

Right Angle Control Valve

1/2" up to 2"

Pneumatically operated valve for control loops with neutral up to highly aggressive media

- Integrated positioner
- Compact design
- All parts in contact with medium made from stainless steel
- For temperatures from -148°F up to +428°F
- Operating pressures up to 580 psi

Technical Information

Nominal sizes	1/2" up to 2"
Body material	CF8M
Connection	
Pipe thread NPT	1/2" - 2"
Nominal pressure	580 psi
Media temperature*	-22°F up to +392°F opt.-148°F up to +428°F
Ambient temperature**	digital positioner +14°F up to +167°F analog positioner -5°F up to +140°F
Vacuum	> 0,0295 mercury (Hg)
Working pressure for version without cavities	maximum 175 psi
*: Please consider further temperature versions and limits in technical bulletin 32	



Positioners:

p/p-positioner body brass chrome plated

Type 8047

i/p-positioner body brass/aluminium

Type 8047

digital positioner body aluminium anodized

Type 8049

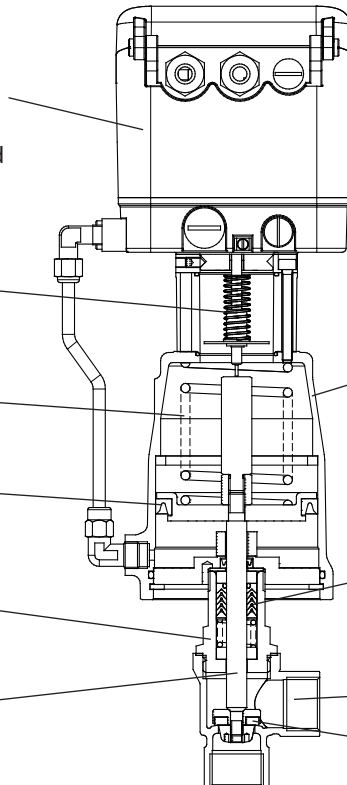
position indicator
PA Trogamid (clear)

actuator springs

outer lip

head section

piston rod
stainless steel 316
roller burnished



Options

- Optical position indicator
- External i/p-converter 8045
- Inductive limit switches
- Ex-i/p-positioner
(II 2G EEx ib IIC T6/T5)

bonnet chrome plated brass
(actuators Ø 3")
aluminium, corrosion protected
(actuator Ø 5"),
option: reinforced plastic material
bonnets in stainless steel available,
if desired

packing from filled PTFE, special version for reduced hollow spaces

stainless steel body CF8M

seating seal

Right Angle Control Valve 7051



with integrated positioner

Cv- Values

Size	Linear						Equal percentage					
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
100 %	6	12.2	19.1	29	46.4	66.1	4.8	10.8	13.9	18.6	37.1	-
40 %	2.4	4.9	7.7	11.6	18.6	-	2	4.3	5.6	7.4	14.8	-
25 %	1.5	3.1	4.8	-	-	-	1.2	2.7	3.5	-	-	-

Admissible Pressures

digital positioner

Size	Pressure	Supply pressure range	Piston Ø	Spring configuration
	psi	psi	inch	number
1/2"	250	60 - 90	3"	2
3/4"	250	60 - 90	3"	2
1"	250	60 - 90	3"	1
1 1/4"	145	60 - 90	3"	1
1 1/4"	250	45 - 90	5"	2
1 1/2"	85	60 - 90	3"	1
1 1/2"	250	60 - 90	5"	3

p/p-positioner i/p-positioner

Size	Pressure	Supply pressure range	Piston Ø	Spring configuration
	psi	psi	inch	number
1/2"	250	60 - 90	3"	2
3/4"	250	60 - 90	3"	2
1"	175	60 - 90	3"	1
1 1/4"	100	60 - 90	3"	1
1 1/4"	190	45 - 90	5"	2
1 1/2"	60	60 - 90	3"	1
1 1/2"	160	60 - 90	5"	3

diaphragm actuator, direct pressure range

Size	Differential pressure (psi)		Supply air (psi)		Diaphragm area inch
	spring range		spring range		
	3 - 15 psi	6 - 29 psi	3 - 15 psi	6 - 29 psi	
1/2"	235	235	20	35	10"
3/4"	235	235	20	35	10"
1"	130	235	20	35	10"
1 1/4"	75	220	20	35	10"
1 1/2"	45	145	20	35	10"
2"	30	90	20	35	10"

Positioner

For technical information of our positioners please refer to the corresponding data sheets.

Right Angle Control Valve 7051, reinforced design with integrated positioner 2" 580 psi

Admissible Pressures

digital positioner

Size	Max. pressure (psi)		Supply pressure range psi	Piston Ø inch	Spring configuration Number
	PTFE	PEEK			
2"	45	-	60 - 90	3"	1
2"	130	45	60 - 90	5"	3
2"	175	75	45 - 90	10"	6
2"	230	145	60 - 90	10"	8
2"	230	230	60 - 90	10"	12

p/p-positioner i/p-positioner

Size	Differential pressure (psi)	Supply pressure range psi	Piston Ø inch	Spring configuration number
	PTFE			
2"	29	60 - 90	3"	1
2"	87	60 - 90	5"	3
2"	174	60 - 90	10"	10
2"	232	60 - 90	10"	12

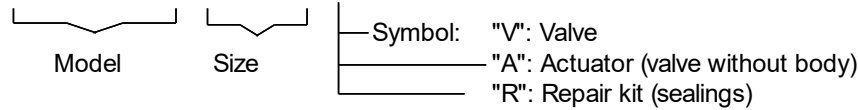
Right Angle Control Valve 7051



with integrated positioner

Ordering Number System

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

1. Body type	2. Connection	3. Body material	4. Seat material	5. Pilot function	6. Actuator
7 Right angle control valve Type 7051	0 pipe thread acc. ISO 228-1 5 NPT thread	2 stainless steel CF8M	0 PTFE	6 p/p positioner + position indicator Type 8047 7 i/p positioner + position indicator Type 8047 8 i/p positioner with plug connection M12x1 with position indicator Type 8047 9 as above, but for hazardous location use (II 2 G EEx ib IIC T6) plug connec. M12x1 Type 8047 C dig. positioner Type 8049 4 wire R dig. positioner Type 8049 2 wire W dig. positioner Type 8049 ExPro, ATEX, IECEx K digital positioner type 8049 ExPro-FM with base plate in stainless steel; Ta = +14°F to +167°F; IS Class I Division 1, Groups A, B, C, D; T4 Entity; Class I Zone 0 AEx ia IIC T4 Entity, IP65 N dig. positioner Type 8049 IO-Link version Y digital positioner type 8049 ExPro-FM with base plate in stainless steel; Ta = +14°F to +167°F; NI Class I Division 2, Groups A, B, C, D; T4 NIFW, IP65	8 piston 3" (NPT) 9 piston 5" (NPT) D diaphragm, stainless steel D 10" (NPT)
7. Springs	8. Characteristic	9. Packing	10. Cv-value	11. Accessories	12. Special versions
- standard spring configuration 1 NO (only with digital positioner) P spring set 3-15psi T 6 springs Y 12 springs	- linear 1 equal percentage	- standard 2 packing underneath (vacuum)	- full Cv-value 1 red. 40% 2 red. 25%	- without 6 pilot-valve DN2 230V AC 7 pilot-valve DN2 24V DC	S to state if some stations are quoted!

Ordering Example: 7051/020V7020C8
 Right angle control valve 7051, 3/4", pipe thread, body material stainless steel, seating seal PTFE, digital positioner 4 wire with position indicator, actuator 3" (NPT), linear flow characteristic 100%, Cv-value 12,2

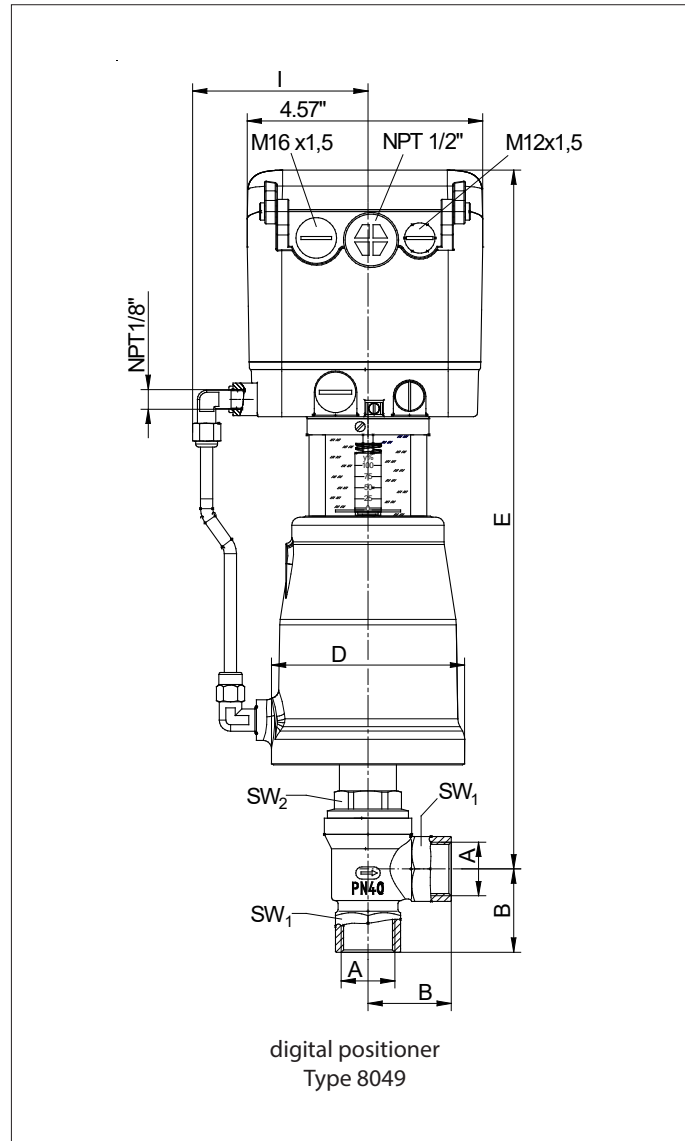
reinforced design (from DN50):

Ordering Example: 7051/050V7020CD-----S-----K
 Right angle control valve 7051, 2", pipe thread, body material stainless steel, seating seal PTFE, digital positioner 8049 4-wire, actuator 10" (NPT), linear flow characteristic 100%, Cv-value 66,1
 „K“ reinforced design

Right Angle Control Valve 7051

piston actuator with integrated positioner

Dimensions and Weights



Size	Actuator	A	B	D	E	Stroke red.	I	SW1	SW2	Cv-value	Weight lbs
1/2"	3"	1/2"	1.61	3.78	13.5	0.35	3.54	0.98	1.18	6	9.7
3/4"	3"	3/4"	1.61	3.78	13.54	0.51	3.54	1.26	1.18	12.2	9.9
1"	3"	1"	1.61	3.78	14.06	0.57	3.54	1.61	2.36	19.1	10.3
1 1/4"	3"	1 1/4"	2.56	3.78	14.06	0.71	3.54	1.97	1.18	2.9	11
1 1/4"	5"	1 1/4"	2.56	5.75	14.88	0.71	4.13	1.97	1.18	2.9	16.7
1 1/2"	3"	1 1/2"	2.56	3.78	14.21	0.94	3.54	2.17	1.26	46.4	11.7
1 1/2"	5"	1 1/2"	2.56	5.75	15.04	0.94	4.13	2.17	1.26	46.4	17.4

reinforced design:

2"	3"	2"	2.56	3.78	14.88	0.94	3.54	2.68	1.42	66.1	13
2"	5"	2"	2.56	5.75	15.71	0.94	4.13	2.68	1.42	66.1	18.7

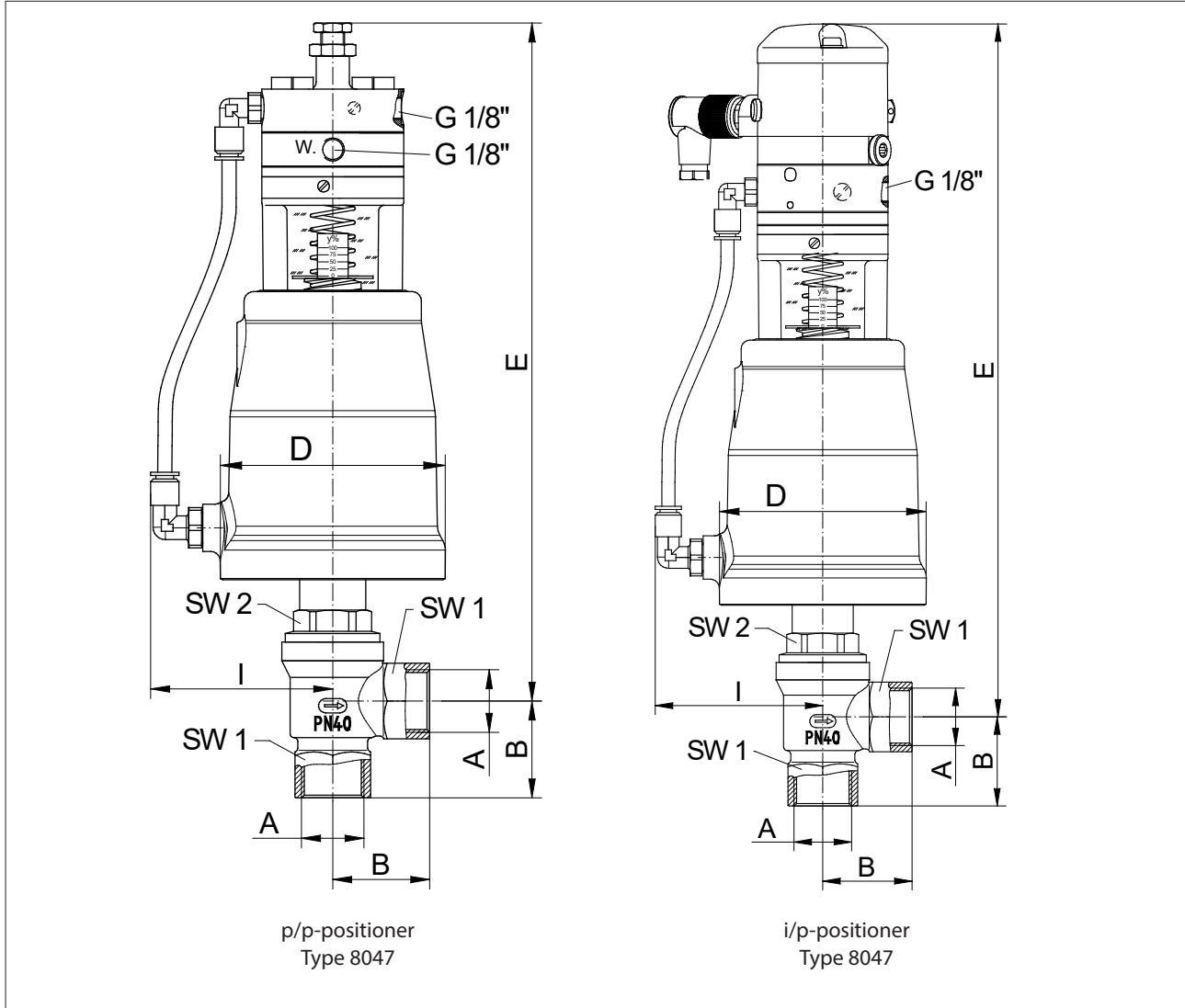
Dimensions in inch

Right Angle Control Valve 7051



piston actuator with integrated positioner

Dimensions and Weights



Size	Actuator	A	B	D	I	E positioner		Weight (lbs)		Stroke
						p/p	i/p	p/p	i/p	
1/2"	3"	1/2"	1.6	3.8	3.15	11.05	12.5	8.1	8.8	0.39
3/4"	3"	3/4"	1.6	3.8	3.15	11.1	12.55	8.4	9	0.51
1"	3"	1"	1.6	3.8	3.15	11.6	13.05	8.8	9.5	0.59
1 1/4"	3"	1 1/4"	2.55	3.8	3.15	11.6	13.05	9.5	10.1	0.71
1 1/4"	5"	1 1/4"	2.55	5.75	4.15	12.4	13.85	15.2	15.8	0.71
1 1/2"	3"	1 1/2"	2.55	3.8	3.15	11.75	13.25	10.1	10.8	0.94
1 1/2"	5"	1 1/2"	2.55	5.75	4.15	12.55	14	0.3	0.3	0.94

reinforced design:

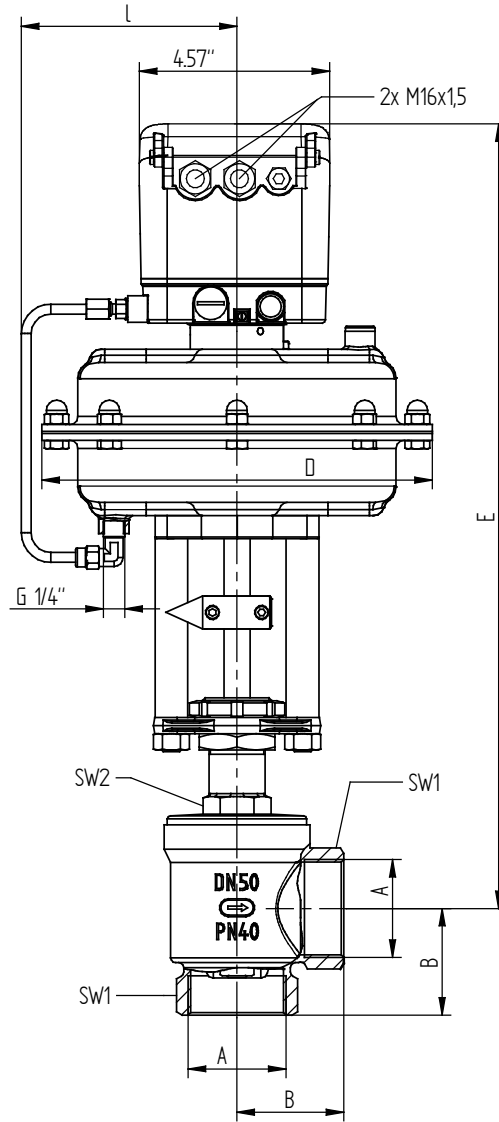
2"	3"	2"	2.55	3.8	3.15	12.45	13.9	0.2	0.2	0.94
2"	5"	2"	2.55	5.75	4.15	13.25	14.7	0.3	0.3	0.94

Dimensions in inch

Right Angle Control Valve 7051

diaphragm actuator with integrated positioner

Dimensions and Weights



diaphragm actuator
with digital positioner Type 8049

Size	Actuator	A	B	D	E	Stroke red.	I	SW1	SW2	Cv- value	Weight lbs
1/2"	10"	1/2"	1.61	9.37	16.54	0.39	5.31	0.98	1.18	5.8	28.2
3/4"	10"	3/4"	1.61	9.37	16.54	0.51	5.31	1.26	1.18	12.8	28.4
1"	10"	1"	1.61	9.37	17.13	0.59	5.31	1.61	1.18	19.7	28.8
1 1/4"	10"	1 1/4"	2.56	9.37	17.91	0.71	5.31	1.97	1.18	29	35.4
1 1/2"	10"	1 1/2"	2.56	9.37	18.11	0.94	5.31	2.17	1.26	46.4	36.1
2"	10"	2"	2.56	9.37	18.9	0.94	5.31	2.68	1.42	66.1	37.4

Dimensions in inch