NXW

Total heat recovery option
Partial heat recovery option
Integrated Pump package option
Silenced version

NXW water-to-water Chillers and reversible cycle heat pumps for indoor installation have been designed to completely satisfy any plant and application needs due to a wide range of models, configurations and accessories.
For years Aermec has been attentive to the energy efficiency issue, and has now designed NXW units with the aim of ensuring high efficiency levels at both full and partial loads. NXW units are commissioned and delivered completely charged with R410a refrigerant and oil (on site it will be necessary to provide the hydraulic and electric connections only), while condenserless versions are delivered only with a watertight charge.

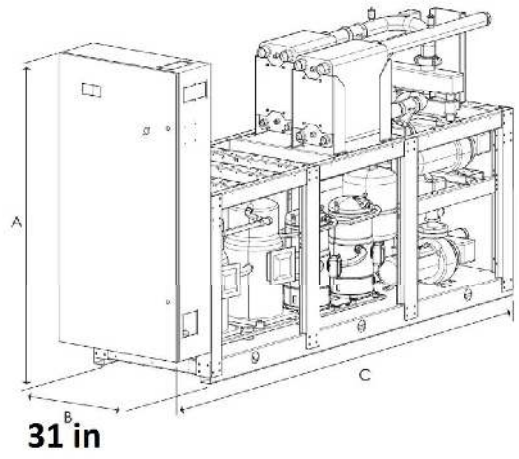
NXW range chillers are available in 11 sizes. By combining the wide variety of available options, it is possible to configure each model in the NXW range in such a way to meet the most varied system requirements. To make installation easier, the machine can be provided with a pump package for condenser water and evaporator water, optimizing spaces, time and installation costs. To control the cooling capacity Aermec leverages multiple compressor concept. Depending on the size NXW units have from two to four On/Off scroll compressors of different sizes, making it possible to have up to 8 capacity steps. All NXW units have two completely independent refrigerant circuits resulting in 50% redundancy.
The NXW has extended operating limits providing condenser outlet water temperature up to 131F and evaporator outlet water temperature down to 17.6F ensuring proper operation in heating mode even at negative ground temperatures when connected to a GEO loop.

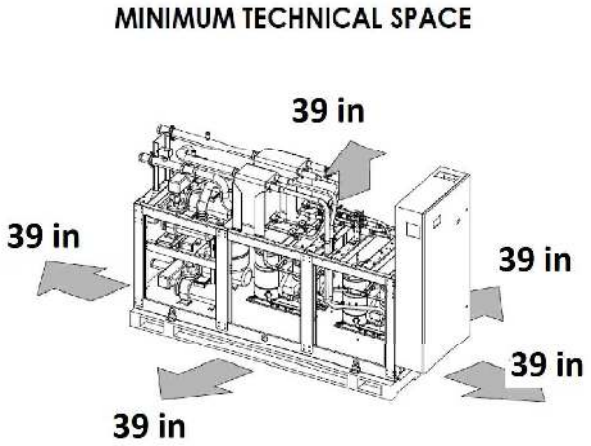
The NXW is available in the following configurations:

- Standard (heat pump with water side cycle inversion)
- Heat pump (heat pump with gas side cycle inversion)
- Desuperheater (equipped with a partial plate heat recovery unit installed in series with the condenser)
- Total heat recovery (equipped with a plate heat exchanger installed in parallel with the condenser for total recovery of the dissipated heat)
- Condenserless (chiller without the condenser. Requires a remote air cooled condenser)

Silenced (heat pumps with reduced sound emission due to the total compressor enclosure with galvanized sheet metal panels of a suitable thickness and good sound absorbing capacity)

Only 31.5 inches wide, NXW units make it possible to be brought into a building through a standard door, which is indispensible for retrofit applications. NXW 6 pipe units for simultaneous hot and chilled water production eliminate the need to have separate equipment for heating and cooling while saving installation and overall operating costs. Utilizing three heat exchangers (evaporator, condenser and heat recovery heat exchanger) NXW units accommodate the building with simultaneous heating and cooling without mixing the fluids.
NXW units can be matched with GEO-thermal loops as well as with the combination of a cooling tower and a boiler to meet any requirements of various applications.





The NXW units are available in different power supply options:

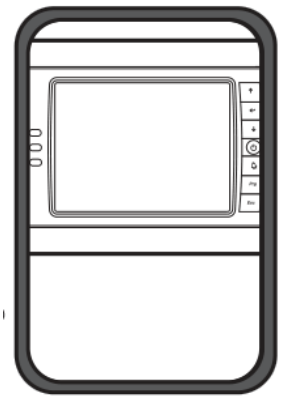
- 230V—3ph—60 Hz
- 460V—3ph—60 Hz
- 575V—3ph—60 Hz

The units controls contain a Carel control board and a control panel display. The set program and parameters are memorized permanently on FLASH memory, allowing their storage even in case of no power situation.

The microprocessor has the following functions:

- remote ON/OFF with external contact without voltage;
- phases sequence control;
- amperometric transformer;
- separate control of the individual compressors;
- the distributed power adjustment depends on the outlet water temperature (proportional+integral control), complete with "Switching Hysteresis" self-adapting work differential to always ensure the correct work schedule, even with low water flow rate (stand-by between peaks, stand-by between switch off and switch on, minimum operation time etc.);
- rotation of the compressors depending on working hours;
- PDC "Pull Down Control" system to prevent the activation of power steps when the temperature of the water quickly approaches the set-point; it optimizes machine operation when working normally and in the presence of load variations, ensuring the best efficiency in all conditions;
- "Always Working" function to prevent machine stopping in certain critical conditions, by means of a self-adjustment system;
- management of any anomalies by:
- alarms display;
- historical alarms;
- cumulative faults block signal;
- differential pressure switch and/or flow meter management;
- display of all main sizes regarding the operation of the machine;
- the main operation parameters can be changed;
- remote panel with the main functions (PGD1 accessory);
- RS485 range and compatible Modbus protocol (AER 485P1 accessory);
- double set-point, both summer and winter, for the temperature of the water produced, pre-set at the menu;
- automatic compensation of the set points on the basis of an analogue input 4 ÷ 20 mA;
- pump management and rotation;
- programmable timer function;
- daily/weekly programming;
- inlet/outlet temperature display;
- multi-language display of the parameters.

Multi Chiller accessory



NXW units can be supplied equipped with "The Multichiller" control system, which is able to control up to 9 NXW units as a single chiller plant.
The accessory AER485P1 is required