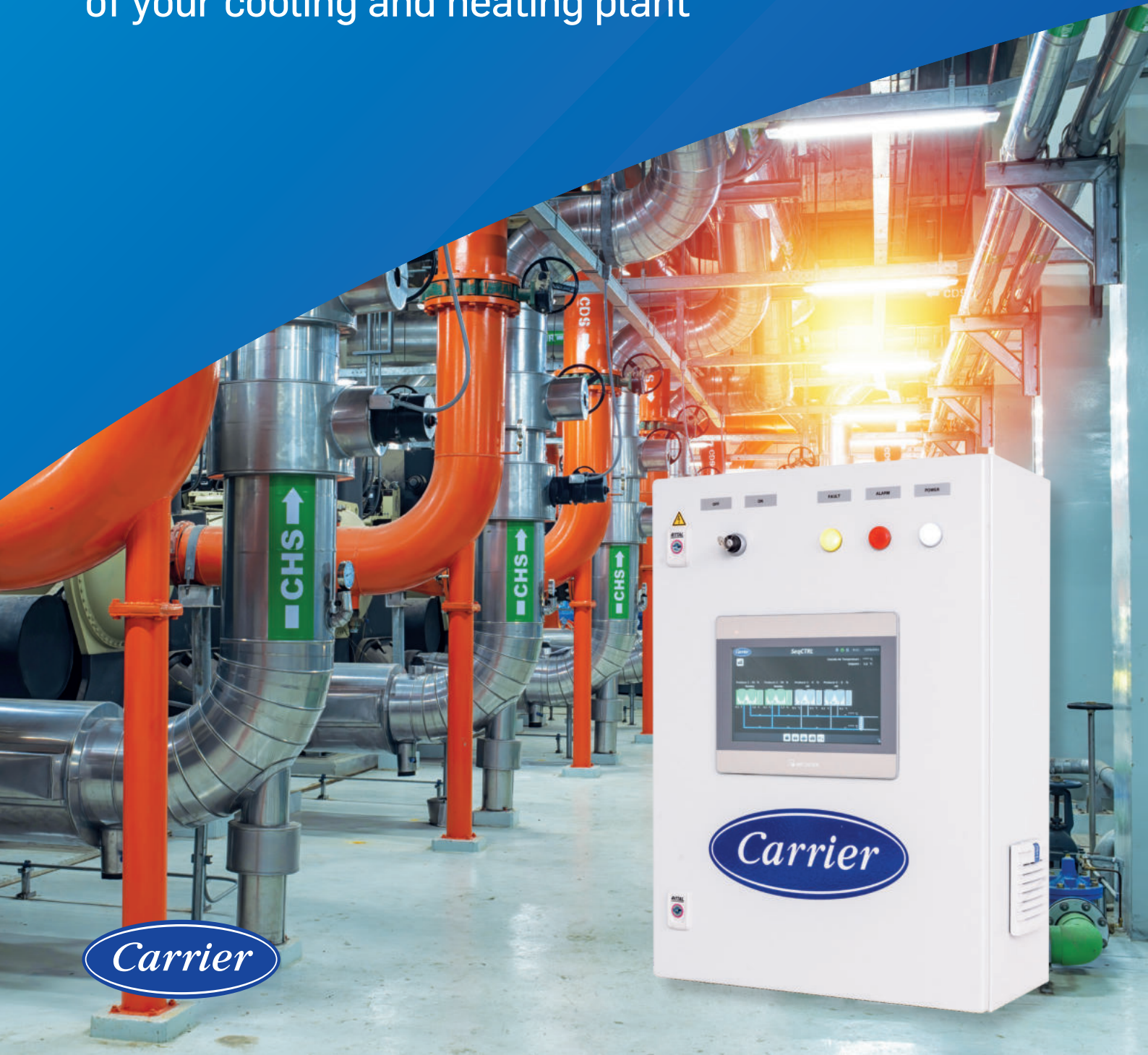




HVAC Service Solutions

TRUVU™ PLANT SEQUENCER

Regulation, Control & Optimization
of your cooling and heating plant



Standard control solution to manage and optimize cooling & heating plants



TruVu Plant Sequencer controls and optimizes cooling and heating plant rooms, benefiting from Carrier's expertise in HVAC systems.

A turnkey solution with an advanced program, easily commissioned by Carrier service technicians.

Energy savings of cooling/heating plant.

Reduced operating and maintenance costs.

Credit gains for Leed®, Breeam®, Hqe™ certifications.

Compliance with local and European energy regulations.



Main capabilities

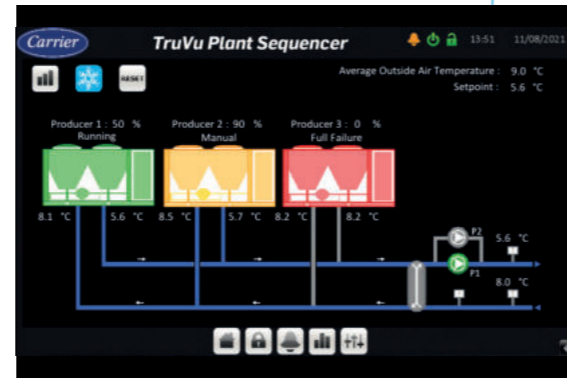
- Up to 4 Carrier chillers or heat pumps.
- Up to 2 secondary pumps.
- Up to 4 dry-coolers (version TruVu plant sequencer v2.0).
- 1 x 3-way valve (mutualized dry-coolers, version TruVu plant sequencer v3.0).

Local monitoring

- 10" standard touchscreen with web server in the front of the electrical cabinet.

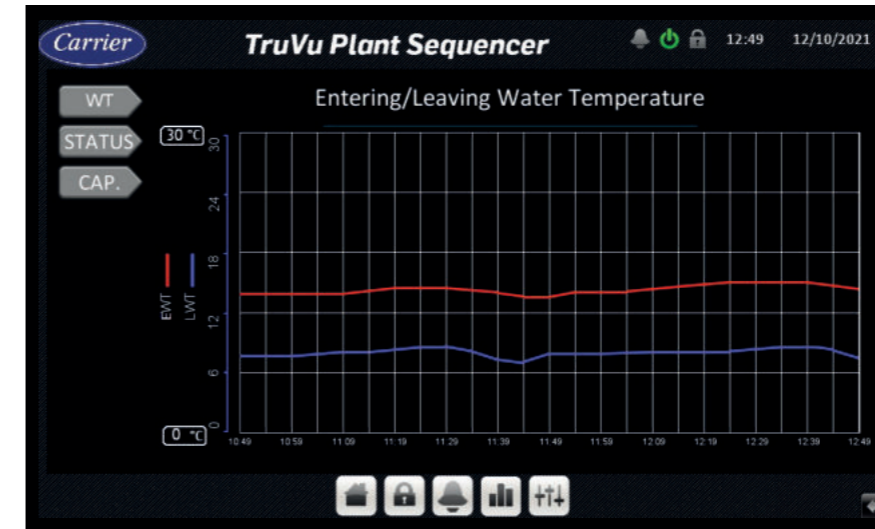
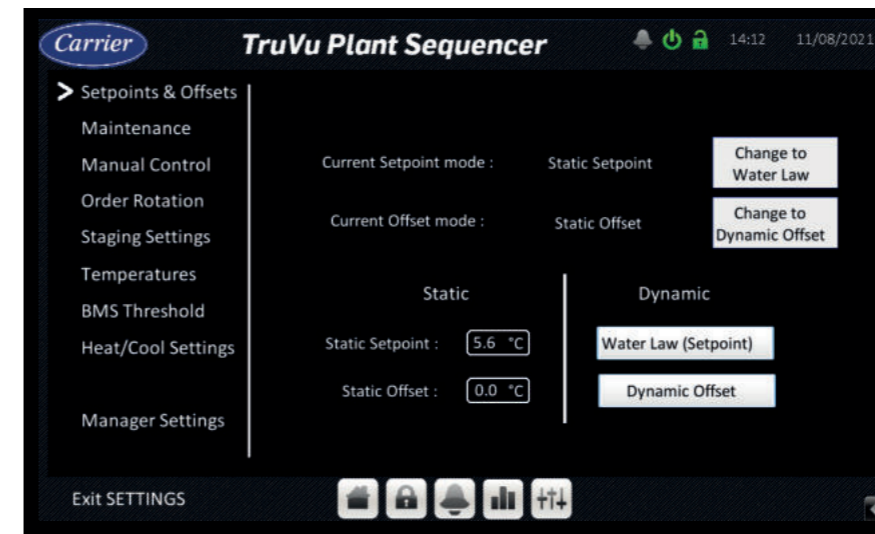
Remote Communication

- BMS: BACnet/IP or Modbus TCP/IP.
- Optional Carrier i-Vu® remote monitoring solution.



Requirements

- BACnet/IP communication is compulsory with chillers or heat pumps.
- Evaporator pumps directly managed by the chiller or heat pump.
- Condenser pumps and 3-way valves for water-cooled units directly managed by the chiller or heat pump (version: TruVu plant sequencer v2.0).
- Modbus RTU communication compulsory with dry-coolers - optional Modbus RTU to physical I/O card (version: TruVu plant sequencer v2.0).
- No wired I/O except temperature and allowed components in the standard scope (see electrical diagram or technical data sheet).



Advanced cascade:

Automatic advanced cascade on temperature drift / temperature evolution / plant capacity / delta T°C. Unit's cascade on full load or predefined partial load. User setup (setpoints, setpoint offset units-network / mini-maxi running units, units priorities, etc.).



Energy savings:

Setpoint offset according to outside air temperature (user configurable). Cascade staging up on predefined units partial load value (user configurable).



Heat recovery and free-cooling:

(version: TruVu plant sequencer v2.0) Priority given to units with the option enabled when conditions are met. Setpoint management.



Local Human to Machine Interface (HMI) and remote monitoring (option i-Vu):

HMI with Real-time synoptic / plant and components status / trends / events / secure access. Webserver for remote visualization of the HMI.



Control Carrier chillers and heat pumps with BACnet IP option:

Cascade with time balance and alternation. Faults, alarms and back up management. Maintenance mode and manual operation.



Dry-coolers:

Carrier & non-Carrier. Setpoint configuration. Faults, alarms and back up management. Maintenance mode and manual operation.



Secondary pumps:

Normal/rescue operation with time balance and alternation. Fixed or variable flow with PID regulation on delta pressure. Faults, alarms and back up management. Maintenance mode and manual operation.



Daily and seasonal programming:

Production start linked to BMS schedule. Manual or automatic changeover for heating/cooling mode selection.

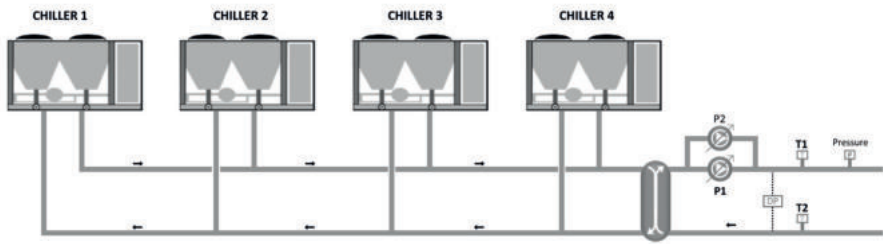


BMS communication:

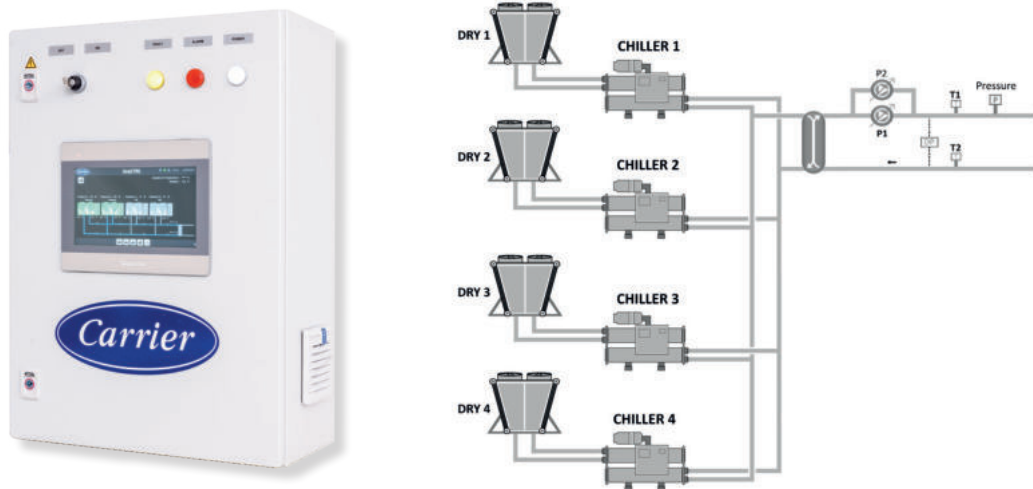
Communication table (read/write access) feedback of all the main operating parameters, faults, alarms.

Hydraulic configuration examples

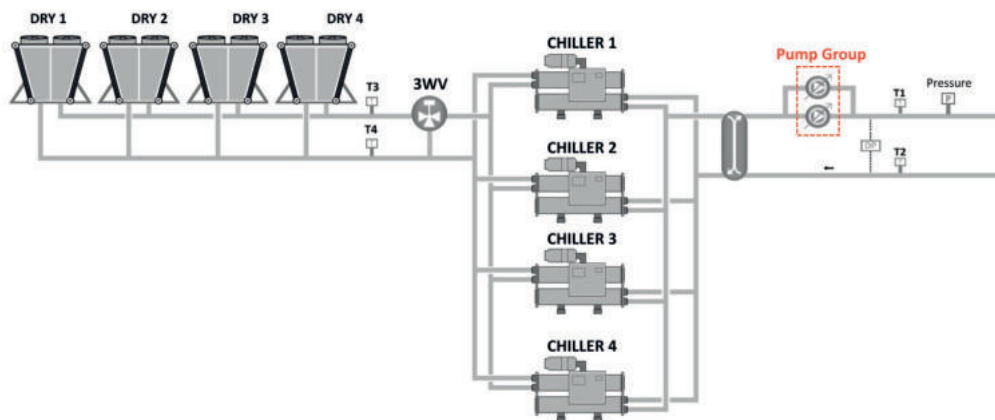
Air-cooled chillers/heat pumps with secondary pumps



Water-cooled chillers/heat pumps with dedicated dry-coolers, and secondary pumps⁽¹⁾



Water-cooled chillers/heat pumps with mutualized dry-coolers, and secondary pumps⁽²⁾



Additional equipment (not included)

- Pressure switch for lack of water detection.
- Modbus RTU for electrical meter - 1 on each chiller/heat pump or 1 common.
- Modbus RTU for flow meter or thermal meter - on leaving or return of network.
- Delta P sensor for variable flow secondary pumps - 0/10V.



www.carrier.com/commercial/en/uk/

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(1) Available for TruVu plant sequencer v2 or above.
 (2) Available for TruVu plant sequencer v3 or above.