# transmittal

**HIXSON**
659 Van Meter Street
Cincinnati, Ohio
45202-1568
513 241 1230
FAX 513 241 1287

TO: Ruscilli Construction Co. LLC
5815 Wall Street
Dublin, OH 43017

JOB NO. 10340.43

DATE: 09/23/22

☑ ENCLOSED

☐ UNDER SEPARATE COVER

DELIVERED BY:
Procore

SUBJECT: Marzetti
Columbus, OH – Old Cook Rm & Controls Upgrade

ATTENTION: Katie Fox

| COPIES | DESCRIPTION |
|---|---|
| | **SUBMITTAL NO. 005** |
| 1 | Product Data - Scroll Water Chillers |
| | Specification Section 236423 |

☐ Not Requested – Not Reviewed
☐ Not Requested – Reviewed

HIXSON

SUBMITTAL REVIEW
**HIXSON**
659 VAN METER STREET
CINCINNATI, OH 45202-4568

A/E review is for general conformance and compatibility with design concept and contract documents. It is not to determine the correctness or adequacy of this submittal. Markings, comments, or the absence of exceptions by the A/E shall not be construed as relieving the Contractor from compliance with the plans, specifications, and contract documents. The Contractor remains responsible for details and accuracy; for confirming and correlating and quantities and dimensions; for selecting fabricators, processes, and systems; for techniques of assembly, construction, and installation; and for the performance of all work in a workmanlike and safe manner.

☒ No Exceptions taken ☐ Note Markings
☐ Rejected ☐ Resubmit
☐ Comments attached

By: DWK/AJM Date: 092322

| JOB NO. | SUBMITTAL NO. |
|---|---|
| 10340.43 | 005 |

**Ruscilli Construction Co**
5815 Wall Street
Dublin, Ohio 43017
P: (614) 876-9484
F: 6148760253

**Project: 22555 Marzetti Allen Dairy**
1709 Frank Road
Columbus , Ohio 43223

# Submittal #236423-1.0 - 236423 - SCROLL WATER CHILLERS
# 236423 - SCROLL WATER CHILLERS

| | | | |
|---|---|---|---|
| **Revision** | 0 | **Submittal Manager** | Katie Fox (Ruscilli Construction Co) |
| **Status** | Open | **Date Created** | Sep 14, 2022 |
| **Issue Date** | | **Spec Section** | 236423 - SCROLL WATER CHILLERS |
| **Responsible Contractor** | TP MECHANICAL | **Received From** | |
| **Received Date** | | **Submit By** | |
| **Final Due Date** | Oct 10, 2022 | **Lead Time** | |
| | | **Cost Code** | |
| **Location** | | **Type** | Product Data |
| **Approvers** | Katie Fox (Ruscilli Construction Co), Karen Blum (HIXSON ARCHITECTS) | | |
| **Ball in Court** | Karen Blum (HIXSON ARCHITECTS) | | |
| **Distribution** | | | |
| **Description** | 1. Product Data: a. Refrigerant type and quantity. b. Rated capacities. c. Operating characteristics. d. Electrical characteristics and motor data. e. Wiring diagram differentiating factory- and field-wiring. f. Furnished specialties, and accessories. g. Dimensions. h. Weights and structural loads. i. Required clearances. j. Method of field assembly, components, and location and size of each field connection. 2. Clearly indicate, by highlighting or itemized lists, all differences to “Design Basis” product features. | | |

## Submittal Workflow

| Name | Sent Date | Due Date | Returned Date | Response | Attachments |
|---|---|---|---|---|---|
| General Information Attachments | | | | | |
| Lindsey Ward | | Sep 21, 2022 | Sep 19, 2022 | Submitted | ~~23 64 23 - Chiller.pdf~~ |
| Katie Fox | Sep 19, 2022 | Sep 26, 2022 | Sep 20, 2022 | Reviewed | 23 64 23 - Chiller.pdf (Current) |
| Karen Blum | Sep 20, 2022 | Oct 10, 2022 | | Pending | |

# 22555 - Marzetti Allen Dairy

1709 Frank Road
Columbus , Ohio 43223
United States

**Ruscilli Construction Co**
5815 Wall Street
Dublin, Ohio 43017
United States
(614) 876-9484

**Title**
236423 - SCROLL WATER CHILLERS

**Submittal Manager**
Katie Fox

**Spec Section**
236423 - SCROLL WATER CHILLERS

**Type**
Product Data

**Number**
236423-1

**Rev**
0

**Description**

1. Product Data:
a. Refrigerant type and quantity.
b. Rated capacities.
c. Operating characteristics.
d. Electrical characteristics and motor data.
e. Wiring diagram differentiating factory- and field-wiring.
f. Furnished specialties, and accessories.
g. Dimensions.
h. Weights and structural loads.
i. Required clearances.
j. Method of field assembly, components, and location and size of each field connection.
2. Clearly indicate, by highlighting or itemized lists, all differences to “Design Basis” product features.

[X] REVIEWED [ ] REVIEWED AS NOTED

[ ] RETURNED FOR CORRECTIONS

By Katie Fox Date 09/20/2022

Review of the drawings is for general conformance only and does not relieve the sub-contractor and/or vendor of responsibility to comply fully with all portions of the contract, drawings and specifications and changes there to.

Ruscilli Construction Co.
LLC CONTROL NO. 236423-1.0

TP Mechanical
CONTRACTORS | SERVICE | FABRICATION

# *SUBMITTAL DATA*

| | |
|---|---|
| **Project:** | **Marzetti Old Cook Room** |
| **Bid Category** : | **Plumbing – HVAC** |
| **Project No.:** | **E1000114** |
| **TP Tab No.:** | **210** |
| **Construction Manager:** | **Ruscilli Construction Co, Inc.** |
| **Architect/Engineer:** | **Hixson Architecture Engineering Interiors** |
| **Submittal For:** | **Chiller** |
| **Specification #:** | **23 64 23** |
| **Manufacturer:** | **Daikin** |
| **Supplier:** | **Elitaire** |

The attached submittal data has been reviewed by TP Mechanical Contractors for compliance with the Architect/Engineer's specifications and plan schedule for this project.

In order to maintain the project schedule, we request that this submittal be returned to TP Mechanical Contractors **within 7 days**.

**NOTE: Material cannot be released without Architect/Engineer's approval of submittal.**

***(Please place stamp of approval here)***

X PRODUCT DATA

_____ DRAWINGS

8/26/22 DATE SUBMITTED

_____ DATE RESUBMITTED

T. P. MECHANICAL CONTRACTORS

BY _____

This drawing or brochure has been checked to quality or proper components only. Approval of this drawing or brochure shall not relieve the supplier of responsibility for accuracy or dimensions of full compliance with plans and specifications and purchase order.

**2064 Drill Avenue ♦ Dayton, OH 45414 ♦ 937-985-9133 ♦ FAX 513-851-0612**

August 26, 2022

# Marzetti Old Cook Room
# TP Job No.: E1000114

## Spec. Section 23 64 23 - Chiller

| Service | Manufacturer | Model # |
|---|---|---|
| CH-2 / Chiller | Daikin | AWV010B |

# Daikin Applied Air Cooled Screw Chiller

Prepared for:

**Hixson**

Sold to:

**TP Mechanical**

Job Name:

**T. Marzetti – Old Cook Room**

Date:

**08.25.2022**

**Notes:**

- Disconnect provided by ElitAire with 65k SCCR option
- 5-yearar parts and labor warranty included for the entire unit
- Field installed RIS isolators
- Field installed strainer kit for the evaporator

**Derek Fryfogle**
dfryfogle@elitaire.com
330-581-1132

## Table of Contents

## Technical Data Sheet for CH-2

| Job Information | *Technical Data Sheet* |
|---|---|
| **Job Name** | T-Marzetti Chiller |
| **Date** | 8/25/2022 |
| **Submitted By** | Michael Weisman |
| **Software Version** | 13.10 |
| **Unit Tag** | CH-2 |

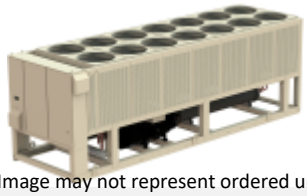


Image may not represent ordered unit

### Unit Overview

| Model Number | Capacity ton | Voltage | Unit Starter Type | ASHRAE 90.1 | LEED Enhanced Refrigerant Management Credit |
|---|---|---|---|---|---|
| AWV010B | 144.5 | 460 V / 60 Hz / 3 Ph | VFD | '07, '10, '13 & '16 | Pass |

### Unit

| Unit Type | Platform | Unit Revision |
|---|---|---|
| Air-Cooled Screw Compressor Chiller | Packaged | 0C |

| Head Pressure | Tubing |
|---|---|
| DC Fan Motors / All Fan VFD | With Liquid Line Solenoid Valves & Suction Shut-off Valves |

| Display |
|---|
| On Controller only |

| Compressor | Refrigerant Economizer |
|---|---|
| DDN | GGN |

| Refrigerant Type | Refrigerant Weight |
|---|---|
| R134a | 245 lb (per unit) |

| Approval |
|---|
| ETL/cETL, AHRI & ASHRAE 90.1 |

#### Evaporator

| | |
|---|---|
| **Evaporator Model:** | PP1000A0206 |
| **Fluid Volume:** | 20.2 gal |
| **Connection Hand:** | Universal Connection - Facing out back |
| **Connection Size:** | 6.0 in |
| **Insulation:** | Single Layer Insulation on Evaporator |

| Entering Fluid Temperature | Leaving Fluid Temperature | Fluid Type | Glycol Concentration | Fluid Flow | Fluid Flow (with glycol) Min / Max | Pressure Drop | Pressure Drop (with glycol) Min / Max | Fouling Factor |
|---|---|---|---|---|---|---|---|---|
| 41.00 °F | 33.00 °F | Propylene Glycol | 30.0 % | 460.2 gpm | 197.0 / 660.0 gpm | 11.2 ft $H_2O$ | 2.70 / 24.6 ft $H_2O$ | 0.000100 °F.ft².h/Btu |

*Note: Evaporator Pressure Drop does not include a strainer. Minimum flow is based on a Variable Flow Pumping System Type and applies to part load conditions only.*

#### Condenser

| | |
|---|---|
| **Number of Fans:** | 10 |
| **Coil Fins:** | MicroChannel |
| **Guards:** | Condenser Coil Wire Grilles only |

| Design Ambient Air Temperature | Altitude | Fan Diameter | Minimum Design Ambient Temperature |
|---|---|---|---|
| 95.0 °F | 0.000 ft | 31.5 in | 0.0 °F |

## Technical Data Sheet for CH-2

### Unit Performance

**Design**

| Capacity | Input Power | Efficiency (EER) | IPLV.IP* (EER) |
|---|---|---|---|
| 144.5 ton | 205.5 kW | 8.438 Btu/W.h | 20.45 Btu/W.h |

**Performance Points rated at AHRI Ambient Relief - with Glycol**

| Unit | | | | | | | Evaporator | | | | Condenser | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point # | % Load | Capacity ton | Input Power kW | Efficiency (EER) Btu/W.h | Refrigerant Economizer Status #1; #2 | Compressor RPS #1; #2 | Fluid Flow gpm | Pressure Drop ft $H_2O$ | Entering Fluid °F | Leaving Fluid °F | Ambient Air °F | Altitude ft |
| 1 | 100.0 | 144.5 | 205.5 | 8.438 | On; On | 87; 84 | 460.2 | 11.2 | 41.00 | 33.00 | 95.0 | 0.000 |
| 2 | 90.0 | 130.1 | 157.7 | 9.898 | On; On | 74; 71 | 460.2 | 11.2 | 40.20 | 33.00 | 89.0 | 0.000 |
| 3 | 80.0 | 115.6 | 125.4 | 11.06 | On; On | 66; 63 | 460.2 | 11.2 | 39.40 | 33.00 | 83.0 | 0.000 |
| 4 | 70.0 | 101.1 | 98.47 | 12.33 | Off; On | 62; 54 | 460.2 | 11.2 | 38.60 | 33.00 | 77.0 | 0.000 |
| 5 | 60.0 | 86.70 | 73.17 | 14.22 | Off; Off | 52; 49 | 460.2 | 11.2 | 37.80 | 33.00 | 71.0 | 0.000 |
| 6 | 50.0 | 72.25 | 47.35 | 18.31 | Off; Off | 37; 37 | 460.2 | 11.2 | 37.00 | 33.00 | 65.0 | 0.000 |
| 7 | 40.0 | 57.80 | 31.19 | 22.24 | Off; Off | 27; 26 | 460.2 | 11.2 | 36.20 | 33.00 | 59.0 | 0.000 |
| 8 | 30.0 | 43.35 | 24.53 | 21.21 | Off; Off | 21; 20 | 460.2 | 11.2 | 35.40 | 33.00 | 55.0 | 0.000 |
| 9 | 20.0 | 28.90 | 14.38 | 24.11 | Off; Off | 26 | 460.2 | 11.2 | 34.60 | 33.00 | 55.0 | 0.000 |
| 10 | 10.0 | 14.45 | 8.657 | 20.03 | Off; Off | 14 | 460.2 | 11.2 | 33.80 | 33.00 | 55.0 | 0.000 |

** IPLV reflects AHRI standard rating conditions with water and may change with user defined conditions due to AWV product optimized configurability.*

## Technical Data Sheet for CH-2

### Sound Data (Internal Discharge Compressor Muffler)

**Sound Pressure (*at 30 feet*)**

| % Load | 63 Hz db | 125 Hz db | 250 Hz db | 500 Hz db | 1 kHz db | 2 kHz db | 4 kHz db | 8 kHz db | Overall dBA |
|---|---|---|---|---|---|---|---|---|---|
| 100 | 77 | 73 | 71 | 66 | 63 | 55 | 49 | 42 | 69 |
| 90 | 76 | 72 | 68 | 65 | 62 | 54 | 48 | 42 | 67 |
| 80 | 76 | 72 | 68 | 64 | 61 | 53 | 48 | 41 | 66 |
| 70 | 76 | 71 | 67 | 64 | 61 | 52 | 47 | 41 | 66 |
| 60 | 75 | 70 | 64 | 62 | 59 | 50 | 45 | 39 | 64 |
| 50 | 74 | 69 | 62 | 60 | 56 | 47 | 42 | 36 | 62 |
| 40 | 71 | 66 | 58 | 57 | 52 | 40 | 35 | 29 | 58 |
| 30 | 67 | 62 | 54 | 52 | 47 | 34 | 29 | 23 | 53 |
| 20 | 67 | 62 | 54 | 52 | 47 | 33 | 29 | 23 | 53 |
| 10 | 35 | 36 | 34 | 32 | 29 | 22 | 17 | 11 | 34 |

**Sound Power**

| % Load | 63 Hz db | 125 Hz db | 250 Hz db | 500 Hz db | 1 kHz db | 2 kHz db | 4 kHz db | 8 kHz db | Overall dBA |
|---|---|---|---|---|---|---|---|---|---|
| 100 | 104 | 100 | 98 | 93 | 90 | 82 | 76 | 69 | 96 |
| 90 | 103 | 99 | 95 | 92 | 89 | 81 | 75 | 69 | 94 |
| 80 | 103 | 99 | 95 | 91 | 88 | 80 | 75 | 68 | 93 |
| 70 | 103 | 98 | 94 | 91 | 88 | 79 | 74 | 68 | 93 |
| 60 | 102 | 97 | 91 | 89 | 86 | 77 | 72 | 66 | 91 |
| 50 | 101 | 96 | 89 | 87 | 83 | 74 | 69 | 63 | 89 |
| 40 | 98 | 93 | 85 | 84 | 79 | 67 | 62 | 56 | 85 |
| 30 | 94 | 89 | 81 | 79 | 74 | 61 | 56 | 50 | 80 |
| 20 | 94 | 89 | 81 | 79 | 74 | 60 | 56 | 50 | 80 |
| 10 | 62 | 63 | 61 | 59 | 56 | 49 | 44 | 38 | 61 |

**One-third Octave Band Sound Power**

| % Load | 50 Hz | 63 Hz | 80 Hz | 100 Hz | 125 Hz | 160 Hz | 200 Hz | 250 Hz | 315 Hz | 400 Hz | 500 Hz | 630 Hz | 800 Hz | 1 kHz | 1.25 kHz | 1.6 kHz | 2 kHz | 2.5 kHz | 3.15 kHz | 4 kHz | 5 kHz | 6.3 kHz | 8 kHz | 10 kHz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 100 | 99 | 98 | 95 | 96 | 93 | 89 | 90 | 96 | 89 | 88 | 88 | 85 | 85 | 87 | 79 | 77 | 75 | 73 | 71 | 70 | 69 | 61 | 55 |
| 90 | 99 | 99 | 97 | 95 | 95 | 92 | 89 | 92 | 91 | 88 | 88 | 86 | 84 | 84 | 85 | 78 | 76 | 74 | 72 | 70 | 70 | 68 | 60 | 55 |
| 80 | 99 | 98 | 97 | 95 | 95 | 92 | 89 | 93 | 87 | 88 | 87 | 84 | 84 | 83 | 84 | 77 | 75 | 73 | 71 | 69 | 69 | 67 | 60 | 54 |
| 70 | 99 | 98 | 96 | 94 | 94 | 91 | 89 | 91 | 87 | 87 | 87 | 83 | 83 | 83 | 83 | 76 | 74 | 73 | 70 | 69 | 68 | 67 | 59 | 53 |
| 60 | 98 | 98 | 96 | 94 | 94 | 89 | 87 | 87 | 85 | 86 | 85 | 82 | 82 | 80 | 81 | 74 | 72 | 70 | 68 | 67 | 66 | 65 | 57 | 51 |
| 50 | 97 | 96 | 95 | 92 | 93 | 87 | 84 | 85 | 84 | 84 | 84 | 80 | 80 | 78 | 77 | 71 | 69 | 68 | 65 | 64 | 63 | 62 | 54 | 49 |
| 40 | 94 | 94 | 92 | 90 | 90 | 80 | 80 | 81 | 80 | 80 | 80 | 77 | 77 | 71 | 72 | 64 | 62 | 61 | 59 | 57 | 57 | 55 | 48 | 43 |
| 30 | 90 | 90 | 88 | 86 | 86 | 74 | 75 | 76 | 76 | 75 | 76 | 72 | 72 | 66 | 67 | 57 | 56 | 54 | 53 | 51 | 51 | 49 | 43 | 38 |
| 20 | 90 | 90 | 88 | 86 | 86 | 74 | 75 | 76 | 76 | 75 | 76 | 73 | 72 | 65 | 67 | 57 | 55 | 54 | 53 | 51 | 51 | 49 | 43 | 38 |
| 10 | 60 | 56 | 47 | 55 | 56 | 62 | 57 | 58 | 54 | 56 | 54 | 51 | 51 | 53 | 51 | 46 | 44 | 42 | 40 | 38 | 38 | 37 | 29 | 23 |

*Octave band is non 'A' weighted and overall readings are 'A' weighted. Sound data rated in accordance with AHRI Standard-370.*

## Technical Data Sheet for CH-2

### Physical

| Unit | | | | |
|---|---|---|---|---|
| **Length*** | **Height** | **Width*** | **Shipping Weight*** | **Operating Weight*** |
| 217 in | 100 in | 88 in | 11841 lb | 12010 lb |

* *Shipping and operating weights are based on 'worst case' unit configuration variations but do not include the weights of any Options or Accessories. Contact Chiller Applications for additional information.*

### Electrical

| Unit Electrical Data | | | | |
|---|---|---|---|---|
| **Voltage** | **Starter Type** | **Fan Motor Quantity** | **LRA Fan Motor (each)** | **FLA Fan Motors (each)** |
| 460 V / 60 Hz / 3 Ph | VFD | 10 | 3.6 A | 2.6 A |

| | |
|---|---|
| **Power Connection Type:** | High Short Circuit Current Rating with Single Point Disconnect Switch and Circuit Protection |
| **Short Circuit Current Rating:** | 65 kA |
| **Drive Type(#1;#2):** | VFD_F3122;VFD_F3122 |
| **Phase Voltage:** | None (PVM included as part of Solid State / VFD) |

| Single Point Power Connection | |
|---|---|
| **Minimum Circuit Ampacity (MCA):** | 362 A |
| **Recommended Overcurrent Protection Size:** | 400 A |
| **Maximum Overcurrent Protection Size(MOCP):** | 500 A |
| **Lug Connection Size:** | (2) 3/0-500MCM |

| Compressor Electrical Data | | |
|---|---|---|
| **Compressor Type** | **Compressor Quantity** | **Starter Type** |
| Screw | 2 | VFD |

| | **Compressor #** | |
|---|---|---|
| | **1** | **2** |
| **Rated Load Amps (RLA):** | 140 A | 150 A |
| **Inrush Current:** | 140 A | 150 A |

*Note: Power wiring connections to the chiller may be done with either copper or aluminum wiring. Wire should be sized per NEC and/or local codes. Wire sizing and wire count must fit in the power connection lug sizing listed above. Please contact your local sales office for more information.*

### Options

| Basic Unit | |
|---|---|
| **Motor Cooling:** | With Additional Liquid Injection Cooling |
| **Control** | |
| **Communication:** | BACnet MS/TP |
| **Electrical** | |
| **Water Flow Indicator:** | Thermal Dispersion Type |

### Warranty

| | |
|---|---|
| **Unit Startup** | Domestic |
| **Standard Warranty:** | 1st Year Entire Unit Parts & Labor |
| **Extended Unit Warranty:** | Entire Unit; Extended 4 years parts & labor (5 Years Total) |
| **Refrigerant Warranty** | 5 Years Total |

## Technical Data Sheet for CH-2

### AHRI Certification

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found In the AHRI Directory at www.ahridirectory.org. Unit contains freeze protection liquids in the evaporator and is certified when rated per the Standard with water.

**Performance at AHRI Standard Condition – with Water**

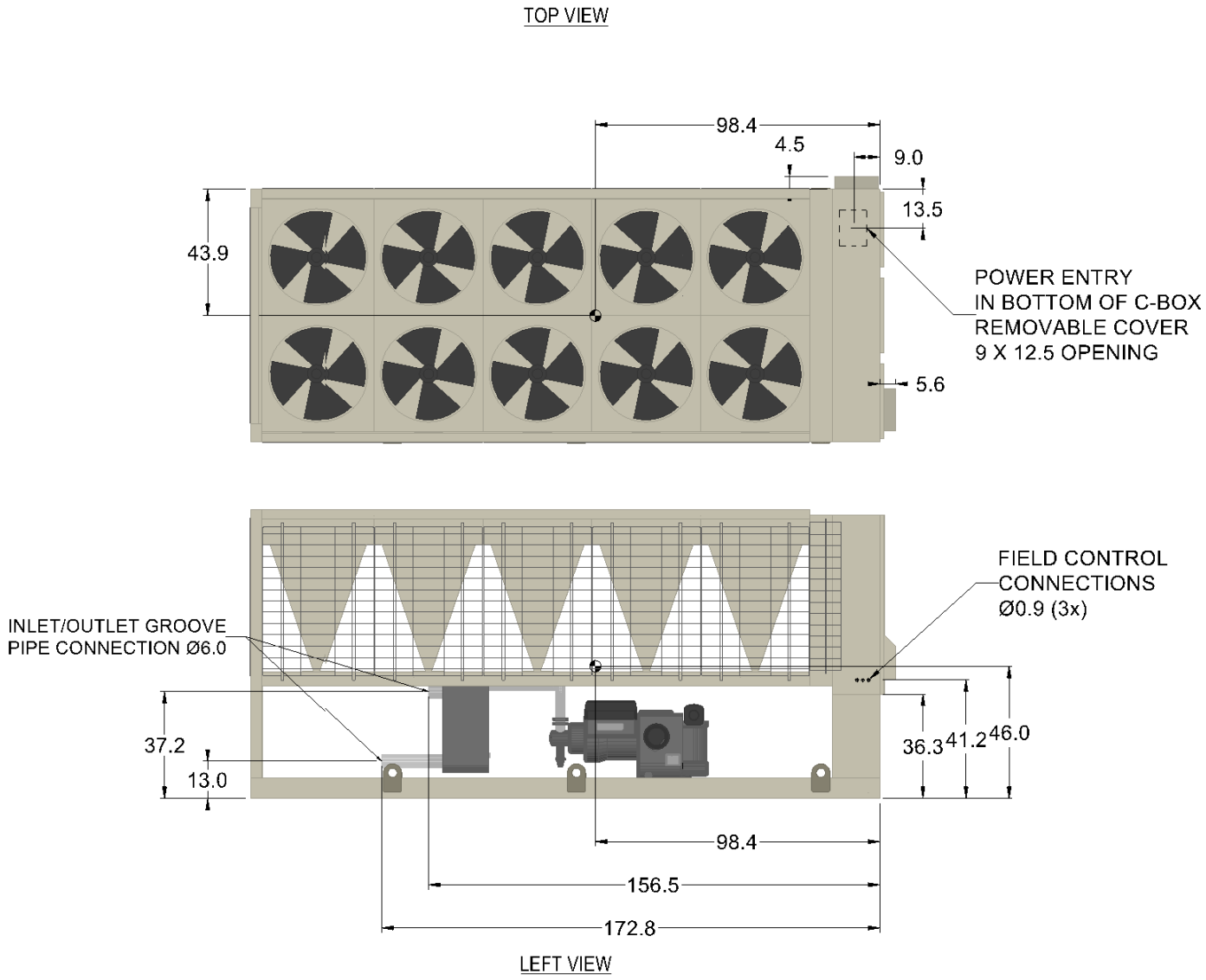
| Unit | | | | | Evaporator | | | | Condenser | |
|---|---|---|---|---|---|---|---|---|---|---|
| % Load | Capacity ton | Input Power kW | Efficiency (EER) Btu/W.h | IPLV.IP* (EER) Btu/W.h | Fluid Flow gpm | Pressure Drop ft $H_2O$ | Entering Fluid °F | Leaving Fluid °F | Ambient Air °F | Altitude ft |
| 100 | 144.5 | 159.8 | 10.85 | 20.45 | 345.8 | 5.20 | 54.00 | 44.00 | 95.0 | 0.000 |

*Note: Performance with water given as reference only to show compliance with AHRI Standard 550/590. Unit will be configured from the factory to support glycol performance as rated. The unit must not operate with water only without consulting the factory.*

### Accessories

**Optional**

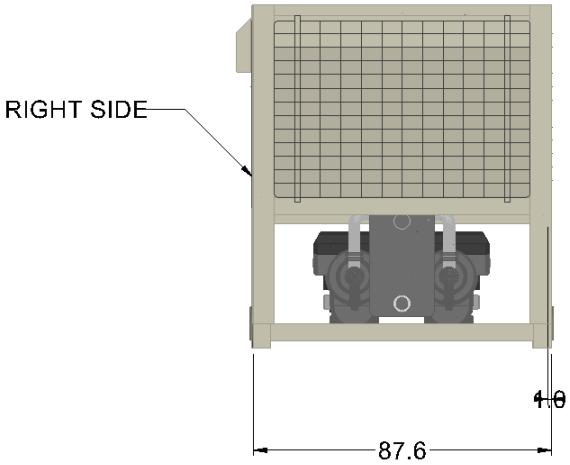
| Part Number | Description |
|---|---|
| 332946485 | RIS Isolator Kit; (6) RED |
| 331758935 | Strainer Kit; Grooved; 6", AWV Turboscrew |

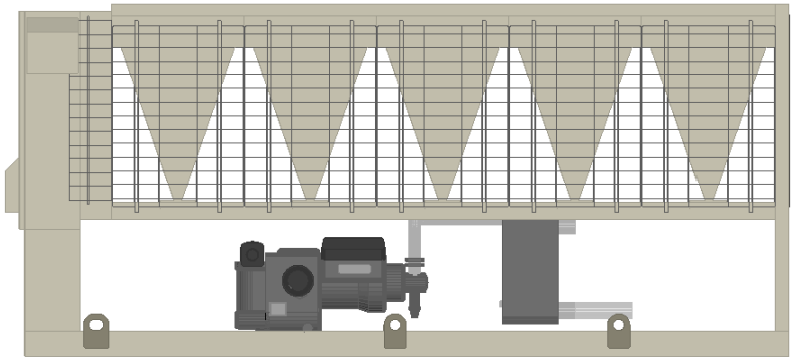



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | Sales Office: ElitAire, Inc. | | | DAIKIN |
| Product: | Project Name: T-Marzetti Chiller | | | Sales Engineer: | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 |
| Model: AWV010B | Aug. 25, 2022 | Ver/Rev: | Sheet: 1 of 1 | Scale: NTS | Tolerance: +/- 0.25" | Dwg Units: (in) | www.DaikinApplied.com Software Version: 13.10 |

# Drawings Rear and Right for CH-2

REAR VIEW



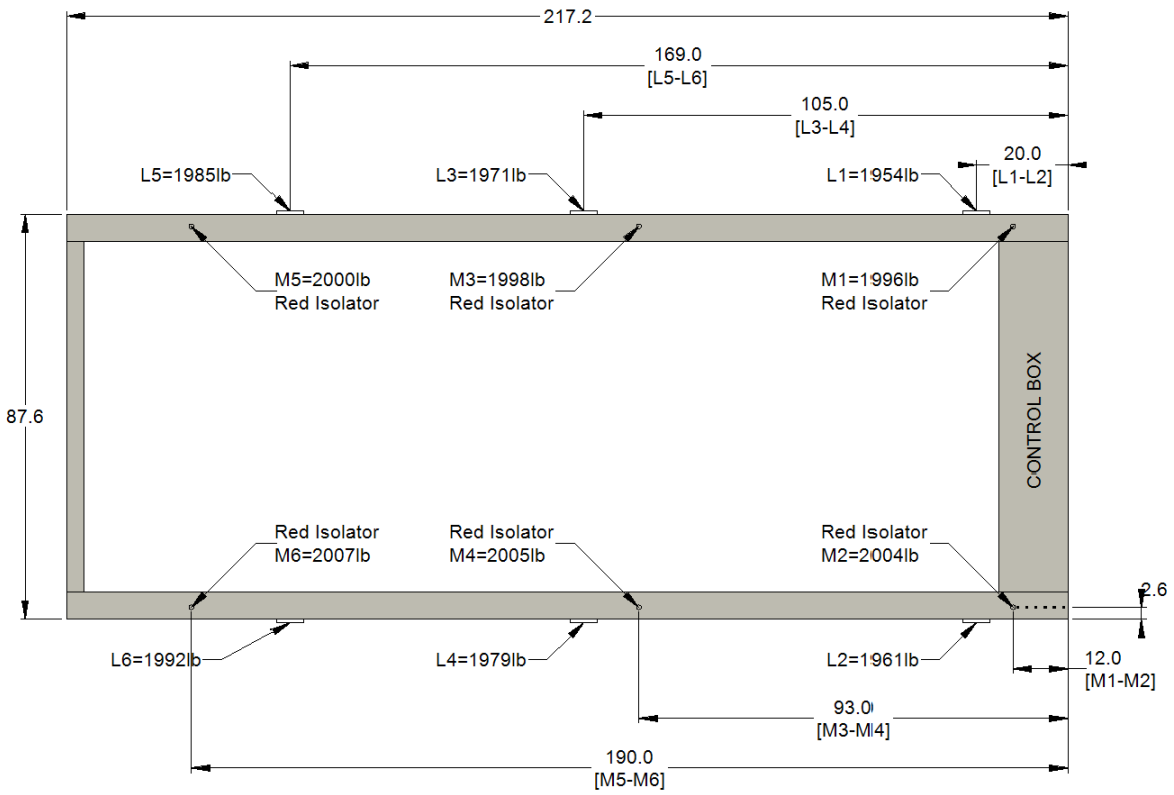
RIGHT VIEW

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | Sales Office: ElitAire, Inc. | | | DAIKIN |
| Product: | Project Name: T-Marzetti Chiller | | | Sales Engineer: | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 |
| Model: AWV010B | Aug. 25, 2022 | Ver/Rev: | Sheet: 1 of 1 | Scale: NTS | Tolerance: +/- 0.25" | Dwg Units: (in) | www.DaikinApplied.com Software Version: 13.10 |

# Drawings Mounting and Lifting for CH-2

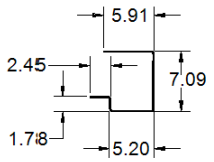
## Mounting and Lifting

BASE FRAME TOP VIEW




NOTES:
1) L = LIFTING WEIGHT
2) M = MOUNTING LOAD
3) UNIT SHIPPING WEIGHT = 11841lb
4) UNIT OPERATING WEIGHT = 12010lb
5) MOUNTING HOLE SIZE = .75"
6) MOUNTING HOLES ONLY ON BOTTOM OF BASE
7) UNIT WIDTH DIMENSION DOES NOT INCLUDE 1 INCH THICKNESS OF THE LIFTING LUG ASSEMBLIES ON BOTH SIDES, WHICH MAY BE REMOVED AFTER INSTALLATION BUT MUST BE RETAINED FOR FUTURE LIFTING / UNIT REMOVAL

Base Rail
Cross Section




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | Sales Office: ElitAire, Inc. | | | DAIKIN |
| Product: | Project Name: T-Marzetti Chiller | | | Sales Engineer: | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 |
| Model: AWV010B | Aug. 25, 2022 | Ver/Rev: | Sheet: 1 of 1 | Scale: NTS | Tolerance: +/- 0.25" | Dwg Units: (in) | www.DaikinApplied.com Software Version: 13.10 |

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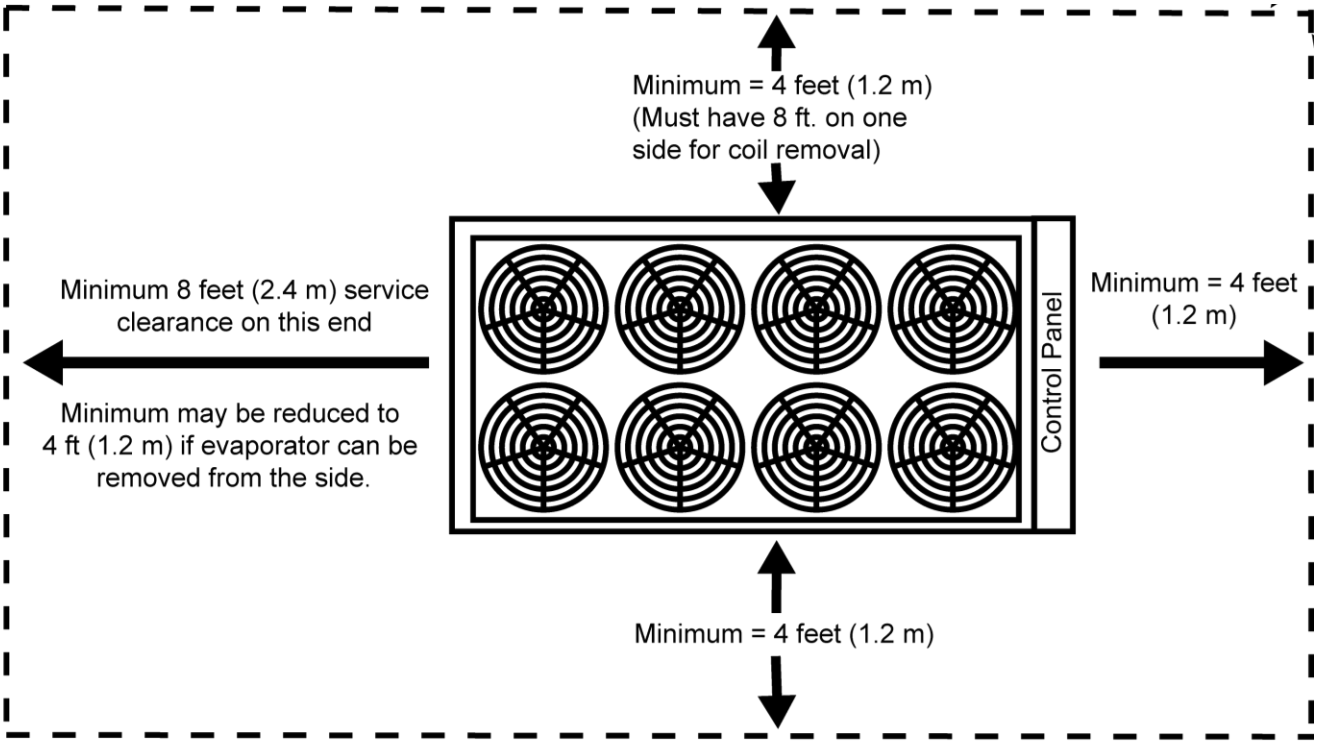
# AWV-A Service Clearance




*NOTE: Additional clearance may be required for proper airflow. Please consult Close Spacing drawings and IOM for additional details.

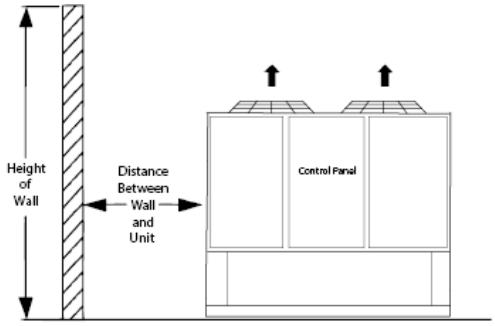
| | | | | | | |
|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | DAIKIN | | |
| Product: Air-Cooled Screw Chiller | Project Name: T-Marzetti Chiller | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 | | |
| Model: AWV-A | Sales Office: ElitAire, Inc. | | | www.DaikinApplied.com | Software Version: 13.10 | |
| Sales Engineer: Derek Fryfogle | Aug. 25, 2022 | Ver/Rev: | Sheet 1 of 1 | Scale: NTS | Tolerance: +/-1.0" | Dwg Units: in [mm] |

00

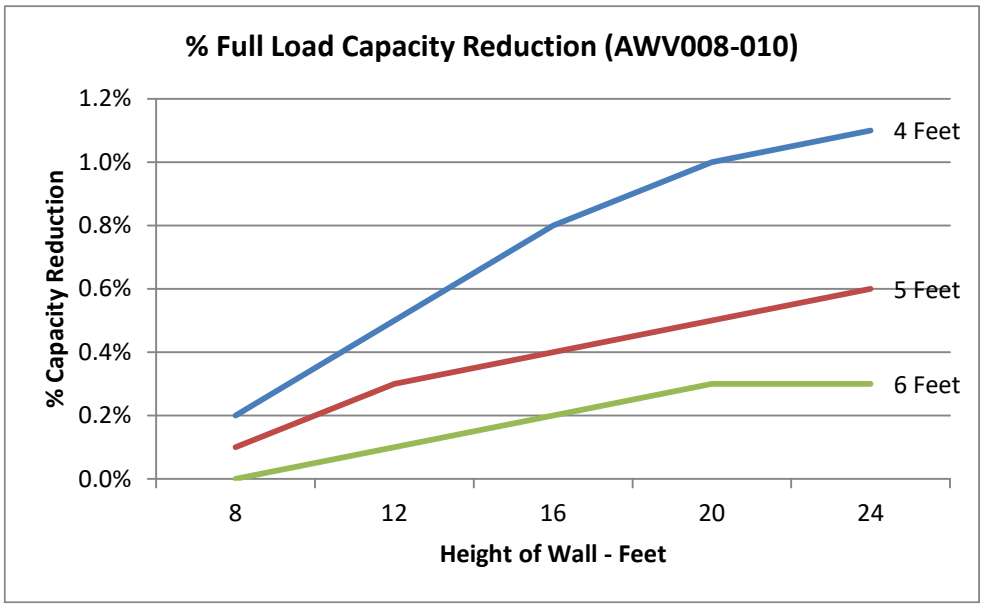
# AWV Close Spacing Performance

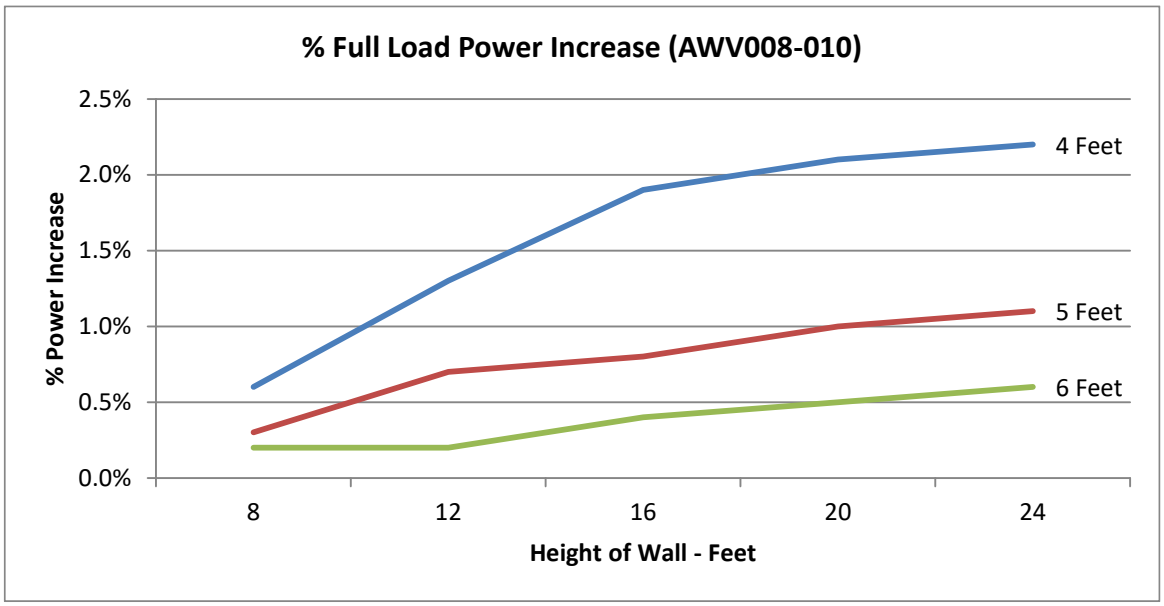
### *Case 1: Building or Wall on One Side of Unit*

For all models, maintain a 4 feet minimum from a wall of any height; however, performance may be affected at this distance due to air recirculation and elevated condenser pressure.




***Case 1- Full Load Power Increase and Capacity Reduction***

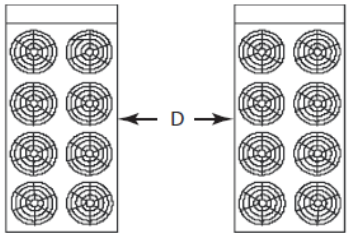


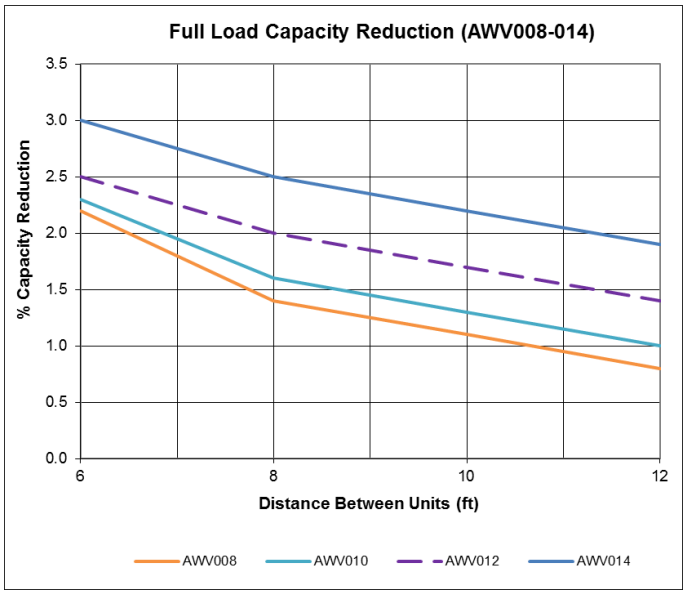

| | | | | | | |
|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | DAIKIN | | |
| Product: Air-Cooled Screw Chiller | Project Name: T-Marzetti Chiller | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 | | |
| Model: AWV-A | Sales Office: ElitAire, Inc. | | | www.DaikinApplied.com | Software Version: 13.10 | |
| Sales Engineer: Derek Fryfogle | Aug. 25, 2022 | Ver/Rev: | Sheet 1 of 1 | Scale: NTS | Tolerance: +/-1.0" | Dwg Units: in [mm] |

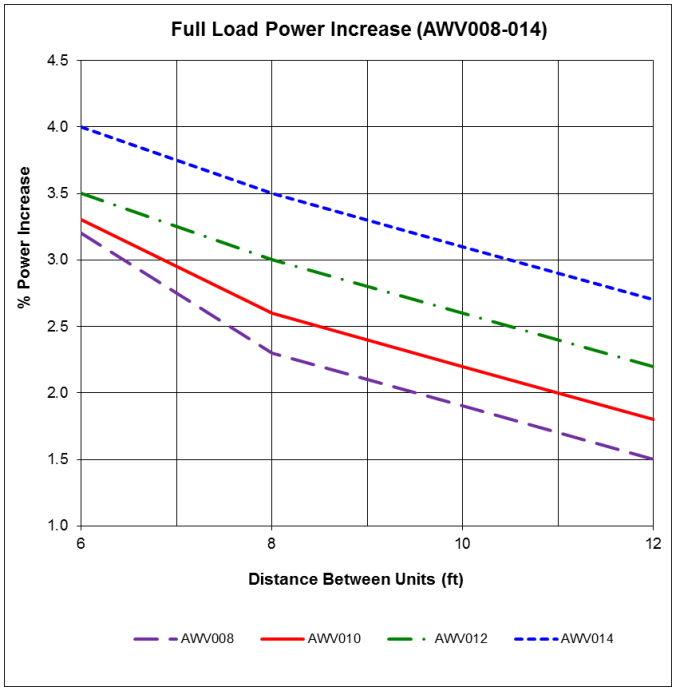
### *Case 2: Two Units, Side-by-Side*

For all models, there must be a minimum of 6 feet between two units placed side-by-side; however, performance may be affected at this distance due to air recirculation and elevated condenser pressure.




***Case 2 - Full Load Capacity Reduction and Power Increase***

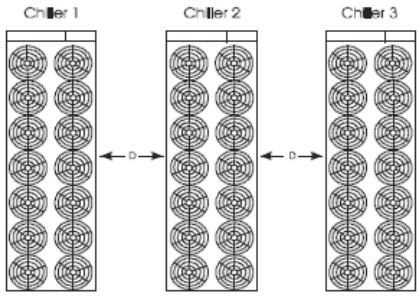


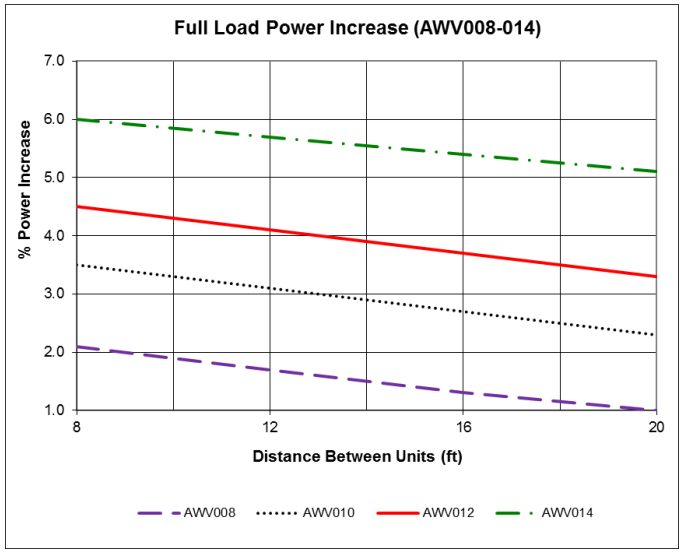

### *Case 3: Three or More Units, Side-by-Side*

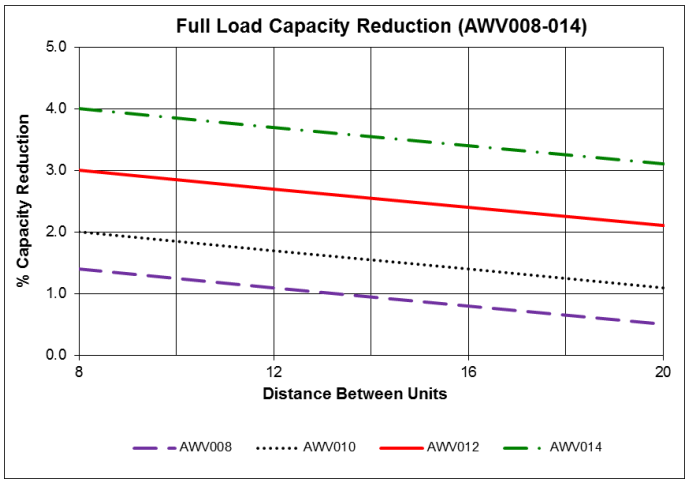
For all models, there must be a minimum of 8 feet between any units placed side-by-side; however, performance may be affected at this distance.

.




***Case 3 - Full Load Capacity Reduction and Power Increase***

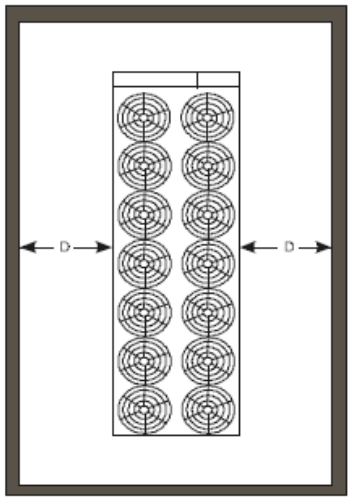


### *Case 4: Open Screening Walls*

Decorative screening walls are often used to help conceal a unit either on grade or on a rooftop. When possible, design these walls such that the combination of their open area and distance from the unit do not require performance adjustment. If the wall opening percentage is less than recommended for the distance to the unit, it should be considered as a solid wall. It is assumed that the wall height is equal to or less than the unit height when mounted on its base support. If the wall height is greater than the unit height, see Case 5: Pit Installation. The distance from the sides of the unit to the side walls must be sufficient for service, such as opening control panel doors. For uneven wall spacing, the distance from the unit to each wall can be averaged providing no distance is less than 4 feet. Values are based on walls on all four-sides.


***Case 4 - Allowable Wall Open Area***



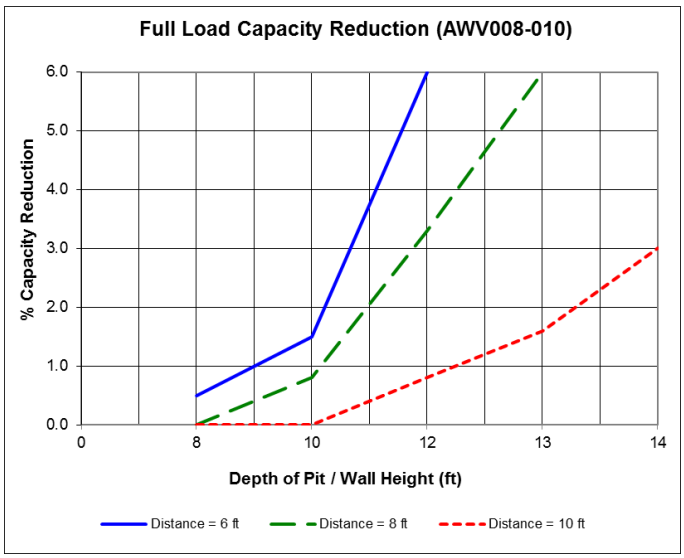

### Case *5: Pit Installation*

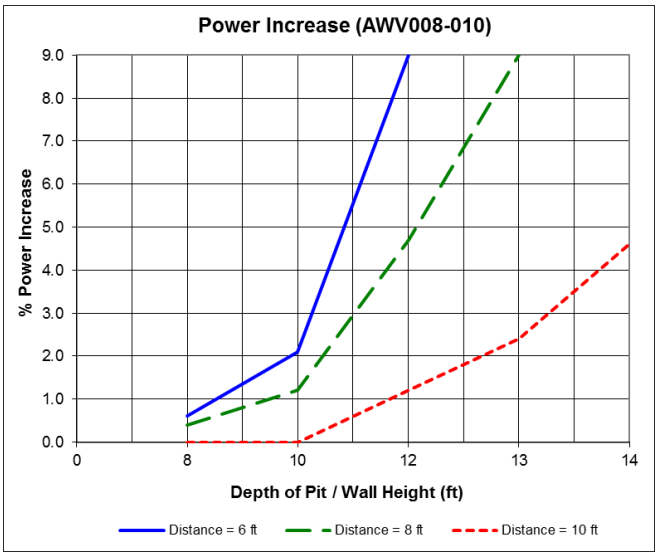
Pit installations can cause operating problems resulting from air recirculation and restriction and require care that sufficient air clearance is provided, safety requirements are met and service access is provided. A solid wall surrounding a unit is substantially a pit and this data should be used. Derates are based on single chiller installation only.

Steel grating is sometimes used to cover a pit to prevent accidental falls or trips into the pit. The grating material and installation design must be strong enough to prevent such accidents, yet provide abundant open area to avoid recirculation problems. Have any pit installation reviewed by the Daikin Applied sales representative prior to installation to ensure it has sufficient air-flow characteristics and approved by the installation design engineer to avoid risk of accident.

***Case 5 - Full Load Capacity Reduction and Power Increase***

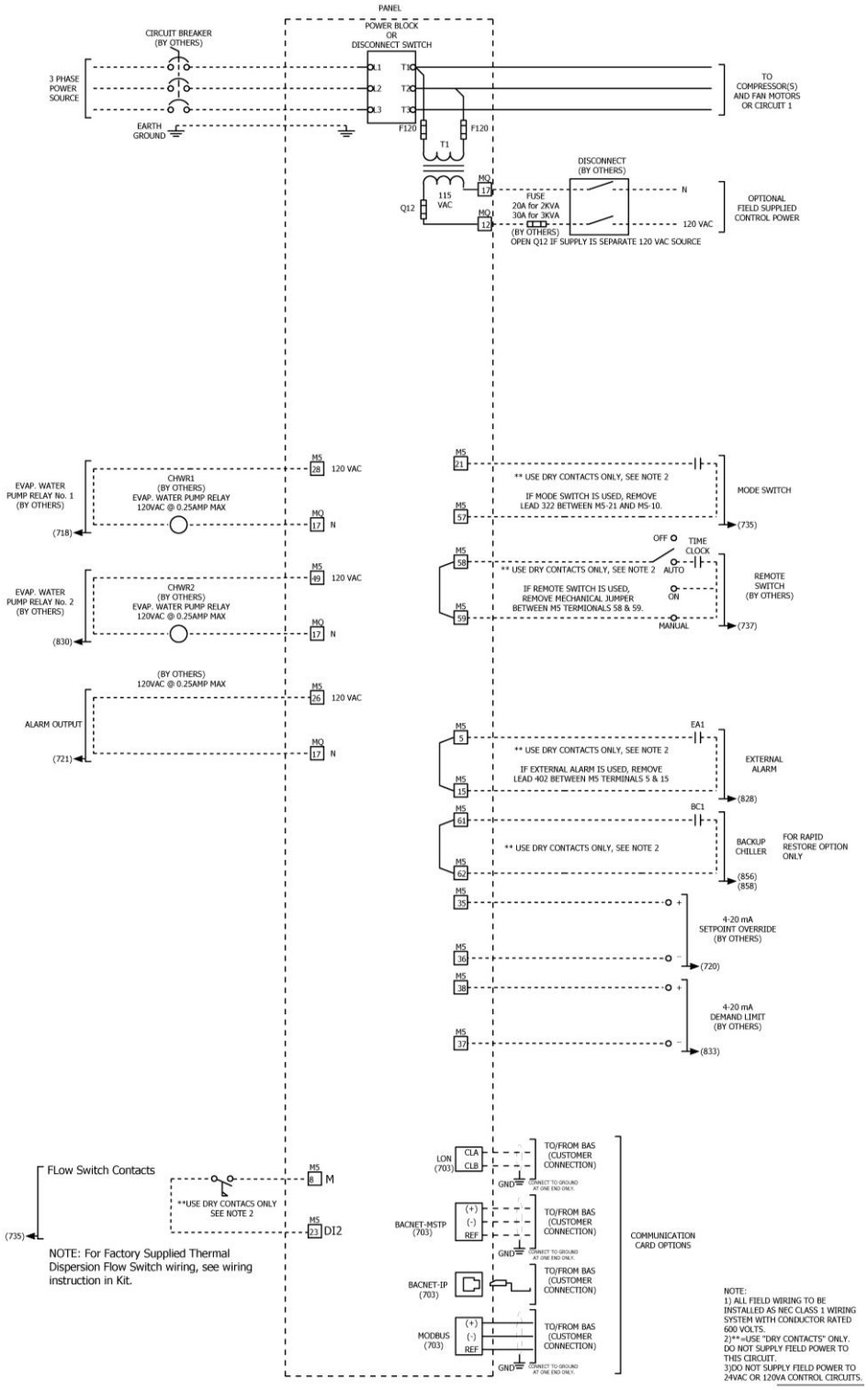
## AWVA_Spacing_008-010 for CH-2



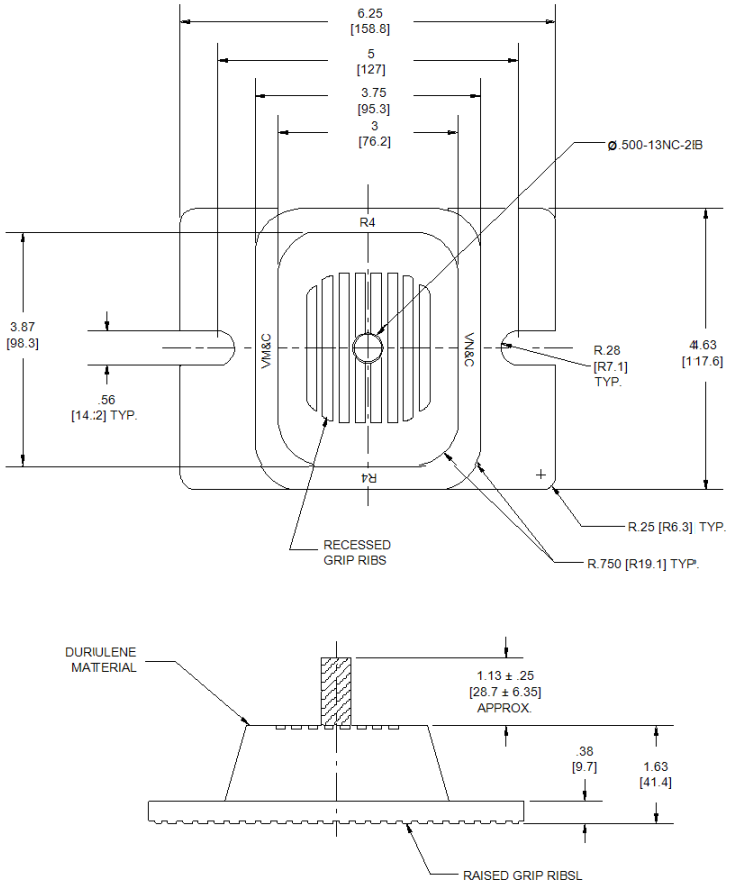
0B

# AWV Single-Point Connection Field Wiring Diagram




| | | | | | | |
|---|---|---|---|---|---|---|
| **Field Wiring Diagram** | Unit Tag: CH-2 | | | DAIKIN | | |
| Product: Air-Cooled Screw | Project Name: T-Marzetti Chiller | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 | | |
| Model: AWV Single-Point | Sales Office: ElitAire, Inc. | | | www.DaikinApplied.com | | Software Version: 13.10 |
| Sales Engineer: Derek Fryfogle | Aug. 25, 2022 | Ver/Rev: | Sheet 1 of 1 | Scale: N/A | Tolerance: N/A | Dwg Units: N/A |

# RIS Isolator



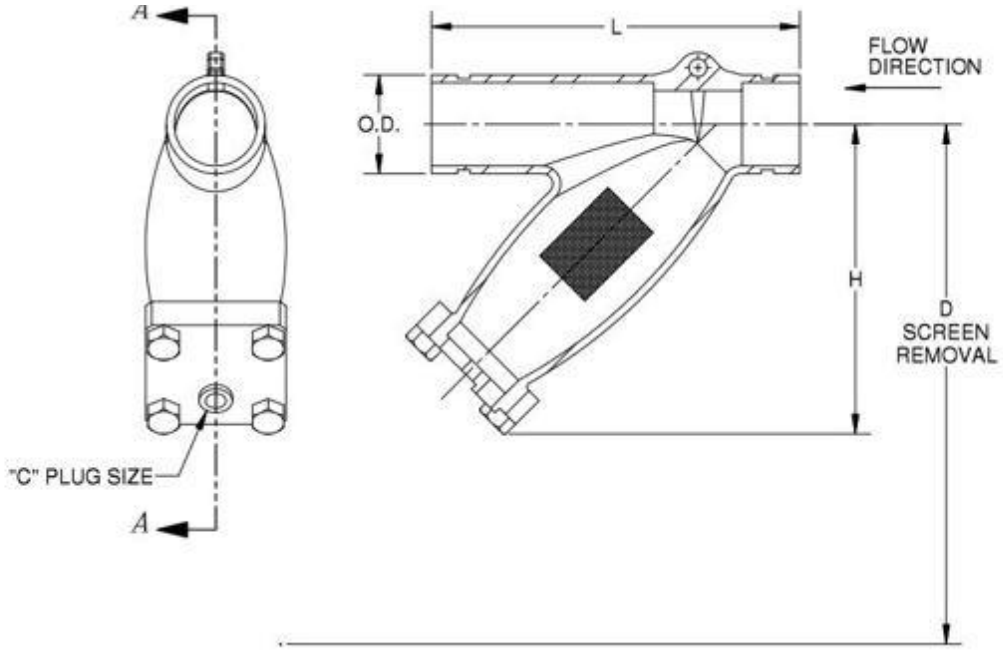

NOTE: SEE 'MOUNTING AND LIFTING' DRAWING FOR ISOLATOR COLOR PLACEMENT.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | Sales Office: ElitAire, Inc. | | | DAIKIN |
| Product: | Project Name: T-Marzetti Chiller | | | Sales Engineer: | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 |
| Model: AWV010B | Aug. 25, 2022 | Ver/Rev: | Sheet: 1 of 1 | Scale: NTS | Tolerance: +/- 0.25" | Dwg Units: (in) | www.DaikinApplied.com Software Version: 13.10 |

# Strainer Kit

## Dimensions and Placement

| PART # | REV | NOM. SIZE. in mm | O.D. in mm | SCEEN MESH SIZE in mm | L in mm | H in mm | PLUG SIZE in mm | D in mm | APPROX. WT. LBS KG |
|---|---|---|---|---|---|---|---|---|---|
| 335043706 | 0C | 6.0<br>150 | 6.625<br>168.3 | 0.059<br>1.5 | 19.76<br>502 | 14.96<br>380 | 1.50<br>38.1 | 22.00<br>559 | 119.5<br>54.2 |


NOTES:

1. SCREEN MESH MATERIAL: 304 STAINLESS STEEL
2. DIMENSIONS ARE IN INCHES/MM.
3. RATED WORKING PRESSURE: 175 PSI MIN.
4. WORKING TEMPERATURE: 14° to 248°F



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Product Drawing** | Unit Tag: CH-2 | | | Sales Office: ElitAire, Inc. | | | DAIKIN |
| Accessory: Strainer Kit | Project Name: T-Marzetti Chiller | | | Sales Engineer: Derek Fryfogle | | | 13600 Industrial Park Blvd. Minneapolis, MN 55441 |
| Kit Part Number: 331758935 | Aug. 25, 2022 | Ver/Rev: | Sheet: 1 of 1 | Scale: NTS | Tolerance: +/- 1.0" | Dwg Units: in [mm] | www.DaikinApplied.com Software Version: 13.10 |

DAIKIN

# Strainer

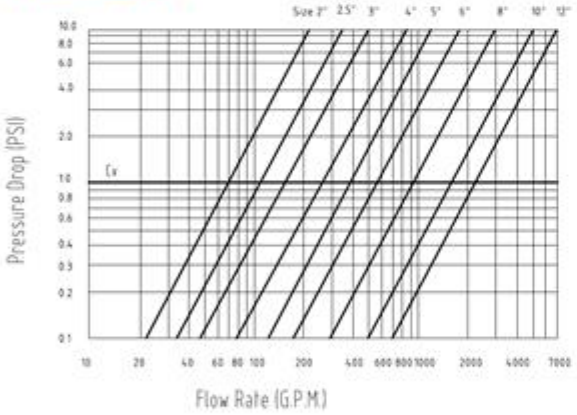
## Description

The strainer is designed to remove foreign debris from the hydronic system. It protects pumps, meters, valves, and other equipment from debris. Additionally, the strainer helps prevent degradation of system efficiency due to fouling or damage.

## Specifications

| | |
|---|---|
| Working pressure | 16 bar |
| Working temperature | -10°C to 120°C |
| Corrosion protection | Internally and externally liquid epoxy painted or fusion bonded epoxy powder coated (FBE) |
| Materials | |
| Body | Ductile iron |
| Cover | Ductile iron |
| Screen | Stainless steel |
| Gasket | Teflon® / graphite |
| Plug | Ductile iron |

## Pressure Drop

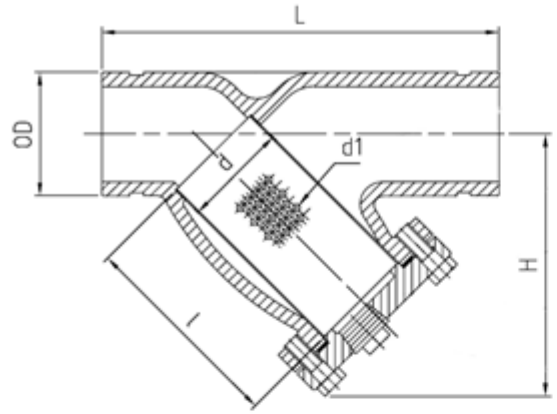







CSD-02024-00 (Apr-18)

## Dimensions




| Dimensions(mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Size** | **50** | **65** | **80** | **100** | **125** | **150** | **200** | **250** | **300** |
| OD | 60.3 | 73.0/76.1 | 88.9 | 114.3 | 139.7/141.3 | 165.1/168.3 | 219.1 | 273 | 323 |
| L | 225 | 285 | 318 | 375 | 448 | 502 | 640 | 710 | 780 |
| H | 152 | 215 | 219 | 254 | 322 | 365 | 462 | 540 | 600 |
| l | 150 | 175 | 180 | 222 | 291 | 325 | 420 | 469 | 515 |
| d | Ø56 | Ø72.5 | Ø80 | Ø105 | Ø130 | Ø158 | Ø210 | Ø266 | Ø317 |
| d1 | Ø1.5 | Ø1.5 | Ø1.5 | Ø3 | Ø3 | Ø3 | Ø3 | Ø3 | Ø3 |
| Free flow | 33% | 33% | 33% | 40% | 40% | 40% | 40% | 40% | 40% |
| Plug | 1/2" | 1" | 1" | 1" | 1-1/4" | 1-1/2" | 1-1/2" | 2" | 2" |

DAIKIN

# Thermal Dispersion Flow Switch

## Description

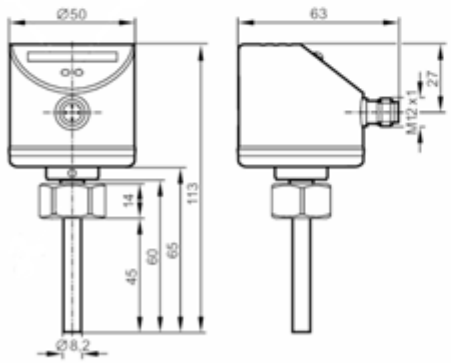
Monitors the flow rate of the hydronic system by measuring the temperature difference between two sensors within the probe.

No moving parts for less maintenance and better reliability than mechanical flow switches.

## Specifications

| | |
|---|---|
| Electrical design | AC/DC |
| Output | Normally open |
| Operating voltage | 18 to 36V DC, 24V AC/DC |
| Current rating | 2A, 36V AC/DC;<br>to EN 50178, SELV, PELV |
| Short-circuit protection | No |
| Reverse polarity protection | No |
| Overload protection | No |
| Pressure rating | 300 bar |
| Adjustment of the switch point | Push button |
| Power-on delay time | Maximum 10 seconds |
| Response time | 1–2 seconds |
| Function LED | 10 LED |
| Operating temperature | -4 to 140°F (-20 to 60°C) |
| Protection | IP 65 / IP 67 |
| Housing material | Stainless steel /PBT-GF 20 |
| Material sensor surface | Stainless steel (303S22) |
| Connection | M12 connector |

## Dimensions (mm)








CSD-02022-00 (Apr-18)

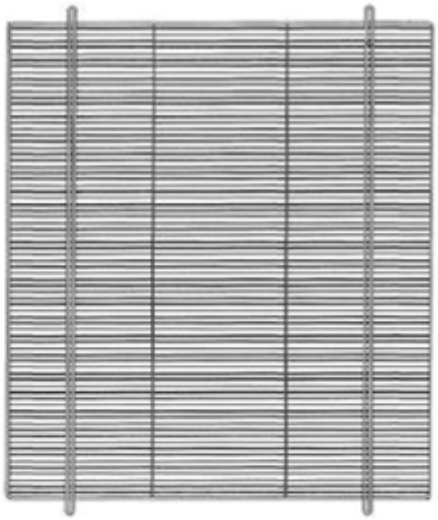

**CH-2, CH-1 Existing**

DAIKIN

# Coil Grille

## Description

PVC-coated steel wire grids mounted on the chiller unit provide protection from physical damage and unwanted access. The high percentage open area allows free air flow for optimal chiller performance.



## Specifications

| | |
|---|---|
| Material | Steel wire, 0.12" grille, 0.24" frame / supports |
| Finish | PVC coated 0.008"–0.012" |
| Color | Black |





CSD-02014-00 (Apr-18)


**60 ton Scroll Chiller, CH-2, CH-1 Existing**

DAIKIN

# MicroTech® III BACnet® MS-TP Communication Module

Part Number: 350147414

## Description

The BACnet communication module connects the MicroTech III chiller unit controller to a building automation system (BAS). This interface enables the exchange of BACnet objects between the unit controller and the network. The BACnet communication module, together with the unit controller, support the BACnet MS/TP (EIA 485) data link layer (physical layer.)

## Features

- Integration into a building automation and control system via BACnet MS/TP (B-AAC profile)
- Simple attachment to a MicroTech III chiller unit controller
- LEDs indicate communication status and network activity
- Network parameters configurable via the unit controller, BAS, or remote HMI
- BACnet application comes pre-installed and ready for custom configuration
- Circuit board components enclosed in protective housing
- Board-to-board connector: 10-pin plug between communication module and unit controller

## Specifications

| | |
|---|---|
| **General** | |
| Dimensions | W × H × D: 1.77 × 4.33 × 2.95 in (45 × 110 × 75 mm) |
| Weight | 3.5 oz (98 g) |
| **Operating** | |
| Temperature | -40 – 158°F (-40 – 70°C) |
| Humidity | <90% RH |
| Atmospheric pressure | Min. 10 psi (70kPa), corresponding to max. 9,842 ft (3,000 m) above sea level |
| **Storage and Transportation** | |
| Temperature | -40 – 158°F (-40 – 70°C) |
| Humidity | <95% RH |
| Atmospheric pressure | Min. 3.77 psi (26kPa), corresponding to max. 32,808 ft (10,000 m) above sea level |
| **Electrical** | |
| Power | DC 5 V (+5% / -5%) bus connector, max. 270 mA |
| Network cable | RS-485 (EIA-485) |
| | 3-wire twisted pair, shielded |
| Bus connection/ Transceiver | Galvanically isolated; A+, B-, REF (3 wires) |
| | Isolated transceiver with fail-safe circuitry; 1/8 Unit load |
| Bus termination | 680 Ω / 120 Ω +1 nF / 680 Ω (switch by software) |
| **Agency Listings** | |
| US | UL916, UL873 |
| Canada | CSA C22.2M205 |
| Europe | |
| EMC directive | 2004/108/EC |
| Low-voltage directive | 2006/95/EC Listings |
| RoHS directive | 2002/95/EC |





CSD-02007-00 (Mar-18)



**60 ton Scroll Chiller, CH-2, CH-1 Existing**

Document Summary Page