



Cert. No. LRQ 0963008

ISO 9001

# spirax sarco

TI-P350-01  
CH Issue 3

## TA10A and TA10P Steam Tracing Temperature Control Systems

### Description

The TA10 is a stainless steel temperature control valve that has been designed for use on tracing applications. The TA10A and TA10P are the temperature control systems that are required to operate the valve - These are sold separately.

#### Available types of temperature control system:

<b>TA10A</b>	For air temperature sensing.
	Immersion/remote sensor for product sensing.
<b>TA10P</b>	<b>Note:</b> the TA10P is supplied with a 1 m capillary tube for remote sensing.

#### Temperature ranges:

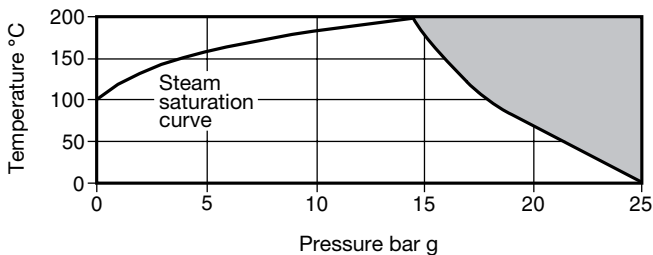
<b>Range 1</b>	0°C to 50°C (TA10A and TA10P)
<b>Range 2</b>	20°C to 70°C (TA10P only)

**Note:** The maximum temperature overrun is 50°C

#### Sizes and pipe connections

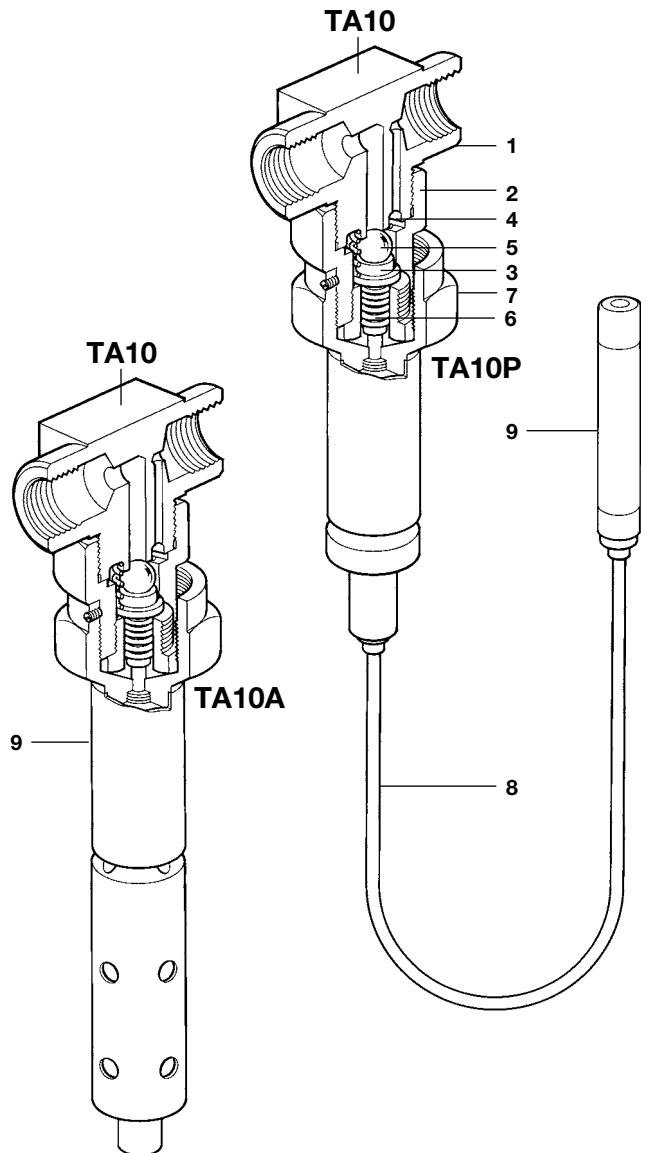
1/2" and 3/4" screwed BSP (BS 21 parallel) or NPT.

#### Pressure / temperature limits



The product **must not** be used in this region.

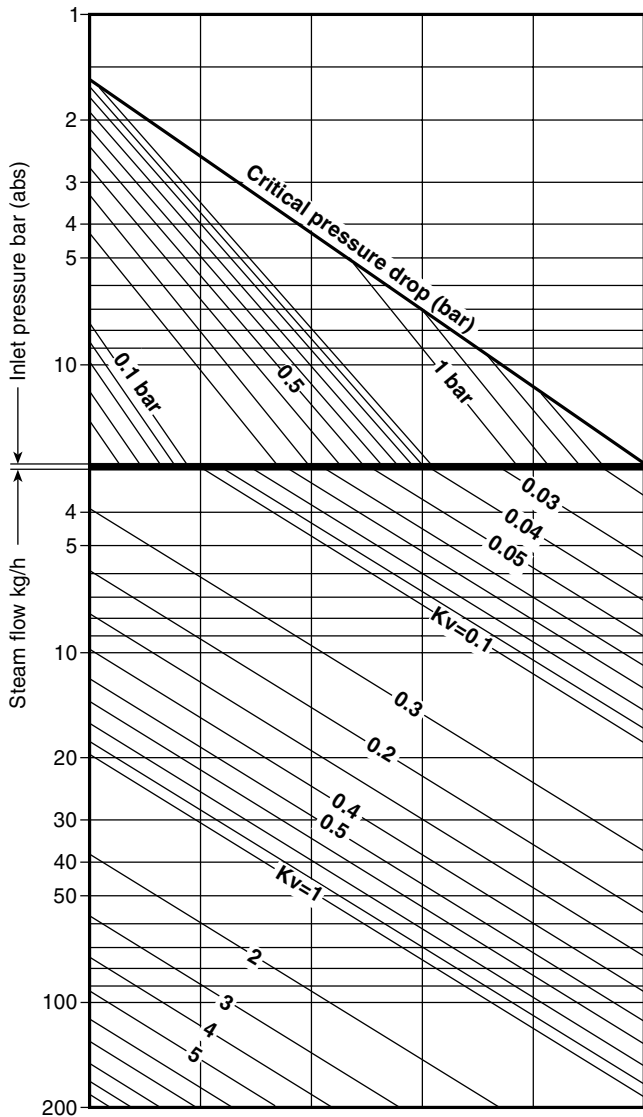
Body design conditions		PN25
PMA	Maximum allowable pressure	25 bar g
TMA	Maximum allowable temperature	200°C
Minimum allowable temperature		0°C
PMO	Maximum operating pressure for saturated steam service	14.6 bar g
TMO	Maximum operating temperature	200°C
Minimum operating temperature		0°C
<b>Note:</b> For lower operating temperatures consult Spirax Sarco		
ΔPMX	Maximum differential pressure	10 bar g
Designed for a maximum cold hydraulic test pressure of 38 bar g		



### Materials

No. Part.	Material	
1	Body	Stainless steel AISI 420 F
2	Bonnet	Stainless steel ASTMA582 Gr.416
3	Valve stem	Stainless steel ASTMA276 Gr.431
4	Seal Bellows housing	Stainless steel ASTMA276 Gr.431
	assembly Bellows	Stainless steel AISI 316L
5	Valve closure member	Stainless steel AISI 440B
6	Return spring	Stainless steel ASTMA313Type302
7	Adjustment head	Stainless steel ASTMA582 Gr.41b
8	Capillary tube	Stainless steel seamless tube ASTMA269 Gr.304
9	Sensor	Stainless steel ASTMA 269 Gr.316

## Capacities



### Example of how to use the capacities chart

#### Where:

- Example load = 20 kg/h
- Upstream gauge pressure 5 bar = 6 bar abs.

#### Method:

- Draw a horizontal line from 6 bar abs.
- Draw a horizontal line from 20 kg/h
- Drop a vertical line from the 6 bar x critical pressure crossing point until it crosses 20 kg/h horizontal.
- The  $K_v$  for valve selection is given at this crossing point as  $K_v$  0.3
- From the P-band table below a 3/4" valve has 4°C P-band.

### $K_v$ at P-band in °C

Size	1°C	2°C	4°C	6°C	8°C	Maximum lift $K_v$
1/2"	0.18	0.22	0.27	0.29	0.32	0.55 at 15°C Xp
3/4"	0.20	0.23	0.29	0.29	0.33	0.87 at 15°C Xp

Operating temperature at design  $K_v$  = Set value - Xp

For conversion:  $C_v$  (UK) =  $K_v \times 0.963$      $C_v$  (US) =  $K_v \times 1.156$

### Safety information, installation and maintenance

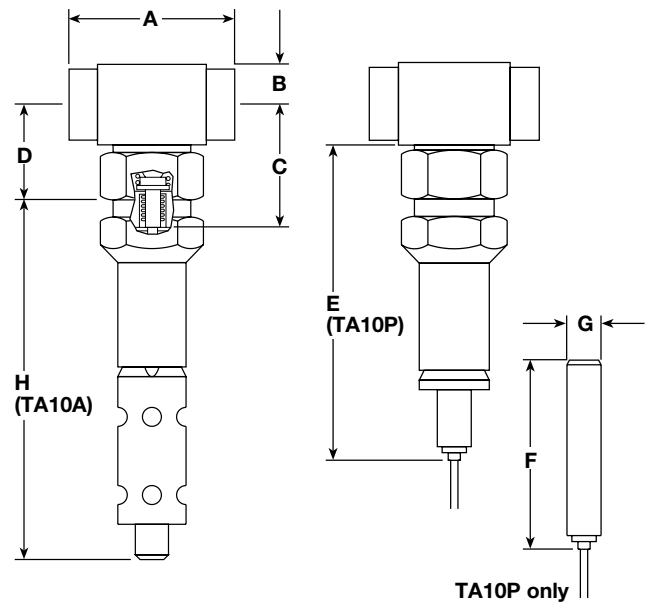
For full details see the Installation and Maintenance Instructions supplied with the product.

### How to order

**Example:** 1 off Spirax Sarco 1/2" TA10 steam tracing temperature control valve having screwed BSP connections supplied with a TA10P range 2 temperature control system.

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

Size	A	B	C	D	E	F	G	H	Weight	
									TA10A	TA10P
1/2"	70	16	58	38	120	72	13	170	1.06	1.08
3/4"	80	20	62	38	120	72	13	170	1.33	1.35



### Spare parts

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

#### Available spares

Internal assembly	A, B, C
Control system (state type and temperature range)	D

#### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size, type and temperature range of the control valve.

**Example:** 1 - Internal assembly for a Spirax Sarco 1/2" TA10 steam tracing temperature control valve.

