
TRANE
Water-Cooled Chillers and Water-to-Water Heat Pumps
With Screw Compressor
CITY

AN INNOVATIVE SOLUTION

- **HFO for Capacities below 400 kW**
- **“Heavy duty” screw technology**
- **Designed to fit tight buildings and restricted spaces**
- **Continuous capacity control**
- **Versatility in application:**
  - ➔ **Comfort**
  - ➔ **Process Cooling**
  - ➔ **Heating**

SUSTAINABLE

R1234ze

0 ODP
Near Zero GWP (<1)

EcoWise™

City chillers with near zero GWP refrigerants are part of the EcoWise™ portfolio of products that are designed to lower their environmental impact with next-generation, low global warming potential (GWP) refrigerants and high-efficiency operation.

The only viable alternative to fast rising cost of HFC's

DESIGN AT A GLANCE

Adaptive Frequency™ Drive

- Industry leading Seasonal Efficiency

→ *Energy bill reduced*

- Eliminates inrush current

→ *No oversizing of electrical components*

→ *Decrease cost of installation*

Controls

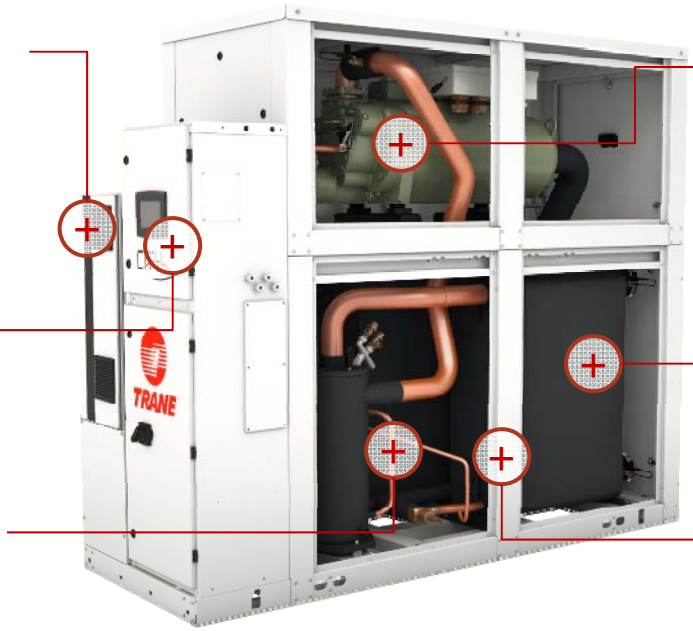
- Fastest controls of the industry
- Safe VPF
- No nuisance trips (Adaptive controls)
- Temperature control within 0.3°C

→ *Efficient, reliable and accurate operation*

Acoustically insulated panels (Optional)

- - 6 dB(A)

→ Low sound emissions



Trane Compressor

- Direct drive, low speed

→ *Excellent Load matching*

→ *Unequaled long lasting Reliability*

Heat Exchangers

- Single Circuit Brazed Plates Heat exchangers

→ *Maximum efficiency*

Compact design

- 920 mm Width only

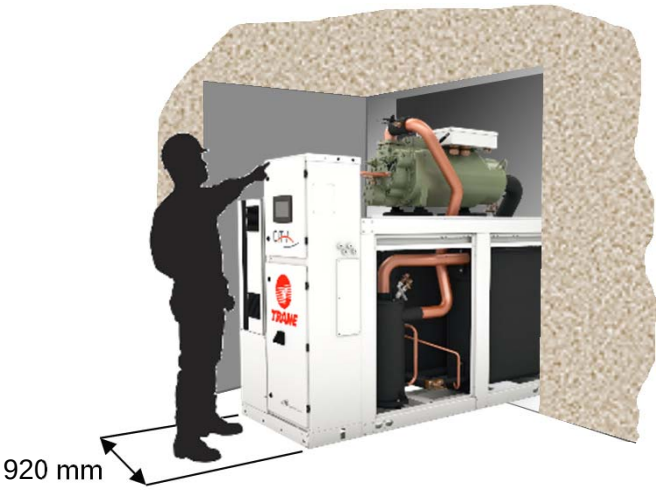
→ Fits standard doors and elevators

→ Can be easily moved

A concentrate of Trane “Expertise”

COMPACT DESIGN

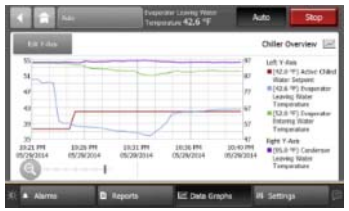
Passes through standard doors

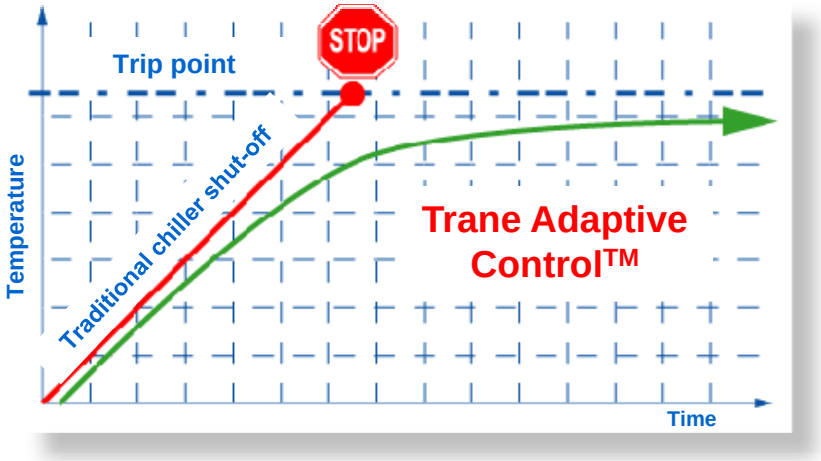


Fits in elevators and Lifts

Optimized for restricted spaces

CONTROLS





Operational effectiveness

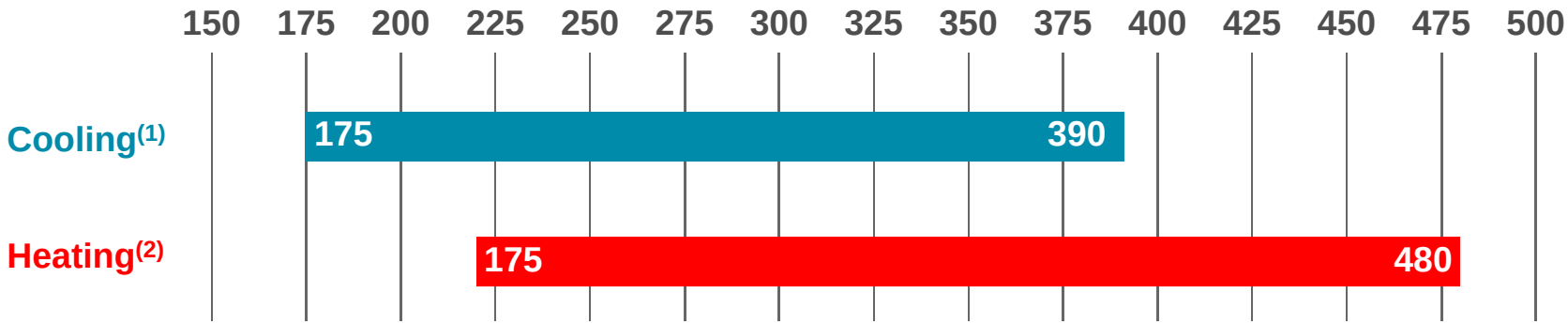
- Industry-leading control algorithms for maximizing both performance and reliability
- Adaptive Control™ to avoid nuisance trips
- Rapid Restart capabilities for maximum uptime
- Data trending
- Active and historic alarm logs
- Standard and custom reports

Intuitive & user friendly interface

- Tracer™ UC800 with TD7 AdaptiView™
- Easy-to-read 7-inch color touch-screen display
- Open-protocol - BACnet®, Modbus or LonTalk
- Trane Intelligent Services (TIS) capable for 24/7 online performance management of your system

Performance, Efficiency and reliability are not options

CAPACITY COVERAGE



Comfort Air Conditioning and Heating
(1)12/7ºC Entering/Leaving Evaporator – 30/35ºC Entering/Leaving Condenser
(2)12/7ºC Entering/Leaving Evaporator – 40/45ºC Entering/Leaving Condenser

Up to 5.1 EER / 6.3 ESEER in Cooling and 6.1 COP in Heating

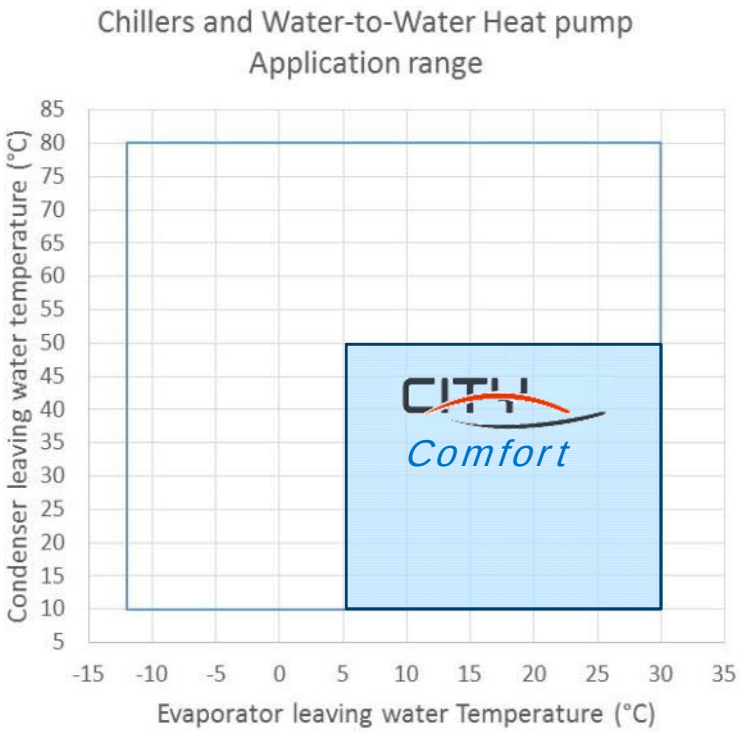
100% SUITABLE FOR EVOLVING NEEDS

Modular and scalable for:

- Easy Capacity addition according to evolution of capacity needs
- Optimized efficiency plant design through partialization of capacity with multiple units

Plan for the future…

VERSATILITY IN APPLICATION



CITH Comfort

Efficiency optimized for moderate comfort applications in cooling or heating up to 50°C, or industrial process applications at positive temperatures


Office Buildings


Hospitality industry

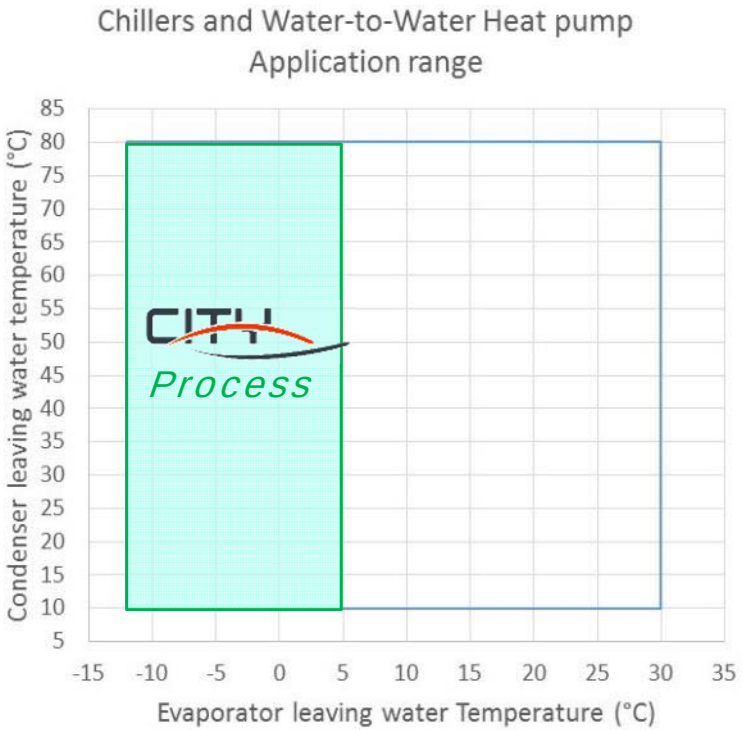

District Cooling/ Heating


Data Centers


Industry

Performance and sustainability at hand for Comfort

VERSATILITY IN APPLICATION



CITH Process

Efficiency optimized for freezing industrial process applications

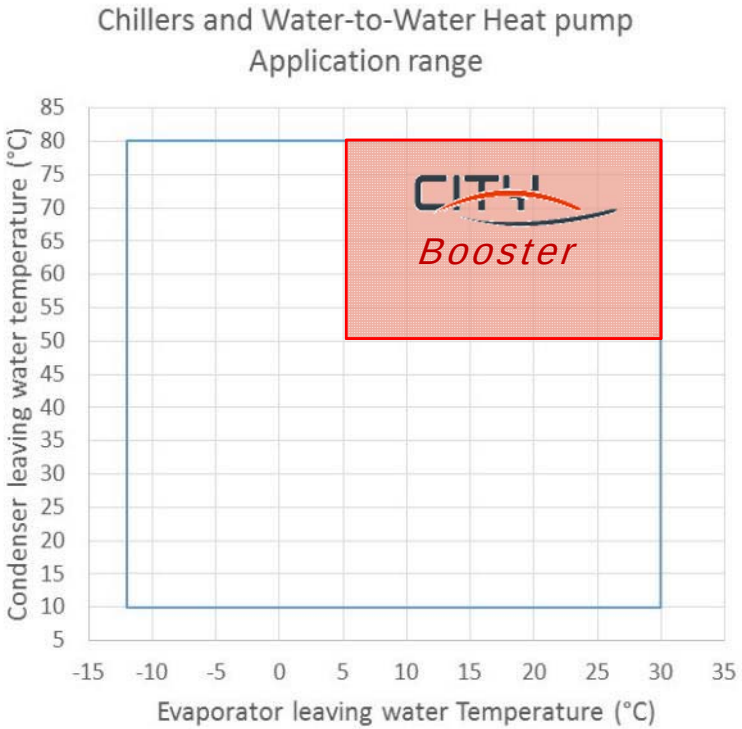
Food & Beverage

Warehouses
Cold Storage

Ice
Rink

Sustainable solution (GWP < 1) with safe operation

VERSATILITY IN APPLICATION



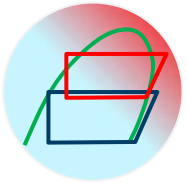
CITH Booster

Operation and Efficiency optimized to deliver High temperature hot water between 50°C and 80°C

High temperature Heating

Sanitary Hot Water

District Heating

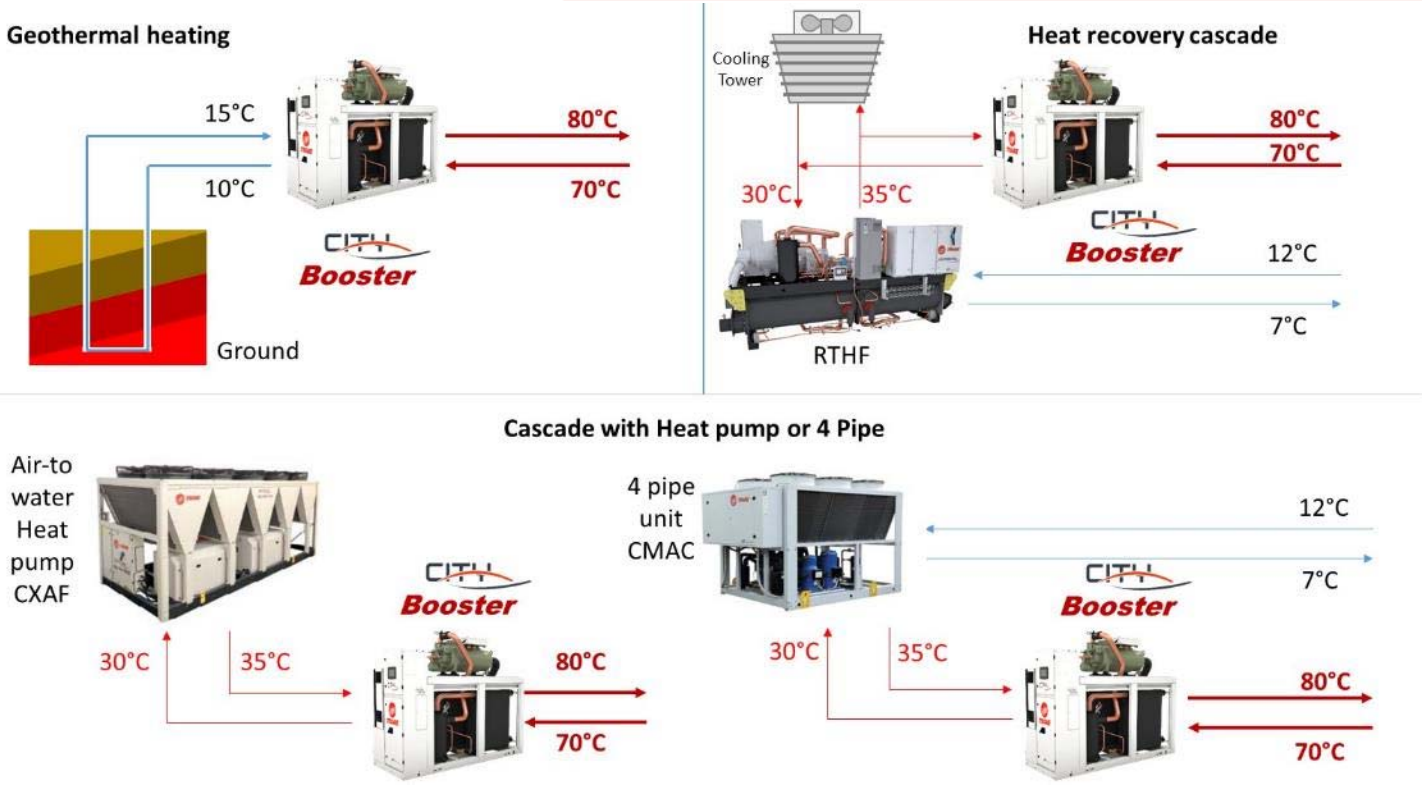


Heat recovery Cascade

A unique opportunity to move to renewable energy

CITY Booster

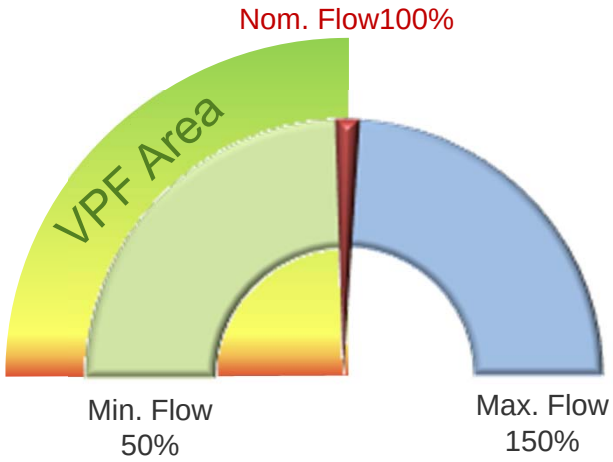
VERSATILITY IN APPLICATION



VARIABLE FLOW COMPATIBILITY

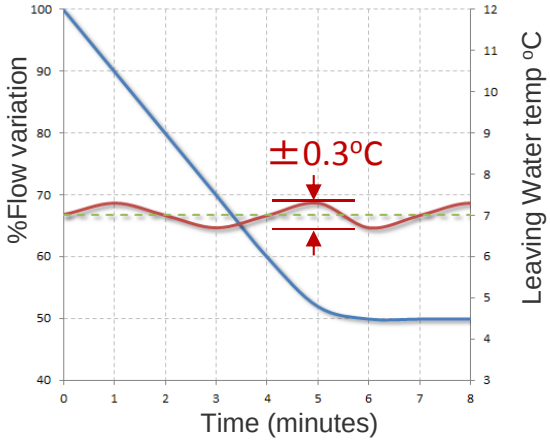
Evaporator

- Designed for Variable Primary Flow (VPF)

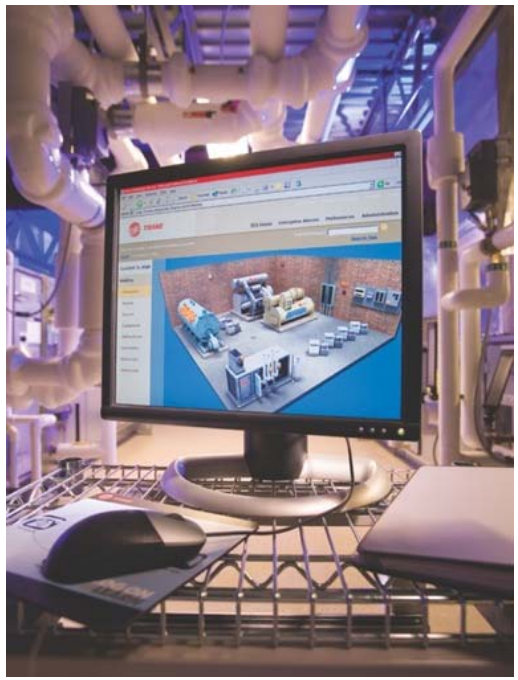


SmartFlow Control

- Algorithm designed to handle variations of 10% per minute
- Maintains water temperature within ±0.3ºC
- Ability to deliver a signal to control variable speed pump



20% Flow reduction = 50% energy savings on pumps



COMMUNICATION

- Compatible with all Trane Building Management Systems and chiller plant controls
- Communication interfaces
  - BACnet™ IP
  - BACnet™ MSTP
  - ModBus™ RTU
  - LonTalk™ (LCI-C)

System optimization through communication

TESTING

Extended testing

- Operation in extreme operating conditions leading to World Class reliability
- Pressure vessels resistance
- Electro-Magnetic compatibility (CE compliance)
- Finite element analysis for structure and components design resistance and robustness
- Acoustics and vibrations testing

Performance and reliability is no coincidence

QUALITY STANDARDS

CE

LLOYD'S REGISTER · LRQA
ISO 14001

LLOYD'S REGISTER · LRQA
ISO 9001

CE compliance

- Pressure Equipment Directive (PED) 97/23/CE
- Machinery Directive (MD) 2006/42/CE
- Low Voltage Directive (LV) 2006/95/CE
- Electromagnetic Compatibility Directive (EMC) 2004/108/CE
- Electrical Machinery Safety Standard EN 60204-1
- Electromagnetic Emission and Immunity Standard EN 61800-3 category C3
- Ecodesign Directive 2009/125/EC

Quality Insurance processes

- ISO9001
- ISO14001

Guaranteed performance of the investment

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TRANE®