

Letter of Transmittal

Date: 05/31/2024	
Project Name:	NVA – Battery Park
Project No:	#12401

To: Godfrey’s Air Conditioning & refrigeration

From: Justin Ruthen - MQE

Submittal Review General Information:

Review and corrections or comments made by Consultant on shop drawings, catalogs, cut sheets, charts, and other items during construction phase submittal review do not relieve Contractor from compliance with requirements of the Contract Documents, for providing a complete and functioning project, nor shall they relieve Contractor from responsibility for deviations or errors of any sort. The Contractor remains responsible for determining the accuracy and completeness of other details such as dimensions and quantities, for substantiating instructions for installations, verifying materials required, obtaining field measurements and related criteria, coordinating work with other disciplines and performing work in compliance with the Contract Documents.

Submittal Review Comments:

No Exceptions were taken for all types without specific comment below.

Submittal Review Stamp:

SUBMITTAL FOR REVIEW	
Project Name NVA - Battery Park Project Number #12401	
<input checked="" type="checkbox"/> NO EXCEPTIONS TAKEN <input type="checkbox"/> REVISE AND RESUBMIT	<input type="checkbox"/> IMPLEMENT EXCEPTIONS NOTED <input type="checkbox"/> REVIEWED AS SUBSTITUTION
REVIEWED BY: Justin Ruthen	
REVIEW IS LIMITED TO CHECKING FOR CONFORMANCE WITH THE INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR AND/OR CONSTRUCTION MANAGER REMAINS TOTALLY RESPONSIBLE FOR ALL DIMENSIONS, QUANTITIES, CONSTRUCTION METHODS AND MEANS, TECHNIQUES, SEQUENCES IN THE WORK, AND PROCEDURES.	
05/31/2024	



Carrier Enterprise Northeast, LLC
 499 7th Avenue, 6th FL South
 NEW YORK, NY 10018
 (P) (212) 465-7700

EQUIPMENT SUBMITTAL

PROJECT: Battery Park Vet

LOCATION: 2 South End Ave, New York, NY 10280

CUSTOMER: Godfrey's Air Conditioning & Refrigeration

ENGINEER: Marque Engineering

DATE: May 6, 2024

REVISION: 0

SUBMITTED BY: AC

ENCLOSED IS SUBMITTAL DATA FOR THE FOLLOWING EQUIPMENT

NOTES: All External Vibration Isolation, Supply Air Smoke Detectors, BMS Controls Integration, Valves, Sensors, Spare Parts, Piping/Refrigeration Specialties, Piping Accessories, Commissioning, Extended Parts And/Or Labor Warranties NOT Included to be Field Supplied and Field Installed by OTHERS

Toshiba/Carrier VRF Ductless Heat Pump System

Qty: (1 System)

Model:

MMY
MMD

Mark For:

ODU-1

AHU-1 thru 5

The following items are included:

- 208-3-60
- Puron Refrigerant
- (1) 12-Ton Outdoor Heat Pump Unit
- (1) ½ Ton Medium Static Pressure Duct Type Indoor Unit
- (1) 1.5 Ton Medium Static Pressure Duct Type Indoor Unit
- (1) 2.5 Ton Medium Static Pressure Duct Type Indoor Unit
- (1) 3 Ton Medium Static Pressure Duct Type Indoor Unit
- (1) 4 Ton Medium Static Pressure Duct Type Indoor Unit
- Equipment Start-up Assistance

The following accessories are provided for field installation by others:

- (5) Wired Controllers– **control wiring between thermostat and FCU by others**
- Central Controller
- Multiple inverter driven, rotary compressors per condensing unit (control in steps of .1 Hz)
- Variable speed condenser fans with 64 steps of control
- Active oil management - compressor oil levels are monitored and shared between condenser compressors, and between twinned condensing units (even if one unit is not running)
- Pulse motor valves (PMV) for precise refrigerant/oil management. Shuts off complete flow of refrigerant thru indoor unit when zone is satisfied
- Direct drive fan motors
- All required branch y-joints and headers
- R-410A holding charge
- Cooling ambient operating temperature is 14° F to 122° F and heating ambient operating temperature is -13° F to 60° F
- Ten (10) years parts only warranty
- Ten (10) years compressor parts only warranty

Start-up supervision may be scheduled after contractor has completed the items below:

- Refrigeration pipe work has been pressure tested (500psig for 24 hours) and triple evacuated
- Power supply to all units has been checked. Power to outdoor unit has been running for minimum 12 hours.
- All condensate drain pipe work is complete.
- Check list must be filled out and signed and submitted before start-up is scheduled.

The following items are NOT included:

- **Start-up**
- BACnet, Hail guards, Filter Boxes, BACnet Integration, Quick Sling Supports, Condensate drip pans, stainless steel drain pans, leak detectors, equipment supports, auxiliary heating, refrigeration piping/specialties, low ambient kit, compressor sound blankets, disconnects, snow stand, external vibration isolation, extended parts and/or labor warranties
- Installation or in-warranty labor
- Wiring of ATC
- Electrical work including starters, disconnects, power and control wiring.

- | | |
|--|--|
| | <ul style="list-style-type: none">• Refrigerant piping• Additional refrigerant beyond holding charge• Balancing, commissioning, or extended warranty |
|--|--|

QUOTATION NOTES: All External Vibration Isolation, Smoke Detectors, Controls, BMS Controls Integration, Valves, Thermostats, Sensors, Spare Parts, Piping/Refrigeration Specialties, Piping Accessories, Startup, Commissioning, Extended Parts And/Or Labor Warranties NOT Included in the Above Quotation to be Field Supplied

Indoor Units:
 Capacity:
 Total Pipe Length:
 Furthest Equiv:
 Furthest Equiv:
 After 1st Branch Actual:
 After 1st Branch Equiv:
 Max Height Between IDU/IDU
 Max Height Between IDU/ODU (Above):
 Max Height Between IDU/ODU (Below):

Correction Factors
 System Capacity:
 Temperature:
 Piping Length:
 Altitude:
 Defrosting:
 Diversity:
 Additional Derates:

Additional Refrigerant:
 Total Refrigerant Amount:
 Min Allowable Room Volume(cuft):

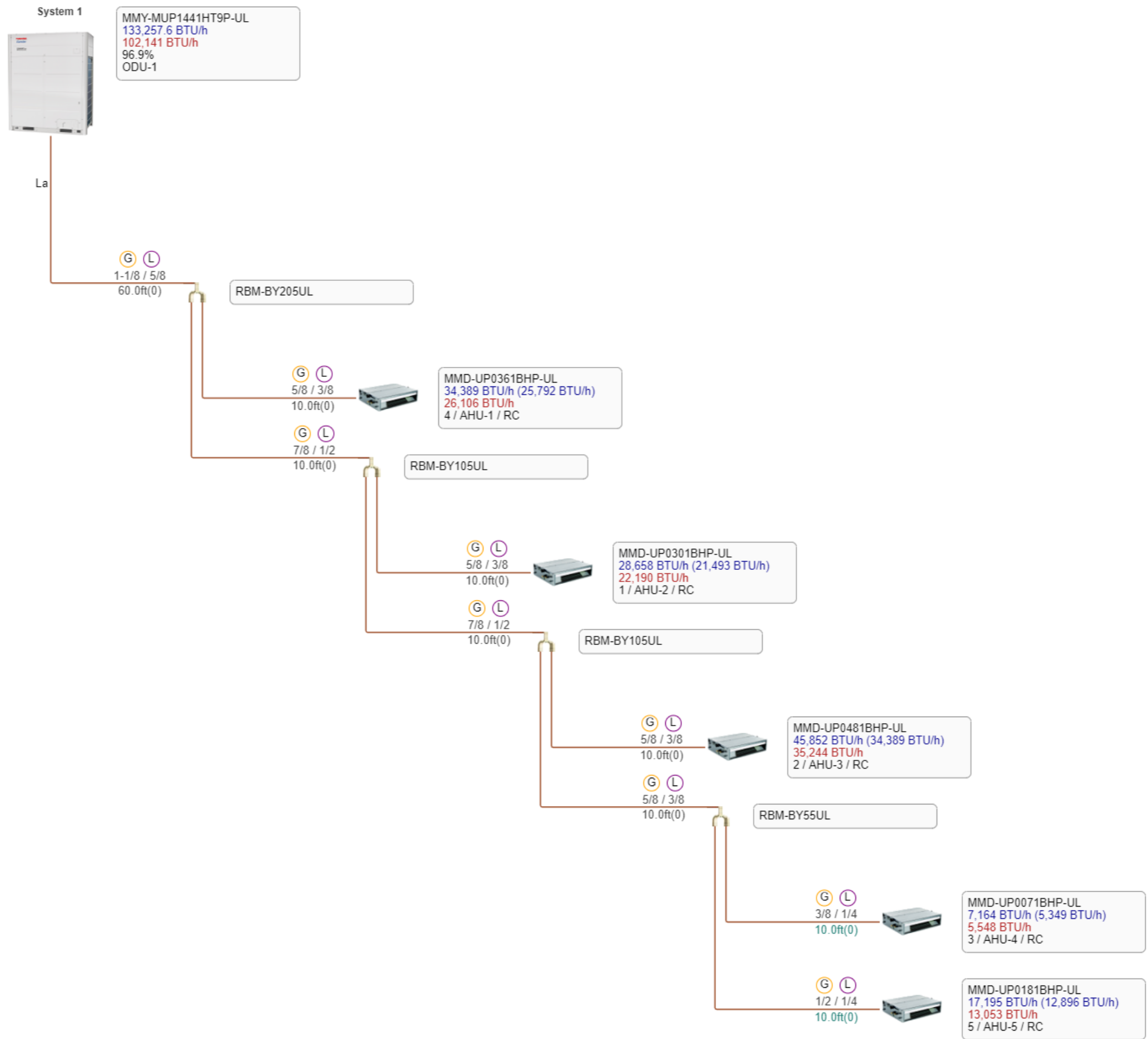
Design Temperatures

Cooling:

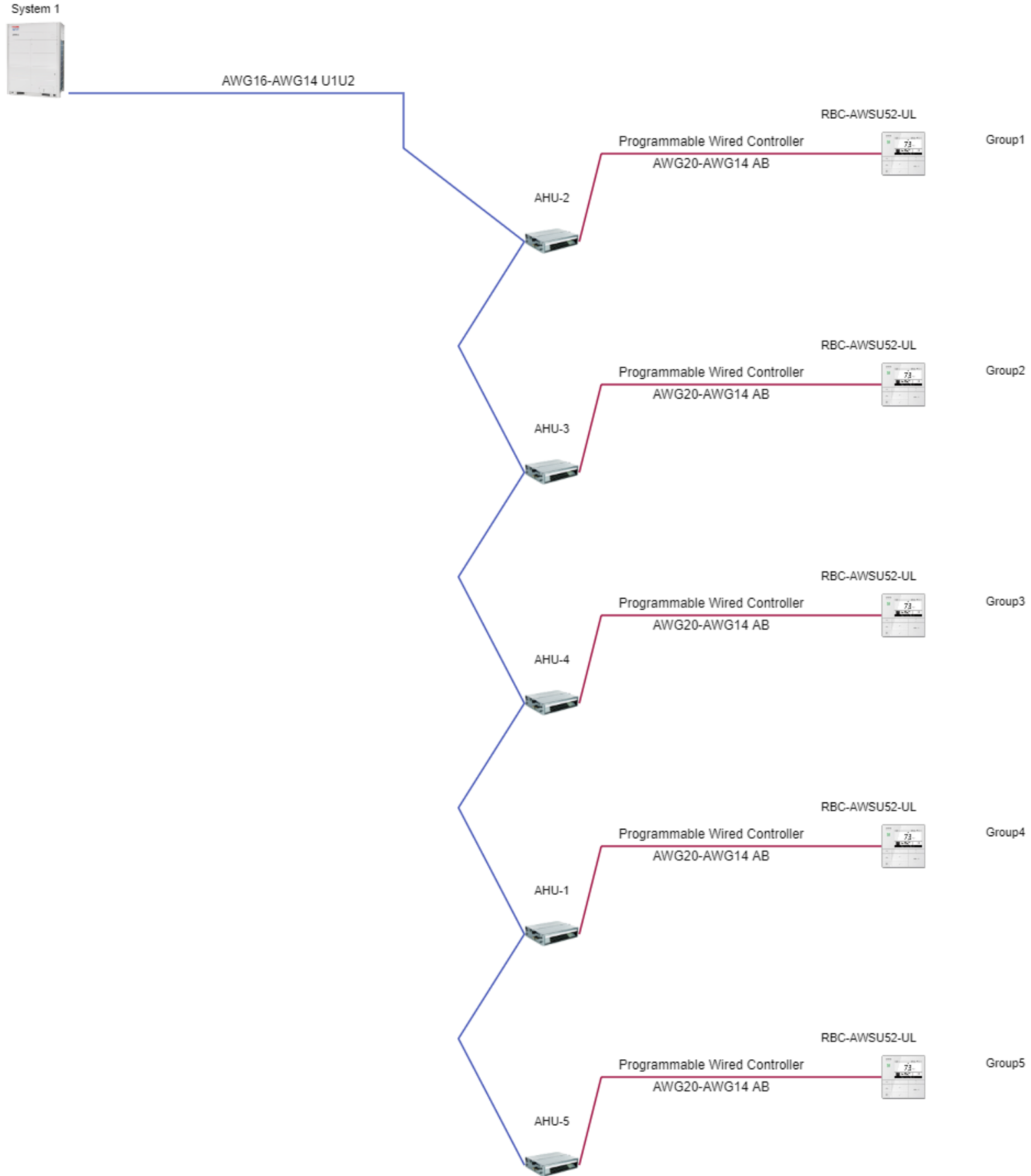
Indoor DB Humidity Indoor WB
 Outdoor DB

Heating:

Indoor DB
 Outdoor DB Humidity Outdoor WB



ALL WIRE FOR THE SYSTEM MUST BE SHIELDED & STRANDED



Centralized Controller - 1



U3U4

AWG16-AWG14 U3U4

System=1 (IDUs=5)

System 1
IU Count: 5



Add
System

BMS-CT2560U-UL

Controller Lines: 1

Total IU Count: 5

Total System Count: 1

SMMSu VRF u-Series Outdoor Unit MMY-MUP1441HT9P-UL—Heat Pump

TOSHIBA
Carrier

Submittal Data

Job Name _____ Location _____

Tag _____



A230327

SMMSu VRF Heat Pump Features

- Energy-efficient priority design
- Super-efficient heat exchanger
- Refrigerant cooling inverter system
- Intelligent VRF control
- Less refrigerant
- Space efficient design
- Configuration flexibility
- Wider Operating temperature range
- Comprehensive System construction solution
- Comprehensive Service solution

Header Unit Model		MMY-MUP1441HT9P-UL	
PERFORMANCE			
Nominal Cooling Capacity†	Btu/h	144,000	
Nominal Heating Capacity†	Btu/h	162,000	
Maximum number of indoor units		25	
Total Connected Indoor Unit Capacity		288	
COOLING EFFICIENCY†			
EER (Non-Ducted)	Btu/Wh	12.0	
Power Consumption (Non-Ducted)	kW	11.48	
EER (Ducted)	Btu/Wh	13.4	
Power Consumption (Ducted)	kW	10.23	
HEATING EFFICIENCY†			
COP (Non-Ducted)	Btu/Wh	4.0	
Power Consumption (Non-Ducted)	kW	11.17	
COP (Ducted)	Btu/Wh	4.0	
Power Consumption (Ducted)	kW	11.23	
FAN			
Fan Type		Propeller	
Airflow	CFM	8650	
Motor Output	kW	0.43 x 2	
ELECTRICAL			
Power Supply	V/Ph/Hz	230/3/60	
MCA	A	51.5	
MOCP	A	70	

COMPRESSORS

Type (Number)		Hermetic Twin Rotary (1)
Motor Output	kW	9.7

PHYSICAL DATA

Pipe Connection Size - Liquid (High Pressure)	in.	5/8 (Brazing)
Pipe Connection Size - Gas (Low Pressure)	in.	1-1/8 (Brazing)
Refrigerant		R-410A
Factory Charge††	lb	19.8
External Finish		Munsell 1Y8.5/0.5
Unit Width	in.	51.4
Unit Height	in.	66.5
Unit Depth	in.	31.1
Unit Net Weight (Non-Ducted)	lb	725

LEGEND

- EER** — Energy Efficiency Ratio
COP — Coefficient of Performance
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection

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

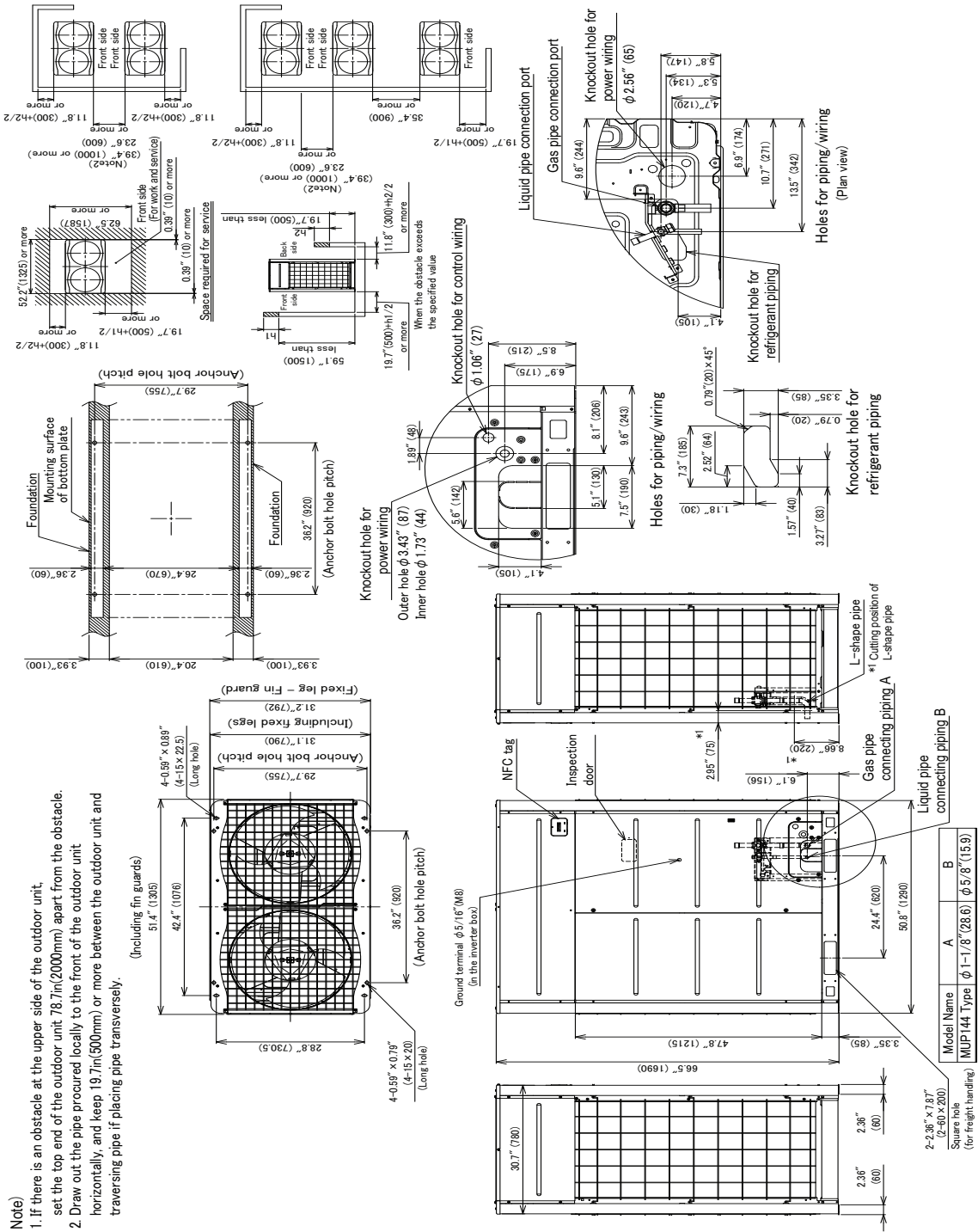
Cooling: Indoor 80°F (27°C) db/67°F (20°C) wb; Outdoor 95°F (35°C) db

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

††Additional charge required.

OUTDOOR UNIT HEAT PUMP MMY-MUP1441HT9P-UL DIMENSIONAL DRAWING

Unit:in(mm)



SMMSu / SHRMu VRF Indoor Unit MMD-UP0071BHP-UL—Concealed Duct



Submittal Data

Job Name _____ Location _____
Tag _____



A210775

SMMSu / SHRMu CONCEALED DUCT FEATURES

- R-410A Refrigerant
- Twelve sizes from 7,500 to 54,000 Btu/h
- Standard condensate pump with 24.3 in. lift capability
- Quiet operation, as low as 30 dBA
- Rear return configurable for bottom return
- Auto or manually set three fan speeds
- Five-year parts limited warranty

INDOOR UNIT MODEL		MMD-UP0071BHP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	7,500
Heating Rated Capacity	Btu/h	8,500
Fan Type (Qty)		Centrifugal (1)
External Static Pressure (ESP)	in.	0.4 (Factory default)
		0.6 (Max)
Standard Airflow (H / M / L)	CFM	318 / 265 / 212
Sound Pressure (H / M / L)*	dBA	39 / 34 / 30
FILTER (Standard)		
Type		Washable
Quantity		1
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	10-5/8 x 27-5/8 x 5/8
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Power Consumption (Input)	kW	0.07
Full Load Amps (FLA)	A	0.73
Minimum Circuit Amps (MCA)	A	0.91
Maximum Overcurrent Protection (MOCP)	A	15.0

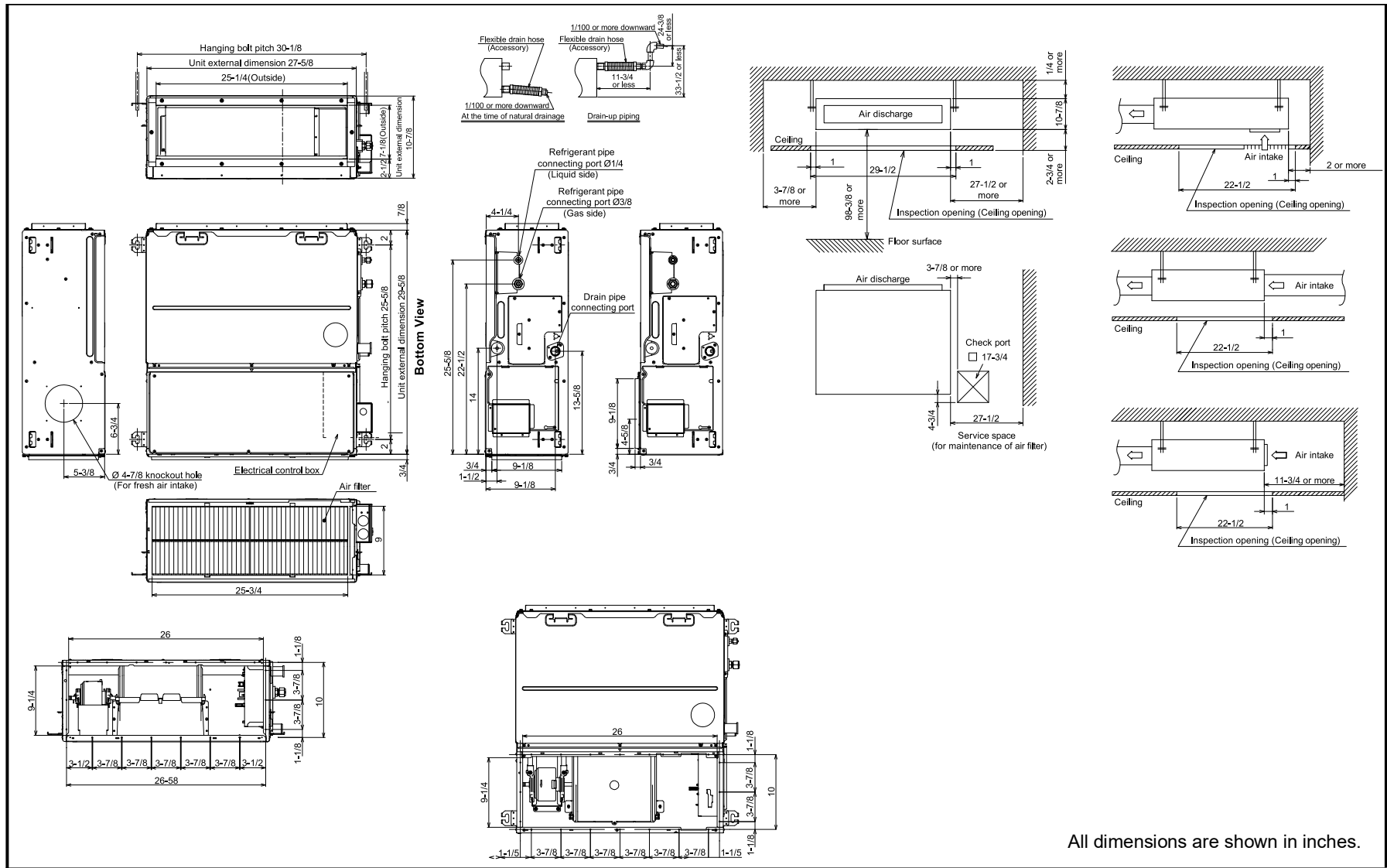
MOTOR		
Motor Type		DC
Motor Watts		150
PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	1/4 (Flare)
Pipe Connection Size - Suction	in.	3/8 (Flare)
Pipe Connection Size - Drain (OD)	in.	1-1/4
Pipe Connection Size - Drain (ID)	in.	1
Refrigerant		R-410A
External Finish		Zinc Hot Dipped Steel Plate
Unit Width	in.	27-5/8
Unit Height	in.	10-7/8
Unit Depth	in.	29-5/8
Net Weight	lb	56

ACCESSORIES

- Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL / RBC-AWSU52-UL
- Simple Wired Remote Control RBC-AS41UL
- Remote Sensor TCB-TC41U-UL
- Auxiliary OA Flange TCB-FF151US-UL
- Zoning Duct Flange TCB-SF56C6BP-UL
- Filter Kit TCB-FW561DP-UL

* The actual values in an external operating environment are generally higher than the indicated values due to ambient noise.

DIMENSIONAL DRAWING CONCEALED DUCT MMD-UP0071BHP-UL



All dimensions are shown in inches.

A210776



Edition Date: 01/23
 Printed in U.S.A.

Form No: MMD-UP0071BHP-UL_01
 Replaces: MMD-AP0076BHPUL-01

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

SMMSu / SHRMu VRF Indoor Unit MMD-UP0181BHP-UL—Concealed Duct



Submittal Data

Job Name _____ Location _____
Tag _____



A210775

SMMSu / SHRMu CONCEALED DUCT FEATURES

- R-410A Refrigerant
- Twelve sizes from 7,500 to 54,000 Btu/h
- Standard condensate pump with 24.3 in. lift capability
- Quiet operation, as low as 30 dBA
- Rear return configurable for bottom return
- Auto or manually set three fan speeds
- Five-year parts limited warranty

INDOOR UNIT MODEL		MMD-UP0181BHP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	18,000
Heating Rated Capacity	Btu/h	20,000
Fan Type (Qty)		Centrifugal (1)
External Static Pressure (ESP)	in. WG	0.4 (Factory default) 0.6 (Max)
Standard Airflow (H / M / L)	CFM	624 / 489 / 394
Sound Pressure (H / M / L)*	dBA	45 / 41 / 35
FILTER (Standard)		
Type		Washable
Quantity		2
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	10-5/8 x 19-5/8 x 5/8
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Power Consumption (Input)	kW	0.14
Full Load Amps (FLA)	A	1.53
Minimum Circuit Amps (MCA)	A	1.91
Maximum Overcurrent Protection (MOCP)	A	15.0

MOTOR		
Motor Type		DC
Motor Watts		150
PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (Flare)
Pipe Connection Size - Suction	in.	5/8 (Flare)
Pipe Connection Size - Drain (OD)	in.	1-1/4
Pipe Connection Size - Drain (ID)	in.	1
Refrigerant		R-410A
External Finish		Zinc Hot Dipped Steel Plate
Unit Width	in.	39-3/8
Unit Height	in.	10-7/8
Unit Depth	in.	29-5/8
Net Weight	lb	73

ACCESSORIES

- Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL / RBC-AWSU52-UL
- Simple Wired Remote Control RBC-AS41UL
- Remote Sensor TCB-TC41U-UL
- Auxiliary OA Flange TCB-FF151US-UL
- Zoning Duct Flange TCB-SF56C6BP-UL
- Filter Kit TCB-FW561DP-UL

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SMMSu / SHRMu VRF Indoor Unit MMD-UP0301BHP-UL—Concealed Duct



Submittal Data

Job Name _____ Location _____
Tag _____



SMMSu / SHRMu CONCEALED DUCT FEATURES

- R-410A Refrigerant
- Twelve sizes from 7,500 to 54,000 Btu/h
- Standard condensate pump with 24.3 in. lift capability
- Quiet operation, as low as 30 dBA
- Rear return configurable for bottom return
- Auto or manually set three fan speeds
- Five-year parts limited warranty

INDOOR UNIT MODEL		MMD-UP0301BHP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	30,000
Heating Rated Capacity	Btu/h	34,000
Fan Type (Qty)		Centrifugal (1)
External Static Pressure (ESP)	in. WG	0.6 (Factory default)
		0.8 (Max)
Standard Airflow (H / M / L)	CFM	742 / 653 / 547
Sound Pressure (H / M / L)*	dBA	45 / 35 / 31
FILTER (Standard)		
Type		Washable
Quantity		2
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	10-5/8 x 27-5/8 x 5/8
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Power Consumption (Input)	kW	0.22
Full Load Amps (FLA)	A	1.85
Minimum Circuit Amps (MCA)	A	2.31
Maximum Overcurrent Protection (MOCP)	A	15.0

MOTOR		
Motor Type		DC
Motor Watts		150
PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (Flare)
Pipe Connection Size - Suction	in.	5/8 (Flare)
Pipe Connection Size - Drain (OD)	in.	1-1/4
Pipe Connection Size - Drain (ID)	in.	1
Refrigerant		R-410A
External Finish		Zinc Hot Dipped Steel Plate
Unit Width	in.	55-1/4
Unit Height	in.	10-7/8
Unit Depth	in.	29-5/8
Net Weight	lb	93

ACCESSORIES

- Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL / RBC-AWSU52-UL
- Simple Wired Remote Control RBC-AS41UL
- Remote Sensor TCB-TC41U-UL
- Auxiliary OA Flange TCB-FF151US-UL
- Zoning Duct Flange TCB-SF56C6BP-UL
- Filter Kit TCB-FW561DP-UL

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SMMSu / SHRMu VRF Indoor Unit MMD-UP0361BHP-UL—Concealed Duct



Submittal Data

Job Name _____ Location _____
Tag _____



SMMSu / SHRMu CONCEALED DUCT FEATURES

- R-410A Refrigerant
- Twelve sizes from 7,500 to 54,000 Btu/h
- Standard condensate pump with 24.3 in. lift capability
- Quiet operation, as low as 30 dBA
- Rear return configurable for bottom return
- Auto or manually set three fan speeds
- Five-year parts limited warranty

INDOOR UNIT MODEL		MMD-UP0361BHP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	36,000
Heating Rated Capacity	Btu/h	40,000
Fan Type (Qty)		Centrifugal (1)
External Static Pressure (ESP)	in. WG	0.6 (Factory default)
		0.8 (Max)
Standard Airflow (H / M / L)	CFM	1130 / 954 / 812
Sound Pressure (H / M / L)*	dBA	46 / 41 / 37
FILTER (Standard)		
Type		Washable
Quantity		2
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	10-5/8 x 27-5/8 x 5/8
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Power Consumption (Input)	kW	0.33
Full Load Amps (FLA)	A	2.71
Minimum Circuit Amps (MCA)	A	3.39
Maximum Overcurrent Protection (MOCP)	A	15.0

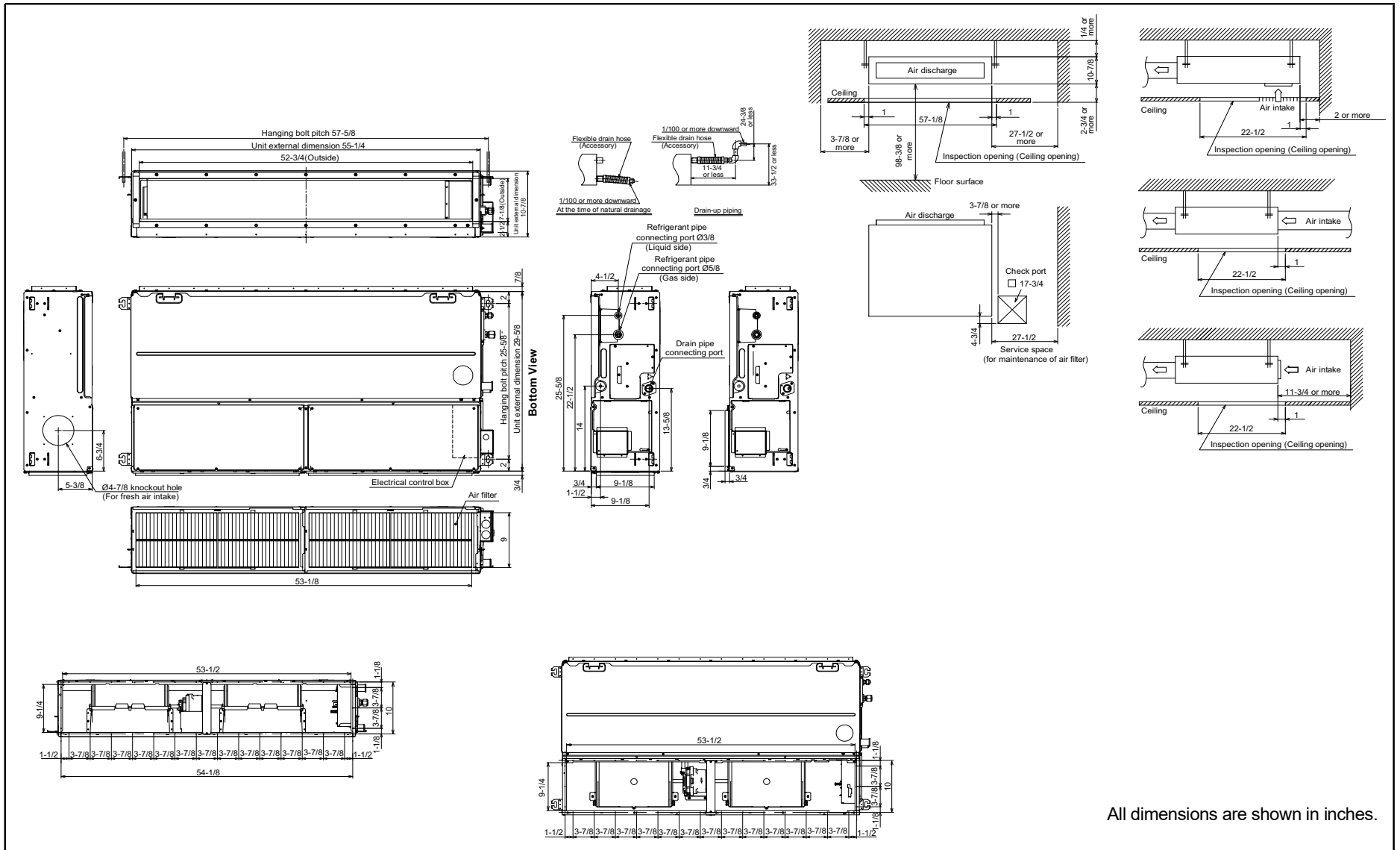
MOTOR		
Motor Type		DC
Motor Watts		250
PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (Flare)
Pipe Connection Size - Suction	in.	5/8 (Flare)
Pipe Connection Size - Drain (OD)	in.	1-1/4
Pipe Connection Size - Drain (ID)	in.	1
Refrigerant		R-410A
External Finish		Zinc Hot Dipped Steel Plate
Unit Width	in.	55-1/4
Unit Height	in.	10-7/8
Unit Depth	in.	29-5/8
Net Weight	lb	93

ACCESSORIES

- Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL / RBC-AWSU52-UL
- Simple Wired Remote Control RBC-AS41UL
- Remote Sensor TCB-TC41U-UL
- Auxiliary OA Flange TCB-FF151US-UL
- Zoning Duct Flange TCB-SF56C6BP-UL
- Filter Kit TCB-FW561DP-UL

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DIMENSIONAL DRAWING CONCEALED DUCT MMD-UP0361BHP-UL



SMMSu / SHRMu VRF Indoor Unit MMD-UP0481BHP-UL—Concealed Duct



Submittal Data

Job Name _____ Location _____
Tag _____



SMMSu / SHRMu CONCEALED DUCT FEATURES

- R-410A Refrigerant
- Twelve sizes from 7,500 to 54,000 Btu/h
- Standard condensate pump with 24.3 in. lift capability
- Quiet operation, as low as 30 dBA
- Rear return configurable for bottom return
- Auto or manually set three fan speeds
- Five-year parts limited warranty

INDOOR UNIT MODEL		MMD-UP0481BHP-UL
PERFORMANCE		
Cooling Rated Capacity	Btu/h	48,000
Heating Rated Capacity	Btu/h	54,000
Fan Type (Qty)		Centrifugal (1)
External Static Pressure (ESP)	in. WG	0.6 (Factory default)
		0.8 (Max)
Standard Airflow (H / M / L)	CFM	1177 / 1024 / 883
Sound Pressure (H / M / L)*	dBA	47 / 42 / 38
FILTER (Standard)		
Type		Washable
Quantity		2
MERV Corresponding Value		5
Dimensions (W x L x D)	in.	10-5/8 x 27-5/8 x 5/8
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Power Consumption (Input)	kW	0.34
Full Load Amps (FLA)	A	2.85
Minimum Circuit Amps (MCA)	A	3.56
Maximum Overcurrent Protection (MOCP)	A	15.0

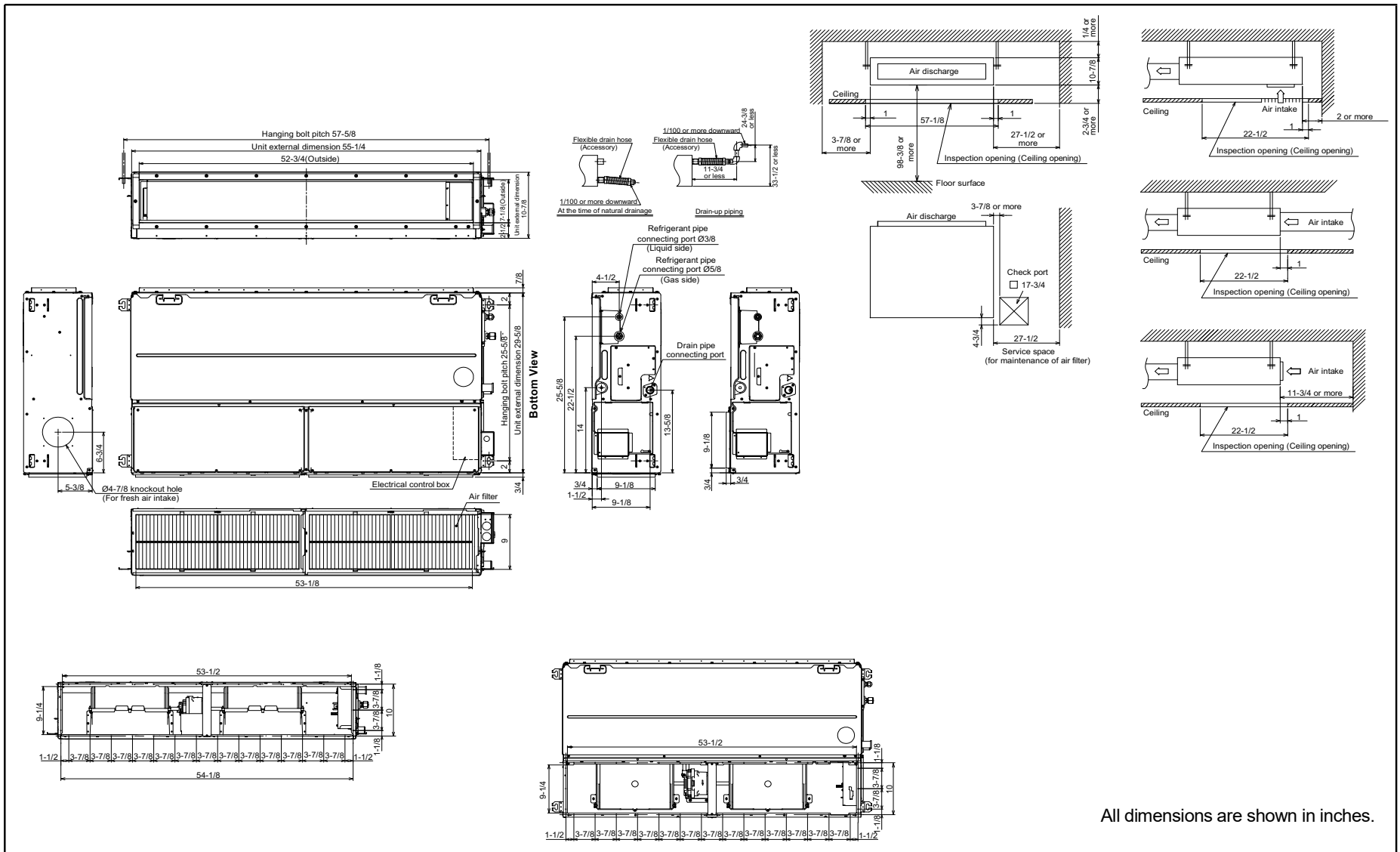
MOTOR		
Motor Type		DC
Motor Watts		250
PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (Flare)
Pipe Connection Size - Suction	in.	5/8 (Flare)
Pipe Connection Size - Drain (OD)	in.	1-1/4
Pipe Connection Size - Drain (ID)	in.	1
Refrigerant		R-410A
External Finish		Zinc Hot Dipped Steel Plate
Unit Width	in.	55-1/4
Unit Height	in.	10-7/8
Unit Depth	in.	29-5/8
Net Weight	lb	93

ACCESSORIES

- Wired Remote Controller (7-Day Programmable) RBC-AMS54E-UL / RBC-AWSU52-UL
- Simple Wired Remote Control RBC-AS41UL
- Remote Sensor TCB-TC41U-UL
- Auxiliary OA Flange TCB-FF151US-UL
- Zoning Duct Flange TCB-SF56C6BP-UL
- Filter Kit TCB-FW561DP-UL

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DIMENSIONAL DRAWING CONCEALED DUCT MMD-UP0481BHP-UL

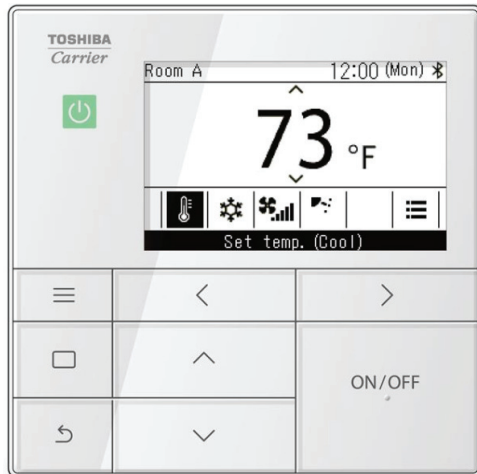


All dimensions are shown in inches.



Submittal Data

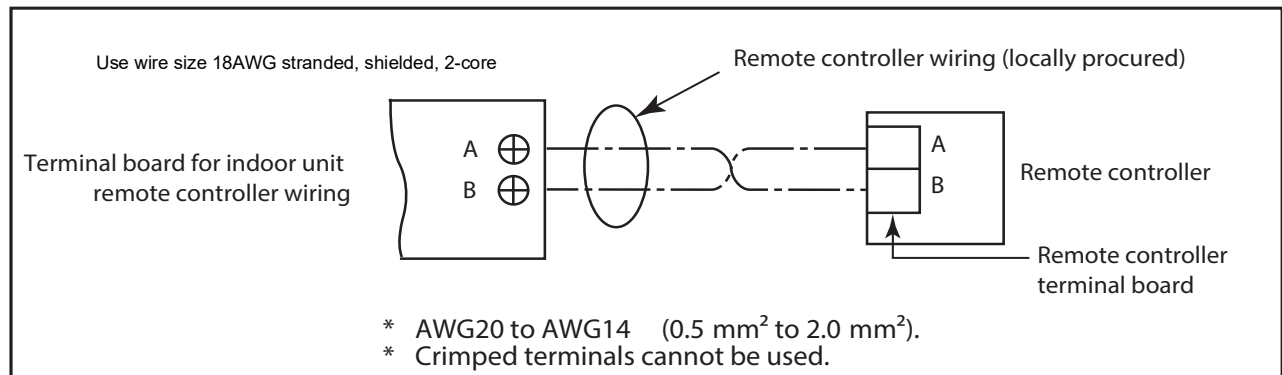
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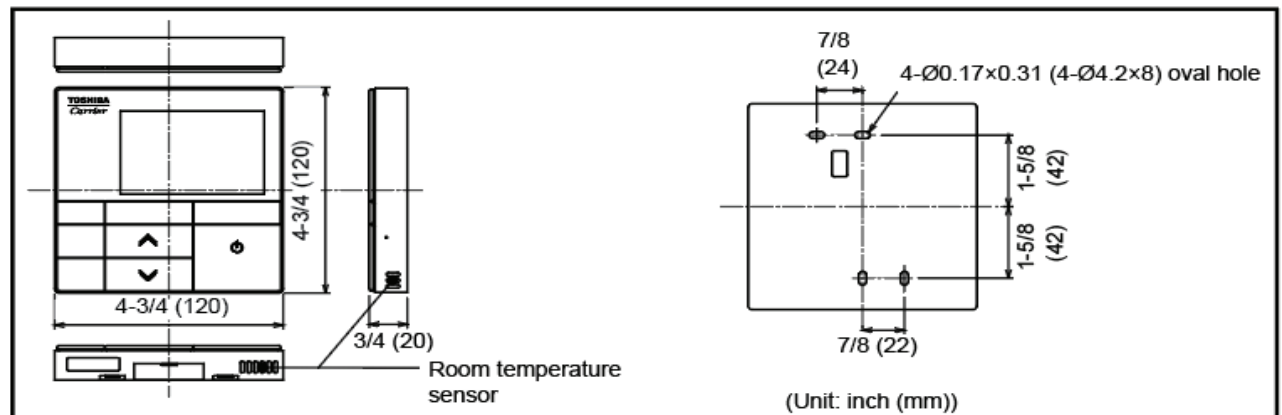
RBC-AWSU52-UL - Wired Remote Controller Features

- Back lit easy to read
- ON/OFF
- Unit addressing capability
- Mode setting: cool, heat, dry, fan, and auto
- Room temperature display
- Fan speed setting
- Louver swing operation
- Temperature display in 1°F
- Indoor temperature range limiting (62°F to 88°F)
- Dual set-point control
- Error display
- Group Control (Max 16 IDU)
- Touch Buttons
- Three configurable input ports
- Two output ports
- Backwards compatible

WIRING DIAGRAM

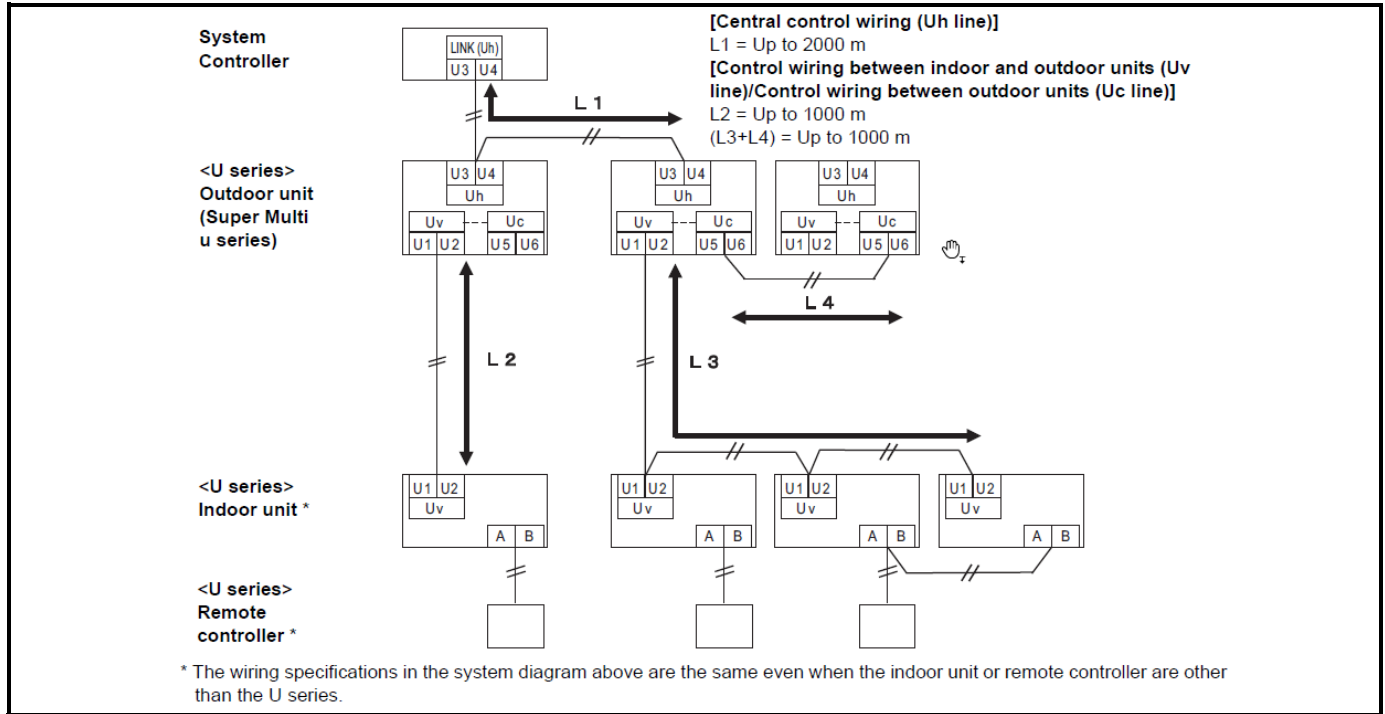


DIMENSIONAL DRAWING



WIRING DIAGRAM TOUCH SCREEN CONTROLLER BMS-CT2560U-UL

When the controller is connected to u-Series systems



When the controller is connected to e-Series or i-Series systems

