



# SA121, SA122, SA128 and SA1219 Self-acting Temperature Control Systems

## Description

A range of self-powered control systems that incorporate sensor, actuator, set point adjustment/indicator for use with the following valve types:-

**2-port** KA, KB, KC, KX, KY, SB, SBRA, BX and BXRA, BM, BMRA, BMF, BMFRA, NS and NSRA

**3-port** TW

## Available types

### Set point adjustment at sensor

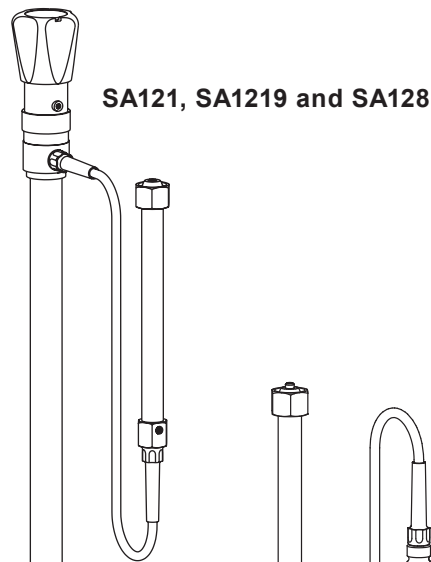
<b>SA121</b>	For use on	2-port valves	DN15 to DN80
		3-port valves	DN20 to DN50
<b>SA1219</b>	For use on	3-port valves	DN80 and DN100
<b>SA128</b>	For use on	2-port valves	DN15 to DN25
		3-port valves	DN20 and DN25

### Set point adjustment at valve

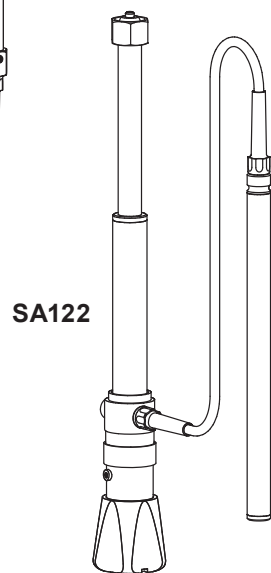
<b>SA122</b>	For use on	2-port valves	DN15 to DN50
		3-port valves	DN20 and DN25

## Optional extras

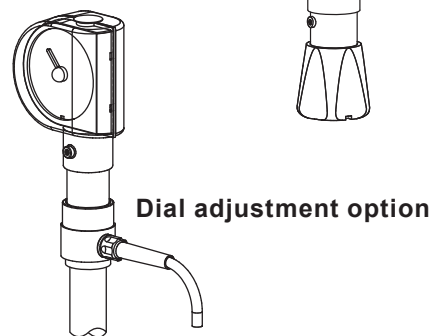
<b>Union kit</b>	Direct immersion
<b>Pocket</b>	Indirect immersion
Pocket material options include copper and stainless steel.	
<b>Wall bracket</b>	
<b>Duct adaptor</b>	Duct mounting
<b>Nickel plating</b>	
<b>Dial type set point adjuster</b>	
<b>Pt100 temperature sensor</b>	SA122TP incorporate an internal pocket to accept a Pt100 sensor



SA121, SA1219 and SA128



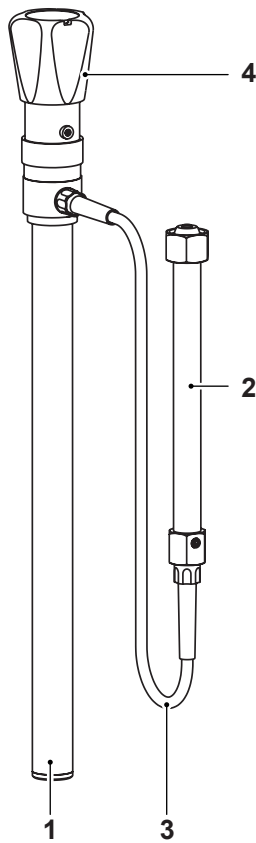
SA122



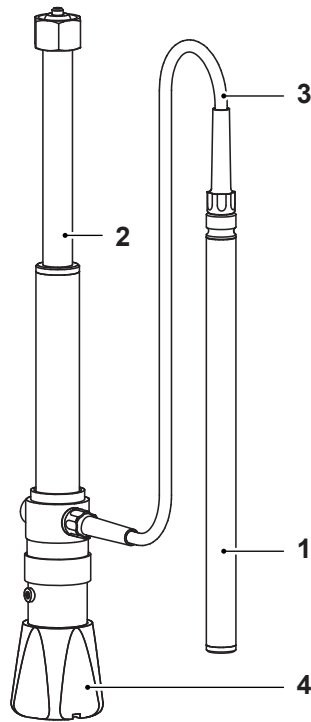
Dial adjustment option

## Materials

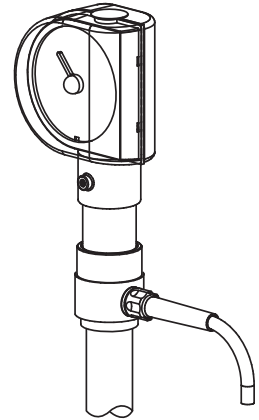
SA121, SA1219 and SA128



SA122



Dial adjustment option



No.Part	Material	
1 Sensor	Brass	
2 Actuator	Brass	
3 Capillary tube	Copper with PVC coated armoured covering	
4 Adjustment head	Polypropylene	
5 * Union kit	Brass	
6 Mounting bracket	Steel	
7 Clip	Polypropylene	
8 * Adaptor plate (Duct fixing adaptor)	Steel	
9 * Pocket	Copper	BS 2871 C106
	Stainless steel	BS 3605 CFS 316S 18
10 Liquid fill	Kerosene	

\* Items 5, 8 and 9 are shown on page 4

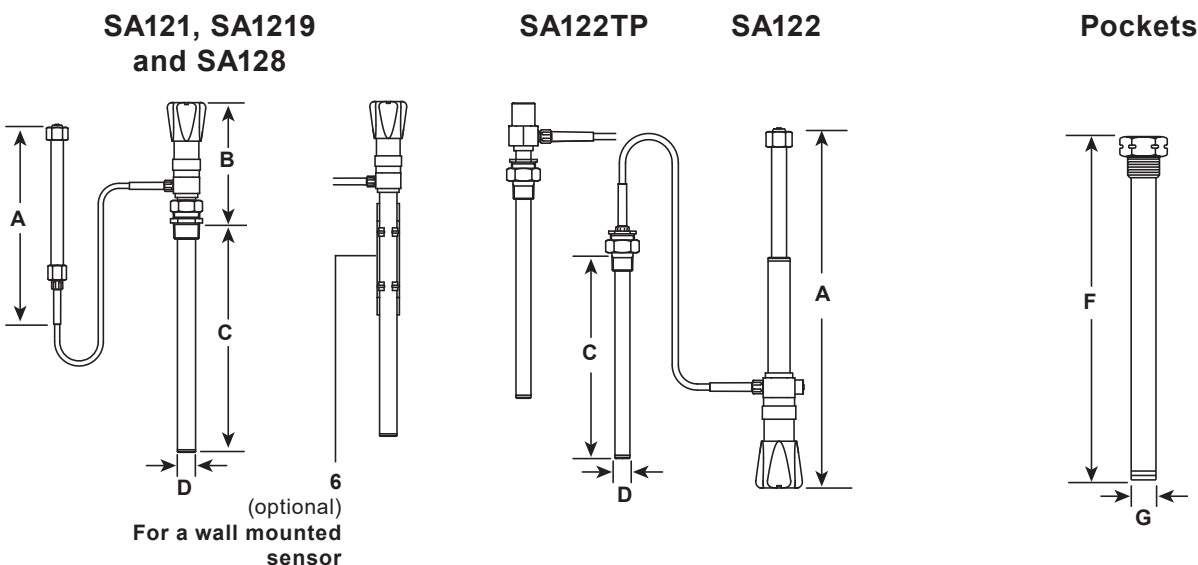
## Temperature ranges

SA121 and SA1219	Range 1	-15 °C to 50 °C
	Range 2	40 °C to 105 °C
	Range 3	95 °C to 160 °C
<b>Over temperature protection</b>		55 °C over set value to 190 °C maximum
SA122	Range 1	-20 °C to 120 °C
	Range 2	40 °C to 170 °C
<b>Over temperature protection</b>		55 °C over set value
SA128	Range 1	-20 °C to 110 °C
	Range 2	40 °C to 170 °C
<b>Over temperature protection</b>		55 °C over set value to 190 °C maximum
<b>Note</b> - Ambient design temperature	Minimum	-35 °C
	Maximum	+50 °C

## Capillary tube

Standard length 2 m, 4 m, 8 m and maximum special length is 16m.

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

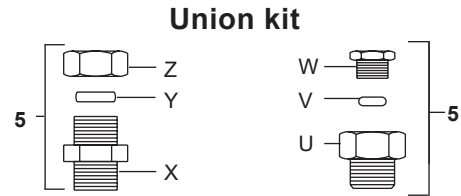


Model	Control system					Metal pockets		Weight excluding pocket
	A	B	C	D	E	F	G	
SA121	252	185	310	25	-	333	28	2.0
SA1219	350	185	310	25	-	333	28	2.3
SA122	441	-	240	17	-	271	20	1.8
SA122TP	441	-	255	17	-	271	20	2.0
SA128	252	185	178	25	-	196	28	1.8

### Union kit (for sensor immersion without pocket)

Includes gland nut, compression ring and union nipple.

SA121, SA1219 and SA128	Items Z, Y and X
SA122	Items W, V and U



### Pockets (for indirect immersion)

Includes pocket, gland nut and compression ring.

SA121, SA1219 and SA128	Items T, Z and Y
SA122	Items S, W and V.
Available materials	Copper and stainless steel

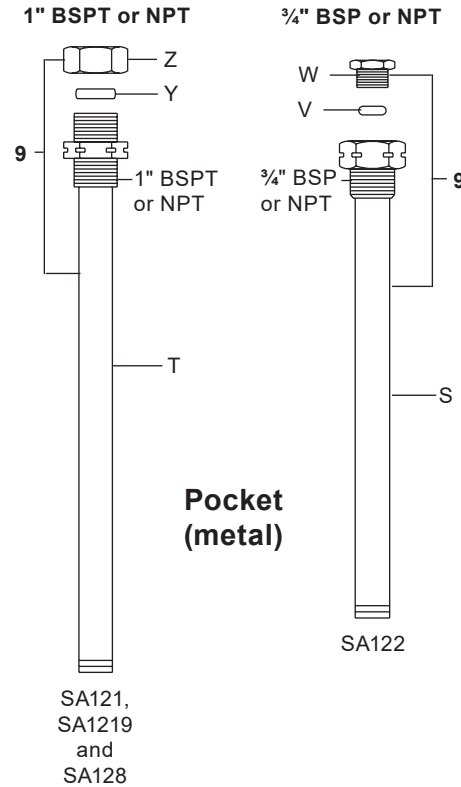
### Long pockets (SA122 only)

To special order only.

Having a minimum length 0.5 m, maximum length to order.

Includes pocket, bracket and rubber bung

SA122	Items S, V, W and T, Z, Y
Available materials	Copper and stainless steel



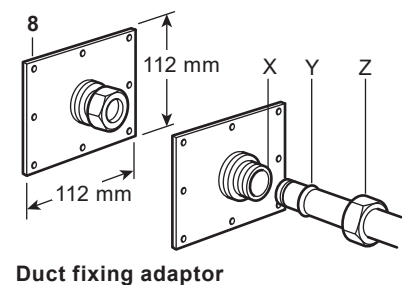
### Wall mounting bracket (Item 6)

SA121, SA1219, SA122 and SA128	Optional
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### Duct fixing adaptor (for air sensing within ducts)

Includes adaptor plate, union nipple, compression ring and gland nut.

SA121, SA1219 and SA128	Items 8, X, Y and Z
SA122	Not available



### Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions supplied with the product.

### How to order

**Example:** 1 - Spirax Sarco SA121 temperature control system, having temperature range 2, 2 m capillary and stainless steel pocket.