

40-Series Oil Burners

Maximum Performance. Minimum Maintenance.

Oil

Gas



RIELLO
BURNERS

Quality engineered to our proven world-class standard, Riello 40-Series oil-fired burners are built for maximum uptime. Riello 40-Series high-efficiency oil burners not only deliver low energy consumption and quiet, worry-free performance, they're the most reliable combustion technology on the market.

And Riello 40-Series oil burners offer a host of advanced features – such as durable, lightweight, compact construction; an integrated electronic control box with interrupted ignition; and an automatic air shutter that eliminates heat loss and enhances efficiency.

Easy to install and service, and backed by coast-to-coast support, Riello 40-Series oil-fired burners are available in seven models with firing rates from 0.5 to 6.4 gph to handle a complete range of residential and light-commercial/industrial applications.

Specifications

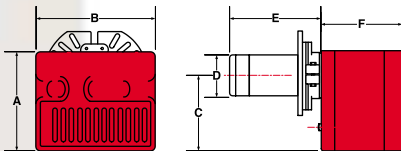
40-Series Oil Forced-Draft Burners

Model	F3	F5	F10	F15	F20	BF3	BF5	
Firing Rates	GPH	0.50 - 0.95	0.75 - 1.65	1.45 - 2.95	2.55 - 5.75	3.50 - 6.40	0.50 - 0.95	0.75 - 1.65
	Btuh x 1,000	70 - 133	105 - 231	203 - 413	357 - 805	490 - 896	70 - 133	105 - 231
	kW/hr	20 - 39	30 - 67	59 - 121	104 - 236	143 - 263	20 - 39	30 - 67
Usable Heating Oil	No heavier than Number 2 (Optional pump required for kerosene)							
Motor Ratings	120v 60Hz 3250 rpm							
	2.2 amp		4.3 amp		2.2 amp			
Pump Pressure Range	120 - 200 psi							

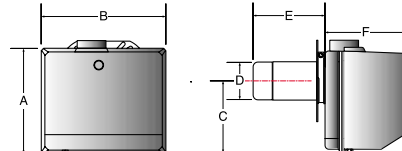
Dimensions

Model	F3	F5	F10	F15	F20	BF3	BF5
A	8 ^{1/2} " (215mm)	9 ^{3/16} " (233mm)	10 ^{5/16} " (262mm)	11 ^{3/4} " (298mm)	11 ^{3/4} " (298mm)	9 ^{13/16} " (249mm)	9 ^{13/16} " (249mm)
B	9 ^{5/16} " (252mm)	10 ^{1/16} " (272mm)	12" (305mm)	13 ^{3/4} " (350mm)	13 ^{3/4} " (350mm)	11 ^{1/4} " (286mm)	11 ^{1/2} " (292mm)
C	6 ^{1/2} " (164mm)	7 ^{1/16} " (180mm)	8 ^{1/16} " (204mm)	9 ^{1/16} " (230mm)	9 ^{1/16} " (230mm)	7 ^{1/2} " (193mm)	7 ^{1/2} " (193mm)
D	3 ^{1/2} " (89mm)	3 ^{1/2} " (89mm)	4 ^{1/8} " (105mm)	4 ^{11/16} " (119mm)	4 ^{11/16} " (119mm)	3 ^{1/2} " (89mm)	3 ^{1/2} " (89mm)
E	VSBT	5 ^{1/2} " (140mm)	5 ^{1/2} " (140mm)	N/A	N/A	N/A	5 ^{1/2} " (140mm)
	SBT	8" (203mm)	8" (203mm)	7" (178mm)	7" (178mm)	7" (178mm)	8" (203mm)
	LBT	12" (305mm)	12" (305mm)	12" (305mm)	12" (305mm)	12" (305mm)	12" (305mm)
	OEM (Custom)	Other combustion head lengths available on request					
F	7 ^{1/4} " (184mm)	7 ^{13/16} " (199mm)	8 ^{1/16} " (221mm)	10" (254mm)	10" (254mm)	6 ^{7/8} " (175mm)	7 ^{1/16} " (189mm)

*Usable tube length will be reduced by as much as 1 5/8" depending on flange selected.

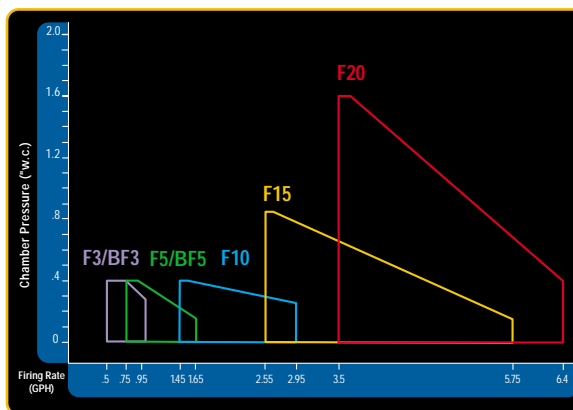


Models F3, F5, F10, F15 and F20



Models BF3 and BF5

Firing Rates



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

40-Series oil burners are UL and CSA approved.





F3-F15

On-Off Oil • 0.5 – 5.75 gph

F20

On-Off Oil • 3.5 – 6.4 gph
with low-fire start

Riello 40-Series oil-fired burners are based on a simplified, integrated design that is engineered to deliver reliable, low-maintenance, fuel-efficient heat. All 40-Series burners are thoroughly quality tested to ensure the highest performance in residential and light-commercial/industrial applications such as steam boilers, heat exchangers and furnaces.

- Durable, lightweight, compact construction for long life and maintenance-free operation
- Factory pre-wired for easy installation; only three adjustments required
- Interrupted ignition minimizes component failure and saves power
- Low-voltage electronics for greater reliability
- Self-centering drawer assembly provides for precise air/fuel mixture



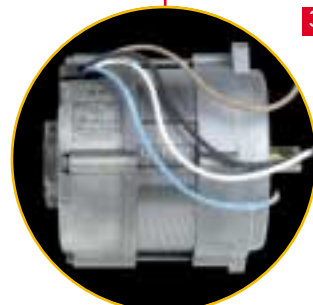
1 Integrated Primary Control

Proven in millions of applications, the 40-Series electronic control box combines interrupted ignition, 5-second safety shutoff and a 10-second prepurge cycle controlling the solenoid valve for smoke-free starts. Digital, selectable post-purge and a 24-volt relay are optionally available.



2 Direct-Drive Fuel Pump

The 40-Series' integrated fuel pump is driven directly from the PSC motor via a nylon drive key which eliminates coupling failure while maximizing stability and efficiency.



3 Permanent Split Capacitor (PSC) Motor

A high-speed, permanent split capacitor (PSC) motor, with an exclusive low-voltage tap for the primary control and automatic reset on thermal overload, provides for low power consumption, long-life and maintenance-free operation.



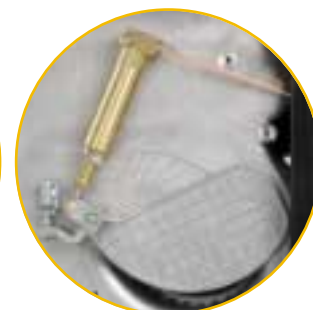
7 Energy-Saving Fan

The 40-Series incorporates a balanced, high-efficiency fan designed to provide super-quiet operation for the life of the burner.



5 Acoustically Insulated

Sound deadening acoustic insulation within the 40-Series' heavy-gauge metal cover provides for incredibly quiet operation, even at full output.



Hydraulic Air Shutter

6 Air Intake Control

40-Series oil burners come standard with either an electronic¹ or hydraulically operated² air shutter that automatically closes the air intake when the burner is not operating to virtually eliminate heat loss through the burner, enhancing burner efficiency. The F20 comes with a hydraulically operated air gate to facilitate low-fire start.

¹ F3 and F5 ² F10 and F15



4 Unique Combustion Head

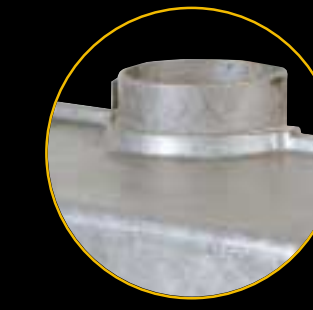
A pioneer in flame retention head design, Riello has engineered the 40-Series high-static-pressure combustion head with the ideal flame geometry, to burn ultra-clean. A titanium endcone eliminates airtube failure.



BF3-BF5

On-Off Balanced-Flue • 0.5 – 1.65 GPH

Riello 40-Series balanced-flue oil burners are specifically designed for applications such as boilers, furnaces and water heaters that require direct connection to outside air for combustion. Built to the same quality standards as all our 40-Series oil burners, the 40-Series balanced-flue burner's airtight construction makes it the quietest residential burner on the market.



Air-Intake Port

The 40-Series balanced-flue burner's airtight design incorporates a rubber-sealed, cast-aluminum cover with a large-diameter intake port for drawing air directly from an external source.



Easy Air Adjustment

A removable plug allows for easy adjustment of the combustion air without removing the heavy-gauge sealed cover, for precise setup and easy maintenance.



Custom Solutions

At Riello, we partner with our customers to offer a broad range of custom solutions. We'll even finish our covers in the color of your choice.



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, dual-fuel and Low NOx 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

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