



R-Series Oil Burners

Maximum Performance. Minimum Maintenance.

Riello Burners – a world of experience in every burner we sell

Across North America and the world over, Riello sets the standard in reliable, high-efficiency, low-maintenance burner technology. With burner capacities from 38 thousand to more than 70 million Btuh, Riello oil, gas and dual-fuel burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in light industrial processes.

Quality engineered for reliability, combined with fuel and power efficiency, Riello burners are environmentally friendly, and easy to install and service – all hallmarks of Riello's advanced burner technology.

With headquarters in Legnago, Italy, Riello has been manufacturing premium quality burners for over 80 years. Today, to meet its customers' needs, Riello employs more than 2,000 people across four continents, with a sales and support network that spans over 60 countries.

Throughout the United States and Canada, our staff and independent sales and support network are dedicated to providing applications engineering support, commissioning, hands-on training, ongoing technical assistance, and after-sales service.

Riello Burners – delivering reliable combustion solutions for our customers in North America and around the world.



Reliable Combustion Solutions



Oil

Gas

Dual-Fuel

Low NOx



Quality engineered for the North American market to Riello's proven world-class standard, R-Series oil burners are built for maximum uptime. These compact burners are based on a simple, integrated design that provides high-efficiency, low-noise operation while significantly reducing fuel and maintenance costs.

And Riello R-Series oil burners offer a host of standard features – like compact, light-weight, die-cast aluminum construction; an integrated control panel, and innovative slidebars that make installation and servicing easy.

Riello R-Series oil burners are available in firing rates from 2.4 to 65.6 gph, to handle a broad range of commercial, industrial and process applications. Offered in a variety of configurations with optional accessories, our RL models deliver uncompromising performance and reliability.



RL/M 70-190
Modulating Oil • 5.4 – 65.6 gph

RL/2 70-130
2-Stage Oil • 6.9 – 41.6 gph

Available in both full modulating and low-high, 2-stage firing configurations, Riello R-Series oil burners come with standard features that deliver high efficiency and reduced fuel consumption for applications such as hot water and steam boilers, thermal oil heaters and other light industrial processes with high-capacity requirements.



Low-High 2-Stage Firing

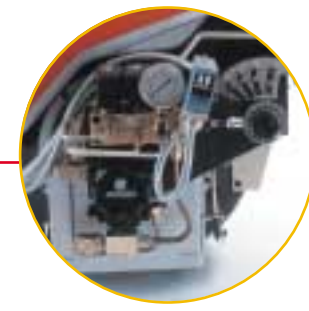
The 2-stage firing Riello RL/2 is equipped with a burner-mounted oil fuel train for easy field installation.

RL70/M



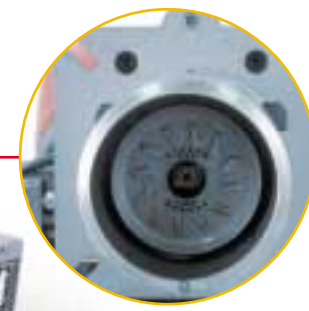
1 Advanced Servomotor (Not in main view)

The servomotor on the RL/M is designed to accept all common types of modulating signals, for maximum control flexibility.



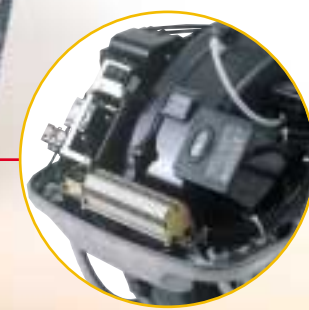
2 Camnetic Regulating Assembly

A characterized, fully adjustable cam assembly with nine lockable adjustment screws and automatic air damper. Provides accurate fuel/air ratio control throughout the firing range for highly reliable combustion and excellent repeatability.



3 Unique Combustion Head Design

Specifically designed for lower-than-standard emissions, the Riello combustion head is available in various lengths to handle a wide range of applications.



4 Integrated Control Panel

The RL burner's factory pre-wired, integrated control panel offers user-friendly operation and ease of service while contributing to an extremely compact overall design. Remote panels are available with Siemens, Honeywell or Fireye controls.

5 High-efficiency reverse-incline fan

The burner's self-cleaning fan blades are set at a reverse incline. The result is high static pressure capability combined with low-noise operation. A high-efficiency fan motor provides for low power consumption and reduced operating costs.

6 Insulated air intake housing

Sound deadening material incorporated within the air intake housing further contributes to the RL's low-noise operation, even at full output.

7 Service slidebars

All RL burners incorporate innovative slidebars which enable the burner assembly to be pulled outwards on two guides, allowing quick access to the combustion head for easy installation and servicing. The result is lower maintenance costs.

8 Die-cast aluminum chassis

Riello's quality engineered, die-cast aluminum construction allows for the RL's remarkably compact design, light weight and ease of installation.

9 Flame viewing window

An accurately positioned flame viewing window provides for easy flame monitoring.

10 Exterior drawer assembly adjustment screw

An innovative feature, the RL burner's exterior drawer assembly adjustment screw allows service personnel to quick-adjust insertion depth, fine tuning air flow pattern for shaping flame geometry.



RL/2 28-50
2-Stage • 2.6 - 16 gph
RL/M 28-50
Modulating • 2.4 - 16 gph

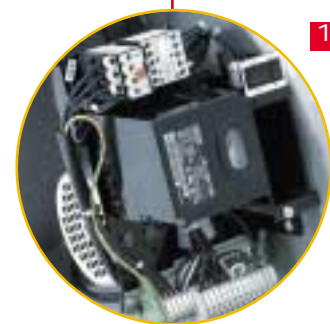
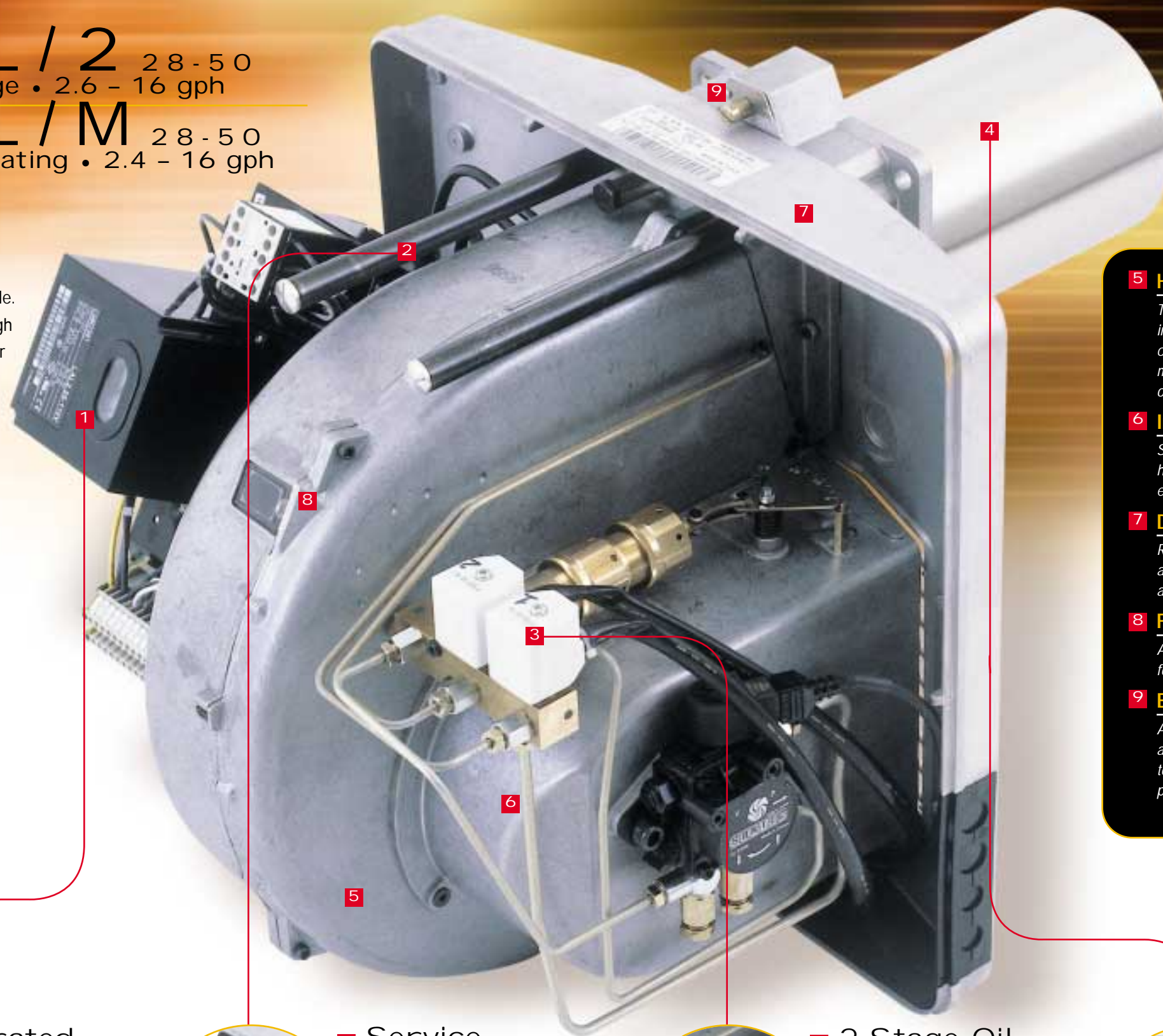
RL38/2

Riello R-Series oil burners come standard in a low-high, 2-stage firing configuration, with a full modulating version also available. Both models are quality engineered for high reliability in applications such as hot water and steam boilers, thermal oil heaters and other light industrial processes with low-capacity requirements.



Full Modulating Assembly

A fully adjustable regulating assembly is also available on the RL/M, providing accurate fuel/air ratio control throughout the firing range.



1 Integrated Control Panel

The RL burner's factory pre-wired, integrated control panel offers user-friendly operation and ease of service while contributing to an extremely compact overall design. Remote panels are available with Siemens, Honeywell or Fireye controls.



2 Service Slidebars

All RL burners incorporate innovative slidebars which enable the burner assembly to be pulled outwards on two guides, allowing quick access to the combustion head for easy installation and servicing. The result is lower maintenance costs.



3 2-Stage Oil Regulating Assembly

The Riello RL/2 comes standard with a burner-mounted 2-stage oil fuel train for easy field installation and simple operation.



4 Unique Combustion Head Design

Specifically designed for lower-than-standard emissions, the Riello combustion head is available in various lengths to handle a wide range of applications.

5 High-efficiency reverse-incline fan

The burner's self-cleaning fan blades are set at a reverse incline. The result is high static pressure capability combined with low-noise operation. A high-efficiency fan motor provides for low power consumption and reduced operating costs.

6 Insulated air intake housing

Sound deadening material incorporated within the air intake housing further contributes to the RL's low-noise operation, even at full output.

7 Die-cast aluminum chassis

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8 Flame viewing window

An accurately positioned flame viewing window provides for easy flame monitoring.

9 Exterior drawer assembly adjustment screw

An innovative feature, the RL burner's exterior drawer assembly adjustment screw allows service personnel to quick-adjust insertion depth, fine tuning air flow pattern for shaping flame geometry.

Specifications

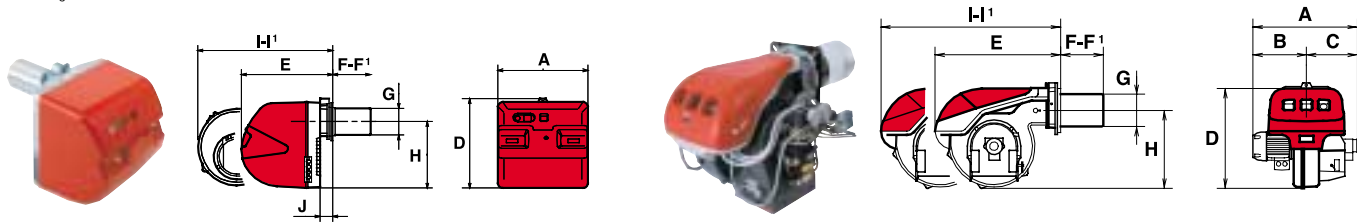
RL Light-Oil Forced-Draft Burners

Dimensions

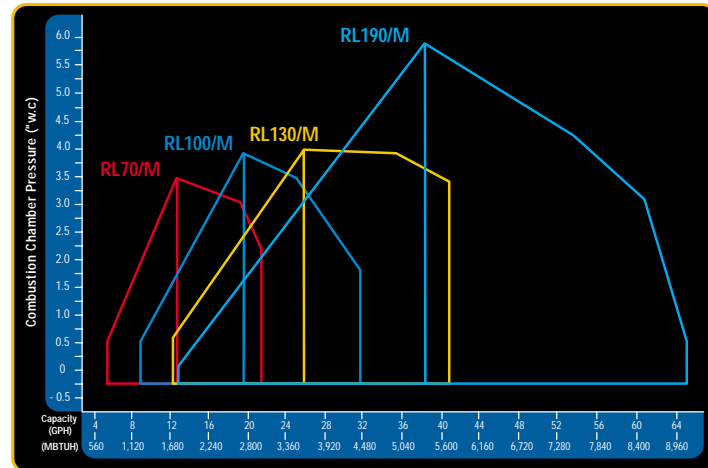
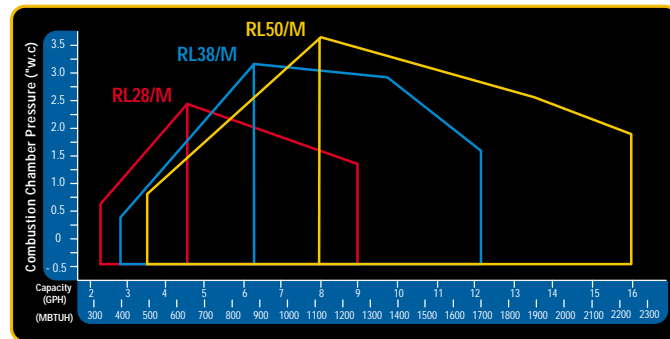
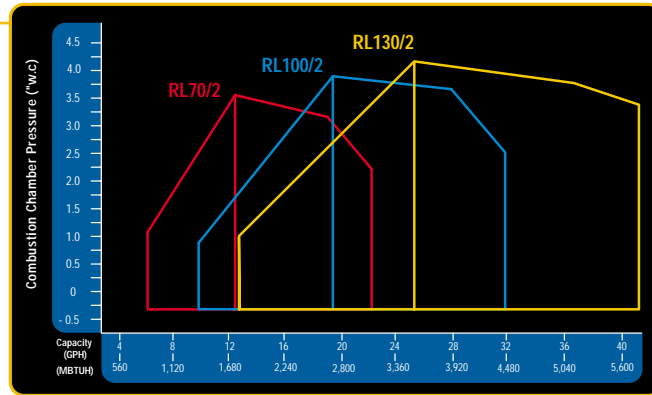
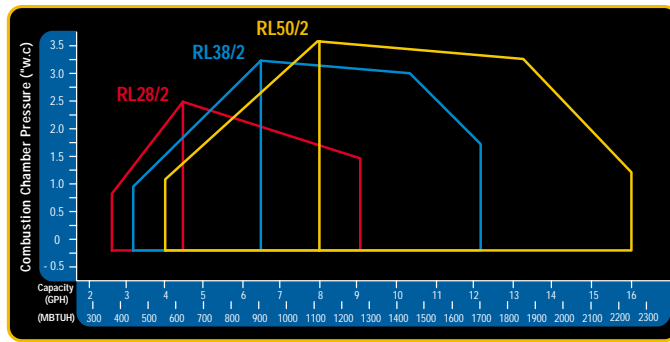
All units are in inches

RL/2	A	B	C	D	E	F-F1*	G	H	I-I1	J
28	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	8 ^{1/2} - 13 ^{13/16}	5 ^{1/2}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
38	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	8 ^{1/2} - 13 ^{13/16}	5 ^{1/2}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
50	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	8 ^{1/2} - 13 ^{13/16}	5 ^{31/32}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
70	22 ^{27/32}	11 ^{21/32}	11 ^{3/16}	21 ^{27/32}	26 ^{25/32}	9 ^{27/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
100	23 ^{19/32}	12 ^{9/32}	11 ^{5/16}	21 ^{27/32}	26 ^{25/32}	9 ^{27/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
130	24 ^{5/8}	13 ^{5/16}	11 ^{5/16}	21 ^{27/32}	26 ^{25/32}	9 ^{27/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
RL/M	A	B	C	D	E	F-F1*	G	H	I-I1	J
28	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	9 ^{15/32} - 13 ^{13/16}	5 ^{1/2}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
38	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	9 ^{15/32} - 13 ^{13/16}	5 ^{1/2}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
50	18 ^{23/32}	-	-	18 ^{23/32}	18 ^{19/32}	9 ^{15/32} - 13 ^{13/16}	5 ^{31/32}	13 ^{27/32}	26 ^{15/32} - 31 ^{3/4}	2 ^{1/16}
70	26 ^{1/8}	11 ^{21/32}	14 ^{15/32}	21 ^{27/32}	26 ^{25/32}	10 ^{23/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
100	26 ^{1/8}	12 ^{9/32}	14 ^{15/32}	21 ^{27/32}	26 ^{25/32}	10 ^{23/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
130	27 ^{3/4}	13 ^{5/16}	14 ^{15/32}	21 ^{27/32}	26 ^{25/32}	10 ^{23/32} - 15 ^{5/32}	7 ^{1/16}	16 ^{15/16}	37 ^{7/16} - 42 ^{3/4}	-
190	32	14 ^{13/32}	17 ^{19/32}	21 ^{27/32}	27 ^{13/32}	14 ^{9/16}	8 ^{3/4}	16 ^{15/16}	43 ^{3/8}	-

* F1 Length with combustion head extension. Not available on the RL190/M.



Firing Rates



Reference Conditions
Ambient temperature: 68°F (20°C)
Barometric pressure: 394" w.c.
Altitude: 329 ft. a.s.l.

R-Series burners are UL, cUL and MEA320-01-E (New York) approved.



Model	Capacity (GPH) ⁽¹⁾	Combustion Air Motor			Sound Levels dBA	Max. Chamber Pressure ("w.c.) @ high fire	
		Voltage ^{(2) (3)}	HP	Amperage Draw			
RL/2	28	2.6 - 9.0	120/1/60	1/2	5.2	68.0	1.5
	38	3.2 - 12.2	120/1/60 or 230-460-575/3/60	1/2 or 3/4	5.2 / 3.2 / 1.6 / 1.3	70.0	1.6
	50	4.0 - 16.0	230-460-575/3/60	3/4	3.2 / 1.6 / 1.3	75.0	1.2
	70	6.9 - 22.4	230-460-575/3/60	1 1/2	4.8 / 2.8 / 2.3	68.0	2.1
	100	9.6 - 32.0	230-460-575/3/60	2 1/2	6.7 / 3.9 / 3.2	70.0	2.5
RL/M	28	2.4 - 9.0	120/1/60	1/2	5.2	68.0	1.5
	38	2.7 - 12.2	230-460-575/3/60	3/4	3.2 / 1.6 / 1.3	70.0	1.6
	50	3.5 - 16.0	230-460-575/3/60	3/4	3.2 / 1.6 / 1.3	75.0	1.8
	70	5.4 - 22.4	230-460-575/3/60	1 1/2	4.8 / 2.8 / 2.3	75.0	2.3
	100	9.0 - 32.0	230-460-575/3/60	2 1/2	6.7 / 3.9 / 3.2	77.0	1.8
RL/M	130	11.2 - 41.6	230-460-575/3/60	3	8.8 / 5.1 / 4.1	78.0	3.2
	190	12.8 - 65.6	230-460-575/3/60	5 1/2	15.8 / 9.1 / 7.3	83.9	0.5

(1) Ratings based on 140,000 Btu/Gallon for No.2 fuel oil. (2) Other voltages available on request. (3) A separate 120/1/60 control voltage supply is required.

Standard Features - RL Models	Low - High		Full Modulation	
	RL28/2 - RL50/2	RL70/2 - RL130/2	RL28/M - RL50/M	RL70/M - RL190/M
General				
Combustion air motor with reverse-incline fan ⁽¹⁾	■	■	■	■ ⁽¹⁾
Service slidebars	■	■	■	■
Photo cell / scanner	■	■	■	■
Direct spark ignition	■	■	■	■
Burner mounted fuel system (pre-piped & tested)	■	■	■	■
Fuel ignition transformer(s)	■	■	■	■
Flame retention combustion head	■	■	■	■
Servomotor (fuel / air ratio adjustment)	■	■	■	■
Flame inspection window	■	■	■	■
Air pressure switch	■	■	■	■
Fan pressure test point	■	■	■	■
Oil System				
Direct-drive pump	■	■	■	■
Drawer & nozzle assembly with diffuser	■	■	■	■
Nozzle(s)	2	2	1	1
Main safety shut-off valve	■	■	■	■
1-stage valve	■	■	■	■
2nd stage shut-off valve	■	■	■	■
Supply shut-off valve	■	■	■	■
Return shut-off valve	■	■	■	■
Hydraulic cylinder for air regulation	■	■	■	■
Camnetic regulating assembly	■	■	■	■
Vacuum pressure gauge (burner mounted)	■	■	■	■
Integrated Control Panel				
Siemens LAL 2.25 flame safeguard	■	■	■	■
Starter with overload	■	■	■	■
Terminal strip	■	■	■	■
On-off switch	■	■	■	■
High / low fire hold switch	■	■	■	■
Auto / manual / off switch	■	■	■	■
Manual firing rate switch	■	■	■	■
PID modulating controller	■	■	Optional	Optional
Remote Panel (Optional)				
Siemens LAL 2.25 flame safeguard	■	■	■	■
Honeywell RM7800 Series flame safeguard	■	■	■	■
Fireye E-110 flame safeguard	■	■	■	■
Fireye MEC120 flame safeguard	■	■	■	■
Starter with overload	■	■	■	■
Terminal strip	■	■	■	■
On-off switch	■	■	■	■
Fuses	■	■	■	■
Indicating lights: Power on	■	■	■	■
Main flame on	■	■	■	■
Flame failure	■	■	■	■
Options				
Alarm horn with silencing switch	■	■	■	■
Additional light	■	■	■	■
Set of dry contacts	■	■	■	■
Panel front-mounted flame safeguard display	■	■	■	■
2-position switch (maintained contact)	■	■	■	■

(1) Forward-incline fan on RL190/M.



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