

**\* FOCUS ON**



## **RIELLO 40 - SERIES OIL BURNERS**

**Maximum Performance. Minimum Maintenance.**



# F 3 - F 15 ON-OFF OIL 0.5 - 5.75 GPH

# F 20 ON-OFF OIL 3.5 - 6.4 GPH (with LOW-FIRE START)

## Overview

Quality engineered to our proven world-class standard, Riello 40-Series oil-fired burners are built for maximum up-time. 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.

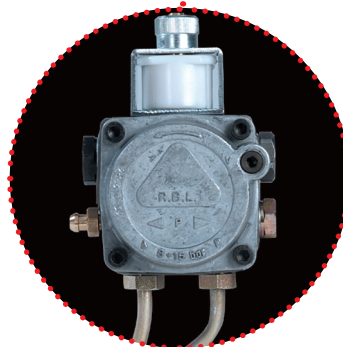
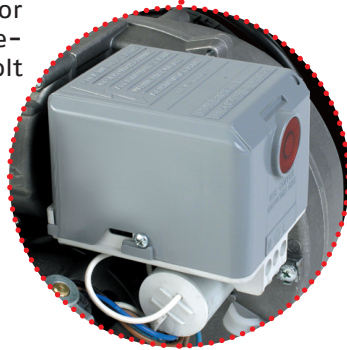
Easy to install and service, and backed by coast-to-coast support, Riello 40-Series oil-fired burners are available in seven models with firing rates from 0.5 to 6.4 gph to handle a complete range of residential and light-commercial/industrial applications. Riello 40-Series oil-fired burners are based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

## Main features

- 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

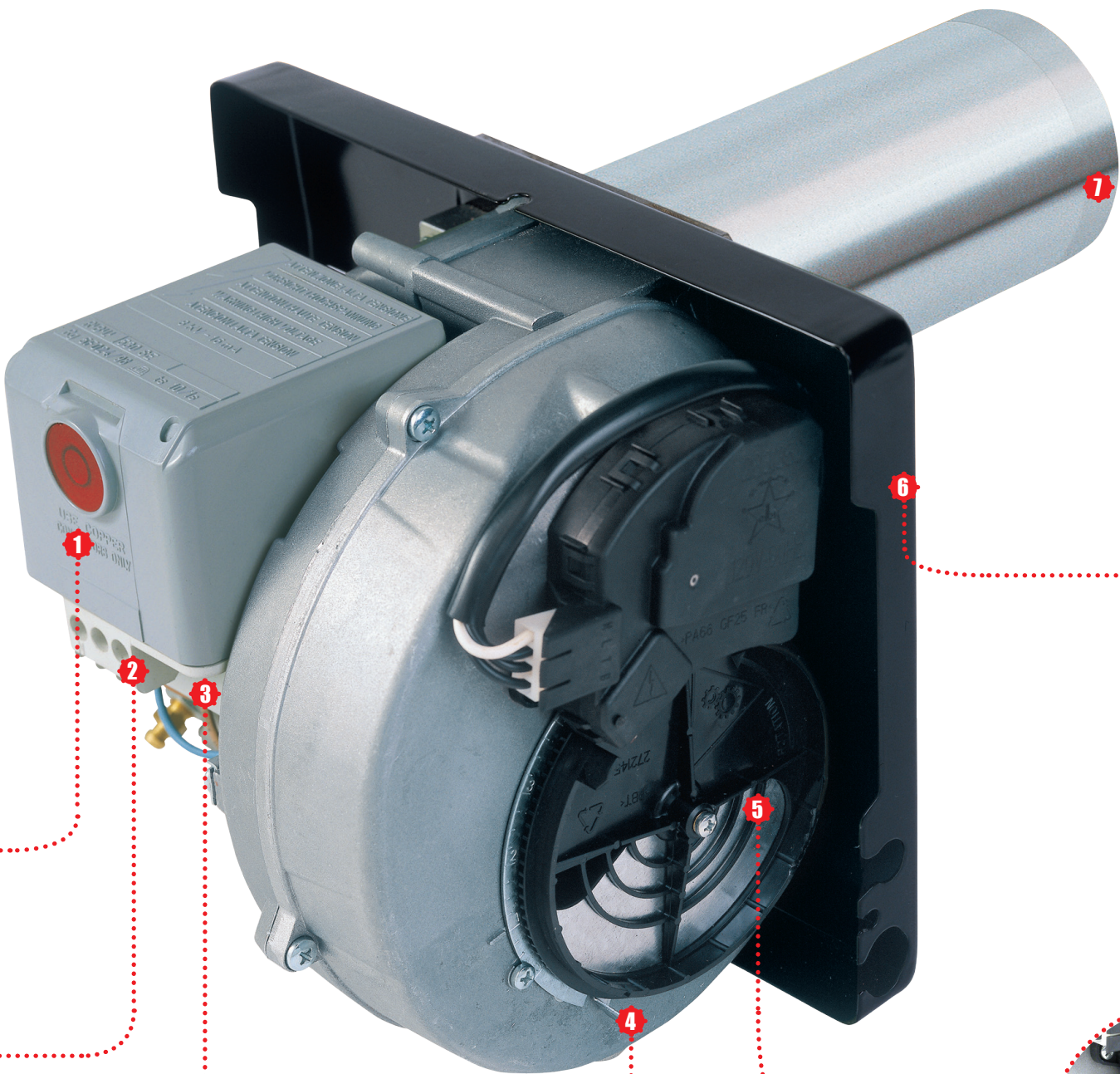
### 1 - INTEGRATED PRIMARY CONTROL

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



### 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.



1

2

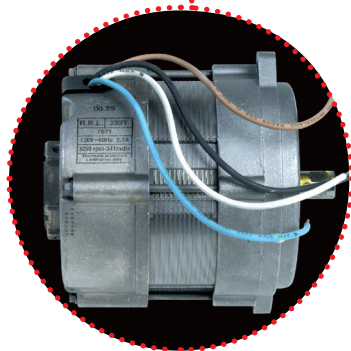
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7



### 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.



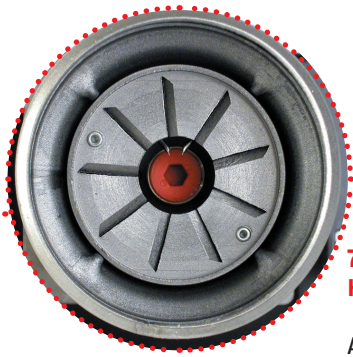
### 4 - ENERGY-SAVING FAN

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



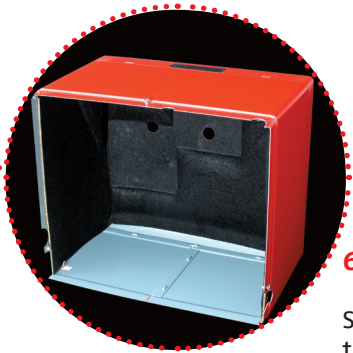
### ELECTRONIC AIR SHUTTER





### 7 - 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.



### 6 - ACOUSTICALLY INSULATED

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



### F20 HYDRAULIC AIR GATE

### 5 - AIR INTAKE CONTROL

40-Series oil burners are available with either an electronic or hydraulically operated 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 F-20 comes with a hydraulically operated air gate to facilitate low-fire start.



## 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.



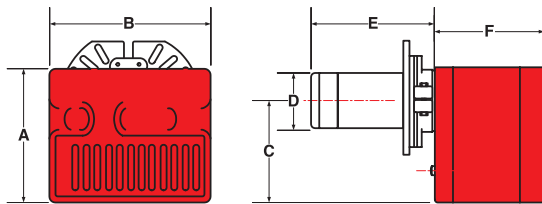


# SPECIFICATIONS

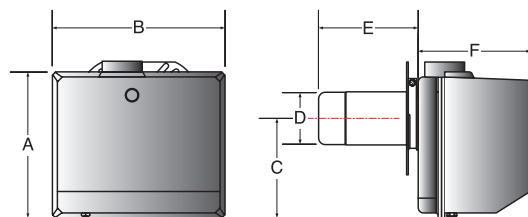
## RIELLO 40 SERIES OIL FORCED DRAFT BURNERS

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
	Btu/hr	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							
Pump Pressure Range	2.2 amp		4.3 amp			2.2 amp		
	120 - 200 psi							

## DIMENSIONS



MODEL F3, F5, F10, F15 AND F20

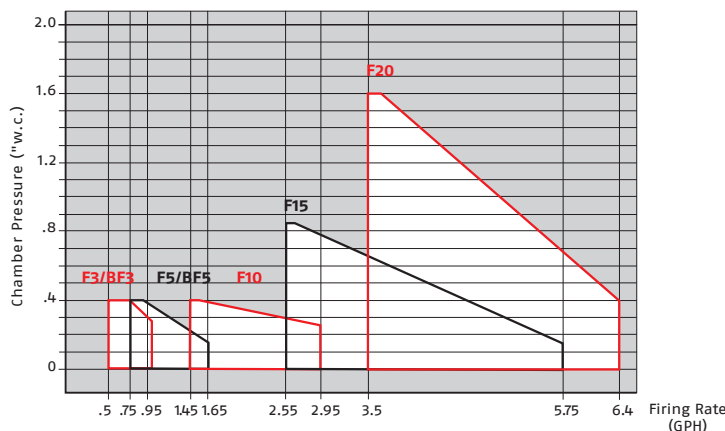


MODEL BF3 AND BF5

Model	F3	F5	F10	F15	F20	BF3	BF5
<b>A</b>	8 <sup>1</sup> / <sub>2</sub> " (215 mm)	9 <sup>3</sup> / <sub>16</sub> " (233 mm)	10 <sup>5</sup> / <sub>16</sub> " (262 mm)	11 <sup>3</sup> / <sub>4</sub> " (298 mm)	11 <sup>3</sup> / <sub>4</sub> " (298 mm)	9 <sup>13</sup> / <sub>16</sub> " (249mm)	9 <sup>13</sup> / <sub>16</sub> " (249mm)
<b>B</b>	9 <sup>15</sup> / <sub>16</sub> " (252 mm)	10 <sup>11</sup> / <sub>16</sub> " (272 mm)	12" (305 mm)	13" (350 mm)	1 <sup>33</sup> / <sub>4</sub> " (350 mm)	1 <sup>1</sup> / <sub>4</sub> " (286mm)	1 <sup>1</sup> / <sub>2</sub> " (292mm)
<b>C</b>	6 <sup>1</sup> / <sub>2</sub> " (164 mm)	7 <sup>1</sup> / <sub>16</sub> " (180 mm)	8 <sup>1</sup> / <sub>16</sub> " (204 mm)	9 <sup>1</sup> / <sub>16</sub> " (230 mm)	9 <sup>1</sup> / <sub>16</sub> " (230 mm)	7 <sup>1</sup> / <sub>2</sub> " (193mm)	7 <sup>1</sup> / <sub>2</sub> " (193mm)
<b>D</b>	3 <sup>1</sup> / <sub>2</sub> " (89 mm)	3 <sup>1</sup> / <sub>2</sub> " (89 mm)	4 <sup>1</sup> / <sub>8</sub> " (105 mm)	4 <sup>11</sup> / <sub>16</sub> " (119mm)	4 <sup>11</sup> / <sub>16</sub> " (119 mm)	3 <sup>1</sup> / <sub>2</sub> " (89 mm)	3 <sup>1</sup> / <sub>2</sub> " (89 mm)
	VSBT 5 <sup>1</sup> / <sub>2</sub> " (140 mm)	5 <sup>1</sup> / <sub>2</sub> " (140 mm)	N/A	N/A	N/A	5 <sup>1</sup> / <sub>2</sub> " (140mm)	5 <sup>1</sup> / <sub>2</sub> " (140mm)
<b>E*</b>	SBT 8" (203 mm)	8" (203 mm)	8" (203 mm)	7" (178 mm)	7" (178 mm)	8" (203mm)	8" (203mm)
	LBT 12" (305 mm)	12" (305 mm)	12" (305 mm)	12" (305mm)	12" (305 mm)	12" (305mm)	12" (305mm)
	OEM (Custom)	Other combustion head lengths available on request					
<b>F</b>	7 <sup>1</sup> / <sub>4</sub> " (184 mm)	7 <sup>13</sup> / <sub>16</sub> " (199 mm)	8 <sup>1</sup> / <sub>16</sub> " (221 mm)	10" (254 mm)	10" (254 mm)	6 <sup>7</sup> / <sub>8</sub> " (175mm)	7 <sup>7</sup> / <sub>16</sub> " (189 mm)

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

## 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.

# Riello Burners - a world of experience in every burner we sell.



BURNERS PRODUCTION PLANT  
S. Pietro, Legnago (Verona) - Italia



COMBUSTION RESEARCH CENTRE  
Angiari (Verona) - Italia

Across the world, Riello sets the standard in reliable, high-efficiency, low-maintenance burner technology. With burner capacities from 17 thousand to more than 122 million Btu/hr, 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 industrial processes.

With headquarters in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 years.

The new manufacturing plant is equipped with the most innovated systems of assembling lines and modern manufacturing cells for a quick and flexible response to the market. Besides, the Riello Combustion Research Centre, located in Angiari Italy, represents one of the most modern facility in Europe and one of the most advanced in the world for the development of the burner technology.

Today, to meet its customers' needs, Riello Burners has a sales and support network that spans over 60 countries.

Throughout the United States and Canada, for more than 30 years, 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.

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