



# BENNETT ENGINEERING

MECHANICAL • ELECTRICAL  
(207) 865-9475

- NO EXCEPTIONS TAKEN
- MAKE CORRECTIONS NOTED
- AMEND & RE-SUBMIT

- SUBMIT SPECIFIED ITEM
- REJECTED-SEE REMARKS
- SEE COMMENTS BELOW

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF THE WORK WITH THAT OF OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

**Justin M. Valliere, P.E.**  
SIGNATURE

**12/21/16**  
REVIEW DATE

**Project: Carleton Street Housing**

**Submittal: 230000-2 Split System Air Conditioner System**

**Comments: NONE**

# BENCHMARK

34 Thomas Drive  
Westbrook, ME 04092  
Ph: (207)591-7600  
Fax: (207)591-7604

## Transmittal

**To:** Archetype Architects  
48 Union Wharf # 2  
Portland, ME 04101  
Ph: (207)772-6022 Fax: (207)772-6022

**Transmittal #:** 23

**Date:** 12/19/2016

**Job:** 10-16-1833 Carleton Street  
Apartments

**Subject:** Submittal 230000-2 Split System Air  
Conditioner System

**WE ARE SENDING YOU**  Attached  Under separate cover via  
 Shop drawings  Prints  Plans  Samples  
 Copy of letter  Change order  Specifications  Submittal

Copies	Date	No.	Description
1		230000-2 Rev 0	Split System Air Conditioner System

**THESE ARE TRANSMITTED as checked below:**

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> For approval | <input type="checkbox"/> Approved as submitted    | <input type="checkbox"/> Resubmit ___ copies for approval     |
| <input type="checkbox"/> For your use            | <input type="checkbox"/> Approved as noted        | <input type="checkbox"/> Submit ___ copies for distribution   |
| <input type="checkbox"/> As requested            | <input type="checkbox"/> Returned for corrections | <input type="checkbox"/> Return ___ corrected prints          |
| <input type="checkbox"/> For review and comment  | <input type="checkbox"/> Other                    | <input type="checkbox"/> PLEASE SIGN AND RETURN TO OUR OFFICE |
| <input type="checkbox"/> <b>FOR BIDS DUE</b>     |   |   |

**Remarks:**

**Copy To:**

**From:** Andrew Mosley (BENCHMARK)

# BENCHMARK

34 Thomas Drive  
Westbrook, ME 04092  
Ph: (207)591-7600  
Fax: (207)591-7604

## Submittal Cover Sheet

**Job:** 10-16-1833  
Carleton Street Apartments  
17 Carleton Street  
Portland, ME 04101

**Spec Section No:** 230000  
**Submittal No:** 2  
**Revision No:** 0  
**Sent Date:** 12/19/2016

**Submittal Title:** Split System Air Conditioner System

**Contractor:**  
BENCHMARK  
Andrew Mosley

### Contractor's Stamp

**x Reviewed-No Except**

Reviewed for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Subcontractor from compliance with the Project plans and specifications, nor departure therefrom. The Subcontractor remains responsible for details and accuracy, for conforming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

**BENCHMARK**

**Architect (Primary):**  
Archetype Architects

### Architect's Stamp

**Engineer**

### Engineer's Stamp

**Damon Mechanical Services**  
*Mechanical Engineers and Contractors*

<u>SUBMITTAL CERTIFICATE</u>	
PROJECT:	17 Carleton St Senior Housing
LOCATION:	Portland, ME
PROJECT NUMBER:	16038
ENGINEER	Bennett Engineering
SUBCONTRACTOR/VENDOR:	Damon Mechanical Services
SUBMITTED BY:	Damon Mechanical Services
CONTACT/PHONE:	Mike Lowe / 207- 784-7461
SPECIFICATION SECTION:	230000
SUB PARAGRAPH:	2.13
TITLE	Split System Air Conditioner System
PREPARED BY:	Mike Lowe, Project Manager
SIGNATURE:	
DATE:	October 17, 2016
SUBMITTED FOR REVIEW:	Yes
CONTAINS VARIATIONS?:	No



Submittal Transmittal

Submittal #    1-001

To:	Damon Mechanical
From:	Homans Associates 250 Ballardvale Street Wilmington, MA 01887

Date:	10-13-16
Transmitted By:	Kevin Faria
Copied To:	Nick St. Ours

Project	Carleton Street Senior Housing	Architect	Archetype
Order #		Engineer	Bennett Engineering
Purchaser			

**Submittal Name:**    **Equipment List**

Submitted For :	Via:	The Following:
<input checked="" type="checkbox"/> Approval/Action <input type="checkbox"/> Information <input type="checkbox"/> Distribution <input type="checkbox"/> Record <input type="checkbox"/> <b>Revised/Resubmit</b>	<input type="checkbox"/> Overnight Delivery <input type="checkbox"/> Mail <input checked="" type="checkbox"/> E-Mail <input type="checkbox"/> Courier <input type="checkbox"/> Fax <input type="checkbox"/> Other	<input type="checkbox"/> Drawings <input type="checkbox"/> Specifications <input type="checkbox"/> Digital Files <input checked="" type="checkbox"/> Submittals <input type="checkbox"/> O & M Manuals <input type="checkbox"/> Other

**Includes the following:**

Unit Tag #	Model	Description	Format	Item Action	QTY:
SAC-3	MSYGE09NA-9	Wall Mounted Cooling Only	PDF	For Approval	1
SCU-3	MUYGE09NA2	Single Zone Cooling Only			1
SAC-1, 4	MSYGE12NA-9	Wall Mounted Cooling Only	PDF	For Approval	2
SCU-1, 4	MUYGE12NA	Single Zone Cooling Only			2
SAC-2	MSYGE18NA-9	Wall Mounted Cooling Only	PDF	For Approval	1
SCU-2	MUYGE18NA-1	Single Zone Cooling Only			1
	MHK1	Backlit Wireless Remote Controller	PDF	For Approval	4

Job Name: **Carleton Street Senior Housing**

System Reference: **SAC-3, SCU-3**

Date: **10-13-16**



### SPECIFICATIONS

#### Cooling<sup>1</sup>

Rated Capacity.....	9,000 Btu/h
Capacity Range.....	3,800 - 12,200 Btu/h
Rated Total Input.....	660 W
Maximum Total Input.....	1,200 W
SEER.....	23.2 Btu/h/W

#### Rating Conditions:

- <sup>1</sup> Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB
- <sup>1</sup> Cooling | Outdoor: 95° F (35° C) DB / 75° F (24° C) WB

#### ENERGY STAR<sup>®</sup>

ENERGY STAR products are third-party certified by an EPA-recognized Certification Body

#### Electrical Requirements

Power Supply.....	208 / 230V, 1-Phase, 60 Hz
Breaker Size.....	15 A

#### Voltage

Indoor - Outdoor S1-S2.....	AC 208 / 230V
Indoor - Outdoor S2-S3.....	DC +/- 24V
Indoor - Remote Controller.....	MHK1 DC 3V PAR-31MAA DC 12V PAC-YT53CRAU DC 12V

#### Operating Conditions

##### Cooling<sup>2</sup>

Indoor Intake Air Temp. . . . .	(Max.) 90° F (32° C) DB / 73° F (23° C) WB (Min.) 67° F (19° C) DB / 57° F (14° C) WB
Outdoor Intake Air Temp. . . . .	(Max.) 115° F (46° C) DB (Min.) 14° F (-10° C) DB

<sup>2</sup> Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

### GENERAL FEATURES

- Wall-mounted indoor unit
- Standard Hybrid Catechin Prefilter is included with indoor unit
- Quiet operation
- Auto fan speed control: Quiet, Low, Medium, High, and Super High
- Hand-held Wireless Remote Controller
- Indoor unit powered from outdoor unit using A-Control
- Auto restart following a power outage
- Anti-allergy Enzyme Filter
- Limited warranty: five years parts and seven years compressor

### ACCESSORIES

#### Indoor Unit

- Condensate Pump (BlueDiamond X87-711/721; 115/230V)
- Condensate Pump (Sauermann SI30-115/230; 115/230V)
- Anti-Allergy Enzyme Filter (MAC-408FT-E)
- Drain Pan Level Sensor (DPLS2)

#### Outdoor Unit

- Three-pole Disconnect Switch (TAZ-MS303)
- Air Outlet Guide (MAC-889SG)
- Mounting Base (DSD-400N)
- Mounting Pad (ULTRILITE1)
- Wall Mounting Bracket (QSWB2000M-1)

#### Controller Options

- Wireless Controller (MHK1)
- Wired Remote Controller PAR-31MAA (Requires MAC-333IF-E)
- Wireless Interface for kumo cloud™ (PAC-WHS01WF-E)
- Thermostat Interface (PAC-US444CN-1)

#### Indoor Unit

MCA.....	1.0 A
Blower Motor (ECM).....	0.76 F.L.A.
Blower Motor Output.....	30 W
Airflow (Quiet - Lo - Med - Hi - Super Hi)	
Cooling.....	145-170-237-321-399 Dry CFM 109-134-201-286-364 Wet CFM
Sound Pressure Level (Quiet - Lo - Med - Hi - Super Hi)	
Cooling.....	19-22-30-37-43 dB(A)
External Finish Color.....	Munsell 1.0Y 9.2/0.2
Dimension Unit	
Inches:.....	11-5/8 H x 31-7/16 W x 9-1/8 D
mm:.....	295 H x 798 W x 232 D
Weight Unit.....	22 lbs. / 10kg
Field Drainpipe Size O.D.....	19/32" x 15 mm

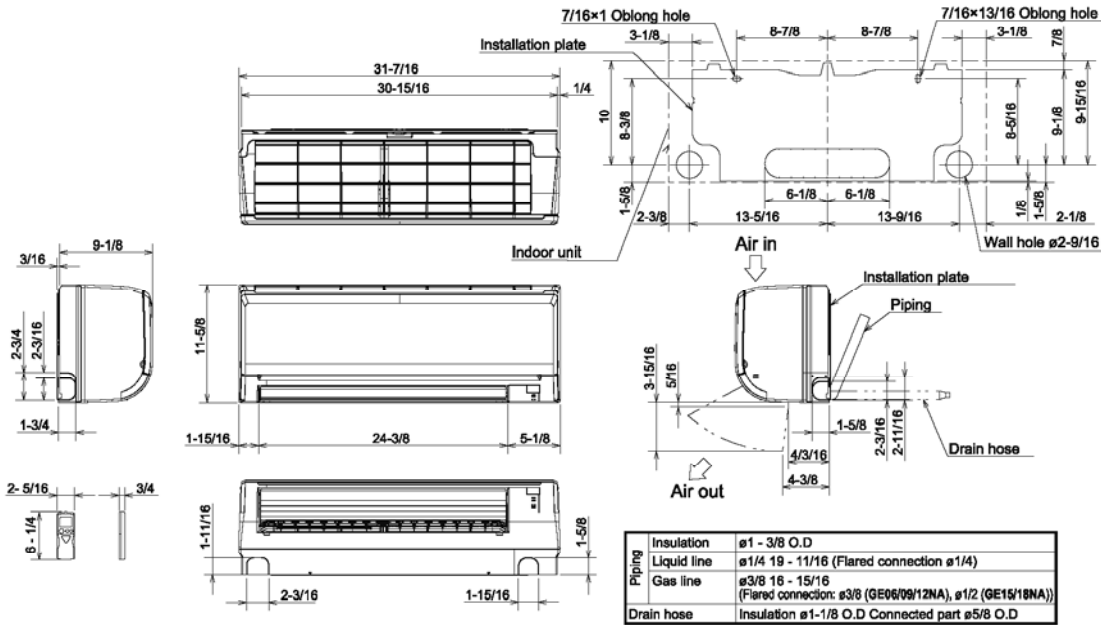
#### Outdoor Unit

MCA.....	12 A
Fan Motor (ECM).....	0.50 F.L.A.
Sound Pressure Level	
Cooling *1.....	46 dB(A)
External Finish Color.....	Munsell 3Y 7.8/1.1
External Dimensions	
Inches:.....	21-5/8 H x 31-1/2 W x 11-1/4 D
mm:.....	550 H x 800 W x 285 D
Weight.....	66 lbs. / 30kg
Refrigerant Type.....	R410A
Refrigerant Pipe	
Gas Side O.D.....	3/8" / 9.52 mm
Liquid Side O.D.....	1/4" / 6.35 mm
Refrigerant Pipe Length	
Height Difference (Max.).....	40' / 12 m
Length (Max.).....	65' / 20 m
Connection Method	
Indoor/Outdoor.....	Flared

# DIMENSIONS: MSY-GE09NA-9 & MUY-GE09NA2

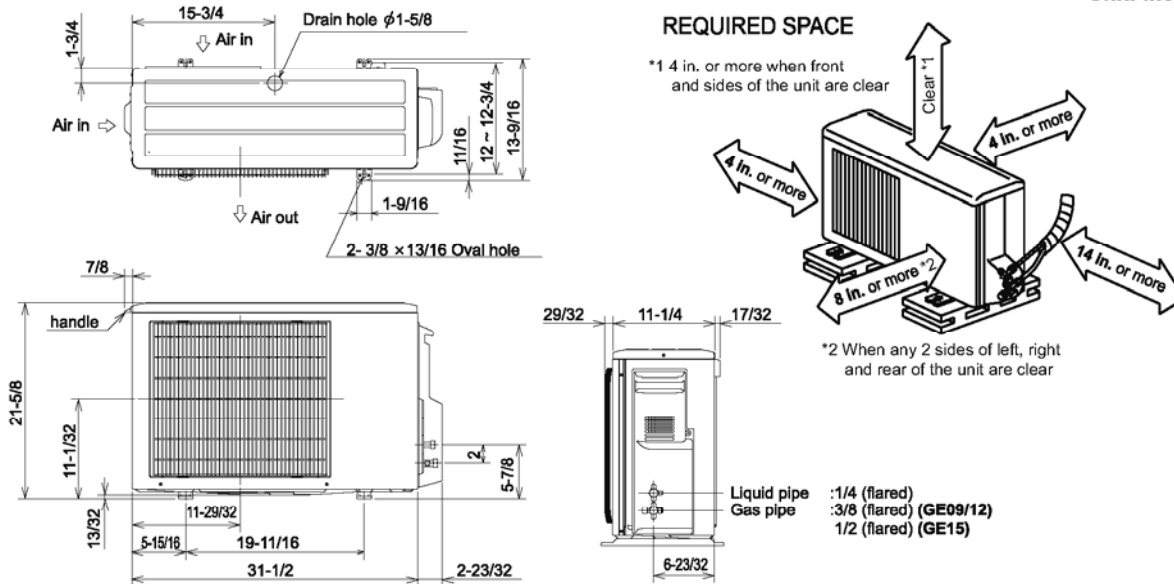
## MSY-GE09NA-9

Unit: inch



## MUY-GE09NA2

Unit: inch



COOLING & HEATING

1340 Satellite Boulevard, Suwanee, GA 30024  
Toll Free: 800-433-4822 www.mehvac.com



## SUBMITTAL DATA: MSY-GE12NA-9 & MUY-GE12NA

12,000 BTU/H WALL-MOUNTED AIR-CONDITIONING SYSTEMS

Job Name: Carleton Street Senior Housing

System Reference: SAC-1, 4 SCU-1, 4

Date: 10-13-16



### GENERAL FEATURES

- Wall-mounted indoor unit
- Standard Hybrid Catechin Prefilter is included with indoor unit
- Quiet operation
- Auto fan speed control: Quiet, Low, Medium, High, and Super High
- Hand-held Wireless Remote Controller
- Indoor unit powered from outdoor unit using A-Control
- Auto restart following a power outage
- Anti-allergy Enzyme Filter
- Limited warranty: five years parts and seven years compressor

### ACCESSORIES

#### Outdoor Unit

- Drain Socket Assembly (MAC-860DS)

#### Indoor Unit

- Condensate Pump (230V; SI3100-230)

#### Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)\*
- Portable Central Controller (MCCH1)\*
- Outdoor Air Sensor (MOS1)\*
- Wired Wall-mounted Controller (PAR-31MAA requires MAC-333IF)\*
- Simple MA Remote Controller (PAC-YT53CRAU requires MAC-333IF)\*

\*See Submittal for information on each option.

- System Control Interface (MAC-333IF)
- Remote Temperature Sensor (M21-JKO-307)
- Lockdown Bracket for Hand-held Controller (RCMKP1CB)



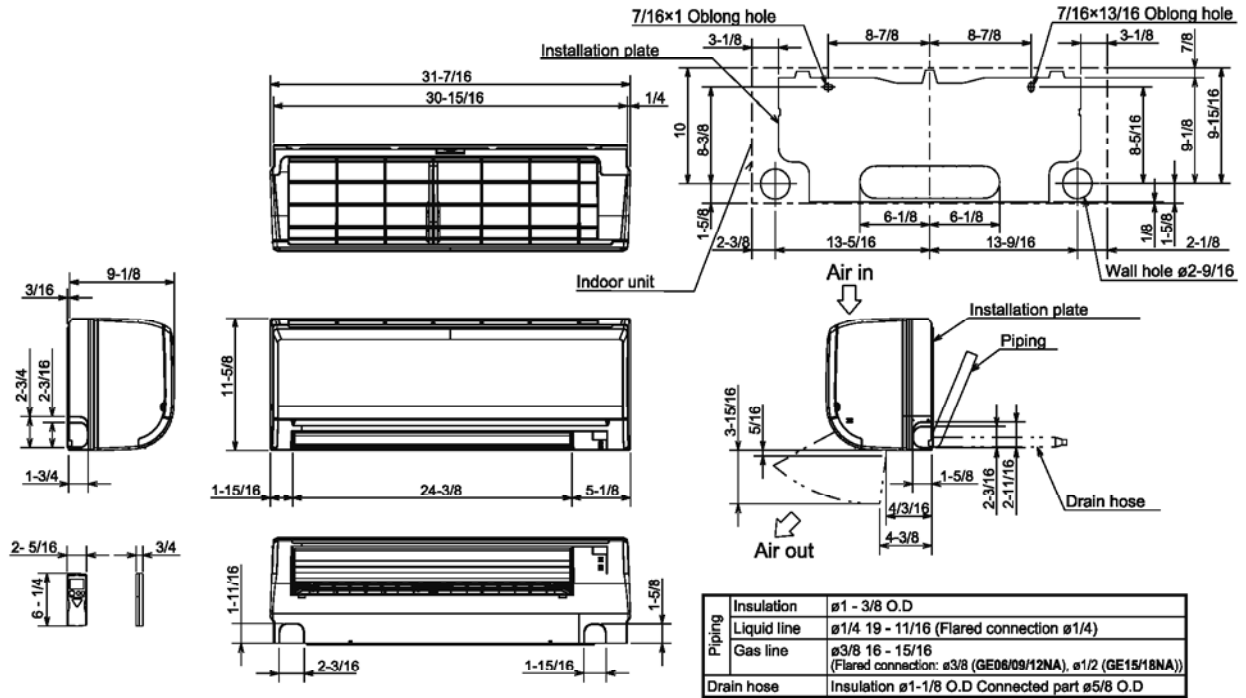




# DIMENSIONS: MSY-GE12NA-9 & MUY-GE12NA

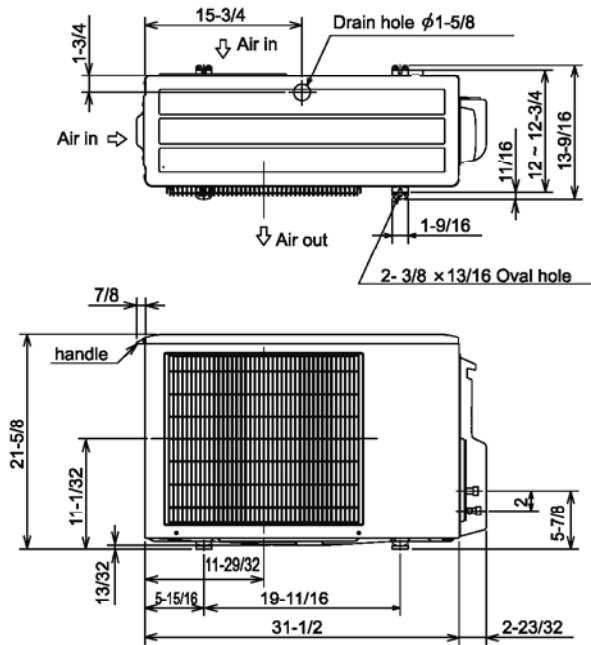
MSY-GE12NA-9

Unit: inch

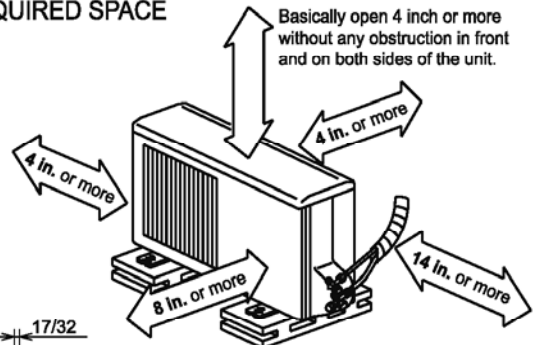


MUY-GE12NA

Unit: Inch



### REQUIRED SPACE



Open two sides of left, right, or rear side.

Liquid pipe : 1/4 (flared)  
 Gas pipe : 3/8 (flared) (GE09/12)  
 1/2 (flared) (GE15)



1340 Satellite Boulevard  
 Suwanee, GA 30024  
 Toll Free: 800-433-4822  
 www.mehvac.com

**SUBMITTAL DATA: MSY-GE18NA-9 & MUY-GE18NA-1**  
18,000 BTU/H WALL-MOUNTED AIR-CONDITIONING SYSTEMS

Job Name: Carleton Street Senior Housing

System Reference: SAC-2, SCU-2

Date: 10-13-16



#### GENERAL FEATURES

- Wall-mounted indoor unit
- Standard Hybrid Catechin Prefilter is included with indoor unit
- Quiet operation
- Auto fan speed control: Quiet, Low, Medium, High, and Super High
- Hand-held Wireless Remote Controller
- Indoor unit powered from outdoor unit using A-Control
- Auto restart following a power outage
- Anti-allergy Enzyme Filter
- Limited warranty: five years parts and seven years compressor

#### ACCESSORIES

##### Outdoor Unit

- Drain Socket Assembly (MAC-811DS)

##### Indoor Unit

- Condensate Pump (230V; SI3100-230)

##### Controller Options

- Wireless Wall-mounted Remote Controller Kit (MHK1)\*
- Portable Central Controller (MCCH1)\*
- Outdoor Air Sensor (MOS1)\*
- Wired Wall-mounted Controller (PAR-31MAA requires MAC-333IF)\*
- Simple MA Remote Controller (PAC-YT53CRAU requires MAC-333IF)\*

\*See Submittal for information on each option.

- System Control Interface (MAC-333IF)
- Remote Temperature Sensor (M21-JKO-307)
- Lockdown Bracket for Hand-held Controller (RCMKP1CB)

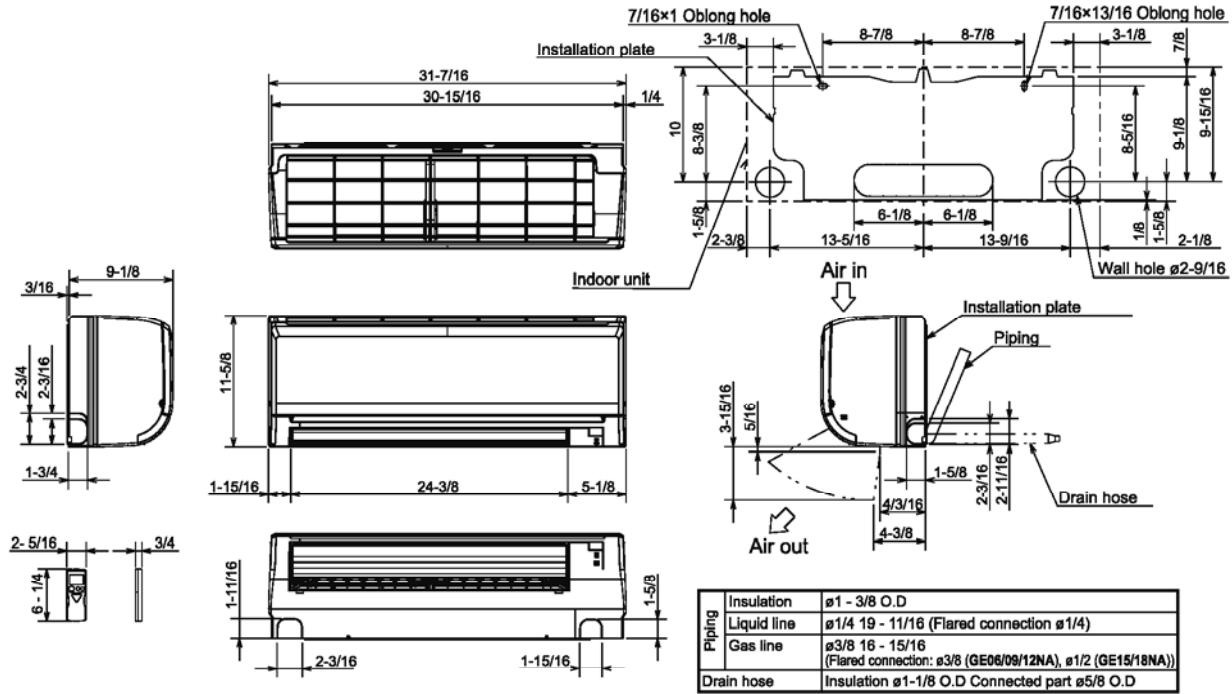




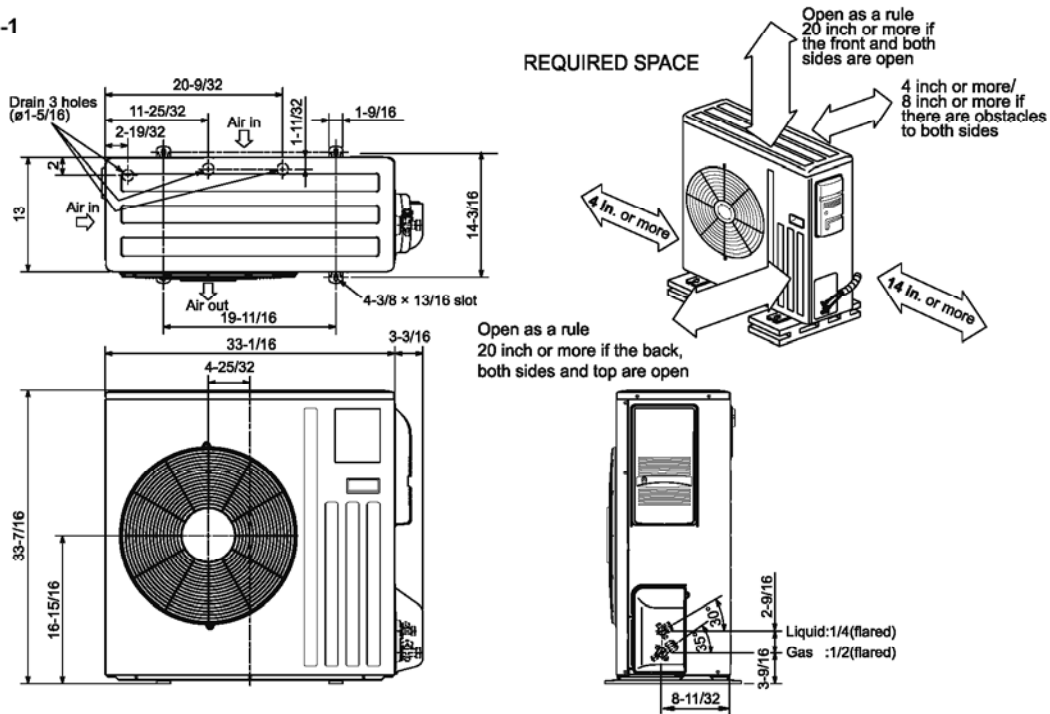
# DIMENSIONS: MSY-GE18NA-9 & MUY-GE18NA-1

MSY-GE18NA-9

Unit: inch



MUY-GE18NA-1



1340 Satellite Boulevard  
 Suwanee, GA 30024  
 Toll Free: 800-433-4822  
 www.mehvac.com

## SUBMITTAL DATA: MHK1 REMOTE CONTROLLER KIT FOR M-SERIES AND P-SERIES

Job Name: Carleton Street Senior Housing

System Reference:

Date: 10-13-16

### MHK1 REMOTE CONTROLLER KIT INCLUDES:

#### MRCH1 REMOTE CONTROLLER

- For use with P-Series NHA4 systems, SEZ-4/SUZ one-to-one systems, SLZ/SUZ one-to-one systems, MXZ-B multi-zone systems, MSY/MSZ, and MFZ indoor units
- Backlit, easy-to-read display
- Supports both Fahrenheit and Celsius
- User functions allow user to set:
  - On/Off
  - Operation modes cool, heat, drying, fan
  - Set temperature (separate dual set points for heat and cool)
  - Fan speed setting
  - Airflow direction
- Day/Time display with a 12-hour clock
- Filter sign display
- Optimal start
- Adjustable auto deadband
- Space temperature offset adjustment
- Display outside temperature and humidity (requires optional MOS1, sold separately)
- Hold function
- Temporary schedule override
- Reset to factory default
- Auto lock display
- Timer Operation:
  - Daily Timer: On/Off times can be set up to 4 times per day in 15-minute increments.
  - Weekly Timer: On/Off times can be set up to 4 times per day of the week in 15-minute increments. Choice of 5-2 and 5-1-1 weekly schedules for heat, cool, auto (separate for each mode)
  - Auto-off Timer: Turns indoor unit Off at scheduled time up to 24 hours in advance
- Room Temperature: Displays room temperature sensed either at the indoor unit or at the remote controller (default)
- Set temperature range limits (dependent on the system connected):
  - Cooling from 50° to 99°F
  - Heating from 40° to 90°F
  - Auto from 50° to 90°F with dual temperature setting



- Diagnostics: Displays and records error codes
- No addressing required
- Can be integrated with other RedLINK™ devices
- Wiring: Connects using five-conductor cable from MIFH1 Wireless Receiver (cable included) to indoor unit; wireless RF from the MIFH1 Wireless Receiver to the MRCH1 Remote Controller
- Dimensions: 3-9/16" H x 5-13/16" W x 1-1/2" D (147 x 38 x 91mm)
- Uses two "AA" alkaline batteries (included)

#### MIFH1 WIRELESS RECEIVER

- Mounts next to or near indoor units to allow MRCH1 Remote Controller operation of P-Series NHA4 systems, SEZ-4/SUZ one-to-one systems, SLZ/SUZ one-to-one systems, MXZ-B multi-zone systems, MSY/MSZ, and MFZ indoor units
- Dimensions: 6-7/16" H x 3-1/4" W x 1-5/16" D (164 x 82.5 x 34 mm)



#### MRC1 CABLE

- Connects MIFH1 Wireless Receiver to five-pin CN105 on indoor unit control board
- Five-conductor wire with preterminated ends
- Length: 6-1/2' (2 m)



#### ACCESSORIES

- Portable Central Controller (MCCH1; for use with Wireless Remote Controller Kit MHK1)\*
- Outdoor Air Sensor (MOS1; for use with Wireless Remote Controller Kit MHK1)\*

\*See Submittal for information on each option.

