



**Applications / Features:**

The ESBE MG series of 3 & 4-way valves are designed to mix water to the appropriate temperature to meet the zone or system requirements within heating and cooling systems. Through means of mixing or diverting, the fluid temperature leaving the valve is regulated by the MG. The valves are designed to operate within closed loop systems through manual operation or automatically when used with the 60 or 90 Series electronic motor actuator that is typically connected to an outdoor reset controller, DDC system or boilers with integrated controls.

**Features:**

- MG series mixing valves are a rotary design allowing for great flexibility in field piping layout.
- Compact valve size.
- Valve position face plate is graduated on both sides and can be rotated allowing a choice of mounting position.
- Easily adaptable with ESBE electronic motor actuator series 60 or 90.
- Suitable fluid: water (maximum 50% glycol)

**Ordering:**

**3-Way Valve**

Code No.	Description						
	Connection		Cv*	Leakage in % of flow		Body	Reference
	Size	Type		Mixing	Diverting		
065B8970	1/2"	NPT	2.9	0.1	0.05	3-Way DZR Brass	3MG 15-2.5
065B8971	3/4"		4.7	0.1	0.05		3MG 20-4
065B8950	3/4"		7.3	0.1	0.05		3MG 20-6.3
065B8972	1"		9.3	0.1	0.05		3MG 25-8
065B8968	1"		14	0.1	0.05		3MG 25-12
065B8969	1-1/4"		21	0.1	0.05		3MG 32-18

**4-Way Valve**

Code No.	Description						
	Connection		Cv*	Leakage in % of flow		Body	Reference
	Size	Type		Mixing			
065B8981	1/2"	NPT	2.9	1.9		4-Way Brass	4MG 15-2.5
065B8982	3/4"		4.7	1.1			4MG 20-4
065B8983	3/4"		7.3	1			4MG 20-6.3
065B8984	1"		9.3	1			4MG 25-8
065B8985	1"		14	1			4MG 25-12
065B8986	1-1/4"		21	1			4MG 32-18
065B8967	3/4"	Solder	2.9	1		4-Way Brass	4MG 20-2.5
065B8990	1"		7.3	1			4MG 25-6.3
065B8991	1-1/4"		14	1			4MG 32-12

\*Cv = Flow rate allowed by the valve in GPM with a pressure drop of one psi.



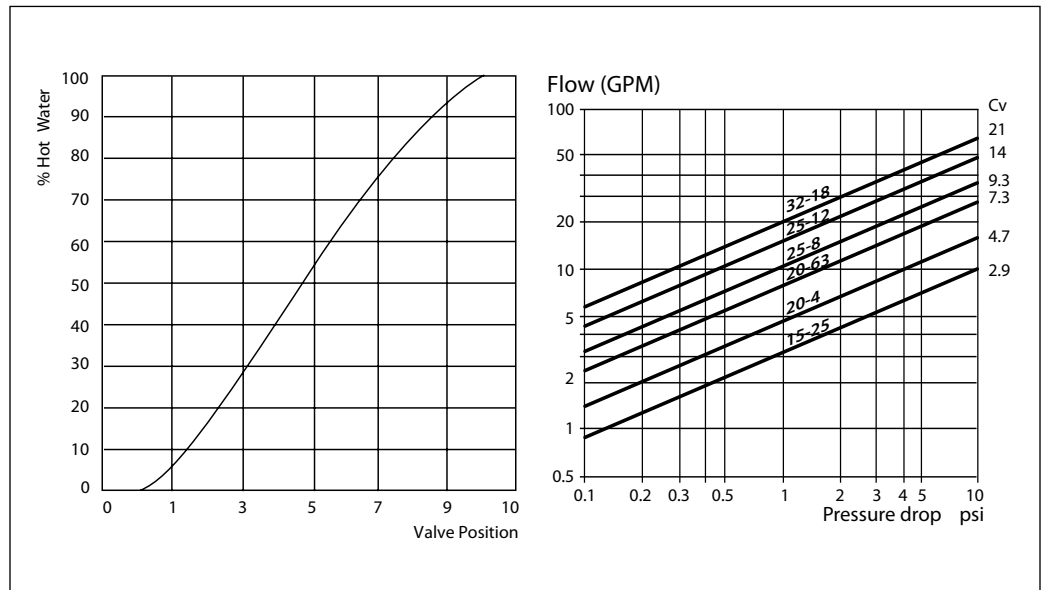
**Ordering (Cont.):**

**Accessories**

Code No.	Description	Valve Sizes	Style
<b>082F8976</b>	Gasket Set	1/2" to 1-1/4"	3-way
<b>082F8975</b>	Complete Interior	1/2" to 1" (065B8972)	
<b>065B8956</b>		1" (065B8968) to 1-1/4"	
<b>082F8976</b>	Gasket Set	1/2" to 1 1/4"	4-way
<b>082F8977</b>	Complete Interior	1/2" to 1" (065B8984)	
<b>065B8957</b>		1" (065B8985) to 1-1/4"	

**Technical Specifications:**

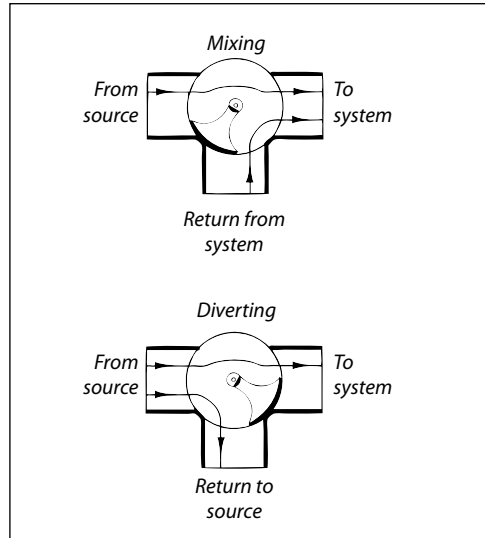
<b>Max. operating pressure</b>	150 psi (10 bar)
<b>Max. operating temperature</b>	265°F (130°C)
<b>Min. operating temperature</b>	14°F (-10°C)
<b>Max. differential pressure</b>	14.5 psi (1.0 bar)
<b>Max. torque</b>	26 in. lb. (3Nm)
<b>Allowable fluid</b>	Closed loop hydronic system 1) Water 2) Glycol mixture, max. 50%



**Piping Arrangement:**

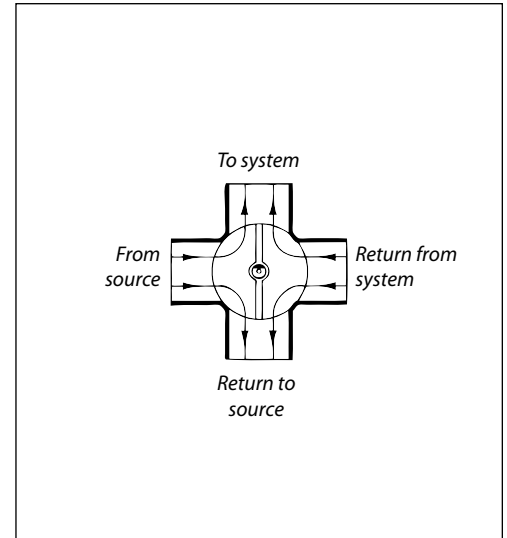
**3-Way Valves**

- Ideal valves for mixing and diverting applications.
- Reduces risk of low temperature water returning to boiler.



**4-Way Valves**

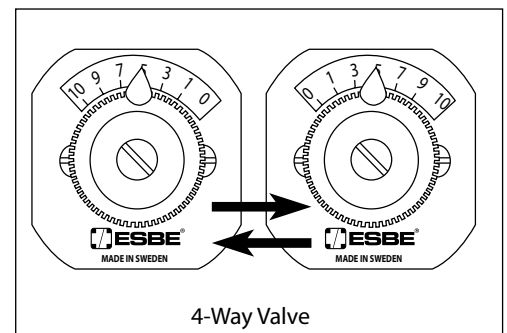
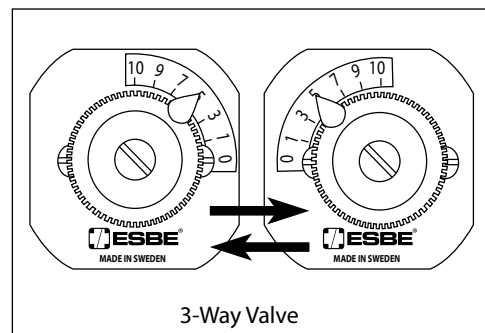
- Double mixing function, providing proportional mixing from source to system and system to source.
- Reduces risk of low temperature water returning to boiler.



**Faceplate:**

The valve position plate is graduated on both sides and can be adjusted to correspond to the installation. After the removal of two flat head

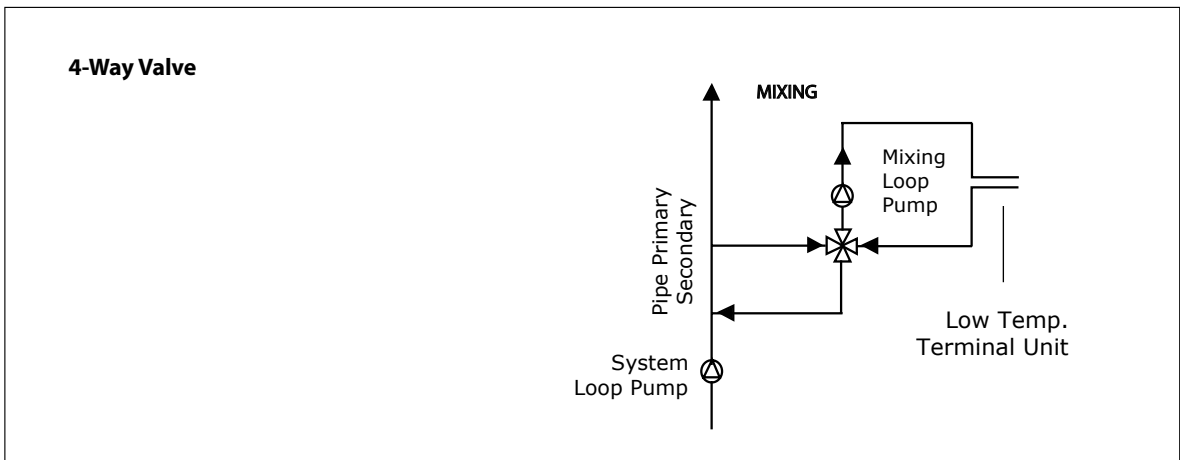
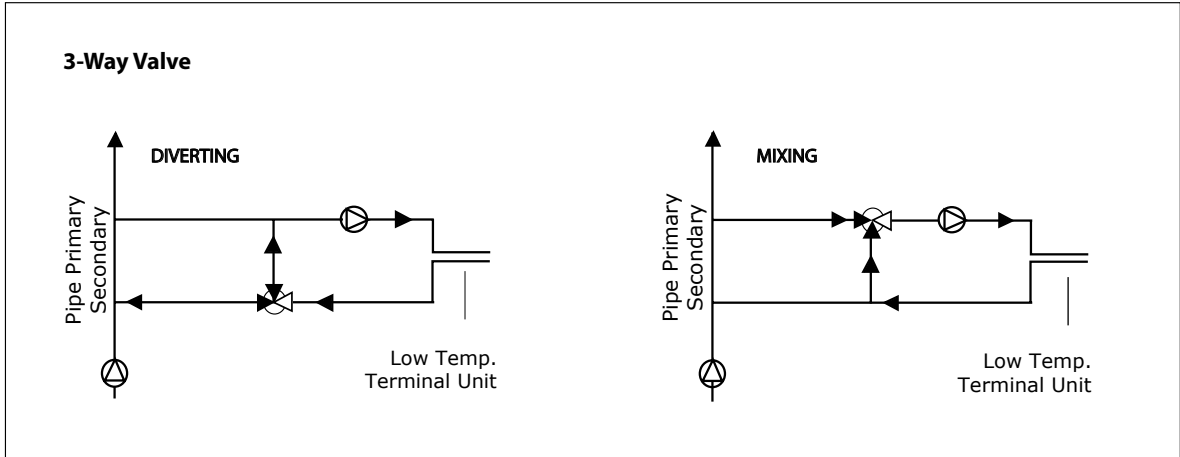
screws, the cover plate can be installed to match the piping orientation.



**Data sheet ESBE Type MG  
3 & 4-Way Mixing Valve**



**Typical Installation:**



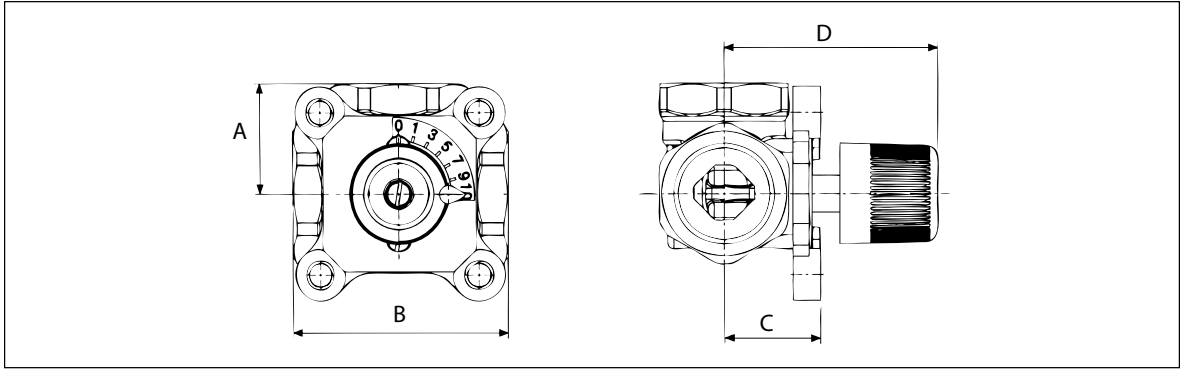
**Construction:**

No.	Description	Type 3MG	Type 4MG
1	Valve Body	Brass DZR CW 602N	Brass CW 614N
2	Slider	Brass DZR CW 602N	Brass CW 614N
3	Stem	Brass DZR CW 602N	Brass CW 614N
4	O-ring	EPDM	EPDM
5	Bushing	Plastic	Plastic
6	Cover Plate	Zinc	Zinc

**Data sheet ESBE Type MG  
3 & 4-Way Mixing Valve**

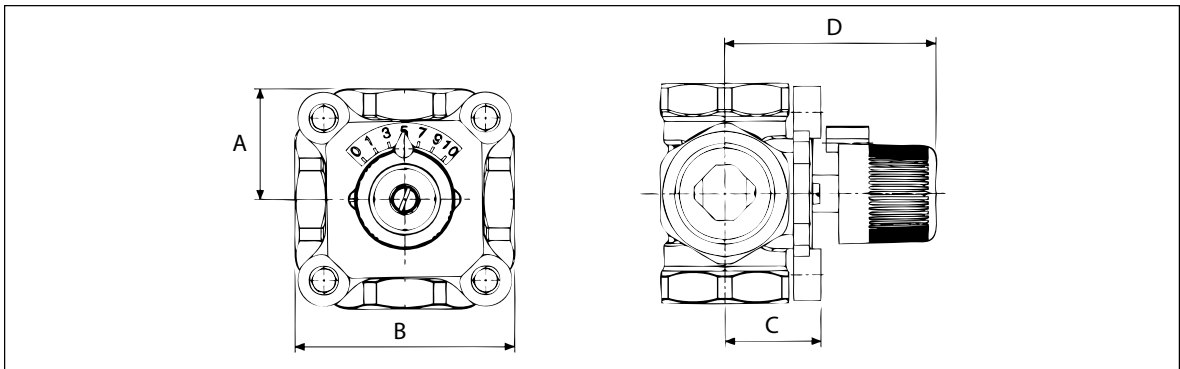


**Dimensions:**



**3 Way Valve Dimensions**

Code Number	Reference	Connection		A		B		C		D		Weight	
		Size	Type	inch	mm	inch	mm	inch	mm	inch	mm	lb.	kg
065B8970	3MG 15-2.5	1/2"	NPT	1.42	36	2.83	72	1.26	32	2.76	70	1.54	0.7
065B8971	3MG 20-4	3/4"		1.42	36	2.83	72	1.26	32	2.76	70	1.32	0.6
065B8950	3MG 20-6.3	3/4"		1.42	36	2.83	72	1.26	32	2.76	70	1.54	0.7
065B8972	3MG 25-8	1"		1.42	36	2.83	72	1.26	32	2.76	70	1.54	0.7
065B8968	3MG 25-12	1"		1.73	44	3.46	88	1.42	36	2.91	74	2.20	1.0
065B8969	3MG 32-18	1-1/4"		1.73	44	3.46	88	1.46	37	2.95	75	2.20	1.0



**4 Way Valve Dimensions**

Code Number	Reference	Connection		A		B		C		D		Weight	
		Size	Type	inch	mm	inch	mm	inch	mm	inch	mm	lb.	kg
065B8981	4MG 15-2.5	1/2"	NPT	1.42	36	2.83	72	1.26	32	2.76	70	1.98	0.9
065B8982	4MG 20-4	3/4"		1.42	36	2.83	72	1.26	32	2.76	70	1.76	0.8
065B8983	4MG 20-6.3	3/4"		1.42	36	2.83	72	1.26	32	2.76	70	1.76	0.8
065B8984	4MG 25-8	1"		1.42	36	2.83	72	1.26	32	2.76	70	1.98	0.9
065B8985	4MG 25-12	1"		1.73	44	3.46	88	1.42	36	2.91	74	2.43	1.1
065B8986	4MG 32-18	1-1/4"		1.73	44	3.46	88	1.46	37	2.95	75	2.65	1.2
065B8967	4MG 20-2.5	3/4"	Solder	1.42	36	2.83	72	1.26	32	2.76	70	1.76	0.8
065B8990	4MG 25-6.3	1"		1.42	36	2.83	72	1.26	32	2.76	70	1.98	0.9
065B8991	4MG 32-12	1-1/4"		1.73	44	3.46	88	1.46	37	2.95	75	2.65	1.2

**ESBE 3-Way Spare Parts**

Item No.	Description	1/2" to 1" (065B8972)	1" (065B8968) to 1-1/4"
		Part No.	Part No.
1	Knob	Not Sold Separately	Not Sold Separately
2	Screw - Body		
3	Screw - Scale Plate		
4	Scale Plate		
5	Cover Plate		
7	'O' Ring	082F8976	082F8976
9	Plug / Spindle		
6 - 8	Gasket Set	082F8976	082F8976
1 - 10	Interior Complete	082F8975	082F8956

**ESBE 4-Way Spare Parts**

Item No.	Description	1/2" to 1" (065B8984)	1" (065B8985) to 1-1/4"
		Part No.	Part No.
1	Knob	Not Sold Separately	Not Sold Separately
2	Screw - Body		
3	Screw - Scale Plate		
4	Scale Plate		
5	Cover Plate		
7	'O' Ring	082F8976	082F8976
9	Plug / Spindle		
6 - 8	Gasket Set	082F8976	082F8976
1 - 10	Interior Complete	082F8977	082F8957

**Typical Specification:**

The mixing/diverting valve shall have a rotary design capable of 90° rotation within a brass construction. The valve body shall have a removable face plate graduated on both sides and able to be flipped and rotated providing

flexibility of valve orientation. The valve shall be capable of accepting an ESBE 60 or 90 series electronic motor actuator. The valve shall be an ESBE series MG valve.

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