

invenSYS™



# UNI-LINE®

## PRODUCT CATALOG

# The brands you trust delivering comprehensive solutions.



**Robertshaw®**

*Easy and efficient*

Robertshaw® Thermostats and Heating Controls are Simply the Right Choice™. Our programmable thermostats offer multi-stage models that are easy to install, easy to program and have features to increase indoor air quality. Robertshaw Heating products offer kitted solutions and universal features that enable a single product to replace hundreds.





## **RANCO**

**Solutions-driven innovation**  
 Ranco® Controls have been an industry standard for 100 years with a full line of refrigeration products. Our quality and features make Ranco an easy choice, with universal controls to reduce inventory and features like the Super Cap® to reduce breakage and costly callbacks.



## **PARAGON**

### **Increased versatility**

Paragon® Defrost Controls lead the pack in versatility with the only multi-voltage timer engineered to refrigeration standards. At four defrosts a day, the Paragon Universal Defrost Timer is rated to last 16 years longer than competitive offerings.



## **eliwell**

### **Integrated electronic solutions**

For unbeatable quality and reliability, professionals have turned to Eliwell™ Controls for over 25 years. The Eliwell full array of products offer maximum control and confidence in a wide range of refrigeration applications.

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## WALL THERMOSTATS

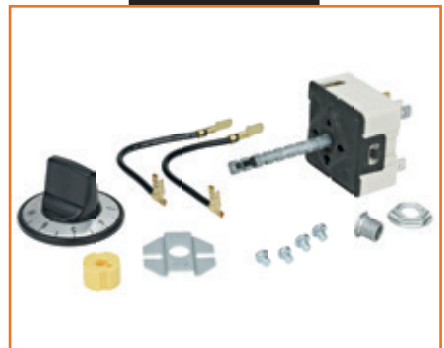
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Selecting the table setting is as important as the cooking controls used to deliver uncompromising excellence.

The Robertshaw® electromechanical and electronic controls offer reliability and custom solutions for setting, controlling and monitoring temperatures in commercial cooking applications.

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# Cooking

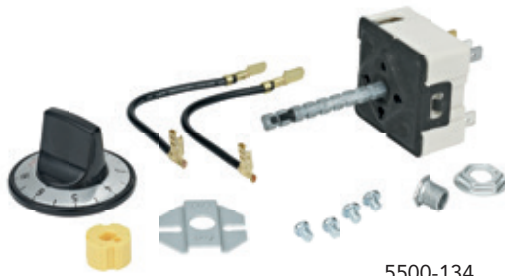




# Robertshaw®



Scan for all models, literature and cross reference



5500-134

## ELECTRIC INFINITE SWITCHES

### 5500 Series

The Robertshaw® 5500 Series Infinite Switch is a rotary switch which controls the power dissipated by a heating element. It is used on electric ranges, hot plates, warming drawers and zones, barbecue grills, space heaters, quartz heaters and many applications which call for proportionate control of a resistive load.

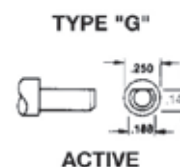
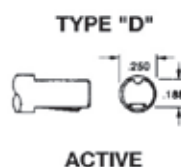
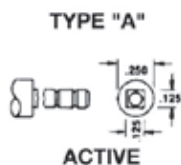
### Features and Benefits

- Small compact design
- Clockwise or counterclockwise rotation
- Variety of shaft lengths and configurations
- Screw mount or bushing mount
- Push-To-Turn (PTT) or Non-Push-To-Turn (Non-PTT)

### Specifications

Part Numbers	Description	% Input at Low	Dial	Dial Shaft Type	Dial Shaft Length	Mounting Type	Voltage	Electrical Rating
5500-134	Commercial Uni-Kit®	5%	Black	D	2-1/8"	Universal	120V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-135	Commercial Uni-Kit	5%	White	D	2-1/8"	Universal	120V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-200	Infinite Controls Uni-Kit Push-To-Turn	5%	None	A	2" Break-Off	Universal	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-202	Infinite Controls Uni-Kit	5%	None	A	2" Break-Off	Universal	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-212	G.E./Hotpoint Uni-Kit	5%	None	G	2" Break-Off	Universal	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-234	Commercial Uni-Kit	5%	Black	D	2-1/8"	Universal	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-235	Commercial Uni-Kit	5%	White	D	2-1/8"	Universal	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)
5500-287	Whirlpool Uni-Kit Push-To-Turn	5%	None	D	1-3/8", 7/8" & 11/16" Break-Offs	4 Position Screw	240V AC	100 Watts to 3600 Watts at 240V AC, 15 Amps max @ 210°F (100°C)

Product Dimensions - Dimensions are in inches.

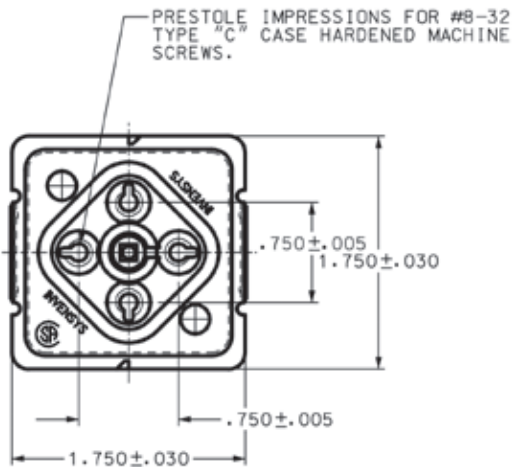
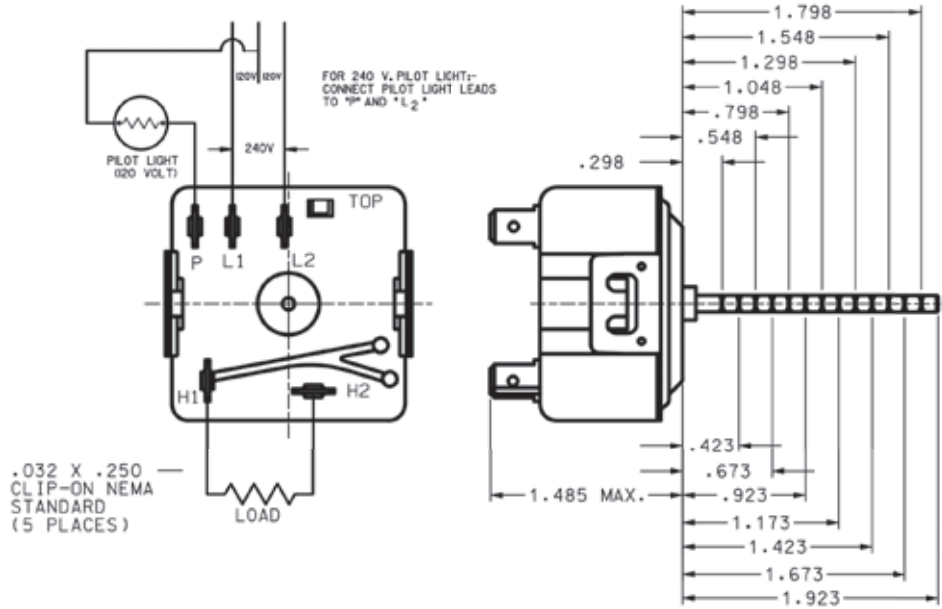






## Product Drawings

Product Dimensions - Dimensions are in inches.



*Robertshaw*<sup>®</sup>

**1** Year  
Limited  
Warranty



# Robertshaw®



Scan for all models, literature and cross reference



5300-614



5300-401

## ELECTRIC THERMOSTATS

### 5300 Series

The Robertshaw® 5300 Series Electric Thermostat is a snap-acting, single pole single throw (SPST) type thermostat. Most thermostats use silver contacts and have heavy-duty terminals for durability and sustained accuracy. The snap-action mechanism is precise and reliable. This direct acting series of thermostats is suitable for the commercial cooking industry.

### Features and Benefits

- KN models are NAK filled diastats with temperature ranges up to 975°F (524°C)
- Rugged and compact design for versatility and long life
- Bulb and capillary available in copper, nickel plated copper and stainless steel (most models)
- Plastic coating available for protection against moisture, dust, etc. (most models)
- Dials of heat resistant plastic available
- RX millivolt models with hermetically sealed reed switch
- Stem flat in down position
- Ambient temperature 200°F (93°C)

## Specifications

Part Numbers	Description	Temperature Range	Capillary Length	Bulb Size	Stem Length	Mounting Bracket	Dial Type	Mechanical Differential	Stuffing Box	Electrical Rating
5300-146	SJ Pilot Duty Model with Auxiliary Switch	100°F to 450°F	36"	3/16" x 11-1/8" Nickel	13/16"	#1, 1-3/4"	4-Way	12°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-175	S Model	100°F to 325°F	36"	3/16" x 11-3/4" Nickel	13/16"	#1, 1-3/4"	NA	12°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-219	SP Model	60°F to 240°F	36"	1/4" x 6-7/16" Copper	3/8"	#1, 1-3/4"	NA	8°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-401	RX Millivolt Model with Hermetically Sealed Reed Switch	200°F to 400°F	36"	3/8" x 5-5/8" Nickel	13/16"	#1, 1-3/4"	4-Way	8°F	1/4" Nickel	0.67 Amp @ 5V DC





*Robertshaw*<sup>®</sup>

## Specifications - continued

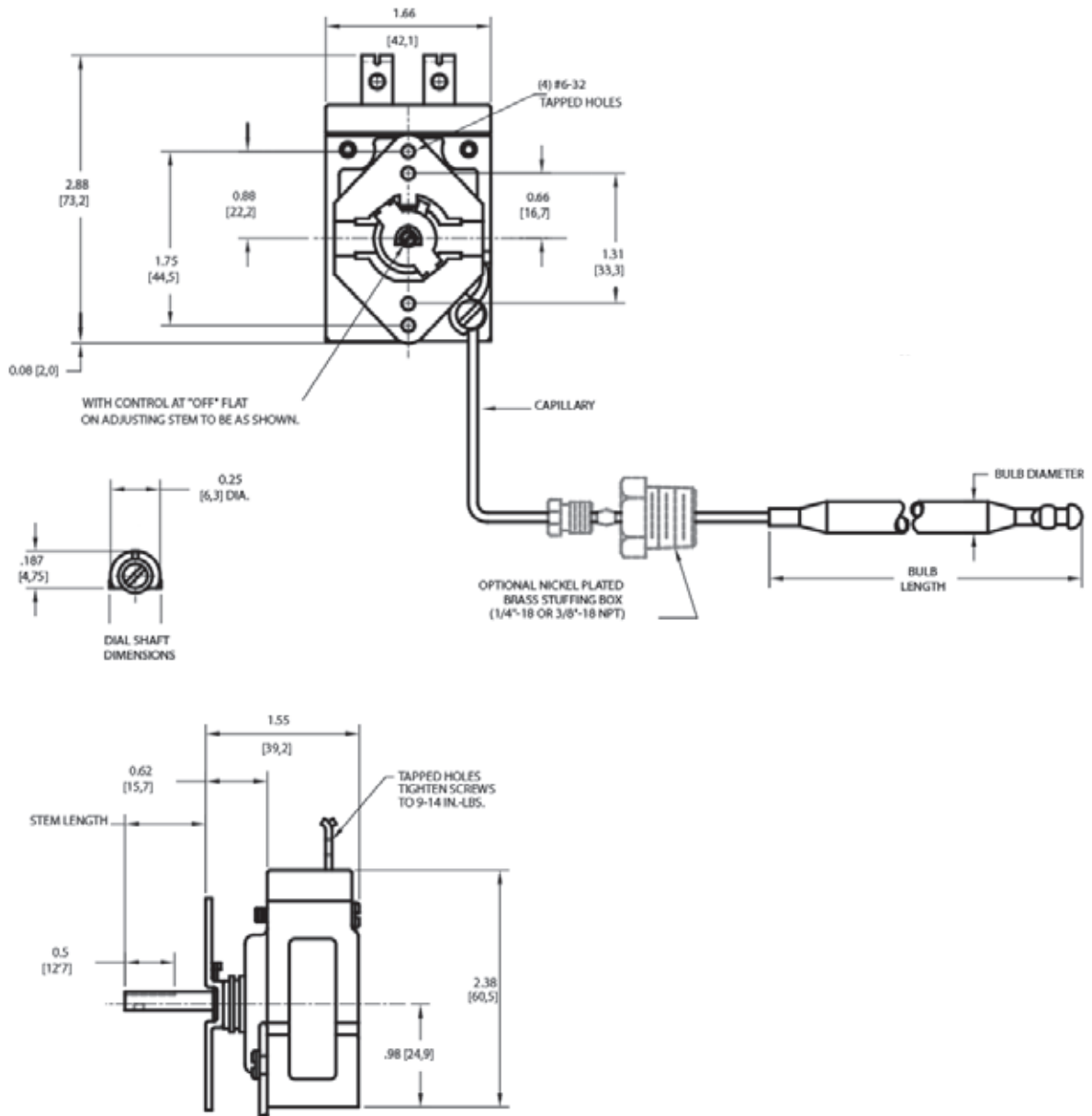
Part Numbers	Description	Temperature Range	Capillary Length	Bulb Size	Stem Length	Mounting Bracket	Dial Type	Mechanical Differential	Stuffing Box	Electrical Rating
5300-406	RX Millivolt Model with Hermetically Sealed Reed Switch	200°F to 375°F	36"	3/8" x 5-5/8" Nickel	13/16"	#1, 1-3/4"	4-Way	8°F	3/8" Nickel	0.67 Amp @ 5V DC
5300-502	KNP Model with 1-10 Dial (Wide)	250°F to 960°F	36"	5/32" x 8-3/4" Stainless Steel	1"	#5, 1-1/4"	4-Way	25°F	NA	27 Amp @ 208V AC 25 Amp @ 240V AC 22.5 Amp @ 277V AC 20 Amp @ 480V AC 125 VA Pilot Duty at 120/277 Volts
5300-612	SP Model Uni-Kit <sup>®</sup>	60°F to 250°F	60"	1/4" x 9-1/4" Copper	2" Kit	#6, Kit	4-Way	8°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-614	SP Model Uni-Kit	60°F to 250°F	60"	3/8" x 4-1/2" Nickel	2" Kit	#6, Kit	4-Way	8°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-618	SP Model Uni-Kit	100°F to 450°F	60"	3/16" x 11-1/8" Nickel	2" Kit	#6, Kit	4-Way	12°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-641	SP Model Uni-Kit	200°F to 400°F	36"	5/16" x 7-1/2" Nickel	2" Kit	#6, Kit	4-Way	8°F	3/8" Nickel	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-651	SP Model Uni-Kit	175°F to 550°F	60"	3/16" x 11-5/8" Nickel	2" Kit	#6, Kit	4-Way	12°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-671	SP Model Uni-Kit	300°F to 700°F	60"	3/16" x 12-1/4" Nickel	2" Kit	#6, Kit	4-Way	12°F	NA	30 Amp @ 277V AC 20 Amp @ 480V AC 18 FLA, 72 LRA @ 250V AC 125 VA Pilot Duty at 120/277 Volts
5300-711*	KX Pilot Duty Model Dip Sealed	200°F to 400°F	36"	3/8" x 5-5/8" Nickel	13/16"	#1, 1-3/4"	4-Way	8°F	1/4" Nickel	50 VA Pilot Duty at 120 / 277 Volts
5300-735	KXP Pilot Duty Model Uni-Kit	175°F to 550°F	60"	3/16" x 11-5/8" Nickel	2" Kit	#6, Kit	4-Way	12°F	NA	50 VA Pilot Duty at 120 / 277 Volts
5300-766	KX Pilot Duty Model	200°F to 400°F	24"	5/16" x 5-5/8" Stainless Steel	13/16"	#1, 1-3/4"	4-Way	8°F	3/8" Nickel	50 VA Pilot Duty at 120 / 277 Volts

\*International export models



## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].





## ELECTRIC THERMOSTATS - LIMIT CONTROLS

### 5225 Series

The Robertshaw® 5225 Series Limit Control is designed for any appliance where temperature protection is needed. All 5225 Series controls are non-adjustable, factory calibrated, and feature negative biased power element diaphragms. The 5225 Series is a proven safety control for commercial and specialty applications. They are available in automatic or manual reset versions with temperature settings from 425°F to 600°F (218°C to 316°C).

### Features and Benefits

- Bulb and capillary assemblies available in nickel plated copper
- Available in manual reset or automatic operation
- Control function is designed to interrupt power in the appliance circuit at the calibrated temperature



5225-112

**Robertshaw**  
®



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### Specifications

Part Numbers	Description	Fixed Temperature	Capillary Length	Bulb Size	Mounting Bracket	Stuffing Box
5225-009	LCH Manual Reset Limit Control	450°F	30"	5/16" x 3-5/8" Nickel	#1	NA
5225-010	LCC Automatic Reset Limit Control	450°F	60"	3/16" x 4-7/8" Nickel	#1	3/8"
5225-047	LCH Manual Reset Limit Control	450°F	24"	3/16" x 7-5/8" Nickel	#1	3/8"
5225-054	LCH Manual Reset Limit Control	440°F	30"	1/4" x 4-7/8" Nickel	#7	Panel Nut
5225-112	LCH Manual Reset Limit Control	450°F	30"	1/4" x 4-7/8" Nickel	#3	1/4"

Model	Description	UL Rating	CSA Rating	European
LCH	SPST - Break on Temperature Rise Manual Reset. Type M2*	30 A, 250 V AC @ 125-480 V AC 35 VA PD @ 24 V, 60 Hz	30 A @ 125-480 V AC	30 A @ 480 V AC
LCC	SPDT - Make and / or Break on Temperature Rise. Automatic Reset	25 A, 250 VA @ 125-480 V, 60 Hz 35 A @ 24 V AC	25 A, 250 V AC @ 125-480 V AC 35 VA PD @ 24 V, 60 Hz	25 A @ 480 V AC

\*M2 switch - trip free - will not recycle if reset button is depressed





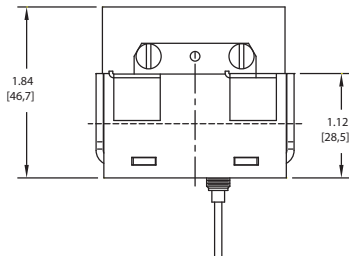
# Robertshaw®

## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

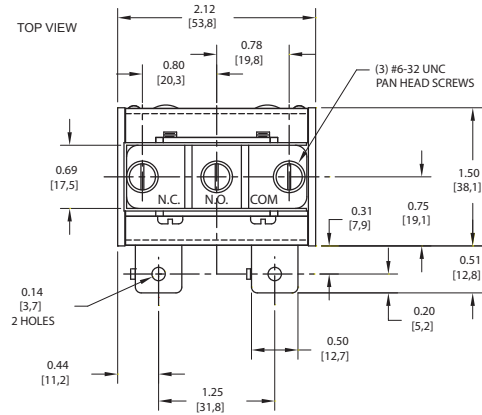
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FRONT VIEW

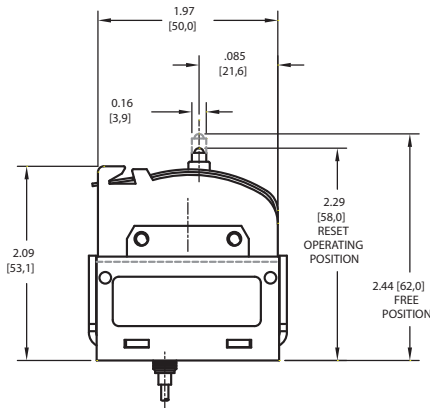


### MODEL LCC

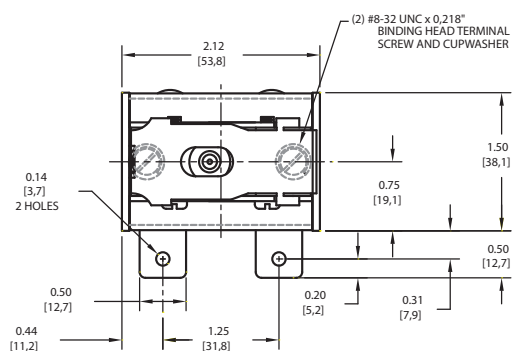
TOP VIEW



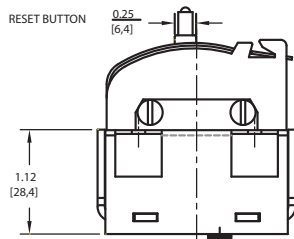
### MODEL LCH



### MODEL LCH



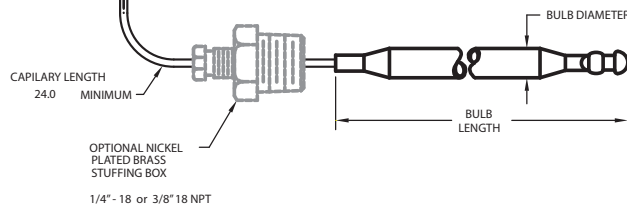
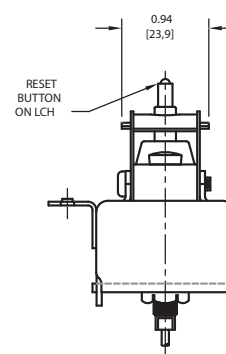
### MODEL LCH



### PANEL NUT



### MODEL LCH

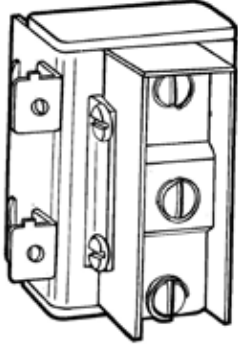




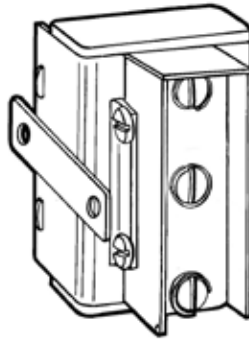
## Product Drawings

Mounting Bracket Types

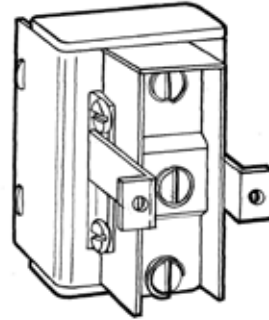
Type #1



Type #3



Type #7



*Robertshaw*<sup>®</sup>

**1** Year  
Limited  
Warranty



# Robertshaw®



Scan for all models, literature and cross reference



5210-125

## ELECTRIC THERMOSTATS

### 5210 Series

The Robertshaw® 5210 Series Electric Thermostat is a direct acting, single pole, slow make and break type thermostat. Typical applications are for incubators, laboratory ovens, water baths, sterilizers, dishwashers, steam tables, scalding tanks and other equipment where a close temperature differential is required.

### Features and Benefits

- Temperature ranges to 550°F (288°C)
- Single pole, slow make and break design
- Very sensitive to temperature change
- Small temperature differential between make and break
- Fine silver contacts to assure consistent switch action and long life
- Rugged and compact design for versatility of application
- Bulb and capillary available in copper or nickel plated copper

## Specifications

Part Numbers	Description	Dial Temperature Range	Ambient Temperature	Capillary Length	Bulb Size	Electrical Rating
5210-125	B-10 Commercial Direct Acting Thermostat	60°F to 200°F (15°C to 93°C)	32°F to 150°F (0°C to 60°C)	42"	3/16" x 15-3/8" Nickel	20 Amps @ 125V AC 15 Amps @ 250V AC 125VA PD @ 125V AC

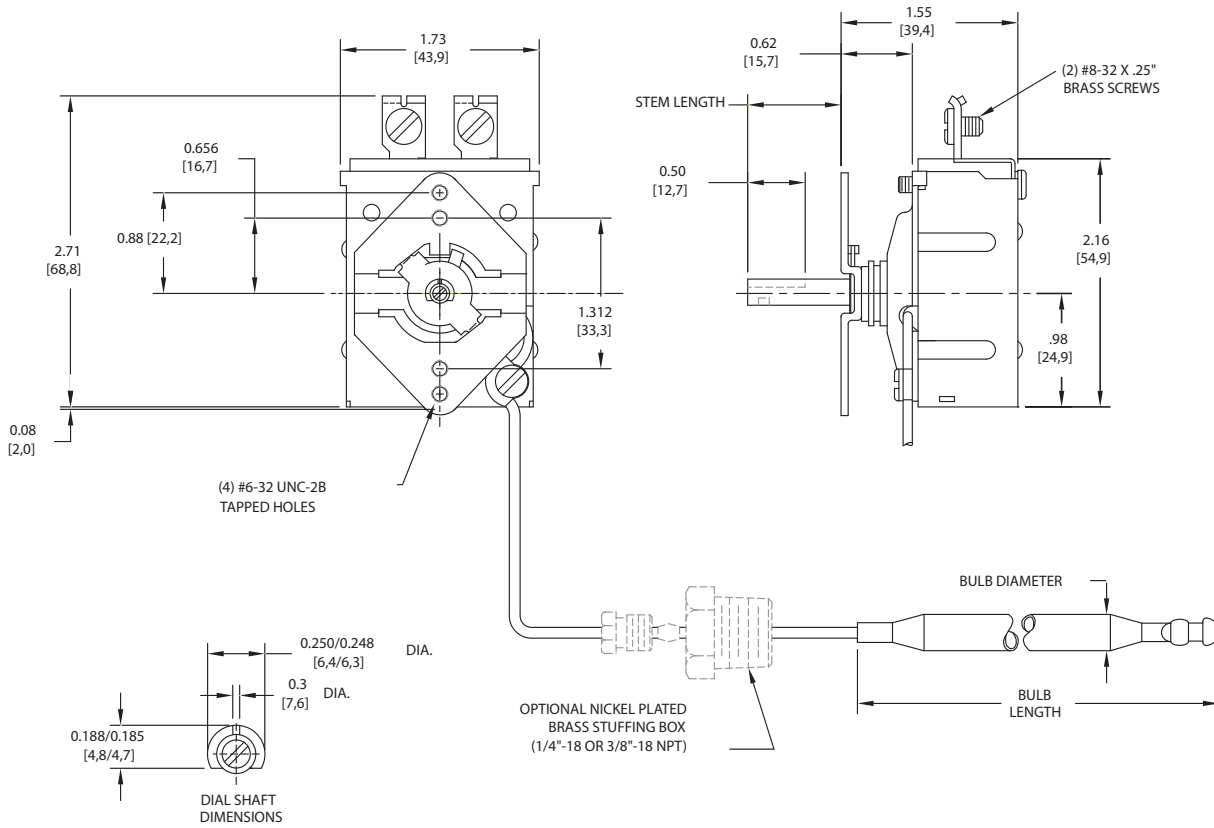






## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].



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**1** Year  
Limited  
Warranty



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5000-851

## ELECTRIC THERMOSTATS

### 5000 Series

The Robertshaw® 5000 Series Electric Thermostat is a heavy-duty thermostat designed for use in harsh applications where precise temperature control is required. The control uses a double pole single throw (DPST) snap-action mechanism with a positive OFF switch. It is recommended for use on applications that require double pole operation and accurate temperature control.

### Features and Benefits

- DPST with positive OFF
- Mechanical snap-action is instantaneous, positive and non-fatiguing
- Reacts to exceedingly small movements of the diaphragms for very close temperature differential
- Diaphragm assembly features two stainless steel diaphragms electrically welded together
- Maximum sensitivity without overstressing the metal
- Supplied with terminals mounted in four different positions
- Bulb and capillary available in copper, nickel plated copper, or stainless steel

## Specifications

Part Numbers	Description	Dial Temperature Range	Capillary Length	Bulb Size	Dial Type	Mechanical Differential	Electrical Rating
5000-811	D1 & D18 Commercial Electric Thermostat with Pilot Light, 4-Way Bezel, Uni-Kit®	60°F to 250°F (15°C to 121°C)	60"	3/8" x 4-1/2"	4-Way	6°F (3°C)	120, 277V AC @ 30A 480V AC @ 10A 277V AC @ 250VA 125V AC @ 125VA
5000-851	D1 & D18 Commercial Electric Thermostat with Pilot Light, 4-Way Bezel, Uni-Kit	100°F to 550°F (38°C to 288°C)	60"	3/16" x 13" Nickel	4-Way	6°F (3°C)	120, 277V AC @ 30A 480V AC @ 10A 277V AC @ 250VA 125V AC @ 125VA

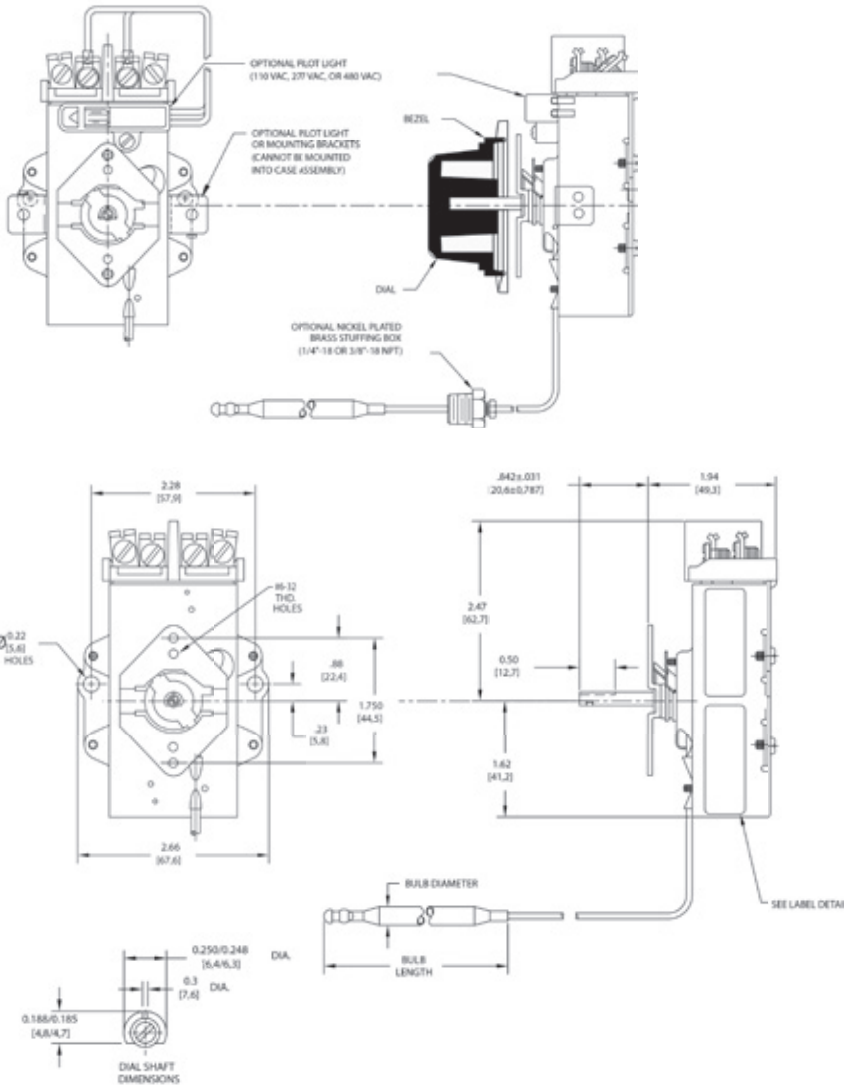




**Robertshaw**<sup>®</sup>

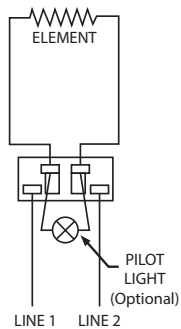
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

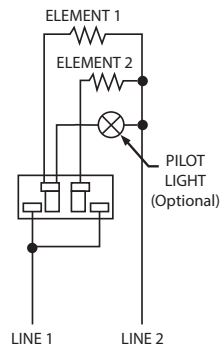


## Wiring Diagram

SINGLE ELEMENT  
DOUBLE POLE  
SINGLE PHASE



TWO ELEMENTS  
SINGLE POLE  
SINGLE PHASE





# Robertshaw®



Scan for all models, literature and cross reference



4350-028

## GAS THERMOSTATS

### 4350 Series

The Robertshaw® 4350 Series Gas Thermostat is a combination gas cock and by-pass type thermostat. It is available with both by-pass and pilot adjustments. With these thermostats, the gas is turned on and the temperature setting made with a single turn of the dial. The 4350 Series is available for a wide variety of applications, especially ranges and griddles.

### Features and Benefits

- Highly adaptable because of multiple orientations and number of outlets
- Mounted, via flange nipple, above or below the manifold
- Available with various temperature ranges
- Front adjustment for pilot and by-pass
- Modulating seat action
- Bulb and capillary available in copper, nickel plated copper and stainless steel

### Specifications

Part Numbers	Description	Max Inlet Pressure	Main Outlet Size	Main Outlet Position	Housing Rotated	Pilot Outlet	Flange Type	Capillary Length	Sensing Bulb	Capacity (Natural Gas)	Temperature Range
4350-015	BJWA Control for Ovens	0.5 PSI	1/4" Pipe	B	180°	Plug	Narrow	48"	3/16" x 11-3/16"	70,000 BTU/HR	250°F to 500°F (121°C to 260°C)
4350-027	BJWA Kit for Ovens	0.5 PSI	1/4" Pipe	A, B, C, D	No	Yes	Wide	48"	3/16" x 11-3/16"	70,000 BTU/HR	250°F to 550°F (121°C to 288°C)
4350-028	BJWA Kit for Griddles	0.5 PSI	1/4" Pipe	A, B, C, D	No	Yes	Wide	36"	3/16" x 8-5/8"	70,000 BTU/HR	150°F to 400°F (66°C to 205°C)
4350-029	BJWA Kit for Ovens	0.5 PSI	7/16" Tubing	C	No	Yes	Wide	48"	3/16" x 11-3/16"	70,000 BTU/HR	250°F to 550°F (121°C to 288°C)
4350-040	BJWA Control for Ovens	0.5 PSI	1/4" Pipe	D	90° Clockwise	Plug	Narrow	48"	3/16" x 11-3/16"	70,000 BTU/HR	250°F to 550°F (121°C to 288°C)
4350-127	BJWA Kit for Ovens	0.5 PSI	1/4" Pipe	A, B, C, D	180°	No	Wide	48"	3/16" x 11-3/16"	70,000 BTU/HR	250°F to 550°F (121°C to 288°C)
4350-128	BJWA Kit for Griddles	0.5 PSI	1/4" Pipe	A, B, C, D	180°	No	Wide	48"	3/16" x 8-5/8"	70,000 BTU/HR	150°F to 400°F (66°C to 205°C)

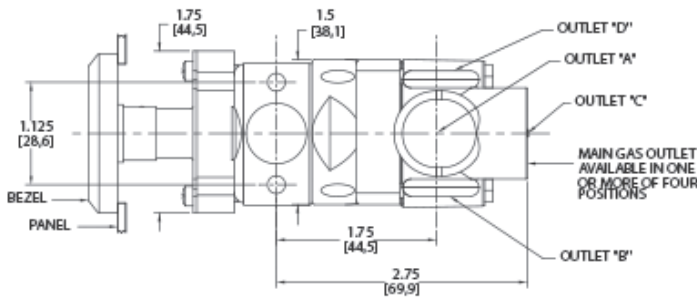
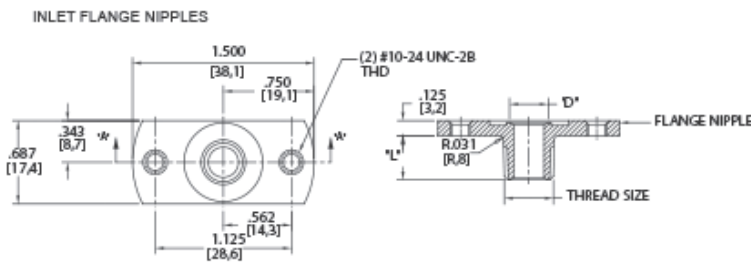
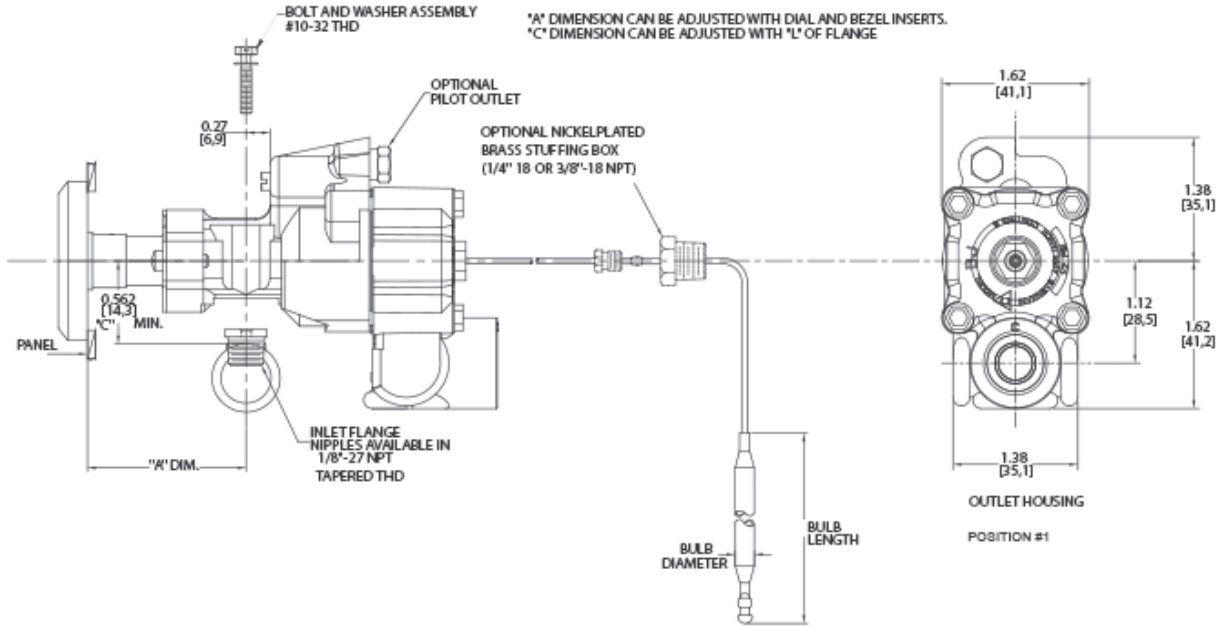




**Robertshaw**<sup>®</sup>

## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].





# Robertshaw®



Scan for all models, literature and cross reference



4290-008

## GAS THERMOSTATS

### 4290 Series

The Robertshaw® 4290 Series Gas Thermostat is a snap-acting hydraulic thermostat and used to provide temperature control by interrupting gas flow to the burner. The 4290 Series gas thermostat is available for a wide variety of applications including small ovens, griddles, brooders, warming cabinets, and fryers.

### Features and Benefits

- Capable up to 30,000 BTUs
- Available in various temperature ranges, with temperature control up to 600°F (316°C)
- Snap-acting from OFF position to full gas flow
- Adjustable bypass key and bypass settings are optional
- Applicable to use with high capacity gas operated diaphragm valves (700-800 Series)
- Adapts to limited mounting space
- Bulb and capillary assemblies supplied in nickel plated copper or stainless steel
- Dials in heat resistant plastic are included
- Ambient temperature is 300°F (149°C)

## Specifications

Part Numbers	Description	Capillary Length	Bulb Size	Inlet Size	Outlet Size	Stuffing Box	Pilot Outlet	Stem Flat	Temperature Range
4290-006	GS Gas Snap-Action Hydraulic Control	30"	3/8" x 5-3/8" Nickel	1/4" Tubing	1/4" Tubing	1/4" Nickel	NA	Down	200°F to 410°F (93°C to 210°C)
4290-008	GS Gas Snap-Action Hydraulic Control	60"	3/8" x 4-1/2" Nickel	3/8" Pipe	3/8" Pipe	3/8" Nickel	NA	Down	60°F to 250°F (16°C to 121°C)
4290-020	GS Gas Snap-Action Hydraulic Control	36"	3/16" x 13" Nickel	1/4" Tubing	1/4" Tubing	NA	NA	Down	200°F to 550°F (93°C to 288°C)



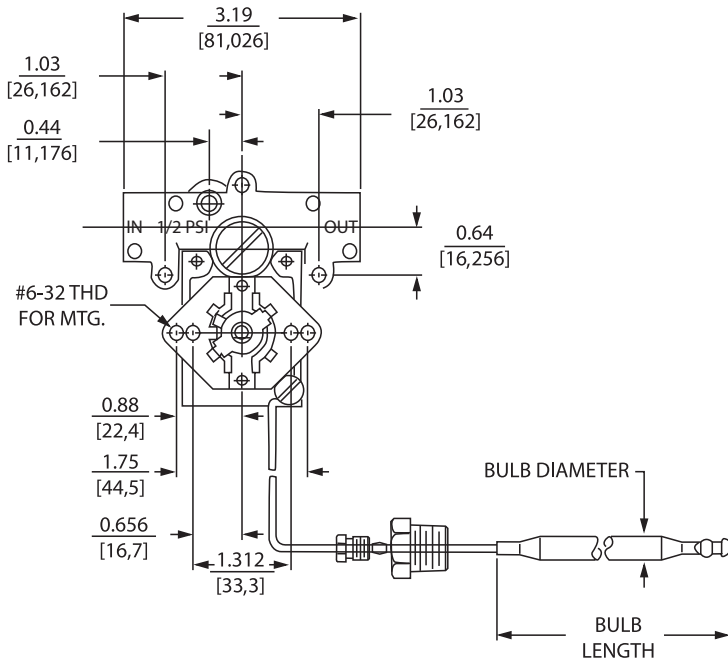


**Robertshaw**<sup>®</sup>

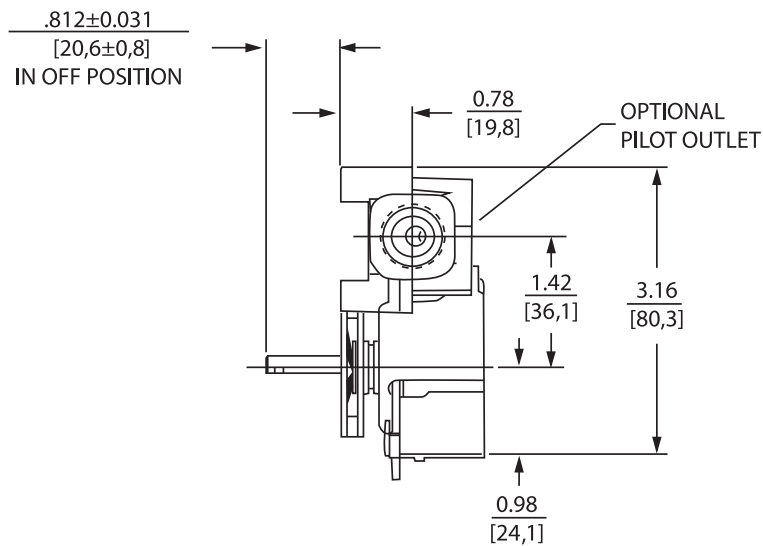
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

Front View



Right View





# Robertshaw®



Scan for all models, literature and cross reference



4200-005  
Type #2 Body



4200-025  
Type #1 Body

## GAS THERMOSTATS

### 4200 Series

The Robertshaw® 4200 Series Gas Thermostat is a heavy-duty, high capacity gas thermostat. These units are available with modulating only or with modulating snap-acting bypass. Both pilot and bypass adjustments are provided. Pilot outlets and customized settings are optional. They are available for a wide variety of applications such as deck ovens, convection ovens, baking ovens, and ranges.

### Features and Benefits

- Heat resistant materials and rugged design
- The pilot and bypass keys are accessible and the pilot and keys are slotted for easy adjustment from the front of the control
- Provides temperature control on most gas appliance systems
- Allows for low temperature control
- Modulates the main gas supply and controls the bypass gas with a snap under the same thermostatic action
- Bulb and capillary assemblies supplied in copper, nickel plated copper or steel
- 4-Way mounting position
- RoHS Compliant

## Specifications

Part Numbers	Description	Inlet Side "F"	Inlet Rear "H"	Outlet Side "E"	Outlet Rear "G"	Pilot Outlet	Capillary Length	Bulb Size	Temperature Range
4200-005	FDO Gas Thermostat, Body Type #2	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	3/16" x 14-3/4" Nickel	150°F to 550°F (66°C to 288°C)
4200-007	FDO Gas Thermostat Body Type #1	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	1/4" x 8-7/16" Nickel	150°F to 550°F (66°C to 288°C)
4200-011	FDTO Gas Thermostat, Body Type #2	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	3/16" x 14-3/4" Nickel	200°F to 550°F (93°C to 288°C)
4200-025	FDO Gas Thermostat Uni-Kit® Body Type #1	3/8" Pipe	3/8" Pipe	3/8" Pipe	3/8" Pipe	Side & Rear	54"	3/16" x 14-3/4" Nickel	150°F to 550°F (66°C to 288°C)
4200-026	FDTO Gas Thermostat Uni-Kit Body Type #1	3/8" Pipe	3/8" Pipe	3/8" Pipe	3/8" Pipe	Side & Rear	54"	3/16" x 14-3/4" Nickel	200°F to 550°F (93°C to 205°C)
4200-503	FDTH Gas Thermostat Body Type #1	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	3/16" x 15-3/8" Nickel	300°F to 650°F (149°C to 343°C)
4200-505	FDTH Gas Thermostat, Body Type #2	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	3/16" x 14-3/4" Nickel	300°F to 650°F (149°C to 343°C)
4200-508	FDH Gas Thermostat, Body Type #2	1/2" Pipe	NA	1/2" Pipe	NA	Side	48"	3/16" x 14-3/4" Nickel	300°F to 650°F (149°C to 343°C)

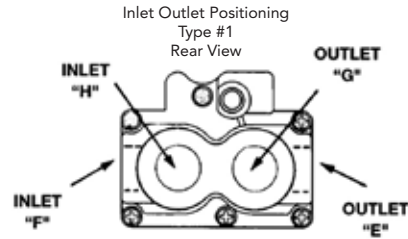
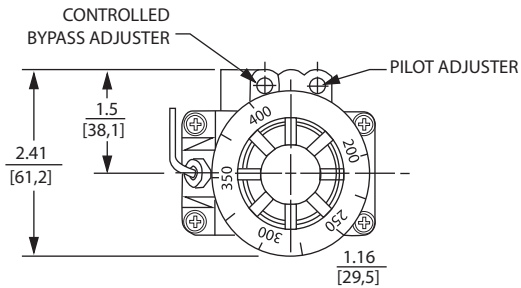




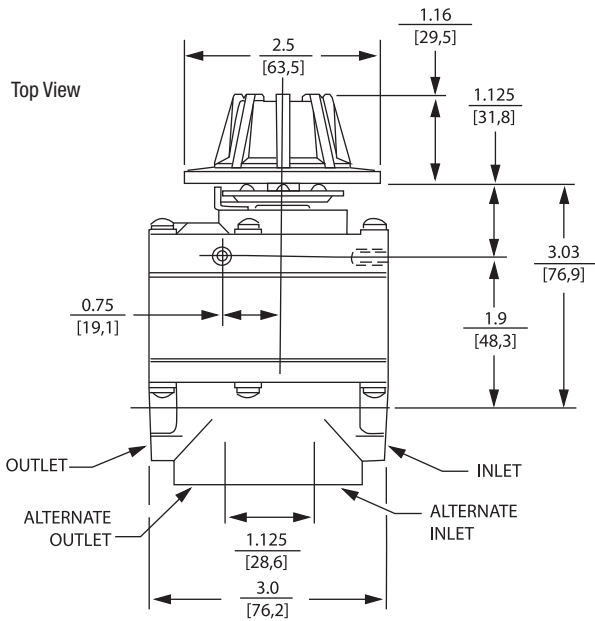
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

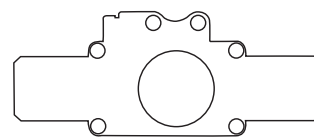
Front View



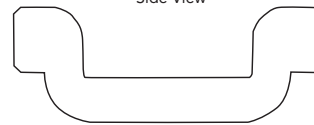
Top View



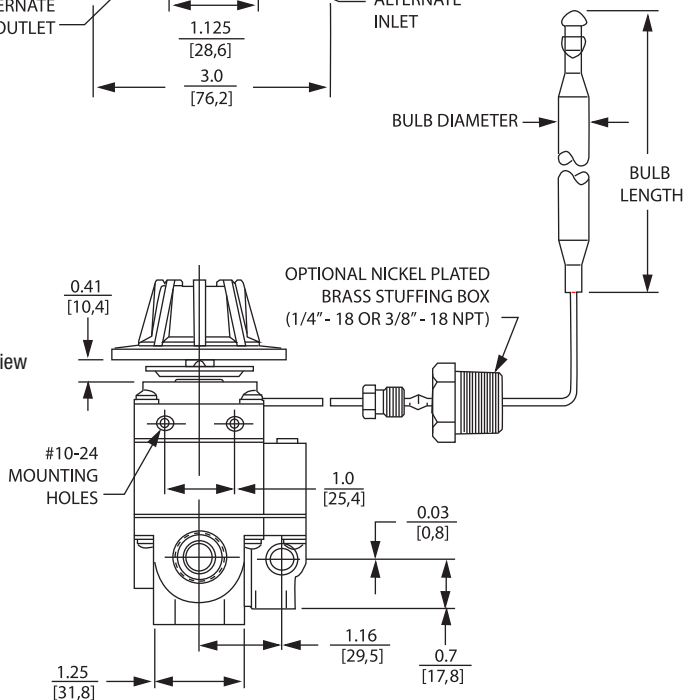
Inlet Outlet Positioning  
Type #2  
Rear View



Side View



Side View



**Robertshaw**<sup>®</sup>

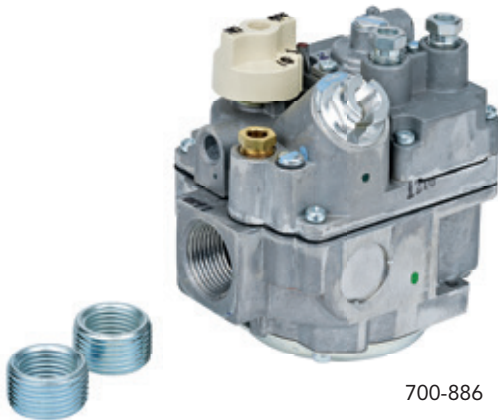
**1** Year  
Limited  
Warranty



# Robertshaw®



Scan for all models, literature and cross reference



700-886

## GAS VALVES - BLEED CONTROL

### 700 Series

The Robertshaw® Unitrol® 700 Series Bleed Control Gas Valves combine a manual main and pilot gas valve, a separate automatic safety pilot valve, pilot adjustment valve, and a diaphragm valve. The regulated models also feature "straight line" gas pressure regulation. Robertshaw diaphragm gas valves are single function, and are excellent replacements for solenoid gas valves. Models are available with or without a gas cock and regulated or non-regulated. Standard features include pilot outlet, pilot gas filter and pilot adjustment key.

### Features and Benefits

- Normally closed solenoid
- Compact size with high flow rates
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

### Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Pressure Regulation	Reducer Bushings Included	Comments
700-804	Bleed Control Gas Valve	305,000 BTU	3/4"	3/4"	3.5" WC Natural Gas	NA	Has slow opening feature. Which can be removed and is Thermocouple driven
700-886	Bleed Control Gas Valve	305,000 BTU	3/4"	3/4"	3.5" WC Natural Gas	1/2" (x2)	Thermopile driven
700-887	Bleed Control Gas Valve	240,000 BTU	1/2"	1/2"	4.0" WC Natural Gas	NA	Thermopile driven

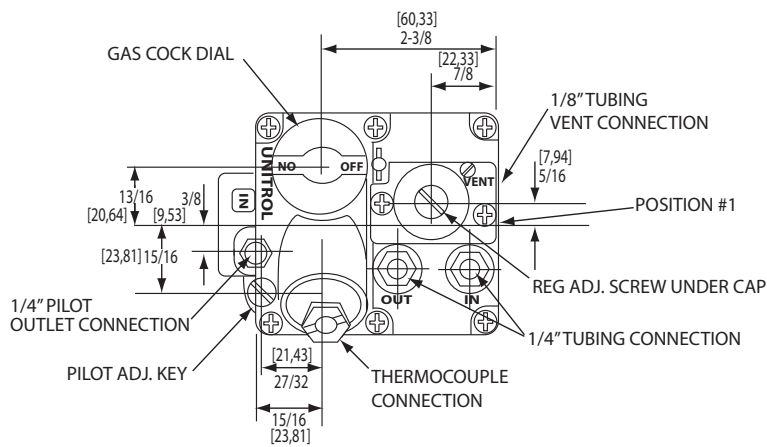
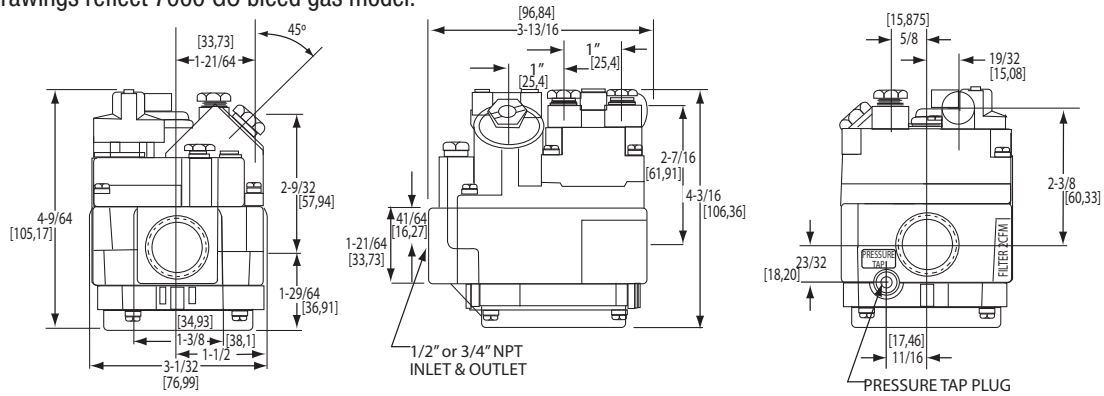




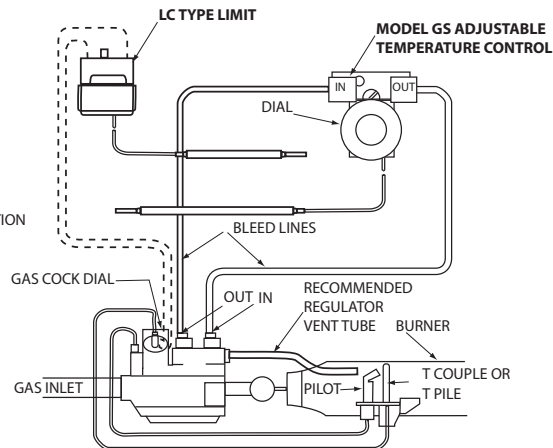
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

Drawings reflect 7000 GO bleed gas model.



SCHEMATIC SKETCH SHOWS ARRANGEMENT OF THERMOSTATS AND UNITROL 7000BGO IN TYPICAL FRYER APPLICATION



**Robertshaw**<sup>®</sup>



# Robertshaw®



Scan for all models, literature and cross reference



4075-029



4075-200

## GAS VALVES - SOLENOID

### 4075 Series

The Robertshaw® 4075 Series Gas Solenoid is designed to control the flow of gas in cooking appliances. Both single FJT and dual FJTDO models are available for a wide variety of applications such as ovens, griddles and fryers.

### Features and Benefits

- Normally closed solenoid
- Multiple inlet/outlet configurations
- 1/8" side pilot outlets available
- Compact size with high flow rates
- Standard NEMA terminals
- Inlet filtered screen
- Gas types: Natural, manufactured, fixed, LP and LP/air mixtures
- RoHS compliant
- AC rectification for silent operation

### Specifications

Part Numbers	Description	Inlet	Outlet	Pilot Outlet	Max Pressure	Capacity	Ambient Temperature	Electrical Rating	Comments
4075-029	FJT Single Gas Solenoid Valve	3/8" Pipe	3/8" Pipe	Left and Right	0.5 PSI	119,000 BTU	-40°F to 275°F (-40°C to 135°C)	24 / 120 / 240 Volts @ 50/60 Hz	Includes (2) 1/8" plugs
4075-200	FJTDO Dual Gas Solenoid Valve	3/8" Pipe	3/8" Pipe	NA	0.5 PSI	165,000 BTU both 110,000 BTU each	-40°F to 275°F (-40°C to 135°C)	24 / 120 / 240 Volts @ 50/60 Hz	0.10 Amp Coil



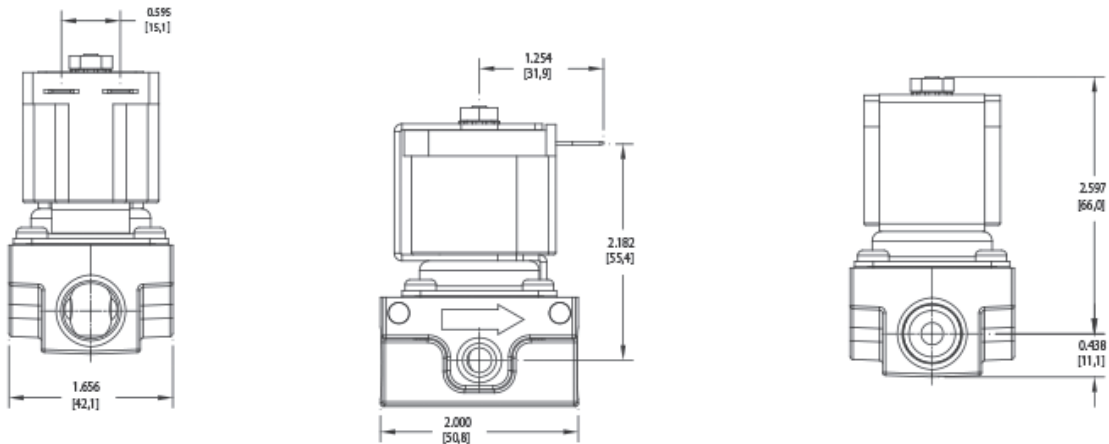


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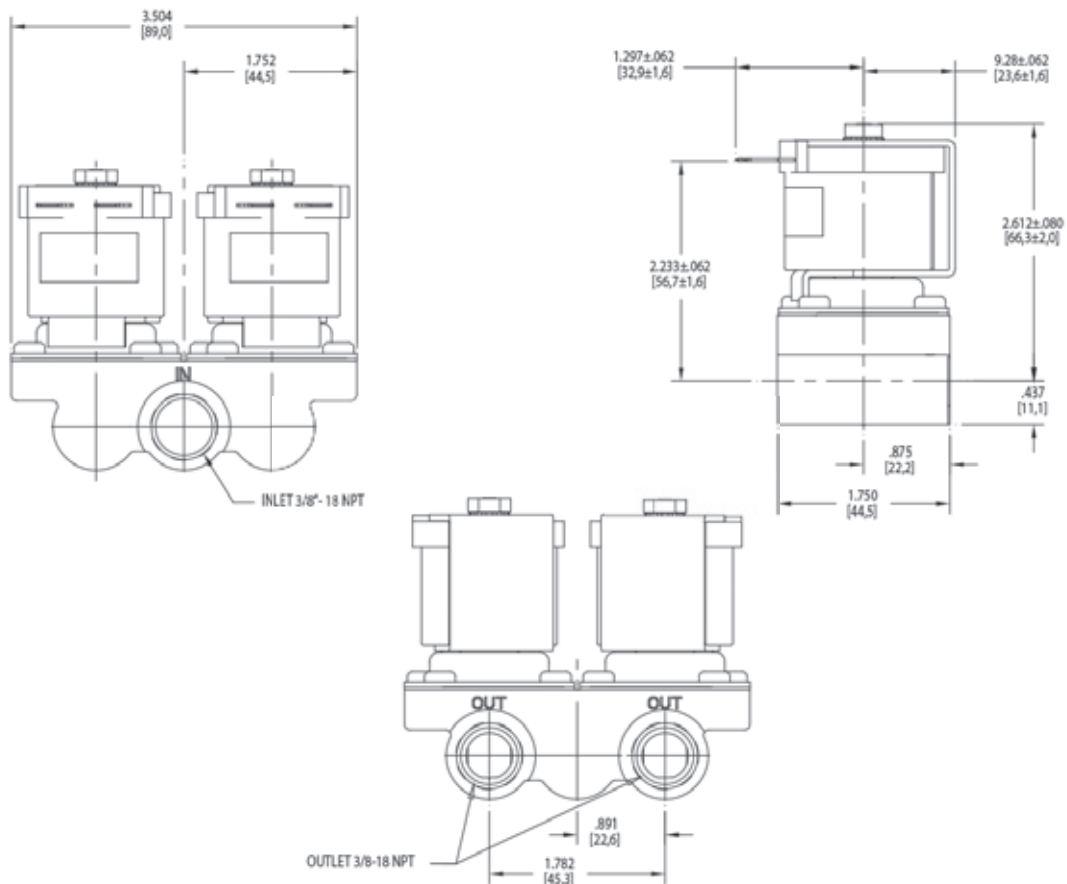
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

Single



Dual

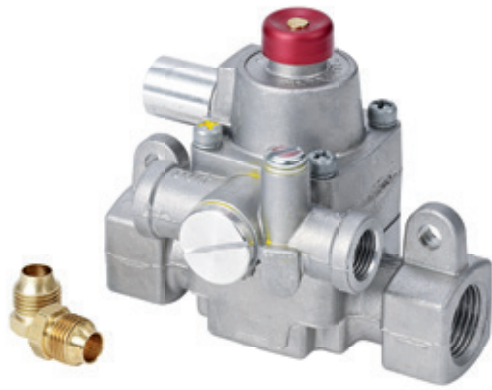




# Robertshaw®



Scan for all models, literature and cross reference



1720-004



1720-801

## GAS VALVES - THERMOMAGNETIC SAFETY

### 1720 Series

The Robertshaw® 1720 Series Thermomagnetic Safety Valve is a control used to cut off the flow of gas to the burner in the event of a pilot outage. The magnet assembly is energized by voltage generated by a thermocouple that is heated by the pilot flame. When this flame is extinguished, the thermocouple voltage decreases until a spring overcomes the magnetic force and closes off both the pilot and main gas. This control can be used for commercial and residential ovens, infrared heaters, chicken and pig brooders, recreational vehicle gas appliances and many more applications requiring automatic safety valves.

### Features and Benefits

- 300°F (149°C) ambient temperature rated and 350°F (177°C) versions available
- J models available with separate pilot inlet/outlet tube connections
- K models are pilot outlet only
- Compatible with other Robertshaw models such as the BJWA, FD, and GS series thermostats
- RoHS compliant

## Specifications

Part Numbers	Description	Body Inlet & Outlet	Head Pilot Inlet & Outlet	Ambient Temperature	Max Pressure
1720-004	TS11J Complete Magnet and Body Assembly	7/16" Tube	1/4" Tube	32°F to 300°F (0°C to 149°C)	0.5 PSI
1720-005	TS11J Complete Magnet and Body Assembly	1/4" Pipe	3/16" Tube	32°F to 300°F (0°C to 149°C)	0.5 PSI
1720-007	TS11J Complete Magnet and Body Assembly	1/2" Pipe	1/4" Tube	32°F to 300°F (0°C to 149°C)	0.5 PSI
1720-008	TS11J Complete Magnet and Body Assembly	1/4" Pipe	1/4" Tube	32°F to 300°F (0°C to 149°C)	0.5 PSI
1720-801	TS11J J Magnet Head Only - Inlet and Outlet	NA	Kit, 1/8" Pipe, 3/16" Tubing, 1/4" Tubing	32°F to 300°F (0°C to 149°C)	0.5 PSI
1720-802	TS11K K Magnet Head Only - Outlet Only	NA	Kit, 1/8" Pipe, 3/16" Tubing, 1/4" Tubing	32°F to 300°F (0°C to 149°C)	0.5 PSI



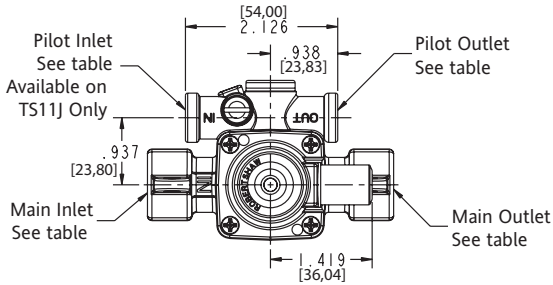


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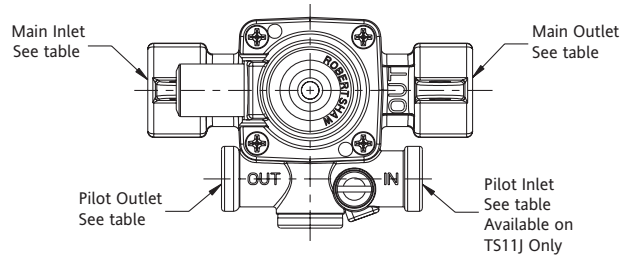
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

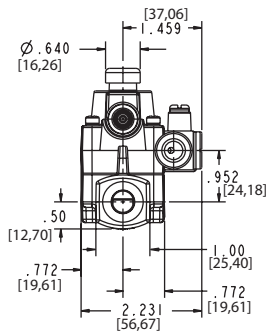
### Top



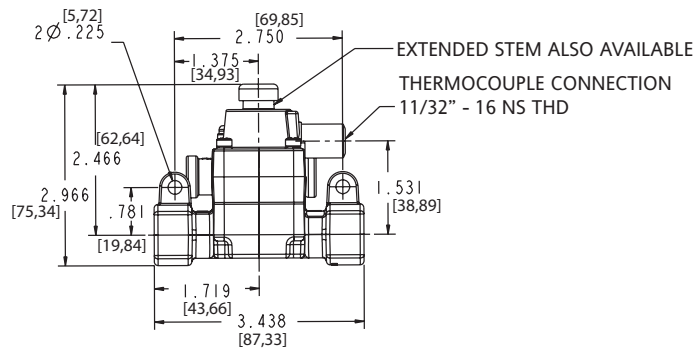
### Top (rotated 180°)



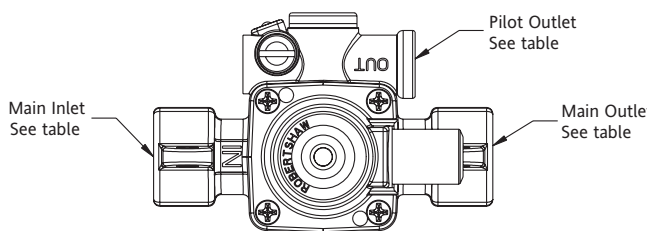
### Side



### Front



### K Model Top with No Pilot Inlet



**1** Year Limited Warranty



# Robertshaw®



Scan for all models, literature and cross reference



## HOT SURFACE IGNITORS

### 41-200 Series

The Robertshaw® 41-200 Series Hot Surface Ignitors are engineered to meet all your gas range and oven needs. These ignitors are used in the ranges of most major appliance original equipment manufactures. In addition, most ignitors are designed to match the Robertshaw bi-metal gas valves.

### Features and Benefits

- High physical and thermal strength
- Easy mounting
- Silent ignition
- Kits include two (2) porcelain nuts

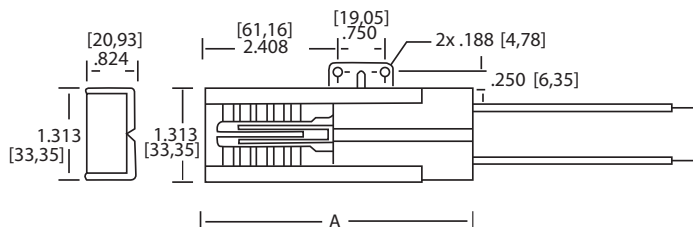
## Specifications

Part Numbers	Description	Length A	Lead Length	Type	Amp Rating	Operating Voltage
41-204	Hot Surface Ignitor	4-1/2"	14-1/2"	501A	3.2 to 3.6 A	120V AC
41-205	Hot Surface Ignitor	3-1/2"	19"	501A	3.2 to 3.6 A	120V AC
41-206	Hot Surface Ignitor, No Shield, 5 1/2" Ceramic	7-1/4"	8-3/8"	501	3.2 to 3.6 A	120V AC
41-209	Hot Surface Ignitor with Plug Adaptor	3-1/2"	16-3/4"	501A	3.2 to 3.6 A	120V AC
41-224	Hot Surface Ignitor	NA	36"	401XM	1.4 to 2.1 A	24V AC

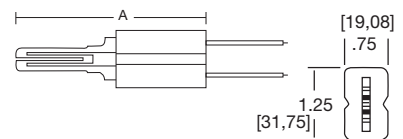
## Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].

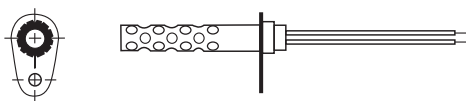
Type 501A



Type 501



Type 401 XM



1 Year Limited Warranty





**Robertshaw**<sup>®</sup>



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**1** Year Limited Warranty

## OVEN SPARK IGNITION MODULES

### 41-500 Series

The Robertshaw<sup>®</sup> 41-521 is an 0+1 Oven Spark Ignition Module designed for oven re-ignition. A spark is generated for as long as the appropriate input terminal is energized.

### Features and Benefits

- Spark generator with 2,000,000 sparks
- Strong dielectric strength tested up to 1500 Volts RMS at 60 Hz for one second
- Spark frequency ranges from 1.0 to 5.0 Hz
- Humidity tested to 90% RH relative humidity for 48 hours
- AGA listed



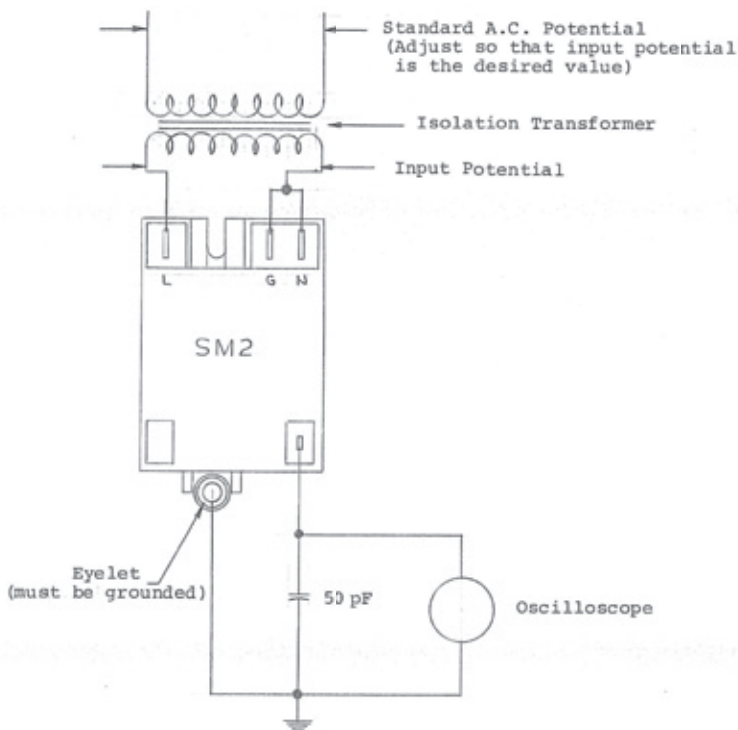
41-521

### Specifications

Part Numbers	Description	Spark Frequency	Spark Gap	Ambient Temperature	Electrical Rating
41-521	SM2 Electronic Re-Ignition Oven Spark Module	2.5 Hz to 4.5 Hz	1/8" max	32°F to 200°F (0°C to 93°C)	120V AC, 18 kV peak across 50 pF (picoFarad) capacitance load

### Product Drawings

Product Dimensions - Dimensions are inches and [millimeters].





Heating, ventilation and air conditioning contractors value quality performance products, while consumers welcome dependable comfort.

With Robertshaw® Heating products, both are achievable while delivering productivity and environmental responsible results. Robertshaw Heating products offer kitted and universal solutions designed to replace hundreds of products.

Gas Valves .....	B2
Water Heating Gas Valves.....	B15
Heating Kits.....	B16
Ignition Controls .....	B18
Ignitors.....	B28
Pilots .....	B34
Thermocouples.....	B36
Thermopiles .....	B38
Air Pressure Sensing Switches .....	B40
Heating Accessories.....	B42



# Heating





# Robertshaw®



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700-059

## GAS VALVES

### 700 Series - Pilot, Hot Surface and Direct Spark

The Robertshaw® 700 Series Universal Gas Valves are designed for intermittent pilot ignition applications. These universal models include all the necessary parts to adapt the valves to direct spark or hot surface applications. Each valve incorporates a manual valve, pilot valve, and a main gas pressure regulator (optional by model). These valves are designed for many residential and commercial applications such as central heating units, wall heaters, boilers and mobile home furnaces.

#### Features and Benefits

- Universal models with pilot, hot surface and direct spark ignition systems
- Maximum inlet pressure 14" WC (0.5 PSI)
- Ambient temperature of -40°F to 175°F
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

### Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Pressure Regulator Setting	Electrical Rating	Comments
700-048	Universal Model	720,000 BTU	1"	1"	3.5" WC Natural Gas	24V AC @ 60 Hz	High capacity
700-049	Universal Model	300,000 BTU	1/2"	1/2"	3.0" WC Natural Gas	24V AC @ 60 Hz	Includes pilot plug
700-056	Universal Model	350,000 BTU	3/4"	3/4"	3.5" WC Natural Gas	24V AC @ 60 Hz	Straight-thru with slow opening feature for soft ignition. Can be field removed.
700-057	Universal Model	720,000 BTU	1"	1"	4.0" WC Natural Gas	24V AC @ 60 Hz	Straight-thru
700-059	Universal Model	720,000 BTU	1"	1"	4.0" WC Natural Gas	24V AC @ 60 Hz	Straight-thru with slow opening feature for soft ignition. Can be field removed.



1 Year Limited Warranty

## GAS VALVES

### 700 Series - Millivolt

The Robertshaw® 700 Series Millivolt Gas Valves are wall thermostat actuated combination controls which provide installation flexibility from furnaces to swimming pool applications. The complete line of 700-500 millivolt gas valves offers a wide range of replacements from small capacity 3/8" pipe to high capacity 1" pipe up to 720,000 BTU usage.

#### Features and Benefits

- Gas cock dial marking Off - Pilot - On
- Pilot outlet 1/4" tubing
- Ambient temperature of -40°F to 175°F
- Terminal type combination screw/spade
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- RoHS compliant



**Robertshaw**®



Scan for all models, literature and cross reference

## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Straight-Thru (FPT)	Outlet Side (FPT) With Plugs	Reducer Bushing (NPT)	Pressure Regulator Setting	Electrical Rating	Compatible with
700-502	Millivolt	100,000 BTU	1/2"	1/2"	1/2"	2	3.5" WC Natural Gas	250mV to 750mV	Coaxial and two lead thermopile
700-504	Millivolt	240,000 BTU	1/2"	3/4"	1/2"	1	3.5" WC Natural Gas	250mV to 750mV	Coaxial and two lead thermopile
700-505	Millivolt Nonregulated	300,000 BTU	3/4"	3/4"	Straight-thru	2	NA	250mV to 750mV	NA
700-506	Millivolt	300,000 BTU	3/4"	3/4"	Straight-thru	2	3.5" WC Natural Gas	250mV to 750mV	Coaxial and two lead thermopile
700-511	Pool Heater	400,000 BTU	3/4"	3/4"	Straight-thru	2	Uni-Kit® Natural Gas	250mV to 750mV	Teledyne-Lars coaxial and two lead thermopile
700-515	Millivolt	485,000 BTU	3/4"	3/4"	Straight-thru	2	10.0" WC Natural Gas	250mV to 750mV	NA
700-516	Millivolt	240,000 BTU	1/2"	1/2"	Straight-thru	NA	4.0" WC Natural Gas	250mV to 750mV	NA



**1** Year Limited Warranty



# Robertshaw®



Scan for all models, literature and cross reference



700-402

## GAS VALVES

### 700 Series - 24 Volt Combination

The Robertshaw® 700 Series 24 Volt Combination Gas Valves offer replacement flexibility. With capacities ranging to 720,000 BTU, three-position outlets and multi-positional capability, these combination gas valves offer unlimited replacement possibilities. The 24 Volt Uni-Kit® models are suitable for either natural or LP gas. The valve is factory set at 3.5" WC natural gas. A regulator cover plate is included to convert to LP gas.

#### Features and Benefits

- Gas cock dial marking Off - Pilot - On
- Pilot outlet 1/4" tubing
- Ambient temperature of -40°F to 175°F
- Combination screw/spade terminal type
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

### Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Side Outlets	Pressure Regulator Setting	Electrical Rating	Comments
700-400	24 Volt Combination	240,000 BTU	1/2"	3/4"	Straight-thru	Uni-Kit® Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	
700-402	24 Volt Combination	240,000 BTU	1/2"	3/4"	1/2"	Uni-Kit Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	
700-406	24 Volt Combination	300,000 BTU	3/4"	3/4"	Straight-thru	Uni-Kit Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	
700-409	24 Volt Combination	240,000 BTU	1/2"	1/2"	Straight-thru	3.5" WC Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	Thermopile type safety magnet
700-426	24 Volt Combination	300,000 BTU	3/4"	3/4"	Straight-thru	3.5" WC Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	Slow opening feature for soft ignition
700-442	24 Volt Combination	720,000 BTU	1"	1"	Straight-thru	3.5" WC Natural Gas	24V AC @ 0.2 Amps, 12V DC @ 0.18 Amps	Slow opening feature for soft ignition



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## GAS VALVES

### 700 Series - Line Voltage

The Robertshaw® 700 Series Line Voltage Gas Valves offer the same replacement flexibility as the 24 Volt combination controls. Line Voltage models are available in 120 and 240 Volts AC. Features include three-position outlets, multi-positional capability and capacities ranging up to 720,000 BTU.

#### Features and Benefits

- Slotted safety magnet
- Gas cock dial marking Off - Pilot - On
- Ambient temperature of -40°F to 175°F
- Pilot outlet 1/4" tubing
- Cover type for conduit connection
- Inlet filtered screen
- RoHS compliant



700-454

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## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Straight-Thru (FPT)	Outlet Side (FPT) With Plugs	Reducer Bushings Included (NPT) 3/4" x 1/2"	Pressure Regulator Setting	Lead Length	Electrical Rating
700-452	Line Voltage Valve	240,000 BTU	1/2"	3/4"	1/2"	1	3.5" WC Natural Gas	32"	120V AC @ 0.034 Amps
700-454	Line Voltage Valve	300,000 BTU	3/4"	3/4"	Straight-thru	2	3.5" WC Natural Gas	32"	120V AC @ 0.034 Amps



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700-513

## GAS VALVES

### 700 Series - Diaphragm/Solenoid

The Robertshaw® 700 Series Diaphragm/Solenoid Gas Valves are single function, diaphragm types and are excellent replacements for solenoid gas valves. Models are available with or without a gas cock, and in regulated or non-regulated configurations. Standard features include pilot outlet, pilot gas filter and pilot adjustment key. Valves can be mounted in any position except upside down. These valves do not have a safety magnet.

#### Features and Benefits

- Pilot outlet 1/4" tubing
- Maximum inlet pressure 14" WC (0.5 PSI)
- Ambient temperature of -40°F to 175°F
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

### Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Side Outlets	Pressure Regulator Setting	Electrical Rating
700-422	24 Volt Diaphragm Solenoid	240,000 BTU	1/2"	3/4"	1/2"	3.5" WC Natural Gas	12V DC @ 0.18 Amps, 24V AC @ 0.2 Amps
700-513	Millivolt Diaphragm Solenoid without Gas Cock	240,000 BTU	1/2"	1/2"	Straight-thru	NA	250 - 750 mV



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## GAS VALVES

### 700 Series - 2-Stage 24 Volt

The Robertshaw® 2-Stage 24 Volt Gas Valves - standing pilot as well as intermittent pilot models - feature reliability, performance, flexibility and easy installation all in one compact control. These valves feature a manual valve (gas cock), inlet/outlet screens, pilot gas filter, and pilot adjustment key. Models have a slotted automatic pilot safety magnet to provide gas shut-off in case of a pilot outage.

#### Features and Benefits

- Pilot outlet 1/4" tubing
- Terminal type 1/4" quick-connect
- Ambient temperature of -40°F to 175°F
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- RoHS compliant



700-064

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## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Reducer Bushing (NPT)	Pressure Regulator Setting	Electrical Rating	Comments
700-064	Universal 2-Stage	720,000 BTU	1"	1"	2	1.3" WC low-fire, 3.5" WC high-fire for Natural Gas, 2.8" WC low-fire, 11.0" WC high-fire for LP	24V AC @ 50/60 Hz, 0.2 Amps low-fire, 0.4 Amps high-fire	Slow opening feature for soft ignition. Can be field removed.



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## GAS VALVES

### 700 Series - Snap-Throttle Hydraulic

The Robertshaw® 700 Series Snap-Throttle Hydraulic Combination Gas Valves are thermostatically operated by a remote temperature sensing bulb. Models are available with single capillary or remote dial-in snap-action and snap-throttle types. Valves can be mounted in any position except upside down.

#### Features and Benefits

- Gas cock dial marking Off - Pilot - On
- Pilot outlet 1/4" tubing
- Ambient temperature of 32°F to 175°F
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Side (FPT) With Plugs	Pressure Regulator Setting	Capillary Length	Bulb Outer Diameter	Bulb Length	Dial Temperature	Remote Temperature
700-205	Snap-Throttle Hydraulic	100,000 BTU	1/2"	1/2"	3.5" WC Natural Gas	36"	1/4"	8"	58°F to 90°F	45°F to 95°F



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## GAS VALVES

### 700 Series - Actuators

The Robertshaw® 700 Series Gas Valves are the industry standard with capacity ranges from 5,000 to 1,150,000 BTUs. Several actuator types are available depending upon the application such as 24 Volts, Line Voltage, Millivolt and Hydraulic.



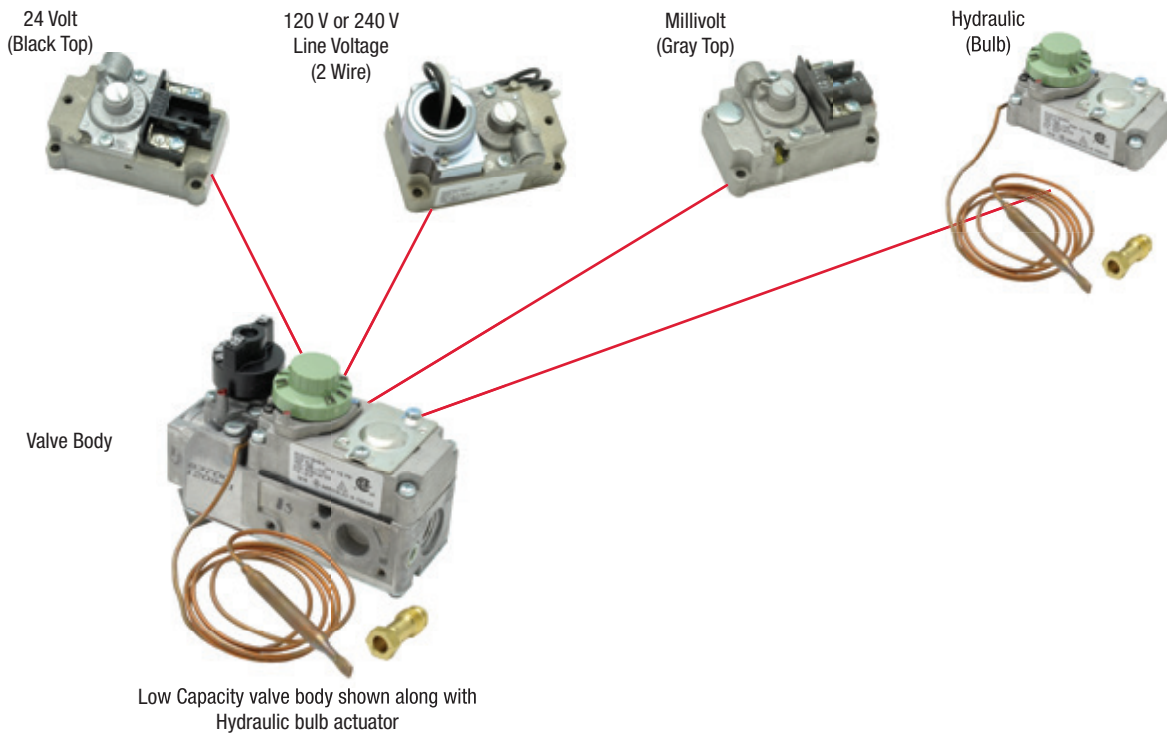
Standard 700 shown with Millivolt gray top actuator

Robertshaw®

### Actuators available for 700 series gas valves

Actuator	Model	Ambient Temperature	Operating Temperature	Power	Current	NEC
12 Volt DC	7000E, E12	-40°F To 175°F (-40°C To 80°C)	NA	2.2 Watts	0.18 Amps @ 12V DC	Class 2
24 Volt	7000E	-40°F To 175°F (-40°C To 80°C)	NA	5 Watts	0.18 Amps @ 12V DC	Class 2
Line Voltage	7000E120 Or 7000E240	-40°F To 175°F (-40°C To 80°C)	NA	4 Watts	0.034 Amps @ 120V 0.017 Amps @ 240V	Class 1
Millivolt	7000MV	-40°F To 225°F (-40°C To 107°C)	NA	Pull-In Voltage 100mV Drop-Out Voltage 15mV	NA	NA
Hydraulic	7000S	32°F To 175°F	Std: 58°F To 90°F (14°C To 32°C) Hi: 100°F To 250°F (38°C To 120°C)	NA	NA	NA

Note: All the above models are available in regulated (R), high/low (RB) or convertible (RC).





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710-502

## GAS VALVES

### 710 Series - Low Capacity

The Robertshaw® 710 Series Low Capacity Gas Valves feature an extremely compact control designed for low capacity and limited space applications. Features include three-position outlets, multi-positional capability and component replaceability.

#### Features and Benefits

- Low capacity with 3-13/16" H x 4-21/32" L x 1-29/32" W dimensions
- Gas cock dial marking Off - Pilot - On
- Ambient temperature of -40°F to 175°F
- Pilot outlet 1/4" tubing
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant





## Specifications

Part Numbers	Description	Application	Capacity	Inlet Size	Outlet Size	Reducer Bushing (NPT)	Pressure Regulator Setting
710-203	Hydraulic Snap-Action Low Capacity	Recreational vehicles	70,000 BTU Natural Gas, 112,000 BTU LP	1/2"	1/2"	(2) 1/2" x 3/8"	NA
710-205	Hydraulic Snap-Action Low Capacity	Wall furnaces	70,000 BTU Natural Gas, 112,000 BTU LP	1/2"	1/2"	(2) 1/2" x 3/8"	3.5" WC Natural Gas
710-402	24 Volt Low Capacity	Wall furnaces	70,000 BTU	1/2"	1/2"	(2) 1/2" x 3/8"	3.5" WC Natural Gas
710-501	Millivolt Low Capacity	Space heaters	70,000 BTU	1/2"	1/2"	(2) 1/2" x 3/8"	NA
710-502	Millivolt Low Capacity	Space heaters	70,000 BTU	1/2"	1/2"	(2) 1/2" x 3/8"	3.5" WC Natural Gas
710-503	Millivolt Low Capacity	Fireplace control	70,000 BTU	1/2"	3/8"	NA	Hi-Lo Adjustable 1.7" to 3.5" WC Natural Gas
710-511	Millivolt Low Capacity	Fireplace control	70,000 BTU	1/2"	3/8" Straight-thru	NA	Hi-Lo Adjustable 1.7" to 3.5" WC Natural Gas

## Specifications continued

Part Numbers	Capillary Length	Electrical Rating	Comments
710-203	36"	NA	
710-205	36"	NA	
710-402	NA	24V DC @ 0.2 Amps, 12V AC @ 0.18 Amps	
710-501	NA	250mV to 750mV	Use two lead thermopiles only
710-502	NA	250mV to 750mV	Use two lead thermopiles only
710-503	NA	250mV to 750mV	Use two lead thermopiles only
710-511	NA	250mV to 750mV	Special dropout safety magnet to meet Canadian specifications used with quick-dropout pilot assembly 1819-100. Use two lead thermopiles only.

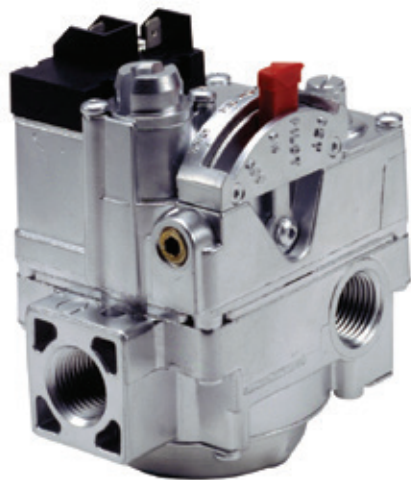
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720-402

## GAS VALVES

### 720 Series - 24 Volt Dual

The Robertshaw® 720 Series 24 Volt Dual Gas Valve is a six-function gas valve incorporating a manual valve, safety shut-off magnet, dual automatic valves, main gas regulator, and pilot adjustment. Models are available with and without a pressure regulator. Uni-Kit® models are factory set at 3.5" WC for natural gas, but can be converted to LP by installing the regulator conversion kit included.

The wiring connections, manual selector and adjustments are easily accessible on top of the valve. With a 3-9/16" swing radius, the 720 Series lends itself well to replacing many OEM valves. Valve can be mounted in any position except upside down.

### Features and Benefits

- Gas cock dial marking Off - Pilot - On
- Pilot outlet 1/4" tubing
- Ambient temperature of -40°F to 175°F
- Combination screw/spade terminal type
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- Multiple actuators available
- RoHS compliant

## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Side Outlets	Pressure Regulator Setting	Reducer Bushings Included (NPT)	Reducer Bushings Included (NPT)	Electrical Rating	Comments
720-400	24 Volt Dual	150,000 BTU	1/2"	3/4"	None	Uni-Kit® Natural Gas	1 3/4" x 1/2"	1 1/2" x 3/8"	24V AC, 0.5 Amps, 50/60 Hz	
720-402	24 Volt Dual	150,000 BTU	1/2"	3/4"	1/2" FPT with plugs	Uni-Kit Natural Gas	1	NA	24V AC, 0.5 Amps, 50/60 Hz	
720-406	24 Volt Dual	150,000 BTU	3/4"	3/4"	None	Uni-Kit Natural Gas	2	NA	24V AC, 0.5 Amps, 50/60 Hz	
720-472	24 Volt Dual	150,000 BTU	1/2"	1/2"	1/2" FPT with plugs	3.5" WC Natural or 11.0" LP Convertible	NA	1	24V AC, 0.5 Amps, 50/60 Hz	Step-opening to 40% of full flow within 30 seconds for mobile home
720-474	24 Volt Dual	150,000 BTU	1/2"	1/2"	1/2" FPT with plugs	3.5" WC Natural or 11.0" LP Convertible	NA	1	24V AC, 0.5 Amps, 50/60 Hz	Step-opening for mobile home



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## GAS VALVES

### 720 Series - Lever Actuated

The Robertshaw® 720 Series Lever Actuated Gas Valves are designed for intermittent pilot ignition applications. This series incorporates a manual valve, pilot valve, dual automatic valves (2), and a main gas pressure regulator. Uni-Kit® models are factory set at 3.5" WC for natural gas, but can be converted to LP by installing the regulator conversion kit included. The 720 Series is designed for many residential applications such as central heating units, space heaters, wall heaters, boilers, and mobile home furnaces. This valve has a compact swing radius of only 3-9/16" to enable it to fit a wide range of OEM replacement applications.

### Features and Benefits

- Pilot outlet 1/4" tubing
- 1/4" quick connect terminal type
- Ambient temperature of -40°F to 175°F
- Maximum inlet pressure 14" WC (0.5 PSI)
- Standard NEMA terminals
- Rated as NEC Class 2
- Inlet filtered screen
- Various gas types: natural, manufactured, mixed, LP, and LP/air mixtures
- RoHS compliant



720-079

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## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Pressure Regulator Setting	Electrical Rating	Comments
720-070	Slow Opening Model	150,000 BTU	1/2"	3/4"	Uni-Kit® Natural Gas	24V AC , 50/60 Hz, 45 Amps, 5 Watts	Has slow-opening feature for soft ignition. Not normally used on hot surface applications
720-079	Universal Model	150,000 BTU	1/2"	3/4"	Uni-Kit Natural Gas	24V AC , 50/60 Hz, 45 Amps, 5 Watts	



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## GAS VALVES

### 722 Series - Low Capacity Dual

The Robertshaw® 722 Series Low Capacity Dual Gas Valve Uni-Kit® models are designed for a wide variety of intermittent pilot, direct spark or hot surface heating applications.

They incorporate dual automatic valves (redundant) that are pressure regulated and come factory set at 3.5" WC for natural gas. They can be converted to LP by installing the regulator conversion kit that is included.

#### Features and Benefits

- Small, compact size, 3-9/16" swing radius, and 90° flanged outlet for side outlet applications allow for greater flexibility of installation
- Incorporates a manual selector valve (On-Off), dual automatic valves, main gas regulator and inlet/outlet pressure taps
- Easily accessible wiring connections, manual selector, and adjustments designed to replace many OEM valves
- Multi-positional and can be mounted in any position except upside down
- As a safety feature, special screws are used and replacement parts are not available to prevent unsafe attempts at repair

## Specifications

Part Numbers	Description	Capacity	Inlet Size	Outlet Size	Pressure Regulator Setting	Comments
722-051	Hot Surface and Direct Spark Low Capacity Dual	170,000 BTU	1/2"	1/2"	Uni-Kit® Natural Gas	Straight-thru
722-079	Universal Low Capacity Dual	170,000 BTU	1/2"	1/2"	Uni-Kit Natural Gas	Straight-thru, 1/2" flanged outlet adapts for side outlet applications



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## WATER HEATING GAS VALVES

### 110 Series

The Robertshaw® 110 Series Water Heating Gas Valves are designed for universal replacement applications in water tanks. All models feature a built-in, non-cycling Energy Cut-Off (ECO) system to shut off all gas to the water heater in case of excessive water temperatures. The ECO is designed to detect over-temperature conditions and to open. Once opened, the control will not function and a new replacement will be required.

### Features and Benefits

- Models include 5-1/2" sensing element
- Various inlet size, outlet size, regulator settings and shank lengths
- Right hand or left hand threads
- Multiple BTU capacities available
- Domestic, commercial and recreational vehicle applications



110-202

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### Specifications

Part Numbers	Description	Flow Setting	Inlet Size	Outlet Size	Shank Length	Pressure Regulator Setting	Temperature
110-202	Water Heater Thermostat Uni-Kit®	45,000	1/2" Pipe	1/2" Inverted Flare	1-3/8"	4.0" WC Natural Gas	160°F (71°C)
110-326	Water Heater Thermostat Uni-Kit	45,000	1/2" Pipe	1/2" Inverted Flare	1-3/8"	3.5" WC Natural Gas	160°F (71°C)
110-262	Water Heater Thermostat Uni-Kit	38,000	1/2" Pipe	1/2" Inverted Flare (Right Hand Threads)	1-3/8"	9" WC to 12" WC LP	160°F (71°C)
110-265	Water Heater Thermostat Uni-Kit	38,000	1/2" Pipe	1/2" Inverted Flare (Left Hand Threads)	1-3/8"	9" WC to 12" WC LP	160°F (71°C)



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## HEATING KITS



710-296

### 710 Series - Millivolt Kit

The Robertshaw® 710-296 Millivolt Kit includes a low profile millivolt actuated gas valve, a pilot generator kit and an easy-to-use mechanical wall thermostat. The kit includes the Robertshaw gas valve cross reference pocket guide.

#### Features and Benefits

- Most common parts needed in retrofit millivolt applications
- Reduces inventory with most common parts
- Easy-to-select, use and install

### Specifications

Part Numbers	Description	Hood Type	Thermostat	Gas Valve
710-296	Millivolt Kit	1820-009 Pilot Kit	986-1R Thermostat	710-502 Low Profile

## HEATING KITS



712-017

### 712 Series - Pilot Kits

The Robertshaw® 712 Series Intermittent Pilot Ignition System Kit features flame rectification with solid-state logic and flame sensing to provide automatic sequencing that will ensure proper operation of an intermittent pilot ignition device. The 712 pilot ignition systems are available with one of four different gas valve types to fit a wide range of furnace applications.

Caution: Do not use on LP gas applications

#### Features and Benefits

- Quick and easy installation
- Complete in-depth instructions and trouble shooting information
- Used on natural gas systems only

### Specifications

Part Numbers	Description	Gas Valve	Inlet	Outlet	Capacity	Restart	Pressure Regulator Setting	Ignition Control
712-017	Intermittent Pilot Ignition System Kit	720-070	1/2"	3/4"	200,000 BTU	Nonlockout	3.5" WC Natural Gas Only	780-715 (Nonlockout)

## HEATING KITS

### Hot Surface Uni-Kit360

The Robertshaw® Uni-Kit360 Heating Kit has you covered 360° with universal products all in one box for use with HSI (Hot Surface Ignition) gas systems. Kit includes the following:

- Universal gas valve
- Universal ignition control
- Universal nitride ignitor
- Universal flame sensor
- Universal air pressure sensing switch
- Gas valve cross reference pocket book, screwdriver and toolbag

### Features and Benefits

- Universal controls with the necessary parts included for most hot surface heating applications
- Reduces inventory with one easy-to-order SKU
- Trusted brand in heating controls for over 90 years



UNI-KIT360

**Robertshaw**®



## Specifications

Part Numbers	Description	Gas Valve	Inlet	Outlet	Capacity	Hot Surface Ignitor	Flame Pattern	Ignition Control	Air Sensing Switch
UNI-KIT360	Universal Hot Surface Heating Repair Kit	720-079	1/2"	3/4"	150,000 BTU	41-802N	10-760	780-910	2374-510

## HEATING KITS

### Regulator Kits

The Robertshaw® 1751 Series Add-on Pressure Regulator Kits are available for use on the following factory model types; 7000, 7010, 7100, 7200 and 7222. Each 1751 pressure regulator kit provides straight-line regulation and includes all the necessary parts including instructions to convert a specific factory model gas valve.

### Features and Benefits

- Converts Natural Gas to LP and vice versa
- Not for use with hydraulic models which cannot be field converted
- Includes all necessary parts for easy regulation conversion



1751-003



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## Specifications

Part Numbers	Description	Suitable For	Series	Regulator Type	Adjustable WC Pressure Low/High
1751-003	Add-On Pressure Regulator Kit	Natural Gas	700 & 710 Series (Models 7000 & 7000LC)	3.5" WC Natural Gas	3" / 7"
1751-013	Add-On Pressure Regulator Kit	LP	700 & 710 Series (Models 7000 & 7000LC)	11.0" WC LP Gas	8" / 12"
1751-021	Add-On Pressure Regulator Kit	LP	700 & 710 Series (Models 7000 & 7000LC)	Hi-Low Adjustable Output LP Gas	2.7" / 11"



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780-001

## IGNITION CONTROLS

### 780 Series - Pilot Controls Uni-Kits

The Robertshaw® 780 Series Pilot Controls Uni-Kits® feature a flame sense circuit that will work equally well on a one rod (local sense) or a two rod (remote sense) application. The automatic recycle features assure that, in the event of flame failure, main gas is disabled and the spark repetition sequence is restarted until pilot gas is ignited. Only after pilot ignition has been re-established can main gas be returned to the burner.

The Robertshaw lockout version kits include the capability to shut off all gas to the furnace, should pilot ignition fail to occur after a predetermined time period. The 780-002 provides three tries for ignition. Each ignition period is 90 seconds followed by a six minute time delay between ignition attempts. If the pilot flame is not sensed after three tries, the unit goes into lockout and must be reset at the thermostat.

### Features and Benefits

- Replaces one rod and/or two rod systems
- Reduces truck stock inventory, saving space and money
- Includes vent damper adapter assembly
- Easy-to-install with complete in-depth installation instructions
- Pilot and main valves draw 1 Amp at 0.5 power factor
- Combined load at 1.5 Amps at 0.4 power factor
- 95% relative humidity noncondensing at 104°F

## Specifications

Part Numbers	Description	Spark Rate	Flame Sense Current	Max Total Current Load	Flame Failure Re-Ignition Time	Thermostat Anticipator Setting	Temperature Range	Transformer	Input Voltage
780-001	Gas ignition control - nonlockout	3 to 4 per second	0.7mA DC @ 25°C	1.5 Amps	0.8 seconds	0.7 Amps	-40°F to 175°F	24V AC, 20 VA	24V AC @ 50/60 Hz
780-002	Gas ignition control - lockout	3 to 4 per second	0.7mA DC @ 25°C	1.5 Amps	0.8 seconds	0.7 Amps	-40°F to 175°F	24V AC, 20 VA	24V AC @ 50/60 Hz

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## IGNITION CONTROLS

### 780 Series - Pilot Controls

The Robertshaw® 780 Series Pilot Controls feature flame rectification with solid-state logic and flame sensing to provide automatic sequencing that will ensure proper operation of an intermittent pilot ignition device. When the thermostat calls for heat, the 780 series control simultaneously initiates ignition sparking and opens the pilot valve portion of the gas valve. Pilot flame recognition stops ignition sparking and opens the main valve portion of the gas valve. Pilot burner flame is continuously monitored at a synchronous frequency for the duration of the heating cycle. Should the pilot flame fail during the heating cycle, the control will shut off the main valve until the pilot flame is established.

The Robertshaw 780-845 lockout ignition control provides 90 seconds of spark, followed by a six minute time delay (purge) between ignition attempts. If the pilot flame is not sensed after three tries, the control goes into a one-hour lockout period. At the end of the lockout period, if the demand for heat is still present, the unit will repeat the three tries for ignition.

### Features and Benefits

- Reduces truck stock inventory, saving space and money
- Easy-to-install with complete in-depth installation instructions
- Pilot and main valves draw 1 Amp at 0.5 power factor
- Combined load at 1.5 Amps at 0.4 power factor
- 95% relative humidity noncondensing at 104°F



780-715

**Robertshaw**®



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## Specifications

Part Numbers	Description	Spark Rate	Flame Sense Current	Max Total Current Load	Flame Failure Re-Ignition Time	Thermostat Anticipator Setting	Safety Lockout Timing	Temperature Range	Transformer	Input Voltage
780-715	Intermittent Pilot - Nonlockout	3 to 4 per second	0.7mA DC @ 25°C	1.5 Amps	0.8 seconds	0.7 Amps	NA	-40°F to 175°F	24V AC, 20 VA	24V AC @ 50/60 Hz
780-735	Intermittent Pilot - Lockout	3 to 4 per second	0.7mA DC @ 25°C	1.5 Amps	0.8 seconds	0.7 Amps	NA	-40°F to 175°F	24V AC, 20 VA	24V AC @ 50/60 Hz
780-845	Intermittent Pilot - Lockout	4 to 15 per second	0.7mA DC @ 25°C	1.5 Amps	2 seconds	0.7 Amps	90 seconds	-40°F to 175°F	24V AC, 20 VA	24V AC @ 50/60 Hz



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