# Condenser Technical Data Sheet

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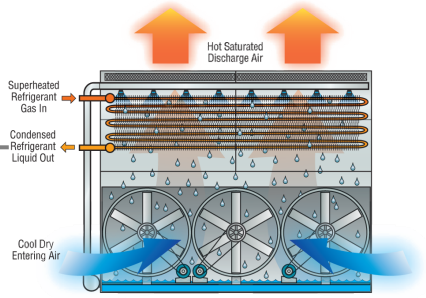
# (2) PMCQ-566Q

## Project Details

**Project Name :** 42-3-2-4936
**Job Reference:** 42-3-2-4936
**Job Number:** 4936

**Date:** 18/02/2022

## Product Description




## Selection Criteria

| | |
|---|---|
| Refrigerant: | NH3 |
| Condensing Temp: | 32.0 C |
| Condensing Pressure: | 1136.8 kPa |
| Entering Wet Bulb: | 21.0 C |

## Required Capacity

2,850 kW NH3 + 396kW DTX Total

## Unit Selected

Two(2) EVAPCO PMCQ-566Q at 100% capacity (1,624.00 kW each)

## Physical Data Per Unit

| | |
|---|---|
| Overall Dimensions (WxLxH): | 2,991mm x 5,490mm x 4,150mm |
| Operating Weight: | 12,179 kg |
| Shipping Weight: | 9,312 kg |
| Heaviest Section: | 5,706 kg |

*weights and dimensions could vary depending on options selected

## IBC Design Capability

IBC Standard Structural Design
1.0 Importance Factor Specified

| | |
|---|---|
| Seismic(Sds): | up to 0.67 g, z/h = 0 |
| Wind Load(P): | up to 13.79 kPa |

## Fan Motor Data per Unit

| | |
|---|---|
| Number of Fans: | 3 |
| # of Fan Motors: | 3 |
| Nameplate Power (415/3/50): | 7.50 kW Per Motor |
| Total Connected Nameplate Power: | 22.50 kW |
| Typical Nameplate FLA: | 13.9 Amps Per Motor |

*Nameplate FLA could vary

## Pump Motor Data per Unit

| | |
|---|---|
| No.of Pumps: | 1 |
| Nameplate Power (415/3/50): | 5.5 kW per pump motor |
| Typical Nameplate FLA: | 10.3 Amps Per Motor |

*Nameplate FLA could vary

## Additional Details Per Unit

| | |
|---|---|
| Air Flow: | 49 $m^3/s$ |
| Coil Volume: | 1.4 $m^3$ per unit |
| Est. Refrigerant Charge: | 166.4 kg per unit |
| Coil Design Pressure: | 24 Bar |

## Hydraulic Data

| | |
|---|---|
| Spray Water Flow: | 65 LPS |
| Evaporated Water Rate: | 0.57 LPS |

## Layout Criteria

| | |
|---|---|
| From FACE B/D to wall: | 2.44m |
| From FACE A/C to wall: | 4.88m |
| Between FACE B/D ends: | 0.00m |
| Between FACE A/C sides: | 0.00m |

## Sound Data(dB(A) @ 1.5m/15m)

| | | | |
|---|---|---|---|
| Face A (Opp Mtr. Side): | 66/58 | Face C (Motor Side): | 84/69 |
| Face B (End): | 70/59 | Face D (Opp End): | 70/59 |
| Top: | 77/63 | | |

Notes: Sound Pressure Levels are according to CTI Standard ATC-128 and verified by an independent CTI-licensed sound test agency. Sound data is shown for 1 cell operating at full speed. The use of frequency inverters (Variable Frequency Drives) can increase sound levels. Sound Options: Super Low Sound Fan

## Shipping Data

1 Basin Sections: (WxLxH): 2971mm x 5969mm x 2743mm ; 3606kg each* | 1 Casing Sections: (WxLxH): 2971mm x 5943mm x 1752mm ; 5706kg each*
*dimensions and weights above include shipping skids

## Accessories

(1) IBC Standard Structural Design
(1) 1.0 Importance Factor Specified
(1) Additional Coil Circuits
(1) Nitrogen Charged Coil(s)
(1) El. Heaters (0F / -18C ambient) (2) 6 kW; 415/3/50
(1) Bottom Screens
(3) IE3 Single Speed Inverter Duty Motor Compliant with (EC) No 640/2009
(1) Super Low Sound Fan
(3) Fan Motor: PTC thermistor
(1) Exterior Paint Finish
(1) Full length access platform, ladder & cage
(1) Glycol Circuit: 198kW DTX

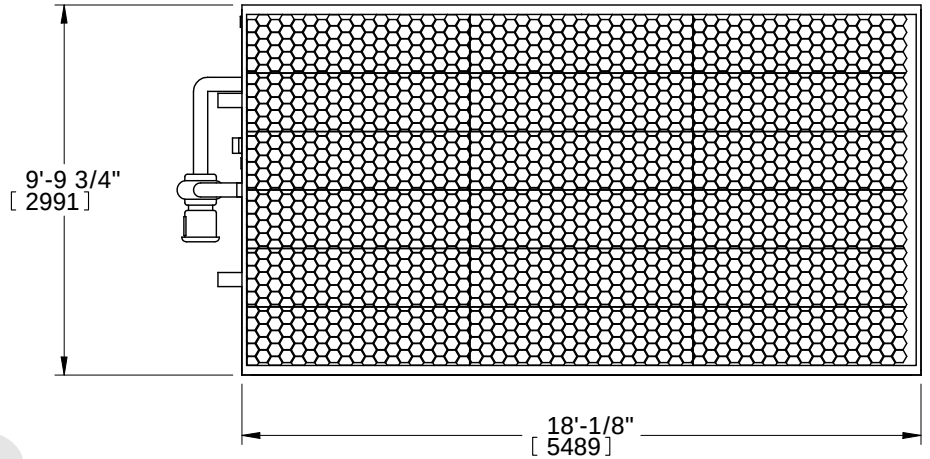
# EVAPCO, INC.

| UNIT | MODEL # | SCALE | DWG. # | REV. | DATE | SERIAL # |
|---|---|---|---|---|---|---|
| EVAPORATIVE CONDENSER | PMCO-566O | N.T.S. | CQTM1806-DRA-ST | - | 2/18/2022 | |

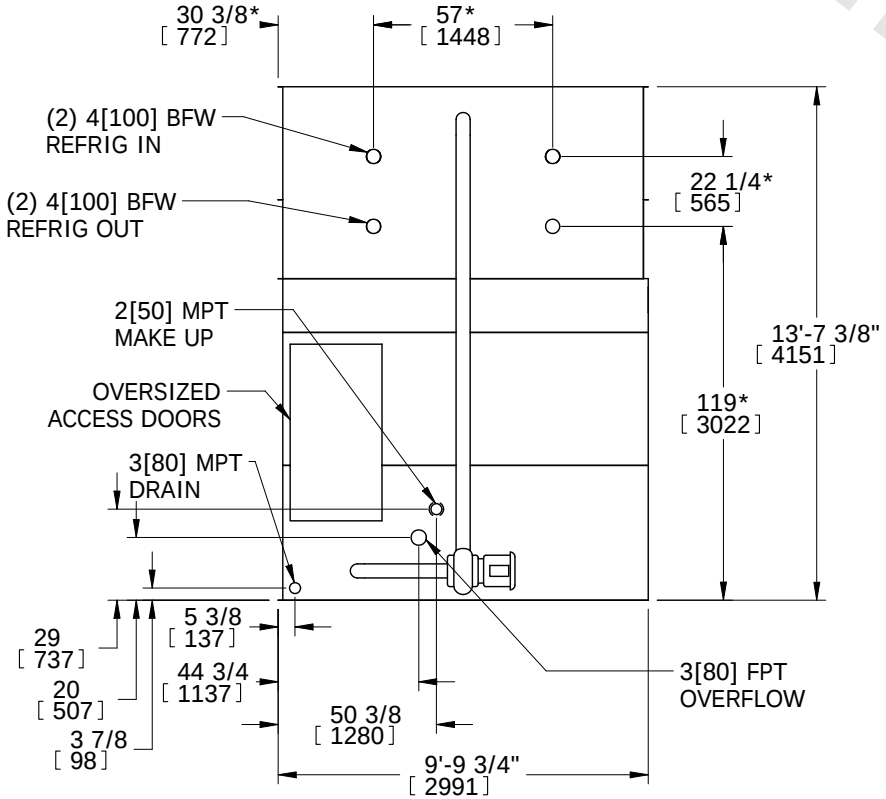
NOTES:
1. (M)- FAN MOTOR LOCATION
2. HEAVIEST SECTION IS UPPER SECTION
3. MPT DENOTES MALE PIPE THREAD
   FPT DENOTES FEMALE PIPE THREAD
   BFW DENOTES BEVELED FOR WELDING
4. +UNIT WEIGHT DOES NOT INCLUDE ACCESSORIES (SEE ACCESSORY DRAWINGS)
5. 3/4" DIA. MOUNTING HOLES. REFER TO RECOMMENDED STEEL SUPPORT DRAWING.
6. MAKE-UP WATER PRESSURE
   20 psi MIN [137 kPa], 50 psi MAX [344 kPa]
7. *-APPROXIMATE DIMENSIONS DO NOT USE FOR PRE-FABRICATION OF CONNECTING PIPING
8. DIMENSIONS LISTED AS FOLLOWS: ENGLISH IN [METRIC] [mm]



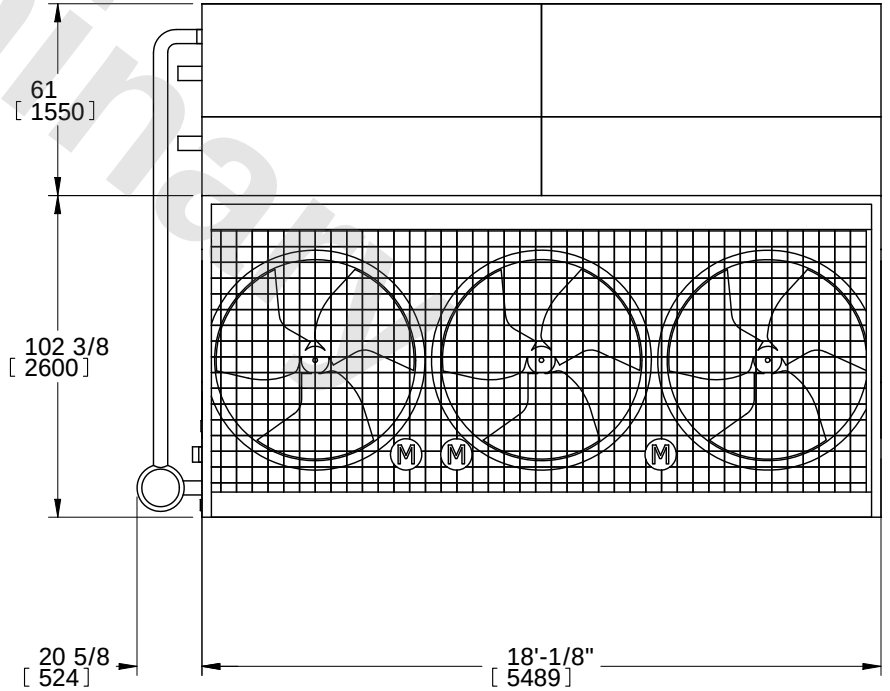
**FACE 1**
**PLAN VIEW**




**FACE 2**



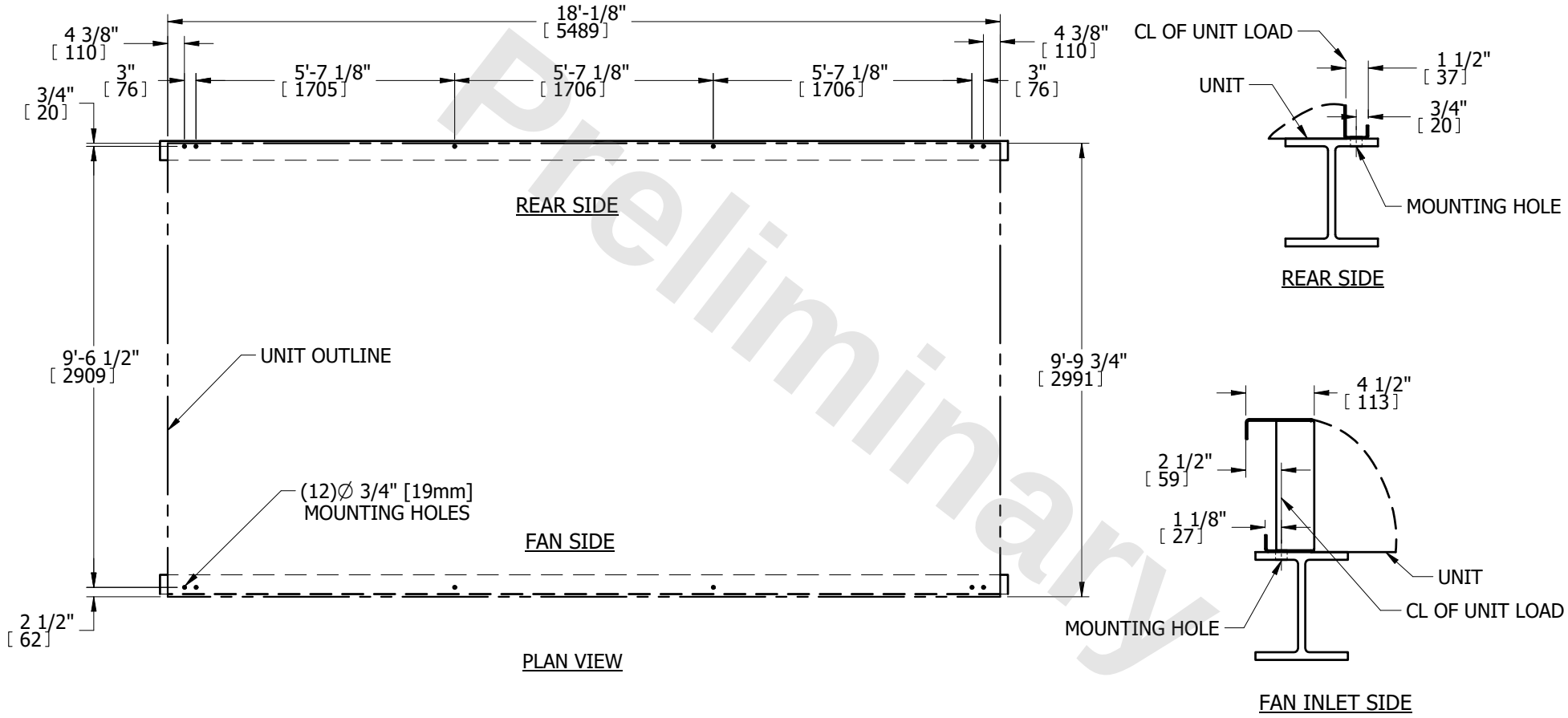

**FACE 1**




**FACE 2**

| SHIPPING WEIGHT | 20920 lbs+ [9489] kg+ | OPERATING WEIGHT | 27240 lbs+ [12356] kg+ | HEAVIEST SECTION WEIGHT | 12580 lbs+ [5706] kg+ | NO. OF SHIPPING SECTIONS | 2 |
|---|---|---|---|---|---|---|---|

| UNIT | PMCQ-566Q | | DWG. # | SLAPTM18-DE |
|---|---|---|---|---|
| TITLE | STEEL SUPPORT CONFIGURATION | **EVAPCO, INC.** | SCALE | N.T.S. |
| | | | DRAWN BY | JLG |






NOTES:

1. BEAMS SHOULD BE SIZED IN ACCORDANCE WITH ACCEPTED STRUCTURAL PRACTICES. MAXIMUM DEFLECTION OF BEAM UNDER UNIT TO BE 1/360 OF UNIT LENGTH NOT TO EXCEED 1/2" [13mm].
2. DEFLECTION MAY BE CALCULATED BY USING 55% OF THE OPERATING WEIGHT AS A UNIFORM LOAD ON EACH BEAM. SEE CERTIFIED PRINT FOR OPERATING WEIGHT.
3. SUPPORT BEAMS AND ANCHOR HARDWARE ARE TO BE FURNISHED BY OTHERS. ANCHOR HARDWARE TO BE ASTM - A325 5/8" [16mm] BOLT OR EQUIVALENT.
4. BEAMS MUST BE LOCATED UNDER THE FULL LENGTH OF THE PAN SECTION.
5. SUPPORTING BEAM SURFACE MUST BE LEVEL. DO NOT LEVEL THE UNIT BY PLACING SHIMS BETWEEN THE UNIT MOUNTING FLANGE AND THE SUPPORTING BEAM.
6. THE FACTORY RECOMMENDED STEEL SUPPORT CONFIGURATION IS SHOWN. CONSULT THE FACTORY FOR ALTERNATE SUPPORT CONFIGURATIONS.
7. UNIT SHOULD BE POSITIONED ON STEEL SUCH THAT THE ANCHORING HARDWARE FULLY PENETRATES THE BEAM'S FLANGE AND CLEARS THE BEAM'S WEB.
8. DIMENSIONS LISTED AS FOLLOWS: ENGLISH FT-IN [METRIC] [mm]

# Full Speed Complete Sound Data

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Sound Pressure Levels (SPL) in dB RE 0.0002 Microbar
Sound Power Levels (PWL) in dB RE 10-12 Watt

| | |
|---|---|
| Model | PMCQ-566Q |
| Motor | 7.50 kW |
| # Motors | 3 |
| Speed | Full Speed |

**1 Cell Data**

| | Sound Pressure Level (dB) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | End | | Motor Side | | Opp End | | Opp Mtr. Side | | Top | | Sound |
| | 5.0 ft | 50.0 ft | 5.0 ft | 50.0 ft | 5.0 ft | 50.0 ft | 5.0 ft | 50.0 ft | 5.0 ft | 50.0 ft | Power |
| Band | (1.5m) | (15.2m) | (1.5m) | (15.2m) | (1.5m) | (15.2m) | (1.5m) | (15.2m) | (1.5m) | (15.2m) | Level (db) |
| 63 HZ | 84 | 69 | 76 | 71 | 84 | 69 | 81 | 67 | 79 | 72 | 101 |
| 125 HZ | 80 | 69 | 85 | 74 | 80 | 69 | 74 | 65 | 80 | 67 | 101 |
| 250 HZ | 71 | 61 | 83 | 68 | 71 | 61 | 67 | 60 | 76 | 64 | 95 |
| 500 HZ | 66 | 54 | 80 | 62 | 66 | 54 | 62 | 56 | 72 | 58 | 90 |
| 1 KHZ | 64 | 51 | 76 | 61 | 64 | 51 | 60 | 51 | 69 | 56 | 88 |
| 2 KHZ | 58 | 47 | 75 | 60 | 58 | 47 | 54 | 45 | 69 | 55 | 86 |
| 4 KHZ | 55 | 44 | 75 | 61 | 55 | 44 | 51 | 43 | 70 | 55 | 87 |
| 8 KHZ | 54 | 42 | 77 | 62 | 54 | 42 | 51 | 42 | 69 | 55 | 87 |
| Calc dBA | 70 | 59 | 84 | 69 | 70 | 59 | 66 | 58 | 77 | 63 | 95 |

Sound option(s) selected: Super Low Sound Fan

Remarks:

1. Sound Pressure Levels are according to CTI Standard ATC-128 and verified by an independent CTI-licensed sound test agency
2. Sound Power Levels are calculated according to the Small Units Section 8
3. Sound from free-field conditions over a reflecting plane with +/-2 db(A) tolerance
4. Noise levels can increase with variable frequency drives depending on the drive manufacturer and the drive configuration
5. Complete unit sound data with all fans operating

# CERTIFICATE OF COMPLIANCE

## Independent Sound Validation

All EVAPCO Cooling Towers, Closed Circuit Coolers and Condensers have been tested in accordance with CTI ATC-128, Test Code for Measurement of Sound from Water-Cooling Towers, by a CTI-licensed independent test agency

*As outlined in CTI ATC-128, sound testing was conducted on various EVAPCO cooling towers, closed circuit coolers and condenser models by an independent CTI-licensed sound test agency. Sound pressure levels were recorded in the acoustic near-field and far-field locations. Using certified and calibrated precision sound test instruments per test standards, the sound test agency conducted and verified the analysis.*

Applicable Codes:
CTI ATC 128