# spirax Sarco

# Balanced Pressure Thermostatic Steam Trap MST21 & MST21H

The welded stainless steel element is self-adjusting over the entire operating pressure range and will discharge condensate at approximately 18°F (10℃) below saturated steam temperature on the standard Fill trap. Up to 518°F (270°C) and waterhammer can be tolerated by this trap. The MST21 can be disassembled for servicing. Trap may be installed in horizontal or vertical pipelines. Can be used on tracing, drips, sterilizers and a low capacity air vent.



Model []	MST21 / MST21H		
РМО	304 psig		
Sizes	1/4", 1/2" MST21 1/2", 3/4", 1" MST21H		
Connections	NPT		
Construction	All Stainless Steel		
Options	NTS Fill near to steam 7.2°F SUB Fill sub cooled 40°F		



# **Limiting Operating Conditions**

Max. Operating Pressure (PMO)

304 psig (21 barg)

Max. Operating Temperature

518°F@ 300 psig (270°C @ 21barg)

## **Pressure Shell Design Conditions**

**Construction Materials** 

<b>PMA</b> Max. allowable pressure	362 psig/up to 248°F 309 psig/424°F 188 psig/752°F	25 barg/up to 120℃ 21 barg/218℃ 13 barg/400℃
<b>TMA</b> Max. allowable temperature	752°F/0-188 psig	400℃/0-13 barg

Dimensions (nominal) in inches and millimeters					
Size	Α	В	С	D	Weight
1/4"	<b>2.0</b> 50.5	<b>0.3</b> 8.5	<b>0.4</b> 10	<b>1.8</b> 45	<b>.75 lb</b> 0.34 kg
1/2"	<b>2.4</b> 61	<b>0.5</b> 12.5	<b>.06</b> 14	<b>1.8</b> 45	<b>1.06 lb</b> 0.48 kg
3/4"	<b>2.7</b> 68	<b>0.6</b> 14.0			<b>1.06 lb</b> 0.48 kg
1"	<b>3.0</b> 75	<b>0.6</b> 14.0		<b>1.8</b> 45.0	<b>1.06 lb</b> 0.48 kg

# Typical Applications

Steam main drainage and steam tracing.

No.	Part	Material	
1	Body	Stainless Steel	ASTM A743 CF16F/ DIN 17440 X 10 CrNiS 18 9
2	Сар	Stainless Steel	ASTM A276 Gr 431
3	Capsule	Stainless Steel	
4	Spring	Stainless Steel	
5	Spacer Plate	Stainless Steel	
6	Strainer Screen (0.8mm perf)	Stainless Steel	
7	Gasket	Stainless Steel	

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only. In the interests of development and improvement of the product, we reserve the right to change the specification.

Steam Traps

**Balanced Pressure** 

2:202



#### Capacities



### **Sample Specification**

Steam trap shall be Spirax Sarco MST21 balanced pressure thermostatic type, which self adjusts to all pressures to 304 psig. Trap to be of all stainless steel maintainable construction. Internal element shall be capable of resisting waterhammer and withstanding up to 518°F (*270°C*). Offered in standard and high capacity with choice of 3 discharge temperature options.

#### Installation

The steam trap is intended for installation in a vertical line with the inlet at the top and the outlet at the bottom. This will ensure that it is selfdraining. Full port isolating valves should be installed upstream and downstream of the trap. If fitted in a horizontal line, the trap should be preceded by a short drop leg. Trap will be piped inverted (outlet vertical up) when used as an airvent (NTS-Fill recommended).

#### Maintenance

Complete isolation of the trap from both supply and return line is required before any servicing is performed.

The trap should be disassembled periodically for cleaning of the strainer screen and inspection and cleaning of the valve head and seat.

Worn or damaged parts should be replaced using a complete Capsule Assembly Set.

Complete installation and maintenance instructions are given in the IM-P125-07 sheet, which accompanies the product.



Available spare parts are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

Please note thermostat fill when ordering spares.

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