Bulletin V5011.12 January 2016

NOR'EAST CONTROLS



SINGLE SEATED V5011 SERIES



Previously manufactured by Dezurik® and Honeywell®

Description:

2 ½" to 6" class 125 with cast iron body, bronze trim and composite seat, ideally suited for low pressure hot and chilled water and steam to 20 psi. Available with direct or reverse acting, 4-6" only, and can be fitted with electric or pneumatic actuators for either on-off or throttling control applications.

Accessories:

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

SPECIFICATIONS

Actuator

Туре	Pneumatic diaphragm-actuated. Type 05. Direct or reverse acting with non-reversible body.		
Construction	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 from -20° to 160°F (-29° to 71°C).		
Effecrtive	Direct acting: 40 in ² (258 cm ²)		
Diaphragm Area	Reverse acting: 38 in ² (245 cm ²)		
Actuator Stem	Zinc-plated steel.		
Spring	Totally enclosed and corrosion resistant.		
	Range: 3 to 15 psi (21 to 100 kPa) Standard.		
	For other ranges, see Actuator shut-off capabilities chart.		
Air Pressure	Normal: 18 or 25 psi (124 or 172 kPa)		
(Air-to-diaphragm)	Maximum: 35 psi (241 kPa) 25 psi (172 kPa)		
Air Connections	1/4" NPT		

Body

Туре	Single-seated, straight-through, unbalanced, composite seat.	
Material	Cast iron.	
Sizes	Flanged ends: 2.5, 3, 4, 5 and 6" (65, 80, 100, 125 and 150 mm).	
Ratings	Cast iron with flanged ends: 125 lb. ANSI B16.1 in all sizes	

Bonnet

Туре	Bolted to body. Temperature range is 32° to 353°F (10° to 178°C)
Packing	Spring loaded PTFE

Trim

Material	Plug: Bronze. Seal: Composite	
Plug	Plug Unbalanced plug with seating surface at bottom.	
Valve Travel	2 ½" and 3" valves: ¾" travel; 4", 5" and 6" valves: 1 ½" travel	

Model Codes

Size	Model: Direct Acting	Model: Reverse Acting
2 1/2"	V5011-A1734	-
3"	V5011-A1767	-
4"	V5011-A1858	V5011-B1013
5"	V5011-A1882	V5011-B1047
6"	V5011-A1916	V5011-B1070

FLOW COEFFICIENTS

Cv/Kv Values

Valve Size	Equal Percentage
2.5"	<u>63</u> 55
65mm	55
3"	<u>100</u> 86
80mm	86
4"	160 138
100mm	138
5″	250
125mm	<u>250</u> 206
6"	360 296
150mm	296

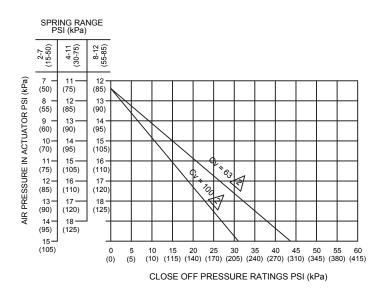
Note: Cv Values = Flow in GPM of water at 1 psi pressure drop. Kv Values = Flow in M³/hour of water at 100 kPa pressure drop.

ACTUATOR SHUT-OFF CAPABILITIES

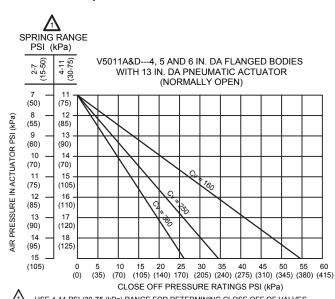
Electric/Electronic Actuators and Q5001 Linkage

	Close-Off Ratings psi (kPa)*		
	Linkage Seal-Off Force		
Size In Inches	320 lbf (1424N) Linkage	160 lbf (712N) Linkage	80 lbf (356N) Linkage
2-1/2	83 (572)	40 (276)	18 (124)
3	40 (276)	18 (124)	7 (48)
4	20 (138)	9 (62)	-
5	12 (83)	5 (34)	-
6	8 (55)	-	-

V5011A--2-1/2 and 3 in. Type 05 Pneumatic Actuator



V5011A--4, 5 and 6 in.



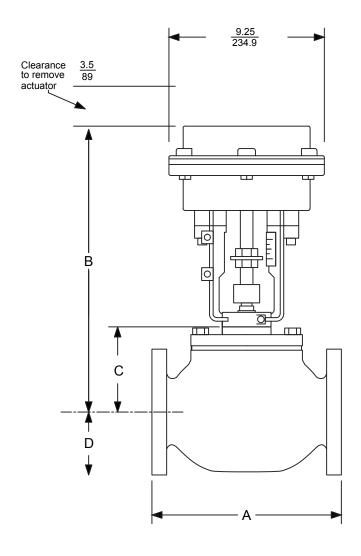
USE 4-11 PSI (30-75 (kPa) RANGE FOR DETERMINING CLOSE OFF OF VALVES USED WITH MP953E ACTUATORS.

DIMENSIONS

Flanged Ends-Type 05 Actuator

Valve Size	А	В	С	D
2.5"	9.5	<u>20.38</u>	4.63	3.5
65mm	241	518	188	88
3"	11.0	20.63	4.88	3.88
80mm	279	524	124	98
4"	<u>13.0</u>	-	5.63	4.56
100mm	330		143	115
5"	15.0	-	7.38	<u>5.44</u>
125mm	381		187	138
6"	16.5	-	7.38	6.30
150mm	419		187	160

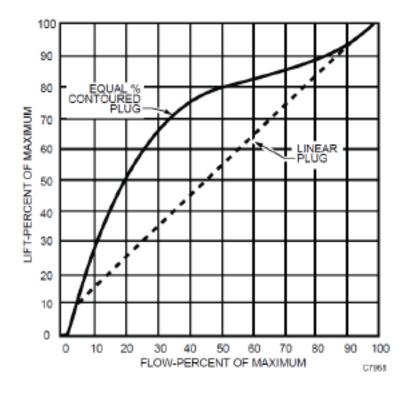
Inch Millimeter



Electric Actuator and Linkage Selection

Linkage (lbf)	Linkage Model/Usage	Spring Return	Torque (lb-in.)	2-Position Model	Floating Model	Proportional Model
80	Q5001A	Yes	25	M8175	-	-
160	Q5001A for 3 in & smaller valves	Yes	60	M8185 M8186	M6385 M6286	M7285 M7286
		No	75	-	M6174	M7274
		No	150	-	M6184	M7284
160	Q5001B for 4, 5 & 6 in. valves	No	150	-	M6184	M7284
320	Q5001A for 3 in & smaller valves	No	300	-	M6194	M7294
	Q5001B for 4, 5 & 6 in. valves					
80	Integral	-	-	ML684	ML684	-
160	Integral	-	-	ML684	ML684	ML784

Typical Flow Characteristics



REPAIR PARTS LIST

2 1/2" V5011A1734				
Description	Qty Req.			
Gasket	30046304-858	1		
Stem packing	30041035-854	4		
Stem	30731050-001	1		
Seat disc	30041049-835	1		
Disc holder	30041054-100	1		
Packing box nut	30067857-107	1		
Spring flange	30041086-107	1		
Spring	30041084-218	1		
Stem head	30041088-107	1		

3" V5011A1767				
Description	Part Number	Qty Req.		
Gasket	30046335-859	1		
Stem packing	30041035-854	4		
Stem	30731052-001	1		
Seat disc	30041050-835	1		
Disc holder	30041055-100	1		
Packing box nut	30067857-107	1		
Spring flange	30041086-107	1		
Spring	30041084-218	1		
Stem head	30041088-107	1		

4" V5011A1858				
Description	Part Number	Qty Req.		
Gasket	30046366-859	1		
Stem packing	30041036-854	5		
Stem	30731054-001	1		
Seat disc	30041051-835	1		
Disc holder	30041056-100	1		
Packing box nut	30067858-001	1		
Spring flange	30041087-107	1		
Spring	30041085-218	1		
Stem head	30041089-235	1		

4" V5011B1013			
Description	Part Number	Qty Req.	
Gasket	30046366-859	1	
Stem packing	30041036-854	5	
Stem	30731054-001	1	
Seat disc	30041051-835	1	
Disc holder	30041056-100	1	
Packing box nut	30041038-001	1	
Spring flange	30041087-107	1	
Spring	30041085-218	1	
Stem head	30041089-235	1	

5" V5011A1882			
Description	Part Number	Qty Req.	
Gasket	30046438-859	1	
Stem packing	30041036-854	5	
Stem	30731055-001	1	
Seat disc	30041052-835	1	
Disc holder	30041057-100	1	
Packing box nut	30067858-001	1	
Spring flange	30041087-107	1	
Spring	30041085-218	1	
Stem head	30041089-235	1	

5" V5011B1047			
Description	Part Number	Qty Req.	
Gasket	30046438-859	1	
Stem packing	30041036-854	5	
Stem	30731056-001	1	
Seat disc	30041052-835	1	
Disc holder	30041057-100	1	
Packing box nut	30041038-001	1	
Spring flange	30041087-107	1	
Spring	30041085-218	1	
Stem head	30041089-235	1	

REPAIR PARTS LIST

6" V5011A1916			
Description	Part Number	Qty Req.	
Gasket	30046541-859	1	
Stem packing	30041036-854	5	
Stem	30731058-001	1	
Seat disc	30041053-835	1	
Disc holder	30041058-100	1	
Packing box nut	30067858-001	1	
Spring flange	30041087-107	1	
Spring	30041085-218	1	
Stem head	30041089-235	1	

6" V5011B1070			
Description	Part Number	Qty Req.	
Gasket	30046541-859	1	
Stem packing	30041036-854	5	
Stem	30731058-001	1	
Seat disc	30041053-835	1	
Disc holder	30041058-100	1	
Packing box nut	30067858-001	1	
Spring flange	30041087-107	1	
Spring	30041085-218	1	
Stem head	30041089-235	1	

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