



Greenhouses of the horticultural company Pavarin

Stages of boiler installation



## Greenhouses heated by wood chips produced from agricultural waste

# REDUCTION OF 75% IN THE HEATING COST

**RECOVERY OF WASTE** Two thermal power plants fueled by wood chips, in lieu of old diesel boilers, used in the greenhouses. An investment of 300,000 euros, 55% funded by the Rural Development Plan of Veneto, allows a saving of 70,000 euros per year on the purchase of fuel. The advantages gained by Pavarin Andrea and Giovanni di Luria horticultural farm, in the province of Rovigo, with the installation of two targati Uniconfort plants are not few.

**THE COMPANY** Pavarin horticultural farm produces 5 million units of salad lettuces and other vegetables per year, for the large supply chains. It cultivates an area of 27 hectares, of which 3.5 is occupied by two greenhouses.

**THE PLANT** Uniconfort has installed two thermal power plants serving two greenhouses. Each boiler has a thermal capacity of 700 kW and is powered by wood chips, composed mainly of orchard explants, purchased from local producers. The compartment above the ground consists of sandwich panels, while the silo basement is equipped with a system of extraction of wood chips at rakes. The distribution of heat in the greenhouses takes place through a series of unit heaters.

### THE SAVINGS: 70 THOUSAND EUROS PER YEAR AND MORE

The wood chips boilers replace diesel fuel of a total value of about 90,000 Euros per year, compared to an expense of 20 thousand Euros for the chips. Therefore, an **approximate saving of 70,000 Euros per year on fuel**; plus the fact that, at such low cost, greenhouses are heated for a longer period with a **reduced risk of frosting** - a risk which can result in extensive damages of up to 100,000 in winter to the Company. In addition, **the optimum heating allows to reduce the use of pesticides by about 30%**.

### THE ENVIRONMENT SAYS THANKS

The use of wood chips, instead of diesel, prevents an **annual emission of 1,302 tonnes of CO<sub>2</sub>** - which is equivalent to emissions by a **car traveling 231 times around the world in a year**.

### THE PLANT'S NUMBERS

Thermal power of the boiler	1,400 kW
Total investment	300,000 euro
Financing Psr of Veneto	55%
Economic value of no longer used diesel fuel	90,000 euro/year
Expenditure for the purchase of wood chips	20,000 euro/year

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