

OUTDOOR UNITS

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1. SPECIFICATIONS

Model			PUHY-HP72TJMU-A(-BS)		PUHY-HP96TJMU-A(-BS)			
Power source			3-phase 3-wire 208 / 230V ±10% 60Hz		3-phase 3-wire 208 / 230V ±10% 60Hz			
Cooling capacity (Nominal) *1 (208 / 230V)		Btu/h	72,000		96,000			
		kW	21.1		28.1			
		Power input	kW	5.60 *4		8.16 *4		
		Current input	A	17.2 / 15.6 *4		25.1 / 22.7 *4		
Temp. range of cooling *3		Indoor	W.B.	59~75°F(15~24°C)		59~75°F(15~24°C)		
		Outdoor	D.B.	23~109°F(-5~43°C) *5		23~109°F(-5~43°C) *5		
Heating capacity (Nominal) *2 (208 / 230V)		Btu/h	80,000		108,000			
		kW	23.4		31.7			
		Power input	kW	6.14 *4		8.80 *4		
		Current input	A	18.9 / 17.1 *4		27.1 / 24.5 *4		
Temp. range of heating *3		Indoor	D.B.	59~81°F(15~27°C)		59~81°F(15~27°C)		
		Outdoor	W.B.	-13~60°F(-25~15.5°C)		-13~60°F(-25~15.5°C)		
Indoor unit		Total capacity	50~130 % of outdoor unit capacity		50~130 % of outdoor unit capacity			
		Model / Quantity	P06~P72 / 1~15		P06~P96 / 1~20			
Sound pressure level (measured in anechoic room)		dB <A>	56.0 61.0(at outdoor temp -5°F W.B. in heating)		57.0 62.0(at outdoor temp -5°F W.B. in heating)			
Refrigerant piping diameter		Liquid pipe	In. (mm)	1/2"(12.7) Brazed		1/2"(12.7) Brazed		
		Gas pipe	In. (mm)	3/4"(19.05) Brazed		7/8"(22.2) Brazed		
Fan		Type x Quantity		Propeller fan x 1		Propeller fan x 1		
		Airflow rate		CFM	6,180		7,950	
				m³ / min	175		225	
				L/s	2,920		3,750	
		Control, Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		
		External static pressure *6		0 in.WG (0 Pa) *6		0 in.WG (0 Pa) *6		
Compressor		Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1		
		Manufacturer		AC&R Works, MITSUBISHI ELECTRIC CORP.		AC&R Works, MITSUBISHI ELECTRIC CORP.		
		Operating Range		Heating: 16-100%		Heating: 13-100%		
		Starting method		Inverter		Inverter		
		Case heater	kW	0.045(230 V)		0.045(230 V)		
		Lubricant		MEL32		MEL32		
External finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>			
External dimension H x W x D		In.	64-31/32" x 36-1/4" x 29-15/16"		64-31/32" x 48-1/16" x 29-15/16"			
		mm	1,650 x 920 x 760		1,650 x 1,220 x 760			
Protection devices		High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
		Inverter circuit (COMP. / FAN)		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
		Compressor		Over-heat protection		Over-heat protection		
		Fan motor		Thermal switch		Thermal switch		
Minimum Circuit Ampacity (MCA)		A	59 / 54		74 / 68			
Recommended Fuse/Breaker Size		A	60 / 60		75 / 75			
Maximum Fuse Size		A	100 / 90		120 / 110			
Refrigerant		Type x original charge		R410A x 19 lbs + 13 oz (9.0kg)		R410A x 26 lbs + 1 oz (11.8kg)		
		Control		LEV and HIC circuit		LEV and HIC circuit		
Net weight		lbs (kg)	497(225)		585(265)			
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube			
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure			
Defrost method			Auto-defrost mode (Reversed refrigerant cycle)		Auto-defrost mode (Reversed refrigerant cycle)			
Drawing		External		KD94C990		KD94C991		
		Wiring		KE94C438		KE94C438		
Standard attachment		Document		Installation Manual		Installation Manual		
		Accessory		Details refer to External Drw		Details refer to External Drw		
Optional parts			Joint: CMY-Y102S/L-G2		Joint: CMY-Y102S/L-G2			
			Header: CMY-Y104/108/1010C-G		Header: CMY-Y104/108/1010C-G			
Remark			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. *3 Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details on your region. *4 For details on the electrical data needed for installing these units, see the Hyper-heating Y-Series System Design section. *5 For details on extended ambient cooling operation range down to 0°FDB (-18°CDB), see Low Ambient Cooling Kit information. *6 External static pressure is adjustable via dipswitch setting (0.12 in.WG, 0.24 in.WG / 30Pa, 60Pa). *7 For information on standard anti-corrosion protection and -BS treatment, see the Hyper-heating Y-Series System Design section.					

Note:	*1 Nominal cooling conditions	*2 Nominal heating conditions	Unit converter
Indoor:	80degF D.B./ 67degF W.B.	70degF D.B.	kcal =kW x 860
	(26.7degC D.B./ 19.4degC W.B.)	(21.1degC D.B.)	BTU/h =kW x 3,412
Outdoor:	95degF D.B. (35degC D.B.)	47degF D.B./ 43degF W.B.	cfm =m³/min x 35.31
		(8.3degC D.B./ 6.1degC W.B.)	lb =kg / 0.4536
Pipe length:	25ft.(7.6m)	25ft.(7.6m)	* Above specification data is subject to rounding variation.
Level difference:	0ft.(0m)	0ft.(0m)	
* Due to continuing improvement, above specifications may be subject to change without notice.			

1. SPECIFICATIONS

Model			PUHY-HP144TSJMU-A(-BS)			
Power source			3-phase 3-wire 208 / 230V ±10% 60Hz			
Cooling capacity (Nominal) *1 (208 / 230V)	Btu/h	kW	144,000			
			42.3			
	Power input		kW			
	Current input		A			
Temp. range of cooling *3	Indoor	W.B.	59~75°F(15~24°C)			
	Outdoor	D.B.	23~109°F(-5~43°C) *5			
Heating capacity (Nominal) *2 (208 / 230V)	Btu/h	kW	160,000			
			46.9			
	Power input		kW			
	Current input		A			
Temp. range of heating *3	Indoor	D.B.	59~81°F(15~27°C)			
	Outdoor	W.B.	-13~60°F(-25~15.5°C)			
System Compressor Operating Range			Heating: 8-100%			
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity			
	Model / Quantity		P06~P96 / 1~31			
Sound pressure level (measured in anechoic room)			59.0 64.0(at outdoor temp -5°F W.B. in heating)			
Refrigerant piping diameter from Twinning Kit to Indoor Units	Liquid pipe	In. (mm)	5/8"(15.88) Brazed			
	Gas pipe	In. (mm)	1-1/8"(28.58) Brazed			
Set Model						
Model			PUHY-HP72TJMU-A(-BS)		PUHY-HP72TJMU-A(-BS)	
Fan	Type x Quantity		Propeller fan x 1		Propeller fan x 1	
	Airflow rate	CFM	6,180		6,180	
		m³ / min	175		175	
		L/s	2,920		2,920	
	Control , Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor	
External static pressure *6		0 in.WG (0 Pa) *6		0 in.WG (0 Pa) *6		
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Manufacturer		AC&R Works, MITSUBISHI ELECTRIC CORP.		AC&R Works, MITSUBISHI ELECTRIC CORP.	
	Starting method		Inverter		Inverter	
	Case heater	kW	0.045(230 V)		0.045(230 V)	
	Lubricant		MEL32		MEL32	
External finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		In.	64-31/32" x 36-1/4" x 29-15/16"		64-31/32" x 36-1/4" x 29-15/16"	
		mm	1,650 x 920 x 760		1,650 x 920 x 760	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)	
	Inverter circuit (COMP. / FAN)		Over-heat protection,Over-current protection		Over-heat protection,Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
	Fan Motor		Thermal switch		Thermal switch	
Minimum Circuit Ampacity (MCA)		A	59 / 54		59 / 54	
Recommended Fuse/Breaker Size		A	60 / 60		60 / 60	
Maximum Fuse Size		A	100 / 90		100 / 90	
Refrigerant	Type x original charge		R410A x 19 lbs + 13 oz (9.0kg)		R410A x 19 lbs + 13 oz (9.0kg)	
	Control		LEV and HIC circuit			
Net weight		lbs (kg)	497(225)		497(225)	
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe,tube-in-tube structure		Copper pipe,tube-in-tube structure	
Refrigerant piping diameter from Module to Twinning Kit	Liquid pipe	In. (mm)	1/2"(12.7)Brazed		1/2"(12.7)Brazed	
	Gas pipe	In. (mm)	3/4"(19.05)Brazed		3/4"(19.05)Brazed	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)			
Drawing	External		KD94C992			
	Wiring		KE94C438		KE94C438	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2			
			Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2			
			Header: CMY-Y104/108/1010C-G			
Remark			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. *3 Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details on your region. *4 For details on the electrical data needed for installing these units, see the Hyper-heating Y-Series System Design section. *5 For details on extended ambient cooling operation range down to 0°FDB (-18°CDB), see Low Ambient Cooling Kit information. *6 External static pressure is adjustable via dipswitch setting (0.12 in.WG, 0.24 in.WG / 30Pa, 60Pa). *7 For information on standard anti-corrosion protection and -BS treatment, see the Hyper-heating Y-Series System Design section.			
Note:	*1 Nominal cooling conditions		*2 Nominal heating conditions		Unit converter	
Indoor:	80degF D.B./ 67degF W.B. (26.7degC D.B./ 19.4degC W.B.)		70degF D.B. (21.1degC D.B.)		kcal =kW x 860 BTU/h =kW x 3,412	
	Outdoor:		95degF D.B. (35degC D.B.)		47degF D.B. / 43degF W.B. (8.3degC D.B./ 6.1degC W.B.)	
Pipe length:	25ft.(7.6m)		25ft.(7.6m)		cfm =m³/min x 35.31 lb =kg / 0.4536	
Level difference:	0ft.(0m)		0ft.(0m)		* Above specification data is subject to rounding variation.	
* Due to continuing improvement, above specifications may be subject to change without notice.						

1. SPECIFICATIONS

Model			PUHY-HP192TSJMU-A(-BS)			
Power source			3-phase 3-wire 208 / 230V ±10% 60Hz			
Cooling capacity (Nominal) *1 (208 / 230V)		Btu/h	192,000			
		kW	56.3			
	Power input	kW	16.81 *4			
Temp. range of cooling *3	Current input	A	51.8 / 46.8 *4			
	Indoor	W.B.	59~75°F(15~24°C)			
	Outdoor	D.B.	23~109°F(-5~43°C) *5			
Heating capacity (Nominal) *2 (208 / 230V)		Btu/h	216,000			
		kW	63.4			
	Power input	kW	18.13 *4			
Temp. range of heating *3	Current input	A	55.9 / 50.5 *4			
	Indoor	D.B.	59~81°F(15~27°C)			
	Outdoor	W.B.	-13~60°F(-25~15.5°C)			
System Compressor Operating Range			Heating: 6-100%			
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity			
	Model / Quantity		P06~P96 / 1-41			
Sound pressure level (measured in anechoic room)		dB <A>	60.0 65.0(at outdoor temp -5°F W.B. in heating)			
Refrigerant piping diameter from Twinning Kit to Indoor Units	Liquid pipe	In. (mm)	5/8"(15.88) Brazed			
	Gas pipe	In. (mm)	1-1/8"(28.58) Brazed			
Set Model						
Model			PUHY-HP96TJMU-A(-BS)		PUHY-HP96TJMU-A(-BS)	
Fan	Type x Quantity		Propeller fan x 1		Propeller fan x 1	
	Airflow rate	CFM	7,950		7,950	
		m³ / min	225		225	
		L/s	3,750		3,750	
	Control , Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor	
External static pressure *6		0 in.WG (0 Pa) *6		0 in.WG (0 Pa) *6		
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1		Inverter scroll hermetic compressor x 1	
	Manufacturer		AC&R Works, MITSUBISHI ELECTRIC CORP.		AC&R Works, MITSUBISHI ELECTRIC CORP.	
	Starting method		Inverter		Inverter	
	Case heater	kW	0.045(230 V)		0.045(230 V)	
	Lubricant		MEL32		MEL32	
External finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet (+powder coating for -BS type) *7 <MUNSELL 5Y 8/1 or similar>	
External dimension H x W x D		In.	64-31/32" x 48-1/16" x 29-15/16"		64-31/32" x 48-1/16" x 29-15/16"	
		mm	1,650 x 1,220 x 760		1,650 x 1,220 x 760	
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)	
	Inverter circuit (COMP. / FAN)		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
	Compressor		Over-heat protection		Over-heat protection	
	Fan Motor		Thermal switch		Thermal switch	
Minimum Circuit Ampacity (MCA)		A	74 / 68		74 / 68	
Recommended Fuse/Breaker Size		A	75 / 75		75 / 75	
Maximum Fuse Size		A	120 / 110		120 / 110	
Refrigerant	Type x original charge		R410A x 26 lbs + 1oz (11.8kg)		R410A x 26 lbs + 1oz (11.8kg)	
	Control		LEV and HIC circuit			
Net weight		lbs (kg)	585(265)		585(265)	
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
HIC circuit (HIC: Heat Inter-Changer)			Copper pipe, tube-in-tube structure		Copper pipe, tube-in-tube structure	
Refrigerant piping diameter from Module to Twinning Kit	Liquid pipe	In. (mm)	1/2"(12.7)Brazed		1/2"(12.7)Brazed	
	Gas pipe	In. (mm)	7/8"(22.2)Brazed		7/8"(22.2)Brazed	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)			
Drawing	External		KD94C993			
	Wiring		KE94C438		KE94C438	
Standard attachment	Document		Installation Manual			
	Accessory		Details refer to External Drw			
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2			
			Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2			
			Header: CMY-Y104/108/1010C-G			
Remark			Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. *3 Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details on your region. *4 For details on the electrical data needed for installing these units, see the Hyper-heating Y-Series System Design section. *5 For details on extended ambient cooling operation range down to 0°FDB (-18°CDB), see Low Ambient Cooling Kit information. *6 External static pressure is adjustable via dipswitch setting (0.12 in.WG, 0.24 in.WG / 30Pa, 60Pa). *7 For information on standard anti-corrosion protection and -BS treatment, see the Hyper-heating Y-Series System Design section.			
Note:	*1 Nominal cooling conditions		*2 Nominal heating conditions		Unit converter	
Indoor:	80degF D.B. / 67degF W.B. (26.7degC D.B. / 19.4degC W.B.)		70degF D.B. (21.1degC D.B.)		kcal =kW x 860 BTU/h =kW x 3,412	
	Outdoor:		95degF D.B. (35degC D.B.)		47degF D.B. / 43degF W.B. (8.3degC D.B. / 6.1degC W.B.)	
Pipe length:	25ft.(7.6m)		25ft.(7.6m)		cfm =m³/min x 35.31 lb =kg / 0.4536	
Level difference:	0ft.(0m)		0ft.(0m)		* Above specification data is subject to rounding variation.	
* Due to continuing improvement, above specifications may be subject to change without notice.						

1. SPECIFICATIONS

Efficiency Ratings

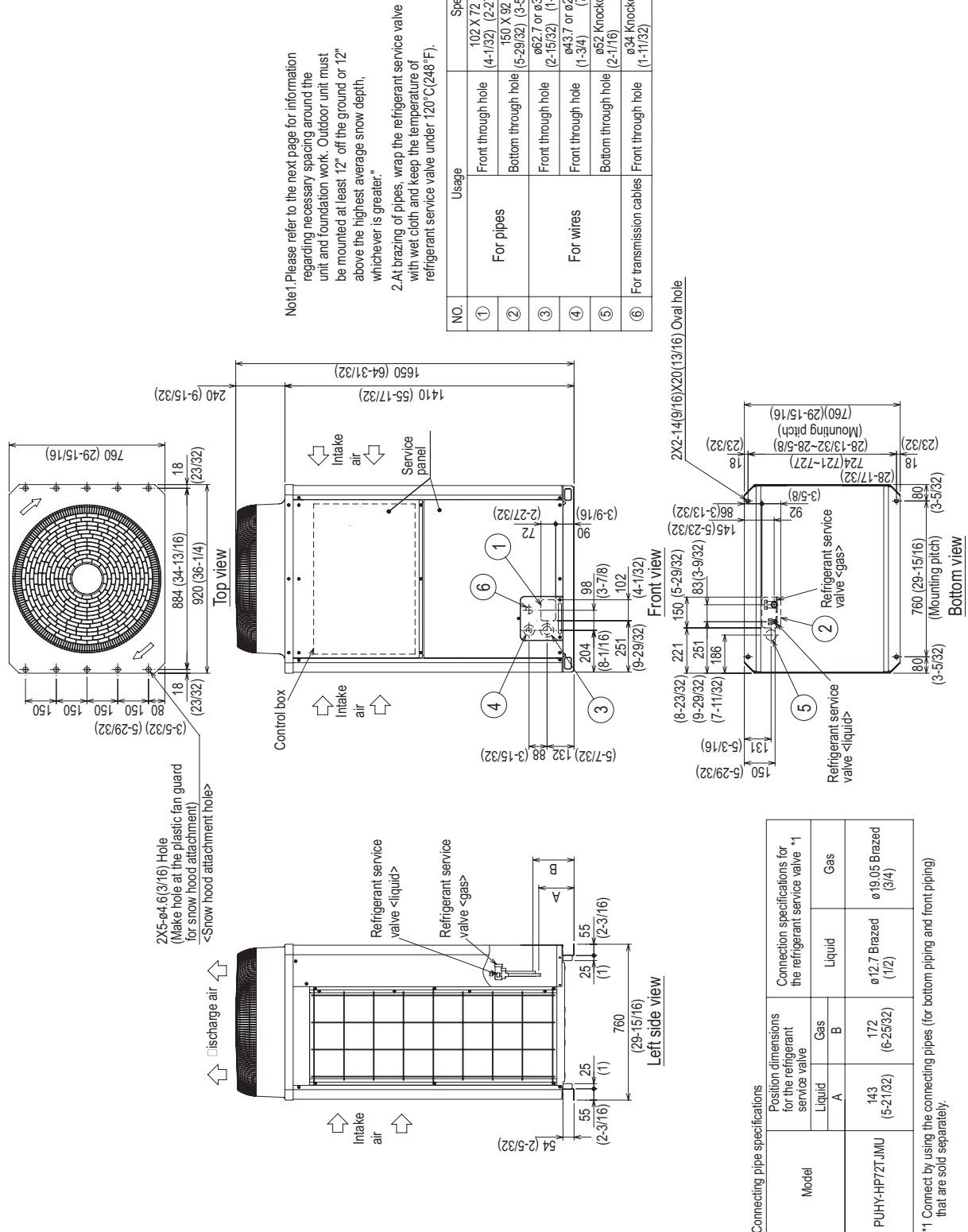
Model	IDU Type	EER (95° F) *1	IEER *1	HI COP (47° F) *1	LOW COP (17° F) *1
PUHY-HP72TJMU-A	Ducted / Non-Ducted	11.7 / 11.3	16.8 / 16.2	3.66 / 3.35	2.39 / 2.25
PUHY-HP96TJMU-A	Ducted / Non-Ducted	11.4 / 11.3	16.0 / 15.4	3.39 / 3.35	2.31 / 2.25
PUHY-HP144TSJMU-A	Ducted / Non-Ducted	11.3 / 10.9	14.4 / 13.8	3.56 / 3.25	2.32 / 2.05
PUHY-HP192TSJMU-A	Ducted / Non-Ducted	10.9 / 10.9	13.6 / 13.1	3.29 / 3.25	2.24 / 2.05
Note:	*1. Efficiency values based on AHRI 1230 test method.				

2. EXTERNAL DIMENSIONS

PUHY-HP72TJMU-A(-BS)

Ref. □ PUHY □ TJMU-A □ □ X □ □ US □ B □ HP72 □

Unit □ mm(in)



2. EXTERNAL DIMENSIONS

PUHY-HP72TJMU-A(-BS)

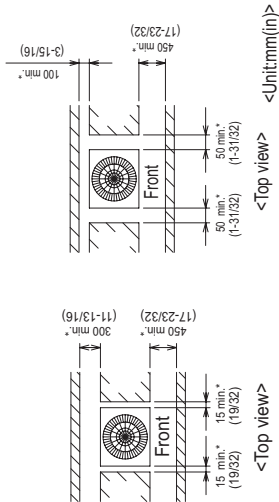
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Unit : mm(in)

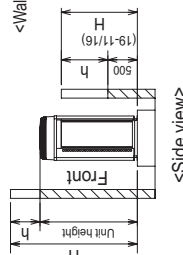
1.Required space around the unit

● In case of single installation

- Secure enough space around the unit as shown in the figure below.
 - With a space of at least 300mm(11-13/16) to the wall on the back of the unit



- When the height of the walls on the front, back or on the sides <H> exceeds the wall height limit as defined below add the height that exceeds the height limit <n> to the figures that are marked with an asterisk.



2.Foundation work

- Take into consideration the surface strength, water drainage route, piping route, and wiring route when preparing the installation site.
 - Note that the drain water comes out of the unit during operation.
- Build the foundation in such way that the corner of the installation leg is securely supported as shown in the right figure.(Fig.A)
 - When using a rubber isolating cushion, please ensure it is large enough to cover the entire width of each of the unit's legs.
- The protrusion length of the anchor bolt must not exceed 30mm(1-3/16).(Fig.A)
- Use four fixing plates as shown in the right figure <field supply required> when using post-installed anchor bolts.(Fig.B)
- To prevent small animals and water and snow from entering the unit and damaging its parts, close the gap around the edges of through holes for pipes and wires with filler plates <field supply required>.
- When the pipes or cables are routed at the bottom of the unit, make sure that the through hole at the base of the unit does not get blocked with the installation base.
- Refer to the Installation Manual when installing units on an installation base.

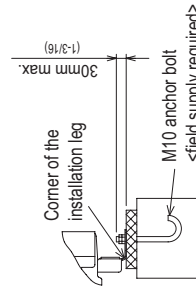


Fig A

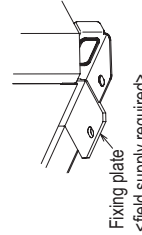
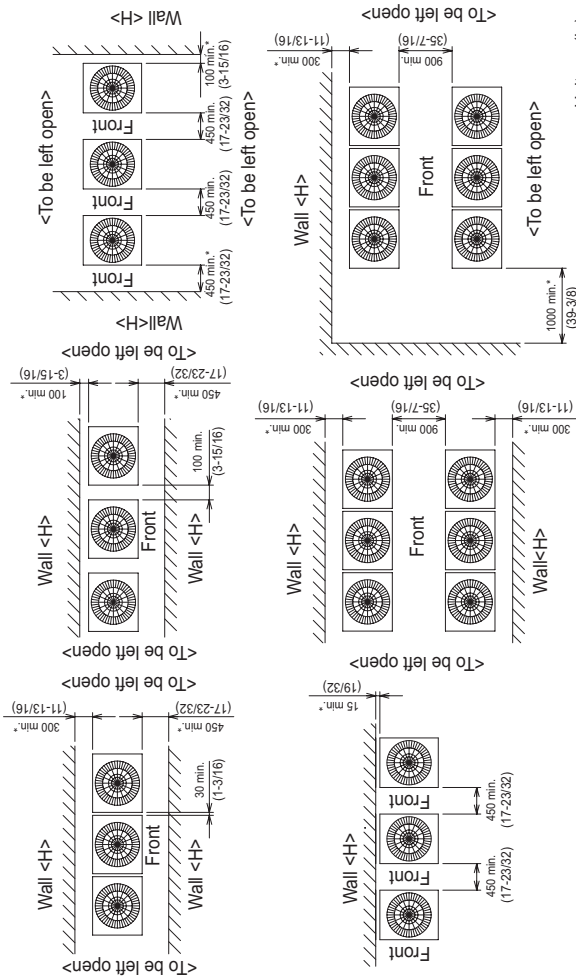


Fig B

● In case of collective installation

- When multiple units are installed adjacent to each other, secure enough space to allow for air circulation and walkway between groups of units as shown in the figures below.
- At least two sides must be left open.
- As with the single installation, add the height that exceeds the height limit <n> to the figures that are marked with an asterisk.
- If there is a wall at both the front and the rear of the unit, install up to six units consecutively in the side direction and provide a space of 39-3/8 in. (1000mm) or more as inlet space/ passage space for each six units.

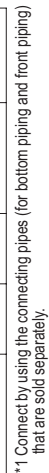


H2i-Y-8

PUHY-HP-T(S)JMU (December 2014)

MITSUBISHI ELECTRIC CORPORATION

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2. EXTERNAL DIMENSIONS

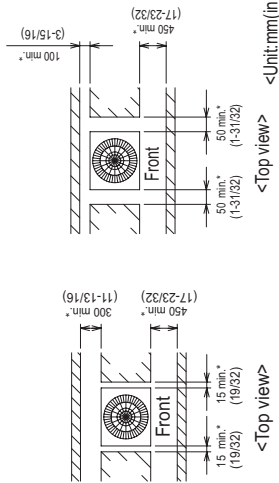
PUHY-HP96TJMU-A(-BS)

Ref.:PUHY_TJMU-A_EXD_USDB_HP96_2
Unit : mm(in)

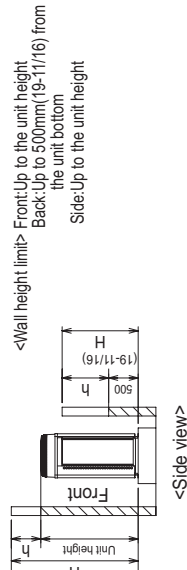
1.Required space around the unit

● In case of single installation

- Secure enough space around the unit as shown in the figure below.
 - With a space of at least 300mm(11-13/16) to the wall on the back of the unit



- When the height of the walls on the front, back or on the sides <H> exceeds the wall height limit as defined below add the height that exceeds the height limit <h> to the figures that are marked with an asterisk.



2.Foundation work

- Take into consideration the surface strength, water drainage route, piping route, and wiring route when preparing the installation site.
 - Note that the drain water comes out of the unit during operation.
- Build the foundation in such way that the corner of the installation leg is securely supported as shown in the right figure.(Fig.A)
 - When using a rubber isolating cushion, please ensure it is large enough to cover the entire width of each of the unit's legs.
- The protrusion length of the anchor bolt must not exceed 30mm(1-3/16).(Fig.A)
- Use four fixing plates as shown in the right figure <field supply required> when using post-installed anchor bolts.(Fig.B)
- To prevent small animals and water and snow from entering the unit and damaging its parts, close the gap around the edges of through holes for pipes and wires with filler plates <field supply required>.
- When the pipes or cables are routed at the bottom of the unit, make sure that the through hole at the base of the unit does not get blocked with the installation base.
- Refer to the Installation Manual when installing units on an installation base.

● In case of collective installation

- When multiple units are installed adjacent to each other, secure enough space to allow for air circulation and walkway between groups of units as shown in the figures below.
- At least two sides must be left open.
- As with the single installation, add the height that exceeds the height limit <h> to the figures that are marked with an asterisk.
- If there is a wall at both the front and the rear of the unit, install up to six units consecutively in the side direction and provide a space of 39-3/8 in. (1000mm) or more as inlet space/ passage space for each six units.

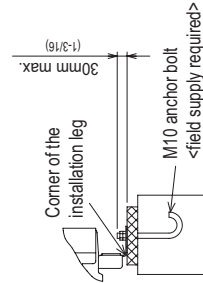
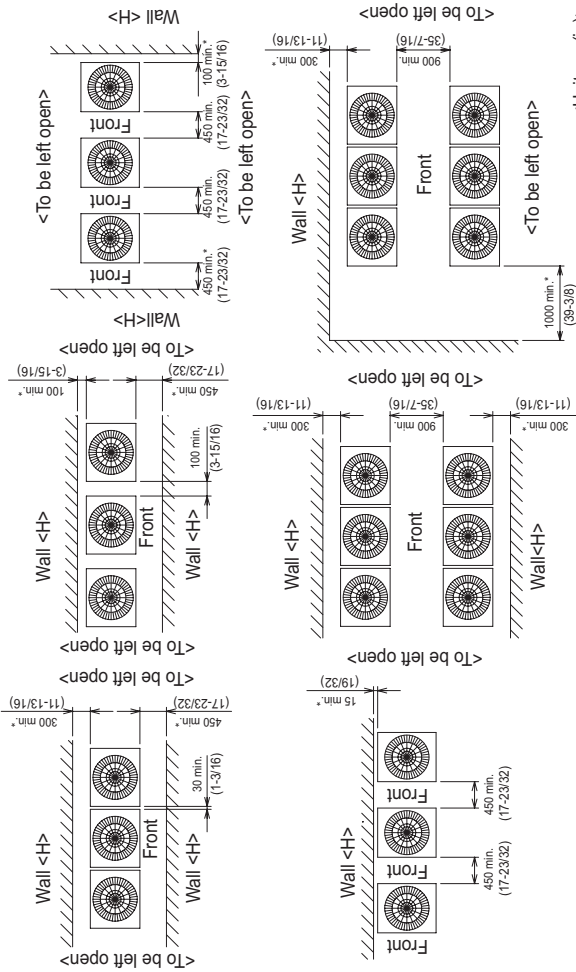


Fig.A

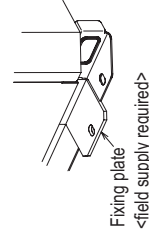


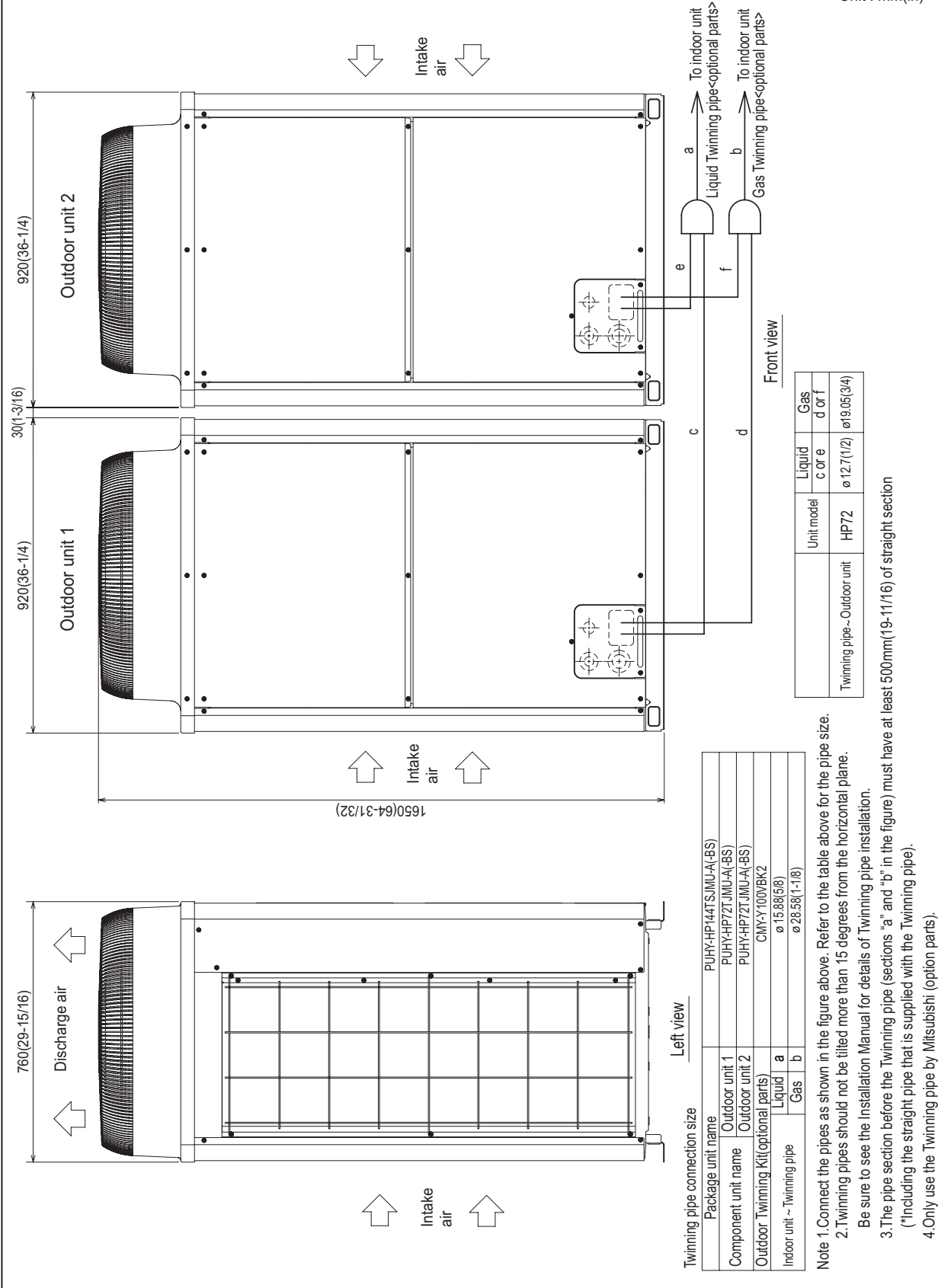
Fig.B

2. EXTERNAL DIMENSIONS

PUHY-HP144TSJMU-A(-BS)

Ref.:PUHY_TSJMU-A_EXD_USDB_HP144

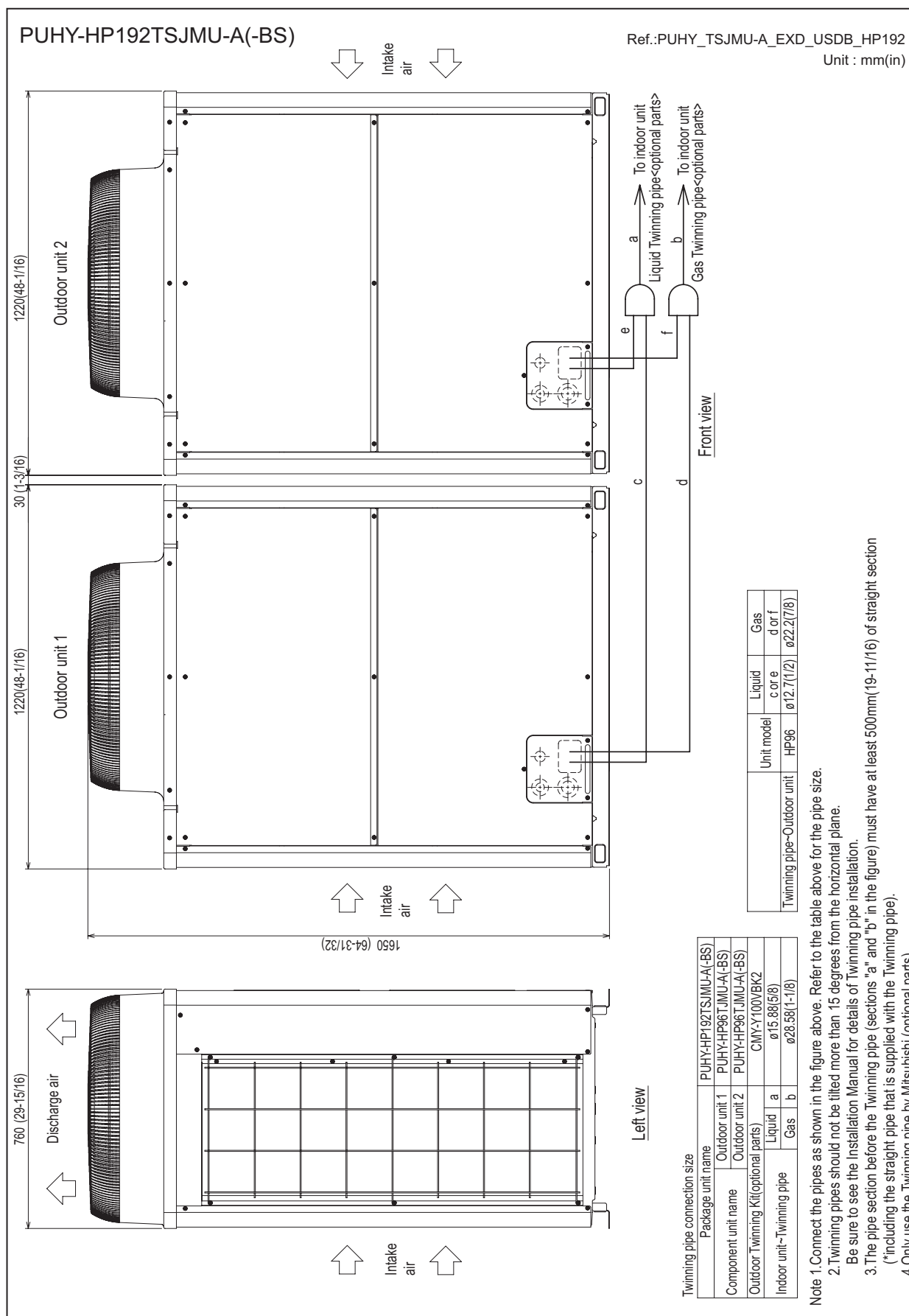
Unit : mm(in)



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PUHY-HP-T(S)JMU (December 2014)

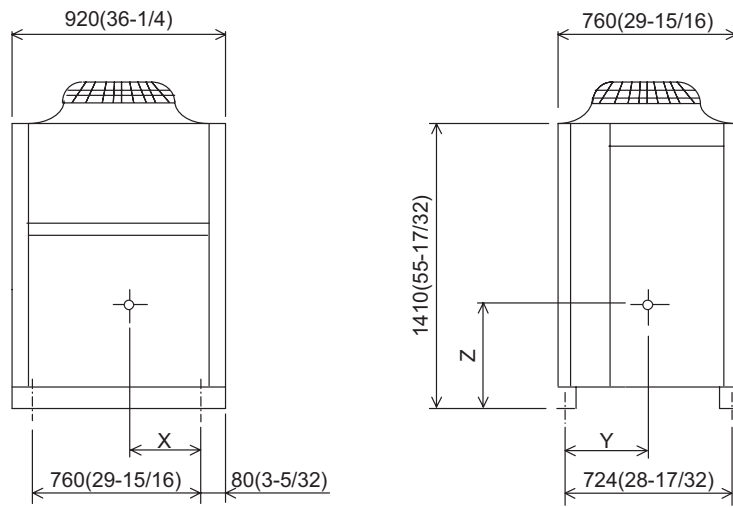
H2i-Y-11



3. CENTER OF GRAVITY

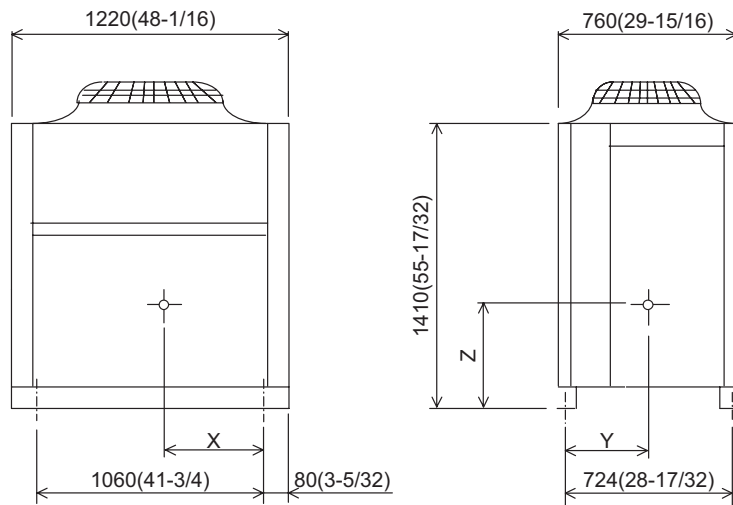
PUHY-HP72TJMU-A

Unit : mm[in.]



Model	X	Y	Z
PUHY-HP72TJMU-A	325(12-13/16)	307(12-3/32)	590(23-1/4)

PUHY-HP96TJMU-A

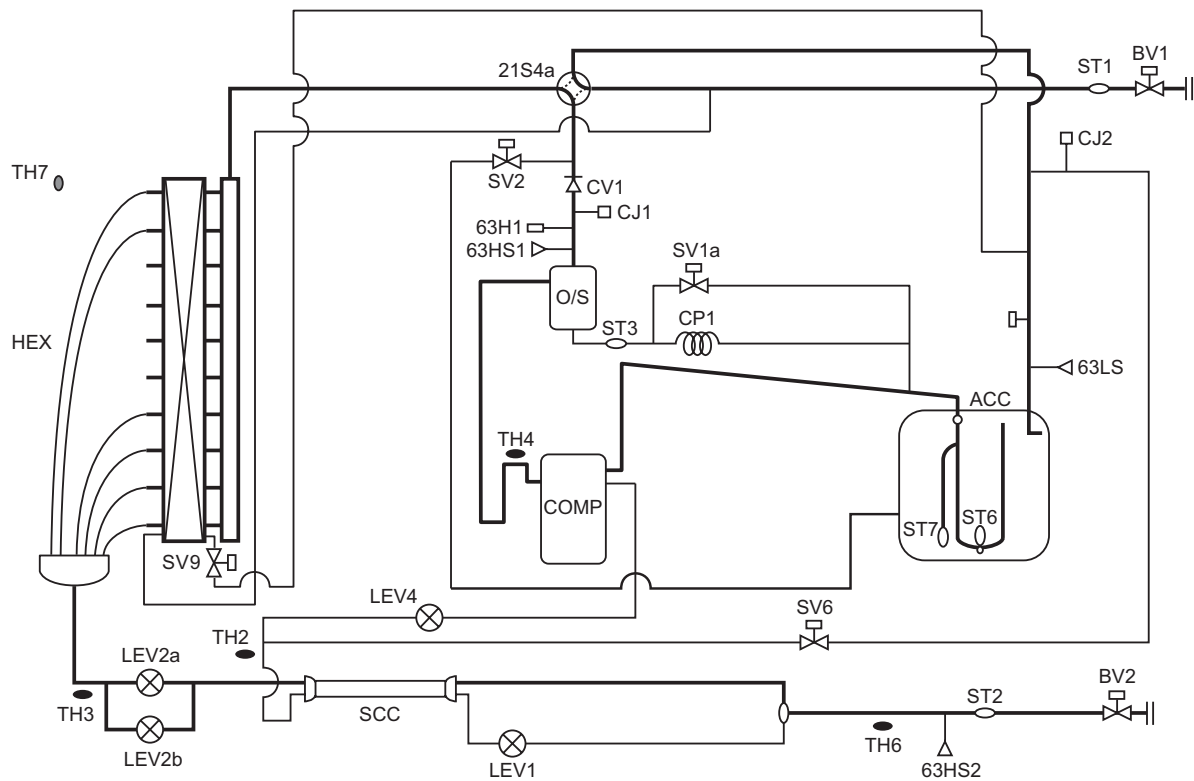


Model	X	Y	Z
PUHY-HP96TJMU-A	464(18-9/32)	326(12-27/32)	549(21-5/8)

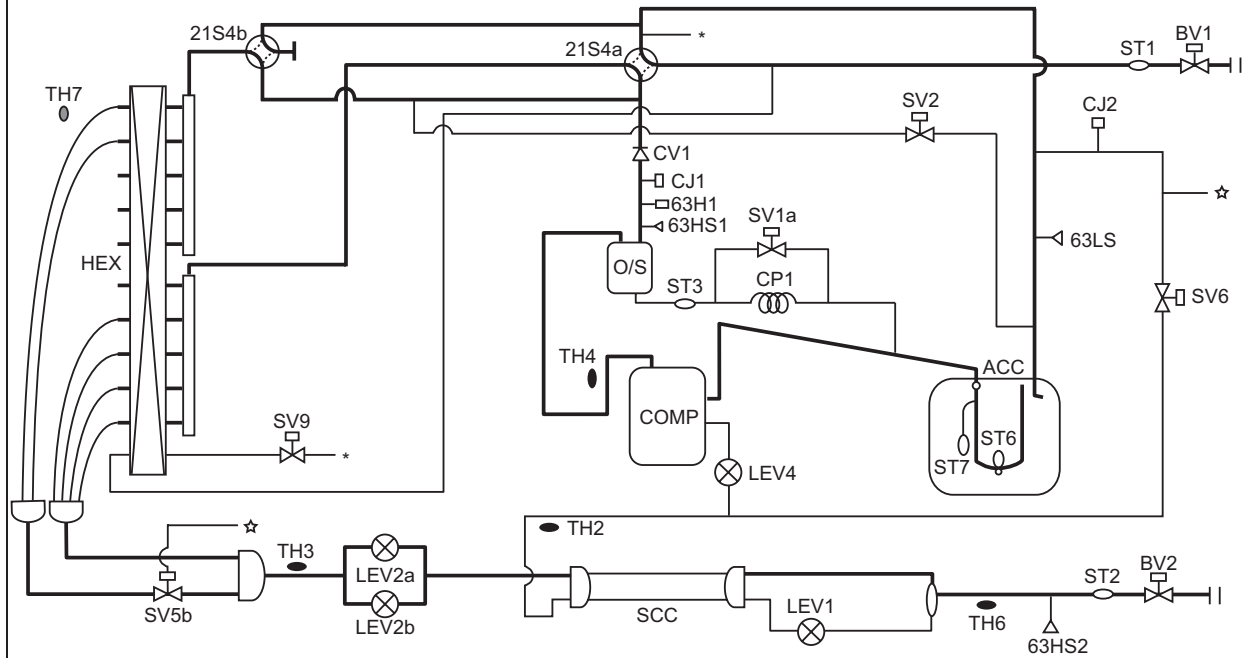
Ref. : PUHY_TJMU_COG_USDB_HP72-96

5. REFRIGERANT CIRCUIT DIAGRAMS

PUHY-HP72

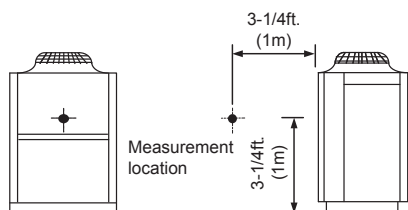


PUHY-HP96

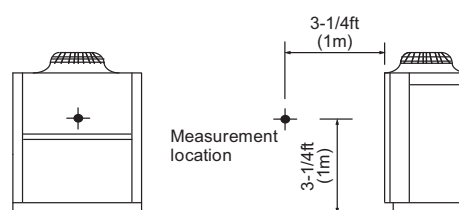


6. SOUND PRESSURE LEVELS

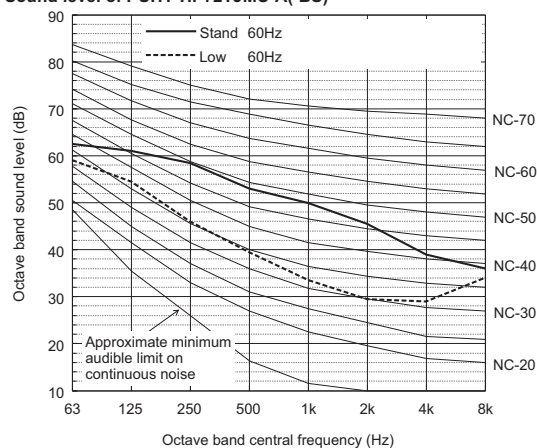
**Measurement condition
PUHY-HP72TJMU-A(-BS)**



**Measurement condition
PUHY-HP96TJMU-A(-BS)**



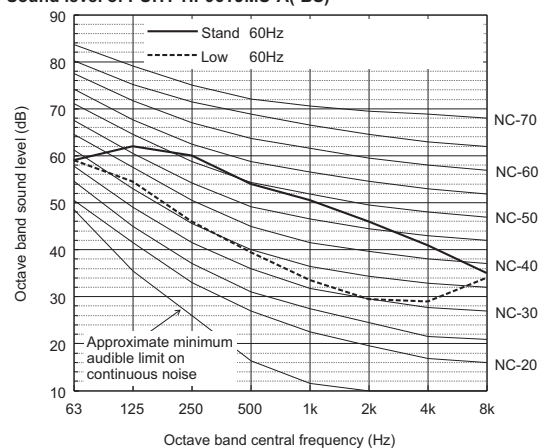
Sound level of PUHY-HP72TJMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	62.5	61.0	58.5	53.0	50.0	45.5	39.0	36.0	56.0
Low noise mode	60Hz	59.0	54.5	46.0	39.5	33.5	29.5	29.0	34.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PUHY-HP96TJMU-A(-BS)

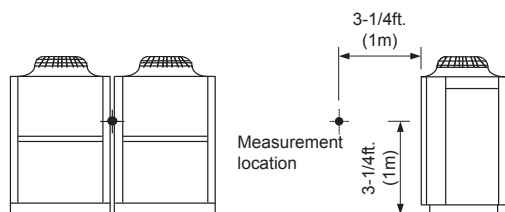


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	59.0	62.0	60.0	54.0	50.5	46.0	41.0	35.0	57.0
Low noise mode	60Hz	59.0	54.5	46.0	39.5	33.5	29.5	29.0	34.0	44.0

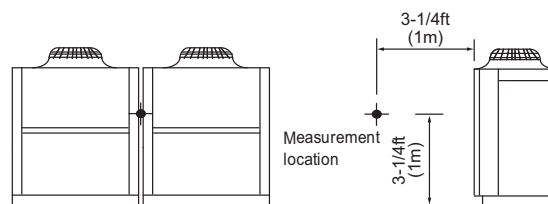
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

6. SOUND PRESSURE LEVELS

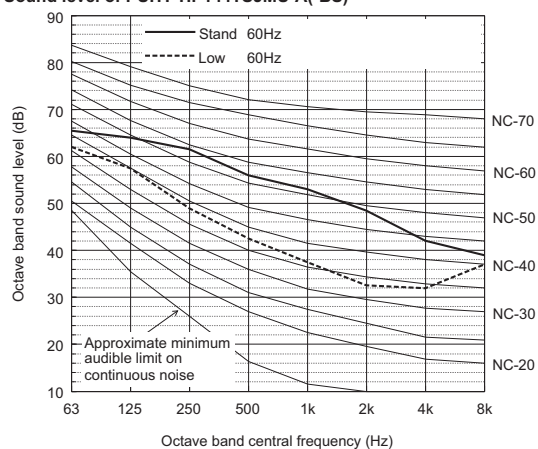
Measurement condition
PUHY-HP144TSJMU-A(-BS)



Measurement condition
PUHY-HP192TSJMU-A(-BS)



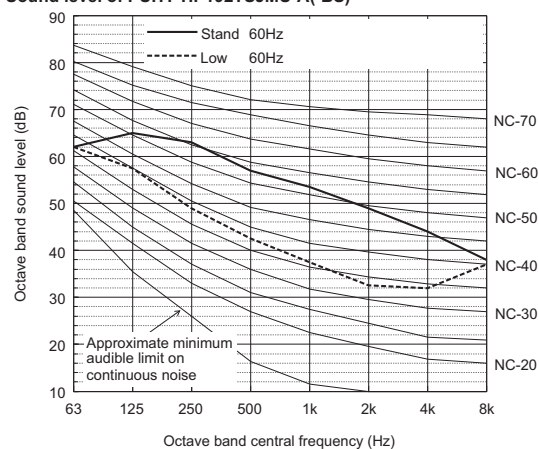
Sound level of PUHY-HP144TSJMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.5	64.0	61.5	56.0	53.0	48.5	42.0	39.0	59.0
Low noise mode	60Hz	62.0	57.5	49.0	42.5	37.5	32.5	32.0	37.0	47.0

When Low noise mode is set the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PUHY-HP192TSJMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	62.0	65.0	63.0	57.0	53.5	49.0	44.0	38.0	60.0
Low noise mode	60Hz	62.0	57.5	49.0	42.5	37.5	32.5	32.0	37.0	47.0

When Low noise mode is set the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

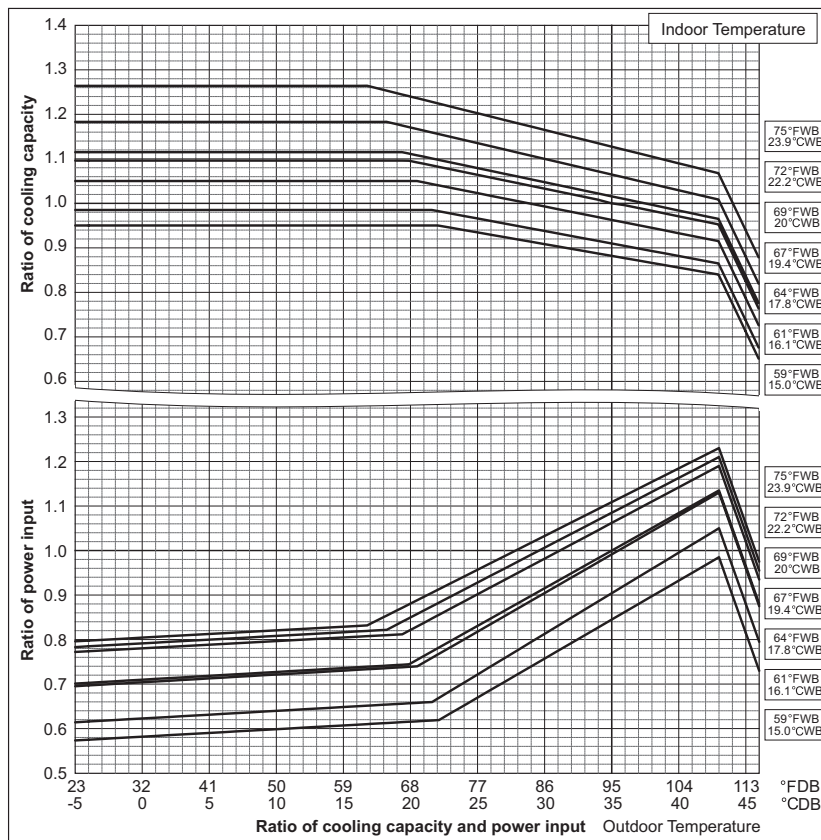
7. CAPACITY TABLES

7-1. Correction by Temperature (Standard Performance)

CITY MULTI could have various capacities at different design temperatures. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperatures.

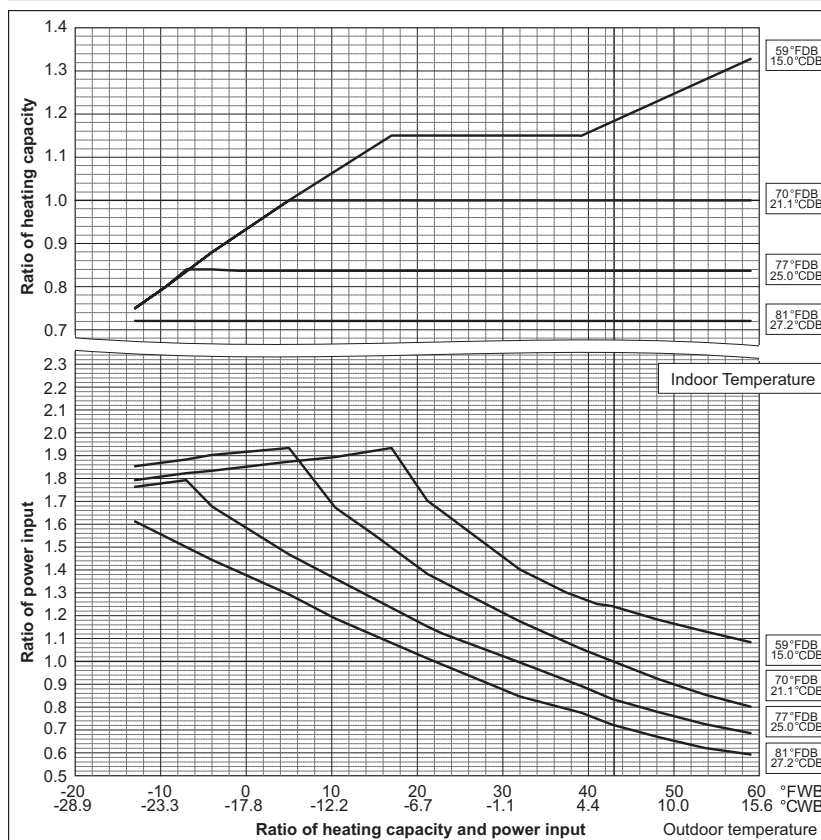
PUHY-		HP72TJMU	HP96TJMU
Nominal Cooling Capacity	kW	21.1	28.1
	BTU/h	72,000	96,000
Input	kW	5.60	8.16

PUHY-		HP144TSJMU	HP192TSJMU
Nominal Cooling Capacity	kW	42.3	56.3
	BTU/h	144,000	192,000
Input	kW	11.54	16.81



PUHY-		HP72TJMU	HP96TJMU
Nominal Heating Capacity	kW	23.4	31.7
	BTU/h	80,000	108,000
Input	kW	6.14	8.80

PUHY-		HP144TSJMU	HP192TSJMU
Nominal Heating Capacity	kW	46.9	63.4
	BTU/h	160,000	216,000
Input	kW	12.65	18.13



Ref:PUHY_T(S)JMU-A_CbT_USDB-HP72-192

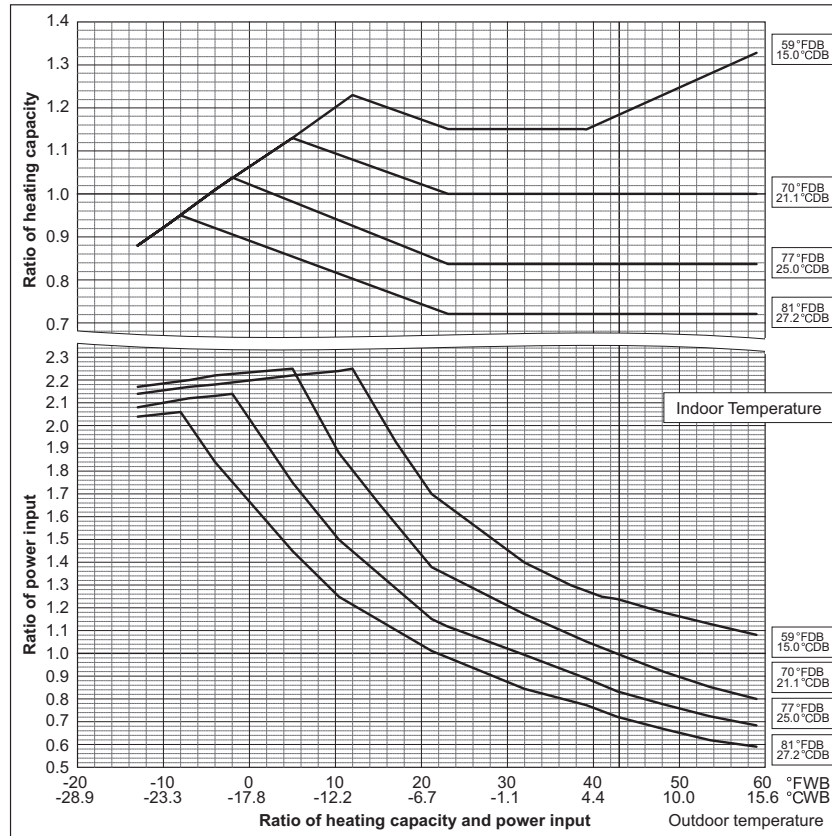
7. CAPACITY TABLES

7-2. Correction by Temperature (High Heating Performance)

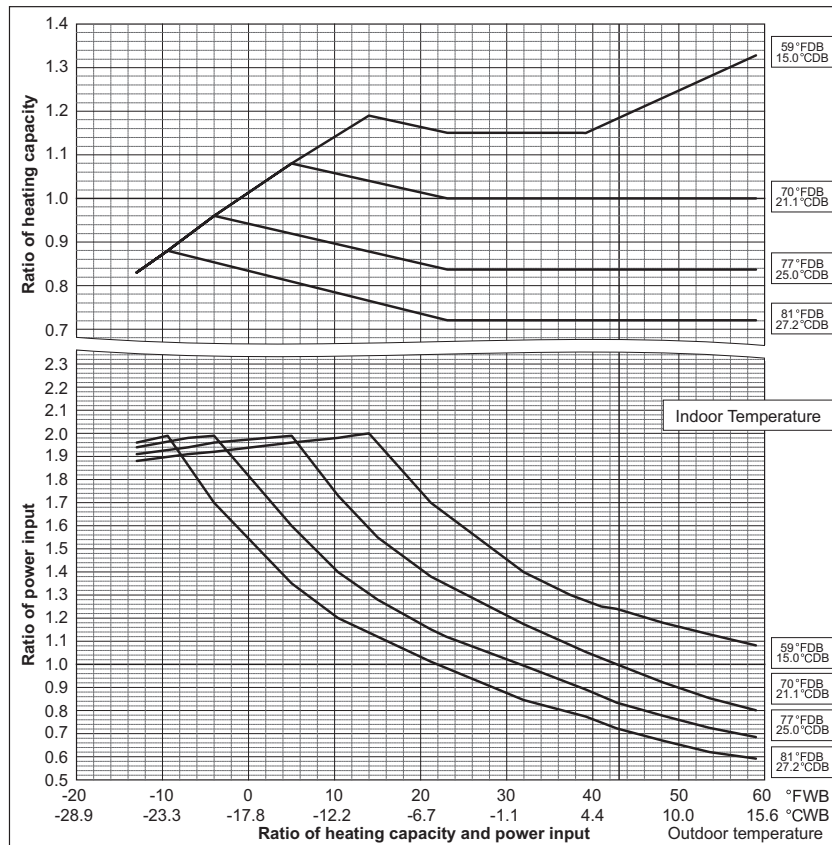
CITY MULTI could have various capacities at different design temperatures. Using the nominal heating capacity value and the ratio below, the capacity can be observed at various temperatures.

To select high-heating performance operation, DipSW3-7 must be set to ON. At low ambient temperatures, heating capacity and power input become higher than those seen in standard operation.

PUHY-	HP72TJMU	HP144TSJMU
Nominal Heating Capacity	23.4	46.9
Input	6.14	12.65



PUHY-	HP96TJMU	HP192TSJMU
Nominal Heating Capacity	31.7	63.4
Input	8.80	18.13

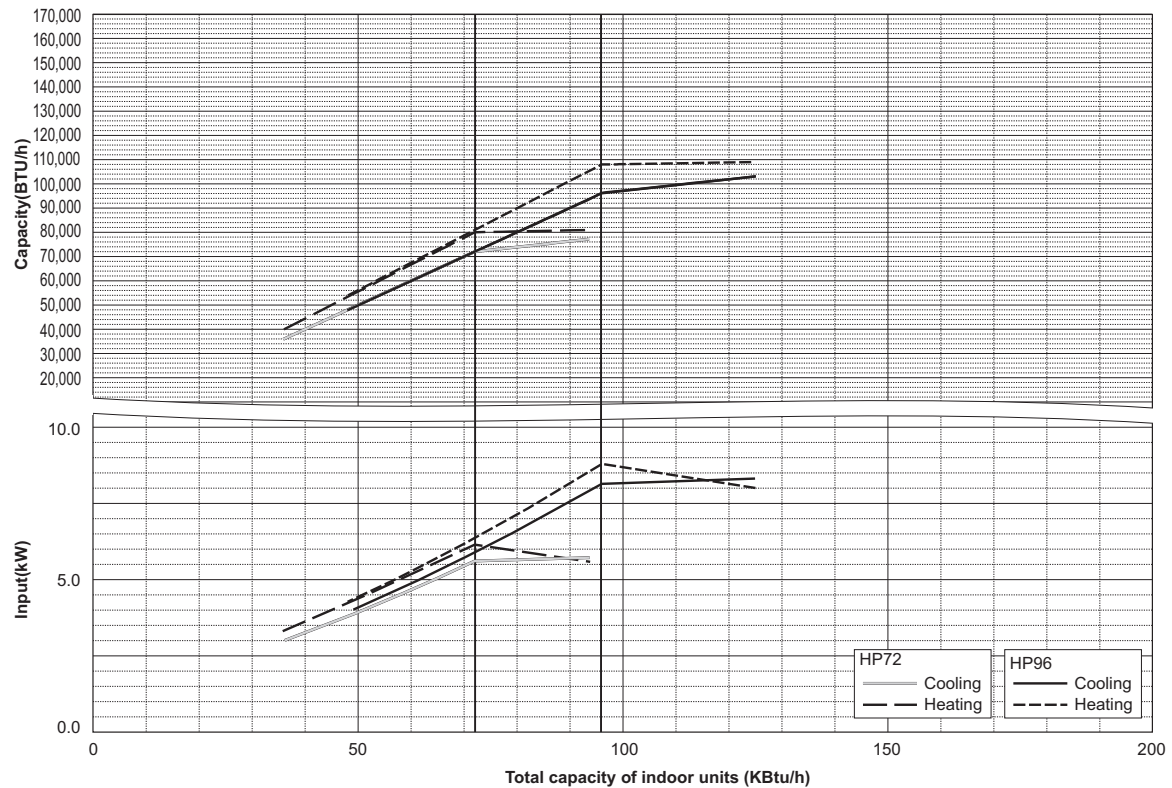


7. CAPACITY TABLES

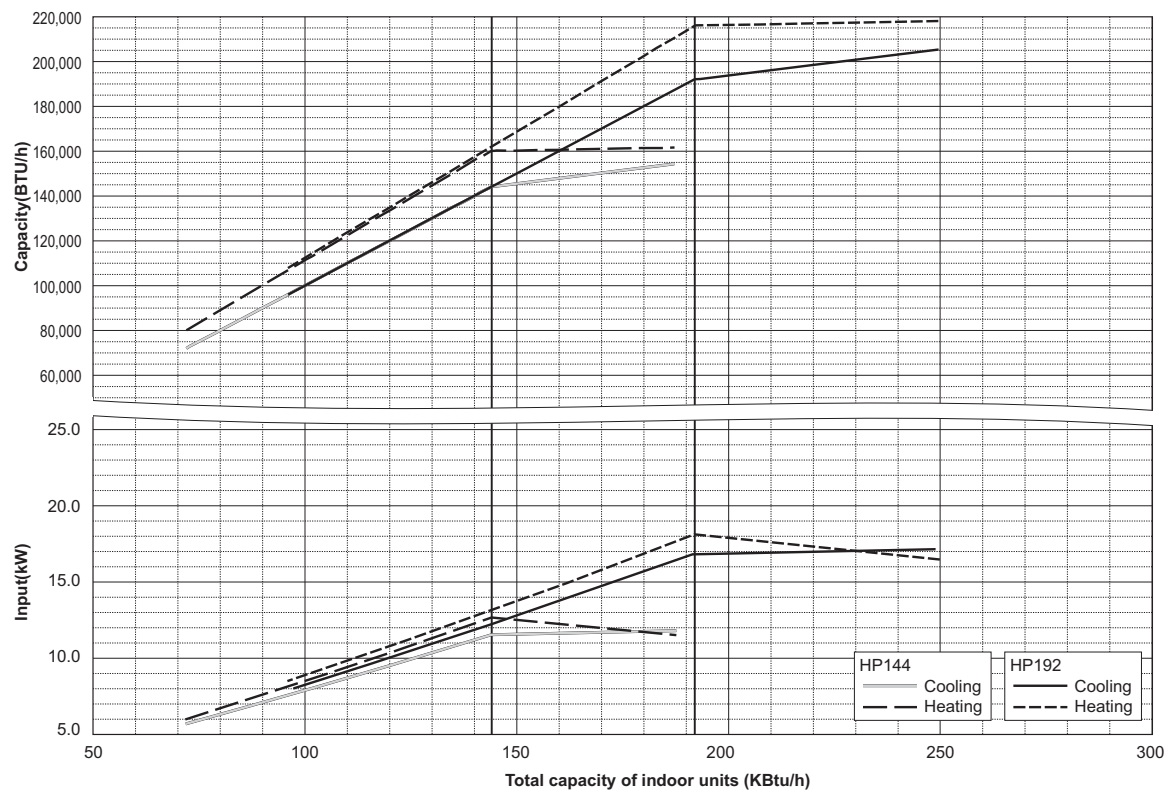
7-3. Correction by Total Indoor

CITY MULTI systems have different capacities and inputs when different combinations of indoor units with different total capacities are connected. Using following tables, the maximum capacity can be found to ensure the system is installed with enough capacity for a particular application.

PUHY-HP72,96TJMU



PUHY-HP144,192TSJMU

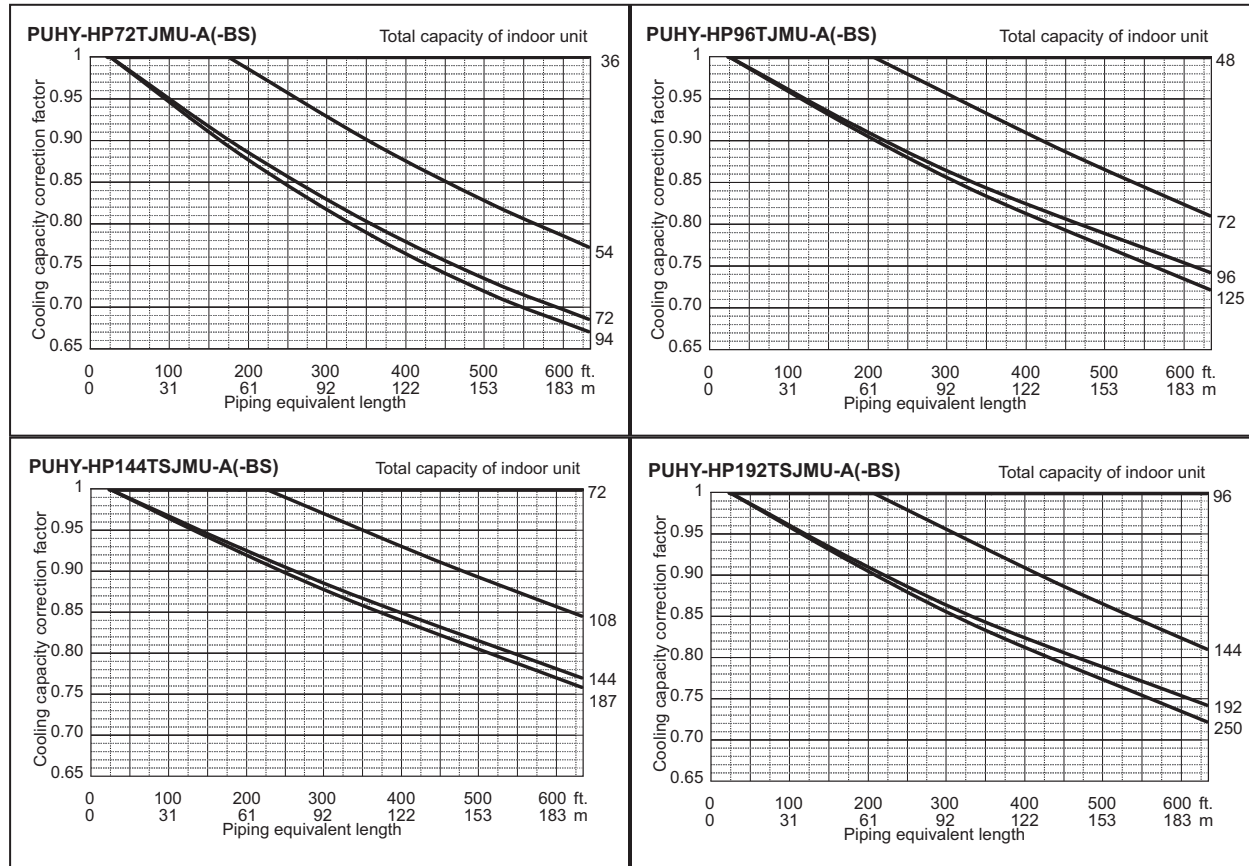


7. CAPACITY TABLES

7-4. Correction by Refrigerant Piping Length

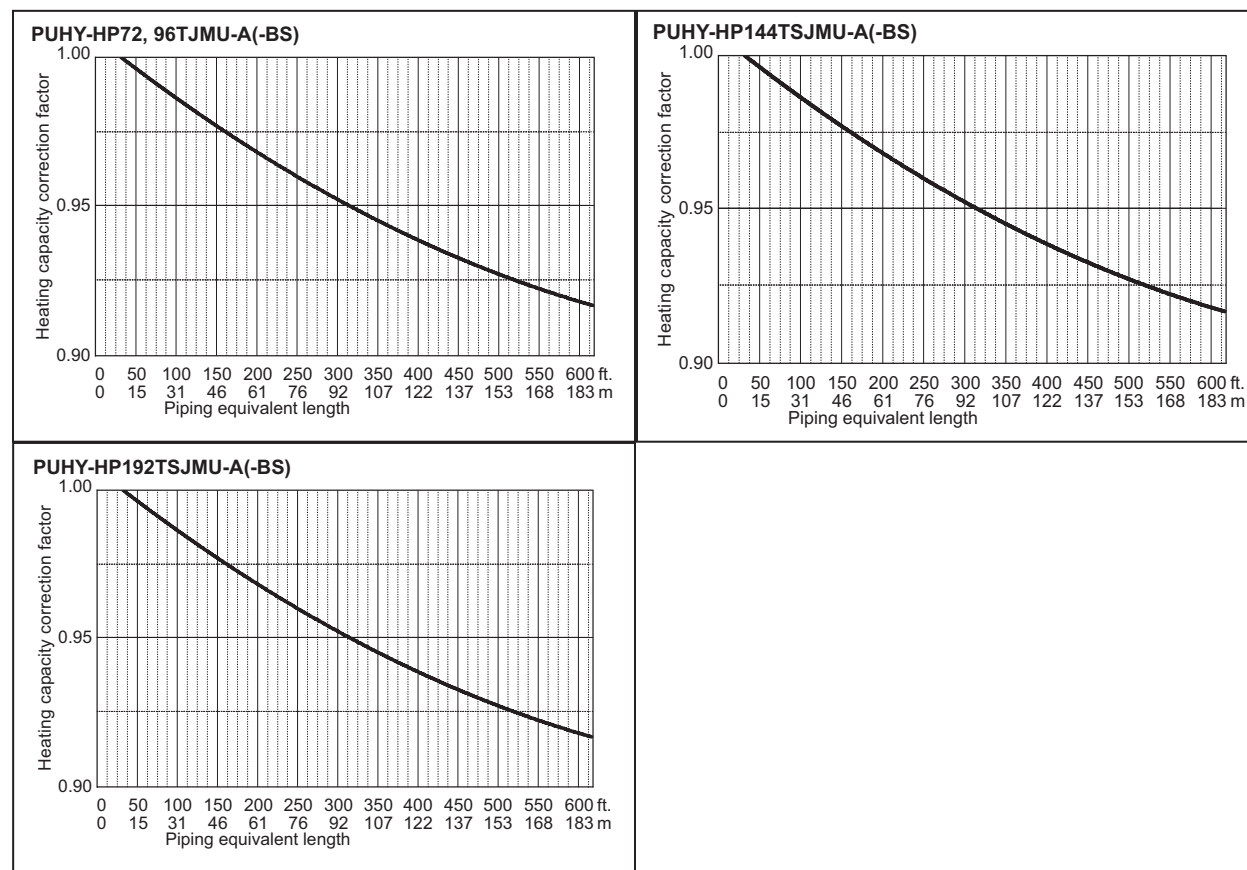
CITY MULTI systems can have extended piping lengths if certain limitations are followed, but cooling/heating capacity could be reduced. Using the following correction factor by equivalent piping length shown at 7-4-1 and 7-4-2, capacity can be found. 7-4-3 shows how to obtain the equivalent piping length.

7-4-1. Cooling Capacity Correction



7. CAPACITY TABLES

7-4-2. Heating Capacity Correction



7-4-3. How to obtain the equivalent piping length

1 PUHY-HP72TJMU-A

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bends in the piping) m
+ (1.15 x number of bends in the piping) ft.

2 PUHY-HP96TJMU-A

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bends in the piping) m
+ (1.38 x number of bends in the piping) ft.

3 PUHY-HP144,192TSJMU-A

Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bends in the piping) m
+ (1.64 x number of bends in the piping) ft.

7. CAPACITY TABLES

7-5. Correction at Frost and Defrost

Under certain conditions the outdoor heat exchanger will accumulate frost, initiating the unit's automatic defrost operation. To calculate obtain the heating capacity of the outdoor unit (when correcting for frost and defrost), multiply by the correction factor shown in the table below.

Correction Factor at Frost and Defrost

Outdoor inlet air temp. °CWB	6	4	2	1	0	-2	-4	-6	-8	-10	-25
Outdoor inlet air temp. °FWB	43	39	36	34	32	28	25	21	18	14	-13
PUHY-HP72,96TJMU	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.95	0.95	0.95	0.95
PUHY-HP144,192TSJMU	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.95	0.95	0.95	0.95

Ref.: CaF_TJMU

* The correction factors in the table above are used for a full-load and additional capacity.

Use the formula below to calculate the correction factor to use for a partial load.

Correction factor for partial load: K

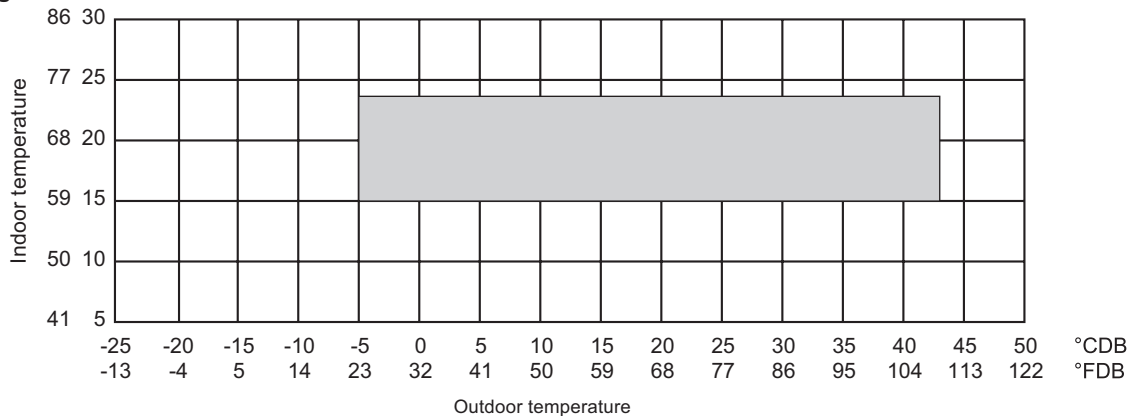
Correction factor for a full load and additional capacity: K_0

Partial load factor: A

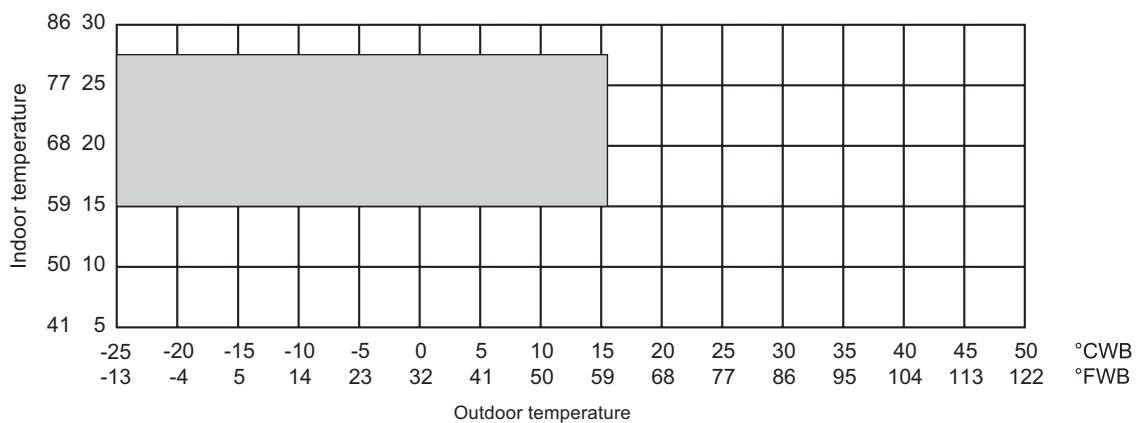
$$K = 1 - (1 - K_0) \times A$$

7-6. Operation Temperature Range

• Cooling °FWB°CWB

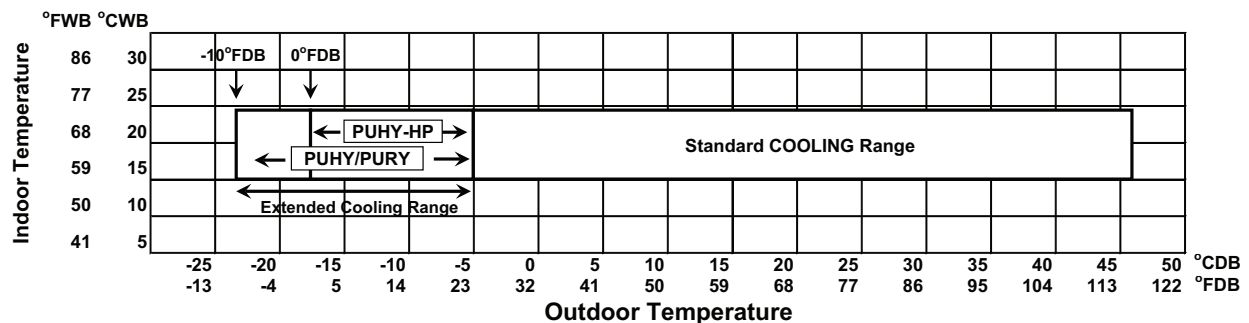


• Heating °FDB°CDB



Ref.: tr-thmu-y

7-7. Extended Cooling Range with Low Ambient Kit



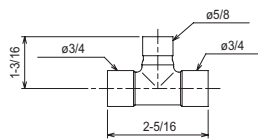
8. OPTIONAL PARTS

8-1. Branch Joints

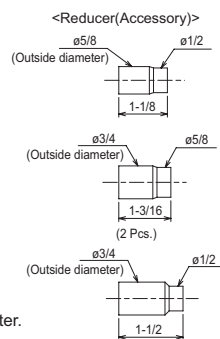
Piping for CITY MULTI systems can be easily performed with branch joints and headers provided by Mitsubishi Electric Corp. For PUHY-HP-T(S)JMU, the following sets of branch joints are available. Details for installing the branch joint sets are found in the System Design section or in the Branch Joint Installation Manual.

CMY-Y102SS-G2

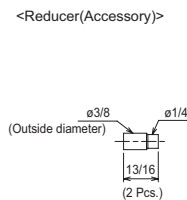
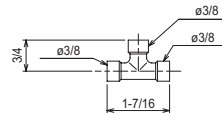
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



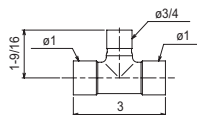
For Liquid pipe:



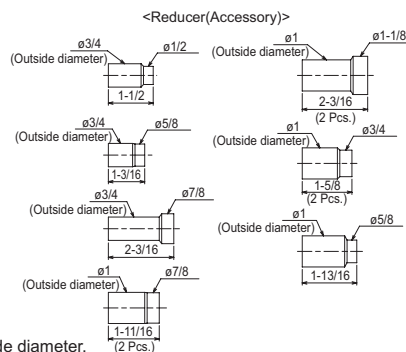
in.

CMY-Y102LS-G2

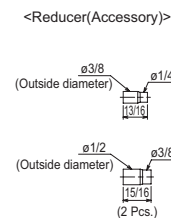
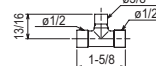
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



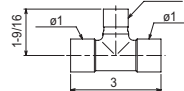
For Liquid pipe:



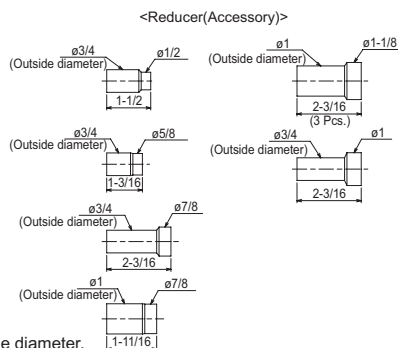
in.

CMY-Y202S-G2

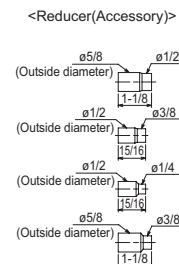
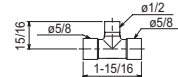
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



For Liquid pipe:



in.

8. OPTIONAL PARTS

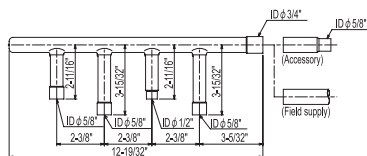
8-2. Headers

Piping for CITY MULTI systems can be easily performed with branch joints and headers provided by Mitsubishi Electric Corp. For PUHY-HP-T(S)JMU, the following sets of headers are available. Details for installing the headers are found in the System Design section or in the Outdoor Unit Installation Manual.

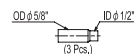
CMY-Y104C-G

Ref.: W901636
in.

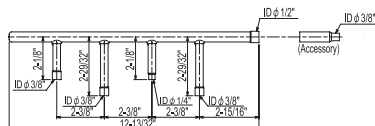
For gas pipe:



<Reducer(Accessory)>



For liquid pipe:



<Reducer(Accessory)>



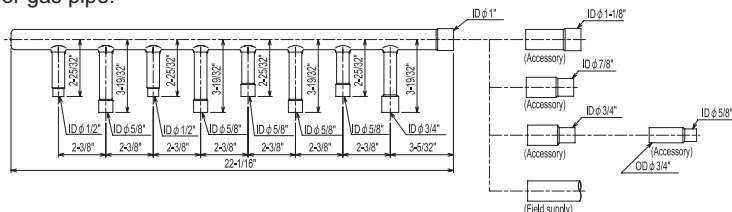
ID: Inner Diameter OD: Outer Diameter

NOTE: Besides above mentioned accessories, caps for $\phi 1/4$ ", $\phi 3/8$ ", $\phi 1/2$ ", $\phi 5/8$ " pipes (each diameter 1 piece) are included in the Header set.

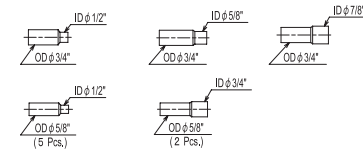
CMY-Y108C-G

Ref.: W901637
in.

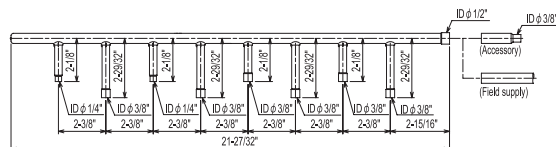
For gas pipe:



<Reducer(Accessory)>



For liquid pipe:



<Reducer(Accessory)>



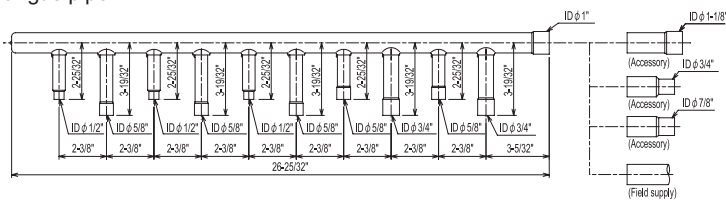
ID: Inner Diameter OD: Outer Diameter

NOTE: Besides above mentioned accessories, caps for $\phi 1/4$ ", $\phi 3/8$ ", $\phi 1/2$ ", $\phi 5/8$ " pipes (each diameter 2 pieces) and 1 cap for $\phi 3/4$ " pipe are included in the Header set.

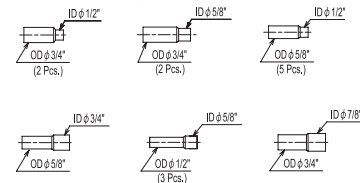
CMY-Y1010C-G

Ref.: W901638
in.

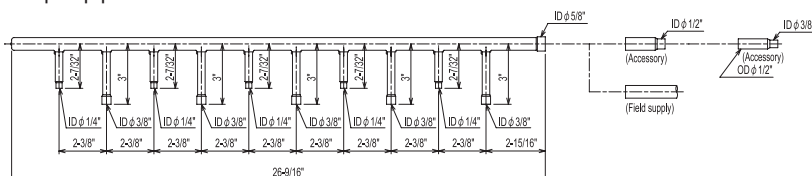
For gas pipe:



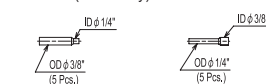
<Reducer(Accessory)>



For liquid pipe:



<Reducer(Accessory)>



ID: Inner Diameter OD: Outer Diameter

NOTE: Besides above mentioned accessories, caps for $\phi 1/4$ ", $\phi 3/8$ ", $\phi 1/2$ ", $\phi 5/8$ " pipes (each diameter 2 pieces) and 1 cap for $\phi 3/4$ " pipe are included in the Header set.

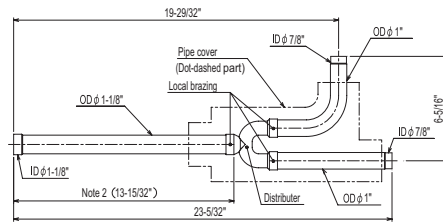
8. OPTIONAL PARTS

8-3. Twinning Kit

Twining Kit is necessary for PUHY-HP-TSJMU to combine the refrigerant flows of the PUHY-HP-TJMU units.

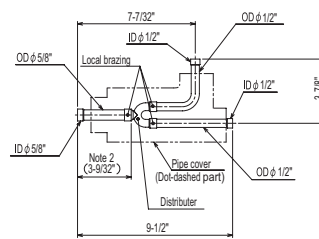
CMY-Y100CBK3

For Gas pipe:



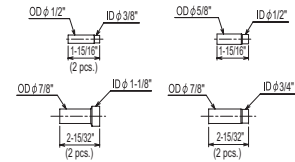
ID: Inner Diameter OD: Outer Diameter

For Liquid pipe:



Ref.: CMY_Y100VBK2_EXD_EUDB_SI
in.

<Reducer(Accessory)>



8. OPTIONAL PARTS

8-4. Low Ambient Kit

Low Ambient Kit allows system to operate at 100% cooling capacity at reduced outdoor temperatures. Complete kit includes hood with control damper assembly and wind deflectors.

PUHY Y-Series Outdoor Units - Down to -10° F DB (-23° C DB) Outdoor Temp.

PURY R2-Series Outdoor Units - Down to -10° F DB (-12° C DB) Outdoor Temp.

PUHY-HP H2i® Y-Series Outdoor Units - Down to 0° F DB (-18°C DB) Outdoor Temp.

- Normal heating performance is unaffected by the low ambient kit
- Hood and wind deflectors constructed of 20 gauge, hot-dipped galvanized G-90 steel
- Heavy-duty polyester-based powder paint finish
- Designed to work with both 208/230 and 460 3-phase units
- NEMA 4X control box protects electrical components from the elements
- ETL recognized component
- Kit easily installs connects to outdoor unit with plug in electrical connections
- Wind deflectors easily install with existing (wire guard) fasteners

Notes:

- Hood and wind deflectors must be used to achieve low operational range
- Outdoor unit must be mounted at least 12" off the ground or 12" above the highest average snow depth, whichever is greater.
- The outdoor unit may require additional mounting restraints depending on the mounting location. See engineering manual or installation instructions for guidelines.
- Clearances for the sides and back of the outdoor unit must be at least 6" greater than standard installation guidelines.

Part Number	Description	Electrical	Net Wt.	Ship Wt.	Carton Dimensions L x W x H
LAH-1	"Low Ambient Hood Assembly (master) with damper control box For single fan modules (P72 and P96)"	"208/230 1-phase .20 amp"	59 lbs. (27 kg)	65 lbs. (30 kg)	43" L x 36" W x 30-1/2" H (1,092 x 914 x 775 mm)
LAH-2	"Low Ambient Hood Assembly (subordinate) Combined with the LAH-1 for double fan (P120 and P144) modules"	"Controlled by LAH-1"	51 lbs. (23 kg)	57 lbs. (26 kg)	43" L x 36" W x 30-1/2" H (1,092 x 914 x 775 mm)
SWD-1	Side Wind Deflector, includes 2 pieces (fits all modules)	N/A	45 lbs. (20 kg)	50 lbs. (23 kg)	54" L x 20" W x 9" H (1,372 x 508 x 229 mm)
RWD-1	Rear Wind Deflector (1 fits S module, 2 fit the XL module)	N/A	37 lbs. (17 kg)	42 lbs. (19 kg)	54" L x 33" W x 9" H (1,372 x 838 x 229 mm)
RWD-2	Rear Wind Deflector (1 fits L module)	N/A	40 lbs. (18 kg)	45 lbs. (20 kg)	54" L x 45" W x 9" H (1,372 x 1,143 x 229 mm)

Components Required per Outdoor unit(s)

For outdoor units with multiple modules, the minimum 1-3/16" separation between the modules is recommended. If modules are placed farther apart than 15" apart, more than 1 set of SWD-1 side wind deflectors may be needed. For multiple units or module sets placed in a row, only one side wind deflector kit (SWD-1) is needed to cover the two outside module coil surfaces.

PUHY-HP-T/Y(S)HMU Series

Unit model	Module Size		Component Quantity			
	S	L	LAH-1	SWD-1	RWD-1	RWD-2
PUHY-HP72THMU-A	1		1	1	1	
PUHY-HP96THMU-A	1		1	1	1	
PUHY-HP144TSHMU-A	2		2	1	2	
PUHY-HP192TSHMU-A	2		2	1	2	

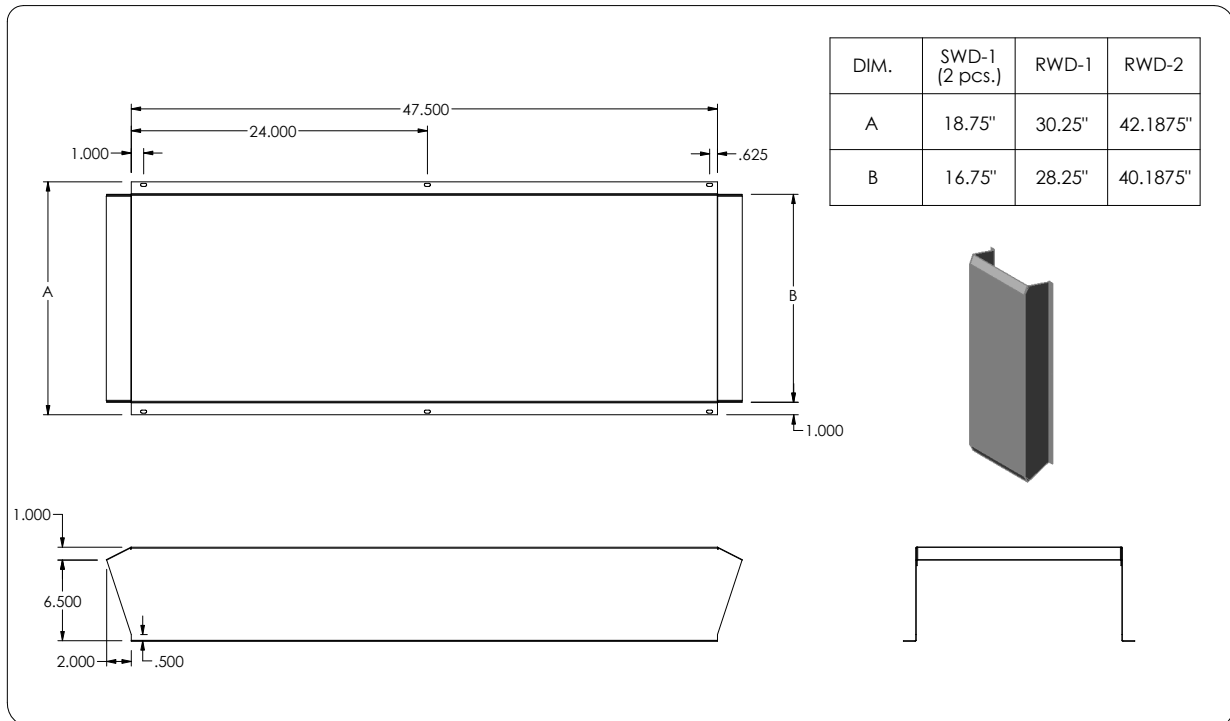
PUHY-HP-T/Y(S)JMU Series

Unit model	Module Size			Component Quantity				
	S	L	XL	LAH-1	LAH-2	SWD-1	RWD-1	RWD-2
PUHY-HP72TJMU-A	1			1		1	1	
PUHY-HP96TJMU-A		1		1		1		1
PUHY-HP144TSJMU-A	2			2		1	2	
PUHY-HP192TSJMU-A		2		2		1		2

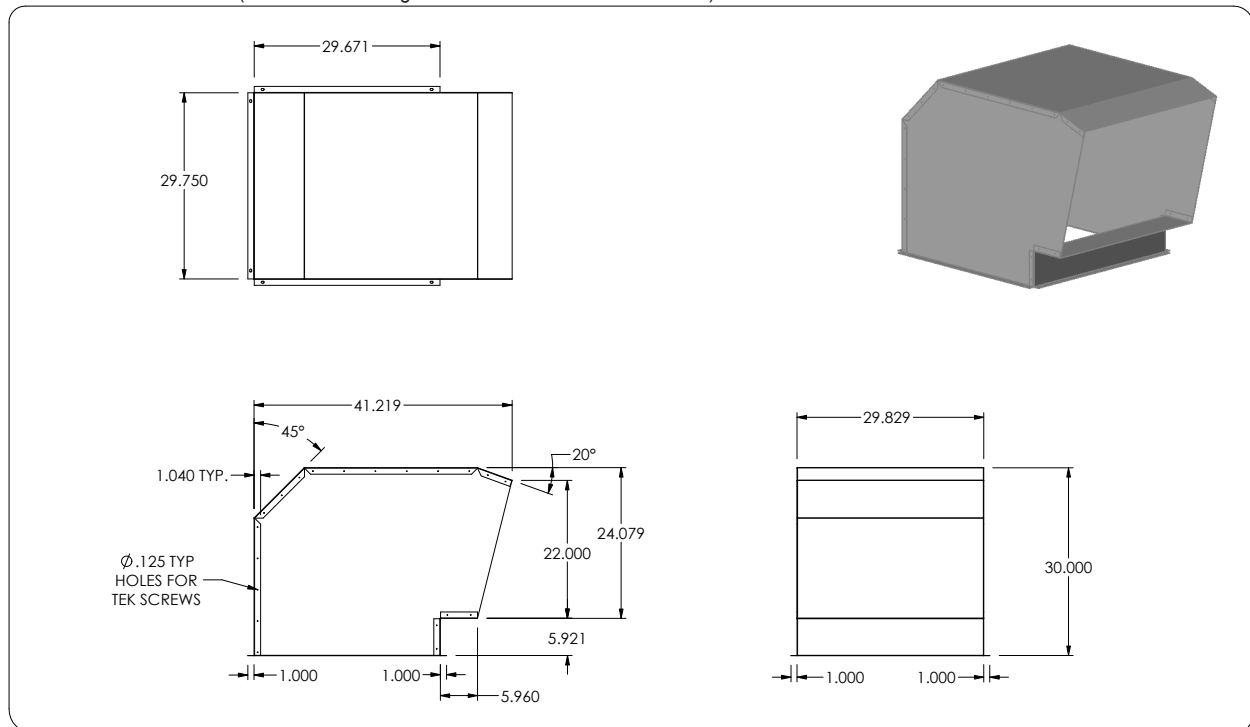
8. OPTIONAL PARTS

Dimensions

Wind Deflectors SWD-1, RWD-1 and RWD-2

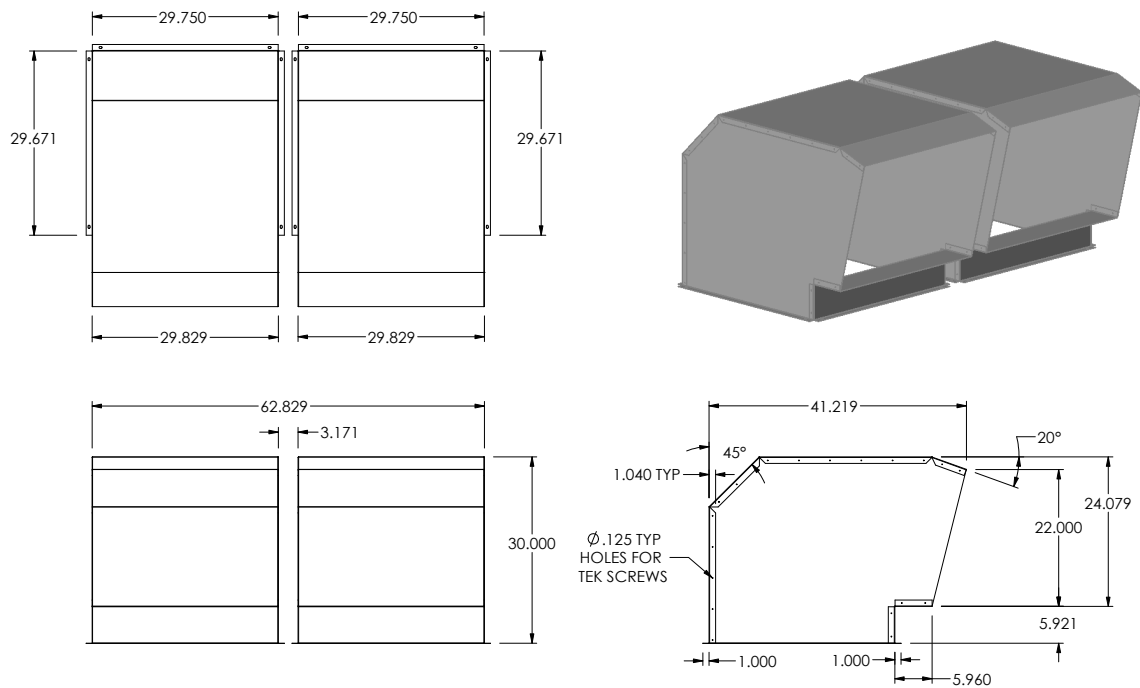


Low Ambient Hood LAH-1 (used alone for single fan modules P72 and P96 sizes)



8. OPTIONAL PARTS

Low Ambient Hood LAH-1 with LAH-2 (combined for dual fan (P120 and P144) modules)



8. OPTIONAL PARTS

8-5. Base Pan Heater Kits

- Prevents ice from building up on the outdoor unit base when operating in heating mode for an extended period of time during low temperature, high humidity conditions.
- Operation of base pan heater is controlled by outdoor unit
 - Energized when unit is in heating mode, compressor is running and outdoor temp drops below 39° F.
 - Connects to CN51 on the outdoor control board of CITY MULTI PUHY J-Series Units.

Base Pan Heater Kits	Included Parts	Rated Voltage	Power Input
Small Module	PAC-BH01EHT-E-US (Heater) PAC-BH01KTT-E (Relay Box)	208 / 230 V	162 / 198 W
Large Module	PAC-BH02EHT-E-US (Heater) PAC-BH01KTT-E (Relay Box)	208 / 230 V	162 / 198 W
XL Module	PAC-BH03EHT-E-US (Heater) PAC-BH01KTT-E (Relay Box)	208 / 230 V	324 / 396 W

Base Pan Heater Kits Required Per Outdoor Unit(s)

PUHY-HP-T(S)JMU-A Series

Unit model	Base Pan Heater Kits		
	Small	Large	XL
PUHY-HP72TJMU-A	1	-	-
PUHY-HP96TJMU-A	-	1	-
PUHY-HP144TSJMU-A	2	-	-
PUHY-HP192TSJMU-A	-	2	-

