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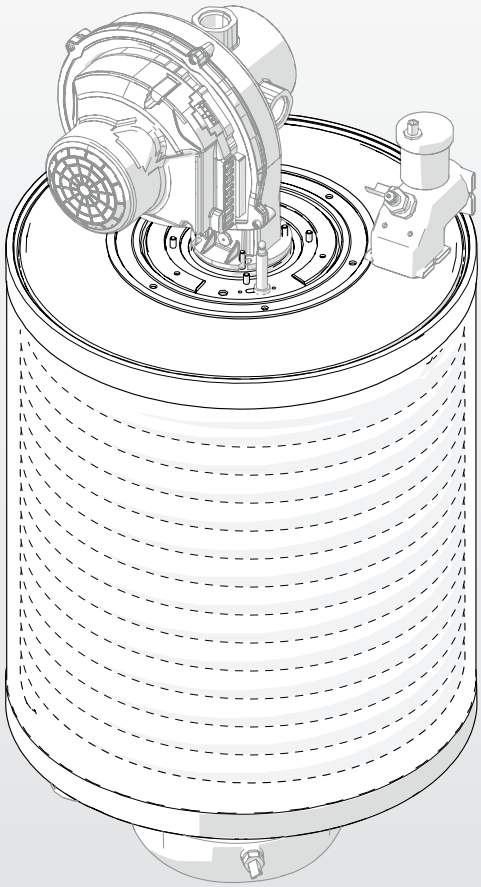

Refractory top ring replacement

US INSTALLATION AND MAINTENANCE MANUAL

RIELLO

1 KEY TO SYMBOLS AND SAFETY INSTRUCTIONS

1.1 Key to symbols

Warnings

⚠ Warnings in this document are identified by a warning triangle printed against a black background.
Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.
- **NOTICE** is used to address practices not related to personal injury.

2 REFRACTORY TOP RING REPLACEMENT

⚠ Before to start any service activity, follow the points listed below:

A. Shutoff the boiler

B. Close the manual gas shutoff valve

C. Disconnect the electric power supply from the boiler

This operating instructions document has been released for the followings finished products:

Part Numbers			Description	From serial Number
20144525	20165537	20177312	ARRAY AR-1000	all
20144524	20165536	20177313	ARRAY AR-1500	all
20144523	20165535	20177314	ARRAY AR-2000	all
20144522	20165534	20177315	ARRAY AR-3000	all
20144042	20165533	20177316	ARRAY AR-4000	all
20164509			ARRAY AR-800	all
20181721			ARRAY AR-399 SE	all
20181722			ARRAY AR-500 SE	all
20142594			CONDEXA PRO NA 75 P	all
20142595			CONDEXA PRO NA 117 P	all

⚠ **WARNING**: All cleaning operations MUST be performed under the following conditions:

- ► boiler cold
- ► boiler switched OFF
- ► suitable personal protection equipment

Carefully perform all steps below:

1 Turn the mains power switch OFF and turn the control panel function selector OFF (0);

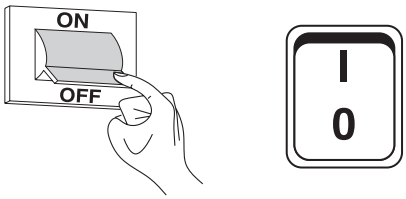

Fig. 1 *Power switch OFF*

2 Close all external fuel valves;

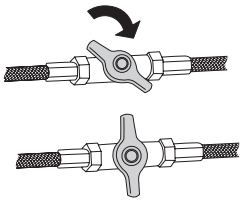

Fig. 2 *Close all fuel valves*

- Disconnect the boiler from both electrical and gas supply. Disconnect the electrical connectors from the fan.

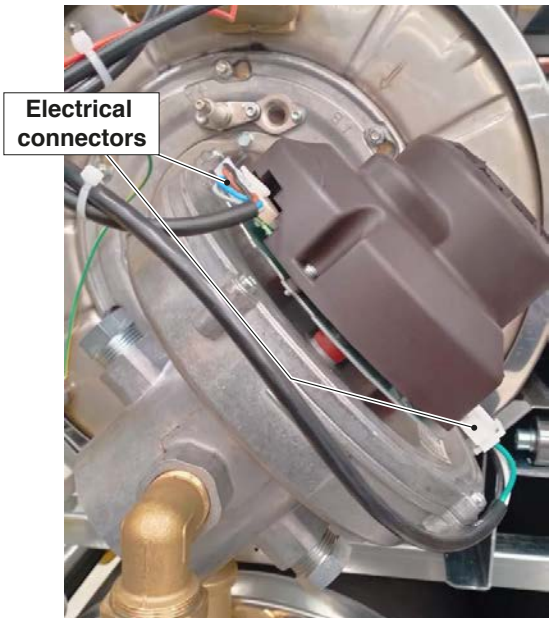

Fig. 3 *Electrical connectors*

- Close the manual ball valve downstream the gas valve and then disconnect the fitting on gas pipe.

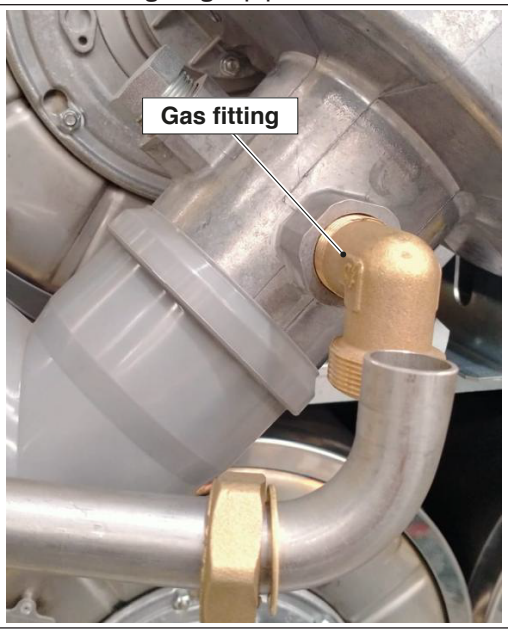

Fig. 4 *Gas fitting*

- Dismount the fan unscrewing the 4 nuts that fix it to the heat exchanger.

Fig. 5 *Nuts*

- Remove the fan and the green gasket

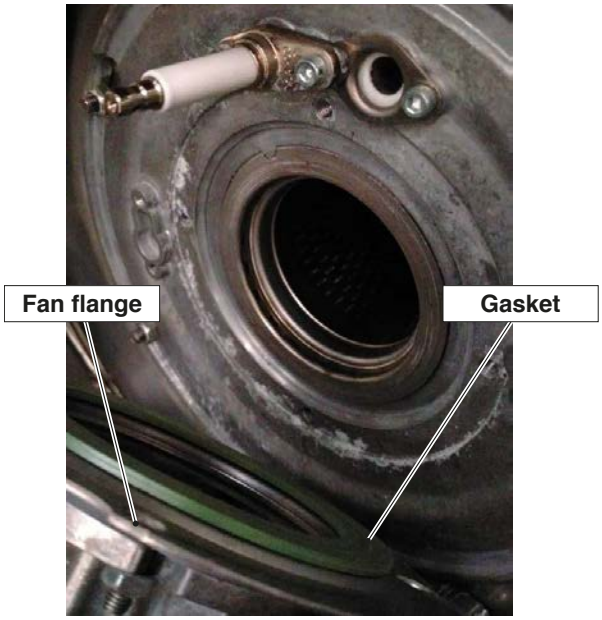

Fig. 6 *Fan and Gasket*

- Pull out the burner head

Fig. 7 *Burner lead*

- Loose all nuts of the aluminum flange;

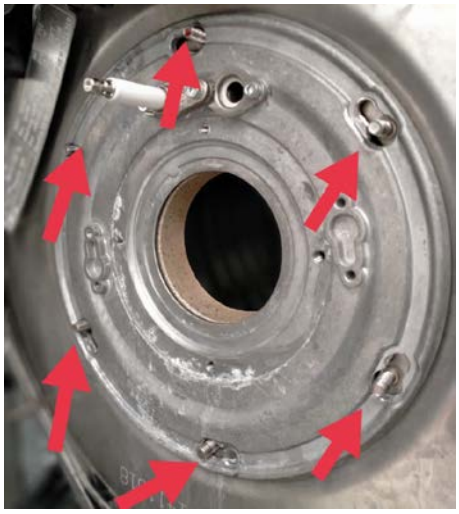

Fig. 8 *Flange*

- Remove the aluminum flange with black o-ring and refractory ring;

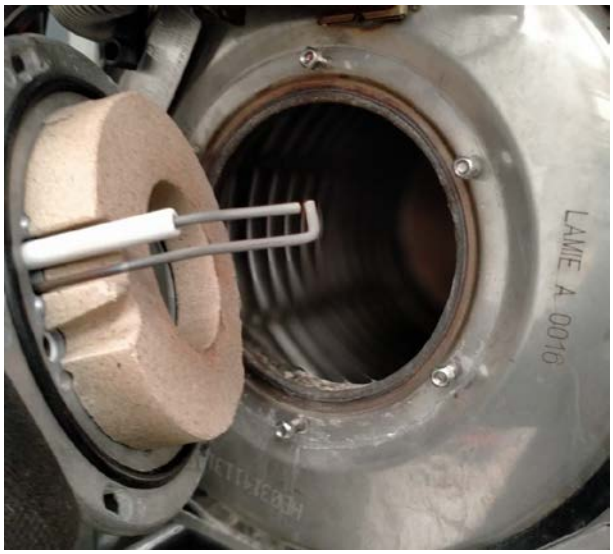

Fig. 9 *Flange with black o-ring*

- Flip the aluminum flange (and the refractory disc) and place it on top of a robust flat desk, with spark plug hanging free at the side of the desk;

Fig. 10 *Refractory disc*

- Break the refractory ring with an hammer;

Fig. 11 *Break refractory disc*

- Remove the broken ring completely;

Fig. 12 *Remove refractory disc*

- Remove the three clips using a pliers;

Fig. 13 *Clips*

- Remove all refractory debris before to assembly the new ring;

Fig. 14 *Remove all debris*

- Put the new ring on top of the aluminum flange, paying attention to the proper alignment with the spark plug;

Fig. 15 *New ring*

- Check the alignment of the ring holes with the pins of the flange;

Fig. 16 *Alignment*

- Push on the ring with hands, applying a progressive and firm pressure distributed all over ring;

Fig. 17 *Press the ring*

- Check the gap between the refractory ring and the aluminum flange. The replacement process is completed when that gap is zero;

Fig. 18 *Gap*

- Reassemble the flange, burner head, fan and gas system. Connect back gas and electrical main supply, then restart the boiler.

⚠ Before restarting the boiler, follow the points listed below:
- Check the boiler is ready for operation, with all panels (front, side, top, bottom, back) correctly installed
- Reconnect the electric power supply to the boiler
- Open the manual gas shutoff valve

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The manufacturer strives to continuously improve all products: appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.