

# WOODDRYER SYSTEM specification sheet.

## Air to Air Heat Recovery Units for kilns and other hostile environments.



Wooddryer System air to air heat recovery system has been developed for installation on lumber kilns and other hostile environments. This system has also been developed for easy installation on existing kilns requiring very few modifications to the kiln equipment.

The heat recovery units have been designed in stainless steel with an aluminum or stainless steel heat transfer core. Normally, aluminum is chosen for its higher heat transfer/efficiency. We have used type 1100 aluminum for maximum heat transfer. This heat recovery unit can be ordered and custom made in several configurations; however, the most common versions are a vertical or horizontal wall mounted type. The vertical wall mounted version will nearly eliminate the expensive duct work installed with most heat recovery units in most cases. This is due to the high, slim design. There are several additional advantages to this design: a) air will stay in the unit longer and give you a higher exchange rate. b) it has been manufactured so it is possible to use stainless steel duct work where needed.

### **Wooddryer System Heat Recovery System for wall mounting:**

Specifications: Type: WSUS-HRSHELL-W-ST-SS+CORE  
Housing is in all stainless steel construction.  
The front plate has fixed aluminum louvers for inlet and outlet with 75 mm/3" foam insulation in between. All aluminum core with 18 mm/ 3/4" spacing of 0.25 mm/0.01" aluminum type 1100. Total surface area in the heat exchanger core is 96 m<sup>2</sup>/1040 ft<sup>2</sup>. Duct work can be ordered in either aluminum/ stainless steel or built by local sheet metal shop.

In contrast to similar heat recovery systems from other manufacturers, our heat recovery units have an independent core element, which easily can be replaced if the environment in which the unit is installed is so corrosive that the aluminum corrodes/oxidizes. The all stainless steel housing and replaceable core element will enable this system to operate in highly corrosive environments at a very reasonable cost.

Above: Wall mounted heat recovery unit installed on back wall on a kiln  
one or two units are normally required depended on the kiln size.  
Below: Picture of the core element for above heat recovery unit.



### **Installation of the heat recovery unit:**

The heat recovery unit is easily installed on several different kinds of structures. The unit is very well suited for installation on masonry walls, standard wood framed structures (flanges fit onto studs places 1220mm/48" on center), Wooddryer System panel system, and most pre fabricated structures. Onto each end of the heat recovery unit we can supply adjustable stainless steel duct work with a 600x600mm or 24"x24" opening. The louvers and fans are placed inside the kilns, thereby keeping the moisture latent air out of the unit when there is no venting.  
Once the heat recovery unit is installed your local heating and venting company can insulate the side of the heat recovery unit and duct work with 2-6" insulation (thickness will depend on the type of insulation chosen).

This system can be easily installed on new or existing kilns. You may have to install one or two extra high capacity fans on the air inlet and/or the exhaust to achieve the required venting capacity.

Note: Dimensions and principle drawing of a Wooddryer System Heat Recovery System can be seen on back side of this spec. sheet.