TDS 161002
for boilers
50-3000kW

ATLANTIC BOILERS
HIGH EFFICIENCY CONDENSING BOILER-PLANT

RT

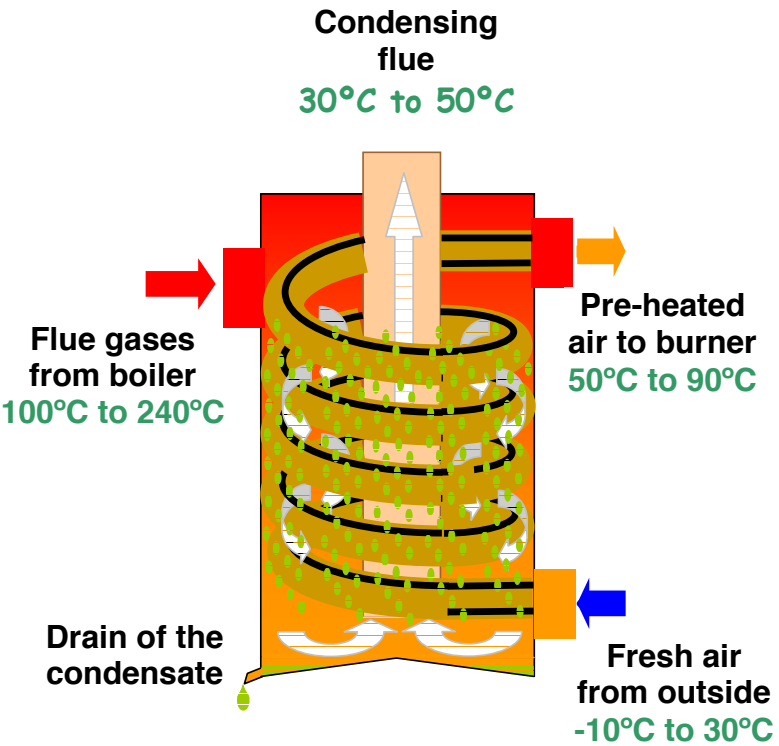
ADD-ON-AIR CONDENSING ECONOMISER

Condensing at any return temperature

- Simple Boiler Add-on
- Year-round condensing even with constant 82°C-71°C system
- Higher efficiency at maximum winter load
- Available for all fuels
- Raise the efficiency from 12 to 20%
- Generate year-round condensing up to 3MW boilers

The RT add-on air condensing economiser is capable of converting a high efficiency boiler with flue gases leaving the boiler at temperatures up to 240°C into a condensing boiler with flue gases leaving at temperatures between 30°C and 50°C. Boiler efficiency rises from around 83%GCV to the range 92%GCV and 96%GCV or more.

The principle is that outside air is drawn for combustion at temperatures of 30°C to - 5°C or lower. The air is pre-warmed by boiler flue gases, reducing the heat requirement of the burner fuel. The condensing heat transfer is handled by the high grade plastics in the RT add-on air condensing economiser.



FOR TECHNICAL HELP/ADVICE Call 0161 621 5960
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FOR FULL PRODUCT RANGE & LITERATURE
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PERFORMANCE

Model		RT60	RT100	RT200	RT400	RT1000	RT3000
Boiler maximum range	kW	60	100	200	400	1000	2500
Resistance to flue gases	mBAR	0.3	0.5	0.6	0.8	1.5	2.5
Resistance to air passage	mBAR	0.5	1	1.2	1.5	3.5	6
Dry Weight	kg	20	25	45	120	200	300
Working pressure	mBAR	25	25	25	25	25	25
Heat recovery with flue gases temperatures at 50ºC	kW	5	9	18	36	90	225
Heat recovery with flue gases temperatures at 30ºC	kW	9	14	29	57	143	358

DIMENSIONS

Diameter	mm	315	500	500	700	1120	2000
Height	mm	700	800	960	1000	1600	1800

CONNECTIONS

Fresh air inlet (from outside)	mm	80	90	110	140	250	315
Fresh air outlet (to the burner)	mm	80	90	110	140	250	315
Flue gases inlet (from boiler)	mm	130	160	200	250	400	450
Flue gases outlet (to chimney)	mm	110	140	160	200	315	315

** All the dimensions and connections can be altered to suit any installation requirements, please contact Atlantic*

SPECIFICATION

The RT add-on air condensing economiser is of galvanised steel and high-grade plastic design. The outer circular shell is fabricated from 4mm thick TECHNAFLON-E with reinforcing ribs which also support the hot air collector and, separately, the cold air intake. The heat exchange is provided by the incoming air being carried in a series of flexible pipes and surrounded by the out-going hot combustion gases. The air inlet and outlet, together with the flue gas inlet and outlet can be built into different quadrant positions to satisfy the site layout.

CASE STUDY

UNIVERSITY COLLEGE, LONDON

University College London have installed an innovative new boiler plant in it's Torrington Place Building. The boiler house operates throughout the year at 95°C flow and 75°C return, and contributes to the UCL ring main that serves scores of buildings, large and small.

Normally these ring main temperatures do not allow condensing, but the Atlantic RT add-on condensing exchanger leads to year round efficiencies of 92-97% GCV (102-107% NCV). To maintain this, three Atlantic TRP 3-pass gas-fired boilers, rated at 700kW, pass the flue gases into the RT add-on where the gases are cooled by the combustion air volume to give condensing conditions. The warmed combustion air increases the efficiency of each burner. This system permits the combustion of gas or oil, and also B100 bio-diesel.

For the UCL ring main, the result is that the Torrington Place boiler plant can lead all other ring main plants running at 95/75°C and raise the overall efficiency.