STOKES

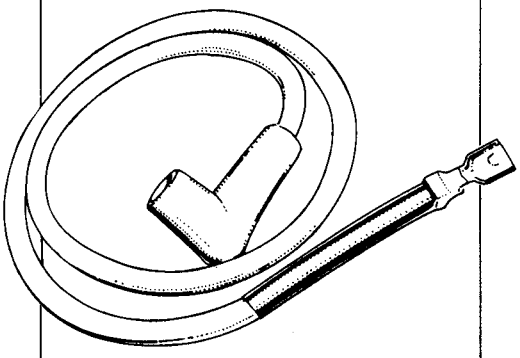
Appliance Parts

Service Manual

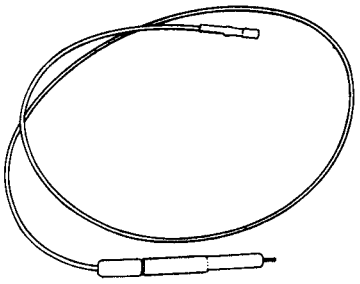
Gas Parts
Section N

Includes:
Thermostats, Thermopiles, Ignitors, Regulators, Pilots, E.C.O.'s, Fans & Motors, Anodes, Solonoids, Grill Burners

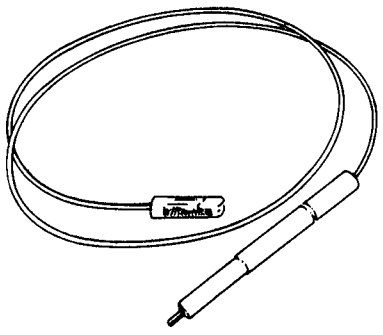
Stokes Appliance Parts - National Administration Centre
24 Palmerston Road West, Ringwood, Victoria 3134, Australia
Ph: 61 3 9872 7474 Fax: 61 3 9872 7400 Freecall: 1800 333 191
E-mail: parts@stokes-aus.com.au Web: www.stokesap.com.au



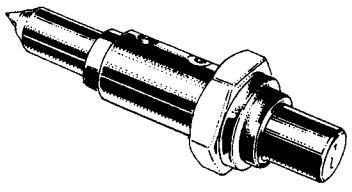
Cat No. GC004
800mm Ignition Cable for 5865H1001B Ignition Module
Honeywell No. 394800-30



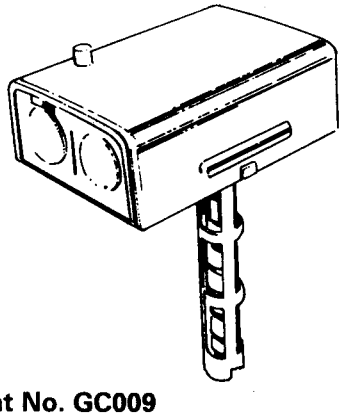
Cat No. GC005
Vernitron Ignitor with lead, suits Brivis (round connector)
Honeywell No. 6123/004



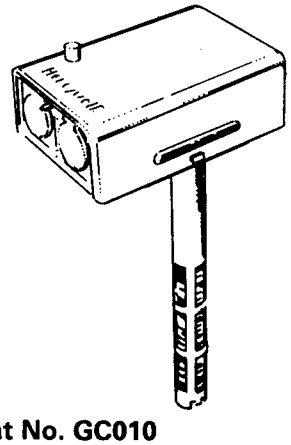
Cat No. GC006
Vernitron Ignitor with lead, suits Brivis (spade connector)
Honeywell No. 6123/002



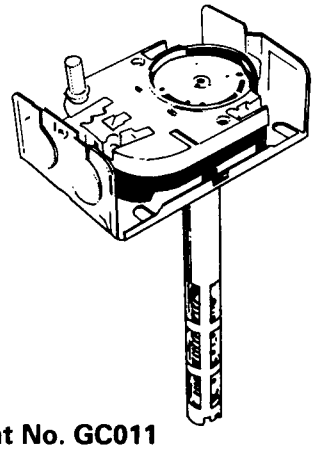
Cat No. GC007
Vernitron Piezo Ignitor
Honeywell No. 66214/000



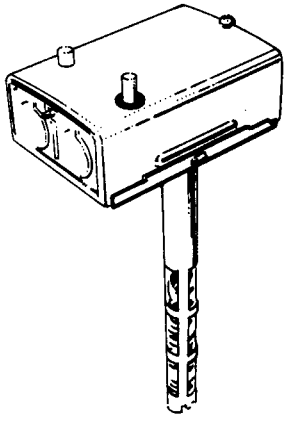
Cat No. GC009
5 inch Fan and Limit Stop 200°F
Early Brivis and others
Honeywell No. L406482640B



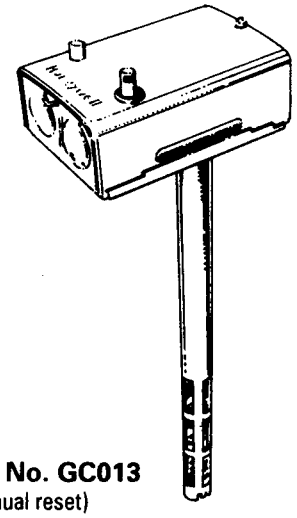
Cat No. GC010
8 inch Fan and Limit Stop 93°C
Early Vulcan and others
Honeywell No. L4064



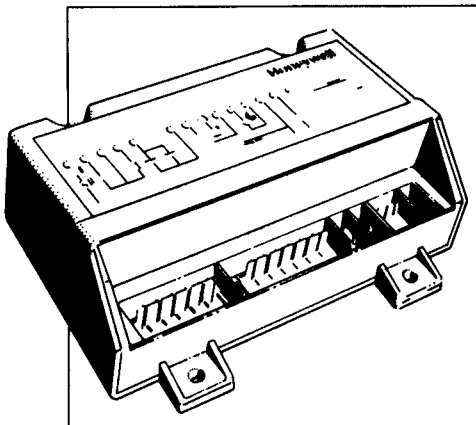
Cat No. GC011
8 inch Fan and Limit Stop 93°C
Used on later Vulcan and most Brivis units
No cover or jumper from switch.
Honeywell No. L4064F1098B



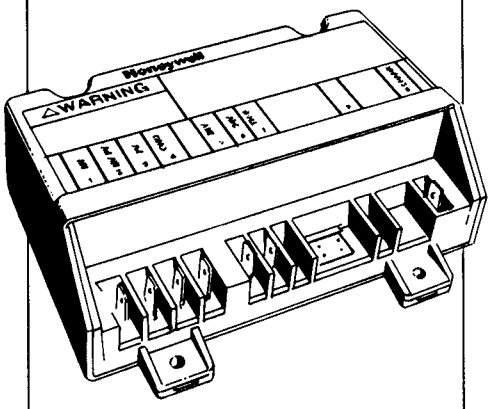
Cat No. GC012
8 inch Fan and Limit Stop 93°C
Manual reset Braemer and others
Honeywell No. L4064N1066B



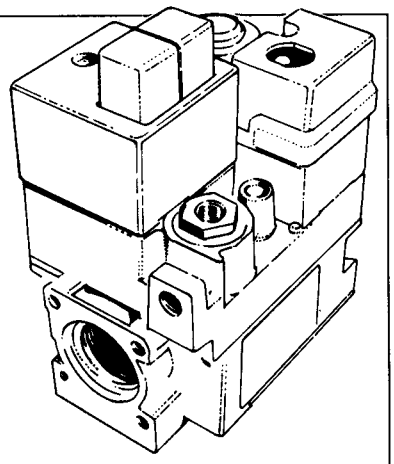
Cat No. GC013
(Manual reset)
11 inch Fan and Limit Stop 93°C
Various manufacturers
Honeywell No. L4064N1074B



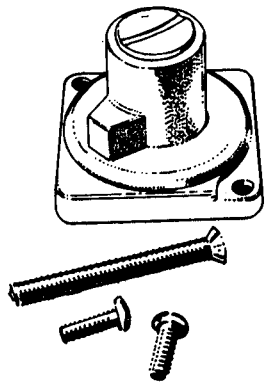
Cat No. GC019
Hot Surface Ignition Module
240v powered 110/120v Ignitor for Direct Ignition for Induced/Forced Draft applications used in Brivis H-E Heaters
Honeywell No. S4570LS1026B



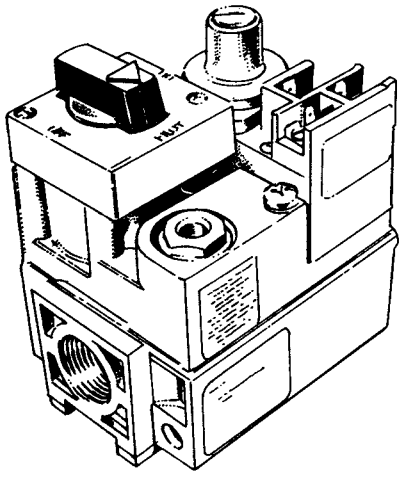
Cat No. GC020
Intermittent Ignition Module
24v 15 Second Lockout.
Use lead GC004
Honeywell No. S8605H1001B



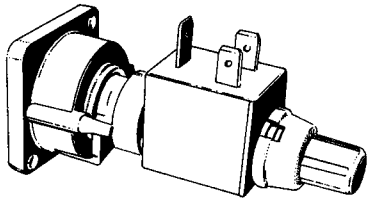
Cat No. GC021
Single Block ¾ inch C.G.C.
Standing Pilot.
Rheem commercial hot water
Honeywell No. V4400C1211B



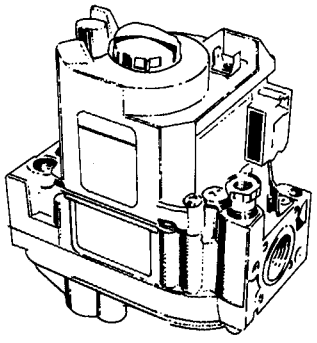
Cat No. GC022
3.5 inch W.G. Pressure Regulator for V/VR800 gas values
Honeywell No. V5306B1009



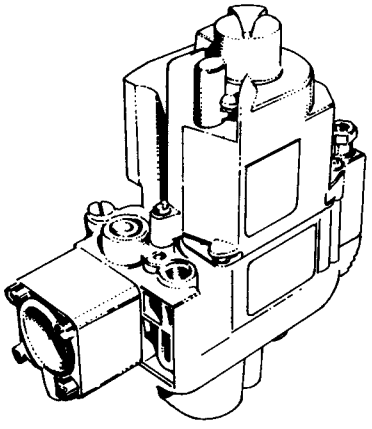
Cat No. GC023
24 volt Single Block C.G.C.
Honeywell No. VR800A1179B



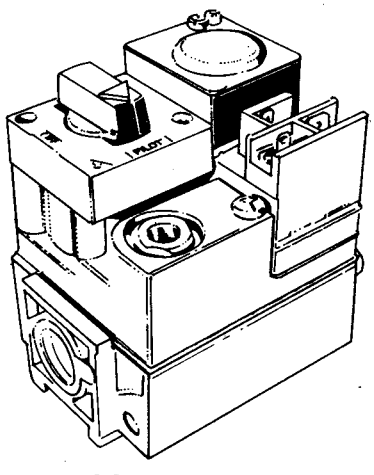
Cat No. GC024
High/Low Regulator used by Brivis
Honeywell No. V8336A2049B



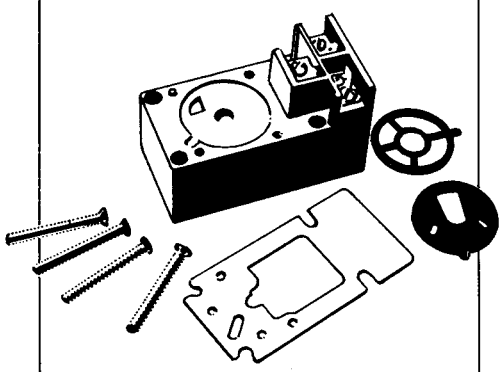
Cat No. GC025
½ inch W.G. Adjustable N.G. Regulator.
Standing Pilot. Dual Solenoid
Honeywell No. VR8200A2801B



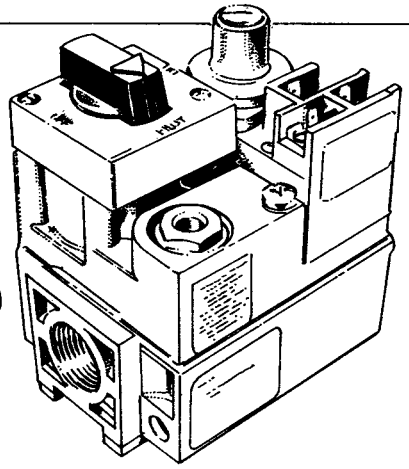
Cat No. GC026
¾ inch 3.5 W.G. Adjustable N.G. Regulator
Standing Pilot. Dual Solenoid
Honeywell No. VR8300A4805B



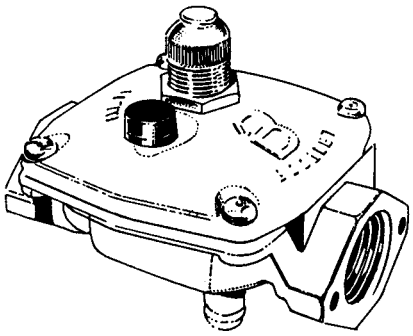
Cat No. GC027
¾ inch 750 M.V. C.G.C. Step Opening,
Adjustable Wild Pilot. Single Block Valve
Honeywell No. VS891C1005B



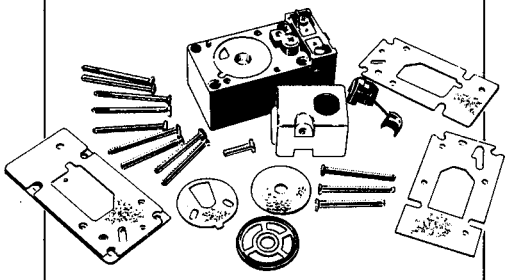
Cat No. GC045
24 Volt Operator
For V800 and VR800 Valve
Comes with screws and gasket
Honeywell No. V80431022



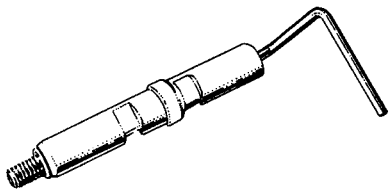
Cat No. GC054
¾ inch (Blue) 24 Volt Single Block C.G.C.
Can use GC026
Honeywell No. V800A1179B



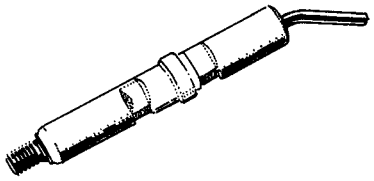
Cat No. GC029
½ inch Appliance Regulator
C/W Test Point
Honeywell No. RV47LM-44/TI



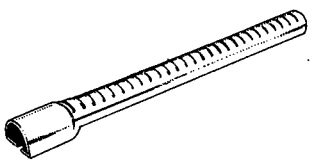
Cat No. GC062
240 Volt Operator
For V400 Family Valves
Honeywell No. V404A1154



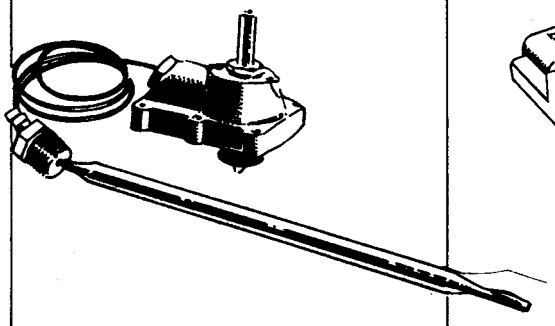
Cat No. GC032
Heat Rod – Semak Rotis



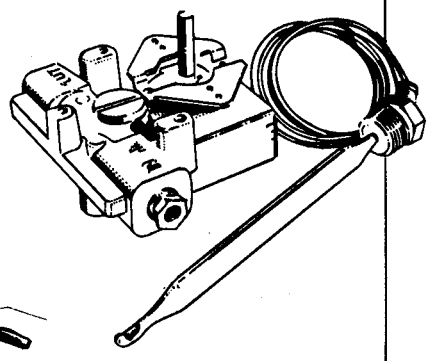
Cat No. GC033
Electrode – Semak Rotis and
Various Heaters



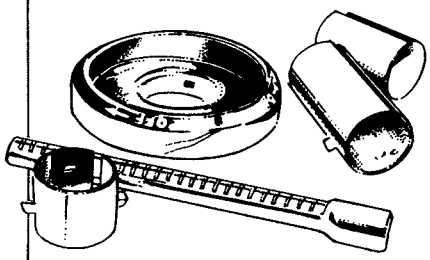
Cat No. GC048
Gasket Diastat G.T.S.



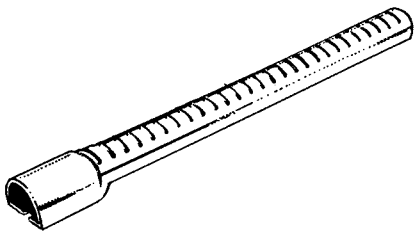
Cat No. GC039
Diastat Thermostat



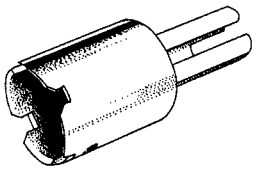
Cat No. GC044
Thermostat (no knob) (95°C-205°C) used
in conjunction with BGORL Gas Valves.
Knob for GS7005 is P2793
Knob Cat No. P2793



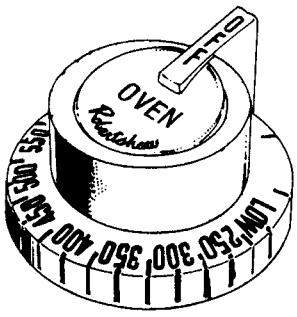
Cat No. GC047
Bezel Kit
For B.J. Thermostat



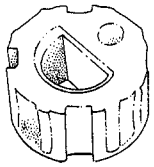
Cat No. GC048
Adaptor Kit
For B.J. Thermostat



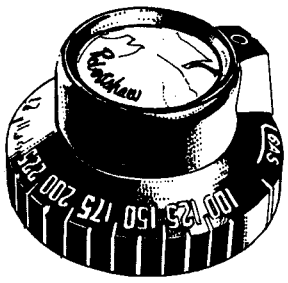
Cat No. GC049
"D Shaft"
For B.J. Thermostat



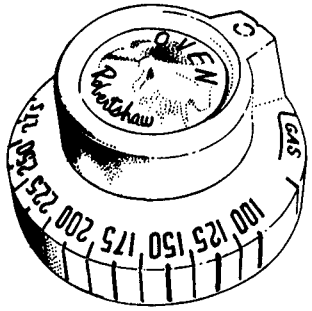
Cat No. GC050
Knob Assembly
For B.J. Thermostat



Cat No. GC051
Insert
For B.J. Thermostat
Must be fitted for Celsius conversion



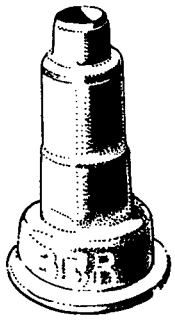
Cat No. GC052
Knob Black (Celsius)
For B.J. Thermostat



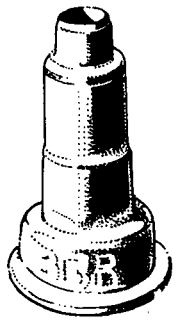
Cat No. GC053
Knob White (Celsius)
For B.J. Thermostat

PILOT BURNERS

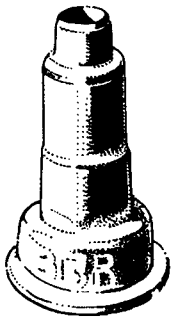
Cat No. GC067 – PILOT (Q314)
Injector 0.010 Orifice L.P.G.
Honeywell No. 390686-1



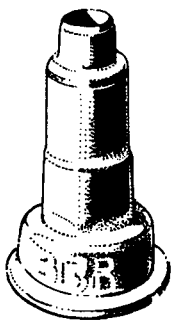
Cat No. GC068 – PILOT (Q314)
Injector 0.018 Orifice N.G.
Honeywell No. 390686-4



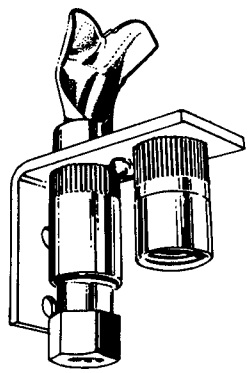
Cat No. GC069 – PILOT (Q314)
Injector 0.016 Orifice N.G.
Honeywell No. 390686-14B



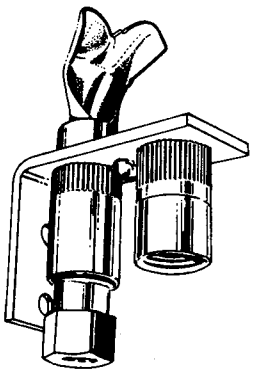
Cat No. GC070 – PILOT (Q314)
Injector 0.012 Orifice L.P.G.
Honeywell No. 390686-25



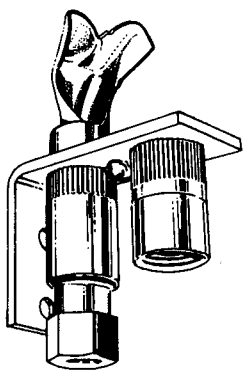
PILOT BURNERS



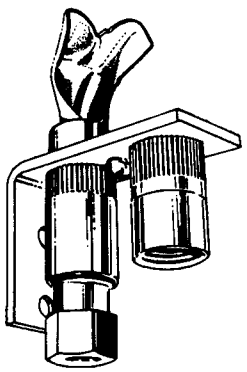
Cat No. GC071 – PILOT
0.016 Injector B/K Brivis
Honeywell No. Q314A6771



Cat No. GC072 – PILOT
0.018 Injector A/K with Electrode Clip
Honeywell No. Q314A9015B

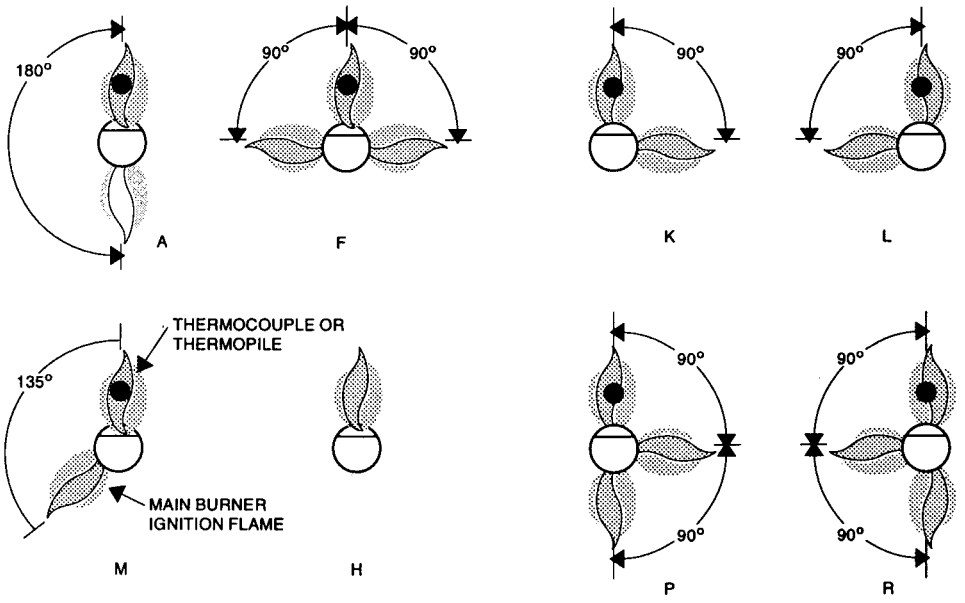


Cat No. GC073 – PILOT
0.020 Injector B/L Raypak
Honeywell No. Q314A9031

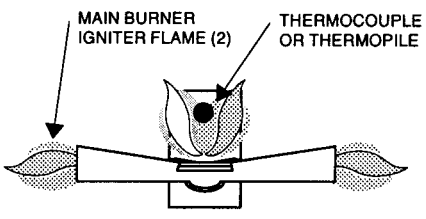


Cat No. GC074 – PILOT
0.18 Injector A/L Braemar, Vulcan and others
Honeywell No. Q314A9049

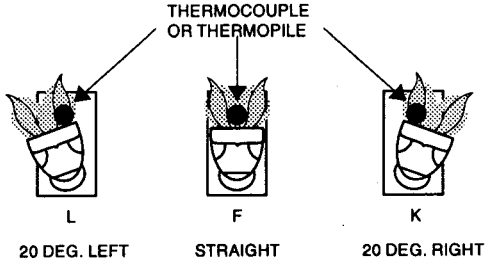
Specifications for Q314, Q324, Q327, Q350 PILOT BURNERS



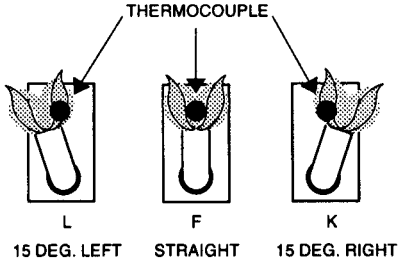
Q324



Q327



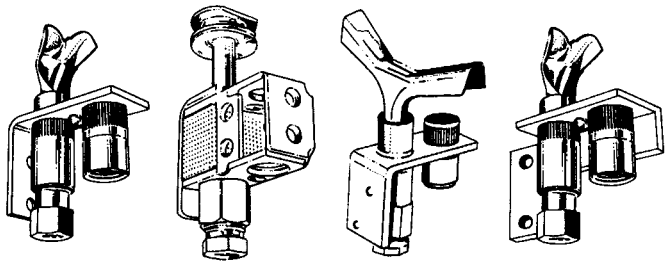
Q314



Q350

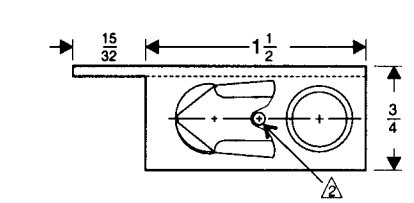
These pilot Burners provide main burner ignition for natural and LP gas-fired equipment. Used with a 30 mV thermocouple to provide automatic pilot safety control. Used with a 750 mV thermopile in a self-powered system.

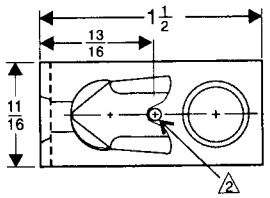
- Q324 and Q327 are primary aerated, spud orifice pilot burners.
- Q314 and Q350 are non-primary aerated, insert orifice pilot burners.
- Variety of mounting brackets available.
- Variety of tip styles to provide desired flame pattern

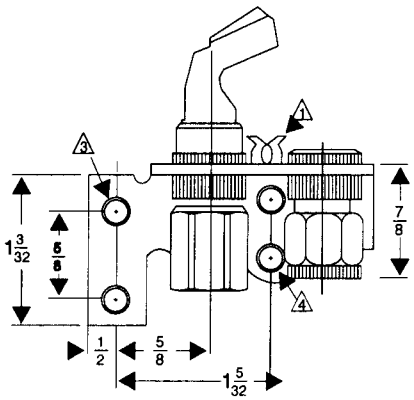


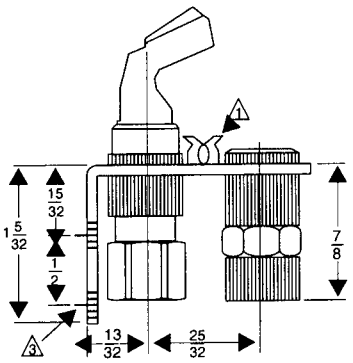
Q314 Q324 Q327 Q350

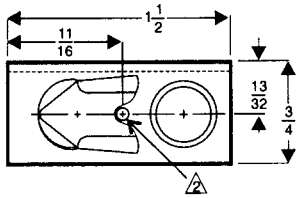
Specifications for Q314, Q324, Q327, Q350 PILOT BURNERS (cont.)

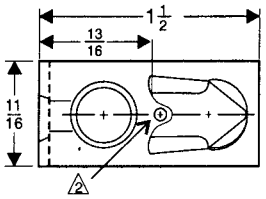


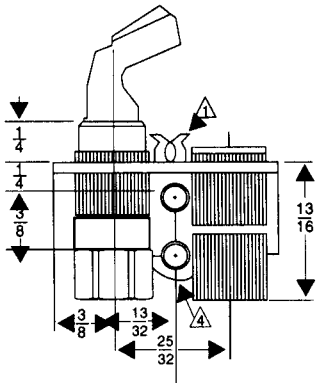


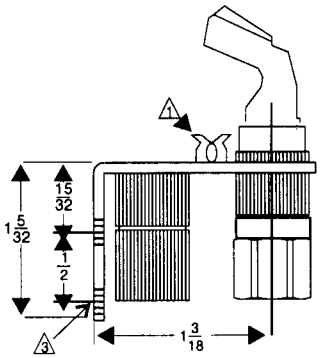




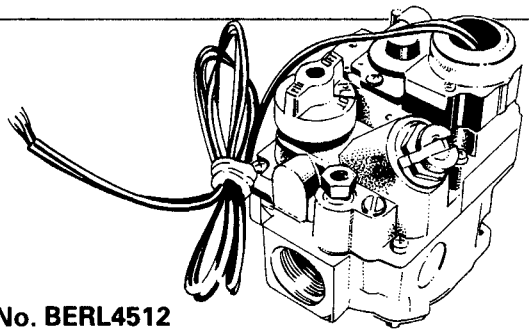




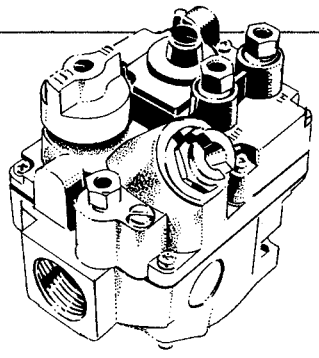




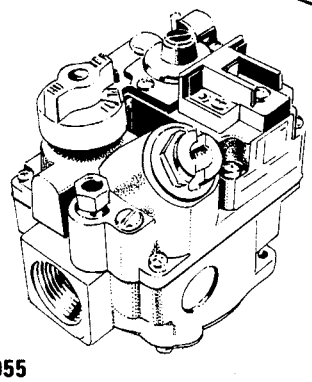
		Inches	Millimetres	Inches	Millimetres	Inches	Millimetres	Inches	Millimetres
1	BLEED TUBE CLIP (Optional)	1/32	0.8	5/16	7.9	19/32	15.1	7/8	22.2
		1/16	1.6	11/32	8.7	5/8	15.9	29/32	23.0
2	HOLE FOR BLEED TUBE	3/32	2.4	3/8	9.5	21/32	16.7	15/16	23.8
		1/8	3.2	13/32	10.3	11/16	17.5	1	25.4
		5/32	4.0	7/16	11.1	23/32	18.3	2	50.8
3	MOUNTING HOLE (2), TAPPED FOR 10-32 NC SCREW	3/16	4.8	15/32	11.9	3/4	19.1		
		7/32	5.5	1/2	12.7	25/32	19.8		
		1/4	6.4	17/32	13.5	13/16	20.6		
4	MOUNTING HOLE (2), 11/64 IN. DIA (4mm) (Clears No. 8 Screw)	9/32	7.1	9/16	14.3	27/32	21.4		



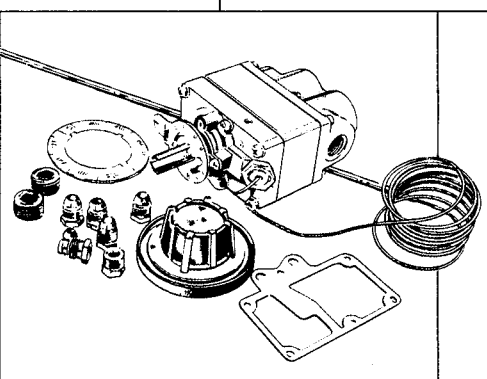
Cat No. BERL4512
Unitrol 7000 ¾" 240 VAC N.G.
Combination controls are available in 120VAC and 240VAC models. These controls contain a manual gas cock, auto pilot safety and a silent line voltage operator. Valve can be mounted in any position except upside down.



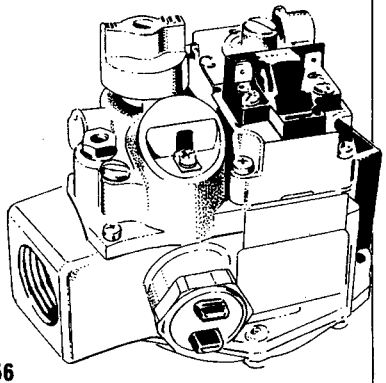
BGORL6032 Unitrol 7000 ¾" Gas Operated N.G.
BGORL6040 Unitrol 7000 ¾" Gas Operated L.P.
BGORL6059 Unitrol 7000 ¾" Gas Operated T.G.



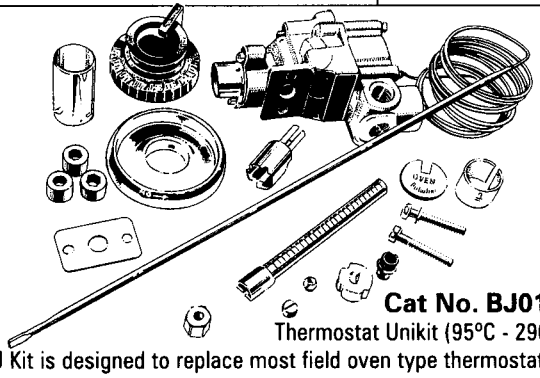
GC055
Robertshaw No. BERL3501
¾" 24V. Gas Control. N.G.



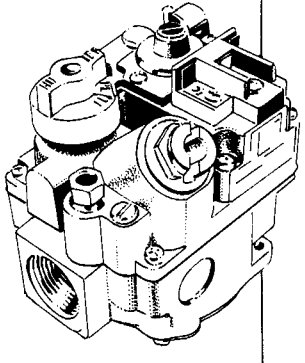
4200-025 (universal replaces 4200-002)
FD Thermostat
FDO (150° - 550°F) (65° - 290°C)



GC056
Robertshaw No. DERHC-57C
1" Unitrol 7000 24V. Gas Control. N.G.



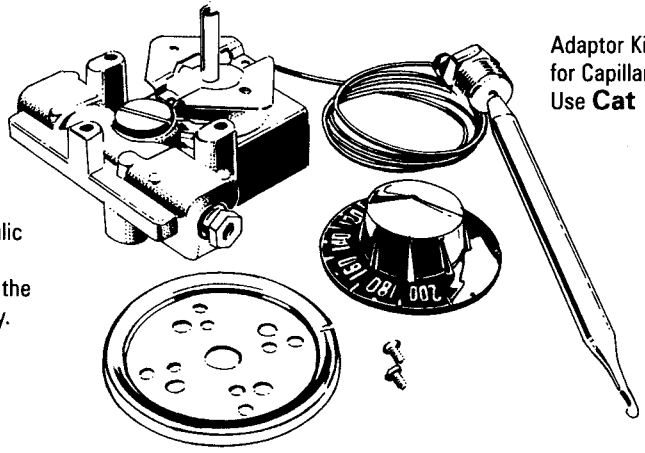
Cat No. BJ0100
Thermostat Unikit (95°C - 290°C)
BJ Kit is designed to replace most field oven type thermostats of its type. It can be mounted in any of the four manifold positions. Rear housing msy be rotated as required. Plugs are provided with models having four outlet tappings.



83386 Spring Short N.G.
82824 Spring Short L.P.G.
BMVRL5507 Unitrol 7000 ¾" Millivolt T.P. L.P.
BMVRLS7C5515 Unitrol 7000 ¾" Millivolt T.P./T.C. N.G.
BMVRLS7C5523 Unitrol 7000 ¾" Millivolt T.P./T.C. L.P.
BMVRLS7C5531 Unitrol 7000 ¾" Millivolt T.P. N.G.
GORHCL5030 Unitrol 7000 1" Gas Operated T.G. High Capacity

GS4007 Gas Thermostat (70°C - 290°C) suit Oven
GS6002 Gas Thermostat (15°C - 120°C) suit Bain Maries
GS7005K Gas Thermostat (95°C - 205°C) suit Fryers

This control is a snap-action hydraulic thermostat used to obtain accurate temperature control by interrupting the burner gas flow directly or indirectly.

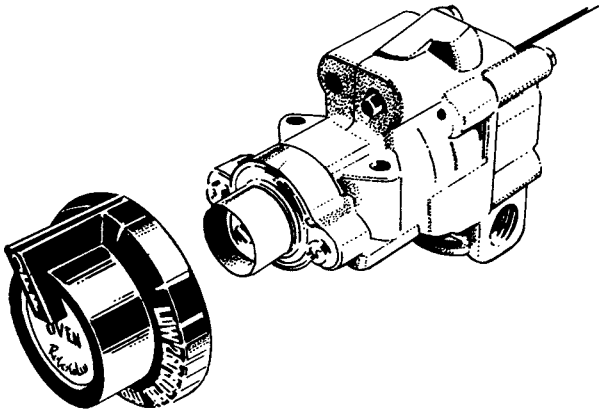


Adaptor Kit Stuffing Box for Capillary Thermostats. Use **Cat No. 5329**

INSTRUCTION BULLETIN

DESCRIPTION

BJ Uni-Line thermostat kits are designed to replace most field oven thermostats of its type. The thermostat can be mounted in any of the four manifold positions. Rear housing may be rotated as required. Plugs are included with the models having four position outlet tapping. Four position dial, stem length adaptor and chrome bezel are included.
These kits will replace most model BJ, BJWA and earlier Uni-Line models.



OVEN DIAL

CAUTION:
When replacing pilot fittings: with pilot plug a suitable sealing thread compound must be used. When fitted check and test for leaks around pilot plug, outlet plugs and rear housing.

* NOTE – The dial assembly for this control has four (4) notches at the orange end of the dial sleeve. Do not use any other dial sleeve than the type shown with the (4) notches.

CAUTION

THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED PERSON WITH DUE REGARD FOR SAFETY AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION

ROTATION OF REAR HOUSING

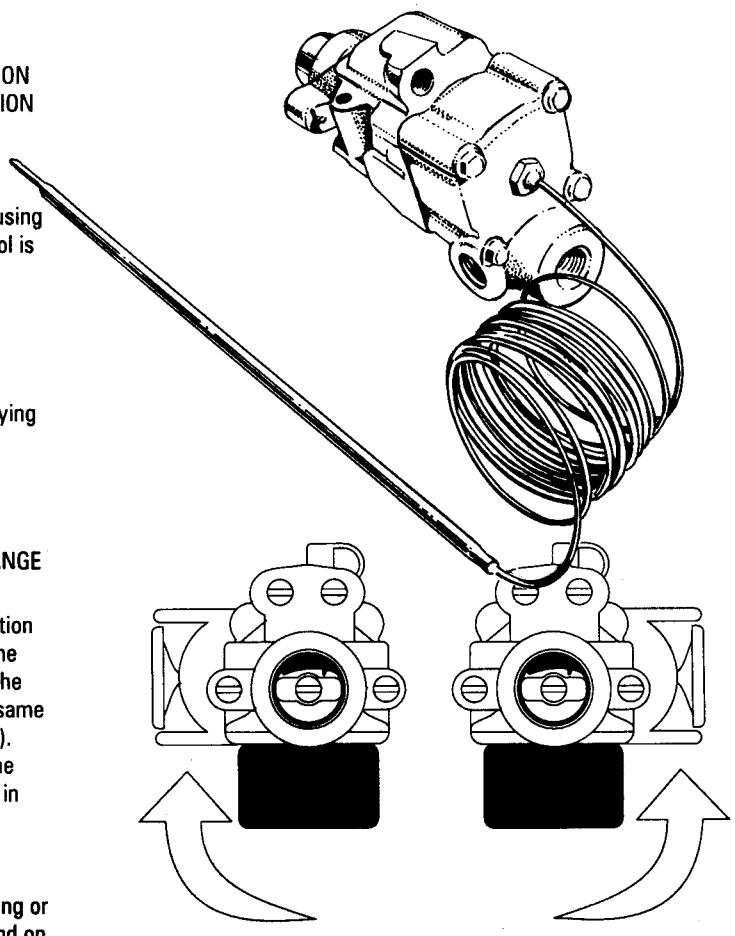
In many applications rotation or repositioning of the rear housing is not required. If the rear housing on the replacement control is in the desired position proceed to fittings and plugs.

For applications requiring a change in the housing position, proceed as follows:

1. Remove pilot fitting if installed in control.
2. Remove four hex head bolts on rear of control while applying pressure to hold rear housing against main control body housing (see illustration at right).
3. Rotate rear housing to desired position.
4. Replace and tighten the four hex head bolts.

NOTE: ROTATION OF THE REAR HOUSING WILL ALSO CHANGE CALIBRATION.

Recalibration of the control after changing rear housing position is easily done at room temperature. View the control from the front. Using a screwdriver, push in the calibration screw in the centre of the gas cock plug. Turn this screw 1/4 turn in the same direction as the housing was rotated (viewed from the front). See illustration at right. If housing was rotated 1/4 turn to the side position, the calibration screw must also be turned 1/4 in the same direction as the housing was rotated.



Housing rotated 1/4 turn to left – turn calibration screw 1/4 turn CLOCKWISE.

Housing rotated 1/4 turn to right – turn calibration screw 1/4 turn COUNTERCLOCKWISE.

FITTINGS AND PLUGS

Install plugs into outlets not required and assemble pilot fitting or plug into pilot outlet. Use a small amount of thread compound on each plug and fitting.

UNICOIL DIASTAT

NOTE: DIASTAT IS LIQUID FILLED AND SHARP BENDS ARE TO BE AVOIDED.

The recommended method to uncoil the diastat is as follows: Insert a round screwdriver shaft through the centre of the diastat coil. Push outward or away from control body to uncoil the diastat smoothly. This method will prevent twisting or crimping.

MOUNTING

Mount control on manifold using new flange nipple gasket and mounting bolts.
Connect outlet and pilot lines as required for the application.
Attach the sensing bulb into its proper location. Again use caution not to twist or crimp the capillary tube.

STOKES PART No. BJ0100 – MODEL BJWA (COMMERCIAL)

BJWA (COMMERCIAL) is a combination gas cock and by-pass type thermostat. Designed for multi use, it is available with by-pass and pilot adjustments.

- Several body positions – inlets and outlets.
- The high ambient (175 degree C) makes it a favourite of the industry.
- Field calibration possible.

APPLICATIONS:

The BJ "FAMILY" offers many uses:

Oven: Temperature range 120 - 290 deg. C

The control is a combination gas cock and thermostat. The control is usually mounted on a manifold pipe by means of a flange nipple. When temperature dial is turned from "off" position, the thermostatic valve disc moves away from the machined seat allowing gas to flow to burner of appliance, based on temperature desired by operator. Liquid in the sensing element is heated and expands the diaphragm, located in the body casting of the control which moves the thermostatic valve disc towards the seat reducing the gas flow at high temperature settingsor fully at lower temperature settings. However, the BJWA has a by-pass set by means of a slotted screw adjuster, in the front of the control. This is to maintain minimum flame on the burner ports which enable the appliance to achieve "stright line" temperature control.

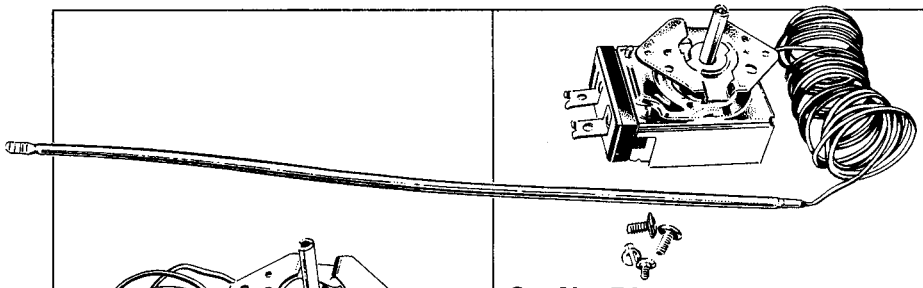
The design of the by-pass feature in the BJWA does not allow for oven temperature below 120 degree C (approx.).

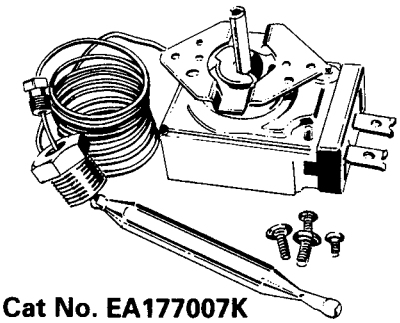
The control is used by itself and also with automatic lighting. The BJWA is an industry standard. No competition exists where an all gas application is desired.

CAPACITIES: 80,000 BTU Natural Gas approx.
Manifold mounted via flange nipple.

The BJWA is AGA approved.

Thermostats and Thermopiles





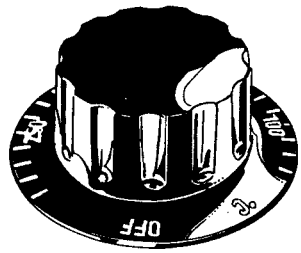
Cat No. EA177007K
Gas Thermostat (95°C - 205°C)
Millivolt use only (gold contacts)

Cat No. EA5-497-2
Capillary Thermostat (Bake Ovens)
(70°C - 290°C) 25A S.P.S.T.

Cat No. EA5-701-4
Capillary Thermostat (Fish Fryers) (95°C - 205°C) 25A S.P.S.T. with 3/8" gland nut

Cat No. EA9-910-0
Capillary Thermostat (Pizza Ovens)
(120°C - 450°C) 25A S.P.S.T.

The EA5 thermostat is a screwed terminal for 25 Amp rating. It can be supplied with dial and bezel for various temperature ranges.

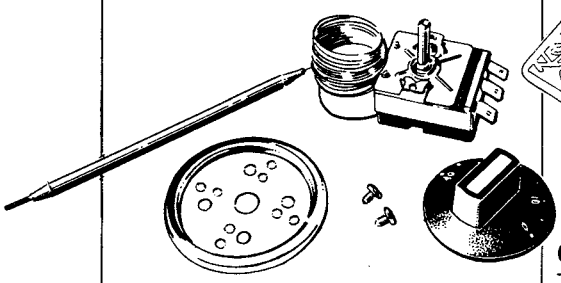


Cat No. P2638
Dial Knob (70° - 290°)

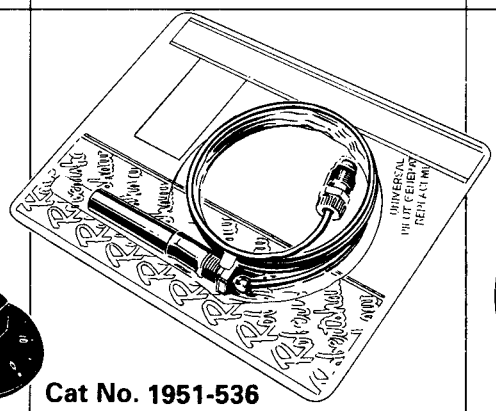
Cat No. P2662
Dial Knob (15° - 120°)

Cat No. P2777
Dial Knob (120° - 450°)
Suit EA5, EA9, EB3 Thermostats

Cat No. P2793
Dial Knob (95° - 205°)



Cat No. 7014-A
Supersedes 7014 and Benz Thermostat 716R-8658 and Stokes EC12-58.
Suits Pyrox One Way, Two Way and Three Way Wall Furnace

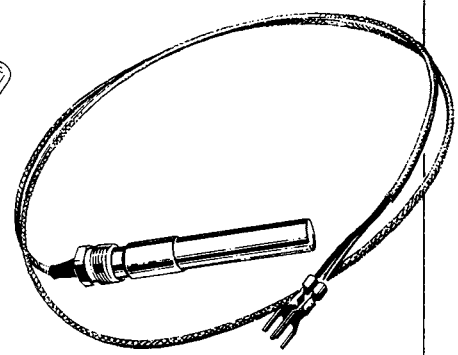


Cat No. 1951-536
Thermopile (915 mm) Coaxial

Cat No. 51023
Thermopile (600 mm) Coaxial

All models include mounting nuts.

A thermopile is many thermo couples assembled together to increase the millivolt output. Thermopiles have two types of connections: coaxial and two wire. One millivolt is 1/1000th of a volt.

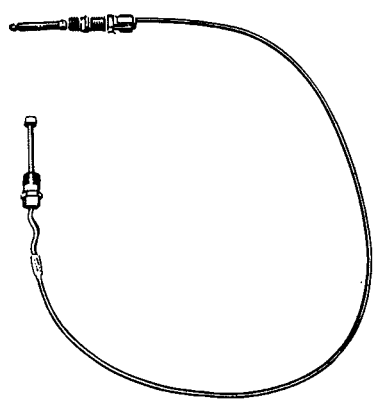


Cat No. 21432
Thermopile (800 mm) 2 Wire

Cat No. 21448
Thermopile (1200 mm) 2 Wire

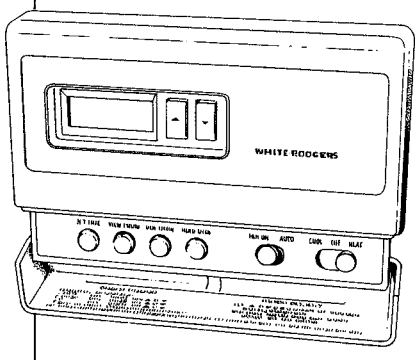
All models include mounting nuts.

Cat No. T33265	(600 mm) Commercial Cooking, Rheem Commercial Hot Water
Cat No. T3324N	(460 mm) Hardie Dux Square Cabinet (old type), Standard Rheem Domestic
Cat No. T3328N	(550 mm) DO NOT use with 2 ch. Pilot; use with 2 BL Pilot
Cat No. T3329AN	(915 mm) Commercial Cooking, Rheem Commercial Hot Water
Cat No. TS475UN	(475 mm) Rheem Domestic Internal Hot Water Services
Cat No. TS440UN	(410 mm) Small Volume Indoor Rheem Hot Water Services
Cat No. TS550UN	(550 mm) Hardie Dux Round Cabinet (new type)
Cat No. 7000EL	(900 mm) Universal
Cat No. GC030	(1200 mm) Non Log Universal
Cat No. GC043	(1500 mm) T33345 Commercial Cooking, Dryers, Hot Water
Cat No. GC042	(1200 mm) T33329 All Commercial Applications
Cat No. GC046	(1800 mm) Q34A1116 (Honeywell)
Cat No. GC059	(1200 mm) (Honeywell) Q340A1108 with Universal Adaptor
Cat No. GC061	(750 mm) (R/Shaw) T3327N (Rheem)
Cat No. GC063	(600 mm) (SIT) 0.210.418 (Vulcan Freeloader)



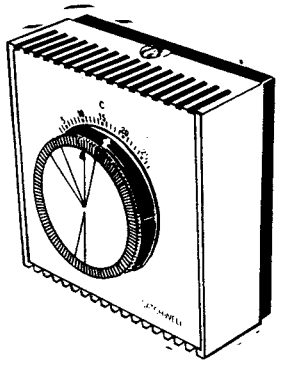
T Thermocouples MUST NOT be used to replace any T.S. Models as there is a safety switch in the end of all T.S. Models.

Room Thermostats



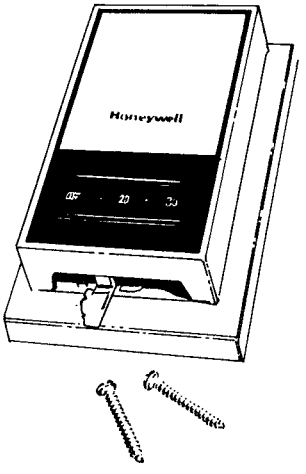
Stokes Cat No. IF80-51
Wall Thermostat (white), Single Stage, Heating and Cooling. Fully Programmable. Not to be used with millivolt systems.

Satchwell/Sunvic Thermostats

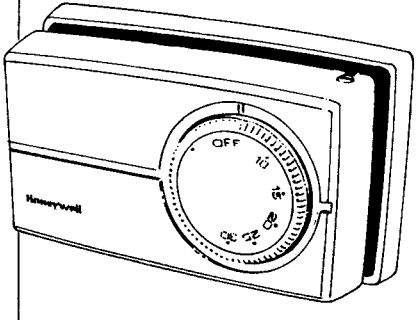


Stokes Cat No. TLX2351
Room Thermostat. Temperature range 3°-27°C. Electrical rating - 1 Amp at 240v.

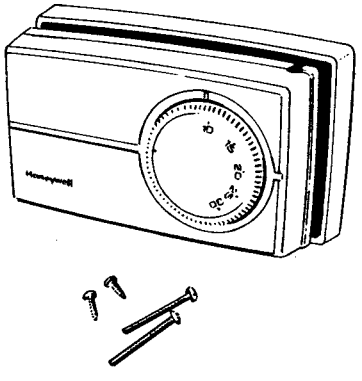
Stokes Cat No. TLX2356
Room Thermostat. Temperature range 3°-27°C. Electrical rating - 2 Amp at 240v.



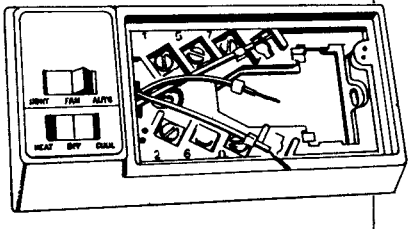
Cat No. T822D1636
Honeywell Room Thermostat 24v Control with Thermometer range 10° to 30°C with positive off (heating only).



Cat No. T4060B
Room Thermostat (20 Amp resistive 240 volt) S.P.S.T. switching with "OFF" position (heating only).

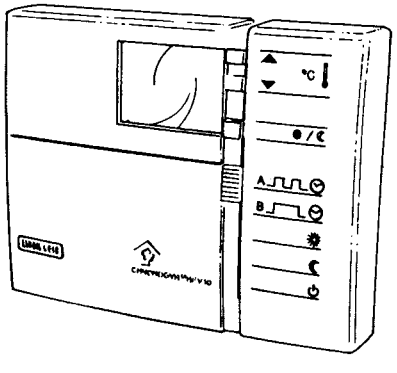


Cat No. T6060B
20 Amp Room Thermostat S.P.D.T. (Heat or Cool).

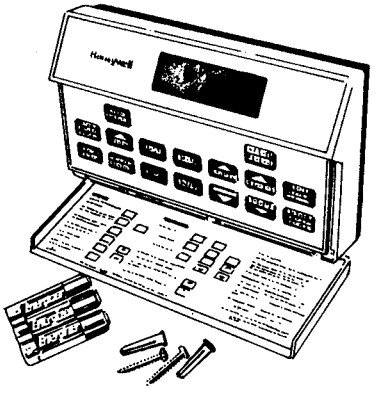


Cat No. Q660B
Switching Sub-Base (for use with T6060B)

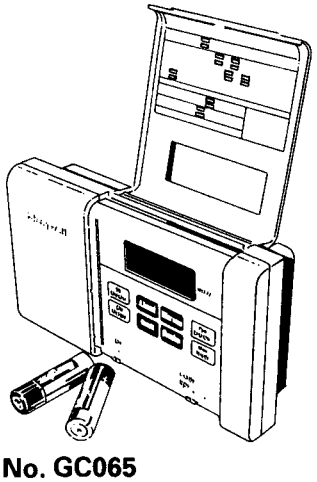
Cat No. R42
Tamper Proof Cover for T6060B



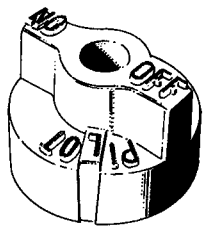
Cat No. GC041
Simple operation; Fully Programmable; Frost protection; Digital; Switching capacity; Voltage 24, 250 VAC; Current 10 (5) Amps; Heating only.



Cat No. GC064
T8602C1038. Programmable thermostat. Programmable 5-1-1 days. Programmable positive off. Sub-base system: HEAT-OFF-COOL. Fan: AUTO-ON. Directly replaces T822, T87 and other 24V Thermostats. Adaptive intelligent recovery.

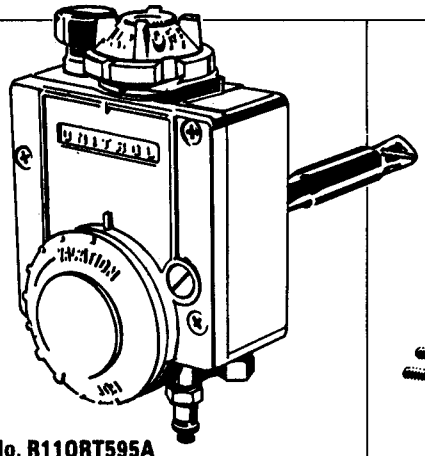


Cat No. GC065
T8132A1049. New Programmable Heating Thermostat. Premier White Colour. 5-2 day programmable. Range 7-31°C. No A.I.R. or programmable positive off.



Cat No. 82220
Dial – Unitrol 7000 Off-Pilot-On

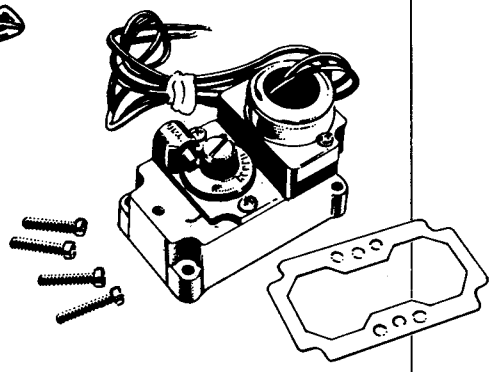
700
(Unitrol 7000) Beige dial. Fits all 700 models. Not for 710 Series or 700 Series Pilot Ignition Valves.



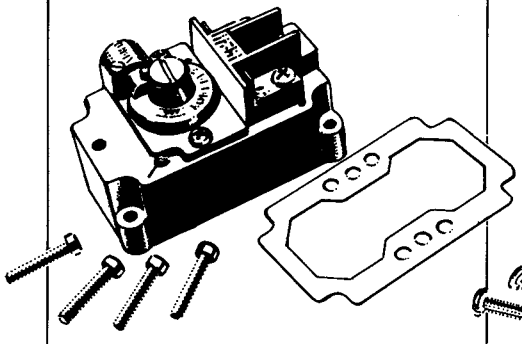
Cat No. R110RT595A
Unitrol R110RT ¾" NG

Cat No. R110RT5968
Unitrol R110RT ¾" LP

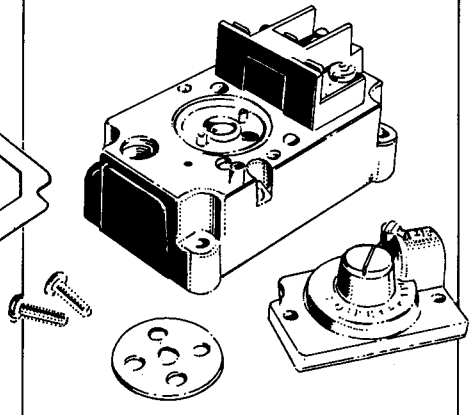
Cat No. R110RT5984
Unitrol R110RT ¾" TG



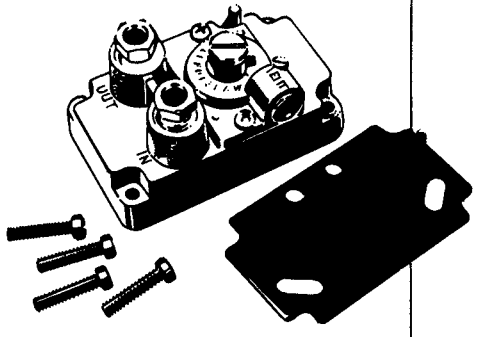
Cat No. 82123
Unitrol 7000 240 VAC Actuator



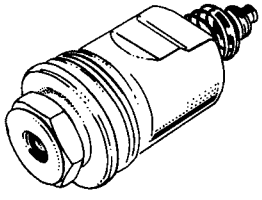
Cat No. 82126
Unitrol 7000 240 VAC Actuator (black)
Replaces 82951 and 82966



Cat No. 82435
Unitrol 7000 Millivolt Actuator (red)

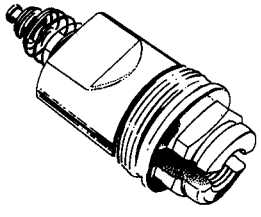


Cat No. 82252
Unitrol 7000 Gas Actuator



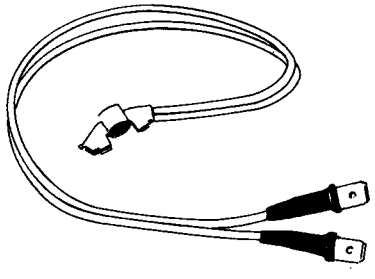
Cat No. 83388
Unitrol 7000 Thermopile Magnet (pin)

When replacing magnet do not overtighten as damage may occur to magnet, thermocouple or thermopile.



Cat No. 83390
Unitrol 7000 Thermocouple Magnet (slotted)

When replacing magnet do not overtighten as damage may occur to magnet, thermocouple or thermopile.

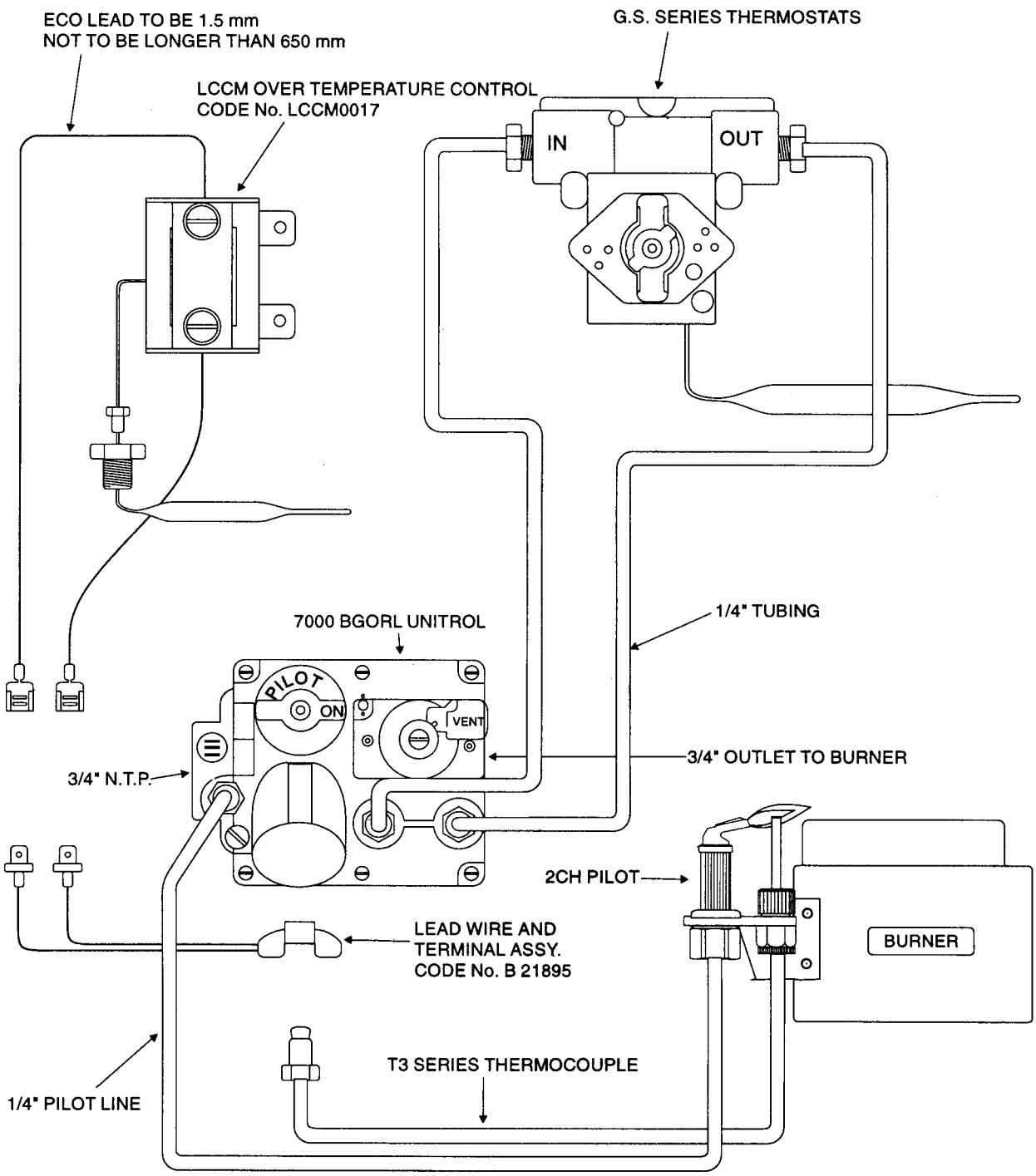


Cat No. B21895
High Limit Lead Wire Assembly (18") fits Slotted Magnet

Fits into slotted magnet on Unitrol 7000 control valve and allows for hook up to an external ECO EG.
(Energy cut out LCCM-0017 or 7000 Series ECO)

Operating System

GAS BLEED THERMOSTATIC CONTROL



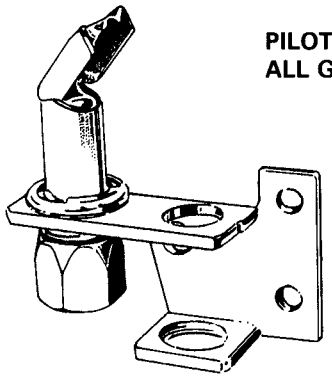
Unitrol 7000 Models are bleed gas controlled diaphragm valves. They provide "On" and "Off" operations in response to a thermostatic bleed line valve, such as the Model GS. they combine a manual main and pilot gas valve, a separate automatic gas ignition system, pilot adjustment valve, pilot and bleed gas filtration and a diaphragm valve. Features "straight line" gas pressure regulation, and can be applied to a wide range of capacity requirements.

Pilots and E.C.O's

PILOTS

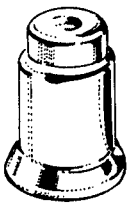
2 CH 6052 Rheem Hot Water Service	Pilot 2 Ch 51 NG R16
2 CH 6126	Pilot 2 Ch 51 TG R21
2 CH 6185	Pilot 2 Ch 51 LP R10
2 CH 6708 Bracket for Spark Plug	Pilot 2 Ch 71 NG R16
2 CH 6767	Pilot 2 Ch 71 TG R24
2 CH 6820	Pilot 2 Ch 71 LP R10

ALL STANDARD PATTERN



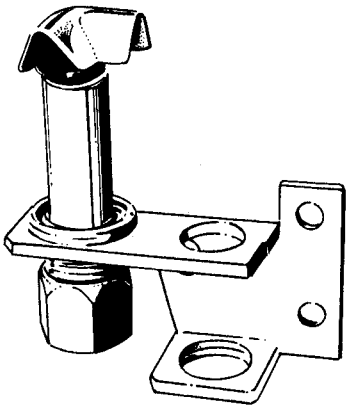
PILOT 6CH KIT
ALL GASSES

6 CH 24-1
3 WAY PATTERN



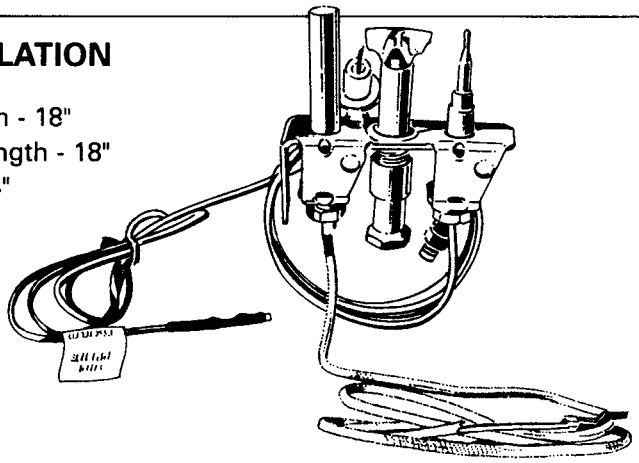
2 WAY
FLAME PATTERN

5CHR-7612 N.G.	Suits Waldorf
5CHR-7698 L.P.	BVA Cook On
5CHL-7604 N.G.	Suits Waldorf
5CHL-768A L.P.	BVA Cook On
GC034, **GC035**, **GC066**	Spuds
GC036	Olive
GC037	Nut



PILOT INSTALLATION

Thermopile length - 18"
Thermocouple length - 18"
Ignitor length - 24"



PILOT ASSEMBLY
(Quick Dropout Thermocouple)

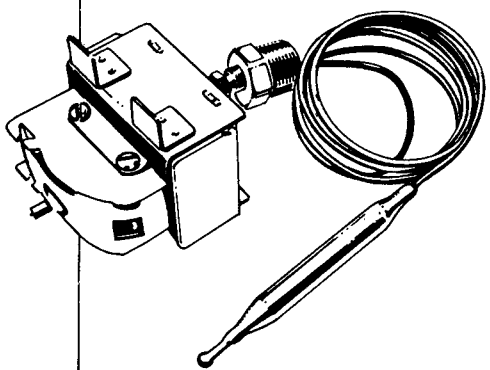
Stokes Part Nos.

4SHR-44 **Natural Gas**

4SHR-45 **L.P.G.**

30 second drop out

E.C.O. CONTROLS



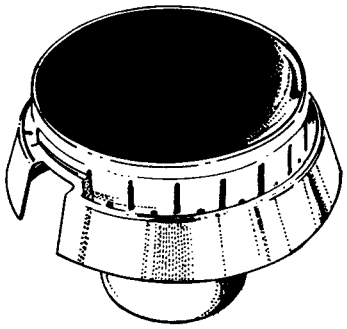
LCCM-0017
Energy cut out (235°C); Auto Reset; Commercial Catering Gas (Millivolt) (gold contacts)
Stuffing Gland Robertshaw **5329**

LCH-0025
Energy cut out (232°C); Manual Reset; Commercial Catering Electric

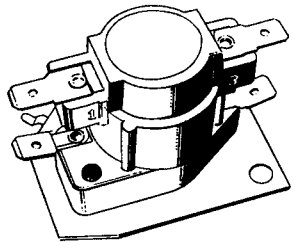
7417
EGO Energy Cut Out (238°C); Manual Reset.

9628
EGO Energy Cut Out (235°C); Manual Reset; Over temp. Control, Gold Contacts, for Fryers (Baker Luke)

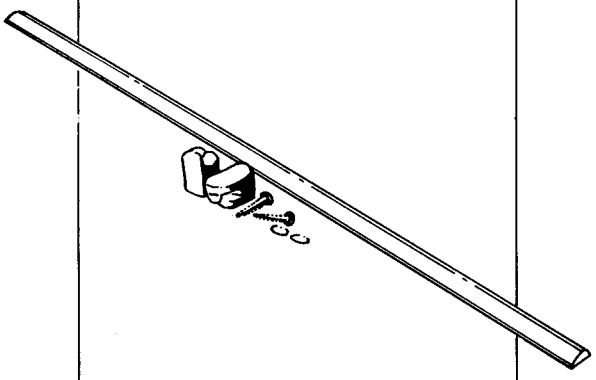
67-06100-100
EGO Stuffing Gland



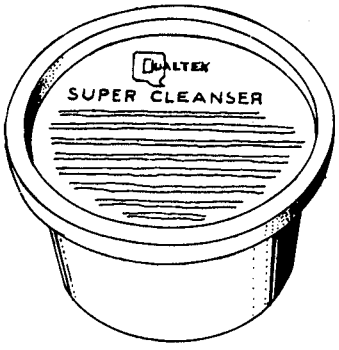
Cat No. 39356
Gas Burner Small (Chef)
Cat No. 39357
Gas Burner Large (Chef)



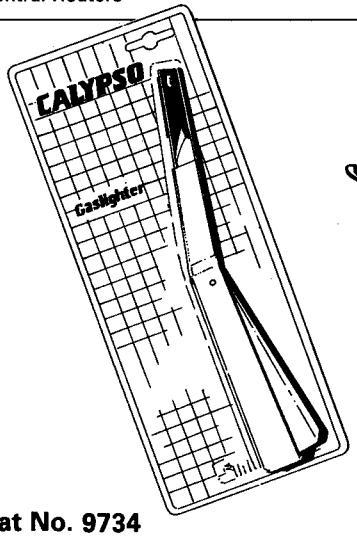
Cat No. 6055
Fan /Heat Sequencer and Time Delay
On Time = 15.35 SEC.
Off Time = 25.55 sec.
Used in Staedt and other various brands of Central Heaters



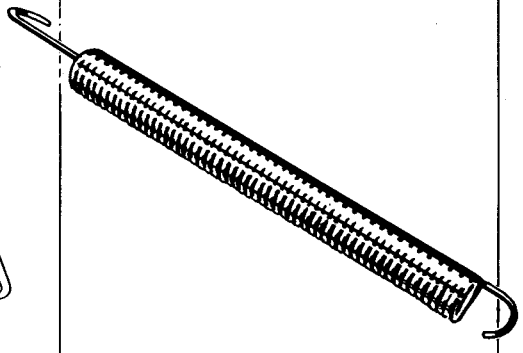
Cat No. 9731
Oven Door Handle Universal



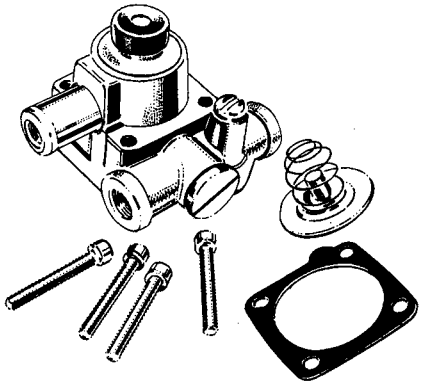
Cat No. 9733
Oven Cleaner



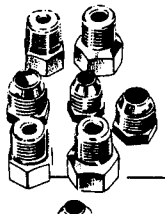
Cat No. 9734
Gas Lighter (Piezoelectric)
For lighting Pilot Lights or Gas Burners in commercial or domestic appliances



Cat No. 9737
Spring Hinge Chef 01787



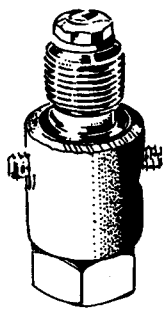
1720 - 801
Pilot Inlet and Outlet
1720 - 802
Pilot Outlet Only



TS REPLACEMENT SAFETY MAGNET HEADS

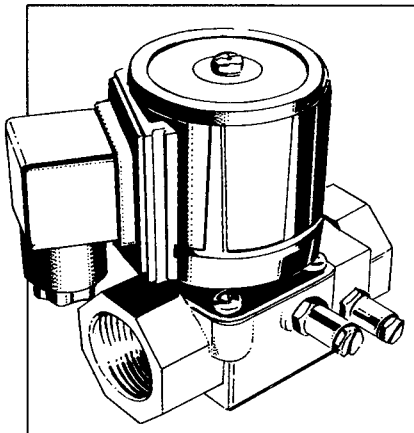
1720 Series Kits are designed to replace many individual TS magnet types. Each kit magnet head is tapped for 1/8" pipe with fittings to adapt to 3/16" and 1/4" compression tubing. Also included is a new valve, gasket and mounting screws. The 1720 Series Replacement Magnet Kit is used with 1710 Series Bodies in TS Automatic Safety Valve applications. All models have FLOW INTERRUPTION so that no gas can flow to the main burner while the reset button is depressed.

TEST ADAPTORS



P10-038 Thermocouple
P10-238 Thermopile
This adaptor is used to make closed circuit tests of Thermocouples using suitable millivolt meters.

Solenoids



235122-00 now use 285122-00

TEKNI 23 SERIES SOLENOID VALVE
¾" F x ¾" F.

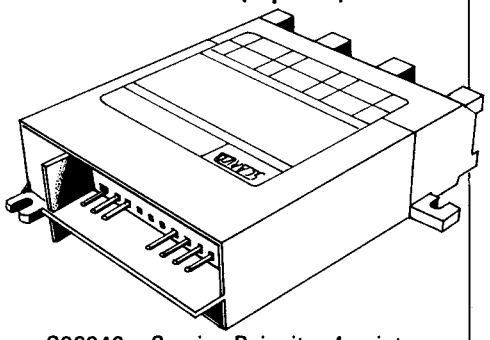
APPLICATION:

On/Off control of natural and LP Gas.
Suitable for industrial burners, both atmospheric and forced draught.

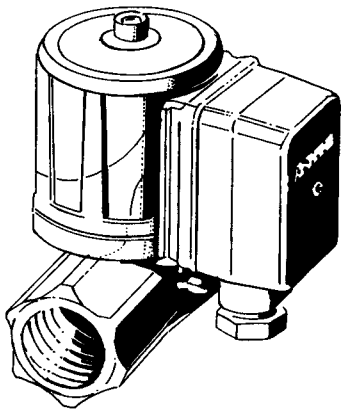
FEATURES:

- Compact design
- Encapsulated Coil
- For use as pilot or main gas valve
- AGA approval No. 3408

Cat No. S02040 (4 point)
Cat No. GC081 (6 point)



S02040 – Scarico Reignitor 4 point
GC081 – Scarico Reignitor 6 point



B2243

E6G SOLENOID VALVE
½" F x ½" F.

APPLICATION:

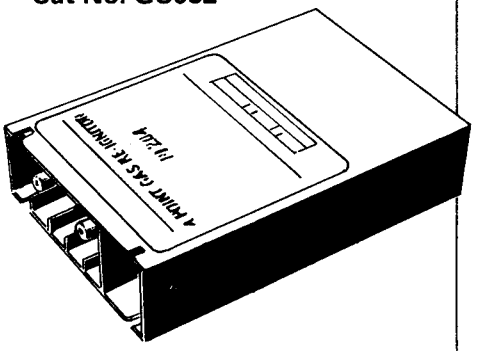
The E6G* S . . . has been designed to be used both in the industrial and domestic market and it is suitable for 1-2-3 gas families for high and low pressure.

The E6G* A . . . is not suitable for use with LPG.

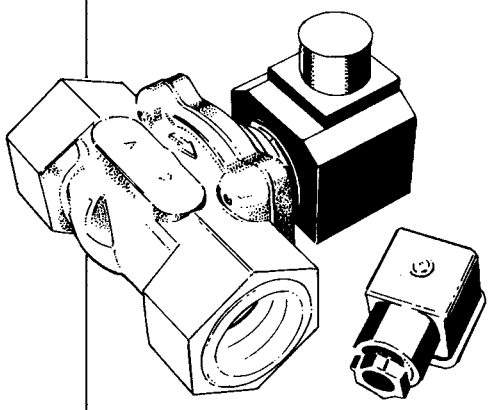
INNER ORIFICE: ½" Valve: 8-10 mm

INSTALLATION POSITION: Whatever.

Cat No. GC082



4 Point Ignition Box
Technical Component



¾" - AC2008 1" - AC2010

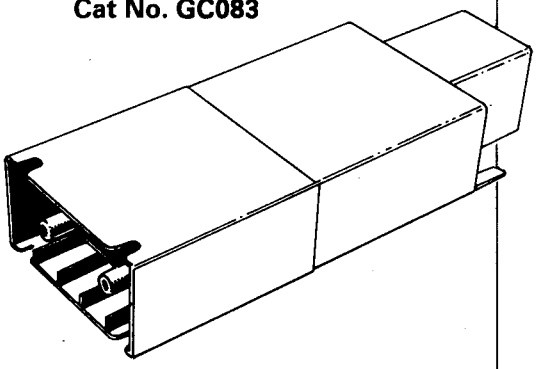
ALCON 2 WAY GB SERIES SOLENOID VALVE

APPLICATION:

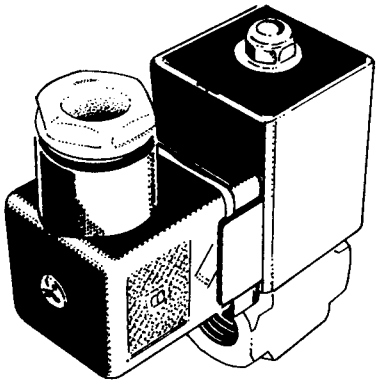
Application for automatic gas burners using natural gas, towns gas. Suitable for butane and propane.

INNER ORIFICE: ¾" - 19 mm
1" - 19 mm

Cat No. GC083



2 Point Ignition Box
Technical Component



STO1250

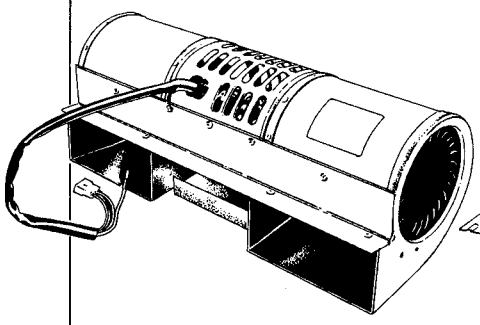
STAIGER 2 WAY ST 14/30 K SOLENOID VALVE
¼"F x ¼"F

Air, natural gas and town gas, hydraulic oils, cooling liquids, lyes, etc.
(max. velocity 6 E - 45 cSt -)

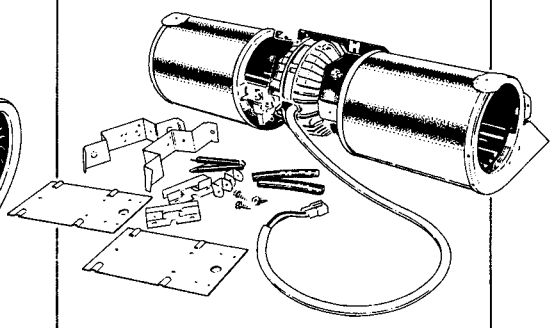
INNER ORIFICE: ¼" Valve 3.5 mm

INSTALLATION POSITION: Vertical

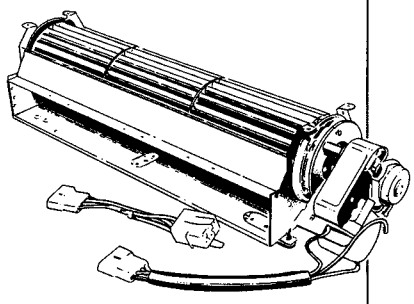
Fans and Fan Motors



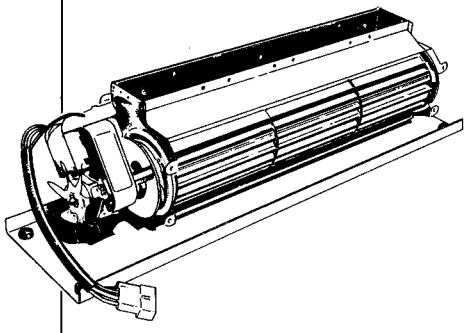
Cat No. 62-46-5904
Fits Vulcan 22 Series Wall Furnace. New pattern



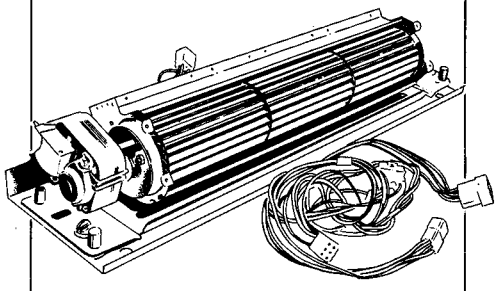
Cat No. 62-48-5904
Fits Vulcan Burwood, Concept, G37 and 49 Series



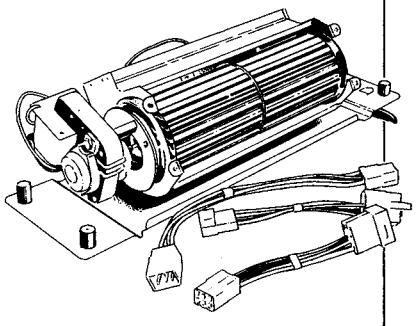
Cat No. 62-42-5911
Fits Rinnai 600E, 828F, RC90, 2000T, 2000 and Spectrum



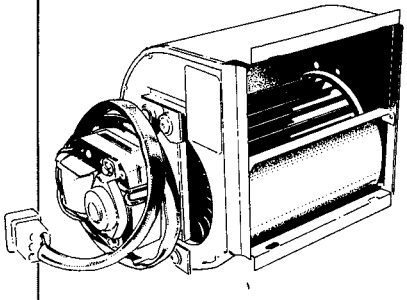
Cat No. 62-42-5910
Rinnai Conversion Fan with Plate



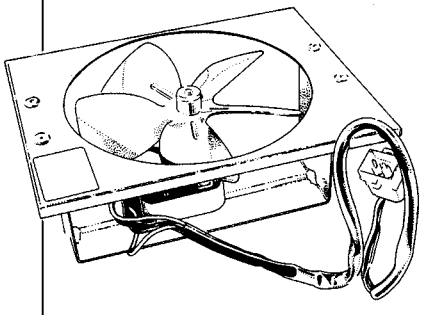
Cat No. 62-35-6631
Fits Pyrox 400, 500, 600, and Loadmatcher



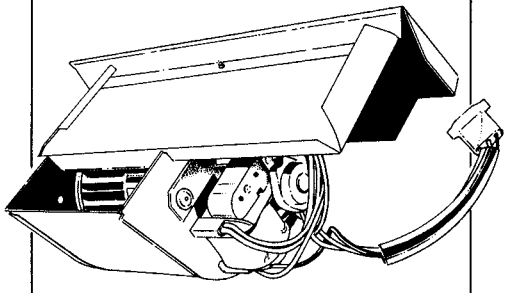
Cat No. 62-35-6632
Fits Pyrox Universal 180 mm



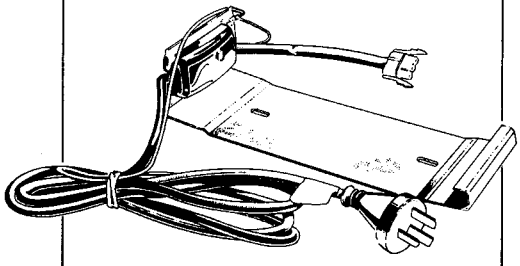
Cat No. 62-14-5801
Fits Gas Glo Drum Type



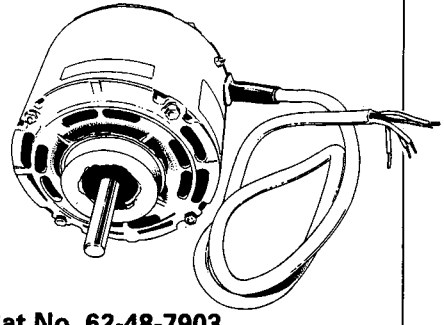
Cat No. 62-14-5805
Fits Gas Glo Blade Type



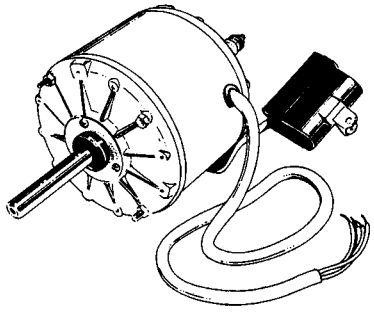
Cat No. 62-01-7802
Fits Braemer D12



Cat No. 62-01-5201
Braemer Bracket Mounting Assembly for D11 Fan

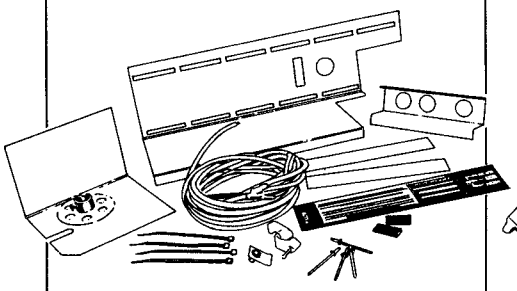


Cat No. 62-48-7903
Motor Assembly, 124 Watts, 6 Pole. Suits some Vulcan and various brand central heaters

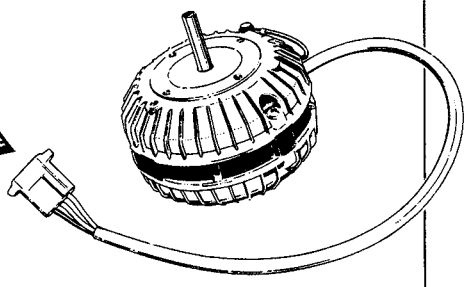


Cat No. 62-46-6765
Motor Assembly. Suits Vulcan Compact 60

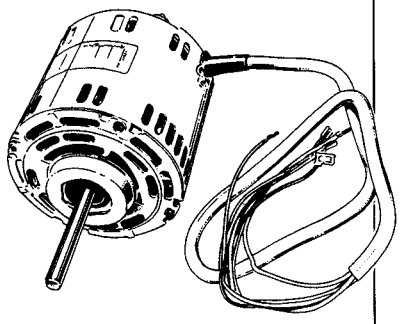
Fans and Fan Motors



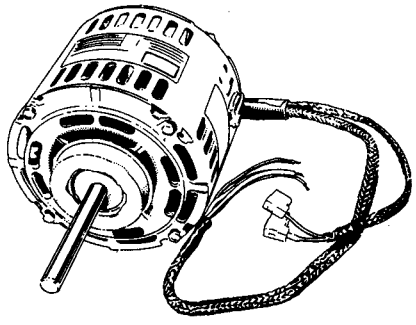
Cat No. 62-01-7101
Kit Modification for Braemer Wall Furnace D45, D45E



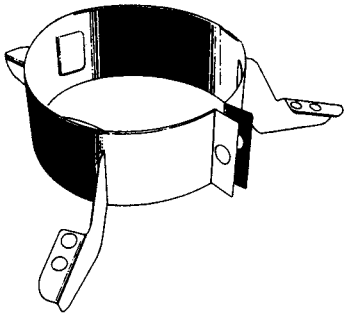
Cat No. 62-01-7804
Motor Fan for Braemer D45 Wall Furnace



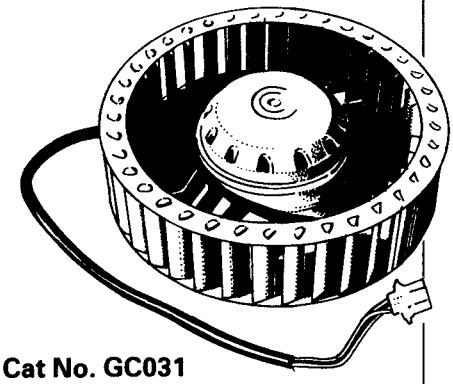
Cat No. 62-48-7902
Motor Kit 600 Watts. Fits various brands of Gas Central Heaters



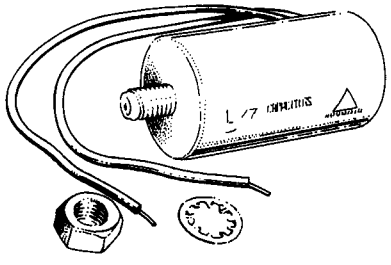
Cat No. 62-48-7901
Motor Assembly, 315 Watts Multi Speed. Fits various brands of Gas Central Heaters



Cat No. 62-48-5402
Bracket, Emerson type



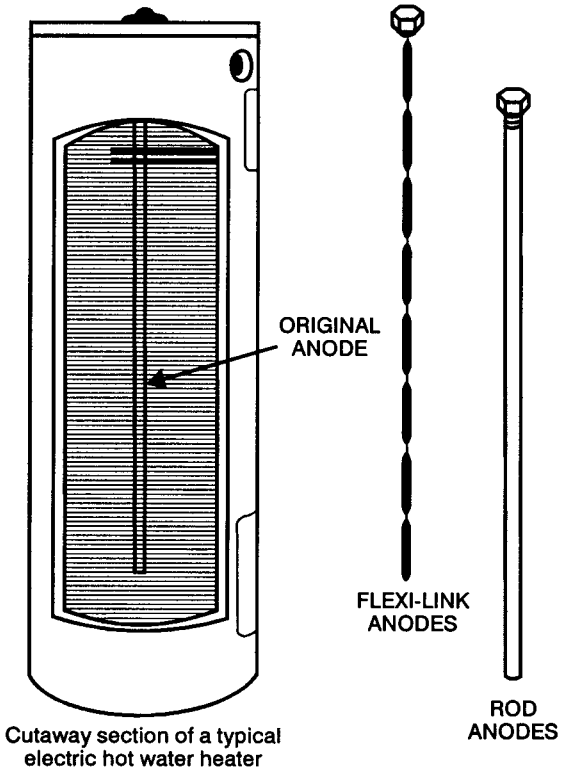
Cat No. GC031
Fits Vulcan Quasar



Cat No. GC040
Capacitor 10UF suits Vulcan Quasar Fan

Sacrificial Anodes

INCREASE THE LIFE . . .
of your MAINS PRESSURE HOT WATER HEATERS through regular replacement of their SACRIFICIAL ANODES . . .



Cutaway section of a typical electric hot water heater

Use the same guaranteed method that the manufacturers use to protect their interest during the warranty period!

Every brand of mains pressure storage heater with vitreous enamel (glass) lined tanks is fitted with between one and three anodes to ensure corrosion cannot take place during the warranty period.

These can last for as little as 2-3 years being expended and thus allowing corrosion to commence.

GAS, ELECTRIC OR SOLAR HEATERS

By simply replacing your anodes every 2-3 years (or as required) you provide the same protection that keeps ships afloat, underground steel pipelines and tanks corrosion free and the World's sea based oil drilling platforms intact.

ANO-GUARD SACRIFICIAL ANODES

Offer a range of 15 rigid and flexible anodes to suit Gas or Electric glass lined mains pressure hot water heaters and Solar heaters.

ANO-GUARD SACRIFICIAL ANODES

Offer the choice of replacement with the original type "Rod" anodes OR if access space is a problem, their exclusive "FLEXI-ROD" flexible anodes. "ALUMINIUM" anodes could be selected in older heaters where the previous anode has ceased to operate for some time particularly in areas of "harder" water to ensure that "gassing" is not experienced.

PLEASE TURN OVER FOR SELECTION GUIDE

Sacrificial Anodes

ANODE SELECTION GUIDE

"ROD TYPE"	Cat. No. ANR810	Cat. No. ANR1210	Cat. No. ANR1510	Cat. No. ANR1686
"FLEXI ROD" TYPE	Cat. No. ANR810F	Cat. No. ANR1210F	Cat. No. ANR1510F	Cat. No. ANR1686F
"ALUMINIUM TYPE"	Cat. No. ANL1177 (cut to size)	Cat. No. ANL1177	Cat. No. ANL1424	Cat. No. ANL1686
ALL USED ON				
ELECTRIC				
RHEEM	80 litre	125 litre 250 litre	160 litre 315 litre	400 litre
HARDIE DUX	80 litre 125 litre	160 litre 250 litre	315 litre 400 litre	
VULCAN	80 litre 125 litre	250 litre	160 litre 315 litre	400 litre
BEASLEY		135 litre	170 litre 270 litre	400 litre 315 litre
GAS				
RHEEM	90 litre	135 litre 200 litre 260 litre 290 litre	170 litre	
HARDIE DUX	90 litre	135 litre	170 litre	
VULCAN 'HOTSHOT'	90 litre	135 litre		
VULCAN 'FREELOADER'		120 litre 145 litre	185 litre	
BEASLEY	90 litre	135 litre 200 litre 260 litre	170 litre	

"SOLAR TYPE"	Cat No. ANS1655	Cat No. ANS2082 34mm NUT	Cat No. ANS2082A 43mm NUT
USED ON			
SOLAR			
BEASLEY	160 litre 300 litre		PRE 1982 MODELS
RHEEM	160 litre 300 litre		
SOLAHART	180 lt, 300 lt } "L" and "K" series	180 litre, 300 litre } "J" series	180 litre, 300 litre } "J" series

NOTE: Length of anodes can be determined by its Part No., eg, ANR1210 is 1210 mm long.

50 LITRE

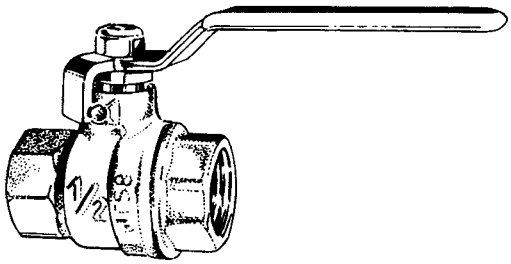
***NEW* to the STOKES Range –**

"Rod" and "Flexi Rod" Anodes to suit 50 litre units

Stokes Part No. ANR500 "Rod" type
Stokes Part No. ANR500F "Flexi Rod" type

Gas Ball Valves

Cat. No. GC075 – ½ inch

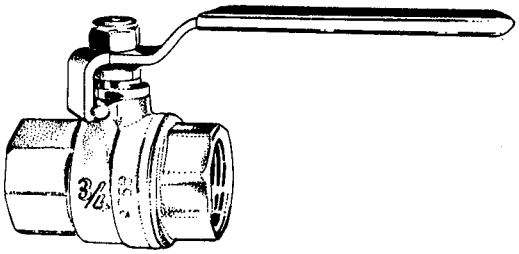


The valve is particularly recommended in gas distributing plants; it is a product ideal for low pressure. Very good results are obtained also by using it in heating and hydro plants at medium pressure.

TEMPERATURE LIMITS:
GAS: Temperature min. -20°C max. +60°C
FLUID: Temperature min. -15°C max. +120°C

AGA 5563

Cat. No. GC076 – ¾ inch

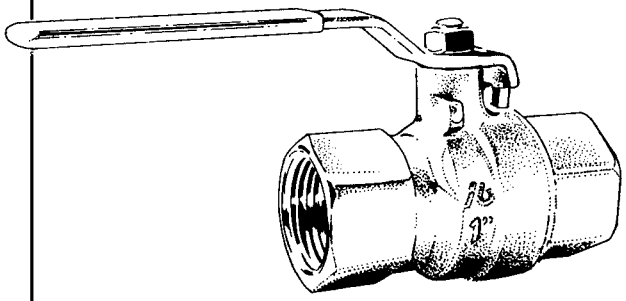


The valve is particularly recommended in gas distributing plants; it is a product ideal for low pressure. Very good results are obtained also by using it in heating and hydro plants at medium pressure.

TEMPERATURE LIMITS:
GAS: Temperature min. -20°C max. +60°C
FLUID: Temperature min. -15°C max. +120°C

AGA 5563

Cat. No. GC077 – 1 inch

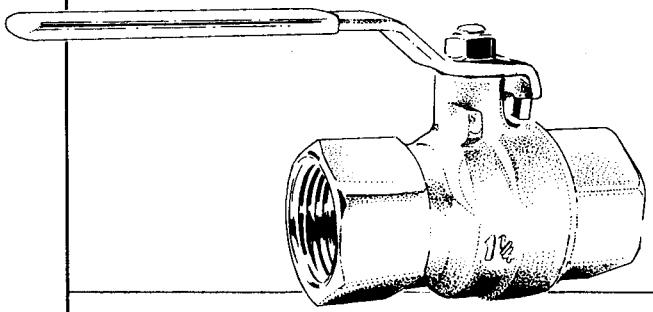


The valve is particularly recommended in gas distributing plants; it is a product ideal for low pressure. Very good results are obtained also by using it in heating and hydro plants at medium pressure.

TEMPERATURE LIMITS:
GAS: Temperature min. -20°C max. +60°C
FLUID: Temperature min. -15°C max. +120°C

AGA 5563

Cat. No. GC078 – 1¼ inch

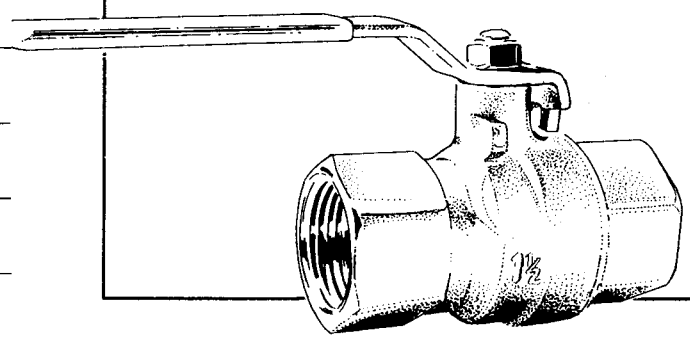


The valve is particularly recommended in gas distributing plants; it is a product ideal for low pressure. Very good results are obtained also by using it in heating and hydro plants at medium pressure.

TEMPERATURE LIMITS:
GAS: Temperature min. -20°C max. +60°C
FLUID: Temperature min. -15°C max. +120°C

AGA 5563

Cat. No. GC079 – 1½ inch



The valve is particularly recommended in gas distributing plants; it is a product ideal for low pressure. Very good results are obtained also by using it in heating and hydro plants at medium pressure.

TEMPERATURE LIMITS:
GAS: Temperature min. -20°C max. +60°C
FLUID: Temperature min. -15°C max. +120°C

AGA 5563

Equivalent Temperatures and Conversion Factors

TABLE OF EQUIVALENT TEMPERATURES

Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.
-50°	-58°	75°	167°	200°	392°	325°	617°	450°	842°	575°	1067°	700°	1292°	825°	1517°
-45°	-49°	80°	176°	205°	401°	330°	626°	455°	851°	580°	1076°	705°	1301°	830°	1526°
-40°	-40°	85°	185°	210°	410°	335°	635°	460°	860°	585°	1085°	710°	1310°	835°	1535°
-35°	-31°	90°	194°	215°	419°	340°	644°	465°	869°	590°	1094°	715°	1319°	840°	1544°
-30°	-22°	95°	203°	220°	428°	345°	653°	470°	878°	595°	1103°	720°	1328°	845°	1553°
-25°	-13°	100°	212°	225°	437°	350°	662°	475°	887°	600°	1112°	725°	1337°	850°	1562°
-20°	- 4°	105°	221°	230°	446°	355°	671°	480°	896°	605°	1121°	730°	1346°	855°	1571°
-15°	5°	110°	230°	235°	455°	360°	680°	485°	905°	610°	1130°	735°	1355°	860°	1580°
-10°	14°	115°	239°	240°	464°	365°	689°	490°	914°	615°	1139°	740°	1364°	865°	1589°
-5°	23°	120°	248°	245°	473°	370°	698°	495°	923°	620°	1148°	745°	1373°	870°	1598°
0°	32°	125°	257°	250°	482°	375°	707°	500°	932°	625°	1157°	750°	1382°	875°	1607°
5°	41°	130°	266°	255°	491°	380°	716°	505°	941°	630°	1166°	755°	1391°	880°	1616°
10°	50°	135°	275°	260°	500°	385°	725°	510°	950°	635°	1175°	760°	1400°	885°	1625°
15°	59°	140°	284°	265°	509°	390°	734°	515°	959°	640°	1184°	765°	1409°	890°	1634°
20°	68°	145°	293°	270°	518°	395°	743°	520°	968°	645°	1193°	770°	1418°	895°	1643°
25°	77°	150°	302°	275°	527°	400°	752°	525°	977°	650°	1202°	775°	1427°	900°	1652°
30°	86°	155°	311°	280°	536°	405°	761°	530°	986°	655°	1211°	780°	1436°	905°	1661°
35°	95°	160°	320°	285°	545°	410°	770°	535°	995°	660°	1220°	785°	1445°	910°	1670°
40°	104°	165°	329°	290°	554°	415°	779°	540°	1004°	665°	1229°	790°	1454°	915°	1679°
45°	113°	170°	338°	295°	563°	420°	788°	545°	1013°	670°	1238°	795°	1463°	920°	1688°
50°	121°	175°	347°	300°	572°	425°	797°	550°	1022°	675°	1247°	800°	1472°	925°	1697°
55°	131°	180°	356°	305°	581°	430°	806°	555°	1031°	680°	1256°	805°	1481°	930°	1706°
60°	140°	185°	365°	310°	590°	435°	815°	560°	1040°	685°	1265°	810°	1490°	935°	1715°
65°	149°	190°	374°	315°	599°	440°	824°	565°	1049°	690°	1274°	815°	1499°	940°	1724°
70°	158°	195°	383°	320°	608°	445°	833°	570°	1058°	695°	1283°	820°	1508°	945°	1733°

CONVERSION FACTORS

Multiply Number of	By . . .	To Obtain	Multiply Number of	By . . .	To Obtain
British Thermal Units	778.3	Foot-pounds	Kilowatt-hours	3413	British thermal units
	3.929×10^{-4}	Horsepower-hours		2665×10^{6}	Foot-pounds
	2.930×10^{-4}	Kilowatt-hours		1.341	Horsepower-hours
	.2930	Watt-hours		1000	Watt-hours
Foot-pounds	1.285×10^{-3}	British thermal units	Watt-hours	3413	British thermal units
	5.05×10^{-7}	Horsepower-hours		2655	Foot-pounds
	3.766×10^{-7}	Kilowatt-hours		1.341×10^{-3}	Horsepower-hours
	3.776×10^{-4}	Watt-hours		.001	Kilowatt-hours
Horsepower-hours	2545	British thermal units			
	1.98×10^{6}	Foot-pounds			
	.7457	Kilowatt-hours			
	745.7	Watt-hours			

Pilot Information

Chart No. 1 – RECOMMENDED ORIFICE SIZE FOR STANDING PILOTS

TYPE PILOT		W/THERMOCOUPLE						W/THERMOPILE		
		NATURAL		L.P.		MANUFACTURED		NAT.	L.P.	MFG.
		STD.	OPT.	STD.	OPT.	STD.	OPT.	STD.	STD.	STD.
2C OR 2CH	VERT.	.018	.016	.010	.008	.024	.022	.018	.0115	.028
	HORIZ.	.018		.010	.0115	.024				
3C OR 3CH	VERT.	.016	.018	.010	.0115	.022		.018	.0115	.024
	HORIZ.	.018		.010		.022	.024			
*4C OR 4CH		.018		.0115		.022	.024	NOT RECOMMENDED		
5C OR 5CH	VERT.	.016	.018	.010	.0115	.022		.018	.0115	.024
	HORIZ.	.018		.010		.022	.024			
*6C OR 6CH		.026	.022	.016		.028		.026	.016	.028
2 BLC		.0115	.010	.008				NOT APPLICABLE		

*NOT USED IN HORIZONTAL POSITION

Chart No. 2 – CINTARG PILOT TYPE ORIFICES

ORIFICE PART No.	ORIFICE SIZE	TYPE GAS	NOMINAL BTU/HR WITH INDICATED GAS PRESSURE AT PILOT ORIFICE*						
			NATURAL			L.P.	MFG.	MX.	TYPE** HOLE
			3.5" W.C.	5" W.C.	7" W.C.	11" W.C.	6" W.C.	6" W.C.	
27270	.008	L.P.				436			RO
76370	.010	L.P.				681			RE
76376	.010	NAT.	236	282	333				RE
76371	.0115	L.P.				901			RE
76377	.0115	NAT.	312	373	441				RE
76364	.014	L.P.				1335			VL
76363	.014	NAT.	462	552	653				VL
76362	.016	L.P.				1743			VL
76360	.016	NAT.	603	721	854				VL
76361	.018	NAT.	764	913	1080				VL
	.021	NAT.	1039	1242	1470				RE
76374	.021	MX.						1242	RE
76378	.0225	NAT.	1193	1427	1688				RE
76375	.0225	MF					1094		RO
27263	.024	MF					1244		RO
27208	.026	NAT.	1593	1904	2253				RO
27264	.028	MF					1693		RE

† NAT = NATURAL GAS L.P. = LIQUIFIED PETROLEUM GAS MF = MANUFACTURER GAS MX = MIXED GAS
Based on: Nat. Gas of 1000 BTU/CF and .65 Sp. Gr., L.P. Gas 2500 BTU/CF and 1.53 Sp. Gr., MF Gas of 535 BTU/CF and .38 Sp. Gr., MF gas of 535 BTU/CF and .38 Sp. Gr., MX Gas of 800 BTU/CF and .50 Sp. Gr.
**Type Hole: RO = Round; RE = Rectangular; VL = Vertical Louvre

Flame must envelop upper ¾" of Thermocouple. Recommended temperature 1200º (549ºC)

Glossary

The definitions given herein are not necessarily complete; for brevity and to conserve your time, only definition and explanations that may be helpful in burner ignition applications are given.

Air Shutter – An adjustable device on the primary air openings of a gas burner used to control the amount of primary combustion air introduced into the burner.

Ambient Temperature – The temperature of the air and/or other gases immediately surrounding a device; for example, immediately surrounding the pilot burner.

Anode Rod – A metal rod, usually magnesium, placed in a water heater to protect the tank from corrosion.

Appliance Flue *(see Flue)* – The flue passages within an appliance.

Automatic Control Valve – An automatic or semi-automatic device consisting of a valve and an operator. The valve controls the gas supply to the burner(s) during operation of an appliance.

Automatic Ignition – Ignition of the appliance burner(s) in response to an appliance user initiating the operation of the appliance.

Automatic Pilot – A gas pilot which acts to light the gas at the main burner(s) each time the appliance operates and acts to shut off gas supply to the burner(s) in the event of pilot flame failure.

Automatic Pilot Device – A device incorporated in a gas pilot assembly which acts to automatically shut off the gas supply to the appliance burner(s) if the source of ignition fails.

Baffle – A rigid plate placed in a gas appliance to direct or deflect the flow of air or combustion gases or flue gases.

Barometric Draft Control – A device attached to a flue outlet on some appliances without draft hoods which has a counter-weighted baffle to allow dilution air to mix with the combustion products. It is used to prevent excessive draft on an appliance.

Broiler – A cooking appliance so constructed to cook food over or under an open flame or other source of direct radiated heat.

BTU – Abbreviation for British Thermal Unit, which is the amount of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit when at 63ºF.

Bunsen-Type Burner – A gas burner in which combustion air is injected into the burner by the gas jet emerging from the gas orifice, and this air is premixed with the gas supply within the burner body before the gas burns on the burner port.

Burner – A device designed for the burning of gas or a gas-air mixture in the combustion zone.

Atmospheric Burner – A burner in which primary air for combustion is drawn into the burner venturi by the velocity of the gas issuing from the burner orifice.

Luminous Flame Burner – A burner that uses only secondary air for combustion of the gas and therefore produces a yellow flame.

Power Burner – A burner in which either gas or air or both are supplied by a blower at pressures exceeding: for gas – the line pressure, and for air – atmospheric pressure; this added pressure being applied at the burner.

Premix Burner – A burner in which all or almost all of the air required for combustion is mixed with the gas as primary air.

Pressure Burner – A burner to which the gas mixture is supplied under pressure, usually 0.5 to 15 inches water column, sometimes higher.

Yellow-Flame Burner – Same as Luminous Flame Burner.

Burner Head – The portion of the burner that is beyond the mixing tube and contains the ports.

Candling – A term used to describe a lazy yellow pilot flame that usually is caused by high ambient temperature.

Central Gas Heating Appliance – A vented gas-fired boiler, central or floor furnace, or vented recessed heater.

Circulating Water Heater System – A system of heating and storing water where the heater is physically separated from the storage tank and water is circulated between them.

Coalescence – Intermingling of pilot and main burner flames, which may result in yellow streaming.

Cold Junction – See Thermocouple.

Combustion – As used herein, combustion is the rapid chemical combination of fuel gases with oxygen from the air (oxidation or burning) and which produces heat, light, and combustion products.

Combustion Air – Air supplied in an appliance specifically for the combustion of a fuel gas.

Combustion Chamber – That portion of an appliance within which combustion normally occurs.

Combustion Products – The combination of gases produced by combustion, including any inert gases but not including excess air.

Condensate (Condensation) – The liquid which separates from a gas (including flue gases) due to a reduction in temperature.

Glossary (continued)

Conduction – Transfer of heat from one fluid or solid to another by means of actual contact between them.

Controls – Devices designed to regulate the supply of gas, air water, or electricity to a gas appliance; may be automatic, semi-automatic, or manual in operation.

Convection – Transfer of heat by movement of a fluid containing the heat.

Cubic Foot of Gas – The amount of gas that, when at a temperature of 60ºF, under pressure of 30 inches of mercury, and saturated with water vapour, would occupy 1 cubic foot.

Diaphragm Valve – A control valve in which the main actuating means is the gas pressure on a flexible diaphragm.

Dilution Air – Air which enters a draft hood and mixes with flue gases.

Direct Heating Appliances – Direct heating appliances are room heaters, recessed heaters, furnaces, decorative and similar appliances such as gas-burning fireplaces, which are located in occupied areas.

Direct Spark Ignition (DSI) – Means of ignition in which the main burner is lit directly by a high voltage electric spark instead of by a pilot flame.

Direct Vent Appliances – Appliances which are constructed and installed so that all air for combustion is derived from the outside atmosphere and all flue gases are discharged to the outside atmosphere.

Draft Hood (Draft Diverter) – A device built into the appliance or made a part of the flue or vent connector from an appliance, which is designed to (1) assure the ready escape of the products of combustion in the event of no draft, back draft, or stoppage beyond the draft hood; (2) prevent a back draft from entering the appliance, and (3) neutralise the effect of stack action of the chimney flue upon the operation of the appliance.

Draft Regulator – A device which functions to maintain a desired draft in the appliance by automatically reducing the draft to the desired value.

Drop-out Milliamperage – The minimum milliamperage that will hold a pilot safety device in the position that allows gas to flow to the main burner(s).

Drop-out Millivoltage – The minimum millivoltage that will hold a pilot safety device in the position that allows gas to flow to the main burner(s) and/or pilot.

Electrodes – Either of 2 terminals of an electrical source. When ignition is energised, a spark crosses the space between the electrodes (the spark gap) and ignites the gas-air mixture.

Energy Cut Off (ECO) – A thermostatic element placed in the control circuit of a water heater which shuts off gas supply in case of excessively high water temperature.

Excess Air – Air which passes through the combustion chamber and the appliance flues in excess of that which is theoretically required for complete combustion.

Flame Rectification – Method of flame sensing which depends on the ability of a flame to conduct current when voltage is applied across 2 electrodes immersed in the flame. Because the flame electrode (the flame rod) is very small compared to the ground electrode (usually the main burner where it contacts the flame), larger current flows in one direction than the other and the flame current is rectified to dc. The system control allows the burner to operate only as long as it receives a dc signal from the flame rod.

Flame Rod – The flame sensor in a rectification system. Consists of a metal rod immersed in the flame to act as the flame electrode in the flame sensing circuit.

Flame Switch – A thermostatic control element responsive to high temperature and thereby used to sense presence of time.

Flash Tube – An ignition device, commonly used for igniting gas on range top burners. An air-gas mixture from the burner body is injected into the end of a short tube, the mixture moves along the tube, is ignited by a standing pilot flame at the other open end of the tube and the flame travels back through the mixture in the flashtube to ignite the gas at the burner ports.

Flue – The passages within and outside an appliance through which the flue gases pass from combustion chamber to outer air.

Appliance Flue – The flue passage inside the appliance.

Chimney Flue – The flue passage inside the chimney.

Flue Outlet – The opening provided in an appliance for the escape of flue gases.

Flue or Vent Connector – The pipe that connects an appliance with the chimney flue or vent.

Flue-Gas Baffle – A baffle located in the path of the flue gases to restrict or change the flow of the flue gases.

Flue Gases – Flue gases consist of the products of combustion and the excess air.

Forced Draft Burner – A burner in which combustion air is supplied by a fan or blower.

Fuel – Any substance used for combustion.

Fuel Gas – Any substance in a gaseous form when used for combustion.

Generator – See Pilot Generator.

Glow Bar – A bar of high-temperature material, usually spirally machined to provide a long electrical path, heated with an electrical current to incandescence to ignite gas burner flames.

Glossary (continued)

Glow Coil – A coil of fine wire heated by electric current and used to light a pilot flame.

Heat Exchanger – Any device for transferring heat from one fluid to another.

Heated Bimetal Valve – A heat motor valve in which the heat generated by a small resistance heater causes a bimetal element to actuate the valve.

Heating Element – All parts of an appliance that are in contact with the flames and/or hot flue gases and with the medium that is being heated and which transmit heat from the flames and hot flue gases to the medium.

Heating Value – The number of British Thermal Units produced by the complete combustion at constant pressure of one cubic foot of gas. Total heating value includes heat obtained from cooling the products to the initial temperature of the gas and air and condensing the water vapour formed during combustion.

Heat Motor Valves – Valves in which the actuating power is supplied by the heat generated by a small resistance heater.

Hot Junction – The junction of the 2 dissimilar metals at or near the tip of a pilot generator. See Thermocouple and Thermopile.

Hot-Wire Valve – A heat motor valve in which valve actuation is obtained by thermal expansion and contraction of a stretched wire heated by an electric current.

Hydrocarbon – Any of a number of compounds composed of carbon and hydrogen.

Hydronic Heating System – A central heating system which utilises heated water or stream carried through pipes to supply heat throughout the structure.

Ignition – The act of standing combustion.

Impingement Target Burner – A burner consisting simply of a gas orifice and a target, with the gas jet from the orifice entraining combustion air in the open and the mixture striking and burning on the target surface. No usual burner body is used.

Infrared Burner – A type of burner in which the main burner flame heats a ceramic or metal surface which then emits infrared radiation. Infrared does not heat the air it passes through, but rather heats objects which it hits.

Injection – Drawing primary air into a gas burner by means of a flow of fuel gas.

Input Rating – The gas-burning capacity of an appliance as specified by the manufacturer, stated in Btuh. Input ratings are based on sea-level operation and apply for elevations up to 2000 feet above sea level. For operation at elevations above 2000 feet, input ratings should be reduced 4 percent for each 1000 feet above sea level. Example: At 3000 feet above sea level, the input rating should be reduced 3 x 4 percent = 12 percent.

Instantaneous Water Heater – A water heater that essentially only heats water as it is used.

Kanthal – High temperature stainless steel alloy used in the manufacture of flame rods. Rated to 2200ºF.

Lifting Flames – Flames which rise off or blow off of burner; may be caused by excessive primary air or overrating of burner.

Liquid Petroleum Gases – Usually commercial propane or commercial butane; usually produced by distillation and separation processes from oil gas which comes from active or natural gas wells.

Listed – Equipment or materials included in a list published by a nationally recognised testing laboratory that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or materials meets nationally recognised standards or has been tested and found suitable for use in a specified manner.

LNG – Liquefied natural gas. Natural gas which has been cooled until it becomes a liquid.

Low Temperature Cutout – A limit control on water chillers or other refrigeration equipment to prevent operation with too low a water temperature.

Manifold – The assembly, comprising the valve-type controls and downstream piping to the main burner orifice.

Manufactured Gas – A fuel gas which is artificially produced by some process, as opposed to natural gas, which is found in the earth. Sometimes called town gas.

Methane – A hydrocarbon gas with the formula CH4, the principal component of natural gases.

Mixer – A combination consisting of mixer head, mixer throat, and mixer tube of an atmospheric burner.

Mixer Head – The usually enlarged portion of the mixer into which primary air flows to mix with the gas stream.

Mixer Throat – The portion of the mixer having the smallest internal cross-sectional area and located between mixer head and mixer tube.

Mixer Tube – The portion of the mixer located between mixer throat and burner head.

Nameplate – A plate affixed to an appliance which gives such information as manufacturer's name, appliance input rate, model number, serial number, certification, etc.

Natural Gas – Any gas found in the earth as opposed to gases which are manufactured.

Open Circuit Millivoltage – The millivoltage developed by a thermoelectric generator with leads disconnected.

Glossary (continued)

Orifice – The restricting opening through which gas is metered as it is discharged to the gas burner.

Insert Orifice – Orifice which drops into the pilot burner head and is held in place with a separate threaded fitting.

Orifice Spud – A removable plug or cap which includes the orifice; removability permits substituting an orifice of different size to adjust gas flow.

Orifice Cap (Hood) – A movable fitting having an orifice which permits adjustment of the flow of gas by changing its position with respect to a fixed needle or other device extending into the orifice.

Pilot – A small gas flame used to ignite the gas at the main burner(s).

Standing Pilot – A continuously burning pilot that does not operate a pilot safety device.

Thermoelectric Pilot – A safety pilot that uses a thermoelectric generator to convert heat energy into electrical energy for use in operating gas safety controls.

Pilot Burner – A small gas burner used to provide a pilot flame for igniting the gas at the main burner(s).

Nonprimary-Aerated Pilot – A pilot burner in which no air is mixed with the gas before the gas passes through the burner port(s); uses only secondary air.

Primary-Aerated Pilot – A pilot burner in which primary air is mixed with the gas before the gas leaves the burner port(s).

Pilot Generator – A thermocouple or thermopile designed to be heated by a gas pilot to generate electric power for operating a pilot safety valve, pilot safety switch, or other automatic control valve. See Thermocouple and Thermopile.

Pilot Safety Switch – An electrical switch operated by electrical power supplied by a pilot generator; used to open the circuit to an electric control valve, thereby shutting off the flow of gas to the main burner(s) when the pilot flame is extinguished or becomes too small to light the main burner(s).

Pilot Safety Valve – A gas valve which is held open by electrical power supplied by a power generator, and which closes automatically to shut off the flow of gas to the main burner(s) when the pilot flame is extinguished or becomes too small to light the main burner(s).

Port(s) – Opening(s) provided in a gas burner head for discharging the gas or gas-air mixture for combustion.

Ignition Port – (a) In a pilot burner, a port that provides flame for lighting the main burner(s); the same flame may also heat a pilot generator; (b) In a main burner, a port provided near the pilot flame to assist in lighting the main flame, usually with the use of carry-over ports or slots.

Carry-Over Ports or Slots – Ports or slots in a gas burner head which are designed to carry flame so as to improve burner ignition. See also Ignition Port.

Premixing Burner – A burner in which all, or nearly all, combustion air is mixed with the gas as primary air.

Pressure Burner – A burner in which an air and gas mixture under pressure is supplied, usually at 0.5 to 14 inches water column.

Pressure Regulator – A device for controlling and maintaining a uniform outlet gas pressure.

Pressure-Temperature Relief Valve – A device applied to water heaters which will open to pass water or stream if excessive pressure or temperature occurs in the water heater tank.

Primary Air – Air that is introduced into a gas burner and mixed with the gas before the gas leaves the burner port(s).

Primary Air Inlet – The opening or openings through which primary air is admitted into a burner.

Propane – A hydrocarbon gas heavier than methane but lighter than butane. It is used as a fuel alone, mixed with air or as a major constituent of liquified petroleum gases.

Purge – (a) To clear gas piping of air or a mixture of gas and air. (b) To clear a combustion chamber and flue passages of gas.

Radiant Burner – (see Infrared Burner).

Radiation – Heat transfer between a hot object and a cooler one without heating the atmosphere between.

Radiation Shield – A plate or baffle used to shield a pilot burner from radiation of main burner flame.

Relief Opening – The opening in a draft hood to permit ready escape to the atmosphere of flue products from the draft hood in event of no draft, back draft or stoppage beyond the draft hood, and to permit inspiration of air into the draft hood in the event of a strong chimney updraft.

Rod and Tube Thermostat – A thermostat actuated by the differential expansion of a rod fastened inside a tube of different material. Relative movement takes place between the free ends relative to each other as the assembly is heated or cooled.

Safe Lighting Valve – A manual gas valve which permits gas flow to the pilot burner but not the main burner for safety when lighting the pilot.

Glossary (continued)

Safety Circuit – A circuit or portion thereof involving one or more safety controls in which failure due to grounding, opening, or shorting of any part of the circuit can cause unsafe operation of the controlled appliance.

Salamander – (1) A small boiler mounted atop a heavy-duty commercial range. (2) A portable heater used mainly at construction sites.

Secondary Air – Combustion air supplied to the flame externally without passing through the burner.

Sensor – The primary component of a control or measuring system which senses the condition of the controlled variable.

Single Port Burner – A burner in which the entire air-gas mixture issues from a single port.

Soft Flame – A flame partially deprived of primary air such that the combustion zone is extended and inner cone is ill-defined.

Solenoid – A coil of wire which creates a magnetic field when electricity flows through it, and hence tends to pull a movable iron core placed within the coil.

Solenoid Valve – A valve actuated by an electric solenoid.

Spark Igniter – In a DSI system, the assembly which includes the ignition electrodes, a ceramic insulator, and a mounting bracket.

Specific Gravity – The specific gravity of a gas is the ratio of the weight of a given volume of the gas to the same volume of air, measured under the same temperature and pressure conditions.

Standby Loss – Heat energy required to maintain stored water at an elevated temperature.

Storage Type Water Heater – A water heater that stores the water for use in the same vessel in which it is heated.

Synthetic Natural Gas (SNG) – Gas which is manufactured to duplicate natural gas.

Target – The pilot burner "tip" or "hood" which directs the pilot flame to the thermocouple and the main burner gas flow. Pilot flame pattern is determined by the shape and position of the target.

Thermocouple – A thermoelectrical device that converts heat directly into electrical energy. It consists essentially of 2 dissimilar metals joined at one point to form a "hot" junction, with electrical leads connected to the 2 metals at a point (the "cold" junction) sufficiently distant from the "hot" junction to establish the necessary termperature differential. When the "hot" junction is heated, as by a pilot flame, so that its temperature becomes higher than the temperature of the "cold" junctions a millivoltage is generated to power a pilot safety device. The millivoltage increases with increasing temperature differential between "hot" and "cold" junctions.

Thermopile – A device containing a number of thermocouples connected in series and having all hot junctions so located that all receive heat from the same heat source. The millivoltage generated is equal to that of the cumulative millivoltage of all thermocouples in the thermopile.

Time Off – The time an automatic pilot requires to shut off the gas supply to the main burner(s) after the pilot flame is extinguished.

Time On – The time an automatic pilot requires, after it is lighted, to activate a pilot safety valve or pilot safety switch and allow gas to flow to the main burner(s).

Turndown Millivoltage – The value of pilot generator millivoltage that will just hold open the pilot safety device to allow gas to flow to the main burner(s). Below that value, the pilot safety device will drop out and stop the flow of gas to the main burner(s). (The pilot must be capable of lighting the main burner(s) satisfactorily with pilot turned down so low that it will generate just the turndown value of millivoltage.)

Automatic Valve – An automatic device consisting essentially of a gas valve and operator that opens and closes the gas supply to the main burner(s) as required during normal operation of an appliance. It may be operated mechanically, electrically, or by pressure of the gas acting on a flexible diaphragm, the pressure on the diaphragm being controlled by an electrically operated pilot valve.

Two Stage Pilot – A pilot ignition system whereby a small standard pilot is used to light a larger pilot which is cycled by the thermostat so that gas flow control to the main burner is exercised by the automatic pilot valve.

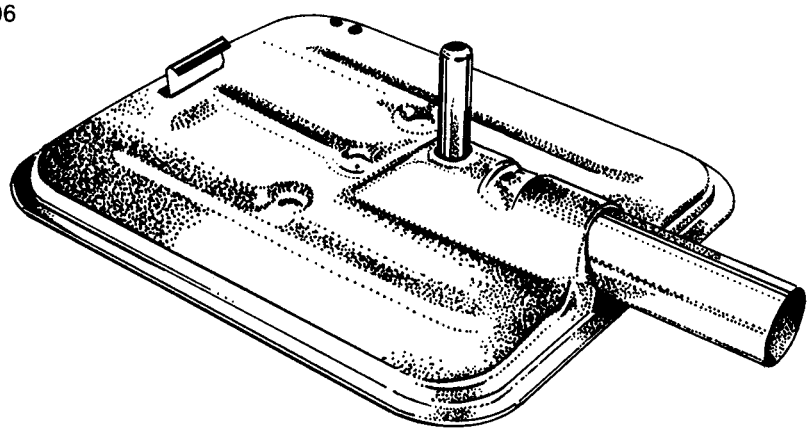
Vent Connector – Same as Flue Connector.

Venturi – Burner mixing tube in which the end nearest the gas orifice is narrower in order to increase the gas velocity and decrease the pressure to allow greater primary air intake.

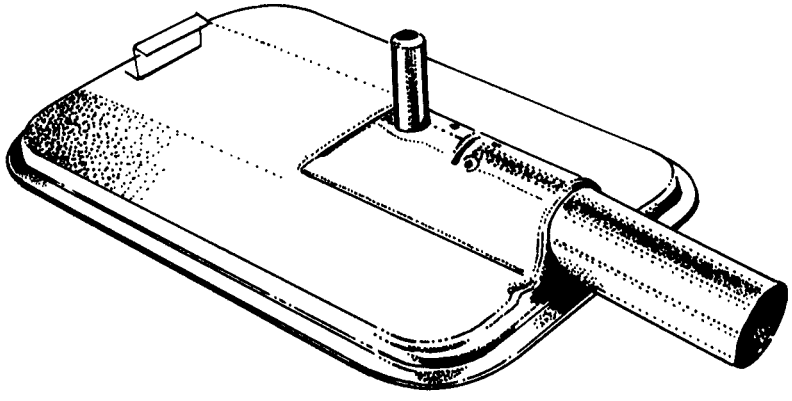
Yellow Tipping – A condition in which tip of flame is yellow; usually caused by insufficient primary air or high ambient temperature.

Grill Burners

Cat No. GC084
Large Grill - Non Auto
Chef Part No. 34406



Cat No. GC085
Small Grill
Chef Part No. 34606



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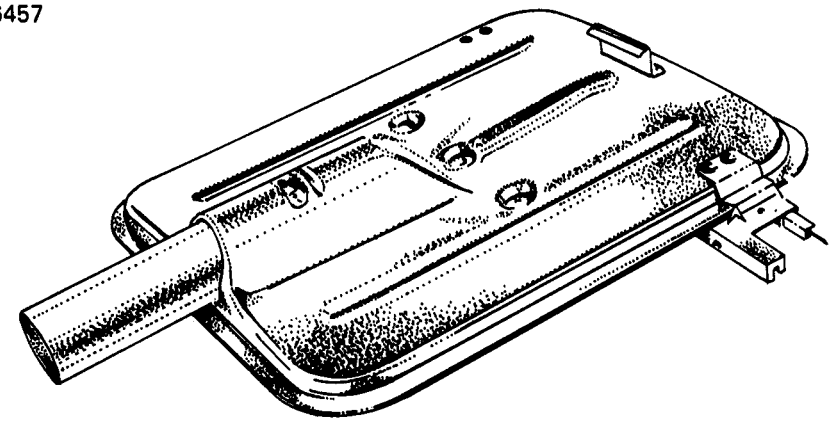

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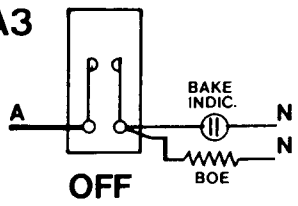

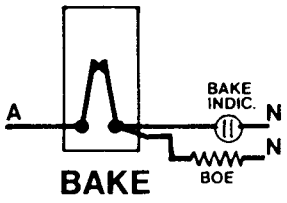

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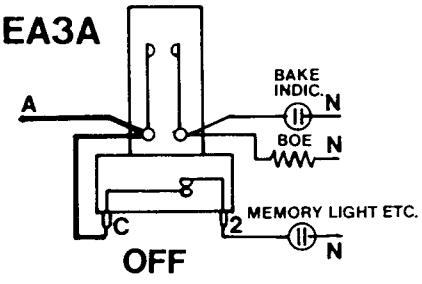

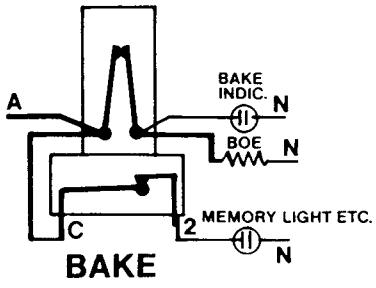

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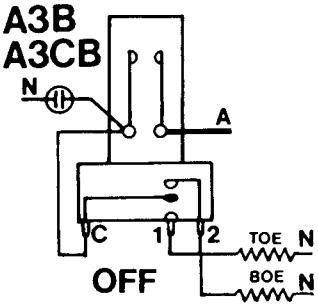

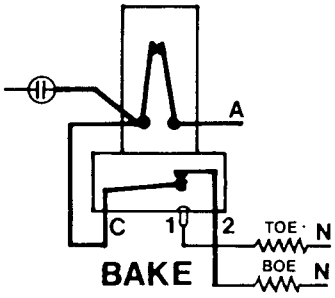

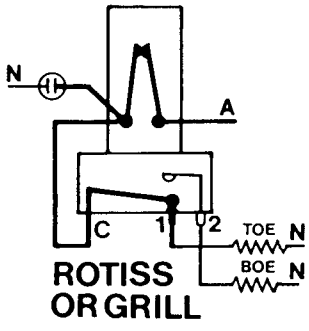

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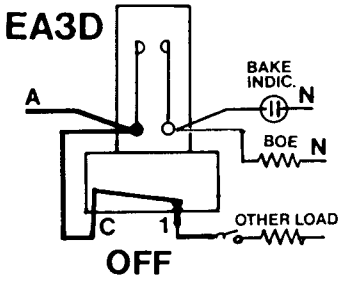

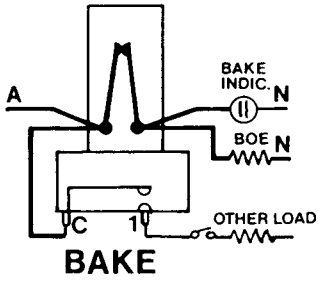

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