

# Heating Components Table of Contents/Part Number Index

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**Compressors,  
Chillers, Condensers**

**Motors**

**Electrical**

**Heating  
Components**

**Indoor Air  
Quality**

**Thermostats**

**Oils &  
Chemicals**

**Accessories, Supplies  
& Commodities**

**Tools &  
Instruments**

**Refrigeration**

# Heating Components

Compressors,  
Chillers, Condensers

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& Commodities

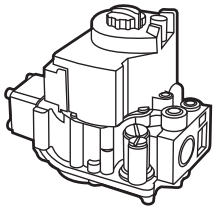
Tools &  
Instruments

Refrigeration

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
301248-101	E-4	HH12KD022*	E-6	LH32JB046	E-4	LH680510	E-8
301248-102	E-4	HH12KD023	E-6	LH32JB053	E-4	LH680512	E-8
301286-702	E-9	HH12KD024	E-6	LH32JB055	E-4	P232-0001	E-6
302989-102	E-4	HH12KD025	E-6	LH32JB056	E-4	P232-0002	E-6
48DA660	E-9	HH12ZA008	E-5	LH32JB059	E-4	P232-0003	E-6
48DA660	E-10	HH12ZA162	E-6	LH32JB063	E-4	P232-L4064B-11	E-6
48DA660025	E-9	HH12ZA169	E-6	LH32JB078	E-4	P232-L4064B-5	E-6
48DD410452	E-9	HH12ZB178	E-6	LH32JB089	E-4	P232-L4064B-8	E-6
48MA403742	E-9	HH12ZW125	E-6	LH32JB093	E-4	P4322	E-10
55939D5	E-9	HH680201	E-6	LH32JB096	E-4	P660-VR83A3500	E-3
58GP305671-101	E-4	HH680203	E-6	LH32JB097	E-4	P660-VR83A3518	E-3
58HH680001	E-9	HH680204	E-6	LH32JB099	E-4	P660-VR83A4508	E-3
58HH680002	E-9	HH680205	E-6	LH32JB101	E-4	P660-VR83A4516	E-3
58HH680025	E-10	HH680400	E-5	LH32JB104	E-4	P660-Y8610F	E-3
58HH680026	E-10	HH680401	E-6	LH32JB106	E-4	P660-Y8610U	E-3
58HH680027	E-9	HH680402	E-6	LH32RF035	E-4	P671-Q340A-18	E-9
58HH680028	E-10	HH680403	E-6	LH32RF047	E-4	P671-Q340A-24	E-9
58HH680029	E-9	HH680404	E-6	LH32RF052	E-4	P671-Q340A-30	E-9
58HH680030	E-10	HH680405	E-5	LH32RF055	E-4	P671-Q340A-36	E-9
58HH680034	E-10	HH680405	E-5	LH32RF070	E-4	P671-Q340A-48	E-9
68459C53	E-4	HH680501	E-6	LH32RF073	E-4	P681-1501	E-2
88RC0000CB128015	E-10	HH680502	E-6	LH32RF082	E-4	P681-VR8345M	E-3
88RC0000CB159816	E-10	HH680504	E-6	LH32RF086	E-4	P682-SV950	E-3
88RC0000CB167217	E-10	HH680505	E-6	LH32RF096	E-4	P691-R7184A-P	E-10
88RC0000CB315018	E-10	HH680506	E-6	LH32RF102	E-4	P691-R7184A-SS	E-10
88RC0000CB363119	E-10	HH72CH003	E-9	LH32RF113	E-4	P691-R7184U	E-10
88RC0000CB675020	E-10	HK02LB005	E-9	LH32RF116	E-4	P691-R8484G	E-10
B0805050	E-9	HK02LB018	E-9	LH32RMO15	E-5	P691-S7184A	E-10
CA57AP20	E-4	HT08BR115	E-10	LH32RMO16	E-5	P691-S8610U	E-8
EF32CB212	E-2	HT08BR116	E-10	LH32RN009	E-5	P691-S910U	E-8
EF33CB181	E-2	HT21AU004	E-9	LH32RN109	E-5	P694-700-2-1	E-11
EF33CZ209	E-2	HT21AU020	E-9	LH32RQ110	E-4	P694-700-4-1	E-11
EF39AB001	E-4	L4068E1047	E-6	LH32RQBG31	E-4	RM680002	E-9
EF39ZW025	E-4	LA25UJZ0	E-9	LH33CM600	E-8		
EF39ZWO23	E-4	LH31AC0	E-7	LH33CZ003	E-8		
EF53CK185	E-2	LH31AC0	E-7	LH33CZ007	E-8		
EF53CK198	E-2	LH31CM023	E-7	LH33EP040	E-8		
EF53CK198†	E-2	LH31JZ022	E-7	LH33EW058	E-8		
EF53CK205†	E-2	LH31RB015	E-7	LH33JZ050	E-8		
EF53CK208	E-2	LH31WF038	E-7	LH33JZ053	E-7		
EF53CK248	E-2	LH31WF039	E-7	LH33WZ510	E-7		
EF53FB020	E-9	LH31WZ507	E-7	LH33WZ512	E-7		
EF680006*	E-2	LH32AN012	E-5	LH33WZ513	E-7		
EF680007	E-2	LH32AN014	E-5	LH33ZS004	E-8		
EF680009	E-3	LH32DB001	E-5	LH39GB011	E-5		
EF680010	E-3	LH32DB002	E-5	LH39GB019	E-5		
EF680016	E-3	LH32DB038	E-4	LH39GB022	E-5		
EV43CR956	E-3	LH32DB042	E-4	LH39JN001	E-5		
EV44CK047	E-3	LH32DB043	E-4	LH39JZ020	E-9		
EV44CK052	E-3	LH32DB053	E-4	LH39JZ051	E-9		
HH11AZ040	E-10	LH32DB054	E-4	LH39WD010	E-5		
HH11AZ067	E-10	LH32DB060	E-4	LH39WD012	E-5		
HH11AZ070	E-10	LH32DB096	E-4	LH39WD018	E-5		
HH11KT165	E-6	LH32DB098	E-4	LH39WD020	E-5		
HH12AB140	E-5	LH32DB200	E-4	LH660001	E-7		
HH12AB141	E-5	LH32DB201	E-4	LH660003**	E-7		
HH12AD204	E-5	LH32DB202	E-4	LH660004	E-7		
HH12AT005	E-6	LH32DB203	E-4	LH660010	E-8		
HH12AT008	E-6	LH32DB204	E-4	LH660011	E-8		
HH12AT015	E-6	LH32DB205	E-4	LH680001	E-7		
HH12AT016	E-6	LH32DB206	E-4	LH680004	E-7		
HH12HA070	E-5	LH32DB207	E-4	LH680005	E-7		
HH12KA250	E-6	LH32DB208	E-4	LH680006	E-7		
HH12KD020	E-6	LH32EB053	E-4	LH680012	E-8		
HH12KD021*	E-6	LH32EB081	E-4	LH680013	E-8		

# Heating Components

## COMBINATION SINGLE STAGE DUAL GAS VALVE, REDUNDANT

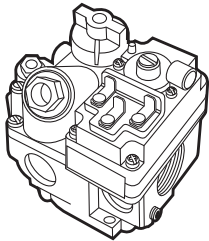


- Replaces many popular brands
- Slow opening
- Single Stage
- LP kit included
- 24 volt operator
- Quick connect terminals
- Inlet and outlet pressure taps
- Off-pilot-on programmed lighting sequence for standing pilot application
- Pilot compression fitting for 1/4" O.D. tubing

PART NO	SIZE (in)	FOR USE WITH GAS TYPE		CAPACITY 1000 BTU's	PRESS IN WC
		NAT	LP		
P681-1501	1/2 x 3/4	YES	YES	130	3.5

Replaces: Single and Dual valve standing pilot controls with rated capacity on natural gas at 130,000 BTU/HR.  
 HONEYWELL: V800 & VR800  
 WHITE-RODGERS: 36C03-300, 36C03-330, 36C03-400 & 36C03-433  
 ITT GENERAL: B57RA68, B57RF68, B57RH161, B59R02 & B59R06  
 ROBERTSHAW: 700-400, 700-402 & 700-406  
 STEVECO: 215-508

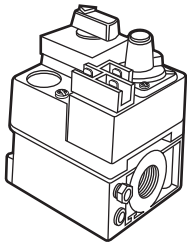
## COMBINATION GAS CONTROLS



- Manual main and pilot gas shutoff
- Pilot gas outlet with adjustment
- Outlet gas pressure tap
- 24 volt operator
- Auto pilot shutoff and pressure regulation as noted
- Capacity: 240,000 BTU's
- Pressure set at: 3.5 @ 125m

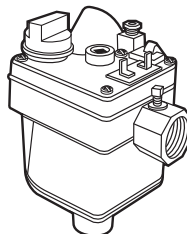
PART NO	SIZE (in)	PRESS REG	USE NAT	WITH LP	100% SHUT-OFF	
					YES	NO
EF53CK185	1/2 x 3/4	YES	YES	--	NO	NO
EF680006*	1/2 x 3/4	YES	YES	YES	YES	YES
EF53CK198†	1/2 x 1/2	YES	YES	--	NO	NO
EF53CK208	1/2 x 1/2	NO	--	YES	YES	YES
EF53CK205†	1/2 x 1/2	YES	YES	--	YES	YES

\*Kit contains EF53CK188 VALVE, Blankoff plate for converting to LP gas applications and 3/4" to 1/2" reducer bushing.  
 †Slow Opening



- Manual main and pilot gas shutoff
- Pilot gas outlet with adjustment
- Outlet gas pressure tap
- 24 volt operator
- Auto pilot shutoff and pressure regulation as noted
- Pressure set at: 3.5 @ 150m (EF33CB181)  
11 @ 125m (EF53CK248)

PART NO	SIZE (in)	CAPACITY 1000 BTU's	PRESS REG	USE NAT	WITH LP	100% SHUTOFF
EF33CB181	1/2 x 1/2	225	YES	YES	--	NO
EF53CK248	1/4 x 3/4	486	YES	--	YES	YES

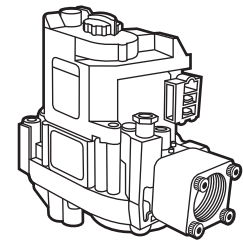


- Manual main and pilot gas shutoff
- Natural gas
- Pilot outlet with adjustment
- Outlet gas pressure tap
- 24 volt operator
- Pressure regulator
- Heat motor gives time delay
- Size 1/2" x 3/4", has pressure regulator, use with natural gas, pressure set at 3.5 @125M
- Capacity: 164,000 BTU's
- Non 100% shutoff
- Includes 3/4" x 1/2" reducer bushing

<b>PART NO</b>
EF53CK198

## COMBINATION DUAL VALVE GAS CONTROLS

- Dual main electric valves – redundant
- Manual main gas shutoff
- I.I.D. system applicable
- Pilot gas adjustment
- Pressure regulator
- Outlet gas pressure tap
- Natural gas
- 24 volt operator



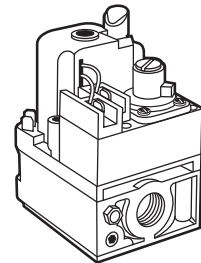
PART NO	SIZE (in)	FOR USE WITH GAS TYPE		CAPACITY 1000 BTU's	PRESS IN WC
		NAT	LP		
EF32CB212	1/2 x 3/4	YES	--	130	3.5

Similar models to RCD P/N EF33CZ206 with slight changes:

- Size 1/2" x 1/2"
- Capacity 179,000 BTU's

<b>PART NO</b>
EF33CZ209

- Dual main electric valves – redundant
- Manual main gas shutoff
- 24 volt operator
- Adjustable pilot gas flow
- Outlet gas pressure tap
- Pressure regulator
- Natural gas
- I.I.D. system applicable



PART NO	CAPACITY 1000 BTU's	PRESS SET AT
EF680007	250	3.5

NOTE: Package includes EF32CB210 valve and 3/4" to 1/2" reducer bushing.

Compressors,  
Chillers, Condensers

Motors

Electrical

Heating  
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Indoor Air  
Quality

Thermostats

Oils &  
Chemicals

Accessories, Supplies  
& Commodities

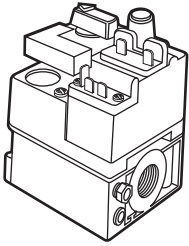
Tools &  
Instruments

Refrigeration

# Heating Components

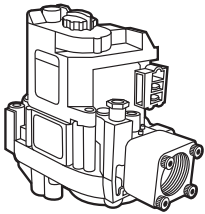
Compressors, Chillers, Condensers  
 Motors  
 Electrical  
 Heating Components  
 Indoor Air Quality  
 Thermostats  
 Oils & Chemicals  
 Accessories, Supplies & Commodities  
 Tools & Instruments  
 Refrigeration

## COMBINATION TWO STAGE GAS CONTROLS



- Pre-selected first stage firing rate
- Adjustable high fire rate
- 24 volt operator
- Manual main gas shutoff
- Pilot gas adjustment
- Outlet gas pressure tap
- Pressure regulator

PART NO	SIZE (in)	GAS TYPE		PRESS IN			100% SHUTOFF
		NAT	LP	CAPACITY 1000 BTU's	WCLO	WCHI	
EF680016	3/4 x 3/4	YES	--	335	1.3	3.5	NO



### Universal electronic ignition gas valve

- Control includes manual valve, two automatic operators, pressure regulators, pilot adjustment, pilot plug and ignition adapter.
- Highest capacity (415,000 BTU MAX. REG., NG) of any electronic ignition valve in the industry.
- Replaces virtually any IP, his, or DSI gas control.
- For use with natural or manufactured gas or LP gas.
- Honeywell part no.: VR8345M4302

PART NO

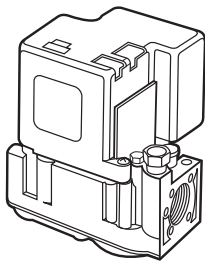
P681-VR8345M

## Continuous pilot dual automatic valve combination gas controls

- Controls include safety shutoff, manual valve, two automatic operators, pressure regulator and pilot adjustment.
- Replaces over 95 percent of the standing pilot gas valves; maximum capacity rating is 150% of the competitive valves.
- Meets 1979 ANSI i standards for redundancy in gas valve operation.

PART NO	HONEYWELL PART NO
P660-VR83A3500	VR8300A3500
P660-VR83A3518	VR8300A3518
P660-VR83A4508	VR8300A4508
P660-VR83A4516	VR8300A4516

## SMARTVALVE SYSTEM



- Combines gas flow and electronic intermittent pilot sequencing functions into a single unit.
- Suitable for a wide range of gas-fired appliances including residential furnaces, rooftop furnaces, residential boilers, unit heaters, infrared heaters, and space heaters.
- Honeywell part no.: SV9501M2528.

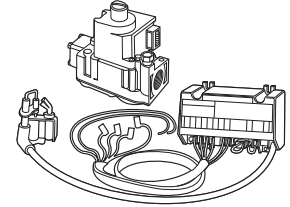
PART NO

P682-SV950

## BURNER IGNITION SYSTEMS

### Universal retrofit intermittent pilot gas burner ignition system

- Combines the most universal ignition controls (S8610 IP module & VR8304M gas valve) into the most capable retrofit kit available.
- Single-rod or dual-rod ignition and sensing simplifies installation with only one lead to wire.
- Sophisticated lockout timing eliminates nuisance lockouts.
- Honeywell part no.: Y8610U3003.



PART NO

P660-Y8610U

### Retrofit intermittent pilot gas burner ignition system

- V8610f kits are for use with natural gas only: continue trial for ignition until the pilot lights or the system is shut down manually.
- Complete kit for converting standing pilot to intermittent pilot.
- Not 100% shutoff on pilot flame loss; ideal for most natural gas systems.
- Honeywell part no Y8610F5003.

PART NO

P660-Y8610F

## SINGLE FUNCTION GAS CONTROLS

### MANUAL GAS SHUTOFF VALVE

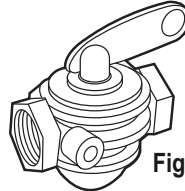


Figure A

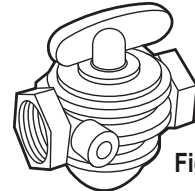
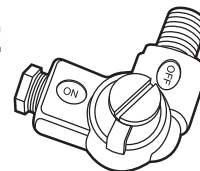


Figure B

PART NO	SIZE (in)	OVERALL LENGTH (in)	HEIGHT (in)	PILOT CONN	FIG
EV44CK047	1/2 x 1/2	2.8	3	Both Plugged	A
EV44CK052	3/4 x 3/4	3.1	3.6	One Plugged	B

### PILOT SHUTOFF VALVE



PART NO

EV43CR956

TYPE

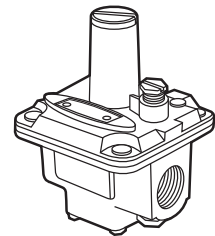
Right Angle

BODY

Aluminum

### GAS PRESSURE REGULATOR

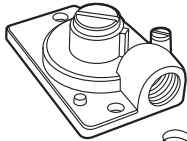
- Regulator is 5 PSI to 4" WC.



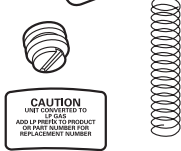
PART NO	VENDOR P/N	PIPE SIZE (IN)	INPUT CAPACITY NATURAL GAS (BTUH)
EF680009	Maxitrol 1/2 RV52	1/2	262,000
EF680010	Maxitrol 3/4 RV53	3/4	687,750

# Heating Components

## GAS VALVE CONVERTERS/KITS



Regulator and gasket set used to convert Robertshaw vh700 & 700 model gas valves from regulated natural gas to regulated L.P. gas Mfg. P/N: 82446



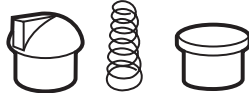
**CAUTION**  
UNIT CONVERTS TO  
LP USE  
AND IS PRESET TO PROTECT  
ON PART NUMBER FOR  
REPLACEMENT NUMBER

PART NO
302989-102

Converts Johnson control gas valves from natural gas to regulated L.P. gas



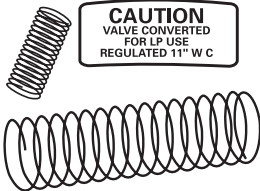
**ATTENTION**  
THIS VALVE HAS  
BEEN CONVERTED  
FOR USE WITH  
LP GAS



PART NO
EF39AB001
EF39ZW025

Honeywell valves with V5306, VR8200 or VR8204 pressure regulators can be converted for regulated L.P. gas service by using these kits. complete regulator need not be changed.

V5306 - Mfg. P/N: 391937 ..... P/N: **EF39AB001**  
VR8200,VR8402 - Mfg.P/N: 393691 ..... P/N: **EF39ZW025**

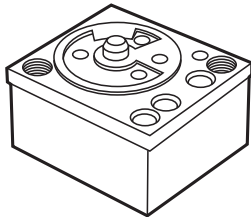


**CAUTION**  
VALVE CONVERTED  
FOR LP USE  
REGULATED 11" W C

Regulator spring converts W-R model 36C & 36E gas valve from natural gas to regulated L.P. gas

PART NO
EF39ZW023

mfg. P/N: **92-0659**  
**RCD 646 & 647 valve conversions**



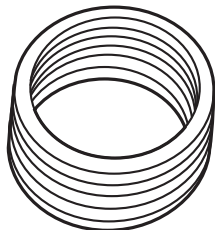
Honeywell step opening regulator for conversion of RCD EF33CY254 valve from natural gas service to regulated L.P. gas (11.0- W.C./4.5- W.C.) mfg. P/N: V5307A117

PART NO
58GP305671-101

## SPRING

PART NO	COLOR	SIZE
301248-102	RED CONVERTS NOM. 3.5" NAT. TO NOM. 11.0 L.P. "	3.0 x .30" "
301248-101	PLAIN CONVERTS NOM. 11.0" LP. TO NOM. 3.5 NAT. "	3.0 x .30" "

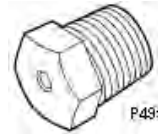
## BUSHING



1/2" x 3/4" NPT face bushing  
• Use to adapt 3/4" NPT ported gas valves for use where 1/2" NPT piping and manifolds are provided

PART NO
CA57AP20

## MAIN BURNER ORIFICES



3/8" across flats,  
1/16 x 32 NST, 31" long

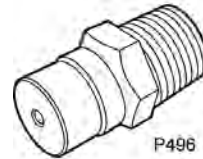
PART NO	DRILL SIZE
LH32DB038	38 (.101)
LH32DB042	42 (.093)
LH32DB043	43 (.089)
LH32DB053	53 (.059)
LH32DB054	54 (.055)

7/16" across flats,  
1/8 x 27 NPT, .50" long

PART NO	DRILL SIZE
LH32DB060	53 (.059)
LH32DB096	41 (.067)
LH32DB098	40 (.098)
LH32DB200	44 (.086)
LH32DB201	55 (.052)
LH32DB202	43 (.089)
LH32DB203	54 (.055)
LH32DB204	101 (.057)
LH32DB205	45 (.082)
LH32DB206	56 (.046)
LH32DB207	42 (.093)
LH32DB208	46 (.081)

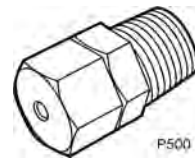
9/16" across flats,  
1/4 x 18 NPT, 5/8" long

PART NO	DRILL SIZE
LH32JB055	54 (.055)
LH32JB059	53 (.059)
LH32JB063	52 (.063)
LH32JB093	42 (.093)
LH32JB096	41 (.096)
LH32JB101	38 (.101)
LH32JB106	36 (.106)



7/16" across flats, 1/8 x 27 NPT,  
7/8" long, dia.

PART NO	DRILL SIZE
LH32EB053	55 (.052)
LH32EB081	45 (.082)

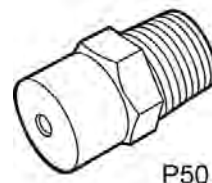


7/16" across flats,  
1/8 27 NPT, 7/8" long

PART NO	DRILL SIZE
LH32JB046	56 (.046)
LH32JB053	55 (.052)
LH32JB056	54 (.055)
68459C53	53 (.059)
LH32JB078	47 (.078)
LH32JB089	43 (.089)
LH32JB097	41 (.096)
LH32JB099	40 (.098)
LH32JB104	37 (.104)

9/16" across flats,  
1/4 x 18 NPT, 7/8" long

PART NO	DRILL SIZE
LH32RQBG31	52 (.063)
LH32RQ110	35 (.110)



9/16" across flats,  
1/4 x 18 NPT, 7/8" long, 495 dia.

PART NO	DRILL SIZE
LH32RF035	65 (.035)
LH32RF047	56 (.046)
LH32RF052	55 (.052)
LH32RF055	54 (.055)
LH32RF070	50 (.070)
LH32RF073	49 (.073)
LH32RF082	45 (.082)
LH32RF086	44 (.086)
LH32RF096	41 (.096)
LH32RF102	38 (.101)
LH32RF113	33 (.113)
LH32RF116	32 (.116)

Compressors,  
Chillers, Condensers

Motors

Electrical

Heating  
Components

Indoor Air  
Quality

Thermostats

Oils &  
Chemicals

Accessories, Supplies  
& Commodities

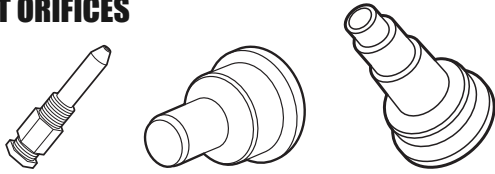
Tools &  
Instruments

Refrigeration

# Heating Components

Compressors, Chillers, Condensers  
 Motors  
 Electrical  
 Heating Components  
 Indoor Air Quality  
 Thermostats  
 Oils & Chemicals  
 Accessories, Supplies & Commodities  
 Tools & Instruments  
 Refrigeration

## PILOT ORIFICES



White-Rodgers used with "E" series pilots

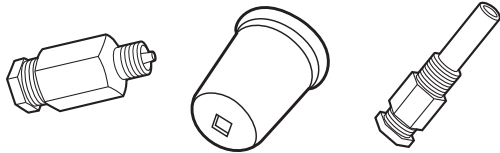
PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS
LH39WD010	0.01	10U	LP
LH39WD012	0.012	12U	LP
LH39WD018	0.018	18U	NAT
LH39WD020	0.02	20U	NAT

BDP used with 732, 733, 734 and 740 pilots

PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS
LH39JN001	0.017	BRIGHT	NAT

Honeywell used with Q308, Q314, Q345 pilots

PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS
LH32RMO15	0.01	BLACK	LP
LH32RMO16	0.018	BRIGHT	NAT
LH32AN012	0.012	BBR12	LP
LH32AN014	0.014	BBR14	NAT



General controls used with 26T pilots

PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS
LH32DB001	0.01	0.01	LP

Robertshaw used with 2CH pilots

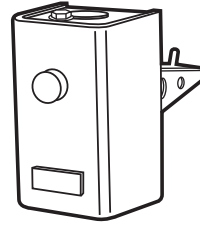
PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS
LH32DB002	0.01	LP10	LP

Penn used with "J" series pilots

PART NO	ORIFICE SIZE	PART MARKING	TYPE GAS	DIM (in)
LH32RN109	0.009	4209	LP	39/64
LH32RN009	0.009	4709	LP	1-1/32
LH39GB011	0.011	4711	LP	1-9/64
LH39GB019	0.018	7218	NAT	39/64
LH39GB022	0.023	3723	NAT	39/64

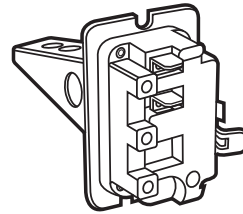
## FAN, LIMIT CONTROLS

### LIMIT CONTROLS



- Manual reset
- For line or low voltage circuit
- Differential limit 25° F
- Non-adjustable settings
- Element length: 3"

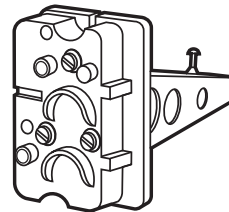
PART NO	SWITCH TYPE	TEMP SETTINGS (F)	
		OPENS	CLOSES
HH12AD204	SPST	200	175



- Temp setting: adj. 160° - 250°F (HH127ZA008) (HH680400)
- adj. 150° - 250°F (HH12ZA011)(HH680405)
- Differential: 30° F
- Switch: SPST

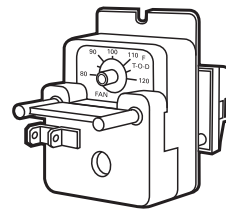
PART NO	ELEMENT LENGTH (in)
HH12ZA008	3-3/8
HH680400	3
HH680405	7-3/8
HH680405	7

### FAN CONTROLS



- Knurled shafts for adjustment of temperature setting and differential
- Slotted for two screw mounting
- Switch type: SPST
- Temp setting: fan off – adj. 80° F - 120° F
- Fan differential: adj. 20° F - 50° F

PART NO	ELEMENT LENGTH (in)
HH12AB140	7
HH12AB141	3



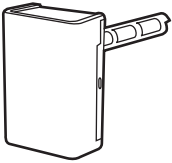
- Quick connect terminals
- 24-volt fan assist heater
- Tube construction for strength
- Slotted for 2 screw mounting
- Switch type: SPST
- Adjustable fan settings
- Temp. Setting: fan off – adj. 80° F - 120° F
- Fan differential: 30° F

PART NO	ELEMENT LENGTH (in)
HH12HA070	1-1/4

# Heating Components

## FAN, LIMIT CONTROLS

### TOTALINE® COMBINATION FAN, LIMIT CONTROLS



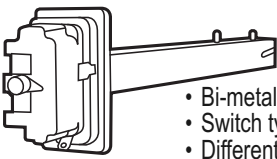
- Manual fan switch
- Individual fan and limit switches
- Helical bi-metal for precise setting
- SPST switch
- Adjustable settings
- Differential: limit - 25°F

#### • Temperature setting:

Fan off/on - ADJ. 90°F-135°F (P232-0001,0002)  
 - ADJ. 90°F-130°F (P232-0003)

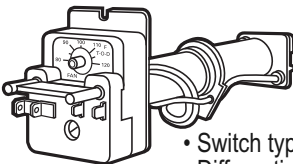
Limit Opens - ADJ. 100°F-250°F (P232-0001,0002)  
 - ADJ. 100°F-220°F (P232-0003)

P/N	ELEMENT LENGTH (in.)
P232-0001	8
P232-0002	5
P232-0003	11.5



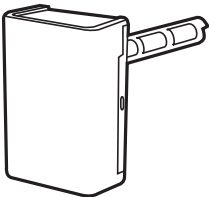
- With fan assist heater to prevent nuisance fan starting
- Individual sensing elements
- Bi-metal actuated
- Switch type: SPST
- Differential: fan - 80° F, except HH12KA250 which is 50° F limit - 30° F
- Element length: 7" (except HH12ZW125 which is 5")
- Temp setting: fan off -ADJ. 90° F-120° F

P/N	TEMP. SETTING LIMIT OPENS (°F)	SETTINGS ADJUSTABLE
HH12KA250	250	FAN
HH12KD020	190	FAN
HH12KD021*	150-250 ADJ	FAN, LIMIT
HH12KD022*	150-250 ADJ	FAN, LIMIT
HH12KD023	220	FAN
HH12KD024	125	FAN
HH12KD025	170	FAN
HH12ZW125	125	FAN



- Slotted for 2 screw mounting
- Rigid tube construction
- 24 volt fan assist heater
- Quick connect electrical terminals
- Switch type: SPST
- Differential: fan - 35°F; limit - 40° F
- Temp setting: fan off - ADJ. 80° F - 120° F

P/N	TEMP. SETTING LIMIT OPENS (°F)	SETTINGS ADJUSTABLE
HH680505	259	5/3/2004



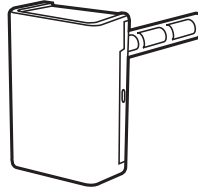
- Individual fan and limit switches
- Helical bi-metal for precise setting
- SPST switch
- Adjustable settings
- Differential: limit -25°
- Temperature setting:  
 Fan on - 20 to 90 seconds after fan assist heater energized (HH12AT016)  
 Fan off - ADJ. 100° F  
 Limit opens - ADJ. 150° F-250° F

P/N	ELEMENT LENGTH (in.)
HH12AT005	5
HH12AT008	8
HH12AT015	11.5
HH12AT016	8

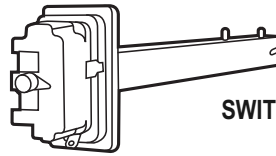
- Temperature setting:  
 Fan off/on -ADJ. 90°F-135°F(HH12AT005,008)  
 -ADJ. 90°F-130°F (HH12AT015)  
 Limit opens -ADJ. 100°F-250°F (H12AT005,008)  
 -ADJ. 100°F-220°F (HH12AT015)

### P/N P232-L4064B Fan and limit control

- Fast response bimetal element with larger surface area allows faster rotation during temperature change response.
- Faster temperature change recognition for safer operation.
- Wider opening steel surrounding bimetal element allows hot gas penetration for faster temperature sensing and improved temperature tracking.

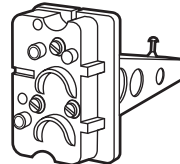


TOTALINE PART NUMBER	HONEYWELL PART NUMBER	DESCRIPTION
P232-L4064B-11	L4064B2210	Fan & Limit 11-1/2"
P232-L4064B-8	L4064B2228	Fan & Limit, 8"
P232-L4064B-5	L4064B2236	Fan & Limit, 5"



### SWITCH - COMBINATION FAN AND LIMIT

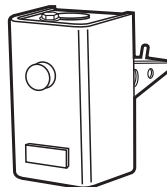
P/N	ELEMENT Length (in.)	SWITCH CLOSSES ADJ FAN RANGE (F)	SWITCH OPENS ADJ FAN RANGE (F)	SWITCH CLOSSES ADJ FAN RANGE (F)	SWITCH OPENS ADJ FAN RANGE (F)
HH680501	6	90-120	75 FIXED	230 FIXED	30 FIXED
HH680502	7	90-120	35 FIXED	200 FIXED	30 FIXED
HH680504	7	90-120	75 FIXED	240 FIXED	30 FIXED
HH680506	7	90-120	50 FIXED	150-250	30 FIXED



### FAN SWITCH - INSERTION TYPE

- Knurled shafts for adjustment of temperature setting and differential
- Slotted for two screw mounting.

P/N	ELEMENT LENGTH (in.)	SWITCH CLOSSES ADJUSTABLE FAN RANGE (°F)	SWITCH OPENS ADJUSTABLE FAN RANGE (°F)	SWITCH TYPE
L4068E1047	3	80-120	25 FIXED	SPST
HH680201	3	70-140	25-45	SPST
HH680203	3	80-120	65 FIXED	SPST
HH680204	7	70-140	25-45	SPST
HH680205	7	80-110	65 FIXED	SPDT



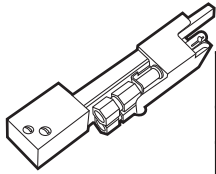
### FAN LIMIT SWITCH - INSERTION TYPE

P/N	ELEMENT LENGTH (in.)	SWITCH CLOSSES ADJUSTABLE FAN RANGE (°F)	SWITCH OPENS ADJUSTABLE FAN RANGE (°F)	SWITCH TYPE
HH680401	7	180 FIXED	10 FIXED	SPDT
HH680402	7	190 FIXED	30 FIXED	SPDT
HH680403	7	200 FIXED	30 FIXED	SPDT
HH680404	7	210 FIXED	30 FIXED	SPDT
HH11KT165	7	165 FIXED	30 FIXED	SPDT
HH12ZB178	7	180 FIXED	40 FIXED	SPST
HH12ZA162	3	160 FIXED	30 FIXED	SPST
HH12ZA169	7	170 FIXED	40 FIXED	SPST

# Heating Components

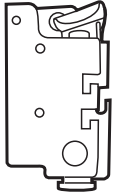
Compressors, Chillers, Condensers  
Motors  
Electrical  
Heating Components  
Indoor Air Quality  
Thermostats  
Oils & Chemicals  
Accessories, Supplies & Commodities  
Tools & Instruments  
Refrigeration

## IGNITION SYSTEMS PILOT BURNERS



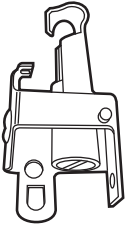
The 2H or 2CH Pilot has SPDT switch action for use with 11 volt glow coil systems.

PART NO	ORIFICE SIZE	PILOT STYLE	TYPE GAS
LH680006	0.021	2H w/COIL	NAT.
LH680004	0.021	2H w/o COIL	NAT.



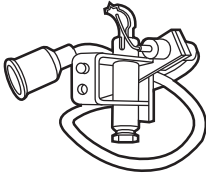
The 734 model pilot burner is for use with a 30 MV thermocouple in standing pilot applications. Snap in or threaded thermocouples may be used.

PART NO	ORIFICE SIZE	TYPE GAS
LH31JZ022	0.017	NAT.



Model E28 pilot burner is for assembly with LH33WZ506 electrode and HH71PD001 sensor. Spark igniter LH33WZ059 and pilot orifice LH39WD020 must be ordered separately. Natural gas

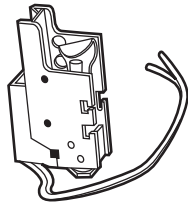
PART NO	ORIFICE SIZE	PILOT STYLE
LH31WZ507	0.02	E28



The following "J" style pilot burners are for use with LH33CM600 spark igniter. Burners come with spark electrode and high tension lead and insulating boot attached. Sensor LH33CM018 and Spark generator LH33CZ007 required.

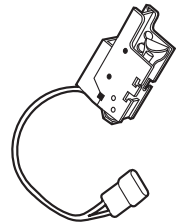
PART NO	ORIFICE SIZE	LEAD LENGTH (in)	HOOD POSITION*
LH31CM023	0.018	18	ST
LH660003**	.023, .009	12.5	ST
LH660004	0.023	17	LH

\* Angle of hood as viewed from electrode LH-Left Hand, ST-Straight.  
\*\* Includes LH31CM021 NAT. gas burner and H32RN009 orifice for L.P. conversion.



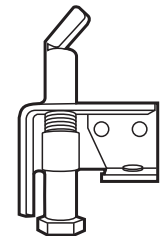
LH33JZ053 is a differential expansion pilot equipped with a 2 lead SPST switch for use with glow coil or spark ignition.

PART NO	ORIFICE SIZE	PILOT STYLE
LH33JZ053	0.017	732C



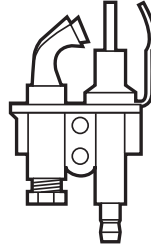
Differential expansion pilot equipped with a 3 lead SPDT switch for use with glow coil or spark ignition. Molex connector included.

PART NO	ORIFICE SIZE	PILOT STYLE
LH680005	0.017	740A



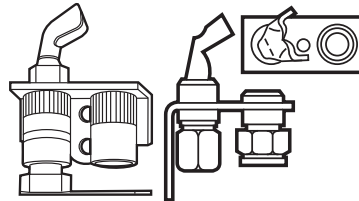
This LH31RB015 model pilot burner is used in standing pilot applications. **2 pilot orifices are provided.** One for natural gas is installed in the burner. The extra one is for use with L.P. gas

PART NO	ORIFICE SIZE	TYPE GAS
LH31RB015	.016.010	NAT.L.P.



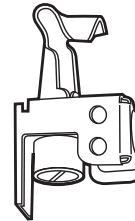
The Q345 pilot burner includes pilot orifice, spark electrode and flame ground. This burner is for use with Honeywell S86 spark module. Converts to LP gas with LH32RM015 pilot orifice.

PART NO	ORIFICE SIZE	TYPE GAS
LH680001	0.018	NAT.



Q314A pilot burner is a nonaerated type with .018 orifice for use with natural gas.

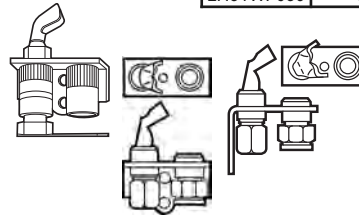
PART NO
LH660001



The E25 and E27 model pilot burners are for use with LH31WM001 Igniter and HH71PD001 Sensor. LH33WM001 Igniter must be used with HT01AW024 Ignition Transformer.

Pilot orifice LH39WD020 not furnished.  
• Natural gas • Orifice size: .020

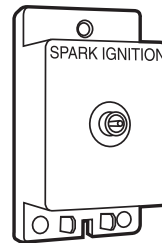
PART NO	MODEL NUMBER
LH31WF038	E25 (LH)
LH31WF039	E27 (RH)



Q314A Pilot burner is a nonaerated type with .018 orifice for use with natural gas.

PART NO
LH31AC0
LH31AC0

## IGNITERS



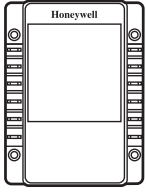
This solid state igniter features push on high tension lead connector. Igniter provides continuous spark until pilot flame is established. 24 volt system.  
Replaces: LH33EP030, LH33WZ502.  
Igniter Model: 990

PART NO	FUNCTION	VOLTS
LH33WZ510	NON-100% LOCKOUT	24
LH33WZ512	5 MIN. 100% LOCKOUT	24
LH33WZ513	5 MIN. 100% LOCKOUT w/20 SEC. PILOT GAS PREPURGE	24

Igniters continued on the next page

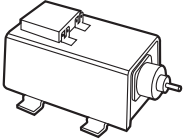
# Heating Components

## IGNITERS continued from previous page



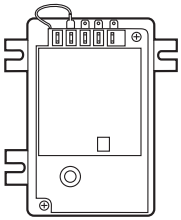
This igniter provides intermittent pilot burner ignition. S86E provides continuous trial for ignition. S86G and S86H provides safe lockout if pilot does not ignite in 90 second trial for ignition period. System volts - 25.

PART NO	MODEL NUMBER	COMPATIBLE H-W VALVE
LH660010	S86E	8,448,440
LH660011	S86H	ALL I.I.D. VALVES
LH680510	S86F	ALL I.I.D. VALVES



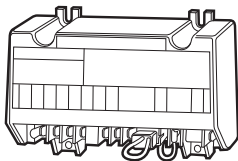
Use these igniters with the "J" style pilot burners. Igniters are suitable for panel mounting. The LH33CM600 may be mounted directly on Penn valves EF33CZ206 and 209. The LH33CZ003 can be mounted on Penn valve EF33CZ210 by removing mounting bracket. The LH33CM018 sensor and RM0 1680001 sensor cable are required. 24 volt system.

PART NO	MODEL NUMBER
LH33CM600	G60



Use these igniters with the "J" style pilot burners. Igniters are suitable for panel mounting. The LH33CM600 may be mounted directly on Penn valves EF33CZ206 and 209. The LH33CZ003 can be mounted on Penn valve EF33CZ210 by removing mounting bracket. The LH33CM018 sensor and RM01680001 sensor cable are required. 24 volt system.

PART NO	MODEL NUMBER
LH33CZ003	G67



Use these igniters with the "J" style pilot burners. Igniters are suitable for panel mounting. The LH33CM600 may be mounted directly on Penn valves EF33CZ206 and 209. The LH33CZ003 can be mounted on Penn valve EF33CZ210 by removing mounting bracket. The LH33CM018 sensor and RM01680001 sensor cable are required. 24 volt system.

PART NO
P691-S8610U

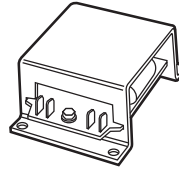
### Universal Intermittent Pilot Module

- Provides ignition sequence, flame rectification and safety shutoff for intermittent pilot central furnaces and heating appliances.
- For use with single rod or dual rod/remote sense applications.
- For use with natural or LP gas.
- Replaces over 300 existing IP modules including Honeywell, Robertshaw, Penn Johnson, Fenwal and others.



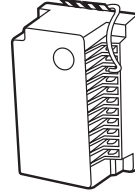
The SX611 Ignition Module generates a high-voltage spark and provides a continuous trial for pilot ignition. The SX611 will also automatically try to re-establish the pilot flame should it be extinguished while the thermostat is calling for heat.

PART NO	MODEL NUMBER
LH33EP040	SX611



Solid state igniter for use with glow coils used on 732 and 740 pilot burner. Igniter cycles glow coil and regulates coil voltage to increase coil life. System volts - 24

PART NO	MODEL NUMBER
LH33JZ050	870

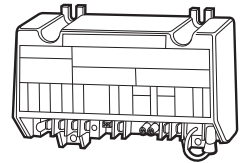


- Use with "J" style pilot.
- Panel mount.
- 24 volt.
- 100% lockout, 120 sec. nominal trial for ignition, w/4 sec. pilot gas prepurge.

PART NO	MODEL NUMBER
LH33CZ007	G770

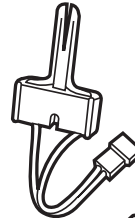
### Universal Hot Surface Ignition Module

- Provides easy field-replacement of a wide range of hot surface ignition modules by Honeywell, Robertshaw and White Rodgers.
- Single rod or remote dual rod rectification type flame sensing.
- LED signals system lockout, weak flame signal or internal error.
- Selectable number of ignition trials (1 or 3).
- Selectable length of trial for ignition (4 or 7 seconds).



PART NO
P691-S910U

### HOT SURFACE IGNITER



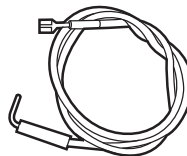
Designed for use with LH680-012or 013 flame sensor

PART NO	MODEL NUMBER
LH33ZS004	271



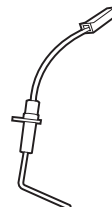
Designed specifically for use with LH68005 and LH33JZ053 pilot burners. Locating tabs and locking screw provide accurate location for required spark gap. Spike connection replaces quick connect style.

PART NO	MODEL NUMBER
LH680512	AM11



Provided with mounting clip. 60" leads with 5/64" thick insulation.

PART NO	MODEL NUMBER
LH33EW058	760-679



### FLAME SENSOR

Sensor is designed for use with LH33ZS004 Hot Surface Igniter.

PART NO	MODEL NUMBER
80° FURNACE USE LH680012	CE6
90° FURNACE USE LH680013	CE6

Compressors,  
Chillers, Condensers

Motors

Electrical

Heating  
Components

Indoor Air  
Quality

Thermostats

Oils &  
Chemicals

Accessories, Supplies  
& Commodities

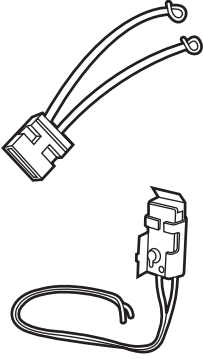
Tools &  
Instruments

Refrigeration

# Heating Components

Compressors, Chillers, Condensers  
Motors  
Electrical  
Heating Components  
Indoor Air Quality  
Thermostats  
Oils & Chemicals  
Accessories, Supplies & Commodities  
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Refrigeration

## GLOW COILS



This is the replacement ignition coil for the 2H pilot burner supplied in the LH68006 pile package. Use with 48DA660025 resistance wire package.

PART NO	PILOT STYLE	NOM VOLTS
LH39JZ051	2H	10

This igniter coil assembly is used with pilot burners LH68005 and LH33JZ053 glow coil voltage source must be limited to maximum of 11 volts.

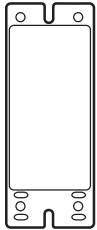
PART NO	PILOT STYLE	NOM VOLTS
LH39JZ020	740	10

## UNIVERSAL THERMOCOUPLE

- Replaces almost any 30 mV thermocouple.
- Average operating life of ten years.
- Bottom lock design allows for one hand installation.
- Universal adapter makes this the two-to-one installer-preferred thermocouple in independent HVAC survey.

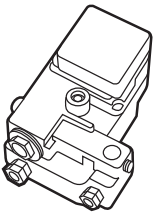
PART NO	HONEYWELL PART NO	DESCRIPTION
P671-Q340A-18	A340A1066	Thermocouple 18.
P671-Q340A-24	Q340A1074	Thermocouple 24.
P671-Q340A-30	Q340A1082	Thermocouple 30.
P671-Q340A-36	Q340A1090	Thermocouple 36.
P671-Q340A-48	Q340A1108	Thermocouple 48.

## PILOT SAFETY SWITCHES



- Solid state lockout timer
- 30 second trial for ignition
- May be reset after 30 sec.
- 24 volt input

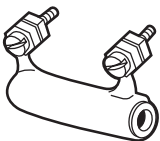
PART NO	MODEL NUMBER
HH72CH003	9901141



Manual reset pilot control which shuts off gas to pilot and main burners when pilot flame fails. Includes pilot gas filter. Use with nominal 30 mV thermocouple.

PART NO	MODEL NUMBER	TUBE SIZE
EF53FB020	C591A	1/4 O.D. "

## RESISTORS



Resistors and resistance wire are required on some units to reduce the voltage to ignition glow coils. Refer to unit installation and service instructions.

PART NO	OHMS RESISTANCE	WATTS
HT21AU004	4	20
HT21AU020	5	20
55939D5	3	8

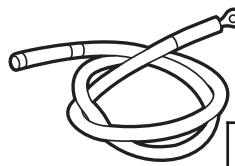
## RESISTANCE WIRE



This package contains stainless resistance wire used in reducing the 24 volt power source to nominal 9-11 volts required on some glow coil igniters. Instruction sheet included.

PART NO	LENGTH (in)	OHMS PER FT
48DA660025	156	0.38

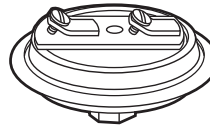
## IGNITION LEADS



High Voltage Ignition Lead Silicone insulated wire for ignition systems where high temperature, moisture resistant ignition lead is required on outdoor equipment.

PART NO	END CONNECTIONS	WIRE LENGTH (in)
48MA403742	SPK. PLUG/RING TERM.	20
B0805050	SPARK PLUG	24
48DD410452	Q.C./PIN TERM.	24
301286-702	NONE	27
RM680002	QUICK CONNECT	24

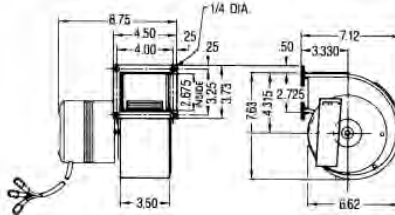
## LOW PRESSURE SWITCH



These low pressure switches are used in ignition circuits to interrupt power when gas pressure is low or gas service to unit is shut down. Switch has 1/8" NPT connection on underside.

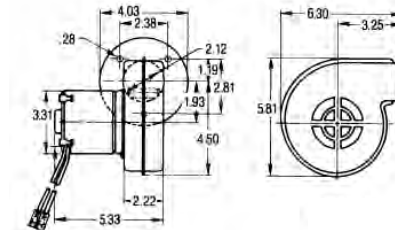
PART NO	RATING	PRESS SETTING
HK02LB005	1 AMP	2 WC "
HK02LB018	1 AMP	6 WC "

## COMBUSTION BLOWER ASSEMBLY



- 100 CFM Max.
- 230 Volt
- 1/10 H.P.
- PSC motor
- 3450 RPM

PART NO
48DA660



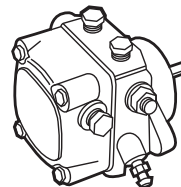
- 60 CFM Max.
- 230 Volt
- 1/80 H.P.
- Shaded pole motor
- 3200 RPM

PART NO
LA25UZ0

## OIL BURNER COMPONENTS

### OIL PUMPS

- Compact size
- 5/16" dia. shaft
- Integral bleed fitting for easy start up

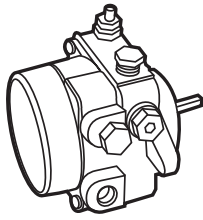


PART NO	PUMP STAGES	PUMP RPM
58HH680027	1	1725
58HH680029	2	1725
58HH680001	1	3450
58HH680002	2	3450

# Heating Components

## OIL BURNER COMPONENTS

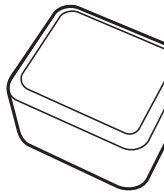
### OIL PUMPS



- Compact size
- 5/16" dia. shaft
- Integral bleed fitting for easy start up

PART NO	PUMP STAGES	PUMP RPM
58HH680028	1	1725
58HH680030	2	1725
58HH680025	1	3450
58HH680026	2	3450

### OIL BURNER IGNITION TRANSFORMER



- 115 Volt
- 10,000 Volt secondary
- 23 ma

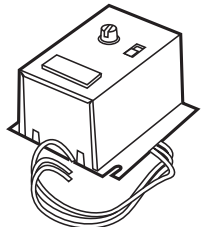
PART NO	WIDTH	LENGTH	MOUNTING CENTERS (in)
HT08BR115	4/7/2016	5/7/2016	3-1/4 x 4-1/4
HT08BR116	4/3/2008	5/5/2016	3-1/2 x 2-3/4

### COUPLINGS



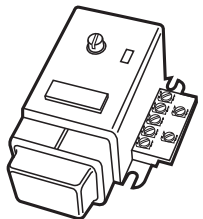
PART NO	ENDS (in)	LENGTH (in)
58HH680034	1/2 x 5/16	4-1/4

### PRIMARY CONTROLS



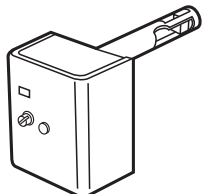
- Provides non-recycling control of an Intermittent ignition oil burner system
- Solid State flame sensing circuit
- Mounts on standard 4 x 4 box
- 45 second safety switch timing
- Manual reset required after safety shutdown
- Use with HH79AY060 CAD cell
- Integral transformer supplies 24V power to control circuit

PART NO	MODEL NUMBER
HH11AZ070	R8184G



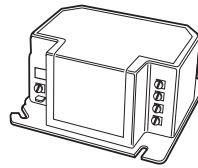
- Solid state flame sensing circuit
- Mounts on standard 4 x 4 box
- 45 second safety switch timing
- Use with HH79AY060 cad cell
- Manual reset required after safety shutdown
- Integral 40va transformer
- Provides control of an intermittent ignition oil burner and power for a low voltage cooling control circuit
- Extra "y" and "g" connections for cooling

PART NO	MODEL NUMBER
HH11AZ067	R8184M



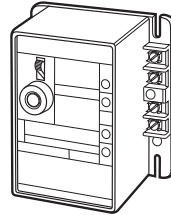
- Stack mounted
- Manual reset
- For use with 2 or 3 wire control
- Manual trip safety switch
- Interrupted ignition

PART NO	MODEL NUMBER
HH11AZ040	RA117A



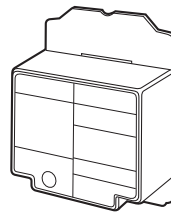
- Compatible with hydronic and forced air applications.
- Available in 15 & 30-second lockout times.
- Safe start check.
- Status indicator light monitors burner flame status and system lockout.
- Uses proven flame detection and monitoring systems.
- Optional delay on valve, blower off delay models.

PART NO	DESCRIPTION
P4322	Oil Burner Components



- Primary control operates the oil burner, oil valve, and ignition transformer in a response for a call for heat from the thermostat.
- Lockout indication lights reduce unnecessary service calls.
- Tamper resistant, rustproof, scratch resistant cover.
- Highest performance and reliability make it the preference of original equipment manufacturers.

PART NO	HONEYWELL PART NO	DESCRIPTION
P691-R7184A-P	R7184A1026	Interrupted Electronic Oil Primary
P691-R7184A-SS	R7184A1042	Interrupted Electronic Oil Primary
P691-R7184U	R7184U1012	Universal Interrupted Electronic Oil Primary
P691-R8484G	R8184G4009	Protectorelay/Oil Burner Control



- The solid state oil igniter is a line voltage igniter for residential oil fired burners, forced air furnaces, boilers, and water heaters.
- Mounts on burner housing.
- Diagnostic led indicates when the igniter has been energized.
- Igniter can be used in an intermittent (continuous) or interrupted mode of operation.

PART NO	HONEYWELL PART NO	DESCRIPTION
P691-S7184A	S7184A1023	Solid State Oil Igniter

### ELECTRIC HEATER REPAIR KITS

- Electric heater repair kits (for allied products heaters)
- Each kit repairs one element
- contains hardware required to repair an apd heater
- Instructions



PART NO	HEATER COIL WIRE GAUGE	COIL ARBOR DIA (in)
88RC0000CB128015	15	0.25
88RC0000CB159816	16	0.25
88RC0000CB167217	17	0.25
88RC0000CB315018	18	0.25
88RC0000CB363119	19	0.25
88RC0000CB675020	20	0.25

### SEQUENCE TESTER



The Sequence Tester allows for rapid and efficient testing or checking out the base unit sequence of operation on cooling, heating, or combination units employing a 24 volt control circuit. Basically, this device is a two-stage heating, two-stage cooling thermostat that can be locally controlled at the base unit. Its use virtually eliminates the need to make time consuming trips to the remote thermostat.

PART NO
48DA660

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Refrigeration

## Universal Hot Surface Igniter Kit

*The Next Generation of  
Universal Hot Surface Igniter*

### • 100% Tested and Certified

Every igniter goes through a 3 point test to insure quality and dead on arrivals a thing of the past.

- Simple installation
- No additional control module needed
- Works with existing OEM control panels

**TOTALINE'S® Silicon Nitride Igniter is compatible with these furnace and boiler igniters:**

Amana	Intertherm	Rheem Rudd
American Road Equip	Janitrol	Roberts Gordon
Arco	Johnstone	Robertshaw Uni-line
Armstrong Air	John Woods	41-238 41-242 41-402
Clare Brothers	Keeprite	41-403 41-404 41-405
Coleman/Evcon	L.B. White Co.	41-407 41-408 41-409
Comfort Maker	Lennox	41-410 41-411 41-412
Detroit/Brant Radiant	Majestic	41-414 41-1090
DMO	Metzger	Smith HB
Dornbeck Furnace	Miller	Snyder General
Ducane	Nordyne	Superior Furnace
Enerco Tech	Norton	Surface Igniter Corp
Fridgidaire	101M 201D 201K	Tappen
Gemline	201L 201M 210N	Tempstar
Goodman	201P 201W 271	Trane
H.B. Smith	271D 271M 271N	Viessmann
Heil	271NM 271P 271R	Wayne Home Equipment
Hupp Industries	271RS 271W	Weil McLain
Intercity	Olsen ECR Industries	White LB Company
Integra	Philco	White Rodgers
	Raypak	Williamson
		York/Luxaire



Replaces these types of silicon carbide igniters.

### Universal Round Kit P694-700-4-1



### Universal Flat Kit P694-700-2-1



### 100% Tested

