

Steam-water mixing valve



Model 253

NE

In installations with steam, the steam can be mixed with cold water to obtain instant hot water in the most economical way.

Can be used in packaging plants, dairies, detergent plants, slaughterhouses, meat processing plants, hospitals,... etc. For cleaning floors, vehicles, toilets, tanks, filters,... etc. In the manufacture of food, chemical, paper and tannery products,... etc.

Specifications

- Efficient, safe, simple installation and moderate cost.
- Water temperature easily adjusted to suit the needs of the consumer.
- Installation does not require pressure reducing valves.
- In certain applications they make an ideal and economical substitute for heat exchangers.
- Equipped with a safety device which prevents the input of steam until there is water flow through the mixer.
- Design aimed at eliminating noises and vibrations which are characteristics of the mixing of steam with cold water.
- Materials carefully selected for resistance to wear, extreme temperatures and corrosion.
- Simplicity of design, ensuring minimum maintenance requirements.
- Moderate weight and size.
- Easy to connect.
- Three single springs which are easily interchangeable and identified by their colour and number of notches.
- All valves undergo thorough testing.
- Each component is numbered, registered and inspected. If previously requested, the valve will be accompanied by certificates corresponding to materials, batch, tests and performance.

IMPORTANT

Depending on demand:

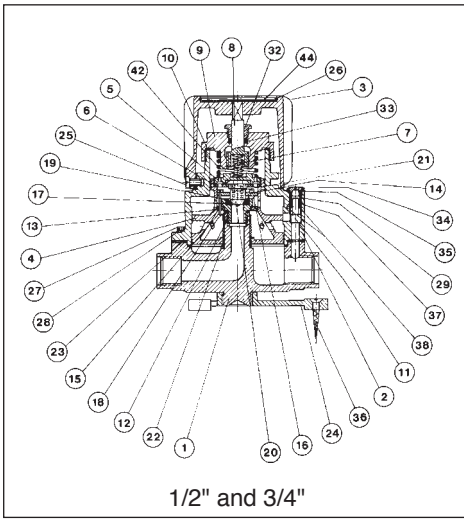
- Valves made entirely from Stainless steel.
- Valves coated internally and externally with PTFE (Teflon).
- Thermostatic valves.
- Chrome or nickel finish.
- Venturi type doser for mixing detergent with hot water.
- Support for coiling the hose.
- Automatic hose coiler.
- Pistol with lance for spraying hot water.



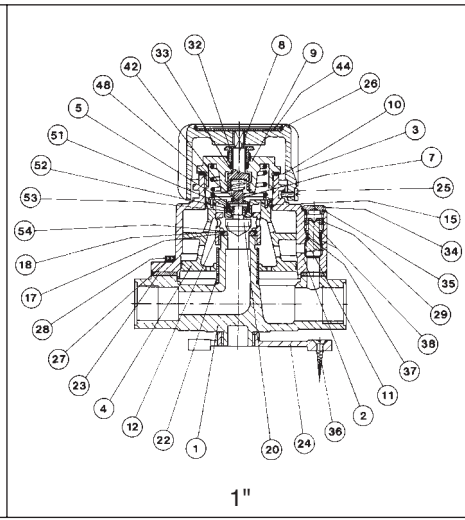
N° PIECE	PIECE	MATERIAL
		BRONZE
1	Body	Bronze (EN-CC491K)
2	Cover	Bronze (EN-CC491K)
3	Control	Plastic ABS (1)
4	Piston	Bronze (EN-CC491K)
5	Upper buffer	Bronze (EN-CC491K)
6	Lower buffer	Stainless steel (EN-1.4401)
7	Fixed spring	Stainless steel (EN-1.4310)
8	Axis	Bronze (EN-CC491K-GC)
9	Spring press	Bronze (EN-CC491K)
10/23	Joint	Klingerit cardboard/Fluorelastomer (Vitón)
11	Valve	Brass (EN-CW617N)
12	Lead	Stainless steel (EN-1.4401)
13	Ring	Brass (EN-CW617N)
14	Plate	Stainless steel (EN-1.4401)
15, 25, 27, 36, 41	Screw	Stainless steel (EN-1.4401)
16	Rivets	Stainless steel (EN-1.4401)
17	Seating	PTFE (Teflón)
18, 40	Washer	Copper
19, 49, 52	Washer	Brass (EN-CW617N)
20	Valve	Stainless steel (EN-1.4401)
21	Spring press	Stainless steel (EN-1.4310)
22	Shirt	Bronze (EN-CC491K-GC)
24	Bracket	Polimer + FV (2)
26	Ciip	Stainless steel (EN-1.4401)
28, 38	Washer	Stainless steel (EN-1.4401)
29	Adjusting screw	Brass (EN-CW617N)
30	Dowel	Stainless steel (EN-1.4401)
31	Cap	Bronze (EN-CC491K)
32	Gland	Brass (EN-CW617N)
33, 37	Seal	Graphite
34	Cap	Brass (EN-CW617N)
35	Joint	PTFE (Teflón)
39	Gudgeon	Stainless steel (EN-1.4401)
42	Variable spring	Stainless steel (EN-1.4310)
43, 44, 45, 46, 47	Plate	Aluminium
48	Lead	Brass (EN-CW617N)
50	Ball	Stainless steel (EN-1.4401)
51	Nut	Brass (EN-CW617N)
53, 54	Washer	Bronze - Berilium
55	Lower plate	Stainless steel (EN-1.4401)
56	Upper plate	Stainless steel (EN-1.4401)
R		1/2", 3/4", 1" and 1 1/2"
PN		16
OPERATING CONDITIONS	MAX. STEAM PRESSURE IN bar	10,5
	MIN. STEAM PRESSURE IN bar	0,35
	MAX. TEMP. IN °C	187

(1) The 1 1/2" control is supplied in Aluminium (EN-AC-44200).

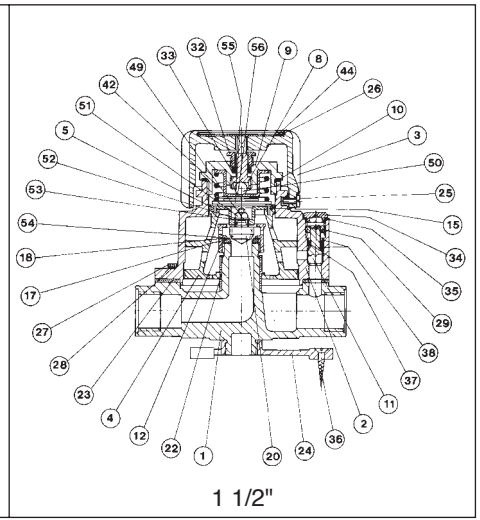
(2) R- 1 1/2" is supplied in Bronze (EN-CC491K).



1/2" and 3/4"



1"



1 1/2"

R	VARIABLE SPRING REGULATION RANGE IN bar (STEAM PRESSURE)	IDENTIFICATION COLOUR	N° NOTCHES	MINIMUM HOT WATER FLOW FOR OPEN STEAM VALVE IN l/min.
1/2"	0,35 a 3,50	Black	1	2,30
	3,50 a 7,00	Green	2	2,70
	7,00 a 10,80	Yellow	3	4,50
3/4"	0,35 a 3,50	White	1	7,00
	3,50 a 7,00	Blue	2	7,00
	7,00 a 10,80	Red	3	8,00
1"	0,35 a 3,50	White	1	27,00
	3,50 a 7,00	Blue	2	32,00
	7,00 a 10,80	Red	3	36,00
1 1/2"	0,35 a 3,50	White	1	55,00
	3,50 a 7,00	Blue	2	55,00
	7,00 a 10,80	Red	3	55,00

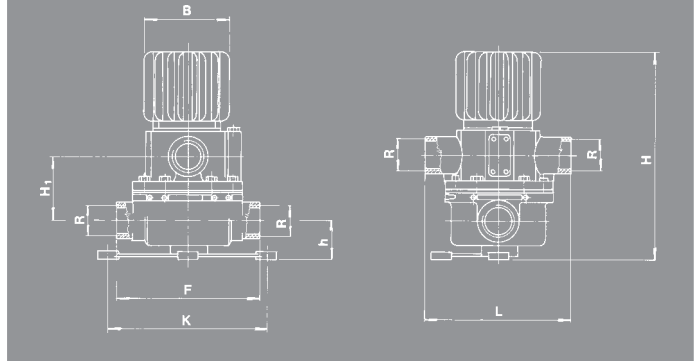
R	1/2"	3/4"	1"	1 1/2"
CONNECTIONS	Whitworth gas-tight cylindrical female ISO 228/1 1978 (DIN-259)			
H	197	197	216	286
H ₁	57	60	70	98
h	32	40	44	60
L	140	151	173	213
F	144	152	201	266
B	108	108	121	143
K	134	159	134	200
DRILLS N°	3	3	3	3
WEIGHT IN Kgs.	6,4	9,4	11,2	26,0
CODE 2106 - 253.	5021	5341	5101	5121

NOTE: The mixing valve is supplied mounted with a variable spring ranging from 3,50 to 7,00 bar and two extra springs are included in case it is required to work at other steam pressures. To change the springs, unscrew the screw (25) remove the control (3) and the spring press (9), and the variable spring (42) will be accessible. To reassemble carry out the reverse sequence.

Flows

Data required to determine the internal diameter of the valve:

- Temperature of consumer hot water:
- Flow of consumer hot water:
- Pressure available at the cold water input:
- Pressure available at the steam input:



Calculation process

- 1- Start with table for 1/2".
- 2- For the available cold water input pressure, work out the flow of cold water.
- 3- For the available steam input pressure, work out the hot water flow at the consumer temperature.
- 4- From the values obtained in steps 2 and 3 choose the smaller value, and compare if this is sufficient to cover the requirements for consumer hot water. If not repeat the process using the 3/4" table and so on up to the 1 1/2" table.

FLOW R.1/2"															
COLD WATER			HOT WATER IN l/min.												
PRESSURE IN bar	FLOW IN l/min. OPEN VALVE	PRESSURE IN bar CLOSED VALVE	SERVICE TEMPERATURE IN °C												
			0,35	13	7	0,35	13	10	8	7	6	6	5	5	4
0,70	19	9	0,70	21	16	13	11	10	9	8	7	7	6	6	5
1,40	29	11	1,40	32	23	20	17	15	13	12	11	10	9	9	8
2,10	36	13	2,10	38	27	23	20	18	16	14	13	12	11	10	10
2,80	42	14	2,80	49	35	30	26	23	20	19	17	16	15	13	13
3,50	47	15	3,50	62	45	38	33	29	26	24	21	20	18	17	16
4,20	52	16	4,20	67	48	41	35	31	28	26	23	21	20	18	17
4,90	56	17	4,90	72	52	44	38	34	30	27	25	23	21	20	19
5,60	60	18	5,60	77	56	47	41	36	32	29	27	25	23	21	20
6,30	65	19	6,30	82	59	50	43	38	34	31	28	26	24	23	21
7,00	69	19	7,00	87	63	53	46	41	37	33	30	28	26	24	22
7,70	73	19	7,70	91	66	56	49	43	39	35	32	29	27	25	24
8,40	77	20	8,40	97	70	60	52	45	41	37	34	31	29	27	25
9,10	79	20	9,10	102	74	63	54	48	43	39	35	33	30	28	26
9,80	82	21	9,80	107	77	65	57	50	45	41	37	34	32	29	28
10,50	85	21	10,50	112	81	69	60	53	47	43	39	36	33	31	29

FLOW R.3/4"															
COLD WATER			HOT WATER IN l/min.												
PRESSURE IN bar	FLOW IN l/min. OPEN VALVE	PRESSURE IN bar CLOSED VALVE	SERVICE TEMPERATURE IN °C												
			0,35	14	9	0,35	23	19	16	14	12	11	10	9	8
0,70	20	10	0,70	37	28	25	22	19	17	16	14	13	12	11	10
1,40	34	13	1,40	55	45	39	33	30	26	24	22	20	19	17	16
2,10	52	17	2,10	66	54	45	40	35	31	28	26	24	22	20	19
2,80	56	21	2,80	85	72	59	51	45	40	37	34	31	29	27	25
3,50	65	23	3,50	93	89	75	65	57	51	46	42	39	36	34	31
4,20	71	25	4,20	115	95	80	70	61	55	50	45	42	39	36	34
4,90	77	28	4,90	124	101	86	75	66	59	53	49	45	41	38	36
5,60	83	30	5,60	132	108	91	79	70	63	57	52	47	44	41	38
6,30	87	31	6,30	149	122	104	90	79	70	64	58	54	50	46	43
7,00	93	33	7,00	165	136	115	100	88	79	71	65	60	55	51	48
7,70	98	35	7,70	182	149	126	109	97	86	78	71	66	60	57	39
8,40	102	36	8,40	199	163	138	120	105	94	85	78	72	66	62	58
9,10	107	38	9,10	205	168	142	124	109	97	88	80	74	69	64	60
9,80	111	40	9,80	209	171	145	125	111	99	90	81	75	70	65	61
10,50	125	42	10,50	213	174	147	127	112	101	91	83	76	71	66	62

Watergun

PI-1



Specifications

- Body of bronze covered with black synthetic rubber.
- Operated using rear-mounted trigger, more manageable, safe and less tiring.
- Instant, automatic and water-proof closure.
- Ring on one end of the pistol for hanging after use or for insertion in the trigger for a fixed setting in order to obtain an effortless, continuous flow.

Spray adjustment

1– Fine spray: Press lightly on the trigger.
Adjustable using the adjustment screw located at the other end from the water output.

2– Constant spray: Press the trigger fully on.

R	1/2"
CONNECTIONS	Whitworth gas-tight cylindrical female thread ISO 228/1 1978 (DIN-259)
HOLE Ø	11
WEIGHT IN Kgs.	1,20
CODE	2106-253.0000

HOT WATER FLOW		
R	1/2"	
PRESSURE IN bar	FLOW IN l/min.	
0,35	13,50	
0,70	19,30	
3,40	37,80	
7,00	45,00	
17,50	54,00	
24,50	85,50	
28,00	90,00	
OPERATING CONDITIONS	MAX. PRESSURE IN bar	28
	MAX. HOT WATER TEMP. IN °C	82

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Founded in 1914

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