only) 3 double acting	0 piston Ø50mm 1 piston Ø80mm 2 piston Ø125mm C diaphragm D 250mm
7. Springs	8.	9. Packing	10. Temperature version	11. Accessories	12. Special versions
- standard (1 spring) 2 2 springs 3 3 springs R 4 springs (D 250mm) T 6 springs (D 250mm) W 8 springs (D 250mm)	- without significance	- standard 2 packing underneath	- standard H high temperature version	- no accessories 1 electrical position indicator with one switch 2 electrical position indicator with two switches 3 manual emergency operation 4 additional manual operation 5 stroke limitation 6 pilot valve DN 2, 230 V AC 7 pilot valve DN 2, 24 V DC K electr. position indicator compact M position indicator with two ind. switch 10 - 36 V DC (PNP) P position indicator with one ind. switch 10 - 36 V DC (PNP) T position indicator compact, inductive 10 - 30 V DC (PNP)	S special versions M position indicator with cable bushing N position indicator with plug connection

Ordering example: 7081/025V302000- - - - 7:  
3/2- way-valve, DN 25, body material stainless steel, BSP-thread acc. ISO 228-1, seat material PTFE, actuator Ø 50 mm - distributing function, pilot valve DN 2, 24 V DC

## Dimensions and Weights



Distributing, mixing and shut-off function  
function 3, 4 and 7



Actuator: normally open  
function 6

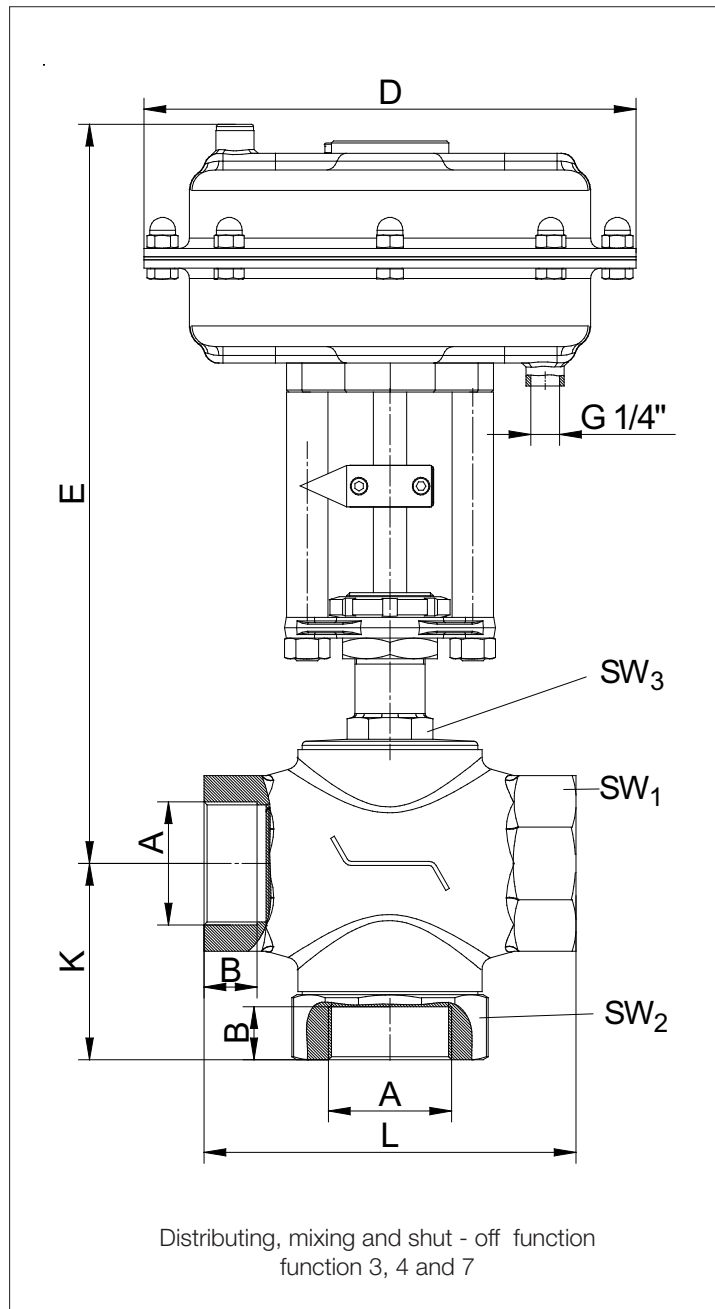
DN	piston	A G/NPT	B G	B NPT	D	E	G	H stroke	I	K	L	SW1	SW2	SW3	Weight (kg)
15	50	1/2"	15	14,5	62	140	G 1/8"	14	34,5	62	90	26	41	30	1,8
15	80	1/2"	15	14,5	98	178	G 1/4"	14	55	62	90	26	41	30	3,4
20	50	3/4"	16,3	15	62	140	G 1/8"	14	34,5	62	90	32	41	30	1,8
20	80	3/4"	16,3	15	98	178	G 1/4"	14	55	62	90	32	41	30	3,4
25	50	1"	19,1	18	62	151	G 1/8"	14	34,5	63	110	41	55	30	2,2
25	80	1"	19,1	18	98	190	G 1/4"	14	55	63	110	41	55	30	3,8
25	125	1"	19,1	18	146	215	G 1/4"	14	80	63	110	41	55	30	5,7
32	80	1 1/4"	21,4	18,4	98	194	G 1/4"	15	55	74	130	48	65	30	4,4
32	125	1 1/4"	21,4	18,4	146	219	G 1/4"	15	80	74	130	48	65	30	6,3
40	80	1 1/2"	21,4	18,4	98	195	G 1/4"	23	55	88	140	58	75	32	5,3
40	125	1 1/2"	21,4	18,4	146	220	G 1/4"	23	80	88	140	58	75	32	7,2
50	125	2"	25,7	19	146	248	G 1/4"	23	80	95	180	85	90	36	10,4

Dimensions in mm

DN	Kvs - value			
	diverting function		mixing function	
	P-A	P-B	P1-A	P2-A
15	7	5,5	5,5	7
20	11	7,5	7,5	11
25	19	12,5	12,5	19
32	28	19	19	28
40	43	32	34	51
50	65	51	51	65

# 3/2-Way Valve 7081, reinforced design

## Dimensions and Weights



DN	Piston	A G/NPT	B G	B NPT	D	K	L	E	Stroke	SW <sub>1</sub>	SW <sub>2</sub>	SW <sub>3</sub>	Weight (kg)
40	250	1 1/2"	21,4	18,4	240	88	140	470	23	58	75	32	14
50	250	2"	25,7	19	240	95	180	480	23	85	90	36	17,2

Dimensions in mm