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Providing LP & Natural Gas Parts for Over 50 Years!

PRODUCT CATALOG



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Controls Inc. has been serving the gas community as a premier parts distributor for over 50 years, offering parts and technical support for most major brands of commercial and residential gas appliances and heating equipment.

This catalog offers an in-depth view of the most common replacement parts found in gas appliance repair.Be sure to keep it handy for quick and easy identification of the parts you may come across in the field.

Whether you need assistance with parts identification, obtaining pricing and availability, or placing an order... We are just a phone call or email away!

PLEASE NOTE: If calling to locate a part or for technical assistance, please be sure to have the Brand Name, Model, and Serial Number of what you are working on in hand so that we can better assist you.

We look forward to hearing from you!

Phone: (800)334-5886 Fax: (888)783-0239 Email: parts@controlsincgas.com Website: www.controlsincgas.com





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ONTENT

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* Not included in "Buy 9 Get 1 Free" special.

Q340A1090

Q340A1108

36"

48"

H06F Junction Block



Order No.	Length
H06F-36	36"

K16RA High Temp



Order No.	Length
K16RA-36	36"
K16RA-48	48"
K16RA-60	60"
K16RA-72	72″

Low Mass - Direct Vent

Special low mass (quick-dropout) thermocouple. Usually found on direct vent applications using both thermocouple and thermopile.



Order No.	Length
1960-027	27"



Order No.	Length
ST-20-24	24"
ST-20-39	39″



Vent-Free (Metric Thread)

Order No.	Length
ST-70-A	38″



Order No.	Length
ST-110	10" (Mr. Heater)
ST-110-18	19 1/2"
ST-110-48	48"

SIT Thermocouples

Order No.	Length & Description	
SIT0200221	18" - Standard Thread	
SIT0290110	23-1/2" - Metric Thread	
SIT0290212	23-1/2" - Standard Thread	
SIT0290181	34" - Standard Thread w/ Nut	
SIT0200179	39-1/2" - Standard Thread	
SIT0290216	23-1/2" - Standard Thread	
SIT0270500	36" w/ Interrupter - Standard Thread	
SIT0270457	23-1/2" w/ Interrupter -Standard Thread	



SIT0270457

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Low-Mass with Junction Block	K16FA Junction Block	Junction Block Adaptor Will fit any standard thermocouple lead for conversion to a junction block application.
		A CONTRACTOR OF THE OWNER
Order No.	Order No. Length	Order No.
VC10001828	K16FA-36 36"	Y99AN-1
Thermocouple AdaptorImage: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2"Image: Colspan="2"<	r 39245 Order No 392451-1 393200-1	Description 1 For use with V800 + V850 series
High Limit Lead Wire	s Thermo	couple Thread Adaptors
10-258		SNA-6

Order No.	Description	
SNA-5	Adapts to metric threaded valves. M8 x M9	
SNA-6	Adapts to standard threaded valves. M10 x 11/32	

Length & Description

18" High Limit Lead Wire

Order No.

10-258

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TECH TIP: Over-tightening a thermocouple more than 1/4 turn past finger tight will likely result in damage to the gas valve.

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Q313(A,B) Metal-Shielded Thermopiles (750mv)



Order No.	Output (MV)	Includes:
Q313A1014	600 to 750 MV	23", commonly used on log sets.
Q313A1055	600 to 750 MV	47", 1/2" thermopile attaching nut.
Q313A1170	600 to 750 MV	35" with PG9 adaptor.
Q313A1188	600 to 750 MV 35", push-in clip, 1/2" thermopi attaching nut.	
Q313B1005	600 to 750 MV	35" with terminal block.

1950 & 1951 Thermopiles (750mv)





1950-001 Two-Lead 1951-536 Coaxial

Order No.	Length	Includes PG9 Pilot Adaptor	Connection Type
1950-001	36"	•	Two Lead
1950-002	48″	•	Two Lead
1950-003	60"	•	Two Lead
1951-536	36″		Coaxial
1951-560	60″		Coaxial

101934 Thermopile (750mv)

Pizza Oven Thermopile (750mv)



"F" Terminal (Spade Clip)



"R" Terminal (Screw-In)

Order No.	Length	Connection Type
101934F32	32″	Spade Clip
101934F48	48"	Spade Clip
101934R32	32"	"R" Terminal



Order No.	Length	Description
BPM1265X	70"	Q313 Style. Metal-Shielded.

Pilots & Flame Sensors



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Q314A Pilot Burner

Nonprimary-aerated, insert orifice-type pilot burner for main burner ignition with Q340 thermocouple or Q313 thermopile.





Q314A3547 A Type Bracket

Q314A4586 B Type Bracket

Order No.	Tip Style	Type Gas	Mounting Bracket	Includes:	
Q314A3547	T T	NAT	А	1/4" cc inlet fitting. For LP, order 390686-1 orifice.	
Q314A4586	F	NAT/LP	В	1/4" cc inlet fitting.	
Q314A6094	Ŧ	NAT/LP	В	Special mounting bracket with screws for converting "B" bracket to "A"	
Q314A6102	R.	NAT/LP	В	bracket.	

Q327A Pilot Burner



Order No.	Description
Q327A1626	B Type Mounting Bracket AT and LP Orifice Included Target Span - 1"

Q347A Spark Ignitor



Q347A1004

Order No.	Ground Strap Orientation	Electrode Length (bracket to tip)
Q347A1004	Standard	2-1/32" (52 mm)
Q347A1012	90° Right Angle	2-1/32" (52 mm)

Q345A Ignitor/Sensor

Nonprimary - aerated combination pilot burner and igniter. Used in intermittent pilot systems.

 Includes pilot burner with bracket, ceramic-insulated Kanthal flame rod/spark ignitor, and ground strap.
 For LP, order 390686-25 orifice.



 Q345A1305
 Image: Constraint of the second seco

Tip Style

Order No.

Type of

Gas

Q345A1305



Honeywell Pilot Orifices			
Order No. Stamping Drill Size			
390686-1	BBR10	.010	
390686-4	BBR18	.018	
390686-15	BBR9	.009	
390686-25	BBR12	.012	
390686-32	BBR14	.014	

390686-1

For additional orifice styles, see the "Orifices & Fittings" section of this catalog.

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--------------------	---------------

Pilots & Flame Sensors

PG9A42JTL020

Right Cobra



PG9A41JTL020 Left Cobra

1810-100 Pilot

Universal 2BLC Pilot

1810-100

Description

1/4" & 3/16" Tubing

Nat/LP

Order No.

1810-100

PG9 Pilot Generator (750mv)



PG9A27JTL022 3/4" Head Width

1810-308 Pilot

1810-308

Description

1/4" Tubing

.010 LP Orifice Included

Order No.

1810-308



PG9A28JTL024 2-3/16" Head Width



PG9A37JTL022 .32" Head Length

1819-001 Quick Drop-Out Pilot

The quick dropout pilot assembly is designed for those applications that require a quick dropout of the safety magnet when pilot flame is lost.

- Specifications:
- Uses 1/4" Tubing
- Two-lead 24" Thermopile
- Lo-mass 18" Thermocouple Electrode w/ 18" Leads
- Includes Nat and LP orifices



1819-001

Order No.	Description	
1819-001	Complete Pilot Assembly	
1960-027	Replacement Thermocouple	
1950-001	Replacement Thermopile	



1810, 1819 & 1820 Replacement Orifices:			
Order No. Gas Size			
10-114	LP	.010	
10-211	LP	.011	
10-021	NAT	.018	

1820 Pilot Uni-Kits

Replacement for ITT PG9 type pilots with a 32" thermopile. - NAT and LP orifices included.



1820-009

Order No.	Flame Pattern	Description
1820-009	90° Right	With Thermopile
1820-019	90° Left	With Thermopile
1820-029	90° Right	Pilot Only
1820-039	90° Left	Pilot Only



Pilots & Flame Sensors

1830 Pilots



Type 4

Type 2





Type 5



controlsinc.

Type 6

MOUNTING BRACKET TYPE Type 1 Type 2 Type 3 Type 4 Type 6 Type 10 **FLAME PATTERN TYPE**



Standard





90° Left Hand





90° Right Hand



1830 Pilots (2H & 2CH)

- NAT and LP orifices included.



1830-004



1830-110



1830-020

1830-115

1830-490

1830-489



1830-491



1830 Replacement Orifices			
Order No. Gas Size			
10-114	LP	.010	
10-211	LP	.011	
10-021	Nat	.018	

Order No.	Factory Number	Hood Type	Bracket Type	Flame Pattern Type
1830-001	2CH-6	2	6	Standard
1830-002	5CHL-6	5	6	90° Left
1830-003	5CH-6	5	6	90° Right
1830-004	2CHL-6	2	6	25°Left
1830-005	4CH-6	4	6	3-Way (A)
1830-010	3CH-6	3	6	180°
1830-020	5CH-4	5	4	90° Right
1830-110	2CH-1	2	1	Standard
1830-111	2CH-1	2	1	25° Left
1830-112	2CHR-1	2	1	25° Right
1830-115*	2CH-10*	2	10	Standard
1830-210	2CH-2	2	2	Standard
1830-211	2CHL-2	2	2	25° Left
1830-312	2CHR-3	2	3	25°Right
1830-489	6CH14-6	6	6	3-Way (B)
1830-490	6CH24-6	6	6	3-Way (B)
1830-491	4CH14-10	6	10	3-Way (B)
1830-501	2CHL-10	6	10	25° Left
1830-502	3CH-10	3	10	Standard
1830-601†	2C-2	2	2	Standard
† Hoo	 * Includes 3/16" tubing + Hood reversed - points away from thermocouple. 			



1830 Pilot Electrode Series

The electrode is permanently riveted to the pilot frame and spark gap is fixed at 1/8". All pilots have **NAT** and **LP** orifices included, except 1830-704. If LP orifice is needed, order 10-114.



1830-702



1830-705





1830-704



1830-707







1830-708



1830-706

1830-709

1830-712

1830-710

1830-716



1830-722



1830-711

1830-726

If you do not see the part you are needing, please *call us* with your unit's Brand, Model, and Serial number.





Order No.	Type Gas	
SIT0140501	LP	
SIT0140511	Nat	
Compression Nut + Ferrule - SIT-CNF		
Thermocouple Retainer Nut - SIT-TRN		



SIT 140 Pilot Orifices	
Order No.	Type Gas
SIT0977148	LP
SIT0977137	Nat

SIT0977148

SIT0140501

Common / OEM Vented Hearth Pilots



Order No.	Type Gas
REG910-039	LP
REG910-038	Nat
Thermocouple - SIT0290216	
Thermopile - Q313A1014	

Heat-N-Glo PSE / Honeywell



Order No.	Type Gas
HG4021-737	LP
HG4021-736	Nat
Thermocouple - 1960-027	
Thermopile - Q313A1014	

Heat-N-Glo PSE / Honeywell



Thermocouple - **1960-027** Thermopile - **1950-001**

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Common / OEM Vented Hearth Pilots (Continued)

Heat-N-Glo Thermopile Only



Order No.	Type Gas
HG446-513A	LP
HG446-512A Nat	
Thermopile - 1950-001	

Majestic / Vermont Castings



Order No.	Type Gas	
SIT0199744-LP	LP	
SIT0199744	Nat	
Thermocouple - SIT0290216		
Thermopile - Q313A1014		





Order No.	Type Gas	
SUP67L70	LP/Nat	
Thermocouple - 1960-027		
Thermopile - Q313A1014		



Mendota



Order No.	Type Gas
MENHA-30-00470	LP
MEN05-04-00035	Nat
LP Thermocouple - K16RA-36	
Nat Thermocouple - 1960-027	
Thermopile - Q313A1188	

SIT Pilot Heads





SIT0975063 SIT0975065

Order No.	Head Type
REG911-039	2-Way Head
SIT0975063	3-Way Head
SIT0975065	4-Way Head

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 Order No.
 Type Gas

 HG2090-013
 LP

 HG2090-012
 Nat





Order No.	Type Gas
RASJPG9-LP	LP
PETEPG-1	Nat

SIT Pilot Tubing



Order No.	
SIT2182280	

Common / OEM Vented Space Heating & Furnace Pilots Empire Coleman Empire Empire Order No. Type Gas Order No. **Type Gas** Order No. Type Gas Order No. **Type Gas** 1830-711 NAT/LP EMR13691 LP CO9880A0161 LP EMR3233 LΡ Empire Empire Empire Empire Order No. **Type Gas** Order No. Type Gas Order No. Type Gas Order No. Type Gas EMR714L LΡ EMR715L ΙP EMR758L LP EMR775L LP For Nat, add 101095HA022 EMR758N Nat orifice Thermopile - 1950-001 Goodman Goodman Rheem / Ruud Reznor Order No. Type Gas Order No. Type Gas Order No. **Type Gas** Order No. Type Gas GMCB14010-11 Nat RH62-21609-01 NAT GMCB14010-03S Nat RE096361 LΡ For LP, add 390686-1 orifice For LP, add 390686-1 orifice For LP, add 10-114 orifice

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(ODS) Vent-Free Hearth & Space Heating Pilots

Universal 3/16" Male (Thermocouple is Metric Thread)



Order No.	Type Gas
SITLPG8404	LP
SITNG8204	Nat

Universal 3/16" Male (Thermocouple is Metric Thread) Old-Style Universal 3/16" Male (Thermocouple is Metric Thread)



Order No.	Type Gas
ODS-LP-A-SA*	LP
ODS-NAT-A-SA*	Nat
* Includes an adaptor for use on female thread applications.	

Buck Stove 1/4" Male (Pilot Only)



SIT 1/4" Female

(Thermocouple is Standard Thread)

Order No.	Type Gas
SITLPG8409	LP

Rasmussen 1/4" Male Thermocouple Only (Thermocouple is Standard Thread)



Order No.	Type Gas
RASODS-CN-LP	LP
RASODS-CN-NG	Nat

SIT 1/4" Female (Metric) (Thermocouple is Standard Thread)

Type Gas

LP

Nat

Order No.

SITLPG8418

SITNG8224



Order No.	Type Gas
SITLPG8427	LP



Order No.	Type Gas
BUCKPE2150054	LP
BUCKPE2150053	Nat

If you do not see the pilot you are needing, please *call us* with your unit's Brand, Model, and Serial number.

	OEN	l Water He	ater Pilots			
American Pilot w/ Thermopile	A O Smith / Stat	te	A O Smith ,	/ State	A O Smith ,	State
Order No. Type Gas	Order No.	Type Gas	Order No.	Type Gas	Order No.	Type Ga
AM100093983 LP	AOS100110197	LP	AOS100109928	LP	AOS100108776	LP
					3	
Order No.	Type Gas	Order No.	Type Gas	Order N		
AOS100109253	LP	BW415-47846-05 BW415-47845-05	LP Nat	RHWSP107	764C LP	ļ
	Common / OEM Pool Heater Pilots					
Hayward	Pentair		Teledyne La	ars	Rayp	ak
			1			-



Order No.	Type Gas
HAHAXPLT1932	LP
HAHAXPLT1931	Nat

B	
B	

5	Order No.	Type Gas
	PF471291	LP
	PF471292	Nat



Order No.	Type Gas	
TLR0096600	LP	
For Nat, also order 388468H orifice		



Order No.	Type Gas
RA002003F	Nat/LP





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Y75 Replacement Flame Sensors

Y75 Flame Sensors may be used to replace sensing probes in G60, G65, G67, G600, G670, or G770 electric ignition control systems.



These replacement probes must **not** be used for new field applications. They can be trimmed to the proper length of the Y75 being replaced. Packed two sensors per bag.

Order No.	Connector Style	Locating Dimension
Y75AS-1H	90° Male Spade	0.34 In
Y75AS-2H	Straight Male Spade	0.34 in
Y75BS-1	Straight Male Spade	0.57 in

10-760 Flame Sensor

The flame sensor has a high temperature Kanthol sensor rod that will withstand 1800°F. Sensor rod is 4" long and can be cut and bent to match original unit.



Order No.	Lead Length	Connector Style
10-760	30"	1/4" Female Quick Connect

S1/S2 Flame Sensors



10-227

10-347

Order No Description				
10-227	S1 Sensor. Has 1/4" quick connect terminal.			
10-347	S2 Sensor. Designed to fit an 1830 style pilot with "thermopile" (large) opening. Comes with 10-204 thermopile fitting.			

Pilots & Flame Sensors



If you do not see the part you are needing, please *call us* with your unit's Brand, Model, and Serial number.

41-400 Series Hot Surface Ignitors - 110 Volts

The 41-400 Series Ignitors deliver dependable ignition in heating system; from furnaces and boilers to rooftop heaters, infrared burners, unit heaters, water heaters, and many other types of HVAC equipment. They are designed to reach ignition temperature within 17 seconds.



F767 Hot Surface Ignitors - 110 Volt

The White-Rodgers F767 is a highly reliable ignitor because it provides a much larger surface area to ignite the gas. It can be used with either a 15, 17, or 45 seconds warm up time system. All replacements have 9" leads rated at 482° (250°C). Electrical Rating: 120v AC, 60 Hz, 5.0 amps.









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F767A-365

Replaces OEM Type No. OEM Lead Lead Insulation **Electrical Connection** Order No. **Ceramic Insulator** Length **Temp Rating Mounting Locator** 767A-303 4-1/2" 200°C Two (2) terminal receptacles F767A-357 767A-353 250°C Tab on left side 6" with .093 male pins 9" 250°C 767A-357 767A-301, 767A-350, 4-1/2" 200°C Two (2) terminal receptacles F767A-361 200°C Tab on right side 767A-306, 6' with .093 male pins 9″ 767A-354, 767A-361 250°C 4-1/2" 1/4" female 767A-310 200°C F767A-365 Tab on right side 767A-365 9″ 250°C spade terminals, uninsulated. 4-1/2" 767A-311 200°C Two (2) terminal receptacles 4-1/2" F767A-366 767A-364 250°C Tab on right side with .084 male pins 767A-366 *9*″ 250°C









	Piezo	Ignitors		
Universal Piezo Ignitor (Spring Clip Mounting)	Universal Piezo Ignitor (Retaining Nut Mounting)	Vanguard Electronic AAA Battery Piezo (MARK 8-2-1.5-T5B)	Universal Piezo Ignitor Cal Round Female x Round Fema	ble ale
Order No.	Order No.	Order No.	Order No. Leng	th
MA020676	MA020676R	VA123651-01	VA098271-10 20"	<i>י</i>
			VA098271-03 36"	<i>,</i>

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Ignitors



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HEATING MODULES

S87 Direct Spark Ignition Modules

Provide electronic control of direct spark ignition systems used on gas fired furnaces, boilers, and other heating appliances.

• Lockout after one trial for ignition if main burner fails to ignite.

• Reset from thermostat after lockout.

• Use modules (except S87C) with any combination gas control designed for direct spark applications and rated at 2.0A or less.

Order No.	Lockout Timing	Application	Use With:
S87B1024 S87B1065	21 sec. 4 sec.	Uses a single electrode for spark ignition and flame sensing. Includes optional alarm output.	Q347A Spark Ignitor
S87C1006 S87C1030	6 sec. 21 sec.	Uses separate electrodes for spark ignition and flame sensing. For use only with Honeywell gas controls designed for DSI application.	Q347A Spark Ignitor and Q354A Flame Sensor
\$87D1004 \$87D1012 \$87D1020 \$87D1038	6 sec. 11 sec. 4 sec. 21 sec.	Uses separate electrodes for spark ignition and flame sensing. Includes optional alarm output.	Q347A Spark Ignitor and Q354A Flame Sensor
S87J1034	21 sec.	Uses a single electrode for spark ignition and flame sensing.	Q347A Spark Ignitor



S87B1065

S89 Direct Spark Ignition Modules

Provide electronic control of direct spark ignition systems with spark transformers. Used on gas-fired furnaces, boilers, conversion burners and other heating appliances.

- Lockout after one trial for ignition if main burner fails to ignite.
- Reset from thermostat after lockout.
- Use separate electrodes for spark ignition and flame sensing.
- Use any 24 Vac combination gas control designed for direct spark applications and rated at 2.0A or less.

Order No.	Lockout Timing	Application	Use With:		
S89E1058	4 sec.	For use in direct spark ignition systems on gas-fired atmospheric and power burners. Provides safe start check before ignition.	VR845, VR854, VR8450, VR8540, VR8205 or VR8305 Combination Gas Control, or any dual valve rated 2.0A or less for DSI application.		
S89F1098 S89F1106*	4 sec. 4 sec.	For use in direct spark ignition systems on gas-fired atmospheric and power burners. Provides safe start check and 30 second purge period prior to ignition.	Q347A Spark Ignitor and Q354A Flame Sensor		
* Label applied upside down for inverted mounting.					



S89F1098

S8910U Universal Hot Surface Ignition Module

Provides electronic control of a direct ignition system using a 120 Vac hot surface ignitor.

- Provides easy field-replacement of a wide range of hot surface ignition modules manufactured by Honeywell, Robertshaw and White-Rodgers.
- For 120 Vac (up to 5.0A) hot surface ignitor (Norton 210/271 or equivalent).
- For local (single rod) or remote (dual rod) rectification type flame sensing.
- Contains easy-to use instructions plus the accessories required to adapt the existing hot surface ignition module.

TEMPERATURE RATINGS: Ambient: -40°F to + 175°F (-40°C to + 79°C) SENSOR: Separate sensor required for remote sensor application ELECTRICAL RATING: Power supply: 24V, 60 Hz. Valve Contacts: 2A max. Hot Surface Ignitor Voltage: 120 Vac, 60 Hz.

PREPURGE: 32 seconds. BETWEEN TRIAL PURGE: 96 seconds (3 trial mode only). FLAME FAILURE RESPONSE TIME: 1.5 seconds maximum. IGNITION SEQUENCE:The number of trials for ignition and trial time is determined by the selection tab. If a selection tab is not installed, the module will operate at four seconds trial time and one ignition trial.



Order No	Prepurge Time
S8910U3000	32 Seconds
3891003000	32 Seconds

S8610U Universal Intermittent Pilot Module

Field service replacement for most Honeywell, Robertshaw, Johnson, and UTEC intermittent pilot ignition modules.

- Provides ignition sequence, flame monitoring and safety shutoff for intermittent pilot central furnaces and heating appliances.
- Provides 100 percent pilot gas shutoff if pilot fails to light; after 6-minute delay, trial for ignition is repeated. Ignition trial/delay sequence is repeated until the appliance lights or call for heat is removed.
- For use with Natural or LP gas.
- Functional equivalent of S86, S8600, S8610 and S90 Modules.
- Includes cable adapters to allow field replacement of both Honeywell and competitive controls without replacing existing cable.

Order No.	Lockout Timing	Application
S8610U3009	90 sec.	For use in single rod or dual rod/remote sense applications.

50D50U-843 Universal Intermittent / DSI Module

The All-SparkTM 50D50U-843 is a non-integrated 24V single stage spark ignition module. This control is designed to replace either 24V Intermittent Pilot (IP) or 24V Direct Spark Ignition (DSI) applications. Additional modifications can be made to replace applications with a rollout switch or edge card harness.

30

- Comes set to match the Honeywell 8610U Universal module.
- Utilizes White-Rodgers Connect app to configure for replacement of popular Fenwal, Robertshaw, Johnson, Baso, and Camstat modules.
- For use with Natural or LP gas.
- Operating Temperature: 40°F (-40°C) Min, 175°F (80°C) Max
- Local or remote flame sense capable.
- Various options for ignition attempts, trial times, pre-pure times, and auto-restart times.

Order No.	Lockout Timing	Application
50D50U-843	Configurable	For use in 24V intermittant and direct spark applications.





50D50U-843

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780 Direct Spark Ignition Modules (DS845)

DS845 Series Direct Ignition Controls are applicable to commercial cooking equipment, gas-fired heating and water heating systems of many types.

Order No.	Factory No.	Pre-Purge	Non-Pre-Purge	Remote Sensor	Local Sensor	Ignition Attempts (Before Lockout)	Valve Trial Time (sec.)	Supply Voltage
780-502	100-00832-13 DS845-NL-1-4		•		•	1	4	24 VAC
780-503	100-00832-17 DS845-PR-1-4	•		•		1	4	24 VAC
780-504	100-00832-21 DS845-NL-3-7		•		•	3	7	24 VAC



780-501

780 Hot Surface Ignition Modules (HS)

The 780 Hot Surface Ignition Module is designed for use on gas-fired heating systems.

Order No.	Factory No.	Pre-Purge	Non-Pre-Purge	Remote Sensor	Local Sensor	lgnition Attempts (Before Lockout)	Valve Trial Time (sec.)	Supply Voltage
780-783	HS-34PL-308A	•			•	3	8	120 VAC
780-785	HS780-34NL-306A		•		•	3	6	120 VAC
780-790	HS780-17NL-304A		•		•	3	4	120 VAC



780-783

780-845 Intermittent Ignition Module (SP845)

Provides 90 seconds of spark, followed by a 6 minute time delay (purge) between ignition attempts. After three tries, if no pilot flame is sensed, 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 three tries for ignition.

NOTE: During lockout, you may override the auto-system and manually reset the unit at the thermostat.

Specifications Input Voltage: Transformer: Safety Lockout Timing: Flame Failure Reignition Time: Ambient Temperature Rating:

24 VAC to 50/60 Hz 24 VAC/20 VA 90 seconds 2 seconds maximum -40°to 175°F(-40°to 80°C)

Orde	er No.	Factory Model	Description
780	-845	SP845NU-3-C	Universal lockout module has three 90 second trials interrupted by a 6 minute purge cycle before 100% lockout



* Module has green diagnostic LED light to indicate normal operation or if failure occurs.

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780-002 Universal Ignition Module (SP845)

Features a lockout feature to shut off all gas to the furnace should pilot ignition fail to occur after 3 tries. Each ignition period is 90 seconds followed by a 6 minute time delay between ignition attempts. After 3 tries if no pilot flame is sensed, unit goes into lockout and must be reset at the thermostat.

Also features a flame sense circuit that will work equally well on a one rod (local sense) or a two rod (remote sense) application. Includes vent damper adaptor assembly.

Specifications

Input Voltage Transformer Flame failure reignition time: Ambient Temperature Rating: 24 VAC to 50/60 Hz 24 VAC/20 VA 8 seconds maximum -40°to 175°F(-40°to 80°C)



Order No.	Factory Model	Description		
780-002	SP845	Lockout Universal Ignition Module		

780-715 Non-Lockout Module (SP715)

Non-Lockout ignition module for NATURAL GAS ONLY. Features a flame rectification system. Use with gas valves 7000BDER, 7100DER, and 7200IPER. Replaces SP715 and SP715A.



78071	5

Order No. Factory Model		Description
780-715	SP715U	Non-Lockout. Natural gas ONLY.

50E47 Universal Hot Surface Ignition Module (Non-Integrated)

The universal non-integrated 50E47-843 replaces all White-Rodgers 50E47 Modules. For use with all gases on single stage applications. Includes program keys for multiple timing selections and tri-colored LED indicator for diagnostics.

TEMPERATURE RATINGS:

Ambient: -40°F to + 175°F (-40°C to + 79°C) SENSOR:

Direct and Indirect Flame Sensing Options. Includes jumper to accomodate systems using Direct (sensing through the ignitor) or Indirect (sensing through a flame sensor). ELECTRICAL RATING:

Input Voltage: 18-30 VAC 60 Hz.

Valve Contacts: 1.5 amp @ 25 VAC 60Hz

Hot Surface Ignitor Voltage: 6.0 amp @ 120 VAC, 60 Hz

Order No.	Lockout Time	Ignitor Warm Up Time	Pre-purge Time	Retries
50E47-843	4 or 7 Sec.	17 or 45 Sec.	30 Sec.	0 or 2



50E47-843

50A55 Universal Integrated Furnace Control

Controls gas valve, ignitor, blower, inducer, humidifier and air cleaner. For use with single stage applications. Replaces most 50A50 and 50A55 modules.

Includes flash code diagnostics

- Includes mounting hole template
- Adjustable blower relay

Order No.	Pre-purge	Retries	Trial for Ignition Period
50A55-843	30 Sec	2	4 Sec.



50A55-843

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Ignition Modules



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Ignition Modules

COOKING MODULES

6500 Series Spark Modules



6513S0001



BR1801B173

Order No.	Description	Replaces
6513S0001	2 + 1 Combination (2 top burner + 1 oven)	Harper 6513 modules, Robertshaw SM3 and 41-513.
BR1801B173	3 + 1 Combination (3 top burner + 1 oven)	Harper 6549G1004



Many other ignition modules are available. For assistance finding the right one for your application, please *call us* with your unit's Brand, Model, and Serial number, or the numbers directly off of your module.
Ignition Modules



Ignition Modules

Miscellaneous

785 Series - Automatic Pilot Relight Kits

Designed for use on rooftop heating equipment, water heaters, boilers, space heaters, unit heaters, dryers, and other commercial, industrial, and residential appliances where the problem of pilot outage may occur. Ambient Temperature -40 to +185°F



Gas Valves

Order No.	Inlet & Outlet Size
1710-110	1/4" Pipe
1710-111	3/8" Pipe
1710-126	1/2" Pipe
1710-113	3/8" Tubing
1710-112	7/16" Tubing

Order No.	Pilot Size	
Inlet & Outlet Model - TS "J" Head		
1720-801	Kit, 1/8" Pipe, 3/16" Tubing, 1/4" Tubing	
Outlet Only Model - TS "K" Head		
1720-802	Kit, 1/8" Pipe, 3/16" Tubing, 1/4" Tubing	

Roberstshaw 1720 (TS11J) Complete Magnet Head and Body Assembly



1720-004

Order No.	Body Inlet & Outlet Size	TS "J" Head Pilot Inlet & Outlet Size	OEM
1720-004	7/16" Tubing (Compression)	1/4" Tubing (Compression)	Vulcan
1720-005	1/4" Pipe	3/16" Tubing (Compression)	US Range, Duke, Imperial, Wells
1720-006	3/8" Pipe	3/16" Tubing (Compression)	Garland
1720-007	1/2" Pipe	1/4" Tubing (Compression)	Garland, Southbend
1720-008	1/4" Pipe	1/4" Tubing (Compression)	Wolf, DCS

If you do not see the part you are needing, please *call us* with your unit's Brand, Model, and Serial number.

Baso H15 Series (With Flow Interrupter)

Description:

Pilot gas is taken from the main line upstream of the valve. Control shuts off both main and pilot gases. Gas will pass only to pilot while the reset button is depressed. 100% Shut-off.

Order No.	Inlet & Outlet Female NPT (Pipe)	Pilot Tap	OEM		
	H15 Series (Pilot In & Out)				
H15AR-3C	3/8"	1/8" Pipe	Wolf		
H15HR-2C	3/8"	1/4" Compression	Garland		
H15EQ-3C	3/4"*	1/4" Compression			
H15FQ-1	1″	1/4" Compression			
	OEM H15 (Pilot In & Out) Valve	S		
IMP1110-1	3/8"	1/4" Compression	Imperial, Baso H15HR-3		
VU497765-2	3/8"	1/8" Pipe	Vulcan, Baso H15AR-4C		
* Packaged wit	h 3/4" to 1/2" and 3/4" to 3/	/8" reducer bushings.			

H15EQ-3C

Description:

Pilot gas is taken from within the valve. Control shuts off both main and pilot gases. Gas will pass only to pilot burner while the reset button is depressed.

Order No.	Inlet & Outlet Female NPT (Pipe)	Pilot Tap	Pilot Gas Flow	OEM
H15 Series (Pilot Out Only)				
H15DA-3C	3/4"**	1/8" Pipe*	Internal	
H15FA-1	1″	1/8" Pipe*	Internal	
	OEM H15 (Pilot Out Only) Va	lves	
VU498025	3/8"	1/8" Pipe	Internal	Baso H15AB-6C
* Pilot tap cor	* Pilot tap comes plugged ** Packaged with 3/4" to 1/2" and 3/4" to 3/8" reducer bushings.			

Baso H19 Series High Pressure

Features: 100% shutoff

- Specifications:
- Maximum inlet pressure = 25 PSIG

NOTE: Flow Interrupter feature allows gas to only go to the pilot during lighting. Non-Flow Interrupter allows gas to both the pilot and the burner during lighting.

Order No.	Inlet & Outlet Female NPT (Pipe)	Flow Interrupter	Pilot Tap	
H19LA-1	3/8"	Yes	1/8"	
H19TA-3*	1/4"	No	1/8"	
*If 1/4" needed with flow interrupter, order H19LA-1 plus two (2) RB-3/8 x 1/4 reducer bushings.				



H19LA-1



H15DA-3C

Baso H15 Series (With Manual Pilot Adjustment Valve)



Features:	100%	shutoff
-----------	------	---------

- Specifications:
- Pilot gas is taken from within the control.
- Gas will pass only to the pilot while reset button is depressed.

Order No.	Inlet & Outlet Female NPT (Pipe)	Pilot Tap			
H15DH-3 3/4"**		1/8" Compression			
** Packaged with 3/4" to 1/2" and 3/4" to 3/8" reducer bushings.					

H15DH-3

Baso H17 Series (Without Flow Interrupter)



H17BB-1C

Features: 100% shutoff

Specifications:

- High temperature construction allows use in ambients up to 300°F (149°C)
- Maximum inlet pressure: 1/2 PSIG

Order No.	Inlet & Outlet Female NPT (Pipe)	Pilot Tap
H17AB-2	1/8"	1/8" Pipe
H17BB-1C	1/4"	1/8" Pipe
H17CB-3	3/8"	1/8" Pipe
H17DB-5	1/2"	1/8" Pipe

Baso H43 Series







Order No.	Inlet & Outlet Female NPT (Pipe)	Pilot Tap	Manual Valve Handle or Rod	Pilot Adjustment	OEM	
H43AA-12C	3/8"	1/4" Compression	Handle	Yes		
H43AB-4C	3/8"	1/4" Compression *	Handle	Yes	Cecilware	
H43BA-2C	1/2"	1/4" Compression	Handle	Yes		
H43GA-3**	1/2"	1/4" Compression	1/4" Square Rod	No		
	OEM H43 Series Valves					
STAR2J-8579	1/2"	1/4" Compression *	Handle	Yes	Star, Baso H43BB-2	
* Note Direct	* Note Direction of Pilot Tap. See Pilot Tap B. ** This value is primarily used on Floor Furnaces					

Roberstshaw 700 (7000GO) Series Millivolt Bleed Valves

These "bleed" valves are most commonly used in commercial fryers in conjunction with the 4290 (GS) Thermostat. Used on many Pitco Frialator models.



Order No.	Factory Model	Inlet (NPT)	Outlet (NPT)	Regulator Capacity*
700-881-LP	7000AMSGOR	1/2"	1/2"	LP Only / 100,000 Btu
700-881-NAT	7000AMSGOR	1/2"	1/2"	3.5" WC Nat Only / 100,000 Btu
700-886-LP† 7000BMSGOR 3/4" 3/4" LP Only / 305,000 Bt		LP Only / 305,000 Btu		
700-886-NAT ⁺ 7000BMSGOR 3/4" 3/4" 3.5" WC Nat Only / 305,000 Btu				3.5" WC Nat Only / 305,000 Btu
† Includes (2) 3/4" x 1/2" Reducer Bushings. * Btu / hr. Nat. Gas 100 Btu / cu. ft. gr. sp. 0.64 PD 1" W.C.				

700-881

Roberstshaw 4020 (FMDA) & 4030 (FMEA) Safety Valves



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Common / OEM Gas Valves				
Baker's Pride	Frymaster / Pitco 4 - Terminal / Millivolt	Frymaster / Pitco 3 - Terminal / Millivolt	Garland Dual Solenoid Valve	
			ASCITACIÓN DE LA CONTRACTO DE LA CONTRACTÓN	
Order No. Description BPM1557X TS11K	Order No. Description PI-60203002-CL LP PI-60203001-CL Nat	Order No.Description36C03U-433Nat / LP	Order No. Description GA1754902 LP / 24V	
Garland	Imperial Solenoid Valve / 120V	Imperial	Imperial New Style	
5 6 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0	BASDIFICI HURLEN AND HURLEN AND H			
Order No. GACK4603990	Order No.DescriptionIMP38181Baso H91DA-13	Order No.DescriptionBaso H15HR-3C 3/8" Inlet/Outlet (1/4" cc Pilot Taps to the right of inlet)	Order No.DescriptionIMP36014Safety / Thermostat Combo	
Southbend	Vulcan	Vulcan	Vulcan	
WARKING WARKING INCOMENTINA INTING INCOMENTING INTINO INTINO INTINO INTINO INT	A PARTIE OF			
Order No.DescriptionBaso H15CQ-3CSB11808661/2" Inlet/Outlet (1/4" cc Pilot Taps to the left of inlet)	Order No.DescriptionBaso H15AR-4C 3/8" Inlet/Outlet (1/8" NPT Pilot Taps to right of inlet)	Order No.DescriptionBaso H15AB-6CVU4980253/8" Inlet/Outlet (1/8" NPT Pilot Taps to the left of inlet)	Order No. Description VU497269-2 LP, 24V VU497269-1 Nat, 24V	

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Common / OEM (Gas Valves (Cont)	OEM N	/lanual Shuto	ff Valves
Vulcan	Vulcan	Blodget	t	Baker's Pride
Order No. Description VU819298 LP, 120V	Order No. Description VU770085-2 LP, 120V	Order N BL7854		Order No. BPR3001X
	Common /	OEM Burner Valves		
Universal Top Burner	Valve	Duke		Eagle
4626-001 1/8″ P Norm		Privation Description 3530 1/4" Comp	Order No. EA302102	Description 1/8" P x 1/4" Comp
4626-002 Push Garland	to Turn	Southbend		Wolf
	ription x 3/8 " P	Order No. SB1178202		der No. D19222

If you don't see the part you are needing, please *call us* with your unit's Brand, Model, and Serial number.

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Roberstshaw 4200 (FD) Series (Body Type 1)

Valve response is either snap throttle (FDO) using dual internal valves giving full on to off operation, or throttle (FDTO) using a single internal valve which gives full on to by-pass operation.



Model Type	Valve Action	Burner Flame Range	Typical Application
FDO	Snap Throttle	Full to off	Oven (150 to 550°F)
FDTO	Throttle	Full to by-pass	Oven (Low to 550°F)
FDH	Snap Throttle	Full to off	Oven (650°F)
FDTH	Throttle	Full to by-pass	Oven (650°F)
FDL	Snap Throttle	Full to off	Liquid - Fryers
FDTL	Throttle	Full to by-pass	Liquid - Fryers
FDS	Snap Throttle	Full to off	Surface Griddle
FDTS	Throttle	Full to by-pass	Surface Griddle

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Gasket P/N 40-659

Order No.	Model Type	Inlet Side"F	Inlet Rear"H"	Outlet Side "E"	Outlet Rear "G"	Pilot Outlet	Capillary Length	Mounting Position	Bulb Size (Nickel)			
	100 TO 450°F											
4200-401	FDS	3/8" Pipe	3/8" Pipe	3/8" Pipe		Rear	30"	Up	3/8" x 3-1/2"			
				150 T	O 550°F							
4200-002	FDO		7/16" Tube		7/16" Tube	None	48"	4-Way	3/16" x 14-3/4"			
4200-007	FDO	1/2" Pipe		1/2" Pipe		Side	48"	4-Way	3/16" x 14-3/4"			
4200-012	FDO		7/16" Tube		7/16" Tube	None	72″	4-Way	3/16" x 14-3/4"			
4200-017	FDTO	1/2" Pipe		1/2" Pipe		Side	54″	4-Way	3/16" x 14-3/4"			
4200-018	FDO	3/8" Pipe		3/8" Pipe		None	72″	4-Way	3/16" x 14-3/4"			
4200-025 Uni-Kit	FDO	3/8" Pipe	3/8" Pipe	3/8" Pipe	3/8" PIpe	Side & Rear	54"	4-Way	3/16" x 14-3/4"			
			L	.OW (200	°F) TO 550	°F						
4200-026 Uni-Kit	FDTO	3/8" Pipe	3/8" Pipe	3/8" Pipe	3/8" Pipe	Side & Rear	54"	4-Way	3/16" x 14-3/4"			
	300 TO 650°F											
4200-503	FDTH	1/2" Pipe		1/2" Pipe		Side	48"	4-Way	3/16" x 15-3/8"			
4200-514	FDH	1/2" Pipe		1/2" Pipe		Side	54"	4-Way	3/16" x 15-3/8"			

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Roberstshaw 4290 (GS) Series - Gas Snap-Action Hydraulic Control

The 4290 Series is a snap-action hydraulic thermostat used to obtain accurate temperature control by interrupting the main burner gas flow.





Controls do not have a pilot outlet

Order No.	Temp. Range	Replaces Factory No.	Capillary Length	Bulb O.D. (Nickel Finish)	Inlet Size	Outlet Size	Stuffing Box (Pipe Size)	
4290-008	60 to 250°F	GS-C8-060-00-14	60″	3/8" x 4-1/2"	3/8" Pipe	3/8" Pipe	3/8" Nickel	
4290-001	200 to 400°F	GS-01-030-01-14	30″	3/8" x 5-3/8"	1/4" Tubing†	1/4" Tubing†	1/4" Nickel	
4290-005	200 to 400°F	GS-A5-048-04-14	48″	1/4" x 11-7/8"	1/4" Tubing†	1/4" Tubing†	3/8" Nickel	
4290-006	200 to 400°F	GS-A6-030-18-14	30″	3/8" x 5-3/8"	1/4" Tubing†	1/4" Tubing†	1/4" Nickel	
4290-011	200 to 400°F	GS-11-030-00-14	30″	3/8" x 5-3/8"	3/8" Pipe	3/8" Pipe	3/8" Nickel	
4290-020	220 to 550°F	GS-J1-036-00-04	36″	3/16" x 12-1/4"	1/4" Tubing†	1/4" Tubing†	3/8" Nickel	
† In	† Includes fitting for 3/16" tubing.							

Roberstshaw 4350 (BJWA) Commercial BJ Thermostats

4350 Commercial Thermostat Kits are designed specially for heavy-duty commercial oven and griddle applications. These thermostats can be mounted in any of the four manifold positions. Rear housing may be rotated as required. Plugs are included with models having 4-position outlet tapping.





Order No.	Temp Range	Main Outlet(s) Size	Main Outlet(s) Position	Pilot Outlet	Capillary Length	Bulb Size	Notes				
	BJ KITS FOR OVENS										
4350-027	250 to 550°F	1/4" Pipe	A,B,C,D	Yes	48″	3/16" x 11-3/16"	Wide Flange				
4350-030	250 to 550°F	1/4" Pipe	A,B,C,D	Yes	72″	3/16" x 11-3/16"	Wide Flange				
4350-029	250 to 550°F	7/16" Tubing*	С	Yes	48″	3/16" x 11-3/16"	Wide Flange				
* 1/4" pij	pe & 3/8" tubing fitt	tings included.									
	BJ KITS FOR GRIDDLES										
4350-028	150 to 400°F	1/4" Pipe	A,B,C,D	Yes	36″	3/16" x 8-5/8"	Wide Flange				
		BJ FOR A STE	AM TABLE (HA	AS 3/8″ S	TUFFING	BOX)					
4350-034	100 to 200°F	7/16" Tubing	С	Yes	36"	3/16* x 15" Copper	Steam Tables, Duke 3509				
		BJ FOR	OVENS - EXACT	REPLACE	MENTS [†]						
4350-038	250 to 550°F	1/4" Pipe	B,D	Yes	24″	3/16" x 11-3/16"	Vulcan 20028				
4350-043	250 to 500°F	1/4" Pipe	А	No	48″	3/16" x 11-3/16"	US Range 227019				
4350-044	250 to 550°F	1/4" Pipe	D	No	48″	3/16" x 11-3/16"	Vulcan 408823-6				
	BJ FOR GRIDDLES - EXACT REPLACEMENTS ⁺										
4350-049	150 to 400°F	3/8" Pipe	А	No	36″	3/16" x 12-3/4"	Garland 1224500				
+ Exact	replacements do not a	always include all access	ory parts.								

Warning

BJ Thermostats are VERY sensitive to changes of the calibration screw. Every notch shown around the ring represents a 25° change in temperature. Anything past a 1/4 turn (90°) in either direction will damage the thermostat and void the manufacturer's warranty. Also, rotating the rear housing requires special instruction. Please check out the **"Tech Resources"** section of this catalog for more information.

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Flange Nipple Kit 4510 (BJFMA Series) Narrow type with "O" rings and adaptors to convert from 1/8" pipe to a 9/16" pipe thread size. Includes 1 each: 15/32" length 19/32" length

23/32" length



Roberstshaw 5300 (KX/RX) Series Millivolt Electric Thermostats



The RX Series are millivolt direct current thermostats.

They are SPST - Break on temperature rise.

Maximum ambient temperature: 230°F (110°C) Stem length: 13/16".

NOTE: Use of this control on alternating current (AC) will damage the switch.

Order No.	Dial Temp Range	Capillary Length	Bulb Size	Stuffing BoX	Stem Flat Position	Robertshaw Model #	OEM Part No. / Comments
5300-401	200-400°F	36″	3/8" x 5-5/8" Nickel	1/4" Pipe	Down	KX-87, KX-299	Pitco 60125401 + 5047587, Imperial 1175 + 0319, Dean 1209
5300-402	200-400°F	24"	3/8" x 5-5/8" Nickel	3/8" Pipe	Down	KX-396, RX-2	Vulcan 411506-13, Star 2T-Y9265
5300-403	200-375°F	24"	3/8" x 5-5/8" Nickel	1/4"Pipe	Down	KX-404, RX-3	Frymaster 807-1692
5300-404	245-406°F	30"	5/16" x 8-3/4" Stainless Steel	NONE	Left	KX-216, KX-439	Keating 021081 + 17370
5300-406	200-375°F	36"	3/8" x 5-5/8" Nickel	3/8" Pipe	Down	KX-433	Cecilware L345A

Roberstshaw 5300-700 (KX) Series Electric Low Voltage Thermostats



Contacts are rated for 50 VA PD.

Maximum ambient temperature: 230°F (110°C) Stem length: 13/16".

5300-711

Order No.	Dial Temp Range	Capillary Length	Bulb Size	Bracket Dimensions	Stem Flat Position	Factory Model #	OEM Part No. / Comments
5300-770	175-500°F	60"	3/16" x 11-5/8" Nickel	1-3/4"	Down	KX-112	Vulcan 411506-3
5300-711 ⁺ ∆	200-400°F	36″	3/8" x 5-5/8" Nickel	1-3/4"	Down	KX-87	Dean 1204
5300-796* Δ	200-375°F	36″	3/8" x 5-5/8" Nickel	1-3/4"	Down	KX-433	Cecilware L345A
5300-757 ∆	245-400°F	30″	5/16" x 10-1/2"	1-3/4"	Left	KX-439	Sleeving on Cap
Δ Contro	Control is dip-sealed / * Has 3/8" pipe			stuffing box - Ni	ckel / † Has 1	/4" pipe stuffi	ing box - Nickel

Roberstshaw 5225 (LCC) Series AUTOMATIC Reset Limit Controls



The 5225 Series Automatic Reset or cycling models do not have a reset button and feature SPDT switch action. Should the temperature exceed the control's fixed setting, the normally closed (N.C.) contracts will open. At the same time the normally open (N.O.) contacts will close, and could be used to signal the over-temperature condition if so desired. Temperature must drop approximately 25°F before the normally closed contacts will reset.

Mounting Brackets: See chart at the bottom of this page.

Replacement Models - Automatic Reset

Order No.	Temp. Setting (Fixed)	Capillary Length	Bulb Size (Nickel Finish)	Stuffing Box	Mounting Bracket	Factory Model No.	OEM Part No. / Comments
5225-207	425°F	36"	5/16" x 3-5/8	1/4"Pipe	#7	LCCM-21-036-00-00	Dean 2191
5225-011	450°F	30"	1/4" x 4-7/8"	1/4"Pipe	#1	LCCM-28-030-00-00	South Bend 1054200
5225-028	450°F	36"	5/16" X 3-5/8"	3/8"Pipe	#1	LCC-08-036-00-00	Wolf 13803

Roberstshaw 5225 (LCH) Series MANUAL Reset Limit Controls



The 5225 Series Manual reset models have a reset button and feature SPST switch action. The reset button is a trip free design, and the switch contact will reset only when the reset button is released after being depressed. Temperature must drop approximately $50^{\circ}F$ before the switch contacts can be closed by depressing the reset button.

Mounting Brackets: See chart at the bottom of this page.

Replacement Models - Manual Reset

Order No.	Temp. Setting (Fixed)	Capillary Length	Bulb Size (Nickel Finish)	Stuffing Box	Mounting Bracket	Factory Model No.	OEM Part No. / Comments
5225-073	440°F	36″	5/16" x 3-5/8"	None	#15	LCHM-24-036-00-00	Cecilware L346A
5225-112	450°F	30"	1/4" x 4-7/8"	1/4"	#3	LCHM-05-030-00-00	Pitco PP10084
5225-009	450°F	30"	5/16" x 3-5/8"	None	#1	LCH-37-030-00-00	Star 2T-Y1668
5225-059	450°F	36"	5/16" x 3-5/8"	3/8"	#1	LC-14-036-00-00	Star 2T-Y1860
5225-015	490°F	30"	1/4" x 6-1/2"	None	#4	LCH-AB-030-00-00	Hobart/Vulcan

Mounting Bracket Type





Type #3



Type #4







Type #15



Type #1

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Type #7

Type #10

Stuffing Box

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Cooking - Commercial

Pilots

Common / OEM Pilots Popular Fryer Pilot Commonly used on Pitco, American, DCS, Popular Fryer Pilot Commonly used on Star, Southbend, and Wells Fryers **Popular Oven Pilot** Commonly used on Garland, Vulcan, and US Range Ovens Southbend, and Anets Fryers Order No. Order No. **Type Gas Type Gas Type Gas** Nat/LP 1830-489 Nat/LP 1830-490 Nat/LP Blodgett Frymaster Order No. **Type Gas** Order No. Type Gas BL18585 LP LP FR810-0427 Imperial Pitco



Baker's Pride



Order No.	Type Gas
BPM1222X	LP
BPM1220X	Nat

Garland



Order No.	Type Gas
GA4522787	LP



Order No.	Type Gas
AMRA11132	Nat/LP
AMRA11132	Nat/LP



Order No.	Type Gas	
PI-60130902	LP	

Popular Fryer Pilot Commonly used on Imperial, Cecilware, Royal, Tri Star, and Vulcan Fryers



Order No.	Type Gas
1830-491	Nat/LP

Frymaster



Order No.	Type Gas
FR810-2155	LP



Order No.	Type Gas	
VU426262-2	LP	

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Ignitors & Modules



Customer Service - (800)334-5886

Order No.

VU424137-2



Gas Thermostat Knobs

4200 (FD Series) SLIP-FIT 4-Way mount dial kits. Includes blank knob and overlay.



4590-077

Order No.	Temperature Range	
4590-077	150-550°F	
4590-078	Low-550°F	
4590-079	300-650°F	
4590-515	Knob	

4200 (FD Series) SLIP-FIT Dial Overlays.



4590-470

Order No.	Temperature
4590-470	150-550°F
4590-471	200-550°F
4590-472	300-650°F

4350, 4500, 4700, 4800 (BJWA, BJ, BH and U Series) Dials For "D" stem applications. Mounts four ways. **4350, 4700** (BJWA, U Series) Griddle Type. For "D" stem applications. Mounts four ways.

Order No.	Dial Marking	Color
4590-002	250-550°F plus Broil	White
4590-003	250-550°F plus Broil	Black



4590-004

Order No.	Dial Marking	Dial Color	
4590-004	150-400°F	Black	

4400, 4510, 4700, 4800 (BJWA, MP, UAF, BH and UHF Series) Lo-temp oven dial for "D" stem application. Mounts four ways.

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4590-023

Order No.	Dial Marking	Dial Color
4590-022	140-550°F plus Broil	Black
4590-023	140-550°F plus Broil	White

Electric Thermostat Knobs & Overlays

SLIP-FIT 4-Way Mount Dials for "D" stem type kit controls. Includes blank dial and overlay. All stem sizes are .187

Order No.	Temperature Range	
4590-089	150-500°F & Broil	
4590-090	1-10	
4590-092	Hold 1-2-3 Broil	
4590-093	60-250°F	
4590-094	100-200°F	
4590-095	100-450°F	
4590-096	100-550°F	
4590-097	200-550°F	
4590-099	300-700°F	
4590-516	Knob	



4590-090

SLIP FIT Dial Overlays

Order No.	Temperature Range	
4590-490	1-10 Narrow Arc	
4590-492	Broil, 3, 2, 1, Hold	
4590-493	60-250°F	
4590-494	100-200°F	
4590-495	100-450°F	
4590-499	300-700°F	



4590-495

Common / OEM Commercial Cooking Knobs				
Universa Top Bi	al Commercial urner Knobs	Comstock Castle	Duke Mfg. High-Med-Low	Eagle
	<u>P</u>	OFF CASTLE OP	HOLDW HOLDW	EAGLE MOT ON
Order No.	Description	Order No.	Order No.	Order No.
B-98	Chrome Metal	CC-18030	DU3511	EA302095
B-278	Black Plastic (Heat Resistant)			
Fr	ymaster	Garland	Garland	Garland Oven Knob
AN	Meller	93 OSt ODt OF	099 099 091 091	DVEN
	Order No. 8810-0334	Order No. GA1086703	Order No. GA1314003-B	Order No. GA1089101
		5	4	

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There are many other knobs available. If you do not see the part you are needing, please *call us* with your unit's Brand , Model, and Serial number.

Cooking - Commercial

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We carry a full line of appliance regulators and food-service installation products. Be sure to check out both the "Regulators & Solenoid Valves" and "Installation - Test Equipment - Tools" sections of this catalog to find regulators, commercial-grade gas hoses, and diagnostic tools.

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Gas Valves

Common/ OEM Residential Cooking Safety Valves



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Common/ OEM Residential Cooking Top Burner Valves

4626 Series Universal Top Burner Valve

Valve has a .240" stem flat height, flat down, 2" stem (from center of inlet), 1/8" pipe inlet with needle valve and orifice hood for LP or Natural gas applications. Needle and orifice hood included.

For most LP gas applications, tighten hood down against needle. For most Natural gas applications tighten hood down against needle and then back it off 1 1/4 turns. In either case, adjust hood until burner maintains a constant blue flame.

Most residential range burner valves are specfic to their model. Please *call us* with your Brand, Model, and Serial numbers so we can find the valve that is right for your application!



Thermostats & Range Controls





Cooking – Residential

Universal Residential Range Ignitor Kit Round Oven Ignitor Includes 41-202, 41-203, 41-204, 41-207, 18" Leads (Amperage Range: 2.5 - 3.0) TH130, and WH12400035 in a sturdy plastic box. Order No. Order No. TH130 **RI-KIT Ignition Modules** Frigidaire **Common Ignition Module** Used on Brown, GE, Whirlpool, Maytag, Peerless, and others Brown 13 Order No. Order No. Order No. BR1801B173 EL316135702 6513S0001 Frigidaire Whirlpool / Maytag



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Be sure to check out the "Regulators & Solenoid Valves" section of our catalog for a wider selection of appliance and step-down regulators.



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Robertshaw w/ Hi-Lo Regulator (Thermopile Only)



Order No.	Type Gas
710-503-LP	LP
710-503-NAT	Nat

SIT w/ Hi-Lo Regulator For Vented Units (Uses Std Thread Thermocouple)



Order No.	Type Gas
SIT0820651	LP
SIT0820652	Nat



Robertshaw

w/ Fixed Regulator (Thermopile Only)

Order No.	Type Gas
710-502	Nat/LP

SIT w/ Hi-Lo Regulator For Vent-Free Units (Uses Metric Thread Thermocouple)



Type Gas
LP (10" Max)
LP (8" Max)
Nat

Robertshaw w/ Hi-Lo Regulator

Common / OEM Millivolt Hearth Gas Valves



pe Gas
at/LP

SIT w/ Fixed Regulator For Vented Units (Uses Std Thread Thermocouple)



Order No.	Type Gas
SIT0820657	LP
SIT0820656	Nat

Robertshaw w/ Fixed Regulator



Order No.	Type Gas
710-508	Nat/LP

SIT w/ Fixed Regulator For Vented Units (Thermopile Only)



Order No.	Type Gas
SIT0820617	LP
SIT0820618	Nat
SIT0820640	Nat

Peterson Mertik Maxitrol



Order No	Type Gas
PETESV-25	LP
PETESV-24	Nat

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		-
		-



Heat-N-Glo

w/ Hi-Lo Regulator Extended Knob

Order No.	Type Gas
HG060-523	LP
HG060-522	Nat

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SIT Eurosit 630





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SIT Retrofit Kits

REPLACEMENT OF OBSOLETE HONEYWELL VS8420E AND VS8421D VALVES WITH SIT RETROFIT KITS



Each kit includes (1) SIT valve, (1) piezo Ignitor, and (1) ignitor mounting bracket + screw.



For Vented Units:			
Order No.	Type Gas		
SITKITV-LP	LP		
SITKITV-NAT	Nat		
For Vent-Free Units:			
Order No.	Type Gas		
SITKITVF-LP	LP		

Nat

SITKITVF-NAT

If you need to replace a Honeywell VS8420E or VS8421D Series gas valve, it is possible that one of our SIT kits may work as a replacement. As noted below, there are a few things to keep in mind when determining whether this retrofit will work for your application...

Is the Honeywell valve's inlet and outlet straight through?

If so, then it is likely the SIT kit will work as a replacement for your valve. *PLEASE NOTE: You may find that the inlet and outlet on the two valves will be REVERSED. If so, you will need to repipe the inlet and outlet on your unit with flex lines, as the new valve cannot be flipped around.

If the inlet and outlet on the Honeywell valve are NOT straight-through, it is unlikely the SIT kit will work for your application as existing brackets may block the SIT valve from being installed properly.

Does your Honeywell valve have a motorized (variable flame height) operator?

If so, the SIT kit will not work as a proper replacement unless the dual thermopile pilot and variable flame height remote are changed as well. Please call for assistance on this changeover.

Log Lighter Valves



LLVS-1/2

LLVS-1/2-B



LLVS-1/2-B LLVA-1/2 LLV-K

Order No. Description LLVS-1/2 Chrome Valve **Brass Valve** Chrome Valve (Angled) **Replacement Brass Key**

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Thermopile - Q313A1014

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Order No.	Type Gas	
SITLPG8409	LP	

Buck Stove 1/4" Male (Pilot Only)



Order No.	Type Gas	
BUCKPE2150054	LP	
BUCKPE2150053	Nat	



Order No.	Type Gas	
SITLPG8427	8427 LP	

Rasmussen 1/4" Female (Thermocouple is Standard Thread)



Order No.	Type Gas	
RASODS-CN-LP	LP	
RASODS-CN-NG	Nat	

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	Common Electronic	Ignition Hearth Parts	
3V Dexen Module	6V UT Module	3V Dexen Valve w/ Hi-Lo Regulator	3V Dexen Valve w/ Fixed Regulator
DEEN AND AFRIGA			
Order No. HG593-592 Yower Supply: HG593-593A Battery Pack: HG593-594A	Order No. HG2166-307 Power Supply: HG2326-131	Order No. Type Gas HG750-501 LP HG750-500 Nat	Order No. Type Ga HG593-501 LP HG593-500 Nat
3V Pilot	3V Pilot	SIT Fireplace Burner Control	SIT Fireplace Burner Control
			(0.584.302)
Order No. Type Gas HG4021-731 LP HG4021-730 Nat	Order No. Type Gas HG2090-013 LP HG2090-012 Nat	Order No. SUPH8656	Order No. MEN05-02-00352
	Piezo I	gnitors	
Universal s Most Piezo Applications (Spring Clip Mounting)	Universal Fits Most Piezo Applications (Has Retaining Nut)	Universal Fits Most Piezo Applications (Has Retaining Nut)	Vanguard Electronic Piezo AAA Battery (MARK 8-2-1.5-T5B)
C.C.C.			
Order No. MA020676	Order No. MA020676R	Order No. MA020676R	Order No. VA123651-01

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Common / OEM Hearth Blowers

Skytech Universal Blower Kit



13" Long x 4" High x 5" Deep

Order No.	Description	
SKYFK-180-RT	Controlled by Rheostat + Fan Switch	
SKYFK-180-ESC	Controlled by Electronic Speed Control	
SKYFK-ESC	Replacement Electronic Speed Control	

Heat-N-Glo

Description Controlled by Electronic

Fan Timer

Replacement Fan Timer

Order No.

HGGFK-160B

HG4021-708

Skytech Universal Blower Kit

"ESC"

Description Controlled by Electronic

Speed Control

Replacement Fan Timer

Dimensions: 12.25" Long x 3.75" High x 4.5" Deep

Order No.

SKYFK-165-ESC

SKYFK-ESC

Heat-N-Glo



Order No.	Description
HGGFK-160A	Controlled by Rheostat + Fan Switch
HGSRV107-570A	Rheostat + Fan Switch Only
HG100-510A	Rheostat Only
HG107-531	Fan Switch Only

Heatilator

Order No.	Description
HEATGFK4B	Controlled by Electronic Speed Control
SKYFK-ESC	Replacement Fan Timer

Lennox Hearth / Superior



Order No.	Description
SUPFBK100	Controlled by Manual Switch
SUPFBK200	Controlled by Rheostat Only
SUPFBK250	Controlled by Rheostat + Fan Switch

Regency



Order No.	Description
REG910-331/P	Manual Blower
REG910-330	Optional Rheostat



	Description
HEATGFK4B	Controlled by Electronic Speed Control
SKYFK-ESC	Replacement Fan Timer

Monessan



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Heating - Hearth Parts

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			_
	Common / OEM Re	emote Control Kits	
Skytech On/Off	Skytech On/Off/Temp	Skytech On/Off/Thermostat	Skytech On/Hi - Off/Lo
Order No.	Order No. SKY1001TLCD	Order No.	Order No.
SKY1001 Heat-N-Glo	Peterson	SKY3301	SKYMRCK
	Variable Flame Height	You can add a rem <u>Millivolt</u> controlled <i>call us</i> for assistanc	<u>u</u> know? ote control kit to any hearth system. Please te on which remote kit our application!
Order No. HGSMARTSTAT-HHT	Order No. PETEVR-1A	is right for ye	
	Common / OEM Heartl	h Fan & Limit Controls	
Empire / Monessan Fan Switch F145	Empire Fan Switch (f165-2)	Empire Fan Switch (F207-32) Dime Size	Heat-N-Glo Limit Switch 325F
Order No. MON26D5011K	Order No. EMR1156	Order No. MON26D2870	Order No. HG4021-383
Heat-N-Glo Electronic Fan Timer	Heat-N-Glo Limit Switch 325F	Heatilator Limit Switch 350F Dime Size	Heatilator Limit Switch L160-35C Dime Size
Order No.	Order No.	Order No.	Order No.
HG4021-708	HG092-531	HEAT24967	HEAT24968A
	72		ww.controlsingas.com

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Heating - Hearth Parts

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Common / OEM Space Heating & Furnace Gas Valves (Continued) Robertshaw Robertshaw Robertshaw Hydraulic w/ Temp Dial 24V (Standing Pilot) 120V Line Voltage Order No. Order No. Description Description LP, 36" Capillary Nat/LP 1/2" x 1/2", (2) 1/2" x 3/8" bushings included 1/2" x 3/4", (1) 3/4" x 1/2" 700-204 700-402 bushing included 700-205 Nat Robertshaw Robertshaw Robertshaw Low Profile Hydraulic w/ Temp Control Millivolt 24V (IPI, HSI, DSI) Description Order No. Description Order No. Nat/LP, 750mv 3/4" x 3/4" (2) 1/2" x 3/4" LP, 36" Capillary 1/2" x 1/2", (2) 1/2" x 3/8" 700-506 710-203 bushings included bushings included 710-205 Nat Robertshaw Skytech SIT 24V Step-Opening American Flame (Standing Pilot) 1740

Order No.	Description
720-472	Nat/LP 1/2" x 3/4", (1) 1/2" x 3/8" bushing included



Order No.	Description
700-452	Nat/LP 1/2" x 3/4", (1) 3/4″ x 1/2″ bushing included



Order No.	Description
720-079	Nat/LP 1/2" x 3/4", (1) 3/4" x 1/2" bushing included

EuroSIT 630 Style



Many styles of the EuroSit 630 are available. Please call us with your Model info and/or the numbers off the valve itself for assistance.

Description

Nat/LP

Order No

SKYAF1000

Common / OEM Space Heating & Furnace Gas Valves (Continued)

White-Rodgers (Standing Pilot w/ ECO Installed) 24V



Order No.	Description
36C03-333	Nat/LP, 24V, 1/2" x 3/4" (1) 3/4" x 1/2" bushing included
36C03-433	Nat/LP, 24V, 3/4" x 3/4"

White-Rodgers



Order No	Description
36J24-214	Nat/LP, 1/2" 24V, Slow-Opening

Empire Mertik Maxitrol



Order No.	Description
EMR6102	LP, Hydraulic GV31B3A2LAG0-0001

White-Rodgers Millivolt



Order No.	Description
36C03U-333	Nat/LP, 750mv, 1/2" x 3/4" (1) 3/4" x 1/2" bushing included
36C03U-433	Nat/LP, 750mv, 3/4" x 3/4"

White-Rodgers



Unre 764-742 1/2'	
	gulated x 1/2" ht or 90°

Goodman White-Rodgers



Order No.	Description
GMCB12826-28	Nat, 36G22-254 For LP, add F92-0659

White-Rodgers 24V Redundant (IPI, HSI, DSI)



Order No.	Description
36H32-423	Nat/LP 3/4" x 3/4", (2) 1/2" x 3/8" bushings included

Empire Honeywell



Order No.	Description
EMR5655	LP VR8100C2991

Modine Honeywell



Order No.	Description
MO5H80682	Nat/LP VR8204M2925

Common / OEM Space Heating & Furnace Gas Valves (Continued)						
М	. Heater SIT	Nordy White	Nordyne / Miller White-Rodgers		Nordyne / Miller Honeywell	
Order No.	Description	Order No.	Description	Order No.	Description	
SIT0400099	LP, High Pressure	NOR1046626	Nat/LP VR8205R2091	NOR904081	Nat/LP VR8215S1289	
H N	Reznor oneywell	Wh	Trane iite-Rodgers	York Wh	/ Coleman ite-Rodgers	
Order No. RE209412	Nat/LD	Order No. TRVAL07731	Description Nat 36G22-209	Order No. YO02543267		

Be sure to also visit the "Heating - Gas Valves" section of this catalog for a wider selection of valves, as well as additional information on many of the valves listed here!



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Universal
Fits Most Piezo Applications
(Spring Clip Mounting)Universal
Fits Most Piezo Applications
(Has Retaining Nut)Enerco
Electronic Piezo
AAA BatteryVanguard
Electronic Piezo
AAA Battery
(MARK 8-2-1.5-T5B)Image: Display the second secon

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F767 Hot Surface Ignitors - 110 Volt

The White-Rodgers F767 is a highly reliable ignitor because it provides a much larger surface area to ignite the gas. It can be used with either a 15, 17, or 45 second warm-up time system. All replacements have 9" leads rated at 482° (250°C). Electrical Rating: 120v AC, 60 Hz, 5.0 amps.

F767A-357 Mounting Tab On Left Side Male Pins (0.93)



Mounting Tab On Right Side Male Pins (0.93)



F767A-366 Mounting Tab On Right Side 1/4" Female Spades



F767A-365 Mounting Tab On Right Side Male Pins (0.84)

41-400 Series Hot Surface Ignitors - 110 Volts

The 41-400 Series Ignitors deliver dependable ignition in heating systems; from furnaces and boilers to rooftop heaters, infrared burners, unit heaters, water heaters, and many other types of HVAC equipment. They are designed to reach ignition temperature within 17 seconds.





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For a wider selection, as well as additional information on the modules listed here, visit the **"Ignition Modules"** section of this catalog. Please *call us* with the Brand, Model, and Serial number for assistance identifying the correct module for your application.

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This is just a small sampling of the most common fan & limit controls. There are MANY more available. Be sure to check out the "Heating - Fan & Limit Controls" section of this catalog for a wider selection!

If you need assitance identifying the correct part, please *call us* with your unit's Brand, Model, and Serial number, or the numbers directly off your part.



Common / OEM Mobile Home & RV Pilots

Coleman

Coleman



Order No.	Type Gas
CO9880A0161	LP

Order No.	Type Gas
CO9849-0161	Nat/LP

Nordyne / Miller



Order No.	Type Gas
Q314A6102	Nat/LP



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White-Rodgers Manual Valve



SPECIFICATIONS:

100% Shut-Off Max Pressure 1/2 PSI 1/2" x 1/2" Straight-Through or 90° Angle (Uses Standard-Thread Thermocouple)

Order No.	Description
764-742	1/2" x 1/2", Unregulated.
F42-0895	Replacement Knob
40-026	Stem Length Adaptor (3-1/2")
F145-1112	Floor Furnace Rod Adaptor (3")

Temperature range Capillary Length Bulb OD and length Ambient temperature Maximum inlet pressure 58° to 90° F 36″ 1/4″ x 8″ -40° to 175° F 14″wc (1/2 PSI)

Robertshaw Snap-Throttle Hydraulic Valves

700-200 Series snap-action and snap-throttle (modulating) hydraulic controls are combination gas valves, thermostatically operated by a remote temperature sensing bulb.



700-204

Order No.	Description	Capacity ¹ (Btu)			
700-204	1/2" x 1/2" Unregulated*	160,000			
700-205 1/2" x 1/2" Nat 100,000					
* A separate pres the system.	ssure regulator may be	required for			

Robertshaw Line Voltage (120V) Combination Valves

700 Series 120V controls combine a manual gas cock, automatic pilot safety valve and silent line voltage operator. The automatic pilot valve provides gas shutoff in case of pilot outage. They can be mounted in any position except upside down.

Electrical rating Pressure regulator Pilot outlet Cover Type Ambient Temperature Lead length (std.) 32" Maximum inlet pressure 120VAC-0.34 amp, 50/60 Hz factory set @ 3.5" wc 1/4" tubing for conduit connection -40° to 175°F 14° W.C. (1/2 PSI)



700-452

Order No.	Factory Model	Inlet Size (FPT)	Straight- Thru (FPT)	Side (FPT) w/ Plugs	Pressure Regulator	Capacity ¹ (Btu)	Includes		
700-452	7000BER-120	1/2"	3/4"	1/2"	Nat (3.5" WC)	240,000	(1) LP Kit (1) 3/4" x 1/2" bushing		
700-454	7000BER-120	3/4"	3/4"	N/A	Nat/LP	300,000	(1) LP Kit (2) 3/4" x 1/2" bushings		
700-456†	7000ERHC-120-S7C	1″	1"	N/A	Nat (3.5" WC) Slow Opening	240,000	(2) 1/2" x 3/8"bushings		
+Has thermo	[†] Has thermopile type safety magnet. ¹ 1000 Btu/Cu Ft 0.64 specific gravity Natural gas (or 2500 Btu/Cu Ft 1.53 specific gravity LP gas) @ 1" WC p.d.								

Robertshaw Millivolt Combination Valves

700 Series Millivolt gas valves are wall thermostat actuated combination gas valves. These controls combine a manual gas cock, automatic pilot safety valve and a millivolt operator. The automatic pilot safety is separate from the gas cock and provides gas shutoff in case of pilot outage. Regulated and nonregulated models are available. Standard features include: pilot outlet, pilot gas filter and pilot adjusting key. These valves can be mounted in any position except upside down.

Electrical rating

Pressure regulator (optional by model) **Pilot outlet** Gas cock dial marking **Terminal type** Ambient Temperature 250 MV to 750 MV operating range

factory set @ 3.5" W.C. 1/4" tubing Off-Pilot-On 1/4" spade, 3/16" spade -40° to 175°F



700-511

Order No.	Factory Model	Inlet Size (FPT)	Straight- Thru (FPT)	Side (FPT) with Plugs	Pressure Regulator	Capacity (Btu) ¹	Includes			
700-502*	7000AMVR	1/2"	1/2"	1/2"	Nat/LP	100,000	(1) LP Kit, (2) 1/2" x 3/8" bushings			
700-504*	7000BMVR	1/2"	3/4"	1/2"	Nat/LP	240,000	(1) LP Kit, (1) 3/4" x 1/2" bushing			
700-506*	7000BMVR	3/4"	3/4"	N/A	Nat/LP	300,000	(2) 3/4" x 1/2" "bushings			
700-507	7000BMVR-S7C	3/4"	3/4"	1/2"	Nat (3.5" WC) Slow Opening	240,000	(1) 3/4" x 1/2" "bushings If for LP, also order 1751-013			
700-511	700-511 7000BMVR-S7C 3/4" 3/4" N/A Nat/LP Slow Opening 300,000						(2) 3/4" x 1/2" bushings			
700-522	7000MVRHC-S7C	1″	1″	N/A	Nat (3.5" WC)	600,000				
* Has coax	* Has coaxial thermopile connections. 1 1000 Btu/Cu Ft 0.64 specific gravity Natural gas (or 2500 Btu/Cu Ft 1.53 specific gravity LP gas) @ 1" WC p.d.									

Robertshaw Electronic Ignition Valves

These 700 Series gas valves are designed for intermittent pilot, direct spark and hot surface applications. They incorporate a manual valve, pilot valve, and a main gas pressure regulator.

> **Electrical Rating** Ambient rating Maximum Inlet Pressure

24 volt, 60 Hz -40°F to +175°F 14" wc (1/2 PSI)





			700-059							
Order No.	Factory Model	Inlet Size (FPT)	Outlet Size (FPT)	Pressure Regulator	Capacity ¹ (Btu)	Includes				
	Universal Single-Stage Models - Intermittent Pilot, Direct Spark, and Hot Surface Ignition									
700-056†	7000BDER-S7A	3/4"	3/4"	Nat/LP - Slow Opening	350,000	(1) LP Kit, (2) 3/4" x 1/2" bushings				
700-058†	7000DEHC-S7A	1″	1″	NONE* - Slow Opening	720,000	(1) LP Kit, (2) 1" x 3/4" bushings				
700-059†	7000DERHC-S7C	1″	1″	Nat (4.0" WC) - Slow Opening	720,000	(2) 1" x 3/4" bushings				
	Universal 2	-Stage Mo	dels - Inte	rmittent Pilot, Direct Spar	k, and Hot S	urface Ignition				
700-051	7000 BDER2-3- LP-S7C	3/4"	3/4"	LP (2.8" WC - 11.0" WC) Slow Opening	350,000	(1) LP Kit, (2) 3/4" x 1/2" bushings				
700-053	7000BDER2-4- S7A	3/4"	3/4"	Nat (1.3" WC - 3.5" WC) Slow Opening	350,000	(1) LP Kit, (2) 3/4" x 1/2" bushings				
	des parts to adapt to d					be required for the system.				

1000 Btu/Cu Ft 0.64 specific gravity Natural gas (or 2500 Btu/Cu Ft 1.53 specific gravity LP gas) @ 1" WC p.d.

Customer Service - (800)334-5886

www.controlsincgas.com parts@controlsincgas.com

Heating - Gas Valves

Robertshaw Low Profile Valves

710 Series low profile gas heating valves are designed for recreational vehicles and other applications with limited space. All models include a manual valve (gas cock), automatic pilot safety valve, pilot outlet, pilot gas filter and pilot adjusting key. These valves can be mounted in any position except upside down.



Customer Service - (800)334-5886

Robertshaw Low Capacity Dual Valve

Designed for intermittent pilot, direct spark or hot surface heating applications. Incorporates dual automatic valves (redundant) that are pressure regulated and come factory set at 3.5" wc for natural gas. Can be converted to LP by installing the regulator conversion kit that is included. Can be mounted in any position except upside down.



Electrical Rating Pilot Outlet (optional) Ambient Rating Maximum Inlet Pressure 24 VAC, 0.4 amps 1/4" tubing -40°F to 175°F 1/2" PSI

Order No.	Factory Model	Inlet Size	Outlet Size*	Pressure Regulator	Capacity (Btu)	Includes			
722-051 7200ER		1/2"	3/4"	Nat/LP+	125,000	(1) 1751-025 LP Kit			
. + LP Regulator is adjustable from 8"-11" WC									

Robertshaw 24V Valves

These 720 Series valves are designed for Intermittent Pilot Ignition (7000IPER models) and Hot Surface Ignition (7000DER models) applications. These valves incorporate a manual valve, pilot valve (IPER models only), dual automatic valve, and a main gas pressure regulator.





Electrical Rating Terminal connections Pilot outlet Ambient rating Maximum Inlet Pressure 24 VAC, 50/60 Hz .45 amp. 1/4" & 3/16" quick-connect 1/4" tubing -40°F to +175°F max. 14" W.C. (1/2 PSI)

720-054	
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Order No.	Factory Model	Inlet Size (FPT)	Outlet Size (FPT)	Side Outlet (FPT) w/ Plugs	Pressure Regulator	Capacity ¹ (Btu)	Includes			
	Universal Models - Intermittent Pilot, Direct Spark, and Hot Surface Ignition									
720-079	7200ERC	1/2"	3/4"	1/2"	Nat/LP	Nat - 200,000 LP - 320,000	(1) LP Kit (1) 1" x 3/4" bushings			
		Int	ermittent	Pilot - Slow O	pening Model					
720-070	7200IPER-S7C	1/2"	3/4"	N/A	Nat/LP Slow Opening	Nat - 200,000 LP - 320,000	(1) LP Kit (1) 3/4" x 1/2" bushings			
	Hot Surface Ignition - Standard Model									
720-051	7200DER (Has NO pilot outlet)	1/2"	3/4"	1/2"	Nat/LP	Nat - 200,000 LP - 320,000	(1) LP Kit, (1) 3/4" x 1/2" bushings			
		Hot	Surface Ig	nition - Slow (Opening Model					
720-050*	7200DER-S7C (Has pilot outlet)	1/2"	3/4"	N/A	Nat/LP Slow Opening	Nat - 200,000 LP - 320,000	(1) LP Kit			
	Hot Surface Ignition - Step Opening Models									
720-055	7200DERCS-1	1/2"	3/8"	N/A	Conv Reg Nat/LP Step Opening	125,000				
* H	as pilot outlet, but includes	plug.		¹ 1000 Btu	ı/Cu Ft 0.64 specific gı	avity Nat @ 1" W	C p.d.			

Robertshaw Standing Pilot Dual Valves

720 Series standing pilot gas valves are six function valves incorporating a manual valve, safety shutoff magnet, dual automatic valve, main gas regulator, and pilot adjustment. These valves can be mounted in any position except upside down.





720-472

Electrical Rating Pressure Regulator Natural Gas LP Gas Pilot Outlet Ambient Temperature Maximum Inlet Pressure Capacity (Btu) 24VAC, 5 amps, 50/60 Hz

factory set @ 3.5" W.C. factory set @ 11.0" W.C. 1/4" tubing -40° to 175°F 14" W.C. (1/2 PSI) Nat - 200,000 LP - 320,000

720 402			120 412						
Order No.	Factory Model	Inlet Size	Outlet Size	Side Outlets	Pressure Regulator	Includes			
	Standing Pilot Models								
720-402	7200ER	1/2"	3/4"	1/2"	Nat/LP	(1) LP Kit, (1) 3/4" x 1/2" bushing			
720-403	7200ER-S7C	1/2"	3/4"	1/2"	Nat/LP - Slow Opening	(1) LP Kit, (1) 3/4" x 1/2" bushing			
720-406	7200ER	3/4"	3/4"	N/A	Nat/LP	(1) LP Kit, (2) 3/4" x 1/2" bushings			
		Stand	ding Pilot M	odels - Conve	ertible Regulator				
720-007	7200ERC	1/2"	1/2"	1/2"	Nat/LP [△]	(1) 1/2" x 3/8" bushing			
Standing Pilot Models - Step-Opening w/ Convertibile Regulator									
720-472†	7200ERCS-2	1/2""	1/2"	1/2"	Nat/LP ^{A -} Step Opening	(1) 1/2" x 3/8" bushing			
+ Step-Op	⁺ Step-Opening feature (starts 40"% - Full Flow in 30 secs) Δ Convertible regulator for mobile home use only. (3.5" WC - Nat, 11.0" WC - LP)								

Robertshaw Pressure Regulator Kits

Add-on pressure regulators are available for 700 Series gas valves (except 700-200 Series hydraulic models which have a built-in regulator, meaning you must replace the whole valve). Kits include: gasket, mounting screws and instruction.

NOTE: Always use a new gasket and mounting screws when replacing the pressure regulator.

Order No.	Regulator		able WC ssure	Use With:
	Туре	Low	High	
1751-003	3.5" WC Nat Gas	3″	7"	700 Series (Model 7000)
1751-005	Hi-Lo Nat	1.3″	3.9″	and 710 Series (Model 7000LO),
1751-021	Hi-Low LP	2.7″	11"	except hydraulic
1751-007	Cover Plate	N/A	N/A	models, which are NOT field
1751-013	11" WC LP	8″	12"	convertible.
1751-016	11" WC LP	8″	12"	700 Series
1751-018	3.5" WC Nat	3″	7″	(Model 7100) and 720 Series (Model 7200)
1751-019	11" WC LP	8″	12"	700 Series (Model 7100) and 720 Series (Model 7200) with Step Opening Only

Robertshaw Valve Accessories

On/Off/Pilot Knob



	Series valves
1751-028	Black - FIts all 710 Series Valves

Drive Rod Adaptor For use on 700 & 710 Series



Customer Service - (800)334-5886

1751-013

1751-007

1751-021

1751-016

1751-018 1751-019

Honeywell V800 Low Voltage Combination Valves

Provides complete control of continuous pilot gas-fired central furnaces and boilers.



Order No.	Voltage	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Includes
V800A1070	24V	1/2" x 3/4"	250,000 - Nat 405,000 - LP	Nat (3.5" WC)	(1) 391937 LP Conversion Kit, (1) 3/4" x 1/2" bushing, (1) 1/2"x 3/8" bushing
V800A1088	24V	3/4" x 3/4"	335,000 - Nat 542,000 - LP	Nat (3.5" WC)	(1) 391937 LP Conversion Kit, (2) 3/4" x 1/2" bushings, (1) 1/2"x 3/8" bushing

V800A1070

Honeywell VR8200 & VR8300 Continuous Pilot Automatic Valve

Combination gas controls for use in 24 Vac, gas-fired, standing pilot appliances.

Lite-Rite (Off-Pilot-On) lighting sequence. Mounting: 0 to 90 degrees in any direction from upright position of gas control knob, including vertically. Body Pattern: Straight-through Body Gas Outlet: Compression fitting for 1/4" OD tubing. Pressure Tapping: 1/8" NPT with plug. Max Pressure Rating: 1/2 psi inlet pressure. Ambient Temp Range: 0°F to 175°F (-18C to +79°C)



			110200/12132	V110500/15500
Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Includes
VR8200A2132	1/2" x 1/2"	200,000 - Nat 324,000 - LP	Nat (3.5" WC)	 (1) 393691 LP Conversion Kit, (1) 1/2" x 3/8" bushing, (1) 393690-14 bag assembly - 3/4"
VR8200H1251	1/2" x 1/2"	200,000 - Nat 324,000 - LP	Nat (3.5" WC) Slow Opening	straight flange with O-ring screws and wrench
VR8300A3500	1/2" x 3/4"	290,000- Nat 469,800 - LP	Nat (3.5" WC)	 (1) 393691 LP Conversion Kit, (1) 3/4" x 1/2" bushing
VR8300C4035	3/4" x 3/4"	486,000 - LP	LP (10" WC) Step Opening*	(2) 3/4" x 1/2" bushings
VR8300C4506	3/4" x 3/4"	300,000 - Nat	Nat (0.9"-3.5" WC) Step Opening*	(2) 3/4" x 1/2" bushings
*Sten pressu	ire is non-adjustable			

Honeywell VR4300 Continuous Pilot Dual Automatic Valve

Combination gas control for use in 120 Vac, gas-fired, standing pilot appliances.

Lite-Rite (Off-Pilot-On) lighting sequence.
Mounting: 0 to 90 degrees in any direction from upright position of gas control knob, including vertically.
Body Pattern: Straight-through
Body Gas Outlet: Compression fitting for 1/4" OD tubing.
Pressure Tapping: 1/8" NPT with plug.
Max Pressure Rating: 1/2 psi inlet pressure.
Ambient Temp Range: 0°F to 175°F (-18C to +79°C)



Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Includes
VR4300A4502	3/4" x 3/4"	300,000 - Nat 486,000 - LP	Nat (3.5″ WC)	 (1) 393691 LP Conversion Kit, (2) 3/4" x 1/2" bushings, (1) 1/2" x 3/8" bushing

Honeywell VR8204 & VR8304 Intermittent Pilot Dual Automatic Valve

Combination gas control for use with 24V gas-fried, intermittent pilot appliances.

Lite-Rite (Off-Pilot-On) lighting sequence. Mounting: 0 to 90 degrees in any direction from upright position of gas control knob, including vertically. Body Pattern: Straight-through Pressure Tapping: 1/8" NPT with plug. Max Pressure Rating: 1/2 psi inlet pressure. Ambient Temp Range: VR8204: 0°F to 175°F (-18°C to + 79°C) VR8304: -40°F to +175°F (-40°C to +79°C)





VR8204A2076

VR8304M4507

Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Includes
VR8204A2076	R8204A2076 1/2" x 1/2" 200,000 - Nat 324,000 - LP Nat (3.5" W		Nat (3.5″ WC)	 (1) 393691 LP Conversion Kit, (1) 1/2"x3/8" bushing
VR8204C1019	1/2" x 1/2"	200,000 - Nat	Nat (0.9"-3.5" WC) Step Opening*	
VR8304M4507	3/4" x 3/4"	300,000 - Nat 486,000 - LP	Nat (3.5" WC)	(1) 393691 LP Conversion Kit, (2) 3/4" 1/2"" bushings
VR8304H4503	3/4" x 3/4"	300,000 - Nat 486,000 - LP	Nat (3.5" WC) Slow Opening	(1) 393691 LP Conversion Kit

* Step pressure is not adjustable.

Honeywell VR8205 & VR8305 Direct Ignition Dual Automatic Valve

Combination gas control for use with 24V hot surface & direct spark ignition systems.

Mounting: 0 to 90 degrees in any direction from upright position of gas control knob, including vertically. Body Pattern: Straight-through Pressure Tapping: 1/8" NPT with plug. Pressure Rating: 1/2 psi inlet pressure. Ambient Temp Range: VR8205: 0°F to 175°F (-18°C to +79°C) VR8305M:-40°F to +175°F (-40°C to +79°C)





VR8205A2024

VR8305M3506

Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Notes:
VR8205A2024	1/2" x 1/2"	200,000 - Nat 320,000 - LP	Nat (3.5" WC)	Includes: (1) 393691 LP Conversion Kit, (1) 1/2"x3/8" bushing
VR8305M3506	1/2" x 3/4"	270,000 - Nat 437,000 - LP	Nat (3.5" WC)	(1) 393691 LP Conversion Kit, (1) 3/4" x 1/2" bushing

Honeywell VR4305M Direct Ignition Dual Automatic Valve

Combination gas control for use with 120V hot surface & direct spark ignition systems.

Mounting: 0 to 90 degrees in any direction from upright position of gas control knob, including vertically.
Body Pattern: Straight-through
Pressure Tapping: 1/8" NPT with plug.
Pressure Rating: 1/2 psi inlet pressure.
Ambient Temp Range: -40°F to +175°F (-40°C to +79°C)



VR4305M4532

	Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Includes
VI	R4305M4532	3/4" x 3/4"	300,000 - Nat 486,000 - LP	Nat (3.5" WC)	 (1) 393691 LP Conversion Kit, (2) 3/4" x 1/2" bushings , (1) 1/2"x3/8" bushing

Honeywell SV9501 Smart Valve ™

Combination gas flow control and electronic intermittent pilot sequencing functions into a single unit.



IMPORTANT: This control is for direct replacement of OEM installed controls only. Do not attempt to apply this control except as a direct replacement for specific Honeywell models. Use Y8610 (as seen below) to convert standing pilot systems to electronic ignition systems.

Smart Valve System Replacement Parts:

Order No.	Description			
SUPSSN24 Replacement Igniter/ Flame Rod Assembly with 30" lead wires				
393691	Nat to LP Conversion Kit			
393690-14	3/4" straight flange			



SV9501M2528	V9501M2528						
Order No.	Inlet / Outlet Size	Capacity (Btu)	Pressure Regulator	Prepurge Time	Notes:		
SV9501M2528	1/2" x 1/2"	200,000 - Nat 320,000 - LP	Nat (3.5" WC)	None	Includes: 393691 LP Conversion Kit		
SV9501M8129	1/2" x 1/2"	200,000 - Nat 320, 000 - LP	Nat (3.4" WC) Fast Opening	None	Includes: 393691 LP Conversion Kit		
SV9502H2522	1/2" x 1/2"	200,000 - Nat 320, 000 - LP	Nat (3.2" WC) Slow Opening	15 Seconds	Includes: 393691 LP Conversion Kit		

Honeywell Y8610U Universal Intermittent Ignition Retrofit Kit

gas shutoff and lockout if pilot fails to light.

Kit for converting conventional standing pilot systems to intermittent pilot. For use with 24V gas-fired atmospheric furnaces, boilers, and heating applications.

Y8610U kits are for use with Natural or LP gas. Controls provide timed trial for ignition and 100% pilot



Each Y8610 system includes:

- S8610U Intermittent Pilot Module.

- VR8304 Intermittent Pilot Dual Combination Gas Valve with an ON-OFF manual valve, pressure regulator and two automatic main gas valve operators.
- Valve comes with reducer bushings.
- 393691 LP Gas Conversion Kit.

- 392431 Igniter-Sensor Assembly. Includes ceramicinsulated Kanthal rod that attaches to the existing pilot burner in place of the thermocouple.

- 394800-30 Ignition Cable. 30" (762mm) cable with connectors.

- 393690-14 Flange Assembly. Includes 3/4" straight flange with O ring. 9/64 hex screws and wrench.

- Wiring Harness. 30" (762mm) wiring harness with 1/4" quick-connect terminals.

	Con	tains	Consoity (Dtu)	Inlet	Reducer	Turne of Coo
Order No.	Control Module ^{A,B}	Gas Valve	Capacity (Btu)	Inlet	Bushings	Type of Gas
Y8610U6006	S8610U3009	VR8304M3558	270,000 - Nat 437,000 - LP	3/4" x 1/2"	(2) 3/4" x 1/2"	Nat/LP
^A With 100 percent pilot gas shutoff and lockout; 90 maximum timed trial for ignition ^B Includes automatic vent damper plug						

Honeywell Gas Valve Conversion Kits

Order No.	Kit Type	Use With			
391936	LP to Nat				
391937	Nat to LP	V800, VS820, VS821, and VR8445; Standard (A or M) or Slow Opening (H).			
393691	Nat to LP				
394588	LP to Nat	SV9501, SV9502, VR8200, VR8300, and VR4200, VR4300; Standard (A or M) or Slow Opening (H).			
396221	Nat to LP				
396222	LP to Nat	VR8205 and VR8215 (S or T)			

White-Rodgers 36C Series Standing Pilot Valves





36C03-333

36C03U-333

SPECIFICATIONS: Electrical Rating

Regulator Setting

Ambient Operating Rating

Maximum Pressure Rating Pilot Gas Connection Pressure Tap

24 VAC 60 Hz, 0.23 amps, (Millivolt valves are 750mv) Natural gas, 3.5" W.C. LP gas 11.0"W.C. -40°F to +175°F (-40°C to +79°C) 1/2 PSI (14.0" W.C.) 1/4" compression 1/8" NPT

Order No.	Voltage	Pipe Size	Pressure Regulator	Capacity (Btu)	Line Interrupter	Includes
36C03-333	24Vac	1/2" x 3/4"	Nat/LP	Nat - 290,000 LP - 469,000	Yes	(1) F92-0659 LP Kit (1) 3/4" x 1/2" bushing
36C03-433	24Vac	3/4" x 3/4"	Nat/LP	Nat - 400,000 LP - 648,000	Yes	(1) F92-0659 LP Kit (2) 3/4" x 1/2" bushings
36C03U-333	750mv	1/2" x 3/4"	Nat/LP	Nat - 290,000 LP - 469,000	Yes	(1) F92-0659 LP Kit (1) 3/4" x 1/2" bushing
36C03U-433	750mv	3/4" x 3/4"	Nat/LP	Nat - 400,000 LP - 648,000	Yes	(1) F92-0659 LP Kit (2) 3/4" x 1/2" bushings
36C53-418	24Vac	3/4" x 3/4"	Nat 3.5" WC Slow Opening	Nat - 400,000 LP - 648,000	Yes	(2) 3/4" x 1/2" bushings For LP, add (1) F92-0659

White-Rodgers 36H Series 24V Universal Electronic Ignition Valves

Compact multifunction valves designed to meet the requirements for use with all types of intermittent ignition systems (cycle pilot, proven pilot, direct spark ignition and hot surface ignition).



SPECIFICATIONS: Electrical Rating

Regulator Adjustment Range

Maximum Pressure Rating

24Vac, Single Stage 0.41 amps, Two-Stage 0.54 amps Nat - 2.5 to 5.0" W.C. LP - 7.0 to 12.0 W.C. 1/2 PSI (14.0" W.C.) -40 to +175°F (-40°C to +79°C)

Ambient Operating Range

36H32-304

Order No.	Pipe Size	Pressure Regulator	Capacity (Btu)	Stages	Includes
36H32-304	6H32-304 1/2" x 3/4" Nat (2.5" WC-5" WC) LP (5"-12" WC)		Nat - 300,000 LP - 486,000	Single	(1) F92-0659 LP Kit (1) 3/4" x 1/2" bushing
36H32-423	3/4" x 3/4" Nat (2.5" WC-5" WC) LP (4"-9.5" WC)		Nat - 400,000 LP - 648,000	Single	(1) F92-0659 LP Kit (2) 3/4" x 1/2" bushing
36H64-463	3/4" x 3/4"	Nat (1"-3.5" Low, 2.5"-5" High) LP (1"-3.5" Low, 8"-12" High)	Nat - 400,000 LP - 648,000	Two-Stage	(1) F92-1008 LP Kit (2) 3/4" x 1/2" bushing
36H33-412	3/4" x 3/4"	Nat (1"-3.5" Low, 2.5"-5" High) LP (1"-3.5" Low, 8"-12" High) Slow Opening	Nat - 400,000 LP - 648,000	Two-Stage	(1) F92-1008 LP Kit (2) 3/4" x 1/2" bushing

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Customer Service - (800)334-5886

White-Rodgers 36G & 36J Gemini Valves

The 36G and 36J Series combination valve is designed for use with non-piloted Intermittent Igntion systems. The control is designed to meet today's maximum capacity, smaller size, and high efficienty gas systems. Features include inlet and outlet pressure taps and the ability to mount in any position including upside down.



SPECIFICATIONS: Electrical Rating

Regulator Adjustment Range

Maximum Pressure Rating Ambient Operating Range Inlet & Outlet Pressure Tap 24Vac, Single Stage 0.41 amps, Two-Stage 0.54 amps Nat - 2.5 to 5.0" W.C. LP - 7.0 to 12.0 W.C. 1/2 PSI (14.0" W.C.) -40 to +175°F (-40°C to +79°C) Yes

Order No.	Pipe Size	Pressure Regulator	Capacity (Btu)	Stages	Includes	
36G22-254	1/2" x 1/2"	Nat (2.5"-5" WC) Fast Opening	Nat - 210,000 LP - 340,000	Single	For LP, add F92-0659 kit. (2) 1/2" x 3/8" bushings	
36J22-214	1/2" x 1/2"	Nat (2.5"-5" WC) LP (7"-12" WC) Fast Opening	Nat - 210,000 LP - 340,000	Single	(1) F92-0659 LP Kit (2) 1/2" x 3/8" bushings	
36J24-214	1/2" x 1/2"	Nat (2.5"-5" WC) LP (7"-12" WC) Slow Opening	Nat - 210,000 LP - 340,000	Single	(1) F92-0659 LP Kit (2) 1/2" x 3/8" bushings	
36J54-214	Nat (1"-4" WC Low, 2"-5" WC High) 1/2" x 1/2" LP (4"-10" Low, 6"-12" High) Fast Opening		Nat - 210,000 LP - 340,000	Two-Stage	(1) F92-1008 LP Kit (2) 1/2" x 3/8" bushings	
36J55-214	1/2" x 1/2"	Nat/LP Slow Opening	Nat - 210,000 LP - 340,000	Two-Stage	(1) F92-1008 LP Kit (2) 1/2" x 3/8" bushings	
36J24-614*	1/2" x 1/2"*	Nat/LP Slow Opening	Nat - 210,000 LP - 340,000	Single	(1) F92-0659 LP Kit (2) 1/2" x 3/8" bushings	
* Has bo	* Has bottom-facing outlet.					

White-Rodgers Valve Conversion Kits

Order No.	Conversion Kit Type	Use With:		
F92-0656 LP to Nat		36G, H, and J Single-Stage Gas Valves		
F92-0659 Nat to LP		36G, H, and J Single Stage Gas Valves		
F92-1011 LP to Nat		36G, H, and J Two-Stage Gas Valves		
F92-1008 Nat to LP		36G, H, and J Two-Stage Gas Valves		
F92-0737 Nat to Unregulated LP		36C Gas Valves		

Customer Service - (800)334-5886

SIT 630 EuroSIT Manual Valves



SIT0630500

Order No.	Description		
SIT0630500	Unregulated, Used on Vent-Free applications. Takes metric-thread thermocouple.		
SIT0630503	LP, Used in Vented applications. Takes standard-thread thermocouple.		
SIT0630555	Unregulated, Used on Vent-Free applications. Takes metric-thread thermocouple.		
SIT0630513 Nat, Used on Vented applications. Takes standard-thread thermocouple.			
Please Note: There are many different configurations of this type of valve. To be sure you receive the correct valve, please call us with the numbers on the valve's label, and/or the Brand, Model, and Serial numbers on the unit.			
These valves are shipped with a blank plug installed. The valve will not modulate unless you replace the blank plug with the plug from the old valve.			

SIT 820 NOVA Valves



SIT0820636

Order No.	Description		
SIT0820636	LP, Used on Vent-Free applications. Takes metric-thread thermocouple.		
SIT0820637	Nat, Used in Vent-Free applications. Takes metric-thread thermocouple.		
SIT0820651	LP, Used on Vented applications. Takes standard-thread thermocouple.		
SIT0820652 Nat, Used on Vented applications. Takes standard-thread thermocouple.			
Please Note: There are many different configurations of this type of valve. To be sure you receive the correct valve, please call us with the numbers on the valve's label, and/or the Brand, Model, and Serial numbers of the application it goes on.			
SIT0907201	LP to Nat Conversion Kit for 820 Series valve with Hi/Lo adjustable regulator.		
SIT0907202	Nat to LP Conversion Kit for 820 Series valve with Hi/Lo adjustable regluator.		
SIT0907601 LP to Nat Conversion Kit for 820 Series valve with fixed-rate regulator.			
SIT0907602	Nat to LP Conversion Kit for 820 Series valve with fixed-rate regulator.		

If you do not see the gas valve you are needing, please *call us* with your unit's Brand, Model, and Serial number, or the numbers off of the valve itself.

Snap Disc Fan & Limit Switches

Manual Reset Limit Switches

Opens on temperature rise.



Order No.	Temperature (°F) Open
MR140	140
MR150	150
MR160	160
MR170	170
MR180	180
MR190	190
MR200	200
MR210	210
MR220	220
MR240	240
MR300	300
MR350	350

MR140

Manual Reset Limit Switches (Dime Sized)

SRL130

(Opens on temperature rise.			
	Order No.	Temperature (°F) Open		
	SRL130	130		
	SRL220	220		
	SRL230	230		
	SRL240	240		

controlsinc.

SRL230	230
SRL240	240
SRL250	250
SRL260	260
SRL300	300
SRL350	350

Automatic Reset Limit Switches

Opens on temperature rise.



L130-4

Order No.	Temperature (°F)	
Order No.	Close	Open
L130-4	90	130
L140-4	100	140
L150-4	110	150
L160-4	120	160
L170-4	130	170
L180-4	140	180
L190-4	150	190
L200-4	160	200
L210-4	170	210
L220-4	180	220
L230-4	190 230	
L240-4	200	240
L250-4	210	250
L270-4	230	270
L300-4	260	300
L325-4	285	325
L350-4	310	350

Automatic Reset Limit Switches (Dime Sized)

Opens on temperature rise.



3L11-140

1 1				
Order No.	Temperature (°F)			
Order No.	Open	Close		
3L11-140	140	110		
3L11-150	150	120		
3L11-160	160 130			
3L11-170	170	140		
3L11-180	180	150		
3L11-190	190 160			
3L11-210	210 180			
3L11-220	220	190		
3L11-230	230	200		
3L11-325	325	275		

Snap Disc Fan & Limit Switches (Continued)





Order No.	Temperature (°F)		
Order No.	Open	Close	
F110-2	90	110	
F120-2	100	120	
F130-2	110	130	
F140-2	120	140	
F150-2	130	150	
F160-2	140	160	
F350-4	310	350	

Fan Switch - Long Style



CO7710-3281

Order No.	Temperature (°F)		
Order No.	Open	Close	
CO7710-3281	85	105	
CO7975-3281	90	110	
CO8866-3281	95	130	

Fan Switch with Heat Anticipator (4-Prong)



Order No.	Fixed Temp Setting		Switch Action	Heater	
Order No.	Cut-In (°F)			Voltage	
EMR2246	125	100	Close on temp rise	24V	

EMR2246

Adjustable Fan / Limit Switches

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BAF-1

Order No. Type		Temperature Range (°F)	Switch Action
BAF-1	Fan	90 to 130	Close on temp rise
BAF-2	Fan	140 to 180	Close on temp rise
BAL-2	Limit	175 to 215	Open on temp rise
BAL-3	Limit	210 to 250	Open on temp rise

Heating - Fan & Limit Controls

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Pink

415F

NTCD415
Standard Transformers

Provide power to 24V circuits. Mutiple mounting options.



Order No.	Rating (VA)	Primary Voltage	Primary Lead Length	Secondary Voltage	Secondary Lead Length	Mounting
AT72D1683	40	120V	9"	26.5V	Screw Terminals	Foot-Mount, Plate-Mount
AT72D1691	40	208V/240V	9"	26.5V	Screw Terminals	on 4" x 4", 4" Octagon, or 2"x 4" Electrical Box

AT72D1683

General Purpose Transformers

Provide power to 24V circuits. Intended for use in systems with predicable, uniform loads. Multiple mounting options.



AT140A1000

Order No.	Rating (VA)	Primary Voltage	Primary Lead Length	Secondary Voltage	Secondary Lead Length	Mounting
AT140A1000	40	120V	9"	27.0V	Screw Terminals	Foot-Mount, Plate-Mount, 2" x 4" or 4" x 4" Outlet Box, or Panel-Mounted
AT140B1206	40	120V	9″	27.0V	9″	Foot-Mount
AT175A1008	75	120V/ 208V/240V		27.0V	Screw Terminals	Foot-Mount, Plate-Mount, 2" x 4" or 4" x 4" Outlet Box, or Panel-Mounted

General Purpose Transformers

Provide power to 24V circuits. Multiple mounting options.



Order No.	Rating (VA)	Primary Voltage	Primary Lead Length	Secondary Voltage	Secondary Lead Length	Mounting
AT40A1121	40	120V	9"	26.5V	9"	Direct Mount, Horizontal or Vertical Mount
AT40A1139	40	240V	9"	26.5V	9"	Direct Mount, Horizontal or Vertical Mount

AT40A1121

620 Series Universal-Mount Transformers



Order No.	Rating (VA)	Primary Voltage	Primary Lead Length	Secondary Voltage	Secondary Lead Length	Mounting
620-402	48*	120V/208V/240V	8″	2.5V, 12V, 24V, or 2.5V & 24V, or 12V & 24V	8″	Universal
620-403	40	120V	8″	24V	8″	Universal
620-404	40	208V/240V	8″	24V	8″	Universal
620-502	50	120V/208V/240V	8″	24V	8″	Universal
* Combined total output of all secondaries						

620-402

BE 2"x4" Transformer

Provide power to 24V circuits. Multiple mounting options.



Order No.	Rating (VA)	Primary Voltage	Primary Lead Length	Secondary Voltage	Secondary Connection	Mounting
BE121620	20	120V	6″	24V	Screw Terminals	2" x 4" Plate

OEM Specific Transformers

Midco (5H71956B1 / 5H71956A1) 115V / 24V Empire Coleman Reznor (BE130915GEK) 24V -200 LOAD E Order No. Order No. Order No. Order No. CO7945-3551 EMR1995 MO5H71956-1 RE131988

Honeywell 24V Heat-Only T822 Economy Thermostats

Provides 24 Vac control of heating systems.



- Vented cover for improved temperature sensing
- Setting lever and thermometer scale on thermostat face
- Mounts directly on the wall or on vertical outlet box
- Integrated thermometer and setting scale
 - Dimensions (approx.):

4 3/4"h x 2 7/8"w x 1 3/8"d 121mm x 73mm x 35mm

Accuracy: +/-2 F (+/-1 C) Current (Heating): 0.02 A to 1.0 A running Electrical Ratings: 20-30 Vac Switch Type: Precision Snap Action Switching Action: SPST Sensor Element: Bimetal

Ord	ler No.	Temp Range (°F)	Application	Features
т822	2K1000	45-90	Heat Only	Heat-Off
T822	2K1018	45-90	Heat Only	No Positive Off Switch

Honeywell 24V T834 Thermostat

Provides 24 Vac control of single-stage heating and/or cooling systems.



 Precise Snap-action switch • Mount directly on wall or outlet box 4 3/4"h x 2 7/8"w x 1 3/8"d Dimensions (approx.): 121mm x 73mm x 35mm

Integrated thermometer and temperature setting scale

Accuracy: +/-2 F (+/-1 C) Current (Heating): 0.02 A to 1.0 A running Current (Cooling): 0.02 A to 1.0 A running Electrical Ratings: 20-30 Vac Switch Type: Precision Snap Action Switching Action: SPST Sensor Element: Bimetal

T834N1002

Order No.	Application	System Switch Positions	Fan Switch Positions	Mounting	Terminal Designation
T834N1002	1 Heat / 1 Cool Conventional and Heat Pump with no Auxillary Heat	Heat-Off-Cool	Auto-On	Vertical	R,Rc,W,Y,G,O,B

Honeywell Millivolt / 12V T827 Thermostat

Provides control of 750 mV or 12 Vdc heating systems.



- Rated for 12 Vdc and millivoltage systems
- Coiled bimetal element operates snap-acting switch
- Temperature setting lever on bottom of thermostat
- Temperature setting and thermometer scale on cover Dimensions (approx.): 4 3/4"h x 2 7/8"w x 1 3/8"d 121mm x 73mm x 35mm

Voltage: 12 Vdc or 750 mV Accuracy: +/-2 F (+/-1 C) Switch Type: Precision Snap Action Switching Action: SPST Sensor Flement: Bimetal

T827K1009

Order No.	Application	System Switch Positions	Mounting	Terminal Designation
T827K1009	Heat Only	Heat - Off	Vertical	R,W

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Honeywell T87(K,N) The Round®

Provide control of 24 Vac heating and cooling systems with a classic twist-to-set dial.



T87K1007

T87N1026

Mercury Free

- Separate temperature setting and thermometer
- The T87K heat only works with 2 or 3 wire heat only systems
- The Easy-To-See[™] model has enlarged scale and raised numbers and it clicks at every 2°F change

Electrical Ratings: 20-30 Vac

Order No.	Temp Range (°F)	Features	
T87K1007	40-90	Heat Only	
T87N1000	40-90	1 Heat/1 Cool Conventional and Heat Pumps with No Auxillary Heat	
T87N1026	40-90	1 Heat/1 Cool Conventional and Heat Pumps with No Auxillary Heat EASY-TO-SEE™ Model	

Robertshaw 802 Line Voltage Heat Only Thermostat

Single-stage heating only thermostat for use with 120V, 240V, or 277V systems.



• Mercury-Free

- Has Positive Off
- J-Box Compatible
- Electrical Ratings: 120, 240, or 277Vac Vac

Order No.	Temp Range (°F)	Application	Positive Off
802	50-90	Heat Only	Yes

802

Thermostat Wire



Order No.	Wires	Roll Length
TH5PP-250	5	250 Ft

TH5PP-250

Water Heaters & Pool Heaters

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Water Heater Parts

*** Water Heater Gas Valves, Thermostats, & Burners ***



A O Smith / State Pilot w/ Thermocouple



Order No.	Type Gas
AOS100109253	LP

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Bradford White Pilot w/ Thermopile



Order No.	Type Gas
BW415-47846-05	LP
BW415-47845-05	Nat

Rheem / Ruud



Order No.	Type Gas
RHWSP10764C	LP

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If you do not see your part listed, *call us* with your unit's Brand, Model, and Serial number.

Water Heaters & Pool Heaters

Pool Heater Parts

Common / OEM Pool Heater Gas Valves

Universal Millivolt Valve



Order No.	Description
700-511	Nat/LP, 750mv, 3/4" x 3/4" Slow Opening

Hayward



Order No.	Description
HAHAXGSV0003	LP, 750mv VS820A1898

Teledyne Laars



Order No.	Description
TLR0096900	LP, 750mv Slow Opening VS820H2057



Order No.	Description
VR8304H4503	Nat/LP, 24V Slow Opening

Hayward



Order No.	Description
HAHAXGSV0004	LP, 24V 36H22-433



Order No.	Description
TLR0319600	LP, 24V VR8305H4039

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Hayward

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Order No.	Description
HAFDXLGSV0002	LP. 24V VR8305M4637

Raypak



Teledyne Laars





Common / OEM Pool Heater Thermostats & Temperature Controllers Hayward Raypak Hayward Order No. Order No. Order No. HAHAXTST1930 RA003346F HACHXTST1930 **Teledyne Laars Teledyne Laars** Order No. Order No. TLR0058200 TLR0011700

Common / OEM Pool Heater Ignition Modules



PLEASE NOTE: There are **MANY** other possible pool heating thermostats, temperature controls, and ignition modules to choose from. If you do not see the part you are needing, please *call us* with your unit's Brand, Model Number, and Serial Number.

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Common / OEM Pool Heater Pilots



Order No.	Type Gas	
HAHAXPLT1932	LP	
HAHAXPLT1931	Nat	

Teledyne Laars



Order No.	Type Gas
1830-020	LP

Pentair

Order No.	Type Gas
PF471291	LP
PF471292	Nat

Teledyne Laars



Order No.	Type Gas		
TLR0493000	LP		



Order No.	Type Gas			
TLR0096600	LP			
For Nat, also order 388468H orifice				



Order No.	Type Gas
RA002003F	Nat/LP

Teledyne Laars



Order No.	Type Gas				
TLR0027600*	LP				
* Lighting tube is no longer available. You must reuse the original.					

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Residential Dryer Parts



Customer Service - (800)334-5886

Maxitrol 1/2 PSI Appliance Pressure Regulators



MAXRV12LT-1/8 LP MAXRV12LT-1/8 N



MAXRV20L-1/4 LP MAXRV20L-1/4 NAT MAXRV20L-3/8 LP MAXRV20L-3/8 NAT VA099415-18



MAXRV47CL-1/2 MAXRV47L-3/8 LP MAXRV47L-3/8 NAT VA098867-10 VA098867-09

Order No.	Inlet Pipe Size	Inlet Pressure (PSI)	Outlet Pressure (Inches WC)	BTU Capacity				
Rubber Seat Poppet Design - Main Burner and Pilot Application								
MAXRV12LT-1/8 LP	1/8"	1/2 psi	8.0"-12"	25,000				
MAXRV12LT-1/8 N	1/8"	1/2 psi	2.8"-5.2"	25,000				
MAXRV20L-1/4 LP	1/4"	1/2 psi	8.0"-12"	65,000				
MAXRV20L-1/4 NAT	1/4"	1/2 psi	2.8"-5.2"	65,000				
MAXRV20L-3/8 LP	3/8"	1/2 psi	8.0"-12"	65,000				
MAXRV20L-3/8 NAT	3/8"	1/2 psi	2.8"-5.2"	65,000				
MAXRV47CL-1/2	1/2"	1/2 psi	4.0"-10"	125,000				
MAXRV47L-3/8 LP	3/8"	1/2 psi	8.0"-12"	125,000				
MAXRV47L-3/8 NAT	3/8"	1/2 psi	2.8"-5.2"	125,000				
MAXRV48L-1/2 LP	1/2"	1/2 psi	5.0"-12"	250,000				
MAXRV48L-1/2 NAT	1/2"	1/2 psi	3.0"-6.0"	250,000				
MAXRV48L-3/4 LP	3/4"	1/2 psi	5.0"-12"	250,000				
MAXRV48L-3/4 NAT	3/4"	1/2 psi	3.0"-6.0"	250,000				
Straight	-Thru Flow	Design - Ma	in Burner O	nly				
MAXRV52-3/4 LP	3/4"	1/2 psi	5.0"-12"	900,000				
MAXRV53-3/4 NAT	3/4"	1/2 psi	3.0"-6.0"	900,000				



MAXRV48L-1/2 LP MAXRV48L-1/2 NAT MAXRV48L-3/4 LP MAXRV48L-3/4 NAT



MAXRV52-3/4 LP MAXRV53-3/4 NAT

Common OEM Specific 1/2 PSI Maxitrol Regulators									
Order No. Factory No. Inlet Size Outlet Size Inlet Pressure (PSI) Outlet Pressure (Inches W									
VA099415-18	7 A099415-18 RV20LSSRF 3/8" Pipe		3/8" Fine (Compression)	1/2 psi	Fixed @ 8.0" (LP)				
VA098867-10 RV47LF 1/2" Pipe 3/8		3/8" Fine (Compression)	1/2 psi	Fixed @ 8.0" (LP)					
VA098867-09 RV47LF 1/2" Pipe		3/8" Fine (Compression)	1/2 psi	Fixed @ 3.5" (Nat)					

Springs to change the outlet pressure range are available for most non-fixed-rate Maxitrol regulators. For more information, please *call us* with your outlet pressure requirements.

Maxitrol 1 PSI Service Regulators







	Ma	in Burner Only *	* USE WITH PILOT	* **	
MAXRV61-1	1″	1 psi	3.0-6.0"	2,500,000	LP Spring - MAXR6110-512
MAXRV61-1 1/4	1-1/4"	1 psi	3.0-6.0"	2,500,000	(Not Included)
MAXRV81-1 1/4	1-1/4"	1 psi	3.0-6.0"	4,500,000	LP Spring - MAXR8110-512
MAXRV81-1 1/2	1-1/2"	1 psi	3.0-6.0"	4,500,000	(Not Included)
MAXRV91-2	2"	1 psi	3.0-6.0"	7,500,000	LP Spring - MAXR9110-412 (Not Included)

Maxitrol 325 Series (2 PSI) Service Regulators



MAX325-3L-44-LP MAX325-3L-44-N



MAX325-5L-3/4 MAX325-5L-1



MAX325-7AL-11/4 MAX325-7AL-11/2

MOUNTING

Comments

The Maxitrol 325 Series is suitable for multi-positional mounting, but when using a vent limiter or vent protector, the regulator MUST be mounted in a horizontal upright position.

Order No.	Pipe Size	Inlet Pressure (PSI)	Outlet Pressure (Inches WC)	Maximum BTU (Individual Load)	Maximum BTU (Combined Loads)	Comments
M	ain Burn	er and Pilot	Applications	** USE WITH PIL	OT OR ELECTRONI	C IGNITION **
MAX325-3L-44-LP	1/2"	2 psi	10"	LP - 225,000	LP - 402,500	Includes MAX12A09 Vent Limiter
MAX325-3L-44-N	1/2"	2 psi	7"	Nat - 140,000	Nat - 250,000	Includes MAX12A09 Vent Limiter
MAX325-5L-3/4	3/4"	2 psi	7"-11"	LP - 684,250 Nat - 300,000	LP - 966,000 Nat - 550,000	Includes MAX12A39 Vent Limiter
MAX325-5L-1	1″	2 psi	7"-11"	LP - 684,250 Nat - 300,000	LP - 966,000 Nat - 550,000	Includes MAX12A39 Vent Limiter
MAX325-7AL-11/4	1-1/4"	2 psi	7"-11"	LP - 2,012,500 Nat - 1,250,000	LP -2,012,500 Nat - 1,250,000	If indoors, also order MAX12A49 Vent Limiter. If outdoors also order MAX13A32-50 Vent Protector.
MAX325-7AL-11/2	1-1/2"	2 psi	7"-11"	LP - 2,012,500 Nat - 1,250,000	LP -2,012,500 Nat - 1,250,000	If indoors, also order MAX12A49 Vent Limiter. If outdoors, also order MAX13A32-50 Vent Protector.

	Maxitrol 325 Series (5 PSI) Service Regulators w/ OPD*							
:	* If the incoming pressure exceeds 2 PSI, code requires an over-protection device (OPD) for Maxitrol regulators.							
	MAX325-3L48-1/ MAX325-5L48 MAX325-5L600-1			3257AL21 3257AL21 MAX325-5	0D-1 1/2	- L - Natur The M multi-posi vent limit	WARNING: imiters CANNOT be used on: P systems exceeding 2PSI al gas systems exceeding 5PSI MOUNTING axitrol 325 Series is suitable for tional mounting, but when using a er or vent protector, the regulator mounted in a horizontal upright position.	
	Order No.	Pipe Size	Inlet Pressure (PSI)	Outlet Pressure (Inches WC)	Maximum BTU (Individual Load)	Maximum BTU (Combined Loads)	Comments	
	Mai	in Burne	r and Pilot A	pplications	** USE WITH PI	LOT OR ELECTRON	NIC IGNITION **	
	MAX325-3L48-1/2	1/2"	5 psi	7-11"	LP - 322,000 Nat - 200,000	LP - 322,000 Nat - 200,000	Includes (2) MAX12A09 Vent Limiters for indoor use. If outdoors, also order (2) MAX13A30-50 Vent Protectors.	
	MAX325-5L48	3/4"	5 psi	7-11″	LP - 515,200 Nat - 320,000	LP - 515,200 Nat - 320,000	Includes (1) MAX12A39 and (1) MAX12A09 Vent Limiter for indoor use. If outdoors, also order (1) MAX13A31-50, and (1) MAX13A30-50 Vent Protector.	
	MAX325-5L600-1	1"	5 psi	7-11"	LP - 748,650 Nat- 465,000	LP - 748,650 Nat - 465,000	Includes (1) MAX12A39 and (1) MAX12A09 Vent Limiter for indoor use. If outdoors, also order (1) MAX13A31-50 and (1) MAX13A30-50 Vent Protector.	
	3257AL210D-1 1/4	1-1/4"	5 psi	7-11"	LP - 2,012,500 Nat - 1,250,000	LP -2,012,500 Nat - 1,250,000	If indoors (and not using existing venting), also order (1) MAX12A49 and (1) MAX12A39 Vent Limiter. If outdoors, also order (1) MAX13A32-50 and (1) MAX13A31-50 Vent Protector.	
	3257AL210D-1 1/2	1-1/2"	5 psi	7-11"	LP - 2,012,500 Nat - 1,250,000	LP -2,012,500 Nat - 1,250,000	If indoors (and not using existing venting), also order (1) MAX12A49 and (1) MAX12A39 Vent Limiters. If outdoors, also order MAX13A32-50 and MAX13A31-50 Vent Protector.	
	MAX325-9L210E-2	2"	5 psi	7-11"	LP - 3,622,500 Nat - 2,250,000	LP - 3,622,500 Nat - 2,250,000	If indoors (and not using existing venting), also order (2) MAX12A49 Vent Limiters. If outdoors, also order (2) MAX13A32-50 Vent Protectors.	

If you need assistance with finding the correct regulator for your application, please *call us*. We will need to know the following information:

• Line Size • Inlet Pressure (psi) • Desired Outlet Pressure (inches WC) • BTU Load

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• Type of Gas (LP or Natural) • Location of the Installation (Indoors or Outdoors)

Regulators & Solenoid Valves

Regulator Accessories Vent Limiters Vent Protectors ✓Limiter[®] Vent Limiting Devices MAX12A09 MAX12A39 MAX12A49 MAX13A30-50 MAX13A31-50 MAX13A32-50 (1/8" NPT) (1/8" NPT) (3/8" NPT) (1/2" NPT) (3/8" NPT) (1/2" NPT) Used On Order No. Used On Order No. MAX12A09 325-3 Series MAX13A30-50 325-3 Series **MAX12A39** 325-5 Series MAX13A31-50 325-5 Series MAX12A49 325-7 & 325-9 Series MAX13A32-50 325-7 & 325-9 Series WARNING: Vent Limiters CANNOT be used on: PLEASE NOTE: - LP systems exceeding 2PSI When using a vent limiter or vent protector, the - Natural gas systems exceeding 5PSI regulator MUST be mounted in a horizontal upright position.

MAXICAP Vent Covers

Weatherproof vent covers that fit 325 Series regulators.



MAXICAP-3

Order No.	Used On
MAXICAP-3	325-3 Series
MAXICAP-5	325-5 Series
MAXICAP-7	325-7 Series

MAXIVENT Weatherproof vent for external relief when piped to the outdoors.



MAXIVENT-3/4F

Order No.	Description
MAXIVENT-3/4F	3/4" Female

Equimeter Final Stage Service Regulators



EQ143-80-2-1 EQ143-80-2-1 1/4 EQ143-80-2-3/4



EQ243-12-2 EQ243-8-2-1 1/2

- These service regulators have an internal relief valve installed for final stage usage.
- Can be mounted in any position except upside down via rotating flange inlet/outlet.
- Spring and orifice should be sized according to BTU demand.
- Maximum inlet pressure is 125 PSI with the appropriate orifice. Maximum inlet pressures for the orifices that are installed by default are listed below.

Order No.	Pipe Size	Inlet Pressure	Outlet Pressure (Inches WC)	<u>2PSI</u> Maximum BTU Capacity	<u>5PSI</u> Maximum BTU Capacity	<u>10PSI</u> Maximum BTU Capacity	Comments	
EQ143-80-2-3/4	3/4"	Up to 60 psi	6"-14"	530,000	700,000	950,000	Has <u>1/4"</u> orifice installed from the manufacturer	
EQ143-80-2-1	1"	Up to 40 psi	6"-14"	840,000	1,160,000	1,330,000	Has <u>3/8"</u> orifice installed from the manufacturer	
EQ143-80-2-1 1/4	1-1/4"	Up to 20 psi	6"-14"	1,020,000	1,490,000	1,800,000	Has <u>1/2"</u> orifice installed from the manufacturer	
EQ243-8-2-1 1/2	1-1/2"	Up to 40 psi	6"-14"	2,000,000	3,800,000	5,400,000	Has <u>3/4"</u> orifice installed from the manufacturer	
EQ243-12-2	2″	Up to 60 psi	6"-14"	3,400,000	6,900,000	9,200,000	Has <u>3/4"</u> orifice installed from the manufacturer	
	PLEASE NOTE:							

These regulators are stocked for the above settings. The spring range and orifice may be changed according to your specific needs.

4600 Series Convertable (1/2 PSI) Regulators

The primary advantage of these regulators are their easy conversion feature. The 4600S0001 can be converted from Natural to LP by flipping the pin located underneath the screw-off cap, while the 4600S0004 simply needs the cap itself to be flipped over for conversion.



4600S0001



4600S0004

Order No.	Pipe Size	Maximum Inlet Pressure (PSI)	Outlet Pressure	BTU/hr
460050001	1/2"	1/2 PSI	LP - 10" Fixed	150 40 200 000
4600S0004	3/4"	1/2 PSI	Nat - 4" Fixed	150 to 200,000

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GC Waterproof Solenoid Valves



• Voltage : 120V

- Up to 140 PSI inlet
 pressure
- 2-Way
- Normally Closed
- Zero Differential
- Waterproof

Order No.	Pipe Size
S201GF02N5DG4	1/2"
S201GF02N5EG5	3/4"

GC 12V Solenoid Valves

- Voltage: 12V(DC)
- Up to 90 PSI inlet
 pressure
- Normally Closed
- Zero Differential

Order No.	Pipe Size
S201AF15N5CG4	3/8"
S201AF15N5DG4	1/2"
S201AF15N5EG5	3/4"

Baso H91 Series Automatic Solenoid Valves



H91WG-1C

H91RG-1C

H91RA-4C H91RS-2C

Order No.	Pipe Size	Maximum Inlet Pressure	Voltage	Comments
H91WG-1C	1/4" Compression	1/2 psi	24	1/4" Male Spades
H91RA-4C	3/4" Pipe	1/2 psi	120	30" Leads
H91RG-1C	3/4" Pipe	1/2 psi	24	1/4" Male Spades
H91RS-2C	3/4" Pipe	1/2 psi	208/240	30" Leads

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Baso BGA Series Solenoid Valves

Electrically operated gas valves that automatically open the valve on a demand signal from a thermostat or other controlling device, and closes once the signal is removed. Its compact size allows installation in space restrictive applications.



BGA110EJJ-1CAA BGA110EJK-1CAA



BGA158CDJ-1CAA BGA158CDJ-1CAA



BGA171EFD-1CAA BGA171EFE-1CAA

Order No.	Pipe Size	Voltage	Maximum Inlet Pressure	Maximum BTU
BGA171EFD-1CAA	3/4"	120V	1/2 psi	290,000
BGA171EFE-1CAA	3/4"	240V	1/2 psi	290,000
BGA110EJJ-1CAA	1″	120V	1/2 psi	500,000
BGA110EJK-1CAA	1″	240V	1/2 psi	500,000
BGA158CDJ-1CAA	1/2"	120V	2 psi	560,000
BGA158CDF-1CAA	1/2"	12V	2 psi	560,000

OEM Gas Solenoid Valves

There are MANY different OEM solenoid valves available, most of which are specific to the application they were made for. Please *call us* with your unit's Brand, Model, and Serial number, as well as the information off of the valve itself.

Pilot Orifices

Note: Images are not true to size. They may be larger in order to assist in identification.

Baso Y90 Pilot Orifices

Г



Y90AA4210 (1/4" Compression)

Order No.	Drill Size	Type Gas
Y90AA4207	.007	LP
Y90AA4208	.008	LP
Y90AA4209	.009	LP
Y90AA4210	.010	LP
Y90AA4211	.011	LP
Y90AA4212	.012	LP
Y90AA4213	.013	LP
Y90AA4214	.014	LP
Y90AA3215	.015	Nat
Y90AA3218	.018	Nat
Y90AA3221	.021	Nat
Y90AA3223	.023	Nat
Y90AA3225	.025	Nat

Drill Size

.010

.011

.012

.018

.021

.023

Order No.

Y90CB4410

Y90CB4411

Y90CB4412

Y90CB3418

Y90CB3421

Y90CB3423

Т

Туре

Gas

LΡ

LP

LP

Nat

Nat

Nat

Robertshaw Pilot Orifices



Used on 1820 and 1830 (2C, 2CH) Pilots					
Order No.	Drill Size	Type Gas	Tube Size		
10-261	.008	LP	1/4"		
10-114	.010	LP	1/4"		
10-211	.011	LP	1/4"		
10-210	.016	LP	1/4"		
10-021	.018	Nat	1/4"		
10-209	.026	Nat	3/16"		

10-114



Used on 1898 and 1890 Pilots					
Order No.	Drill Size	Type Gas	Tube Size		
10-067	.010	LP	3/16"		
10-043	.014	Nat/LP	3/16"		
10-066	.018	Nat	3/16"		

10-067

SIT Pilot Orifices



Order No.	Type Gas
SIT0977148	LP
SIT0977137	Nat



SIT0977148	LP
SIT0977137	Nat

SIT0977148



Order No.	Type Gas
SIT0977167	LP (#30)
SIT0977168	LP (#35)
SIT0977165	Nat (#51)

SIT0977168



Y90CB4410 (1/8" Female Pipe)



Order No.	Drill Size	Type Gas
Y90HA4707	.007	LP
Y90HA4710	.010	LP
Y90HA4711	.011	LP
Y90HA4712	.012	LP
Y90HA7718	.018	Nat
Y90HA7721	.021	Nat

Y90HA4710 (1/4" Compression)

Cust

tomer Service -	(800)334-5886

Pilot Orifices (Continued)

Note: Images are not true to size. They may be larger in order to assist in identification.

Honeywell Pilot Orifices

Order No.	Stamping	Drill Size	
390686-15	BBR9	.009	
390686-1	BBR10	.010	
390686-36	BBR11	.011	
390686-32	BBR14	.014	
390686-4	BBR18	.018	
390686-5	BBR20	.020	

390686-1



Order No.	Stamping	Drill Size
390686-23	BBR8	.008

Order No.	Stamping	Dril
390686-23	BBR8	.(

390686-23





Order No.	Drill Size	Notes
FR810-0148	.010 (LP)	5/16" x 32 Thread

FR810-0148

Pilot Extension w/ Orifice (Fish Cooker)



Order No.	Drill Size	Notes
PL-629	.010 (LP)	1/8" x 27 Thread, 1/2" Hex, 15/16" Long

PL-629



Order No.	Stamping	Drill Size
388468D	L10	.010
388468H	H18	.018
388468T	H18	.012

388468D



Burner Orifices







CO-1

CO-405



CO-406

CO-403*

CO-407*



CO-404



CO-410

Order No.	Drill Size	Hex Size	Thread Size	Length	
CO-1	72	1/2"	3/8" x 27	.725″	
CO-402	72	1/2"	3/8" x 40	.725″	
CO-403*	72	1/2"	3/8" x 27	.750″	
CO-404	72	9/16"	1/2" x 27	.925″	
CO-405	72	9/16"	1/2" x 20	.925″	
CO-406	72	1/2"	3/8" x 27	.812″	
CO-407*	72	1/2"	3/8" x 27	.925″	
CO-410	72	11/16"	9/16" x 24	1.17″	
* Counter-Bored					

Plug Orifices

Sin		S OF THE	the start of	Order No.	Drill Size	Tip Style	Hex Size	Thread Size	Length
	10-51			PO-501	72	Bullet	5/16"	16 x 36	.375″
1				PO-508	72	Flat Hex	1/4"	1/4" x 28	.344″
DO 504			DO 540	PO-511	72	Flat Hex	1/2"	7/16" x 27	.375″
PO-501	PO-508	PO-511	PO-518	PO-518	72	Flat Hex	3/8"	11/32"x 32	.375″
and a	1. The	and a	1 in the	PO-519	72	Flat Round	Round	1/8" Pipe Thread	.468″
			0 - 4	PO-520	72	Flat Round	Round	1/4" Pipe Thread	.531"
PO-519, PO-520,	PO-523	PO-525	PO-529	PO-521	72	Flat Round	Round	3/8" Pipe Thread	.625″
PO-519, PO-520, PO-521, PO-522	10-525	F0-525	10-323	PO-522	72	Flat Round	Round	1/2" Pipe Thread	.687"
and a start of		1990		PO-523	72	Flat Hex	7/16"	1/8" x 27	.438″
				PO-525	72	Flat Hex	9/16"	1/4" (Tapered) Pipe Thread	.594"
				PO-529	72	Bullet	3/8"	5/16" x 27	.375″
PO-531	PO-533	PO-536	PO-537	PO-531	72	Flat Hex	3/8"	11/32" x 27	.438″
				PO-533	72	Bullet	3/8"	5/16" x 32	.375″
CONT CONT	11 1 2	X	and the second	PO-536	72	Bullet	7/16"	3/8" x 27	.438″
a a	and the second	IN THE L		PO-537	72	Flat Hex	5/8"	1/8" x 27	.627″
				PO-543	72	Flat Hex	1/2"	7/16" x 24	.375″
PO-543	PO-556	PO-557	PO-559	PO-556	72	Bullet	9/16"	1/2" x 27	.563″
PO-343	PO-330	PU-337	PO-339	PO-557	72	Flat Hex	5/8"	9/16" x 18	.5″

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PO-559

Cap Orifices

5/8" x 27

.544"

11/16"

Flat Hex

Burner Orifices (Continued)

Round Barrel Plug Orifices







Order No.	Drill Size	Hex Size	Thread Size	Length
PO-505	72	1/2"	1/8" Pipe	1.18″
PO-510	72	1/2"	1/8" Pipe	1.18″
PO-561	72	3/8"	1/16" Pipe	.870

PO-505

PO-510







BJ-203



BJ-200

BJ-206

Order No.	Drill Size	Type Gas	Thread Size	Length
BJ-200	68	Nat	5/16" x 27	1.36″
BJ-201	77	LP	5/16" x 27	1.39″
BJ-203	77	LP	1/8" Pipe	1.75″
BJ-206	77	LP	5/16" x 27	1.50"

BJ-201

Slotted-Cap Burner Jets









BJ-214 BJ-215

BJ-216

BJ-217

BJ-220

BJ-218

Order No.	Drill Size	Hex Size	Thread Size	Length
BJ-214	77	5/8"	5/16" x 24	2.375″
BJ-215	77	1/2"	5/16" x 24	2.75″
BJ-216	77	3/4"	1/8" Tapered Pipe	2.18″
BJ-217	77	3/4"	7/16" x 24	2.18"
BJ-218	77	1/2"	7/16" x 24	2.06″
BJ-220	77	1/2"	5/16" x 24	2.25"

Burner Orifice Kit

Includes 68 of the most popular burner, plug, cap, and insert orifices in a sturdy plastic box.



Insert Orifice

Used to spud and re-drill burner orifices. Commonly used in converting an orifice from Natural to LP, as LP requires a smaller orifice hole.





Customer Service - (800)334-5886

www.controlsincgas.com parts@controlsincgas.com

Inverted Compression Nut
Order No. ICN-3/16 ICN-1/4 ICN-3/8 ICN-1/2
Inverted Compression Nut w/ Break Off Ferrule
Order No.
ICNB-1/8 ICNB-3/16 ICNB-1/4
ICNB-1/4X1/8 ICNBL-1/4X1/8 (Long)
4590-070 (1/4x3/16) ICNB-3/8 ICNB-3/8F (Fine Thread)
ICNB-7/16 ICNB-7/16F (Fine Thread)
Compression Union
Order No. CU-1/8 CU-3/16 CU-1/4 CU-5/16 CU-3/8 CU-7/16 CU-1/4X1/8 CU-1/4X3/16 CU-3/8X1/4

Brass Fittings (Continued)					
Compression	n Tee		Compression X	Male IPT Elbow	1
	Order No. CT-1/8 CT-3/16 CT-1/4 CT-3/8 CT-3/8X1/4 (3/8 X 3/8 X 1/4) CT-7/16			Order No. CME-3/16X1/8 CME-1/4X1/8 CME-1/4X1/4 CME3/8X3/8 CME-1/2X1/2 CME-7/16X1/4 CME-3/8X1/4	
Compression Tee	X Male IPT	C	ompression X N	/lale IPT Adapto	or
	Order No. CTM-1/4X1/8 CTM-3/8X1/4				
			Orde	r No.	
			CMA-1/8X1/8	CMA-3/8X1/4	
			CMA-3/16X1/8	CMA-3/8X3/8	
Compression Tee >	K Female IPT		CMA-1/4X1/8	CMA-3/8X1/2	
			CMA-1/4X1/4	CMA-7/16X1/4	
A FEW	Order No.		CMA-1/4X3/8	CMA-7/16X3/8	
	CTMF-1/4X1/8		CMA-1/4X1/2	CMA-1/2X1/4	
A MAR LAND			CMA-5/16X1/8	CMA-1/2X3/8	
			CMA-5/16X1/4	CMA-1/2X1/2	
			CMA-3/8X1/8	CMA-1/2X3/4	
		Co	ompression X Fe	emale IPT Adapt	tor
Compression	Elbow				
	Order No. CE-3/16 CE-1/4		(A)		
	CE-5/16		Orde	er No.	
C	CE-3/8		CFA-3/16X1/8	CFA-3/8X3/8	
	CE-7/16		CFA-1/4X1/8	CFA-3/8X1/2	
	CE-1/2		CFA-1/4X1/4	CFA-1/2X3/8	
	,		CFA-5/16X1/8	CFA-1/2X1/2	
			CFA-3/8X1/4	,,	
			,	<u> </u>	

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Brass Ball Valves

Brass ball valves with a sturdy metal handle. Maximum Pressure: 1/2 PSI.



Pipe X Pipe			
Order No	Size		
BV-3/8	3/8" Pipe		
BV-1/2	1/2" Pipe		
BV-3/4	3/4" Pipe		
BV-1	1" Pipe		
BV-1 1/4	1-1/4" Pipe		
BV-1 1/2	1-1/2" Pipe		



Flare X Flare

Order No	Size	
BV-3/8F	-3/8F 3/8" Flare	
BV-1/2F	1/2" Flare	



Flare X Pipe				
Order No Size				
BV-1/2Fx1/2P 1/2" Flare X 1/2" Pip				

T-Handle Ball Valve with Pressure Tap

Brass ball valves with 1/8" pressure tap. Maximum Pressure: 1/2 PSI.



Order No	Size		
BVTM-3/8	3/8" Pipe		
BVTM-1/2	1/2" Pipe		
BVTM-3/4	BVTM-3/4 3/4" Pipe		
1/8"FPT side tap allows manometer to be attached to test line pressure.			

NV-1/4X1/8S

NV-1/4X1/8A

Order Ne	S	Shula	
Order No	Tube	Pipe	Style
NV-1/4X1/8S	1/4"	1/8"	Straight
NV-1/4X1/8A	1/4"	1/8"	Angled

Needle Valves

Brass needle valves. Maximum Pressure: 1/2 PSI.

Installation / Test Equipment / Tools Controlsinc.

Dormont Gas Connectors & Accessories

Note: If your appliance is on casters and can be moved OR is located on a food truck, then the BP series hose is required by code.

N-Series Stainless Steel (Non-Coated)

These connectors are specially designed for range, dryer, and heater applications. The 3/4" and larger connectors are for mobile home use and stationary, non-castered food service equipment.

Available in the following lengths. Please specify.

> SSC1625, 1637, & 1650: 12", 18", 24", 36", 60", 72"

SSC1675: 24" 36", 48", 60", 72"



Order No	Hose Size		Fitting Size		
Order No	I.D.	0.D.	MIP	FIP	
SSC1625N	1/4"	3/8"	3/8"		
SSC1637N	3/8"	1/2"	3/8"		
SSC1650N	1/2"	7/8"	1/2"		
SSC1675N	3/4"	1″	3/4"		
- If you need 3/8" Flare Tubing Size fitting, order SSC1625 Series. - If you need 1/2" Flare Tubing Size fitting, order SSC1637 series.					

Quick Disconnect Coupling*

	Order No
St 5	B-37
	A-50
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A-75
	A-100
	A-125

Order No.	Size
B-37	3/8"
A-50	1/2"
A-75	3/4"
A-100	1″

NFS-Series Stainless Steel (Gray or Yellow Coated)

These connectors are specially designed for range, dryer, and heater applications. The 3/4" and larger connectors are for mobile home use and stationary, non-castered food service equipment.

Available in the following lengths. Please specify. SSC1637, & 1650: 12", 18", 24", 36", 60", 72" SSC1675, 100, & 125: 24" 36", 48", 60", 72"

	Hose	Size	Fitting Size	
Order No.	I.D.	O.D.	MIP	FIP
SSC1637NFS	3/8"	1/2"	3/8"	
SSC1650NFS	1/2"	7/8"	1/2"	
SSC1675NFS	3/4"	1″	3/4"	
SSC16100NFS	1″	1-1/4"	1″	
SSC16125NFS	1-1/4"	1-1/2"	1-1/4"	

SUPR-SWIVEL® Fitting*



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* Dormont Quick Disconnect Couplings, SUPR-SWIVEL® Fittings, and Restraining Devices are sold separately from hoses.

1-1/4"

BP-Series Stainless Steel Braid (Blue Coated)

These heavy-duty connectors handle all fuel gases and serve all types of moveable, caster-mounted, gas-fired appliances found in the food service industry.

Available in the following lengths. Please specify.

> SSC1650, 1675, 100, & 125: 24" 36", 48", 60", 72"



Order No.	Hose	Size	Fitting Size		
Order No.	I.D.	O.D.	MIP	FIP	
SSC1650BP	1/2"	7/8"	1/2"		
SSC1675BP	3/4"	1″	3/4"		
SSC16100BP	1″	1-1/4"	1″		
SSC16125BP	1-1/4"	1-1/2"	1-1/4"		

** PLEASE NOTE** This style hose is required by code on any movable gas equipment (on casters) as well as any gas appliance located on a food truck.

Restraining Device*



For maximum safety, a restraining device is required under the ANSI and CGA standards for the safe installation of the all types of moveable / castered gas appliances. Mounting hardware included.

Customer Service - (800)334-5886

Mavrik	Gas Connection Kit		DORMON	FlexTube	e® Kits		
Base reconciliant MF	3/4" Gas Connection Kit (Suitable for Food Service)	Corr For g	ugated 3/16" or 1 gas supply and pil	./4" stainless st ot lines.	teel flex tube	e kits.	
5	Kit Includes: 1 - 3/4" x 48" Gas Hose			Order No.	Tubing Size (O.D.)	Length	
MAVRIK	1 - 3/4" Quick-Disconnect			T3-KIT-12	3/16"	12"	
Gas Connection Kit	1 - 3/4" Full Port Ball Valve 1 - 48" Restraining Device	Contraction of the second seco		T3-KIT-18	3/16"	18"	
		۵ 🏐		T3-KIT-24	3/16"	24"	
	Order No.		and the second se	T3-KIT-30	3/16"	30"	
Arealing				T4-KIT-12	1/4"	12"	
	MAV-3/4-48			T4-KIT-18	1/4"	18"	
Manalite and Annual				T4-KIT-24	1/4"	24"	
Operation Operation Operation Operation Operation Operation Operation				T4-KIT-30	1/4"	30″	
	inum Tubing		Tubing				
Aluminum tubing co	mes in a 50 ft roll or by the foot.	Rothenbe	erger	Uniw	eld Mini Cut	ter	
	Order No. Tubing Size (O.D.) AT-1/8 1/8" AT-3/16 3/16"	C		A.			
	AT-1/4 1/4" AT-5/16 5/16"	Order No.	Size	Order N	lo.	Size	
	AT-3/8 3/8"	ROT70010	Cuts 1/8" to 1-1/8" tubing	UNI700	00 Cut	s 1/8" to " tubing	
	AT-7/16 7/16"	ROT70007	Replacement				
	AT-1/2 1/2"		cutter wheel				
Tubing E	Bender		Flaring To	ols			
Uniwe	eld	Rothenberger			Uniweld		
Order No.	Tubing Sizes	Order No. Flare Sizes		Order No.	Fla	re Sizes	
UNI70015	3-in-1 Model 1/4", 5/16", 3/8"	ROT26033 3/16", 1/4", 5/1 3/8", 1/2", 5/8	6", ,"	UNIUDFT	3/16", 1/4	xe Model 4", 5/16", 3 /2", 5/8", 3	
		(136)					

Customer Service - (800)334-5886



Customer Service - (800)334-5886





Customer Service - (800)334-5886

controlsinc.

Test Equipment (Continued)

UEI Digital Multimeter

The DM505 offers a wide variety of user-friendly features and functions needed to help technicians successfully troubleshoot, repair and verify appliance operation.



- AC & DC Voltage
- DC CurrentDiode & Continuity
- Resistance (Ohms)
- Audible Continuity Alert Included:
- Multimeter
- Test Lead Set
- Temperature Probe
- Temperature Prob
 Dettemp (0) ()
- Battery (9V)Zippered Bag
- Zippereu bag

Replacement Accessories Test Leads - ATL55

UEI Clamp-On Digital Multimeter

The DL379B is geared towards the HVAC service technician, offering 600A AC, temperature, capacitance, and frequency.

- True RMS
- AC & DC Voltage
- DC Current
- Temperature
- Diode & Continuity
- Resistance (Ohms) • Audible Continuity Alert

Included:

- Mulitmeter
 Test Lead Set w/
- Alligator Clips
- Temperature Probe
- Batteries (2 AAA)
- Zippered pouch

Replacement Accessories

Test Leads - ATL55 Temperature Probe - ATT71



Order No.	
DL379B	

Thermocouple Tester

Test thermocouple voltage with this screw-in adaptor. Standard thread.



Order No. 392451-1

Alligator Clips

Set of 2 w/ high temp rubber boots.



TPI One-Touch Multimeter

Order No. UTDM505

The new TPI 100 automatically switches between AC and DC Voltage, as well as Ohm resistance measurements.



• Single Button Operation w/ Auto Power-Off

- Auto Power-Off • Automatic Switching between
- AC Volts, DC Volts, and Ohms • Protective Rubber Casing
- Included:
- Multimeter
- Test Lead Set
- Batteries





Customer Service - (800)334-5886

Common Service Accessories (Continued)

Pressure Gauges Oven Thermometer Serviceman's Friend Fitting has 1/8" pipe thread and special 5/16" x 32 thread. Opposite end has Stainless steel case that hangs or stands. 2" diameter dial with readings in F° and C° Range - 200-550°F (90-290°C) regular hose fitting and 1/8" pipe thread. Order No. SF-1 Order No. Description DAJA220A 0-15"WC **Special Hose Barb** 0-30"WC DAJA221A 1/4" hose barb can be used with an P88-02L15 0-15 PSI allen wrench. P88-02LQ15 0-15 PSI (Liquid Filled) Order No. P88-02L30 0-30 PSI OT-103 P88-02LQ30 0-30 PSI (Liquid Filled) P88-02L100 0-100 PSI

Gas Timers

Automatic timer / gas shutoff valves can be installed on your exisiting gas grill or fireplace. They can be set for an automatic shut-off time to prevent wasted gas. These timers are all 1/2"NPT (if 3/8" is needed, also order FB-1/2X3/8).



Order No. SHB-1

InfiniteLite Refillable Butane Lighter



Orifice Capacities Chart

				Natural		1	P					Vatural	,	L	P
Inches of	Water Column	: 3.0"	3.5″	4.0″	4.5″	7.0″	11.0″	Inches of \	Vater Column	: 3.0″	3.5″	4.0"	4.5″	7.0″	11.0"
Drill Size BTU's				'U's	Drill Size				BTU's						
80	.0135	428	463	495	525	654	1273	39	.0995	23272	25137	26872	28502	35549	69156
79	.0145	494	534	571	605	755	1469	38	.1015	24217	26157	27963	29660	36992	71964
1/64	.0156	572	618	661	701	874	1700	37	.1040	25425	27462	29358	31139	38837	75553
78	.0160	602	650	695	737	919	1788	36	.1065	26662	28798	30786	32654	40726	79229
77	.0180	762	823	1086	933	1163	2263	7/64	.1094	28133	30388	32486	34456	42957	83603
76	.0200	940	1016	1197	1152	1463	2794	35	.1100	28443	30722	32843	34835	43447	84552
75	.0210	1037	1120	1374	1270	1583	3081	34	.1110	28962	31283	33443	35472	44241	86066
74	.0225	1190	1285	1563	1457	1818	3536	33	.1130	30015	32420	34659	36761	45849	98195
73	.0240	1354	1462	1696	1658	2068	4024	32	.1160	31630	34165	36524	38739	48316	93994
72	.0250	1469	1587	1835	1799	2244	4366	31	.1200	33849	36562	39086	41457	51706	100588
71	.0260	1589	1716	2128	1946	2427	4722	1/8	.1250	36792	39672	42411	44984	56104	109145
70	.0280	1843	1991	2314	2257	2815	5476	30	.1285	38815	41924	44819	47538	59290	115343
69	.0292	2004	2165	2314	2455	3062	5956	29	.1360	43478	46961	50204	53249	66413	129200
68	.0310	2259	2440	2608	2767	3451	6713	28	.1405	46402	50120	53581	56831	70881	137892
1/32	.0313	2303	2487	2659	2820	3518	6843	9/64	.1006	46469	50192	63657	56912	70982	138088
67	.0320	2407	2600	2779	2948	3677	7153	27	.1440	48743	52649	56284	59698	74456	144847
66	.0330	2560	2765	2956	3135	3910	7607	26	.1470	50795	54865	85653	62211	77591	159046
65	.0350	2880	3110	3325	3527	4399	8557	25	.1495	52583	56747	60665	64345	80253	156123
64	.0360	3046	3291	3518	3731	4654	9053	24	.1520	54309	58661	62711	66515	82959	161398
63	.0370	3218	3476	3716	3941	4916	9563	23	.1540	55748	60215	64372	68277	85157	165664
62	.0380	3394	3666	3919	4157	5185	10087	5/32	.1563	57426	62027	66309	70332	87719	170649
61	.0390	3575	3862	4128	4379	5461	10625	22	. 1570	57941	62584	66905	70963	88507	172181
60	.0400	3761	4062	4343	4606	5745	11176	21	. 1590	59427	64188	68620	72783	90776	176596
59	.0410	3951	4268	4563	4840	6036	11742	20	.1610	60931	65813	70357	74625	93074	181066
58	.0420	4147	4479	4788	5078	6334	12322	19	.1660	64775	69965	74795	79332	98945	192487
57	.0430	4346	4695	5019	5323	6639	12916	18	.1695	67535	72946	77982	82713	103161	200690
56	.0465	5083	5490	5869	6225	7764	15104	11/64	.1719	69461	75026	80206	85072	106103	206413
3/64	.0469	5157	5585	5970	6333	8798	15365	17	. 1730	70353	75990	81236	86164	107465	209063
55	.0520	6356	6865	7339	7785	9709	18888	16	.1770	73644	79544	85036	90195	112492	218843
54	.0550	7111	7680	8211	8709	10862	21131	15	.1800	76161	82263	87943	93278	116338	26324
53	.0595	8322	8989	9609	10192	12712	24730	14	.1820	77683	84102	98808	95362	118938	231381
1/16	.0625	9182	9918	10603	11246	14026	27286	13	.1850	80451	68697	92897	98532	122891	239072
52	.0635	9478	10238	10945	11609	14479	28167	3/16	.1875	82640	89261	95425	101213	126235	245577
51	.0670	10552	11398	12184	12924	16119	31357	12	.1890	83968	90695	96957	102839	128263	249522
50	.0700	11518	12441	13300	14107	17594	34228	11	.1910	85754	92625	9020	105027	130992	254831
49	.0730	12527	13530	14464	15342	19135	37225	10	.1935	88014	95066	101629	107794	134443	261546
48	.0760	13577	14665	15678	16629	20740	40347	9	.1960	90303	97583	104272	110598	137940	268348
5/64	.0781	14338	15487	16556	17560	21902	42608 43045	8	.1990	93088	100547	107489	114009		276625
47	.0785	14485	15646	16726	17741	22127		7	.2010	94969	102578	109660	116312	145067	282213
46 45	.0810 .0820	15423 15806	16658 17072	17809 18251	18889 19358	23558 24144	45831 46969	13/64	.2031	96963	104732	111964	118755	148114	288141
45	.0820	17385	18778	20075	21293	26557	46969 51663	6	.2040	97825	105663	112958	119810		290701
	.0880	17385	20111	21500	21293	28442		5	.2055	99269	107222	114526	121579	151635	
43 42	.0890	20550	20111	23729	22804	28442 31391	55331 61067	4	.2090	102679	110906	118563	125755	156844	305125
3/32	.0935	20550	22339	23729	25168	31391	61460	3	.2130	106647	115192	123145	130615 137825		316916
41	.0938	20682	22339	23882	26532	31592	64377	7/32	.2188	112534	121550	129943			334411
	.0980							2	.2210	114808	124007	132569	140611	175372	
40	.0980	22576	24384	26068	27649	34485	67087	1	.2280	122196	131987	141100	149659	186658	363124

Use this chart to determine the correct size to drill orifices to (per BTU) for Natural or LP applications. Natural - 1050 BTU -0.65 Specific Gravity / LP - 2500 BTU - 1.53 Specifc Gravity

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Millivolt Fryer Wiring Diagrams



Troubleshooting Residential Oven Safety Valves & Ignitors

Gas Range - Hot Surface Ignition Operation and Troubleshooting

IGNITOR SYSTEM OPERATION

The hot surface ignition system in gas ranges has three main components: 1) The thermostat, or an electronic range control, 2) The hot surface ignitor, and 3) The bimetal gas oven safety valve. Other items such as fuses, timers, contactors, door switches, etc. may be included in the circuit, but the three basic components remain the same.

In a typical bake system, the thermostat, ignitor and valve are wired in series. Some applications use a single thermostat, a selector switch (bake and broil), two ignitors and a "dual" bimetal valve. This is usually a series-parallel circuit, and when troubleshooting, each circuit must be checked individually. When the thermostat is set at a selected temperature, the contacts close and supply power to the circuit. With power applied, the ignitor begins to heat and glow in a few seconds.

The electrical resistance of the ignitor will decrease as the surface temperature of the ignitor increases. The current flowing in the circuit increases in proportion to the drop in ignitor resistance. Current flows through the heater coil of the valve causing the bimetal arm to flex, opening the valve and allowing gas to flow to the burner where it is ignited by the glowing ignitor. The rising current flow in the circuit raises the amount of heat produced by the heater coil. The bimetal arm in the valve will reach a flexing temperature and open the valve when the current flow approaches its peak which is 3.2 to 3.6 amps with the flat NORTON ignitors, and 2.5 to 3.0 amps with the round CARBORUNDUM ignitors.

The surface temperature of the ignitor is approximately 2500°F by the time the bimetal valve opens. The gas flows out of the valve into the burner and ignition occurs. The ignitor will remain energized at all times when the burner is lit. When the oven reaches the selected temperature, the thermostat contacts open and remove power from the ignitor/valve circuit. With power removed, the heater coil and bimetal arm will cool and the valve will close in a few seconds extinguishing the burner flame.

IGNITOR DOES NOT GLOW

1. Disconnect or remove ignitor and measure its resistance. Cold resistance should be between 50 and 150 OHMS. (The value of the resistance is not important as long as the ignitor is not open or shorted.)

- 2. Check internal fuses, switches and 120 VAC power supply.
- 3. If power is working -
 - A. Disconnect oven power and remove wires at "B" and "C".
 - 1) Check continuity between wire "B" and terminal "C". If continuity is present go to Step 4.
 - B. If continuity is NOT present remove wire at "D" and probe terminals "D" and "C" for continuity. If NO continuity replace bimetal valve.
 - C. If continuity is present at "D" and "C" probe wires "B" and "D". If NO continuity replace the ignitor.
- 4. If continuity is present in step 3.A.1 Check thermostat.
 - A. Make sure the oven is not heated. Turn power off, disconnect wiring and turn thermostat dial to 350°F. Probe at terminals "A" and "B". If NO continuity - replace the oven thermostat.

IGNITOR GLOWS WITH NO IGNITION

1. Check that gas is turned on to the range.

- 2. Check ampere draw at bimetal valve. Power on. Thermostat set at 350°F.
 - A. Using wrap-around amp. meter test one leg for amp. draw at "D" or "C".
 - 1) NORTON (flat) Ignitor 3.2 to 3.6 amps. or 2.94 to 3.3 volts.
 - 2) CARBORUNDUM (round) Ignitor* 2.5 to 3.0 amps. or 3.3 to 4.0 volts.
 - If amp. or voltage draw is **NOT** within proper range replace the ignitor.
 - B. If correct amp. draw is present replace the valve.



For safety purposes, when measuring the current flow through the ignitor circuit, shut off the main or the oven gas shut-off valve.

* Norton (flat) ignitor with "powder-blue" ceramic body has Carborundum value of 2.5 to 3.0 amps.

CAUTION: Premature failure of ignitor can be caused by over-gassed safety valve orifice or defective burner. If ignitor is located in the flame, premature failure will occur. It is important to check its location when installing a replacement ignitor.

Troubleshooting Dryer Coils

AWARNING-

- To reduce the risk of electric shock, fire, explosion, serious injury, or death:
- Disconnect electric power to the dryer before servicing.
- Close gas shut-off valve to gas dryer before servicing.
- Never start the dryer with any guards or panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded.

Gas Valve Coil Test:

- a. Refer to appropriate Service Manual and gain access to the gas valve.
- b. Remove disconnect blocks from gas valve colls.
- c. Set test meter to read Ohms and put meter probes to terminals as follows,
 Figure 1 and 2:

	60 Hertz				
Holding Coil	1365 ± 25				
Terminals 1 and 2	Ohms				
Booster Coil	560 ± 25				
Terminals 1 and 3	Ohms				
Secondary Coil	1220 ± 50				
Terminals 4 and 5	Ohms				



Figure 2

Figure 1

NOTE: If meter registers readings different from those listed, the respective coil(s) should be replaced.

Flame Sensor Test:

- a. Refer to appropriate Service Manual and gain access to the flame sensor.
- b. Remove wires from sensor terminals.
- c. Set test meter to read Ohms and put meter probes on sensor terminals. *Meter should read "zero" Ohms.* If meter registers an Ohm reading of any amount, replace sensor.

Igniter Test:

- a. Refer to appropriate Service Manual and gain access to the igniter.
- b. Disconnect igniter wires at disconnect block.
- c. Set test meter to read Ohms and put meter probes on terminals of igniter wires. *Meter should read between 75-800 Ohms*. If meter does not read between 75-800 Ohms, replace igniter.

NOTE: If the gas valve coils, the flame sensor, and the igniter all check okay in the non-energized state, then proceed as follows:

- a. Refer to wiring diagram and make sure gas valve is wired correctly.
- b. Make sure all pins are locked into connectors and that all wires are connected securely.

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- c. Reconnect electric power to the dryer and start dryer in a heat setting.
- d. Observe at least two complete ignition and burn cycles.
- e. Reinstall lower access panel.

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"BJ" Series Thermostat Housing Rotation & Calibration



1. Remove pilot fitting if installed on control.

2. Remove 4 hex head bolts on rear of control while applying pressure to hold the rear housing against the main control body housing.

3. Re-calibration of the control is required after rotating the rear housing $1/4 \text{ turn } (90^\circ)$ to the right or left. Re-calibration is NOT necessary if turning the rear housing $1/2 \text{ turn } (180^\circ)$.

4. To re-calibrate the control, view the control from the front. Using a screwdriver, push in the calibration screw in the center of the gas cock plug. Turn this screw 1/4 turn (90°) in the same direction as the housing was rotated as viewed from the front of the control. (See illustration above for reference)

CAUTION

NEVER turn the calibration screw more then 1/4 turn (90°) as this will damage the thermostat beyond repair and void the manufacturer warranty. Each notch around the calibration screw represents a +/- 25°F change. Each 1/4" turn will change the temperature setting approximately 225°!!!

5. To rotate the rear housing 180°, pull the rear housing apart from the body so they are completely separated. Rotate it 180°. DO NOT let the "t-bar" in the rear housing be in contact with the body while rotating. Once 180° rotation is complete, carefully work "t-bar" back into the body.

6. Replace and tighten the 4 hex head bolts.

"BJ" Series Thermostat Bypass (Minimum Flame) Adjustment



1. Turn bypass screw clockwise, all the way closed.

2. Turn thermostat to 300°F. When the temperature reaches 300°F, the flame should cut off (assuming the thermostat has been calibrated correctly).

• <u>WARNING</u>: These controls have been carefully calibrated at the factory and should NOT require field calibration. However, it DOES require field adjustment for bypass (minimum) burner flame screw.

3. When the temperature reaches 300°F and the flame has gone out, turn bypass screw counter-clockwise until a small flame forms completely around the burner.

• <u>NOTE</u>: The flame MUST be large enough so that it will not flash back into the venturi, and is small (low) enough that the temperature will not increase.

4. Turn the thermostat temperature up to 350°F. When the temperature reaches 350°F, the flame must go back to the low flame setting that you previously set.

5. Turn the thermostat to 300°F. Flame should stay the same size as it was at 350°F. If it does not, make the necessary adjustments.

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NOTES:

We look forward to hearing from you!

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Visit out our website at www.controlsincgas.com

Be sure to scan the QR code on the rear cover to download our current catalog to your device!



