

Steam-Water-Mixing Valve

SERIES MX

MX1N

Features

1. Temperature is thermostatically controlled.
2. Can be installed where steam and cold water are available.
3. Produces hot water quickly and efficiently.
4. Efficient energy saving.
5. Precise thermostatic control.
6. Inline repairability.
7. Nickel plated finish.

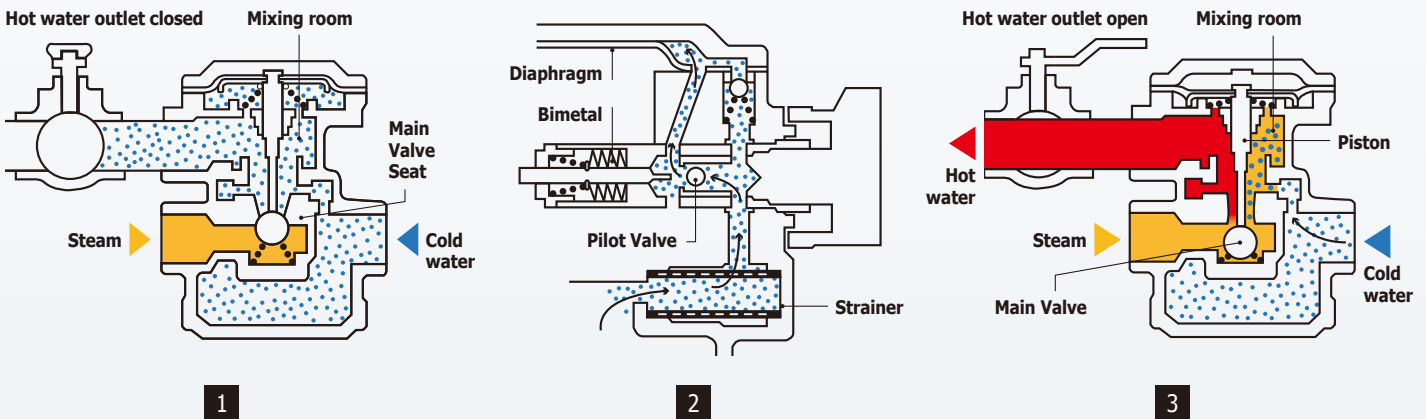


Suitable for

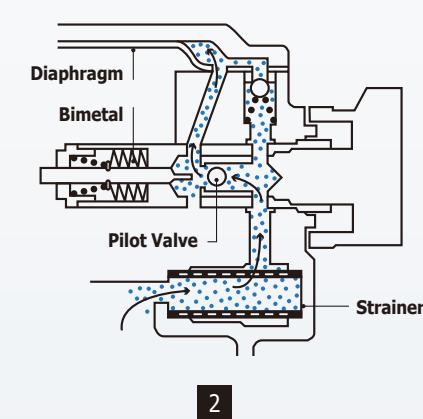
Washing down floors, vehicles, vats, jacketed vessels, backflushing filters, washing out vessels and other equipment in the dairy, brewery, food, chemical and soap manufacturing industries and wherever hot water is required economically.

Operating principle

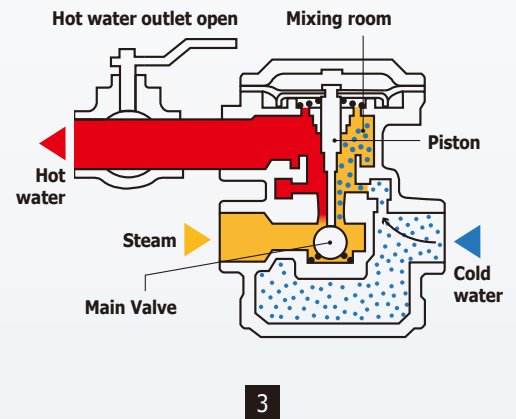
●●● Cold water
 ■ Hot water
 ■ Steam



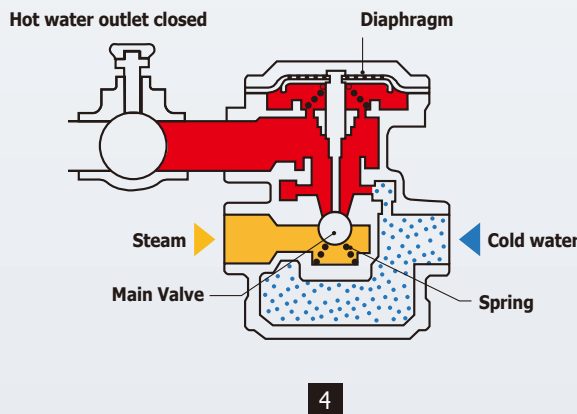
The cold water occupies the lower part of the body completely, flows through a hole next to the seat of the main valve into the mixing room and occupies it up to the hot water outlet. The main valve is closed. The steam can't enter the mixing room.



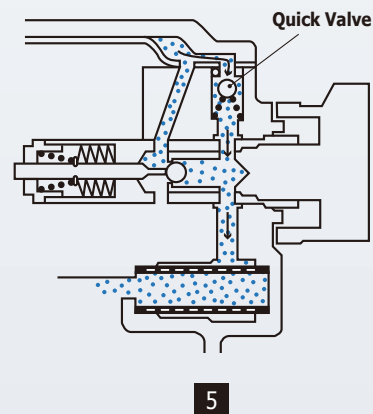
When you open the hot water outlet the cold water flows from the mixing room to the hot water outlet. During this process one part of the cold water flows through the strainer and runs behind the pilot valve (which is connected with the bimetal unit) into the space above the diaphragm.



The water pressure in the space above the diaphragm increases and pushes the diaphragm and the connected piston downwards. Consequently, the main valve opens and the steam flows into the mixing room and mixes with the cold water. The hot water flows to the hot water outlet.



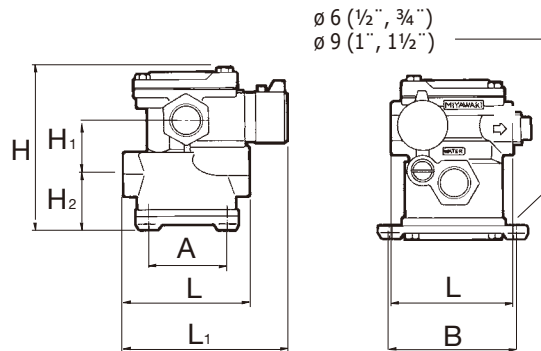
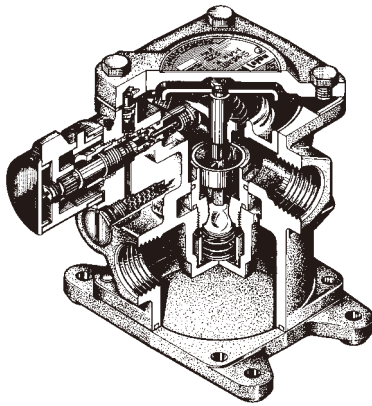
When the hot water outlet is being closed the pressure in the mixing room rises, the pressure on the diaphragm increases and the diaphragm returns to its original position. The main valve closes due to the pressure of the spring and the steam.



The pressure above the diaphragm is equalized by the quick valve. The pilot valve is closed.

MX1N Steam-Water-Mixing Valve

Dimensions



Connection	Size	Max. Operating Pressure				Min. Operating Pressure				Max. Temperature		Max. Pressure Ratio steam : water (water : steam)	Max. Temperature		Dimensions mm (in)								Weight	
		Steam		Water		Steam		Water		Steam			Hot Water		L	L ₁	H	H ₁	H ₂	A	B	kg	lb	
		MPa	psig	MPa	psig	MPa	psig	MPa	psig	°C	°F		°C	°F										
Screwed Rc, NPT	1/2"	0,7	101.5	0,7	101.5	0,03	5	0,03	5	185	365	3 : 1	93	199	100	138	134	43	47	62	102	3,9	8.6	
	(3.9)														(5.4)	(5.3)	(1.7)	(1.9)	(2.4)	(4.0)				
	140														179	168	57	51	86	147	8,6	18.9		
	(5.5)														(7.0)	(6.6)	(2.2)	(2.0)	(3.4)	(5.8)				
1 1/2"	0,5	72.5	0,5	72.5										160	189	197	70	60	86	147	14,1	31.0		
														(6.3)	(7.4)	(7.8)	(2.8)	(2.4)	(3.4)	(5.8)				

Body Material: Brass C3771 (JIS); PMA = 1,0 MPa (145 psig), TMA = 185°C (365°F)

Hot Water Capacity MX1N

Ratio Steam Pressure : Cold Water Pressure = 1 : 1, Cold Water Temperature 15°C

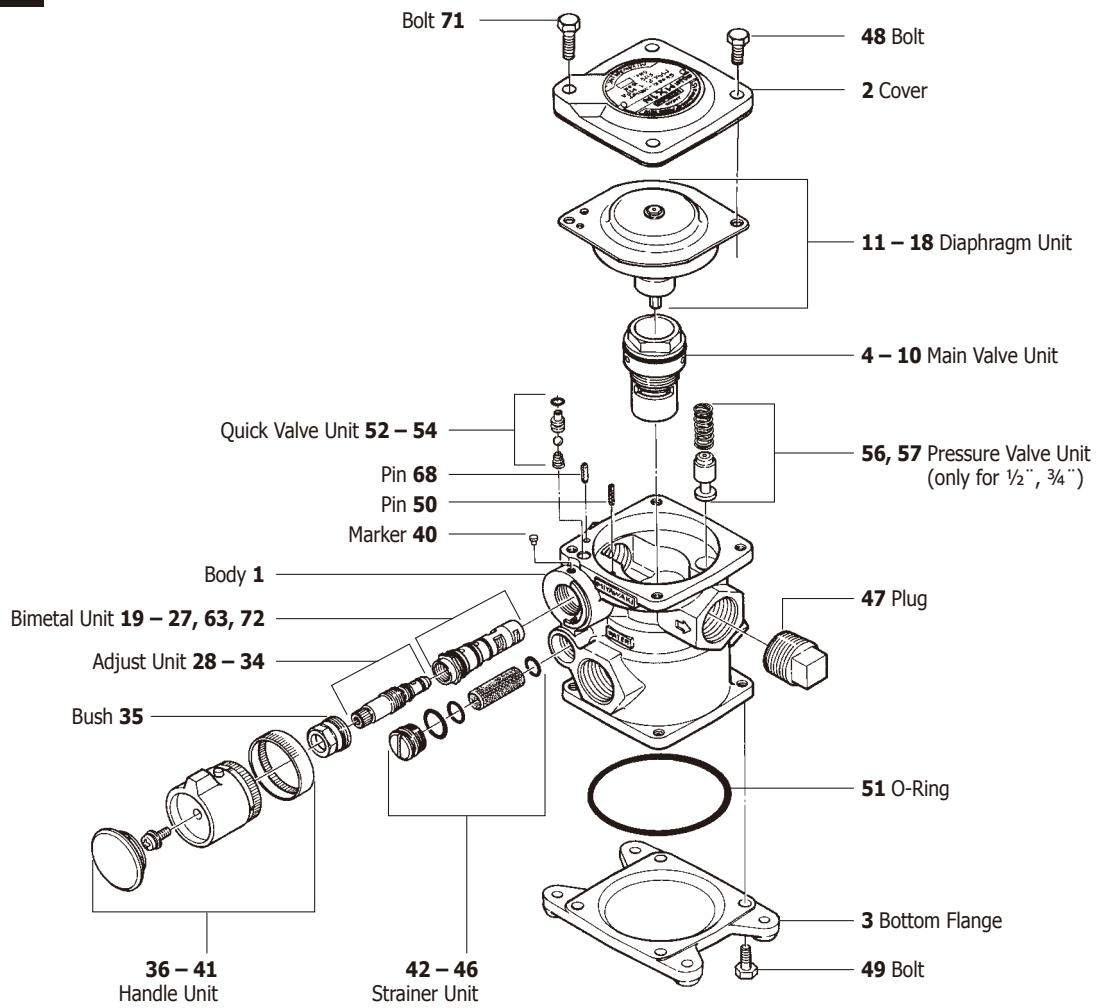
Size (in)	Pressure		Hot Water Flow Amount (l/min)											
			40°C		50°C		60°C		70°C		80°C		90°C	
	MPa	psig	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/2"	0,1	14.5	3	12	3	12	3	13	5	13	5	11	5	10
	0,2	29.0	3	20	3	21	3	21	5	20	5	17	10	14
	0,3	43.5	6	25	6	25	6	26	9	26	9	22	13	19
	0,4	58.0	6	29	6	29	6	29	12	30	12	28	17	24
	0,5	72.5	7	32	7	32	8	33	13	34	18	34	29	29
	0,6	87.0	7	35	7	36	16	36	17	37	27	37	34	34
	0,7	101.5	8	38	9	38	21	39	21	40	37	40	38	38
3/4"	0,1	14.5	5	22	5	23	5	20	8	17	8	14	9	12
	0,2	29.0	5	32	5	32	5	31	8	25	8	21	13	18
	0,3	43.5	8	39	8	39	8	40	10	34	10	28	25	25
	0,4	58.0	9	45	9	45	9	46	14	42	20	36	31	31
	0,5	72.5	11	50	11	51	11	52	15	51	23	43	37	37
	0,6	87.0	12	55	12	55	23	56	23	57	42	50	43	43
	0,7	101.5	14	59	15	60	44	61	45	62	56	56	49	49
1"	0,1	14.5	30	54	30	54	29	47	23	38	20	32	17	28
	0,2	29.0	38	76	39	77	48	70	37	57	31	49	27	42
	0,3	43.5	48	93	48	94	65	94	52	77	44	65	38	56
	0,4	58.0	54	107	55	109	66	111	67	97	57	82	49	71
	0,5	72.5	60	120	66	122	67	124	82	116	69	98	60	85
	0,6	87.0	66	131	67	133	68	135	97	136	82	115	71	100
	0,7	101.5	71	142	72	144	73	146	107	149	93	130	81	112
1 1/2"	0,1	14.5	91	140	83	116	64	90	53	74	45	63	39	54
	0,2	29.0	116	197	137	175	100	136	82	112	69	94	60	82
	0,3	43.5	136	242	170	235	136	183	112	149	94	126	82	110
	0,4	58.0	153	279	170	284	172	229	141	188	119	159	103	138
	0,5	72.5	171	312	173	317	210	276	172	226	146	191	126	166

Max. Temperature of hot water – Ratio Steam Pressure 1 : 1

1/2"	93°C	3/4"	93°C	1"	93°C	1 1/2"	93°C
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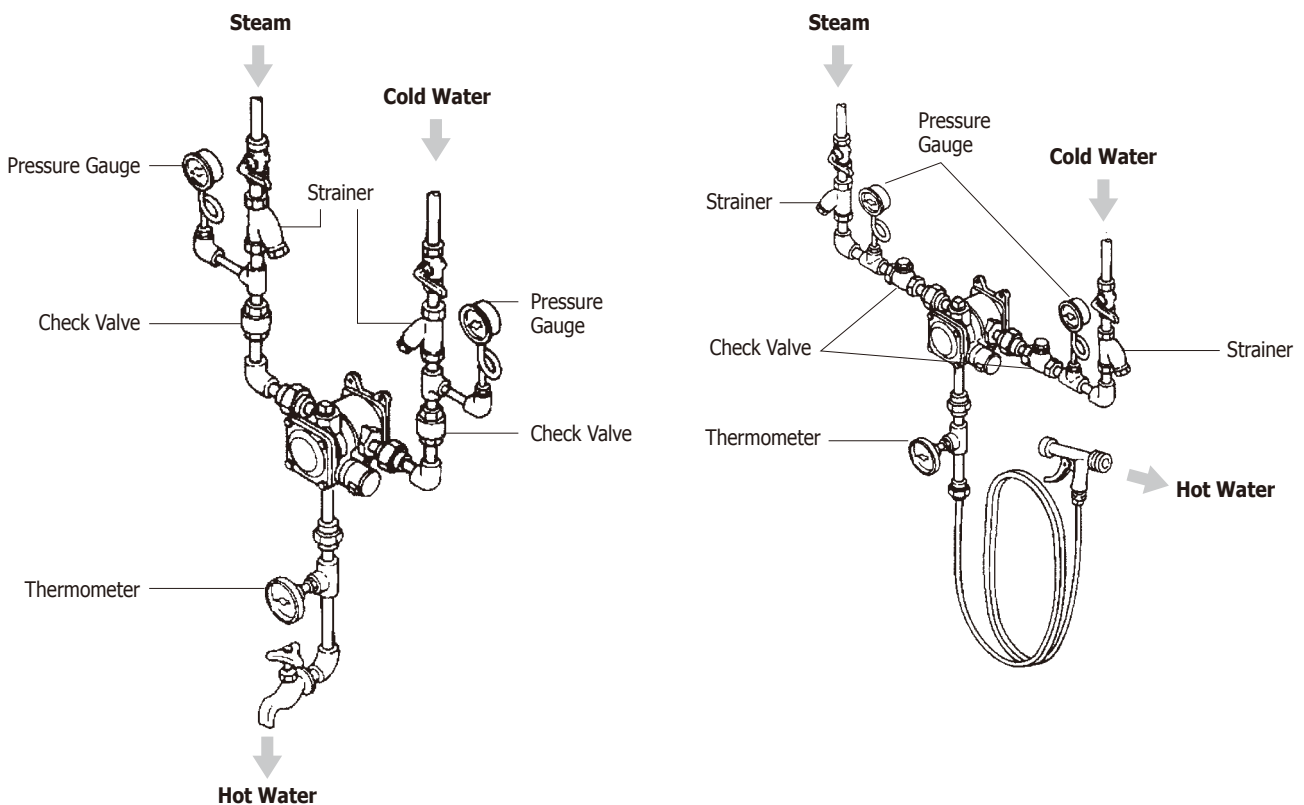
Please, look at our Website www.miyawaki.net (Products/Steam Water Mixing Valves) for more detailed flow charts containing hot water flow rates of the MX1N. If you require further technical details, please ask for our technical leaflet on Steam Water Mixing Valves.

MX1N

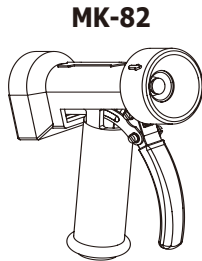
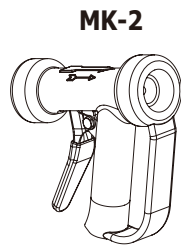


MX1N

Installation Examples



MK



Features

1. Trigger operated water gun. Front trigger or rear trigger available
2. Perfect water consumption control
3. One-handed mode with either variable spray or direct jet
4. Automatic and immediate shut-off when the trigger is released

Suitable for

- MK2** is suitable for most industrial applications
- MK-MV** is recommended for use with Steam-Water-Mixing Valves

Model	Material	Rubber Cover	Trigger	Orifice Size		Max. Pressure	
				in	mm	MPa	psi
MK-2	Gunmetal or Stainless Steel	Black or White	rear	5/16"	7,9	0,7	101.5
MK-OH				7/16"	11,1		
MK-MV				9/16"	14,3		
MK-78	Gunmetal	Black or White	front	5/16"	7,9	1,4	203.0
MK-80				7/16"	11,1		
MK-82				9/16"	14,3		

Pressure		Orifice Size			Orifice Size		
MPa	psig	5/16"	7/16"	9/16"	5/16"	7/16"	9/16"
		l/min			GPM		
0,035	5.0	3,2	13,5	15,0	0.84	3.56	3.96
0,07	10.2	5,6	20,0	21,0	1.48	5.28	5.54
0,1	14.5	7,0	22,5	24,0	1.85	5.94	6.34
0,2	29.0	10,0	25,0	36,0	2.64	6.60	9.50
0,3	43.5	12,5	32,0	47,0	3.30	8.45	12.41
0,35	50.8	14,5	37,0	52,0	3.83	9.77	13.73
0,4	58.0	16,0	38,0	55,0	4.22	10.03	14.52
0,5	72.5	18,0	40,0	60,0	4.75	10.56	15.84
0,6	87.0	20,5	42,0	65,0	5.41	11.09	17.16
0,7	101.5	22,3	44,0	69,0	5.89	11.62	18.22
1,0	145.0	27,5	51,0	-	7.26	13.46	-
1,5	217.5	35,0	62,0	-	9.24	16.37	-
2,0	290.0	43,0	74,0	-	11.35	19.54	-
2,5	362.5	50,5	85,0	-	13.33	22.44	-

CVC3, CVC3R, CV5R Check Valve

CVC3, CVC3R, CV5R

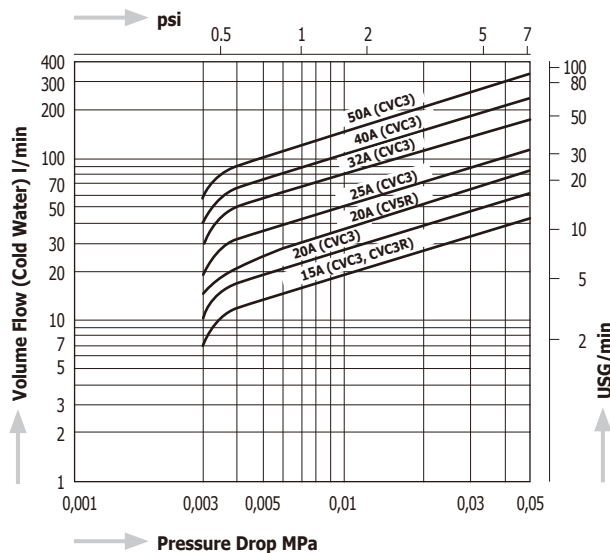


CVC3, CVC3R



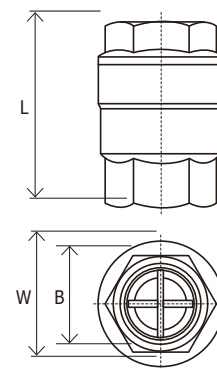
CV5R

Pressure Drop Chart

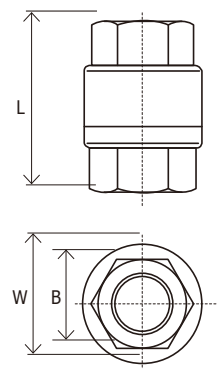


Dimensions

CVC3, CVC3R



CV5R



Model	Connections	Size	Max. Operating Pressure		Opening Pressure		Max. Operating Temperature		Dimensions (mm)			Dimensions (in)			Body Material	Weight	
			MPa	psig	MPa	psig	°C	°F	L	W	B	L	W	B		kg	lb
CVC3	Screwed Rc, NPT	1/2"	2,1	305	0,003	0.44	220	428	48	35	27	1.9	1.4	1.1	Stainless Steel SCS13A	0,2	0.44
		61							43	33	2.4	1.7	1.3	0,3		0.66	
		73							54	41	2.9	2.1	1.6	0,6		1.32	
		80,5							62	50	3.2	2.4	2.0	0,8		1.76	
		87							75	58	3.4	3.0	2.3	1,2		2.64	
		100							90	72	3.9	3.5	2.8	1,8		3.96	
CVC3R	Screwed Rc, NPT	1/2"	2,1	305	0,003	0.44	80	176	48	35	27	1.9	1.4	1.1	SCS13A	0,2	0.44
CV5R	Screwed Rc, NPT	3/4"	1,6	230	0,003	0.44	80	176	60	46	34	2.4	1.8	1.3	SCS13A	0,3	0.66