



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:

TA10A For air temperature sensing.

Immersion/remote sensor for product sensing.

TA10P **Note:** the TA10P is supplied with a 1 m capillary tube for remote sensing.

Temperature ranges:

Range 1 0 °C to 50 °C (TA10A and TA10P)

Range 2 20 °C to 70 °C (TA10P only)

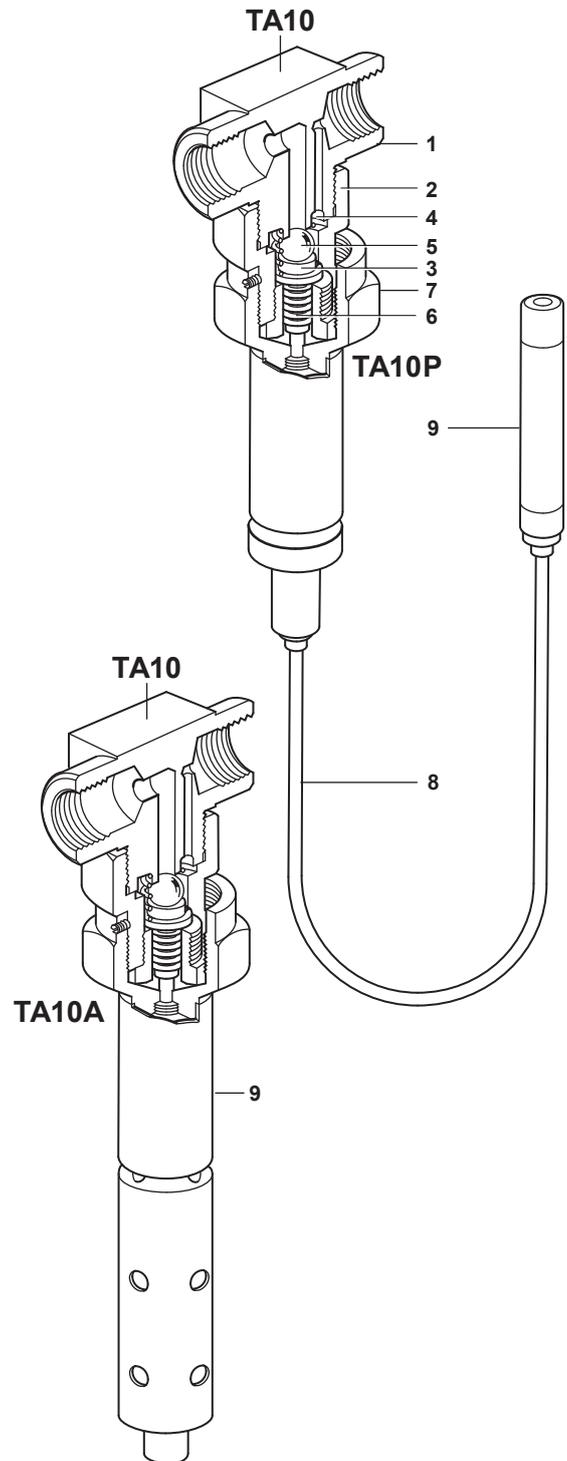
Note: The maximum temperature overrun is 50 °C

Sizes and pipe connections

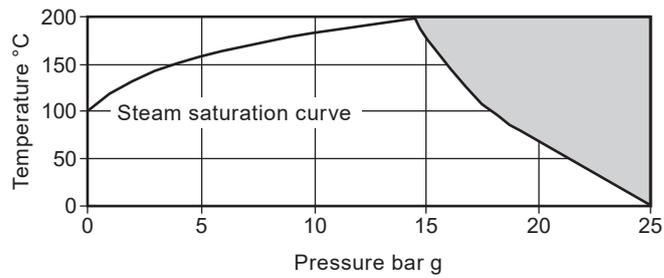
½" and ¾" screwed BSP (BS 21 parallel) or NPT.

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 assembly	Bellows housing	Stainless steel ASTMA276 Gr.431
	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



Pressure/temperature limits

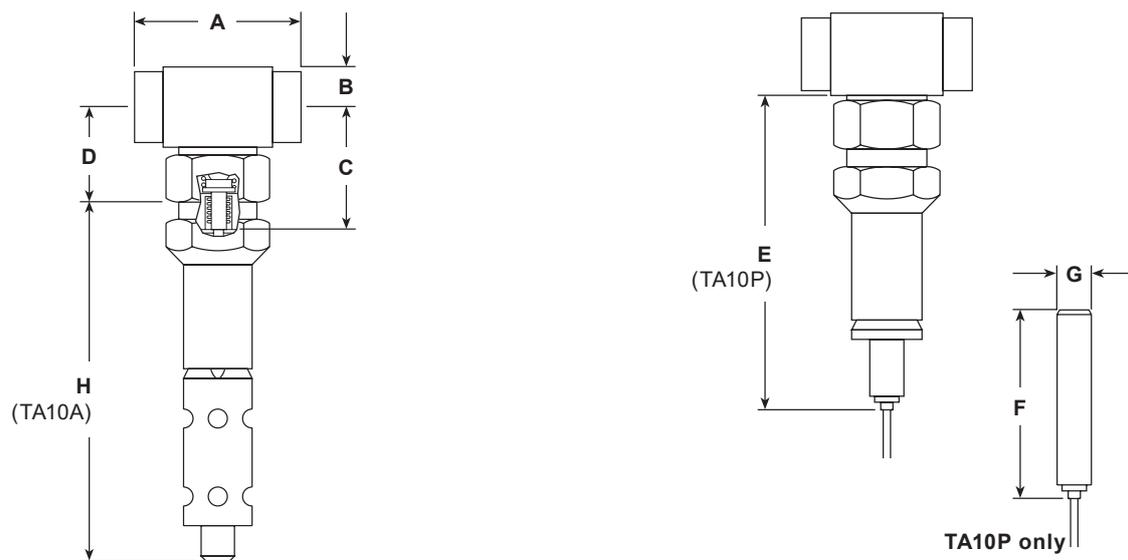


The product **must not** be used in this region.

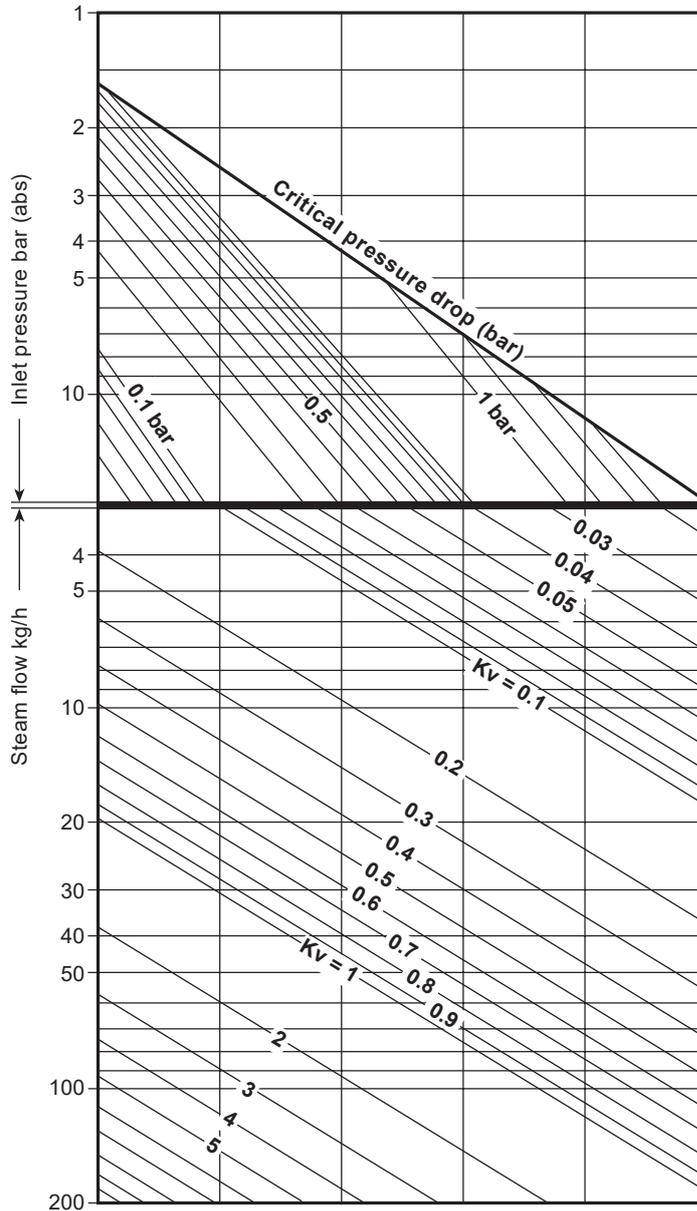
Body design conditions	PN25
PMA Maximum allowable pressure	25 bar g
TMA Maximum allowable temperature	200 °C
Minimum allowable temperature	0 °C
PMO Maximum operating pressure for saturated steam service	14.6 bar g
TMO Maximum operating temperature	200 °C
Minimum operating temperature	0 °C
Note: For lower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

Dimensions/weights (approximate) in mm and kg

Size	A	B	C	D	E	F	G	H	Weight	
									TA10A	TA10P
½"	70	16	58	38	120	72	13	170	1.06	1.08
¾"	80	20	62	38	120	72	13	170	1.33	1.35



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 Kv for valve selection is given at this crossing point as Kv 0.3
 - From the P-band table below a 3/4" valve has 4 °C P-band.

Kv at P-band in °C

Size	1 °C	2 °C	4 °C	6 °C	8 °C	Maximum lift Kv
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

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

Operating temperature at design Kv = Set value - Xp

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.

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in a grey 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.

