
Accritem® Controllers

Rigid and Remote Bulb Blind Controllers

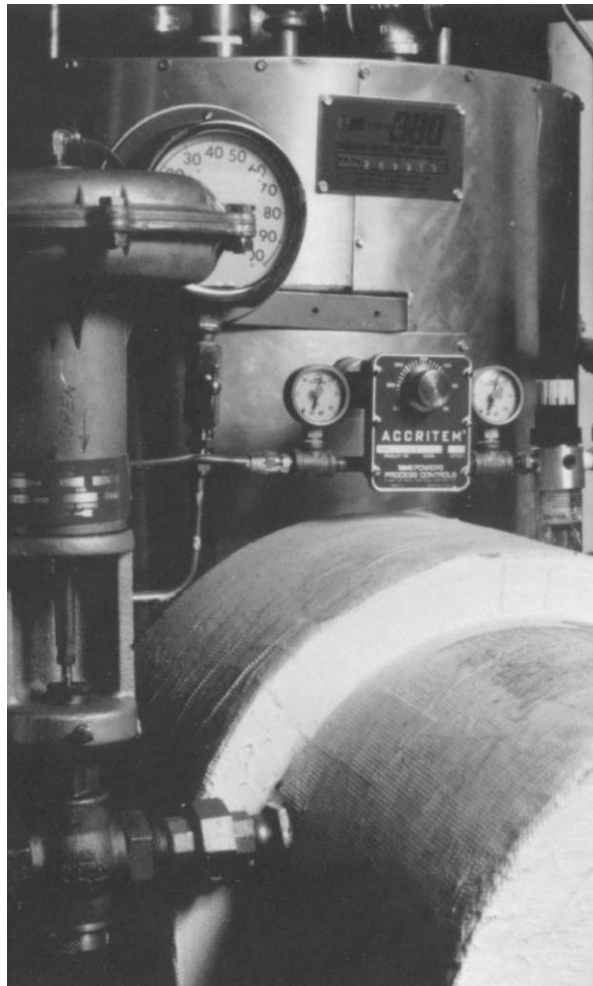


POWERS
A WATTS INDUSTRIES CO.

Accritem® Controllers

Accritem Controllers are reliable, rugged, compact non-indicating controllers that accurately maintain temperatures in a wide variety of applications. The sensing element, either rigid or remote bulb, is mounted directly in the medium to be controlled, and the Accritem's response to temperature change is a proportional pneumatic signal sent to a control valve.

Typical applications are instantaneous or high capacity storage water heaters, compressors, lube oil coolers, shell and tube heat exchangers, diesel engine cooling systems, oil preheaters, 100% outside air make-up units, and specific processes such as parts washing, die casting, and plastic molding.



Why non-indicating control?

A manually controlled process with an existing thermometer is an ideal situation for a move to automatic control; an Accritem and control valve team frees personnel for more productive work. In other applications, the redundancy of a separate thermometer and controller is desirable, since failure of one would not affect the other. Non-indicating controllers are equally effective to the indicating type in many applications, with the additional advantages of lower cost and less vulnerability to adverse operating conditions.

Why Accritem control?

Accritem Controllers offer:

- precise, rapid response to temperature changes
- simple design – fewer moving parts allow trouble free, dependable operation
- available with remote or rigid bulbs in copper and stainless steel (316L) to satisfy different applications
- easy temperature adjustment
- supply and control pressure gauges included at no additional cost
- control action can be easily altered by operating personnel
- its rugged construction is very resistant to construction, and is unaffected by environmental moisture and dust. Air supply need only be clean, not instrument quality.

Select Control Action

An effective system requires coordination of the control action of the Accritem, with that of the control valve, for failsafe conditions. The table below identifies which Accritem (direct or reverse acting) should be utilized for desired results in basic applications.

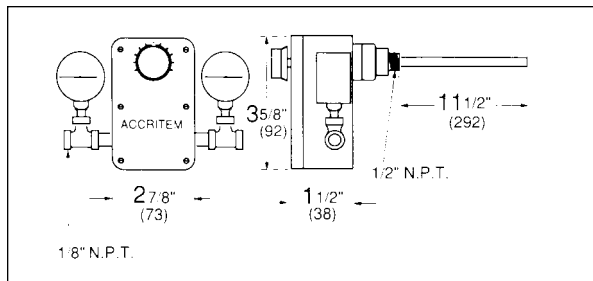
ACCRIEM TYPE	APPLICATION		
	HEATING	COOLING	MIXING
Direct Acting (output pressure increases as temp. increases)	Normally Open Valve	Normally Closed Valve	Hot Piped to Normally Open Port of Valve
	Valve Opens on Air Failure	Valve Closes on Air Failure	Valve Opens to Hot Flow on Air Failure
Reverse Acting (output pressure decreases as temp. increases)	Normally Closed Valve	Normally Open Valve	Hot Piped to Normally Closed Port of Valve
	Valve Closes On Air Failure	Valve Opens on Air Failure	Valve Opens to Cold Flow on Air Failure

Accritem® Rigid Bulb Controller



- complete with pressure gauges and fitting (1/2" NPT Pipe Fitting)
- adjustable set point 50-350 F
- sensing element is bimetallic, an invar rod enclosed in copper or stainless steel bulb
- sensing element acts by differential expansion of a bimetal element, so there is no danger of leakage from the bulb
- forged brass construction with phosphor bronze internal parts special water operated model uses stainless steel internal parts

Model	Action	Product Number
Rigid Copper Bulb		
Air Operated	Direct	744-1213
	Reverse	744-1214
Water Operated	Direct	744-1217
	Reverse	744-1218
Rigid Stainless Steel Bulb		
Air Operated	Direct	744-1270
	Reverse	744-1271

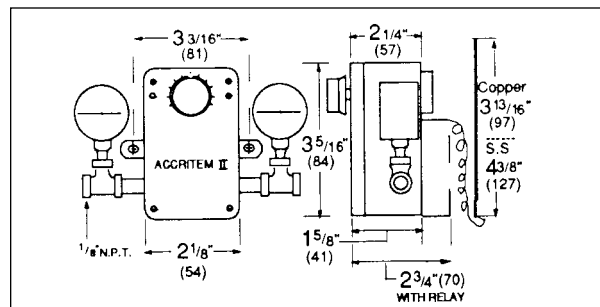


Accritem® Remote Bulb Controller



- offers the reliability of the Accritem Rigid Bulb Controller with increased flexibility of remote monitoring
- 4" copper bulb capillary or 10i stainless steel bulb capillary allows the bulb to be immersed in difficult-to-access pipes, tanks and air ducts, while the instrument can be conveniently located for ease of adjustment
- compact size of the liquid filled thermal (4" long, 7/32" in diameter) allows placement in narrow pipes and the flexibility of transverse mounting for larger pipes
- compression fitting with 3/8" NPT thread allows direct mounting of bulb in pipe or tank
- easily mounted vertically or horizontally, on flat or curved surfaces, the glass filled Norel instrument body resists corrosion from moisture, caustic cleaners and many other chemical compounds
- reversible F/C degree scale plate.

Model	Action	Product Number
Remote Copper Bulb (includes 3/8" NPT brass compression fitting)		
Air Operated	Direct	744-1256
	Reverse	744-1258
Remote Stainless Bulb (includes 3/8" NPT brass compression fitting)		
Air Operated	Direct	744-1272
	Reverse	744-1273

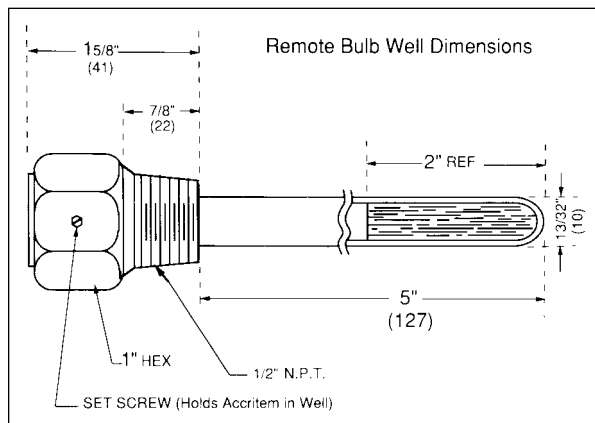
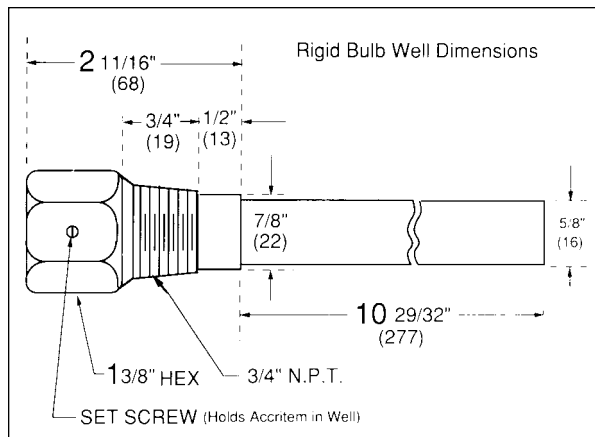


Specifications

Characteristic	Rigid Bulb	Remote Bulb
Standard Adjustment		
Dial Range	50°-350°F	0 to 300°F/ -20 to 150°C
Maximum Supply Pressure at Room Temp.	35psi	35psi
Maximum Operating Temp.	400°F (204°C)	350° (177°C)
Maximum Operating Pressure	250psi (1724kPa)	250psi (1724kPa)
Air Consumption (max.)	800 SCIM	200 SCIM
Adjustable Sensitivity per °F	1/4 to 2-1/4 psi	1/3 to 2 psi
Temperature Response	0.5°F	0.5°F
Sensing Element Bulb Mat.	Copper or Stainless	Copper or Stainless
Bulb Mounting Connection	1/2" NPT	1/2" NPT
Air or Water Connection	1/8" NPT	1/8" NPT
Drain Connection (water operated)	1/4" NPT	1/4" NPT
Ambient Temperature Range	NA	40-120°F
Maximum Temperature of Wells		
Stainless Steel	400°F (204°C)	400°F (204°C)
Copper	265°F (129°C)	265°F (129°C)
Maximum Pressure of Wells		
Stainless Steel	1125psi (7757kPa)	1000psi (6895kPa)
Copper	525psi (3619kPa)	400psi (2758kPa)
Shipping Weight	4 lbs.	2lbs.

Accritem Accessories

Description	Part No.	Rigid Bulb	Remote Bulb
Accessory Kit for			
Air/Gas Operation	744-107	X	X
Accessory Kit for Water	744-180	X	X
Union Fitting-Brass	744-106	X	X
Socket Well: Copper	744-111	X	X
Copper	744-266	X	X
Socket Well: Stainless Steel	744-082	X	X
Stainless Steel	744-199	NA	X
Duct Flange	808-517		X



POWERS

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