



## Steam/Water Mixing Valve - MkII

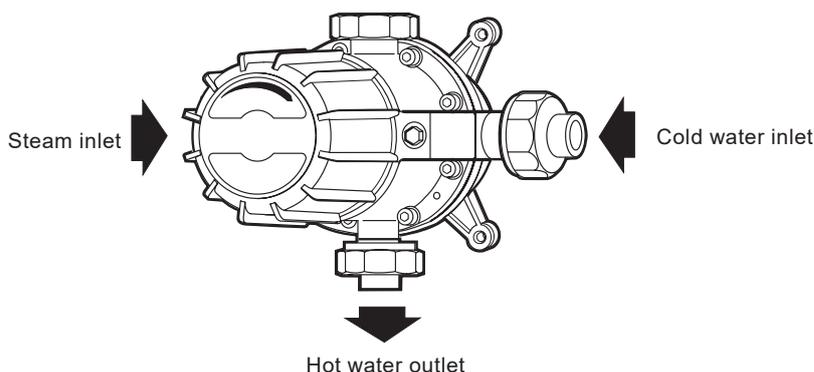
### Description

#### Design

The MkII Spirax Sarco steam/water mixing valve is designed to provide hot water economically by blending steam and cold water quickly to the required user temperature. The temperature can be changed by turning the adjustment knob. As the valve is not thermostatically controlled in order to maintain a fixed hot water temperature the cold water pressure and flowrate must be constant. The installer must ensure that the Local Water Board Regulations are adhered to, with regard to direct use of mains water supply. MkII valves were supplied from 2002 onwards.

#### Operation

The mixing valve employs a piston to lift and open the steam valve. The piston is lifted by the cold water supply. If the cold water supply stops the piston will fall, closing the steam valve. To sustain this design integrity the piston must move freely. Scale build-up will prevent movement and regular maintenance must be carried out to ensure the valves safe operation.



#### Range

The ½" and ¾" valves are primarily intended for use in hosedown stations, washing down plant e.g. The food and beverage industries. See TI-P157-06 on steam/water mixing stations and TI-P157-05 for the hosedown gun, hose and hose rack. High capacity 1" and 1½" valves are intended for fixed installation i.e. Periodic filling of tanks, therefore no hoses or guns are available.

#### Temperature/pressure ranges

All sizes will supply a mixed water temperature in the range of 40 ° to 90 °C. For sizing, see TI-P157-06. The valves are supplied with three fixed loading springs which allows the valve to operate over a wide range of steam pressures. The intermediate spring is fitted as standard.

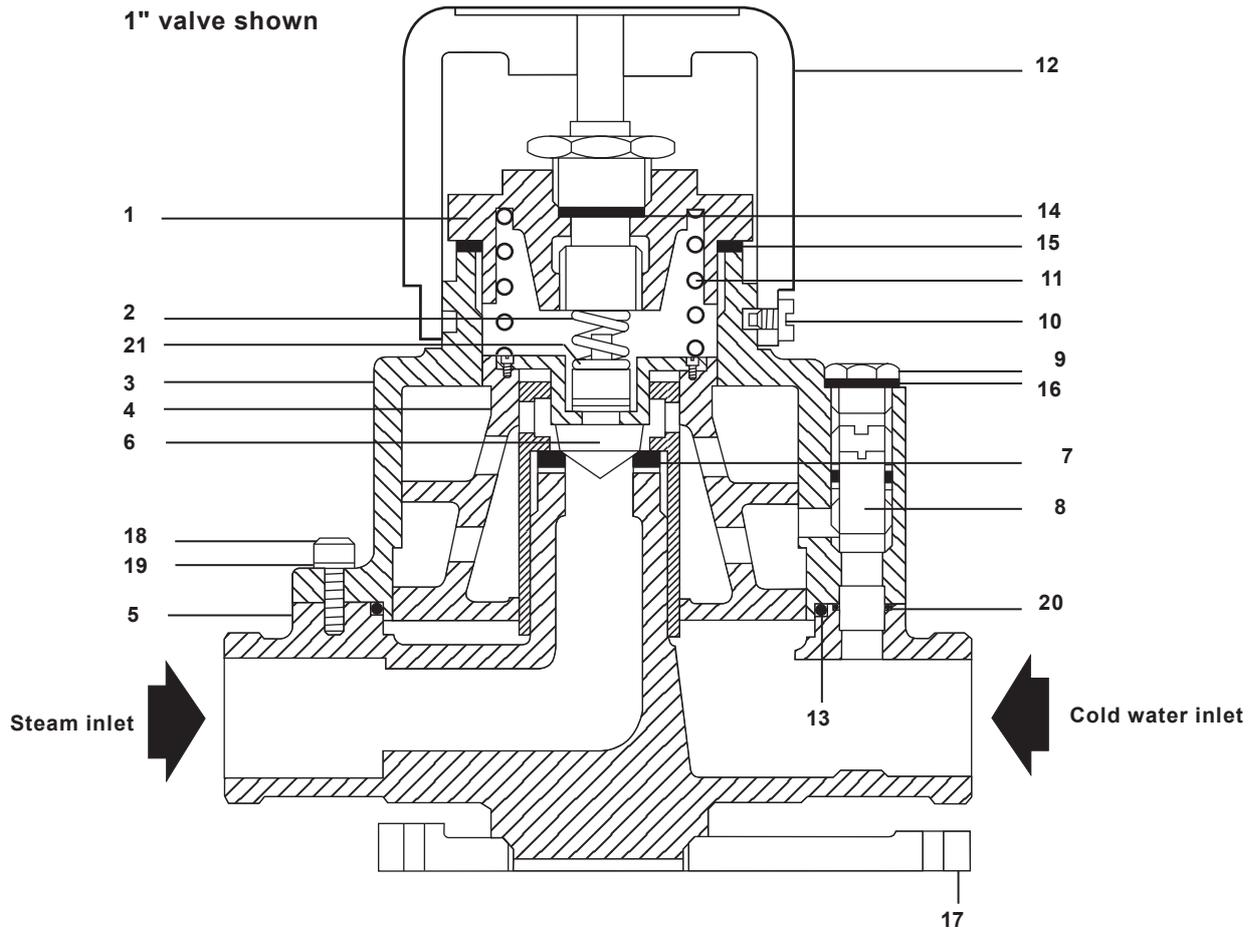
#### Sizes and pipe connections

½", ¾", 1" and 1½" screwed BSP (inlet and outlet)

#### Limiting conditions

Body design condition	PN16
Maximum pressure and temperature of inlet steam	10.3 bar g @ 184 °C
Designed for a maximum cold hydraulic test pressure of	24 bar g

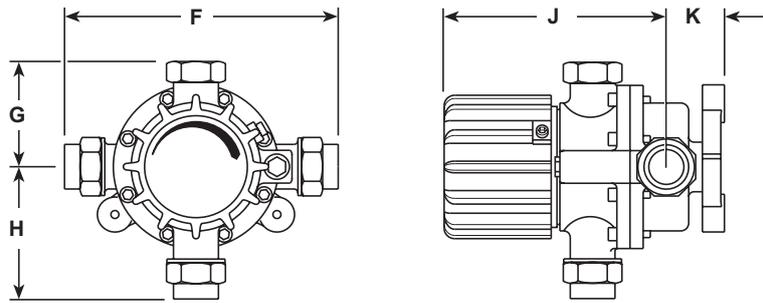
## Materials



No.	Part	Material
1	Upper head	Bronze
2	Steam valve spring	Stainless steel
3	Upper body	Bronze
4	Piston	Bronze
5	Lower body	Bronze
6	Steam valve plug	Stainless steel
7	Steam valve seat	PTFE
8	Bypass valve	Stainless steel
9	Screw	Brass
10	Knob retaining screw	Stainless steel
11	Fixed loading spring	Stainless steel
12	Temperature adjustment knob	DN15 - 25 Glass filled polymer DN40 Plastic coated aluminium

No.	Part	Material
13	Body 'O' ring	Viton
14	'O' ring packing washer	Graphite
15	Top gasket	Klingersil
16	Bypass valve washer	PTFE
17	Wall bracket	1/2" - 1" Polypropylene 1 1/2" Bronze
18	Cap screw	Stainless steel
19	Washer	Stainless steel
20	Bypass 'O' ring	Viton
21	Spigoted spring guide	(1" + 1 1/2" only)

## Dimensions/weights (approximate) in mm and kg



Size	F	G	H	J	K	Weight
½"	208	85	158	157	41	6.2
¾"	212	87	158	165	45	7.1
1"	261	108	158	179	58	11.1
1½"	396	128	200	226	60	23.8

## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P157-03) supplied with the product.

### General information

Cleaning should only be carried out by suitably qualified persons.

Regular cleaning of the mixing valve and handgun is required to prevent scale build-up and continued safe working operation. This is especially important in hard water areas.

**Note:** Pressure gauges are installed in the steam and cold water supply lines of all Spirax Sarco steam/water mixing valve stations. These are installed for fault finding purposes.

### Disposal

See IM-P157-03 which is supplied with the product for full details.

The product is recyclable. No ecological hazard is anticipated with the disposal of this product providing due care is taken. However if the recycling process involves a temperature approaching 260 °C caution is advised regarding decomposition of the PTFE and/or Viton components.

### How to order

Example: 1 off 1½" Spirax Sarco MkII steam/water mixing valve.

## Spare parts

Spare parts are available as indicated. No other parts are supplied as spares.

### Available spares

Maintenance set	2, 6, 7, 8, 9, 13, 15, 16, 20
Gasket set	8, 13, 15, 16, 20
Fixed loading spring	11, 15

### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size of the valve.

**Example:** 1 off Gasket set for a 1½" Spirax Sarco MkII steam / water mixing valve.

