

TOPDUAL

Natural refrigerants R 290 & R600a

HT from 2 °C to 20 °C

MT from -15 °C to 2 °C

LT from -35 °C to -15 °C

Heating temperature regimes up to 90 °C

Cooling capacity range from 35 kW to 500 kW (*)

High temperature heating capacity up to 400 kW (**)

(*) Evaporator inlet/outlet water 12/7 °C

(**) Condenser inlet/outlet water 35/75 °C



FRIGOPLUS

■ ■ ■ NATURAL COOLING & HEATING

R 290 & R 600a

TOPDUAL

WATER COOLED CHILLERS

Water cooled chillers are used for indirect cooling for air conditioning of buildings, industrial processes, logistics centers for food retail, precision cooling of data centers. Heat transfer fluid can be water, mixture of water and ethylene/propylene glycol or some other secondary heat transfer fluid. Refrigerant is propane (R 290), which due to its excellent thermodynamic properties allows the use of the chiller in the temperature range from -35 to 20 °C.

HIGH TEMPERATURE HEAT PUMPS

Iso-butane (R 600a) refrigerant enables very high temperature applications (up to 90 °C) for this type of units. High temperature heat pumps are very suitable for peak loads of district heating systems and for heating of the buildings, also for industrial processes where waste heat must be raised to higher energy levels. If temperatures that need to be reached for heating are lower, it is recommended to use propane (R 290) water - water heat pumps for better efficiency and smaller footprint.

TOPDUAL

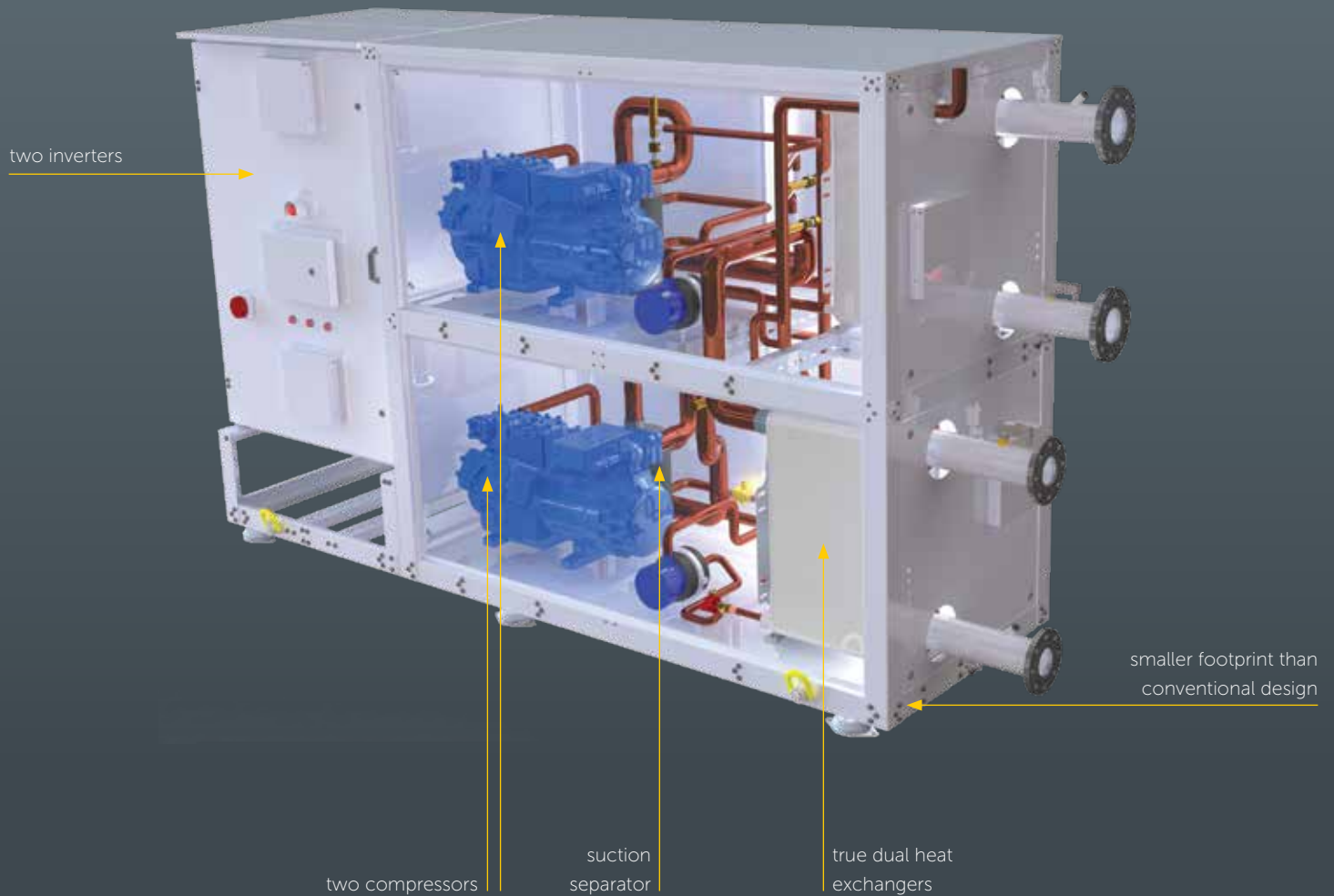
- TOPDUAL units are packaged in compact housing and all of the components of the refrigerant circuits are built into the unit.
- Units can easily be stacked (great flexibility of the capacity).
- Small footprint ensures that units can be installed in every machine room (up to 1100 mm unit width).
- Units can be made for outside installation.
- A microprocessor controls the operation of the unit in combination with optimized parameters in order to achieve as high efficiency as possible.

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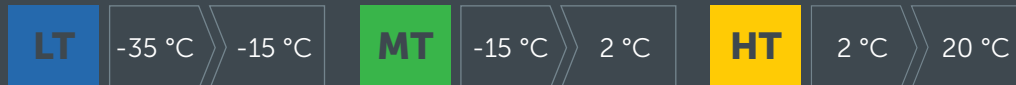
 NATURAL COOLING & HEATING

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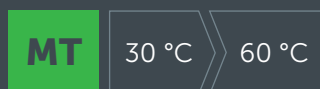
R290 R600a



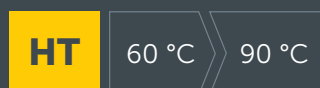
R 290 COOLING TEMPERATURE RANGE



R 290 HEATING TEMPERATURE RANGE



R 600a HEATING TEMPERATURE RANGE



COOLING CAPACITY RANGE

35 kW - 500 kW (*)

(*) Evaporator inlet/outlet water 12/7 °C

HIGH TEMPERATURE HEATING CAPACITY

UP TO 400 kW (**)

(**) Condenser inlet/outlet water 35/75 °C

- Natural refrigerant
- Semi-hermetic reciprocating compressors
- Inverter driven compressors
- True dual evaporators and condensers
- Without by-pass effect
- Electronic expansion valve
- Inovative technical cooling solution for high energy efficiency
- **R 600a** - for high temperature hot water applications

HYDRO MODULES

Frigo Plus has designed special hydromodules which perfectly fit with TOPDUAL chiller dimensions for confined machine rooms.

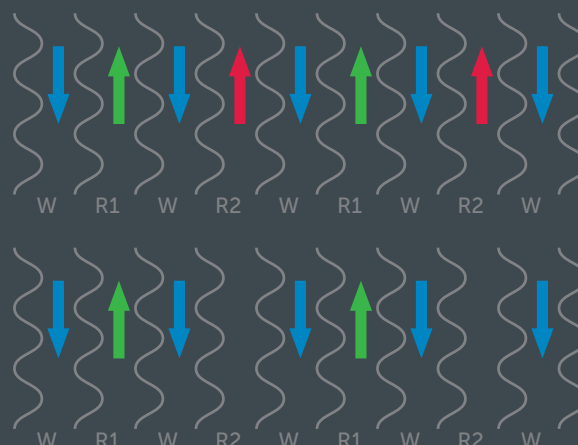
Hydro modules may have buffer tank / hydraulic switch up to 800 l in combination with single or parallel primary or secondary pumps.

True dual exchangers
True Dual technology
for higher operational
efficiency.



Suction line accumulators
Suction line accumulators for
protection of compressors against
liquid hammer and its subsequent
damage.

Cross-section of the channels inside a True Dual exchanger



CONTROLLER by **SIEMENS**

SIEMENS
CLOUD MONITORING



CUSTOMER

R290 R600a

FRIGOPLUS

- Intuitive and user friendly TOUCH SCREEN
- Innovative algorithm for precise control of outlet water/glycol temperature
- Advanced operation control for 'heat recovery' and precise outlet hot water temperature
- Alarm management for safe and reliable chiller operation
- Easy connectivity with standard MODBUS and BacNET protocols

Producing natural cooling and heating systems since 2002.

FRIGOPLUS
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