



Control Valves with Pneumatic Actuator, PN50 (DN150 = PN40)

Control characteristic: linear or equal percentage

Stainless steel body and topwork

Actuator - air opens, spring closes or contrary

"live loaded" gland packing

"cleaned and degreased for oxygen service" - the actuator is not cleaned and degreased for oxygen

Part No. 01343.X.161*

*Butt weld connection for stainless steel pipes acc. to DIN EN ISO 1127 or ASTM A312

Part No. 01343.X.1614

Socket weld connection for stainless steel pipes acc. to DIN EN ISO 1127 and ASTM A312



Accessories for Control Valves - see page 31 & 32

Available options - on request only:

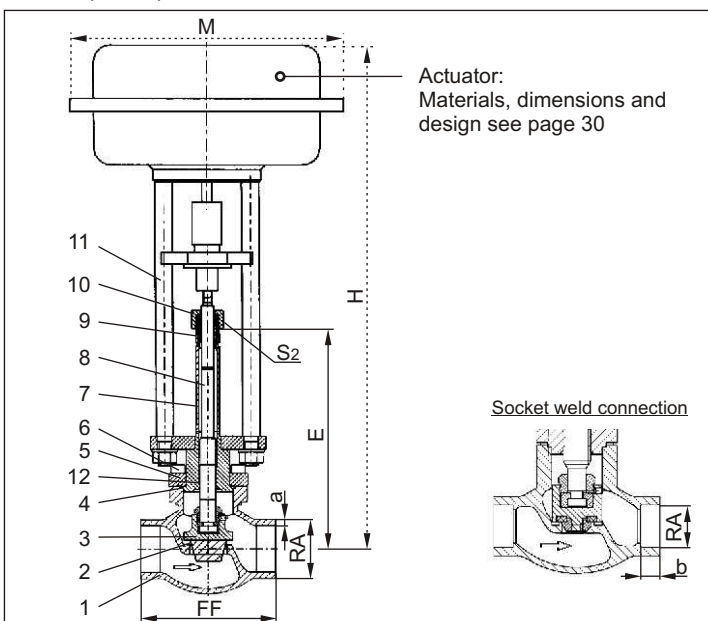
- Welded stainless steel stubs acc. to DIN EN ISO 1127 or ASTM A312 - length FF + 150mm
- Actuator - "cleaned and degreased for oxygen"
- Electric actuator
- Bellow sealed option

Applications:

Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluoromethan, carbon oxide, methane, ethane and ethylene.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Bonnet gasket	PTFE	
5 Headpiece	1.4301	A 276 Grade 304
6 Bolts	1.4301/A2	A 194 B8
7 Elongation tube	1.4541	A 213 TP 321
8 Stem	1.4301	A 276 Grade 304
9 Gland packing	Graphite / PTFE	
10 Gland nut	1.4305	A 276 Grade 303
11 Pillars	1.4301	A 276 Grade 304
12 Bush	CW452K	B 103 UNS C51900



Standard marking acc. to Pressure Equipment Directive 97/23/EG (PED).



Type 01343 - Control Valve	Technical data	Nominal size													
		DN	10	15	15	20	25	32	40	40	50	65	80	100	150
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	6570	8088	0114	0168	
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280	400	
Height	H	dependent on actuator													
Length	E	195	195	195	200	200	230	230	230	235	300	300	300	350	
Outside pipe-Ø DIN EN ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3	168.3	
Wall thickn. pipe DIN EN ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0	7.1	
Outside pipe-Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3	168.3	
Wall thickness pipe ASTM A312	a	S10	S40	S10	S10	S10	-	S10	S10	S10	S40	S10	S40	S40	
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20	-	
Actuator-Ø	M	dependent on actuator													
Wrench size across flats	S ₂	30	30	30	30	30	36	36	36	36	36	36	41	41	
Weight w/o actuator	ca. kg	1.9	2.15	2.2	2.4	3.1	3.8	6.5	6.5	9.0	15.2	20.0	28.0	61.0	
Kvs - Value linear/ equal percent.	m ³ /h	see table page 29													
Cv - Value linear/ equal percent.	gal /min	see table page 29													

Dimensions in mm.

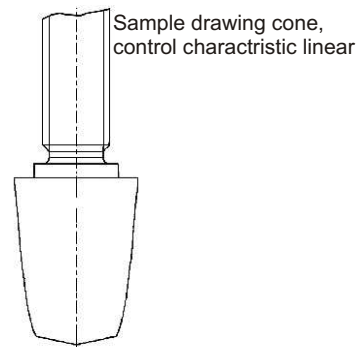
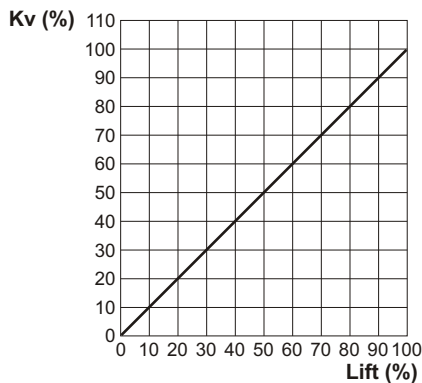
Control Valves

Type 01343 - Actuated Control Valve



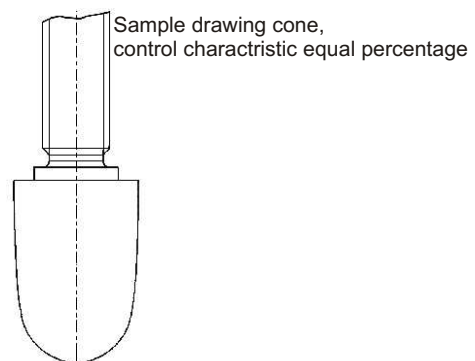
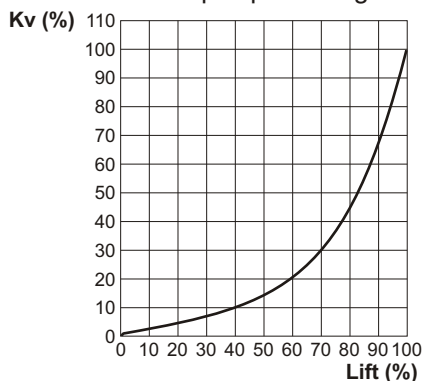
Type 01343 Control valve		Flow coefficient for Control Valves – Control characteristic linear Kvs-Value in m ³ /h, Cv-Value in gal/min																	
Lift in mm	20	20		20		30		30		30		40		40		40			
Seat-Ø in mm	15	20		25		32		36		45		62		76		94			
Nominal size	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	
DN 15	3.5	4.1																	
DN 20			6.3	7.3															
DN 25					10.0	11.6													
DN 32							16.0	18.6											
DN 40									19.0	22.1									
DN 50											30.0	34.9							
DN 65														in preparation					
DN 80															in preparation				
DN 100																			in preparation

Ideal inhärent linear characteristic line acc. to DIN IEC 60534 Part 2-4



Type 01343 Control valve		Flow coefficient for Control Valves – Control characteristic equal percentage Kvs-Value in m ³ /h, Cv-Value in gal/min																	
Lift in mm	20	20		20		30		30		30		40		40		40			
Seat-Ø in mm	15	20		25		32		36		45		62		76		94			
Nenngröße	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	Kvs	Cv	
DN 15	3.5	4.1																	
DN 20			4.0	1.7															
			6.0	7.0															
DN 25					2.5	2.9													
					4.5	5.2													
					6.3	7.3													
					10.0	11.6													
DN 32							10.0	11.6											
							14.0	16.3											
DN 40									10.0	11.6									
									19.0	22.1									
DN 50											10.0	11.6							
											16.0	18.6							
											25.0	29.1							
											30.0	34.9							
DN 65														in preparation					
DN 80															in preparation				
DN 100																			in preparation

Ideal inhärent equal percentage characteristic curve acc. to DIN IEC 60534 Part 2-4



Control Valves

Type 27511 - Pneumatic Actuator

HEROSE



Pneumatic Actuators

Standard actuator - air opens, spring closes
 maximum air pressure for operation 6.0 bar ü
 Actuator coating outside - Epoxy resin

Available options - on request only:

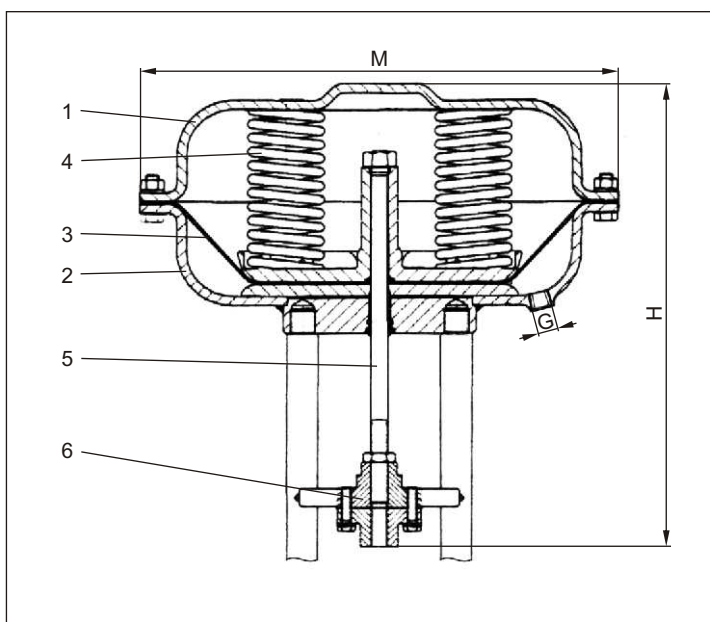
- Actuator - spring opens, air closes
- Actuator - cleaned and degreased for oxygen service
- Pneumatic actuator with override handwheel



Overview - required actuator sizes for different working pressures

Code in Table	Part No. Actuator	Nom. Size	Lift in mm	Working pressure in bar													
				2	4	5	6	8	10	15	17	20	25	30	35	40	
A	27511.15A6.3SPO	DN 10	14	A	A	A	A	A	A	A	A	A	A	A	A	A	A
B	27511.35B6.6GPO	DN 15	14	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C	27511.60A6.6GPO	DN 20	12	A	A	A	A	A	A	A	A	A	A	B	B	B	B
D	27511.60C6.7GPO	DN 25	14	A	A	A	A	A	A	A	B	B	B	B	B	B	B
E	27511.41B6.6SPO	DN 32	15	A	A	A	A	A	B	B	B	B	B	B	B	B	C
F	27511.41C6.2SPO	DN 40	18	B	B	B	B	B	B	B	B	C	C	C	C	C	C
		DN 50	19	B	B	B	B	B	B	C	C	C	D	D	E	E	
		DN 65	25	C	C	C	C	C	C	D	D	E	E	E	F	F	o.r.
		DN 80	30	C	C	C	D	D	E	E	E	F	F	F	F	o.r.	o.r.
		DN 100	30	C	C	D	D	E	E	F	o.r. – on request						
		DN 150	40	D	E	F	o.r. – on request										

Materials	DIN EN	ASTM
1 Body	1.0333	A 619 Grade 1008
2 Body	1.0333	A 619 Grade 1008
3 Diaphragm	NBR	
4 Springs	1.1200	A 576 Grade 1045
5 Actuator stem	1.4301	A 276 Grade 304
6 Coupling	CC333G	B 148 UNS C95800



Part No. Actuator	Type 27511 Technical data						
	.15A6.3SPO	.35B6.6GPO	.60A6.6GPO	.60C6.7GPO	.41B6.6SPO	.41C6.2SPO	
Diameter actuator	M	162	210	320	320	415	415
Height	H	204	260	296	339	399	570
Thread	G	M12	M12	M12	M12	M16	M16
Diaphragm area	cm ²	120	280	530	530	1000	1000
Spring range	bar	0.9 – 2.0	0.8 – 3.0	0.8 – 2.8	0.7 – 3.0	0.6 – 2.3	1.0 – 2.5
Regulating lift	mm	20	35	40	60	60	80
Weight	ca. kg	3.0	5.0	12.5	14.0	47.0	76.0

Dimensions in mm.

Control Valves

Type 01343 - Accessories



Accessories for Control Valves

3/2 way Solenoid Valve

direct acting solenoid valve DN3, fast acting, for neutral medium like air and water
port connections G1/4, body in brass, NBR seal,
circuit function: power free - outlet balanced, Pressure range 0 - 10.0 bar, Voltage tolerance $\pm 10\%$,
Ambient temperature max $+55^{\circ}\text{C}$ / 131°F , with flat seal and fixing screw

Standard version

Protecting class IP65, with cable plug for cable- $\varnothing 7$ mm, Medium temperature: 0°C / 32°F up to $+80^{\circ}\text{C}$ / 176°F

Part No. 40060.0200.C024

Operating voltage 24V, AC (50Hz)

Part No. 40060.0200.C110

Operating voltage 110V, AC (50Hz)

Part No. 40060.0200.C230

Operating voltage 230V, AC (50Hz)

Part No. 40060.0200.C24D

Operating voltage 24V, DC



Standard version

EEx-protected version

Protecting class IP65 EEx ed IIC T5, with cable $3 \times 0.75 \text{ mm}^2$, Medium temperature: 0°C / 32°F up to $+70^{\circ}\text{C}$ / 158°F
semi time-lag fuse acc. to nominal voltage

Part No. 40061.0200.C024

Operating voltage 24V, UC

Part No. 40061.0200.C230

Operating voltage 230V, UC

UC = DC and AC



EEx-protected version

Available options - on request only:

- Solenoid Valve "cleaned and degreased for oxygen"
- other port connections (1/4"NPT, G1/8), body and seat material 1.4401
- seal material EPDM or FPM, circuit function: power free - outlet pressure loaded

Position and Limit Switches

Limit switch (0/100%) with parallel roller lever and fixing device, quick-break switch,
Max. fuse rating 6A gL/gD D-fuse, Switching frequency 3600/h,

Part No. 40070.0011.0000Z - Standard version

Protecting class IP65 acc. to EN 60529,

Rated operating current/-voltage I_e/U_e : 6A / 400VAC, 3 cable entries M16 x 1.5,
change-over contact with double break (1 break contact / 1 make contact),
Ambient temperature -20°C / -4°F up to $+80^{\circ}\text{C}$ / 176°F

Part No. 40071.0011.0000Z - EEx-protected version

Protecting class IP67 acc. to EN 60529, EEX d IIC T6,

Rated operating current/-voltage I_e/U_e : 5A / 250VAC, with cable $4 \times 0.75 \text{ mm}^2$,
change-over contact with single break (1 break contact / 1 make contact),
Ambient temperature -20°C / -4°F up to $+65^{\circ}\text{C}$ / 149°F

Available options - on request only:

- overrun limit switch to signal intermediate positions



Standard version



EEx-protected version

Inductive proximity switches

Functions: inductive, Switching element function NAMUR NC, Output polarity NAMUR, Rated operating distance 2mm,
Assured operating distance 0 - 1.62 mm, Installation embeddable,
Nominal voltage 8V, Switch frequency 0 - 1000 Hz, Short-circuit and reverse polarity protection,
Indication of the switching state all direction LED yellow, with cable $2 \times 0.34 \text{ mm}^2$ and fixing device

Part No. 40080.1235.0000Z

Protecting class IP67 acc. to EN 60529, EEX ia IIC T6



Control Valves

Type 01343 - Accessories



Accessories for Control Valves

Air Control sets

Diaphragm pressure regulator with secondary ventilation,
Installation position vertical - drain plug at bottom,
Inlet pressure maximal 16.0 bar, Pore diameter in filter element 5µm,
filter element in Polyethylen (sintered), port connections G1/4, brass body,
with NBR seal, tank capacity maximal 0.35 cm³ condensate, condensate draining manuel,
Ambient temperature max +60°C / 140°F,
including pressure gauge and fixing accessories

Part No. 08002.021K.0000Z

condensate tank Polycarbonat, control range 0.5 - 10.0 bar,

Available options - on request only:

- condensate tank in brass, control range 0.5 - 16.0 bar,
- port connections G1/8



Condensate-tank
Polycarbonat



Condensate-tank
brass

Electropneumatic positioner for pneumatic Actuator

ATTENTION - operate only with dry, oil-free air acc. to IEC654-2 !
Protecting class IP65 acc. to EN 60529, with fixing device

Part No. 40090.6136.0000

Operation: simple, Inlet air pressure: max. 6.0 bar - connection with female thread G1/4

Electrical connection: screw type terminals 2.5 mm², cable gland: M 20 x 1.5

Set point x: 4 - 20 mA with 2 conductor connections

0/4 - 20 mA with 3/4 conductor connections

Auxiliary power with 3/4 conductor connections: UH: 18-30V DC

Internal resistance: Ri = 500 Ohm (2-wire)

Ri = 50 Ohm (3/4-wire)

Ambient temperature: -30°C / -22°F up to +80°C / 176°F



Part No. 40090.6137.0000

Digital electropneumatic positioner with Self-tuning after manuel release,
3 step opening characteristic, lift range 10 - 80 mm adjustable, with key pad
operating voltage: 24 V DC 0.4 A, electrical power consumption: ca 10W 4-wire circuit,
Inlet air pressure: max. 6.0 bar - connection with female thread G1/8, Air output: 70l/min

Electrical connection: screw type terminals 1.5 mm², 2 x PG9 cable bushings

Signal input: 0/4 - 20 mA or 0 - 10V

Auxiliary power 24 V = ca 0.4 A

Internal resistance: Ri = ca. 200 Ohm



Pneumatic positioner for pneumatic Actuator

ATTENTION - operate only with dry, oil-free air acc. to IEC654-2 !
Protecting class IP54 acc. to EN 60529, with fixing device

Part No. 40090.0981.0000

Operation: simple, Inlet air pressure: max. 6.0 bar - connection with female thread G1/8

Independent adjustment of stroke range and zero,

Signal range 0.2 - 1.0 bar or split range down to Δw 0.2 bar,

adjustable amplification and damping,

Ambient temperature: -40°C / -40°F up to +80°C / 176°F



other available positioner - on request only::

- analog positioner