

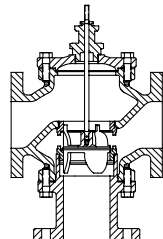
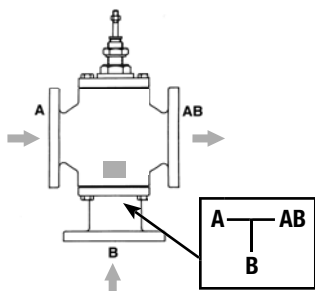
# G7...(S) 3-way Mixing Flanged Globe Valve, Bronze or Stainless Steel Trim



Technical Data		
	G7	G7...S
Service	chilled or hot water, 60% glycol	chilled or hot water, 60% glycol
Flow characteristic	linear	
Action	stem up - open B to AB	
Sizes	2½" to 6"	
End fitting	125 lb. flanged	
Materials		
Body	iron	iron
Seat	bronze	stainless steel
Stem	stainless steel	stainless steel
Plug	bronze	stainless steel
Packing	NLP (no lip packing)	TFE V-ring
ANSI class	ANSI 125	
Leakage	Class III	
Max inlet		
Water	150 psi (1034kPa) @ 250°F	150 psi (1034kPa) @ 250°F
Media temperature		
Water	32°F to 350°F (0°C to 176°C)	32°F to 350°F (0°C to 176°C)
Maximum ΔP*		
Water	25 psi (172kPa)	50 psi (340kPa)
Rangeability	50:1	
Valve weights	G765(S) G780(S) G7100(S) G7125(S) G7150(S)	64 lbs 83 lbs 139 lbs 157 lbs 202 lbs

\* (50% or more open)

## G7...(S) 3-way Flow Patterns



Flow Pattern is marked on valve.

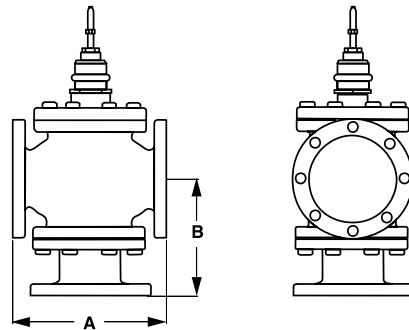
Stem Up = Open B to AB

## Application

This valve is typically used in Large Air Handling Units on heating or cooling coils. This valve is suitable for use in a hydronic system with variable flow.

C <sub>v</sub>	Valve Nominal Size		Type				Suitable Actuators		
	Inches	3-way Flanged	Non-Spring	Spring	Electronic Fail-Safe				
68	2½	G765(S)	NVG	GM Series	AF	APX Series	GK Series		
91	3	G780(S)							
190	4	G7100(S)							
280	5	G7125(S)							
340	6	G7150(S)							

## Dimensions



D169-G73W

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
G765(S)	2½"	[65]	9.00" [229]	7.12" [181]
G780(S)	3"	[80]	10.00" [254]	8.00" [203]
G7100(S)	4"	[100]	13.00" [330]	9.87" [251]
G7125(S)	5"	[125]	15.75" [400]	9.25" [235]
G7150(S)	6"	[150]	17.75" [451]	9.87" [251]

## Piping

The valves should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. For the NV Series, allow 6" for cover removal and 12" for complete actuator removal. The G6/G7 preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. However, the assemblies can be mounted with valve stem vertical above the valve or up to 45 degrees in relation to the horizontal pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.

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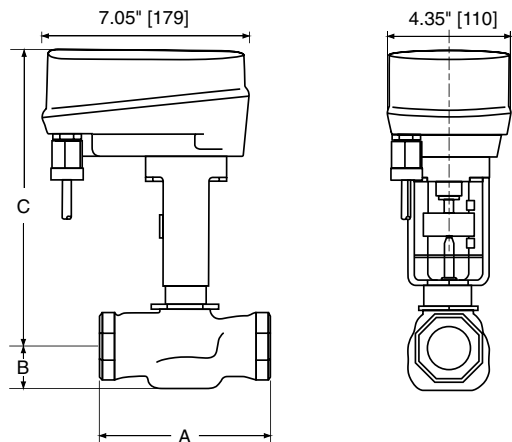
### Models

NVD24-MFT US  
 NV24-MFT US  
 NVG24-MFT US

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Nominal voltage range	19.2...28.8 VAC, 21.6...28.8 VDC
Power consumption	
NVD24-MFT US	3 W
NV24-MFT US	3 W
NVG24-MFT US	4 W
Transformer sizing	5 VA (Class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable ½" conduit connector
Overload protection	electronic throughout stroke
Control	Multi-Function Technology
Control signal Y	2 to 10 VDC (V-10001 default), PWM available
Operating range	2 to 10 VDC 4 to 20 mA (w/500 Ω, ¼ W resistor) ZG-R01
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA) 500 Ω for 4 to 20 mA 1500 Ω for PWM, on/off and floating point
Feedback output U	2 to 10 VDC, 0.5 mA max
Maximum stroke	¾" [20mm]
Force	
NVD24-3 US	90 lbf [400 N]
NV24-3 US	225 lbf [1000 N]
NVG24-MFT US	360 lbf [1600 N]
Position indication	stroke indicator on bracket
Manual override	3/16" hex, 5mm hex or phillips screwdriver
Running time	150 seconds, independent of load
Humidity	5 to 95% RH non-condensing
Ambient temperature	32°F to 122°F [0°C to 50°C]
Storage temperature	20°F to 176°F [-7°C to 80°C]
Housing	NEMA 2/IP54 with cable entry down
Housing material	UL94-5V (flammability rating)
Agency listings†	cULus to UL 60730-1A/UL60730-2-14 and CAN/CSA E60730-1/CSA C22.2 No. 24-93 CE acc. to 2004/108/EC & 2006/95/EC, tested to 1EC/EN 60730-1 and 1EC/EN 60370-2-14
Noise level	<35 dB(A)
Quality standard	ISO 9001

### Dimensions with G2... Series 2-Way Valve

Assembly using UNV-001 Bracket

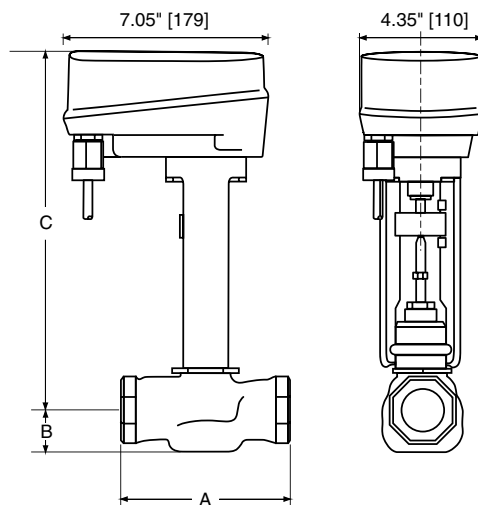


D081

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G2	1/2"	15	3.00" [76]	1.06" [27]	9.75" [248]
G2	3/4"	20	3.62" [92]	1.06" [27]	9.75" [248]
G2	1"	25	4.62" [117]	1.12" [29]	10.43" [265]
G2	1-1/4"	32	4.62" [117]	1.37" [35]	10.43" [265]
G2	1-1/2"	40	5.37" [137]	1.50" [38]	10.50" [267]
G2	2"	50	6.12" [156]	1.56" [40]	10.81" [275]

### Dimensions with G2...S Series 2-Way Valve

Assembly using UNV-035 Bracket (Bracket is 1.563" longer than UNV-001)

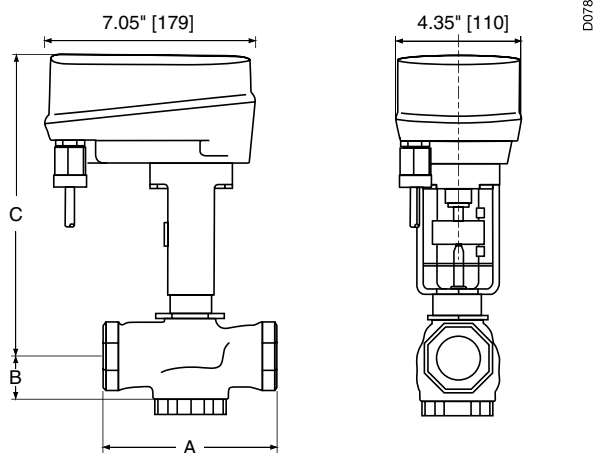


D086

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G2S	1/2"	15	3.00" [76]	1.06" [27]	11.31" [287]
G2S	3/4"	20	3.62" [92]	1.06" [27]	11.31" [287]
G2S	1"	25	4.62" [117]	1.12" [29]	12.00" [305]
G2S	1-1/4"	32	4.62" [117]	1.37" [35]	12.00" [305]
G2S	1-1/2"	40	5.37" [137]	1.50" [38]	12.06" [306]
G2S	2"	50	6.12" [156]	1.56" [40]	12.37" [314]

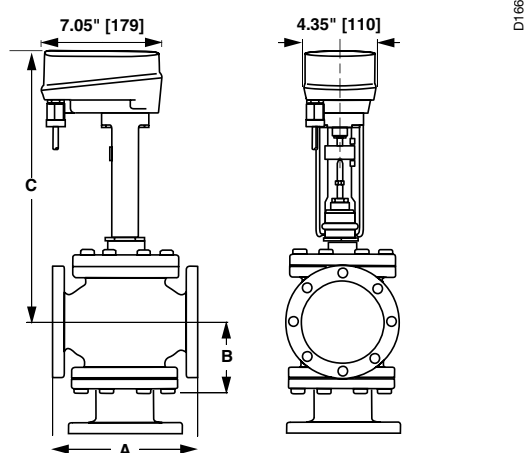
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### Dimensions with G3...(D) Series 3-Way Valve



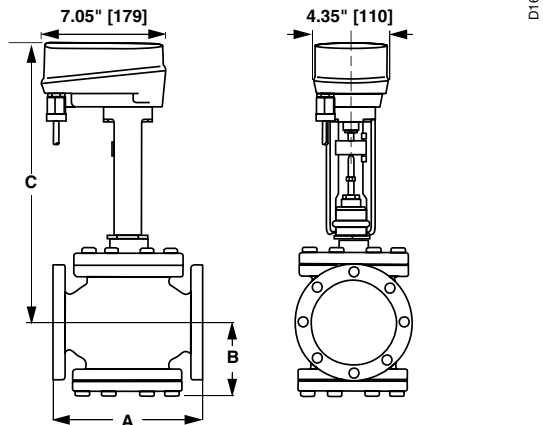
Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G3(D)	1/2"	15	3.00" [76]	1.37" [35]	9.75" [248]
G3(D)	1/2"	15	3.00" [76]	1.37" [35]	9.75" [248]
G3(D)	3/4"	20	3.62" [92]	1.68" [43]	9.75" [248]
G3(D)	1"	25	4.62" [117]	1.56" [40]	9.81" [249]
G3(D)	1-1/4"	32	4.62" [117]	1.62" [41]	10.06" [256]
G3(D)	1-1/2"	40	5.37" [137]	1.62" [41]	9.18" [234]
G3(D)	2"	50	6.12" [156]	1.87" [48]	9.25" [235]

### Dimensions with G7 and G7D ANSI 125/250 Series 3-Way Valve



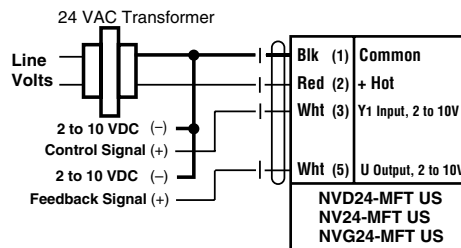
Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G7 ANSI 125	2-1/2"	65	9.00" [229]	7.12" [181]	15.37" [391]
G7 ANSI 125	3"	80	10.00" [254]	8.00" [203]	15.93" [405]
G7D ANSI 125	2-1/2"	65	9.00" [229]	7.12" [181]	15.12" [384]
G7D ANSI 125	3"	80	10.00" [254]	8.00" [203]	15.93" [405]
G7D ANSI 125	4"	100	13.00" [330]	9.87" [251]	16.75" [425]
G7 ANSI 250	2-1/2"	65	9.62" [244]	7.37" [187]	15.50" [394]
G7 ANSI 250	3"	80	10.75" [273]	8.37" [213]	16.12" [410]
G7D ANSI 250	2-1/2"	65	9.62" [244]	7.37" [187]	15.25" [387]
G7D ANSI 250	3"	80	10.75" [273]	8.37" [213]	16.06" [408]
G7D ANSI 250	4"	100	13.62" [346]	10.25" [260]	16.87" [429]

### Dimensions with G6/G6C ANSI 125 and G6 ANSI 250 Series 2-Way Valve

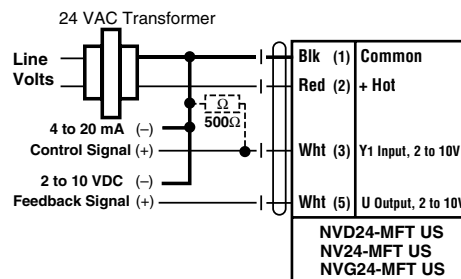


Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G6/G6C ANSI 125	2-1/2"	65	9.00" [229]	4.75" [120]	15.00" [381]
G6/G6C ANSI 125	3"	80	10.00" [254]	5.37" [137]	15.43" [392]
G6 ANSI 250	2-1/2"	65	9.62" [244]	4.75" [120]	15.00" [381]
G6 ANSI 250	3"	80	10.75" [273]	5.37" [137]	15.43" [392]

### Wiring Diagrams



#### 2 to 10 VDC Control Signal



#### 4 to 20 mA Control Signal

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	Non-Spring Return				Spring Return					Electronic Fail-Safe
	NV	NVG	GM	2 x GM	NVF	AF	2x AF	AFX	2 x AFX	GK
<b>2-way ANSI 125</b>										
G665, G665S		62	113	150		36	59	51	82	113
G680, G680S		42	78	121		24	40	34	56	78
G6100, G6100S			19							19
<b>2-way Pressure Comp ANSI 125</b>										
G665C, G665CS, G665LCS	150				150	150		150		
G680C, G680CS, G680LCS	150				136	150		150		
G6100C, G6100CS, G6100LCS			150				132		150	150
G6125C, G6125CS, G6125LCS			150				87		150	150
G6150C, G6150CS, G6150LCS			150				50		150	150
<b>2-way Pressure Comp ANSI 250</b>										
G665C-250, G665CS-250								250		
G680C-250, G680CS-250								250		
G6100C-250, G6100CS-250			250						212	250
G6125C-250, G6125CS-250			239						152	239
G6150C-250, G6150CS-250			178						105	178
<b>2-way ANSI 250</b>										
G665-250, G665S-250		62	113	176		36	59	51	82	113
G680-250, G680S-250		42	78	121		24	40	34	56	78
G6100-250, G6100S-250			19							19
<b>3-way ANSI 125 Mixing</b>										
G765, G765S		62	113	150		36	59	51	82	114
G780, G780S		42	78	121		24	40	34	56	78
G7100, G7100S			19	31					13	19
G7125, G7125S				19						
G7150, G7150S				13						
<b>3-way ANSI 250 Mixing</b>										
G765-250, G765S-250		62	113	176		35	58	40	114	114
G780-250, G780S-250		42	78	121		23	40	25	77	78
G7100-250, G7100S-250				31					24	19
G7125-250, G7125S-250				19						
G7150-250, G7150S-250				13						
<b>3-way ANSI 125/250 Diverting</b>										
G765D, G765DS, G765DS-250		100	100			100		100		100
G780D, G780DS, G780DS-250		100	100			100		100		100
G7100D, G7100DS, G100DS-250		100	100			100		100		100
G7125D, G7125DS, G7125DS-250			100				100		100	100
G7150D, G7150DS, G7150DS-250			100				100		100	100

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