Mitsubishi PUHY-EP120TNU/YNU-A1 NONDUCTED-VRF-OU,!- Name
Mitsubishi PUHY-EP120TNU/YNU-A1 DUCTED-VRF-OU,!- Name
Mitsubishi PUHY-EP120TNU/YNU-A1 NONDUCTED-HIGHHEAT-VRF-OU,!- Name
Mitsubishi PUHY-EP120TNU/YNU-A1 DUCTED-HIGHHEAT-VRF-OU,!- Name

	Energy Modeling Assumptions and Comments	Applicable Field
1	Coefficient of Performance is calculated assuming either Ducted or Non-Ducted indoor units, as specified in the **!- Name**	!- Gross Rated Cooling COP {W/W}
2	Outdoor unit is installed in location above indoor units (this affects cooling operating outdoor temperature range). If the outdoor unit will be installed below the indoor units, adjust the fields: **!- Minimum Outdoor Temperature in Cooling Mode {C} = 0°C** **!- Maximum Outdoor Temperature in Cooling Mode {C} = 43°C**	!- Maximum Outdoor Temperature in Cooling Mode {C}
3	Standard performance mode: Dip switch toggle is off (it will not allow for high heating performance mode). For high heating performance, see **!- Name** with **HIGHHEAT**	!- Heating Capacity Ratio Modifier Function of Low Temperature Curve Name !- Heating Energy Input Ratio Modifier Function of Low Temperature Curve Name
4	EPLUS Default is 1: IT DOES NOT ACCOUNT FOR OPERATIONAL INEFFICIENCIES BELOW MINIUM PLR (COMPRESSOR CYCLING) ! No information from Mitsubishi on this.	!- Cooling Part-Load Fraction Correlation Curve Name
5	EPLUS Default is 1: IT DOES NOT ACCOUNT FOR OPERATIONAL INEFFICIENCIES BELOW MINIUM PLR (COMPRESSOR CYCLING) ! No information from Mitsubishi on this.	!- Heating Part-Load Fraction Correlation Curve Name
6	No waste heat recovery	!- Heat Pump Waste Heat Recovery
7	30 meters. Adjust this parameter to suit your project conditions	!- Equivalent Piping Length used for Piping Correction Factor in Cooling Mode {m}
8	10 meters: This is not used	!- Vertical Height used for Piping Correction Factor {m}
9	No published derate for height between IDU and ODU, used EPLUS default 0	!- Piping Correction Factor for Height in Cooling Mode Coefficient {1/m}
10	Mitsubishi docs do not indicate any crank case heater. There is an optional drain pan heater though...this is currently only for Evaporative condensers	!- Crankcase Heater Power per Compressor {W}
11	Mitsubishi docs do not indicate any dependence on indoor wetbulb temperature	!- Defrost Energy Input Ratio Modifier Function of Temperature Curve Name
12	Default (null value) for this field will use the weatherfile outdoor conditions. If condenser is located up high, another file may be necessary.	!- Condenser Inlet Node
13	No heat recovery for this model	!- Minimum Outdoor Temperature in Heat Recovery Mode {C} !- Maximum Outdoor Temperature in Heat Recovery Mode {C} !- Heat Recovery Cooling Capacity Modifier Curve Name !- Initial Heat Recovery Cooling Capacity Fraction {W/W} !- Heat Recovery Cooling Capacity Time Constant {hr} !- Heat Recovery Cooling Energy Modifier Curve Name !- Initial Heat Recovery Cooling Energy Fraction {W/W} !- Heat Recovery Cooling Energy Time Constant {hr} !- Heat Recovery Heating Capacity Modifier Curve Name !- Initial Heat Recovery Heating Capacity Fraction {W/W} !- Heat Recovery Heating Capacity Time Constant {hr} !- Heat Recovery Heating Energy Modifier Curve Name !- Initial Heat Recovery Heating Energy Fraction {W/W} !- Heat Recovery Heating Energy Time Constant {hr}

CITYMULTI® **10-TON PUHY-EP120TNU-A1** MITSUBISHI ELECTRIC

Job Name:
System Reference: Date:

208/230V OUTDOOR VRF HEAT PUMP SYSTEM

UNIT OPTION

☐ Standard Model PUHY-EP120TNU-A1

ACCESSORIES

☐ Big Foot Stand ..... for details see Big Foot Stands submittals
☐ Header Kit ..... for details see Pipe Accessories Submittal
☐ Joint Kit ..... for details see Pipe Accessories Submittal
☐ Low Ambient Kit ..... for details see Low Ambient Kit Submittal
☐ Panel Heater Kit ..... for details see Panel Heater Kit Submittal
☐ Snow/Hail Guards Kit ..... for details see Snow/Hail Guards Kit Submittal

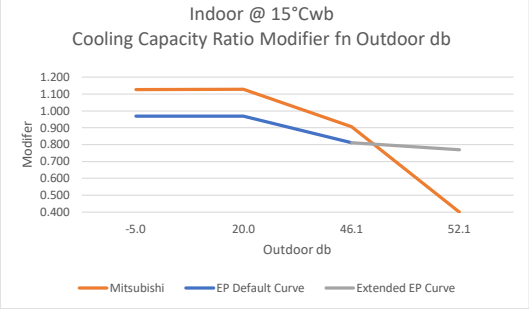
Specifications			System
Unit Type			PUHY-EP120TNU-A1
Cooling Capacity (Nominal)		BTU/H	120,000
Heating Capacity (Nominal)		BTU/H	135,000
Guaranteed Operating Range	Cooling	°F [°C]	23~126 [-5.0~52.0]
	Heating	°F [°C]	-13~60 [-25.0~15.5]
Extended Operating Range	Heating	°F [°C]	-27.4~60 [-33.0~15.5]
External Dimensions (H x W x D)		In. [mm]	71-5/8 x 48-7/8 x 29-3/16 [1,818 x 1,240 x 740]
Net Weight		Lbs. [kg]	633 [287]
External Finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) [MUNSELL 3Y 7.8/1.1 or similar]
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance		208/230V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity		A	55.0/49.0
Maximum Overcurrent Protection		A	90/80
Recommended Fuse Size		A	60/50
Recommended Minimum Wire Size		AWG [mm]	4/6 [21.2/13.3]
SCCR		kA	5
Refrigerant Piping Diameter	Liquid (High Pressure)	In. [mm]	3/8 [9.52] Brazed (Pipe Size Dependent on Piping Length)
	Gas (Low Pressure)	In. [mm]	1-1/8 [28.58] Brazed
Max. Total Refrigerant Line Length		Ft.	3,280 [1,000]
Max. Refrigerant Line Length (Between ODU & IDU)		Ft.	541 [165]
Max. Control Wiring Length		Ft.	1,640 [500]
Indoor Unit Connectable	Total Capacity		50.0~130.0% of outdoor unit capacity
	Model/Quantity		P04~P96/1.0~30.0
Sound Pressure Levels		dB(A)	59.5/61.5
Sound Power Levels		dB(A)	79.5/81.0
FAN[1]	Type x Quantity		Propeller fan x 2
	Fan Motor Output	kW	0.46+0.46
	Airflow Rate	CFM	7,750
	External Static Pressure	In. WG	Selectable: 0.00, 0.12, 0.24, 0.32, In. WG; factory set to 0 In. WG
Compressor Operating Range			15.0% to 100.0%

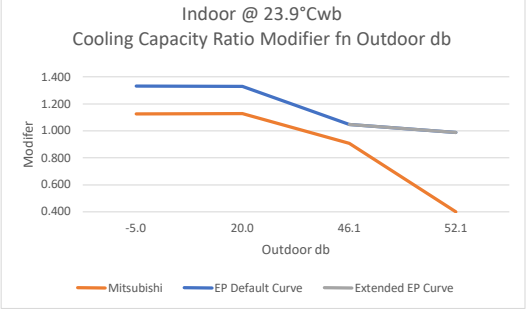
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge	R410A x 21.0 lbs + 9.0 oz [9.8 kg]
Protection Devices	High Pressure Protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter Circuit (Comp./Fan)	Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER	10.7/10.9
	IEER	21.9/24.8
	COP	3.8/4.21

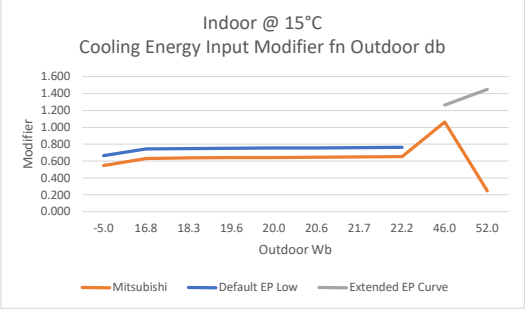
NOTES:
Nominal cooling conditions (Test conditions are based on AHRI 1230-2023)
Indoor: 80°FD.B./67°FW.B. (26.7°CD.B./19.4°CW.B.), Outdoor: 95°FD.B. (35°CD.B.)
Nominal heating conditions (Test conditions are based on AHRI 1230-2023)
Indoor: 70°FD.B. (21.1°CD.B.), Outdoor: 47°FD.B./43°FW.B. (8.3°CD.B./6.1°CW.B.)

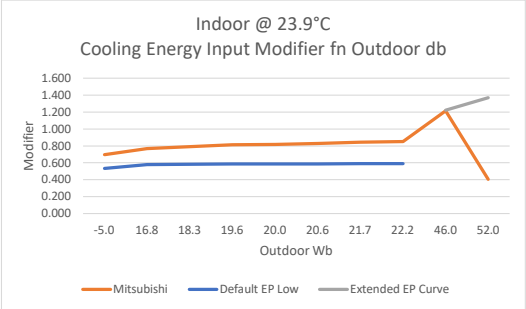
[1]Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region
[2]For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal
[3]When applying product below -4°F, consult your design engineer for cold climate application best practices, including the use of a backup source for heating
[4]Unit will continue to operate in extended operating range, but capacity is not guaranteed

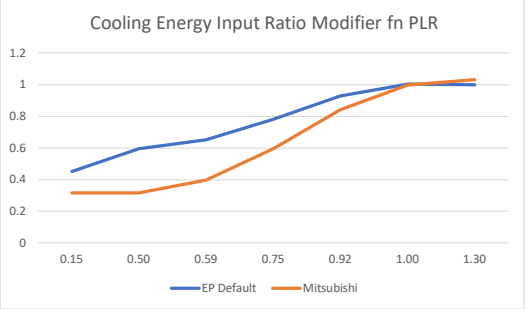
Specifications are subject to change without notice.

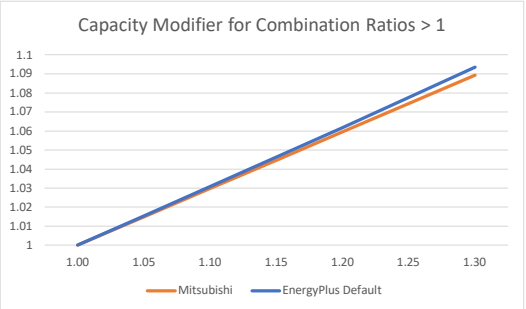


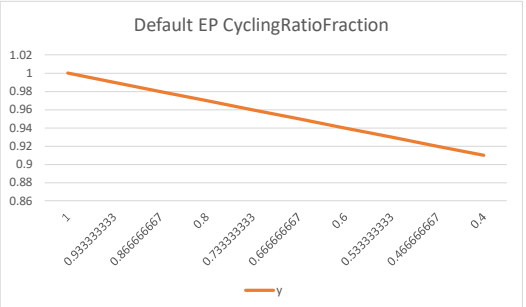


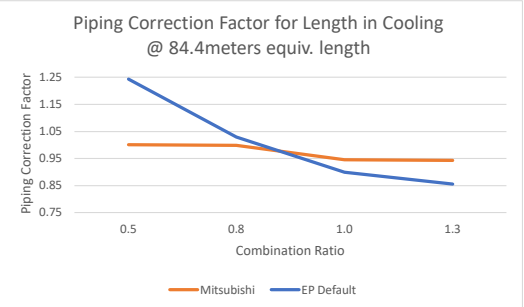


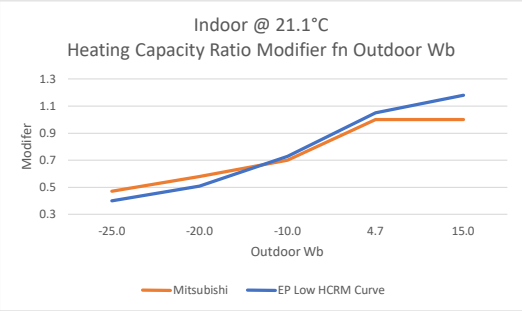


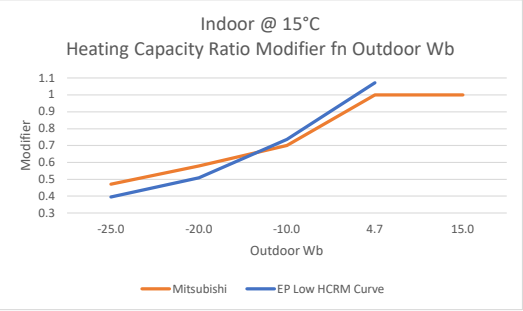


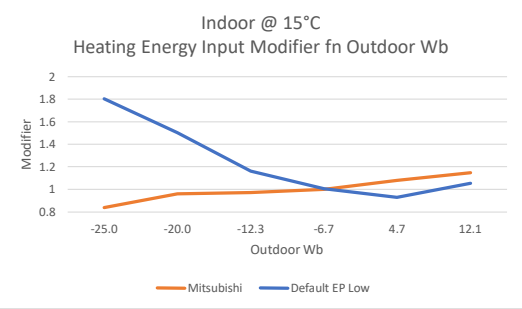


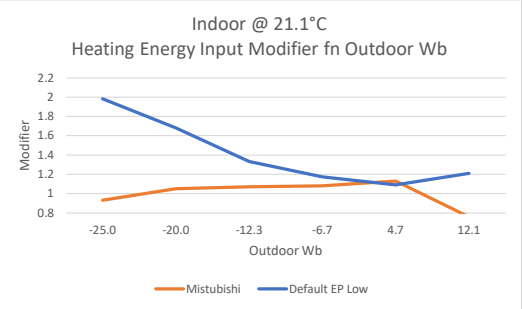


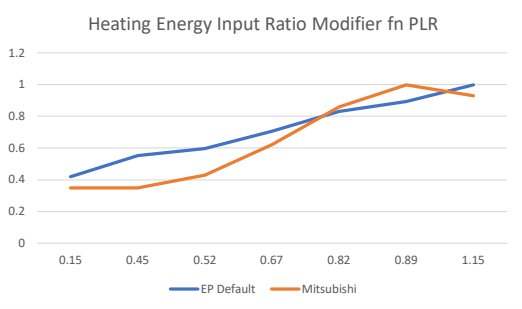


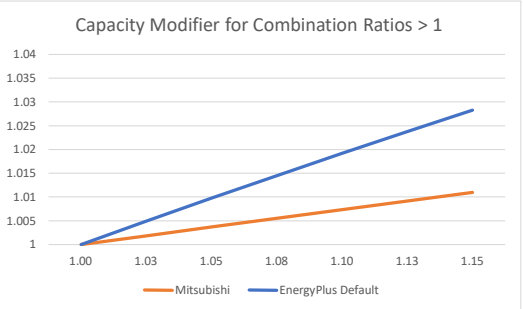

Indoor @ 21.1°C
Heating Capacity Ratio Modifier fn Outdoor Wb
Modifier
1.3
1.1
0.9
0.7
0.5
0.3
-25.0
-20.0
-10.0
4.7
15.0
Outdoor Wb
Mitsubishi
EP Low HCRM Curve

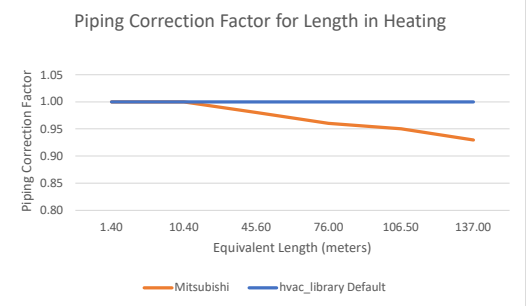

Indoor @ 15°C
Heating Capacity Ratio Modifier fn Outdoor Wb
Modifier
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
-25.0
-20.0
-10.0
4.7
15.0
Outdoor Wb
Mitsubishi
EP Low HCRM Curve

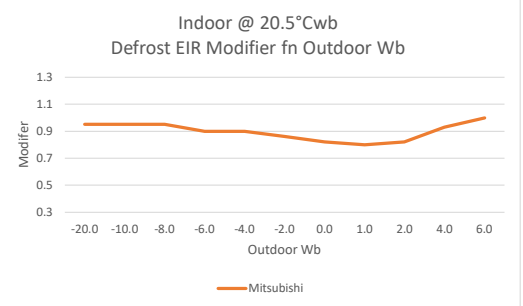

Indoor @ 15°C
Heating Energy Input Modifier fn Outdoor Wb
Modifier
2
1.8
1.6
1.4
1.2
1
0.8
-25.0
-20.0
-12.3
-6.7
4.7
12.1
Outdoor Wb
Mitsubishi
Default EP Low

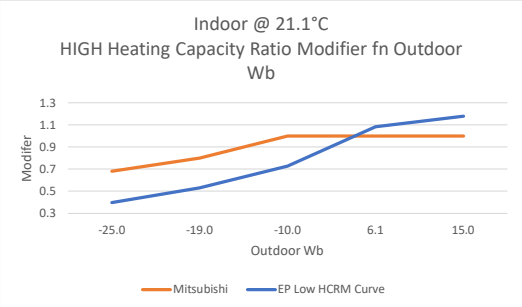

Indoor @ 21.1°C
Heating Energy Input Modifier fn Outdoor Wb
Modifier
2.2
2
1.8
1.6
1.4
1.2
1
0.8
-25.0
-20.0
-12.3
-6.7
4.7
12.1
Outdoor Wb
Mistubishi
Default EP Low

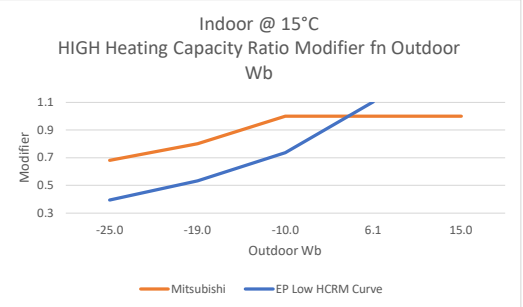

Heating Energy Input Ratio Modifier fn PLR
1.2
1
0.8
0.6
0.4
0.2
0
0.15
0.45
0.52
0.67
0.82
0.89
1.15
EP Default
Mitsubishi

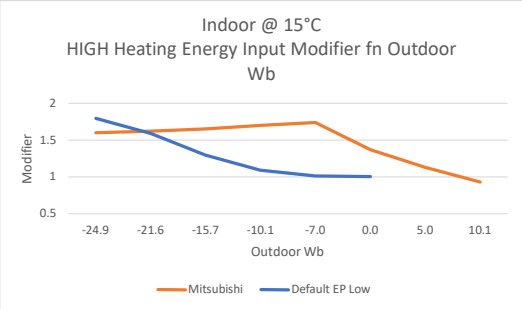

Capacity Modifier for Combination Ratios > 1
1.04
1.035
1.03
1.025
1.02
1.015
1.01
1.005
1
1.00
1.03
1.05
1.08
1.10
1.13
1.15
Mitsubishi
EnergyPlus Default

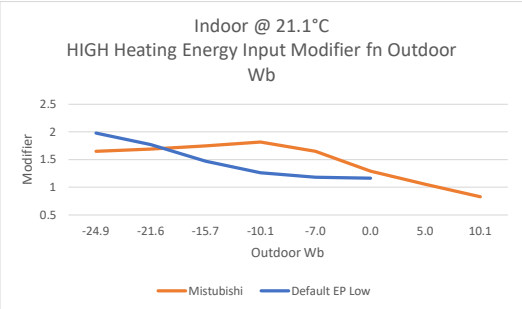

Piping Correction Factor for Length in Heating
Piping Correction Factor
1.05
1.00
0.95
0.90
0.85
0.80
1.40
10.40
45.60
76.00
106.50
137.00
Equivalent Length (meters)
Mitsubishi
hvac_library Default


Indoor @ 20.5°Cwb
Defrost EIR Modifier fn Outdoor Wb
Modifer
1.3
1.1
0.9
0.7
0.5
0.3
-20.0
-10.0
-8.0
-6.0
-4.0
-2.0
0.0
1.0
2.0
4.0
6.0
Outdoor Wb
Mitsubishi


Indoor @ 21.1°C
HIGH Heating Capacity Ratio Modifier fn Outdoor Wb
Modifer
1.3
1.1
0.9
0.7
0.5
0.3
-25.0
-19.0
-10.0
6.1
15.0
Outdoor Wb
Mitsubishi
EP Low HCRM Curve


Indoor @ 15°C
HIGH Heating Capacity Ratio Modifier fn Outdoor Wb
Modifer
1.1
0.9
0.7
0.5
0.3
-25.0
-19.0
-10.0
6.1
15.0
Outdoor Wb
Mitsubishi
EP Low HCRM Curve


Indoor @ 15°C
HIGH Heating Energy Input Modifier fn Outdoor Wb
Modifier
2
1.5
1
0.5
-24.9
-21.6
-15.7
-10.1
-7.0
0.0
5.0
10.1
Outdoor Wb
Mitsubishi
Default EP Low


Indoor @ 21.1°C
HIGH Heating Energy Input Modifier fn Outdoor Wb
Modifier
2.5
2
1.5
1
0.5
-24.9
-21.6
-15.7
-10.1
-7.0
0.0
5.0
10.1
Outdoor Wb
Mistubishi
Default EP Low