



## SUBMITTAL DATA

### SIGLER COMMERCIAL HVAC DIVISION

Office Location: 3636 S. East Avenue, Fresno, CA 93725

Phone: (559) 365-9581

Contractor Sales Engineer: Andrew Arballo

### PROJECT: BCSD HVAC Equipment and Exhaust Fans #23-06-01

MECHANICAL ENGINEER: Integrated Design

MECHANICAL CONTRACTOR: N/A

ATTENTION: David West

We are pleased to submit the following equipment for your approval on the above project:

Mark For	Qty	Model Number	Description
HP-1A	12	50GCQJ06J2M6-0A3A0	5 Ton Heat Pump Rooftop Packaged Unit 460-3-60 <ul style="list-style-type: none"><li>Two-Stage Cooling single circuit</li><li>460-3-60</li><li>5 Tons</li><li>Condensate overflow switch</li><li>Direct drive, EcoBlue, medium static fan</li><li>Al/Cu cond. coil - Al/Cu evap coil w/Hail Guards</li><li>Electro-Mechanical Ctl</li><li>Hinged access panels</li><li>Ion Generator</li><li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li></ul>
HP-1A	12		Time Guard II <b>(Field Installed)</b>
HP-1A	12		Fan/Filter Status Switch <b>(Field Installed)</b>
HP-1A	12		Phase Monitor Control <b>(Field Installed)</b>
HP-1A	12		5.5 kW Electric Heat Strip <b>(Field Installed)</b>
HP-1A	12		Hinged Access Door <b>(Field Installed)</b>
HP-1A	12		Down Discharge Belimo Actuator Only Economizer <b>(Field Installed)</b>
HP-1A	12		14" Tall Pitched Welded Roof Curb <b>(Field Installed) (Contractor to Verify Prior to Order)</b>
HP-4A	12	50GCQJ04J2M6-0A3A0	3 Ton Heat Pump Rooftop Packaged Unit 460-3-60 <ul style="list-style-type: none"><li>Two-Stage Cooling single circuit (SEER)</li><li>460-3-60</li><li>3 Tons</li><li>Condensate overflow switch</li><li>Direct drive, EcoBlue, medium static fan</li><li>Al/Cu cond. coil - Al/Cu evap coil w/Hail Guards</li><li>Electro-Mechanical Ctl</li><li>Hinged access panels</li><li>Ion Generator</li><li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li></ul>
HP-4A	12		Time Guard II <b>(Field Installed)</b>
HP-4A	12		Fan/Filter Status Switch <b>(Field Installed)</b>
HP-4A	12		Phase Monitor Control <b>(Field Installed)</b>
HP-4A	12		5.5 kW Electric Heat Strip <b>(Field Installed)</b>
HP-4A	12		Hinged Access Door <b>(Field Installed)</b>
HP-4A	12		Down Discharge Belimo Actuator Only Economizer <b>(Field Installed)</b>
HP-4A	12		14" Tall Pitched Welded Roof Curb <b>(Field Installed) (Contractor to Verify Prior to Order)</b>
HP-7	72	50GCQJ05J2M6-0A3A0	4 Ton Heat Pump Rooftop Packaged Unit 460-3-60 <ul style="list-style-type: none"><li>Two-Stage Cooling single circuit (SEER)</li><li>460-3-60</li><li>4 Tons</li><li>Condensate overflow switch</li><li>Direct drive, EcoBlue, medium static fan</li><li>Al/Cu cond. coil - Al/Cu evap coil w/Hail Guards</li></ul>

			<ul style="list-style-type: none"> <li>Electro-Mechanical Ctl</li> <li>Hinged access panels</li> <li>Ion Generator</li> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-7	72		Time Guard II <b>(Field Installed)</b>
HP-7	72		Fan/Filter Status Switch <b>(Field Installed)</b>
HP-7	72		Phase Monitor Control <b>(Field Installed)</b>
HP-7	72		5.5 kW Electric Heat Strip <b>(Field Installed)</b>
HP-7	72		Hinged Access Door <b>(Field Installed)</b>
HP-7	72		Down Discharge Belimo Actuator Only Economizer <b>(Field Installed)</b>
HP-7	72		14" Tall Pitched Welded Roof Curb <b>(Field Installed) (Contractor to Verify Prior to Order)</b>
HP-8	1	38MARBQ12AA3	1 Ton Heat Pump Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-8	1	40MBCQ12---3	1 Ton 4-Way Cassette Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-8	1		Cassette Grille <b>(Field Installed)</b>
HP-8	1		24V Interface Kit <b>(Field Installed)</b>
HP-9	1	38MARBQ12AA3	1 Ton Heat Pump Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-9	1	40MAHBQ12XA3	1 Ton High Wall Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-9	1		24V Interface Kit <b>(Field Installed)</b>
HP-9	1		Gobi Condensate Pump <b>(Field Installed)</b>
HP-10	4	38MARBQ18AA3	1.5 Ton Heat Pump Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-10	4	40MBCQ18---3	1.5 Ton 4-Way Cassette Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-10	4		Cassette Grille <b>(Field Installed)</b>
HP-10	4		24V Interface Kit <b>(Field Installed)</b>
HP-11	1	38VMB036HDS3-1	3 Ton Heat Pump VRF Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-11	1		Y-Joint <b>(Field Installed)</b>
HP-11	2	40VMC012A--3	1 Ton 4-Way Cassette Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-11	2		Cassette Grille <b>(Field Installed)</b>
HP-11	2		24V Interface Kit <b>(Field Installed)</b>
HP-12	1	38MBRCQ36AA3	3 Ton Heat Pump Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-12	1	40MBFQ36---3	3 Ton Underceiling Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-12	1		24V Interface Kit <b>(Field Installed)</b>
HP-12	1		Gobi Condensate Pump <b>(Field Installed)</b>
HP-13	3	38MARBQ12AA3	1 Ton Heat Pump Condenser 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-13	3	40MBDQ12---3	1 Ton Ducted Indoor Unit 208/230-1-60 <ul style="list-style-type: none"> <li>Factory Start-Up with 1<sup>st</sup> Year Labor Warranty</li> </ul>
HP-13	3		24V Interface Kit <b>(Field Installed)</b>
HP-8,9,10,12,13	10		Soft Copper Lineset <b>(Mechanical Contractor to Verify Lengths) (HP-11 to have hard copper lines provided by Mechanical Contractor)</b>

**NOTE: A COPY OF THIS SUBMITTAL MUST BE RETURNED MARKED "APPROVED" OR "APPROVED AS NOTED" PRIOR TO OUR ENTERING FACTORY ORDER.**

**CUSTOMER WILL NEED TO VERIFY ALL VOLTAGES PRIOR TO BEING ORDERED**

**APPROVED BY:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Sigler, Inc.**

**August 21, 2023**

**Prepared By: Andrew Arballo**

## Unit Report For HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Unit Parameters

Unit Model:.....**50GCQJ06J2M6-0A3A0**  
Unit Size:.....**06 (5 Tons)**  
Volts-Phase-Hertz:.....**460-3-60**  
Heating Type:.....**Heat Pump**  
Heat Control:.....**Two Stage Cooling Models**  
Duct Cfg:.....**Vertical Supply / Vertical Return**

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....**6' 2.375"**  
Unit Width:.....**3' 10.625"**  
Unit Height:.....**3' 5.375"**  
**Total Operating Weight:.....633 lb**

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Return Air Filter Type:.....**Throwaway**  
Return Air Filter Quantity:.....**4**  
Return Air Filter Size:.....**16 x 16 x 2**

**Selection includes construction throwaway filter into the base fan curve.**

### Unit Configuration

Condensate Overflow Switch  
Direct Drive - EcoBlue - Medium Static  
Al/Cu - Al/Cu - Louvered Hail Guards  
Base controls set up for field installed air management device  
Hinged Access Panels  
Standard Packaging

### Warranty Information

5-Year compressor parts (STD.)  
5-Year electric heater (STD.)  
1-Year parts (STD.)  
3-Year SystemVu controller

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

### Ordering Information

Part Number	Description	Quantity
50GCQJ06J2M6-0A3A0	Rooftop Unit	1
	Base Unit	
	Condensate Overflow Switch	
	Direct Drive - EcoBlue - Medium Static	
	Al/Cu - Al/Cu - Louvered Hail Guards	
	Hinged Access Panels	
	None	
<b>Field Installed Accessories</b>		
CRTIMEGD001A00	Time Guard II	1
CRSTATUS001A00	Fan/Filter Status Switch	1
CRPHASE3001A02	Phase Monitor Control	1
CRHEATER333A00	Electric Heater	1
CRPECONV003A00	Hinged Panel Sealing Angle Kit	1



## Performance Summary For HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Part Number:50GCQJ06J2M6-0A3A0

ARI SEER: 17.00  
ARI SEER2: 16.00  
Application EER (Rooftop Unit only): 11.00

#### Base Unit Dimensions

Unit Length: 74.4 in  
Unit Width: 46.6 in  
Unit Height: 41.4 in

#### Operating Weight

Base Unit Weight: 596 lb  
Condensate Overflow Switch: 5 lb  
Al/Cu - Al/Cu - Louvered Hail Guards: 17 lb  
Hinged Access Panels: 5 lb

#### Accessories

Electric Heater: 10 lb

Total Operating Weight: 633 lb

#### Unit

Unit Voltage-Phase-Hertz: 460-3-60  
Air Discharge: Vertical  
Fan Drive Type: Vane Axial  
Actual Airflow: 2000 CFM  
Site Altitude: 0 ft

#### Cooling Performance

Condenser Entering Air DB: 95.0 F  
Evaporator Entering Air DB: 80.0 F  
Evaporator Entering Air WB: 67.0 F  
Entering Air Enthalpy: 31.44 BTU/lb  
Evaporator Leaving Air DB: 58.1 F  
Evaporator Leaving Air WB: 57.4 F  
Evaporator Leaving Air Enthalpy: 24.62 BTU/lb  
Unit Discharge Air DB: 59.3 F  
Unit Discharge Air WB: 57.8 F  
Unit Discharge Air Enthalpy: 24.92 BTU/lb  
Gross Cooling Capacity: 61.35 MBH  
Net Cooling Capacity: 58.65 MBH  
Gross Sensible Capacity: 47.33 MBH  
Net Sensible Capacity: 44.63 MBH  
Compressor Power Input: 4.24 kW  
Coil Bypass Factor: 0.015

#### Heating Performance

Outdoor Ambient Temperature: 47.0 F  
Entering Air Indoor Coil DB: 70.0 F  
Leaving Air Indoor Coil DB: 95.9 F  
Total Heating Capacity: 55.90 MBH  
Integrated Heating Capacity: 55.90 MBH  
Heating Power Input: 3.45 kW  
High Temperature COP: 3.80  
Low Temperature COP: 2.70  
HSPF: 8.9  
High Temperature COP2: 3.70  
Low Temperature COP2: 2.60  
HSPF2: 7.5  
Electric Heating Capacity: 5.50 kW  
Unit Leaving Air Temp: 104.6 F

## Performance Summary For HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Supply Fan

External Static Pressure:	0.80	in wg
Options / Accessories Static Pressure		
Electric Heaters:	0.23	in wg
Application External Static (ESP + Unit Opts/Acc.):	1.03	in wg
Fan RPM:	2055	
Fan Power:	0.93	BHP
NOTE: Selected IFM RPM Range: 1228 - 2390		

**Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.**

### Electrical Data

Voltage Range:	414 - 506	
Compressor #1 RLA:	8	
Compressor #1 LRA:	55	
Actual Electric Heater kW:	5.5	
Electric Heater FLA:	7.2	
Indoor Fan Motor Type:	MED	
Indoor Fan Motor FLA (Total):	1.9	
Power Supply MCA:	22	
Power Supply MOCP (Fuse or HACR):	25	
Disconnect Size FLA:	21	
Disconnect Size LRA:	66	
Electrical Convenience Outlet:	None	
Outdoor Fan [Qty / FLA (ea)]:	1 / 0.8	
Electric Heater Part Number:	333A	
Electric Heater Number of Stages:	1	

**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

### Acoustics

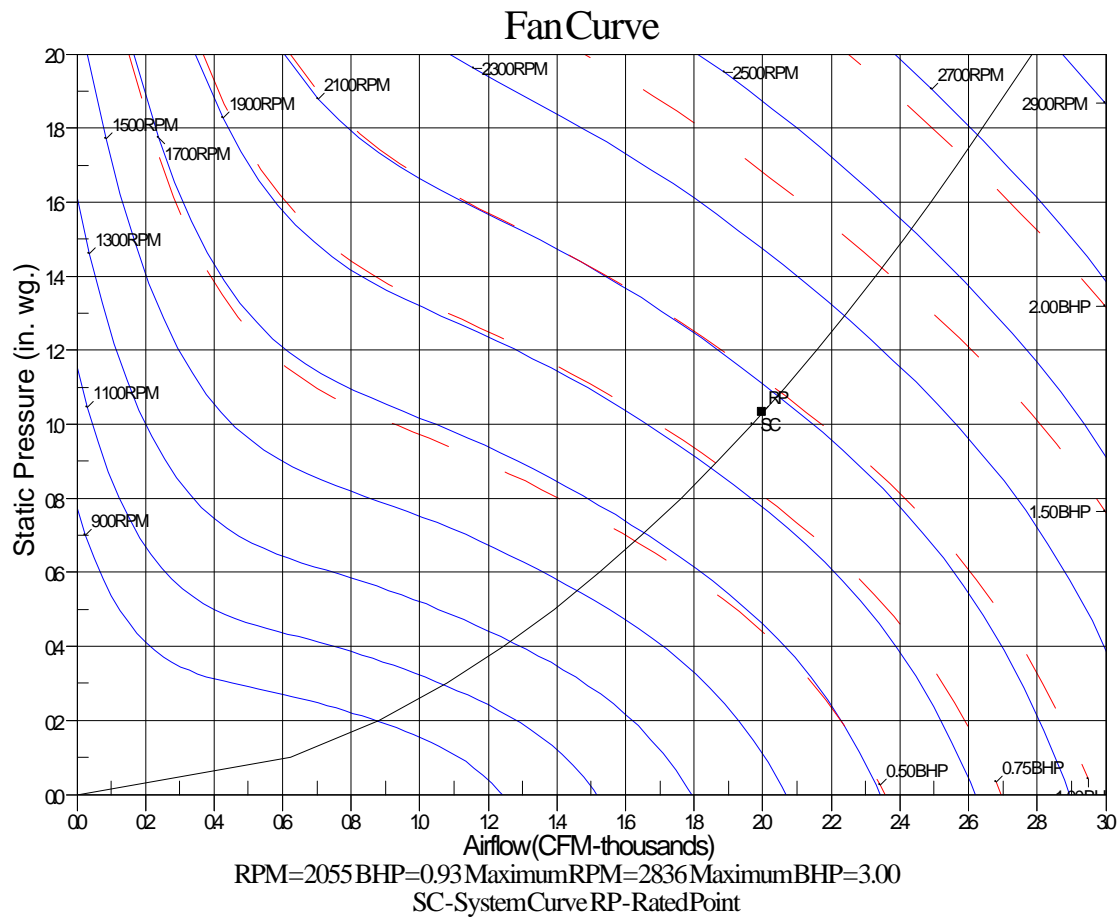
Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	92.6	90.9	NA
125 Hz	83.8	79.9	NA
250 Hz	77.8	72.6	NA
500 Hz	74.1	66.7	NA
1000 Hz	70.9	68.7	NA
2000 Hz	68.0	59.5	NA
4000 Hz	64.5	53.4	NA
8000 Hz	60.5	47.0	NA

## Performance Summary For HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM






# Certified Drawing for HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

## NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
50GCO*04	33 3/8 [847]	18 5/8 [472]
50GCO*05	41 3/8 [1051]	18 5/8 [472]
50GCO*06	41 3/8 [1051]	18 5/8 [472]

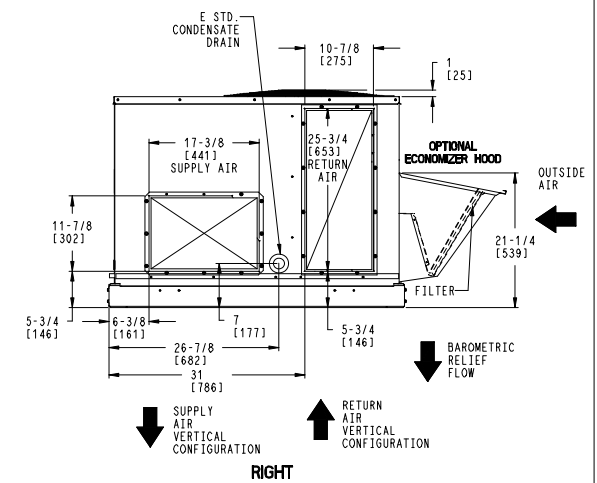
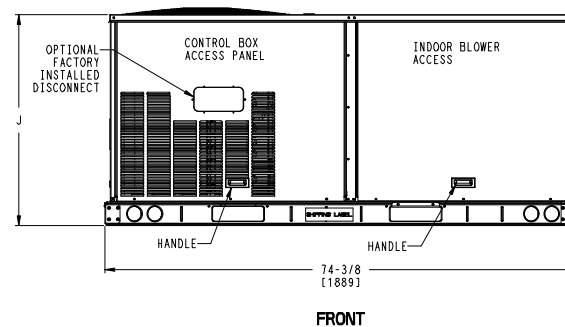
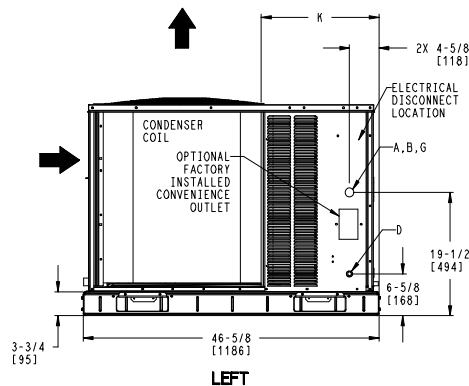
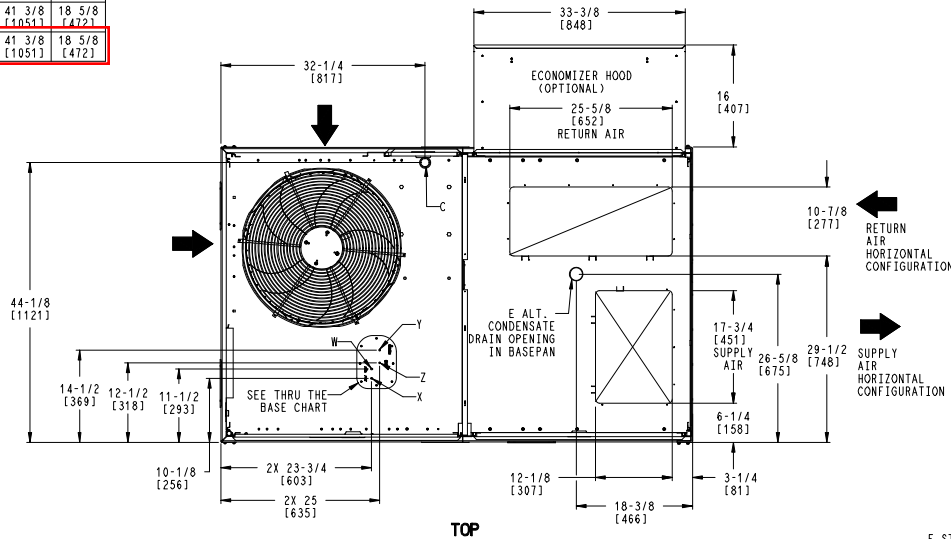


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CONNECTION SIZES		
A	1 3/8" [35]	DIA FIELD POWER SUPPLY HOLE
B	2" [51]	DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [44]	DIA GAUGE ACCESS PLUG
D	7/8" [22]	DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
G	2 1/2" [64]	DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR008A00, 009A00			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	115V	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y *	3/4"	POWER	1 1/8" [28.6]
Z **	(009A00) 1/2" FPT	GAS	1 1/8" [28.6]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE			
** (008A00) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV
U.S. ECCN:NSR	1 OF 3	08/15/19	-			-

# Certified Drawing for HP-1A

Project: BCSD HVAC Replacement  
Prepared By:

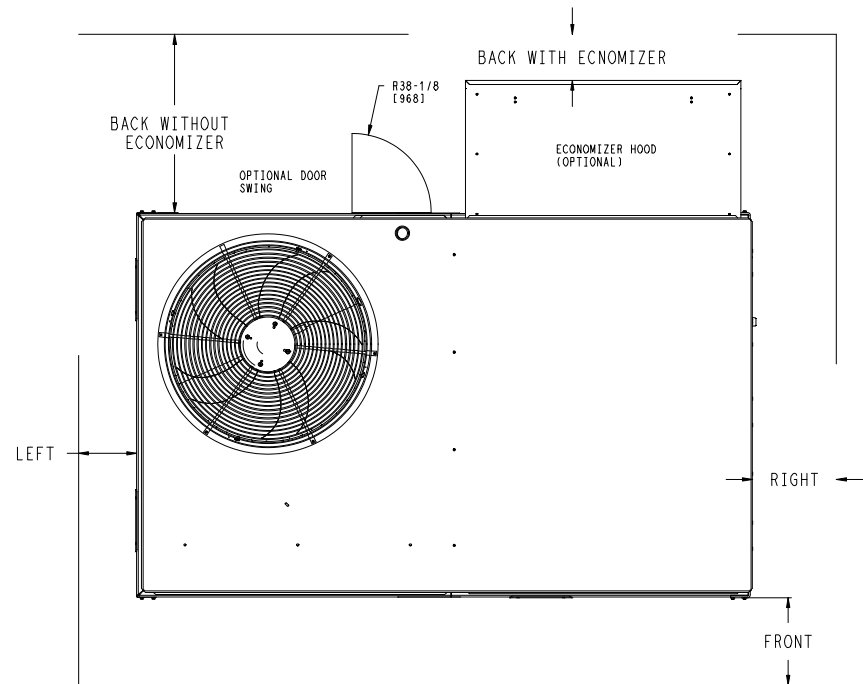
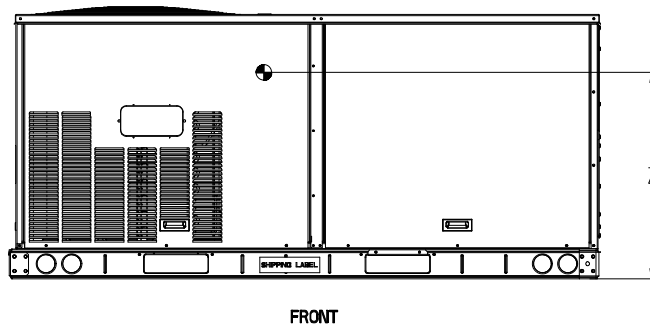
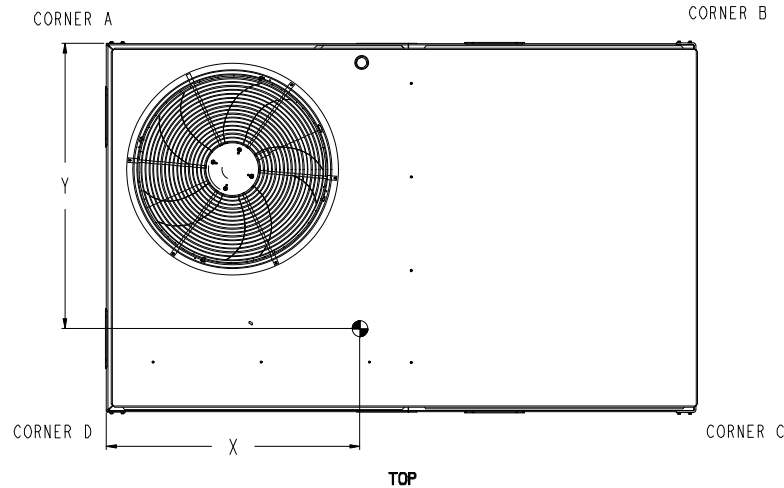
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UNIT	STD. UNIT WEIGHT #		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50GCO*04	475	215	128	58	120	54	110	50	117	53	36 [914]	22 3/8 [568]	16 1/8 [410]
50GCO*05	590	268	162	73	147	67	134	61	148	67	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]
50GCO*06	596	270	163	74	148	67	125	61	149	68	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]

\*- STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.  
FOR OTHER OPTIONS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.



NOTE:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

SURFACE	SERVICE WITH:		OPERATING CLEARANCE
	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV
U.S. ECCN:NSR	2 OF 3	08/15/19	-			-

# Certified Drawing for HP-1A

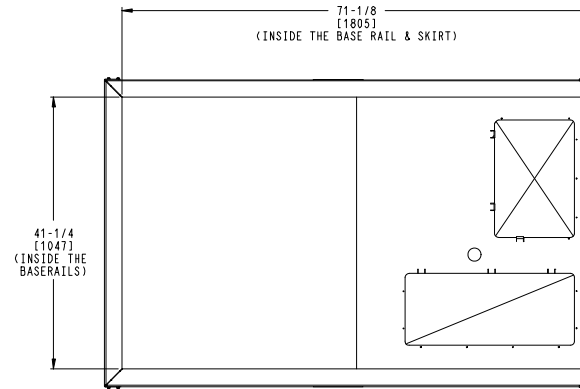
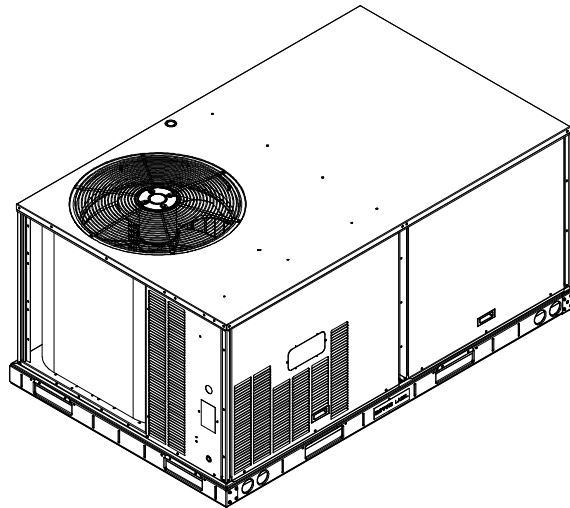
Project: BCSD HVAC Replacement  
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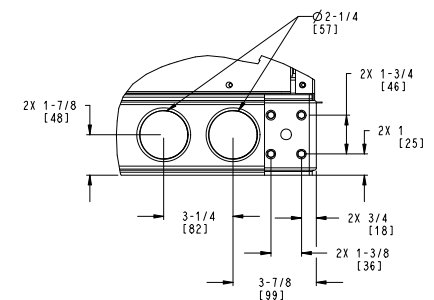


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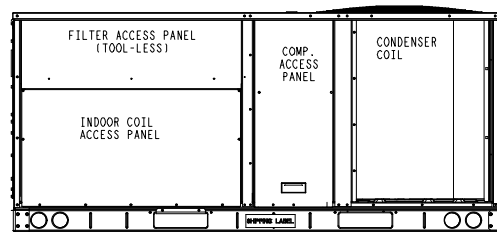
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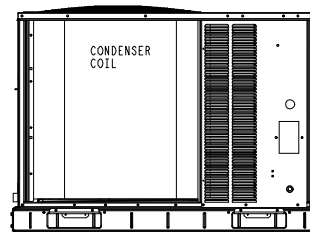
INSIDE BASERAIL DIMENSIONS  
BOTTOM



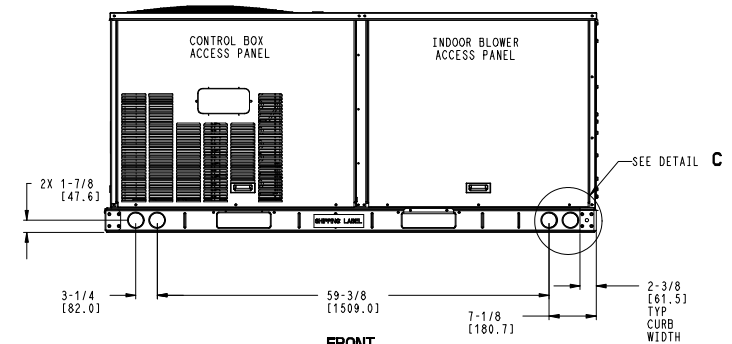
DETAIL C  
TYP 4 PLCS



BACK



LEFT



FRONT

ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 3 OF 3	DATE 08/15/19	SUPERCEDES -	50GCQ 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV -
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# AP-Thirteen

High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements



The Camfil AP-Thirteen extended surface pleated filter offers filtration for applications that have 1", 2" or 4" deep filter tracks. The AP-Thirteen is a MERV 13 filter when evaluated per ASHRAE Standard 52.2 and meets the requirements for minimum filtration efficiency, as published in LEED manuals for new or existing buildings. The AP-Thirteen may reduce the size of the HVAC system, saving valuable mechanical area floor space. It also simplifies the upgrading of in-place systems, allowing existing units to meet LEED requirements without major equipment modification.

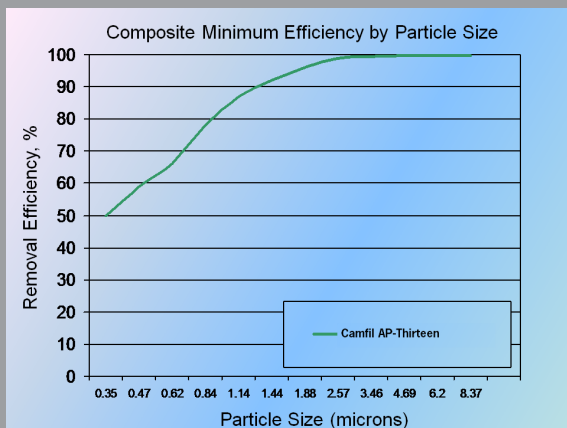
Standard pleated filters remove nuisance dusts, lint and contaminants associated with staining, and are primarily designed to protect equipment and act as prefilters. As a stand-alone filter, the AP-Thirteen will perform these tasks and removes sub-micron particles, defined as lung-damaging by cognizant authorities. The AP-Thirteen, according to filtration application design manuals, can be used as the only filter for special process areas, electrical shops, paint shops, average general offices and laboratories. Other applications include analytical laboratories, electronics shops, drafting areas, conference rooms, and above-average general offices.

Built for today's HVAC systems, the AP-Thirteen:

- Has 16 pleats per linear foot on 1", 15 pleats per linear foot on 2" and 11 pleats per linear foot on 4" nominal depths. The radial pleat design ensures full use of media area and a longer filter life.
- Includes a synthetic fiber blend with a unique media loft that provides high efficiency ASHRAE MERV 13 performance and high dust-holding capacity.
- Has a welded wire media grid backing, treated for corrosion resistance, preventing media oscillation or filter pack failure as filter pressure drop increases.
- Has a high wet-strength beverage board frame that creates a rigid and durable filter pack. The AP-Thirteen will not bow or deflect.

These combined features allow the AP-Thirteen to outlast other MERV 13 pleated panels by a factor of 20% or more resulting in the lowest total cost of ownership (TCO).

**High efficiency filtration meeting the needs for a 1", 2" or 4" deep MERV 13 pleated panel for LEED facility certification.**



The efficiency chart above is extrapolated from particle size versus efficiency information when evaluated per ASHRAE Standard 52.2.

<sup>1</sup> LEED, Leadership in Energy and Environmental Design is a registered trademark of the United States Green Building Council.



# AP-Thirteen

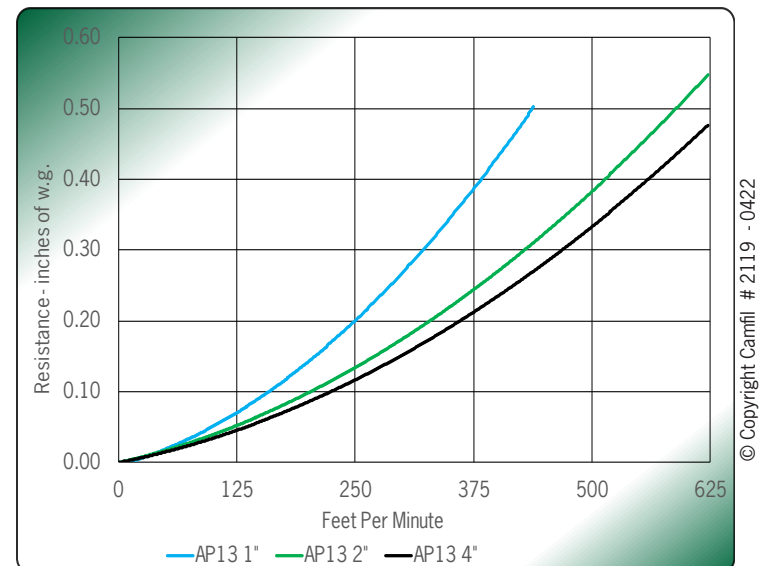
High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements

## Performance Data

1" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
16 Pleats per Lin. Ft.	406769001	20x16	0.36"	770	5.4
	406769002	20x20		970	6.7
	406769003	25x20		1210	8.5
	406769004	25x16		970	6.7
	406769005	24x24		1400	9.8
	406769006	20x14		680	4.7
	406769007	24x20		1160	8.1
	406769008	20x15		720	5.0
	406769009	24x12		700	4.8
	406769010	24x16		930	6.5
	406769011	25x14		850	5.9
	406769012	20x10		480	3.3
	406769013	25x25		1510	10.7
	406769014	25x18		1090	7.6
	406769016	16x16		620	4.3
	406769018	20x12		580	4.0
	406769019	20x18		870	6.1
	406769020	22x22		1170	8.2
	406769021	24x10		580	4.0
	406769022	25x10		600	4.1
	406769023	25x12		720	5.0
	406769024	25x15		910	6.3
	406769026	24x14		810	5.6
	406769027	16x12		460	3.2
	406769028	24x18		1050	7.3
	406769029	20x30		1450	10.2
	406769030	18x14		615	4.2

4" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
11 Pleats per Lin. Ft.	405414001	24x24	0.36"	2000	27.5
	405414002	24x12		1000	13.4
	405414003	20x20		1380	18.9
	405414004	20x16		1110	15.0
	405414005	25x16		1380	18.9
	405414006	25x20		1730	23.8
	405414007	24x20		1660	22.8
	405414008	24x18		1500	20.4
	405414009	24x16		1330	18.1
	405414013	16x25		1380	18.9
	405414014	20x24		1660	22.8
	405414015	20x25		1730	23.8

2" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
15 Pleats per Lin. Ft.	405413001	20x16	0.41"	1110	9.6
	405413002	20x20		1380	12.0
	405413003	25x20		1730	15.1
	405413004	25x16		1380	12.0
	405413005	24x24		2000	17.3
	405413006	24x12		1000	8.4
	405413007	24x20		1660	14.5
	405413008	24x18		1500	13.0
	405413009	25x18		1560	13.6
	405413010	20x14		970	8.3
	405413011	25x14		1210	10.5
	405413012	24x16		1330	11.5
	405413013	25x25		2170	19.0
	405413014	20x12		830	7.1
	405413015	20x10		690	5.9
	405413016	16x16		880	7.6
	405413017	20x15		1040	8.9
	405413018	20x18		1250	10.8
	405413019	25x15		1300	11.2
	405413020	16x25		1380	12.0
	405413021	20x24		1660	14.5
	405413022	20x25		1730	15.1
	405413023	20x30		2080	18.2



DATA NOTES:  
 1.0" w.g. recommended maximum final resistance. System design may dictate a lower change-out point. The AP-Thirteen filter is classified by Underwriters Laboratories as UL 900.  
 Maximum operating temperature 175° F. (79° C).



Certified Quality System

For detailed specifications and exact height, width and depth of each size, consult your local Camfil Distributor, Representative or

[www.camfil.com](http://www.camfil.com) or [AP-Thirteen](#)

Camfil has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

Camfil | 1 North Corporate Drive, Riverdale, NJ 07457 | Tel: (973) 616-7300

[www.camfil.com](http://www.camfil.com)



## ION-0A \* 00 | Ion Generator for AHU's, Heating and AC Units

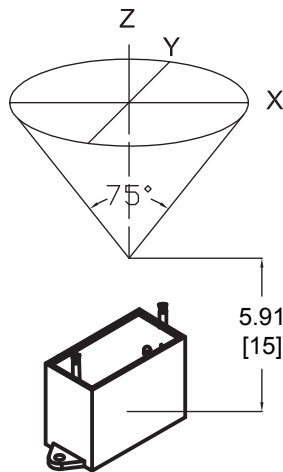
### Part Number

ION - 0A \* 00

#### VOLTAGE:

A - 24VAC / VDC, 1 $\phi$   
D - 115VAC, 1 $\phi$

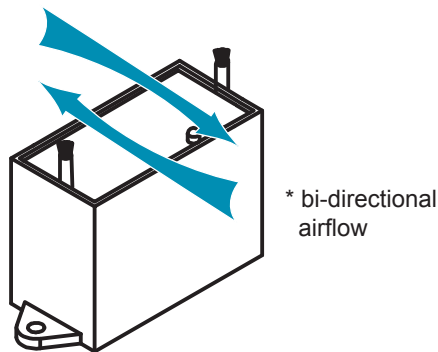
### Ion Distribution (inches[cm])



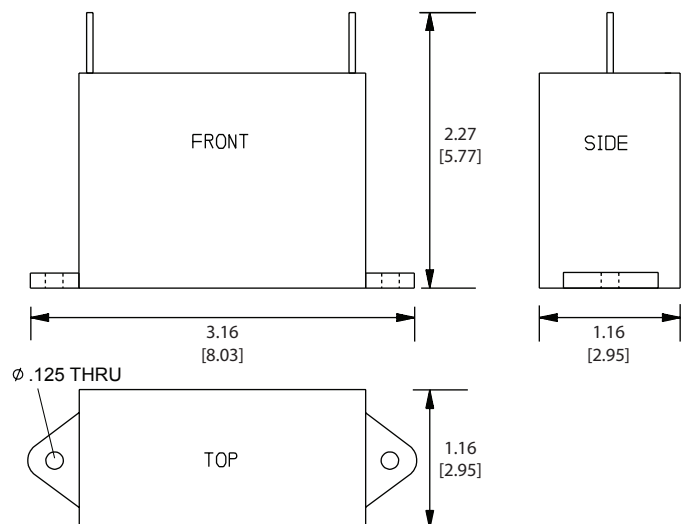
### Product Application

Hospitals | Nursing Homes | Schools |  
Animal Feeding and Processing Plants |  
Shopping Malls | Laboratories | Veterinary Offices |  
Restaurants and Food Preparation Areas | Zoos |  
Casinos | Convention Centers and Arenas | Jails |  
Museums | Health Clubs | Churches and Synagogues

### Airflow



### Product Dimensions (inches [cm])



### Technical Data

Power Supply	See part number voltage
Power Consumption	4.3 W / 24V; 6.9 W all other volts
Output Voltage	+/- 9000VDC
Power Wiring Leads	35 inches in length
Mounting	Self tapping metal screws
Dimensions	3.16" x 1.16" x 2.27" (w/ CF tips)
CFM	2,000 CFM
Output Ion	Negative $4 \times 10^7$ pieces / $\text{cm}^3$
Weight	.5 lbs (.25 kg)
Life Span	15,000 Hours



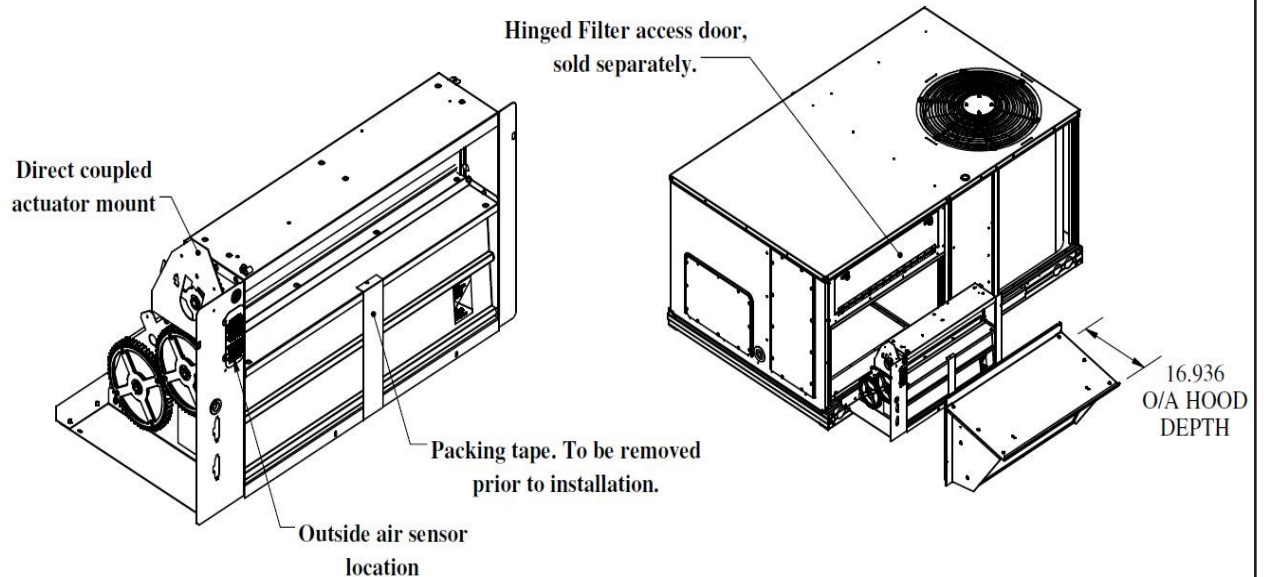
Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
RTU:		

Submitted to:	Approved by:	Notes:
---------------	--------------	--------

Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.

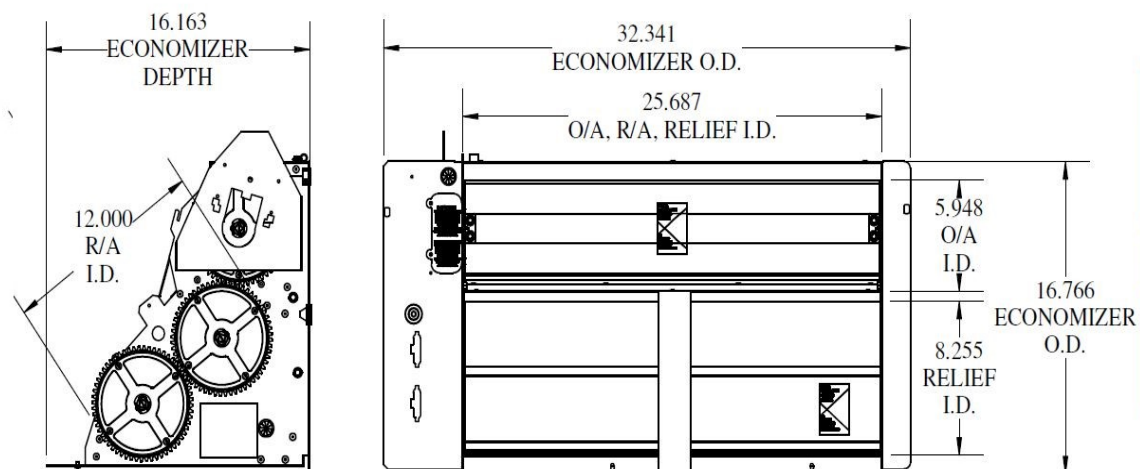
#### FEATURES:


- External gear driven dampers with roll formed blades.
- Designed for vertical applications only.
- Factory assembled rain hood, with aluminum water entrainment filters.
- Filter access door supplied with RTU.
- Hinged filter access door is ordered separately.
  - MMC P/# for Chassis 1 - ECD-SRT1CA-HDOOR
  - MMC P/# for Chassis 2 - ECD-SRT2CA-HDOOR
- Rain hood is sloped for water run off.
- All harnesses and plugs needed are supplied.
- Economizer is class 1A & AMCA rated.
- Relief blades are AMCA rated.
- Uses filter rack with unit.
- Motorized relief available, add -M to end of part number
  - Ex: ECD-SRT12CB-D00H-M
- Economizer with smoke detector available, add -S to end of part number
  - Ex: ECD-SRT12CB-D00H-S



#### -Control Types

-D0DB-4	RTU Open - Premier Link - System VU, No controller, Adjustable dry bulb, Belimo actuator
-D0DB-X	Comfortlink - No controller, Adjustable dry bulb, Belimo MFT actuator with 500 ohm resistor
-D00H-H	Communicating Honeywell actuator only
-D00H	Non-communicating Honeywell actuator only
-D00B	Belimo actuator with feedback and end switch
-D00S	Siemens actuator with feedback



	Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
	RTU:		
Submitted to:		Approved by:	Notes:
<p>Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.</p>			
<p><b><u>Compliant Economizer:</u></b></p> <ol style="list-style-type: none"> <li><b>Title 24:</b> Economizers meet California Energy Commission Title 24-2013 / 2016 prescriptive section 140.4 (damper leakage etc.), and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems, meet mandatory section 120.2.i for Fault Detection and Diagnostic requirements. 5 Year Warranty for parts and components only.</li> <li><b>ASHRAE 90.1:</b> Economizers meet ASHRAE 90.1-2013/2016 damper leakage requirements, and meet 2016 Fault Detection and Diagnosis requirements when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems.</li> <li><b>IECC:</b> Economizers meet IECC 2012, IECC 2015, and IECC 2018 for outside air, return air, and relief damper (when provided) leakage requirements, and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex control systems meet IECC 2015 and IECC 2018 for Fault Detection and Diagnostic requirements. Note: IECC 2015 and IECC 2018 requires differential return air sensor, which must be ordered separately.</li> <li><b>AMCA:</b> Outside air and return air (volume) dampers are AMCA Class 1A rated at 1" w.g. Refer to MicroMetl NS2 catalog sheet on web site for details. Relief air dampers (when provided) are also AMCA rated. Refer to GR1 series catalog sheet on web site for details.</li> </ol>			
<p><b><u>Features:</u></b></p> <ul style="list-style-type: none"> <li>For single or 2 speed indoor fan units. Other control options available.</li> <li>Gear driven design for trouble-free operation, eliminating slippage and binding associated with standard linkage.</li> <li>Includes assembled rainhood with aluminum water entrainment filters in the outside air section.</li> <li>Rainhood is sloped for water run-off.</li> <li>Built-in barometric relief damper provided. Power exhaust options available.</li> <li>All harnesses and plugs needed are provided.</li> <li>Uses standard factory filter access door shipped with HVAC unit.</li> <li>If factory hinged access door option is installed on unit, an additional kit is required to seal hinged door properly. <ul style="list-style-type: none"> <li>OEM part no. CRPECONV003A00 or MicroMetl part number 0640-0100-HDANGL</li> </ul> </li> </ul>			
<p><b><u>Notes:</u></b></p> <ol style="list-style-type: none"> <li>Control systems include DDC actuator, and some models include 500 OHM resistor and outside air temperature sensor.</li> <li>Differential return air sensor if required can be ordered from OEM unit factory, and is field installed in return duct.</li> <li>ASHRAE, IECC, and Title 24 require the economizer controller be capable of reporting faults to a fault management application accessible by day-to-day operating or service personnel, or annunciated locally on zone thermostats or in some codes other devices are acceptable. Refer to applicable code requirements and to DDC controller for options.</li> </ol>			
<p>This Document Is The Property Of MicroMetl Corporation And Is Delivered Upon The Express Condition That The Contents Will Not Be Disclosed Or Used Without MicroMetl's Written Consent. MicroMetl Reserves The Right To Discontinue, Or Change At Any Time, Specifications &amp; Designs Without Any Notice Incurring Obligations.</p>		<p>Master Revision 0001A</p> <p>Page Revision 0001A</p>	



MicroMetl Corporation certifies that the models GR1 and NS2 shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with requirements of the AMCA Certified Ratings Programs. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.

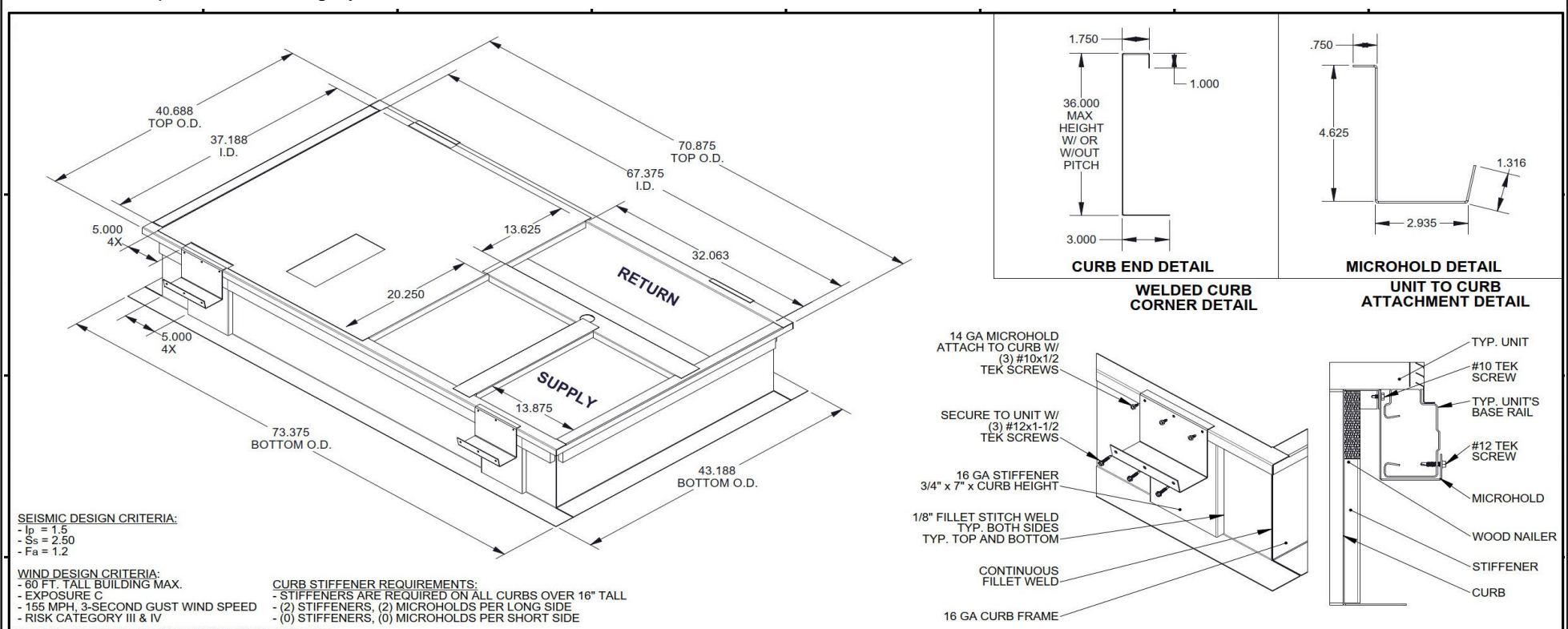




Date: \_\_\_\_\_ Weight: 105lbs (US) 47.63kg (Metric) Part Number: CRBW-SRT12HA-1411  
RTU: \_\_\_\_\_

Submitted to: \_\_\_\_\_ Approved by: \_\_\_\_\_ Notes: \_\_\_\_\_

Welded Structurally Calculated Curb - 14 Inches Tall Non Insulated Full Perimeter Welded Structurally Calculated Curb Curb, California State Standard, Standard Seismic Criteria, "Structurally" Stamped By A Professional Engineer, Without Pitch, Insulated Deck Pan If Applicable, Includes Wood Nailer & Hold Down Brackets. Meets Seismic Requirements for 2022 CBC & 2021 IBC. Wind Design Criteria: 60 Foot Tall Building Maimum, Exposure C, 155 MPH - 3 Second Gust Speed, Risk Category III & IV.



**Indianapolis, IN. : (800) 662-4822**  
**Sparks, NV. (800) 884-4662**  
**Longview, TX. (903) 248-4800**

DRAWN BY: IR DATE 08/24/2022

MEETS SEISMIC REQUIREMENTS FOR 2022 CBC & 2021 IBC

MEETS REQUIREMENTS FOR 155 MPH, 60' BUILDING HEIGHT MAX. 3 SEC. GUST, EXP C

**ANCHORAGE DETAILS TO ROOF:** ALL DETAILS ARE CALCULATED USING THE SEISMIC DESIGN CRITERIA INDICATED ABOVE. FOR ANY OTHER TYPE OF ANCHORAGE THE EOR HAS THE OPTION TO CALCULATE THE ANCHORAGE USING SITE SPECIFIC PARAMETERS AND LOADS.

**TYPICAL PLAN VIEW:** (BEAM BY OTHERS) USE A307 1/2" DIA. BOLTS, W/ WASHER CENTERED ON FLANGE. a = 2", c = 6".

**STEEL ATTACHMENT:** (2.5") LONG 1/8" FILLET WELDS ARE PERMITTED TO BE USED IN PLACE OF EACH BOLT INDICATED BY THE STEEL ATTACHMENT DETAIL EQUALLY SPACED.

**WOOD ATTACHMENT:** (REF. DOUGLAS FIR) USE 1/4" x 3" SIMPSON SDS W/ WASHER, CENTERED ON CURB FLANGE. a = 1", c = 3".

**CONCRETE ATTACHMENT:** (3000 PSI MINIMUM, 6" MINIMUM THICKNESS) (4" MIN EDGE DISTANCE, 3-3/4" EMBEDDED) USE 1/2" SIMPSON TITEN HD CENTERED ON CURB FLANGE, 8" MIN. SPACING. a = 3", c = 8".

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	1	1	2	12	
UP TO 24"	1	1	2	12	
UP TO 36"	1	1	4	20	

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	6	2	4	32	
UP TO 24"	6	3	4	34	
UP TO 36"	8	3	6	46	

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	1	1	2	12	
UP TO 24"	1	1	2	12	
UP TO 36"	2	1	2	14	

**STRUCTURALLY CALCULATED WELDED CURB**

MAX UNIT WEIGHT 1099 lbs.

8/24/22

BJG# 20220039

# SUBMITTAL

# MicroMetl

Please Fill Out For All Instances

SRT12, SRT34, AND SRT05 CURBS

PART NUMBER:

PITCH

ILLUSTRATION

DATE: 06/2017

SUBMITTED TO:

COMPANY:

DRAWN BY: NB

JOB NAME:

WEIGHT:

NOTES: PLEASE FILL IN NOTES BELOW

FOR KNOCK DOWN CURBS THE DECK PANS CAN BE ARRANGED IN EITHER CONFIGURATION FOR THE GIVEN PITCH DIRECTION (LONG OR SHORT).

ILLUSTRATION #1 (SHORT DIRECTION) IS EQUIVALENT TO ILLUSTRATION A OR B.  
ILLUSTRATION #2 (LONG DIRECTION) IS EQUIVALENT TO ILLUSTRATION C OR D.

## NOTES:

\* CURBS SHOWN FACTORY ASSEMBLED.  
KNOCK DOWN CURBS REQUIRE ASSEMBLY.

\* WHEN ORDERING KNOCK DOWN CURBS  
PLEASE SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION #1 (SHORT DIRECTION) OR  
- ILLUSTRATION #2 (LONG DIRECTION)

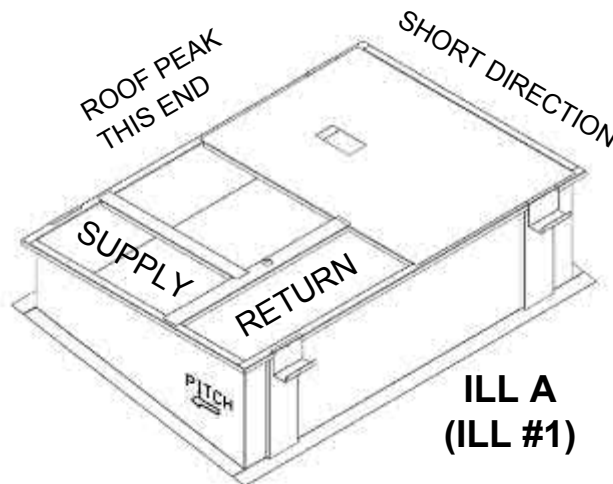
\* WHEN ORDERING WELDED CURBS PLEASE  
SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION A (SHORT DIRECTION)  
- ILLUSTRATION B (SHORT DIRECTION)  
- ILLUSTRATION C (LONG DIRECTION) OR  
- ILLUSTRATION D (LONG DIRECTION)

\* PLEASE DESIGNATE THE SLOPE OF THE  
ROOF BELOW.

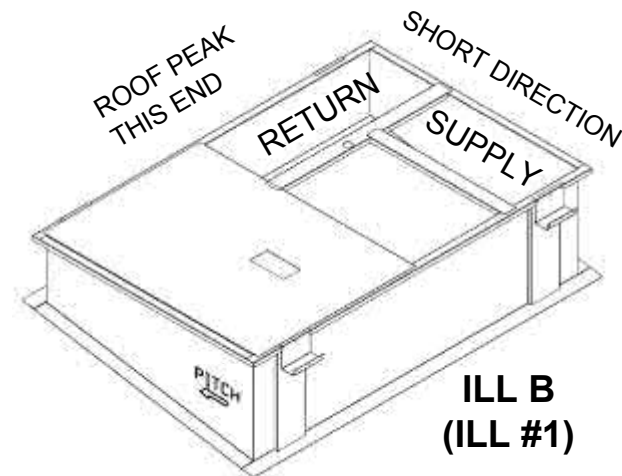
\* CONTACT MICROMETL FOR PRICING.  
PHONE NUMBER: (800) 884-4662

ILLUSTRATION # B

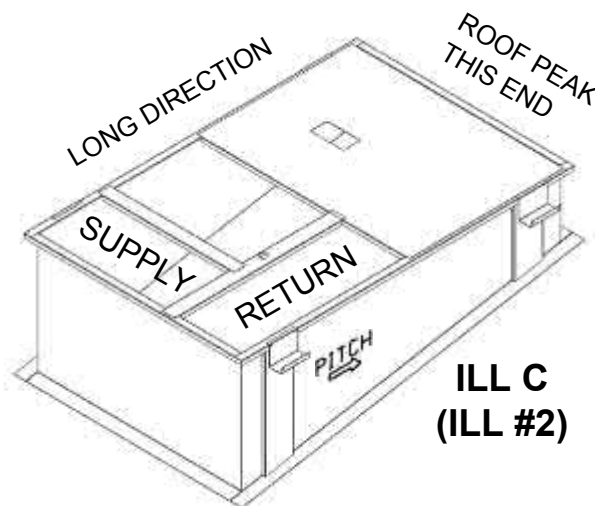
SLOPE OF ROOF 1/2" IN 12" 16" Tall



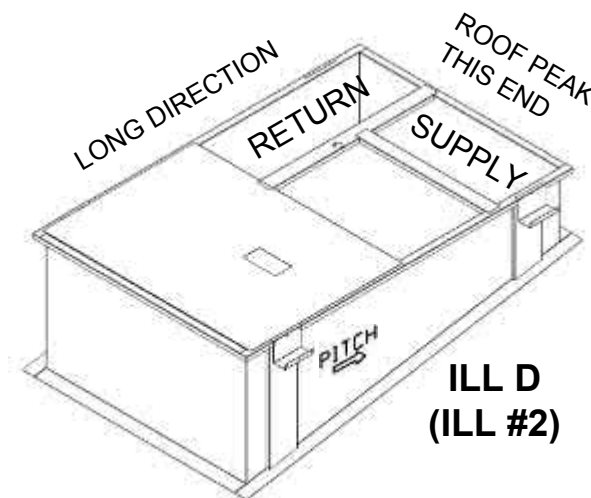
ILL A  
(ILL #1)



ILL B  
(ILL #1)



ILL C  
(ILL #2)



ILL D  
(ILL #2)

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MICROMETL CORPORATION \* 3035 N. SHADELAND AVE., SUITE 300 \* INDIANAPOLIS, IN 46226 \* 1-800-662-4822 \*\*\* MICROMETL WEST \* 202 SOUTH 18TH STREET \* SPARKS, NV \* 1-800-884-4662

## Unit Report For HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Unit Parameters

Unit Model:.....**50GCQJ04J2M6-0A3A0**  
Unit Size:.....**04 (3 Tons)**  
Volts-Phase-Hertz:.....**460-3-60**  
Heating Type:.....**Heat Pump**  
Heat Control:.....**Two Stage Cooling Models**  
Duct Cfg:.....**Vertical Supply / Vertical Return**

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....**6' 2.375"**  
Unit Width:.....**3' 10.625"**  
Unit Height:.....**2' 9.375"**  
**Total Operating Weight:.....508 lb**

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Return Air Filter Type:.....**Throwaway**  
Return Air Filter Quantity:.....**2**  
Return Air Filter Size:.....**16 x 25 x 2**

**Selection includes construction throwaway filter into the base fan curve.**

### Unit Configuration

Condensate Overflow Switch  
Direct Drive - EcoBlue - Medium Static  
Al/Cu - Al/Cu - Louvered Hail Guards  
Base controls set up for field installed air management device  
Hinged Access Panels  
Standard Packaging

### Warranty Information

5-Year compressor parts (STD.)  
5-Year electric heater (STD.)  
1-Year parts (STD.)  
3-Year SystemVu controller

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

### Ordering Information

Part Number	Description	Quantity
50GCQJ04J2M6-0A3A0	Rooftop Unit	1
	Base Unit	
	Condensate Overflow Switch	
	Direct Drive - EcoBlue - Medium Static	
	Al/Cu - Al/Cu - Louvered Hail Guards	
	Hinged Access Panels	
	None	
<b>Field Installed Accessories</b>		
CRTIMEGD001A00	Time Guard II	1
CRSTATUS001A00	Fan/Filter Status Switch	1
CRPHASE3001A02	Phase Monitor Control	1
CRHEATER333A00	Electric Heater	1
CRPECONV003A00	Hinged Panel Sealing Angle Kit	1

## Performance Summary For HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Part Number:50GCQJ04J2M6-0A3A0

ARI SEER: 17.00  
ARI SEER2: 16.00  
Application EER (Rooftop Unit only): 11.93

#### Base Unit Dimensions

Unit Length: 74.4 in  
Unit Width: 46.6 in  
Unit Height: 33.4 in

#### Operating Weight

Base Unit Weight: 475 lb  
Condensate Overflow Switch: 5 lb  
Al/Cu - Al/Cu - Louvered Hail Guards: 13 lb  
Hinged Access Panels: 5 lb

#### Accessories

Electric Heater: 10 lb

Total Operating Weight: 508 lb

#### Unit

Unit Voltage-Phase-Hertz: 460-3-60  
Air Discharge: Vertical  
Fan Drive Type: Vane Axial  
Actual Airflow: 1200 CFM  
Site Altitude: 0 ft

#### Cooling Performance

Condenser Entering Air DB: 95.0 F  
Evaporator Entering Air DB: 80.0 F  
Evaporator Entering Air WB: 67.0 F  
Entering Air Enthalpy: 31.44 BTU/lb  
Evaporator Leaving Air DB: 58.3 F  
Evaporator Leaving Air WB: 57.4 F  
Evaporator Leaving Air Enthalpy: 24.66 BTU/lb  
Unit Discharge Air DB: 59.3 F  
Unit Discharge Air WB: 57.8 F  
Unit Discharge Air Enthalpy: 24.91 BTU/lb  
Gross Cooling Capacity: 36.59 MBH  
Net Cooling Capacity: 35.25 MBH  
Gross Sensible Capacity: 28.14 MBH  
Net Sensible Capacity: 26.80 MBH  
Compressor Power Input: 2.38 kW  
Coil Bypass Factor: 0.066

#### Heating Performance

Outdoor Ambient Temperature: 47.0 F  
Entering Air Indoor Coil DB: 70.0 F  
Leaving Air Indoor Coil DB: 96.5 F  
Total Heating Capacity: 34.30 MBH  
Integrated Heating Capacity: 34.30 MBH  
Heating Power Input: 2.34 kW  
High Temperature COP: 3.80  
Low Temperature COP: 2.40  
HSPF: 8.8  
High Temperature COP2: 3.60  
Low Temperature COP2: 2.30  
HSPF2: 7.3  
Electric Heating Capacity: 5.50 kW  
Unit Leaving Air Temp: 110.9 F



## Performance Summary For HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Supply Fan

External Static Pressure:	0.80	in wg
Options / Accessories Static Pressure		
Electric Heaters:	0.07	in wg
Application External Static (ESP + Unit Opts/Acc.):	0.87	in wg
Fan RPM:	1849	
Fan Power:	0.46	BHP
NOTE: Selected IFM RPM Range: 1058 - 2190		

**Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.**

### Electrical Data

Voltage Range:	414 - 506	
Compressor #1 RLA:	4.7	
Compressor #1 LRA:	44	
Actual Electric Heater kW:	5.5	
Electric Heater FLA:	7.2	
Indoor Fan Motor Type:	MED	
Indoor Fan Motor FLA (Total):	1.2	
Power Supply MCA:	17	
Power Supply MOCP (Fuse or HACR):	20	
Disconnect Size FLA:	16	
Disconnect Size LRA:	54	
Electrical Convenience Outlet:	None	
Outdoor Fan [Qty / FLA (ea)]:	1 / 0.6	
Electric Heater Part Number:	333A	
Electric Heater Number of Stages:	1	

**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

### Acoustics

Sound Power Levels, db re 10E-12 Watts

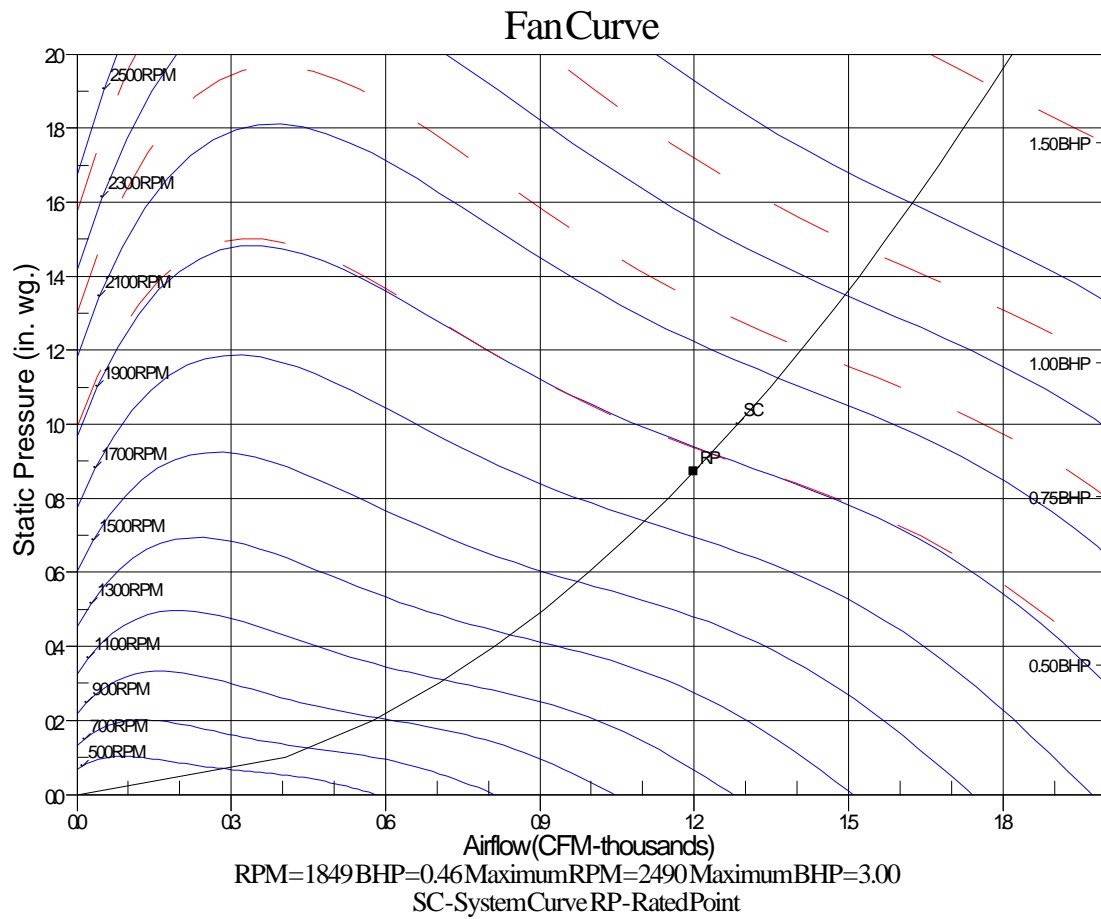
	Discharge	Inlet	Outdoor
63 Hz	91.2	85.1	NA
125 Hz	82.7	77.9	NA
250 Hz	75.2	68.9	NA
500 Hz	67.8	61.4	NA
1000 Hz	65.2	62.7	NA
2000 Hz	62.0	54.4	NA
4000 Hz	58.2	48.6	NA
8000 Hz	56.6	42.5	NA



## Performance Summary For HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM






# Certified Drawing for HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

## NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
50GCO*04	33 3/8 [847]	18 5/8 [472]
50GCO*05	41 3/8 [1051]	18 5/8 [472]
50GCO*06	41 3/8 [1051]	18 5/8 [472]

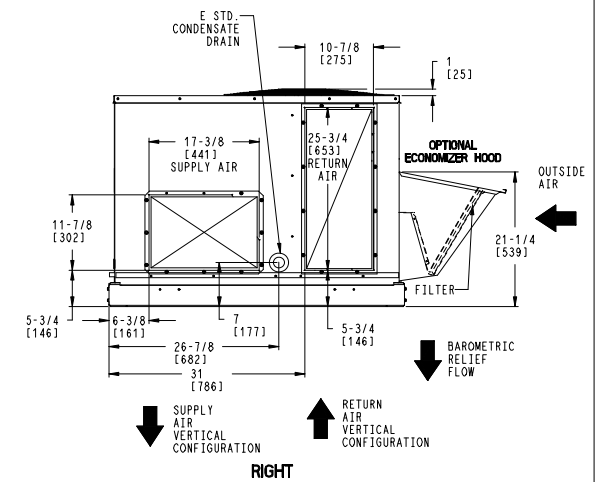
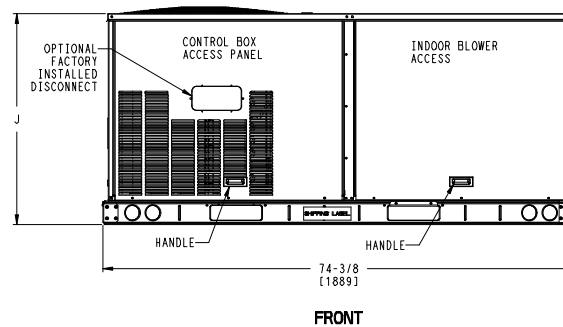
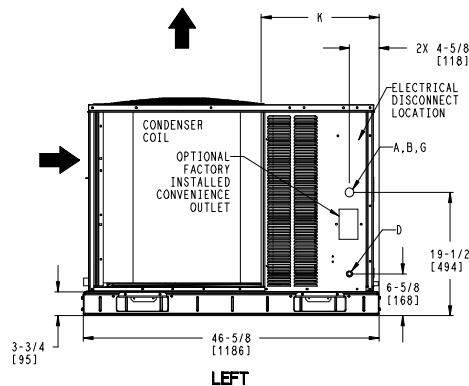
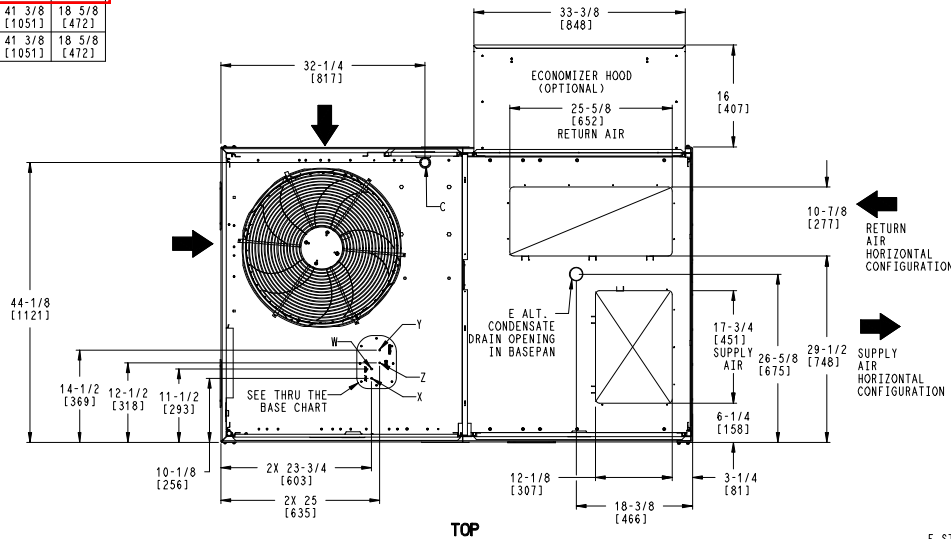


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CONNECTION SIZES		
A	1 3/8" [35]	DIA FIELD POWER SUPPLY HOLE
B	2" [51]	DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [44]	DIA GAUGE ACCESS PLUG
D	7/8" [22]	DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
G	2 1/2" [64]	DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPW008A00, 009A00			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	115V	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y *	3/4"	POWER	1 1/8" [28.6]
Z **	(009A00) 1/2" FPT	GAS	1 1/8" [28.6]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE			
** (008A00) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV
U.S. ECCN:NSR	1 OF 3	08/15/19	-			-

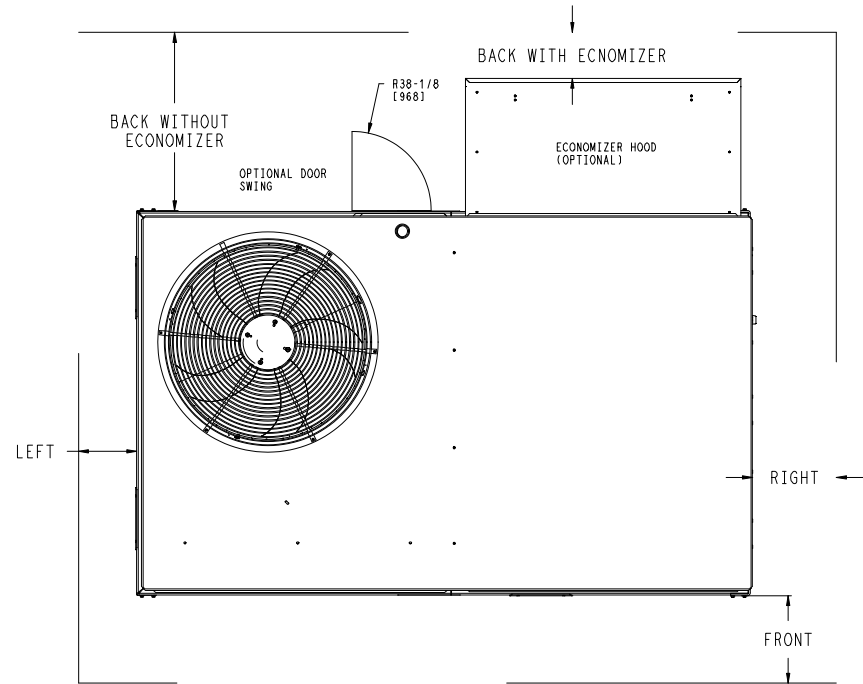
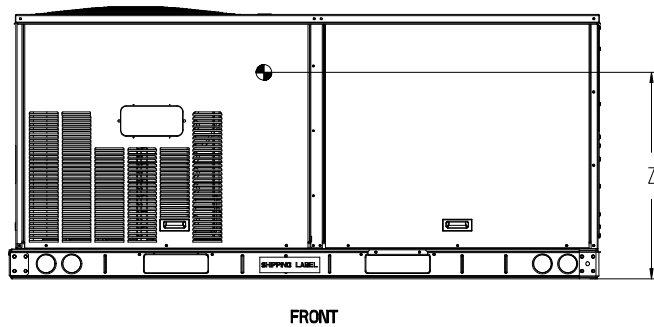
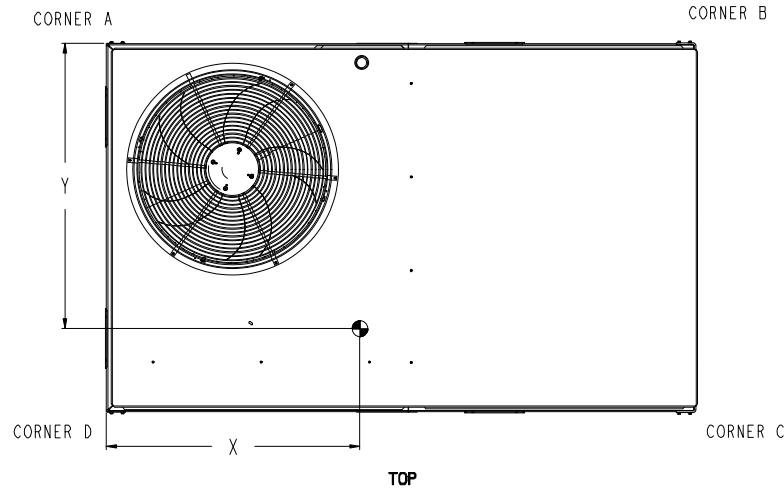
# Certified Drawing for HP-4A

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50GCO*04	475	215	128	58	120	54	110	50	117	53	36 [914]	22 3/8 [568]	16 1/8 [410]
50GCO*05	590	268	162	73	147	67	134	61	148	67	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]
50GCO*06	596	270	163	74	148	67	125	61	149	68	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]

\* - STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.  
FOR OTHER OPTIONS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.



NOTE:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

SURFACE	SERVICE WITH:		OPERATING CLEARANCE
	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 2 OF 3	DATE 08/15/19	SUPERCEDES -	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV -
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# Certified Drawing for HP-4A

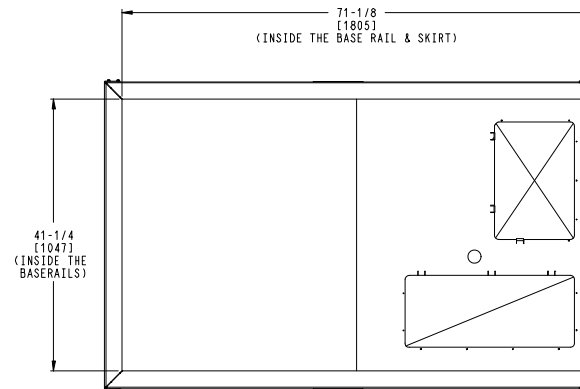
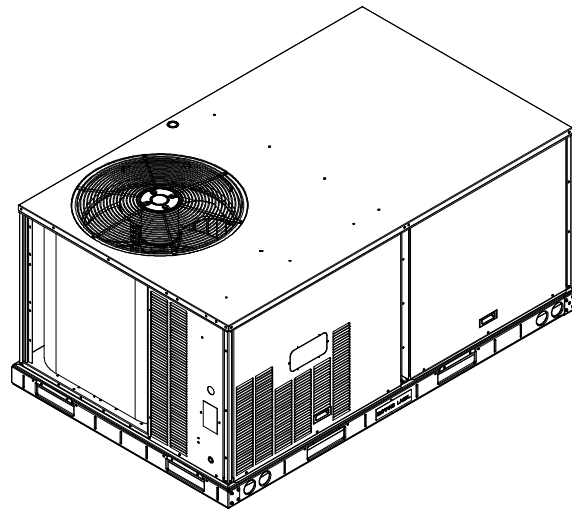
Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

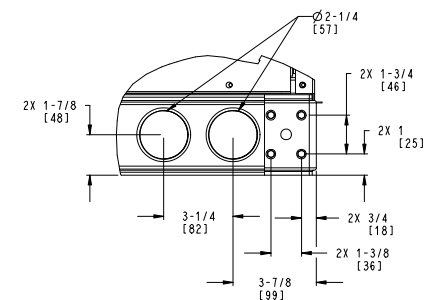


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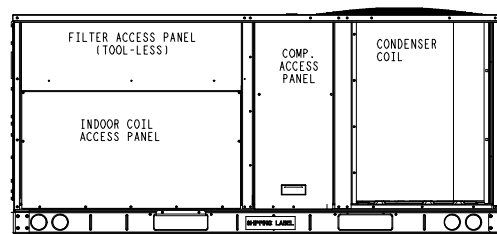
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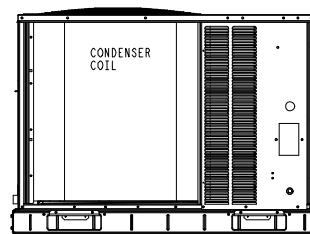
INSIDE BASERAIL DIMENSIONS  
BOTTOM



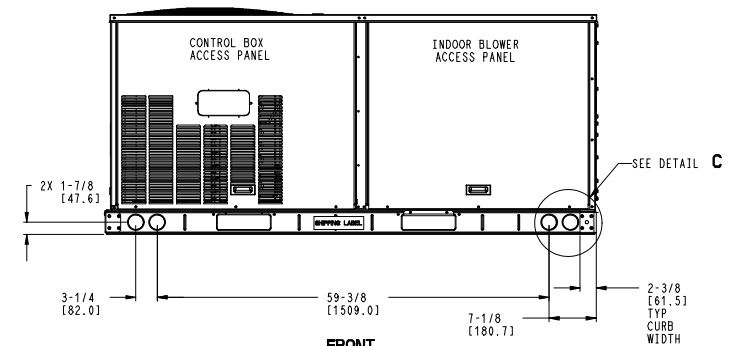
DETAIL C  
TYP 4 PLCS



BACK



LEFT



FRONT

ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 3 OF 3	DATE 08/15/19	SUPERCEDES -	50GCQ 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV -
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# AP-Thirteen

High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements



The Camfil AP-Thirteen extended surface pleated filter offers filtration for applications that have 1", 2" or 4" deep filter tracks. The AP-Thirteen is a MERV 13 filter when evaluated per ASHRAE Standard 52.2 and meets the requirements for minimum filtration efficiency, as published in LEED manuals for new or existing buildings. The AP-Thirteen may reduce the size of the HVAC system, saving valuable mechanical area floor space. It also simplifies the upgrading of in-place systems, allowing existing units to meet LEED requirements without major equipment modification.

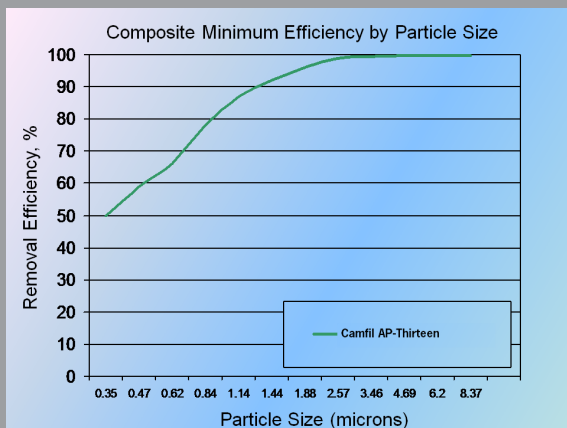
Standard pleated filters remove nuisance dusts, lint and contaminants associated with staining, and are primarily designed to protect equipment and act as prefilters. As a stand-alone filter, the AP-Thirteen will perform these tasks and removes sub-micron particles, defined as lung-damaging by cognizant authorities. The AP-Thirteen, according to filtration application design manuals, can be used as the only filter for special process areas, electrical shops, paint shops, average general offices and laboratories. Other applications include analytical laboratories, electronics shops, drafting areas, conference rooms, and above-average general offices.

Built for today's HVAC systems, the AP-Thirteen:

- Has 16 pleats per linear foot on 1", 15 pleats per linear foot on 2" and 11 pleats per linear foot on 4" nominal depths. The radial pleat design ensures full use of media area and a longer filter life.
- Includes a synthetic fiber blend with a unique media loft that provides high efficiency ASHRAE MERV 13 performance and high dust-holding capacity.
- Has a welded wire media grid backing, treated for corrosion resistance, preventing media oscillation or filter pack failure as filter pressure drop increases.
- Has a high wet-strength beverage board frame that creates a rigid and durable filter pack. The AP-Thirteen will not bow or deflect.

These combined features allow the AP-Thirteen to outlast other MERV 13 pleated panels by a factor of 20% or more resulting in the lowest total cost of ownership (TCO).

**High efficiency filtration meeting the needs for a 1", 2" or 4" deep MERV 13 pleated panel for LEED facility certification.**



The efficiency chart above is extrapolated from particle size versus efficiency information when evaluated per ASHRAE Standard 52.2.

<sup>1</sup> LEED, Leadership in Energy and Environmental Design is a registered trademark of the United States Green Building Council.



# AP-Thirteen

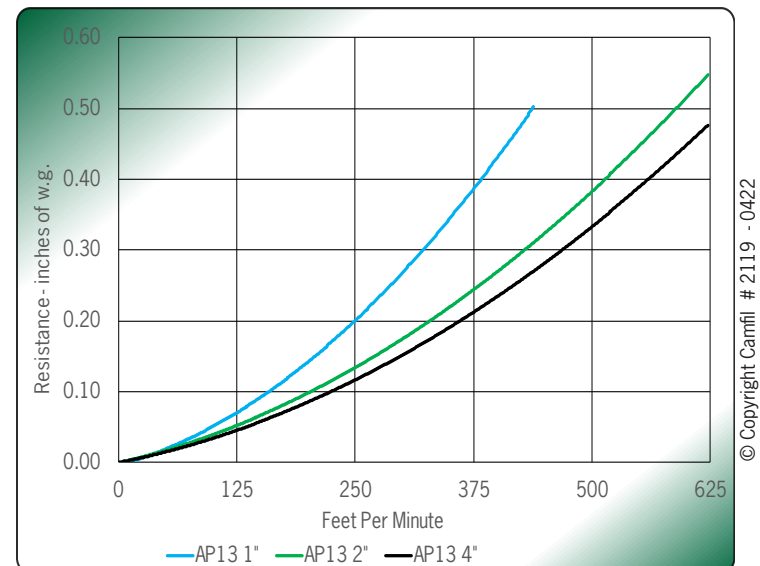
High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements

## Performance Data

1" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
16 Pleats per Lin. Ft.	406769001	20x16	0.36"	770	5.4
	406769002	20x20		970	6.7
	406769003	25x20		1210	8.5
	406769004	25x16		970	6.7
	406769005	24x24		1400	9.8
	406769006	20x14		680	4.7
	406769007	24x20		1160	8.1
	406769008	20x15		720	5.0
	406769009	24x12		700	4.8
	406769010	24x16		930	6.5
	406769011	25x14		850	5.9
	406769012	20x10		480	3.3
	406769013	25x25		1510	10.7
	406769014	25x18		1090	7.6
	406769016	16x16		620	4.3
	406769018	20x12		580	4.0
	406769019	20x18		870	6.1
	406769020	22x22		1170	8.2
	406769021	24x10		580	4.0
	406769022	25x10		600	4.1
	406769023	25x12		720	5.0
	406769024	25x15		910	6.3
	406769026	24x14		810	5.6
	406769027	16x12		460	3.2
	406769028	24x18		1050	7.3
	406769029	20x30		1450	10.2
	406769030	18x14		615	4.2

4" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
11 Pleats per Lin. Ft.	405414001	24x24	0.36"	2000	27.5
	405414002	24x12		1000	13.4
	405414003	20x20		1380	18.9
	405414004	20x16		1110	15.0
	405414005	25x16		1380	18.9
	405414006	25x20		1730	23.8
	405414007	24x20		1660	22.8
	405414008	24x18		1500	20.4
	405414009	24x16		1330	18.1
	405414013	16x25		1380	18.9
	405414014	20x24		1660	22.8
	405414015	20x25		1730	23.8

2" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
15 Pleats per Lin. Ft.	405413001	20x16	0.41"	1110	9.6
	405413002	20x20		1380	12.0
	405413003	25x20		1730	15.1
	405413004	25x16		1380	12.0
	405413005	24x24		2000	17.3
	405413006	24x12		1000	8.4
	405413007	24x20		1660	14.5
	405413008	24x18		1500	13.0
	405413009	25x18		1560	13.6
	405413010	20x14		970	8.3
	405413011	25x14		1210	10.5
	405413012	24x16		1330	11.5
	405413013	25x25		2170	19.0
	405413014	20x12		830	7.1
	405413015	20x10		690	5.9
	405413016	16x16		880	7.6
	405413017	20x15		1040	8.9
	405413018	20x18		1250	10.8
	405413019	25x15		1300	11.2
	405413020	16x25		1380	12.0
	405413021	20x24		1660	14.5
	405413022	20x25		1730	15.1
	405413023	20x30		2080	18.2



DATA NOTES:  
 1.0" w.g. recommended maximum final resistance. System design may dictate a lower change-out point. The AP-Thirteen filter is classified by Underwriters Laboratories as UL 900.  
 Maximum operating temperature 175° F. (79° C).



Certified Quality System

For detailed specifications and exact height, width and depth of each size, consult your local Camfil Distributor, Representative or

[www.camfil.com](http://www.camfil.com) or [AP-Thirteen](#)

Camfil has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

Camfil | 1 North Corporate Drive, Riverdale, NJ 07457 | Tel: (973) 616-7300

[www.camfil.com](http://www.camfil.com)

## ION-0A \* 00 | Ion Generator for AHU's, Heating and AC Units

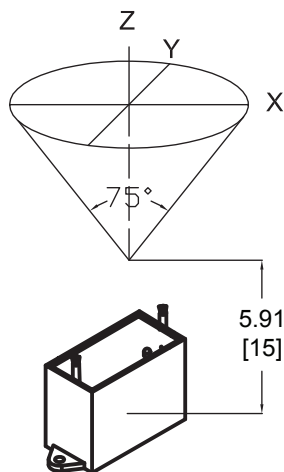
### Part Number

ION - 0A \* 00

#### VOLTAGE:

A - 24VAC / VDC, 1 $\phi$   
D - 115VAC, 1 $\phi$

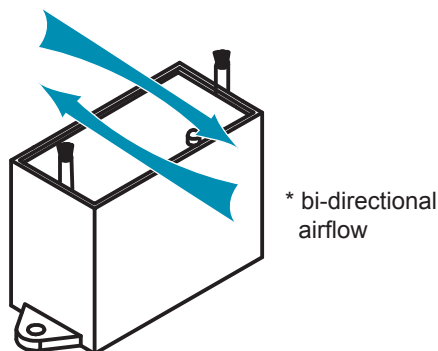
### Ion Distribution (inches[cm])



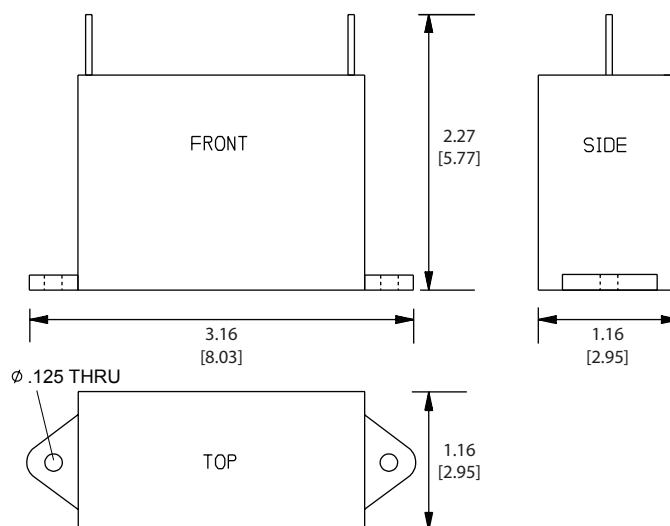
### Product Application

Hospitals | Nursing Homes | Schools |  
Animal Feeding and Processing Plants |  
Shopping Malls | Laboratories | Veterinary Offices |  
Restaurants and Food Preparation Areas | Zoos |  
Casinos | Convention Centers and Arenas | Jails |  
Museums | Health Clubs | Churches and Synagogues

### Airflow



### Product Dimensions (inches [cm])



### Technical Data

Power Supply	See part number voltage
Power Consumption	4.3 W / 24V; 6.9 W all other volts
Output Voltage	+/- 9000VDC
Power Wiring Leads	35 inches in length
Mounting	Self tapping metal screws
Dimensions	3.16" x 1.16" x 2.27" (w/ CF tips)
CFM	2,000 CFM
Output Ion	Negative $4 \times 10^7$ pieces / $\text{cm}^3$
Weight	.5 lbs (.25 kg)
Life Span	15,000 Hours





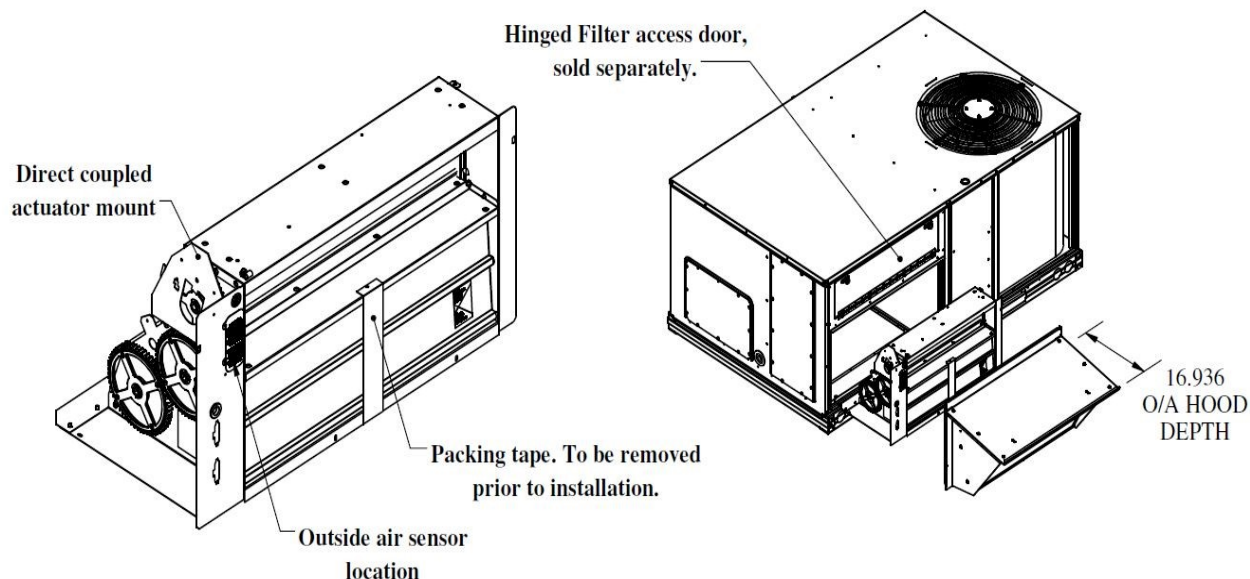
Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
RTU:		

Submitted to:	Approved by:	Notes:
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Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.

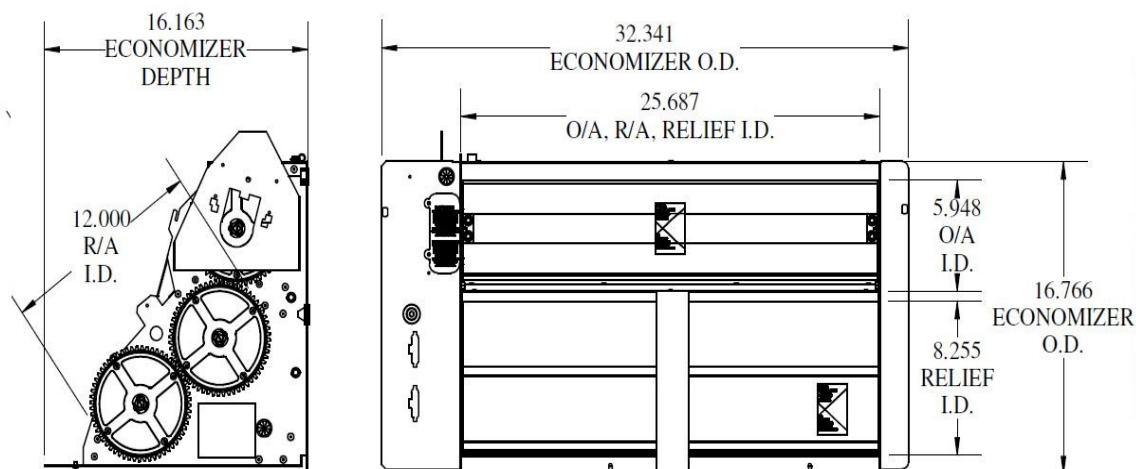
#### FEATURES:

- External gear driven dampers with roll formed blades.
- Designed for vertical applications only.
- Factory assembled rain hood, with aluminum water entrainment filters.
- Filter access door supplied with RTU.
- Hinged filter access door is ordered separately.
  - MMC P/# for Chassis 1 - ECD-SRT1CA-HDOOR
  - MMC P/# for Chassis 2 - ECD-SRT2CA-HDOOR
- Rain hood is sloped for water run off.
- All harnesses and plugs needed are supplied.
- Economizer is class 1A & AMCA rated.
- Relief blades are AMCA rated.
- Uses filter rack with unit.
- Motorized relief available, add -M to end of part number
  - Ex: ECD-SRT12CB-D00H-M
- Economizer with smoke detector available, add -S to end of part number
  - Ex: ECD-SRT12CB-D00H-S




#### -Control Types

-D0DB-4	RTU Open - Premier Link - System VU, No controller, Adjustable dry bulb, Belimo actuator
-D0DB-X	Comfortlink - No controller, Adjustable dry bulb, Belimo MFT actuator with 500 ohm resistor
-D00H-H	Communicating Honeywell actuator only
-D00H	Non-communicating Honeywell actuator only
-D00B	Belimo actuator with feedback and end switch
-D00S	Siemens actuator with feedback





	Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
	RTU:		
Submitted to:		Approved by:	Notes:
<p>Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.</p>			
<p><b><u>Compliant Economizer:</u></b></p> <ol style="list-style-type: none"> <li><b>Title 24:</b> Economizers meet California Energy Commission Title 24-2013 / 2016 prescriptive section 140.4 (damper leakage etc.), and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems, meet mandatory section 120.2.i for Fault Detection and Diagnostic requirements. 5 Year Warranty for parts and components only.</li> <li><b>ASHRAE 90.1:</b> Economizers meet ASHRAE 90.1-2013/2016 damper leakage requirements, and meet 2016 Fault Detection and Diagnosis requirements when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems.</li> <li><b>IECC:</b> Economizers meet IECC 2012, IECC 2015, and IECC 2018 for outside air, return air, and relief damper (when provided) leakage requirements, and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex control systems meet IECC 2015 and IECC 2018 for Fault Detection and Diagnostic requirements. Note: IECC 2015 and IECC 2018 requires differential return air sensor, which must be ordered separately.</li> <li><b>AMCA:</b> Outside air and return air (volume) dampers are AMCA Class 1A rated at 1" w.g. Refer to MicroMetl NS2 catalog sheet on web site for details. Relief air dampers (when provided) are also AMCA rated. Refer to GR1 series catalog sheet on web site for details.</li> </ol>			
<p><b><u>Features:</u></b></p> <ul style="list-style-type: none"> <li>For single or 2 speed indoor fan units. Other control options available.</li> <li>Gear driven design for trouble-free operation, eliminating slippage and binding associated with standard linkage.</li> <li>Includes assembled rainhood with aluminum water entrainment filters in the outside air section.</li> <li>Rainhood is sloped for water run-off.</li> <li>Built-in barometric relief damper provided. Power exhaust options available.</li> <li>All harnesses and plugs needed are provided.</li> <li>Uses standard factory filter access door shipped with HVAC unit.</li> <li>If factory hinged access door option is installed on unit, an additional kit is required to seal hinged door properly. <ul style="list-style-type: none"> <li>OEM part no. CRPECONV003A00 or MicroMetl part number 0640-0100-HDANGL</li> </ul> </li> </ul>			
<p><b><u>Notes:</u></b></p> <ol style="list-style-type: none"> <li>Control systems include DDC actuator, and some models include 500 OHM resistor and outside air temperature sensor.</li> <li>Differential return air sensor if required can be ordered from OEM unit factory, and is field installed in return duct.</li> <li>ASHRAE, IECC, and Title 24 require the economizer controller be capable of reporting faults to a fault management application accessible by day-to-day operating or service personnel, or annunciated locally on zone thermostats or in some codes other devices are acceptable. Refer to applicable code requirements and to DDC controller for options.</li> </ol>			
<p>This Document Is The Property Of MicroMetl Corporation And Is Delivered Upon The Express Condition That The Contents Will Not Be Disclosed Or Used Without MicroMetl's Written Consent. MicroMetl Reserves The Right To Discontinue, Or Change At Any Time, Specifications &amp; Designs Without Any Notice Incurring Obligations.</p>		<p>Master Revision 0001A</p> <p>Page Revision 0001A</p>	



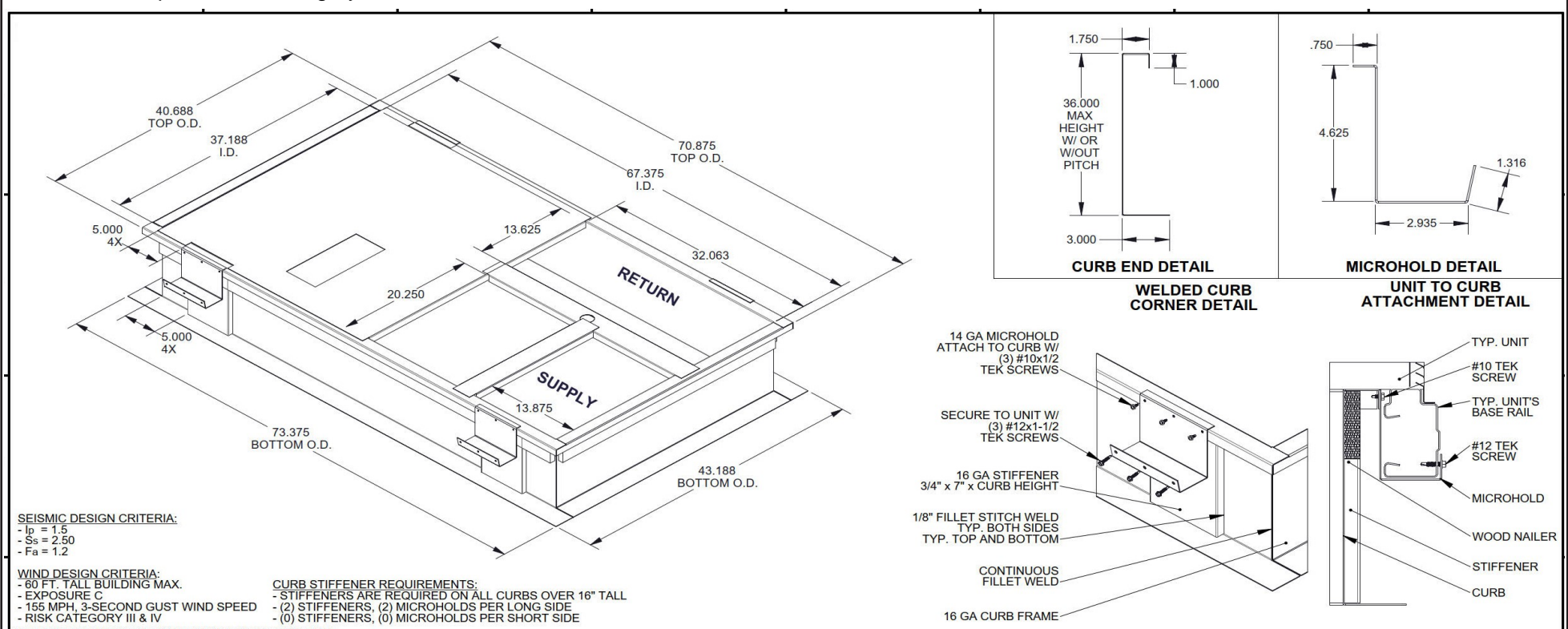
MicroMetl Corporation certifies that the models GR1 and NS2 shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with requirements of the AMCA Certified Ratings Programs. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.



Date: \_\_\_\_\_ Weight: 105lbs (US) 47.63kg (Metric) Part Number: CRBW-SRT12HA-1411  
RTU: \_\_\_\_\_

Submitted to: \_\_\_\_\_ Approved by: \_\_\_\_\_ Notes: \_\_\_\_\_

Welded Structurally Calculated Curb - 14 Inches Tall Non Insulated Full Perimeter Welded Structurally Calculated Curb Curb, California State Standard, Standard Seismic Criteria, "Structurally" Stamped By A Professional Engineer, Without Pitch, Insulated Deck Pan If Applicable, Includes Wood Nailer & Hold Down Brackets. Meets Seismic Requirements for 2022 CBC & 2021 IBC. Wind Design Criteria: 60 Foot Tall Building Maimum, Exposure C, 155 MPH - 3 Second Gust Speed, Risk Category III & IV.



**Indianapolis, IN. : (800) 662-4822**  
**Sparks, NV. (800) 884-4662**  
**Longview, TX. (903) 248-4800**

DRAWN BY: IR DATE 08/24/2022

MEETS SEISMIC REQUIREMENTS FOR 2022 CBC & 2021 IBC

MEETS REQUIREMENTS FOR 155 MPH, 60' BUILDING HEIGHT MAX. 3 SEC. GUST, EXP C

**ANCHORAGE DETAILS TO ROOF:** ALL DETAILS ARE CALCULATED USING THE SEISMIC DESIGN CRITERIA INDICATED ABOVE. FOR ANY OTHER TYPE OF ANCHORAGE THE EOR HAS THE OPTION TO CALCULATE THE ANCHORAGE USING SITE SPECIFIC PARAMETERS AND LOADS.

**TYPICAL PLAN VIEW:** (BEAM BY OTHERS) USE A307 1/2" DIA. BOLTS, W/ WASHER CENTERED ON FLANGE. a = 2", c = 6".

**STEEL ATTACHMENT:** (2.5") LONG 1/8" FILLET WELDS ARE PERMITTED TO BE USED IN PLACE OF EACH BOLT INDICATED BY THE STEEL ATTACHMENT DETAIL EQUALLY SPACED.

**WOOD ATTACHMENT:** (REF. DOUGLAS FIR) USE 1/4" x 3" SIMPSON SDS W/ WASHER, CENTERED ON CURB FLANGE. a = 1", c = 3".

**CONCRETE ATTACHMENT:** (3000 PSI MINIMUM, 6" MINIMUM THICKNESS) (4" MIN EDGE DISTANCE, 3-3/4" EMBEDDED) USE 1/2" SIMPSON TITEN HD CENTERED ON CURB FLANGE, 8" MIN. SPACING. a = 3", c = 8".

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	1	1	2	12	
UP TO 24"	1	1	2	12	
UP TO 36"	1	1	4	20	

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	6	2	4	32	
UP TO 24"	6	3	4	34	
UP TO 36"	8	3	6	46	

CURB HEIGHT	QTY OF ANCHORS				TOTL
	EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER		
UP TO 14"	1	1	2	12	
UP TO 24"	1	1	2	12	
UP TO 36"	2	1	2	14	

**STRUCTURALLY CALCULATED WELDED CURB**

MAX UNIT WEIGHT 1099 lbs.

8/24/22

BJG# 20220039

# SUBMITTAL

# MicroMetl

Please Fill Out For All Instances

SRT12, SRT34, AND SRT05 CURBS

PART NUMBER:

PITCH

ILLUSTRATION

DATE: 06/2017

SUBMITTED TO:

COMPANY:

DRAWN BY: NB

JOB NAME:

WEIGHT:

NOTES: PLEASE FILL IN NOTES BELOW

FOR KNOCK DOWN CURBS THE DECK PANS CAN BE ARRANGED IN EITHER CONFIGURATION FOR THE GIVEN PITCH DIRECTION (LONG OR SHORT).

ILLUSTRATION #1 (SHORT DIRECTION) IS EQUIVALENT TO ILLUSTRATION A OR B.  
ILLUSTRATION #2 (LONG DIRECTION) IS EQUIVALENT TO ILLUSTRATION C OR D.

## NOTES:

\* CURBS SHOWN FACTORY ASSEMBLED.  
KNOCK DOWN CURBS REQUIRE ASSEMBLY.

\* WHEN ORDERING KNOCK DOWN CURBS  
PLEASE SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION #1 (SHORT DIRECTION) OR  
- ILLUSTRATION #2 (LONG DIRECTION)

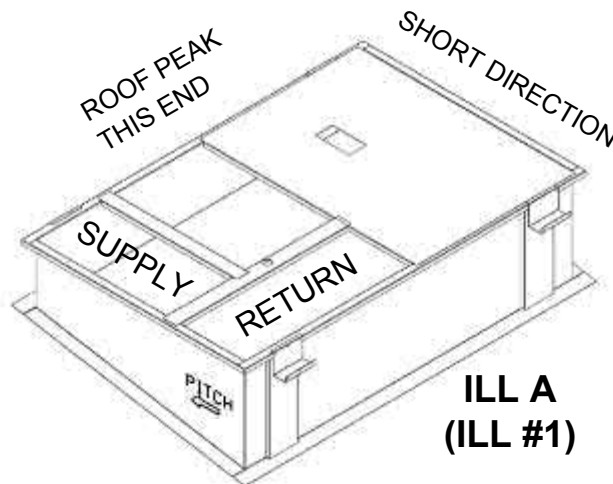
\* WHEN ORDERING WELDED CURBS PLEASE  
SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION A (SHORT DIRECTION)  
- ILLUSTRATION B (SHORT DIRECTION)  
- ILLUSTRATION C (LONG DIRECTION) OR  
- ILLUSTRATION D (LONG DIRECTION)

\* PLEASE DESIGNATE THE SLOPE OF THE  
ROOF BELOW.

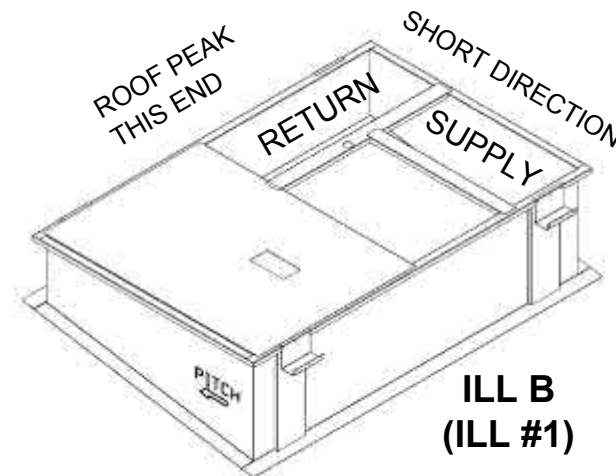
\* CONTACT MICROMETL FOR PRICING.  
PHONE NUMBER: (800) 884-4662

ILLUSTRATION # B

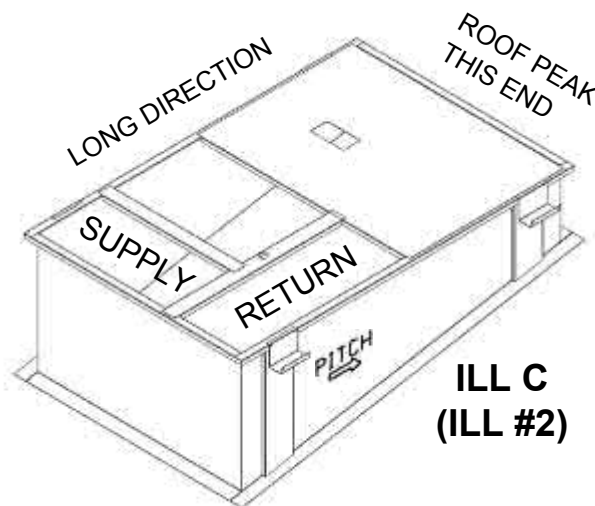
SLOPE OF ROOF 1/2" IN 12" 16" Tall



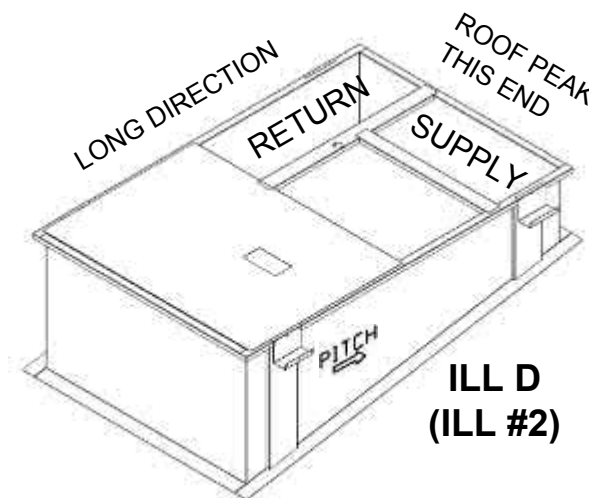
ILL A  
(ILL #1)



ILL B  
(ILL #1)



ILL C  
(ILL #2)



ILL D  
(ILL #2)

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## Unit Report For HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Unit Parameters

Unit Model:.....50GCQJ05J2M6-0A3A0  
Unit Size:.....05 (4 Tons)  
Volts-Phase-Hertz:.....460-3-60  
Heating Type:.....Heat Pump  
Heat Control:.....Two Stage Cooling Models  
Duct Cfg:.....Vertical Supply / Vertical Return

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....6' 2.375"  
Unit Width:.....3' 10.625"  
Unit Height:.....3' 5.375"  
Total Operating Weight:.....623 lb

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Return Air Filter Type:.....Throwaway  
Return Air Filter Quantity:.....4  
Return Air Filter Size:.....16 x 16 x 2

Selection includes construction throwaway filter into the base fan curve.

### Unit Configuration

Condensate Overflow Switch  
Direct Drive - EcoBlue - Medium Static  
Al/Cu - Al/Cu - Louvered Hail Guards  
Base controls set up for field installed air management device  
Hinged Access Panels  
Standard Packaging

### Warranty Information

5-Year compressor parts (STD.)  
5-Year electric heater (STD.)  
1-Year parts (STD.)  
3-Year SystemVu controller

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

### Ordering Information

Part Number	Description	Quantity
50GCQJ05J2M6-0A3A0	Rooftop Unit	1
	Base Unit	
	Condensate Overflow Switch	
	Direct Drive - EcoBlue - Medium Static	
	Al/Cu - Al/Cu - Louvered Hail Guards	
	Hinged Access Panels	
	None	
<b>Field Installed Accessories</b>		
CRTIMEGD001A00	Time Guard II	1
CRSTATUS001A00	Fan/Filter Status Switch	1
CRPHASE3001A02	Phase Monitor Control	1
CRHEATER333A00	Electric Heater	1
CRPECONV003A00	Hinged Panel Sealing Angle Kit	1

## Performance Summary For HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Part Number:50GCQJ05J2M6-0A3A0

ARI SEER: 17.00  
ARI SEER2: 16.00  
Application EER (Rooftop Unit only): 11.77

#### Base Unit Dimensions

Unit Length: 74.4 in  
Unit Width: 46.6 in  
Unit Height: 41.4 in

#### Operating Weight

Base Unit Weight: 590 lb  
Condensate Overflow Switch: 5 lb  
Al/Cu - Al/Cu - Louvered Hail Guards: 13 lb  
Hinged Access Panels: 5 lb

#### Accessories

Electric Heater: 10 lb

Total Operating Weight: 623 lb

#### Unit

Unit Voltage-Phase-Hertz: 460-3-60  
Air Discharge: Vertical  
Fan Drive Type: Vane Axial  
Actual Airflow: 1600 CFM  
Site Altitude: 0 ft

#### Cooling Performance

Condenser Entering Air DB: 95.0 F  
Evaporator Entering Air DB: 80.0 F  
Evaporator Entering Air WB: 67.0 F  
Entering Air Enthalpy: 31.44 BTU/lb  
Evaporator Leaving Air DB: 58.5 F  
Evaporator Leaving Air WB: 57.3 F  
Evaporator Leaving Air Enthalpy: 24.58 BTU/lb  
Unit Discharge Air DB: 59.7 F  
Unit Discharge Air WB: 57.7 F  
Unit Discharge Air Enthalpy: 24.86 BTU/lb  
Gross Cooling Capacity: 49.39 MBH  
Net Cooling Capacity: 47.37 MBH  
Gross Sensible Capacity: 37.07 MBH  
Net Sensible Capacity: 35.05 MBH  
Compressor Power Input: 3.25 kW  
Coil Bypass Factor: 0.055

#### Heating Performance

Outdoor Ambient Temperature: 47.0 F  
Entering Air Indoor Coil DB: 70.0 F  
Leaving Air Indoor Coil DB: 96.4 F  
Total Heating Capacity: 45.60 MBH  
Integrated Heating Capacity: 45.60 MBH  
Heating Power Input: 3.04 kW  
High Temperature COP: 3.70  
Low Temperature COP: 2.40  
HSPF: 8.7  
High Temperature COP2: 3.60  
Low Temperature COP2: 2.40  
HSPF2: 7.1  
Electric Heating Capacity: 5.50 kW  
Unit Leaving Air Temp: 107.2 F

## Performance Summary For HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

### Supply Fan

External Static Pressure:	0.80	in wg
Options / Accessories Static Pressure		
Electric Heaters:	0.18	in wg
Application External Static (ESP + Unit Opts/Acc.):	0.98	in wg
Fan RPM:	1863	
Fan Power:	0.70	BHP
NOTE: Selected IFM RPM Range: 1047 - 2170		

**Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.**

### Electrical Data

Voltage Range:	414 - 506	
Compressor #1 RLA:	7.7	
Compressor #1 LRA:	62	
Actual Electric Heater kW:	5.5	
Electric Heater FLA:	7.2	
Indoor Fan Motor Type:	MED	
Indoor Fan Motor FLA (Total):	1.5	
Power Supply MCA:	21	
Power Supply MOCP (Fuse or HACR):	25	
Disconnect Size FLA:	20	
Disconnect Size LRA:	72	
Electrical Convenience Outlet:	None	
Outdoor Fan [Qty / FLA (ea)]:	1 / 0.8	
Electric Heater Part Number:	333A	
Electric Heater Number of Stages:	1	

**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

### Acoustics

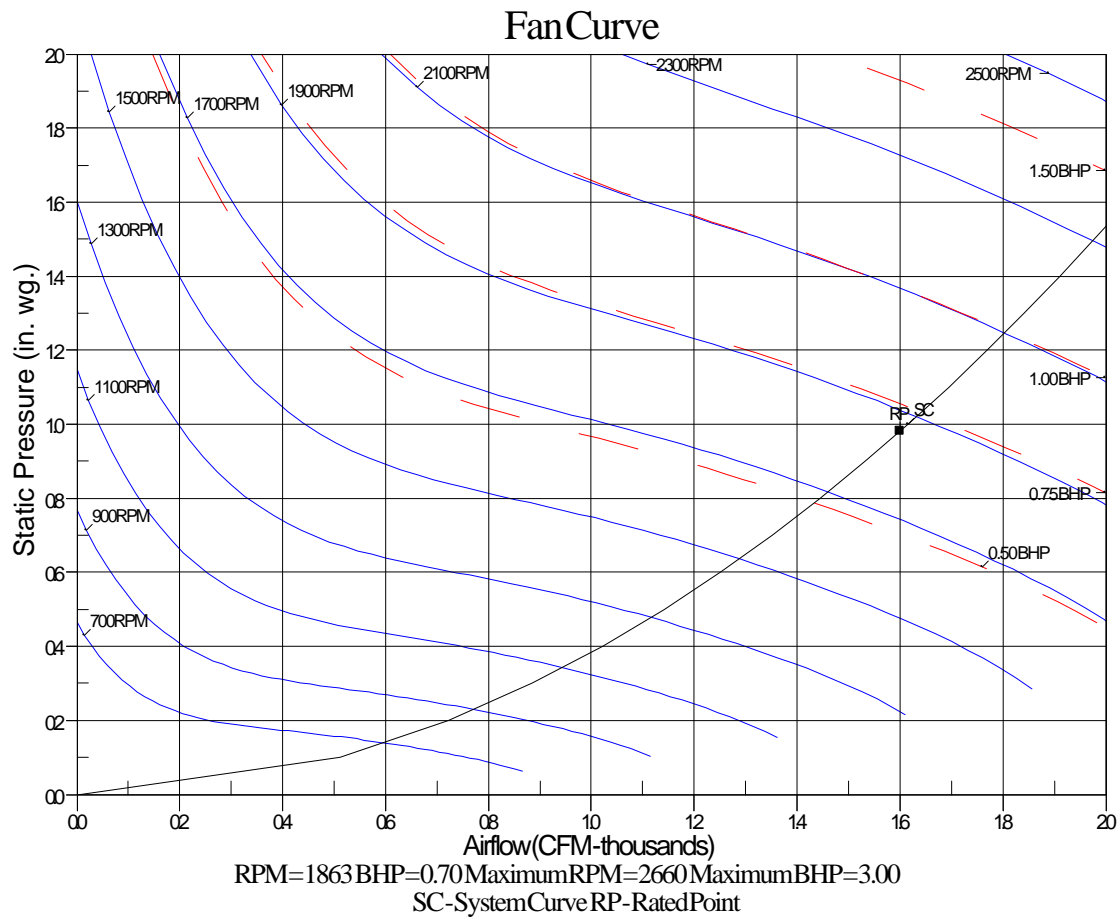
Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	92.3	90.0	NA
125 Hz	83.1	78.2	NA
250 Hz	76.8	71.9	NA
500 Hz	71.8	64.3	NA
1000 Hz	68.3	66.5	NA
2000 Hz	65.0	57.3	NA
4000 Hz	62.4	51.5	NA
8000 Hz	59.3	45.0	NA

## Performance Summary For HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM






# Certified Drawing for HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

## NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
50GCO*04	33 3/8 [847]	18 5/8 [472]
50GCO*05	41 3/8 [1051]	18 5/8 [472]
50GCO*06	41 3/8 [1051]	18 5/8 [472]

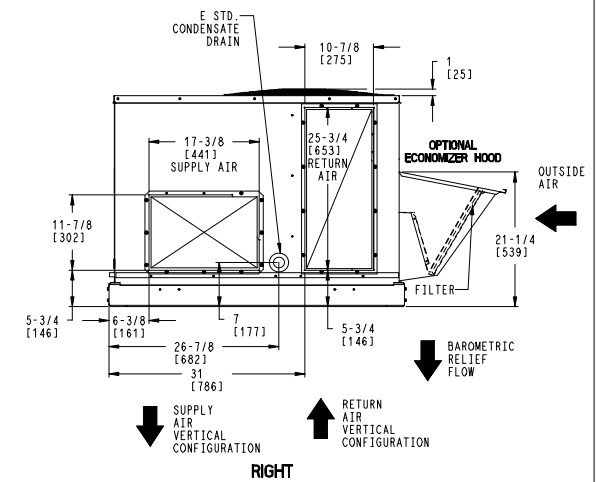
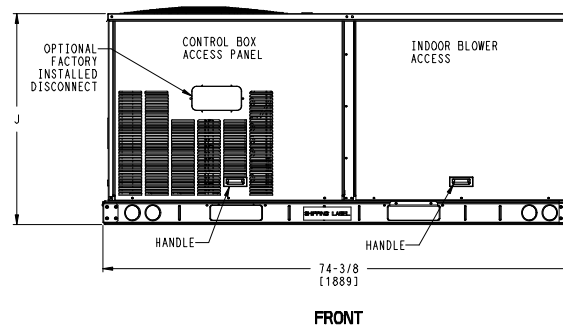
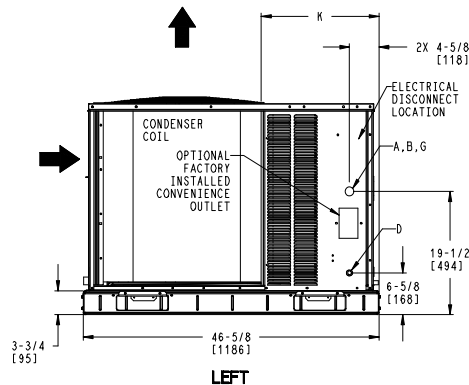
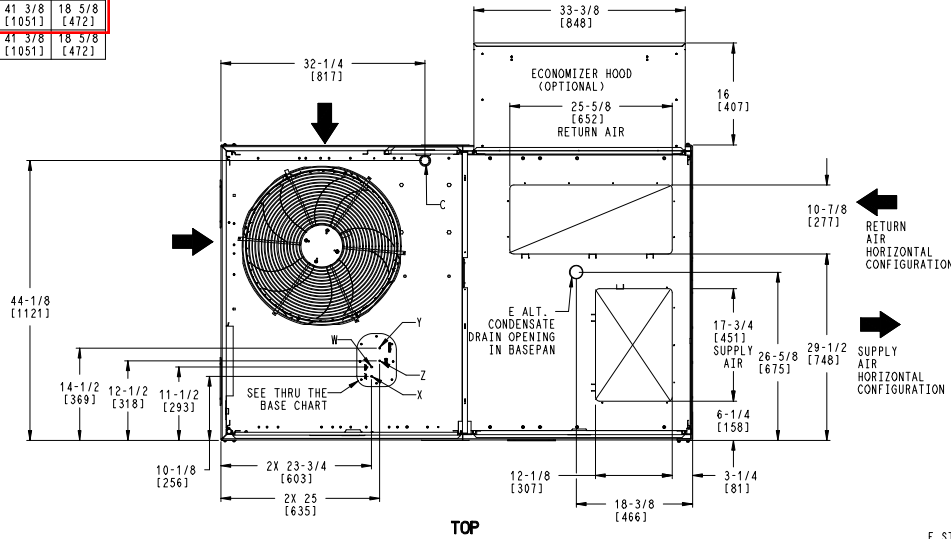


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CONNECTION SIZES		
A	1 3/8" [35]	DIA FIELD POWER SUPPLY HOLE
B	2" [51]	DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [44]	DIA GAUGE ACCESS PLUG
D	7/8" [22]	DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
G	2 1/2" [64]	DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPW008A00, 009A00			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	115V	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y *	3/4"	POWER	1 1/8" [28.6]
Z **	1/2" FPT	GAS	1 1/8" [28.6]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE			
** (008A00) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV
U.S. ECCN:NSR	1 OF 3	08/15/19	-			-



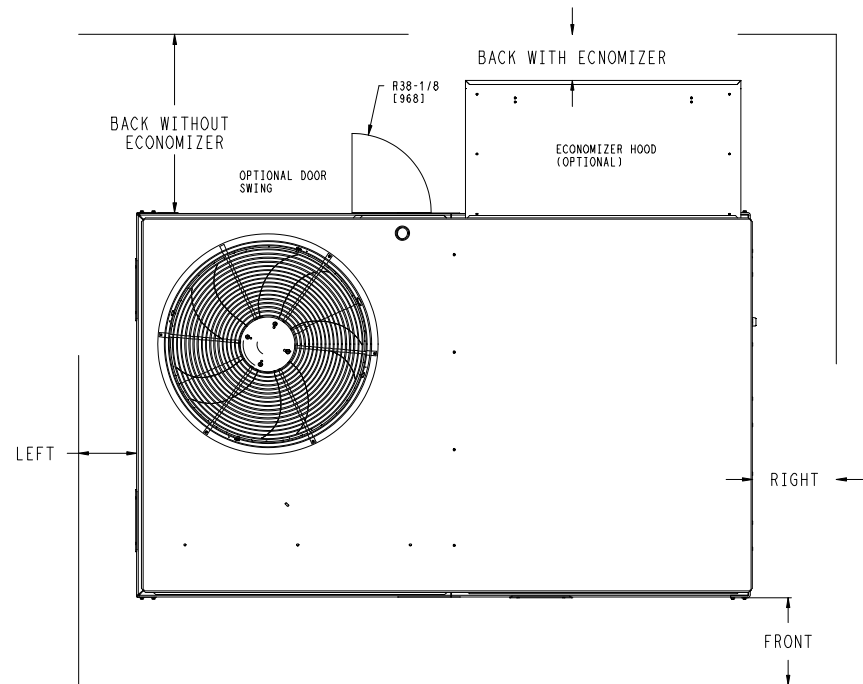
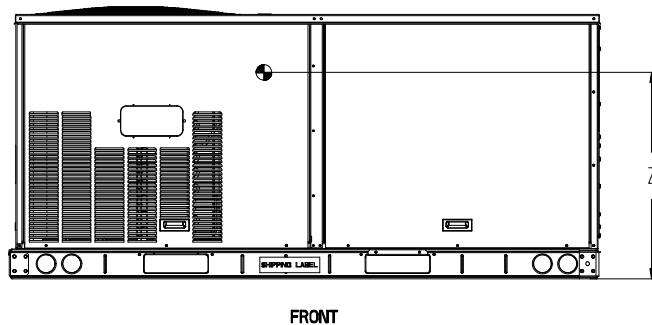
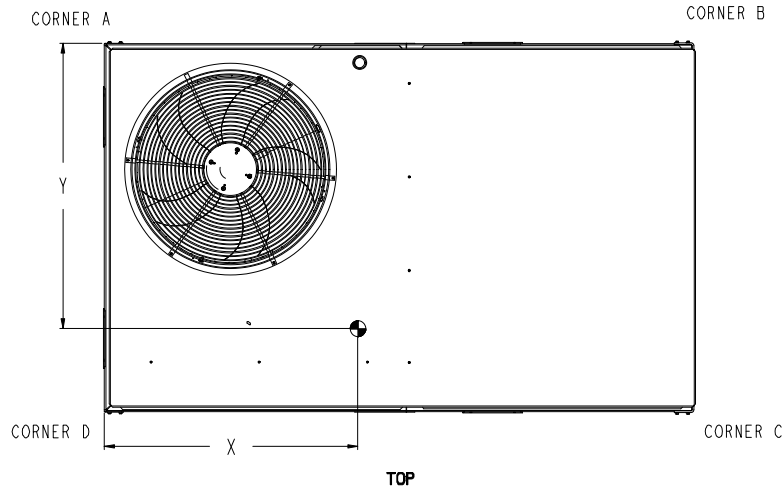
# Certified Drawing for HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM

UNIT	STD. UNIT WEIGHT #		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.			HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	
50GCO#04	475	215	128	58	120	54	110	50	117	53	36 [914]	22 3/8 [568]	16 1/8 [410]	
50GCO#05	590	268	162	73	147	67	134	61	148	67	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]	
50GCO#06	596	270	163	74	148	67	125	61	149	68	35 3/8 [898]	22 5/16 [557]	16 1/2 [419]	

\* - STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.  
FOR OTHER OPTIONS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.



NOTE:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

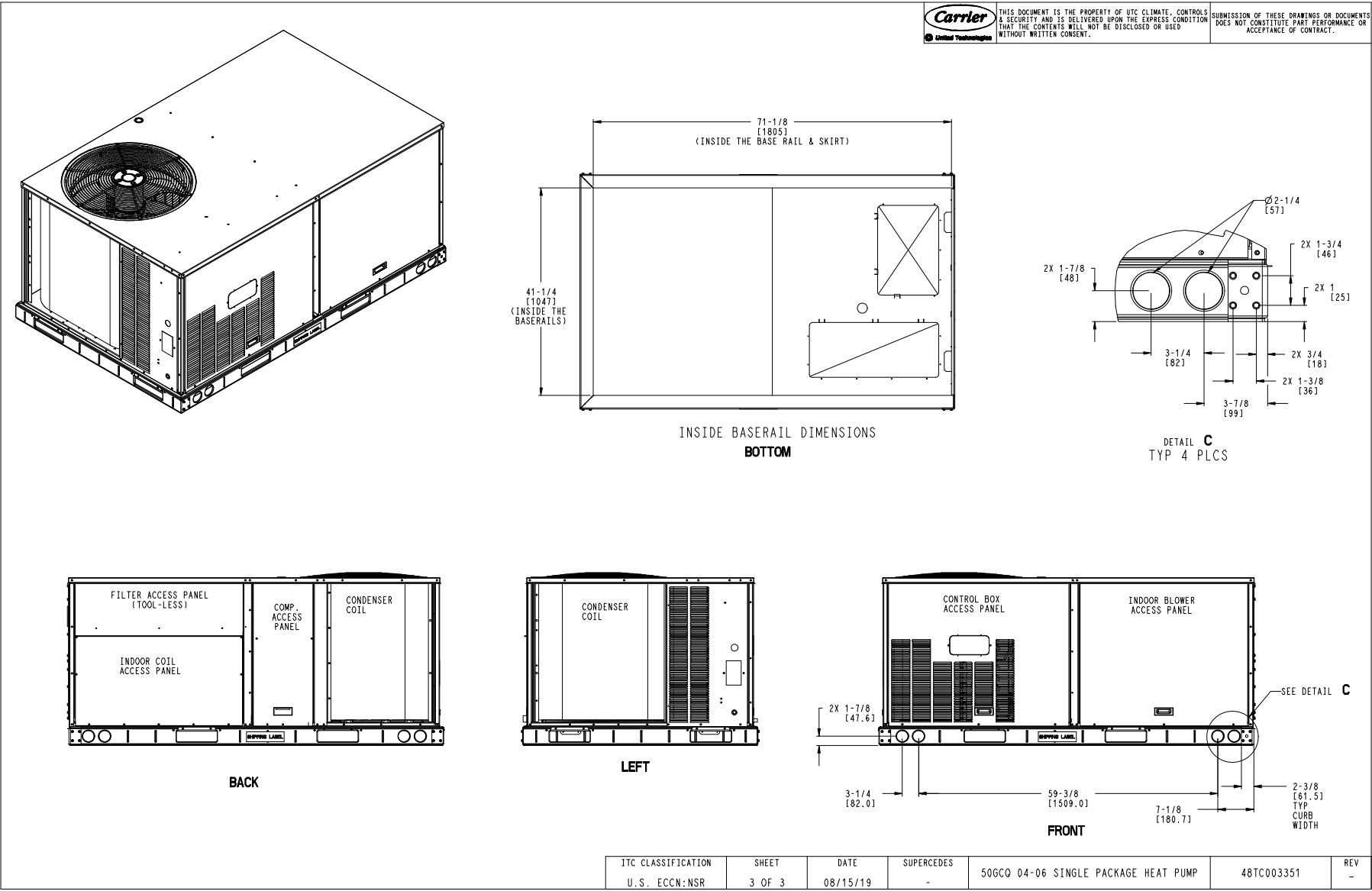
SURFACE	SERVICE WITH:		OPERATING CLEARANCE
	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION U.S. ECCN:NSR	SHEET 2 OF 3	DATE 08/15/19	SUPERCEDES -	50GCO 04-06 SINGLE PACKAGE HEAT PUMP	48TC003351	REV -
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Certified Drawing for HP-7

Project: BCSD HVAC Replacement  
Prepared By:

08/09/2023  
09:57AM





# AP-Thirteen

High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements



The Camfil AP-Thirteen extended surface pleated filter offers filtration for applications that have 1", 2" or 4" deep filter tracks. The AP-Thirteen is a MERV 13 filter when evaluated per ASHRAE Standard 52.2 and meets the requirements for minimum filtration efficiency, as published in LEED manuals for new or existing buildings. The AP-Thirteen may reduce the size of the HVAC system, saving valuable mechanical area floor space. It also simplifies the upgrading of in-place systems, allowing existing units to meet LEED requirements without major equipment modification.

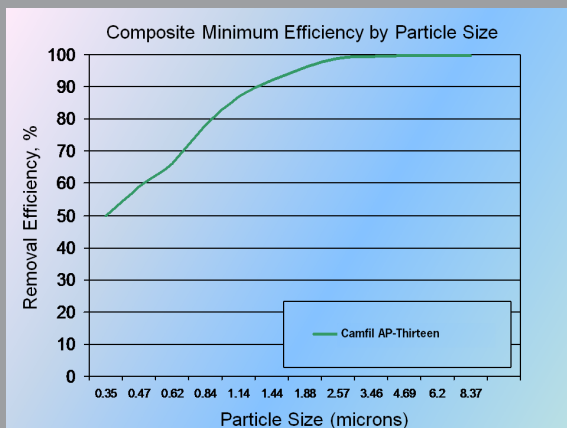
Standard pleated filters remove nuisance dusts, lint and contaminants associated with staining, and are primarily designed to protect equipment and act as prefilters. As a stand-alone filter, the AP-Thirteen will perform these tasks and removes sub-micron particles, defined as lung-damaging by cognizant authorities. The AP-Thirteen, according to filtration application design manuals, can be used as the only filter for special process areas, electrical shops, paint shops, average general offices and laboratories. Other applications include analytical laboratories, electronics shops, drafting areas, conference rooms, and above-average general offices.

Built for today's HVAC systems, the AP-Thirteen:

- Has 16 pleats per linear foot on 1", 15 pleats per linear foot on 2" and 11 pleats per linear foot on 4" nominal depths. The radial pleat design ensures full use of media area and a longer filter life.
- Includes a synthetic fiber blend with a unique media loft that provides high efficiency ASHRAE MERV 13 performance and high dust-holding capacity.
- Has a welded wire media grid backing, treated for corrosion resistance, preventing media oscillation or filter pack failure as filter pressure drop increases.
- Has a high wet-strength beverage board frame that creates a rigid and durable filter pack. The AP-Thirteen will not bow or deflect.

These combined features allow the AP-Thirteen to outlast other MERV 13 pleated panels by a factor of 20% or more resulting in the lowest total cost of ownership (TCO).

High efficiency filtration meeting the needs for a 1", 2" or 4" deep MERV 13 pleated panel for LEED facility certification.



The efficiency chart above is extrapolated from particle size versus efficiency information when evaluated per ASHRAE Standard 52.2.

<sup>1</sup> LEED, Leadership in Energy and Environmental Design is a registered trademark of the United States Green Building Council.



# AP-Thirteen

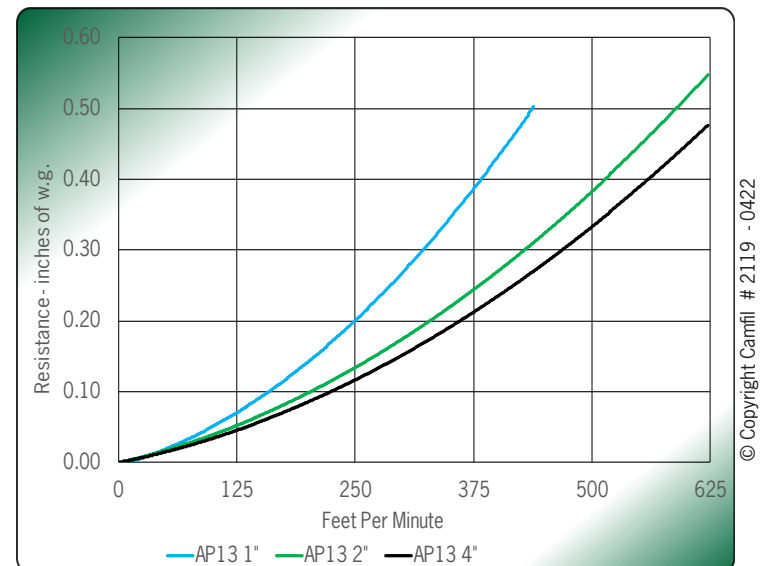
High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements

## Performance Data

1" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
16 Pleats per Lin. Ft.	406769001	20x16	0.36"	770	5.4
	406769002	20x20		970	6.7
	406769003	25x20		1210	8.5
	406769004	25x16		970	6.7
	406769005	24x24		1400	9.8
	406769006	20x14		680	4.7
	406769007	24x20		1160	8.1
	406769008	20x15		720	5.0
	406769009	24x12		700	4.8
	406769010	24x16		930	6.5
	406769011	25x14		850	5.9
	406769012	20x10		480	3.3
	406769013	25x25		1510	10.7
	406769014	25x18		1090	7.6
	406769016	16x16		620	4.3
	406769018	20x12		580	4.0
	406769019	20x18		870	6.1
	406769020	22x22		1170	8.2
	406769021	24x10		580	4.0
	406769022	25x10		600	4.1
	406769023	25x12		720	5.0
	406769024	25x15		910	6.3
	406769026	24x14		810	5.6
	406769027	16x12		460	3.2
	406769028	24x18		1050	7.3
	406769029	20x30		1450	10.2
	406769030	18x14		615	4.2

4" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
11 Pleats per Lin. Ft.	405414001	24x24	0.36"	2000	27.5
	405414002	24x12		1000	13.4
	405414003	20x20		1380	18.9
	405414004	20x16		1110	15.0
	405414005	25x16		1380	18.9
	405414006	25x20		1730	23.8
	405414007	24x20		1660	22.8
	405414008	24x18		1500	20.4
	405414009	24x16		1330	18.1
	405414013	16x25		1380	18.9
	405414014	20x24		1660	22.8
	405414015	20x25		1730	23.8

2" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
15 Pleats per Lin. Ft.	405413001	20x16	0.41"	1110	9.6
	405413002	20x20		1380	12.0
	405413003	25x20		1730	15.1
	405413004	25x16		1380	12.0
	405413005	24x24		2000	17.3
	405413006	24x12		1000	8.4
	405413007	24x20		1660	14.5
	405413008	24x18		1500	13.0
	405413009	25x18		1560	13.6
	405413010	20x14		970	8.3
	405413011	25x14		1210	10.5
	405413012	24x16		1330	11.5
	405413013	25x25		2170	19.0
	405413014	20x12		830	7.1
	405413015	20x10		690	5.9
	405413016	16x16		880	7.6
	405413017	20x15		1040	8.9
	405413018	20x18		1250	10.8
	405413019	25x15		1300	11.2
	405413020	16x25		1380	12.0
	405413021	20x24		1660	14.5
	405413022	20x25		1730	15.1
	405413023	20x30		2080	18.2



DATA NOTES:  
 1.0" w.g. recommended maximum final resistance. System design may dictate a lower change-out point. The AP-Thirteen filter is classified by Underwriters Laboratories as UL 900.  
 Maximum operating temperature 175° F. (79° C).



Certified Quality System

For detailed specifications and exact height, width and depth of each size, consult your local Camfil Distributor, Representative or

[www.camfil.com](http://www.camfil.com) or [AP-Thirteen](#)

Camfil has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

Camfil | 1 North Corporate Drive, Riverdale, NJ 07457 | Tel: (973) 616-7300

[www.camfil.com](http://www.camfil.com)

## ION-0A \* 00 | Ion Generator for AHU's, Heating and AC Units

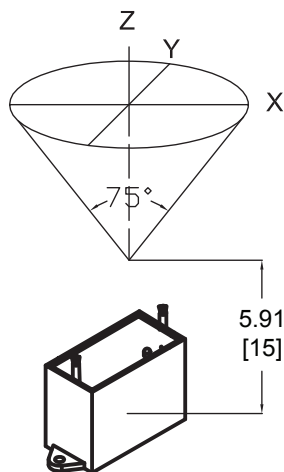
### Part Number

ION - 0A \* 00

#### VOLTAGE:

A - 24VAC / VDC, 1 $\phi$   
D - 115VAC, 1 $\phi$

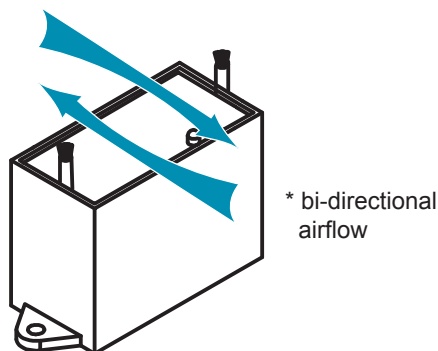
### Ion Distribution (inches[cm])



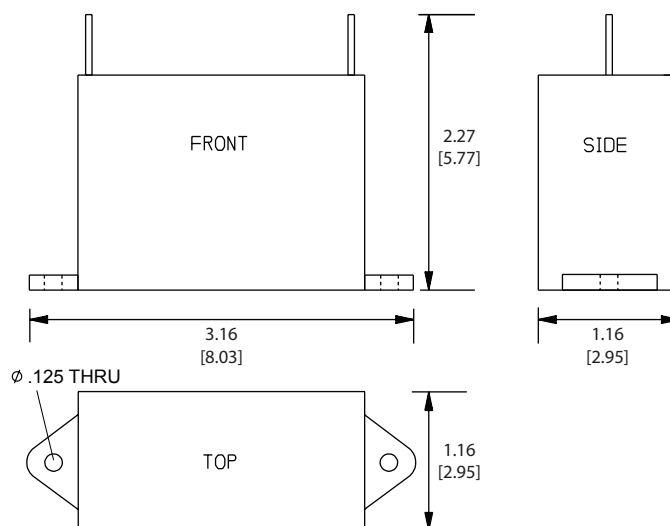
### Product Application

Hospitals | Nursing Homes | Schools |  
Animal Feeding and Processing Plants |  
Shopping Malls | Laboratories | Veterinary Offices |  
Restaurants and Food Preparation Areas | Zoos |  
Casinos | Convention Centers and Arenas | Jails |  
Museums | Health Clubs | Churches and Synagogues

### Airflow



### Product Dimensions (inches [cm])



### Technical Data

Power Supply	See part number voltage
Power Consumption	4.3 W / 24V; 6.9 W all other volts
Output Voltage	+/- 9000VDC
Power Wiring Leads	35 inches in length
Mounting	Self tapping metal screws
Dimensions	3.16" x 1.16" x 2.27" (w/ CF tips)
CFM	2,000 CFM
Output Ion	Negative $4 \times 10^7$ pieces / $\text{cm}^3$
Weight	.5 lbs (.25 kg)
Life Span	15,000 Hours





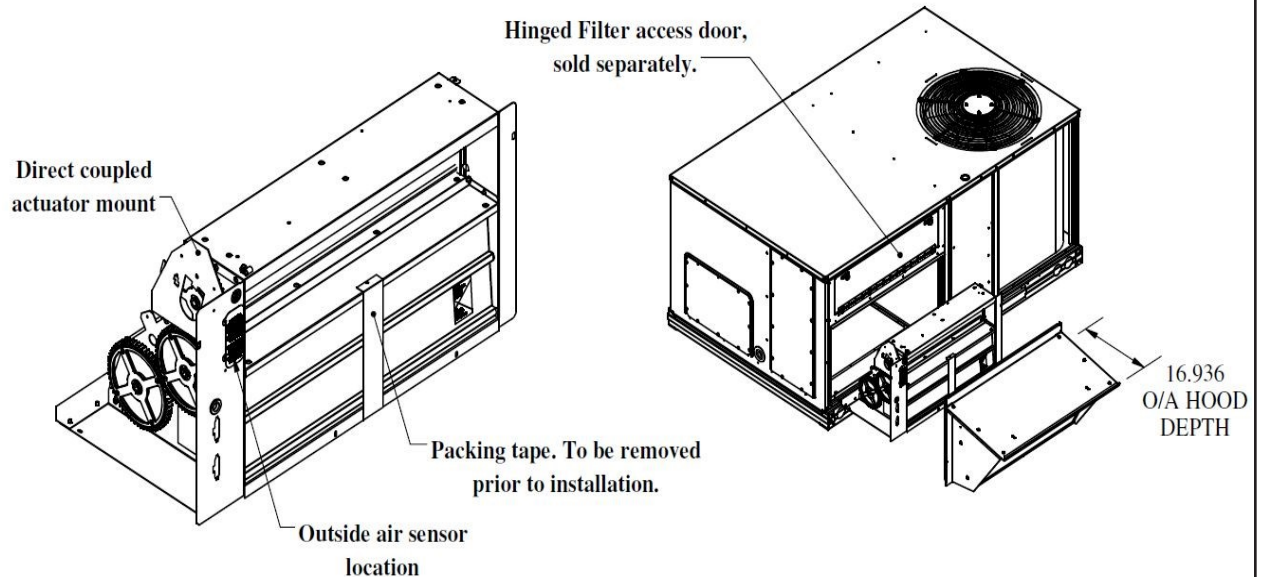
Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
RTU:		

Submitted to:	Approved by:	Notes:
---------------	--------------	--------

Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.

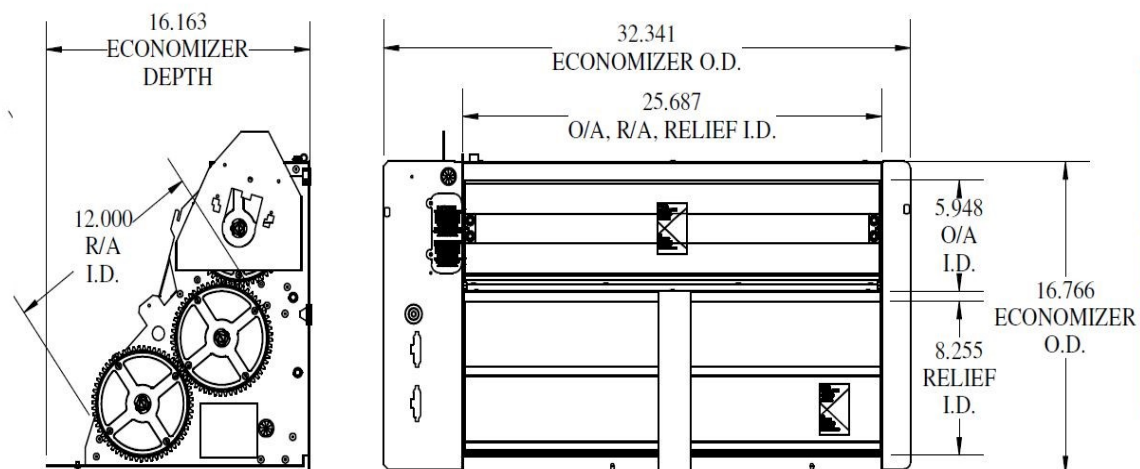
#### FEATURES:

- External gear driven dampers with roll formed blades.
- Designed for vertical applications only.
- Factory assembled rain hood, with aluminum water entrainment filters.
- Filter access door supplied with RTU.
- Hinged filter access door is ordered separately.
  - MMC P/# for Chassis 1 - ECD-SRT1CA-HDOOR
  - MMC P/# for Chassis 2 - ECD-SRT2CA-HDOOR
- Rain hood is sloped for water run off.
- All harnesses and plugs needed are supplied.
- Economizer is class 1A & AMCA rated.
- Relief blades are AMCA rated.
- Uses filter rack with unit.
- Motorized relief available, add -M to end of part number
  - Ex: ECD-SRT12CB-D00H-M
- Economizer with smoke detector available, add -S to end of part number
  - Ex: ECD-SRT12CB-D00H-S




#### -Control Types

-D0DB-4	RTU Open - Premier Link - System VU, No controller, Adjustable dry bulb, Belimo actuator
-D0DB-X	Comfortlink - No controller, Adjustable dry bulb, Belimo MFT actuator with 500 ohm resistor
-D00H-H	Communicating Honeywell actuator only
-D00H	Non-communicating Honeywell actuator only
-D00B	Belimo actuator with feedback and end switch
-D00S	Siemens actuator with feedback





	Date:	Weight: 45lbs (US) 20.41kg (Metric)	Part Number: ECD-SRT12CB-D0DB-4
	RTU:		
Submitted to:		Approved by:	Notes:
<p>Economizer - Economizer - Genesis Ultra Low Leak Economizer, Vertical Orientation, RTU Open - Premier Link - System VU - No Controller, Adjustable Dry Bulb Sensor, Belimo Actuator. Painted Rain Hood With Aluminum Filter, Barometric Relief, All Necessary Panels And Hardware Included.</p>			
<p><b><u>Compliant Economizer:</u></b></p> <ol style="list-style-type: none"> <li><b>Title 24:</b> Economizers meet California Energy Commission Title 24-2013 / 2016 prescriptive section 140.4 (damper leakage etc.), and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems, meet mandatory section 120.2.i for Fault Detection and Diagnostic requirements. 5 Year Warranty for parts and components only.</li> <li><b>ASHRAE 90.1:</b> Economizers meet ASHRAE 90.1-2013/2016 damper leakage requirements, and meet 2016 Fault Detection and Diagnosis requirements when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex 6126 control systems.</li> <li><b>IECC:</b> Economizers meet IECC 2012, IECC 2015, and IECC 2018 for outside air, return air, and relief damper (when provided) leakage requirements, and when used with Carrier Comfortlink, RTU Open, System Vu, or I/O Flex control systems meet IECC 2015 and IECC 2018 for Fault Detection and Diagnostic requirements. Note: IECC 2015 and IECC 2018 requires differential return air sensor, which must be ordered separately.</li> <li><b>AMCA:</b> Outside air and return air (volume) dampers are AMCA Class 1A rated at 1" w.g. Refer to MicroMetl NS2 catalog sheet on web site for details. Relief air dampers (when provided) are also AMCA rated. Refer to GR1 series catalog sheet on web site for details.</li> </ol>			
<p><b><u>Features:</u></b></p> <ul style="list-style-type: none"> <li>For single or 2 speed indoor fan units. Other control options available.</li> <li>Gear driven design for trouble-free operation, eliminating slippage and binding associated with standard linkage.</li> <li>Includes assembled rainhood with aluminum water entrainment filters in the outside air section.</li> <li>Rainhood is sloped for water run-off.</li> <li>Built-in barometric relief damper provided. Power exhaust options available.</li> <li>All harnesses and plugs needed are provided.</li> <li>Uses standard factory filter access door shipped with HVAC unit.</li> <li>If factory hinged access door option is installed on unit, an additional kit is required to seal hinged door properly. <ul style="list-style-type: none"> <li>OEM part no. CRPECONV003A00 or MicroMetl part number 0640-0100-HDANGL</li> </ul> </li> </ul>			
<p><b><u>Notes:</u></b></p> <ol style="list-style-type: none"> <li>Control systems include DDC actuator, and some models include 500 OHM resistor and outside air temperature sensor.</li> <li>Differential return air sensor if required can be ordered from OEM unit factory, and is field installed in return duct.</li> <li>ASHRAE, IECC, and Title 24 require the economizer controller be capable of reporting faults to a fault management application accessible by day-to-day operating or service personnel, or annunciated locally on zone thermostats or in some codes other devices are acceptable. Refer to applicable code requirements and to DDC controller for options.</li> </ol>			
<p>This Document Is The Property Of MicroMetl Corporation And Is Delivered Upon The Express Condition That The Contents Will Not Be Disclosed Or Used Without MicroMetl's Written Consent. MicroMetl Reserves The Right To Discontinue, Or Change At Any Time, Specifications &amp; Designs Without Any Notice Incurring Obligations.</p>		<p>Master Revision 0001A</p> <p>Page Revision 0001A</p>	



MicroMetl Corporation certifies that the models GR1 and NS2 shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with requirements of the AMCA Certified Ratings Programs. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.



# SUBMITTAL

# MicroMetl

Please Fill Out For All Instances

SRT12, SRT34, AND SRT05 CURBS

PART NUMBER:

PITCH

ILLUSTRATION

DATE: 06/2017

SUBMITTED TO:

COMPANY:

DRAWN BY: NB

JOB NAME:

WEIGHT:

NOTES: PLEASE FILL IN NOTES BELOW

FOR KNOCK DOWN CURBS THE DECK PANS CAN BE ARRANGED IN EITHER CONFIGURATION FOR THE GIVEN PITCH DIRECTION (LONG OR SHORT).

ILLUSTRATION #1 (SHORT DIRECTION) IS EQUIVALENT TO ILLUSTRATION A OR B.  
ILLUSTRATION #2 (LONG DIRECTION) IS EQUIVALENT TO ILLUSTRATION C OR D.

## NOTES:

\* CURBS SHOWN FACTORY ASSEMBLED.  
KNOCK DOWN CURBS REQUIRE ASSEMBLY.

\* WHEN ORDERING KNOCK DOWN CURBS  
PLEASE SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION #1 (SHORT DIRECTION) OR  
- ILLUSTRATION #2 (LONG DIRECTION)

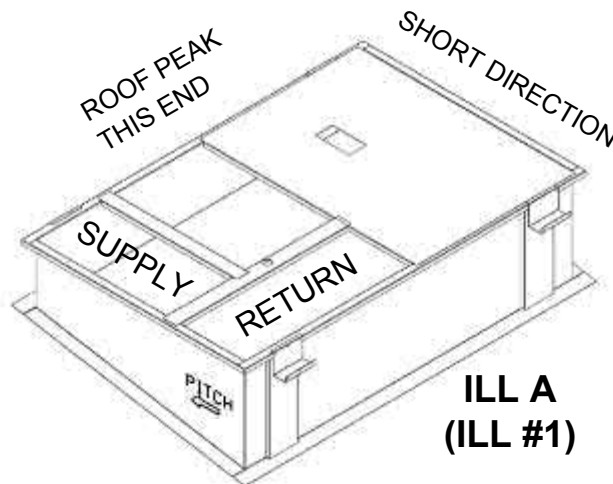
\* WHEN ORDERING WELDED CURBS PLEASE  
SPECIFY ONE OF THE FOLLOWING:  
- ILLUSTRATION A (SHORT DIRECTION)  
- ILLUSTRATION B (SHORT DIRECTION)  
- ILLUSTRATION C (LONG DIRECTION) OR  
- ILLUSTRATION D (LONG DIRECTION)

\* PLEASE DESIGNATE THE SLOPE OF THE  
ROOF BELOW.

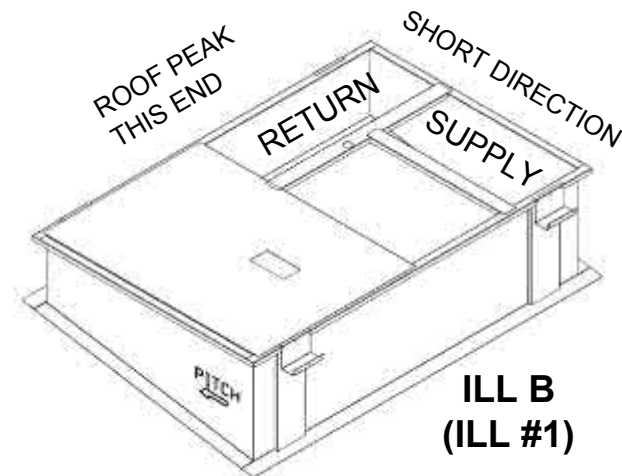
\* CONTACT MICROMETL FOR PRICING.  
PHONE NUMBER: (800) 884-4662

ILLUSTRATION # B

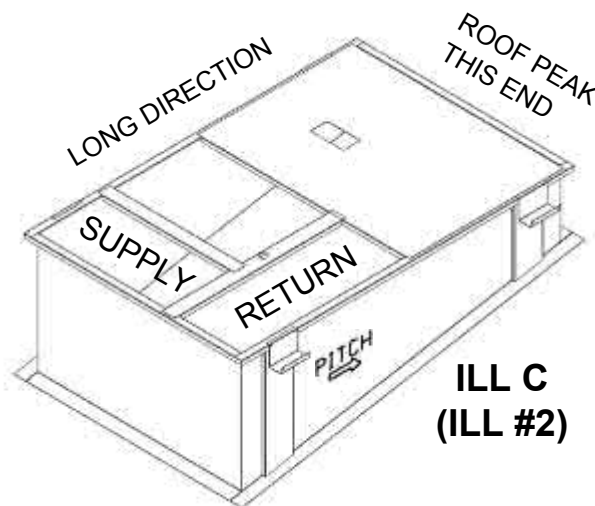
SLOPE OF ROOF 1/2" IN 12" 16" Tall



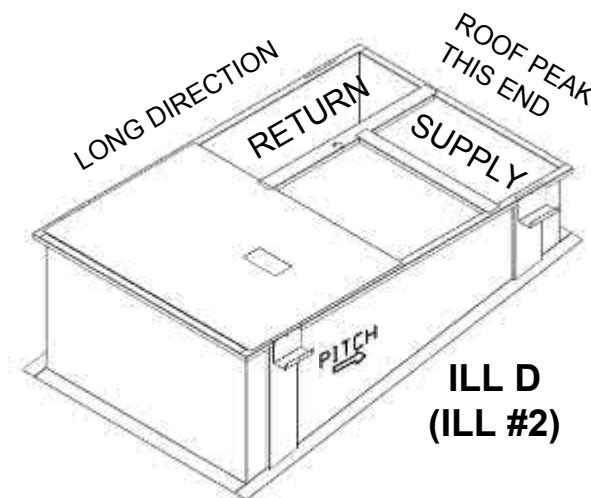
ILL A  
(ILL #1)



ILL B  
(ILL #1)



ILL C  
(ILL #2)



ILL D  
(ILL #2)

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MICROMETL CORPORATION \* 3035 N. SHADELAND AVE., SUITE 300 \* INDIANAPOLIS, IN 46226 \* 1-800-662-4822 \*\*\* MICROMETL WEST \* 202 SOUTH 18TH STREET \* SPARKS, NV \* 1-800-884-4662



VRoom Select v2.0.430.0

**Project Name:** BCSD HVAC Equipment  
**Project Number:**  
**VRoom Job Created:** 07/05/2023  
**VRoom Job Last Updated:** 7/5/2023 1:23:36 PM  
**VRoom Job Revision:**  
**Originator:**  
**Project Address:**



**Design Engineering Firm**

**Installing Contractor**

**Project Phase:**  
**Building Project Type:** Airports and Transportation  
**Elevation (ft):** 00.0  
**Notes:**

## Equipment List

Equipment Summary

Type	Description	Model	Qty	Tags
Outdoor Units	Ductless Series Outdoor Unit	38MARBQ12AA3	3	HP-8, HP-9, HP-13
	Ductless Series Outdoor Unit	38MARBQ18AA3	1	HP-10
	1-Phase Heat Pump Series Outdoor Unit	38VMB036HDS3-1	1	HP-11
	Ductless Series Outdoor Unit	38MBRBQ36AA3	1	HP-12
Indoor Units	4-Way Cassette Type Indoor Unit	40MBCQ12---3	1	HP-8
	High Wall Type Indoor Unit	40MAHBQ12XA3	1	HP-9
	4-Way Cassette Type Indoor Unit	40MBCQ18---3	1	HP-10
	Compact 4-Way Cassette Indoor Unit	40VMC012A--3	2	HP-11, HP-11
	Console Type Indoor Unit	40MBFQ36---3	1	HP-12
	Ducted Type Indoor Unit	40MBDQ12---3	1	HP-13
Branch Units	Y-Joint	40VM900031	1	
Controls	24V Interface	KSAIC0301230	5	
	24V Interface	40VM900008	2	
IU Accessories	Grille / Panel For Compact 4-Way Cassette	40VMC001----	2	

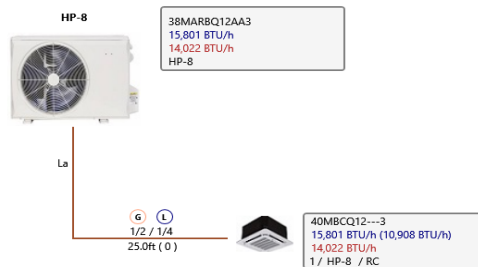
## Refrigerant Piping Summary

Pipe Size (inch)	Total Length (feet)	Number of Bends
1/2	150	0
1/4	150	0
3/8	50	0
5/8	50	0

## HP-8

### Piping Diagram Image (Design View)

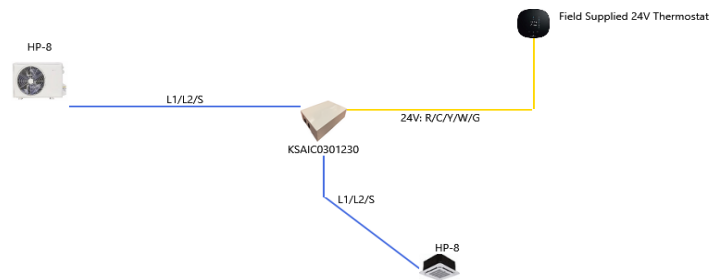
Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.





## HP-8

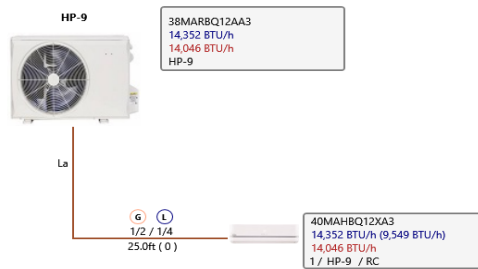
### System Control Wiring Image (Wiring View)



## HP-9

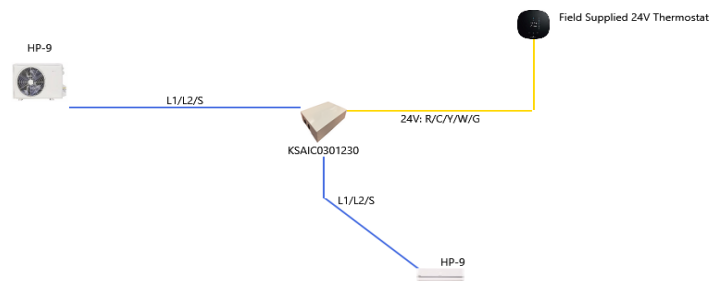
### Piping Diagram Image (Design View)

Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.



## HP-9

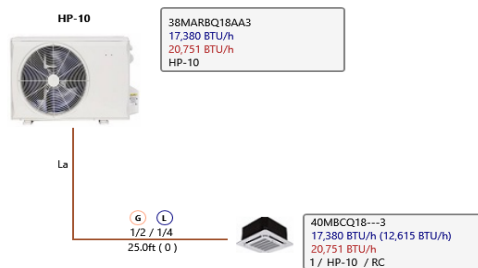
### System Control Wiring Image (Wiring View)



## HP-10

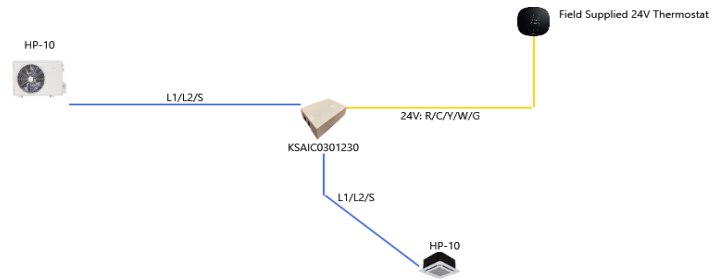
Piping Diagram Image (Design View)

Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.



## HP-10

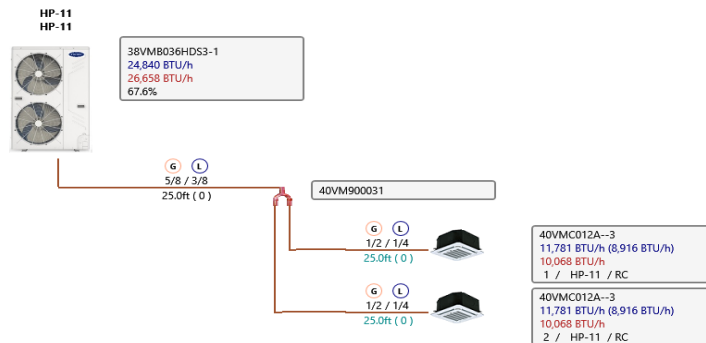
### System Control Wiring Image (Wiring View)



## HP-11

### Piping Diagram Image (Design View)

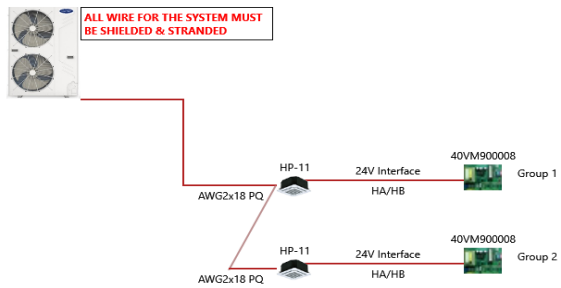
Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.





## HP-11

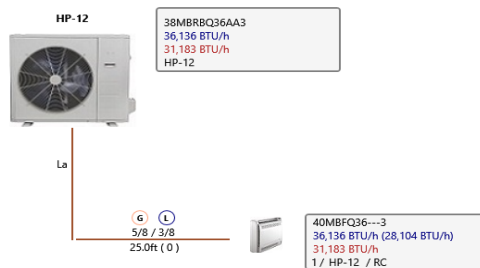
### System Control Wiring Image (Wiring View)



## HP-12

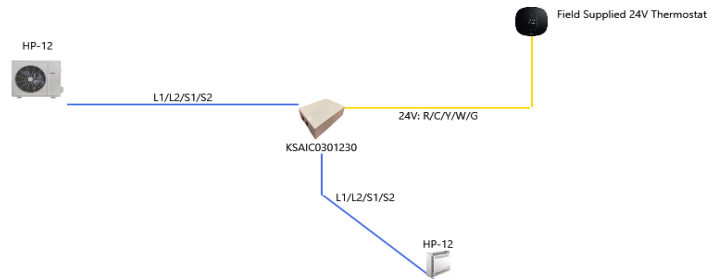
### Piping Diagram Image (Design View)

Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.



## HP-12

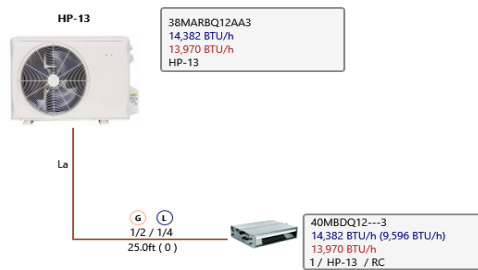
### System Control Wiring Image (Wiring View)



## HP-13

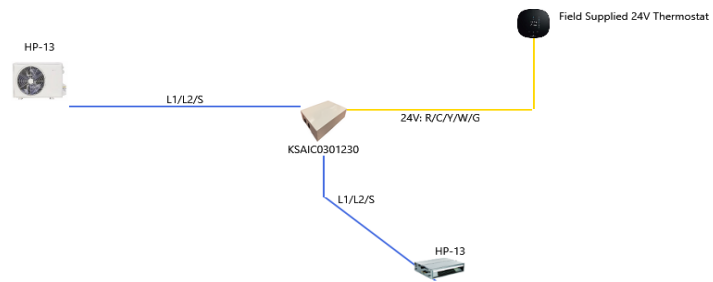
### Piping Diagram Image (Design View)

Note: Installing Contractor must verify actual piping lengths and update selection file as necessary to check for errors and calculate correct additional refrigerant charge.



## HP-13

### System Control Wiring Image (Wiring View)



OUTDOOR UNIT SCHEDULE

VRoom Select v2.0.430.0

System Tag		HP-8	HP-9	HP-10	HP-11	HP-12	HP-13
Tag Reference		HP-8	HP-9	HP-10	HP-11	HP-12	HP-13
General Data	Make	Carrier	Carrier	Carrier	Carrier	Carrier	Carrier
	Model Number	38MARBQ12AA3	38MARBQ12AA3	38MARBQ18AA3	38VMB036HDS3-1	38MBRBQ36AA3	38MARBQ12AA3
	Modules						
	Nominal Cooling Capacity (BTU/h)	12,000.0	12,000.0	18,000.0	36,000.0	36,000.0	12,000.0
	Nominal Heating Capacity (BTU/h)	12,000.0	12,000.0	18,000.0	40,000.0	39,000.0	12,000.0
	System Connected Capacity	N/A	N/A	N/A	67.6%	N/A	N/A
	Main Refrigerant Pipe Dims (inch)	1/2 / 1/4	1/2 / 1/4	1/2 / 1/4	3/8 / 5/8	5/8 / 3/8	1/2 / 1/4
	Preliminary Added Field Charge (lb)	0.0	0.0	0.0	2.0	0.0	0.0
	Sound Pressure (dBA)	56	56	59	58.7	61.7	56
	Unit Weight (lbs)	73.6	73.6	101.0	220.0	155.4	73.6
Design Conditions	Project Design Cooling Outdoor Temp DB (°F)	96.0	96.0	96.0	96.0	96.0	96.0
	Project Design Heating Outdoor Temp WB[or DB] (°F)	[18.0]	[18.0]	[18.0]	16.5	[18.0]	[18.0]
Performance Data	Corrected Cooling Total Capacity (BTU/h)	15,801.2	14,352.0	17,380.1	23,562.5	36,135.8	14,382.0
	Corrected Heating Capacity (BTU/h)	14,021.5	14,046.1	20,751.0	20,135.1	31,183.1	13,969.9
	Capacity Maintenance (%)	94.0	100.0	94.0	65.0		97.0
Electrical Data	Voltage / Phase	208/230V / 1-phase 4-wire	208/230V / 1-phase 4-wire	208/230V / 1-phase 4-wire	208/230V / 1-phase 3-wire	208/230V / 1-phase 4-wire	208/230V / 1-phase 4-wire
	MCA	15	15	16	36	30	15
	MOCP	15	15	25	75	45	15
	Recommended Fuse Size (RFS)	15	15	20	40	30	15
Efficiency Data	Cooling Efficiency IEER/EER	N/A	N/A	N/A	N/A	N/A	N/A
	SEER2/EER2	22.3/12.7	25.5/14	20/12.5	18.25/11.9	19/8.5	19.5/11.7
	SCHE[or HSPF2]	[10.2]	[10.4]	[9.5]	[9.15]	[9]	[10]
	Heating COP @ 47°F[or @5°F]	/[1.89]	/[1.80]	/[1.75]	3.40/[2.00]		/[1.96]
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8

Notes & Options:

- Nominal cooling capacities are based on indoor air temperature of 80°F DB / 67°F WB, outdoor air temperature of 95°F (DB)
- Nominal heating capacities are based on indoor air temperature of 70°F DB, outdoor air temperature of 47°F DB / 43°F WB
- VRF Efficiency values for EER, IEER, and COP are for mixed ducted and non-ducted indoor units based on AHRI 1230 test method.
- Ductless and Single-Phase VRF Heat Pump Efficiency values for EER, SEER, and HSPF are for mixed ducted and non-ducted indoor units based on AHRI 210/240 test method.
- Preliminary Additional Field Charge is calculated based on software inputs; Final Additional Field Charge must be calculated based on final "as-built" piping dimensions.
- Project design elevation is 0.0 feet
- COP2 as per M1 Rating for ductless and Single phase Heat Pump
- N/A = Not Applicable



# INDOOR UNIT SCHEDULE

VRoom Select v2.0.430.0

System Tag		HP-8	HP-9	HP-10	HP-11	HP-11	HP-12	HP-13
Tag Reference		HP-8	HP-9	HP-10	HP-11	HP-11	HP-12	HP-13
General Data	Room Name							
	Address							
	Make	Carrier	Carrier	Carrier	Carrier	Carrier	Carrier	Carrier
	Model	40MBCQ12---3	40MAHBQ12XA3	40MBCQ18---3	40VMC012A--3	40VMC012A--3	40MBFQ36---3	40MBDQ12---3
	Type	4-Way Cassette Type	High Wall Type	4-Way Cassette Type	Compact 4-Way Cassette	Compact 4-Way Cassette	Console Type	Ducted Type
	Nominal Cooling Capacity (BTU/h)	12,000.0	12,000.0	18,000.0	12,170.0	12,170.0	36,000.0	12,000.0
	Nominal Heating Capacity (BTU/h)	12,000.0	12,000.0	18,000.0	13,000.0	13,000.0	38,000.0	12,000.0
Design Conditions	Refrig Pipe Dimensions (inch)	1/2 / 1/4	1/2 / 1/4	1/2 / 1/4	1/4 / 1/2	1/4 / 1/2	5/8 / 3/8	1/2 / 1/4
	Project Cooling Design Entering Temp DB/WB (°F)	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0
	Project Heating Design Entering Temp DB (°F)	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Performance Data	Cooling Total Capacity (BTU/h)	15,801.2	14,352.0	17,380.1	11,781.3	11,781.3	36,135.8	14,382.0
	Cooling Sensible Capacity (BTU/h)	10,907.6	9,549.2	12,615.2	8,915.9	8,915.9	28,103.7	9,596.3
	Heating Capacity (BTU/h)	14,021.5	14,046.1	20,751.0	10,067.6	10,067.6	31,183.1	13,969.9
	Estimated Cooling Coil LAT (°F)	54.2	53.1	51.6	56.5	56.5	54.4	57.2
	Estimated Heating Coil LAT (°F)	102.5	108.9	115.8	96.0	96.0	97.9	102.6
Electrical Data	Voltage / Phase	208/230V / 1-phase	208/230V / 1-phase	208/230V / 1-phase	208-230V / 1-phase	208-230V / 1-phase	208/230V / 1-phase	208/230V / 1-phase
	MCA / MOCP	Powered by Outdoor	Powered by Outdoor	Powered by Outdoor	.53 / 15	.53 / 15	Powered by Outdoor	Powered by Outdoor
Fan Data	Selected Fan Speed	High	High	High	High	High	High	High
	Rated Airflow at Selected Fan Speed (cfm)	400	335	420	359	359	1037	397
	Max Fan ESP Setting (IN WG)	0	0	0	0.04	0.04	0	0.2
	Sound Pressure Per Fan Speed (H/M/L) (dBA)	27/34/42	30/32/37/47	33/40/46.5	45.5 / 42.3 / 38.1	45.5 / 42.3 / 38.1	43/49/54	35/37/39
Remote Controller	Zone Remote Controller 1	KSAIC0301230	KSAIC0301230	KSAIC0301230	40VM900008	40VM900008	KSAIC0301230	KSAIC0301230
	Zone Remote Controller 2							
	ERV (DI/DO) Interface Model Number							
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6

## Notes & Options:

- Nominal cooling capacities are based on indoor air temperature of 80°F DB / 67°F WB, outdoor air temperature of 95°F (DB)
- Nominal heating capacities are based on indoor air temperature of 70°F DB, outdoor air temperature of 47°F DB / 43°F WB
- LATs estimated using formula for sensible capacity = (1.08 Btu/(hr cfm °F)) x cfm x deltaT
- All ductless FMA/FMC/FMU or FV4 series indoor units require a piping adaptor kit (Model #s: 331831-701 or 40MD000003)
- Warning: Accessories are filtered by system and unit type. Check product data to confirm accessory compatibility with voltage, product tier, etc.
- Warning: One or more outside air indoor units in this system have cooling or heating temperatures that are out of range.
- Nominal cooling capacities are based on indoor air temperature of 80°F DB / 67°F WB, outdoor air temperature of 95°F (DB)

## Outdoor Unit Single Zone Heat Pump Ductless System

## 38MARB Submittal Selection

HP-8

Carrier

Turn to the experts

Job Data: Location: Carrier #: Tag #: Date: 

Outdoor Model #	Size
38MARBQ12AA1	12K - 115V
38MARBQ06AA3	6K
38MARBQ09AA3	9K
38MARBQ12AA3	12K - 208/230V
38MARBQ18AA3	18K
38MARBQ24AA3	24K
38MARBQ30AA3	30K
38MARBQ36AA3	36K
38MARBQ36AB3	36K - AHU Only

Combination Selection	
Outdoor Unit	12K - 208/230V
Indoor Unit Category	Cassette

## STANDARD FEATURES

- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Quiet operation
- Anti-corrosive fin coating

## LIMITED WARRANTY\*

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications.

See warranty for full details.

NOTE: Images for illustration purposes only. Actual models may be slightly different.

## Specifications

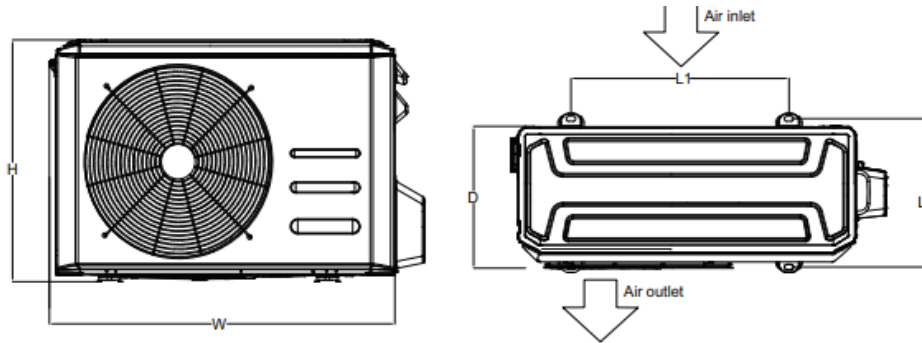
Outdoor - Heat Pump										
System	Outdoor Size					12K - 208/230V				
Electrical	Voltage, Phase, Cycle	V/Ph/Hz				208/230-1-60				
	MCA	A.				15				
	Recommended Fuse Size	A.				15				
	MOCP - Fuse Rating	A.				15				
	Short Circuit Current Rating (SCCR)	kA				2.4				
Operating Range	Cooling Outdoor DB Min - Max	°F(°C)				-22-122 (-30-50)				
	Heating Outdoor DB Min - Max	°F(°C)				-22-86 (-30-30)				
Piping	Total Piping Length	ft (m)				82 (25)				
	Piping Lift	ft (m)				32 (10)				
	Pipe Connection Size - Liquid	in (mm)				1/4 (6.35)				
	Pipe Connection Size - Suction	in (mm)				1/2 (12.7)				
Refrigerant	Refrigerant Type					R410A				
	Charge	lbs (kg)				2.6 (1.18)				
	Add'l Refrigerant (between Std & Max Piping Lngths)	Oz/ft (g/m)				0.161 (15)				
	Metering Device					EEV				
Outdoor Coil	Face Area	Sq. Ft.				4.67				
	No. Rows					2				
	Fins per inch					20				
Compressor	Circuits					4				
	Type					Rotary Inverter				
	Model					KTN110D42UFZ				
	Oil Type					VG74				
	Oil Charge	Fl. Oz.				11.84				
Airflow & Sound	Rated Current	RLA				8.5				
	Airflow	CFM				1323.53				
	Sound Pressure	dB(A)				56				

\* Condensing unit above or below indoor unit

## Performance

Outdoor Size		12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
High Wall	Indoor Model									
	Energy Star									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								

	Outdoor Size	12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
Cassette	Indoor Model				12K - 208/230V					
	Energy Star				YES					
	Cooling System Tons				1					
	Cooling Rated Capacity	Btu/h			12000					
	Cooling Cap. Range Min - Max	Btu/h			3,000~13,700					
	SEER				21.5					
	EER				12.7					
	Heating Rated Capacity (47°F)	Btu/h			12000					
	Heating Rated Capacity (17°F)	Btu/h			7900					
	Heating Maximum Capacity (17°F)	Btu/h			14000					
	Heating Maximum Capacity (5°F)	Btu/h			11500					
	Heating Cap. Range Min - Max	Btu/h			2,000~15,300					
	HSPF				10.6					
	COP (47°F)	W/W			3.22					
	COP (17°F)	W/W			2.2					
	COP (5°F)	W/W			1.86					
Ducted	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Mix Match Ducted	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Console	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Air Handler	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								



Size					12K - 208/230V					
Width (W)	in (mm)				31.69 (805)					
Height (H)	in (mm)				21.81 (554)					
Depth (D)	in (mm)				12.99 (330)					
L1	in (mm)				20.1 (511)					
L2	in (mm)				12.5 (317.2)					
Operating Weight	lbs (kg)				73.63 (33.4)					
Shipping Width	in (mm)				36.02 (915)					
Shipping Height	in (mm)				24.21 (615)					
Shipping Depth	in (mm)				14.57 (370)					
Shipping Weight	lbs (kg)				79.37 (36)					



# Cassette Heat Pump Ductless System

HP-8

Indoor Model: 40MBCQ12---3

## Submittal Data

Job Data:

Location:

Buyer:

Buyer P.O. #:

Carrier #:

Unit Number:

Model Number:

Performance Data Certified By:

Date:



### STANDARD FEATURES

Modes: Cool, Heat, Dry, Fan, Auto  
Louver Control (Fixed or Swing)  
Outside Air Intake  
Built-in condensate Lift pump  
Follow Me (senses temperature at handheld remote)  
Heating Setback (46° F Heating Mode)  
Quiet indoor operation  
Aluminum Golden Hydrophilic pre-coated fins

### Controls:

Wireless Remote Controller included with indoor unit  
Optional Wired Remote Controller (Timer Function)  
Optional Wired Remote Controller KSACN0501AAA (7 Day programmable)

### LIMITED WARRANTY\*

• 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

System	Size		12
	Indoor Model		40MBCQ12---3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply Indoor unit powered by outdoor unit		
	MCA	A.	0.2
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Optional
Operating Range	Cooling Indoor DB Min -Max	°F(°C)	63~90 (17~32)
	Heating Indoor DB Min -Max	°F(°C)	32~86 (0~30)
Piping	Pipe Connection Size - Liquid	in (mm)	1/4 (6.35)
	Pipe Connection Size - Suction	in (mm)	1/2 (12.7)

Indoor Coil	Face Area	Sq. Ft.	3.10
	No. Rows		2
	Fins per inch		19
	Circuits		4
Indoor	Body Unit Width	in (mm)	22.44 (570)
	Body Unit Height	in (mm)	10.24 (260)
	Body Unit Depth	in (mm)	22.44 (570)
	Body Net Weight	lbs (kg)	35.27 (16)
	Panel Unit Width	in (mm)	25.47 (647)
	Panel Unit Height	in (mm)	1.97 (50)
	Panel Unit Depth	in (mm)	25.47 (647)
	Panel Net Weight	lbs (kg)	5.51 (2.5)
	Number of Fan Speeds		3
	Airflow (low to high)	CFM	280/340/400
	Sound Pressure (lowest to highest)	dB(A)	36/39/42
	Air throw Data	ft (m)	23 (7)
Indoor	Moisture removal	Pint/h (L/h)	2.88 (1.366)
	Field Drain Pipe Size O.D.	in (mm)	1 (25.4)

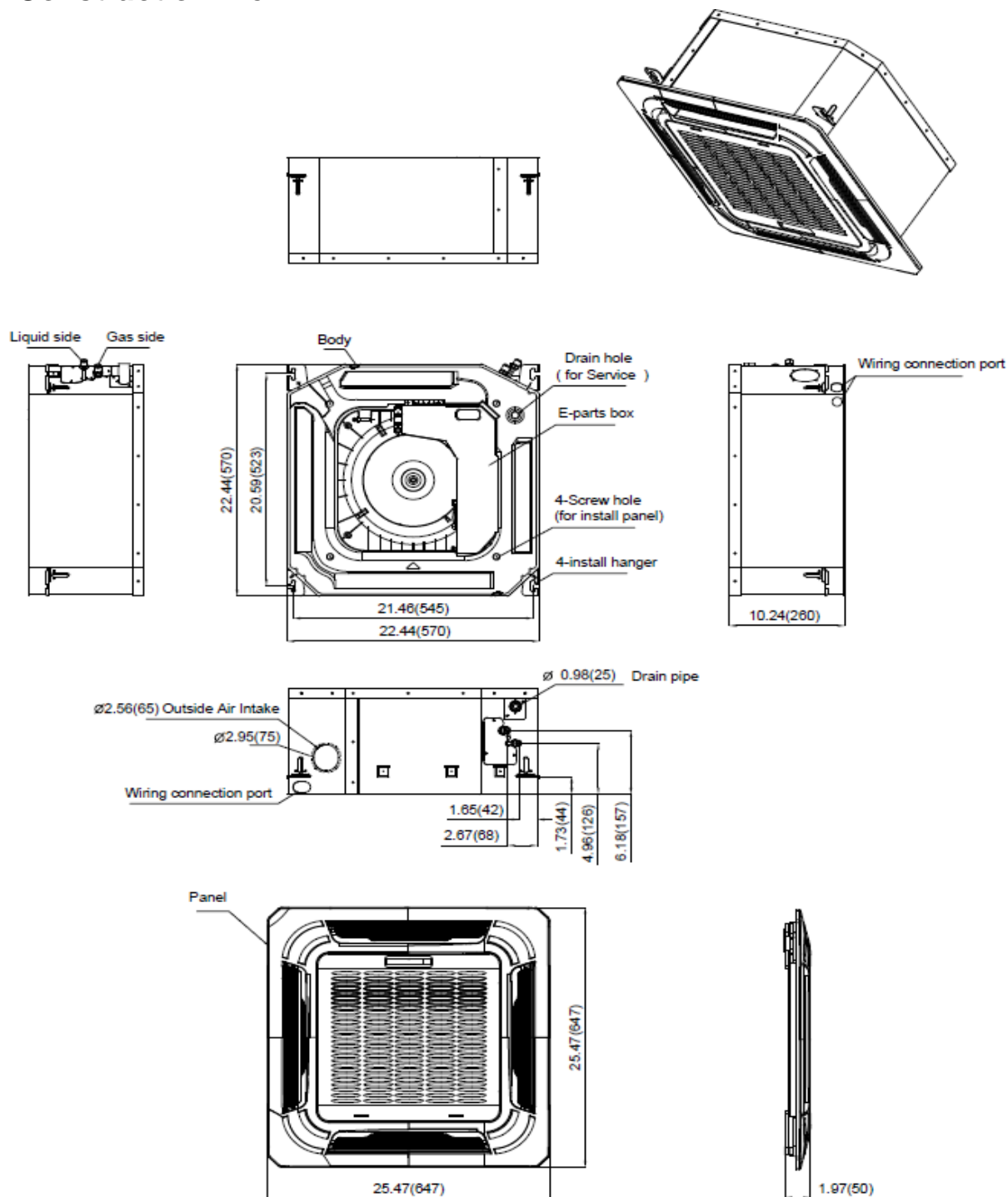
For Compatibility See Product Data

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.

## Accessories

KSACN0101AAA	Wired Remote Control with Timer Function
KSACN0501AAA	Wired Remote Control 7 day Programmable
KSAIF0401AAA	Wi-Fi™ Kit
KSAIC0101230	24V Interface Kit 208/230V
40MBCQ01XXX3	Grille/Ceiling panel
53DS-900---008	Insulated 25' Line Set - 1/4" x 1/2"

## Construction View





## 24V Interface Kit 2<sup>nd</sup> Generation Ductless Systems

HP-8

Model: KSAIC0301230 (208-230V)

# Submittal Data

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_

Buyer: \_\_\_\_\_ Buyer P.O. #: \_\_\_\_\_ Carrier #: \_\_\_\_\_

Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_

Performance Data Certified By: \_\_\_\_\_ Date: \_\_\_\_\_



The 24V INTERFACE KIT 2<sup>nd</sup> Generation is used to connect:

- A **SINGLE ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **MULTI-ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **SINGLE ZONE** Ductless Condensing Unit with an approved Fan Coil/Furnace/Cased Coil and a third party single stage conventional thermostat (sold separately) allowing up to 3 different fan speeds on the indoor unit.

### Features

- **AUTO Fan speed** on Single Zone and Multi-zone on Ductless applications
- **Up to 3 Fan speeds** on Single Zone Ductless Outdoor matched with Multi-family Fan Coils, Furnace/Cased Coils applications.
- One 24V INTERFACE KIT per indoor head
- Keeps the Inverter Compressor operating as a Variable Speed System
- Rated for outdoor and indoor mounting
- Dry mode contact for active dehumidification control
- Remote ON/OFF contact
- Auxiliary Heat control through the thermostat
- Diagnostic code display LEDs
- 208/230V Transformer Built-in

### Parts included

- 24V INTERFACE Control Box
- Installation manual
- Wall anchors
- Screws M4X20mm
- •16.4ft. (5m) Return Air Thermistor Assembly required and installed near or on the unit and on the air inlet side

### Accessories, Sold Separately

- ☐ 115V transformer RCD# 11203103000393, used only on ductless systems with 115V power.
- ☐ Piping Adaptor Kit RCD# 331831-701, used ONLY on Multifamily applications with the FMA4, FMC and FMU fan coils to facilitate piping installation when removing the TXV kit from the indoor unit

# Compatibility

The 24V INTERFACE KIT is compatible with most thermostats matched with the Ductless Systems listed below. Before installation, check the compatibility of your Ductless System. Professional installation is recommended.

Type of Indoor unit	Indoor Family Name	Single Zone Outdoor Family Name	Multi-zone Outdoor Family Name	208/230V
HIGH WALL	40MPHA	38MPRA	38MGR	All Sizes
	619PHA	38MPRA	38MGR	All Sizes
	DHMPHA	38MPRA	38MGR	All Sizes
	40MAQ	38MA*R	38MGR	All Sizes
	619P*B	38MA*R	38MGR	All Sizes
	DHMSHA	38MA*R	38MGR	All Sizes
	40MHH	38MHR	38MGR	All Sizes
CASSETTE	40MBCQ	38MA*R	38MGR	All Sizes
DUCTED	40MBDQ	38MA*R	38MGR	All Sizes Except size 58
CONSOLE	40MBFQ	38MA*R	38MGR	All Sizes Except sizes 12 and 58
VERTICAL FAN COIL	FMA4	38MA*R		Sizes 12 to 36
CASED HORIZONTAL FAN COIL	FMC4	38MA*R		Sizes 12 to 36
UNCASED HORIZONTAL FAN COIL	FMU4	38MA*R		Sizes 12 to 36

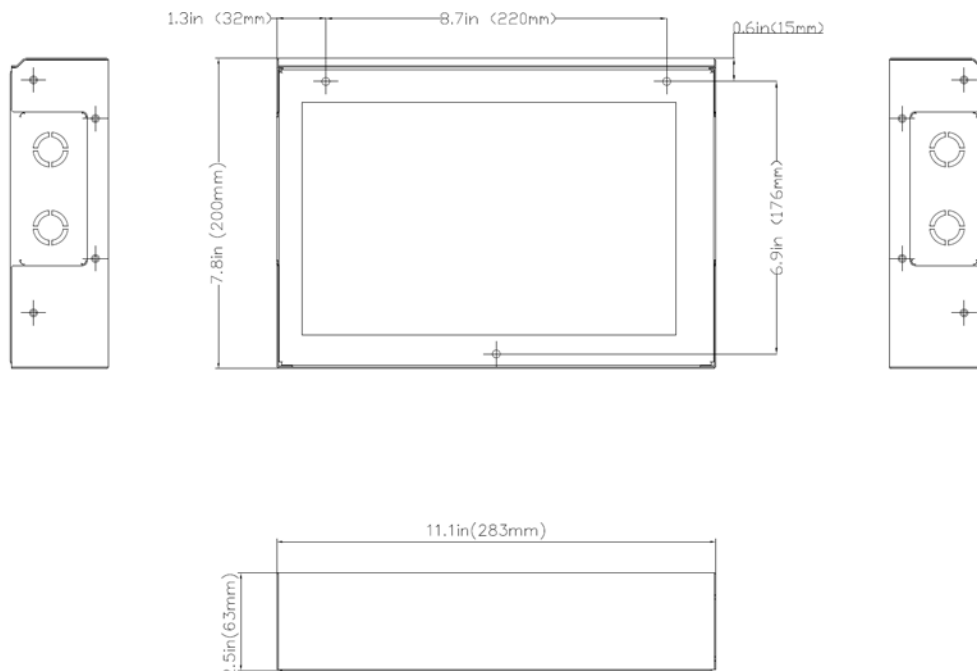
	Compatible
	Not Compatible

**Notes:** The Indoor unit requires an updated control board for compatibility with the 24V Interface Kit.  
 High Wall units starting with Serial # 4316V10001 are shipped with the compatible control board.  
 Ducted units starting with Serial # 4616V10001 are shipped with the compatible control board.  
 For other model numbers not shown on the table above, please contact your ductless representative.

\*Except size 58

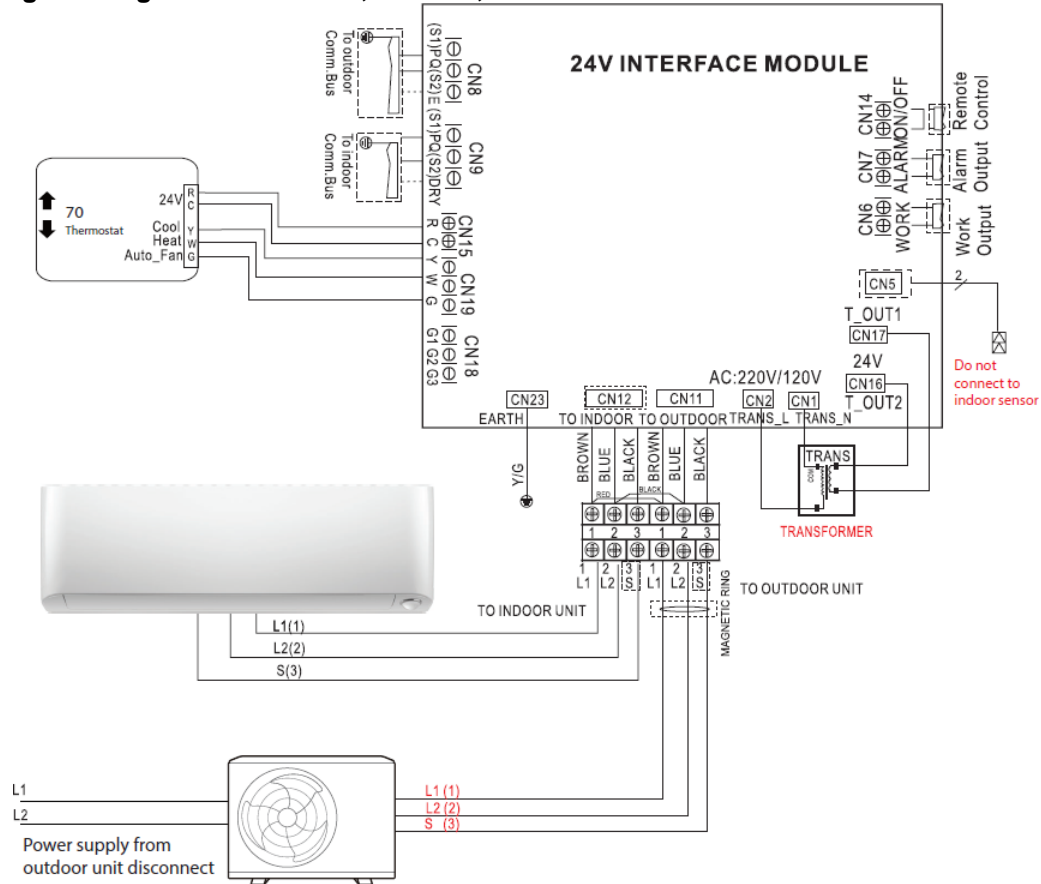
\*\*Except sizes 12 and 58

## Construction View

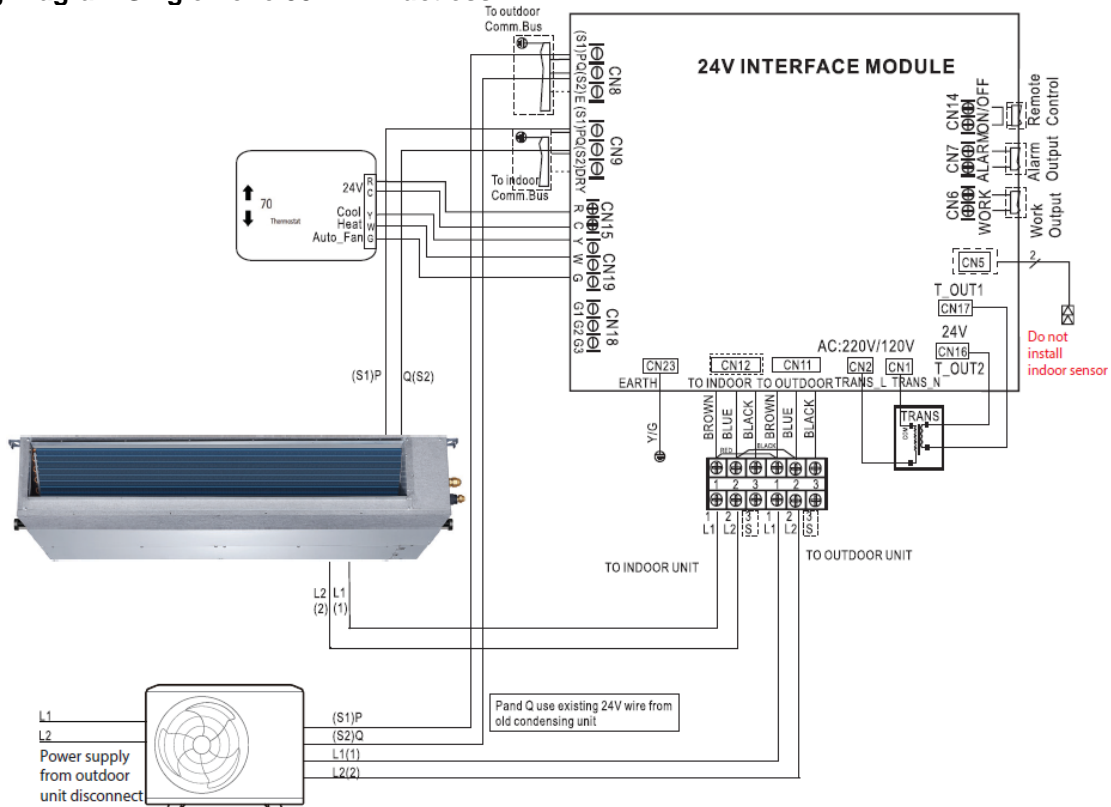


# Wiring Diagrams

## 1. Wiring Diagram Single Zone 38MPRA, 38MA\*R, 38MHR or Multi-zone 38MGR Ductless



## 2. Wiring Diagram Single Zone 38MBR Ductless





Outdoor Unit Single Zone Heat Pump Ductless System  
38MARB Submittal Selection

HP-9

Carrier

Turn to the experts

Job Data:

Location:

Carrier #:

Tag #:

Date:



Outdoor Model #	Size
38MARBQ12AA1	12K - 115V
38MARBQ06AA3	6K
38MARBQ09AA3	9K
38MARBQ12AA3	12K - 208/230V
38MARBQ18AA3	18K
38MARBQ24AA3	24K
38MARBQ30AA3	30K
38MARBQ36AA3	36K
38MARBQ36AB3	36K - AHU Only

Combination Selection	
Outdoor Unit	12K - 208/230V
Indoor Category	High Wall

**STANDARD FEATURES**

- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Quiet operation
- Anti-corrosive fin coating

**LIMITED WARRANTY\***

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years
  - \*For residential applications.
- See warranty for full details.

NOTE: Images for illustration purposes only. Actual models may be slightly different.

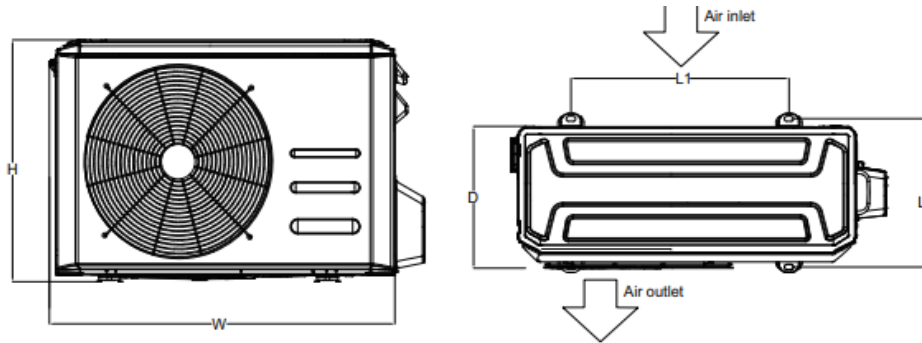
**Specifications**

Outdoor - Heat Pump										
System	Outdoor Size					12K - 208/230V				
	Voltage, Phase, Cycle	V/Ph/Hz				208/230-1-60				
	MCA	A.				15				
	Recommended Fuse Size	A.				15				
	MOCP - Fuse Rating	A.				15				
Operating Range	Short Circuit Current Rating (SCCR)	kA				2.4				
	Cooling Outdoor DB Min - Max	°F(°C)				-22-122 (-30-50)				
	Heating Outdoor DB Min - Max	°F(°C)				-22-86 (-30-30)				
	Total Piping Length	ft (m)				82 (25)				
	Piping Lift	ft (m)				32 (10)				
Piping	Pipe Connection Size - Liquid	in (mm)				1/4 (6.35)				
	Pipe Connection Size - Suction	in (mm)				1/2 (12.7)				
	Refrigerant Type					R410A				
	Charge	lbs (kg)				2.6 (1.18)				
	Add'l Refrigerant (between Std & Max Piping Lngths)	Oz/ft (g/m)				0.161 (15)				
Refrigerant	Metering Device					EEV				
	Face Area	Sq. Ft.				4.67				
	No. Rows					2				
	Fins per inch					20				
	Circuits					4				
Outdoor Coil	Type					Rotary Inverter				
	Model					KTN110D42UFZ				
	Oil Type					VG74				
	Oil Charge	Fl. Oz.				11.84				
	Rated Current	RLA				8.5				
Compressor	Airflow	CFM				1323.53				
	Sound Pressure	dB(A)				56				
Airflow & Sound										

\* Condensing unit above or below indoor unit

**Performance**

Outdoor Size		12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
High Wall	Indoor Model				12K - 208/230V					
	Energy Star				YES					
	Cooling Rated Capacity	Btu/h			12000					
	Cooling Cap. Range Min - Max	Btu/h			3,300-14,300					
	SEER				25.5					
	EER				14					
	Heating Rated Capacity (47°F)	Btu/h			12000					
	Heating Rated Capacity (17°F)	Btu/h			7500					
	Heating Maximum Capacity (17°F)	Btu/h			12000					
	Heating Maximum Capacity (5°F)	Btu/h			11650					
	Heating Cap. Range Min - Max	Btu/h			5,000-15,300					
	HSPF				13					
	COP (47°F)	W/W			3.81					
	COP (17°F)	W/W			3					
	COP (5°F)	W/W			1.8					



Size					12K - 208/230V					
Width (W)	in (mm)				31.69 (805)					
Height (H)	in (mm)				21.81 (554)					
Depth (D)	in (mm)				12.99 (330)					
L1	in (mm)				20.1 (511)					
L2	in (mm)				12.5 (317.2)					
Operating Weight	lbs (kg)				73.63 (33.4)					
Shipping Width	in (mm)				36.02 (915)					
Shipping Height	in (mm)				24.21 (615)					
Shipping Depth	in (mm)				14.57 (370)					
Shipping Weight	lbs (kg)				79.37 (36)					





# High Wall Heat Pump Ductless System

HP-9



Indoor Model: 40MAHBQ12XA3

## Submittal Data

Job Data:  Location:

Buyer:  Buyer P.O. #:  Carrier #:

Unit Number:  Model Number:

Performance Data Certified By:  Date:



Performance  
SERIES

### STANDARD FEATURES

- Modes: Cool, Heat, Dry, Fan, Auto
- Turbo Mode
- Four fan speeds
- Sleep Mode
- Relative Humidity Sensor
- Intelligent Eye (Occupancy Sensor)
- ECO Mode
- Up-Down Louver control (fixed or swing)
- Follow Me (senses temperature at handheld remote)
- Heating Setback (46° F Heating Mode)
- Quiet indoor operation
- Aluminum Golden Hydrophilic pre-coated fins

### CONTROLS:

- Wireless Remote Controller included with indoor unit

### LIMITED WARRANTY\*

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

System	Size		12
	Indoor Model		40MAHBQ12XA3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply	Indoor unit powered by outdoor unit	
	MCA	A.	0.3125
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Optional
Operating Range	Cooling Indoor DB Min -Max	°F(°C)	63~90 (17~32)
	Heating Indoor DB Min -Max	°F(°C)	32~86 (0~30)
Piping	Pipe Connection Size - Liquid	in (mm)	1/4 (6.35)
	Pipe Connection Size - Suction	in (mm)	1/2 (12.7)

Indoor Coil	Face Area	Sq. Ft.	2.15
	No. Rows		2
	Fins per inch		20
	Circuits		3
Indoor	Unit Width	in (mm)	31.3 (795)
	Unit Height	in (mm)	11.61 (295)
	Unit Depth	in (mm)	8.86 (225)
	Net Weight	lbs (kg)	22.93 (10.4)
	Number of Fan Speeds		4
	Airflow (lowest to highest)	CFM	176/229/335/382
	Sound Pressure (lowest to highest)	dB(A)	30/32/37/47
	Air throw Data	ft (m)	26.2 (8.0)
	Moisture removal	Pint/h (L/h)	2.333 (1.11)
	Field Drain Pipe Size O.D.	in (mm)	0.625 (16)

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.

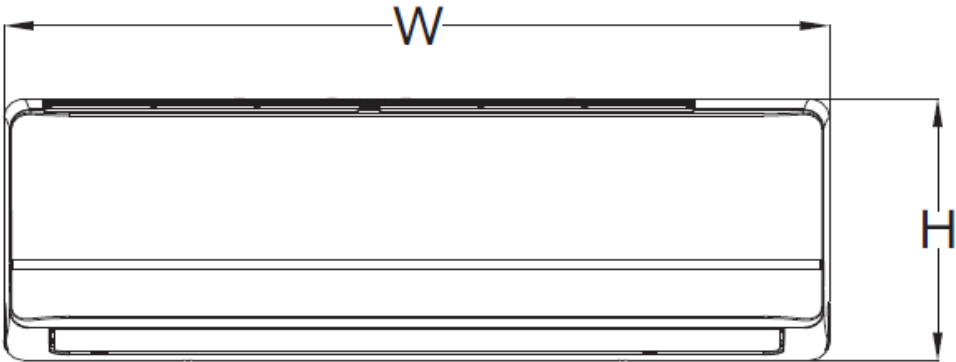
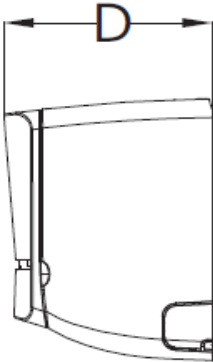
For Compatibility See Product Data

Accessories

KSACN0801AAA	Wired Remote Control 7 Day Programmable
KSACN0101AAA	Wired Remote Control with Timer Function
KSAIF0601AAA	Wi-Fi™ Kit High Wall Mid-Tier
KSAIC0301230	24V Interface Kit 230V

Construction View

Indoor Model: 40MAHBQ12XA3



Unit Width	in (mm)	31.3 (795)
Unit Height	in (mm)	11.61 (295)
Unit Depth	in (mm)	8.86 (225)
Net Weight	lbs (kg)	22.93 (10.4)



## 24V Interface Kit 2<sup>nd</sup> Generation Ductless Systems

HP-9

Model: KSAIC0301230 (208-230V)

# Submittal Data

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_

Buyer: \_\_\_\_\_ Buyer P.O. #: \_\_\_\_\_ Carrier #: \_\_\_\_\_

Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_

Performance Data Certified By: \_\_\_\_\_ Date: \_\_\_\_\_



The 24V INTERFACE KIT 2<sup>nd</sup> Generation is used to connect:

- A **SINGLE ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **MULTI-ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **SINGLE ZONE** Ductless Condensing Unit with an approved Fan Coil/Furnace/Cased Coil and a third party single stage conventional thermostat (sold separately) allowing up to 3 different fan speeds on the indoor unit.

### Features

- **AUTO Fan speed** on Single Zone and Multi-zone on Ductless applications
- **Up to 3 Fan speeds** on Single Zone Ductless Outdoor matched with Multi-family Fan Coils, Furnace/Cased Coils applications.
- One 24V INTERFACE KIT per indoor head
- Keeps the Inverter Compressor operating as a Variable Speed System
- Rated for outdoor and indoor mounting
- Dry mode contact for active dehumidification control
- Remote ON/OFF contact
- Auxiliary Heat control through the thermostat
- Diagnostic code display LEDs
- 208/230V Transformer Built-in

### Parts included

- 24V INTERFACE Control Box
- Installation manual
- Wall anchors
- Screws M4X20mm
- •16.4ft. (5m) Return Air Thermistor Assembly required and installed near or on the unit and on the air inlet side

### Accessories, Sold Separately

- ☐ 115V transformer RCD# 11203103000393, used only on ductless systems with 115V power.
- ☐ Piping Adaptor Kit RCD# 331831-701, used ONLY on Multifamily applications with the FMA4, FMC and FMU fan coils to facilitate piping installation when removing the TXV kit from the indoor unit

# Compatibility

The 24V INTERFACE KIT is compatible with most thermostats matched with the Ductless Systems listed below. Before installation, check the compatibility of your Ductless System. Professional installation is recommended.

Type of Indoor unit	Indoor Family Name	Single Zone Outdoor Family Name	Multi-zone Outdoor Family Name	208/230V
HIGH WALL	40MPHA	38MPRA	38MGR	All Sizes
	619PHA	38MPRA	38MGR	All Sizes
	DHMPHA	38MPRA	38MGR	All Sizes
	40MAQ	38MA*R	38MGR	All Sizes
	619P*B	38MA*R	38MGR	All Sizes
	DHMSHA	38MA*R	38MGR	All Sizes
	40MHH	38MHR	38MGR	All Sizes
CASSETTE	40MBCQ	38MA*R	38MGR	All Sizes
DUCTED	40MBDQ	38MA*R	38MGR	All Sizes Except size 58
CONSOLE	40MBFQ	38MA*R	38MGR	All Sizes Except sizes 12 and 58
VERTICAL FAN COIL	FMA4	38MA*R		Sizes 12 to 36
CASED HORIZONTAL FAN COIL	FMC4	38MA*R		Sizes 12 to 36
UNCASED HORIZONTAL FAN COIL	FMU4	38MA*R		Sizes 12 to 36

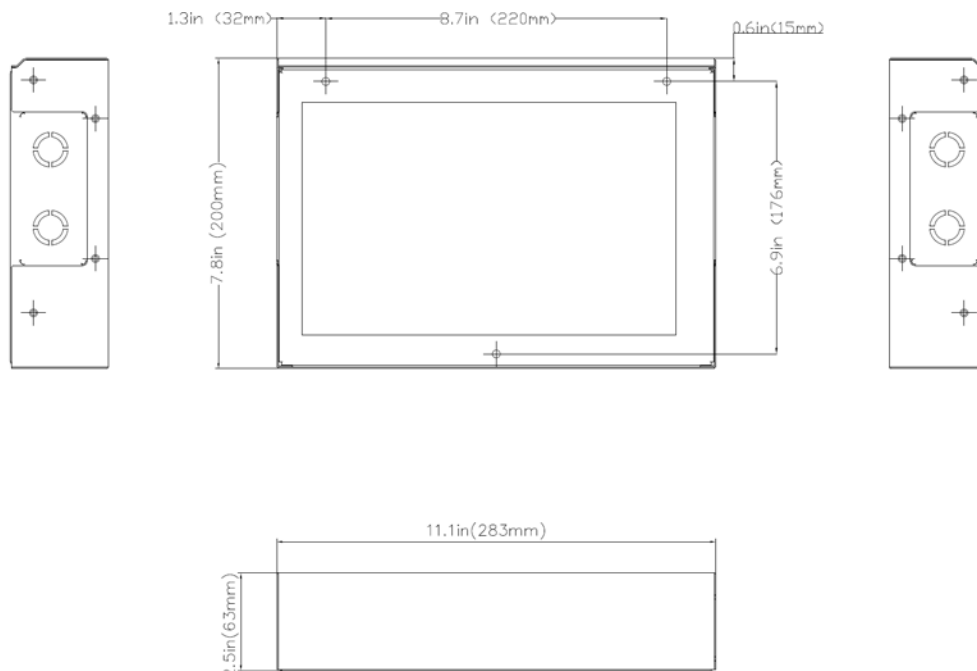
	Compatible
	Not Compatible

**Notes:** The Indoor unit requires an updated control board for compatibility with the 24V Interface Kit.  
 High Wall units starting with Serial # 4316V10001 are shipped with the compatible control board.  
 Ducted units starting with Serial # 4616V10001 are shipped with the compatible control board.  
 For other model numbers not shown on the table above, please contact your ductless representative.

\*Except size 58

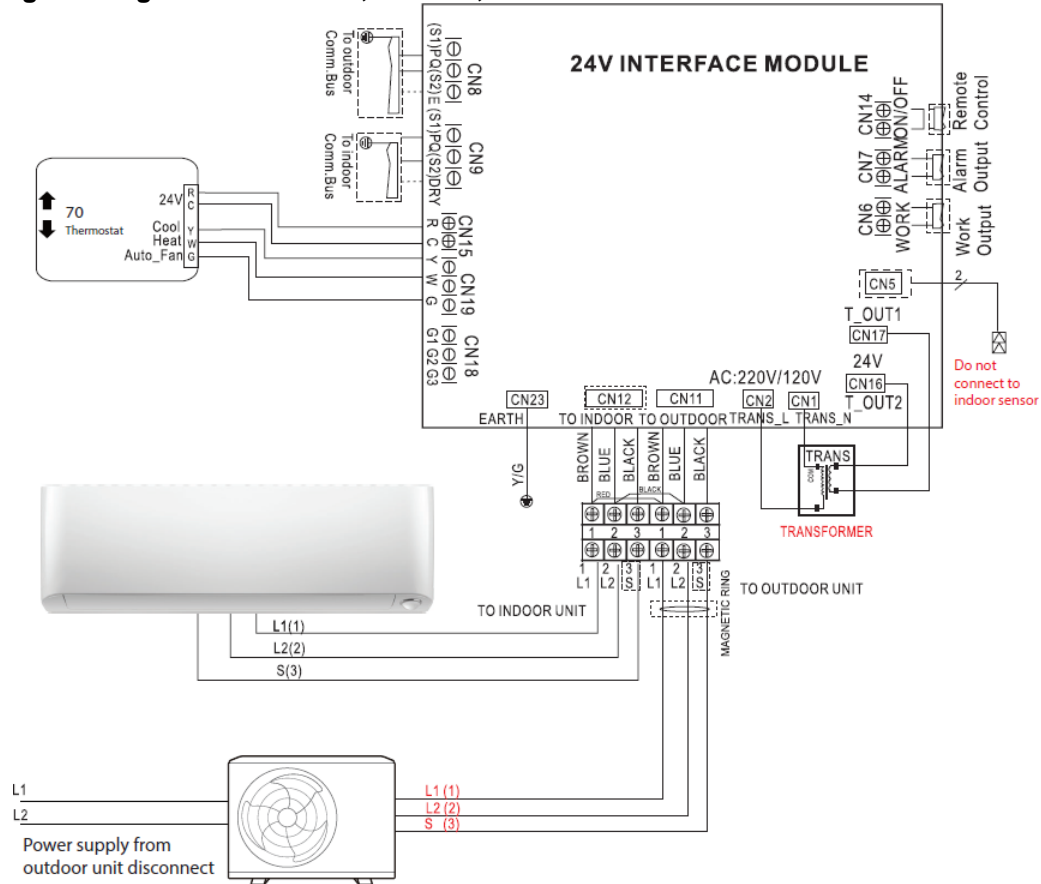
\*\*Except sizes 12 and 58

## Construction View

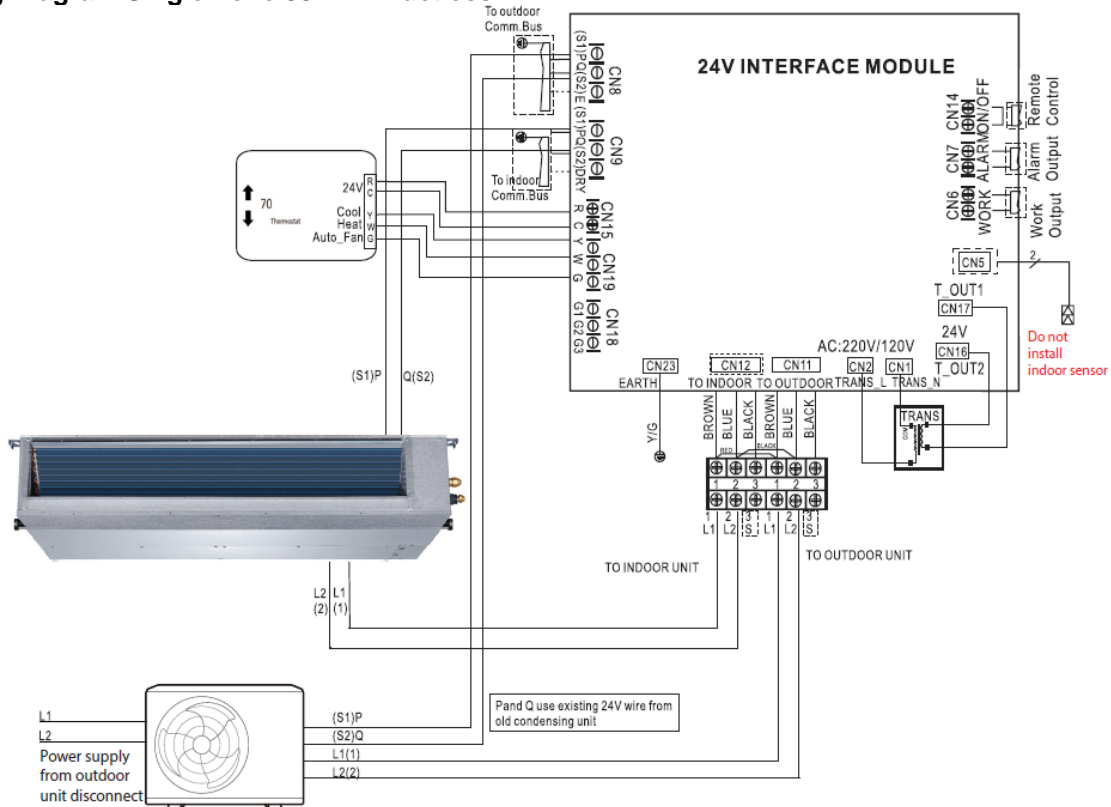


# Wiring Diagrams

## 1. Wiring Diagram Single Zone 38MPRA, 38MA\*R, 38MHR or Multi-zone 38MGR Ductless



## 2. Wiring Diagram Single Zone 38MBR Ductless







## GOBI II

**Item Number 3004145**

The GOBI II condensate pump for direct mounting under the air conditioner is designed for systems from 6 000 BTU/h (1.75kW) up to 120 000 BTU/h (35kW). The digital water sensor, the universal voltage range and the individually configurable flow rate are features that contribute to making the Gobi II the most powerful and quietest condensate pump for air conditioning systems on the market today. The variable range of applications allows the trade as well as the installer to cover almost all needs with just one pump.

- Universal use due to wide range of applications
- Warranty period only starts with commissioning (readable via USB)
- 11 gallon pumping capacity per hour
- 65 ft delivery head
- <19 dB noise level
- No float problems thanks to digital sensor
- Demand-oriented control of the pumping capacity
- Spare parts available

## Technical Data

<b>Color</b>	signal white (RAL 9003)
<b>Standards</b>	EN 60335-1, EN 60335-2-41, UL778 CSA C22.2 #68
<b>RoHS Conformity</b>	1
<b>RoHS Conformity</b>	Yes
<b>Type</b>	Diaphragm type
<b>Operating Temperature Range</b>	41 - 104 °F
<b>Storage Temperature Range</b>	-4 - 122 °F
<b>Water Temperature Range</b>	41 - 104 °F



*Acknowledged globally*



<b>Voltage</b>	100 - 240 VAC
<b>Frequency</b>	50 / 60 Hz
<b>Protection Class</b>	I
<b>Ingression Protection</b>	IP44
<b>Energy Consumption</b>	12 W
<b>Cable Length</b>	5 ft
<b>Max. Flow Capacity</b>	11 GPH
<b>Max. Suction Head</b>	10 ft
<b>Max. Delivery Head</b>	65.6 ft
<b>Noise Level</b>	19 dB(A)
<b>Alarm Relay</b>	Interchangeable NO or NC, rated 250VAC, 6.3A or 28VDC, 6.3A
<b>Tube Diameter</b>	1/4 "
<b>Packaging</b>	Blister
<b>Scope of Supply</b>	Power cable, Alarm cable, Star tube and anti-siphon device, Screws (for mounting), Screw anchors, Factory-installed alarm fuse, Cable ties, Instruction manual

## Accessories

4678597	IN-LINE FILTER	Filter for condensate water
4679160	PVC-TUBE	Plastic tube 6 mm, 30 meters, 1/4"
4678741	AQUASWITCH	Electronic water switch, 95-254V
4678546	AQUASWITCH-24	Electronic water switch 24 V AC/DC

## Spare Parts

3004064	FIL-4064/4	Spare filter for GOBI II, 4 pieces
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*Acknowledged globally*



3004087	KIT-4087	Star tube with Siphon device
3004180	FUS-4180/10	Spare fuses for COMBI and GOBI II 6.3A, pack of 10 pieces
3004050	FUS-4050/10	Spare fuse, 10 pieces
3004065	HSG-4065/4	Siphon Device, 4 pieces

## Outdoor Unit Single Zone Heat Pump Ductless System

## 38MARB Submittal Selection

HP-10

Carrier

Turn to the experts

Job Data: Location: Carrier #: Tag #: Date: 

Outdoor Model #	Size
38MARBQ12AA1	12K - 115V
38MARBQ06AA3	6K
38MARBQ09AA3	9K
38MARBQ12AA3	12K - 208/230V
38MARBQ18AA3	18K
38MARBQ24AA3	24K
38MARBQ30AA3	30K
38MARBQ36AA3	36K
38MARBQ36AB3	36K - AHU Only

Combination Selection	
Outdoor Unit	18K
Indoor Category	Cassette

## STANDARD FEATURES

- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Quiet operation
- Anti-corrosive fin coating

## LIMITED WARRANTY\*

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications.

See warranty for full details.

NOTE: Images for illustration purposes only. Actual models may be slightly different.

## Specifications

Outdoor - Heat Pump										
System	Outdoor Size						18K			
Electrical	Voltage, Phase, Cycle	V/Ph/Hz					208/230-1-60			
	MCA	A.					16			
	Recommended Fuse Size	A.					20			
	MOCP - Fuse Rating	A.					25			
	Short Circuit Current Rating (SCCR)	kA					2.4			
Operating Range	Cooling Outdoor DB Min - Max	°F(°C)					-22~122 (-30~50)			
	Heating Outdoor DB Min - Max	°F(°C)					-22~86 (-30~30)			
Piping	Total Piping Length	ft (m)					98 (30)			
	Piping Lift	ft (m)					65 (20)			
	Pipe Connection Size - Liquid	in (mm)					1/4 (6.35)			
	Pipe Connection Size - Suction	in (mm)					1/2 (12.7)			
Refrigerant	Refrigerant Type						R410A			
	Charge	lbs (kg)					4.08 (1.85)			
	Add'l Refrigerant (between Std & Max Piping Lngths)	Oz/ft (g/m)					0.161 (15)			
	Metering Device						EEV			
Outdoor Coil	Face Area	Sq. Ft.					5.9			
	No. Rows						2			
	Fins per inch						20			
	Circuits						6			
Compressor	Type						Rotary Inverter			
	Model						KTM240D43UKT			
	Oil Type						VG74			
	Oil Charge	Fl. Oz.					20.97			
Airflow & Sound	Rated Current	RLA					14.25			
	Airflow	CFM					1764.71			
	Sound Pressure	dB(A)					59			

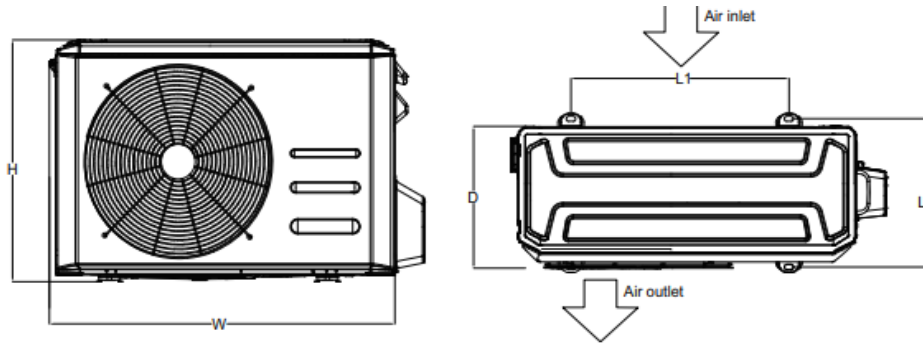
\* Condensing unit above or below indoor unit

## Performance

Outdoor Size			12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
High Wall	Indoor Model										
	Energy Star										
	Cooling Rated Capacity	Btu/h									
	Cooling Cap. Range Min - Max	Btu/h									
	SEER										
	EER										
	Heating Rated Capacity (47°F)	Btu/h									
	Heating Rated Capacity (17°F)	Btu/h									
	Heating Maximum Capacity (17°F)	Btu/h									
	Heating Maximum Capacity (5°F)	Btu/h									
	Heating Cap. Range Min - Max	Btu/h									
	HSPF										
	COP (47°F)	W/W									
	COP (17°F)	W/W									
	COP (5°F)	W/W									

	Outdoor Size	12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
Cassette	Indoor Model					18K				
	Energy Star					YES				
	Cooling System Tons					1.33				
	Cooling Rated Capacity	Btu/h				16000				
	Cooling Cap. Range Min - Max	Btu/h				5,600-17,000				
	SEER					20				
	EER					12.5				
	Heating Rated Capacity (47°F)	Btu/h				18000				
	Heating Rated Capacity (17°F)	Btu/h				11000				
	Heating Maximum Capacity (17°F)	Btu/h				21000				
	Heating Maximum Capacity (5°F)	Btu/h				17000				
	Heating Cap. Range Min - Max	Btu/h				8,700-21,000				
	HSPF					10.3				
	COP (47°F)	W/W				2.88				
	COP (17°F)	W/W				1.8				
	COP (5°F)	W/W				1.8				
Ducted	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Mix Match Ducted	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Console	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Air Handler	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								

Outdoor Size	12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
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Size						18K				
Width (W)	in (mm)					35.04 (890)				
Height (H)	in (mm)					26.50 (673)				
Depth (D)	in (mm)					13.46 (342)				
L1	in (mm)					26.1 (663)				
L2	in (mm)					13.65 (346.674)				
Operating Weight	lbs (kg)					100.97 (45.8)				
Shipping Width	in (mm)					39.17 (995)				
Shipping Height	in (mm)					29.13 (740)				
Shipping Depth	in (mm)					15.67 (398)				
Shipping Weight	lbs (kg)					108.03 (49)				



# Cassette Heat Pump Ductless System

HP-10

Indoor Model: 40MBCQ18---3

## Submittal Data

Job Data:  Location:

Buyer:  Buyer P.O. #:  Carrier #:

Unit Number:  Model Number:

Performance Data Certified By:  Date:



### STANDARD FEATURES

Modes: Cool, Heat, Dry, Fan, Auto  
 Louver Control (Fixed or Swing)  
 Outside Air Intake  
 Built-in condensate Lift pump  
 Follow Me (senses temperature at handheld remote)  
 Heating Setback (46° F Heating Mode)  
 Quiet indoor operation  
 Aluminum Golden Hydrophilic pre-coated fins

### Controls:

Wireless Remote Controller included with indoor unit  
 Optional Wired Remote Controller (Timer Function)  
 Optional Wired Remote Controller KSACN0501AAA (7 Day programmable)

### LIMITED WARRANTY\*

• 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

System	Size		18
	Indoor Model		40MBCQ18---3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply Indoor unit powered by outdoor unit		
	MCA	A.	0.2
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Optional
Operating Range	Cooling Indoor DB Min -Max	°F(°C)	63~90 (17~32)
	Heating Indoor DB Min -Max	°F(°C)	32~86 (0~30)
Piping	Pipe Connection Size - Liquid	in (mm)	1/4 (6.35)
	Pipe Connection Size - Suction	in (mm)	1/2 (12.7)

Indoor Coil	Face Area		Sq. Ft.	3.10
	No. Rows			2
	Fins per inch			19
	Circuits			4
Indoor	Body Unit Width	in (mm)	22.44 (570)	
	Body Unit Height	in (mm)	10.24 (260)	
	Body Unit Depth	in (mm)	22.44 (570)	
	Body Net Weight	lbs (kg)	39.68 (18)	
	Panel Unit Width	in (mm)	25.47 (647)	
	Panel Unit Height	in (mm)	1.97 (50)	
	Panel Unit Depth	in (mm)	25.47 (647)	
	Panel Net Weight	lbs (kg)	5.51 (2.5)	
	Number of Fan Speeds		3	
	Airflow (low to high)	CFM	290/350/420	
	Sound Pressure (lowest to highest)	dB(A)	46/48/50	
	Air throw Data	ft (m)	30 (9)	
	Moisture removal	Pint/h (L/h)	4.26 (2.02)	
	Field Drain Pipe Size O.D.	in (mm)	1 (25.4)	

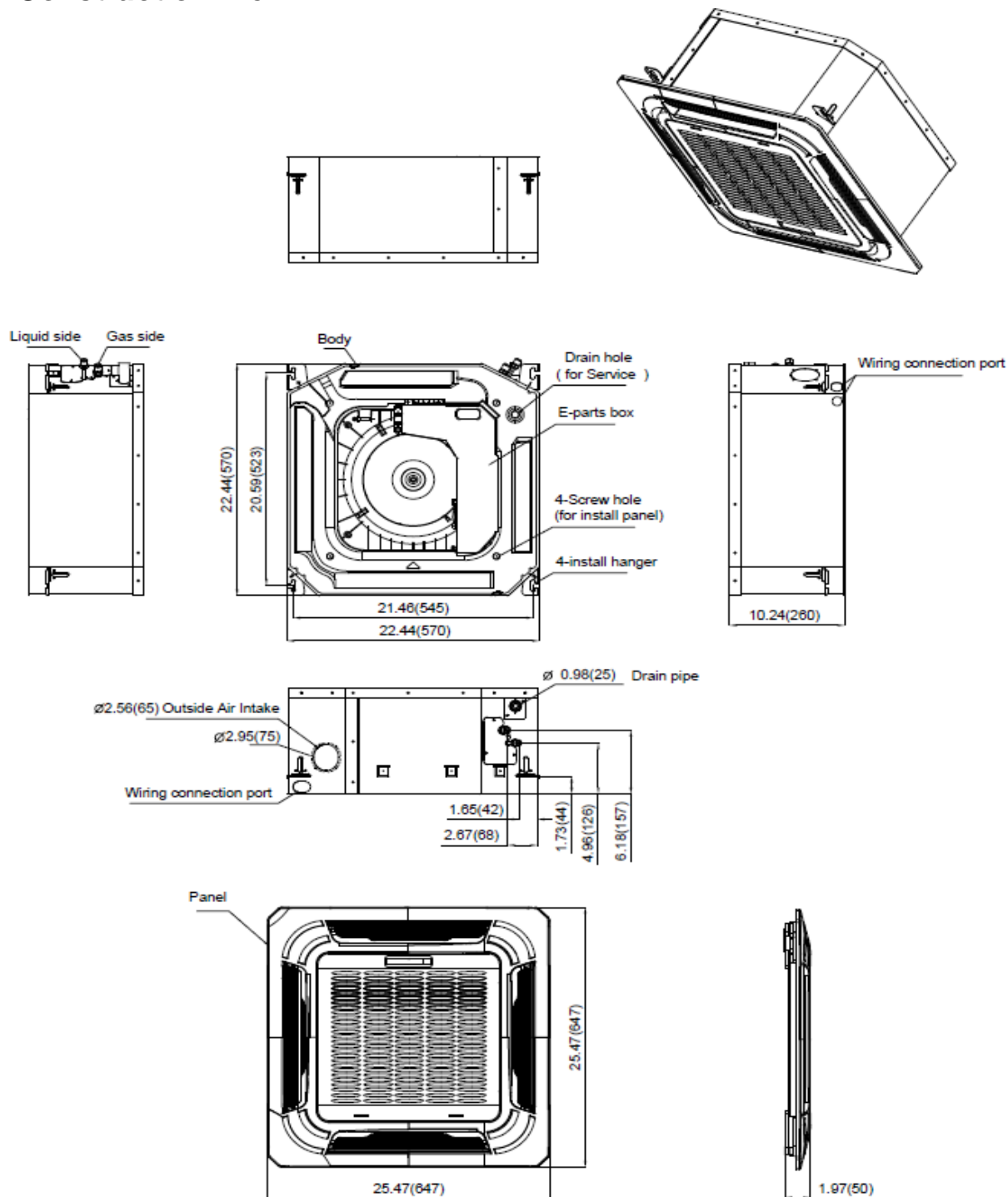
For Compatibility See Product Data

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.

## Accessories

KSACN0101AAA	Wired Remote Control with Timer Function
KSACN0501AAA	Wired Remote Control 7 day Programmable
KSAIF0401AAA	Wi-Fi™ Kit
KSAIC0101230	24V Interface Kit 208/230V
40MBCQ01XXX3	Grille/Ceiling panel
53DS-900---008	Insulated 25' Line Set - 1/4" x 1/2"

## Construction View





## 24V Interface Kit 2<sup>nd</sup> Generation Ductless Systems

HP-10

Model: KSAIC0301230 (208-230V)

# Submittal Data

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_

Buyer: \_\_\_\_\_ Buyer P.O. #: \_\_\_\_\_ Carrier #: \_\_\_\_\_

Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_

Performance Data Certified By: \_\_\_\_\_ Date: \_\_\_\_\_



The 24V INTERFACE KIT 2<sup>nd</sup> Generation is used to connect:

- A **SINGLE ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **MULTI-ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **SINGLE ZONE** Ductless Condensing Unit with an approved Fan Coil/Furnace/Cased Coil and a third party single stage conventional thermostat (sold separately) allowing up to 3 different fan speeds on the indoor unit.

### Features

- **AUTO Fan speed** on Single Zone and Multi-zone on Ductless applications
- **Up to 3 Fan speeds** on Single Zone Ductless Outdoor matched with Multi-family Fan Coils, Furnace/Cased Coils applications.
- One 24V INTERFACE KIT per indoor head
- Keeps the Inverter Compressor operating as a Variable Speed System
- Rated for outdoor and indoor mounting
- Dry mode contact for active dehumidification control
- Remote ON/OFF contact
- Auxiliary Heat control through the thermostat
- Diagnostic code display LEDs
- 208/230V Transformer Built-in

### Parts included

- 24V INTERFACE Control Box
- Installation manual
- Wall anchors
- Screws M4X20mm
- •16.4ft. (5m) Return Air Thermistor Assembly required and installed near or on the unit and on the air inlet side

### Accessories, Sold Separately

- ☐ 115V transformer RCD# 11203103000393, used only on ductless systems with 115V power.
- ☐ Piping Adaptor Kit RCD# 331831-701, used ONLY on Multifamily applications with the FMA4, FMC and FMU fan coils to facilitate piping installation when removing the TXV kit from the indoor unit

# Compatibility

The 24V INTERFACE KIT is compatible with most thermostats matched with the Ductless Systems listed below. Before installation, check the compatibility of your Ductless System. Professional installation is recommended.

Type of Indoor unit	Indoor Family Name	Single Zone Outdoor Family Name	Multi-zone Outdoor Family Name	208/230V
HIGH WALL	40MPHA	38MPRA	38MGR	All Sizes
	619PHA	38MPRA	38MGR	All Sizes
	DHMPHA	38MPRA	38MGR	All Sizes
	40MAQ	38MA*R	38MGR	All Sizes
	619P*B	38MA*R	38MGR	All Sizes
	DHMSHA	38MA*R	38MGR	All Sizes
	40MHH	38MHR	38MGR	All Sizes
CASSETTE	40MBCQ	38MA*R	38MGR	All Sizes
DUCTED	40MBDQ	38MA*R	38MGR	All Sizes Except size 58
CONSOLE	40MBFQ	38MA*R	38MGR	All Sizes Except sizes 12 and 58
VERTICAL FAN COIL	FMA4	38MA*R		Sizes 12 to 36
CASED HORIZONTAL FAN COIL	FMC4	38MA*R		Sizes 12 to 36
UNCASED HORIZONTAL FAN COIL	FMU4	38MA*R		Sizes 12 to 36

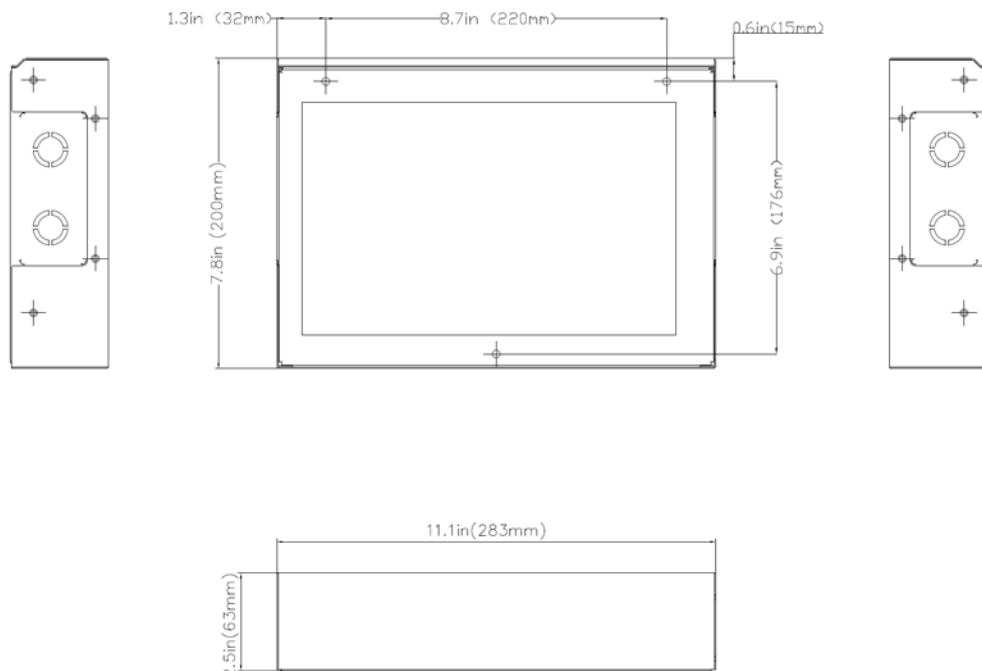
	Compatible
	Not Compatible

**Notes: The Indoor unit requires an updated control board for compatibility with the 24V Interface Kit.**  
**High Wall units starting with Serial # 4316V10001 are shipped with the compatible control board.**  
**Ducted units starting with Serial # 4616V10001 are shipped with the compatible control board.**  
**For other model numbers not shown on the table above, please contact your ductless representative.**

\*Except size 58

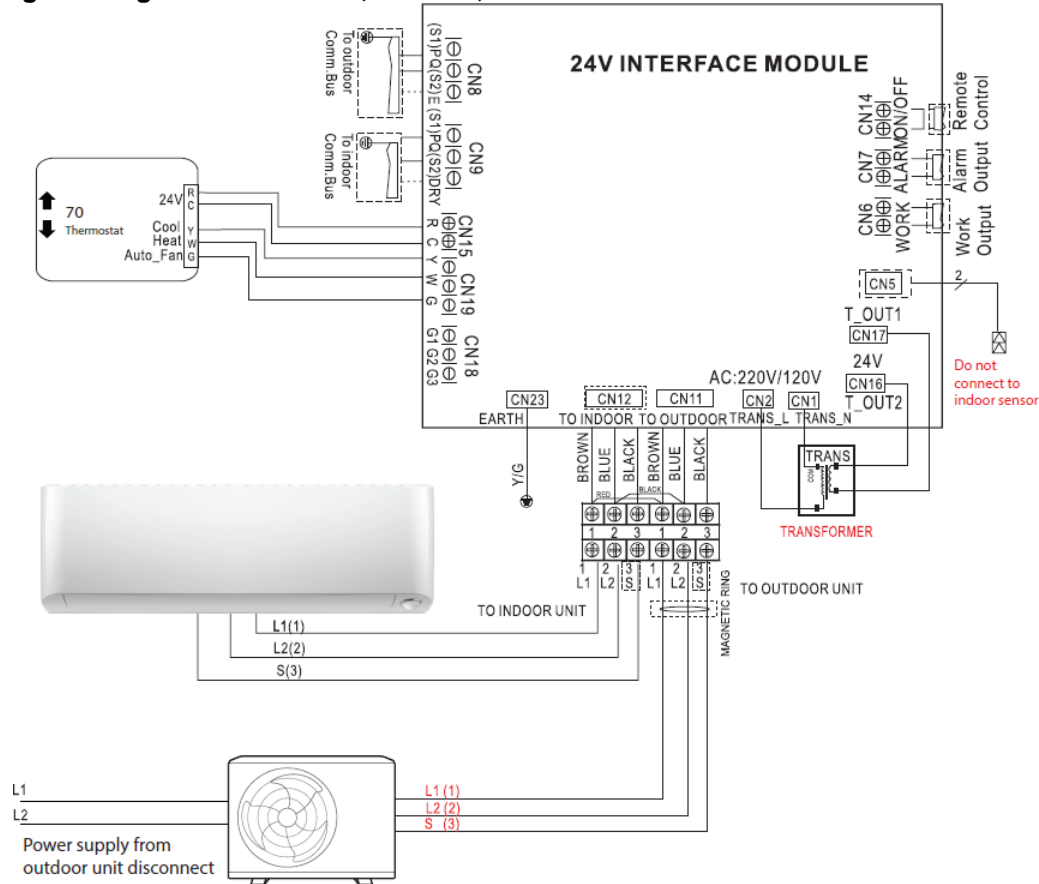
\*\*Except sizes 12 and 58

## Construction View

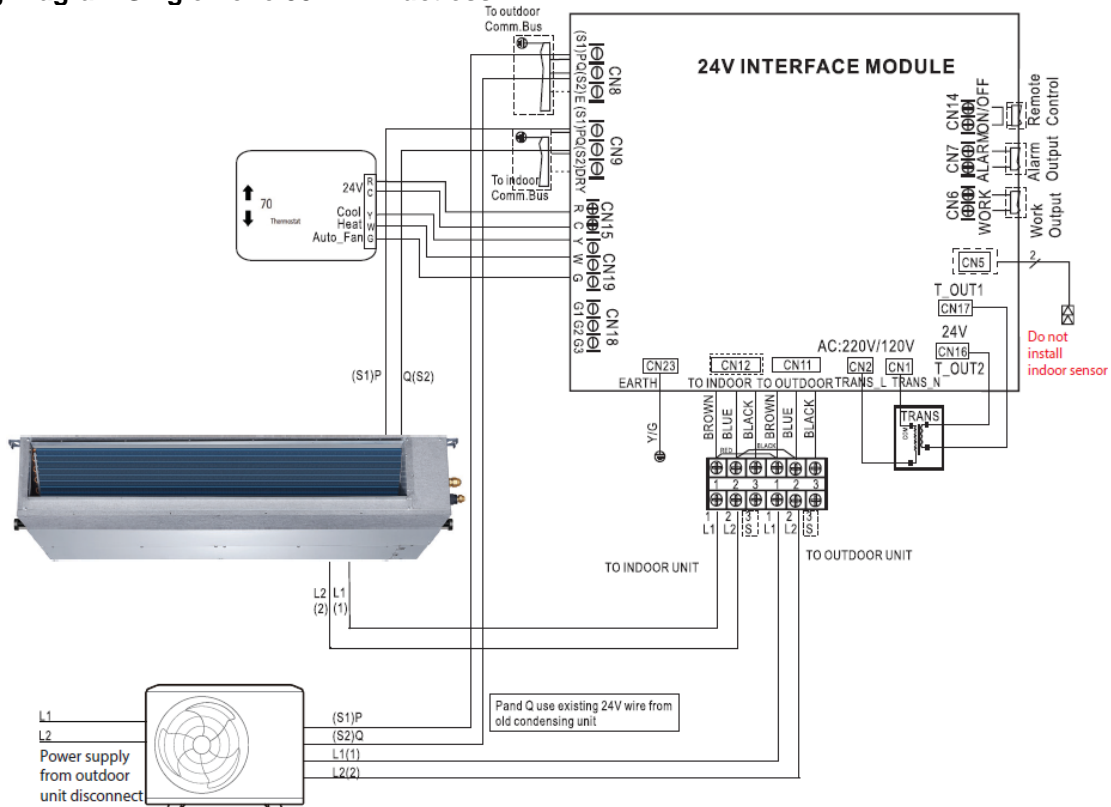


# Wiring Diagrams

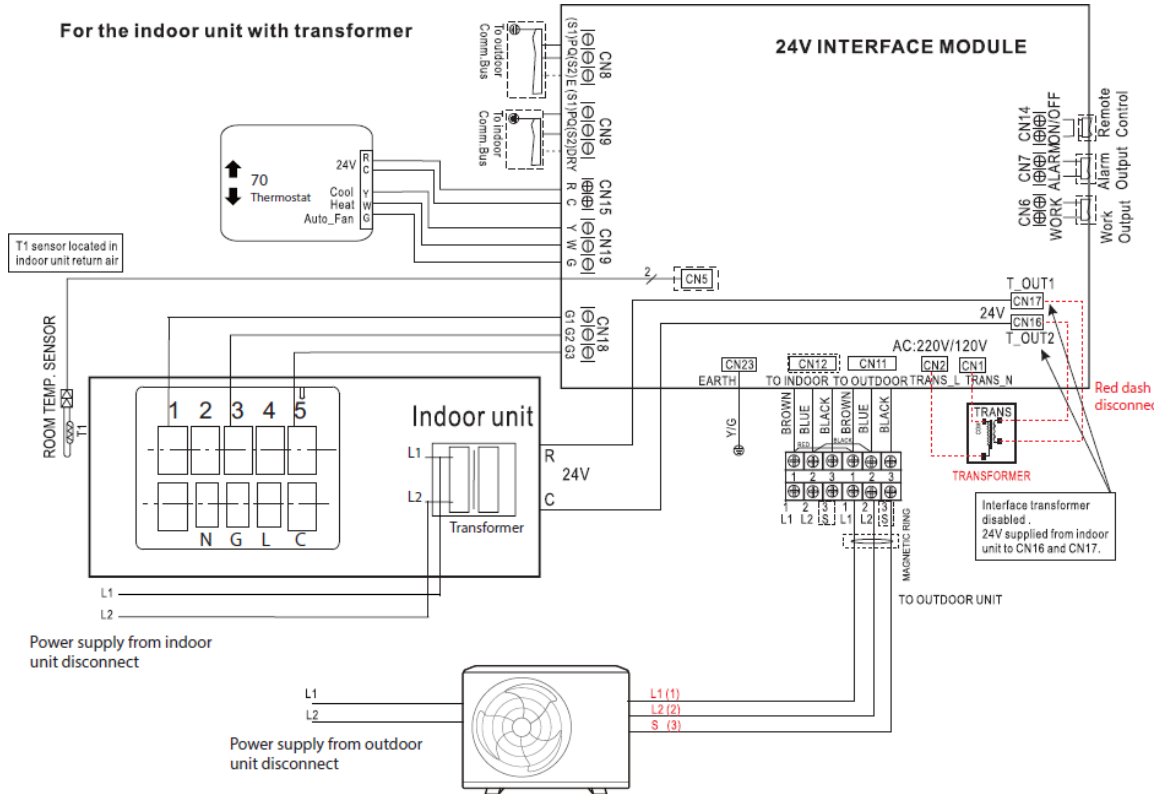
## 1. Wiring Diagram Single Zone 38MPRA, 38MA\*R, 38MHR or Multi-zone 38MGR Ductless



## 2. Wiring Diagram Single Zone 38MBR Ductless



### 3. Wiring Diagram Single Zone Ductless Condensing Unit 38MA\*R with an approved Fan Coil/Furnace/Cased Coil



# Single Phase VRF Outdoor Unit 38VMB036HDS3-1—Heat Pump

HP-11



## Submittal Data

Job Name \_\_\_\_\_ Location \_\_\_\_\_  
Tag \_\_\_\_\_



A210498

### Standard Features

- High Efficiency Rotary Inverter Compressor
- Optimized Compressor Start-Up Technology
- DC Condenser Fan Motor
- Aerodynamic Fan Design for Increased Airflow
- Field Configurable Four Side Piping Connection
- 492 ft (150m) actual total system piping (liquid line)

Header Unit Model		38VMB036HDS3-1
PERFORMANCE		
Nominal Cooling Capacity	Btu/h	36,000
Nominal Heating Capacity	Btu/h	40,000
Maximum Total Connected Indoor Unit Capacity		50% to 130%
COOLING EFFICIENCY†		
SEER2, Ducted FCUs	Btu/Wh	17.30
SEER2, Ductless FCUs	Btu/Wh	19.20
HEATING EFFICIENCY†		
HSPF2, Ducted FCUs	Btu/Wh	9.10
HSPF2, Ductless FCUs	Btu/Wh	9.20
Fan Type (Qty)		Propeller (2)
Airflow, Standard Range	CFM	4,100
Sound Pressure, Cooling/Heating	dBA	58.7
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Minimum Circuit Amps (MCA)	A	36
Recommended Fuse Size	A	40

### LEGEND

SEER —Seasonal Energy Efficiency Ratio  
FCU —Fan Coil Unit  
HSPF—Heating Seasonal Performance Factor

COMPRESSORS		
Type (Number)		Hermetically Sealed Rotary DC Inverter (1)
FAN MOTOR		
Motor Type (Qty)	Brushless DC (2)	
PHYSICAL DATA		
Pipe Connection Size - Liquid (High Pressure)	in.	3/8
Pipe Connection Size - Gas (Low Pressure)	in.	5/8
Refrigerant		R-410A
Factory Charge††	lb	8.6
Unit Width	in.	35-1/2
Unit Height	in.	52-1/4
Unit Depth	in.	15-3/4
Net Weight	lb	220.0
OPERATING TEMPERATURE RANGE		
Cooling (DB)	°F	5~118
Heating (WB)	°F	-13~64

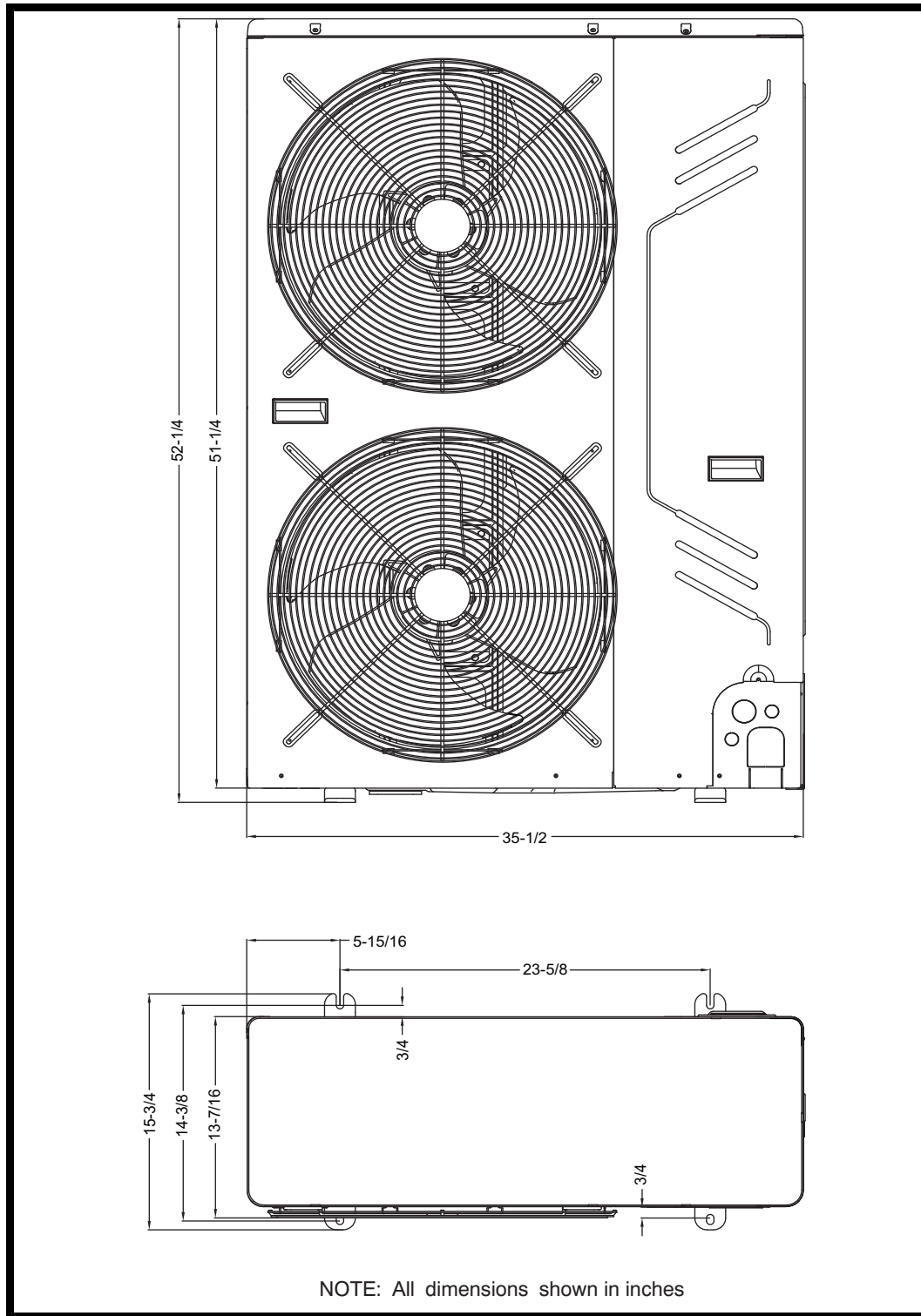
†Rated per AHRI (Air-Conditioning, Heating and Refrigeration Institute) 210/240 Standard.

Cooling: Indoor 80°F (27°C) db/67°F (20°C) wb; Outdoor 95°F (35°C) db

Heating: Indoor 70°F (21°C) db; Outdoor 47°F (8°C) db/43°F (6°C) wb

††Additional charge required.

# DIMENSIONAL DRAWING OUTDOOR UNIT 38VMB036HDS3-1



A210496



# VRF Indoor Unit 40VMC012A--3—Compact 4-Way Cassette

HP-11



## Submittal Data

Job Name \_\_\_\_\_ Location \_\_\_\_\_  
Tag \_\_\_\_\_



### STANDARD FEATURES

- Delivers air in all four directions
- Three fan speeds - high, medium, and low
- Built-in condensate lift mechanism
- Condensate lift 23-5/8 inches
- Built in EXV (Electronic Expansion Valve) for installation ease
- Outside air connection
- Branch duct for supply (blank off required)
- Panel/grill (40VMC001----) - ordered separately

INDOOR UNIT MODEL		40VMC012A--3
PERFORMANCE		
Total Cooling Rated Capacity	Btu/h	12,170
Sensible Cooling Capacity	Btu/h	8,050
Total Heating Rated Capacity	Btu/h	13,000
Airflow (H / M / L)	CFM	359 / 306 / 253
Sound Pressure (H / M / L)	dBA	45.5 / 42.3 / 38.1
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Indoor Fan Motor Power Consumption (Input)	W	24
Minimum Circuit Amps (MCA)	A	0.53
Maximum Overcurrent Protection	A	15.0
Motor Type		DC

PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	1/4 (OD)
Pipe Connection Size - Suction	in.	1/2 (OD)
Pipe Connection Size - Drain	in.	1 (OD)
Refrigerant		R-410A
Unit Width	in.	24-3/4
Unit Height	in.	10-1/4
Unit Depth	in.	22-7/16
Unit Net Weight	lbs.	43.0
Panel Width	in.	25-1/2
Panel Height	in.	2
Panel Depth	in.	25-1/2
Panel Net Weight	lbs.	5.5

### ACCESSORIES

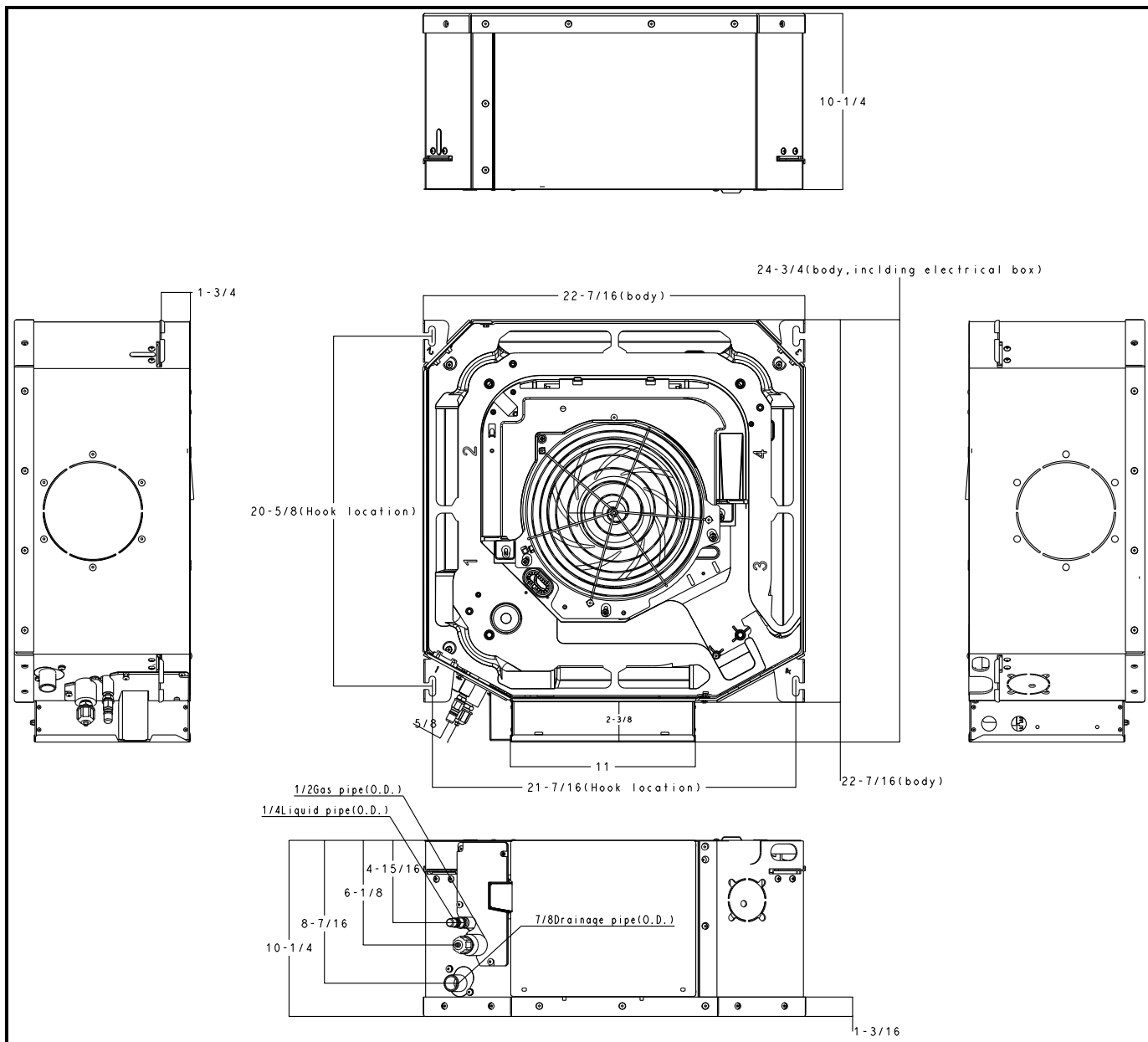
- ☐ Wireless Remote Controller 40VM900001
- ☐ Wired Remote Controller - Non-Prog. 40VM900002
- ☐ Wired Remote Controller - Prog. 40VM900003
- ☐ Touch Screen Wired Controller 40VM900005
- ☐ 24V Controller 40VM900008
- ☐ Button Sensor 40VM900009

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.



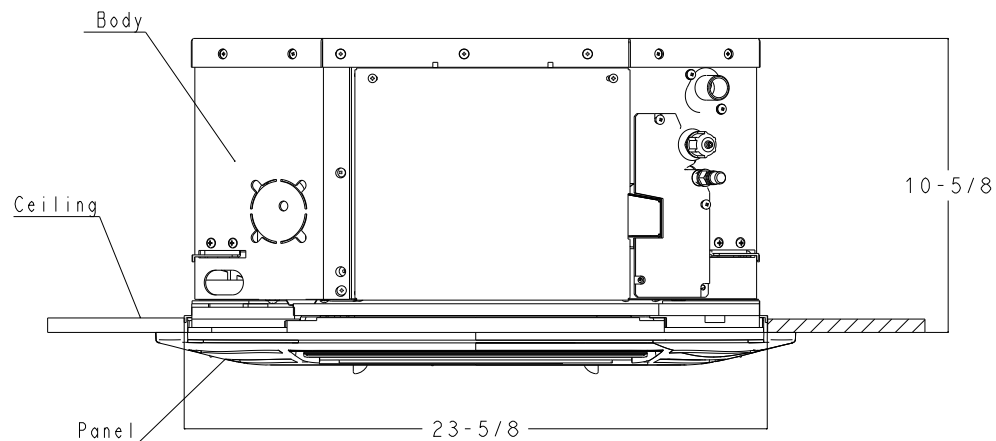
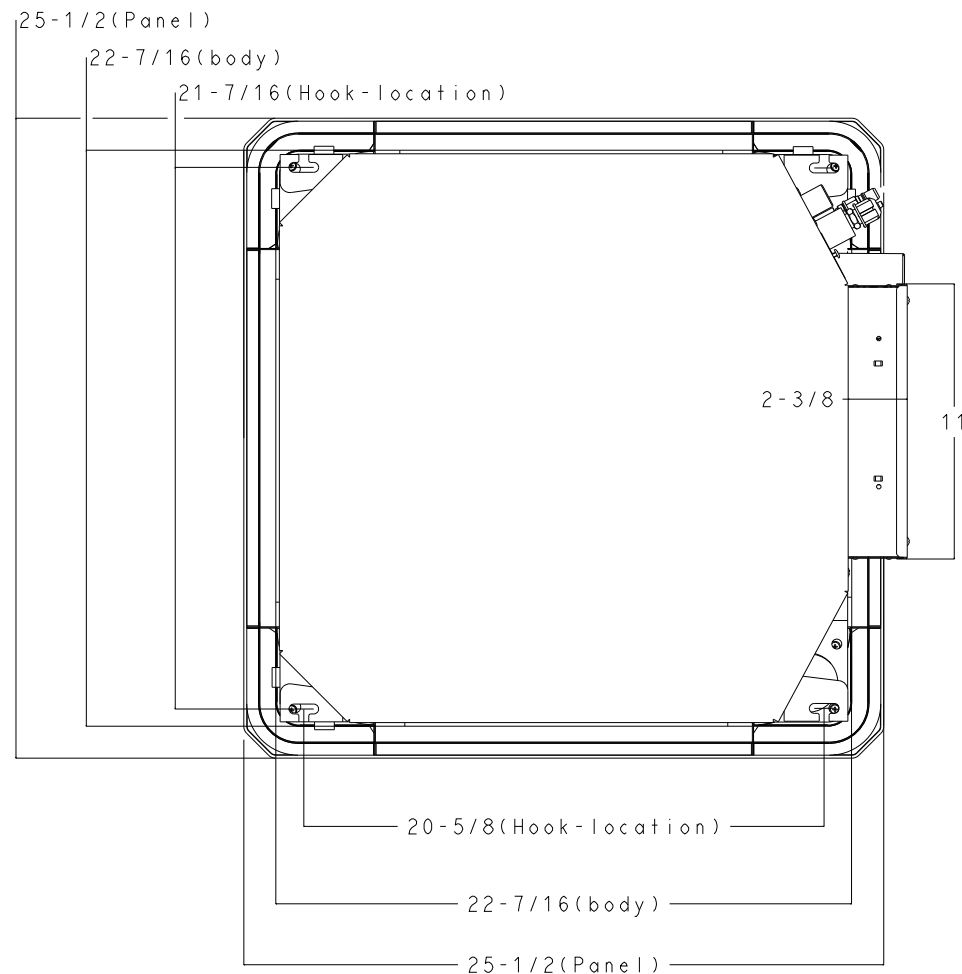
# DIMENSIONAL DRAWING

## INDOOR UNIT COMPACT 4-WAY CASSETTE 40VMC012A--3



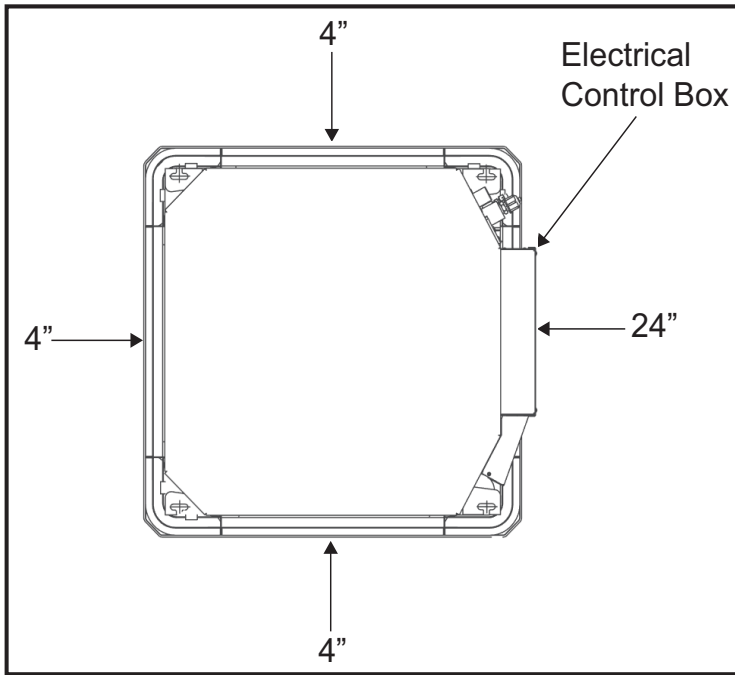
All Dimensions are shown in inches.

# **DIMENSIONAL DRAWING** **INDOOR UNIT COMPACT 4-WAY CASSETTE 40VMC012A--3**

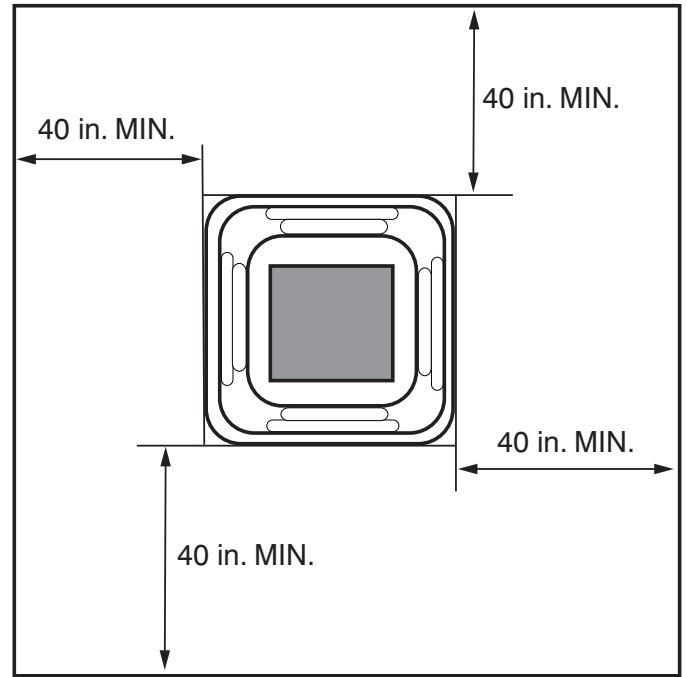


All Dimensions are shown in inches.

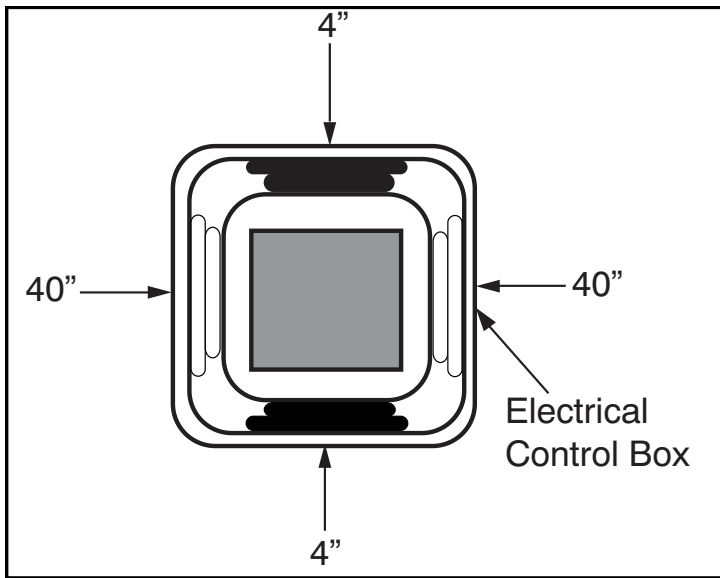
## RECOMMENDED SERVICE CLEARANCE



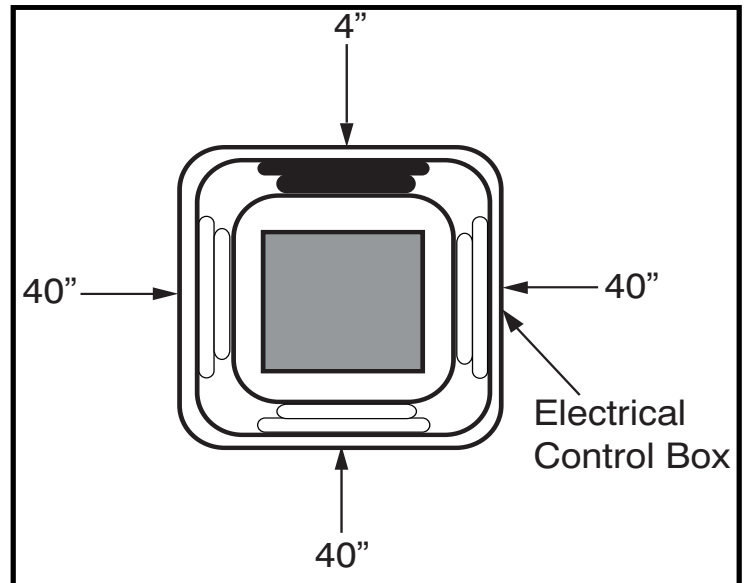
## RECOMMENDED AIRFLOW CLEARANCE



## RECOMMENDED CLEARANCE FOR BLOCKING OFF LOUVERS / SUPPLY DUCT OPENING



2 Supply Louvers Blocked Off



1 Supply Louver Blocked Off



# VRF Controls and Accessories

## 40VM900008 - 24V Interface

HP-11



## Submittal Data

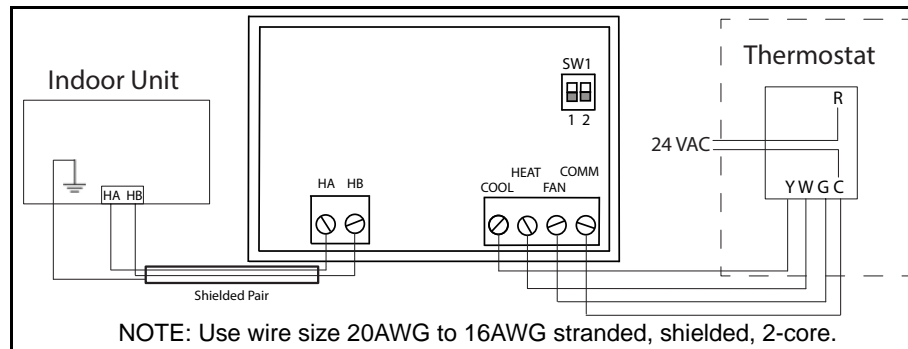
Job Data \_\_\_\_\_ Location \_\_\_\_\_  
Buyer \_\_\_\_\_ Buyer PO # \_\_\_\_\_ Carrier # \_\_\_\_\_  
Unit Number \_\_\_\_\_ Model Number \_\_\_\_\_  
Performance Data Certified By \_\_\_\_\_ Date \_\_\_\_\_



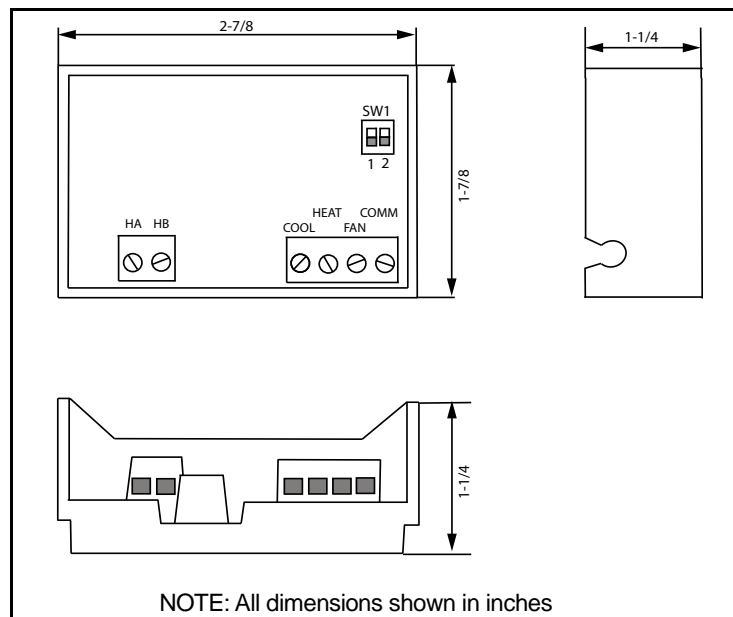
### 40VM900008 - 24V Interface Features

- Allows connection of conventional 24VAC thermostat to VRF system
- Accepts inputs for Fan, Heat, and Cool (single-stage)
- Fan speed configurable via dip switch settings for High, Medium, Low, or Auto
- Compact design for installation ease

## WIRING DIAGRAM



## DIMENSIONAL DRAWING



## Outdoor Unit Single Zone Heat Pump Ductless System

HP-12

Outdoor Model: 38MBRBQ36AA3

### Submittal Data

Job Data:

Location:

Buyer:  Buyer P.O. #:

Carrier #:

Unit Number:

Model Number:

Performance Data Certified By:

Date:



#### STANDARD FEATURES

##### Features Outdoor:

- Variable Speed (Inverter) Compressor
- Basepan Heater factory installed
- Quiet operation
- Aluminum Hydrophilic pre-coated fins

- Piping length 213 ft. (65 m)

Cooling operating range -13° ~ 122° F (-25° ~ 50°C)

Heating operating range -22°~86°F (-30°~30°C)

#### LIMITED WARRANTY\*

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

# Specifications

System	Size		36
	Outdoor Model		38MBRBQ36AA3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	MCA	A.	30
	MOCP - Fuse Rating	A.	45
Operating Range	Cooling Outdoor DB Min - Max	°F(°C)	-13~122 (-25~50)
	Heating Outdoor DB Min - Max	°F(°C)	-22~86 (-30~30)
Piping	Total Piping Length	ft (m)	213 (65)
	Piping Lift	ft (m)	98 (30)
	Pipe Connection Size - Liquid	in (mm)	3/8 (9.52)
	Pipe Connection Size - Suction	in (mm)	5/8 (16)
Refrigerant	Type		R410A
	Charge	lbs (kg)	7.05 (3.2)
	Metering Device		EEV
Outdoor Coil	Face Area	Sq. Ft.	9
	No. Rows		2
	Fins per inch		20
	Circuits		4
Compressor	Type		R410A
	Model		KTF310D43UMT
	Oil Type		ESTER OIL VG74
	Oil Charge	Fl. Oz.	33.82
	Rated Current	RLA	23.5
Outdoor	Unit Width	in (mm)	41.1 (1,045)
	Unit Height	in (mm)	31.9 (810)
	Unit Depth	in (mm)	17.9 (455)
	Net Weight	lbs (kg)	155.42 (70.5)
	Airflow	CFM	2,118
	Sound Pressure	dB(A)	61.7

\* Condensing unit above or below indoor unit  
For Compatibility See Product Data

# Performance

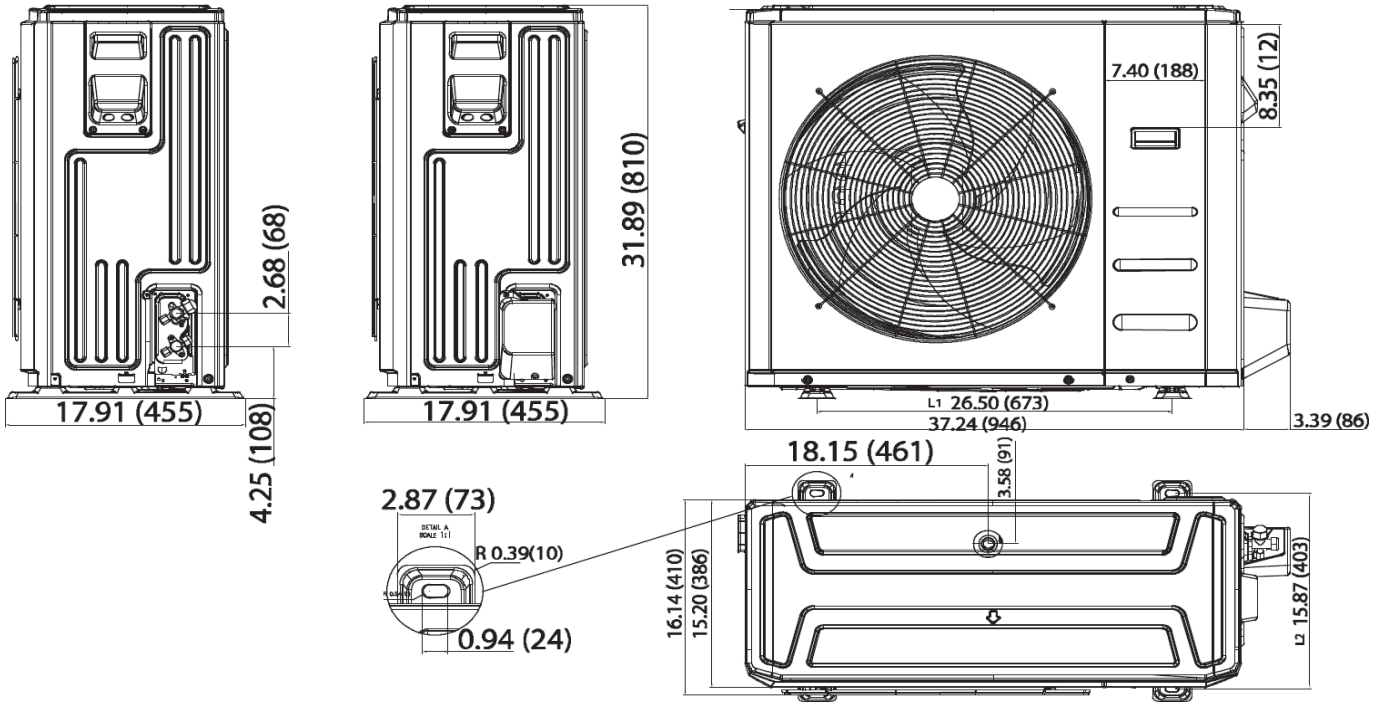
Air Handler	Indoor Model		40MBAAQ36XA3
	Energy Star		NO
	Cooling Rated Capacity	Btu/h	36,000
	Cooling Cap. Range Min - Max	Btu/h	7,500~52,200
	SEER		16.5
	EER		8.5
	Heating Rated Capacity (47°F)	Btu/h	39,000
	Heating Rated Capacity (17°F)	Btu/h	25,000
	Maximum Heating Capacity (5°F)	Btu/h	25,800
	Heating Cap. Range Min - Max	Btu/h	11,800~45,400
	HSPF		10.4
	COP (47°F)	W/W	3.2
	COP (17°F)	W/W	2.45
	COP (5°F)	W/W	2.3

Ducted	Indoor Model		40MBDQ36---3
	Energy Star		NO
	Cooling Rated Capacity	Btu/h	36,000
	Cooling Cap. Range Min - Max	Btu/h	7,500~52,100
	SEER		16.7
	EER		9
	Heating Rated Capacity (47°F)	Btu/h	40,000
	Heating Rated Capacity (17°F)	Btu/h	27,000
	Maximum Heating Capacity (5°F)	Btu/h	29,100
	Heating Cap. Range Min - Max	Btu/h	11,400~50,500
	HSPF		11.5
	COP (47°F)	W/W	3.37
	COP (17°F)	W/W	2.6
	COP (5°F)	W/W	2.5

Cassette	Indoor Model		40MBCQ36---3
	Energy Star		NO
	Cooling Rated Capacity	Btu/h	36,000
	Cooling Cap. Range Min - Max	Btu/h	7,500~52,200
	SEER		17.6
	EER		9
	Heating Rated Capacity (47°F)	Btu/h	38,000
	Heating Rated Capacity (17°F)	Btu/h	22,000
	Maximum Heating Capacity (5°F)	Btu/h	32,200
	Heating Cap. Range Min - Max	Btu/h	12,600~55,800
	HSPF		10.6
	COP (47°F)	W/W	3.01
	COP (17°F)	W/W	2.49
	COP (5°F)	W/W	2.41

Floor Console	Indoor Model		40MBFQ36---3
	Energy Star		NO
	Cooling Rated Capacity	Btu/h	36,000
	Cooling Cap. Range Min - Max	Btu/h	7,500~52,100
	SEER		17
	EER		8
	Heating Rated Capacity (47°F)	Btu/h	38,000
	Heating Rated Capacity (17°F)	Btu/h	22,000
	Maximum Heating Capacity (5°F)	Btu/h	29,300
	Heating Cap. Range Min - Max	Btu/h	11,400~50,000
	HSPF		10
	COP (47°F)	W/W	2.8
	COP (17°F)	W/W	2.3
	COP (5°F)	W/W	2.05

# Construction View





# Floor Console Heat Pump Ductless System

HP-12

Indoor Model: 40MBFQ36---3

## Submittal Data

Job Data:

Location:

Buyer:  Buyer P.O. #:

Carrier #:

Unit Number:

Model Number:

Performance Data Certified By:

Date:



### STANDARD FEATURES

Modes: Cool, Heat, Dry, Fan, Auto

Timer

Auto-Restart

Sleep mode

Up-Down Louver control (fixed or swing)

**Capable to be mounted on Floor and Ceiling**

Follow Me (Sense Temperature at handheld remote)

46°F Heating Mode (Heating Setback)

Aluminum Golden Hydrophilic pre-coated fins

### CONTROLS:

Wireless Remote Controller included with indoor unit

Optional Wired Remote Controller (Timer Function)

Optional Wired Remote Controller KSACN0501AAA (7 Day programmable)

### LIMITED WARRANTY\*

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

System	Size		36
	Indoor Model		40MBFQ36---3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply Indoor unit powered by outdoor unit		
	MCA	A.	1.23
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Standard
Operating Range	Cooling Indoor DB Min -Max	°F(°C)	63~90 (17~32)
	Heating Indoor DB Min -Max	°F(°C)	32~86 (0~30)
Piping	Pipe Connection Size - Liquid	in (mm)	3/8 (9.52)
	Pipe Connection Size - Suction	in (mm)	5/8 (16)

Indoor Coil	Face Area	Sq. Ft.	3.2
	No. Rows		3
	Fins per inch		19
	Circuits		9
Indoor	Unit Width	in (mm)	50.59 (1285)
	Unit Height	in (mm)	9.25 (235)
	Unit Depth	in (mm)	26.57 (675)
	Net Weight	lbs (kg)	69 (31.3)
	Number of Fan Speeds		3
	Airflow (lowest to highest)	CFM	638/917/1037
	Sound Pressure (lowest to highest)	dB(A)	43/49/54
	Air throw Data	ft (m)	33(10)
	Field Drain Pipe Size O.D.	in (mm)	1 (25.4)

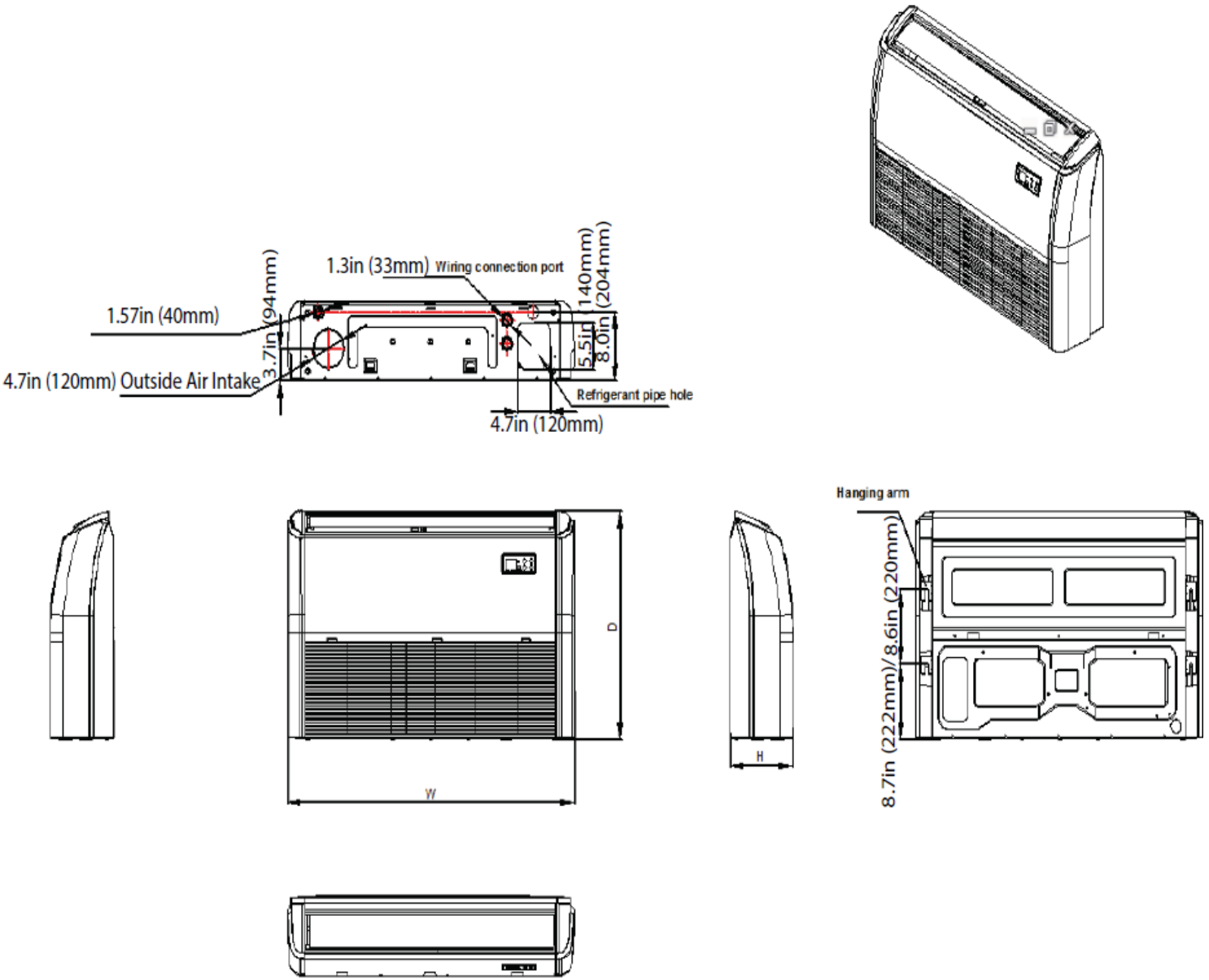
For Compatibility See Product Data

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.

Accessories

53DS-900---118	Condensate Pump (208/230V)
KSACN0101AAA	Wired Remote Control with Timer Function
KSACN0501AAA	Wired Remote Control 7 day Programmable
KSAIF0401AAA	Wi-Fi™ Kit Console
KSAIC0101230	24V Interface Kit 208/230V
53DS-900---090	Wireless Remote Control Locking Mount Kit

Construction View  
Indoor Model: 40MBFQ36---3



## 24V Interface Kit 2<sup>nd</sup> Generation Ductless Systems

HP-12

Model: KSAIC0301230 (208-230V)

# Submittal Data

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_

Buyer: \_\_\_\_\_ Buyer P.O. #: \_\_\_\_\_ Carrier #: \_\_\_\_\_

Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_

Performance Data Certified By: \_\_\_\_\_ Date: \_\_\_\_\_



The 24V INTERFACE KIT 2<sup>nd</sup> Generation is used to connect:

- A **SINGLE ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **MULTI-ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **SINGLE ZONE** Ductless Condensing Unit with an approved Fan Coil/Furnace/Cased Coil and a third party single stage conventional thermostat (sold separately) allowing up to 3 different fan speeds on the indoor unit.

### Features

- **AUTO Fan speed** on Single Zone and Multi-zone on Ductless applications
- **Up to 3 Fan speeds** on Single Zone Ductless Outdoor matched with Multi-family Fan Coils, Furnace/Cased Coils applications.
- One 24V INTERFACE KIT per indoor head
- Keeps the Inverter Compressor operating as a Variable Speed System
- Rated for outdoor and indoor mounting
- Dry mode contact for active dehumidification control
- Remote ON/OFF contact
- Auxiliary Heat control through the thermostat
- Diagnostic code display LEDs
- 208/230V Transformer Built-in

### Parts included

- 24V INTERFACE Control Box
- Installation manual
- Wall anchors
- Screws M4X20mm
- •16.4ft. (5m) Return Air Thermistor Assembly required and installed near or on the unit and on the air inlet side

### Accessories, Sold Separately

- ☐ 115V transformer RCD# 11203103000393, used only on ductless systems with 115V power.
- ☐ Piping Adaptor Kit RCD# 331831-701, used ONLY on Multifamily applications with the FMA4, FMC and FMU fan coils to facilitate piping installation when removing the TXV kit from the indoor unit

# Compatibility

The 24V INTERFACE KIT is compatible with most thermostats matched with the Ductless Systems listed below. Before installation, check the compatibility of your Ductless System. Professional installation is recommended.

Type of Indoor unit	Indoor Family Name	Single Zone Outdoor Family Name	Multi-zone Outdoor Family Name	208/230V
HIGH WALL	40MPHA	38MPRA	38MGR	All Sizes
	619PHA	38MPRA	38MGR	All Sizes
	DHMPHA	38MPRA	38MGR	All Sizes
	40MAQ	38MA*R	38MGR	All Sizes
	619P*B	38MA*R	38MGR	All Sizes
	DHMSHA	38MA*R	38MGR	All Sizes
	40MHH	38MHR	38MGR	All Sizes
CASSETTE	40MBCQ	38MA*R	38MGR	All Sizes
DUCTED	40MBDQ	38MA*R	38MGR	All Sizes Except size 58
CONSOLE	40MBFQ	38MA*R	38MGR	All Sizes Except sizes 12 and 58
VERTICAL FAN COIL	FMA4	38MA*R		Sizes 12 to 36
CASED HORIZONTAL FAN COIL	FMC4	38MA*R		Sizes 12 to 36
UNCASED HORIZONTAL FAN COIL	FMU4	38MA*R		Sizes 12 to 36

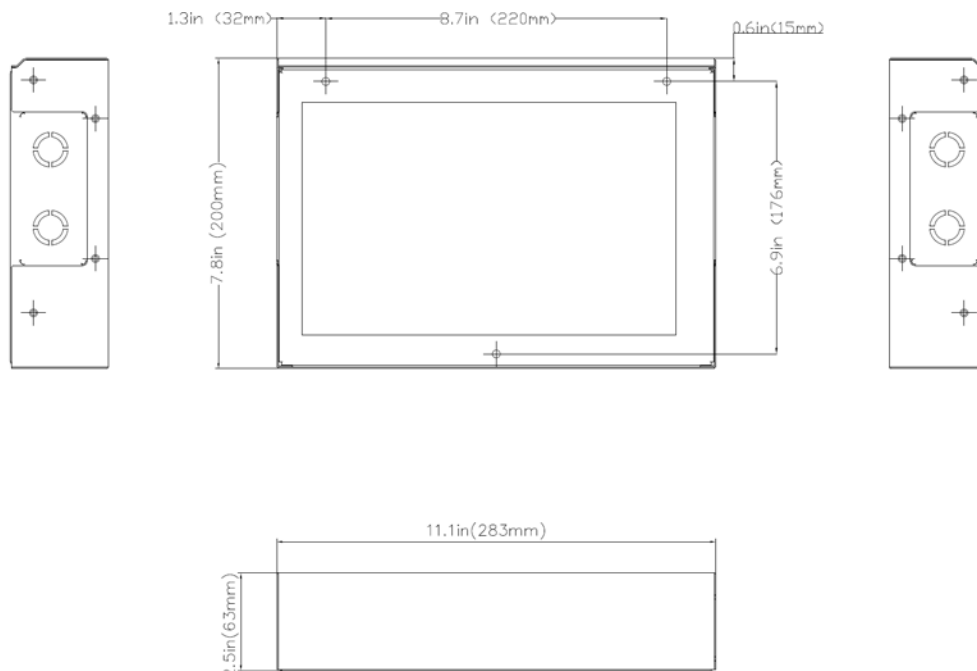
	Compatible
	Not Compatible

**Notes: The Indoor unit requires an updated control board for compatibility with the 24V Interface Kit.**  
**High Wall units starting with Serial # 4316V10001 are shipped with the compatible control board.**  
**Ducted units starting with Serial # 4616V10001 are shipped with the compatible control board.**  
**For other model numbers not shown on the table above, please contact your ductless representative.**

**\*Except size 58**

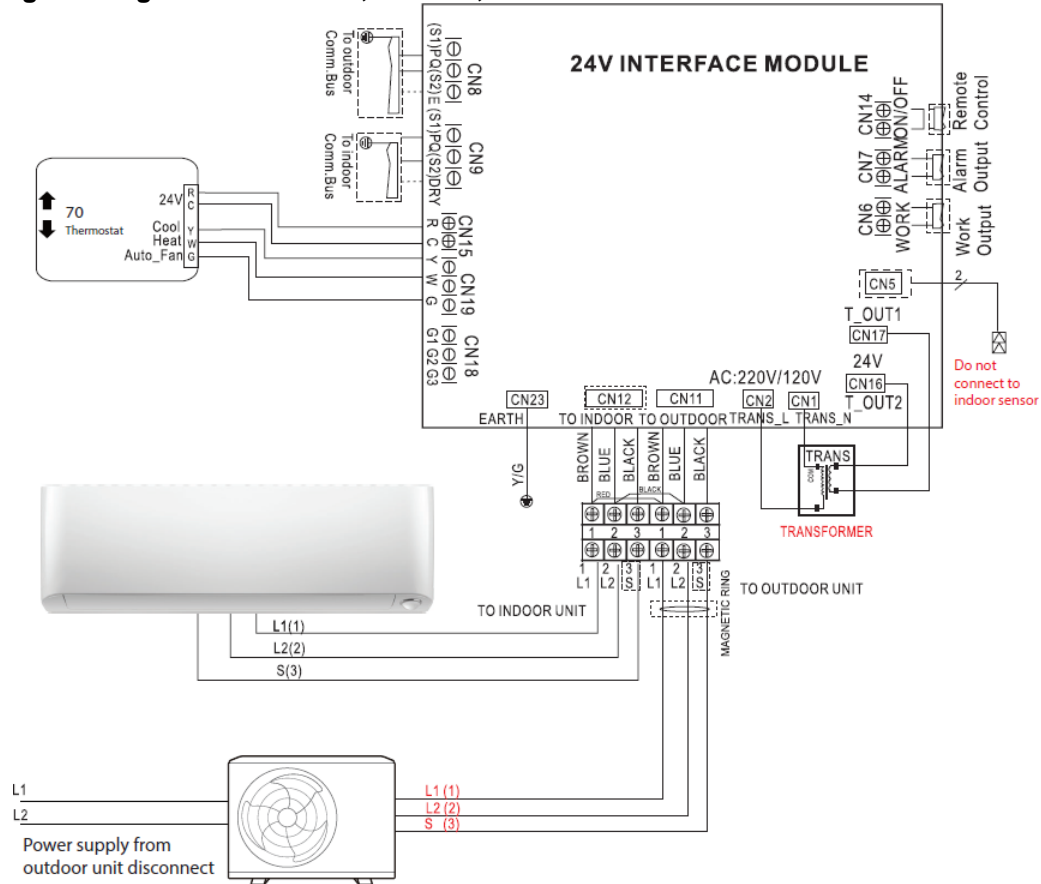
**\*\*Except sizes 12 and 58**

## Construction View

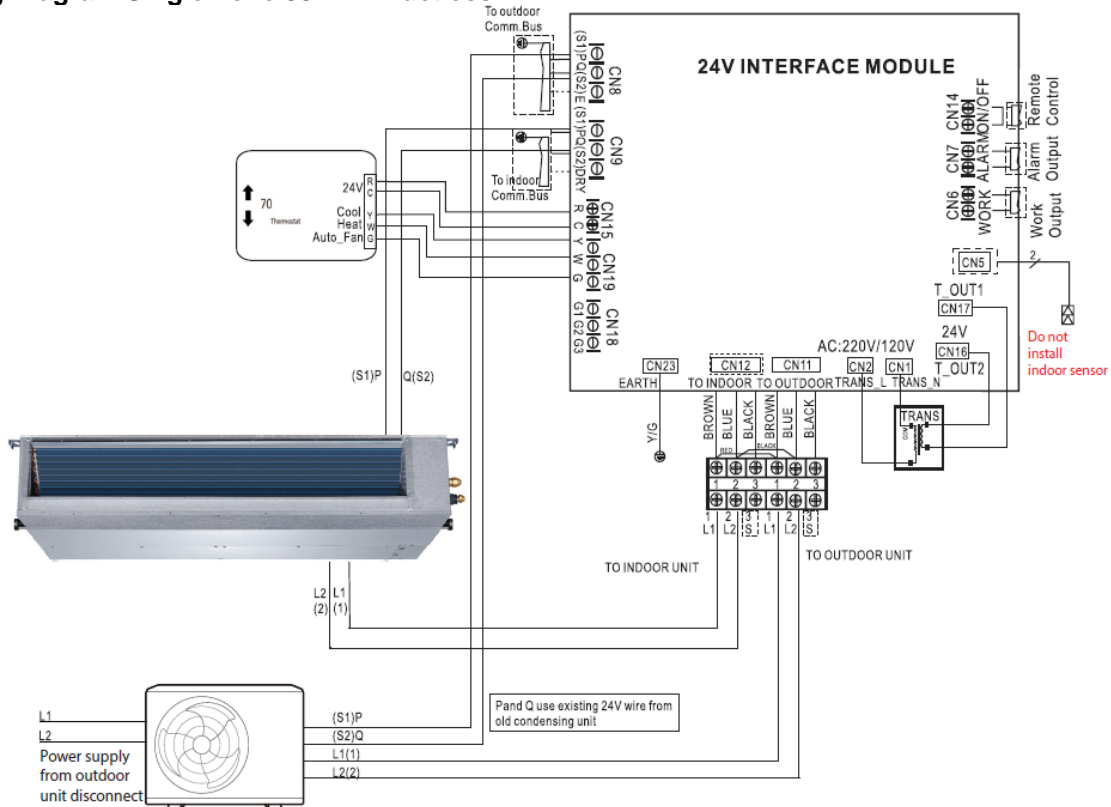


# Wiring Diagrams

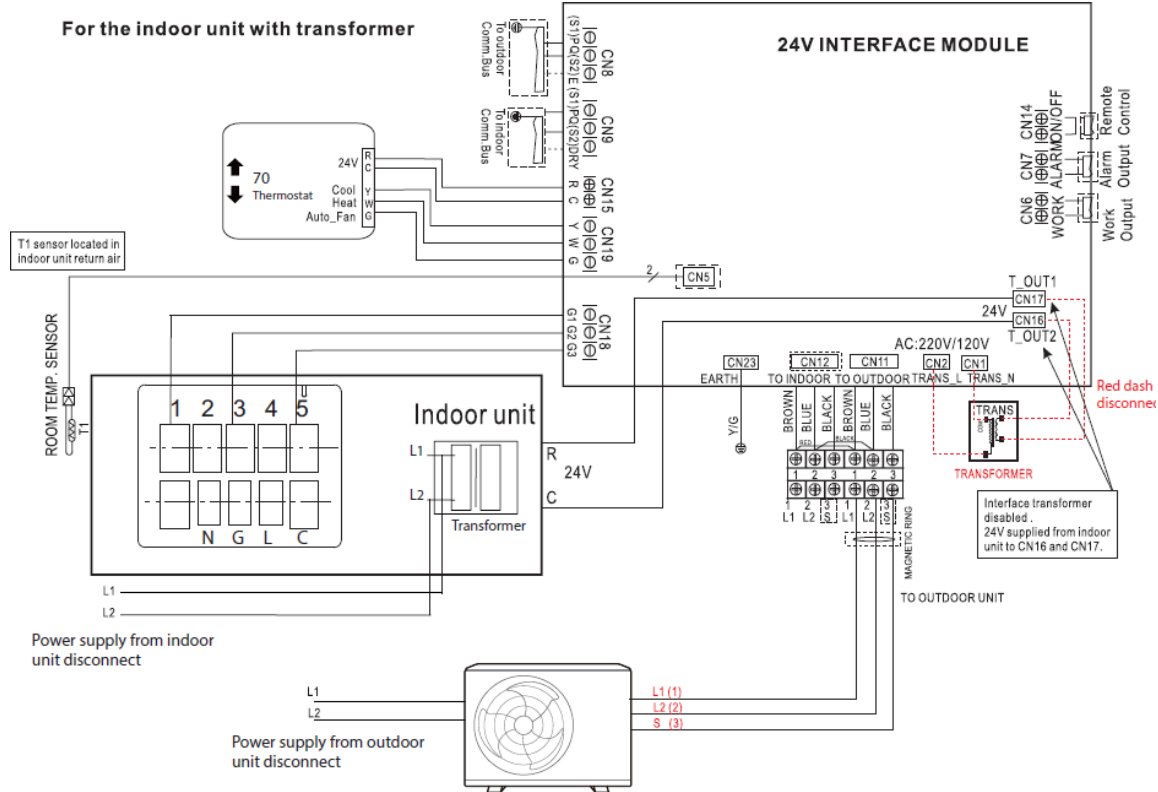
## 1. Wiring Diagram Single Zone 38MPRA, 38MA\*R, 38MHR or Multi-zone 38MGR Ductless



## 2. Wiring Diagram Single Zone 38MBR Ductless



3. Wiring Diagram Single Zone Ductless Condensing Unit 38MA\*R with an approved Fan Coil/Furnace/Cased Coil





## GOBI II

**Item Number 3004145**

The GOBI II condensate pump for direct mounting under the air conditioner is designed for systems from 6 000 BTU/h (1.75kW) up to 120 000 BTU/h (35kW). The digital water sensor, the universal voltage range and the individually configurable flow rate are features that contribute to making the Gobi II the most powerful and quietest condensate pump for air conditioning systems on the market today. The variable range of applications allows the trade as well as the installer to cover almost all needs with just one pump.

- Universal use due to wide range of applications
- Warranty period only starts with commissioning (readable via USB)
- 11 gallon pumping capacity per hour
- 65 ft delivery head
- <19 dB noise level
- No float problems thanks to digital sensor
- Demand-oriented control of the pumping capacity
- Spare parts available

## Technical Data

<b>Color</b>	signal white (RAL 9003)
<b>Standards</b>	EN 60335-1, EN 60335-2-41, UL778 CSA C22.2 #68
<b>RoHS Conformity</b>	1
<b>RoHS Conformity</b>	Yes
<b>Type</b>	Diaphragm type
<b>Operating Temperature Range</b>	41 - 104 °F
<b>Storage Temperature Range</b>	-4 - 122 °F
<b>Water Temperature Range</b>	41 - 104 °F

*Acknowledged globally*



<b>Voltage</b>	100 - 240 VAC
<b>Frequency</b>	50 / 60 Hz
<b>Protection Class</b>	I
<b>Ingression Protection</b>	IP44
<b>Energy Consumption</b>	12 W
<b>Cable Length</b>	5 ft
<b>Max. Flow Capacity</b>	11 GPH
<b>Max. Suction Head</b>	10 ft
<b>Max. Delivery Head</b>	65.6 ft
<b>Noise Level</b>	19 dB(A)
<b>Alarm Relay</b>	Interchangeable NO or NC, rated 250VAC, 6.3A or 28VDC, 6.3A
<b>Tube Diameter</b>	1/4 "
<b>Packaging</b>	Blister
<b>Scope of Supply</b>	Power cable, Alarm cable, Star tube and anti-siphon device, Screws (for mounting), Screw anchors, Factory-installed alarm fuse, Cable ties, Instruction manual

## Accessories

4678597	IN-LINE FILTER	Filter for condensate water
4679160	PVC-TUBE	Plastic tube 6 mm, 30 meters, 1/4"
4678741	AQUASWITCH	Electronic water switch, 95-254V
4678546	AQUASWITCH-24	Electronic water switch 24 V AC/DC

## Spare Parts

3004064	FIL-4064/4	Spare filter for GOBI II, 4 pieces
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*Acknowledged globally*



3004087	KIT-4087	Star tube with Siphon device
3004180	FUS-4180/10	Spare fuses for COMBI and GOBI II 6.3A, pack of 10 pieces
3004050	FUS-4050/10	Spare fuse, 10 pieces
3004065	HSG-4065/4	Siphon Device, 4 pieces

Outdoor Unit Single Zone Heat Pump Ductless System  
38MARB Submittal Selection

HP-13

Carrier

Turn to the experts

Job Data:

Location:

Carrier #:

Tag #:

Date:



Outdoor Model #	Size
38MARBQ12AA1	12K - 115V
38MARBQ06AA3	6K
38MARBQ09AA3	9K
38MARBQ12AA3	12K - 208/230V
38MARBQ18AA3	18K
38MARBQ24AA3	24K
38MARBQ30AA3	30K
38MARBQ36AA3	36K
38MARBQ36AB3	36K - AHU Only

Combination Selection	
Outdoor Unit	12K - 208/230V
Indoor Category	Ducted

**STANDARD FEATURES**

- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Quiet operation
- Anti-corrosive fin coating

**LIMITED WARRANTY\***

- 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years
- \*For residential applications. See warranty for full details.

NOTE: Images for illustration purposes only. Actual models may be slightly different.

**Specifications**

System		Outdoor - Heat Pump									
Electrical	Outdoor Size					12K - 208/230V					
	Voltage, Phase, Cycle	V/Ph/Hz				208/230-1-60					
	MCA	A.				15					
	Recommended Fuse Size	A.				15					
	MOCP - Fuse Rating	A.				15					
Operating Range	Short Circuit Current Rating (SCCR)	kA				2.4					
	Cooling Outdoor DB Min - Max	°F(°C)				-22-122 (-30-50)					
	Heating Outdoor DB Min - Max	°F(°C)				-22-86 (-30-30)					
Piping	Total Piping Length	ft (m)				82 (25)					
	Piping Lift	ft (m)				32 (10)					
	Pipe Connection Size - Liquid	in (mm)				1/4 (6.35)					
	Pipe Connection Size - Suction	in (mm)				1/2 (12.7)					
Refrigerant	Refrigerant Type					R410A					
	Charge	lbs (kg)				2.6 (1.18)					
	Add'l Refrigerant (between Std & Max Piping Lngths)	Oz/ft (g/m)				0.161 (15)					
	Metering Device					EEV					
Outdoor Coil	Face Area	Sq. Ft.				4.67					
	No. Rows					2					
	Fins per inch					20					
Compressor	Circuits					4					
	Type					Rotary Inverter					
	Model					KTN110D42UFZ					
	Oil Type					VG74					
	Oil Charge	Fl. Oz.				11.84					
Airflow & Sound	Rated Current	RLA				8.5					
	Airflow	CFM				1323.53					
	Sound Pressure	dB(A)				56					

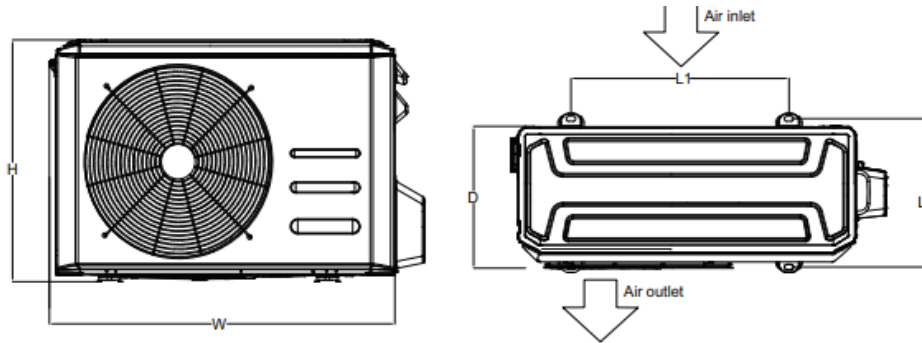
\* Condensing unit above or below indoor unit

**Performance**

Outdoor Size		12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
High Wall	Indoor Model									
	Energy Star									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								

	Outdoor Size	12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
Cassette	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Ducted	Indoor Model				12K - 208/230V					
	Energy Star				YES					
	Cooling System Tons				1					
	Cooling Rated Capacity	Btu/h			12000					
	Cooling Cap. Range Min - Max	Btu/h			2,250~14,400					
	SEER				21.5					
	EER				13					
	Heating Rated Capacity (47°F)	Btu/h			12000					
	Heating Rated Capacity (17°F)	Btu/h			8300					
	Heating Maximum Capacity (17°F)	Btu/h			12900					
	Heating Maximum Capacity (5°F)	Btu/h			12400					
	Heating Cap. Range Min - Max	Btu/h			1,800~16,300					
	HSPF				11.5					
	COP (47°F)	W/W			3.52					
	COP (17°F)	W/W			2					
	COP (5°F)	W/W			1.87					
Mix Match Ducted	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Console	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								
Air Handler	Indoor Model									
	Energy Star									
	Cooling System Tons									
	Cooling Rated Capacity	Btu/h								
	Cooling Cap. Range Min - Max	Btu/h								
	SEER									
	EER									
	Heating Rated Capacity (47°F)	Btu/h								
	Heating Rated Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (17°F)	Btu/h								
	Heating Maximum Capacity (5°F)	Btu/h								
	Heating Cap. Range Min - Max	Btu/h								
	HSPF									
	COP (47°F)	W/W								
	COP (17°F)	W/W								
	COP (5°F)	W/W								

Outdoor Size	12K - 115V	6K	9K	12K - 208/230V	18K	24K	30K	36K	36K - AHU Only
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Size					12K - 208/230V					
Width (W)	in (mm)				31.69 (805)					
Height (H)	in (mm)				21.81 (554)					
Depth (D)	in (mm)				12.99 (330)					
L1	in (mm)				20.1 (511)					
L2	in (mm)				12.5 (317.2)					
Operating Weight	lbs (kg)				73.63 (33.4)					
Shipping Width	in (mm)				36.02 (915)					
Shipping Height	in (mm)				24.21 (615)					
Shipping Depth	in (mm)				14.57 (370)					
Shipping Weight	lbs (kg)				79.37 (36)					



# Ducted Style Heat Pump Ductless System

HP-13

Indoor Model: 40MBDQ12---3

## Submittal Data

Job Data:

Location:

Buyer:  Buyer P.O. #:

Carrier #:

Unit Number:

Model Number:

Performance Data Certified By:

Date:



### STANDARD FEATURES

Modes: Cool, Heat, Dry, Fan, Auto  
Vertical or Horizontal Installation  
Rear or Bottom Return  
Outside Air Intake  
Condensate Lift pump shipped with the unit  
Follow Me (senses temperature at handheld remote)  
Heating Setback (46° F Heating Mode)  
Quiet indoor operation  
Aluminum Golden Hydrophilic pre-coated fins

### Controls:

Wireless Remote Controller included with indoor unit  
Optional Wired Remote Controller (Timer Function)  
Wired Remote Controller KSACN0501AAA (7 Day programmable) included with indoor unit

### LIMITED WARRANTY\*

• 10 year limited to original purchaser on compressor and parts upon timely registration, otherwise 5 years

\*For residential applications. See warranty for full details.

System	Size		12
	Indoor Model		40MBDQ12---3
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply	Powered from outdoor unit	
	MCA	A.	1.11
Controls	Wireless Remote Controller (°F/°C Convertible)		Standard
	Wired Remote Controller (°F/°C Convertible)		Standard
Operating Range	Cooling Indoor DB Min -Max	° F (° C)	62~90 (17~32)
	Heating Indoor DB Min -Max	° F (° C)	32~86 (0~30)
Piping	Pipe Connection Size - Liquid	in (mm)	1/4 (6.35)
	Pipe Connection Size - Suction	in (mm)	1/2 (12.7)

Indoor Coil	Face Area	Sq. Ft.	1.18
	No. Rows		3
	Fins per inch		18
	Circuits		3
Indoor	Unit Width	in (mm)	27.56 (700)
	Unit Height	in (mm)	7.87 (200)
	Unit Depth	in (mm)	19.92 (506)
	Net Weight	lbs (kg)	43.56 (19.8)
	Number of Fan Speeds		3
	Airflow (lowest to highest)	CFM	176/282/353
	Sound Pressure (lowest to highest)	dB(A)	35/37/39
	Max Static Pressure	In.WG.	0.2
	Field Drain Pipe Size O.D.	in (mm)	1 (25.4)

For Compatibility See Product Data

Performance may vary based on the outdoor unit matched to. See compatible outdoor units pages for Performance Data.

## Accessories

KSACN0101AAA	Optional Wired Remote Control with Timer Function
KSACN0501AAA	Shipped with the unit Wired Remote Control 7 day Programmable
KSAIF0401AAA	Wi-Fi™ Kit
KSAIC0101230	24V Interface Kit 208/230V
53DS-900---008	Insulated 25' Line Set - 1/4" x 3/8"
53DS-900---090	Wireless Remote Control Locking Mount Kit

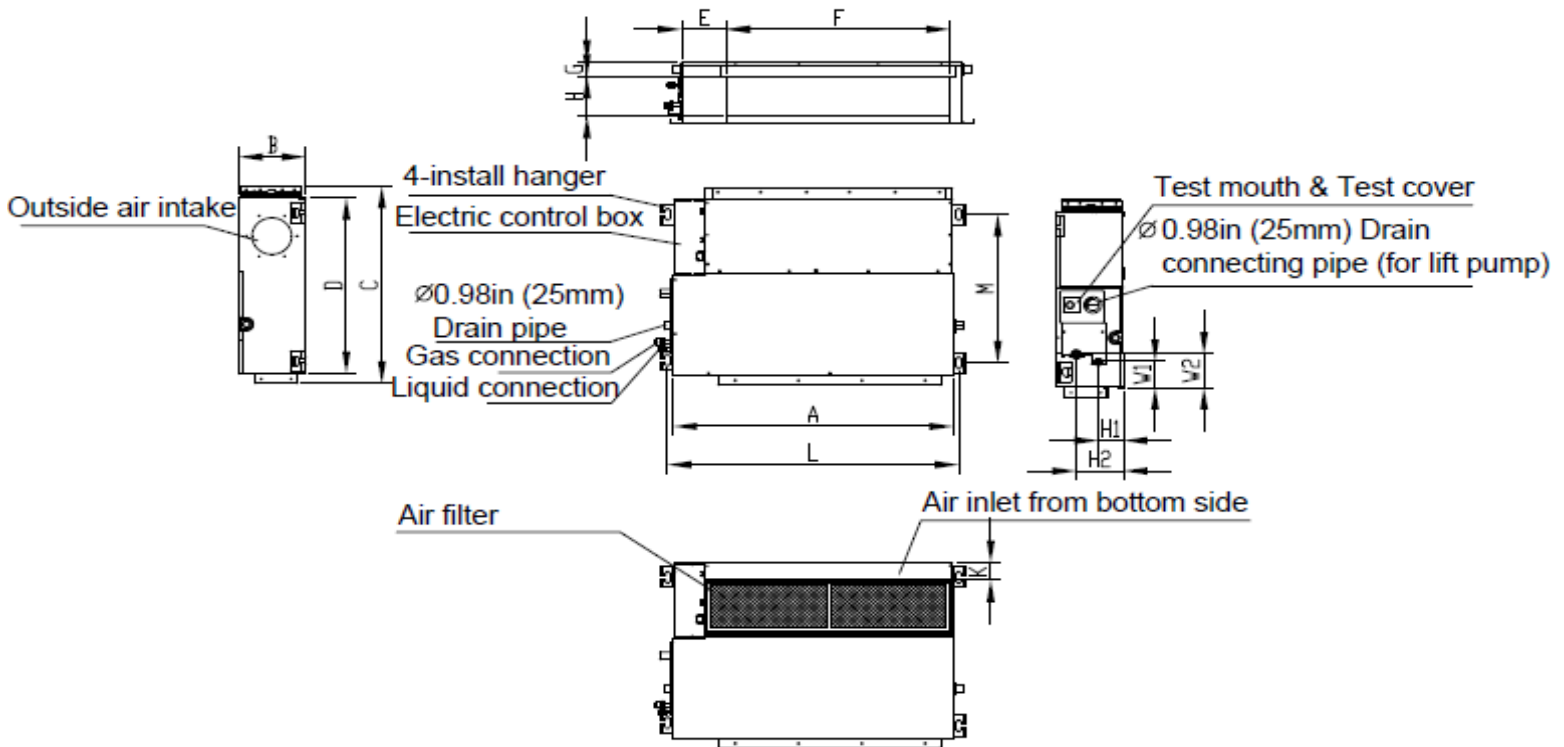
# Construction View

Indoor Model:

40MBDQ12---3


Air filter

Air inlet from rear side



		Unit	inch	mm
OUTLINE	DIMENSIONS	A	27.6	700
		B	7.9	200
		C	19.9	506
		D	17.7	450
AIR OUTLET	OPENING SIZE	E	5.4	137
		F	21.1	537
		G	1.2	30
		H	6	152
AIR RETURN	OPENING SIZE	I	23.6	599
		J	7.3	186
		K	2	50
HANGER	BRACKERS	L	29.2	741
		M	14.2	360
REFRIGERANT PIPE	LOCATIONS	H1	3.3	84
		H2	5.5	140
		W1	3.3	84
		W2	3.3	84
OPERATING WEIGHT	lb (kg)		40	18.1



 <b>MicroMetl</b>	<b>DATE:</b> 06/2020	<b>WEIGHT (LBS):</b> SEE TABLE	<b>DESCRIPTION:</b> FILTER BOX FOR CARRIER 40MBDQ18-58 SERIES	<b>PART NUMBER:</b> <b>FS-40MBDQ** SERIES</b>
<b>SUBMITTED TO:</b>	<b>COMPANY:</b> MMC	<b>JOB NAME:</b> Job Name	<b>APPROVED BY:</b> <b>DATE:</b>	

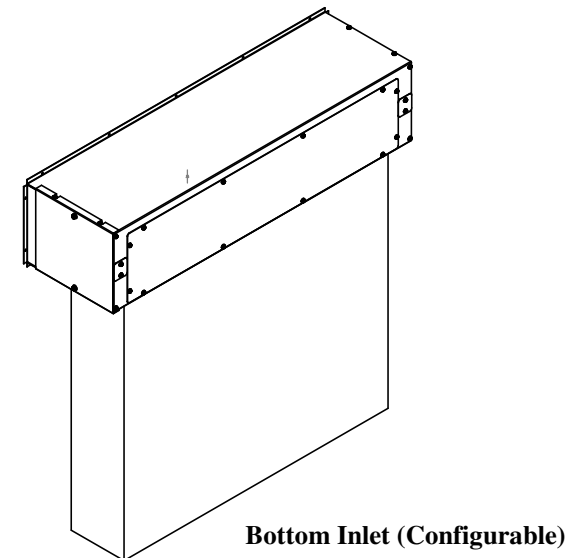
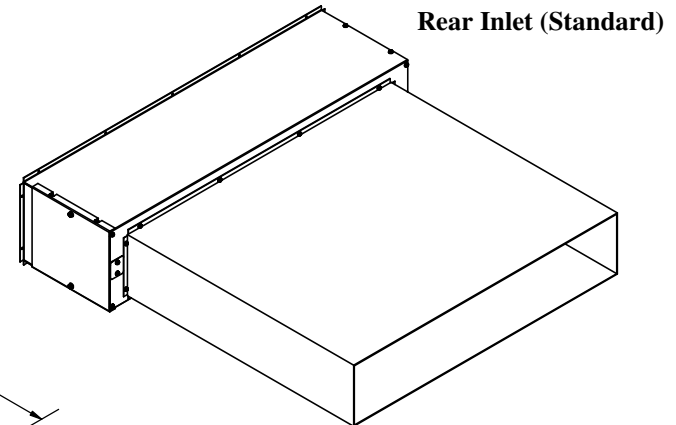
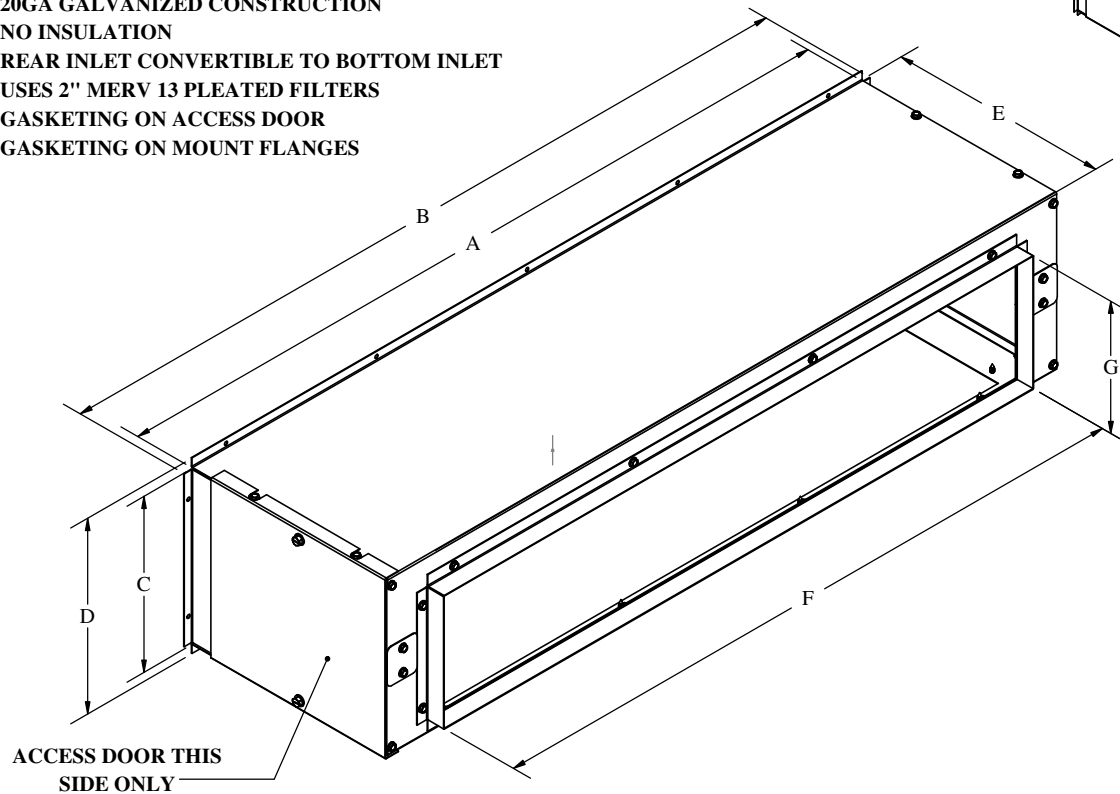
**FOR MODEL NUMBER:** SE TABLE BELOW

DETAILS: SEE TABLE BELOW

MMC Part #	Carrier unit	Filter Box Dimensions							Filters provided by MMC (MERV 13)	Weight
		A"	B"	C"	D"	E"	F"	G"		
FS-40MBDQ0912	40MBDQ09, 12	23.600	24.600	7.300	8.300	12.625	20.076	5.140	(1) 12" x 20" x 2"	14 lbs
FS-40MBDQ18	40MBDQ18	30.730	31.730	7.480	8.480	12.025	20.076	5.244	(1) 12" x 25" x 2"	17 lbs
FS-40MBDQ24	40MBDQ24	39.410	40.410	8.980	9.980	11.500	34.696	6.744	(2) 12" x 20" x 2"	21 lbs
FS-40MBDQ36	40MBDQ36	49.650	50.650	8.980	9.980	11.500	44.936	6.744	(2) 12" x 25" x 2"	25 lbs
FS-40MBDQ48	40MBDQ48	43.350	44.350	11.020	12.020	11.500	38.636	6.375	(2) 12" x 20" x 2"	24 lbs
FS-40MBDQ58	40MBDQ58	46.540	47.540	11.020	12.020	12.250	41.826	7.500	(1) 14" x 20" x 2" & (1) 14" 25" x 2"	25 lbs

### FEATURES

- 20GA GALVANIZED CONSTRUCTION
- NO INSULATION
- REAR INLET CONVERTIBLE TO BOTTOM INLET
- USES 2" MERV 13 PLEATED FILTERS
- GASKETING ON ACCESS DOOR
- GASKETING ON MOUNT FLANGES



### NOTES: SPECIAL NOTES

Openings and dimensions may vary from contract. An order constitutes acceptance of these variances.

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# AP-Thirteen

High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements



The Camfil AP-Thirteen extended surface pleated filter offers filtration for applications that have 1", 2" or 4" deep filter tracks. The AP-Thirteen is a MERV 13 filter when evaluated per ASHRAE Standard 52.2 and meets the requirements for minimum filtration efficiency, as published in LEED manuals for new or existing buildings. The AP-Thirteen may reduce the size of the HVAC system, saving valuable mechanical area floor space. It also simplifies the upgrading of in-place systems, allowing existing units to meet LEED requirements without major equipment modification.

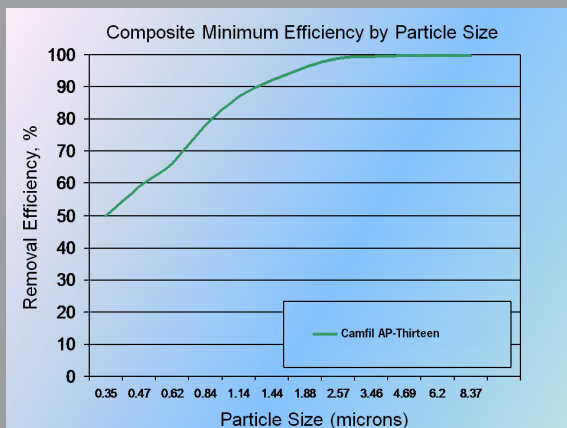
Standard pleated filters remove nuisance dusts, lint and contaminants associated with staining, and are primarily designed to protect equipment and act as prefilters. As a stand-alone filter, the AP-Thirteen will perform these tasks and removes sub-micron particles, defined as lung-damaging by cognizant authorities. The AP-Thirteen, according to filtration application design manuals, can be used as the only filter for special process areas, electrical shops, paint shops, average general offices and laboratories. Other applications include analytical laboratories, electronics shops, drafting areas, conference rooms, and above-average general offices.

Built for today's HVAC systems, the AP-Thirteen:

- Has 16 pleats per linear foot on 1", 15 pleats per linear foot on 2" and 11 pleats per linear foot on 4" nominal depths. The radial pleat design ensures full use of media area and a longer filter life.
- Includes a synthetic fiber blend with a unique media loft that provides high efficiency ASHRAE MERV 13 performance and high dust-holding capacity.
- Has a welded wire media grid backing, treated for corrosion resistance, preventing media oscillation or filter pack failure as filter pressure drop increases.
- Has a high wet-strength beverage board frame that creates a rigid and durable filter pack. The AP-Thirteen will not bow or deflect.

These combined features allow the AP-Thirteen to outlast other MERV 13 pleated panels by a factor of 20% or more resulting in the lowest total cost of ownership (TCO).

High efficiency filtration meeting the needs for a 1", 2" or 4" deep MERV 13 pleated panel for LEED facility certification.



The efficiency chart above is extrapolated from particle size versus efficiency information when evaluated per ASHRAE Standard 52.2.

<sup>1</sup> LEED, Leadership in Energy and Environmental Design is a registered trademark of the United States Green Building Council.





# AP-Thirteen

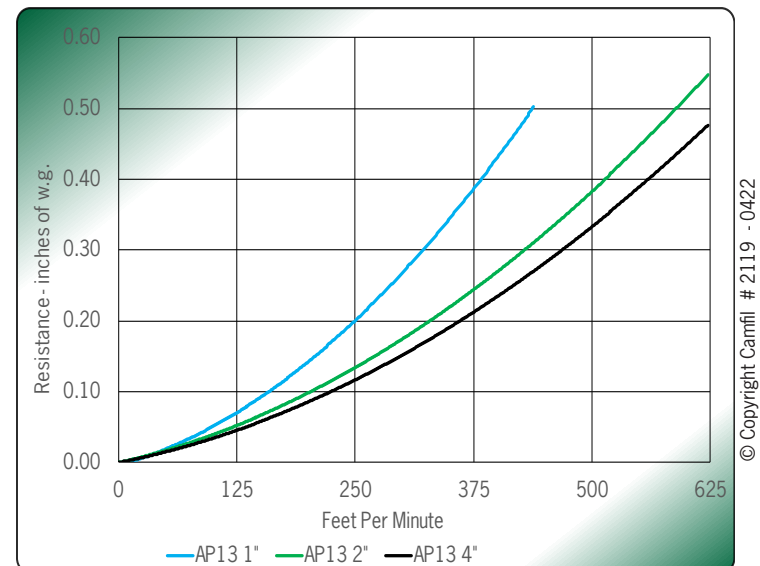
High Efficiency, High-Capacity, Pleated Panel Filter for Meeting LEED<sup>1</sup> Requirements

## Performance Data

1" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
16 Pleats per Lin. Ft.	406769001	20x16	0.36"	770	5.4
	406769002	20x20		970	6.7
	406769003	25x20		1210	8.5
	406769004	25x16		970	6.7
	406769005	24x24		1400	9.8
	406769006	20x14		680	4.7
	406769007	24x20		1160	8.1
	406769008	20x15		720	5.0
	406769009	24x12		700	4.8
	406769010	24x16		930	6.5
	406769011	25x14		850	5.9
	406769012	20x10		480	3.3
	406769013	25x25		1510	10.7
	406769014	25x18		1090	7.6
	406769016	16x16		620	4.3
	406769018	20x12		580	4.0
	406769019	20x18		870	6.1
	406769020	22x22		1170	8.2
	406769021	24x10		580	4.0
	406769022	25x10		600	4.1
	406769023	25x12		720	5.0
	406769024	25x15		910	6.3
	406769026	24x14		810	5.6
	406769027	16x12		460	3.2
	406769028	24x18		1050	7.3
	406769029	20x30		1450	10.2
	406769030	18x14		615	4.2

4" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
11 Pleats per Lin. Ft.	405414001	24x24	0.36"	2000	27.5
	405414002	24x12		1000	13.4
	405414003	20x20		1380	18.9
	405414004	20x16		1110	15.0
	405414005	25x16		1380	18.9
	405414006	25x20		1730	23.8
	405414007	24x20		1660	22.8
	405414008	24x18		1500	20.4
	405414009	24x16		1330	18.1
	405414013	16x25		1380	18.9
	405414014	20x24		1660	22.8
	405414015	20x25		1730	23.8

2" Nominal Depth	Part Numbers	Nominal Size (inches)	Initial Resistance (inches, w.g.)	Airflow Capacity (cfm)	Total Media Area (sq ft)
15 Pleats per Lin. Ft.	405413001	20x16	0.41"	1110	9.6
	405413002	20x20		1380	12.0
	405413003	25x20		1730	15.1
	405413004	25x16		1380	12.0
	405413005	24x24		2000	17.3
	405413006	24x12		1000	8.4
	405413007	24x20		1660	14.5
	405413008	24x18		1500	13.0
	405413009	25x18		1560	13.6
	405413010	20x14		970	8.3
	405413011	25x14		1210	10.5
	405413012	24x16		1330	11.5
	405413013	25x25		2170	19.0
	405413014	20x12		830	7.1
	405413015	20x10		690	5.9
	405413016	16x16		880	7.6
	405413017	20x15		1040	8.9
	405413018	20x18		1250	10.8
	405413019	25x15		1300	11.2
	405413020	16x25		1380	12.0
	405413021	20x24		1660	14.5
	405413022	20x25		1730	15.1
	405413023	20x30		2080	18.2



DATA NOTES:  
 1.0" w.g. recommended maximum final resistance. System design may dictate a lower change-out point. The AP-Thirteen filter is classified by Underwriters Laboratories as UL 900.  
 Maximum operating temperature 175° F. (79° C).



Certified Quality System

For detailed specifications and exact height, width and depth of each size, consult your local Camfil Distributor, Representative or

[www.camfil.com](http://www.camfil.com) or [AP-Thirteen](#)

Camfil has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

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## 24V Interface Kit 2<sup>nd</sup> Generation Ductless Systems

HP-13

Model: KSAIC0301230 (208-230V)

# Submittal Data

Job Data: \_\_\_\_\_ Location: \_\_\_\_\_

Buyer: \_\_\_\_\_ Buyer P.O. #: \_\_\_\_\_ Carrier #: \_\_\_\_\_

Unit Number: \_\_\_\_\_ Model Number: \_\_\_\_\_

Performance Data Certified By: \_\_\_\_\_ Date: \_\_\_\_\_



The 24V INTERFACE KIT 2<sup>nd</sup> Generation is used to connect:

- A **SINGLE ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **MULTI-ZONE** Ductless System to a 3rd party single stage conventional thermostat (sold separately) providing AUTO fan speed on the indoor unit.
- A **SINGLE ZONE** Ductless Condensing Unit with an approved Fan Coil/Furnace/Cased Coil and a third party single stage conventional thermostat (sold separately) allowing up to 3 different fan speeds on the indoor unit.

### Features

- **AUTO Fan speed** on Single Zone and Multi-zone on Ductless applications
- **Up to 3 Fan speeds** on Single Zone Ductless Outdoor matched with Multi-family Fan Coils, Furnace/Cased Coils applications.
- One 24V INTERFACE KIT per indoor head
- Keeps the Inverter Compressor operating as a Variable Speed System
- Rated for outdoor and indoor mounting
- Dry mode contact for active dehumidification control
- Remote ON/OFF contact
- Auxiliary Heat control through the thermostat
- Diagnostic code display LEDs
- 208/230V Transformer Built-in

### Parts included

- 24V INTERFACE Control Box
- Installation manual
- Wall anchors
- Screws M4X20mm
- •16.4ft. (5m) Return Air Thermistor Assembly required and installed near or on the unit and on the air inlet side

### Accessories, Sold Separately

- ☐ 115V transformer RCD# 11203103000393, used only on ductless systems with 115V power.
- ☐ Piping Adaptor Kit RCD# 331831-701, used ONLY on Multifamily applications with the FMA4, FMC and FMU fan coils to facilitate piping installation when removing the TXV kit from the indoor unit

# Compatibility

The 24V INTERFACE KIT is compatible with most thermostats matched with the Ductless Systems listed below. Before installation, check the compatibility of your Ductless System. Professional installation is recommended.

Type of Indoor unit	Indoor Family Name	Single Zone Outdoor Family Name	Multi-zone Outdoor Family Name	208/230V
HIGH WALL	40MPHA	38MPRA	38MGR	All Sizes
	619PHA	38MPRA	38MGR	All Sizes
	DHMPHA	38MPRA	38MGR	All Sizes
	40MAQ	38MA*R	38MGR	All Sizes
	619P*B	38MA*R	38MGR	All Sizes
	DHMSHA	38MA*R	38MGR	All Sizes
	40MHH	38MHR	38MGR	All Sizes
CASSETTE	40MBCQ	38MA*R	38MGR	All Sizes
DUCTED	40MBDQ	38MA*R	38MGR	All Sizes Except size 58
CONSOLE	40MBFQ	38MA*R	38MGR	All Sizes Except sizes 12 and 58
VERTICAL FAN COIL	FMA4	38MA*R		Sizes 12 to 36
CASED HORIZONTAL FAN COIL	FMC4	38MA*R		Sizes 12 to 36
UNCASED HORIZONTAL FAN COIL	FMU4	38MA*R		Sizes 12 to 36

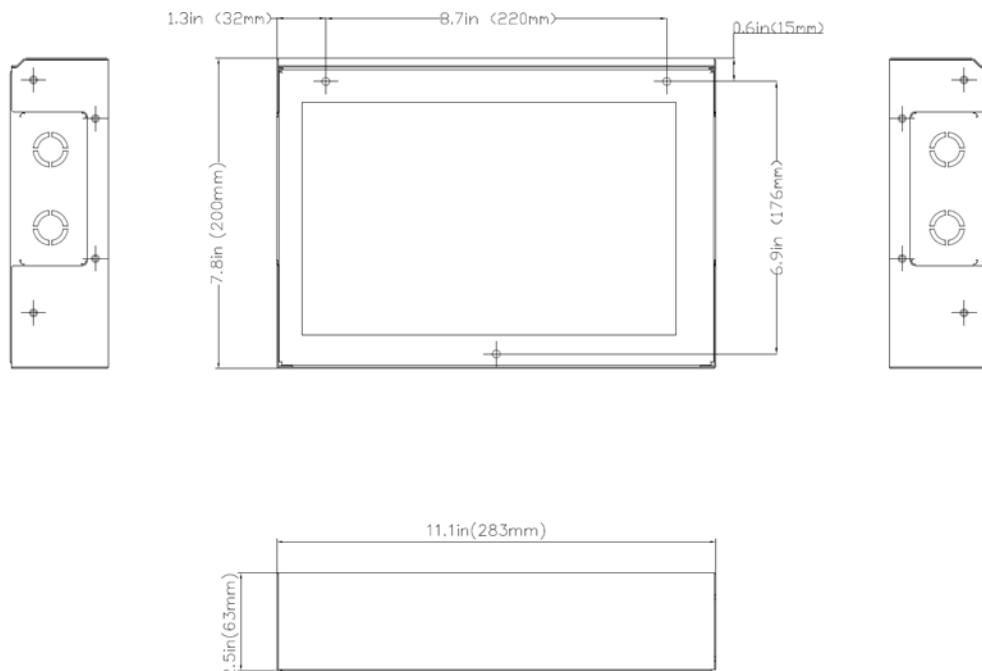
	Compatible
	Not Compatible

**Notes:** The Indoor unit requires an updated control board for compatibility with the 24V Interface Kit.  
High Wall units starting with Serial # 4316V10001 are shipped with the compatible control board.  
Ducted units starting with Serial # 4616V10001 are shipped with the compatible control board.  
For other model numbers not shown on the table above, please contact your ductless representative.

\*Except size 58

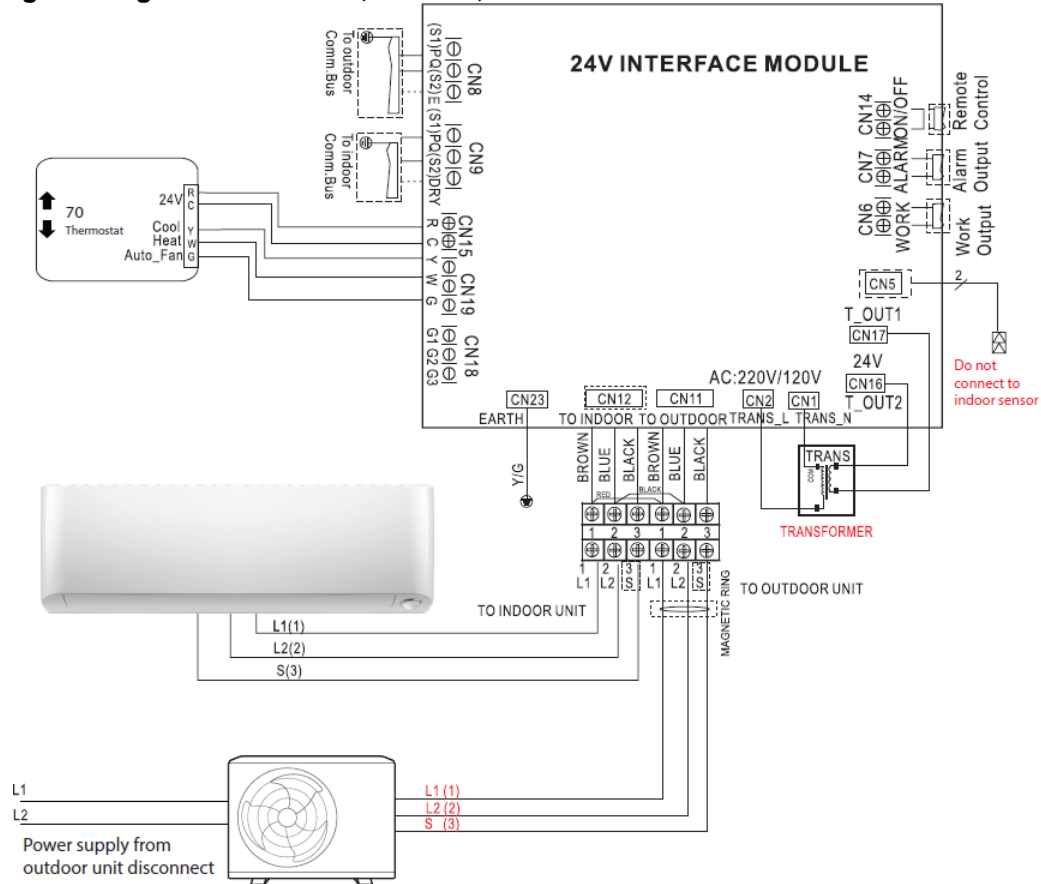
\*\*Except sizes 12 and 58

## Construction View



# Wiring Diagrams

## 1. Wiring Diagram Single Zone 38MPRA, 38MA\*R, 38MHR or Multi-zone 38MGR Ductless



## 2. Wiring Diagram Single Zone 38MBR Ductless

