

# 3/2-Way Valve 7081

1/2" up to 2"

**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 -58°F up to +428°F
- Working pressure up to 40 bar
- Versatile actuators



## Technische Daten

Body material	SST CF8M
Nominal sizes	1/2" - 2"
Connections	NPT thread
Nominal pressure	580 psi
Media temperature:*	
with metal bonnet	-22°F up to +338°F, opt. -58°F up to +428°F
with plastic bonnet	-22°F up to +275°F
with diaphragm actuator	-22°F up to +392°F, opt. -22°F up to +428°F
Ambient temperature	-22°F to +140°F
Viscosity of the media	maximum 600 mm <sup>2</sup> /s (600cSt)
Leakage acc. EN 12266-1	leakage class A

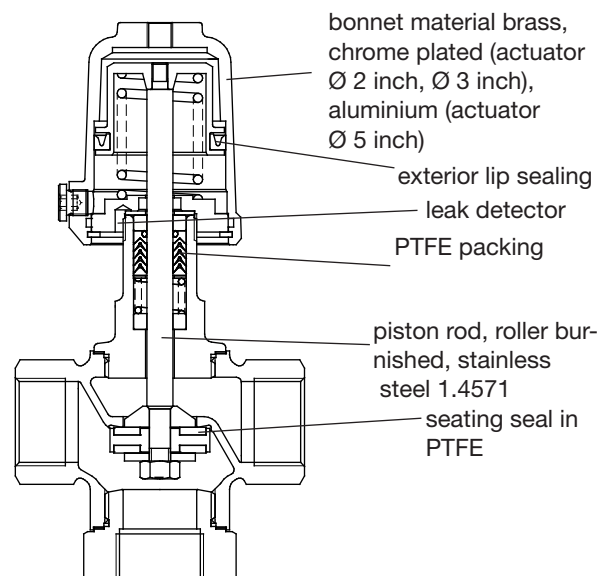
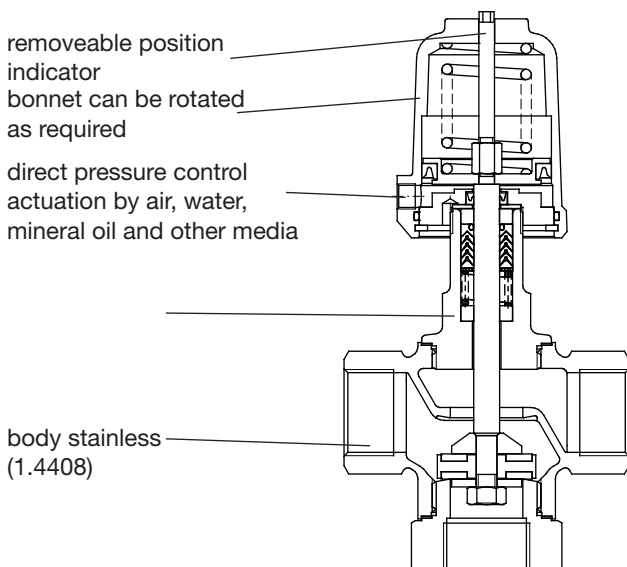
\*: Please consider further temperature versions and limits in technical bulletin 32

## Options

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

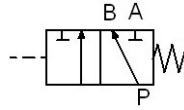
**distributing function: function 3**  
**mixing function: function 4**  
**shut - off function: function 7**

**actuator**  
**normally open: function 6**

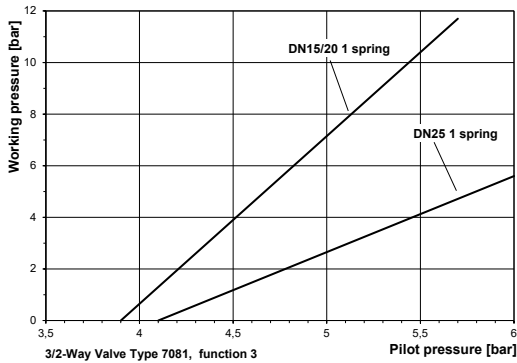


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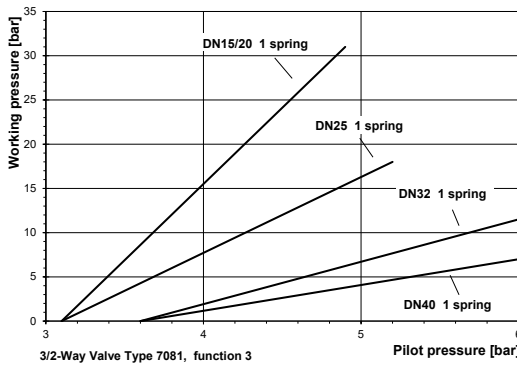
## 3/2-Way Valve, Distributing function (3)



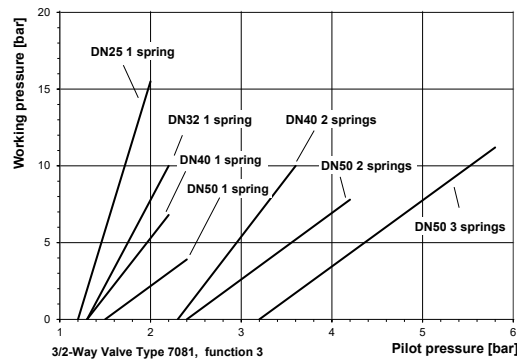
Actuator diameter 2 inch



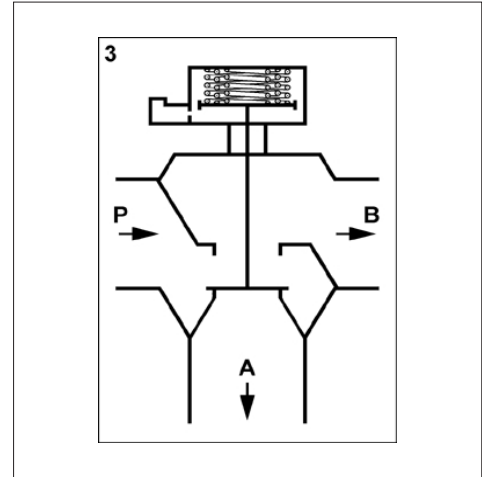
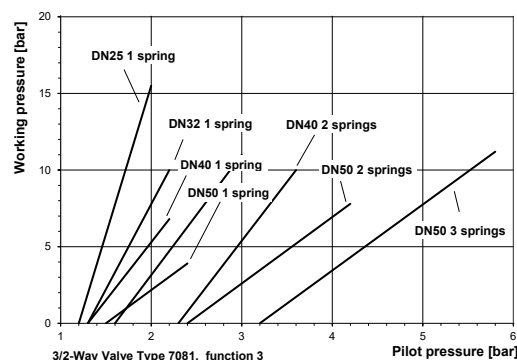
Actuator diameter 3 inch



Actuator diameter 5 inch



Actuator diameter 10 inch



### max. Pilot pressure, function 3

Nominal size	Actuator Ø	Springs *	max. Pilot pressure (psi)
1/2" + 3/4"	2"	1	130
1/2" + 3/4"	3"	1	100
1"	2"	1	130
1"	3"	1	100
1"	5"	1	40
1 1/4"	3"	1	100
1 1/4"	5"	1	45
1 1/2"	3"	1	110
1 1/2"	5"	1	45
1 1/2"	5"	2	55
2"	5"	1	80
2"	5"	2	95
2"	5"	3	105
2"	10"	4	50

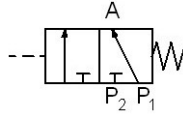
\* standard spring configuration  
1 spring

### Attention:

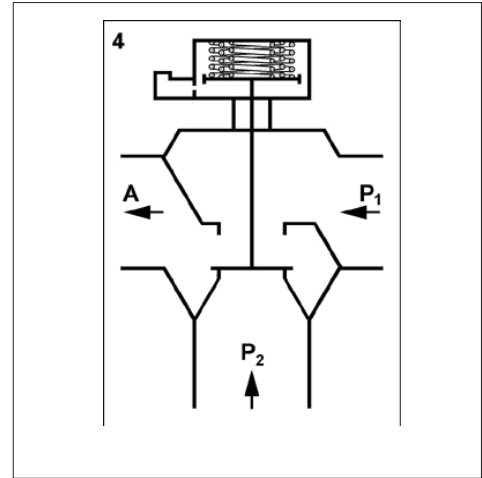
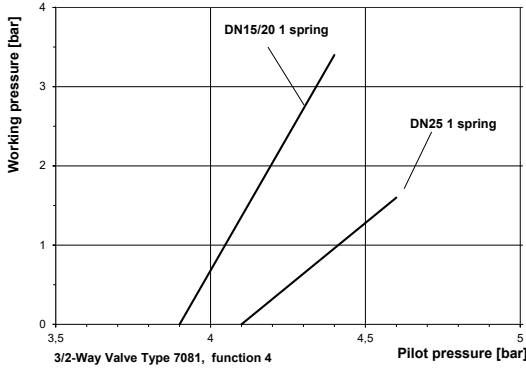
The maximum pilot pressure must not be exceeded since otherwise the piston rod would be damaged.

# 3/2-Way Valve 7081

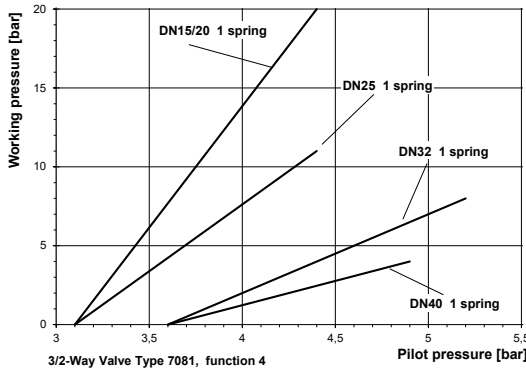
## 3/2-Way Valve, Mixing function (4)



Actuator diameter 2 inch



Actuator diameter 3 inch

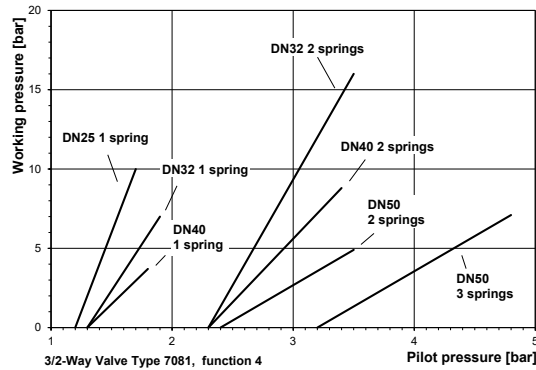


### max. Pilot pressure, function 4

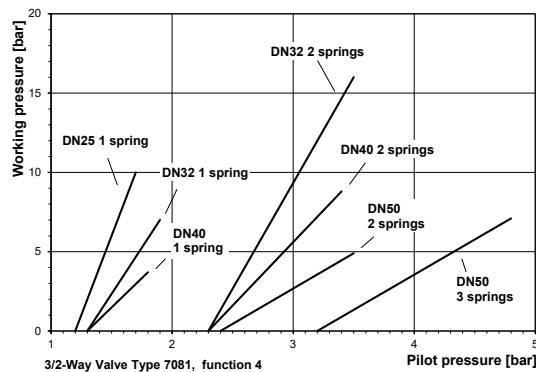
Nominal size	Actuator Ø	Springs *	max. Pilot pressure (psi)
1/2" + 3/4"	2"	1	145
1/2" + 3/4"	3"	1	105
1"	2"	1	145
1"	3"	1	105
1"	5"	1	40
1 1/4"	3"	1	110
1 1/4"	5"	1	45
1 1/4"	5"	2	55
1 1/2"	3"	1	110
1 1/2"	5"	1	45
1 1/2"	5"	2	55
1 1/2"	10"	4	35
2"	5"	1	85
2"	5"	2	95
2"	5"	3	105
2"	10"	8	70

\* standard spring configuration  
1 spring

Actuator diameter 5 inch



Actuator diameter 10 inch

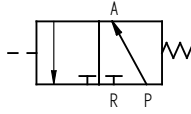


### Attention:

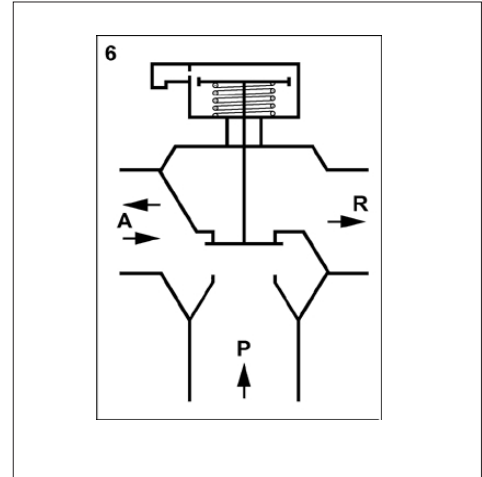
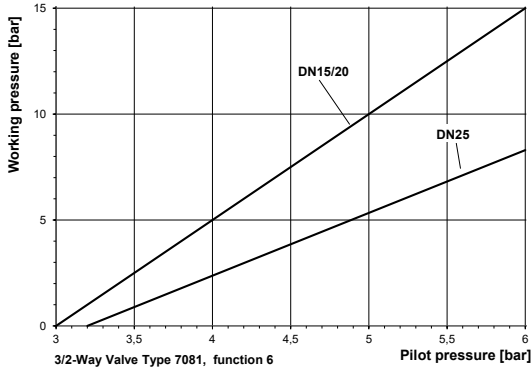
The maximum pilot pressure must not be exceeded since otherwise the piston rod would be damaged

# 3/2-Way Valve 7081

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



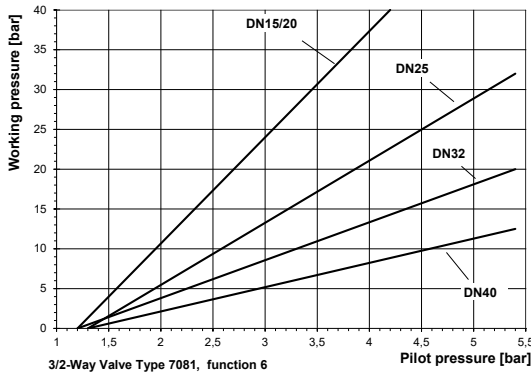
Actuator diameter 2 inch



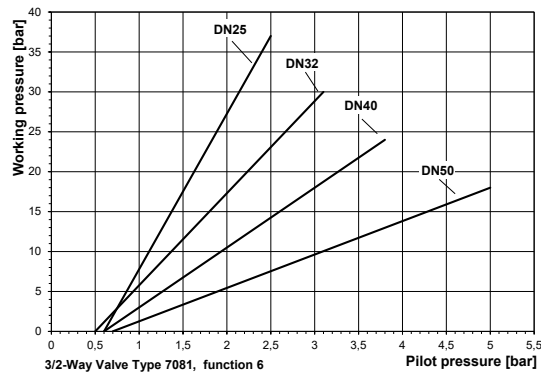
max. Pilot pressure, function 6

Nominal size	Actuator Ø	max. Pilot pressure (psi)
1/2" + 3/4"	2"	100
1/2" + 3/4"	3"	70
1"	2"	100
1"	3"	85
1"	5"	45
1 1/4"	3"	85
1 1/4"	5"	50
1 1/2"	3"	85
1 1/2"	5"	60
2"	5"	80

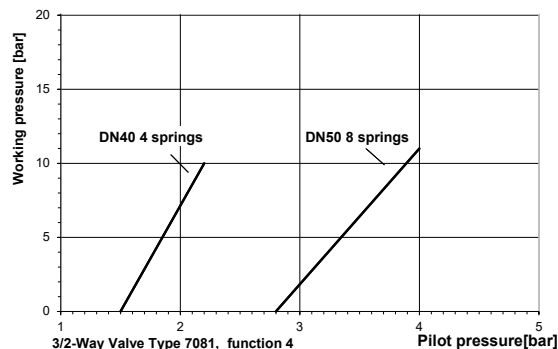
Actuator diameter 3 inch



Actuator diameter 5 inch



Actuator diameter 10 inch



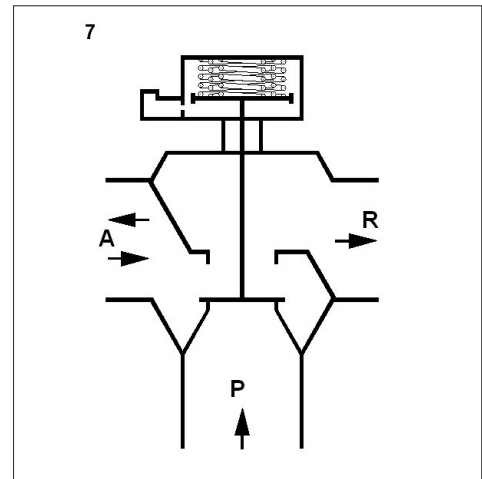
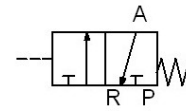
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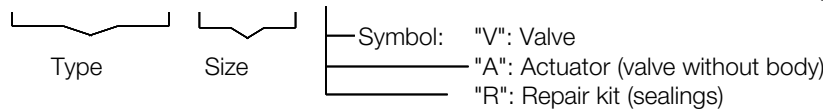
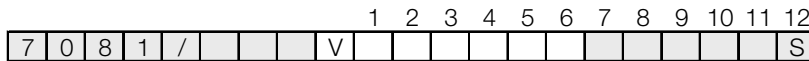
## 3/2-Way Valve, shut - off function, spring to close (7)

Nominal Size	Diff. Pressure max (psi)	Pilot pressure (psi)	Actuator Ø inch	Springs *
1/2" / 3/4"	45	60 - 145	2"	1
1/2" / 3/4"	100	75 - 145	2"	2
1"	50	80 - 145	2"	2
1/2" / 3/4"	290	45 - 105	3"	1
1"	160	46 - 105	3"	1
1"	230	60 - 115	3"	2
1"	290	70 - 130	3"	3
1 1/4"	115	55 - 110	3"	1
1 1/4"	160	70 - 120	3"	2
1 1/4"	205	85 - 135	3"	3
1 1/2"	75	70 - 120	3"	2
1 1/4"	230	35 - 55	5"	2
1 1/2"	45	25 - 40	5"	1
1 1/2"	115	35 - 55	5"	2
1 1/2"	175	45 - 65	5"	3
2"	65	40 - 90	5"	2
2"	100	50 - 105	5"	3
1 1/2"	230	54 - 87	10"	6
2"	125	35 - 65	10"	6
2"	160	45 - 70	10"	8

\* standard spring configuration 1 spring



## Ordering Number System

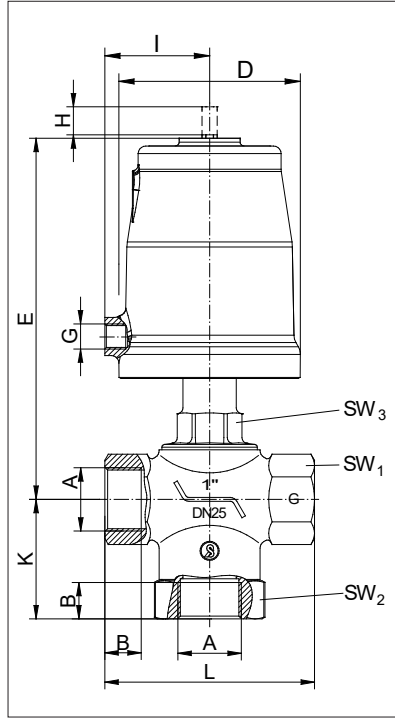


1 - 6 : Please quote all 6 sections.  
 7 - 12: Quote only if required.

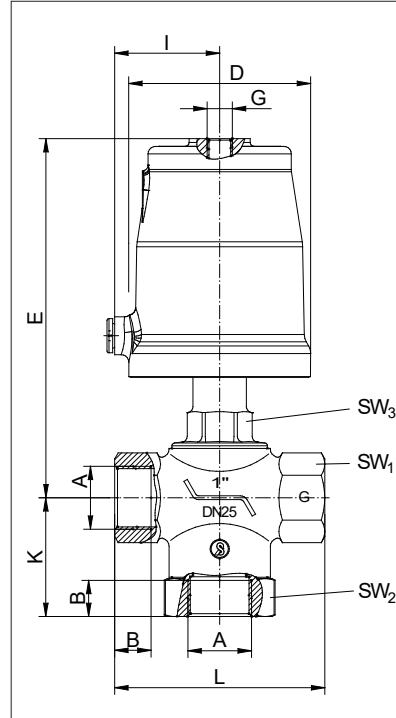
1. Body type	2. Connection	3. Body material	4. Seating seal	5. Pilot function	6. Actuator
3 3/2-way, diverting function	5 NPT-thread	2 stainless steel CF8M	0 PTFE	0 spring closes (function 3, 4 and 7 only)	7 piston 2" (NPT)
4 3/2-way, mixing function				1 spring opens (function 6 only)	8 piston 3" (NPT)
6 3/2-way, spring opens				3 double acting	9 piston 5" (NPT)
7 3/2-way, shut - off function					D membrane D 10" (NPT)
7. Springs	8.	9. Packing	10. Temperature version	11. Accessories	12. Special versions
- standard (1 spring)	- without significance	- standard packing under-neath	- standard	- no accessories	S special versions
2 2 springs			H high temperature version	1 electrical position indicator with one switch	
3 3 springs			V viton exterior lip sealing	2 electrical position indicator with two switches	
R 4 springs (D 10")				3 manual emergency operation	
T 6 springs (D 10")				4 additional manual operation	
W 8 springs (D 10")				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)	

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

## Dimensions and Weights



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



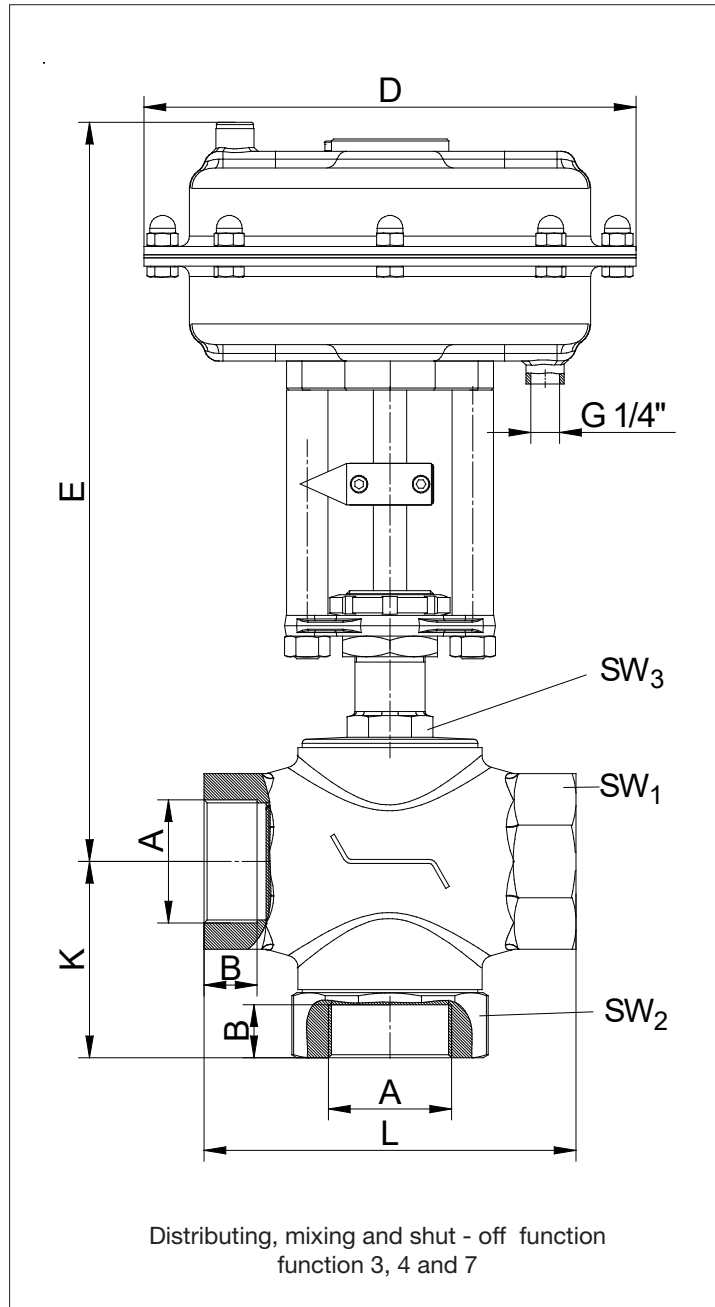
Actuator: normally open  
function 6

Size	piston	A NPT	B	B NPT	D	E	G	H stroke	I	K	L	SW1	SW2	SW3	Weight (lbs)
1/2"	2"	1/2"	0.6	0.55	2.45	5.5	G 1/8"	0.55	1.35	2.45	3.55	1	1.6	1.2	4
1/2"	3"	1/2"	0.6	0.55	3.85	7	G 1/4"	0.55	2.15	2.45	3.55	1	1.6	1.2	7.5
3/4"	2"	3/4"	0.65	0.6	2.45	5.5	G 1/8"	0.55	1.35	2.45	3.55	1.25	1.6	1.2	4
3/4"	3"	3/4"	0.65	0.6	3.85	7	G 1/4"	0.55	2.15	2.45	3.55	1.25	1.6	1.2	7.5
1"	2"	1"	0.75	0.7	2.45	5.95	G 1/8"	0.55	1.35	2.5	4.35	1.6	2.15	1.2	4.8
1"	3"	1"	0.75	0.7	3.85	7.5	G 1/4"	0.55	2.15	2.5	4.35	1.6	2.15	1.2	8.4
1"	5"	1"	0.75	0.7	5.75	8.45	G 1/4"	0.55	3.15	2.5	4.35	1.6	2.15	1.2	12.5
1 1/4"	3"	1 1/4"	0.85	0.7	3.85	7.65	G 1/4"	0.59	2.15	2.9	5.1	1.9	2.55	1.2	9.7
1 1/4"	5"	1 1/4"	0.85	0.7	5.75	8.6	G 1/4"	0.59	3.15	2.9	5.1	1.9	2.55	1.2	13.9
1 1/2"	3"	1 1/2"	0.85	0.7	3.85	7.7	G 1/4"	0.91	2.15	3.45	5.5	2.3	2.95	1.25	11.7
1 1/2"	5"	1 1/2"	0.85	0.7	5.75	8.65	G 1/4"	0.91	3.15	3.45	5.5	2.3	2.95	1.25	15.8
2"	5"	2"	1	0.75	5.75	9.75	G 1/4"	0.91	3.15	3.75	7.1	3.35	3.55	1.4	22.9

Dimensions in inch

Size	Cv - values			
	diverting function		mixing function	
	P-A	P-B	P1-A	P2-A
1/2"	8.1	6.4	6.4	8.1
3/4"	12.8	8.7	8.7	12.8
1"	22	14.5	14.5	22
1 1/4"	32.5	22	22	32.5
1 1/2"	49.9	37.1	39.4	59.2
2"	75.4	59.2	59.2	75.4

## Dimensions and Weights



Size	Piston	A Rp/NPT	B Rp	B NPT	D	K	L	E	Stroke	SW1	SW2	SW3	Weight (lbs)
1 1/2"	10"	1 1/2"	0.84	0.72	9.45	3.46	5.51	18.5	0.91	2.28	2.95	1.26	31
2"	10"	2"	1.01	0.75	9.45	3.74	7.09	18.9	0.91	3.35	3.54	1.42	38

Dimensions in inch