

Carlin[®]

Combustion Technology

**BURNERS
IGNITORS
CONTROLS**



About Carlin

Since its founding in 1949, Carlin Combustion Technology, Inc. has been a consistent leader in the heating industry. Producing oil & gas residential and commercial burners, controls, ignitors and various components, the company prides itself on high quality products with excellent customer and technical service.

Carlin was founded by Bernard C. Lindberg, who took over the assets of the U.S. Oil Burner Corporation. Mr. Lindberg was joined by John Carlburg and the name “Carlin” was born. The company’s original concern for burner quality and the genuine desire to serve its customers resonates today.

For more than 70 years, Carlin has introduced innovative burners, ignitors, controls and other components to meet the needs and standards of its clientele in the heating industry. The company has had several locations in Massachusetts and Connecticut and in 2014 settled in North Haven, Connecticut. This facility houses the manufacturing plant, administrative personnel and sales staff and is the venue for Carlin’s highly-informative Carlin U. training sessions.

Visit our website, www.carlincombustion.com, or call us at 203-680-9401 to learn more about this authentic Made-in-America company.

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MODEL: **PROX** 70200

Universal Diagnostic Oil Primary Control

UNIVERSAL
Replacement



FEATURES

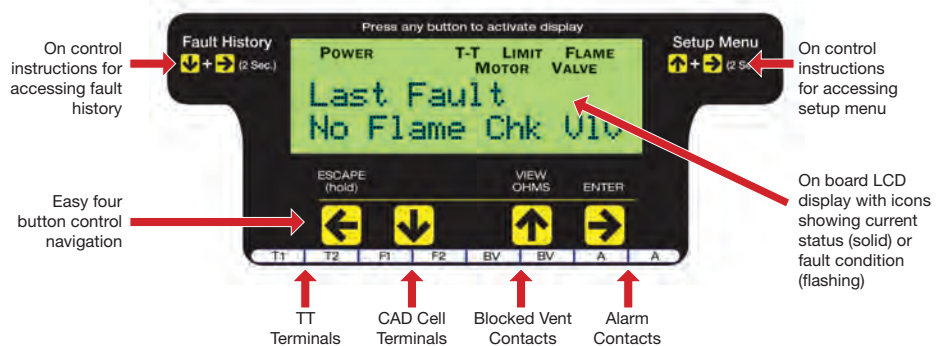
- Simple Setup – “Plug and Play” on your favorite application
- Detects faulty components for fast, accurate repairs
- Last Fault Alert – Displays fault reason, even if homeowner resets control
- Large Built-In LCD Display – plain-language fault messages with no codes to decipher
- Recessed Wiring Terminals – Added wiring space in j-box
- Low Voltage Blocked Vent and Alarm Contacts – Allows for easy connections
- 3 different ignition options – Smart, Interrupted and Intermittent (constant)
- Selectable valve delay on and motor delay off (pre-purge and post-purge)

SPECIFICATIONS

Power Input	120 VAC, 60 HZ, 9VA
Limit Circuit Input	120 VAC, 60 HZ
Motor Load	10 FLA/ 60 LRA (reduce by valve load)
Ignitor Load	120 VAC, 60 HZ, 500 VA
Valve Load	120 VAC, 60 HZ, 2A
Vent Load	0.1 amp
L1 Output	1 amp
Alarm Contacts	Dry contacts max load rating 24V, AC/DC, 2A
Blocked Vent (BV)	Intake or exhaust
Operating Temperature Limits	+32°F to +140°F
Thermostat Anticipator Current	0.1 A, AC
Agencies	UL Recognized (US & Canada)

PROX 70200 Xtreme Diagnostics

Icons and messages clearly identify the cause of fault condition.
Detailed history of last 32 faults takes guesswork out of troubleshooting.



MODEL: 48245

3 or 4 Wire Replacement Oil Primary Control



FEATURES

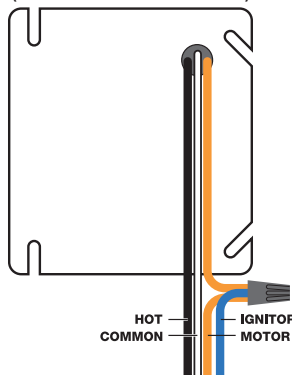
- Selectable trial for ignition - 45 or 15 seconds - easy pull jumper
- Diagnostic LED Indicators
- Optional Smart Ignition – automatically switches between:
 - Intermittent (constant) Duty when you need it.
 - Ignitor-saving Interrupted Duty when you don't.
- Wire for wire change out for R8184G4009 & R8184G4066

Direct Replacement for the Honeywell R8184G*

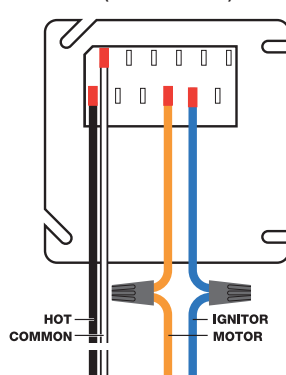
*Registered trademark of Honeywell International, Inc.



HONEYWELL R8184G
(48245 INTERMITTENT - Constant)



CARLIN MODEL 48245
(SMART IGNITION)



SPECIFICATIONS

Power Input (from limit circuit)	120 VAC, 60 HZ
Motor Load	10 FLA / 60 LRA
Ignitor Load	120 VAC, 60 HZ, 500 VA
Operating Temperature Limits	+32°F to +140°F
Storage Temperature Limits	-40°F to +185°F
Thermostat Anticipator Current	0.1 A, AC
CAD Cell Resistance (with flame)	R < 3300 OHMS
Agencies	UL recognized (US & Canada)

Direct Replacement in 3 and 4-wire installations

Honeywell	R8184G4009
	R8184G4066
Beckett	7505A-0000
White-Rogers	668-364
	668-601
	668-401
	668-430
ICM	ICM1501
	ICM1503

How Smart Ignition (48245 and 70200 controls) Works

Smart Ignition turns off the ignitor once the flame is fully established and the combustion chamber is warmed up. In the majority of cases, the burner will not lose flame retention. If, however, the flame is lost, the control will switch to Intermittent "constant" Duty and restart the burner. The control will remain in Intermittent Duty for ten heat cycles. Following these cycles, the control resumes Interrupted Duty ignition unless another flame loss occurs.

MODELS: 40200, 42230, 50200, 60200

Like-for-Like Replacement Oil Primary Control



FEATURES

- Interrupted ignition
- Diagnostic LED indicators
- Recycle on flame failure
- Serviceman reset protection
- Pump prime mode

SPECIFICATIONS

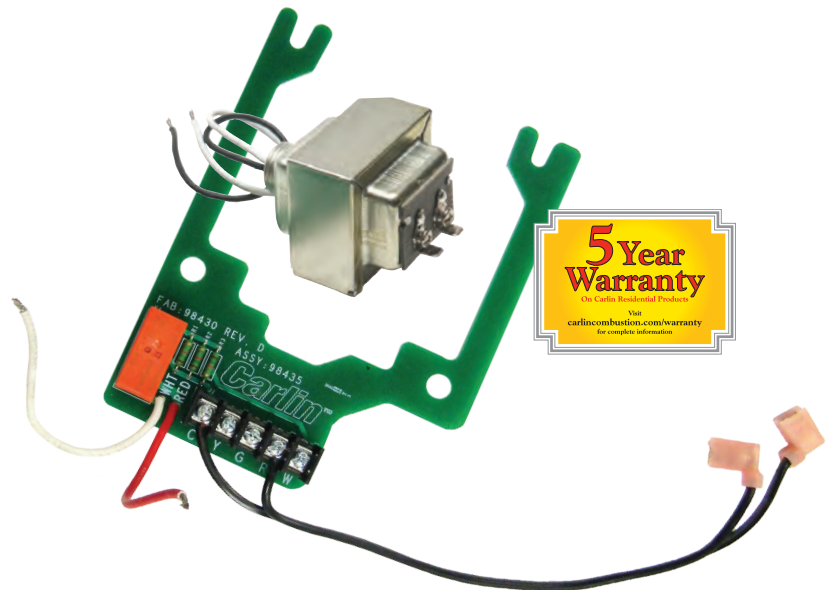
	40200	42230	50200	60200
Power Input	120VAC, 60Hz, 10VA	120VAC, 60Hz, 10VA	120VAC, 60Hz, 9VA	—
Limit Circuit Input	—	—	—	120VAC, 60Hz, 9VA
Motor Load	10FLA, 60 LRA (reduce by valve load)	10FLA, 60 LRA (reduce by valve load)	10FLA, 60 LRA (reduce by valve load)	10FLA, 60 LRA (reduce by valve load)
Ignitor Load	120 VAC, 60Hz, 500 VA	120 VAC, 60Hz, 500 VA	120 VAC, 60Hz, 500 VA	120 VAC, 60Hz, 500 VA
Valve Load	—	—	—	120 VAC, 60 Hz, 0.3 Amps
Alarm Contacts	—	—	Dry contacts max load rating 24V, AC/DC, 2A	Dry contacts max load rating 24V, AC/DC, 2A
Operating Temperature Limits	+32°F to +140°F	+32°F to +140°F	+32°F to +140°F	+32°F to +140°F
Thermostat Anticipator Current	0.1A, AC	0.1A, AC	0.1A, AC	0.1A, AC
TFI	15	30	15/30	15/30
Valve Delay On (pre-purge)	—	—	—	Yes
Motor Delay Off (post-purge)	—	—	—	Yes
Agencies	UL Recognized (US & Canada)	UL Recognized (US & Canada)	UL Recognized (US & Canada)	UL Recognized (US & Canada)

MODEL: 98435

24 VAC Power Adapter Kit for

- AC interface for combination AC/Oil
- adding WiFi thermostats

UNIVERSAL
Replacement



FEATURES

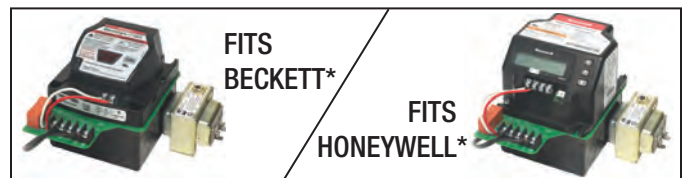
- Easy to use power kit for common WiFi thermostats
- Universal Fit – Works with Carlin, Beckett and Honeywell primary controls
- Replaces Beckett 51950U Ready Kit or 51970U Terminal base
- Replaces Honeywell R8184M when installed with Carlin primary control
- Heavy Duty 16 amp relay for added durability
- Designed for quick installation

SPECIFICATIONS

Transformer Input (primary)	120 VAC, 60 HZ
Transformer Output (secondary)	24 VAC, 60 HZ, 40 VA
Control Specifications	Refer to primary control data sheet
Max Ambient Temp	140°F

Model 98435S:
Includes circuit board, quick connect wire harness, 24VAC transformer

Model 98435S1:
Includes circuit board, quick connect wire harness (no transformer)



*Registered trademarks of R.W. Beckett Corp. and Honeywell International, Inc.

MODEL: 60200FR

Diagnostic Gas Primary Control

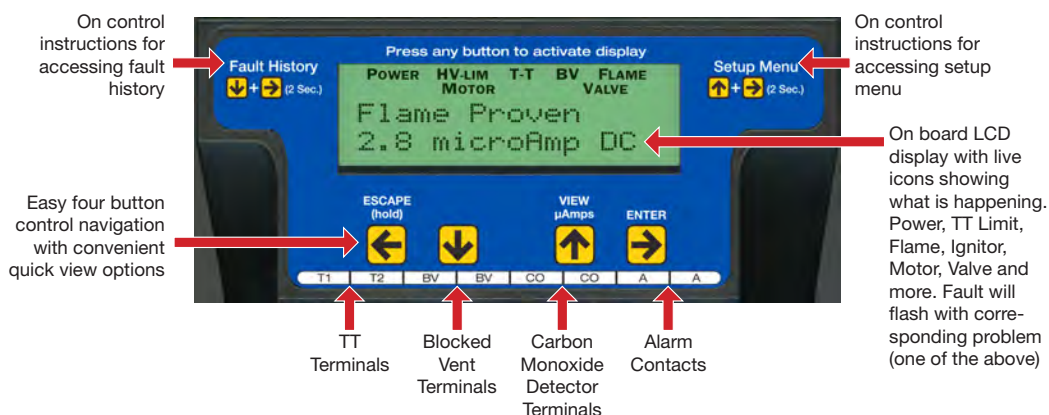


FEATURES

- On-board LCD screen and diagnostic display eliminates the need for separate tools
- Pinpoints cause of burner faults for fast, accurate repairs
- Last Fault Alert – Displays fault reason, even if homeowner resets control
- Large LCD Display – plain language messages, no codes to decipher
- Intuitive Menu Options – Simplified setup and navigation
- Recessed Wiring Terminals – Added wiring space in j-box
- Low Voltage Blocked Vent and Alarm Contacts – Allow for easy connections
- Replaces previous versions of 60200FR controls, Commercial and Residential
- Real time, live icons display sequence of operation

SPECIFICATIONS

Power Input	120 VAC, 60 HZ, 9 VA
Limit Circuit Input	120 VAC, 60 HZ
Motor Load	10 FLA / 60 LRA (reduce by valve and ignition load)
Ignitor Load	120 VAC, 60 HZ, 500 VA
Valve Load	2 Amps
Aux	120 VAC, 1 amp
Alarm Contacts	Dry contacts max load rating 24V, AC/DC, 2A
Operating Temperature Limits	+32°F to +140°F
Thermostat	24 VAC, 0.1A
Blocked Vent	12 VDC, 2mA Switch
CO	12 VDC, 2mA Switch
Agencies	UL recognized (US & Canada)



MODEL: **PROX** 45000

**Universal Oil
Burner Ignitor**

UNIVERSAL
Replacement



FEATURES

- Constant duty rated
- Robust circuit design for optimal performance
- Rugged components for added durability
- Optimized heat management for improved longevity
- Universal fit – mounts to existing baseplates

SPECIFICATIONS

Power Input	120 VAC, 60 HZ, 40 VA
Ignitor Output	19,000 Volts, 35 mA RMS
Secondary Grounding	Midpoint
Operating Temperature Limits	+32°F to +140°F
Agencies	UL Recognized (U.S. and Canada)

KEY MODELS IT REPLACES

MANUFACTURER	REPLACES MODELS
CARLIN	41000S, 41000SOBK1, 41000SOBK2, 41000SOCAS, 41000SOLC, 41000SOSC, 41000SOWA1, 41000SOWA2, 41000SOWA3, 41000SOWM
ALLANSON	2275-456, 2275-605, 2275-619, 2275-620, 2275-628G, 2275-629, 2275-630, 2275-633, 2275-647, 2275-653, 2275-658, 2275U
BECKETT	51771U, 51805U, 51824U, 51825U, 51826U, 51827U, 51828, 51836U, 51837U, 51840U, 5188U
FRANCE	10SAY-03, 10SAY-04, 10SAY-05, 10SAY-15, 10SAY-16, 10SAY-30, 10SAY-31, 10SAY-32, 10SAY-56, 10SAYL-70
WEBSTER	12-8AB7, 313-24AB81, 313-25AB78, 313-28AB205, 313-28AB85, 313-28AB91, 3-24AB-AER, 3-28AB-BAFR, 3-28AB-BS, 3-32AB-BAF

MODEL: 41000

Replacement Oil Burner Ignitor



FEATURES

- Proven robust design
- Solid state technology means high performance, long life and durability
- Available with or without baseplate for use on a wide variety of applications
- Constant duty rated

SPECIFICATIONS

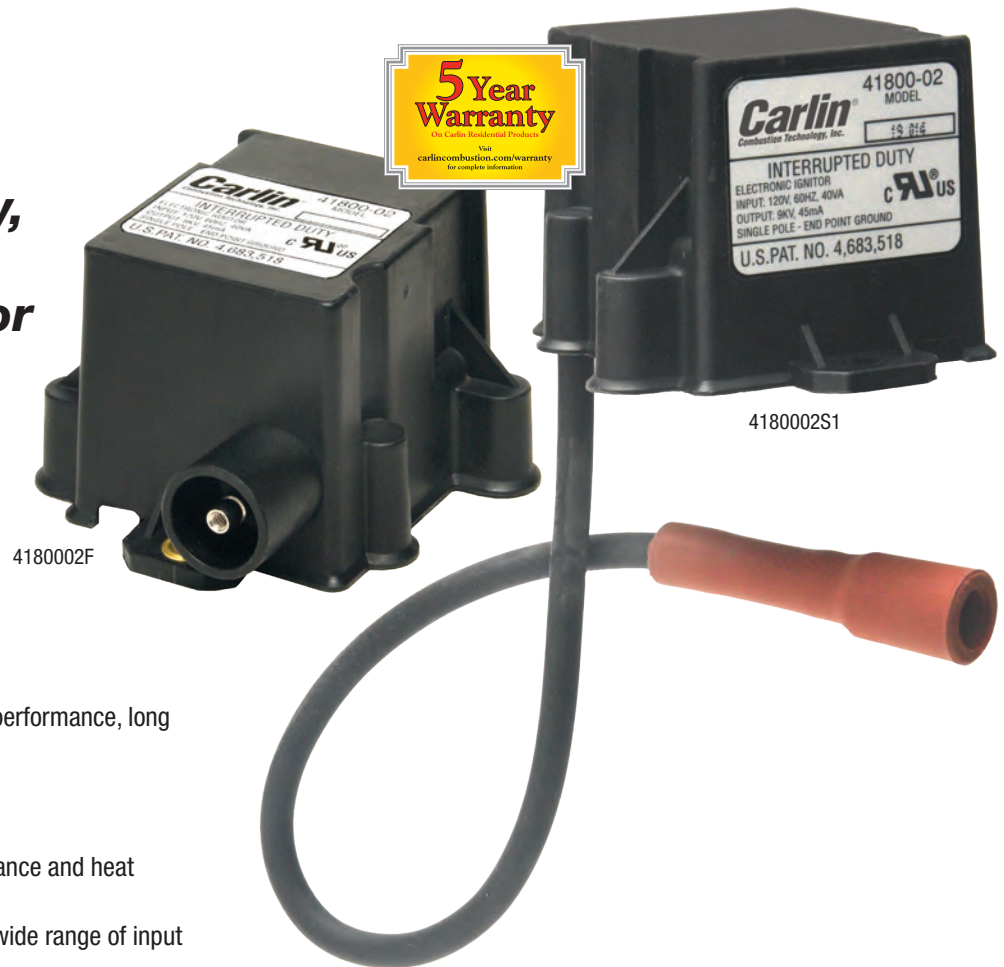
Power Input	120 VAC, 60HZ, 40 VA
Ignitor Output	19,000 Volts, 35 mA RMS
Secondary Grounding	Midpoint
Operating Temperature Limits	+32°F to +140°F
Agencies	UL Recognized (US & Canada)

INTERCHANGEABLE ON ALL CARLIN BASEPLATES

- Carlin Residential
- Carlin Small Commercial (201, 301CRD)
- Carlin Large Commercial (601CRD -1150FFD)
- Beckett
- Wayne E
- Wayne M

MODEL: 41800

Interrupted-duty, Single Pole Electronic Ignitor



FEATURES

- 9,000-volt output
- Solid state technology means high performance, long life and durability
- Interrupted-duty rated
- Low current draw saves electricity
- Epoxy sealant provides water resistance and heat dissipation
- Consistent voltage output across a wide range of input voltages
- Reliable replacement for Honeywell Q652

SPECIFICATIONS

Power Input	120 VAC, 60 HZ, 40 VA
Ignitor Output	9,000 Volts, 45 mA RMS
Secondary Grounding	Single pole endpoint grounding
Operating Temperature Limits	0° F to +106° F
Agencies	UL Recognized – US & Canada

Part No.	Spark Connection	Cable Length
4180002S	High voltage	14" (used on Carlin 301 Gas Burners)
4180002S1	supression ignition cable	12" (used on Carlin EZ-Gas Burners)
4180002S2	with booted 1/4" female Rajah connection	6" (used on Carlin 201 and 202 Gas Burners)
4180002F	1/4" male Rajah connection	not applicable

MODELS: 90000, 90200, 90300

Water Heater Temperature Control

FEATURES

- Dynamic Display shows temperature setting and diagnostic codes.
- Navigation buttons allow for easy transition of EZ-Temp modes and settings.
- LEDs to indicate Lockout/Latchup and Call for Heat.
- Individual and dual sensor options
- Smart Manual Reset – Designed to avoid false Hi Temp lockouts



SPECIFICATIONS

Model	Application	Replaces	Limit	Temp Limit	High Limit
90000B1S	Universal	L4103A	Dual	90°-160°, 8° Diff.	180°, 10° Diff.
90200A6S	Bradford White	L4006A L4080B	Single	120°-145°, 6° Diff.	—
90200A7S	Bock Residential	L4006A L4080B	Single	100°-160°, 8° Diff.	—
90200A8S	Therma-Flo Everhot	L4006A L4080B	Single	90°-130°, 8° Diff.	—
90000B2S	Bock Residential	—	Dual	100°-160°, 8° Diff.	180°, 10° Diff.
90000B4S	Bradford White	—	Dual	120°-145°, 6° Diff.	165°, 6° Diff.
90000B10S	Therma-Flo Everhot	—	Dual	90°-130°, 8° Diff.	160°, 10° Diff.
90000C5S	John Wood	—	Dual	90°-160°, 10° Diff.	200°, 1° Diff.
90000C6S	John Wood	—	Dual	90°-180°, 10° Diff.	200°, 1° Diff.
90300B1S	Bock Commercial	L4080B & L8100C	Dual	100°-180°, 8° Diff.	200°, 10° Diff.

MODELS: 98022, 98611, 98627, 98629,
98630, 98866, 99220

Oil Burner Replacement Motors

FEATURES

- **Reliable** –
 - auto reset thermal overload
 - quiet sealed ball bearings
 - eliminates centrifugal start switch
 - 5-year warranty
 - UL recognized
- **Versatile** –
 - replace 1/15 to 1/4 HP motors
- **Slotted mounting holes** for easy and fast installation
- **Fits 48M/48N frame housings** including Carlin, Beckett and Wayne



SPECIFICATIONS

MODEL	98022	98611	98527	98629	98630	98866	99220
Power Input (VAC, 1-phase)	120	120	230	120	120	120	230
Frequency (Hz)	60	60	50/60	60	60	60	50
HP	1/7	1/6	1/6	1/15	1/4	1/6	1/4
Starting/running Currents (Amps RMS)	5.8/1.6	6.1/1.8	1.0	4.3/1.25	12.1/2.7	4.3/1.25	1.3
Speed (RPM)	3450	3450	2840/3390	3450	3450	1725	2800
Frame	48M	48N	48M	48M	48N	48N	48N
Lead Length (inches)	10	10	10	10	10	10	10
Rotation (looking from rear)	clockwise	clockwise	clockwise	clockwise	clockwise	clockwise	clockwise
Agencies	UL & CUL recognized						

MODEL: EZ-1, EZ-2, EZ-3

Model	Input
EZ-1	.50 to 1.65 GPH
EZ-2	1.50 to 2.25 GPH
EZ-3	2.00 to 2.60 GPH



BIO Fuel Compatible
up to B20 blends

Residential Oil Burner for Boiler and Furnace Applications



FEATURES

- EZ Design – Developed with the Tech in mind for simplified installation, setup and servicing
- OEM Specifications – Factory set to OEM requirements for optimal performance straight out of the box
- Pro-X 70200 Primary Control - Advanced diagnostics and plain-language display for fast, accurate repairs
- Pro-X 45000 Ignitor – the latest ignitor technology to deliver the strongest spark, longest lasting performance
- Quiet Operation – Engineered for smooth light-off and combustion for minimal burner noise
- Unsurpassed Warranty – 5 years on Carlin components and burner

SPECIFICATIONS

Fuels	
No. 1 or No. 2 Fuel oil (including bio-blends ≤ B20) (ASTM D396)	
Fuel unit	
Fuel Unit	Suntec A2VA-3006B or A2VA-7116B
Electrical	
Motor	Carlin PSC, 1/6 HP, 3450 RPM
Ignition & Primary Control	
Ignitor	Carlin Pro-X 45000 Universal Ignitor
Primary Control	Carlin Pro-X 70200 (some exceptions)
Operating Temperature Limits	
Maximum Ambient	140°F (60°C)
Agencies	
UL Listed	US & Canada

MODEL: EZ-1, EZ-2, EZ-3

Model	Input
EZ-1	.50 to 1.65 GPH
EZ-2	1.50 to 2.25 GPH
EZ-3	2.00 to 2.60 GPH



BIO Fuel Compatible
up to B20 blends

Carlin
SELECT

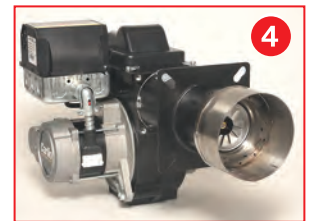
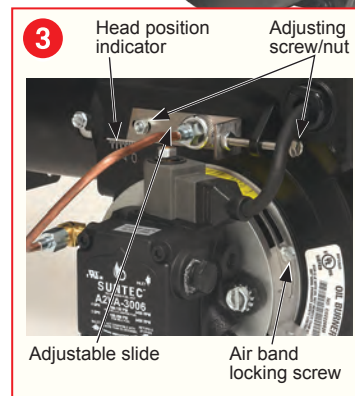
**Advanced performance
for today's demanding
applications**

FEATURES

- Adjustable head for simple setup and precision combustion
- Stainless steel flame wrap for added heat retention, delivering smooth light-offs and quiet combustion
- Factory-set and shipped to OEM specs for optimal appliance efficiency and performance straight out of the box
- Pro-X 70200 Universal Oil Primary with advanced diagnostics and plain language display for fast, accurate repairs

SPECIFICATIONS

Fuels	
No. 1 or No. 2 Fuel oil (including bio-blends ≤ B20) (ASTM D396)	
Fuel Unit	
Fuel Unit	Suntec A2VA-3006B or A2VA-7116B
Electrical	
Motor	Carlin PSC, 1/6 HP, 3450 RPM
Ignition & Primary Control	
Ignitor	Carlin Pro-X 45000 Universal Ignitor
Primary Control	Carlin Pro-X 70200 Universal Oil Primary (some exceptions)
Operating Temperature Limits	
Maximum Ambient	140°F (60°C)
Agencies	
UL Listed	US & Canada



- 1 Carlin Pro-X 70200 Universal Control**
Includes Large LCD display, Last Fault Alert, 3 different ignition types, Xtreme Diagnostics, and more!
- 2 Carlin Pro-X 45000 Universal Ignitor**
Built tough for continuous use
- 3 Combustion Head Adjustability**
Simple setup and calibration thanks to head position indicator and "One-Size" adjusting screw/ nut.
- 4 Stainless Steel Flame Wrap**
Improved flame head heat retention

MODELS: 99FRD, 102CRD

Model	Input
99FRD	0.50 to 3.00 GPH
102CRD	2.00 to 4.50 GPH

Residential and Light Commercial Oil Burners



FEATURES

- Adjustable head assembly for optimal fuel/air mixing
- Carlin's unique Allen key setting method, the only adjustments are the air band and the retention ring
- Compact design using standard components and same air handling parts for each firing rate range
- Excellent performance in appliances that do not use refractory combustion chambers

SPECIFICATIONS

Fuels	
No. 1 or No. 2 Fuel oil (including bio-blends ≤ B20) (ASTM D396)	
Fuel Unit	
Fuel Unit	Suntec A2VA-3006
Electrical	
Motor	Carlin PSC, 1/6 HP, 3450 RPM
Ignition & Primary Control	
Ignitor	Carlin Pro-X 45000
Primary Control	Carlin 48245/50200/60200/70200
Operating Temperature Limits	
Maximum Ambient	140°F (60°C)
Agencies	
UL Listed	US & Canada

MODEL: RESCVR5S

***EZ Oil and Gas
Burner Cover***

FEATURES

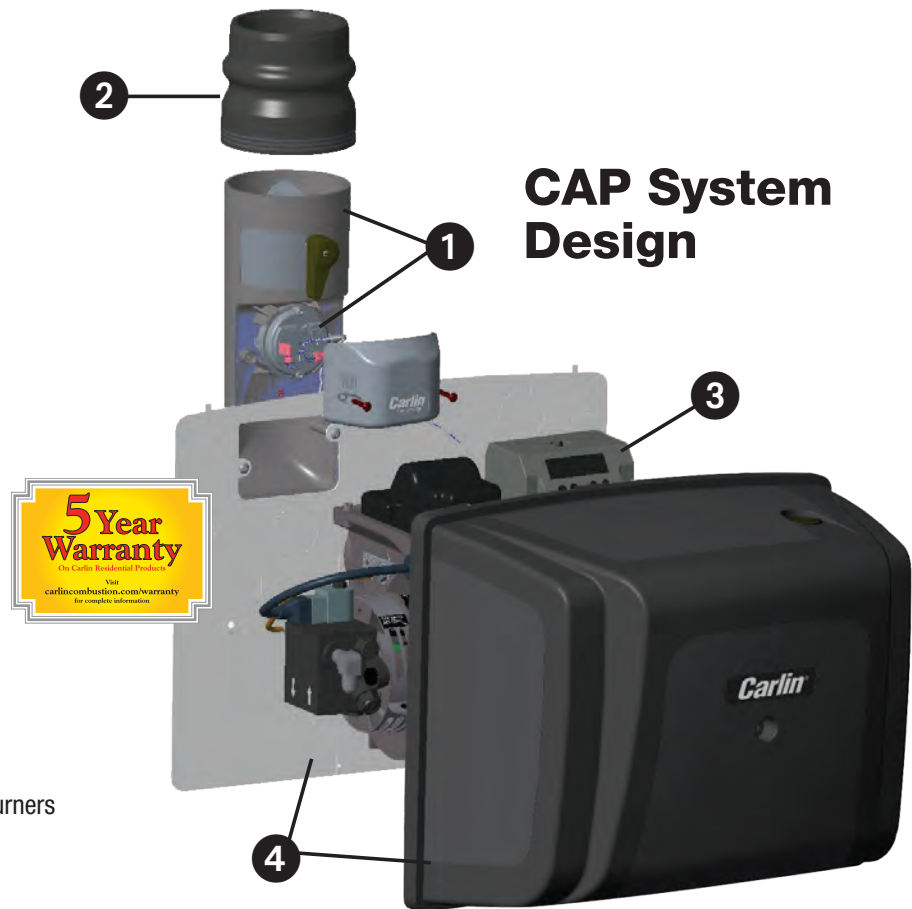
- Gives a clean, finished look
- Quick, simple install on new or retrofit applications
- For EZ Oil and Gas Burners
- Design adds to the already quiet burner operation
- Homeowner preferred



MODEL: CAP SYSTEM

Combination Air Proving System – Direct Combustion Air Kit with Burner Cut-off

Patent No. 11,428,407



FEATURES

- Easily Installed on new or existing Carlin EZ Burners
- Code Compliant*
- Preferred by Homeowners
- Test Damper
- No 120 VAC Wiring

*Designed to meet NFPA31, section 5.4.3.3, as covered by April 2019 TIA 16-2

CAP Model	Description	Firing Rate (GPH)
51300AS	Low Rate CAP Kit (for Carlin burners with covers)	0.50 - 1.00
51300BS	Medium Rate CAP Kit (for Carlin burners with covers)	1.05 - 1.45
51300CS	High Rate CAP Kit (for Carlin burners with covers)	1.50 - 2.00
51300S	Complete CAP System Kit (for Carlin burners without covers)	0.50 - 2.00

- 1 CAP System air inlet for safe burner operation and blockage detection
- 2 Flexible connector for easy vent connection
- 3 Pro-X 70200 primary control provides easy 2-wire setup
- 4 Sealed sound-dampening cover/back plate

Why CAP?

- For confined spaces and tight homes requiring combustion air or buildings with negative pressure caused by exhaust fans, dryers, range vents and fire places.
- Better solution –
 - No 120 volt wiring. Consumes no energy.
 - No cold/hot air flooding room like conventional combustion air kits or inducer fans.
 - Quiet – no fan.
 - Safe, shuts down if blockage occurs.

MODELS: 201CRD, 301CRD

Burner Model		GPH
201CRD		2.5 to 5.5
301CRD	3¼" air cone "B" style	3.0 to 6.0
	3½" air cone "C" style	4.0 to 7.0

Power Burners to Meet Your Needs for Commercial Oil-Fired Applications



FEATURES

- Adjustable combustion head assembly – for unmatched fuel/air mixing, smooth light-offs and quiet operation.
- Simple and easy installation on OEM boilers.
- Easy setup and servicing: Only adjustments required are to the air band and the combustion head, set with Carlin's easy-access screw adjustment.
- Positive ignition, stable operation and compact flame.
- The 301CRD burner is available in two firing ranges, depending on air cone diameter selected.

SPECIFICATIONS

Fuels	
No. 1 or No. 2 Fuel oil (including bio-blends ≤ B20) (ASTM D396)	
Fuel Unit & Oil Valves	
Fuel Unit	Suntec A2VA-3006B
Oil Valve	Carlin SVC10FF
Electrical	
Power	120 VAC/60 Hz/1-phase
Motor	1/4 HP, 3450 RPM
Motor Frame	48-frame, "N" flange
Oil Valve Power	120 VAC/60 Hz
Ignition & Primary Control	
Ignitor	Carlin Pro-X 45000 solid state electronic ignitor
Ignition Voltage	19,000 Volts
Primary Control	Carlin Pro-X 70200
Agencies	
UL Listed	US & Canada

MODELS: 601, 701, 702, 801CRD

Burner Model		GPH
601CRD	Fixed	6.0 to 13.2
701CRD	High Fire	6.0 to 13.2
	Low Fire	3.6 to 6.6
702CRD	High Fire	6.0 to 13.2
	Low Fire	3.5 to 7.5
801CRD	High Fire	11.4 to 19.8
	Low Fire	6.6 to 8.4



Commercial Oil Burners

FEATURES

- The automatically closed air damper and low-high-low step modulation improve efficiency by effectively matching output to demand and reducing standby losses.
- Equipped with Carlin's adjustable combustion head assembly for unmatched fuel/air mixing, smooth light offs and quiet operation.
- Easy servicing – Only adjustments required are to the low fire air and combustion head
- Pro-X 70200 primary for advanced diagnostics with plain language display

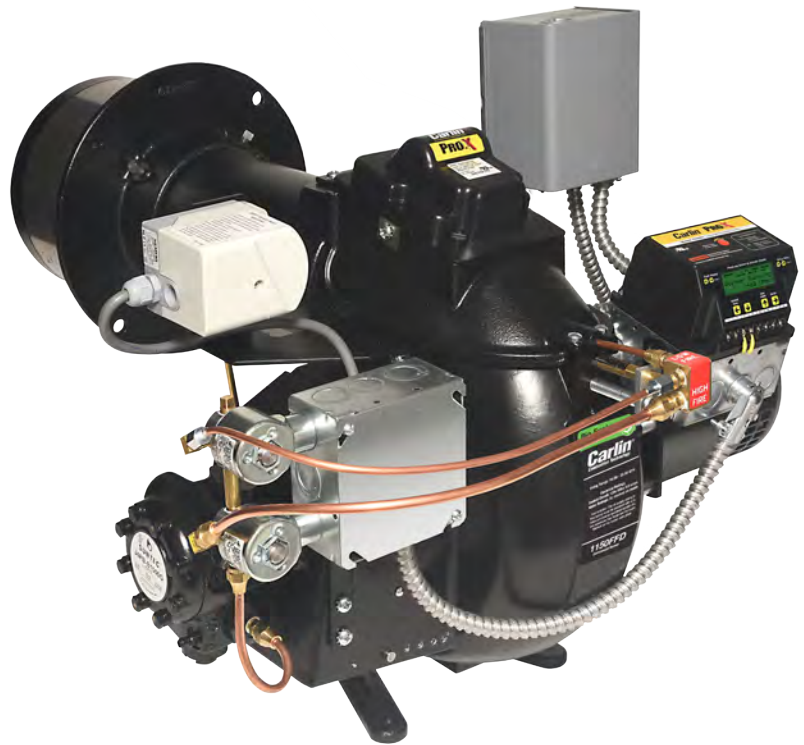
SPECIFICATIONS

		Model Number			
		601	701	702	801
Fuels					
U.S.	No. 1 or No. 2 Fuel oil				
Oil Nozzles					
	Single Nozzle	(1) Low fire Nozzle (1) High fire Nozzle	Single Nozzle Vary fuel pressure for high/low fire	(1) Low fire Nozzle (1) High fire Nozzle	
Electrical					
Motor	1/2 hp, 3450 RPM, 60 Hz, 48-frame, “N” flange Optional 208-230 VAC/60 Hz	1/2 hp, 3450 RPM, 48-frame, “N” flange 115 / 208-230 VAC/60 Hz/1-ph, 8.4 / 3.8-4.2 Amps	1/2 hp, 3450 RPM, 48-frame, “N” flange 115 / 208-230 VAC/60 Hz/1-ph, 8.4 / 3.8-4.2 Amps	3/4 hp, 3450 RPM, 56C-frame 115 / 208-230 VAC/ 60 Hz/1-ph, 9.8 / 4.8-4.9 Amps	
Oil Valve Power	120 VAC/60 Hz				
Damper Motor	Siemens SQN71 with end switch				
Ignition & Primary Control					
Ignitor	Carlin Model 45000 solid state electronic ignitor				
Primary Control	Carlin 70200				
Agencies					
UL Listed	US & Canada				

MODEL: 1050FFD, 1150FFD

Burner Model		GPH
1050FFD	High Fire	15.0 to 25.0
	Low Fire	9.0 to 12.0
1150FFD	High Fire	20.0 to 35.0
	Low Fire	12.0 to 15.0

Commercial Oil Burners



FEATURES

- Updated solid linkage with Siemens actuator
- Carlin's exclusive Flame-Funnel Combustion
- Automatically closing air damper & low-high-low step modulation to improve efficiency by effectively matching output to demand and reducing standby losses.
- Easy servicing: Only adjustments required are to the low fire air and the combustion head, set with Carlin's easy-access screw adjustment.
- Each burner (1050 or 1150) uses a single set of air handling parts for all firing rates. All burners use Carlin electronic ignitors.
- Excellent performance when tested in appliances that do not use refractory combustion chambers.

SPECIFICATIONS

	Model Number	
	1050FFD	1150FFD
Fuels		
Fuel Specification	No. 2 ASTM D396	No. 2 ASTM D396
Electrical		
Motor	1 HP, 3450 RPM, 60 Hz	1.5 HP, 3450 RPM, 60 Hz
Motor Volts 1-phase 3-phase	115/208-230 208-230/460	115/208-230 208-230/460
Motor Amps 115 Volts, 1-phase 230 Volts, 1-phase 230 Volts, 3 phase 460 Volts, 3 phase	16.4 8.2 4.0 2.0	22.0 11.0 5.0 2.5
Control Volts, Hz	120, 60	120, 60
Ignitor Volts	120	120
2-Stage Fuel Unit Pressure	100	100
Low and High-Fire Oil Valve	120V, 60-Hz	120V, 60-Hz
Damper Actuator	Siemens SQN with end switches	Siemens SQN with end switches
Oil Nozzle Specs.	(3) 45°SS	(3) 45°SS
Approximate Shipping Wt.	135 lbs.	145 lbs.
Ignition & Primary Control		
Carlin Model 45000 solid state electronic ignitor		
Primary Control	Carlin Pro-X 70200 / Honeywell/Fireye	
Agencies		
UL Listed	US & Canada	

MODEL: EZGasPro

Model	Diffuser Plate	BTUH
EZGasPro	"A"	175,000 - 275,000
	"B"	50,000 - 175,000
	9-Slot	70,000 - 230,000

Residential Gas Conversion Burner



FEATURES

- Converts most residential oil boilers from oil to natural gas or propane
- Converts from propane to natural gas with just a field drillable orifice change – no conversion kit needed
- Provides dependable, direct-spark ignition of main flame – for quick, clean light-offs
- Factory-packaged with combustion control and gas train
- 60200FR advanced diagnostic primary
- Easy installation and setup

SPECIFICATIONS

Fuels	
Natural gas or propane gas	
Maximum Supply Pressure	14 inches w.c.
Minimum Supply Pressure	5.0 inches w.c.
Manifold Pressure	3.5 inches w.c.
Electrical	
Power	120 VAC/60 Hz/1-phase
Limit Circuit Input	120 VAC/60 Hz
Motor	1/15 HP, 3450 RPM, 48M frame
Current	Approximately 2.0 Amps
Gas Valve Power	24 VAC/60 Hz
Ignition & Primary Control	
Ignitor	Carlin Model 41800 solid state electronic ignitor, single pole
Ignition Voltage	9,000 Volts, single pole
Primary Control	Carlin Model 60200FR gas primary
Agencies	
UL Listed (United States)	per ANSI Z21.17

MODEL: 201GAS

Burner Model	Head/Tube	MBH
201GAS	"B"	215 to 300
	"A"	300 to 399

Light Commercial Gas Burner



FEATURES

- Provides dependable, direct-spark ignition of main flame – for quick, clean light-offs
- Factory-packaged with gas primary and gas train
- Shipped completely assembled and wired – for easy installation and start-up
- High-efficiency, compact flame pattern design ensures clean, quiet operation
- Does not require a refractory liner – fires with or without a combustion chamber

SPECIFICATIONS

Fuels	
Natural gas or propane gas	
Maximum Supply Pressure	14 inches w.c.
Minimum Supply Pressure	5.0 inches w.c.
Manifold Pressure	3.5 inches w.c.
Electrical	
Power	120 VAC/60 Hz/1-phase
Limit Circuit Input	120 VAC/60 Hz
Motor	1/6 or 1/4 HP, 3450 RPM
Current	Approx. 2.5 or 4.4 Amps
Fuel Valve Power	120 VAC/60 Hz
Ignition & Primary Control	
Ignitor	Carlin Model 41800 solid state electronic ignitor
Ignition Voltage	9,000 Volts
Primary Control	Carlin Model 60200FR microprocessor control
Agencies	
UL Listed (United States)	per ANSI Z21.17

MODELS: 301GAS, 601GAS

Burner Model	Head/Tube	MBH
301GAS	"B"	401 to 700
	"C"	550 to 1,100
601GAS	"11/B"	700 to 1,000
	"21/C"	800 to 1,050
	"32/D"	900 to 1,500

Commercial Gas Burners



FEATURES

- Converts from propane to natural gas with just an orifice change – no conversion kit needed
- Dependable, direct-spark ignition of main flame – for quick, clean light-offs
- Factory-packaged with gas primary and gas fuel train – gas train assembled and leak tested for quick installation
- Shipped pre-wired – for easy installation and startup
- High-efficiency, compact flame pattern design ensures clean, quiet operation

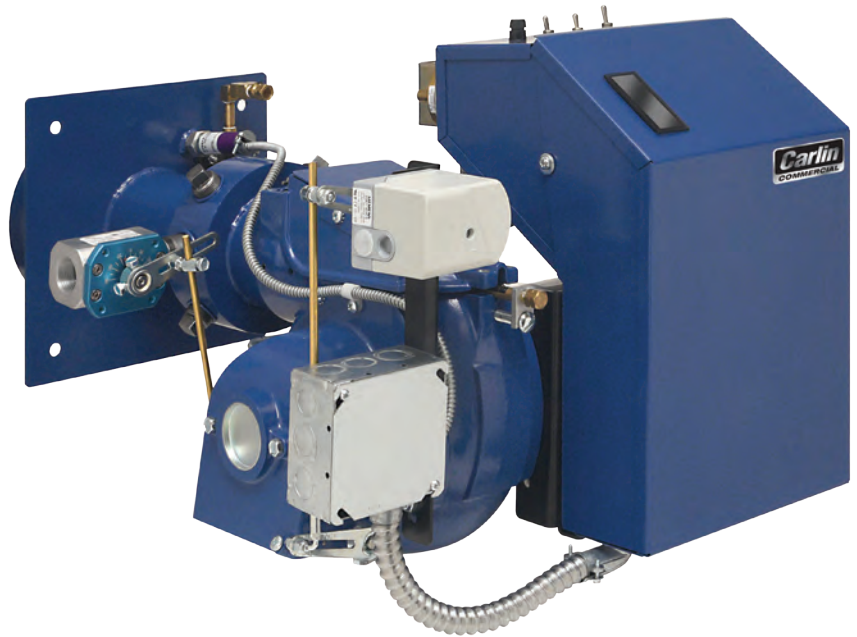
SPECIFICATIONS

Fuels	
Natural gas or propane gas	
Maximum Supply Pressure	14 inches w.c.
Minimum Supply Pressure	5.0 inches w.c.
Manifold Pressure	3.5 inches w.c.
Electrical	
Power	120 VAC/60 Hz/1-phase
Limit Circuit Input	120 VAC/60 Hz
Motor 301	1/6, 3450 RPM
601	1/2 hp, 3450 RPM, 8.4 Amps
Current 301	Approx. 2.5 Amps
601	Approx. less than 10 Amps
Fuel Valve Power	120 VAC/60 Hz
Ignition & Primary Control	
Carlin Model 41800 solid state electronic ignitor (for Model 301)	
Ignition Voltage	9,000 Volts, single pole
Carlin Model 41000 solid state electronic ignitor (for Model 601)	
Ignition Voltage	19,000 Volts
Primary Control	Carlin Model 60200FR advanced diagnostic gas primary
Agencies	
UL Listed	United States

MODELS: 702GAS, 801GAS

	702GAS	801GAS	
Gas Input	High Fire: 840 to 1600 MBH	Low Rate	High Rate
		High Fire: 1400 to 2100 MBH	High Fire: 2100 to 2500 MBH

Commercial Gas Burners



FEATURES

- Updated direct linkage with Siemens actuator
- Upgraded, state-of-the art components including our new pilot design, low profile panel with optional configurations
- Robust build designed to withstand demanding use in both Low-Fire and High-Fire
- Designed with technicians in mind for simple adjustments and servicing
- Fully assembled Gas Trains (available with standard pressure, low pressure, and ventless options)
- Standard burner mounted panel, remote panel options

SPECIFICATIONS



Fuels			
Natural gas or propane gas			
Maximum Supply Pressure	14 inches w.c.	14 inches w.c.	
Minimum Supply Pressure	5.0 inches w.c.	5.0 inches w.c.	
Manifold Pressure	3.5 inches w.c.	3.5 inches w.c.	
Electrical			
Motor Size	1/2 HP	1/2 HP	3/4 HP
Motor Voltage	115 / 208-230 VAC	115 / 208-230 VAC	115 / 208-230 VAC
Power	120 VAC/60 Hz/1-phase	120 VAC/60 Hz/1-phase	
Limit Circuit Input	120 VAC/60 Hz	120 VAC/60 Hz	
Control Circuit Load (120 VAC)	1.2 Amps	1.2 Amps	
Damper Motor	Siemens SQV71 with end switch	Siemens SQV71 with end switch	
Ignition & Primary Control			
Pilot Ignition	Carlin 41800 Solid State Ignitor: 9000 Volts	Carlin 41800 Solid State Ignitor: 9000 Volts	
Primary Control	Honeywell RM7897C Alt: Fireye MEC120	Honeywell RM7897C Alt: Fireye MEC120	
Gas Train			
Gas Train	Standard, Angled, Low pressure, Ventless	Standard, Angled, Low pressure, Ventless	

MODELS: 702G/O, 801G/O

	702G/O	801G/O	
Oil Input	High Fire: 6.0 to 11.2 GPH	Low Rate	High Rate
		High Fire: 10.4 to 15 GPH	High Fire: 15 to 17 GPH
Gas Input	High Fire: 840 to 1600 MBH Low Fire: 490 to 940 MBH	High Fire: 1400 to 2100 MBH	High Fire: 2100 to 2500 MBH



Dual Fuel Commercial Burners

FEATURES

- Upgraded direct linkage with Siemens actuator
- Upgraded, state-of-the art components including our new pilot design, low profile panel with optional configurations and Siemens damper actuator
- Robust build designed to withstand demanding use in both Low-Fire and High-Fire
- Designed with technicians in mind for simple adjustments and servicing
- Fully assembled Gas Trains available with standard pressure, low pressure, and ventless options
- Standard burner mounted panel, remote panel options

SPECIFICATIONS

	702G/O	801G/O
Fuels		
No. 1 or No. 2 Fuel Oil Natural Gas or Propane		
Maximum Supply Pressure	14 inches w.c.	14 inches w.c.
Minimum Supply Pressure	5.0 inches w.c.	5.0 inches w.c.
Manifold Pressure	3.5 inches w.c.	3.5 inches w.c.
Electrical		
Motor Size	1/2 HP	1 1/2 HP
Motor Voltage	115 / 208-230 VAC	208-230 / 460 VAC
Power	120 VAC/60 Hz/1-phase	120 VAC/60 Hz/1-phase
Limit Circuit Input	120 VAC/60 Hz	120 VAC/60 Hz
Control Circuit Load (120 VAC)	1.2 Amps	1.2 Amps
Damper Motor	Siemens SQV71 with end switch	Siemens SQV71 with end switch
Ignition & Primary Control		
Direct Spark Ignition (oil)	Carlin Pro-X 45000 Ignitor: 19,000 Volts	Carlin Pro-X 45000 Ignitor: 19,000 Volts
Pilot Ignition (gas)	Carlin 41800 Solid State Ignitor: 9000 Volts	Carlin 41800 Solid State Ignitor: 9000 Volts
Primary Control	Honeywell RM7897C Alt: Fireye MEC120	Honeywell RM7897C Alt: Fireye MEC120
Gas Train		
Gas Train	Standard, Angled, Low pressure, Ventless	Standard, Angled, Low pressure, Ventless



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