

FLCH-7P SERIES, A.1

LARGE-SIZED MODULAR CHILLER

PREMIUM SERIES, AIR COOLED CONDENSER

SINGLE OR DUAL SCREW COMPRESSOR(S)

70-186 TR PER UNIT / 744 TR PER SET 

PREMIUM
SERIES

PROCESS COOLING LINE

The new FLCH-7P: FriconUSA Large-Sized Modular Chiller, 7 Series Premium, air cooled condenser, is designed to meet most of the demands of medium to large range capacity for process cooling. Its flexible innovative design allows the modules to work independently in capacities between 70 to 186 TR or grouped in different combinations of sizes to form one or various sets and meet capacity requirements up to 744 TR per set. The quality, high efficiency up to 11.8 EER and exceptional IPLV, according to AHRI Standard 550/590, ensures our customers reliability, low operating cost and long life of the equipment.

We have two types of Chillers depending on the application for high temperature and medium-low temperature for use with glycol.

The most common applications are for cooling in industrial processes such as: plastic plants (molds, extrusion and blowing), chemical processes, beverage industry, glycol cooling systems, ice rinks, thermal ice energy storage, petroleum and for demanding air conditioning for industrial plants or data center.

Standard ambient operating temperature range: +110°F (+43.3°C) to +40°F (4.4°C)

Extended ambient operating temperature range: +125°F (+51.7°C) to -20°F (-28.9°C)*

*See optional packages.

Application / leaving fluid temperature range:

"H" High Temperature: +50°F (+10°C) to +18°F (-8.0°C)

"M" Medium Temperature: +37°F (+2.6°C) to +5°F (-15.2°C)

STANDARD FEATURES & BENEFITS:

- Bitzer compact screw compressor(s) with one or two separate refrigeration circuits for more reliability.
- Automatic step-less unloader, adjusts the compressor capacity to the required thermal load between 25% 100% for one compressor and 13% 100% for dual compressors, per unit.
- Innovative modular design, aluminum frame with galvanized steel reinforcement, high efficiency condenser with strong structure and aluminum micro-channel coil, less weight and size; reduces transport, assembly and construction costs.
- Built-in 8" Victaulic connection manifold to easily join units and create a set, simplifying installation.
- Eco-friendly; Micro-channel Air cooled condenser coil with reduced internal volume requires, along with the incorporated refrigerant distributor in our innovative, high-efficiency, Direct Expansion (DX) shell-tube evaporator, reduces the refrigerant charge between 60% to 70% compared to Chillers from similar efficiency with flooded evaporator.
- Wide range of applications for water or glycol.
- Quiet, high efficiency, external rotor motor, two speed, AC type axial fans for a better operation.
- Built-in high efficiency, shell-tube, single pass, counter-flow, Direct Expansion (DX) evaporator with efficiency similar to a flooded evaporator but with less refrigerant charge.
- Electronic expansion valve, liquid sight glass and solenoid valve.
- Liquid drier with replaceable core and inlet/outlet ball valve.



STANDARD FEATURES & BENEFITS (CONT.):

- Liquid sub-cooling system (economizer) on each compressor with brazed plate heat exchanger and electronic expansion valve for medium temperature applications increases capacity and efficiency.
- Built-in flow switch.
- Optical oil level sensor.
- Refrigerant: R-134a
- Factory pre-charged and individually tested.
- UL 508A listed built-in electrical control panel.
- Compressor and fans circuit breakers.
- Voltage and phase-loss monitor with protection module for each compressor.
- Control: 208-230V / 1PH / 60HZ
- Power supply voltage 460V / 3PH / 60HZ with single point power connection.
- Electronic Control System; compressor(s) and condenser fans operational management: alarms, measurement of pressure and temperature variables, 132x64 LCD backlit built-in display with 6-button keypad. Alarm management: 3 alarms for compressor(s) (overload, pressure and oil) and 1 overload alarm for condenser fans.
- Adjustable dual pressure control on each compressor.
- Built-in 7" PGD touch screen on main panel door.
- BMS (Building Management System): ModBus protocol for supervisor or HMI (Human Machine Interface).
- 2-year warranty.

STANDARD OPTIONS:

- Different compressor brand.
- Condenser coil with E-coating for greater resistance to corrosion.
- Protective mesh for the condenser.
- EC type fan(s) with variable speed (for 575V a VFD is used).
- Evaporator option:
 - Remote evaporator
- External Hydronic Package includes TEFC type motors and NEMA 3R control panel:
 - 1 recirculation pump
 - 1 recirculation pump with VFD
 - 2 recirculation pumps
 - 2 recirculation pumps with VFD
- Different power supply voltage.

ADDITIONAL OPTIONS:

- VRF (Variable Refrigerant Flow) package to maximize the efficiency and capacity adaptability to the demand:
 - VRF-II*: VFD (Variable Frequency Drive). Infinite capacity control on the lead compressor in each circuit (50~100%).
**Certain limitations apply.*
- CAIP (Compressor Acoustic Insulation Package) for better soundproofing:
 - CAIP-I: Fully enclosed metal compressor box with access door and internal convoluted acoustic foam panel lining.
- Pivoting fan assembly for easy maintenance.
- Refrigerant and oil evacuated for non-hazardous shipping.
- LAOP (Low Ambient Operation Package) required for operation below +40°F:
 - LAOP-I: +110°F (+43.3°C) to +10°F (-12.2°C), Includes: split condenser with variable speed fan on the first fan section and electrical antifreeze heater on the evaporator.
 - LAOP-II: +110°F (+43.3°C) to -20°F (-28.9°C), Includes: same as LAOP-I plus liquid receiver and flooded condenser with head pressure control valve.
 - LAOP-III*: +110°F (+43.3°C) to -35°F (-37.2°C), Includes: same as LAOP-II plus insulated liquid receiver with electric heater, thermally insulated compressor cabin and control panel with ventilated heating.
**Requires CAIP (Compressor Acoustic Insulation Package).*
- HAOP (High Ambient Operation Package) required for operation above +110°F:
 - HAOP-I: +125°F (+51.7°C) to +40°F (4.4°C), Includes: control panel air extractor fan and filter for air intake.
- MDS (Main Disconnect Switch)
- Electronic Control System:
 - BACnet Communication board.
 - Remote LCD display.
 - Remote 7" or 15" touch screen display.
 - Energy Management Module.
 - CHSM (Chiller System Manager) controls the sequence between multiple sets.
- Extended 5-year compressor warranty (U.S. only).

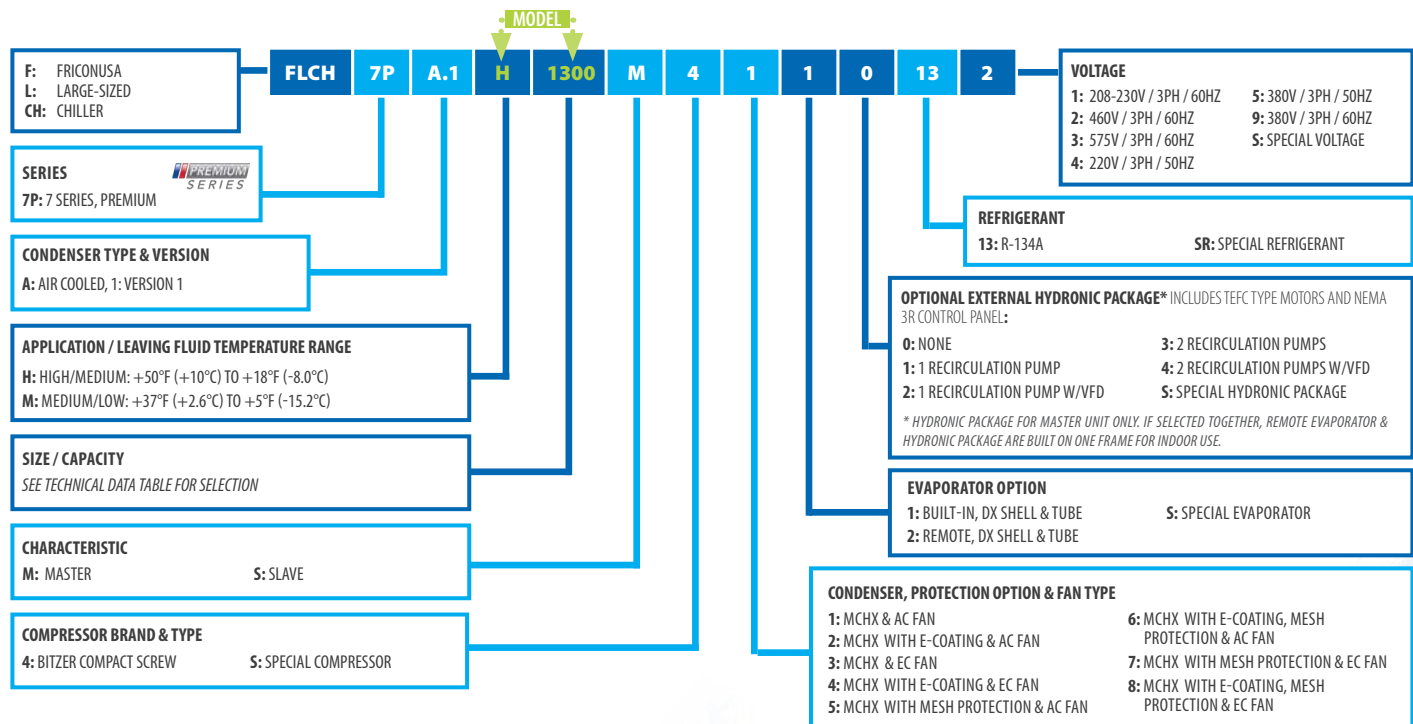


- 1. Compressor(s)
- 2. Micro-channel condenser
- 3. Fans (optional pivoting assembly)
- 4. Victaulic connection manifolds (fluid inlet / outlet)
- 5. Shell-tube evaporator
- 6. Electronic expansion valve
- 7. Liquid drier(s)
- 8. Electrical control panel
- 9. Electronic Control System
- 10. Protective mesh (optional)



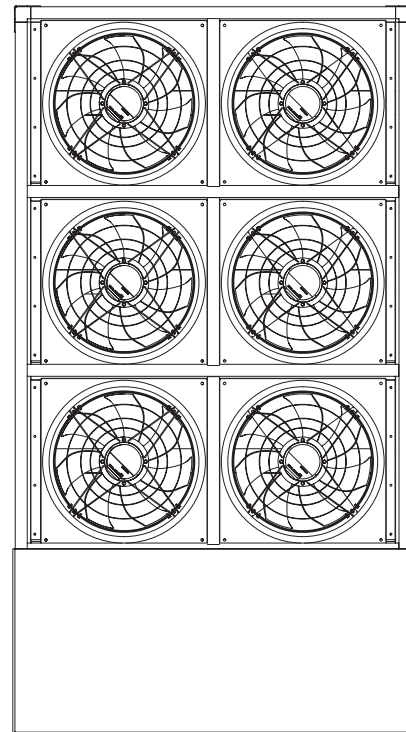
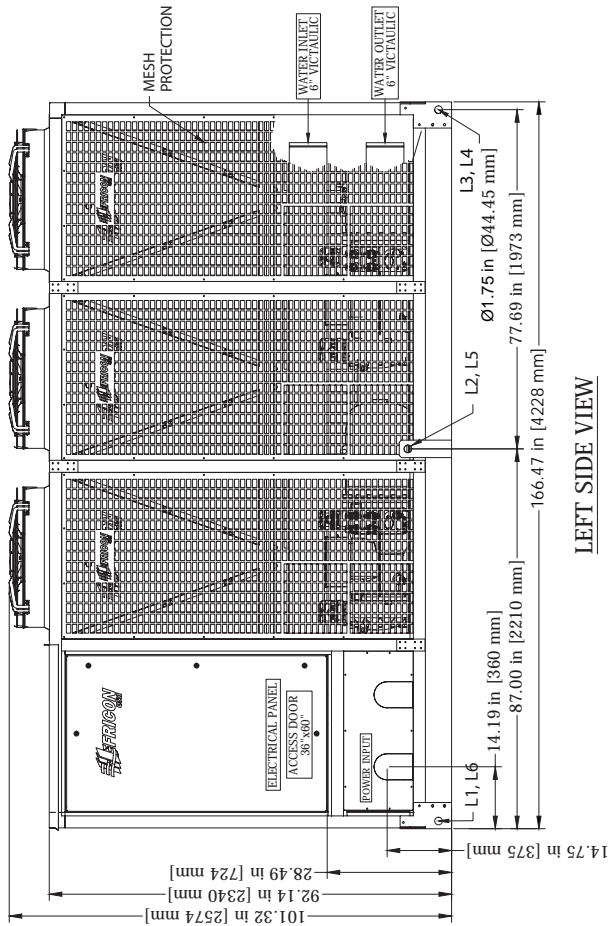
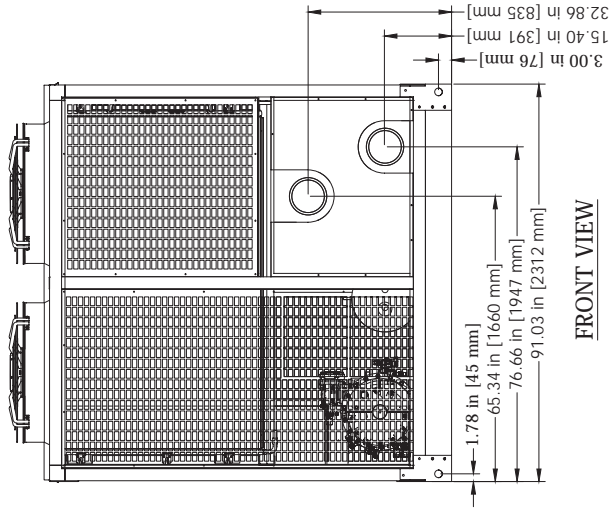
SUBJECT TO CHANGE ACCORDING TO ACCESSORIES/OPTIONS. PLEASE CONSULT THE FACTORY FOR SPECIFIC INFORMATION.

NOMENCLATURE



FRAME TYPE / DRAWING REFERENCE

A) Single or dual screw compressor(s), 6 fans (800mm)

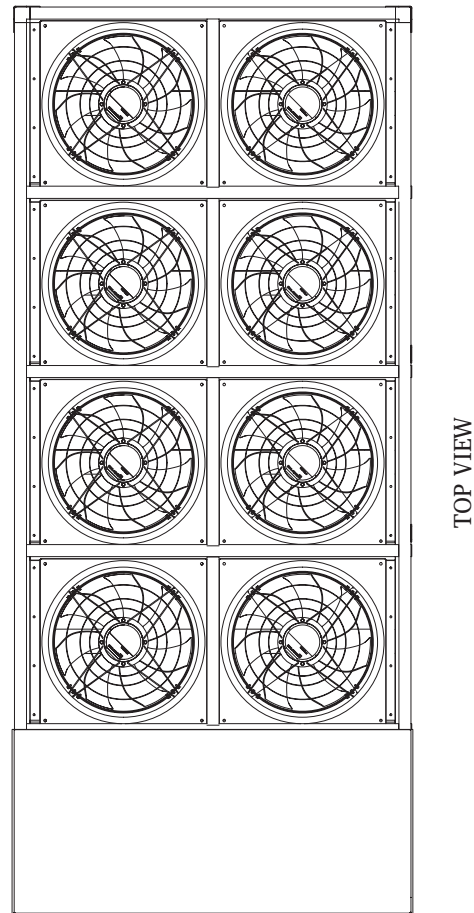
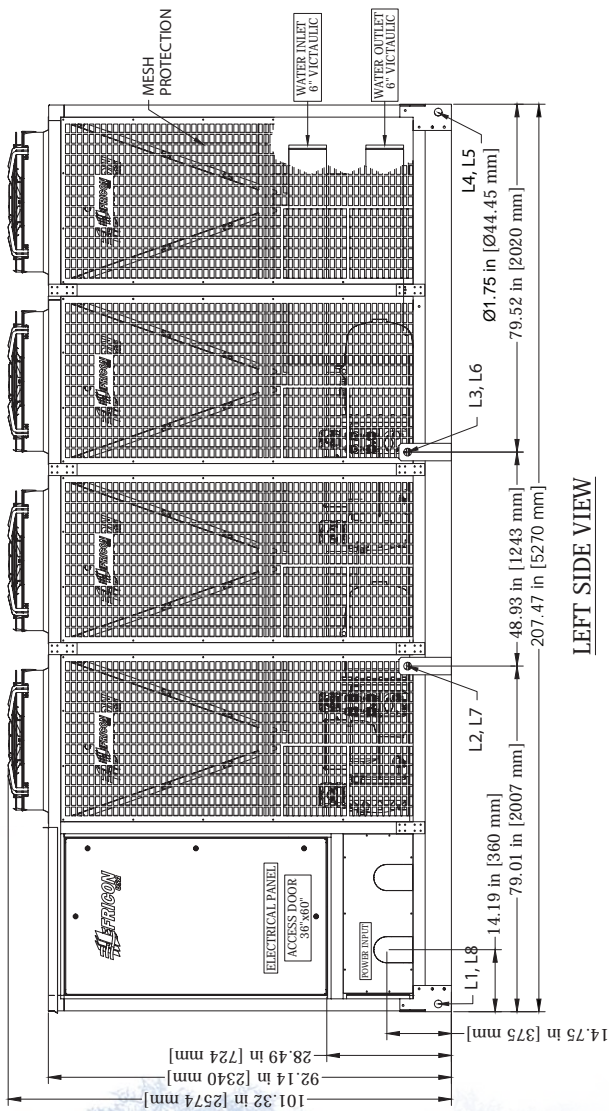
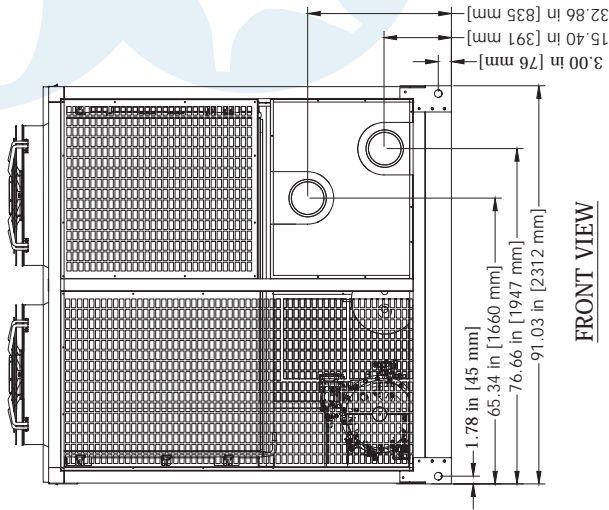


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FRAME TYPE / DRAWING REFERENCE

B) Single or dual screw compressor(s), 7* or 8 fans (800mm)

*The 7th fan is placed centered on the condensation module.

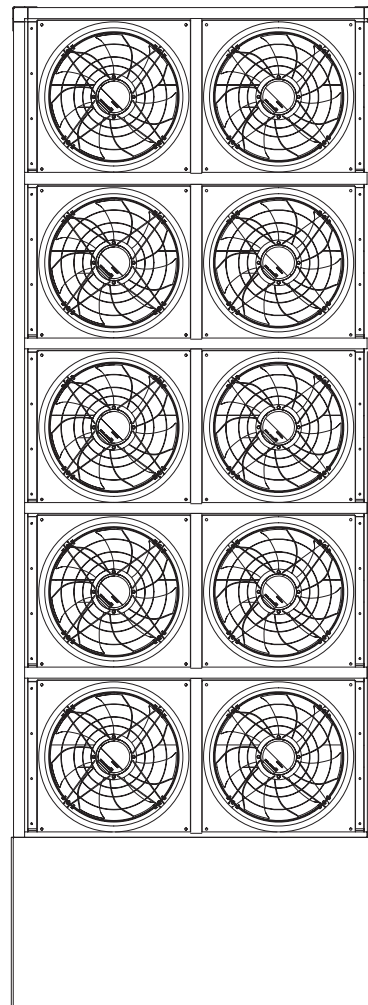
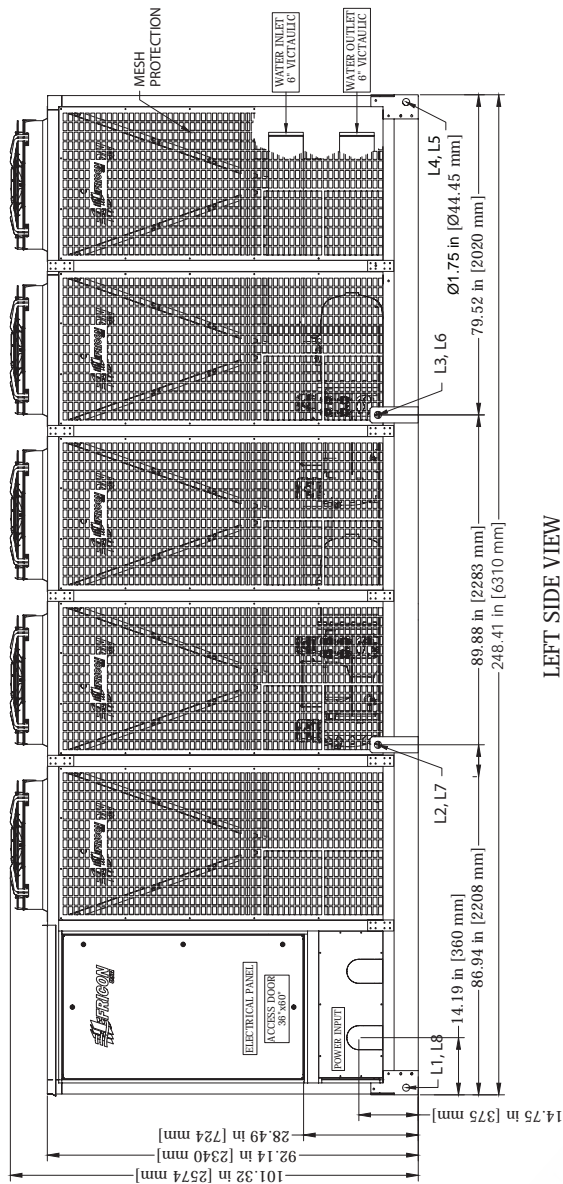
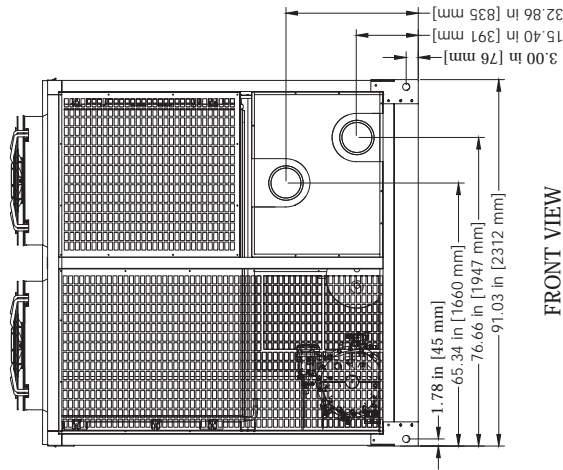


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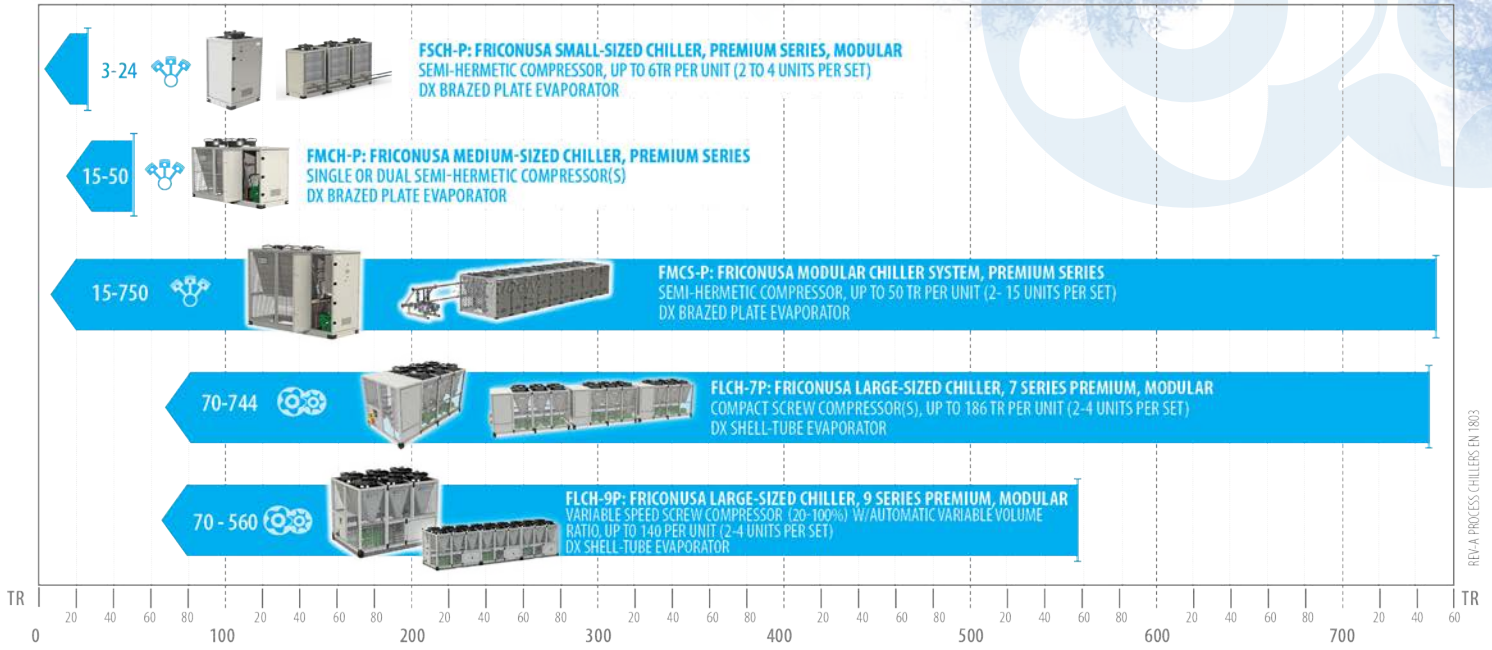
C) Single or dual screw compressor(s), 9* or 10 fans (800mm)

*The 9th fan is placed centered on the condensation module.



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FRICONUSA AIR COOLED CHILLERS FOR PROCESSES



REV-A PROCESS CHILLERS EN 1803

AUTHORIZED DISTRIBUTOR: