

## HUNT HEAT RECOVERY CONDENSING UNITS WITH TNAR OR FOR RETROFIT – 200 kW to 5MW

Supply and install Heat Recovery Condensing Unit(s), which shall be manufactured using skilled labour and proven materials, for optimum life and efficiency and will comply with the following Australian Standards:

- AS1200-2000 Pressure Equipment
- AS1210-2010 Pressure Vessels
- AS1271-2003 Safety valves, other valves, liquid level gauges and other fittings for boilers and unfired pressure vessels
- AS3920.1-1993 Assurance of Product Quality – Pressure Equipment Manufacture
- AS3992-1998 Pressure equipment – Welding and brazing qualification
- AS4037-1999 Pressure equipment – Examination and testing
- AS4343-2005 Pressure equipment – Hazard levels
- AS4458-1997 Pressure Equipment – Manufacture

### HEAT RECOVERY CONDENSING UNIT(s) - HRCU

The HRCU(s) shall be of Hunt Boilers manufacture or equal approved and must comply to the following performance and construction criteria:

#### General

The HRCU(s) shall be designed and constructed in accordance to AS1210-1997 and be suitable for a pressurised system, constrained by the maximum operating pressure designated within this specification.

The HRCU(s) shall be suitable to operate in a fully flooded state, where the water or other liquid is heated to a temperature below boiling point at normal atmospheric pressure.

The HRCU(s) shall be capable of recovering a minimum of 7% additional heat recovery over and above the hot water heater's maximum combustion efficiency, based on an inlet gas temperature of 200°C.

The HRCU(s) shall be designed such that the restriction imposed on the system is not sufficient to require the fitment of any additional powered flue fan, other than that already included with the burner package.

#### Construction

The HRCU(s) shall be manufactured from suitable grades of stainless steel and be provided with fin pitches on the heat exchanger tubes that limit deposition formation.

All gas and condensate collectors associated with the HRCU(s) shall also be manufactured from suitable grades of stainless steel to minimize corrosion effects of the gas and water products.

The HRCU(s) will be provided with an adequate number of inspection openings to facilitate internal heat exchanger inspection and cleaning as required by the design standards, without the necessity to remove flow and return piping.

#### Refractory

All external flat surfaces of the HRCU(s) gas collector, condensate collector and heat exchanger shall be fitted with a minimum of 50mm thick fibre type insulation and lagging.

#### ADELAIDE

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#### MELBOURNE

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### HRCU Insulation

The HRCU shall be fully insulated over all side and top surfaces using Glasswool or Rockwool insulation, selected to be suitable for the continuous operating temperature of the HRCU.

A suitable metal case shall cover over the insulation with all longitudinal and transverse joints lapped by a minimum of 40mm and all joints being made weatherproof with the application of a suitable sealant.

### Documentation

The HRCU(s) shall be provided with a complete set of documentation as follows:

- Manufacturer's Data Report
- Complete Instruction Manuals (2 sets - electronic)

### General Capacity Specification

The HRCU(s) shall be provided as follows:

Model	<b>Hunt HRCU or approved equal</b>
Rated Continuous Capacity	<b>200 kilowatts to 5 MW</b>
Transport Mass	<b>425 kgs to 830 kgs</b>
Flooded Mass	<b>590 kgs to 1060 kgs</b>
Minimum Heat Recovery	<b>7%</b>
Maximum Operating Temperature	<b>200°C</b>
Design pressure	<b>1500 kPa</b>
Maximum operating pressure	<b>1500 kPa</b>
Hydrostatic Test Pressure	<b>3240 kPa</b>
Fuel type	<b>Natural Gas</b>
Principle Design Standards	<b>AS1200, AS1210, AS3920.1, AS3992, AS4343 and AS4458</b>

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