Product Catalog

# Trane Rental Services

## Process Chiller — MTA


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# Table of Contents

# Features and Benefits

## General Description

The Trane Rental TAEevo chiller platform, available in sizes ranging from 3 to 40 tons refrigeration capacity, is an ideal solution for industrial process applications. The chillers are equipped with rugged hermetically sealed scroll compressors for reliability, digital controls for precise temperature control, manual bypass piping for low-flow applications, and an innovative finned evaporator housed in an integral fluid storage tank which resists corrosion and provides adequate fluid volume without the need for an external buffer tank.

## Frame and Structure

The galvanized chiller frame includes forklift pockets and lift points for easy transportation and placement, with the 3-15 ton size ranges equipped with locking swivel caster wheels for additional maneuverability.

Powdercoated access panels resist corrosion, with the compressor compartment separated from the condenser area to allow service accessibility even while the chiller is running.

## Compressors

The TAEevo chiller line features rugged scroll compressors with anti-vibration dampers and built-in protection against reverse-phasing and overcurrent.

The supplied crankcase heaters, powered via main 480 VAC power, prevent oil dilution on startup and should be energized for at least four hours prior to starting the unit.

## Evaporator

The innovative direct expansion evaporator consists of a finned coil immersed within a large fluid storage tank, providing excellent heat transfer, minimal pressure loss, and sufficient fluid volume to operate the chiller in a small chilled water loop without the need for an external buffer tank.

## Condenser

The condenser coil consists of copper tubes with corrugated aluminum fins, providing a large area for heat transfer and allowing operating in high ambient temperature conditions. The condenser coils are protected by removable, washable metal filters for easy cleaning and reduced downtime.

## Fan

The condenser fan assembly consists of axial fans with IPI54 rated fan motors for outdoor operation. For standard ambient models, the fixed-speed fans are staged based on condenser refrigerant pressure. For units equipped with the optional low ambient control option, variable speed fans are controlled based on condenser refrigerant pressure transducers.

## Refrigeration Circuit

The refrigeration circuit is composed of:

- Refrigerant filter-dryer with hygroscopic molecular sieves
- Refrigerant liquid flow sight glass and moisture control
- Thermostatic expansion valve with external equalization
- R-410A refrigerant
- High and low pressure safety switches
- Analog condenser and evaporator refrigerant pressure gauges

# Hydraulic Circuit

The hydraulic circuit is fitted with:

**Pumps**

The fixed-speed centrifugal pumps are equipped with silicon carbide/EPDM seals. 3-15 ton chillers have stainless steel pump and volute, while 20-40 ton chillers have a cast iron volute with stainless steel impeller. Pump drain and vent connections are routed to the chiller exterior to conveniently drain and vent the pump.

**Storage Tank**

The TAEevo evaporator design consists of a cylindrical fluid storage tank with a finned evaporator coil located within. The large fluid capacity of the evaporator provides a thermal buffer to reduce short-cycling, allowing for installation on small chilled water loops without the need for an external buffer tank. The evaporator tank is rated for a maximum pressure of 87 PSIG.

The evaporator includes vent and drain lines routed to the exterior of the chiller for easy filling, draining, and venting of air.

**Hydraulic Bypass**

A low-flow piping bypass allows for manual adjustment of process flow rate in low-flow applications while maintaining minimum flow through the evaporator.

**Water Level Sensor and Flow Switch**

All chillers are equipped with a conductive water level sensor and paddle-type flow switch to prevent operation in a no-flow or airbound condition.

# Electrical

**Electrical Board**

The main control panel is wired in conformance with UL508A and includes an IP54 rating for outdoor operation. Within the main control panel are the following components:

- Unfused power disconnect switch
- Fan, pump, and compressor overcurrent protection
- Phase reversal protection relay
- Controls transformer and fuses
- Customer connection terminal block for alarm status and remote start/stop control (dry contacts only, no voltage to be applied to customer connection terminals).

# Controls

All chillers are controlled by a Dixell IC208CX digital controller with integrated display. The controller supports the following functions and features:

- Precise fluid temperature control and display with setpoint input
- Fixed speed pump control
- Condenser fan staging, including variable speed fan control on units with low ambient controls
- Compressor staging, including balanced starts and hours rotation for chillers with multiple compressors
- Alarm management and display
- Remote, clear language display standard on 40 ton models

# Application Considerations

Trane Rental Services MTA chiller models can operate indoor and outdoor in a wide range of external air temperatures. The minimum and maximum allowable external air temperature limitations for all MTA chiller models range from 20°F to 109°F (-6°C to 42°C). Glycol antifreeze protection may be required if MTA chiller models are exposed to below freezing (32°F or 0°C) external air temperatures to prevent ice build-up and compressor failure.

## Water Flow Limits

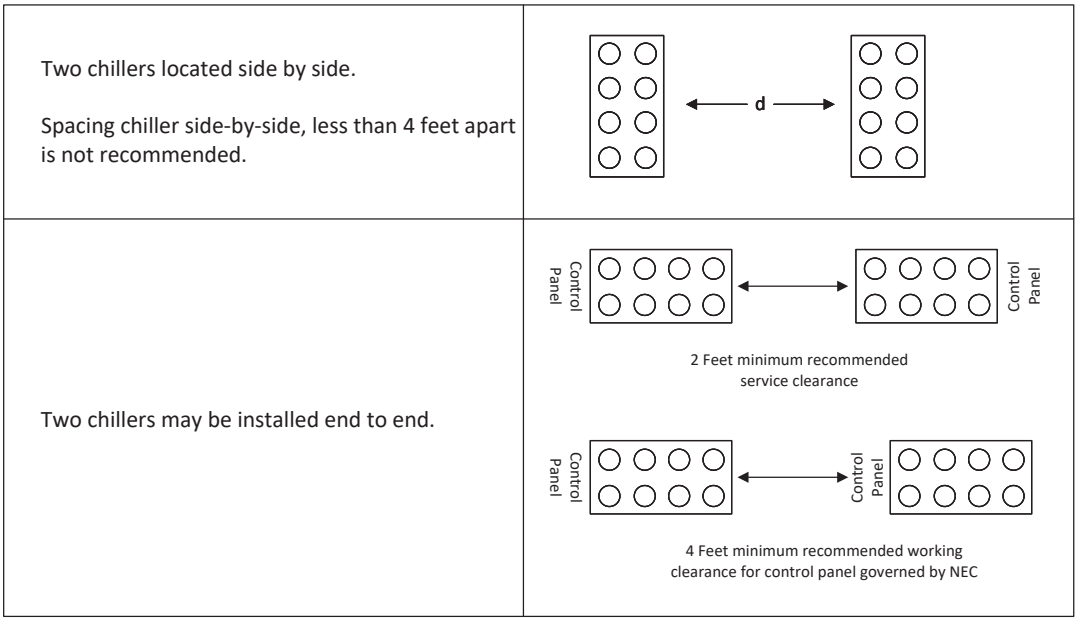
Minimum and maximum flow rates are listed based on unit size in the following pages. Flow rates above or below the allowable flow range will result in adverse evaporator heat transfer, leading to flow and/or low refrigerant pressure diagnostics. In addition, flow rates above the allowable maximum may cause evaporator tube erosion due to excessive fluid velocity.

## Close Space and Clearances

- Allow for unrestricted access to all service points.
- **3 – 15 Ton Models:** A minimum of 4 feet clearance for the front, right, and left sides, while the back only requires 2 feet clearance recommended for maintenance.
- **20 Ton Models:** A minimum of 4 feet clearance for the left and back sides, while the front and right sides require 6.5 feet clearance recommended for maintenance.
- **40 Ton Models:** A minimum of 4 feet clearance for the left and back sides, while the front right side must have at least 6.5 feet and right side requires 8 feet clearance recommended for maintenance.
- Provide sufficient clearance for the opening of control panel doors.
- The chiller should be completely open above the fan deck.
- Ducting individual fans is not recommended.

When installation is a concern due to minimal recirculating air and close spacing, consider the following for more than one chiller:

**Figure 1. Close spacing clearance**




There is no performance effect for any spacing of chillers end to end. Minimum spacing is governed by service clearances and working clearance required by the National Electric Code (NEC) near control panels. A 2-foot clearance is recommended on the end opposite the control panel. Article 110-16 of the

NEC requires 3 to 4 feet of working clearance, on the control panel end depending on the actual installed conditions. Refer to the NEC for a detailed discussion of requirements.

Rental Services recommends utilizing the manufacturer clearance listed in the “Unit Drawings” General Data section for proper airflow and maintenance. The guidelines listed in the table above are the minimum allowable spacing for multiple units installed side-by-side.

# Acoustics

In order to minimize noise and vibration transmission, locate unit away from sound sensitive areas.

Sound levels listed below are determined based on measurements taken in accordance with the standard ISO 3744. Sound pressure is expressed in Table 1 below as the average value obtained in free field on a reflective surface at a distance of 32.8 feet (10 meters) from the longer side of the machine and at height of 1.6 m from the unit support base. Values with tolerance +/- 2 dB. The sound levels refer to operation of the unit under full load in nominal conditions.

**Table 1. Sound data**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSCA0003 | 53.6 | 75 | 75.9 | 72.2 | 78.1 | 73.7 | 66.7 | 58.9 | 82.6 | 54.6 |
| RSCA0005 | 54.7 | 76.1 | 77 | 73.3 | 79.2 | 74.8 | 67.8 | 60 | 83.7 | 55.7 |
| RSCA0007 | 52.9 | 71.7 | 72 | 75 | 80.7 | 77.3 | 71.2 | 60.9 | 83.9 | 55.9 |
| RSCA0010 | 53 | 71.9 | 72.3 | 75.3 | 81 | 77.6 | 71.5 | 61.1 | 84.2 | 56.2 |
| RSCA0015 | 53.6 | 72.7 | 73.1 | 76.1 | 81.8 | 78.4 | 72.2 | 61.7 | 85.1 | 57.1 |
| RSCA0020 | 63.5 | 75.7 | 76.8 | 79 | 85.1 | 81.8 | 75.2 | 62.8 | 88.3 | 60.3 |
| RSCA0040 | 66.7 | 79.4 | 80.6 | 82.9 | 89.2 | 85.8 | 78.9 | 66 | 92.3 | 64.3 |

**Table 2. Sound pressure correction factors**

| Distance (Ft.) | KdB |
|---|---|
| 3.3 | 15 |
| 9.8 | 10 |
| 16.4 | 6 |
| 32.8 | 0 |

To calculate a different distance of the sound pressure level, use the formula in table #’s above: dB(A)L= dB(A)32,8 ft+Kdb.

# Freeze Protection

In ambient temperatures between 32°F (0°C) and -20°F (-28°C), it is recommended that a non-freezing, low temperature, corrosion inhibiting, heat transfer fluid be added to the chilled water system. The solution must be strong enough to provide protection against ice formation at the lowest anticipated ambient temperature. As a result of low chilled water setpoints, at or below 40°F (4°C), glycol or other antifreeze solution must be used. Contact Trane Rental Services Engineering for more information on glycol percentage recommendations.

In addition to using glycol, it is highly recommended all exposed piping and pumps, integral to the chiller, be heat traced and insulated. Follow recommended guidelines by the heat tracing manufacturer. The circulating pump must be allowed to run at all times when the chiller is exposed to freezing ambient temperatures.

# Model Number Description

**Digit 1, 2— Unit Model**

RS = Rental Services

**Digit 3, 4— Unit Type**

CA = Air-Cooled Chiller

**Digit 5, 6, 7, 8— Unit Capacity**

0003 = 3.21 Nominal Tons
0005 = 4.58 Nominal Tons
0007= 7.63 Nominal Tons
0010 = 11.67 Nominal Tons
0015 = 13.26 Nominal Tons
0020 = 22.33 Nominal Tons
0040 = 39.94 Nominal Tons

**Digit 9, 10— Design Sequence**

F0

**Digit 11, 12— Incremental Designator**

AA

# General Data

## 3 Ton Air-Cooled Process Chiller

### Model: MTA TAET031

**Table 3. General data — RSCA0003F0**

| General | RSCA0003F0 |
|---|---|
| Nominal Tonnage[a] | 3.21 |
| Refrigerant | R-410A |
| Refrigerant Charge | 7.28 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 1.5 inch Cam-lock |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits[b] | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT

[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.

[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 4. Electrical data — RSCA0003F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Pin and sleeve |
| SCCR | 10,000 A |
| Fused Disconnect | 30 A |

[a] Cable offered in 50-foot or 100-foot sections with Leviton Series IEC connections.

**Table 5. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 9.7 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 15 A |
| Full Load Amps (FLA) | 8 A |

**Table 6. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 12.1 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 15 A |
| Full Load Amps (FLA) | 10.4 A |

**Notes:**

1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data — RSCA0003F0

**Table 7. Pump data — RSCA0003F0**

| | |
|---|---|
| Horsepower | 1 HP |
| Min Flow | 2.2 gpm @ 103.1 feet |
| Max Flow | 21.1 gpm @ 55 feet |

## Dimensions and Weights

**Table 8. Dimensions and weights — RSCA0003F0**

| | |
|---|---|
| Length | 5 feet 10.75 inches |
| Width | 3 feet 0.13 inches |
| Height | 5 feet 11.63 inches |
| Shipping Weight | 1016 pounds |
| Operating Weight | 1278 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 2 ft x 8.875 in. |
| Fork Pocket Center to Center Distance | 2 feet 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 9. Installed/operating clearances — RSCA0003F0**

| | |
|---|---|
| Front | 4 feet |
| Right Side | 4 feet |
| Left Side | 4 feet |
| Back Side | 2 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 10. Gross cooling capacities - RSCA0003F0**

| MTA TAET031 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 1.95 | 3.1 | 5.22 | 1.87 | 3.28 | 5.03 | 1.72 | 3.68 | 4.62 |
| 35% | 20 | 2.24 | 3.13 | 6.01 | 2.16 | 3.31 | 5.8 | 2 | 3.7 | 5.35 |
| 25% | 25 | 2.58 | 3.16 | 6.65 | 2.49 | 3.34 | 6.41 | 2.3 | 3.73 | 5.94 |
| 25% | 30 | 2.86 | 3.2 | 7.39 | 2.77 | 3.37 | 7.14 | 2.57 | 3.76 | 6.62 |
| 20% | 35 | 3.17 | 3.23 | 8.05 | 3.07 | 3.41 | 7.78 | 2.85 | 3.8 | 7.23 |
| | 40 | 3.53 | 3.28 | 8.44 | 3.42 | 3.46 | 8.16 | 3.18 | 3.84 | 7.59 |
| | 45 | 3.83 | 3.32 | 9.16 | 3.17 | 3.49 | 8.86 | 3.45 | 3.88 | 8.25 |
| | 50 | 4.14 | 3.36 | 9.9 | 4 | 3.54 | 9.58 | 3.73 | 3.93 | 8.93 |
| | 55 | 4.45 | 3.41 | 10.66 | 4.31 | 3.59 | 10.31 | 4.02 | 3.97 | 9.63 |
| | 60 | 4.81 | 3.45 | 11.52 | 4.65 | 3.63 | 11.15 | 4.34 | 4.02 | 10.39 |
| | 65 | 5.19 | 3.51 | 12.45 | 5.03 | 3.69 | 12.05 | 4.7 | 4.08 | 11.27 |
| | 68 | 5.43 | 3.55 | 13.03 | 5.26 | 3.73 | 12.62 | 4.92 | 4.12 | 11.79 |

**Table 10. Gross cooling capacities - RSCA0003F0 (continued)**

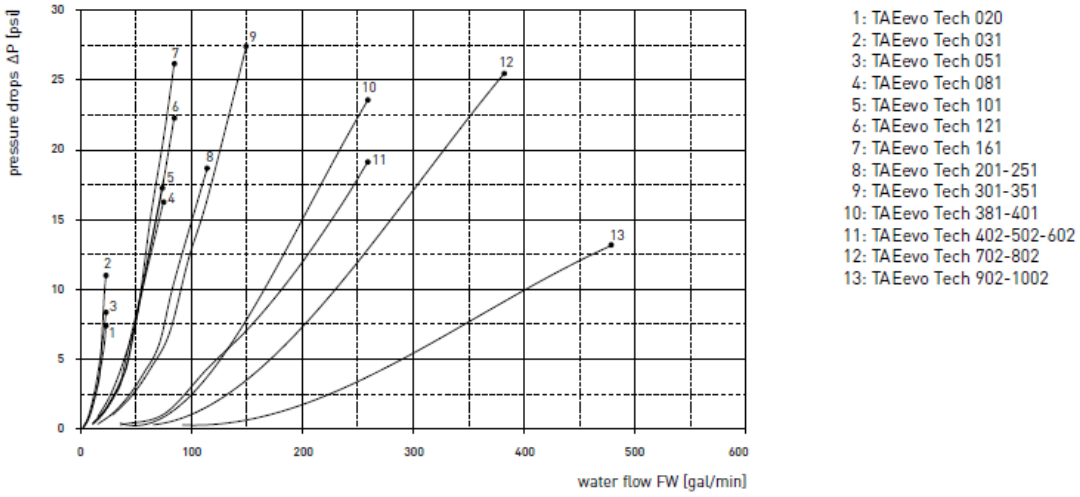
| MTA TAET031 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 1.64 | 3.89 | 4.41 | 1.56 | 4.12 | 4.19 | 1.49 | 4.39 | 3.99 |
| 35% | 20 | 1.91 | 3.91 | 5.12 | 1.83 | 4.14 | 4.89 | 1.74 | 4.41 | 4.67 |
| 25% | 25 | 2.21 | 3.94 | 5.69 | 2.11 | 4.17 | 5.46 | 2.02 | 4.43 | 5.22 |
| 25% | 30 | 2.47 | 3.97 | 6.36 | 2.37 | 4.2 | 6.1 | 2.27 | 4.46 | 5.86 |
| 20% | 35 | 2.74 | 4.01 | 6.95 | 2.64 | 4.23 | 6.68 | 2.53 | 4.49 | 6.42 |
| | 40 | 3.06 | 4.05 | 7.31 | 2.95 | 4.27 | 7.04 | 2.83 | 4.53 | 6.77 |
| | 45 | 3.33 | 4.09 | 7.95 | 3.21 | 4.31 | 7.66 | 3.09 | 4.57 | 7.38 |
| | 50 | 3.6 | 4.13 | 8.61 | 3.47 | 4.35 | 8.3 | 3.35 | 4.61 | 8 |
| | 55 | 3.88 | 4.18 | 9.29 | 3.75 | 4.39 | 8.97 | 3.61 | 4.66 | 8.65 |
| | 60 | 4.19 | 4.23 | 10.03 | 4.04 | 4.45 | 9.68 | 3.91 | 4.71 | 9.36 |
| | 65 | 4.53 | 4.29 | 10.86 | 4.38 | 4.5 | 10.51 | 4.23 | 4.77 | 10.15 |
| | 68 | 4.75 | 4.33 | 11.39 | 4.58 | 4.54 | 10.99 | 4.44 | 4.8 | 10.64 |

| MTA TAET031 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 101 |
| 35% | 20 | 1.65 | 4.7 | 4.43 | 106 |
| 25% | 25 | 1.93 | 4.72 | 4.98 | 109 |
| 25% | 30 | 2.17 | 4.75 | 5.6 | 109 |
| 20% | 35 | 2.43 | 4.78 | 6.15 | 109 |
| | 40 | 2.72 | 4.82 | 6.49 | 109 |
| | 45 | 2.97 | 4.86 | 7.09 | 109 |
| | 50 | 3.22 | 4.9 | 7.7 | 109 |
| | 55 | 3.48 | 4.95 | 8.33 | 109 |
| | 60 | 3.76 | 5 | 9.02 | 108 |
| | 65 | | | | 104 |
| | 68 | | | | 102 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming ΔT = 10°F
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

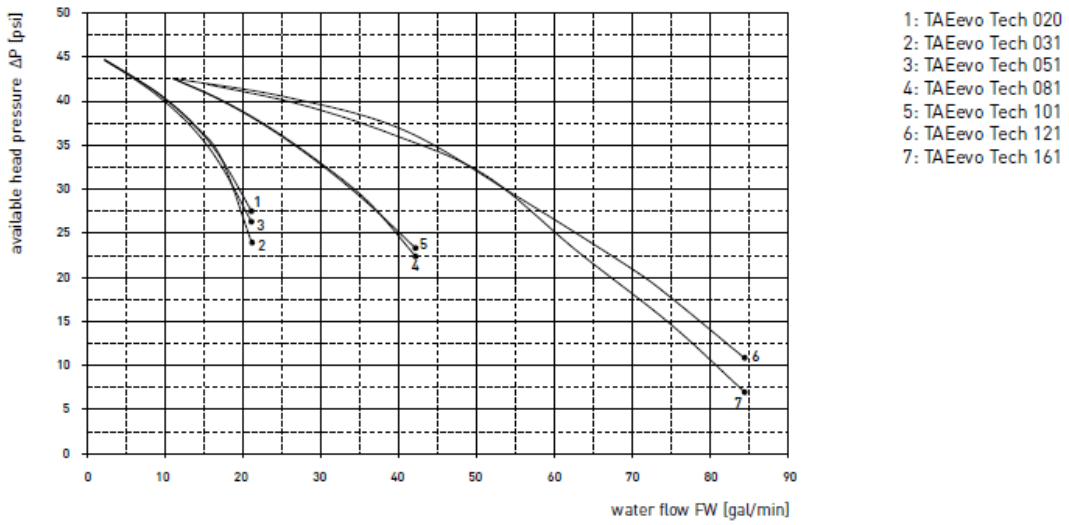
## Evaporator Pressure Drops

**Figure 2. Evaporator pressure drops**



## Pump Curves

**Figure 3. Available head pressure with pump P3**



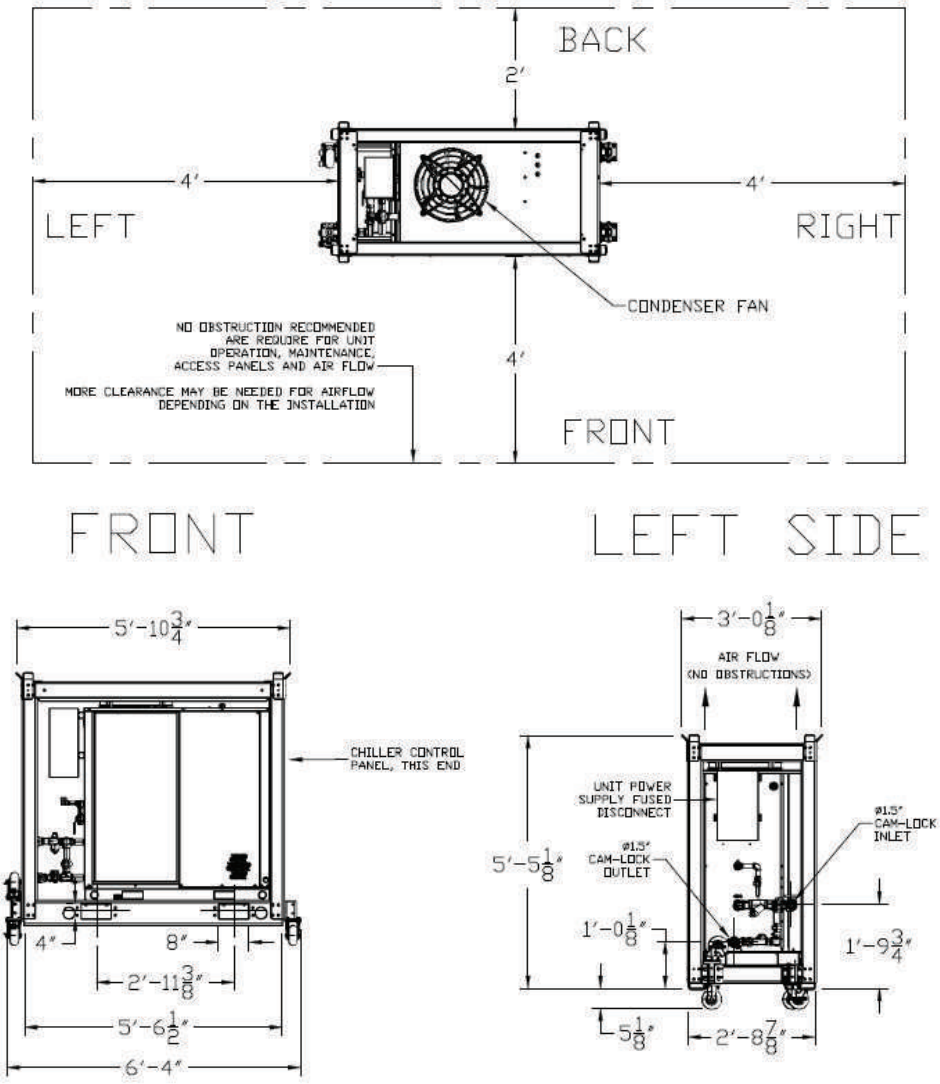

## Sound Data

**Table 11. Sound data — RSCA0003**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSCA0003 | 53.6 | 75 | 75.9 | 72.2 | 78.1 | 73.7 | 66.7 | 58.9 | 82.6 | 54.6 |

## Unit Drawing

**Figure 4. Unit drawing — RSCA0003**



# 5 Ton Air-Cooled Process Chiller

## Model: MTA TAET051

**Table 12. General data — RSCA0005F0**

| General | RSCA0005F0 |
|---|---|
| Nominal Tonnage[a] | 4.58 |
| Refrigerant | R-410A |
| Refrigerant Charge | 5.181 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 1.5 inch Cam-lock |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits[b] | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT
[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.
[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 13. Electrical data — RSCA0005F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Pin and sleeve |
| SCCR | 10,000 A |
| Fused Disconnect | 30 A |

[a] Cable offered in 50-foot or 100-foot sections with Leviton Series IEC connections.

**Table 14. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 14.1 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 25 A |
| Full Load Amps (FLA) | 11.6 A |

**Table 15. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 19.5 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 25 A |
| Full Load Amps (FLA) | 17 A |

**Notes:**
1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 16. Pump data — RSCA0005F0**

| | |
|---|---|
| Horsepower | 1 HP |
| Min Flow | 2.2 gpm @ 103.1 feet |
| Max Flow | 21.1 gpm @ 55 feet |

## Dimensions and Weights

**Table 17. Dimensions and weights — RSCA0005F0**

| | |
|---|---|
| Length | 5 feet 10.75 inches |
| Width | 3 feet 0.13 inches |
| Height | 5 feet 11.63 inches |
| Shipping Weight | 1056 pounds |
| Operating Weight | 1318 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 2 ft 8.875 in. |
| Fork Pocket Center to Center Distance | 2 feet 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 18. Installed/operating clearances — RSCA0005F0**

| | |
|---|---|
| Front | 4 feet |
| Right Side | 4 feet |
| Left Side | 4 feet |
| Back Side | 2 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 19. Gross cooling capacites — RSCA0005F0**

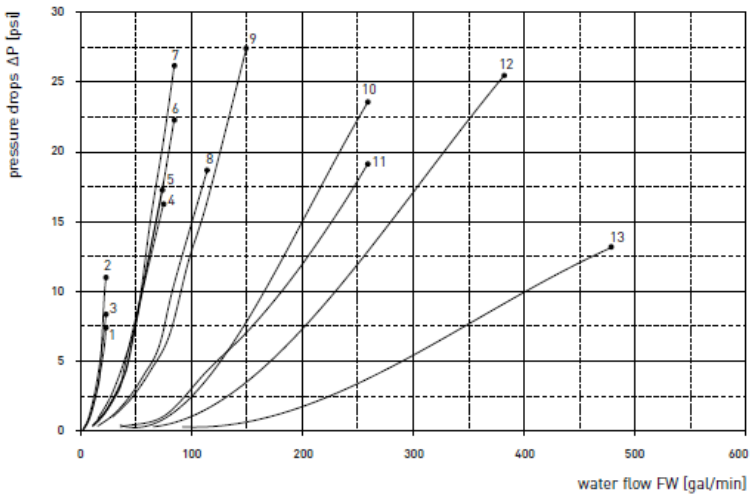
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 2.86 | 4.04 | 7.67 | 2.76 | 4.3 | 7.4 | 2.55 | 4.87 | 6.83 |
| 35% | 20 | 3.25 | 4.11 | 8.72 | 3.14 | 4.37 | 8.42 | 2.91 | 4.96 | 7.8 |
| 25% | 25 | 3.72 | 4.2 | 9.59 | 3.59 | 4.46 | 9.27 | 3.34 | 5.05 | 8.61 |
| 25% | 30 | 4.1 | 4.27 | 10.58 | 3.97 | 4.54 | 10.23 | 3.69 | 5.13 | 9.53 |
| 20% | 35 | 4.53 | 4.35 | 11.48 | 4.38 | 4.63 | 11.1 | 4.08 | 5.23 | 10.35 |
| | 40 | 5.04 | 4.46 | 12.05 | 4.88 | 4.73 | 11.66 | 4.55 | 5.34 | 10.87 |
| | 45 | 5.44 | 4.55 | 13.01 | 5.27 | 4.83 | 12.59 | 4.92 | 5.44 | 11.76 |
| | 50 | 5.87 | 4.64 | 14.04 | 5.68 | 4.92 | 13.59 | 5.3 | 5.54 | 12.68 |
| | 55 | 6.3 | 4.75 | 15.08 | 6.1 | 5.03 | 14.6 | 5.69 | 5.66 | 13.63 |
| | 60 | 6.78 | 4.86 | 16.26 | 6.56 | 5.15 | 15.73 | 6.13 | 5.79 | 14.68 |
| | 65 | 7.32 | 5.01 | 17.55 | 7.08 | 5.3 | 16.99 | 6.62 | 5.94 | 15.87 |
| | 68 | 7.65 | 5.1 | 18.36 | 7.41 | 5.4 | 17.77 | 6.92 | 6.04 | 16.6 |
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 2.44 | 5.19 | 6.55 | 2.33 | 5.53 | 6.26 | | | |
| 35% | 20 | 2.8 | 5.28 | 7.5 | 2.68 | 5.61 | 7.19 | 2.57 | 6.01 | 6.88 |
| 25% | 25 | 3.21 | 5.37 | 8.28 | 3.08 | 5.71 | 7.96 | 2.96 | 6.11 | 7.64 |
| 25% | 30 | 3.56 | 5.46 | 9.17 | 3.42 | 5.79 | 8.82 | 3.29 | 6.19 | 8.48 |
| 20% | 35 | 3.93 | 5.55 | 9.97 | 3.79 | 5.88 | 9.6 | 3.65 | 6.29 | 9.24 |
| | 40 | 4.39 | 5.67 | 10.48 | 4.23 | 6 | 10.1 | 4.07 | 6.4 | 9.73 |
| | 45 | 4.75 | 5.76 | 11.35 | 4.58 | 6.09 | 10.94 | 4.41 | 6.5 | 10.55 |
| | 50 | 5.11 | 5.87 | 12.23 | 4.93 | 6.21 | 11.79 | 4.75 | 6.62 | 11.38 |
| | 55 | 5.5 | 5.98 | 13.16 | 5.31 | 6.31 | 12.72 | 5.12 | 6.73 | 12.26 |
| | 60 | 5.92 | 6.12 | 14.18 | 5.72 | 6.45 | 13.7 | 5.52 | 6.86 | 13.24 |
| | 65 | 6.39 | 6.27 | 15.33 | 6.18 | 6.59 | 14.83 | 5.96 | 7.02 | 14.3 |
| | 68 | 6.69 | 6.37 | 16.05 | 6.46 | 6.69 | 15.5 | 6.25 | 7.11 | 14.98 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 98 |
| 35% | 20 | | | | 101 |
| 25% | 25 | 2.83 | 6.55 | 7.3 | 106 |
| 25% | 30 | 3.15 | 6.63 | 8.13 | 109 |
| 20% | 35 | 3.5 | 6.73 | 8.87 | 109 |
| | 40 | 3.91 | 6.85 | 9.34 | 109 |
| | 45 | 4.24 | 6.95 | 10.15 | 109 |
| | 50 | 4.58 | 7.05 | 10.96 | 109 |
| | 55 | 4.93 | 7.17 | 11.81 | 109 |
| | 60 | | | | 105 |
| | 65 | | | | 102 |
| | 68 | | | | 100 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming ΔT = 10°F
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

## Evaporator Pressure Drops

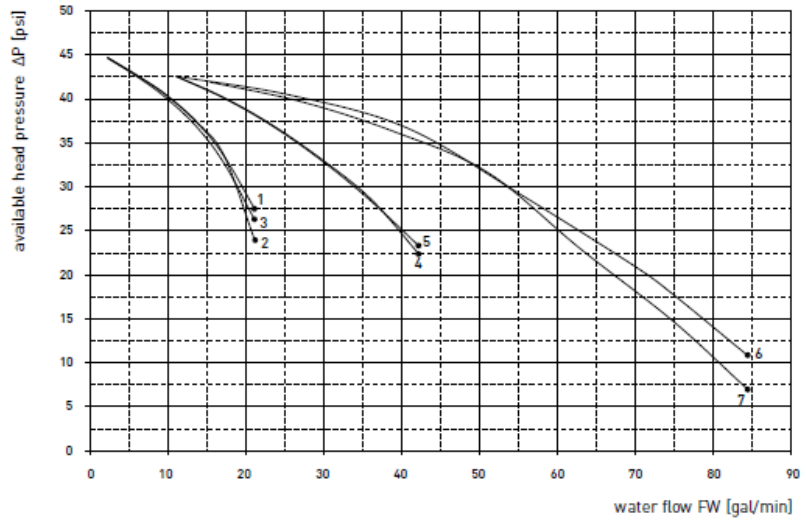
**Figure 5. Evaporator pressure drops**




1: TAEevo Tech 020
2: TAEevo Tech 031
3: TAEevo Tech 051
4: TAEevo Tech 081
5: TAEevo Tech 101
6: TAEevo Tech 121
7: TAEevo Tech 161
8: TAEevo Tech 201-251
9: TAEevo Tech 301-351
10: TAEevo Tech 381-401
11: TAEevo Tech 402-502-602
12: TAEevo Tech 702-802
13: TAEevo Tech 902-1002

## Pump Curves

**Figure 6. Available head pressure with pump P3**




1: TAEevo Tech 020
2: TAEevo Tech 031
3: TAEevo Tech 051
4: TAEevo Tech 081
5: TAEevo Tech 101
6: TAEevo Tech 121
7: TAEevo Tech 161

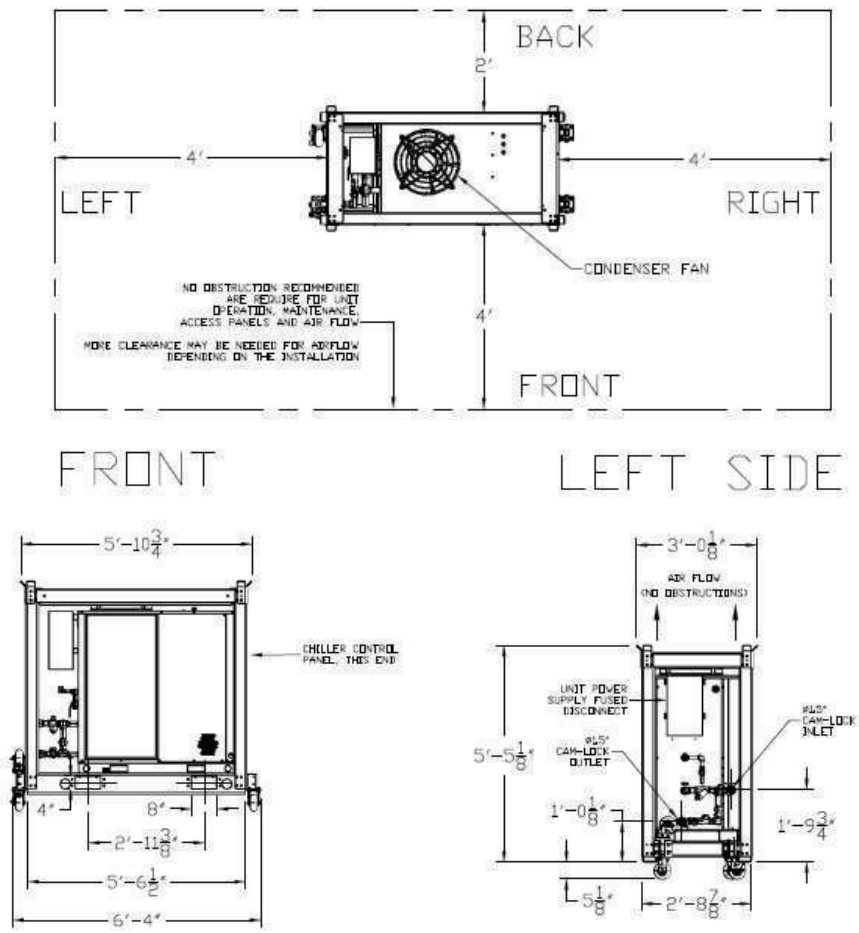
## Sound Data

**Table 20. Sound data — RSCA0005F0**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0005 | 54.7 | 76.1 | 77 | 73.3 | 79.2 | 74.8 | 67.8 | 60 | 83.7 | 55.7 |

## Unit Drawing

**Figure 7. Unit drawing — RSCA0005**



# 7 Ton Air-Cooled Process Chiller

## Model: MTA TAET081

**Table 21. General data — RSCA0007F0**

| General | RSCA0007F0 |
|---|---|
| Nominal Tonnage[a] | 7.63 |
| Refrigerant | R-410A |
| Refrigerant Charge | 10.582 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 1.5 inch Cam-lock |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT

[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.

[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 22. Electrical data — RSCA0007F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Pin and sleeve |
| SCCR | 10,000 A |
| Fused Disconnect | 60 A |

[a] Cable offered in 50-foot or 100-foot sections with Leviton Series IEC connections.

**Table 23. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 23.6 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 40 A |
| Full Load Amps (FLA) | 19.3 A |

**Table 24. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 26.7 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 40 A |
| Full Load Amps (FLA) | 22.4 A |

**Notes:**

1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 25. Pump data — RSCA0007F0**

| | |
|---|---|
| Horsepower | 1 HP |
| Min Flow | 11 gpm @ 98.5 feet |
| Max Flow | 42.3 gpm @ 51.6 feet |

## Dimensions and Weights

**Table 26. Dimensions and weights — RSCA0007F0**

| | |
|---|---|
| Length | 8 feet 3.88 inches |
| Width | 3 feet 4.13 inches |
| Height | 6 feet 3.38 inches |
| Shipping Weight | 1416 pounds |
| Operating Weight | 1733 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 3 ft 0.75 in. |
| Fork Pocket Center to Center Distance | 2 feet 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 27. Installed/operating clearances — RSCA0007F0**

| | |
|---|---|
| Front | 4 feet |
| Right Side | 4 feet |
| Left Side | 4 feet |
| Back Side | 2 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 28. Gross cooling capacities — RSCA0007F0**

| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 5.33 | 6.92 | 14.29 | 5.14 | 7.3 | 13.78 | 4.75 | 8.13 | 12.73 |
| 35% | 20 | 5.84 | 7.03 | 15.65 | 5.64 | 7.41 | 15.11 | 5.23 | 8.24 | 14.02 |
| 25% | 25 | 6.46 | 7.16 | 16.68 | 6.25 | 7.53 | 16.13 | 5.81 | 8.38 | 14.99 |
| 25% | 30 | 7.03 | 7.27 | 18.12 | 6.81 | 7.66 | 17.55 | 6.35 | 8.49 | 16.36 |
| 20% | 35 | 7.65 | 7.41 | 19.4 | 7.41 | 7.8 | 18.79 | 6.92 | 8.64 | 17.54 |
| | 40 | 8.39 | 7.59 | 20.05 | 8.13 | 7.98 | 19.43 | 7.6 | 8.82 | 18.16 |
| | 45 | 9.01 | 7.75 | 21.54 | 8.73 | 8.15 | 20.86 | 8.17 | 8.99 | 19.53 |
| | 50 | 9.64 | 7.93 | 23.06 | 9.34 | 8.32 | 22.35 | 8.73 | 9.18 | 20.88 |
| | 55 | 10.28 | 8.11 | 24.62 | 9.96 | 8.51 | 23.86 | 9.33 | 9.38 | 22.33 |
| | 60 | 10.94 | 8.34 | 26.21 | 10.62 | 8.73 | 25.44 | 9.94 | 9.6 | 23.82 |
| | 65 | 11.75 | 8.63 | 28.17 | 11.39 | 9.03 | 27.31 | 10.67 | 9.91 | 25.58 |
| | 68 | 12.24 | 8.82 | 29.36 | 11.87 | 9.23 | 28.47 | 11.12 | 10.11 | 26.68 |

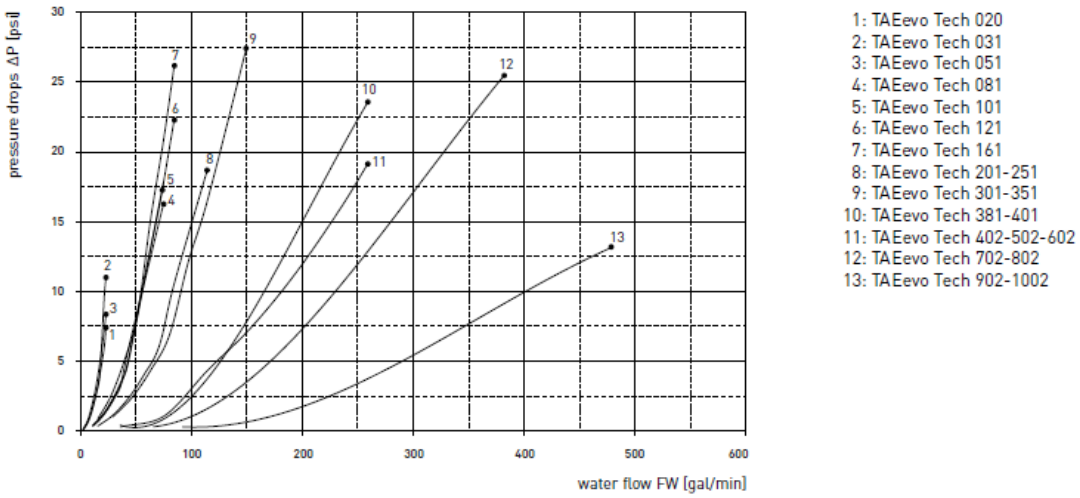
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 4.54 | 8.58 | 12.19 | 4.34 | 9.05 | 11.63 | | | |
| 35% | 20 | 5.02 | 8.69 | 13.45 | 4.81 | 9.16 | 12.88 | 4.59 | 9.73 | 12.3 |
| 25% | 25 | 5.59 | 8.83 | 14.42 | 5.36 | 9.3 | 13.83 | 5.14 | 9.87 | 13.25 |
| 25% | 30 | 6.1 | 8.95 | 15.73 | 5.87 | 9.42 | 15.13 | 5.64 | 9.99 | 14.53 |
| 20% | 35 | 6.68 | 9.09 | 16.92 | 6.43 | 9.55 | 16.3 | 6.18 | 10.13 | 15.67 |
| | 40 | 7.34 | 9.27 | 17.53 | 7.08 | 9.73 | 16.91 | 6.81 | 10.32 | 16.28 |
| | 45 | 7.89 | 9.44 | 18.87 | 7.62 | 9.9 | 18.22 | 7.36 | 10.47 | 17.59 |
| | 50 | 8.46 | 9.63 | 20.23 | 8.16 | 10.09 | 19.53 | 7.88 | 10.67 | 18.86 |
| | 55 | 9.01 | 9.84 | 21.58 | 8.72 | 10.29 | 20.87 | 8.43 | 10.87 | 20.18 |
| | 60 | 9.62 | 10.05 | 23.05 | 9.31 | 10.51 | 22.3 | 9 | 11.09 | 21.57 |
| | 65 | 10.34 | 10.35 | 24.79 | 10.01 | 10.8 | 24 | 9.69 | 11.39 | 23.23 |
| | 68 | 10.76 | 10.56 | 25.83 | 10.44 | 11 | 25.04 | 10.1 | 11.59 | 24.24 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 100 |
| 35% | 20 | | | | 102 |
| 25% | 25 | 4.9 | 10.49 | 12.64 | 106 |
| 25% | 30 | 5.39 | 10.61 | 13.9 | 109 |
| 20% | 35 | 5.92 | 10.76 | 15.02 | 109 |
| | 40 | 6.55 | 10.94 | 15.63 | 109 |
| | 45 | 7.08 | 11.1 | 16.93 | 109 |
| | 50 | 7.61 | 11.29 | 18.2 | 109 |
| | 55 | 8.14 | 11.49 | 19.48 | 109 |
| | 60 | 8.68 | 11.72 | 20.81 | 108 |
| | 65 | | | | 104 |
| | 68 | | | | 102 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming $\Delta T = 10°F$
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

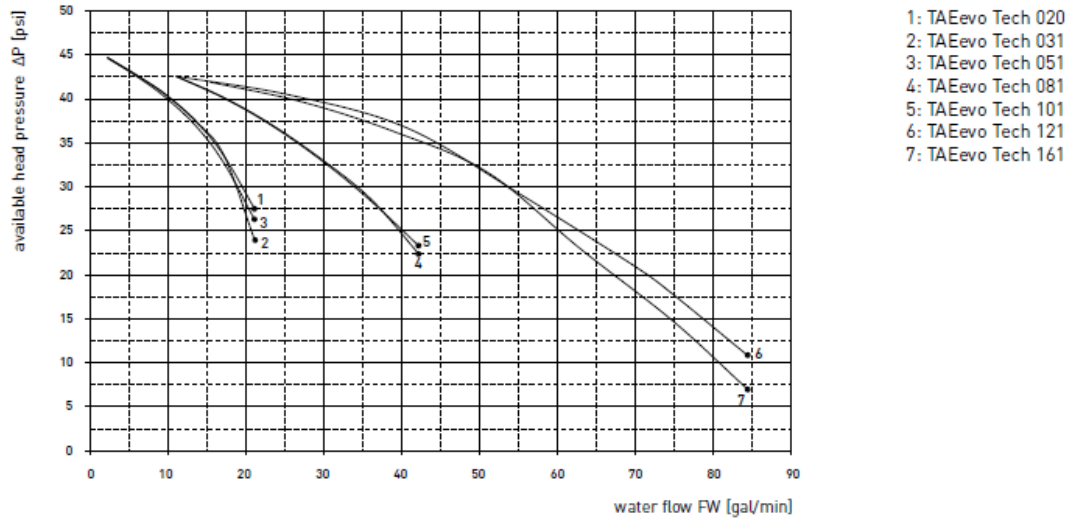
## Evaporator Pressure Drops

**Figure 8. Evaporator pressure drops**




## Pump Curves

**Figure 9. Available head pressure with pump P3**



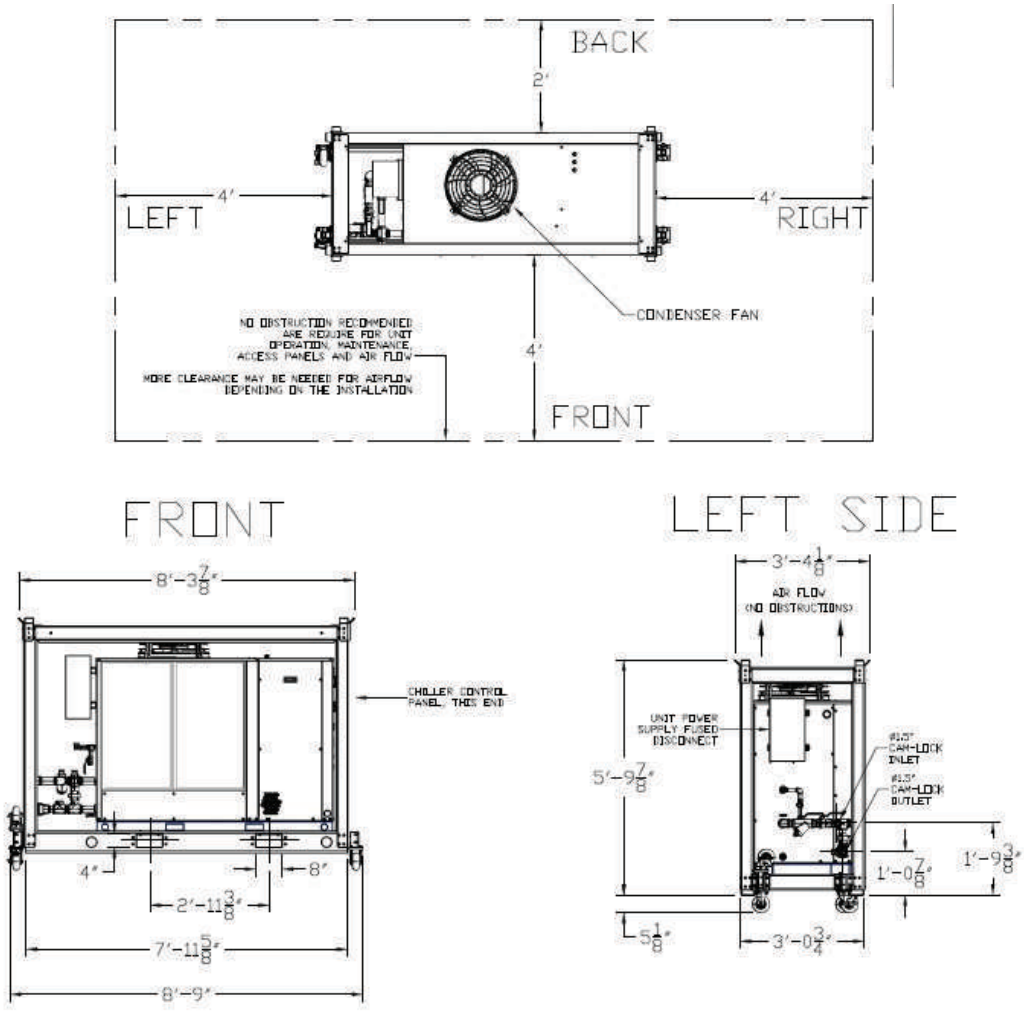

## Sound Data

**Table 29. Sound Data — RSCA0007**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0007 | 52.9 | 71.7 | 72 | 75 | 80.7 | 77.3 | 71.2 | 60.9 | 83.9 | 55.9 |

## Unit Drawing

**Figure 10. Unit drawing — RSCA0007**



# 10 Ton Air-Cooled Process Chiller

## Model: MTA TAET121

**Table 30. General data — RSCA0010F0**

| General | RSCA0010F0 |
|---|---|
| Nominal Tonnage[a] | 11.67 |
| Refrigerant | R-410A |
| Refrigerant Charge | 11.24 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 1.5 inch Cam-lock |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT
[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.
[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 31. Electrical data — RSCA0010F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Pin and sleeve |
| SCCR | 10,000 A |
| Fused Disconnect | 60 A |

[a] Cable offered in 50-foot or 100-foot sections with Leviton Series IEC connections.

**Table 32. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 41 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 60 A |
| Full Load Amps (FLA) | 34 A |

**Table 33. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 42 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 60 A |
| Full Load Amps (FLA) | 35.4 A |

**Notes:**
1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 34. Pump data — RSCA0010F0**

| | |
|---|---|
| Horsepower | 3 HP |
| Min Flow | 11 gpm @ 98.5 feet |
| Max Flow | 84.5 gpm @ 24.7 feet |

## Dimensions and Weights

**Table 35. Dimensions and weights — RSCA0010F0**

| | |
|---|---|
| Length | 8 feet 3.88 inches |
| Width | 3 feet 4.13 inches |
| Height | 6 feet 3.38 inches |
| Shipping Weight | 1546 pounds |
| Operating Weight | 2116 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 3 ft 0.375 in. |
| Fork Pocket Center to Center Distance | 2 feet 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 36. Installed/operating clearances — RSCA0010F0**

| | |
|---|---|
| Front | 4 feet |
| Right Side | 4 feet |
| Left Side | 4 feet |
| Back Side | 2 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 37. Gross cooling capacities — RSCA0010F0**

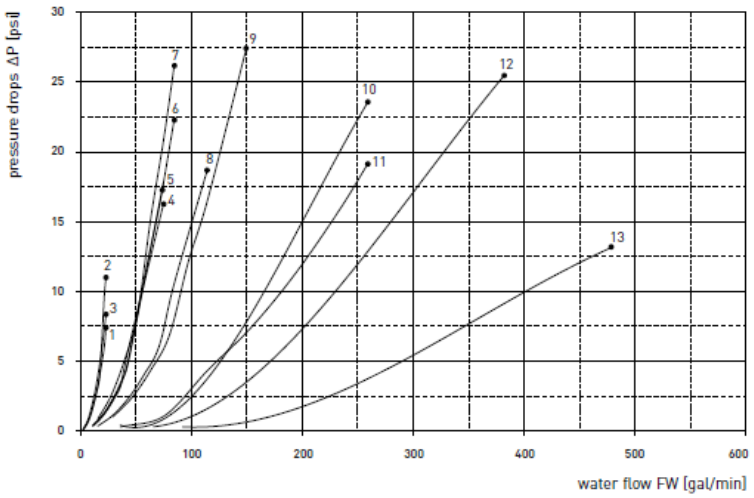
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 8.01 | 10.6 | 21.47 | 7.74 | 11.16 | 20.77 | 7.2 | 12.37 | 19.31 |
| 35% | 20 | 8.77 | 10.69 | 23.51 | 8.49 | 11.26 | 22.75 | 7.91 | 12.49 | 21.2 |
| 25% | 25 | 9.75 | 10.81 | 25.14 | 9.44 | 11.38 | 24.34 | 8.8 | 12.64 | 22.71 |
| 25% | 30 | 10.6 | 10.92 | 27.33 | 10.27 | 11.49 | 26.49 | 9.59 | 12.76 | 24.74 |
| 20% | 35 | 11.59 | 11.04 | 29.39 | 11.22 | 11.62 | 28.44 | 10.48 | 12.89 | 26.58 |
| | 40 | 12.81 | 11.21 | 30.59 | 12.4 | 11.79 | 29.61 | 11.6 | 13.07 | 27.71 |
| | 45 | 13.77 | 11.37 | 32.92 | 13.36 | 11.93 | 31.93 | 12.5 | 13.21 | 29.87 |
| | 50 | 14.75 | 11.53 | 35.3 | 14.31 | 12.1 | 34.23 | 13.42 | 13.36 | 32.1 |
| | 55 | 15.77 | 11.71 | 37.75 | 15.3 | 12.27 | 36.63 | 14.33 | 13.55 | 34.31 |
| | 60 | 16.81 | 11.92 | 40.28 | 16.34 | 12.47 | 39.16 | 15.33 | 13.73 | 36.73 |
| | 65 | 18.12 | 12.2 | 43.45 | 17.59 | 12.75 | 42.18 | 16.55 | 13.98 | 39.68 |
| | 68 | 18.93 | 12.38 | 45.42 | 18.38 | 12.92 | 44.1 | 17.27 | 14.16 | 41.42 |
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 6.92 | 13.02 | 18.56 | 6.65 | 13.69 | 17.82 | 6.39 | 14.45 | 17.13 |
| 35% | 20 | 7.61 | 13.16 | 20.4 | 7.32 | 13.84 | 19.61 | 7.05 | 14.62 | 18.88 |
| 25% | 25 | 8.48 | 13.31 | 21.88 | 8.16 | 14 | 21.06 | 7.87 | 14.8 | 20.29 |
| 25% | 30 | 9.25 | 13.43 | 23.86 | 8.91 | 14.13 | 22.98 | 8.6 | 14.95 | 22.17 |
| 20% | 35 | 10.12 | 13.58 | 25.66 | 9.76 | 14.28 | 24.75 | 9.42 | 15.1 | 23.89 |
| | 40 | 11.2 | 13.75 | 26.75 | 10.81 | 14.45 | 25.82 | 10.44 | 15.29 | 24.93 |
| | 45 | 12.08 | 13.9 | 28.87 | 11.66 | 14.6 | 27.88 | 11.27 | 15.44 | 26.94 |
| | 50 | 12.98 | 14.04 | 31.05 | 12.54 | 14.74 | 30.01 | 12.13 | 15.58 | 29.03 |
| | 55 | 13.88 | 14.22 | 33.23 | 13.4 | 14.92 | 32.09 | 12.99 | 15.76 | 31.11 |
| | 60 | 14.84 | 14.41 | 35.55 | 14.34 | 5.11 | 34.35 | 13.88 | 15.96 | 33.26 |
| | 65 | 16.01 | 14.65 | 38.4 | 15.51 | 15.33 | 37.18 | 14.99 | 16.21 | 35.94 |
| | 68 | 16.75 | 14.81 | 40.19 | 16.22 | 15.49 | 38.91 | 15.71 | 16.34 | 37.69 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | 6.12 | 15.26 | 16.41 | 106 |
| 35% | 20 | 6.76 | 15.45 | 18.11 | 109 |
| 25% | 25 | 7.56 | 15.65 | 19.5 | 109 |
| 25% | 30 | 8.27 | 15.82 | 21.33 | 109 |
| 20% | 35 | 9.07 | 15.99 | 22.99 | 109 |
| | 40 | 10.06 | 16.19 | 24.03 | 109 |
| | 45 | 10.87 | 16.35 | 25.97 | 109 |
| | 50 | 11.71 | 16.49 | 28.02 | 109 |
| | 55 | 12.54 | 16.67 | 30.03 | 109 |
| | 60 | 13.42 | 16.86 | 32.17 | 108 |
| | 65 | 14.49 | 17.12 | 34.75 | 106 |
| | 68 | | | | 104 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming $\Delta T = 10°F$
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

## Evaporator Pressure Drops

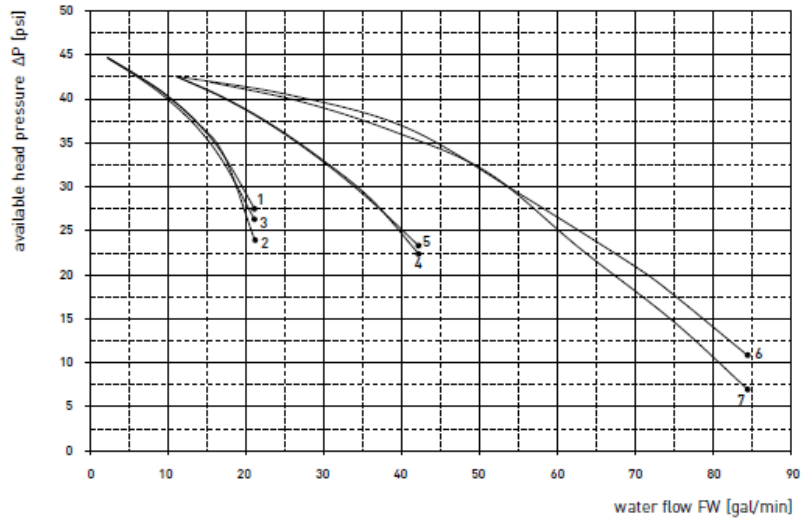
**Figure 11. Evaporator pressure drops**




1: TAEevo Tech 020
2: TAEevo Tech 031
3: TAEevo Tech 051
4: TAEevo Tech 081
5: TAEevo Tech 101
6: TAEevo Tech 121
7: TAEevo Tech 161
8: TAEevo Tech 201-251
9: TAEevo Tech 301-351
10: TAEevo Tech 381-401
11: TAEevo Tech 402-502-602
12: TAEevo Tech 702-802
13: TAEevo Tech 902-1002

## Pump Curves

**Figure 12. Available head pressure with pump P3**




1: TAEevo Tech 020
2: TAEevo Tech 031
3: TAEevo Tech 051
4: TAEevo Tech 081
5: TAEevo Tech 101
6: TAEevo Tech 121
7: TAEevo Tech 161

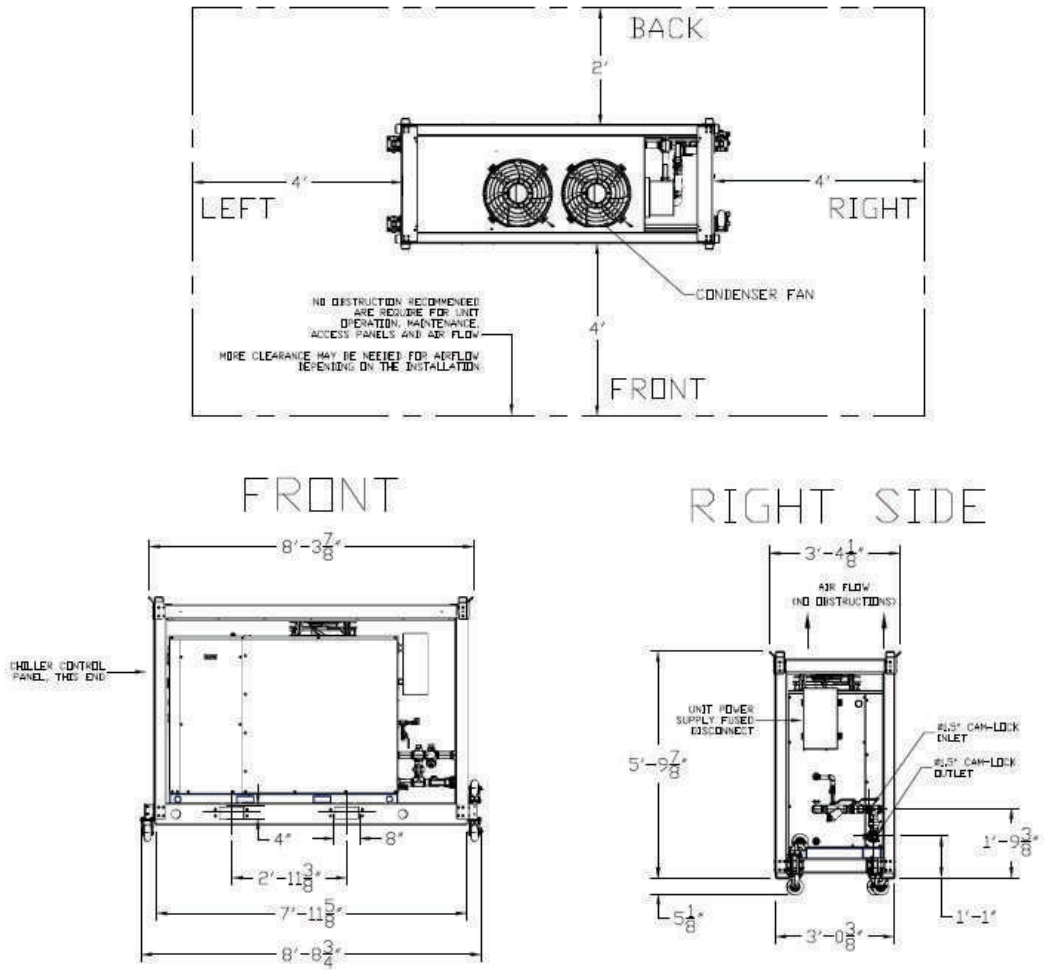
## Sound Data

**Table 38. Sound data — RSCA0010**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0010 | 53 | 71.9 | 72.3 | 75.3 | 81 | 77.6 | 71.5 | 61.1 | 84.2 | 56.2 |

## Unit Drawing

**Figure 13. Unit drawing — RSCA0010**



# 15 Ton Air-Cooled Process Chiller

## Model: MTA TAET161

**Table 39. General data — RSCA0015F0**

| General | RSCA0015F0 |
|---|---|
| Nominal Tonnage[a] | 13.26 |
| Refrigerant | R-410A |
| Refrigerant Charge | 15.65 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 1.5 inch Cam-lock |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT

[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.

[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 40. Electrical data — RSCA0015F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Pin and sleeve |
| SCCR | 10,000 A |
| Fused Disconnect | 60 A |

[a] Cable offered in 50-foot or 100-foot sections with Leviton Series IEC connections.

**Table 41. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 42.5 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 70 A |
| Full Load Amps (FLA) | 34.8 A |

**Table 42. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 49.2 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 70 A |
| Full Load Amps (FLA) | 41.5 A |

**Notes:**

1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 43. Pump data — RSCA0015F0**

| | |
|---|---|
| Horsepower | 3 HP |
| Min Flow | 15.4 gpm @ 97 feet |
| Max Flow | 84.5 gpm @ 16 feet |

## Dimensions and Weights

**Table 44. Dimensions and weights — RSCA0015F0**

| | |
|---|---|
| Length | 8 feet 3.88 inches |
| Width | 3 feet 4.13 inches |
| Height | 6 feet 3.38 inches |
| Shipping Weight | 1600 pounds |
| Operating Weight | 2170 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 3 ft 0.375 in. |
| Fork Pocket Center to Center Distance | 2 ft. 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 45. Installed/operating clearances — RSCA0015F0**

| | |
|---|---|
| Front | 4 feet |
| Right Side | 4 feet |
| Left Side | 4 feet |
| Back Side | 2 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 46. Gross cooling capacities — RSCA0015F0**

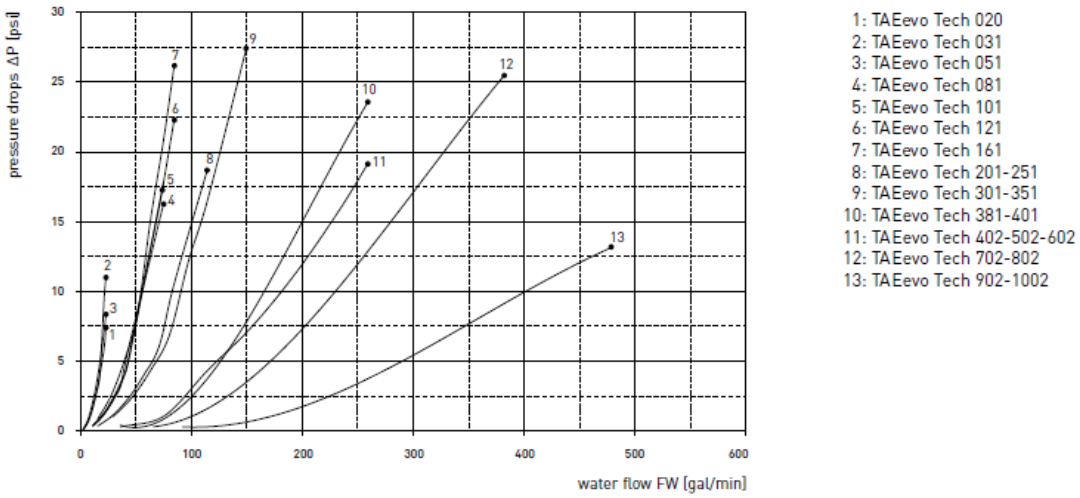
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 9.38 | 12.47 | 25.14 | 9.05 | 13.12 | 24.27 | 8.38 | 14.56 | 22.46 |
| 35% | 20 | 10.25 | 12.63 | 27.45 | 9.9 | 13.29 | 26.53 | 9.19 | 14.74 | 24.62 |
| 25% | 25 | 11.33 | 12.84 | 29.22 | 10.96 | 13.51 | 28.27 | 10.19 | 14.97 | 26.29 |
| 25% | 30 | 12.29 | 13.01 | 31.7 | 11.87 | 13.69 | 30.62 | 11.07 | 15.17 | 28.54 |
| 20% | 35 | 13.35 | 13.21 | 33.85 | 12.93 | 13.9 | 32.79 | 12.04 | 15.4 | 30.53 |
| | 40 | 14.67 | 13.47 | 35.04 | 14.22 | 14.17 | 33.96 | 13.25 | 15.69 | 31.65 |
| | 45 | 15.68 | 13.69 | 37.48 | 15.21 | 14.38 | 36.36 | 14.18 | 15.93 | 33.91 |
| | 50 | 16.73 | 13.88 | 40.03 | 16.2 | 14.6 | 38.77 | 15.12 | 16.16 | 36.18 |
| | 55 | 17.7 | 14.1 | 42.39 | 17.17 | 14.83 | 41.1 | 16.09 | 16.37 | 38.54 |
| | 60 | 18.8 | 14.31 | 45.05 | 18.22 | 15.05 | 43.66 | 17.03 | 16.65 | 40.82 |
| | 65 | 20.22 | 14.61 | 48.48 | 19.59 | 15.36 | 46.98 | 18.35 | 16.97 | 44 |
| | 68 | 21.08 | 14.8 | 50.58 | 20.44 | 15.56 | 49.04 | 19.15 | 17.18 | 45.93 |
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 8.03 | 15.33 | 21.54 | 7.69 | 16.13 | 20.62 | 7.36 | 17.06 | 19.74 |
| 35% | 20 | 8.82 | 15.52 | 23.64 | 8.46 | 16.32 | 22.68 | 8.12 | 17.26 | 21.75 |
| 25% | 25 | 9.8 | 15.75 | 25.29 | 9.42 | 16.55 | 24.3 | 9.05 | 17.51 | 23.36 |
| 25% | 30 | 10.65 | 15.96 | 27.48 | 10.26 | 16.76 | 26.45 | 9.87 | 17.72 | 25.45 |
| 20% | 35 | 11.61 | 16.19 | 29.42 | 11.18 | 17 | 28.35 | 10.77 | 17.97 | 27.31 |
| | 40 | 12.78 | 16.49 | 30.53 | 12.33 | 17.3 | 29.44 | 11.89 | 18.27 | 28.39 |
| | 45 | 13.72 | 16.71 | 32.8 | 13.25 | 17.52 | 31.67 | 12.76 | 18.52 | 30.51 |
| | 50 | 14.61 | 16.96 | 34.97 | 14.11 | 17.77 | 33.77 | 13.62 | 18.77 | 32.59 |
| | 55 | 15.54 | 17.19 | 37.22 | 15.05 | 18 | 35.96 | 14.49 | 19.03 | 34.68 |
| | 60 | 16.47 | 17.46 | 39.46 | 15.94 | 18.27 | 38.18 | 15.42 | 19.27 | 36.96 |
| | 65 | 17.71 | 17.81 | 42.47 | 17.14 | 18.62 | 41.11 | 16.58 | 19.64 | 39.76 |
| | 68 | 18.52 | 18.01 | 44.43 | 17.89 | 18.84 | 42.92 | 17.3 | 19.87 | 41.51 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 103 |
| 35% | 20 | 7.76 | 18.28 | 20.78 | 106 |
| 25% | 25 | 8.67 | 18.53 | 22.36 | 109 |
| 25% | 30 | 9.47 | 18.75 | 24.41 | 109 |
| 20% | 35 | 10.35 | 19.01 | 26.24 | 109 |
| | 40 | 11.43 | 19.32 | 27.29 | 109 |
| | 45 | 12.28 | 19.57 | 29.36 | 109 |
| | 50 | 13.14 | 19.82 | 31.45 | 109 |
| | 55 | 13.96 | 20.1 | 33.44 | 109 |
| | 60 | 14.87 | 20.35 | 35.64 | 108 |
| | 65 | | | | 103 |
| | 68 | | | | 102 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming ΔT = 10°F
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

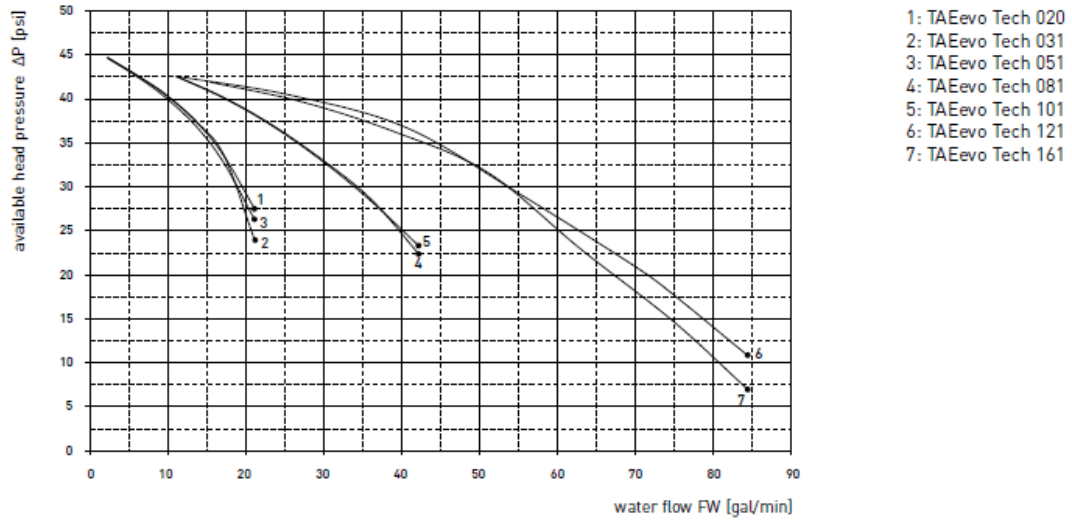
## Evaporator Pressure Drops

**Figure 14. Evaporator pressure drops**




## Pump Curves

**Figure 15. Available head pressure with pump P3**



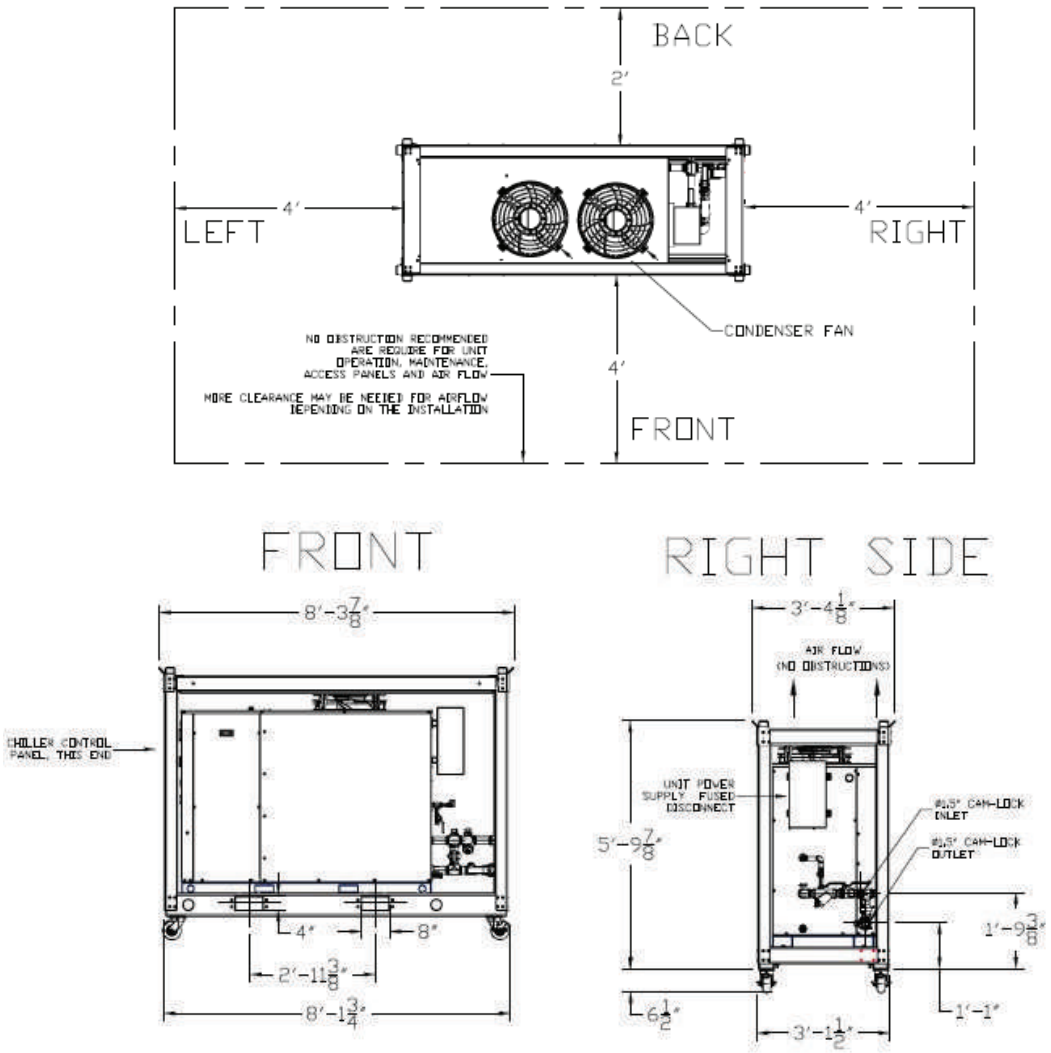

## Sound Data

**Table 47. Sound data RSCA0015**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0015 | 53.6 | 72.7 | 73.1 | 76.1 | 81.8 | 78.4 | 72.2 | 61.7 | 85.1 | 57.1 |

## Unit Drawing

**Figure 16. Unit drawing — RSCA0015**



# 20 Ton Air-Cooled Process Chiller

## Model: MTA TAET351

**Table 48. General data — RSCA0020F0**

| General | RSCA0020F0 |
|---|---|
| Nominal Tonnage[a] | 22.33 |
| Refrigerant | R-410A |
| Refrigerant Charge | 23.81 pounds |
| Refrigerant Circuits | 1 |
| Water Connection Size[b] | 2.5 inch victaulic |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT
[b] 25-foot sections of hose offered separately. Cam-lock to Victaulic adapters will need to be sourced in the field to connect to TRS AHU waterlines.
[c] 2.5" Victaulic hose kits provided separately by Trane Rental Services

## Electrical Data

**Table 49. Electrical data — RSCA0020F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Cam-lock pin |
| SCCR | 10,000 A |
| Fused Disconnect | 100 A |

[a] Temporary power cables with Cam-lock connections provided separately by Trane Rental Services

**Table 50. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 68.9 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 100 A |
| Full Load Amps (FLA) | 61.2 A |

**Table 51. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 80.6 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 110 A |
| Full Load Amps (FLA) | 72.9 A |

**Notes:**
1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 52. Pump data — RSCA0020F0**

| | |
|---|---|
| Horsepower | 5 HP |
| Min Flow | 29 gpm @ 113 feet |
| Max Flow | 149.7 gpm @ 16 feet |

## Dimensions and Weights

**Table 53. Dimensions and weights — RSCA0020F0**

| | |
|---|---|
| Length | 10 feet 0.5 inches |
| Width | 3 feet 9.25 inches |
| Height | 7 feet 10.125 inches |
| Shipping Weight | 2440 pounds |
| Operating Weight | 3228 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 3 ft 5.875 in. |
| Fork Pocket Center to Center Distance | 2 feet 11.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 54. Installed/operating clearances — RSCA0020F0**

| | |
|---|---|
| Front | 6.5 feet |
| Right Side | 6.5 feet |
| Left Side | 4 feet |
| Back Side | 4 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 55. Gross cooling capacities — RSCA0020F0**

| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 15.6 | 22.75 | 41.84 | 15.08 | 24.01 | 40.44 | 13.92 | 26.79 | 37.32 |
| 35% | 20 | 17.02 | 23.1 | 45.6 | 16.48 | 24.37 | 44.15 | 15.3 | 27.16 | 41 |
| 25% | 25 | 18.89 | 23.52 | 48.73 | 18.29 | 24.82 | 47.18 | 17.09 | 27.71 | 44.08 |
| 25% | 30 | 20.49 | 23.87 | 52.86 | 19.88 | 25.17 | 51.28 | 18.47 | 28.11 | 47.64 |
| 20% | 35 | 22.32 | 24.29 | 56.58 | 21.61 | 25.64 | 54.78 | 20.22 | 28.55 | 51.26 |
| | 40 | 24.66 | 24.83 | 58.91 | 23.89 | 26.21 | 57.07 | 22.36 | 29.17 | 53.41 |
| | 45 | 26.49 | 25.23 | 63.32 | 25.66 | 26.62 | 61.34 | 29.92 | 29.69 | 57.19 |
| | 50 | 28.21 | 25.7 | 67.5 | 27.35 | 27.1 | 65.45 | 25.64 | 30.14 | 61.34 |
| | 55 | 29.98 | 26.16 | 71.79 | 29.07 | 27.58 | 69.61 | 27.22 | 30.68 | 65.17 |
| | 60 | 31.96 | 26.63 | 76.59 | 30.98 | 28.07 | 74.23 | 29.01 | 31.2 | 69.51 |
| | 65 | 34.28 | 27.31 | 82.22 | 33.26 | 28.77 | 79.76 | 31.19 | 31.91 | 74.79 |
| | 68 | 35.75 | 27.74 | 85.76 | 34.69 | 29.21 | 83.22 | 32.55 | 32.36 | 78.1 |

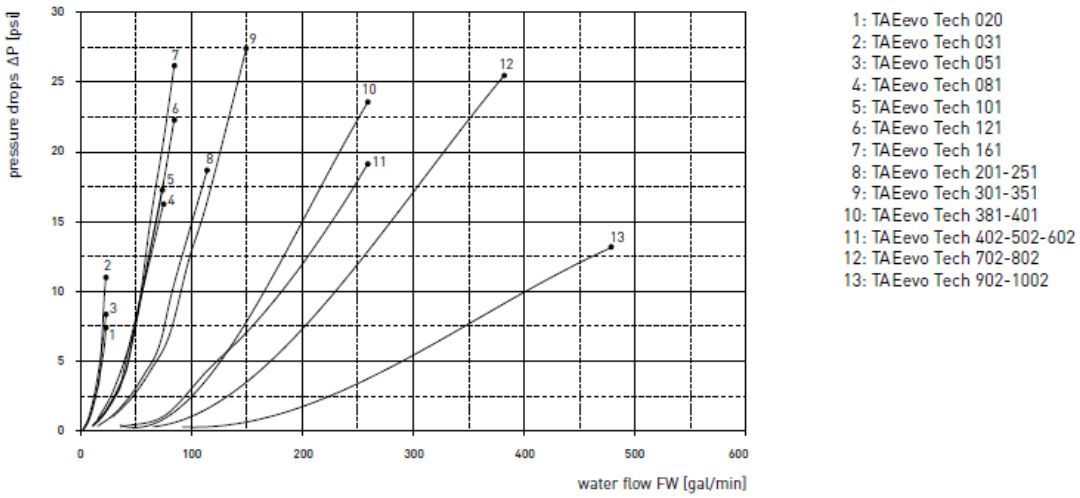
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 13.35 | 28.26 | 35.8 | 12.78 | 29.77 | 34.28 | | | |
| 35% | 20 | 14.72 | 28.65 | 39.45 | 14.08 | 30.2 | 37.72 | 3.5 | 32.01 | 36.17 |
| 25% | 25 | 16.41 | 29.18 | 42.34 | 15.78 | 30.71 | 40.72 | 15.13 | 32.59 | 39.02 |
| 25% | 30 | 17.85 | 29.62 | 46.04 | 17.14 | 31.2 | 44.2 | 16.52 | 33.05 | 42.6 |
| 20% | 35 | 19.47 | 30.12 | 49.37 | 18.73 | 31.72 | 47.49 | 18.08 | 33.6 | 45.83 |
| | 40 | 21.57 | 30.75 | 51.52 | 20.75 | 32.36 | 49.55 | 20.06 | 34.25 | 47.93 |
| | 45 | 23.11 | 31.27 | 55.24 | 22.31 | 32.85 | 53.33 | 21.57 | 34.78 | 51.57 |
| | 50 | 24.75 | 31.74 | 59.2 | 23.86 | 33.37 | 57.09 | 23.04 | 35.35 | 55.12 |
| | 55 | 26.32 | 32.28 | 63.02 | 25.47 | 33.84 | 60.99 | 24.61 | 35.85 | 58.93 |
| | 60 | 28 | 32.85 | 67.1 | 27.09 | 34.44 | 64.9 | 26.18 | 36.47 | 62.73 |
| | 65 | 30.17 | 33.53 | 72.35 | 29.13 | 35.17 | 69.86 | 28.19 | 37.21 | 67.6 |
| | 68 | 31.49 | 33.99 | 75.55 | 30.49 | 35.58 | 73.14 | 29.42 | 37.69 | 70.58 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 98 |
| 35% | 20 | | | | 101 |
| 25% | 25 | 14.47 | 34.57 | 37.34 | 106 |
| 25% | 30 | 15.86 | 35.05 | 40.9 | 109 |
| 20% | 35 | 17.38 | 35.67 | 44.05 | 109 |
| | 40 | 19.25 | 36.35 | 45.99 | 109 |
| | 45 | 20.74 | 36.88 | 49.58 | 109 |
| | 50 | 22.19 | 37.47 | 53.08 | 109 |
| | 55 | 23.69 | 38 | 56.72 | 109 |
| | 60 | 25.28 | 38.59 | 60.58 | 108 |
| | 65 | 27.17 | 39.4 | 65.15 | 105 |
| | 68 | | | | 104 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming ΔT = 10°F
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

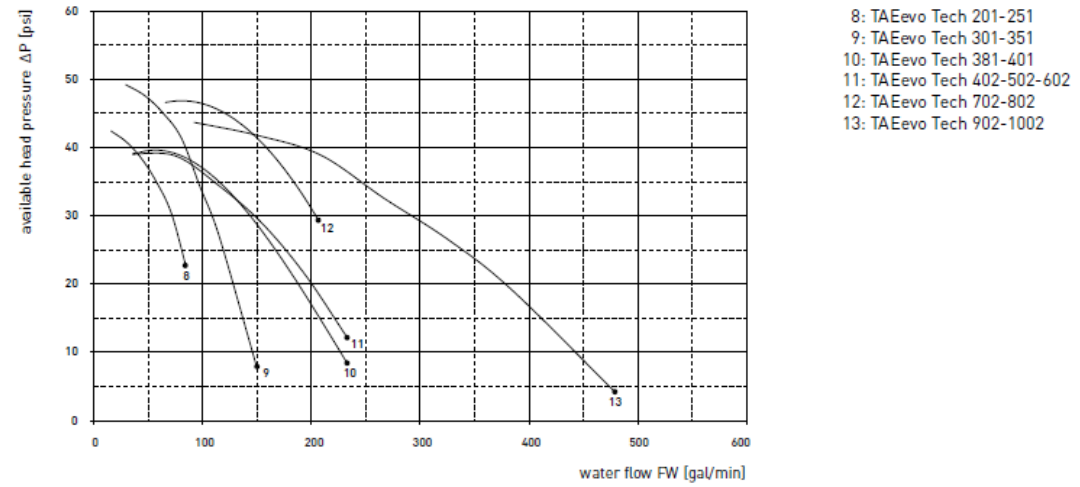
## Evaporator Pressure Drops

**Figure 17. Evaporator pressure drops**




## Pump Curves

**Figure 18. Available head pressure with pump P3**



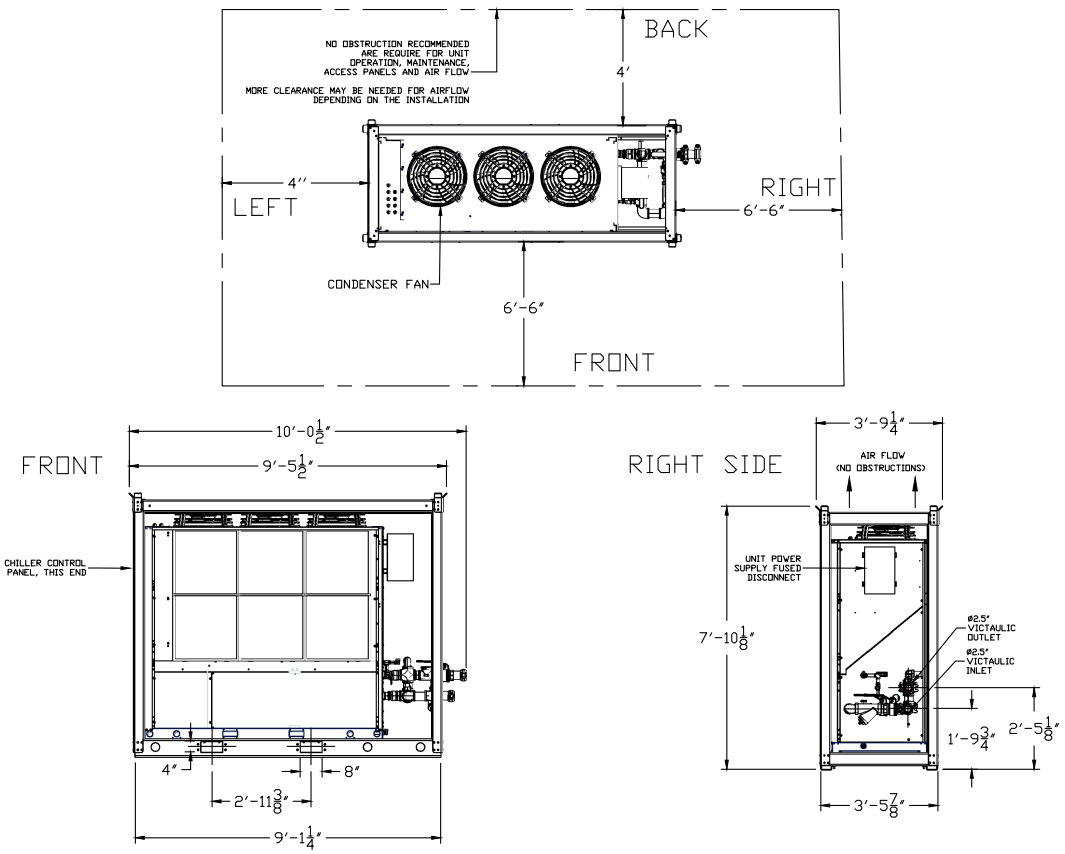

## Sound Data

**Table 56. Sound data — RSCA0020**

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0020 | 63.5 | 75.7 | 76.8 | 79 | 85.1 | 81.8 | 75.2 | 62.8 | 88.3 | 60.3 |

## Unit Drawing

**Figure 19. Unit drawing — RSCA0020**



# 40 Ton Air-Cooled Process Chiller

## Model: MTA TAET602

**Table 57. General data — RSCA0040F0**

| General | RSCA0040F0 |
|---|---|
| Nominal Tonnage[a] | 39.94 |
| Refrigerant | R-410A |
| Refrigerant Charge | 24.69 pounds |
| Refrigerant Circuits | 2 |
| Water Connection Size[b] | 2.5 inch Victaulic |
| Ambient Operating Conditions[c] | 23º F — 109º F |
| Setpoint Limits | 23º F — 86º F |
| Maximum Water Pressure | 87 PSI |

[a] Design Conditions: 95°F Ambient, 55°F EWT, 45°F LWT
[b] 2.5" Victaulic hose kits provided separately by Trane Rental Services
[c] When leaving solution is below 40°F, a glycol solution is required.

## Electrical Data

**Table 58. Electrical data — RSCA0040F0**

| Electrical Circuits | 1 |
|---|---|
| Voltage | 460 V 3–Phase |
| Frequency | 60 Hz |
| Wire Connection Type[a] | Cam-lock pin |
| SCCR | 10,000 A |
| Fused Disconnect | 200 A |

[a] Temporary power cables with Cam-lock connections provided separately by Trane Rental Services

**Table 59. Electrical data without integral pump**

| Minimum Circuit Ampacity (MCA) | 104.8 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 125 A |
| Full Load Amps (FLA) | 98.2 A |

**Table 60. Electrical data with integral pump**

| Minimum Circuit Ampacity (MCA) | 123.7 A |
|---|---|
| Maximum Overcurrent Protection (MOP) | 150 A |
| Full Load Amps (FLA) | 117.2 A |

**Notes:**
1. For additional electrical information, contact Trane Rental Services.
2. All features and specifications are subject to change without notice or liability.

## Pump Data

**Table 61. Pump data — RSCA0040F0**

| | |
|---|---|
| Horsepower | (Qty: 2) 5 HP |
| Min Flow | 35.7 gpm @ 88 feet |
| Max Flow | 233.4 gpm @ 25.4 feet |

## Dimensions and Weights

**Table 62. Dimensions and weights — RSCA0040F0**

| | |
|---|---|
| Length | 13 feet 8.25 inches |
| Width | 5 feet 0.625 inches |
| Height | 7 feet 11.75 inches |
| Shipping Weight | 4486 pounds |
| Operating Weight | 5604 pounds |
| Fork Pocket Dimensions | 8 in. x 4 in. x 4 ft 11.125 in. |
| Fork Pocket Center to Center Distance | 3 feet 3.375 inches |
| Lifting Device | Forklift or crane |

## Installed/Operating Clearances

**Table 63. Installed/operating clearances — RSCA0040F0**

| | |
|---|---|
| Front | 6.5 feet |
| Right Side | 8 feet |
| Left Side | 4 feet |
| Back Side | 4 feet |
| Vertical Exhaust | No obstructions |

## Gross Cooling Capacities

**Table 64. Gross cooling capacities — RSCA0040F0**

| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 70 | | | 75 | | | 85 | | |
| Glycol | LWT[a] °F | Pf[b] (Ton) | Pa[c] (kW) | Fw[d] (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 27.75 | 36.44 | 74.42 | 26.71 | 38.52 | 71.64 | 24.62 | 43.04 | 66.03 |
| 35% | 20 | 30.42 | 36.99 | 81.51 | 29.32 | 39.11 | 78.56 | 27.1 | 43.72 | 72.61 |
| 25% | 25 | 33.84 | 37.7 | 87.29 | 32.65 | 39.85 | 84.24 | 30.53 | 44.53 | 78.03 |
| 25% | 30 | 36.8 | 38.33 | 94.89 | 35.54 | 40.5 | 91.66 | 32.96 | 45.24 | 85 |
| 20% | 35 | 40.15 | 39.06 | 101.79 | 38.83 | 41.26 | 98.44 | 36.07 | 46.06 | 91.44 |
| | 40 | 44.39 | 40.01 | 106.03 | 42.94 | 42.23 | 102.56 | 39.91 | 47.07 | 95.33 |
| | 45 | 47.76 | 40.79 | 114.17 | 46.09 | 43.03 | 110.18 | 42.94 | 47.96 | 102.65 |
| | 50 | 51.17 | 41.67 | 122.42 | 49.45 | 43.95 | 118.32 | 46.09 | 48.86 | 110.27 |
| | 55 | 54.69 | 42.57 | 130.95 | 52.92 | 44.81 | 126.71 | 49.34 | 49.75 | 118.14 |
| | 60 | 58.31 | 43.62 | 139.72 | 56.46 | 45.88 | 135.29 | 52.67 | 50.83 | 126.22 |
| | 65 | 62.65 | 44.91 | 150.24 | 60.67 | 47.17 | 145.49 | 56.67 | 52.13 | 135.9 |
| | 68 | 65.34 | 45.74 | 156.75 | 63.28 | 48 | 151.81 | 59.12 | 52.98 | 141.82 |

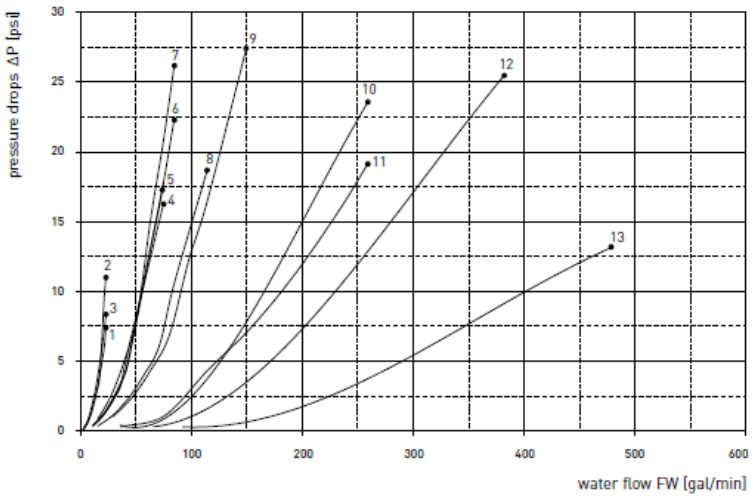
| MTA TAET051 | | External Air Temperature °F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 90 | | | 95 | | | 100 | | |
| Glycol | LWT[e] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) | Pf (Ton) | Pa (kW) | Fw (GPM) |
| 35% | 15 | 23.52 | 45.49 | 63.07 | 22.55 | 47.9 | 60.48 | | | |
| 35% | 20 | 25.99 | 46.16 | 69.63 | 24.9 | 48.65 | 66.72 | 23.86 | 51.6 | 63.94 |
| 25% | 25 | 29.04 | 47.01 | 74.91 | 27.87 | 49.54 | 71.89 | 26.67 | 52.61 | 68.79 |
| 25% | 30 | 31.69 | 47.75 | 81.74 | 30.45 | 50.29 | 78.54 | 29.23 | 53.35 | 75.38 |
| 20% | 35 | 34.7 | 48.58 | 87.97 | 33.38 | 51.13 | 84.63 | 32.07 | 54.24 | 81.3 |
| | 40 | 38.43 | 49.61 | 91.8 | 37 | 52.17 | 88.38 | 35.59 | 55.32 | 85.02 |
| | 45 | 41.35 | 50.54 | 98.85 | 39.91 | 53.04 | 95.41 | 38.41 | 56.22 | 91.83 |
| | 50 | 44.44 | 51.41 | 106.33 | 42.82 | 53.9 | 102.45 | 41.26 | 57.18 | 98.72 |
| | 55 | 47.59 | 52.32 | 113.95 | 45.86 | 54.95 | 109.8 | 44.19 | 58.18 | 105.81 |
| | 60 | 50.9 | 53.35 | 121.98 | 49.13 | 55.91 | 117.73 | 47.38 | 59.17 | 113.53 |
| | 65 | 54.71 | 54.71 | 131.21 | 52.86 | 57.24 | 126.76 | 51.05 | 60.45 | 122.43 |
| | 68 | 57.1 | 55.55 | 136.98 | 55.19 | 58.06 | 132.04 | 53.23 | 61.36 | 127.7 |

| MTA TAET051 | | External Air Temperature °F | | | Ta Max[f] (°F) |
|---|---|---|---|---|---|
| | | 105 | | | |
| Glycol | LWT[g] °F | Pf (Ton) | Pa (kW) | Fw (GPM) | |
| 35% | 15 | | | | 97 |
| 35% | 20 | | | | 100 |
| 25% | 25 | | | | 104 |
| 25% | 30 | 27.99 | 56.62 | 72.19 | 109 |
| 20% | 35 | 30.73 | 57.56 | 77.91 | 109 |
| | 40 | 34.12 | 58.69 | 81.51 | 109 |
| | 45 | 36.86 | 59.63 | 88.11 | 109 |
| | 50 | 39.6 | 60.64 | 94.73 | 109 |
| | 55 | 42.48 | 61.63 | 101.7 | 109 |
| | 60 | 45.55 | 62.67 | 109.14 | 108 |
| | 65 | | | | 103 |
| | 68 | | | | 102 |

(a) Evaporator leaving water temperature
(b) Gross cooling capacities
(c) Absorbed power by compressors
(d) Water volume flow rate assuming ΔT = 10°F
(e) Evaporator leaving water temperature
(f) Max allowable external air temperature
(g) Evaporator leaving water temperature

## Evaporator Pressure Drops

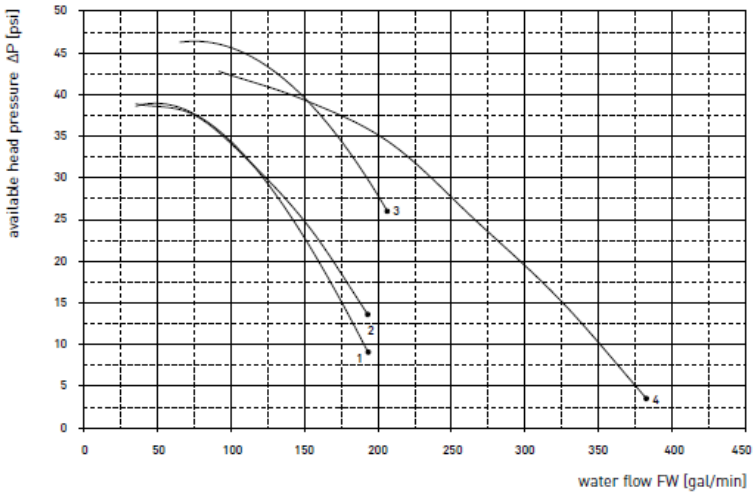
**Figure 20. Evaporator pressure drops**




1: TAEevo Tech 020
2: TAEevo Tech 031
3: TAEevo Tech 051
4: TAEevo Tech 081
5: TAEevo Tech 101
6: TAEevo Tech 121
7: TAEevo Tech 161
8: TAEevo Tech 201-251
9: TAEevo Tech 301-351
10: TAEevo Tech 381-401
11: TAEevo Tech 402-502-602
12: TAEevo Tech 702-802
13: TAEevo Tech 902-1002

## Pump Curves

**Figure 21. Available head pressure with double pump P3 + P3**



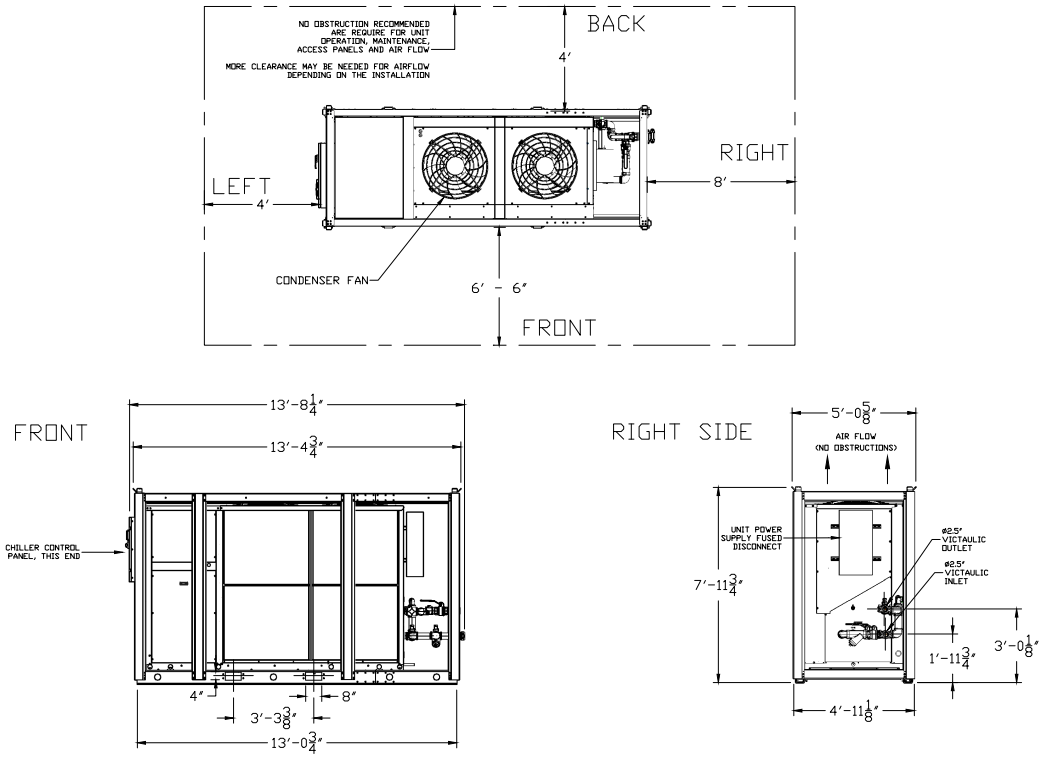

1: TAEevo Tech 381-401
2: TAEevo Tech 402-502-602
3: TAEevo Tech 702-802
4: TAEevo Tech 902-1002

## Sound Data

| Model | Octave Bands (Hz) | | | | | | | | Power | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB (A) | Lp dB (A) 32.8 ft. |
| | Sound Power Level Lw dB (A) | | | | | | | | | |
| RSC-A0040 | 66.7 | 79.4 | 80.6 | 82.9 | 89.2 | 85.8 | 78.9 | 66 | 92.3 | 64.3 |

## Unit Drawing

**Figure 22. Unit drawing — RSCA0040**



# Controls

## Microprocessor Control

All units are equipped with parametric microprocessor control IC208CX. In the models 0003-0020, the control is installed on the cabinet door, while in models 0040 it is internally secured to the electrical cabinet and connected to a semi-graphic LCD display on the door of the control panel. Through the control menu is possible to visualize the working pressures and temperatures, the parameters and the various alarms.

**Figure 23. Microprocessor control IC208CX**


The controller manages the following functions:

- Thermostatic control depending on the process fluid output temperature (neutral zone or proportional)
- Process fluid output temperature display
- Measurement and display of the external temperature for management of the antifreeze heaters (when included) and management of start-up of the pump under conditions of low external temperature
- Management of the automatic rotation of the starting sequence of compressors for equalization of the operating times for each compressor (models 0020-0040)
- Dynamic set point function: the microprocessor allows the operating setpoint to be modified by adding or subtracting a coefficient proportional to the external air temperature
- Measurement and display of the condensation pressure (models 0040 and models 0003-0020 with EC brushless fans)
- Unloading function in the two-circuit units (models 0040 and models 0020 with EC brushless fans), which allows the startup and the operation of the unit also under conditions that are much worse than nominal ones
- Management of anti-freezing heaters and pump switch on with low ambient temperature
- Display of the alarm history
- TTL serial interface (KIT required for conversion to RS485)
- Management of alarm messages:
  - High condensing pressure alarm
  - Low evaporation pressure alarm
  - Freeze alarm on water at evaporator outlet
  - Compressor fault alarm
  - Pump thermal protection alarm
  - Tank level alarm
  - Count of operating hours of the unit and of the individual compressors

A free-voltage contact is provided to remote the general alarm signal.

# Jobsite Connections

## Electrical Connections

Each Trane Rental TAEevo chiller is equipped with a fused, lockable disconnect and temporary power connection input located near the water connections.

20-40 ton MTA chillers utilize Leviton 16-Series Cam-lock pin connections for power input, while the 3-15 ton chillers utilize Leviton Series IEC pin-style connectors.

Trane Rental Services offers Cam-lock style power cable kits to be used in conjunction with the Leviton 16-series Cam-lock pin connectors on the 20-40 ton MTA chillers. See figures below.

**Figure 24. 16-Series Cam-lock power supply connections**

**Figure 25. MTA unit mounted fused disconnect with pin & sleeve power supply connections**


Trane Rental services offers 50 or 100 foot power cable assemblies with Leviton Series IEC Pin and Sleeve connectors for use with the 3-15 ton MTA chillers. See figure below.

**Figure 26. Leviton series IEC pin & sleeve inlet (part #460B7WLEV)**

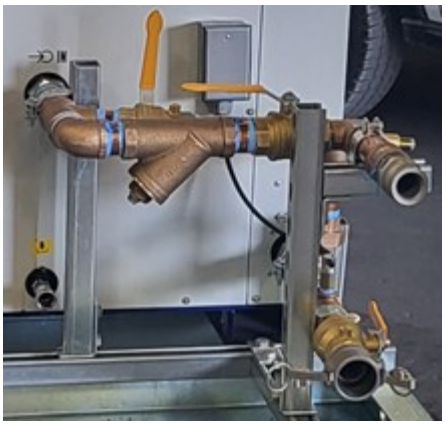

**Figure 27. Leviton series IEC connector (part #460C7WLEV)**

Refer to the general data section for additional electrical information which included recommended breaker sizes (MOP), conductor power cable sizing (MCA), unit operating amp draw (FLA), and fused disconnect amp rating for each capacity size chiller.

# Water Connections

3-15 ton chillers utilize 1-1/2 inch Cam-lock style water connections on the chilled water inlet and outlet, with connections indexed such that the return (inlet) connections have a grooved Cam-lock connector and supply (outlet) connections have a Cam-lock receiver with clamps as shown in figure below. All chillers ship with one set of 1-1/2 inch Cam-lock to 1-1/2" NPT adapters for connection to existing piping. In addition, Trane Rental Services offers 1-1/2" hose with Cam-lock connections in 25 foot lengths.

**Figure 28. Cam-lock water connections for 3 —15 ton models**



20-40 ton chillers utilize 2-1/2 inch grooved Victaulic connections for both return (inlet) and supply (outlet) connections as shown in figure below. Trane Rental Services offers 2-1/2 inch hose kits with flange adapters for connection to existing piping..

**Figure 29. Victaulic water connections for 20 and 40 ton models**

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