Unit description

Outdoor unit for the production of chilled water with semi-hermetic variable-speed screw compressors optimized for R134a, axial-flow fans, micro-channel full-aluminum condensing coils, single-pass shell and tubes evaporator designed by Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A. and electronic expansion valve. Base and supporting structure and panels are of galvanized epoxy powder coated steel with increased thickness. Eurovent certification. The screw compressors feature the variable speed technology thanks to the integrated refrigerant cooled inverter, for the maximum compactness and operating flexibility. Moreover, they feature the Variable Vi (compression ratio) technology, to change the internal geometry according to the operating conditions. Thanks to the accurate sizing of all internal components and the use of variable speed technology, the unit ensures flexibility, reliability and maximum efficiency in every operating condition.

Versions

- **K** - Standard efficiency
- **SL-K** - Super low noise, standard efficiency
- **A** - High efficiency
- **SL-A** - Super low noise, high efficiency

Configurations

- **-** - Basic function
- **D** - Partial condensing heat recovery function
- **R** - Total condensing heat recovery function

Features

- HIGH EFFICIENCY
  Very high efficiency at full and partial load, at the highest market levels,

thanks to the adopted technological solutions. These units ensure low operating costs and therefore a quick payback time.

- ErP COMPLIANT 2021
  Thanks to the inverter technology and the accurate design, the units already comply and exceed the minimum seasonal energy efficiency requirements that will start from 2021, imposed by the eco-sustainable design Directive 2009/125/EC.
- WIDE OPERATING RANGE
  The accurate condensation control (variable fan speed regulation as per standard on every model), the availability of devoted kits and smart control logics allow unit's operation from -20°C up to 55°C of outdoor air temperature and from -8°C to 20°C of evaporator leaving water temperature.
- REDUCED FOOTPRINT
  These new units have a reduced footprint, making them the best solution both for new plants (thanks to high efficiency) and for the replacement of obsolete units in existing plants, offering a very high efficiency increase with same dimensions and cooling capacity.
- ALUMINIUM MICRO-CHANNEL HEAT EXCHANGERS
  The full aluminium micro-channel condenser coils deliver high efficiency whilst ensuring a reduced refrigerant volume and a lower unit weight. The e-coating protection (optional) grants the highest level of resistance to corrosion in any condition, even in the most aggressive environments.
- INTEGRATED HYDRONIC GROUP
  The built-in hydronic group (optional) includes the main water circuit components. The 2 pumps are in twin configuration and available with 2 or 4-pole motor, fixed or variable speed, high or low head, to satisfy the different installation requirements.
- ADAPTABILITY
  Adaptability at the building’s heating request thanks to the continuous capacity regulation, assured by sophisticated control’s logic.
- HARMONY BETWEEN UNIT AND PLANT
  Low inrush current and power factor higher than similar fixed speed units, permit an easy electrical installation which is not stressed during start-up and with no need of extra devices for power factor correction. The use of VSD technology allows the unit to partialize in a stepless way, with consequent lower fluctuations of leaving water temperature.

Accessories

- Noise reducer (only on not silenced versions)
- EC fans with electronic DC brushless motor (for K versions)
- Microchannel coils with e-coating protection
- Traditional coils with copper tubes and alluminium fins, also available with prepainted fins or Fin Guard Silver protective treatment.
- Leak detector

- Kit HT to increase the unit operating range
- Hydronic group
- VPF (Variable Primary Flow) system
- Set-up for remote connectivity with ModBus, Mitsubishi M-Net, Echelon, Bacnet, Bacnet over-IP.