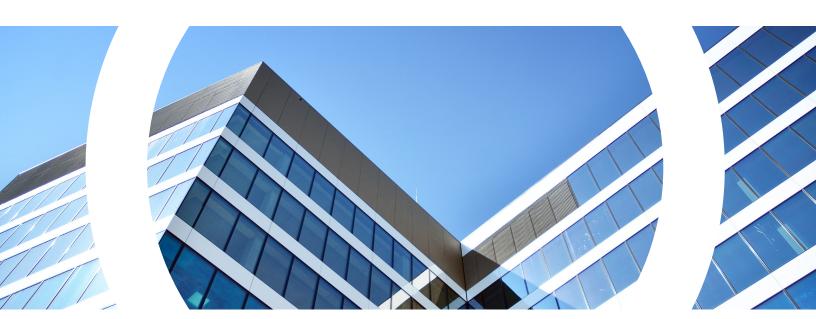
# National Line Card PRODUCTS & SYSTEMS SOLUTIONS





# APPROACH

Our goal is to deliver the outcomes that matter most to you—from more comfortable indoor environments to energy efficient operations. We take a consultative approach to understand your unique business objectives, gather data and information to make informed recommendations, and support you from implementation to validation.

# **SERVICE & SOLUTIONS**

Our capabilities include commercial systems, energy services & solutions, contracting, controls/building automation, rentals and service.



# BUILDING SERVICES

Help reduce operating costs and extend the life of your equipment with planned, reliable, preventative and proactive scheduled maintenance and repair by Trane factory trained technicians.

- Service Agreements
  - Connected Mechanical Service Agreements
- Extended Warranty
- Quoted Repair Product

#### DIGITAL SERVICES

Leverage your data and Trane's analytics to create simple dashboards that can help you to understand performance of your building and its assets. Dashboards can help to find opportunities for increasing efficiency, decreasing energy use, and increasing productivity through system optimization.

- Connected Building Service
- Agreements
- Intelligent Services Agreements

#### **INTELLIGENT SERVICES**

Harness the power of data and domain expertise to optimize your building management and maintenance with real-time data collection, analytics, and consulting services.



#### We use deep expertise and a datadriven approach to support your business and sustainability goals. Through partnership, we work to understand how energy impacts your unique situation, and we optimize energy use with strategies to manage energy storage, consumption, and overall network efficiency to provide

# validated outcomes.

- 24/7/365 local service, engineering expertise and an expansive fleet of rental products. Promptly provides temporary, scalable HVAC and power from standard applications to complex solutions
- Water-Cooled Chillers, Air-Cooled Chillers, Temporary Power, Cooling Towers, Packaged A/C Units, Air Handlers, Portable A/C Units

#### IAQ SERVICES

Today there are more ways than ever to assess and manage indoor air quality, while keeping your goals for cost and sustainability in sight. Trane offers a variety of services, innovative technologies, and proven solutions for measuring and monitoring IAQ. We can help you align with air quality guidelines and recommendations set by the CDC, EPA, and ASHRAE.



#### LIGHTING SOLUTIONS

Control more than half of your building energy use when you integrate Trane lighting solutions into your BAS.\* The Trane difference offers increased energy savings, improved comfort and flexibility, and a higher quality design—all within your budget. Utilizing lighting solutions can enhance productivity, performance, safety, and wellbeing all while significantly contributing to energy and carbon reduction goals.

#### TRANE CREATIVE SOLUTIONS

Customized Trane Equipment Modifications Including: Multizone Replacements, Water-Side Economizer Coils for Air-Cooled Chillers, Packaged Air-Cooled Ice Storage Systems, Acoustical Attenuation

### ENGINEER AND CONTRACTOR RESOURCES

Trane is here to support, enable and educate Engineers and Contractors through comprehensive tools and resources, design and analysis tools, professional education and training, BIM and CAD drawings, and preengineered system solutions.

# traneengineer.com | tranecontractors.com

## ENGINEERED SYSTEMS

- Comprehensive Chilled Water Systems
  - Comprehensive Chiller- Heater Systems
    CoolSense® Integrated Outdoor Systems
  - Intelligent Variable Air Systems
  - Thermal Battery<sup>™</sup> Systems
  - Variable Refrigerant Flow (VRF) Systems
  - · Zoned Rooftop Systems



# **Building Automation**



# Tracer<sup>®</sup> SC+

Scalable building automation system solution with standard, open protocol



Tracer Concierge® Light commercial control system



# **Pivot® Smart Thermostat**

Wi-Fi & Ethernet thermostat for light commercial applications

# Symbio<sup>®</sup>

Application Specific and Programmable Unit Controllers, Integrates with BACnet MSTP, BACnet/IP, BACnet/Zigbee, Lontalk & Modbus Protocols

# Air-Fi<sup>®</sup> Zone Sensors



Flexible and reliable wireless sensors & system communications leveraging Air-Fi® Wireless (BACnet/ Zigbee) technology. Sensors include temperature, humidity, CO<sub>2</sub> & occupancy

# **Building Management Systems**

Tracer<sup>®</sup> Ensemble<sup>®</sup>



Enterprise level building management software for facility professionals



# Tracer<sup>®</sup> Synchrony<sup>®</sup>

Tracer SC+'s built-in web based user interface software for building operators



# Tracer<sup>®</sup> Concierge<sup>®</sup>

Light commercial control system with set-up wizard for installers and simple user interface for nontechnical users



## **BAS Operator and Occupant Apps** Providing mobile access to service

providers, building operators, and



# occupants **IAQ Solutions**

# **Synexis**

Provides a continuous application of DHP that can reduce airborne and surface pathogens, fungi and VOCs

# TCACS



Trane Catalytic Air Cleaning System (TCACS) is an enhanced air filter containing 3 technologies: filtration, germ-killing ultraviolet light, and a photocatalytic oxidation (PCO) process

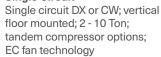
### Awair Omni



An in-room air quality monitoring device that measures T, RH, VOCs, CO<sub>2</sub>, PM2.5, light and noise; can be integrated into Trane BAS systems

# **Trane Precision Cooling**

## Single Circuit



# **Dual Circuit DX**

Dual circuit DX or CW; vertical floor mounted; 5 - 80 Tons; EC fan technology

## **Ceiling Mounted**

R-513A

or R-134A

Ceiling Mounted DX or CW; 1-10 Tons; Independently circuited scroll compressors

# Water-Cooled Portfolio **Centrifugal Chillers**



























# CenTraVac<sup>®</sup> Model CVHE 3-Stage Compressor; Heating and Cooling capable; Free

Cooling; Symbio<sup>®</sup> 800 controller; 150 - 500 Tons; R-514A

#### CenTraVac® Model CVHF 2-Stage Compressor; Heating

and Cooling capable; Free Cooling; Heat recovery operation; Symbio® 800 controller; 325 - 2000 Tons; R-514A

# CenTraVac<sup>®</sup> Model CVHH

Multi-stage; Dual Compressor; Heating and Cooling capable; Free Cooling; Heat recovery operation, Symbio<sup>®</sup> 800 controller; 900 - 2000 Tons; R-1233zd

### CenTraVac<sup>®</sup> Series S<sup>™</sup> Model CVHM Heating and Cooling capable; Free Cooling; Symbio<sup>®</sup> 800

controller; 170 - 390 Tons; R-514A

# CenTraVac<sup>®</sup> Model CDHF

Multi-Stage Dual Compressor; Heating and Cooling capable; Free Cooling; Symbio<sup>®</sup> 800 controller; 1450 - 3950 Tons; R-514A



#### CenTraVac® Model CDHH Multi-stage: Dual Compressor: Heating and Cooling capable; Free Cooling; Symbio<sup>®</sup> 800 controller; 1800 - 4000 Tons; R-1233zd

# Water-Cooled Chillers

Cold Generator<sup>™</sup> Model CGWR Scroll Compressors; 20 - 75 Tons; R-410A

#### Series R<sup>®</sup> Model RTWD

Helical Rotary Compressor; Heating and Cooling capable; Heat recovery operation-dual setpoint; Up to 140°F HW production60 - 250 Tons; R-134a or R-513a

### **Optimus® Model RTHD**

Optional Variable Speed Helical Rotary Compressor; Heating and Cooling capable; 150 - 430 Tons; R-134a; or R-513a for fixed speed only

# **Air-Cooled Chillers**

# Ascend<sup>®</sup> Air-to-Water Heat Pump Model ACX

Energy efficient, all electric heating and cooling; Symbio<sup>®</sup> 800 controller; 140-230 tons cooling; 1500 - 2500 MBh heating; R-410A



#### Ascend<sup>®</sup> Model ACS Scroll Compressor; 140 - 230 Tons; R-410A; Symbio<sup>®</sup> 800 controller

### Ascend<sup>®</sup> Model ACR



Model CGAM



#### Scroll Compressor; 20 - 130 Tons; R-410A; Heat recovery option



# Oil Free Centrifugal; 60 - 440 Tons; R-134a or R-513A

Sintesis<sup>®</sup> Model RTAF





# R-134a or next gen R-513A; Symbio<sup>®</sup> 800 controller Cold Generator<sup>™</sup> Model CCAR Scroll Compressor with

Variable Speed Helical Rotary Compressor; 115 - 520 Tons;

Air-Cooled Condenser; 20 - 70 Tons; R-410A



150 - 42550 Tons; Heating and

HW; 60 Hz, 50 Hz; Symbio<sup>®</sup> 800

controller; uses either R-513A

Cooling capable; Up to 140°F









# **Modular Units**



# Thermafit<sup>™</sup> Model AMC

Air-Cooled Chiller; Free cooling & Heat recovery; 15 - 80 Tons (800 Ton Banks); R-410A



# Thermafit<sup>™</sup> Model AMT

High efficiency Air-Cooled Chiller; Variable speed compressor and fans; Free cooling & heat recovery; 20 - 40 Tons (400 Ton Banks); High efficiency; R-410A



# Thermafit<sup>™</sup> Model MWC

Water-Cooled Chiller; Heat recovery; 15 - 80 Tons (800 Ton Banks); R-410A



# Thermafit<sup>™</sup> Model MWT

High efficiency water-cooled chiller: Variable speed compressor: 20 - 40 Tons (400 Ton Banks); R-410A



#### Thermafit<sup>™</sup> Model AXM Air-to-water heat pump; Energy

efficient; All electric cooling or heating; 30 Ton (300 Ton Banks); R-410A



#### Thermafit<sup>™</sup> Model WXM Water-to-water heat pump; Energy efficient; All electric cooling or heating; 20 - 80 Tons (800 Ton



# Thermafit<sup>™</sup> Model MWS Water-cooled multipipe; Simultaneous heating and cooling;

30 - 60 Tons (90-480 Ton Banks): 450 MBh to 7,200 MBh; R-410A



# Minimod Model TACW

Banks); R-410A

Water-cooled chiller; Oil-free centrifugal; 60 - 135 Tons (1000 Ton Banks); R-134a and R-513A



### Cold Generator<sup>™</sup> Model CICD Water-cooled; Heat Recovery; 20 - 85 Ton (600 ton Arrays)

# **Thermal Energy Storage**



**Thermal Energy Storage Tanks** Optimizes energy usage by storing renewable, excess or inexpensive energy; Reduces peak electric demand charges; Access to demand response programs; Buildings with chilled water systems above 100 cooling tons

# Thermal Battery<sup>™</sup> Air-Cooled **Chiller Plant**



Pre-Engineered, Factory Built Cooling System. Incl: Air-Cooled Chillers, CALMAC® Energy Storage Tanks, Customizable System



#### Thermal Battery<sup>™</sup> Storage Source Heat Pump System

Delivers Heating and Cooling, Supports Electrification. Incl: Waterto-Water and Air-to-Water Heat Pumps, CALMAC<sup>®</sup> Energy Storage Tanks, Trane Controls

Cooling, Gas/Electric, Heat Pump

& Dual-Fuel; Multiple Efficiency

Levels; Up to 16 SEER; 2 - 5 Tons

# Packaged Units

Precedent® 17 Plus

Cooling & Gas/Electric;

Up to 17.5 SEER; 3 - 5 Tons

Impack<sup>®</sup>









Precedent<sup>®</sup> & Precedent<sup>®</sup> with eFlex<sup>™</sup> Cooling, Gas/Electric, Heat Pump & Dual-Fuel; Multiple Efficiency Levels; eFlex Variable Speed Compressor; Up to 23.5 IEER; 3 - 25 Tons

# Voyager<sup>®</sup> 2 with eFlex

Cooling, Gas/Electric (Up to 20.1 IEER), eFlex Variable Speed

# Zoned Rooftop Systems

Pre-designed for small building comfort; Includes Precedent or Voyager rooftop unit, VAV terminal units, Tracer<sup>®</sup> Concierge<sup>™</sup> system control & Air-Fi® wireless controls & sensors; 3 - 25 Tons

#### Voyager 3 Cooling, Gas/Electric; eStage<sup>™</sup>

# IntelliPak<sup>®</sup> 1



Cooling, Gas/Electric, Hot Water, Steam; 20 - 130 Tons; Available with eFlex Variable Speed Compressor; Symbio 800 controller; 40 - 75 Tons

# IntelliPak<sup>®</sup> 2

Cooling, Gas/Electric, Hot Water, Steam: Air-Cooled and Evaporative Condenser; Available with eFlex Variable Speed Compressor; Symbio 800 controller; Tracer<sup>®</sup> SC+ controls; VariTrane<sup>™</sup> VAV terminals; 90 - 150 Tons;



Cooling, Gas/Electric, Hot Water, Steam; 20 - 75 Tons; Avail. with eFlex Variable Speed Compressor; Available connectivity; Symbio 800 controller; Up to 17.8 IEER

IntelliPak<sup>®</sup> 3

# **Self-Contained Units**



IntelliPak® Modular Series Split apart construction, easy transport & installation; Factoryinstalled digital controls: Up to 13.9 EER, 17.9 IEER; Water Cooled 20 - 35 Tons; Remote Air Cooled - 32 Tons

# IntelliPak<sup>®</sup> Signature Series

Up to 14.1 EER, 19.3 IEER; Floor by floor system; Factory-installed digital controls; Air-Cooled 20-60 Tons; Water-cooled 20 - 110 Tons

# Modular Self Contained System



Smallest Footprint on the Market; Water-Cooled System; Variable speed compressors and fans; Full and part load efficiencies; Industry-leading Part Load Efficiency - Up to 20.8 IEER; 40 -80 Tons, cassette construction

# Water-Source Heat Pumps

# Axiom<sup>™</sup> Standard Efficiency **GEH/GEV Models**

Horizontal (0.5 - 15T) or vertical (0.5 - 25T); Quiet operation; Multiple airflow configurations; 0.5 - 25 Tons



Axiom High Efficiency Single-Stage EXH/EXV Models Horizontal or vertical; **Electronically Commuted** Motor (ECM); Rotary or scroll compressor; 0.5 - 6 Tons

# **Axiom High Efficiency**

Two-Stage DXH/DXV Models Horizontal or vertical; 2-Stage compressor; Deluxe sound option for quiet operation; Meets LEED EAc4 requirement; 2 - 6 Tons

# **Axiom Variable Speed** VSH/VSV Models



Horizontal or vertical; eFlex<sup>™</sup> Variable Speed compressors and fans; Single and three phase voltage; 2 - 5 Tons

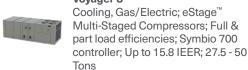
#### **Axiom High Efficiency Console GEC Model** ASHRAE 62 indoor air quality

compliant; Quiet operation; 0.5 - 1.5 Tons











Compressor



# Axiom Vertical Stack **GET Model**

Multiple capacities & cabinet sizes; Available in PSC or ECM motors; Flexible air supply options; Integrated controls; 0.75 - 3 Tons



# Axiom Water-to-Water EXW Model

Co-axial heat exchanger; Rackable modular design; 5, 10, 20 Tons

#### Axiom Rooftop **GWS Model**

Boiler/Tower or Geothermal applications; Multiple configuration options; Microprocessor controls; 3 - 20 Tons

# **Air Handling Units**

**Performance Climate** Changer<sup>®</sup> - Catalog Cost Effective Performance; Compact Footprint; Factory-Engineered, Mounted & Tested Controls; Indoor/Outdoor; Up to 15000 CFM; 2" R-13 Construction

Performance Climate Changer<sup>®</sup> - Semi-custom Leading Efficiency and Casing Performance: Dimensional Flexibility enabling Easy Installation: Indoor/Outdoor; Up to 60000 CFM: up to +/-10 in w.g.; 2", R-13 or 3", R-19 Construction; Factory Engineered, Mounted & Tested Controls



### Performance Climate Changer - Custom (TCFS/TCPA)

Indoor or Outdoor; Up to 200,000 CFM; Up to +/- 12 inches w.g.; Full dimensional flexibility and thermal performance up to R-25



#### **Trane Air Rotation Unit** Indoor or Outdoor; Up to 300

tons and 120,000+ CFM; CW or DX; 2" Foam Insulated panels, factory engineered & mounted controls



Blower Coil Model BCXE:

Indoor; Up to 4000 CFM;

Configurations; ECM Motors,

**CoolSense® Terminal Unit** 

ECM or constant-fan speed;

(available with Air-Fi wireless)

Single Duct Variable Air Volume

Dual Duct Variable Air Volume

Volume Boxes; 200 - 3300 CFM;

Tracer<sup>®</sup> UC400 controller

VariTrane<sup>®</sup> Model VC\*F

Boxes; 25 - 8000 CFM

Boxes; 80 - 8000 CFM

VariTrane® Model V\*\*F

or Series Configuration

VariTrane® Model L\*\*F

Series Configuration

Variable Air Volume Boxes;

100 - 1800 CFM; Parallel or

VariTrane® Model VRRF

Boxes: 25 - 4000 CFM

Round Inlet/Round Outlet

RetroFit Variable Air Volume

Parallel

Fan-Powered Variable Air

VariTrane® Model VDDF

Up to 1300 CFM; Variable speed

Horizontal and Vertical

Multiple Filter Options, Factory-Engineered & Mounted

# **Blower Coil**

Controls.



























Hvdronic & Steam



Model UHWA/UHAA/UHRA/UHXA/ UHEC/UHCA Electric Unit Heaters

Indoor Gas Heating Units Unit Heaters & Duct Furnaces: High Efficiency >95%

# **Split Systems**



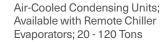
Cooling & Heat Pump; Gas, Electric, or Hot Water Heat; 1.5 - 5 Tons





# RAUJ

CAUJ





Air-Cooled Condensers; 20 - 120 Tons

# **Outdoor Air Solutions**

#### Horizon<sup>™</sup> DOAS



DOAS; Packaged product (DX, Air and Water Cooled); Heat Pump, Gas, and Hot Water; <51F Dew Point capability; ERV; AHRI 920 rated

# HOXX



Up to 100% outdoor air; Packaged product (DX - Gas Heating); >51F Dew Point capability; ERV; AHRI 340/360 certified; ASHRAE 90.1 compliant

# Make-Up Air Gas Heating Units

### Model GSAA



Indoor Gas-Fired Make-Up Air Handlers; Standard & High Efficiency; 100 - 1200 MBH

Model GRAA

Outdoor Gas-Fired Make-Up Air Handlers; 100 - 1200 MBH

# Model AHOA

Packaged Air Handlers; Cooling, Make-Up Air, & Ventilation

# VFD



Trane TR150/TR200 Variable Frequency Drives; 6, 12, 18 Pulse

# For more information visit trane.com/commercial



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit trane.com or tranetechnologies.com.

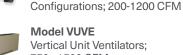
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300 - 1200 CFM Force-Flo<sup>™</sup> Model FF\*B Horizontal or Vertical Cabinet Heater; Concealed or Recessed



Vertical Unit Ventilators: 750 - 1500 CFM



750 - 2000 CFM



Model UHS/UHP Propeller Unit Heaters;

**UniTrane® Model FCV** Vertical High Rise Fan Coil Units Vertical stack fan coil;



