

VRF HEAT PUMP AIR HANDLER UNIT FAN COIL, FITTINGS, SECONDARY DRAIN PAN.

OUTSIDE WALL LOUVER W/ FRAME OR ROOF VENTILATOR AND ROOF CURB.

CEILING EXHAUST FAN OR ROOF MOUNTED EXHAUST FAN WITH CURB & FITTINGS.

NEW CEILING OR SUPPLY REGISTER, ADJUSTABLE DAMPER & INSULATED ROUND BOOT.

DUCT FIRE DAMPER RATED PER WALL ASSEMBLY (UL-P265) WITH ACCESS DOOR - TYP.

VRF OUTDOOR HEAT PUMP (HP) UNIT.

ABOVE FINISHED FLOOR

AHU-#

HP-#

F.D.

A.F.F.

L-#

EF-#

HORIZONTAL AIR HANDLER W/ DX COIL UV OR PROVIDE CONDENSATE PUMP & PIPE (INSULATED) TO EXTERIOR.

TYPICAL AIR HANDLER SUSPENSION DETAIL

SECONDARY DRAIN PAN

NOTE: PROVIDE SMOKE DETECTOR IN RETURN DUCT

Outdoor Unit: 16-TON PURY-HP192TSKMU-A-H

(Consists of Two PURY-HP96TKMU-A-H and One CMY-R100CBK2 Twinning Kit)

HP-1,2

mmm

PURY-HP192TSKMU-A-H

192,000

215,000

Refer to Module Data

Refer to Module Data

1104 / 500

Refer to Module Data

Refer to Module Data

Refer to Module Data*

Refer to Module Data*

1-1/8 / 28.58

Refer to Module Data

P06 ~ P96 / 1 to 48

Refer to Module Data

Cooling: 12% to 100%

Heating: 6% to 100%

Refer to Module Data

Refer to Module Data

Refer to Module Data

11.1 / 12.1

16.1 / 16.6

3.32 / 3.31

16.9 / 21.4

munum

OPTIONAL PARTS

□ Joint Kit....

□ BC Controller...

Low Ambient Kit ...

Twinning Kit (required)

Date: 3/5/15

23 ~ 115° F (-5 ~ +46° C) DB

-13 ~ +60°F (-25 ~ +15.5° C) WB

Pre-coated galvanized steel sheet

208 / 230V, 3-phase, 60Hz

Refer to System Data

Refer to System Data

Refer to System Data

R410A x 26 lbs + 1 oz (11.8 kg)

MEL32 High pressure sensor, High High pressure sensor. High

essure switch at 4.15 MPa pressure switch at 4.15 MPa

Refer to System Data

* Each individual module requires a separate electrical connection

Refer to electrical data for each individual module.

1/32 x 48-1/16 x 29-5/32 / 64-31/32 x 48-1/16 x 29-5/32

□ Snow/Hail Guards Kit......for details see Snow/Hail Guards Kit Submittal

□ Base Pan Heater Kit.....for details see Base Pan Heater Kit Submittal

↑PURY-HP96TKMU-A-H

96.000

1,650 x 1,220 x 740

552 / 250

7/8 / 22.2

Inverter-driven Scroll

Hermetic x 1

(601 psi)

Over-current protection

Thermal switch

...for details see Pipe Accesories Submittal

....for details see Low Ambient Kit Submittal

.....for details see BC Controller Submittals

PURY-HP96TKMU-A-H

96.000

108.000

1,650 x 1,220 x 740

552 / 250

60 / 54**

7/8 / 22.2

Propeller Fan x 1

Inverter-driven Scroll

Hermetic x 1

(601 psi)

Thermal switch

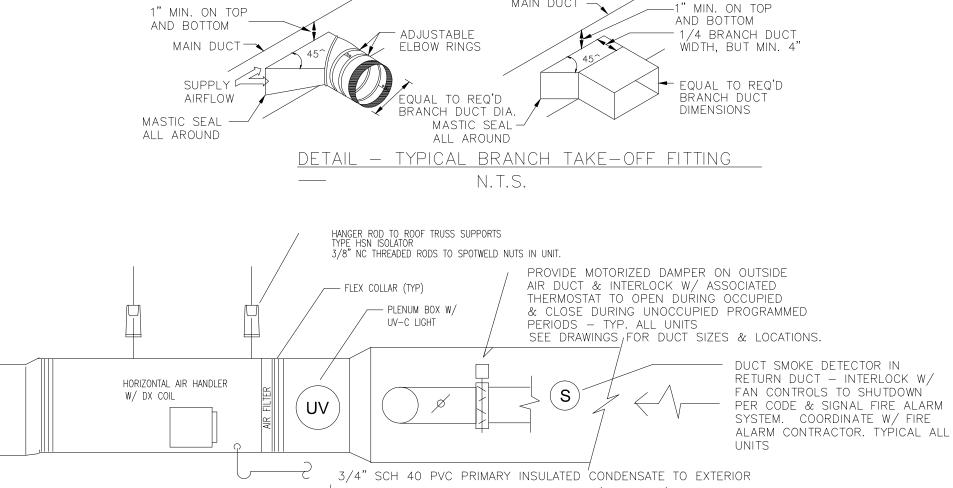
.CMY-R100CBK2

GRILLE/DIFFUSER/REGISTER SCHEDULE DIFFUSER NECK OPPOSED SIZE SIZE BLADE (IN) (IN) DAMPFR MARK LOCATION REMARKS MFR MODEL DAMPER 6 X 60 | 10"(2) | YES | 4000 BRONZE FINISH | S-1 | T&B* FLOOR FLOOR REGISTER BRONZE FINISH W/ INSUL. BOOT |S-2|T&B*YES 4000 BRONZE FINISH FLOOR 6 X 14 FLOOR REGISTER BRONZE FINISH W/ INSUL. BOOT S-3 T&B* 10 YES 6000-S-100-2-B-ECP-MP CEILING LINEAR 2 SLOT 1" DIFFUSER W/PLENUM CEILING 44 X 4 | S-4 | T&B* SIDEWALL REGISTER WALL 12 X 10 | 10 | YES | 4000 S-5 T&B* CEILING 72 X 4 | 10 | YES | 6000-S-100-2-B-ECP-MP | CEILING LINEAR 2 SLOT 1" DIFFUSER W/PLENUM S-6 T&B* 12 X 8 | 10 | YES | 4000-SF-03-SOBD-FB CEILING CEILING REGISTER 12 X 6 | D.O. | YES | T54 S-7 T&B* CEILING CEILING/SIDEWALL REGISTER 6 X 6 D.O. YES 4000-SF-03-SOBD-OW S-8 T&B* CEILING CEILING/SIDEWALL REGISTER |S-9 |T&B* 10 YES T1100SW CEILING CEILING REGISTER-COORD. W/ CEILING FINISH 10 X 6 | D.O. | YES | 4000 S-10 T&B* WALL CEILING/SIDEWALL REGISTER 6 X 6 D.O. YES 4000 (SURFACE BEVELED) CEILING REGISTER-COORD. W/ CEILING FINISH S-11 T&B* CEILING S-12 T&B* CEILING 12 X 12 | 8 | YES | 4000 CEILING REGISTER-COORD. W/ CEILING FINISH R-1 MCNICHOLS CAB. GRILLE SEE REMARKS D.O. N/A PERF. GRILLE PER ARCH. 2-15 X 36 & 2-15 X 28: SEE DWG.A9.3, COORD R-2 T&B* WALL 30 X 14 | D.O. | N/A | T70D WALL RETURN GRILLE-TOP OF CABINET BLACK R-3 REGGIO WALL/CL'G CEILING/WALL RETURN GRILLE-GRAY 16 X 30 | D.O. | N/A | G1733-SGH R-4 REGGIO 18 X 30 | D.O. | N/A | 2032-ARBH |WALL/CL'G WALL RETURN GRILLE-BRONZE R-5 REGGIO WALL 18 X 30 | D.O. | N/A | 2032-AH WALL RETURN GRILLE - PAINTABLE R-6 T&B* WALL RETURN GRILLE-TOP OF CABINET BLACK 12 X 18 | D.O. | N/A | T70D T-1 T&B* DOOR TRANSFER GRILLE 24 X 24 N/A N/A A990VF T-2 T&B* | WALL 8 X 18 N/A N/A A990VF OW TRANSFER GRILLE-FUSIBLE LINK FIRE DAMPER ___1 |T&B* 12 X 12 | 8 | N/A | T70D CEILING EXHAUST GRILLE ROOF CAP W/ 12"CURB FOR EXHAUST L-1 GREENHECK AS SHOWN 20.5 8 N/A GRSR-8

*TUTTLE	&	BAILEY	MFR.	OR	EQUAL.

	EXHAUST FAN SCHEDULE										
MARK	DESCRIPTION	MFR OR EQUAL	MODEL	CFM	SP	MOTOR	VOLTAGE	REMARKS			
EF-1	ROOF EXHAUST FAN	GREENHECK	SP-B110	90	0.25"	50 W	115/1/60	W/ HANGERS/BACKDRAFT DAMPERS/ DUCT TO WALL/ROOF W/ CAP.			
EF-2	CEILING EXHAUST FAN	GREENHECK	SP-B150	150	0.375"	350 W	115/1/60	W/ HANGERS/BACKDRAFT DAMPERS/ DUCT TO WALL/ROOF W/ CAP.			
EF-3	CEILING EXHAUST FAN	GREENHECK	GB-091-4	400	0.375"	1/6 HP	115/1/60	W/ 12"ROOF CURB, SCREEN, AND BACKDRAFT DAMPERS			

EF-3 FAN SHALL RUN DURING OCCUPIED PERIOD & BE OFF DURING UNOCCUPIED PERIOD. MOUNT EXHAUST FAN TIMER ON WALL IN ELECTRICAL/MECHANICAL ROOM. ALL EXHAUST FANS EF-1 & EF-2 IN BATHROOM SHALL SWITCH ON WITH LIGHT. COORDINATE W/ ELECTRICAL CONTRACTOR.



PROVIDE FLOAT CUT-OFF SWITCH IN SECONDARY DRAIN PAN

Job Name: Charles Washington Hall

capacity at lower outdoor temperatures

Connects to CITY MULTI indoor units

INVERTER-driven compressor

Built-in base pan heater to prevent ice in drain pan

Air-source, simultaneous cooling and heating

Controlled via CITY MULTI Controls Network

Electrical Power Requirements Voltage, Phase, Hertz

OUTDOOR VRF HEAT PUMP WITH HEAT RECOVERY

• Innovative flash injection technology for tremendous heating

In. / mm

Liquid (High Pressure)

Gas (Low Pressure)

Gas (Low Pressure)

Total Capacity

High-pressure

Fan motor

SCHE *3

Ask your Mitsubishi Electric representative for more details about your region.
*2. For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal.

1. Harsh weather environments may demand performance enhancing equipment

Specifications are subject to change without notice.

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Inverter circuit (COMP./F.

dB(A)

Model / Quantity

Liquid (High Pressure)

Schedule Reference:

SYSTEM FEATURES

Nominal Cooling Capacity

Nominal Heating Capacity

Operating Temperature

Minimum Circuit Ampacity

From Modules to Twinning Kit

Compressor Operating Range

Compressor Type x Quantity

External Dimension

Maximum Fuse Size

Piping Diameter

Piping Diameter

(Brazed) (In. / mm)

(Brazed) (In. / mm)

Sound Pressure Levels

Indoor Unit

Type x Quantity

Airflow Rate

Refrigerant

Protection Devices

(Ducted/Non-Ducted)

Simultaneous Rating

(Ducted/Non-Ducted)

AHRI Ratings

(208/230V)

(H x W x D)

Net Weight

External finish

OR PIPE TO DRAIN PER LOCAL CODE TYP.

1. PROVIDE COMPLETE VRF HEAT PUMP HEATING, COOLING WITH CONTROL SYSTEMS, AS SPECIFIED, DUCT SMOKE DETECTORS. INSULATED AND INTERIOR LINED METAL DUCTWORK PER SMACNA STANDARDS, DIFFUSERS, REGISTERS, INSULATED BOOTS, FLEXIBLE COLLARS, INSULATED BRANCH DUCTS, MASTER PROGRAMMABLE THERMOSTATS WITH PROGRAMMABLE FAN CYCLE AND DEHUMIDIFICATION, CAPABILITY AND CONTROL WIRING PER MITSUBISHI OR APPROVED EQUAL. PROVIDE ALL

AS SPECIFIED, REFRIGERANT PIPING PER MITSUBISHI INSTALLATION DESIGN MANUALS, ASTM STANDARDS, CURRENT CODES OR APPROVED EQUAL. 2. CONTRACTOR SHALL AT LEAST 5 YEARS EXPERIENCE WITH VRF HEAT PUMP SYSTEMS AND PROVIDE AT LEAST 3 REFERENCES.

PIPING SHALL BE INSTALLED WITH INSULATION, PIPE HANGERS AND INSULATION SLEEVES. 3. UNITS SHALL HAVE 30% EFFICIENCY PLEATED FILTERS, VIBRATION ISOLATION - DOUBLE DEFLECTION NEOPRENE MOUNTS (MASON IND. TYPE ND OR EQUAL), AND FLEXIBLE COLLARS & PIPING. EVAPORATOR CONDENSATE DRAIN SHALL BE PROVIDED AND CONDENSATE PIPED TO DRAINS OR PUMPED TO EXTERIOR. 4. COMMERCIAL GRADE SUPPLY DIFFUSERS AND RETURN GRILLES SHALL BE PROVIDED AS SHOWN WITH OPPOSED BLADE DAMPERS.

ALL BRANCH LINES SHALL HAVE ADJUSTABLE LOCKING DAMPERS AND ALL DUCTWORK MASTIC SEALED. 5. ALL MAIN SUPPLY & RETURN DUCT TRUNKS SHALL BE METAL WITH INTERIOR LINER OR EXTERIOR INSULATION (R-4 OR R-5), AS SPECIFIED W/ MASTIC SEALED JOINTS/SEAMS. INSULATION MINIMUM PER 2012 IECC SECTION 803, DESIGN BY ACCEPTABLE PRACTICE FOR COMMERCIAL BLDGS. RUN METAL SUPPLY & RETURN DUCTS ABOVE CEILINGS OR EXPOSED, AS INDICATED ON DRAWINGS, INSULATE DUCTS IN CEILING. BRANCH AIR DUCTS SHALL BE METAL TO DIFFUSERS AND SHALL BE A MINIMUM OF R-5 INSULATION.

CONTRACTOR HAS OPTION OF USING ASTRO-FOIL REFLECTIVE INSULATION OR EQUAL, PROVIDED R-VALUES ARE MAINTAINED. 6. PROVIDE ALL REFRIGERANT PIPING, FITTINGS AND CONTROLS PER MANUFACTURER.

7. ALL WORK SHALL COMPLY WITH 2012 INTERNATIONAL MECHANICAL CODE (IMC), NATIONAL ELECTRICAL CODE (NEC), 2012 INTERNATIONAL PLUMBING CODE (IPC), 2012 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), AND LOCAL GOVERNING CODES. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY DRAWINGS.

PROVIDE AND SUBMIT CATALOG CUTS FOR APPROVAL OF VRF HEAT PUMP UNITS, INSULATION, CONTROLS & DIFFUSERS/LOUVERS. 8. REFRIGERANT SYSTEM SHALL BE FACTORY CHARGED AND FIELD CHECKED. AIR BALANCE SYSTEMS TO

DESIGN FLOWS AND PROVIDE THE ARCHITECT/ENGINEER 3 SETS OF NEBB OR EQUAL CERTIFIED AIR BALANCE REPORT FOR APPROVAL. 9. PROVIDE THE OWNER WITH TWO SETS OF MANUFACTURER'S O&M LITERATURE ON ALL EQUIPMENT.

10. RUN SUPPLY & RETURN DUCTS AS INDICATED ON DRAWINGS. PROVIDE OFFSETS AND TRANSITIONS AS REQUIRED TO AVOID STRUCTURAL, ELECTRICAL AND PLUMBING INTERFERENCES.

11. COORDINATE FINAL VRF HEAT PUMP UNITS & DUCTWORK LOCATION W/ JOISTS AND TRUSSES. PROVIDE MINIMUM 30 INCHES MAINTENANCE CLEARANCE FOR UNIT ACCESS AND CLEARANCES AND PER MANUFACTURER/CODE.

PIPE CONDENSATE TO DRAIN OR EXTERIOR. PROVIDE CONDENSATE PUMP(S). PIPING & INSULATED AS REQUIRED.

12. PROVIDE ENGRAVED PLASTIC EQUIPMENT I.D. PLATES 3/4" X 3 1/4" WIDE WITH 0.125 HELVETICA LETTERING ON ALL PIECES OF MAJOR EQUIPMENT. (MINIMUM VRE HEAT PUMP UNITS)

Compressor Type x Quantity

High-pressure Protection Device

Inverter Protection Device

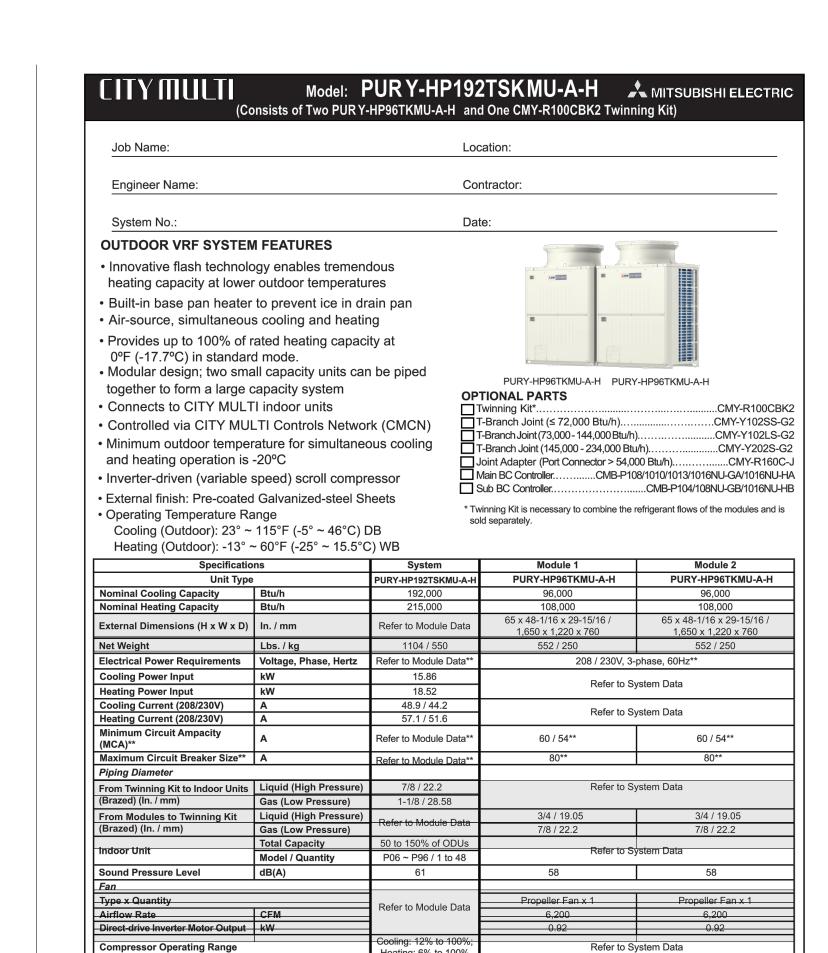
Compressor Motor Output kW
Compressor Crankcase Heater kW

Compressor / Fan Protection Device

13. PROVIDE 30% EFFICIENT AIR FILTER AND 1" MESURFLO HOSE KIT FOR ALL VRF HEAT PUMP AIR HANDLER UNITS. 14. PROVIDE HIGH OUTPUT UV-C GERMICIDAL LAMP IN AIR HANDLER FAN COIL SUPPLY OR RETURN PLENUM PER LAMP

MANUFACTURER (TOTALINE, LENNOX OR EQUAL) INSTALLATION INSTRUCTIONS WITH MOUNTING HARDWARE AND ACCESSORIES. COORDINATE WITH ELECTRICAL ON POWER TO LAMP AND PROVIDE DISCONNECT FOR INSTALLATION BY ELECTRICAL CONTRACTOR.

15. PROVIDE RETURN DUCT SMOKE DETECTORS ON ALL AIR HANDLERS PER CODE AND COORDINATE CONNECTION W/ OWNERS. COORDINATE W/ FIRE ALARAM AND ELECTRICAL CONTRACTORS AS REQUIRED, FOR POWER AND ALARM TO ALL MECHANICAL EQUIPMENT.



Refer to Module Data

Refer to Module Data

* Each individual module requires a separate electrical connection. Reference electrical data for each individual module.

erter-driven Scroll Hermetic x 1 Inverter-driven Scroll Hermetic x 1

601 psi / 4.15 MPa 601 psi / 4.15 MPa

Overheat Protection / Thermal Switch
Overheat / Overcurrent Protection
Overheat / Overcurrent Protection

NORTH (magnetic)



Washington Hall RENOVATIONS Corner of George & **Washington Streets** Charles Town, W.Va.

For the City of Charles Town City of Ranson

Planning & Engineering (prime) Hall Planning & Engineering, Inc. 316 Williams Street Tallahassee, FL 32303

Landscape Architecture

Stromberg/Garrigan & Assoc.,Inc. 102 E. Main Street-The Penn Bldg Somerset, PA 15501

Historic Preservation & Architecture Landmarks SGA, LLC 102 E. Main Street-The Penn Bldg Somerset, PA 15501

Structural Engineer

R.L. Silman Associates 1053 31st Street NW Washington D.C. 20007

Mech/Elect Engineer

Comfort Design, Inc. 620 Pennsylvania Avenue Winchester, VA 2260

Architect



Issue/Revision Seal 1\ REVISED VRF MARCH 4. 2015

Drawing Title

Mechanical Schedules & Details

Date: 9/26/14 Scale: As Shown Project Number 11105 **Drawing Number**