

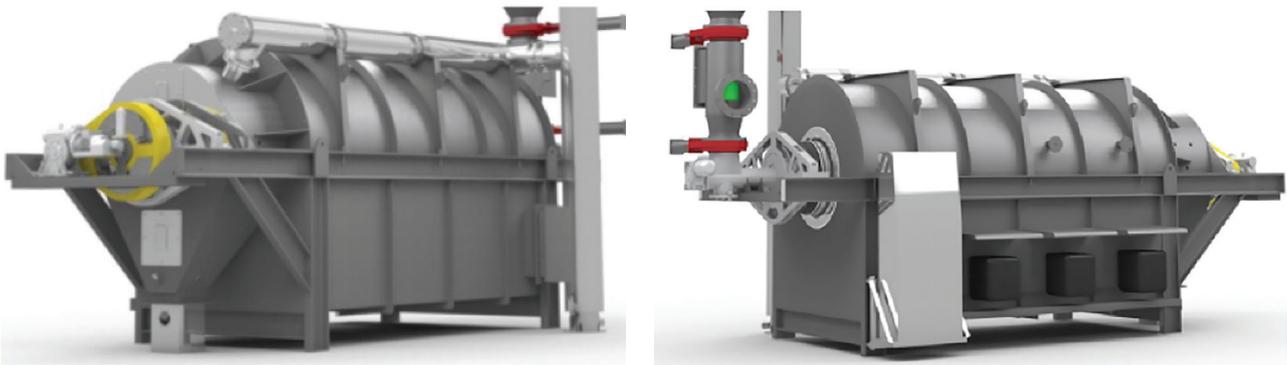


# Equipment and Services Catalogue



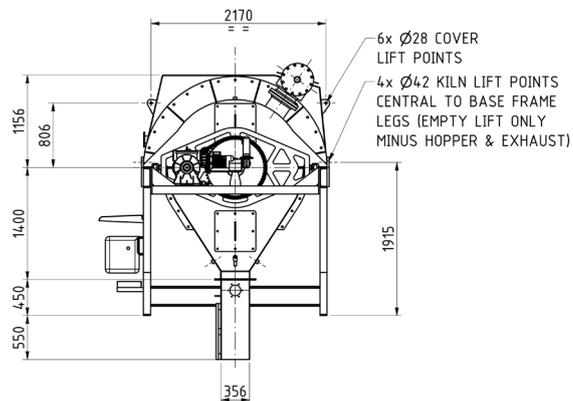
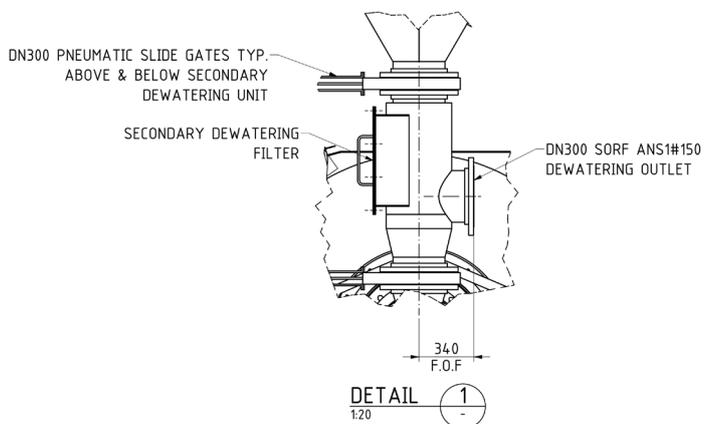
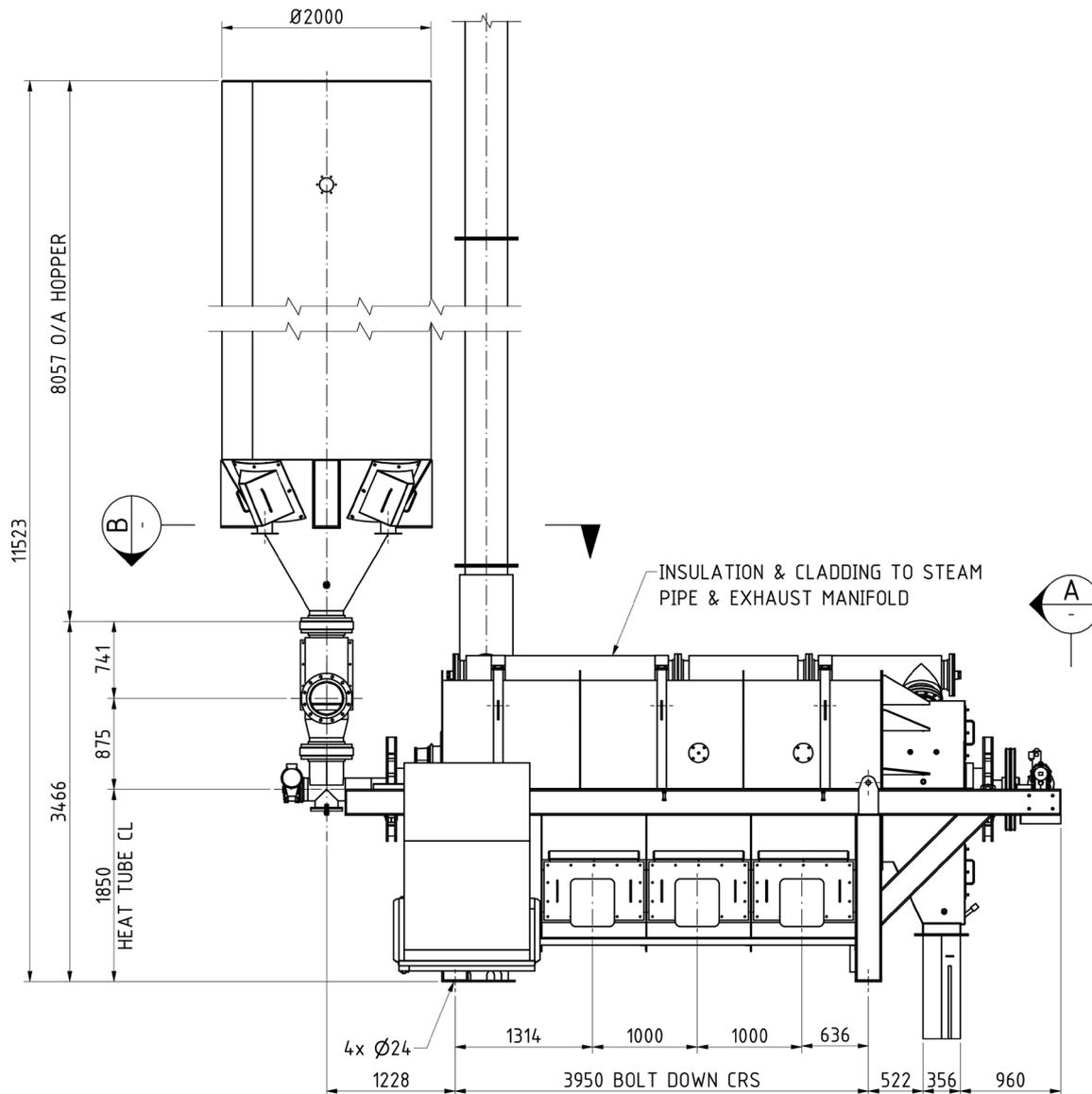
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# Advanced Technology Carbon Regeneration Kilns



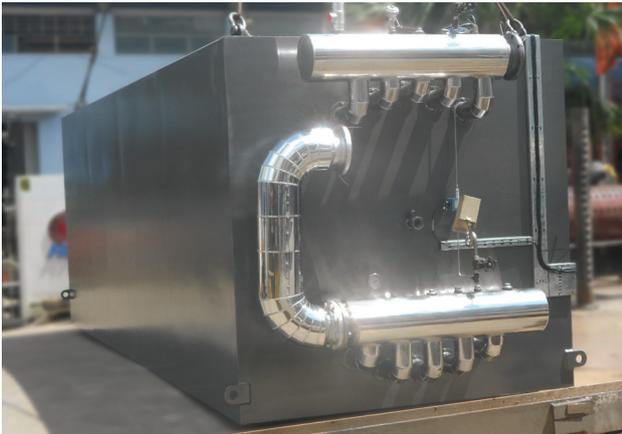
## Features and Benefits

- ✓ The carbon hoppers have been designed to effectively and efficiently dewater the carbon prior to entering the kiln. This style of hopper provides a much more user friendly dewatering option and is almost impossible to block
- ✓ Provision of a 'dewatering complete' signal which avoids subjective and wasteful dewatering downtime as well as ensuring consistent feed moisture content for optimum regeneration
- ✓ More efficient heat transfer achieved through features such as a curved top cover, finned heat tube, optimized baffle plate and the application of innovative insulation and reflective paint
- ✓ A DN300 throat diameter as opposed to smaller diameter throat sizes provided by other OEM's. This will mitigate historical blockage issues that can occur in this area
- ✓ Slidegate valves that are specially designed to be used with slurry and are pressure rated to prevent water leakage issues
- ✓ Improved quality control via direct carbon bed temperature measurement
- ✓ Cutting edge seal design
- ✓ Multiple safety interlocks
- ✓ A multi-lingual and simple to use operator interface, complete with an in-built manual
- ✓ In contrast to other manufacturers, the TR series kiln does not require a water cooled discharge chamber, therefore removing the requirement for the supply of large and constant volumes of cooling water. A dry back-end prevents historical issues with tar condensation and blockage in this area
- ✓ The split discharge chamber design means that a heat tube change can be completed in hours, rather than days
- ✓ There is no requirement for any product pre-drying with the TR series kilns. This is historically a high maintenance and blockage prone area of the process. Instead, our design maintains high energy efficiency via extended heat transfer surfaces around the tube. Additionally, HEAT Systems has provided for dewatering physically in the hopper as well as below the hopper through the easy service pipe screen
- ✓ Added and improved inspection hatches, easily accessible bolts and lifting lugs



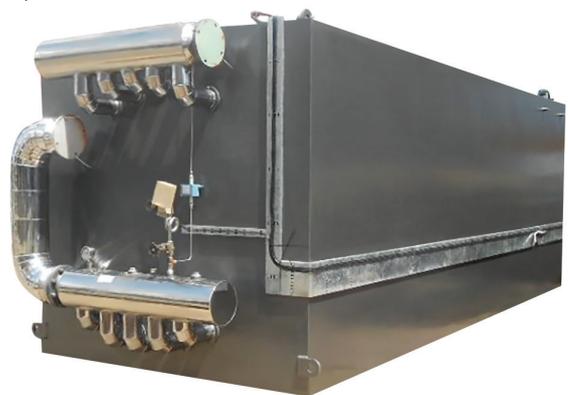
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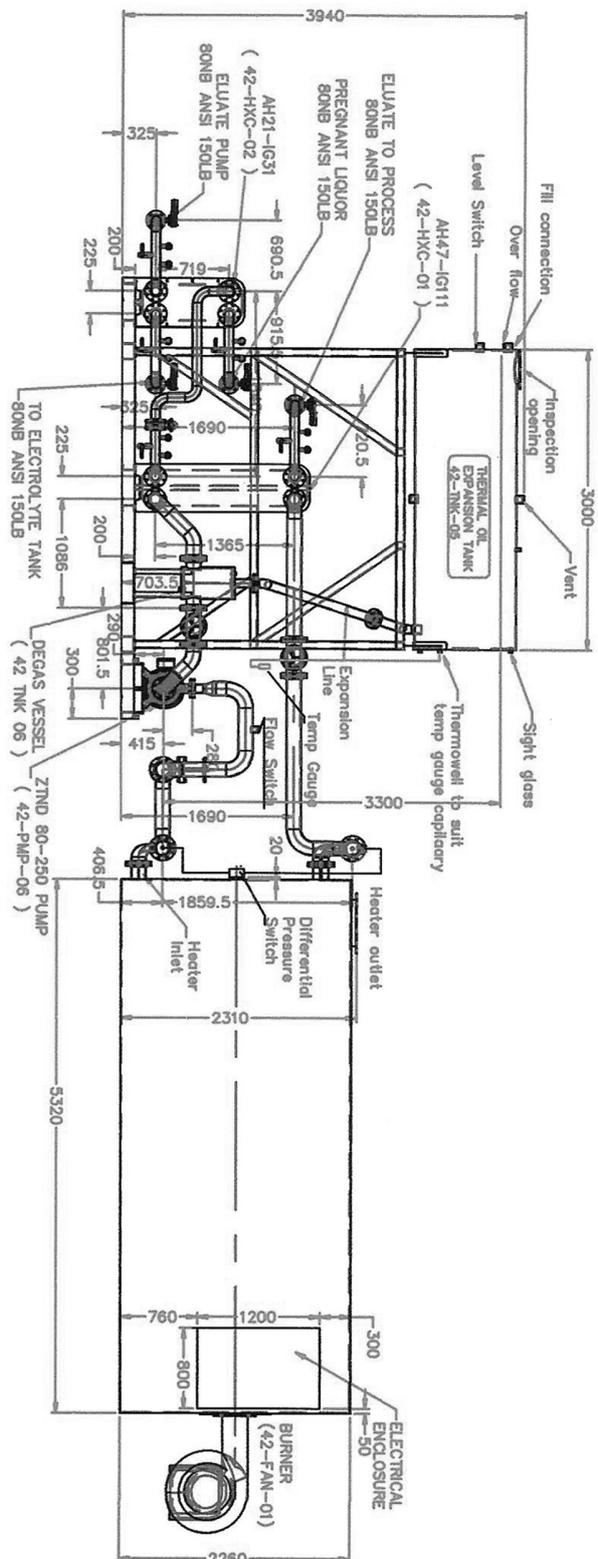
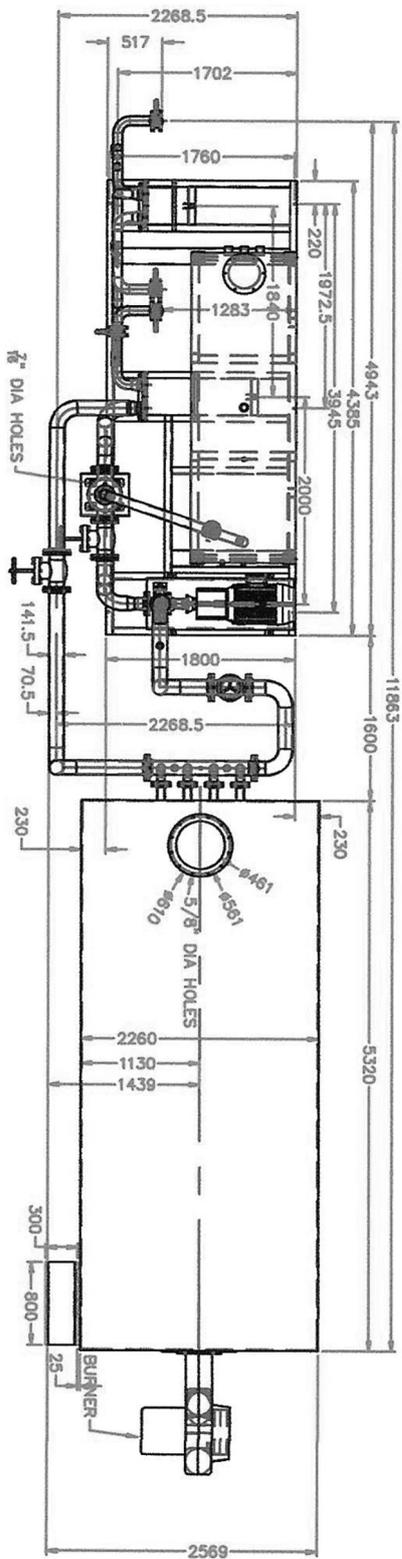
# Tried and True Thermal Oil/Elution Heaters



## Features and Benefits

- ✓ HEAT Systems thermal oil heaters are designed for operation under forced draught to avoid stack problems
- ✓ Fully automatic combustion occurs in a fluid cooled chamber composed of three (3) separate coils wound into an inner and outer cannon coil. This design prevents weld stress and the possibility of failure due to fatigue cracking as found in header style heaters
- ✓ The thermal oil heater is of the 'O' type. A three pass tubular coil set is employed to maintain the circulation at the correct levels to ensure longer oil life and optimum heat transfer
- ✓ The heaters are factory tested and delivered complete with all valves, fittings, combustion equipment, controls and safeguards





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## Tilting Bullion Furnace

- ✓ Pour at the exact smelting temperature due to the benefit of a tilting burner. It is no longer necessary to overheat to provide for the rapid cooling during pouring
- ✓ Robust hydraulic tilting mechanism makes for a very smooth and precise pour
- ✓ Spouted crucibles mean that there is no need for a ceramic transition piece when pouring. No more headaches associated with the expansion / contraction and wear of these items.
- ✓ A swing-over refractory lid means faster heat-up and more heat retention
- ✓ Height-adjustable cascade table
- ✓ Burner fan run-on to maximise burner life
- ✓ Excellent quality refractory bricks
- ✓ Kits can be provided to allow for rapid re-lines in-situ should a repair be required. No need for troublesome castable refractories which require time consuming curing and costly visits from suppliers



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## Gold Room Oven

- ✓ Built-in safety interlocks
- ✓ Robust 304SS construction
- ✓ Built to any electrical power requirement
- ✓ 6 or 9 tray configuration (custom sizes available on request)
- ✓ Simple to maintain and operate
- ✓ Loading trolley provided
- ✓ Homogeneous heat distribution
- ✓ Fan forced
- ✓ Industrial 5mm thick elements
- ✓ Refractory lined with ceramic outer layer for exceptional wear resistance

## About Us

Heating Equipment and Thermal Systems Pty Ltd (HEAT Systems) is a supplier of minerals processing equipment, spare parts, maintenance and engineering services to the Gold and Silver mining industries, both locally and internationally.

Our vision underlies everything we do.

“To be the number one thermal processing equipment supplier and maintenance provider to the international gold and silver mining industry”

In line with achieving this vision, HEAT Systems provides some unique benefits to our clients:

- ✓ Innovative equipment design which allows for more fuel efficient operations
- ✓ More robust equipment control, allowing even the most junior of operators to get up to speed rapidly
- ✓ Greatly improved equipment reliability and up-time
- ✓ A quicker and more cost effective spare parts supply chain
- ✓ A reactive maintenance department who can supply highly skilled technicians anywhere in the world within 48 hours of a critical failure being reported
- ✓ Improved carbon regeneration quality
- ✓ Expert assistance in service / maintenance and spares supply

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## Heat Recovery Projects

HEAT Systems has expertise in delivering small to medium size brown-fields upgrades for general industrial and mining sector clients who may generate their own heat and/or power. Our expert Engineers can design, engineer and deliver projects which make sound economic sense. Our clients quickly recognise quantifiable and measureable operational cost savings.

The key benefits of undertaking such a study and subsequent works include:

- ✓ Fuel savings (between 10 – 25% is standard)
- ✓ Excellent payback on capital projects / upgrades (under 3 years is typical)
- ✓ Environmental credibility through the reduction of carbon footprint

Contact us at [info@heatsystems.com.au](mailto:info@heatsystems.com.au) or call us on 08 6465 4198

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