

Gas Absorption Water-Water Heat Pump System

Cantina Selvapiana

Rufina (Firenze) - Italy



caring for the environment



The Robur units are utilized to satisfy both the comfort conditioning of the staff and also provide the process chilled and hot water requirements during the wine making process.

The installation of the Robur Equipment was part of an expansion project at the facility that included enlargement of the vinification cellar due to a new fermenting room equipped with stainless steel tanks, new aging barrels

room, a new building used for the bottle cellar, one additional fermenting room for masonry tanks and an equipment rooms and warehouse.

A four-pipe circuit is used for the wine making processes, which require chilled and hot water simultaneously and a two pipe circuit for the comfort conditioning, which can provide alternate cooling or heating.



Heating



Cooling

The Robur solution provides exceptional flexibility with a Gas Utilization Efficiency variable from 1.86 to 2.25 keeping operating costs low.



The total system requirements are 485,000 BTU/h for heating and 25 tons for cooling. However, the premises have very diverse heating and cooling needs. In the fermenting room precise control of temperature and humidity must be maintained during the wine making process; in the aging barrels room a high humidity level is

necessary; in the new fermenting room a system to cool and heat the stainless steel tanks is required. The equipment listed below was selected for this application to allow for the best operating efficiency and greatest flexibility:
 - 3 GAHP-W Gas Absorption Heat Pumps for simultaneous production of hot and chilled

Building type	Winery
Unit number and type	3 GAHP-W Gas Absorption Water-Water Heat Pumps + 2 AYF60-119/4 Gas Absorption Chiller-Heaters
Heating capacity	619,000 BTU/h
Cooling capacity	284,800 BTU/h

water; these units are dedicated to the base load of the system;
 - 2 AYF60-119/4 Chiller-Heaters

supplement the base load during peak demands for chilled and hot water.