spirax sarco

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

SA121	For use on	2-port valves	DN15 to DN80	(½" to 3")
		3-port valves	DN20 to DN50	(¾" to 2")
SA1219	For use on	3-port valves	DN80 and DN100	(3" to 4")
SA128	For use on	2-port valves	DN15 to DN25	(½" to 1")
		3-port valves	DN20 and DN25	(¾" to 1")

Set point adjustment at valve

SA122	For use on	2-port valves	DN15 to DN25	(½" to 1")
		3-port valves	DN20 and DN25	(¾" to 1")

Optional extras

Union kit	Direct immersion
Pocket	Indirect immersion

Pocket material options include copper and stainless steel.

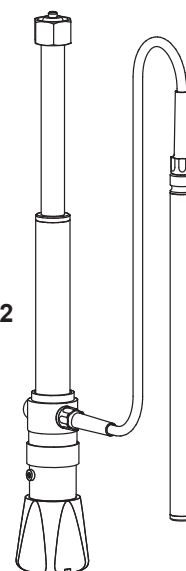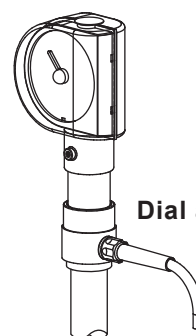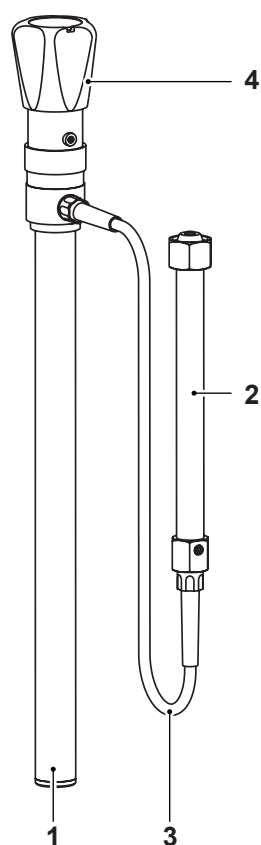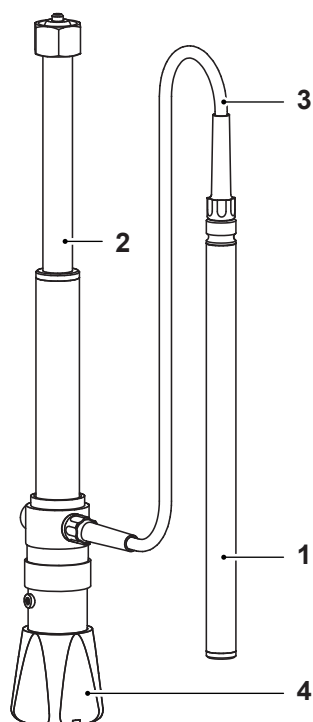|	
Wall bracket	
Duct adaptor	Duct mounting
Nickel plating	
Dial type set point adjuster	
Pt100 temperature sensor	SA122TP incorporate an internal pocket to accept a Pt100 sensor
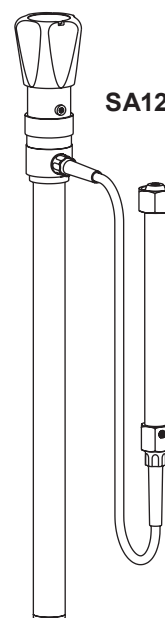
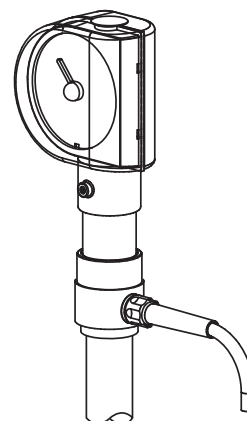

SA121, SA1219 and SA128

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

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

Temperature ranges

SA121 and SA1219	Range 1	-15 °C to 50 °C	(5 °F to 122 °F)
	Range 2	40 °C to 105 °C	(104 °F to 221 °F)
	Range 3	95 °C to 160 °C	(203 °F to 320 °F)
Over temperature protection		55 °C (131 °F) over set value to 190 °C (374 °F) maximum	
SA122	Range 1	-20 °C to 120 °C	(-4 °F to 248 °F)
	Range 2	40 °C to 170 °C	(104 °F to 338 °F)
Over temperature protection		55 °C (131 °F) over set value	
SA128	Range 1	-20 °C to 110 °C	(-4 °F to 230 °F)
	Range 2	40 °C to 170 °C	(104 °F to 338 °F)
Over temperature protection		55 °C (131 °F) over set value to 190 °C (374 °F) maximum	
Note - Ambient design temperature	Minimum	-35 °C	(-31 °F)
	Maximum	+50 °C	(122 °F)

Capillary tube
Standard length 2 m, 4 m, 8 m and maximum special length is 16m. (6.6 ft, 13.1 ft, 26.2 ft and 52.5 ft)

Dimensions/weights (approximate) in mm and kg

SA121, SA1219 and SA128   SA122TP   SA122   Pockets

For a wall mounted sensor
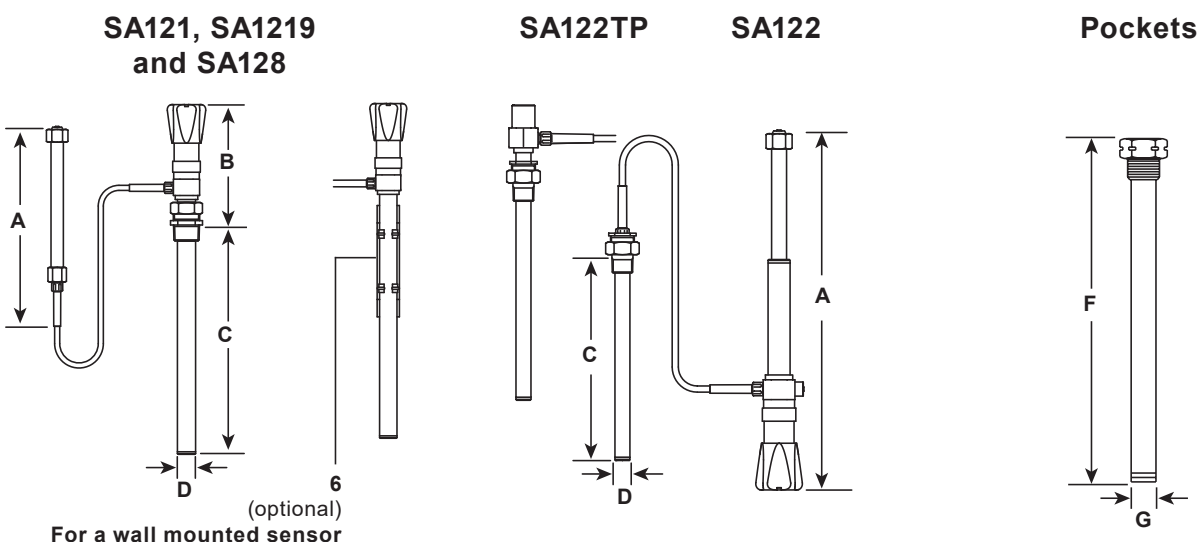
	Control system				Metal pockets		Weight
Model	**A**	**B**	**C**	**D**	**E**	**F**	excluding pocket
SA121	252 (9.9)	185 (7.3)	310 (12.2)	25 (1.0)	333 (13.1)	28 (1.1)	2.0 (4.4)
SA1219	350 (13.8)						2.3 (5.1)
SA122	441 (17.4)		240 (9.4)	17 (0.7)	271 (10.7)	20 (0.8)	1.8 (4.0)
SA122TP			255 (10)				2.0 (4.4)
SA128	252 (9.9)		178 (7)	25 (1.0)	196 (7.7)	28 (1.1)	1.8 (4.0)

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

Union kit (for sensor immersion without pocket)
Includes gland nut, compression ring and union nipple.

Union kit

SA121, SA1219 and SA128	Items Z, Y and X
SA122	Items W, V and U
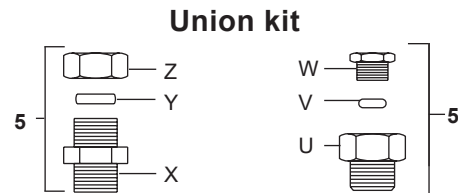
Pockets (for indirect immersion)
Includes pocket, gland nut and compression ring.

1" BSPT or NPT   **¾" BSP or NPT**

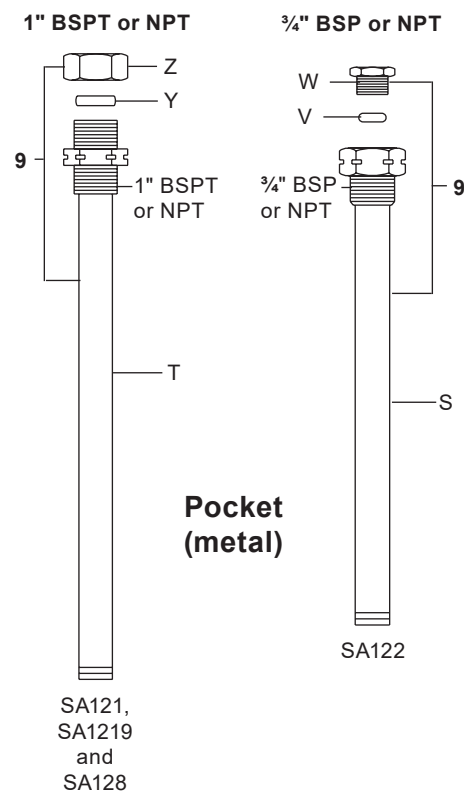| SA121, SA1219 and SA128	Items T, Z and Y
SA122	Items S, W and V.
Available materials	Copper and stainless steel

Long pockets (SA122 only)
To special order only.
Having a minimum length 0.5 m (1.6 ft), 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

Pocket (metal)

SA122

SA121, SA1219 and SA128

Wall mounting bracket (Item 6)

SA121, SA1219, SA122 and SA128	Optional

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

112 mm

112 mm

Duct fixing adaptor
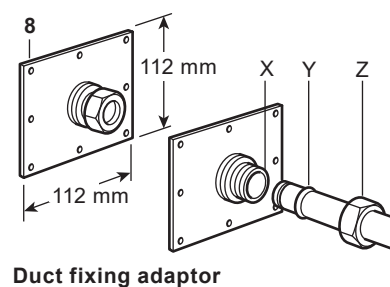
Safety information, installation and maintenance
For full details see the Installation and Maintenance Instructions supplied with the product.

How to order
Example: 1 - Spirax Sarco SA121 temperature control system, having temperature range 2, 2 m (6.6 ft) capillary and stainless steel pocket.