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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 folowing valve types:

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

Available Types

Set point adjustment at sensor

SA121	For use on	2-port valves	1/2" to 3"
		3-port valves	3/4" to 1-1/2"
SA128	For use on	2-port valves	1/2" to 1"
		3-port valves	3/4" and 1"

Set point adjustment at valve

SA122	For use on	2-port valves	1/2" to 1"
		3-port valves	3/4" and 1"

Remote set point adjustment

SA123	For use on	2-port valves	1/2" to 3"
		3-port valves	3/4" to 1-1/2"

Connection - NPT

Optional Extras

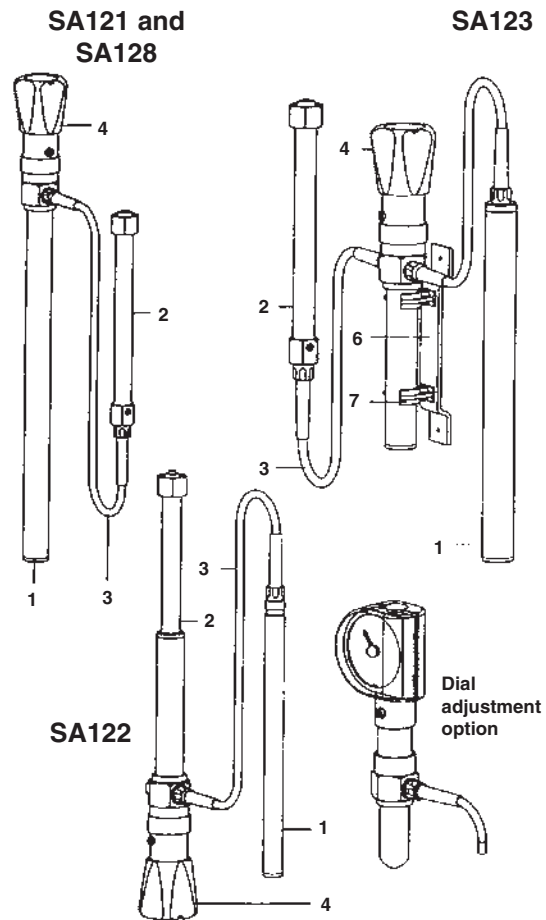| Union Kit (SA122)	Direct immersion
Pocket	Indirect immersion
	Material options include mild steel, copper, brass, stainless steel
	Glass option also available for SA122 and SA123 only
Wall bracket	
Duct adaptor	Duct mounting
Coiled Sensor	Fast response
Nickel plating	
Dial Type Set Point Adjuster	
Pt100 Temperature Sensor	SA122TP and SA123TP incorporate an internal pocket to accept a Pt100 sensor.

Construction Materials

No	Part	Material
1	Sensor	Brass
2	Actuator	Brass
3	Capillary tube	Copper with a 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	Mild steel BS 980 CEW2
		Copper BS 2871 C106
		Brass BS 2817 CZ126
		Stainless steel BS 3605 CFS 316S 18
10	Liquid fill	Kerosene

*Items 5,8, and 9 are shown overleaf

SA121 and SA128

SA123

SA122

Dial adjustment option

Temperature Ranges

Set point adjustment at sensor

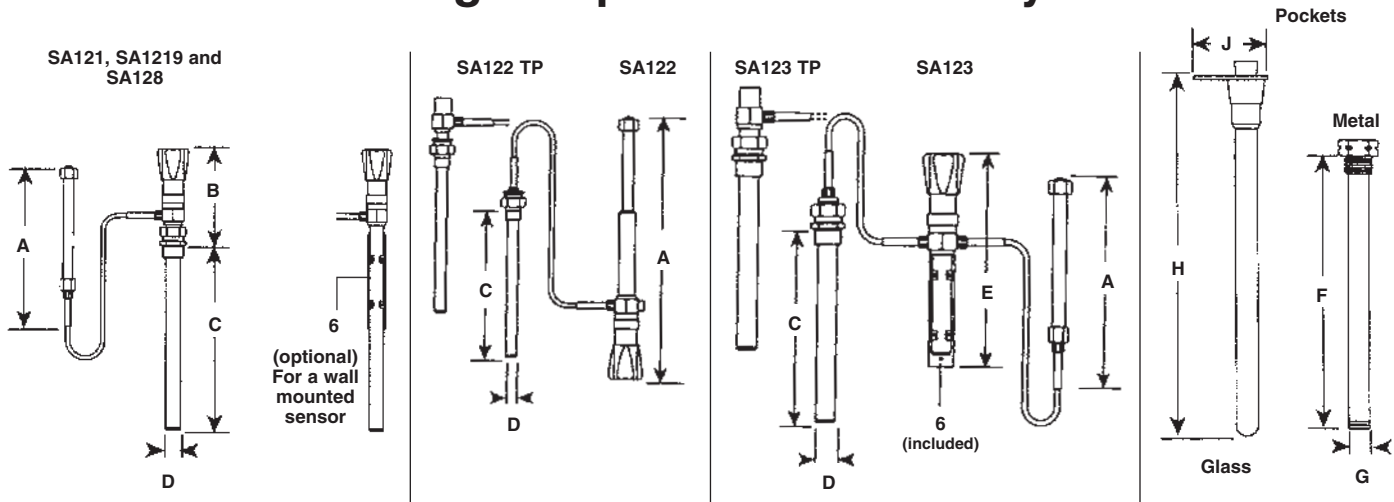| SA121	Range 1	5° to 125°F (-15°C to 50°C)
	Range 2	105° to 225°F (40° to 105°C)
SA123	Range 3	205° to 320°F (95°C to 160°C)
Over temperature protection		100°F (55°C) over set value to 375°F (190°C) maximum
SA122	Range 1	0° to 250°F (-20°C to 120°C)
	Range 2	105° to 340°F (40°C to 170°C)
Over temperature protection		100°F (55°C) over set value to 375°F (190°C) maximum
SA128	Range 1	0° to 230°F (-20°C to 110°C)
	Range 2	105° to 340°F (40°C to 170°C)
Over temperature protection		100°F (55°C) over set value to 375°F (190°C) maximum

Capillary Tube

Standard length 2 m, 4m, 8m, and 20 m.

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Self Acting Temperature Control Systems

SA121, SA1219 and SA128

SA122 TP **SA122**

SA123 TP **SA123**

Pockets

Metal

Glass

Dimensions / Weight (approximate) in inches & millimeters

Model	Control System					Metal Pockets		Glass Pockets		Weight excluding
	A	B	C	D	E	F	G	H	J	
SA121	11.0 (275)	7.2 (185)	12.2 (310)	1.0 (25)	-	12.5 (315)	1.1 (28)	-	-	4.5lb (2.0)
SA122	16.3 (415)	-	9.4 (240)	.67 (17)	-	10.1 (258)	.8 (20)	255 (575)	4.5 (117)	4.0lb (1.8)
SA122TP	16.3 (415)	-	10.4 (225)	.67 (17)	-	10.1 (258)	.8 (20)	-	-	4.5lb (2.0)
SA123	11.0 (275)	-	9.7 (248)	1.0 (25)	10.6 (270)	10.1 (258)	1.1 (28)	225 (575)	4.5 (117)	5.8lb (2.5)
SA123TP	11.0 (275)	-	10.4 (225)	1.0 (25)	10.6 (270)	10.1 (258)	1.1 (28)	-	-	5.8lb (2.7)
SA128	11.0 (275)	7.2 (185)	6.7 (178)	1.0 (25)	-	7.0 (180)	1.1 (28)	-	-	4.0lb (1.8)

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

SA121, SA123 and SA128	Items Z, Y and X included with controller
SA122	Items W, V and U optional - not included

Pockets (for indirect immersion)
Includes pocket, gland nut, and compression ring.

SA121, SA123 and SA128	Items T, Z, and Y
SA122	Items S, W, and W
Available materials	Mild steel, copper, brass and stainless steel

Long Pockets (SA122 and SA123 only)
To special order only.
Having a minimum length 0.5m, maximum length to order.
Includes pocket, bracket and rubber bung.

SA121 and SA123	Items S, V, W and T, Z, Y
Available Materials	Mild steel, copper, brass and stainless steel

Glass Pockets (SA122 and SA123 only)
To special order only.
Includes pocket, bracket and rubber bung.

SA122 and SA123	Items R, O, and P

Wall Mounting Bracket (Item 6)

SA121, SA122, SA123 and SA128	Optional

Duct Fixing Adaptor (for air sensing within ducts)
Includes adaptor plate, union nipple, compression ring and gland nut.

SA121, SA123 and SA128	Items 8, X, Y, and Z
SA122	Not available

Union Kit

Pocket (glass)

1"NPT   **3/4" NPT**

1" NPT   **³/4" NPT**

Pocket (Metal)

SA121, SA123, and SA128   **SA122**

Duct fixing adaptor

(112mm) 4.4"

(112mm) 4.4"

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