

Technical Service Bulletin:

Nozzle selection and electrode setting

Models: Riello F3/F5 and BF3/BF5 Burners



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Introduction

The following technical service bulletin is to inform you of the correct nozzle selection for the G115/21 boiler with a Riello R40 F3 burner, along with the correct electrode setting for the Riello F3, F5, BF3 and BF5 burners with 60Hz electrical systems. Both of these changes will be included in the next revisions of the Riello manuals.

Nozzle Selection

The documentation included with the Riello R40 F3 burner indicates the wrong nozzle combination with a G115/21 boiler.

The nozzles, which should be used with this boiler and burner combination, is the Del 0.50x70°A and the Del 0.50x70°W. See Table 1, page 2 for complete G115 / Riello Burner selection sheet.

Electrode Setting

The electrode gap shown in the Riello R40 F3/F5 and BF3/BF5 burner installation manual (5/32") is for installations with a 50Hz electrical system. If the burner is installed in a 60Hz electrical system, the gap between the electrodes should be increased to: 1/4" (see Figure 1).

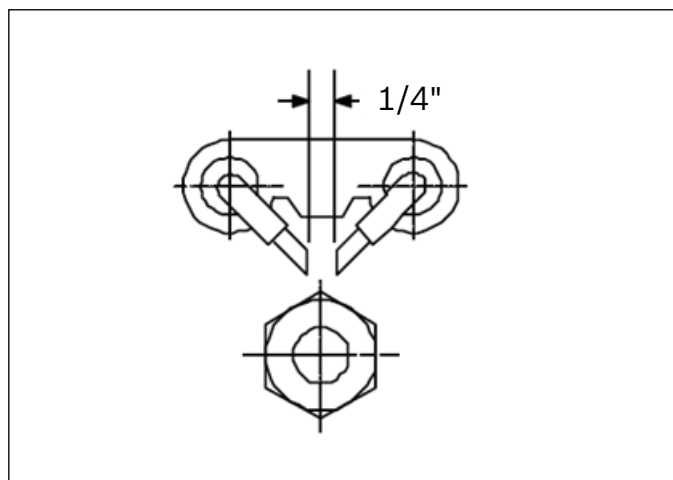


Figure 1 Electrode Gap Setting for 60Hz systems

Boiler Model	Input BTU/HR	Vent System	Burner Model	Insertion Depth	Firing Rate GPH	Burner Part No.	Air Tube Comb.	Head Setting	Specified Nozzle Type/Brand	Pump Pressure PSI	Breach Press W.C.	Over-fire Press. W.C Based on Breach Press.	Air Setting		Appx Gross Stack Temp.
									Alternate Nozzle Type/Brand				Air gate	Band	
G115WS Series - Upfired															
G115WS/3	105000	Chimney	R40 F3	6"	0.75	C8511443	LBT*	2	Del 0.55x60°A	185	0 to -0.03	0 to Slightly +	3.50	---	350°F
									Del 0.55x60°B						
G115WS/4	126000	Chimney	R40 F5	6"	0.90	C8512543	LBT*	1	Del 0.65x60°A	190	0 to -0.03	0 to Slightly +	2.10	---	326°F
									Del 0.65x60°B						
G115WS/5	161000	Chimney	R40 F5	10"	1.15	C8512443	LBT*	2	Del 0.80x60°A	205	0 to -0.03	0 to Slightly +	3.10	---	325°F
									Del 0.80x60°B						
G115 Series - Chimney Vent															
G115/21	84000	Chimney	R40 F3	6"	0.60	C8511443	LBT*	0	Del 0.50x70°A	160	0 to -0.03	0 to Slightly +	3.50	---	289°F
									Del 0.50x70°W						
G115/28	112000	Chimney	R40 F5	6"	0.80	C8512543	LBT*	0	Del 0.60x60°A	185	0 to -0.03	0 to Slightly +	2.00	---	297°F
									Del 0.60x60°B						
G115/34	140000	Chimney	R40 F5	10"	1.00	C8512443	LBT*	2	Del 0.70x60°A	205	0 to -0.03	0 to Slightly +	2.50	---	284°F
									Del 0.70x60°B						
G115 Series - Direct Vent															
G115/21	84000	Direct Vent	R40 BF3	6"	0.60	C8511343	LBT*	0	Del 0.50x70°A	160	N/A	N/A	4.50	---	316°F
									Del 0.50x70°W						
G115/28	112000	Direct Vent	R40 BF3	6"	0.80	C8511344	LBT*	3	Del 0.60x60°A	185	N/A	N/A	5.25	---	304°F
									Del 0.60x60°B						
G115/34	140000	Direct Vent	R40 BF5	10"	1.00	C8512343	LBT*	0	Del 0.75x60°A	185	N/A	N/A	5.75	---	310°F
									Del 0.75x60°B						

Table 1 Buderus G115 & G115WS Boiler / Riello

* Reverse air flow turbolator disk

Actual operating settings on the burner may differ from factory settings.
Adjust burner settings to obtain a #0 to trace smoke reading with approx. 12% CO₂.

Direct vent models: Draft pressures will vary due to job site locations

We recommend the use of a nozzle line pre-heater if intake air is suspected to be below 10°F at any time.

This data sheet is intended to be a setup guide.

It is critical that all oil fired heating equipment be installed using combustion test equipment.



BOSCH

Bosch Thermotechnology Corp.
65 Grove Street
Watertown, MA 02472

Tel: 1-866-642-3198

Fax: 1-954-776-5529

www.boschheatingandcooling.com