

For Steam

Armstrong's OB-2000 is a high performance externally piloted temperature regulator for large capacity applications such as heat exchangers, steam coils, steam dryers, plating tanks and parts washers. Self-actuated and requiring no external energy source, the OB-2000 comes with pilot valve and tubing pre-

assembled. Capillary units mount in any position and can be easily disconnected and interchanged, offering easy installation and maximum application flexibility. Available in sizes 1/2" through 4" with six temperature ranges and three capillary lengths.

Table PTC-242-1. OB-2000 Specifications

Application	Inlet Pressure (barg)	Minimum Differential Pressure (barg)	Temperature Ranges (°C)	Temperature Accuracy (°C)	Capillary Length (m)
Steam	0,5 - 20	0,5	-8 - 15	± 1 °C From Set Point	2 3 5*
			10 - 36		
			30 - 62		
			55 - 94		
			80 - 127		
			115 - 183		

* Standard length.

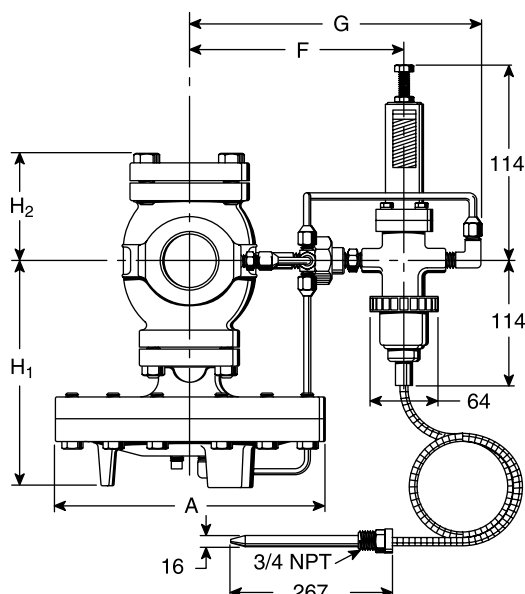
Note: If desired set temperature is in temperature range overlap, select lower range.

Table PTC-242-2. OB-2000 Dimensions and Weights

Size	Face-to-Face		H ₁	H ₂	A	F	G	Weight		Cv
	BSPT	PN 25/40						BSPT	PN 25/40	
	mm	mm						kg	kg	
15 - 1/2"	150	150	170	74	200	169	222	14	15,4	5,0
20 - 3/4"	150	150	170	74	200	169	222	14	16,1	7,2
25 - 1"	160	160	175	76	226	174	227	18	20,6	10,9
32 - 1 1/4"	180	180	192	90	226	182	235	22	24,4	14,3
40 - 1 1/2"	180	200	192	90	226	182	235	22	25,3	18,8
50 - 2"	230	230	216	103	276	189	242	33	37,0	32,0
65 - 2 1/2"	—	290	251	122	352	206	259	—	66,5	60,0
80 - 3"	—	310	264	135	352	217	270	—	71,8	78,0
100 - 4"	—	350	321	167	401	234	287	—	113,3	120,0

Shade indicates products that are CE Marked according to the PED (97/23/EC). All the other sizes comply with the Article 3.3 of the same directive.

Note: DN150 valve is available on request, but is **not CE Marked**.



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Table PTC-243-1. Sensor and Accessory Specifications

CAPILLARY		BULB		THERMAL WELL	
Material	Temperature Range (°C)	Material	Connection	Material	Connection
Copper Capillary Tube with 304 Stainless Steel Armor Shield	-8 - 15	Nickel Plated Copper	3/4" NPT	Brass or 304 Stainless Steel*	1" BSPT
	10 - 36				
	30 - 62				
	55 - 94				
	80 - 127				
	115 - 183				

* Standard. Other material available upon request. See page PTC-240 for dimensional information.

Note: Capillary can withstand a maximum of 20°C above rated range. If desired set temperature is in temperature range overlap, select lower range.

Table PTC-243-2. OB-2000 Materials

OB-2000	Body	Seat	Valve	Connection	Maximum Temperature
Main Valve	Ductile Iron ASTM A536	Single Seat Stainless Steel AISI 420	Stainless Steel AISI 420	BSPT or Flanged PN 25/40	232°C
Temperature Pilot Valve	Bronze ASTM B584			1/4" NPT	

Valve Sizing

Proper valve selection requires the following information

- Steam capacity required for application
- Supply pressure of steam
- Allowable pressure drop across valve*

* Where it is not possible to calculate pressure drop, 35% - 40% of gauge supply pressure can be used as a reasonable approximation.
For capacities see page PTC-245.

Temperature Regulator Selection Example

Parameters:

Fluid Steam
 Maximum inlet pressure 7 bar
 Outlet pressure 6 bar
 Maximum flow rate 678 kg/h
 Temperature required 82°C
 Distance from regulator to sensing point 1,5 m

To Locate Proper Model:

Enter inlet column at 7 bar
 Move to outlet pressure of 6 bar
 Locate capacity of 678 kg/h under 1"
 Find capillary temperature range 55 - 94°C
 Select capillary length 2 m or standard 5 m

Application Will Require:

**OB-2000, 1" with 55 - 94°C Temperature Range,
 Capillary Length 5 m**

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