Bulletin
681.05-3NE
January 2016

NOR'EAST™ CONTROLS

SINGLE SEATED CAGE VALVES

SERIES 8100 MODEL 8105

ALLAGASH™ INTERNATIONAL GROUP, LLC

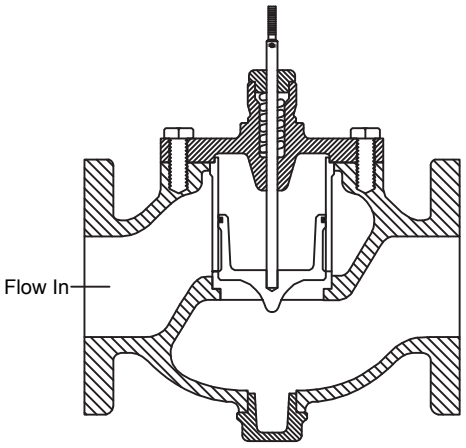
Previously manufactured by
Dezurik® and Honeywell®

Description:

The model 8105 valve combines the advantages of cage valve construction with a pneumatic actuator for low-maintenance and high performance service. The spring-type actuator provides either direct or reverse action as specified.

Accessories:

- Pneumatic and electro-pneumatic positioners
- Top-mounted handwheel (direct-acting only)
- Micro Switch precision switches
- Solenoids
- Air sets



SPECIFICATIONS

Actuator

Type	Pneumatic, diaphragm-actuated type 05. Direct or reverse acting with non-reversible body.
Construction	Anodized aluminum diaphragm cases and yoke.
Diaphragm Material	Molded of flexible Neoprene and convoluted to retain a constant effective area through the total stroke. Ambient temperature range of -20° to 160°F (-29° to 71°C).
Effective Diaghragm Material	Direct acting: 40 in^2 (258 cm^2) Reverse acting: 38 in^2 (245 cm^2)
Actuator Stem	Zinc-plated steel.
Spring	Totally enclosed and corrosion resistant. Ranges: 3 to 15 psig (21 to 100 kPa) standard. For other ranges, see Table 1.
Air Pressure (Air-to-diaphragm)	Normal: 18 or 25 psig (124 or 172 kPa). Maximum: 35 psig (241 kPa) 25 psig (172 kPa)
Air Connections	1/4” NPT.

Body

Type	Single-seated, straight-through, balanced cage type, non-reversible.
Material	Cast Iron
Sizes	Flanged ends: 2.5, 3, 4, 5 and 6" (86, 80, 100, 125 and 160mm)
Ratings	Cast iron with flanged ends: 125 lb. ANSI B16.1 in all sizes, 250 lb. in 2.5, 3, and 4” sizes.

Bonnet

Type	Bolted to body. Temperatures range is 32° to 353°F (0° to 178°C) for 125 lb. valves, and 32° to 400°F (0° and 204°C) for 250 lb. valves.
Packing	Spring loaded PTFE v-ring.

Trim

Material	Plug and cage: 304 stainless steel. Seal: Spring-loaded PTFE.
Plug	Balanced plug with seating surface at bottom and PTFE seal at top. Plug slides inside cage and opens characterized ports in cage.
Cage	Supplied with equal precentage or modifed linear characteristics. Seating surface machined into cage. Cage is clamped into body by bonnet.
Valve Travel	1.5" (40mm)

FLOW COEFFICIENTS

Cv/Kv Values

Valve Size	Equal Percentage	Modified Linear
2.5" 65mm	75 65	75 65
3" 80mm	102 88	116 100
4" 100mm	145 125	178 154
5" 125mm	260 225	318 275
6" 150mm	305 264	390 337

Note: Cv values = Flow in GPM of water at 1 psi pressure drop.
Kv values = Flow in M^3/hour of water at 100 kPa pressure drop.

ORDERING DATA

Please Specify:

- Valve Model 8105
- Body rating
- Size
- Packing
- Trim material
- Accessories

ACTUATOR SHUT-OFF CAPABILITIES

Maximum Pressure Differentials in Closed Positions, psi/kPa

Trim	Valve Size				
	2.5" 65mm	3" 80mm	4" 100mm	5" 125mm	6" 150mm
304 Stainless Steel	150 1030	150 1030	150 1030	150 1030	150 1030

Note: Maximum pressure differentials with all springs ranges in closed position is 150 psi (1030 kPa)
Refer to "Packing" in the specifications selection for temperature-pressure limits.

MAXIMUM LEAKAGE RATE*

Air-to-Close (Spring-to-Open), % of Value Cv

Air Supply psi kPa	Spring Range psi kPa	Valve Size				
		2.5" 65mm	3" 80mm	4" 100mm	5" 125mm	6" 150mm
18 120	3 - 15 21 - 103	0.01 0.07	0.01 0.07	0.01 0.07	0.04 0.28	0.04 0.28
	5 -13 34 - 90	0.01 0.07	0.01 0.07	0.01 0.07	0.02 0.14	0.02 0.14
25 172	3 - 15 21 - 103	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07
	5 -13 34 - 90	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07

Air-to-Open (Spring-to-Close), % of Value Cv

Air Supply psi kPa	Spring Range psi kPa	Valve Size				
		2.5" 65mm	3" 80mm	4" 100mm	5" 125mm	6" 150mm
18 120	3 - 15 21 - 103	0.01 0.07	0.01 0.07	0.01 0.07	0.04 0.28	0.04 0.28
	5 -13 34 - 90	0.01 0.07	0.01 0.07	0.01 0.07	0.02 0.14	0.02 0.14
	7-18 48 - 124	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07	0.01 0.07

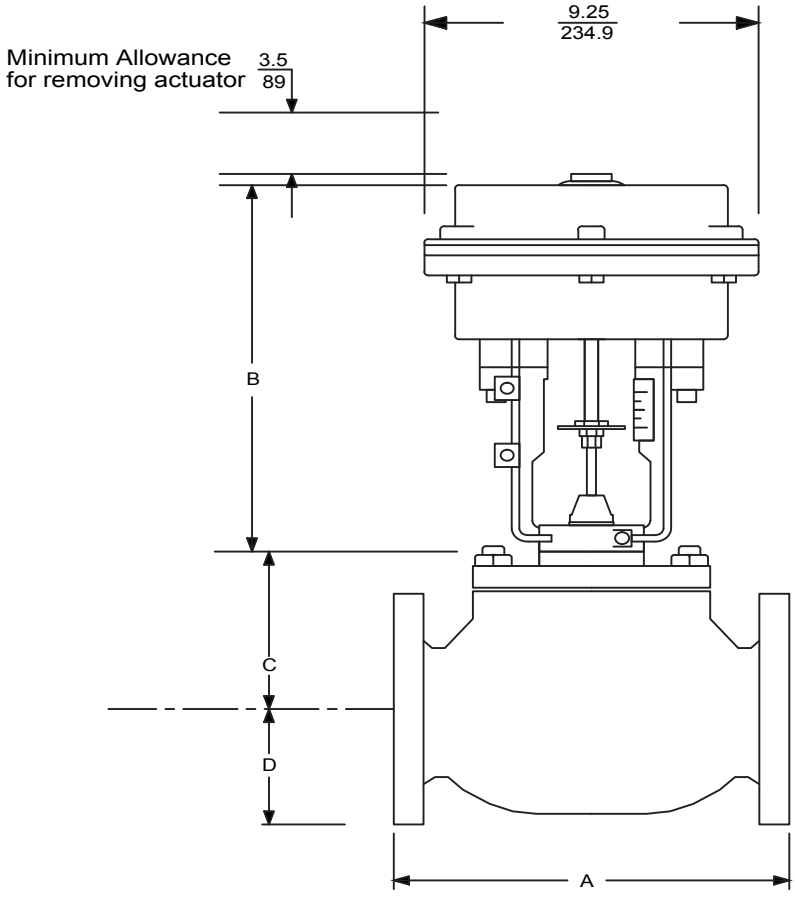
* For pressure up to 150 psi (1030 kPa)

DIMENSIONS

Flanged Ends

Valve Size	A		B	C	D	
	Iron 125	Iron 250			Iron 125	Iron 250
2.5"	9.5	11.5	20.38	4.63	3.5	3.75
65mm	241	292	518	188	88	95
3"	11.0	12.5	20.63	4.88	3.88	4.13
80mm	279	318	524	124	98	104
4"	13.0	14.5	21.38	5.63	4.56	5.00
100mm	330	368	543	143	115	156
5"	15.0	16.75	23.13	7.38	5.44	5.50
125mm	381	425	588	187	138	139
6"	16.5	18.63	23.13	7.38	6.30	6.30
150mm	419	473	588	187	160	160

Inch
Millimeter



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Allagash International Group, LLC representatives are located in major cities throughout the world.
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