



Submittal Review:

Project Name: SHAKE SHACK Montgomeryville

Project No. 2021-503

Submittal Name RTU-2

Submittal No. 1

Spec Section:

SRW Engineering & Architecture PLLC

NOTATIONS DO NOT AUTHORIZE CHANGES TO CONTRACT SUM

- | | |
|--|--|
| <input type="checkbox"/> NO EXCEPTIONS TAKEN | <input checked="" type="checkbox"/> PROVIDE AS CORRECTED |
| <input type="checkbox"/> REVISE AND RESUBMIT | <input type="checkbox"/> REJECTED |

REVIEWED FOR GENERAL CONFORMANCE ONLY

This review is for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Corrections or comments made during this review do not relieve the Contractor from compliance with the requirements of the Contract Documents, nor shall they act as a Construction Change Directive or authorization to proceed with additional work. Review is not for the purpose of determining the accuracy and completeness of details and information including, but not limited to; dimensions, quantities, instructions for installation, performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. Review does not constitute approval of safety precautions and/or construction means, methods, techniques, sequences or procedures. Approval of a specific item shall not indicate approval of an assembly of which the item is a component.

DATE: 09-07-2021

BY: CB

Accepted: SRW Engineering & Architecture



SUBMITTAL

Project

Shake Shack - 1378 - Montgomeryville, PA

Date

Wednesday, June 30, 2021

EXCLUSIONS and/or CLARIFICATIONS:

- Quoted RTU is out of stock and lead time is 7 weeks. Lead time is subject to change prior to sale.
- Ductless units are out of stock and lead time is 130 days. Lead time is subject to change prior to sale.
- No MERV filters provided, to be provided by contractor
- Thermostats, humidistats and temp sensors not included, to be provided by contractor
- Non-fused disconnects provided for RTUs
- Roof curbs provided.
- Please verify submittal for all units meets required staging and circuiting among other necessary design attributes

PROVIDE WITH VFD

INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING EQUIPMENT BEING SUPPLIED MATCHES FINAL BID DOCUMENTS and/or REPLACEMENT EQUIPMENT NEEDED FOR STORE (i.e. voltage, size, etc). Carrier will not be responsible for installation and/or removal of any incorrect units. Please report any discrepancies immediately.

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Prepared By:

06/30/2021
03:49PM

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RTU-2

**Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report**

Unit Report For RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
 Prepared By:

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Unit Parameters

Unit Model:..... **48HCEE12A2A5-DR2J0**
 Unit Size:..... **12 (10 Tons (11.5 EER))**
 Volts-Phase-Hertz:..... **208-3-60**
 Heating Type:..... **Gas**
 Duct Cfg:..... **Vertical Supply / Vertical Return**
 Medium Heat
 Two stage cooling models with Humidi-MiZer

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

Unit Length:..... **7' 4.125"**
 Unit Width:..... **4' 11.5"**
 Unit Height: **4' 1.375"**
 *** Total Operating Weight: **2118 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:..... **16x16x2**

Unit Configuration

Medium Static Option - Belt Drive
 Al/Cu - Al/Cu
 ComfortLink (Standard with EnergyX)
 EnergyX and Enthalpy Economizer
 Powered Convenience Outlet
 Non-Fused Disconnect
 Standard Packaging
 2-Speed indoor fan motor controlled by VFD
 Humidi-MiZer™ Adaptive Dehumidification System

Warranty Information

1-Year parts
 5-Year compressor parts
 10-Year heat exchanger - Aluminized

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
48HCEE12A2A5-DR2J0	Rooftop Unit	1
	Base Unit	
	Medium Static Option - Belt Drive	
	Powered Convenience Outlet	
	Humidi-MiZer™ Adaptive Dehumidification System	
	EnergyX System ComfortLink controls and Enthalpy Bypass Damper (Vertical Supply and Return air duct	
	2 Speed Fan Controller (VFD) and Non-Fused Disconnect	
	Accessories	
CRSTATUS007A00	Filter status indicator switch	1
CRRFCURB003A01	14-inch Tall Roof Curb	1

BMS INTERFACE CARD

Certified Drawing for RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
 Prepared By:

06/30/2021
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NOTES:

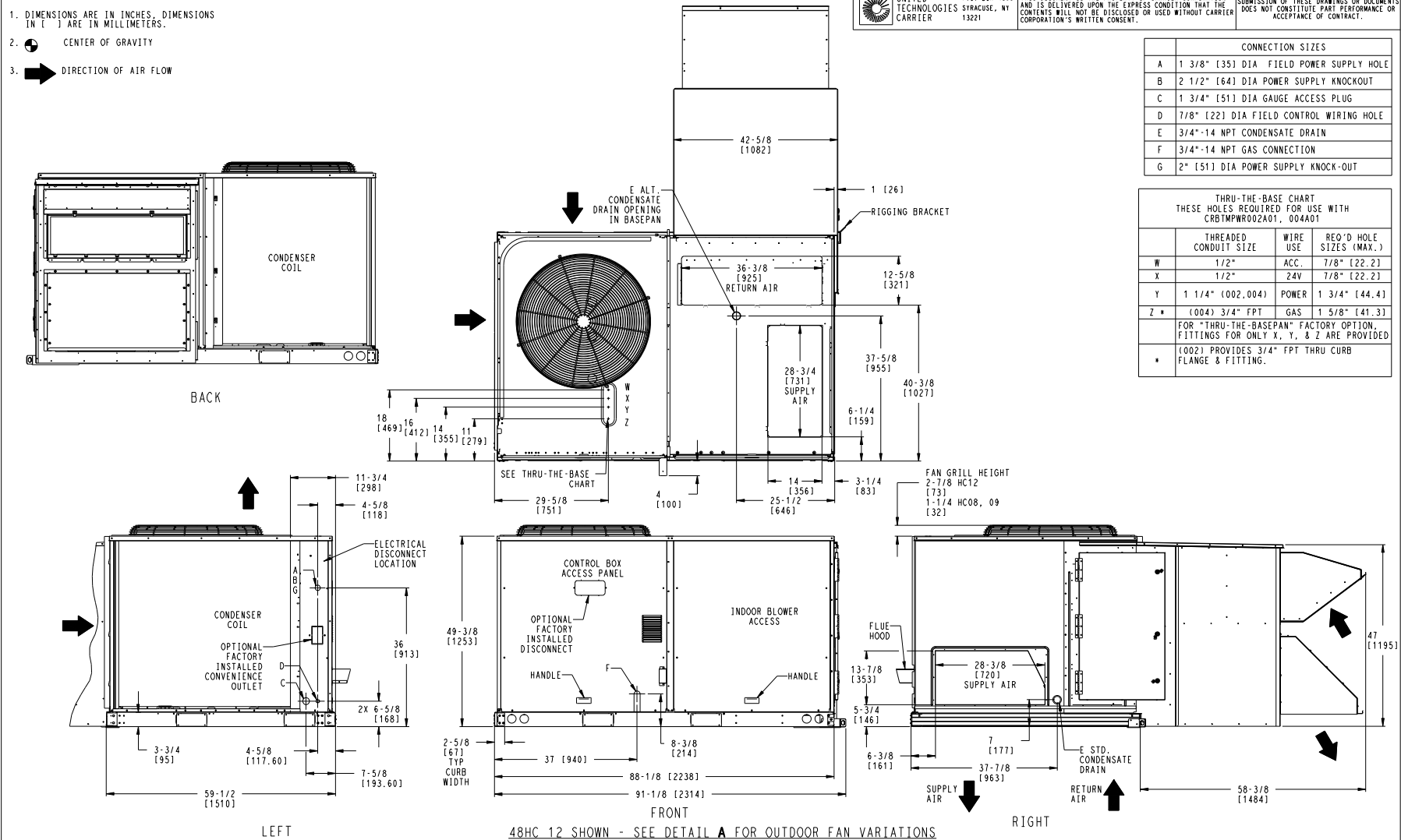
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW

UNITED TECHNOLOGIES CARRIER	P.O. BOX 4808 SYRACUSE, NY 13221	THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.	SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.
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CONNECTION SIZES			
A	1 3/8" [35]	DIA	FIELD POWER SUPPLY HOLE
B	2 1/2" [64]	DIA	POWER SUPPLY KNOCKOUT
C	1 3/4" [51]	DIA	GAUGE ACCESS PLUG
D	7/8" [22]	DIA	FIELD CONTROL WIRING HOLE
E	3/4"-14	NPT	CONDENSATE DRAIN
F	3/4"-14	NPT	GAS CONNECTION
G	2" [51]	DIA	POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE WITH CRBTMPW002A01, 004A01			
THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
W	1/2"	ACC.	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y	1 1/4" [002,004]	POWER	1 3/4" [44.4]
Z *	(004) 3/4" FPT	GAS	1 5/8" [41.3]

FOR "THRU-THE-BASEPAM" FACTORY OPTION FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED
 * (002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.



48HC 12 SHOWN - SEE DETAIL A FOR OUTDOOR FAN VARIATIONS

SHEET 1 OF 2	DATE 09/29/14	SUPERCEDES 03/30/12	48HC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT AND ERV	48TM504187	REV B
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Certified Drawing for RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
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06/30/2021
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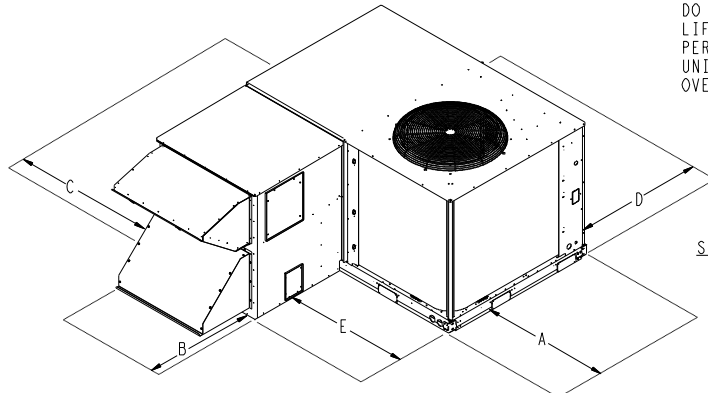
UNIT	ERV	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48HC-D08	HIGH CFM	1794	815	598	272	946	430	153	70	97	44	54 (1371)	8 1/4 (211)	22 7/8 (582)
48HC-D09	HIGH CFM	1794	815	598	272	946	430	153	70	97	44	54 (1371)	8 1/4 (211)	22 7/8 (582)
48HC-D11	HIGH CFM	1959	890	773	352	849	386	176	80	161	73	46 1/8 (1171)	10 1/4 (260)	20 3/4 (528)
48HC-D12	HIGH CFM	1959	890	773	352	849	386	176	80	161	73	46 1/8 (1171)	10 1/4 (260)	20 3/4 (528)
48HC-D08	LOW CFM	1583	718	467	212	732	332	234	106	149	68	53 7/8 (1367)	14 3/8 (367)	23 (584)
48HC-D09	LOW CFM	1583	718	467	212	732	332	234	106	149	68	53 7/8 (1367)	14 3/8 (367)	23 (584)
48HC-D11	LOW CFM	1748	793	690	313	758	344	157	71	144	65	45 (1142)	16 (406)	21 3/4 (551)
48HC-D12	LOW CFM	1748	793	690	313	758	344	157	71	144	65	45 (1142)	16 (406)	21 3/4 (551)

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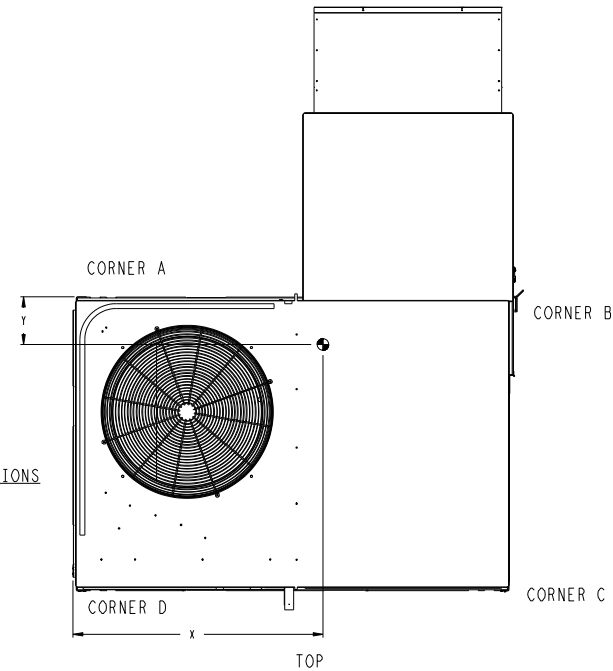
* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING. FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

NOTE:
 UNIT IS NOT DESIGNED TO HAVE OVERHEAD OBSTRUCTION. CONTACT APPLICATION ENGINEERING FOR GUIDANCE ON ANY APPLICATION PLANNING OVERHEAD OBSTRUCTION OR FOR VERTICAL CLEARANCES.

WARNING:
 DO NOT LIFT UNIT THROUGH FORK LIFT OPENINGS IN UNIT BASERAIL. PER RIGGING LABEL INSTRUCTIONS, UNIT MUST BE LIFTED BY AN OVERHEAD LIFTING DEVICE

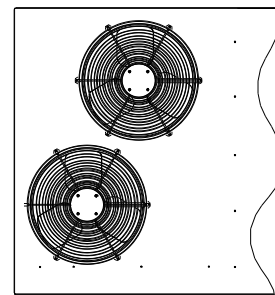


48HC 12 SHOWN -
 SEE DETAIL A FOR OUTDOOR FAN VARIATIONS

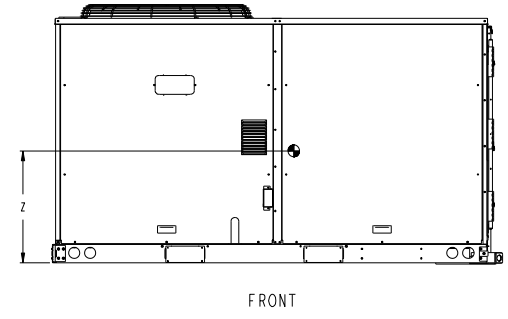


CLEARANCES

LOCATION	DIMENSION	CONDITION
A	48 (1219)	UNIT DISCONNECT IS MOUNTED ON PANEL
	18 (457)	NO DISCONNECT, CONVENIENCE OUTLET OPTION
	18 (457)	RECOMMENDED SERVICE CLEARANCE
	12 (305)	MINIMUM CLEARANCE
B	36 (914)	RECOMMENDED SERVICE CLEARANCE
	42 (1067)	RECOMMENDED SERVICE CLEARANCE
D	48 (1219)	NO FLUE DISCHARGE ACCESSORY INSTALLED, SURFACE IS COMBUSTIBLE MATERIAL
	42 (1067)	SURFACE BEHIND SERVICER IS GROUNDED (e.g., METAL, MASONRY WALL, ANOTHER UNIT)
	36 (914)	SURFACE BEHIND SERVICER IS ELECTRICALLY NON-CONDUCTIVE (e.g., WOOD, FIBERGLASS)
	SPECIAL	CHECK FOR ADJACENT UNITS OR BUILDING FRESH AIR INTAKES WITHIN 10 FT (3 M) OF THIS UNIT'S FLUE OUTLET
E	36 (914)	RECOMMENDED SERVICE CLEARANCE



DETAIL A
 48HC 08.09



SHEET 2 OF 2	DATE 09/29/14	SUPERCEDES 03/30/12	48HC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT AND ERV	48TM504187	REV B
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Certified Drawing for RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
 Prepared By:

06/30/2021
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ROOF CURB ACCESSORY #	A	NOTES	CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRRFCURB003A01	14" [368]	1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED. 2. INSULATED PANELS: 25.4(1") THK. POLYURETHANE FOAM, 445(1.34) # DENSITY. 3. DIMENSIONS IN [] ARE IN MILLIMETERS. 4. ROOF CURB: 18 GAGE STEEL. 5. ATTACH DUCTWORK TO CURB (FLANGES OF DUCT REST ON CURB). 6. SERVICE CLEARANCE: 4 FEET ON EACH SIDE. 7. ZZZZZ DIRECTION OF AIR FLOW. 8. CONNECTOR PACKAGE CRBTMPWR002A01 IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRBTMPWR004A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.	CRBTMPWR002A01	THRU-THE-CURB	3/4" [19] NPT	1 1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRRFCURB004A01	24" [610]		CRBTMPWR004A01	THRU-THE-BOTTOM				

VIEW "B" CORNER DETAIL

SECTION THRU SIDE

SEE VIEW "B"

DRAWING RELEASE LEVEL: PRODUCTION		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:		THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS PROPRIETARY TO CARRIER CORPORATION AND SHALL NOT BE USED OR DISCLOSED TO OTHERS, IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION OF CARRIER CORPORATION.
1 DEC	2 DEC	3 DEC	ANG	
± .1	± .01	± .01	± .01	TITLE CURB ASY, ROOF
AUTHORIZATION NUMBER: 1029120				
ENGINEERING REQUIREMENTS		ENGINEERING	MANUFACTURING	SIZE: D
T-005 Y-002		DRAFTER: M.M.C.	CHECKER:	DRAWING NUMBER: 50HJ405012
WEIGHT: -		M.M.C.	12/16/09	REV: C
SURFACE FINISH: -		MODEL (INTERNAL USE ONLY)		SHEET 5 OF 5
MFG/PURCH: PURCH		NEXT DRAWING: -		SCALE: N/A
REVISION RECORD		DISTRIBUTION: -		

Performance Summary For RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
Prepared By:

06/30/2021
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Part Number:48HCEE12A2A5-DR2J0

ARI EER: **11.50**
IEER (Max Cooling at Normal Cooling Design Mode): **12.4**
CEF (Combined Efficiency): **12.03**

Base Unit Dimensions

Unit Length: **88.1** in
Unit Width: **59.5** in
Unit Height: **49.4** in

Operating Weight

Base Unit Weight: **925** lb
Medium Heat: **18** lb
Two stage cooling models with Humidi-MiZer: **85** lb
Medium Static Option - Belt Drive: **15** lb
ComfortLink (Standard with EnergyX): **10** lb
EnergyX and Enthalpy Economizer: **852** lb
Powered Convenience Outlet: **35** lb
2 Speed Fan Controller (VFD) and Non-Fused Disconnect: **35** lb

Accessories

14-inch Tall Roof Curb: **143** lb

Total Operating Weight: **2118** lb

Unit

Unit Voltage-Phase-Hertz: **208-3-60**
Air Discharge: **Vertical**
Fan Drive Type: **Belt**
Actual Airflow: **4000** CFM
Site Altitude: **30** ft

Cooling Performance

Condenser Entering Air DB: **92.0** F
Evaporator Entering Air DB: **76.8** F
Evaporator Entering Air WB: **64.6** F
Entering Air Enthalpy: **29.63** BTU/lb
Evaporator Leaving Air DB: **55.9** F
Evaporator Leaving Air WB: **54.5** F
Evaporator Leaving Air Enthalpy: **22.88** BTU/lb
Cooling Capacity (R/ERV/S): **121.40 / 5.83 / 127.23** MBH
Sensible Capacity (R/ERV/S): **90.09 / 2.57 / 92.66** MBH
Compressor Power Input: **7.83** kW
Coil Bypass Factor: **0.060**
R/ERV/S ==>: **Rooftop / EnergyX / System**

Mixed Air

Outdoor Air Airflow: **2000** CFM
Outdoor Air DB: **78.8** F
Outdoor Air WB: **66.1** F
Outdoor Air Htg. Temp.: **11.0** F
Return Air DB: **76.0** F
Return Air WB: **64.0** F
Return Air Htg. Temp.: **70.0** F
EnergyX Leaving Cooling Air DB: **77.5** F
EnergyX Leaving Cooling Air WB: **65.2** F
EnergyX Leaving Heating Air DB: **36.2** F
EnergyX Leaving Heating Air WB: **32.9** F

Heating Performance

Heating Airflow: **4000** CFM

Performance Summary For RTU-2

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Entering Air Temp:	53.1	F
Leaving Air Temp:	95.7	F
Gas Heating Input Capacity:	180.0 / 224.0	MBH
Gas Heating Output Capacity (R/ERV/S):	184.00 / 55.23 / 239.23	MBH
Temperature Rise:	42.6	F
Thermal Efficiency (%):	82.0	

Supply Fan

External Static Pressure:	0.95	in wg
Options / Accessories Static Pressure		
Humidi-MiZer Dehumidification System:	0.20	in wg
Economizer:	0.20	in wg
Total Application Static (ESP + Unit Opts/Acc.):	1.35	in wg
Fan RPM:	1077	
Fan Power:	3.12	BHP
NOTE:	Selected IFM RPM Range: 838 - 1084	

Electrical Data

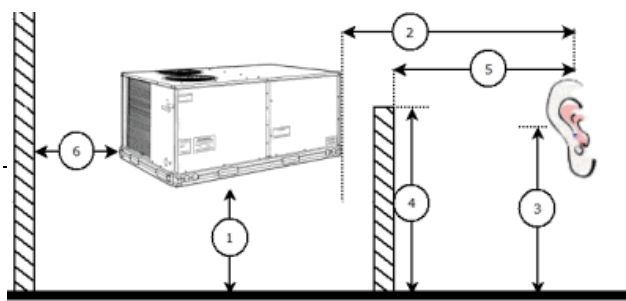
Voltage Range:	187-253
Compressor #1 RLA:	15.9
Compressor #1 LRA:	110
Compressor #2 RLA:	15.9
Compressor #2 LRA:	110
Indoor Fan Motor Type:	MED
Indoor Fan Motor FLA:	10.8
Combustion Fan Motor FLA (ea):	0.48
Power Supply MCA:	70
Power Supply MOCP (Fuse or HACR):	80
Disconnect Size FLA:	75
Disconnect Size LRA:	346
Electrical Convenience Outlet FLA (based on unit line voltage):	4.8
EnergyX Exhaust [Qty / FLA(ea)]:	1 / 7.78
Outdoor Fan [Qty / FLA (ea)]:	1 / 6.2
EnergyX Supply [Qty / FLA(ea)]:	1 / 3.89
EnergyX Wheel [Qty / FLA(ea)]:	1 / 0.3
NOTE: Convenience outlet must be field connected to the line/load side of the unit disconnect per local code.	

Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	98.4	95.2	85.9
125 Hz	94.7	88.4	87.9
250 Hz	81.7	74.0	85.6
500 Hz	75.4	68.8	84.4
1000 Hz	72.2	66.8	82.8
2000 Hz	69.7	62.5	78.5
4000 Hz	72.9	63.0	74.9
8000 Hz	75.1	60.9	72.5
A-Weighted	83.1	76.3	87.0



Advanced Acoustics

Performance Summary For RTU-2

Project: Shake Shack - 1378 - Montgomeryville, PA
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06/30/2021
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Advanced Acoustics Parameters

1. Unit height above ground:**30.0** ft
2. Horizontal distance from unit to receiver:**50.0** ft
3. Receiver height above ground:**5.7** ft
4. Height of obstruction:**0.0** ft
5. Horizontal distance from obstruction to receiver: **.0.0** ft
6. Horizontal distance from unit to obstruction:**0.0** ft

Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	85.9	87.9	85.6	84.4	82.8	78.5	74.9	72.5	92.9 Lw
B	59.7	71.8	77.0	81.2	82.8	79.7	75.9	71.4	87.3 LwA
C	53.5	55.5	53.2	52.0	50.4	46.1	42.5	40.1	60.5 Lp
D	27.3	39.4	44.6	48.8	50.4	47.3	43.5	39.0	54.9 LpA

Legend

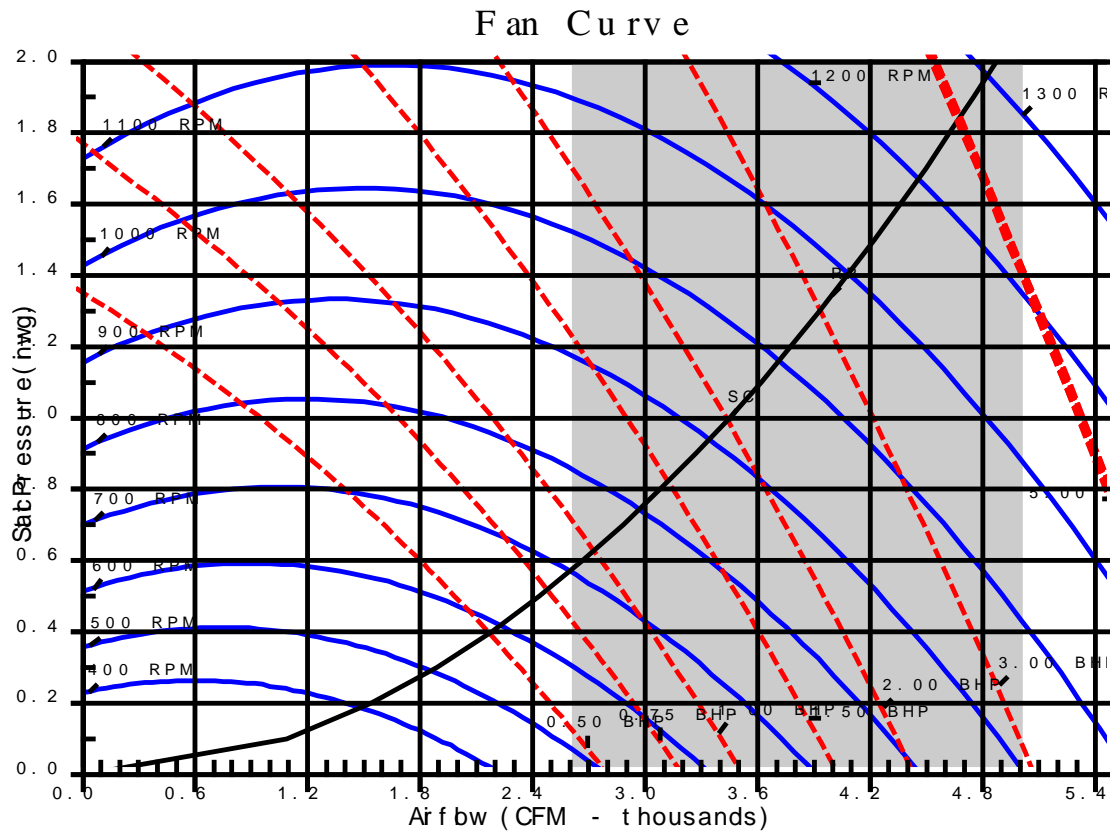
- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

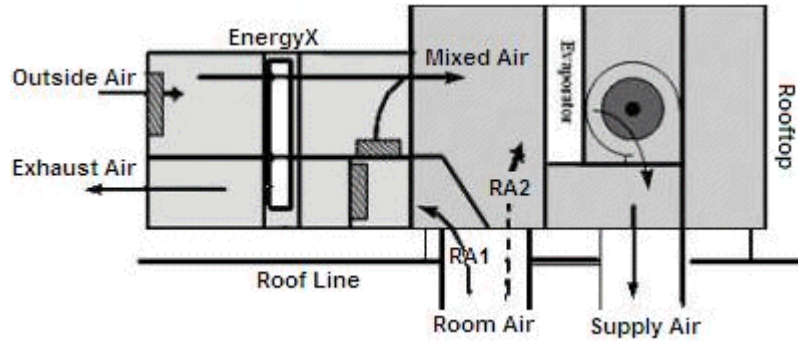
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RPM = 1077 BHP = 3.12 Maximum RPM = 1400 Maximum BHP = 4.90
 Please contact application engineering for selections outside the shaded region
 SC - System Curve RP - Rated Point



EnergyX

Design Conditions	Dry Bulb	Wet Bulb	Enthalpy
Summer, Outdoor	78.8 F	66.1 F	30.8 F
Summer, Indoor	76.0 F	64.0 F	29.2 F
Winter, Outdoor	11.0 F	8.6 F	30.8 F
Winter, Indoor	70.0 F	57.0 F	24.4 F

Model Number: EnergyX and Enthalpy Economizer

Supply Air Flow Rate 2000 CFM
 Exhaust Air Flow Rate 1000 CFM

Performance Summary For RTU-2

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Latent Effectiveness	80.92 %	
Sensible Effectiveness	86.65 %	
Net Effectiveness (S/W)	84.45 %	85.95 %
Measured Effectiveness (S/W)	80.36 %	81.41 %

DESIGN LOADS

	Summer	Winter
Outside Air	5.91 MBH	135.87 MBH
Outside Air, Latent	8.03 MBH	65.55 MBH
Outside Air, Total	13.94 MBH	201.42 MBH
Recovered Sensible	2.57 MBH	55.23 MBH
Recovered Latent	3.26 MBH	24.53 MBH
Total Recovered	5.83 MBH	55.23 MBH

INSTALLED HVAC REDUCTION

Cooling	0.49 Tons	
Heating		55.2 MBH

Outdoor Unit Single Zone Heat Pump Ductless System



Outdoor Model: **38MARBQ18AA3**

Submittal Data

Turn to the experts

Job Data:

Location:

Buyer: Buyer P.O. #:

Carrier #:

Unit Number:

Model Number:

Performance Data Certified By:

Date:



STANDARD FEATURES

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

Low ambient controls down to -4 degrees F.

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.

**COORDINATE POWER
WITH ELECTRICAL
CONTRACTOR**



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

System	Size		18
	Outdoor Model		38MARBQ18AA3
Electrical	Voltage, Phase, Cycle		V/Ph/Hz 208/230-1-60
	MCA	A.	16
	MOCP - Fuse Rating		A. 25
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
	Metering Device		EEV
	Charge	lbs (kg)	4.08 (1.85)

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

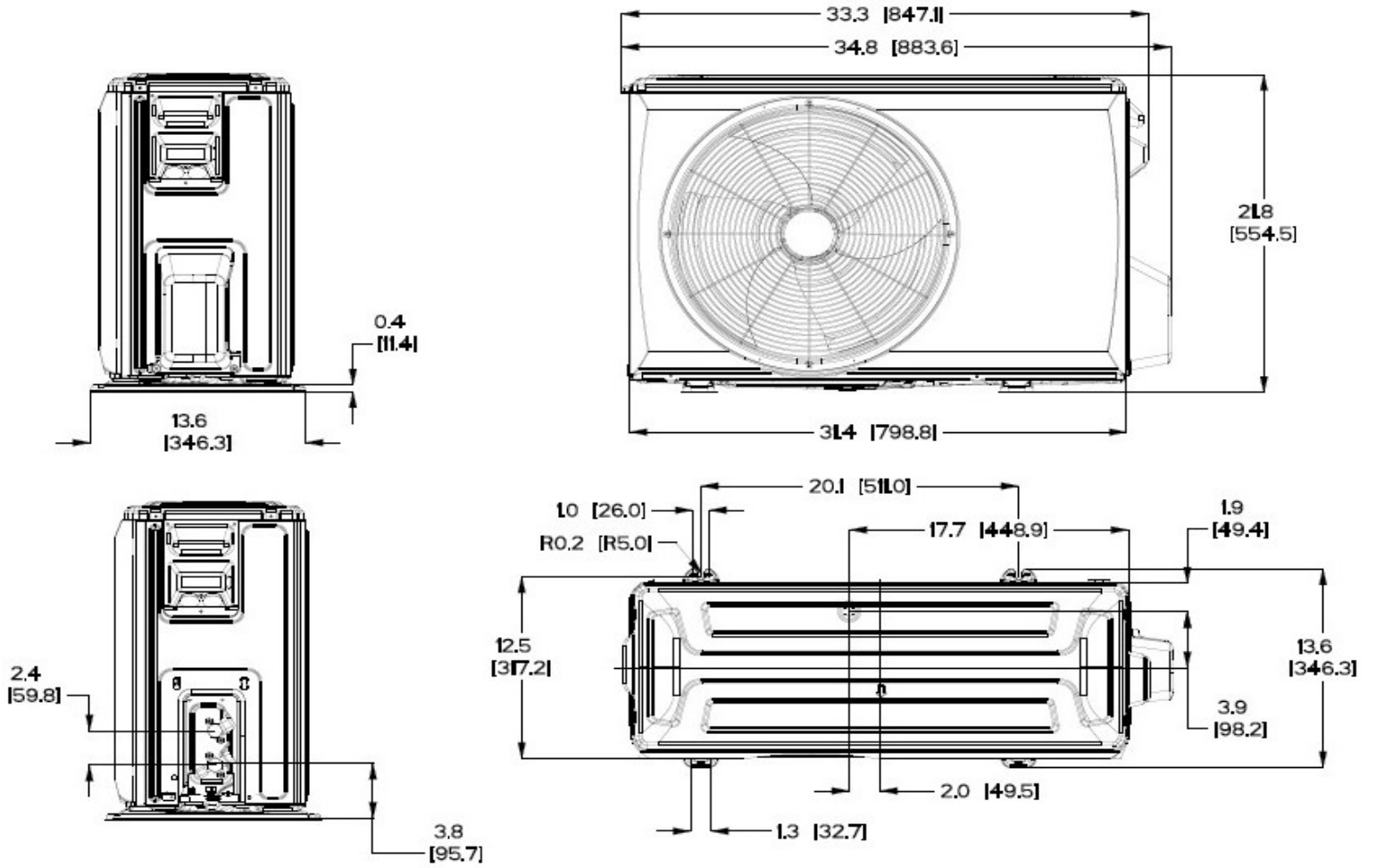
Outdoor Coil	Face Area	Sq. Ft.	5.9
	No. Rows		2
	Fins per inch		20
	Circuits		6
Compressor	Type		Rotary Inverter
	Model		KTM240D43UKT
	Oil Type		VG74
	Oil Charge	Fl. Oz.	21.0
	Rated Current	RLA	14.3
Outdoor	Unit Width	in (mm)	35.04 (890)
	Unit Height	in (mm)	26.50 (673)
	Unit Depth	in (mm)	13.46 (342)
	Net Weight	lbs (kg)	100.97 (45.8)
	Airflow	CFM	1,765
	Sound Pressure	dB(A)	59.0

Performance

High Wall	Indoor Model		40MAHBQ18XA3
	Energy Star		YES
	Cooling Rated Capacity	Btu/h	18,000
	Cooling Cap. Range Min - Max	Btu/h	8,870~19,400
	SEER		21.5
	EER		12.5
	Heating Rated Capacity (47°F)	Btu/h	18,000
	Heating Rated Capacity (17°F)	Btu/h	10,800
	Heating Maximum Capacity (17°F)	Btu/h	14,000
	Heating Maximum Capacity (5°F)	Btu/h	18,000
	Heating Cap. Range Min - Max	Btu/h	8,400~19,500
	HSPF		13.0
	COP (47°F)	W/W	3.10
	COP (17°F)	W/W	2.80
COP (5°F)	W/W	1.78	
Cassette	Indoor Model		40MBCQ18---3
	Energy Star		YES
	Cooling Rated Capacity	Btu/h	16,000
	Cooling Cap. Range Min - Max	Btu/h	5,600~17,000
	SEER		20.0
	EER		12.5
	Heating Rated Capacity (47°F)	Btu/h	18,000
	Heating Rated Capacity (17°F)	Btu/h	11,200
	Heating Maximum Capacity (17°F)	Btu/h	21,000
	Heating Maximum Capacity (5°F)	Btu/h	17,000
	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	1.80
COP (5°F)	W/W	1.68	
Ducted	Indoor Model		40MBDQ18---3
	Energy Star		YES
	Cooling Rated Capacity	Btu/h	16,500
	Cooling Cap. Range Min - Max	Btu/h	6,500~18,800
	SEER		19.6
	EER		12.5
	Heating Rated Capacity (47°F)	Btu/h	19,000
	Heating Rated Capacity (17°F)	Btu/h	12,700
	Heating Maximum Capacity (17°F)	Btu/h	21,500
	Heating Maximum Capacity (5°F)	Btu/h	17,800
	Heating Cap. Range Min - Max	Btu/h	8,900~22,000
	HSPF		11.0
	COP (47°F)	W/W	2.93
	COP (17°F)	W/W	1.90
COP (5°F)	W/W	1.75	
Console	Indoor Model		40MBFQ18---3
	Energy Star		YES
	Cooling Rated Capacity	Btu/h	17,000
	Cooling Cap. Range Min - Max	Btu/h	7,800~19,900
	SEER		20.2
	EER		12.5
	Heating Rated Capacity (47°F)	Btu/h	18,000
	Heating Rated Capacity (17°F)	Btu/h	12,000
	Heating Maximum Capacity (17°F)	Btu/h	20,700
	Heating Maximum Capacity (5°F)	Btu/h	16,900
	Heating Cap. Range Min - Max	Btu/h	8,600~21,500
	HSPF		10.6
	COP (47°F)	W/W	3.19
	COP (17°F)	W/W	1.80
COP (5°F)	W/W	1.75	

Construction View

Outdoor Model: 38MARBQ18AA3



Cassette Heat Pump Ductless System

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
- Anti-corrosive fin coating

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

