

OUTDOOR UNITS

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1. SPECIFICATIONS

1-1. PURY-HP72~192T(S)KMU-A-H Specifications

Model			PURY-HP72TKMU-A-H		PURY-HP96TKMU-A-H		
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	5.08 *4		7.66 *4	
		Current input	A	15.6 / 14.1 *4		23.6 / 21.3 *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 ~ 115° F (-5 ~ +46° C) *5		23 ~ 115° F (-5 ~ +46° C) *5		
Heating capacity (Nominal) *2 (208-230V)		Btu/h	80,000		108,000		
		kW	23.4		31.7		
		Power input	kW	6.26 *4		8.88 *4	
		Current input	A	19.3 / 17.4 *4		27.3 / 24.7 *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		50~150 % of outdoor unit capacity		50~150 % of outdoor unit capacity		
	Model / Quantity		P06~P96 / 1~18		P06~P96 / 1~24		
Sound pressure level (measured in anechoic room)		dB <A>	58.0		58.0		
Refrigerant piping diameter	Liquid (High Pressure)	In. (mm)	5/8 (15.88) Brazed		3/4 (19.05) Brazed		
	Gas (Low Pressure)	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	6,200		6,200		
		m3 / min	175		175		
		L/s	2,920		2,920		
	Control, Driving mechanism		Inverter-control, Brushless DC motor		Inverter-control, Brushless DC 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		
	Lubricant		MEL32		MEL32		
External finish			Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet <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-current protection		Over-current protection		
	Fan motor		Thermal switch		Thermal switch		
Minimum Circuit Ampacity (MCA)		A	44 / 40		60 / 54		
Recommended Fuse/Breaker Size		A	50		65		
Maximum Fuse Size		A	60		80		
Refrigerant	Type x original charge		R410A x 26 lbs + 1 oz (11.8 kg)		R410A x 26 lbs + 1 oz (11.8kg)		
	Control		Indoor LEV and BC controller		Indoor LEV and BC controller		
Net weight		lbs (kg)	552 (250)		552 (250)		
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		
Defrost method			Auto-defrost mode (Reversed refrigerant cycle)		Auto-defrost mode (Reversed refrigerant cycle)		
Drawing	External		KJ94G386		KJ94G386		
	Wiring		KE94C883		KE94C883		
Standard attachment	Document		Installation Manual		Installation Manual		
	Accessory		Details refer to External Drw		Details refer to External Drw		
Optional parts			Joint: CMY-Y102SS-G2,CMY-Y102LS-G2, CMY-R160C-J		Joint: CMY-Y102SS-G2,CMY-Y102LS-G2, CMY-R160C-J		
			BC controller: CMB-P104,105,106,108,1010,1013, 1016NU-G		BC controller: CMB-P104,105,106,108,1010,1013, 1016NU-G		
			Main BC controller: CMB-P108,1010,1013, 1016NU-GA,1016NU-HA		Main BC controller: CMB-P108,1010,1013, 1016NU-GA,1016NU-HA		
			Sub BC controller: CMB-P104,108NU-GB, CMB-P1016NU-HB		Sub BC controller: CMB-P104,108NU-GB, CMB-P1016NU-HB		
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).				
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.)		cfm =m³/min x 35.31 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			PURY-HP144TSKMU-A-H			
Power source			3-phase 3-wire 208 / 230V ±10% 60Hz			
Cooling capacity (Nominal) *1 (208 / 230V)		Btu/h	144,000			
		kW	42.2			
		Power input	kW	10.85 *4		
Current input		A	33.4 / 30.2 *4			
Temp. range of cooling *3		Indoor	W.B.	59 ~ 75° F (15 ~ 24° C)		
		Outdoor	D.B.	23 ~ 115° F (-5 ~ +46° C) *5		
Heating capacity (Nominal) *2 (208-230V)		Btu/h	160,000			
		kW	46.9			
		Power input	kW	13.16 *4		
Current input		A	40.5 / 36.7 *4			
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		50~150 % of outdoor unit capacity		
		Model / Quantity		P06~P96 / 1~36		
Sound pressure level (measured in anechoic room)			dB <A>			
			61.0			
Refrigerant piping diameter from Twinning Kit to Indoor Units		Liquid (High Pressure)	In. (mm)	7/8 (22.2) Brazed		
		Gas (Low Pressure)	In. (mm)	1-1/8 (28.58) Brazed		
Set Model						
Model						
			PURY-HP72TKMU-A-H		PURY-HP72TKMU-A-H	
Fan		Type x Quantity		Propeller fan x 1		
		Airflow rate		CFM	6,200	
				m³ / min	175	
				L/s	2,920	
		Control , Driving mechanism		Inverter-control, Brushless DC motor		Inverter-control, Brushless DC 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		
		Manufacturer		AC&R Works, MITSUBISHI ELECTRIC CORP.		
		Starting method		Inverter		
		Lubricant		MEL32		
External finish			Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet <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)		
		Inverter circuit (COMP. / FAN)		Over-heat protection,Over-current protection		
		Compressor		Over-heat protection		
		Fan Motor		Thermal switch		
Minimum Circuit Ampacity (MCA)		A	44 / 40		44 / 40	
Recommended Fuse/Breaker Size		A	50		50	
Maximum Fuse Size		A	60		60	
Refrigerant		Type x original charge		R410A x 26 lbs + 1 oz (11.8 kg)		
		Control		LEV and HIC circuit		
Net weight		lbs (kg)	552 (250)		552 (250)	
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
Refrigerant piping diameter from Module to Twinning Kit		Liquid (High Pressure)	In. (mm)	5/8"(15.88)Brazed		
		Gas (Low Pressure)	In. (mm)	3/4"(19.05)Brazed		
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)			
Drawing		External		KJ94G492		
		Wiring		KE94C883		
Standard attachment		Document		Installation Manual		
		Accessory		Details refer to External Drw		
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2			
			Joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-Y202S-G2,CMY-R160C-J			
			Main BC controller: CMB-P108,1010,1013,1016NU-GA,1016NU-HA			
			Sub BC controller: CMB-P104,108NU-GB,CMB-P1016NU-HB			
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).			

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			PURY-HP192TSKMU-A-H	
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	15.86 *4	
	Current input	A	48.9 / 44.2 *4	
Temp. range of cooling *3	Indoor	W.B.	59 ~ 75° F(15 ~ 24° C)	
	Outdoor	D.B.	23 ~ 115° F (-5 ~ +46° C) *5	
Heating capacity (Nominal) *2 (208-230V)		Btu/h	215,000	
		kW	63.0	
	Power input	kW	18.52 *4	
	Current input	A	55.9 / 50.5 *4	
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: 6-100%	
Indoor unit connectable	Total capacity		50~150 % of outdoor unit capacity	
	Model / Quantity		P06~P96 / 1-48	
Sound pressure level (measured in anechoic room)		dB <A>	61.0	
Refrigerant piping diameter from Twinning Kit to Indoor Units	Liquid (High Pressure)	In. (mm)	7/8"(22.2) Brazed	
	Gas (Low Pressure)	In. (mm)	1-1/8"(28.58) Brazed	
Set Model				
Model			PURY-HP96TKMU-A-H	PURY-HP96TKMU-A-H
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1
	Airflow rate	CFM	6,200	6,200
		m3 / min	175	175
		L/s	2,920	2,920
	Control , Driving mechanism		Inverter-control, Brushless DC motor	Inverter-control, Brushless DC 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
	Lubricant		MEL32	MEL32
External finish			Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheet <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-current protection	Over-current protection
	Fan Motor		Thermal switch	Thermal switch
Minimum Circuit Ampacity (MCA)		A	60 / 54	60 / 54
Recommended Fuse/Breaker Size		A	65	65
Maximum Fuse Size		A	80	80
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)	552 (250)	552 (250)
Heat exchanger			Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Refrigerant piping diameter from Module to Twinning Kit	Liquid (High Pressure)	In. (mm)	3/4"(19.05)Brazed	3/4"(19.05)Brazed
	Gas (Low Pressure)	In. (mm)	7/8"(22.2)Brazed	7/8"(22.2)Brazed
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)	
Drawing	External		KJ94G492	
	Wiring		KE94C883	KE94C883
Standard attachment	Document		Installation Manual	
	Accessory		Details refer to External Drw	
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2	
			Joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-Y202S-G2,CMY-R160C-J	
			Main BC controller: CMB-P108,1010,1013,1016NU-GA,1016NU-HA	
			Sub BC controller: CMB-P104,108NU-GB,CMB-P1016NU-HB	
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).	

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.)	cfm =m³/min x 35.31 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

1-2. PURY-HP72~192Y(S)KMU-A-H Specifications

Model			PURY-HP72YKMU-A-H		PURY-HP96YKMU-A-H			
Power source			3-phase 3-wire 460V ±10% 60Hz		3-phase 3-wire 460V ±10% 60Hz			
Cooling capacity (Nominal) *1 (460V)		Btu/h	72,000		96,000			
		kW	21.1		28.1			
		Power input	kW	5.08 *4		7.66 *4		
		Current input	A	7.0 *4		10.6 *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 ~ 115° F (-5 ~ +46° C) *5		23 ~ 115° F (-5 ~ +46° C) *5		
Heating capacity (Nominal) *2 (460V)		Btu/h	80,000		108,000			
		kW	23.4		31.7			
		Power input	kW	6.26 *4		8.88 *4		
		Current input	A	8.7 *4		12.3 *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		50~150 % of outdoor unit capacity		50~150 % of outdoor unit capacity		
		Model / Quantity		P06~P96 / 1~18		P06~P96 / 1~24		
Sound pressure level (measured in anechoic room)		dB <A>	58.0		58.0			
Refrigerant piping diameter		Liquid (High Pressure)	In. (mm)	5/8 (15.88) Brazed		3/4 (19.05) Brazed		
		Gas (Low Pressure)	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	6,200		6,200	
				m3 / min	175		175	
				L/s	2,920		2,920	
		Control, Driving mechanism		Inverter-control, Brushless DC motor		Inverter-control, Brushless DC 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		
		Lubricant		MEL32		MEL32		
External finish			Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet <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-current protection		Over-current protection		
		Fan motor		Thermal switch		Thermal switch		
Minimum Circuit Ampacity (MCA)		A	26		32			
Recommended Fuse/Breaker Size		A	30		35			
Maximum Fuse Size		A	30		35			
Refrigerant		Type x original charge		R410A x 26 lbs + 1 oz (11.8 kg)		R410A x 26 lbs + 1 oz (11.8kg)		
		Control		Indoor LEV and BC controller		Indoor LEV and BC controller		
Net weight		lbs (kg)	580 (263)		583 (264)			
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube			
Defrost method			Auto-defrost mode (Reversed refrigerant cycle)		Auto-defrost mode (Reversed refrigerant cycle)			
Drawing		External		KJ94G387		KJ94G387		
		Wiring		KE94C884		KE94C884		
Standard attachment		Document		Installation Manual		Installation Manual		
		Accessory		Details refer to External Drw		Details refer to External Drw		
Optional parts		Joint: CMY-Y102SS-G2,CMY-Y102LS-G2, CMY-R160C-J		Joint: CMY-Y102SS-G2,CMY-Y102LS-G2, CMY-R160C-J		Joint: CMY-Y102SS-G2,CMY-Y102LS-G2, CMY-R160C-J		
		BC controller: CMB-P104,105,106,108,1010,1013, 1016NU-G		BC controller: CMB-P104,105,106,108,1010,1013, 1016NU-G		BC controller: CMB-P104,105,106,108,1010,1013, 1016NU-G		
		Main BC controller: CMB-P108,1010,1013, 1016NU-GA,1016NU-HA		Main BC controller: CMB-P108,1010,1013, 1016NU-GA,1016NU-HA		Main BC controller: CMB-P108,1010,1013, 1016NU-GA,1016NU-HA		
		Sub BC controller: CMB-P104,108NU-GB, CMB-P1016NU-HB		Sub BC controller: CMB-P104,108NU-GB, CMB-P1016NU-HB		Sub BC controller: CMB-P104,108NU-GB, CMB-P1016NU-HB		
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).					
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.)		cfm =m³/min x 35.31 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			PURY-HP144YSKMU-A-H				
Power source			3-phase 3-wire 460V ±10% 60Hz				
Cooling capacity (Nominal) *1 (460V)		Btu/h	144,000				
		kW	42.2				
		Power input	kW	10.85 *4			
Current input		A	15.1 *4				
Temp. range of cooling *3		Indoor	W.B.	59 ~ 75° F(15 ~ 24° C)			
		Outdoor	D.B.	23 ~ 115° F (-5 ~ +46° C) *5			
Heating capacity (Nominal) *2 (460V)		Btu/h	160,000				
		kW	46.9				
		Power input	kW	13.16 *4			
Current input		A	18.3 *4				
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		50~150 % of outdoor unit capacity			
		Model / Quantity		P06~P96 / 1~36			
Sound pressure level (measured in anechoic room)			dB <A>				
			61.0				
Refrigerant piping diameter from Twinning Kit to Indoor Units		Liquid (High Pressure)	In. (mm)	7/8 (22.2) Brazed			
		Gas (Low Pressure)	In. (mm)	1-1/8 (28.58) Brazed			
Set Model							
Model			PURY-HP72YKMU-A-H		PURY-HP72YKMU-A-H		
Fan		Type x Quantity		Propeller fan x 1		Propeller fan x 1	
		Airflow rate	CFM	6,200		6,200	
			m³ / min	175		175	
			L/s	2,920		2,920	
		Control , Driving mechanism		Inverter-control, Brushless DC motor		Inverter-control, Brushless DC 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	
		Lubricant		MEL32		MEL32	
External finish			Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet <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	26		26		
Recommended Fuse/Breaker Size		A	30		30		
Maximum Fuse Size		A	30		30		
Refrigerant		Type x original charge		R410A x 26 lbs + 1 oz (11.8 kg)		R410A x 26 lbs + 1 oz (11.8 kg)	
		Control		LEV and HIC circuit			
Net weight		lbs (kg)	580 (263)		580 (263)		
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		
Refrigerant piping diameter from Module to Twinning Kit		Liquid (High Pressure)	In. (mm)	5/8 (15.88)Brazed		5/8 (15.88)Brazed	
		Gas (Low Pressure)	In. (mm)	3/4 (19.05)Brazed		3/4 (19.05)Brazed	
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)				
Drawing		External		KJ94G493			
		Wiring		KE94C884		KE94C884	
Standard attachment		Document		Installation Manual			
		Accessory		Details refer to External Drw			
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2				
			Joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-Y202S-G2,CMY-R160C-J				
			Main BC controller: CMB-P108,1010,1013,1016NU-GA,1016NU-HA				
			Sub BC controller: CMB-P104,108NU-GB,CMB-P1016NU-HB				
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).				

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			PURY-HP192YSKMU-A-H		
Power source			3-phase 3-wire 460V ±10% 60Hz		
Cooling capacity (Nominal) *1 (460V)		Btu/h	192,000		
		kW	56.3		
	Power input	kW	15.86 *4		
	Current input	A	22.1 *4		
Temp. range of cooling *3	Indoor	W.B.	59 ~ 75° F (15 ~ 24° C)		
	Outdoor	D.B.	23 ~ 115° F (-5 ~ +46° C) *5		
Heating capacity (Nominal) *2 (460V)		Btu/h	215,000		
		kW	63.0		
	Power input	kW	18.52 *4		
	Current input	A	25.8 *4		
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: 6-100%		
Indoor unit connectable	Total capacity		50~150 % of outdoor unit capacity		
	Model / Quantity		P06~P96 / 1-48		
Sound pressure level (measured in anechoic room)		dB <A>	61.0		
Refrigerant piping diameter from Twinning Kit to Indoor Units	Liquid (High Pressure)	In. (mm)	7/8 (22.2) Brazed		
	Gas (Low Pressure)	In. (mm)	1-1/8 (28.58) Brazed		
Set Model					
Model		PURY-HP96YKMU-A-H		PURY-HP96YKMU-A-H	
Fan	Type x Quantity		Propeller fan x 1		Propeller fan x 1
	Airflow rate	CFM	6,200		6,200
		m3 / min	175		175
		L/s	2,920		2,920
	Control , Driving mechanism		Inverter-control, Brushless DC motor		Inverter-control, Brushless DC 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
	Lubricant		MEL32		MEL32
External finish		Pre-coated galvanized steel sheet <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheet <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-current protection		Over-current protection
	Fan Motor		Thermal switch		Thermal switch
Minimum Circuit Ampacity (MCA)		A	32		32
Recommended Fuse/Breaker Size		A	35		35
Maximum Fuse Size		A	35		35
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)	583 (264)		583 (264)
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube
Refrigerant piping diameter from Module to Twinning Kit	Liquid (High Pressure)	In. (mm)	3/4 (19.05)Brazed		3/4 (19.05)Brazed
	Gas (Low Pressure)	In. (mm)	7/8 (22.2)Brazed		7/8 (22.2)Brazed
Defrosting method			Auto-defrost mode (Reversed refrigerant cycle)		
Drawing	External		KJ94G493		
	Wiring		KE94C884		KE94C884
Standard attachment	Document		Installation Manual		
	Accessory		Details refer to External Drw		
Optional parts			Outdoor Twinning kit: CMY-Y100CBK2		
			Joint: CMY-Y102SS-G2,CMY-Y102LS-G2,CMY-Y202S-G2,CMY-R160C-J		
			Main BC controller: CMB-P108,1010,1013,1016NU-GA,1016NU-HA		
			Sub BC controller: CMB-P104,108NU-GB,CMB-P1016NU-HB		
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 H2i R2-Series System Design section. *5 For details on extended ambient cooling operation range down to -10°FDB (-23°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).		

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

Efficiency Ratings

Model	IDU Type	EER (95° F) *1	IEER *1	HI COP (47° F) *1	LOW COP (17° F) *1	SCHE
PURY-HP72TKMU-A-H	Ducted / Non-Ducted	12.9 / 13	17.2 / 18.4	3.61 / 3.55	2.39 / 2.25	22.7 / 22.6
PURY-HP96TKMU-A-H	Ducted / Non-Ducted	11.4 / 12.5	16.5 / 17.1	3.46 / 3.44	2.31 / 2.25	17.4 / 22.0
PURY-HP144TSKMU-A-H	Ducted / Non-Ducted	12.5 / 12.6	16.7 / 17.9	3.47 / 3.41	2.32 / 2.05	22.1 / 22.0
PURY-HP192TSKMU-A-H	Ducted / Non-Ducted	11.1 / 12.1	16.1 / 16.6	3.32 / 3.31	2.24 / 2.05	16.9 / 21.4
PURY-HP72YKMU-A-H	Ducted / Non-Ducted	12.9 / 13	17.2 / 18.4	3.61 / 3.55	2.27 / 2.26	22.7 / 22.6
PURY-HP96YKMU-A-H	Ducted / Non-Ducted	11.4 / 12.5	16.5 / 17.1	3.46 / 3.44	2.26 / 2.26	17.4 / 22.0
PURY-HP144YSKMU-A-H	Ducted / Non-Ducted	12.5 / 12.6	16.7 / 17.9	3.47 / 3.41	2.13 / 2.12	22.1 / 22.0
PURY-HP192YSKMU-A-H	Ducted / Non-Ducted	11.1 / 12.1	16.1 / 16.6	3.32 / 3.31	2.12 / 2.12	16.9 / 21.4
Note:	*1. Efficiency values based on AHRI 1230 test method.					

2. EXTERNAL DIMENSIONS

PURY-HP72, 96TKMU-A-H(-BS)

Unit : mm(in)

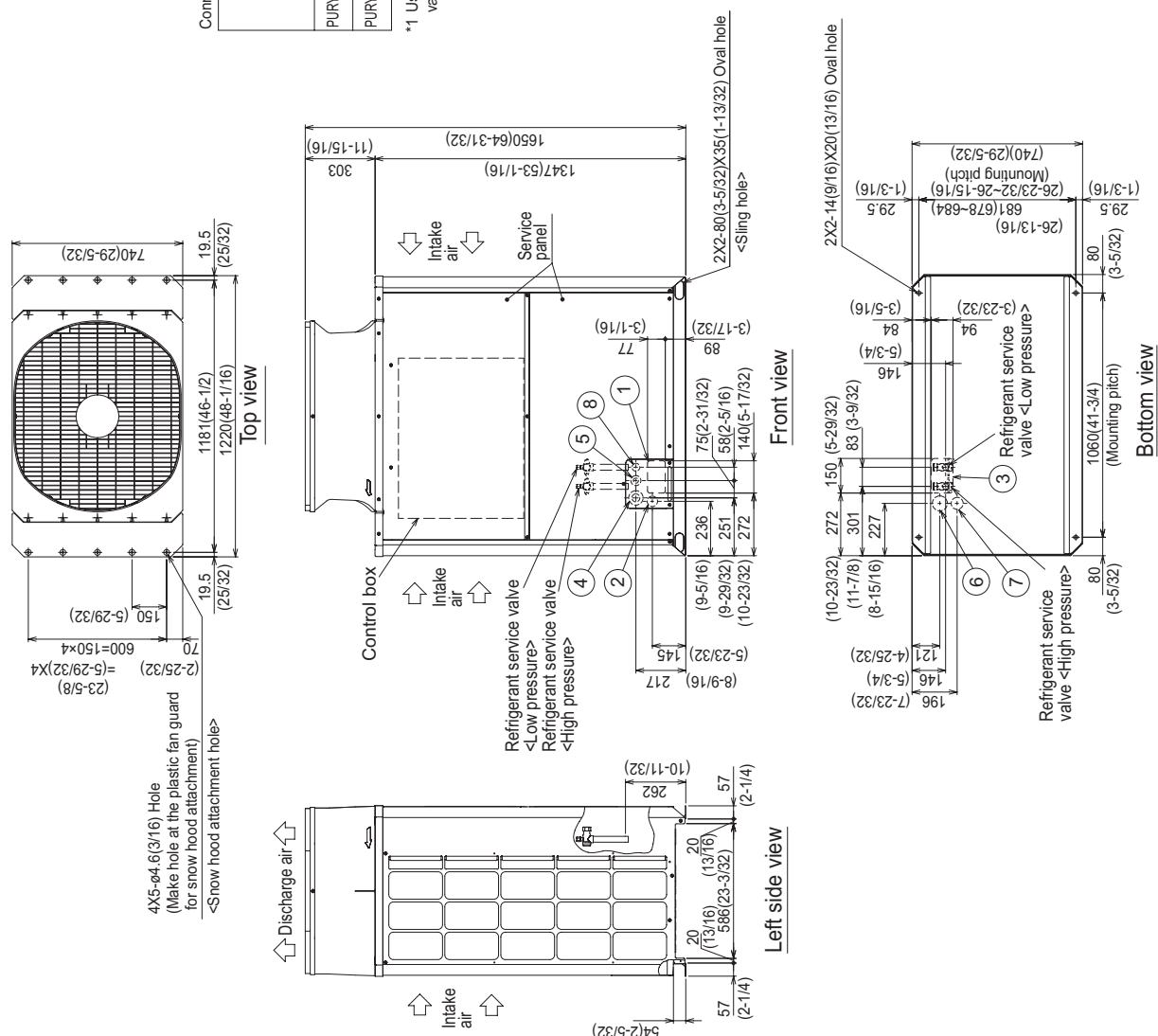
Note 1. Please refer to the next page for information regarding necessary spacing around the unit and foundation work.

2. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications				
Model	Diameter			
	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PUR-Y-HP72TKMLA-H-(BS)	ø15.88 Braze (5/8) *1	ø19.05 Braze (3/4) *1	ø25.4 (1)	ø25.4 (1)
PUR-Y-HP96TKMLA-H-(BS)	ø19.05 Braze (3/4) *1	ø22.2 Braze (7/8) *1	ø25.4 (1)	ø25.4 (1)

***1** Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

NO.	Usage	Specifications
①	Front through hole	140 × 77 Knockout hole (5-17/32) (3-1/16)
②	For pipes	Front through hole (Uses when winning kit (optional parts) is mounted.)
③	Bottom through hole	150 × 94 Knockout hole (5-29/32) (3-23/32)
④	Front through hole	ø62.7 or ø34.5 Knockout hole (2-15/32) (1-3/8)
⑤	Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑥	For wires	Bottom through hole (2-9/16)
⑦	Bottom through hole	ø52 Knockout hole (2-1/16)
⑧	For transmission cables	ø34 Knockout hole (1-11/32)



2. EXTERNAL DIMENSIONS

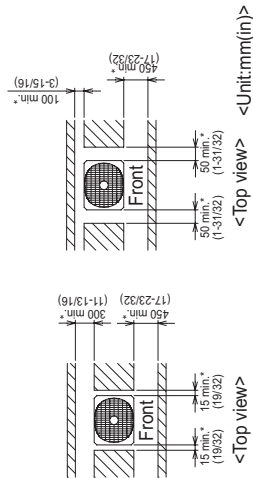
PURY-HP72, 96TKMU-A-H(-BS)

Unit : mm(in)

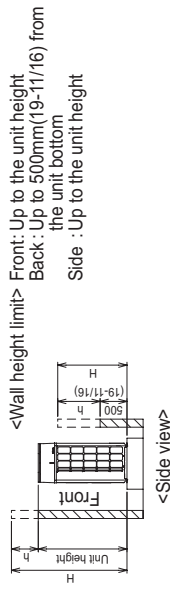
1. Required space around the unit

● 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

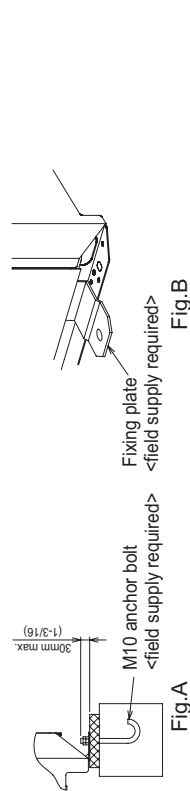


- When the height of the walls on the front, back or on the sides<H> exceeds the wall height limit as defined below add the height that exceeds the height limit <h> to the figures that are marked with an asterisk.



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 1000mm or more as inlet space/ passage space for each six units.

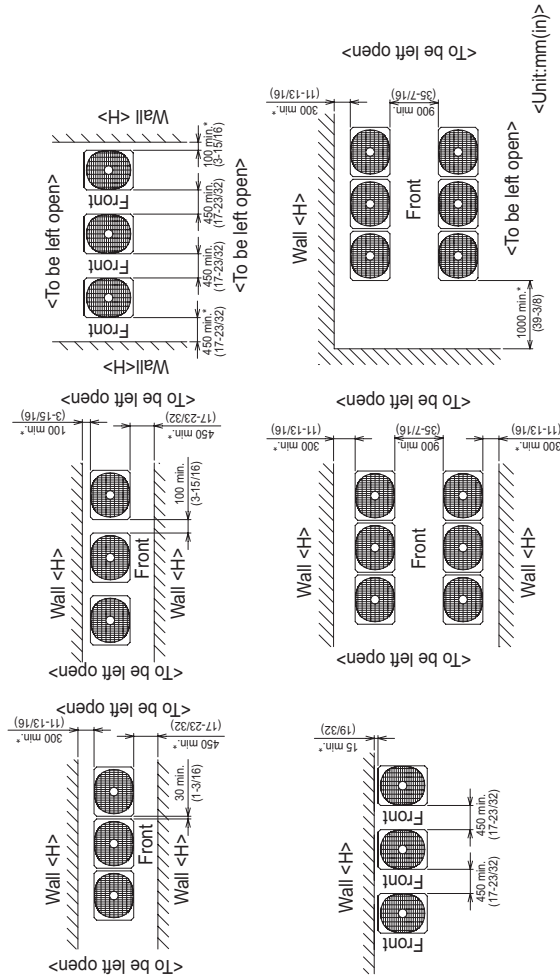
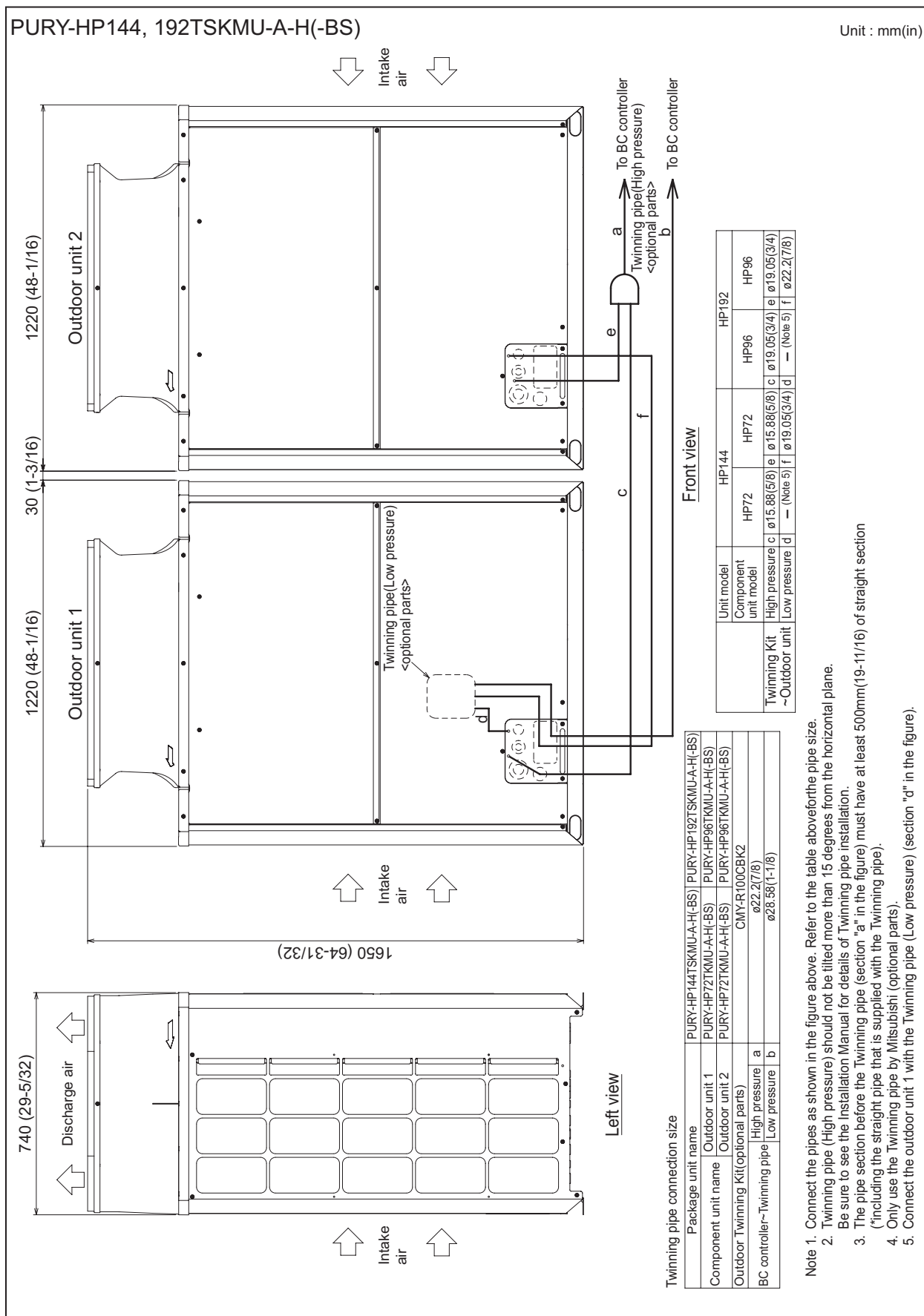


Fig.B

Fig.A

2. EXTERNAL DIMENSIONS



2. EXTERNAL DIMENSIONS

PURY-HP72, 96YKMU-A-H(-BS)

Unit : mm(in)

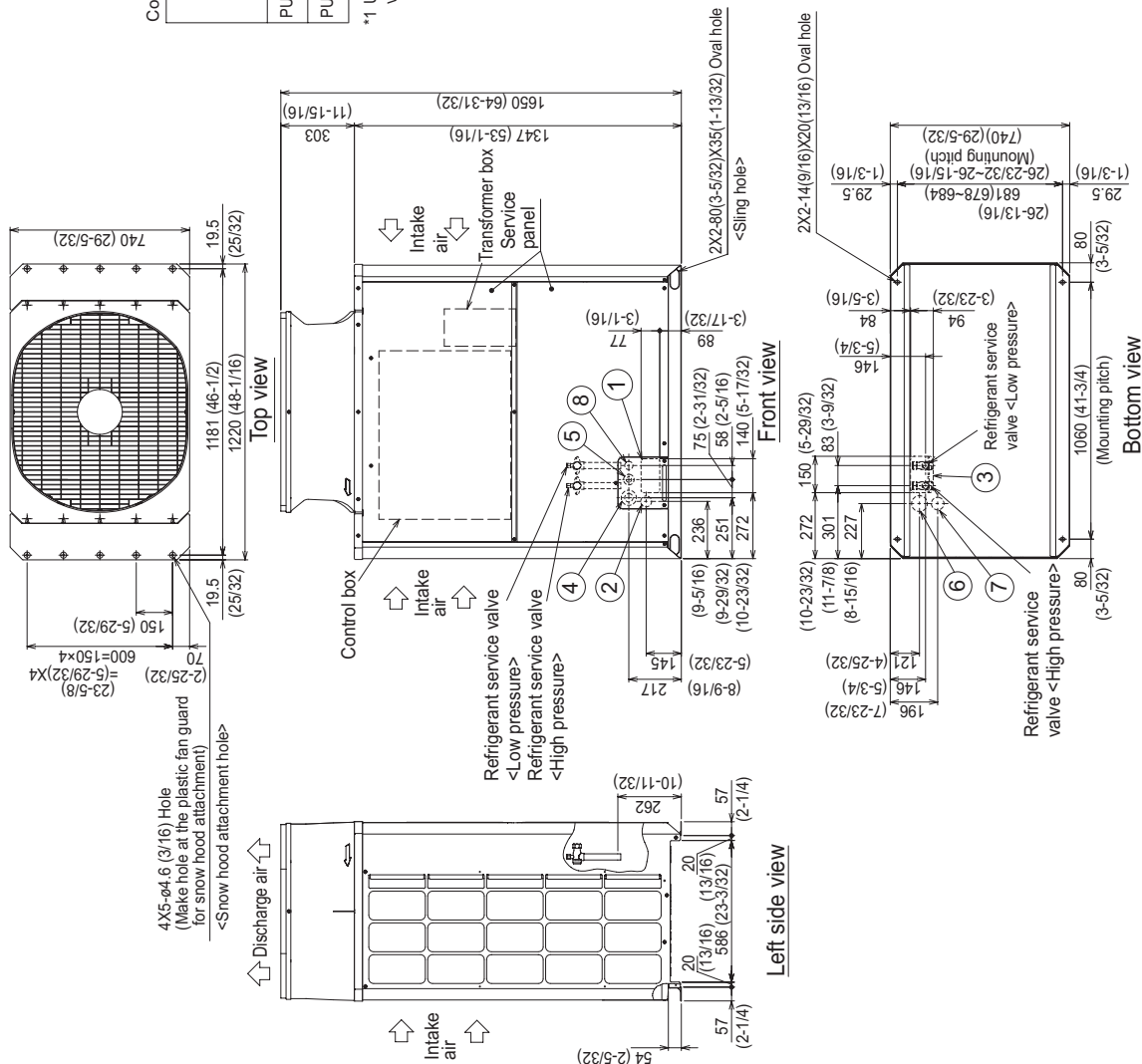
Note 1. Please refer to the next page for information regarding necessary spacing around the unit and foundation work.

2. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PURY-HP72YKMU-A-H(-BS)	ø15.88 Braze (5/8) *1	ø19.05 Braze (3/4) *1	ø25.4 (1)	ø25.4 (1)
PURY-HP96YKMU-A-H(-BS)	ø19.05 Braze (3/4) *1	ø22.2 Braze (7/8) *1	ø25.4 (1)	ø25.4 (1)

*1 Use the pipe joint(field supply) and connect to the refrigerant service valve piping.



NO.	Usage	Specifications
①	Front through hole	140 x 77 Knockout hole (5-17/32) (3-1/16)
②	Front through hole (Uses when twinning kit (optional parts) is mounted.)	ø45 Knockout hole (1-25/32)
③	Bottom through hole	150 x 94 Knockout hole (5-29/32) (3-23/32)
④	Front through hole	ø62.7 or ø34.5 Knockout hole (2-15/32) (1-3/8)
⑤	Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑥	Bottom through hole	ø65 Knockout hole (2-9/16)
⑦	Bottom through hole	ø52 Knockout hole (2-1/16)
⑧	Front through hole	ø34 Knockout hole (1-11/32)

2. EXTERNAL DIMENSIONS

PURY-HP72, 96YKMU-A-H(-BS)

Unit : mm(in)

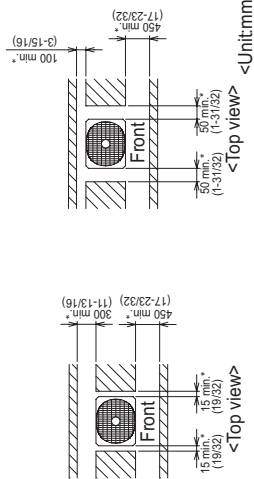
- In case of collective installation

- ① 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.
- ② At least two sides must be left open.
- ③ As with the single installation, add the height that exceeds the height limit<h> to the figures that are marked with an asterisk.
- ④ 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 1000mm or more as inlet space/ passage space for each six units.

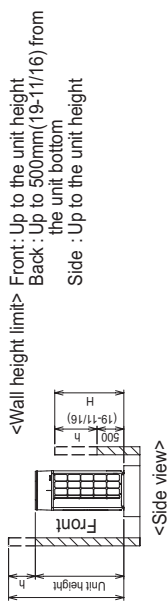
1. Required space around the unit

- In case of single installation

- ① 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
 - With a space of at least 100mm(3-15/16) to the wall on the back of the unit

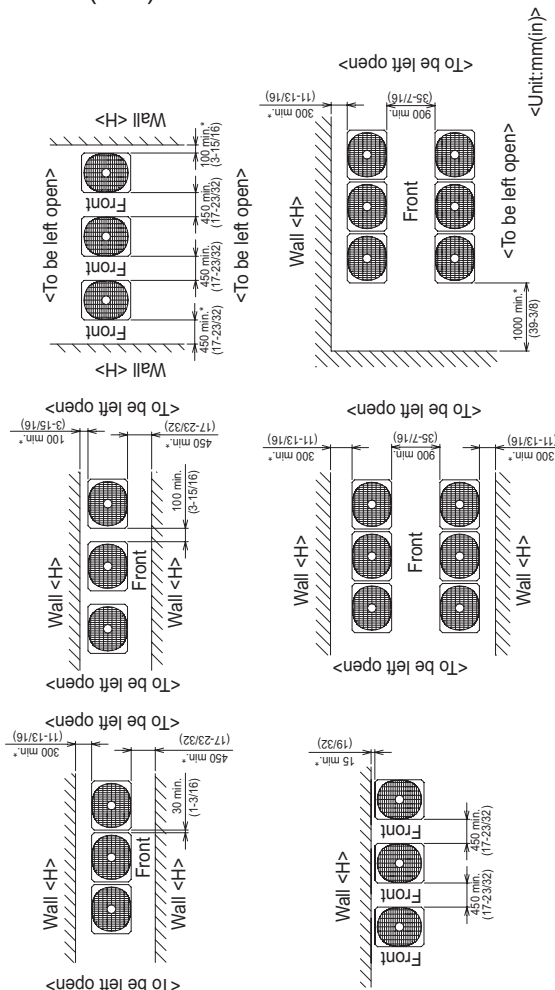


- ② When the height of the walls on the front, back or on the sides <H> exceeds the wall height limit as defined below add the height that exceeds the height limit <h> to the figures that are marked with an asterisk.



2. Foundation work

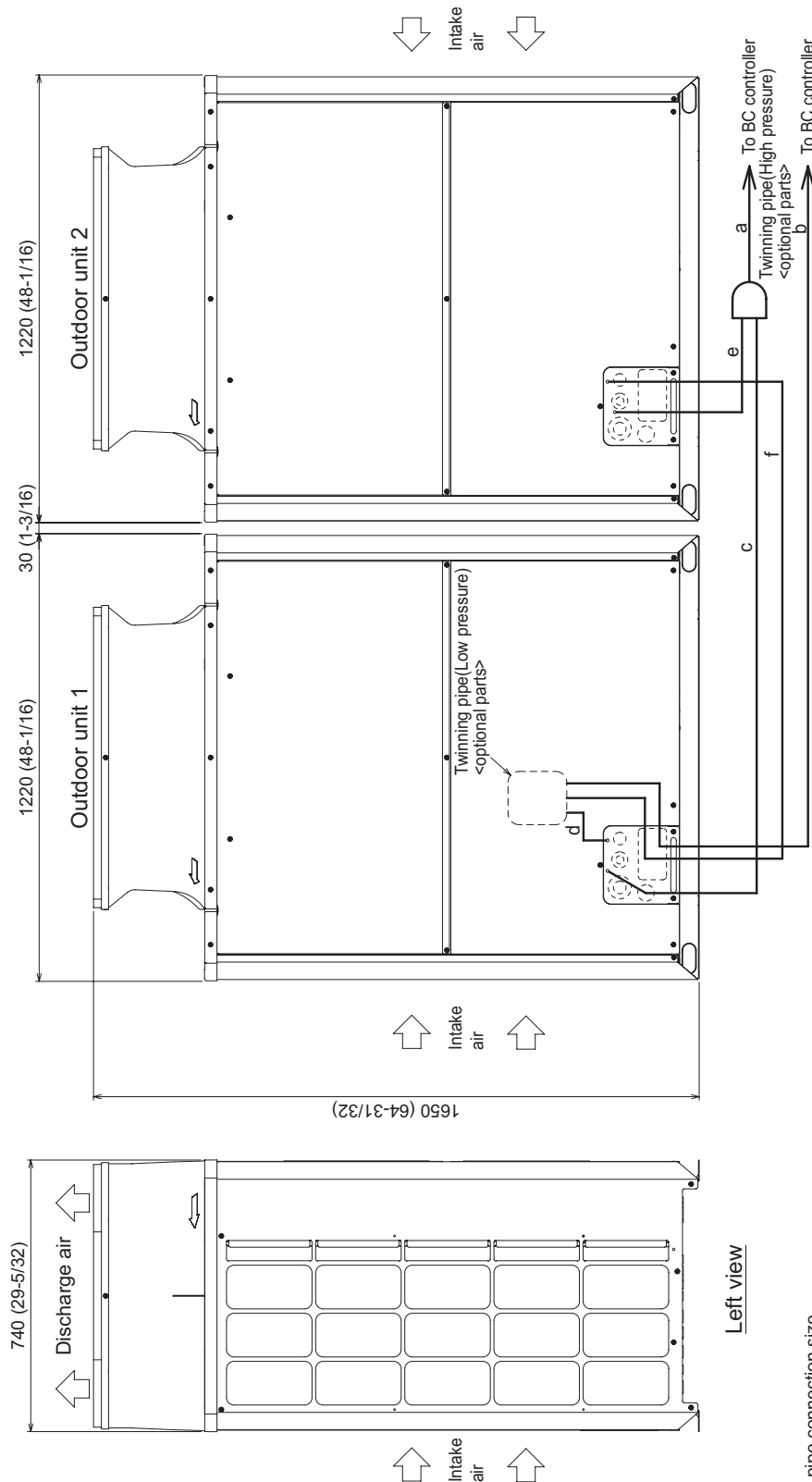
- ① Take into consideration the surface strength, water drainage route, piping route and wiring route when preparing the installation site.
- ② Note that the drain water comes out of the unit during operation. > Build the foundation in such way that the corner of the installation leg is securely supported 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.
- ③ The protrusion length of the anchor bolt must not exceed 30mm(1-3/16). (Fig.A)
- ④ Use four fixing plates as shown in the right figure <field supply required> when using post-installed anchor bolts. (Fig.B)
- ⑤ 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>.
- ⑥ 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.
- ⑦ Refer to the Installation Manual when installing units on an installation base.



2. EXTERNAL DIMENSIONS

PURY-HP144, 192YSKMU-A-H(-BS)

Unit : mm(in)



Twinning pipe connection size

Package unit name	PURY-HP144YSKMU-A-H(-BS)	PURY-HP192YSKMU-A-H(-BS)
Outdoor unit 1	PURY-HP72YSKMU-A-H(-BS)	PURY-HP96YSKMU-A-H(-BS)
Outdoor unit 2	PURY-HP72YSKMU-A-H(-BS)	PURY-HP96YSKMU-A-H(-BS)
Outdoor Twinning Kit (optional parts)	CMY-R100CBK2	
BC controller~ Twinning pipe	ø22.2(7/8)	
High pressure	a	b
Low pressure	c	d

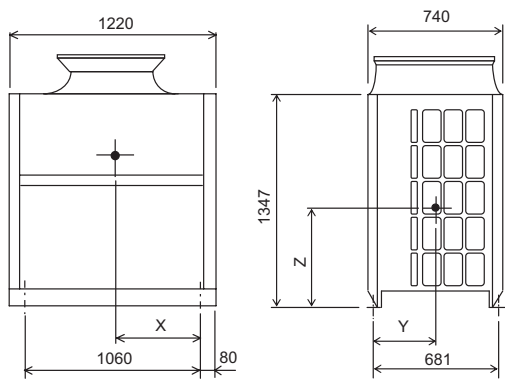
Front view

Unit model	HP144	HP72	HP96	HP192
Component unit model	HP72	HP72	HP96	HP96
Twinning Kit	HP72	HP72	HP96	HP96
~Outdoor unit	HP72	HP72	HP96	HP96
High pressure	c	ø15.88(5/8)	e	ø19.05(3/4)
Low pressure	d	— (Note 5)	f	ø22.2(7/8)

- Note 1. Connect the pipes as shown in the figure above. Refer to the table above for the pipe size.
2. Twinning pipe (High pressure) should not be tilted more than 15 degrees from the horizontal plane.
3. Be sure to see the Installation Manual for details of Twinning pipe installation.
4. The pipe section before the Twinning pipe (section "a" in the figure) must have at least 500mm(19-11/16) of straight section.
5. (*Including the straight pipe that is supplied with the Twinning pipe).
6. Only use the Twinning pipe by Mitsubishi (optional parts).
7. Connect the outdoor unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

3. CENTER OF GRAVITY

PURY-HP72, 96TKMU-A-H (-BS)
PURY-HP72, 96YKMU-A-H (-BS)

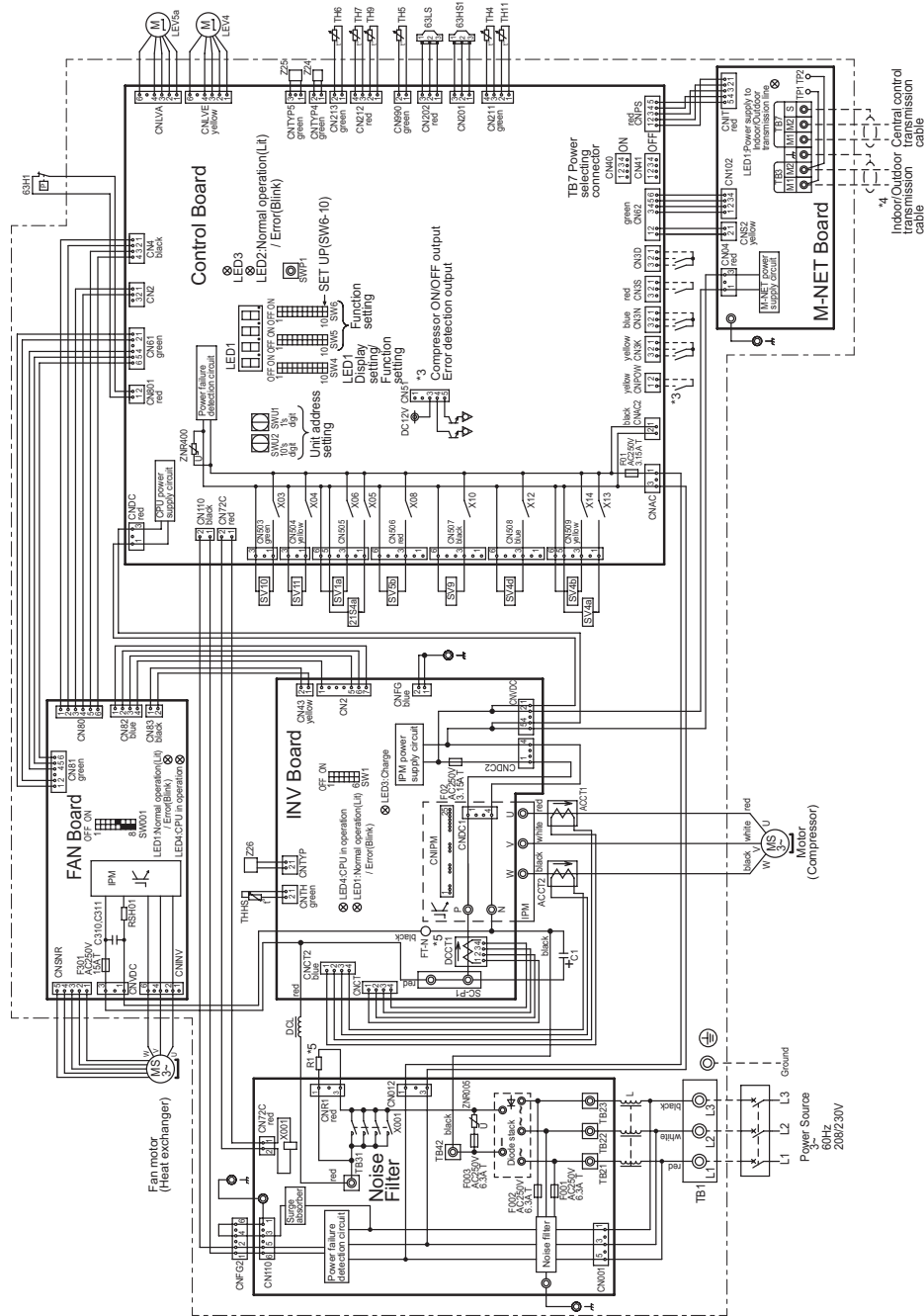


Unit : mm[in.]

Model	X	Y	Z
PURY-HP72TKMU-A-H	460[18-1/8]	320[12-5/8]	609[23]
PURY-HP96TKMU-A-H	447[17-5/8]	311[12-1/4]	595[23-7/16]
PURY-HP72YKMU-A-H	447[17-5/8]	310[12-7/32]	623[24-17/32]
PURY-HP96YKMU-A-H	435[17-5/32]	302[11-29/32]	610[24-1/32]

4. ELECTRICAL WIRING DIAGRAMS

PURY-HP72, 96TKMU-A-H(-BS)



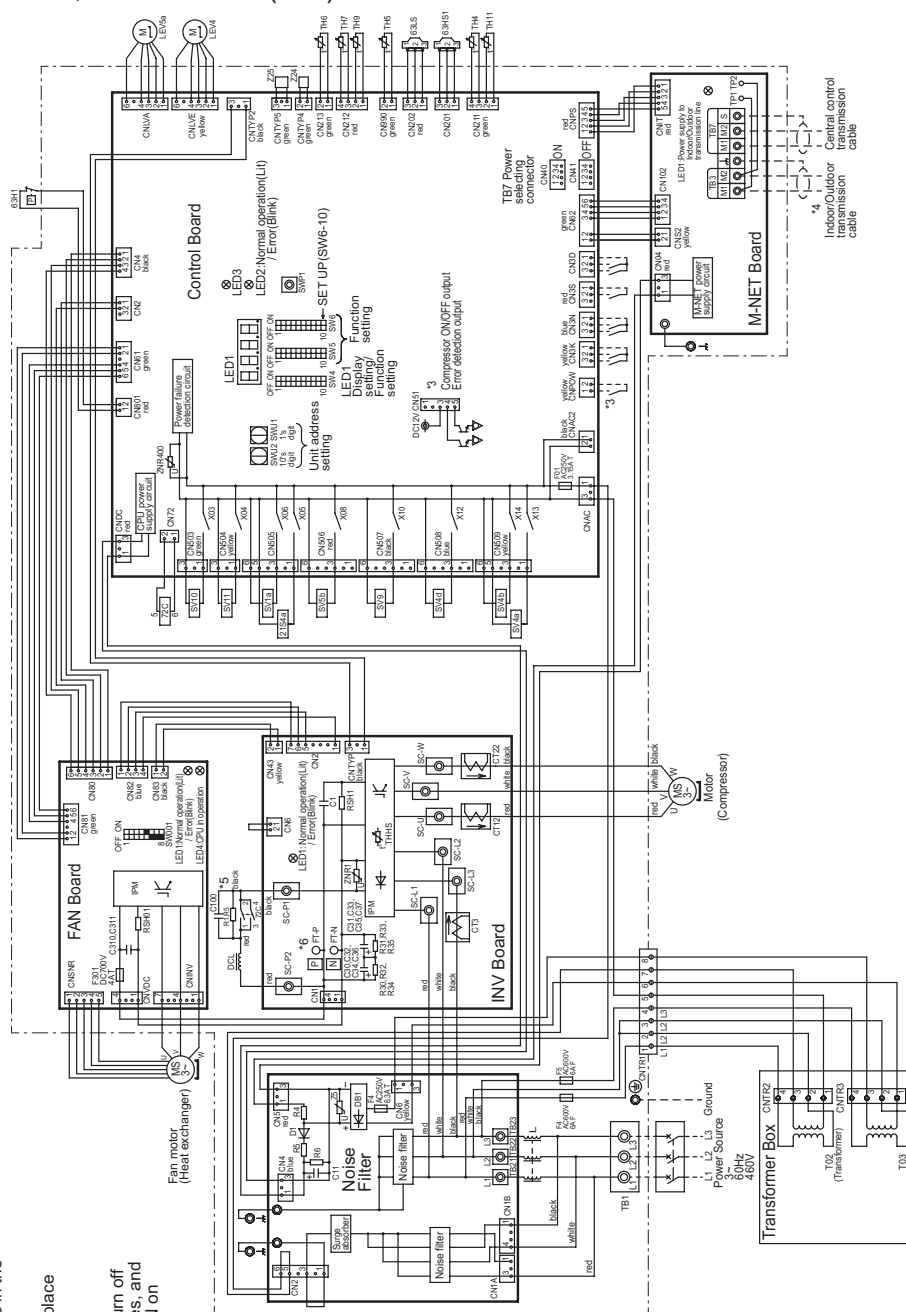
- *1. Single-dotted lines indicate wiring not supplied with the unit.
- *2. Dot-dash lines indicate the control box boundaries.
- *3. Refer to the Data book for connecting input/output signal connectors.
- *4. Daisy-chain terminals (TB3) on the outdoor units in the same refrigerant system together.
- *5. Faston terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
- *6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage at both ends of the main capacitor (C1) has dropped to DC20V or less.

<Symbol explanation>

Symbol	Explanation	Symbol	Explanation
63H1	4-way valve (cooling/heating switching)	SV5b	Solenoid valve
63H2	Pressure switch	SV5c	Outdoor unit heat exchanger capacity control
63H3	Pressure sensor	SV9	For opening/closing the bypass circuit
63H4	Pressure sensor	SV10, 11	For opening/closing the defrost circuit
63H5	Pressure sensor	SV12	For opening/closing the defrost circuit
63H6	Pressure sensor	SV13	Indoor/Outdoor transmission cable
63H7	Pressure sensor	SV14	Central control transmission cable
63H8	Pressure sensor	SV15	Discharge pipe temperature
63H9	Pressure sensor	SV16	RCC inlet pipe temperature
63H10	Pressure sensor	SV17	Subcooling liquid refrigerant temperature
63H11	Pressure sensor	SV18	OA temperature
63H12	Pressure sensor	SV19	Heat exchanger outlet pipe temperature
63H13	Pressure sensor	SV20	IPM temperature
63H14	Pressure sensor	SV21	Function setting connector

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PURY-HP-T(S)KMU-A-H,-Y(S)KMU-A-H (January 2016)

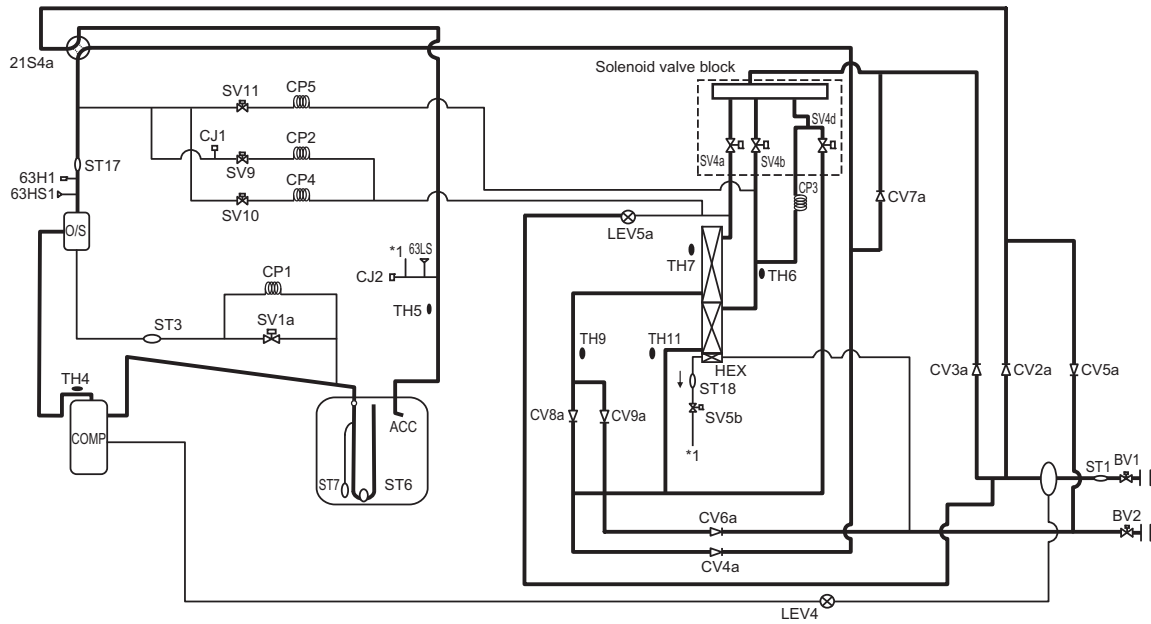


1. Single-dotted lines indicate wiring not supplied with the unit.
2. Dot-dash lines indicate the control box boundaries.
3. Refer to the Data book for connecting input/output signal connectors.
4. Daisy-chain terminals (TB3) on the outdoor units in the same refrigerant system together.
5. Fasten terminals have a locking function. Make sure the terminals are securely locked in place after insertion. Press the tab on the terminals to removed them.
6. Control box houses high-voltage parts. Before inspecting the inside of the control box, turn off the power, keep the unit off for at least 10 minutes, and confirm that the voltage between FT-P and FT-N on INV Board has dropped to DC20V or less.

Symbol	Explanation
4-way valve	Cooling/heating switching
Pressure switch	High pressure protection for the outdoor unit
Pressure sensor	Pressure
Pressure relay	Pressure
Magnetic relay (power main circuit)	Compressor
Capacitor (inverter main circuit)	Capacitor
Current sensor(A/C)	Current sensor(A/C)
DC coil	DC coil
Check coil	Check coil
Energy saving (noise reduction)	Energy saving (noise reduction)
Linear expansion valve	Linear expansion valve (for the control of evaporating temperature)
Reactor	For inrush current prevention
Reactor	For current detection
Solenoid valve	For opening/closing the bypass
Heat exchanger	Heat exchanger
Heat exchanger capacity control	Heat exchanger capacity control
Outdoor unit heat exchanger	Outdoor unit heat exchanger
Capacity control	Capacity control
Capacitor (inverter main circuit)	Capacitor (inverter main circuit)
For opening/closing the bypass circuit	For opening/closing the bypass circuit
Power supply	Power supply
Terminal block	Terminal block
Indoor/Outdoor transmission cable	Indoor/Outdoor transmission cable
Central control transmission cable	Central control transmission cable
Thermistor	Thermistor
Discharge pipe temperature sensor	Discharge pipe temperature sensor
Subcooled and refrigerant temperature	Subcooled and refrigerant temperature
O/A temperature	O/A temperature
Heat exchanger outlet pipe temperature	Heat exchanger outlet pipe temperature
IPMX temperature	IPMX temperature
Function call	Function call

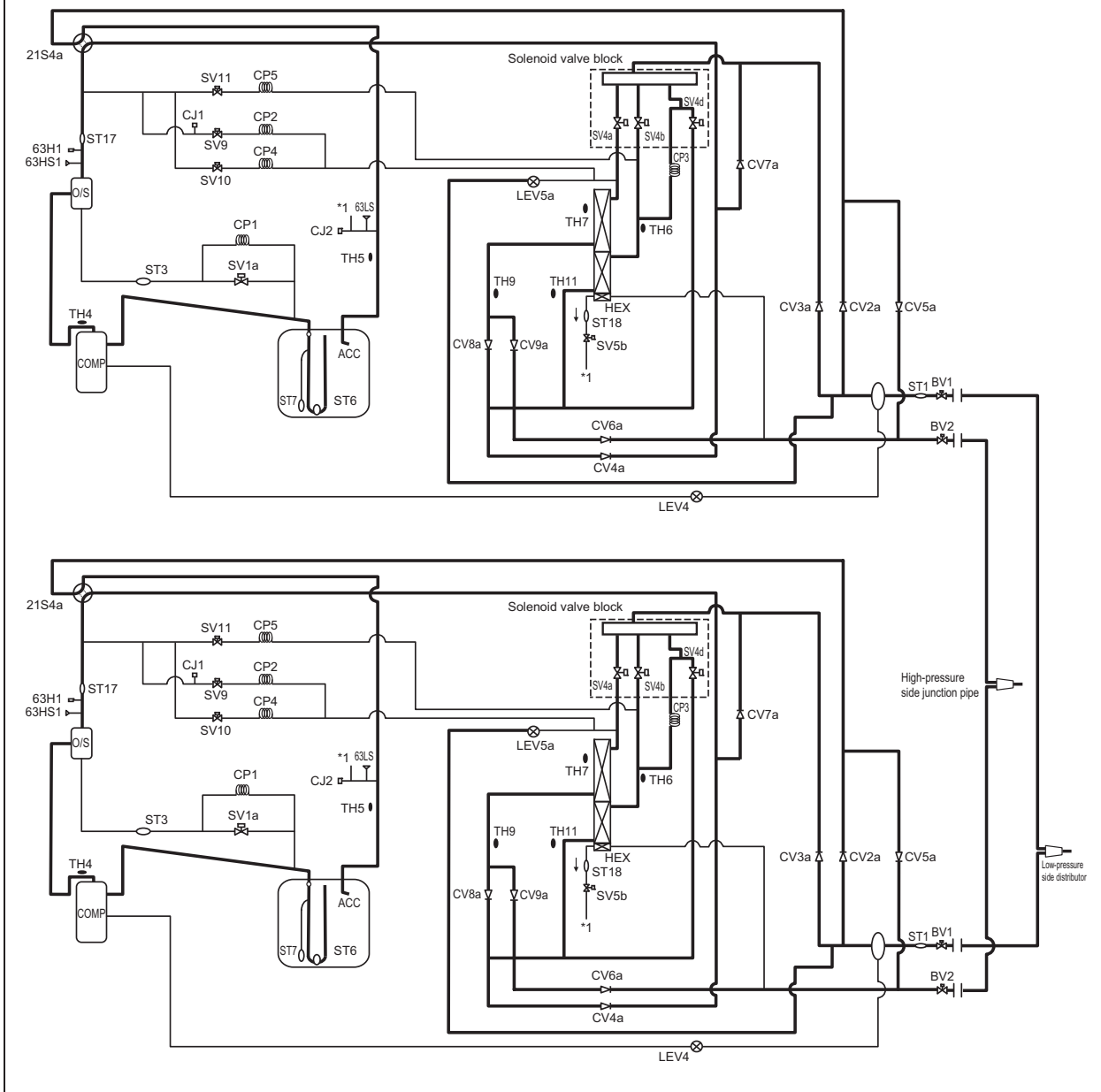
5. REFRIGERANT CIRCUIT DIAGRAMS

PURY-HP72, HP96TKMU-A-H
PURY-HP72, HP96YKMU-A-H



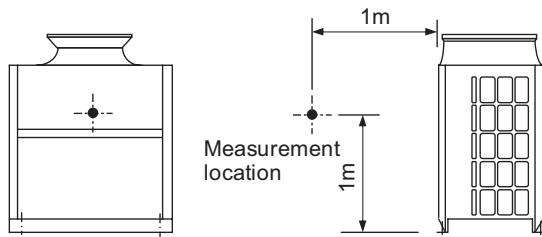
5. REFRIGERANT CIRCUIT DIAGRAMS

PURY-HP144, HP192TSKMU-A-H
PURY-HP144, HP192YSKMU-A-H

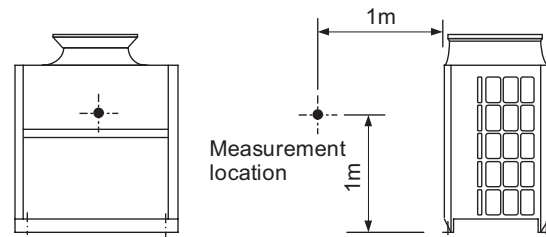


6. SOUND PRESSURE LEVELS

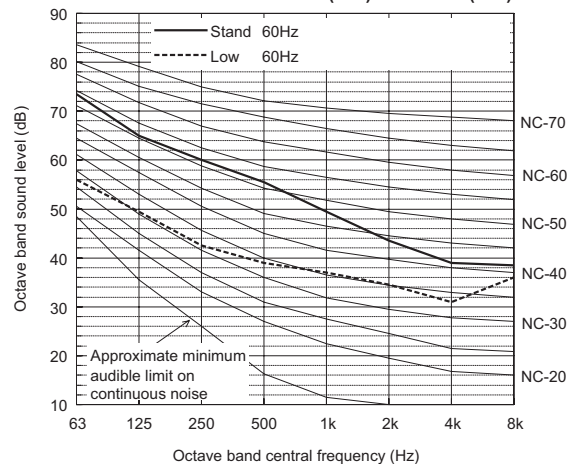
PURY-HP72TKMU-A-H/YKMU-A-H



PURY-HP96TKMU-A-H/YKMU-A-H



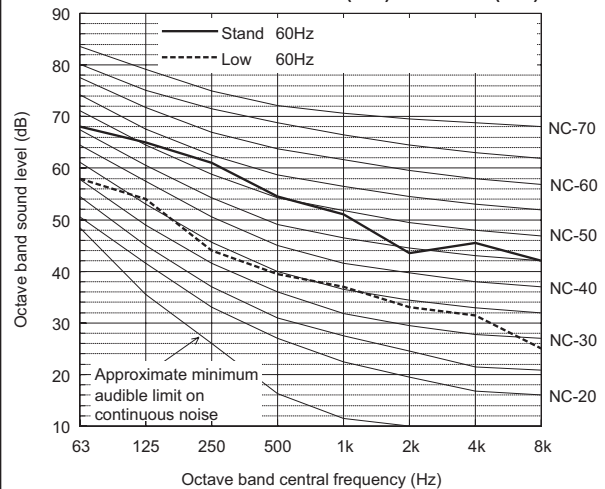
Sound level of PURY-HP72TKMU-A-H(-BS)/YKMU-A-H(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	73.5	65.0	60.0	55.5	49.5	43.5	39.0	38.5	58.0
Low noise mode	60Hz	56.0	49.5	42.5	39.0	37.0	34.5	31.0	36.0	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 PURY-HP96TKMU-A-H(-BS)/YKMU-A-H(-BS)

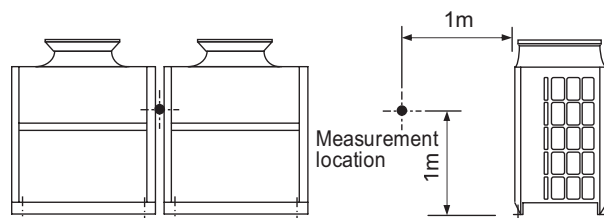


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	68.0	65.0	61.0	54.5	51.0	43.5	45.5	42.0	58.0
Low noise mode	60Hz	58.0	54.0	44.0	39.5	37.0	33.0	31.5	25.0	44.0

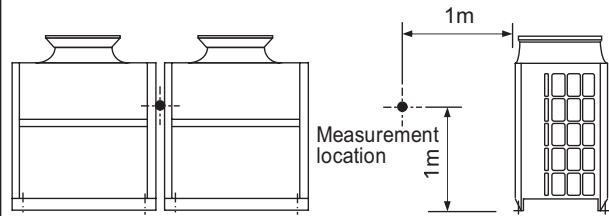
When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

6. SOUND PRESSURE LEVELS

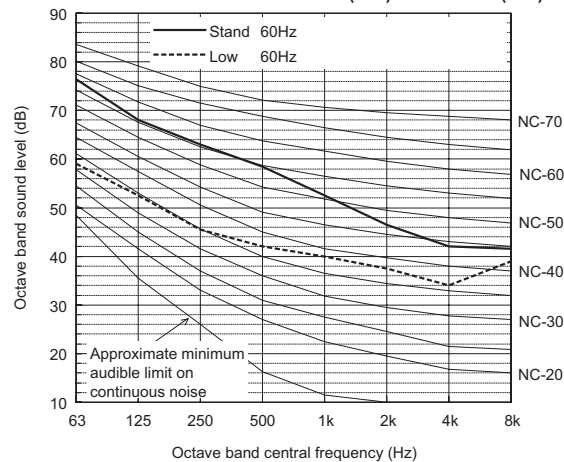
PURY-HP144TSKMU-A-H/YSKMU-A-H



PURY-HP192TSKMU-A-H/YSKMU-A-H



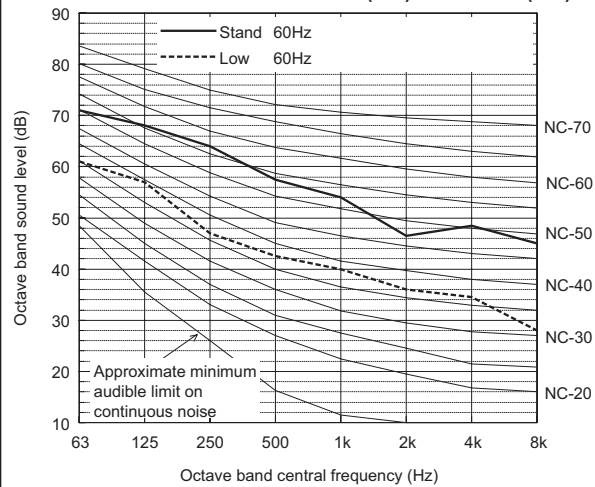
Sound level of PURY-HP144TSKMU-A-H(-BS)/YSKMU-A-H(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	76.5	68.0	63.0	58.5	52.5	46.5	42.0	41.5	61.0
Low noise mode	60Hz	59.0	52.5	45.5	42.0	40.0	37.5	34.0	39.0	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 PURY-HP192TSKMU-A-H(-BS)/YSKMU-A-H(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	71.0	68.0	64.0	57.5	54.0	46.5	48.5	45.0	61.0
Low noise mode	60Hz	61.0	57.0	47.0	42.5	40.0	36.0	34.5	28.0	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. Selection of Cooling/Heating Units

<Cooling>

Design Condition	
Outdoor Design Dry Bulb Temperature	43 °C
Total Cooling Load	17.5 kW
Room1	
Indoor Design Dry Bulb Temperature	27 °C
Indoor Design Wet Bulb Temperature	20 °C
Cooling Load	8.0 kW
Room2	
Indoor Design Dry Bulb Temperature	24 °C
Indoor Design Wet Bulb Temperature	17 °C
Cooling Load	9.5 kW
<Other>	
Indoor/Outdoor Equivalent Piping Length	50 m

1. Cooling Calculation

(1) Temporary Selection of Indoor Units

Room1	PEFY-P30	8.8 kW (Rated)
Room2	PEFY-P36	10.6 kW (Rated)

(2) Total Indoor Units Capacity

$$P30 + P36 = P66$$

(3) Selection of Outdoor Unit

The HP72 outdoor unit is selected as total indoor units capacity is P66

PUHY-HP72	21.1 kW
-----------	---------

(4) Total Indoor Units Capacity Correction Calculation

Room1	
Indoor Design Wet Bulb Temperature Correction (20°C)	1.03 (Refer to Fig.1)
Room2	
Indoor Design Wet Bulb Temperature Correction (17°C)	0.95 (Refer to Fig.1)

Total Indoor Units Capacity (CTi)

$$\begin{aligned} CTi &= \Sigma (\text{Indoor Unit Rating} \times \text{Indoor Design Temperature Correction}) \\ &= 8.8 \times 1.03 + 10.6 \times 0.95 \\ &= 19.1 \text{ kW} \end{aligned}$$

(5) Outdoor Unit Correction Calculation

Outdoor Design Dry Bulb Temperature Correction (43°C)	0.94 (Refer to Fig.2)
Piping Length Correction (50 m)	0.94 (Refer to Fig.3)

Total Outdoor Unit Capacity (CTo)

$$\begin{aligned} CTo &= \text{Outdoor Rating} \times \text{Outdoor Design Temperature Correction} \times \text{Piping Length Correction} \\ &= 21.1 \times 0.94 \times 0.94 \\ &= 18.6 \text{ kW} \end{aligned}$$

(6) Determination of Maximum System Capacity (CTx)

Comparison of Capacity between Total Indoor Units Capacity (CTi) and Total Outdoor Unit Capacity (CTo)

$$CTi = 19.1 > CTo = 18.6, \text{ thus, select } CTo.$$

$$CTx = CTo = 18.6 \text{ kW}$$

(7) Comparison with Essential Load

Against the essential load 17.5kW, the maximum system capacity is 18.6kW: Proper outdoor units have been selected.

(8) Calculation of Maximum Indoor Unit Capacity of Each Room

CTx = CTo, thus, calculate by the calculation below

Room1

$$\begin{aligned} &\text{Maximum Capacity} \times \text{Room1 Capacity after the Temperature Correction} / (\text{Room1,2 Total Capacity after the Temperature Correction}) \\ &= 18.6 \times (8.8 \times 1.03) / (8.8 \times 1.03 + 10.6 \times 0.95) \\ &= 8.8 \text{ kW} \quad \text{OK: fulfills the load 8.0kW} \end{aligned}$$

Room2

$$\begin{aligned} &\text{Maximum Capacity} \times \text{Room2 Capacity after the Temperature Correction} / (\text{Room1,2 Total Capacity after the Temperature Correction}) \\ &= 18.6 \times (10.6 \times 0.95) / (8.8 \times 1.03 + 10.6 \times 0.95) \\ &= 9.8 \text{ kW} \quad \text{OK: fulfills the load 9.5kW} \end{aligned}$$

Go on to the heating trial calculation since the selected units fulfill the cooling loads of Room 1, 2.

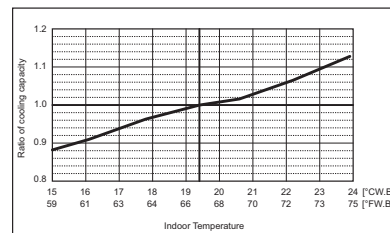


Fig.1 Indoor unit temperature correction
To be used to correct indoor unit only

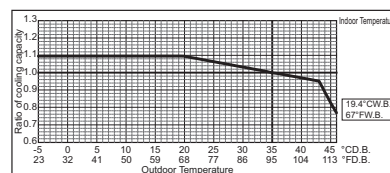


Fig.2 Outdoor unit temperature correction
To be used to correct outdoor unit only

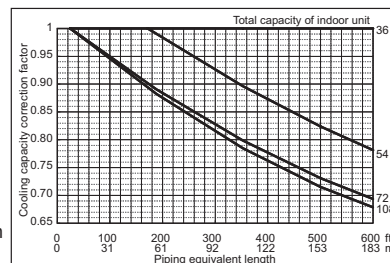


Fig.3 Correction of refrigerant piping length

7. CAPACITY TABLES

<Heating>

Design Condition	
Outdoor Design Wet Bulb Temperature	-3 °C
Total Heating Load	18 kW
Room1	
Indoor Design Dry Bulb Temperature	23 °C
Heating Load	8.5 kW
Room2	
Indoor Design Dry Bulb Temperature	24 °C
Heating Load	9.5 kW
<Other>	
Indoor/Outdoor Equivalent Piping Length	50 m

2. Heating Calculation

(1) Temporary Selection of Indoor Units

Room1	
PEFY-P30	10 kW (Rated)
Room2	
PEFY-P36	11.7 kW (Rated)

(2) Total Indoor Units Capacity

$$P30 + P36 = P66$$

(3) Selection of Outdoor Unit

The HP72 outdoor unit is selected as total indoor units capacity is P66

$$PUHY-HP72 \quad 23.4 \text{ kW}$$

(4) Total Indoor Units Capacity Correction Calculation

Room1	
Indoor Design Dry Bulb Temperature Correction (23°C)	0.90 (Refer to Fig.4)
Room2	
Indoor Design Dry Bulb Temperature Correction (24°C)	0.86 (Refer to Fig.4)

Total Indoor Units Capacity (CTi)

$$\begin{aligned} CTi &= \Sigma (\text{Indoor Unit Rating} \times \text{Indoor Design Temperature Correction}) \\ &= 10.0 \times 0.90 + 11.7 \times 0.86 \\ &= 19.1 \text{ kW} \end{aligned}$$

(5) Outdoor Unit Correction Calculation

Outdoor Design Wet Bulb Temperature Correction (-3°C)	0.98 (Refer to Fig.5)
Piping Length Correction (50 m)	0.97 (Refer to Fig.6)
Defrost Correction	0.89 (Refer to Tbl.1)

Total Outdoor Unit Capacity (CTo)

$$\begin{aligned} CTo &= \text{Outdoor Unit Rating} \times \text{Outdoor Design Temperature Correction} \times \text{Piping Length} \\ &\quad \text{Correction} \times \text{Defrost Correction} \\ &= 23.4 \times 0.98 \times 0.97 \times 0.89 \\ &= 19.7 \text{ kW} \end{aligned}$$

(6) Determination of Maximum System Capacity (CTx)

Comparison of Capacity between Total Indoor Units Capacity (CTi) and Total Outdoor Unit Capacity (CTo)

$$CTi = 19.1 < CTo = 19.7, \text{ thus, select } CTi.$$

$$CTx = CTi = 19.1 \text{ kW}$$

(7) Comparison with Essential Load

Against the essential load 18.0kW, the maximum system capacity is 19.1kW: Proper outdoor units have been selected.

(8) Calculation of Maximum Indoor Unit Capacity of Each Room

CTx = CTi, thus, calculate by the calculation below

Room1	
Indoor Unit Rating × Indoor Design Temperature Correction	
= 10.0 × 0.90	
= 9.0 kW	OK: fulfills the load 8.5kW

Room2	
Indoor Unit Rating × Indoor Design Temperature Correction	
= 11.7 × 0.86	
= 10.1 kW	OK: fulfills the load 9.5kW

Completed selecting units since the selected units fulfill the heating loads of Room 1, 2.

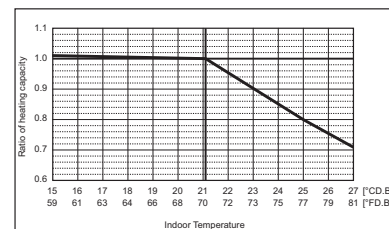


Fig.4 Indoor unit temperature correction
To be used to correct indoor unit only

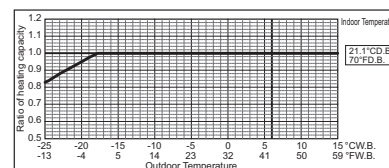


Fig.5 Outdoor unit temperature correction
To be used to correct outdoor unit only

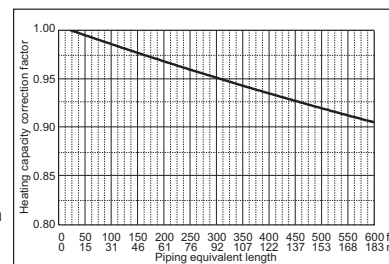


Fig.6 Correction of refrigerant piping length

Tbl.1 Table of correction factor at frost and defrost

Outdoor inlet air temp. °C	6	4	2	1	0	-2	-4	-6	-8	-10	-20
Outdoor inlet air temp. °F	43	39	36	34	32	28	25	21	18	14	-4
PURY-HP72	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP96	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP144	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95
PURY-HP192	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95

7. CAPACITY TABLES

<Cooling>

Design Condition	
Outdoor Design Dry Bulb Temperature	109 °F
Total Cooling Load	60,000 BTU/h
Room1	
Indoor Design Dry Bulb Temperature	81 °F
Indoor Design Wet Bulb Temperature	68 °F
Cooling Load	27,000 BTU/h
Room2	
Indoor Design Dry Bulb Temperature	75 °F
Indoor Design Wet Bulb Temperature	63 °F
Cooling Load	32,000 BTU/h
<Other>	
Indoor/Outdoor Equivalent Piping Length	164 ft.

1. Cooling Calculation

(1) Temporary Selection of Indoor Units

Room1	
PEFY-P30	30,000 BTU/h (Rated)
Room2	
PEFY-P36	36,000 BTU/h (Rated)

(2) Total Indoor Units Capacity

$$P30 + P36 = P66$$

(3) Selection of Outdoor Unit

The HP72 outdoor unit is selected as total indoor units capacity is P66

PUHY-HP72	72,000 BTU/h
-----------	--------------

(4) Total Indoor Units Capacity Correction Calculation

Room1	
Indoor Design Wet Bulb Temperature Correction (68°F)	1.03 (Refer to Fig.1)
Room2	
Indoor Design Wet Bulb Temperature Correction (63°F)	0.95 (Refer to Fig.1)

Total Indoor Units Capacity (CTi)

$$\begin{aligned}
 CTi &= \Sigma (\text{Indoor Unit Rating} \times \text{Indoor Design Temperature Correction}) \\
 &= 30,000 \times 1.03 + 36,000 \times 0.95 \\
 &= 65,000 \text{ BTU/h}
 \end{aligned}$$

(5) Outdoor Unit Correction Calculation

Outdoor Design Dry Bulb Temperature Correction (109°F)	0.94 (Refer to Fig.2)
Piping Length Correction (164 ft.)	0.94 (Refer to Fig.3)

Total Outdoor Unit Capacity (CTo)

$$\begin{aligned}
 CTo &= \text{Outdoor Rating} \times \text{Outdoor Design Temperature Correction} \times \text{Piping Length Correction} \\
 &= 72,000 \times 0.94 \times 0.94 \\
 &= 63,000 \text{ BTU/h}
 \end{aligned}$$

(6) Determination of Maximum System Capacity (CTx)

Comparison of Capacity between Total Indoor Units Capacity (CTi) and Total Outdoor Unit Capacity (CTo)

$$CTi = 65,000 > CTo = 63,000, \text{ thus, select } CTo.$$

$$CTx = CTo = 63,000 \text{ BTU/h}$$

(7) Comparison with Essential Load

Against the essential load 60,000BTU/h, the maximum system capacity is 63,000BTU/h: Proper outdoor units have been selected.

(8) Calculation of Maximum Indoor Unit Capacity of Each Room

$$CTx = CTo, \text{ thus, calculate by the calculation below}$$

Room1

$$\begin{aligned}
 &\text{Maximum Capacity} \times \text{Room1 Capacity after the Temperature Correction} / (\text{Room1,2 Total Capacity after the Temperature Correction}) \\
 &= 63,000 \times (30,000 \times 1.03) / (30,000 \times 1.03 + 36,000 \times 0.95) \\
 &= 30,000 \text{ BTU/h} \quad \text{OK: fulfills the load 27,000BTU/h}
 \end{aligned}$$

Room2

$$\begin{aligned}
 &\text{Maximum Capacity} \times \text{Room2 Capacity after the Temperature Correction} / (\text{Room1,2 Total Capacity after the Temperature Correction}) \\
 &= 63,000 \times (36,000 \times 0.95) / (30,000 \times 1.03 + 36,000 \times 0.95) \\
 &= 33,000 \text{ BTU/h} \quad \text{OK: fulfills the load 32,000BTU/h}
 \end{aligned}$$

Go on to the heating trial calculation since the selected units fulfill the cooling loads of Room 1, 2.

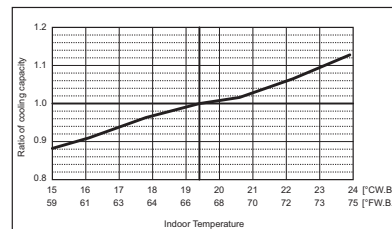


Fig.1 Indoor unit temperature correction
To be used to correct indoor unit only

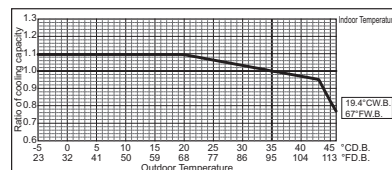


Fig.2 Outdoor unit temperature correction
To be used to correct outdoor unit only

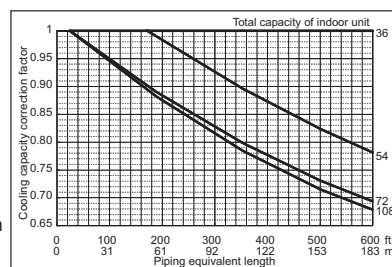


Fig.3 Correction of refrigerant piping length

7. CAPACITY TABLES

<Heating>

Design Condition	
Outdoor Design Wet Bulb Temperature	27 °F
Total Heating Load	61,000 BTU/h
Room1	
Indoor Design Dry Bulb Temperature	73 °F
Heating Load	29,000 BTU/h
Room2	
Indoor Design Dry Bulb Temperature	75 °F
Heating Load	32,000 BTU/h
<Other>	
Indoor/Outdoor Equivalent Piping Length	164 ft.

2. Heating Calculation

(1) Temporary Selection of Indoor Units

Room1	
PEFY-P30	34,000 BTU/h (Rated)
Room2	
PEFY-P36	40,000 BTU/h (Rated)

(2) Total Indoor Units Capacity

$$P30 + P36 = P66$$

(3) Selection of Outdoor Unit

The HP72 outdoor unit is selected as total indoor units capacity is P66

PUHY-HP72	80,000 BTU/h
-----------	--------------

(4) Total Indoor Units Capacity Correction Calculation

Room1	
Indoor Design Dry Bulb Temperature Correction (73°F)	0.90 (Refer to Fig.4)
Room2	
Indoor Design Dry Bulb Temperature Correction (75°F)	0.86 (Refer to Fig.4)

Total Indoor Units Capacity (CTi)

$$\begin{aligned}
 CT_i &= \sum (\text{Indoor Unit Rating} \times \text{Indoor Design Temperature Correction}) \\
 &= 34,000 \times 0.90 + 40,000 \times 0.86 \\
 &= 65,000 \text{ BTU/h}
 \end{aligned}$$

(5) Outdoor Unit Correction Calculation

Outdoor Design Wet Bulb Temperature Correction (27°F)	0.98 (Refer to Fig.5)
Piping Length Correction (164 ft.)	0.97 (Refer to Fig.6)
Defrost Correction	0.89 (Refer to Tbl.1)

Total Outdoor Unit Capacity (CTo)

$$\begin{aligned}
 CTo &= \text{Outdoor Unit Rating} \times \text{Outdoor Design Temperature Correction} \times \text{Piping Length} \\
 &\quad \text{Correction} \times \text{Defrost Correction} \\
 &= 80,000 \times 0.98 \times 0.97 \times 0.89 \\
 &= 67,000 \text{ BTU/h}
 \end{aligned}$$

(6) Determination of Maximum System Capacity (CTx)

Comparison of Capacity between Total Indoor Units Capacity (CTi) and Total Outdoor Unit Capacity (CTo)

$$CT_i = 65,000 < CTo = 67,000, \text{ thus, select } CT_i.$$

$$CT_x = CT_i = 65,000 \text{ BTU/h}$$

(7) Comparison with Essential Load

Against the essential load 61,000BTU/h, the maximum system capacity is 65,000BTU/h: Proper outdoor units have been selected.

(8) Calculation of Maximum Indoor Unit Capacity of Each Room

CTx = CTi, thus, calculate by the calculation below

Room1	
Indoor Unit Rating × Indoor Design Temperature Correction	
= 34,000 × 0.90	
= 31,000 BTU/h	OK: fulfills the load 29,000BTU/h

Room2

$$\begin{aligned}
 &\text{Indoor Unit Rating} \times \text{Indoor Design Temperature Correction} \\
 &= 40,000 \times 0.86 \\
 &= 34,000 \text{ BTU/h} \quad \text{OK: fulfills the load 32,000BTU/h}
 \end{aligned}$$

Completed selecting units since the selected units fulfill the heating loads of Room 1, 2.

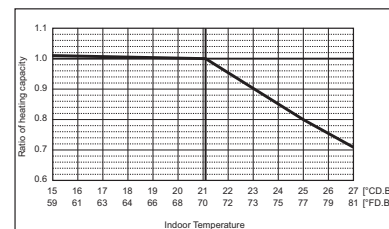


Fig.4 Indoor unit temperature correction
To be used to correct indoor unit only

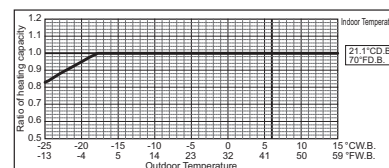


Fig.5 Outdoor unit temperature correction
To be used to correct outdoor unit only

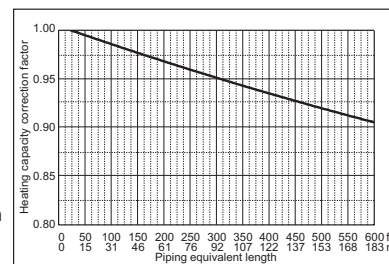


Fig.6 Correction of refrigerant piping length

Tbl.1 Table of correction factor at frost and defrost

Outdoor inlet air temp. °C	6	4	2	1	0	-2	-4	-6	-8	-10	-20
Outdoor inlet air temp. °F	43	39	36	34	32	28	25	21	18	14	-4
PURY-HP72	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP96	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP144	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95
PURY-HP192	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95

7. CAPACITY TABLES

7-2. Correction by Temperature (Standard Performance)

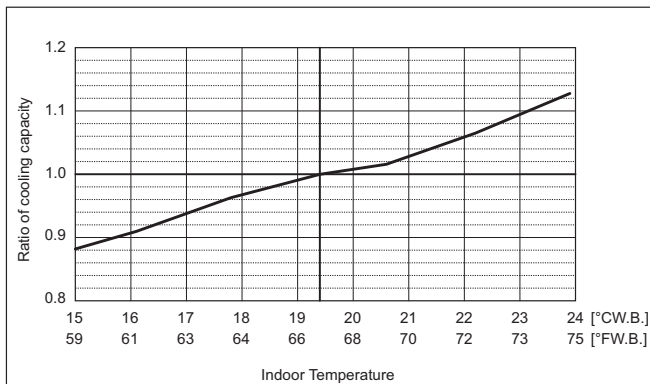
CITY MULTI could have various capacities at different design temperatures. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperatures.

PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000		96,000	
	kW	21.1		28.1	
	Input kW	5.08		7.66	
Rated cooling capacity	BTU/h	69,000		92,000	
	kW	20.2		27.0	
	Input kW	4.95	4.45	6.84	7.34

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000		192,000	
	kW	42.2		56.3	
	Input kW	10.85		15.86	
Rated cooling capacity	BTU/h	137,000		183,000	
	kW	40.2		53.6	
	Input kW	10.23	9.86	14.36	15.01

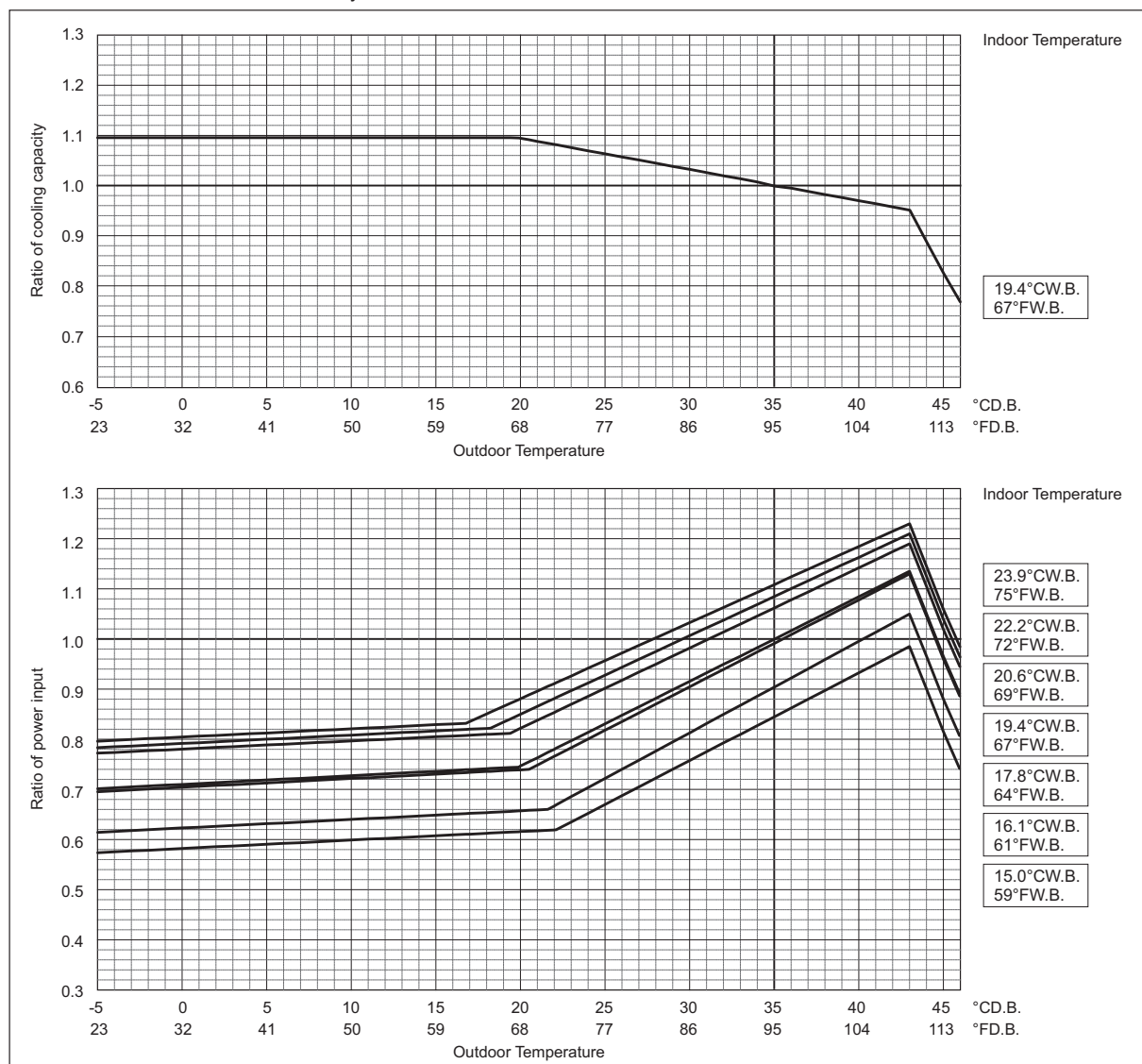
Indoor unit temperature correction

To be used to correct indoor unit capacity only



Outdoor unit temperature correction

To be used to correct outdoor unit only



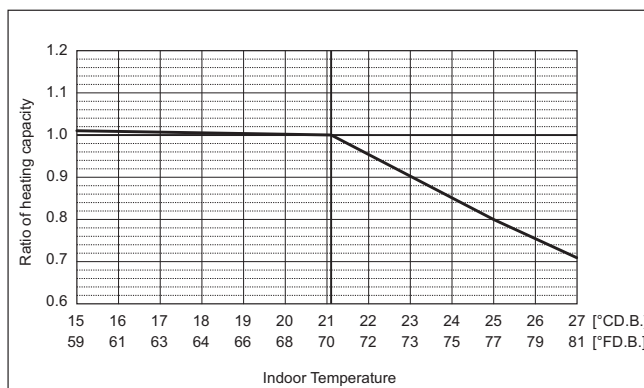
Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

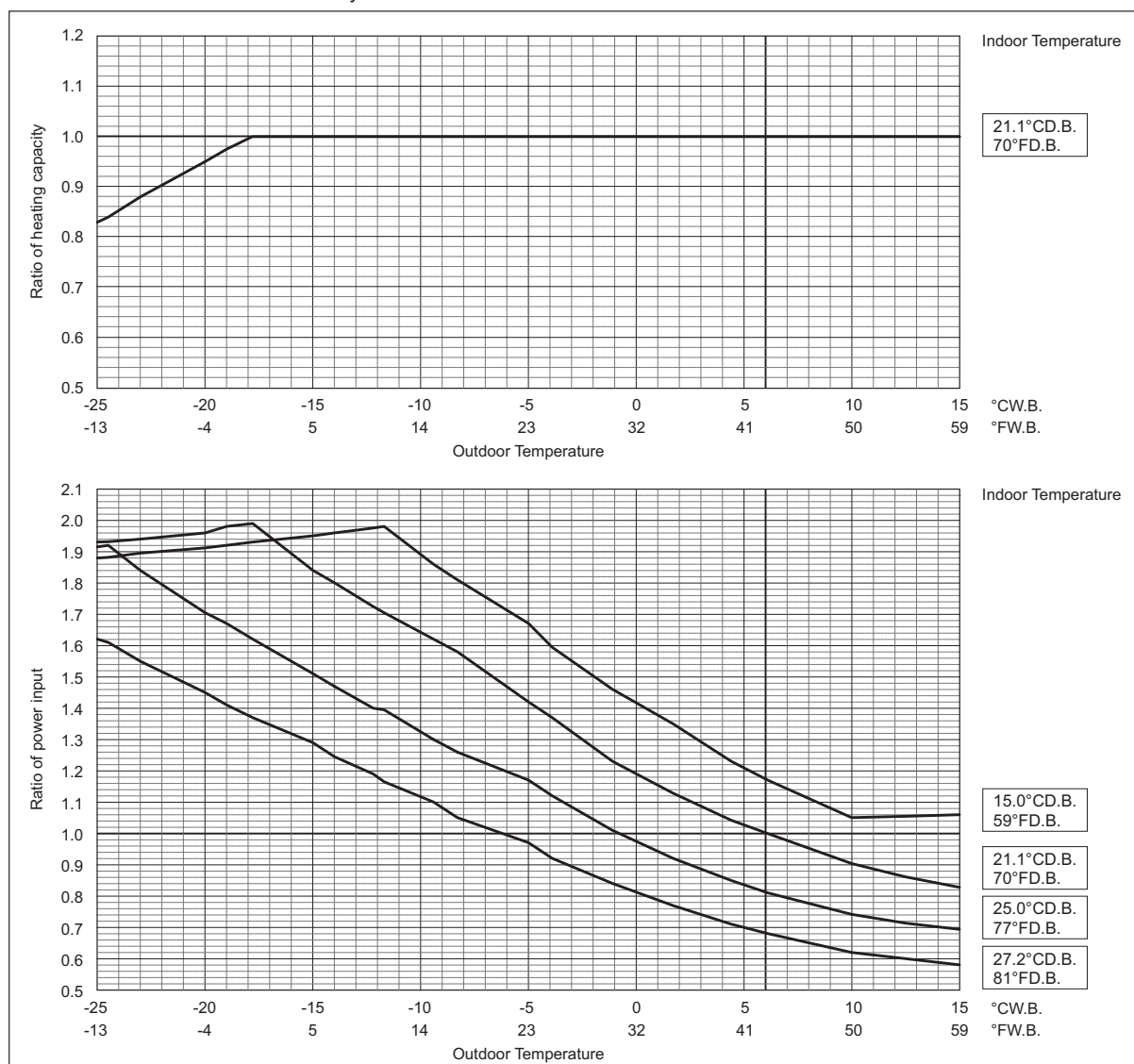
PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000		108,000	
	kW	23.4		31.7	
Rated Heating capacity	BTU/h	76,000		103,000	
	kW	22.3		30.2	
Input	kW	5.98	5.60	8.33	8.10

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000		215,000	
	kW	46.9		63.0	
Rated Heating capacity	BTU/h	152,000		205,000	
	kW	44.5		60.1	
Input	kW	12.50	11.87	17.44	16.84

Indoor unit temperature correction To be used to correct indoor unit capacity only



Outdoor unit temperature correction To be used to correct outdoor unit only



Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

7-3. 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.

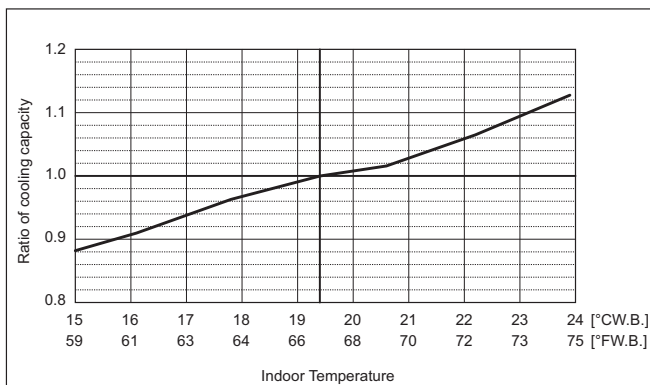
To select high-heating performance operation, DipSW3-7 must be set to ON and DipSW 4-10 must be set to OFF. At low ambient temperatures, heating capacity and power input become higher than those seen in standard operation.

PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000		96,000	
	kW	21.1		28.1	
	Input kW	5.08		7.66	
Rated cooling capacity	BTU/h	69,000		92,000	
	kW	20.2		27.0	
	Input kW	4.95	4.45	6.84	7.34

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000		192,000	
	kW	42.2		56.3	
	Input kW	10.85		15.86	
Rated cooling capacity	BTU/h	137,000		183,000	
	kW	40.2		53.6	
	Input kW	10.23	9.86	14.36	15.01

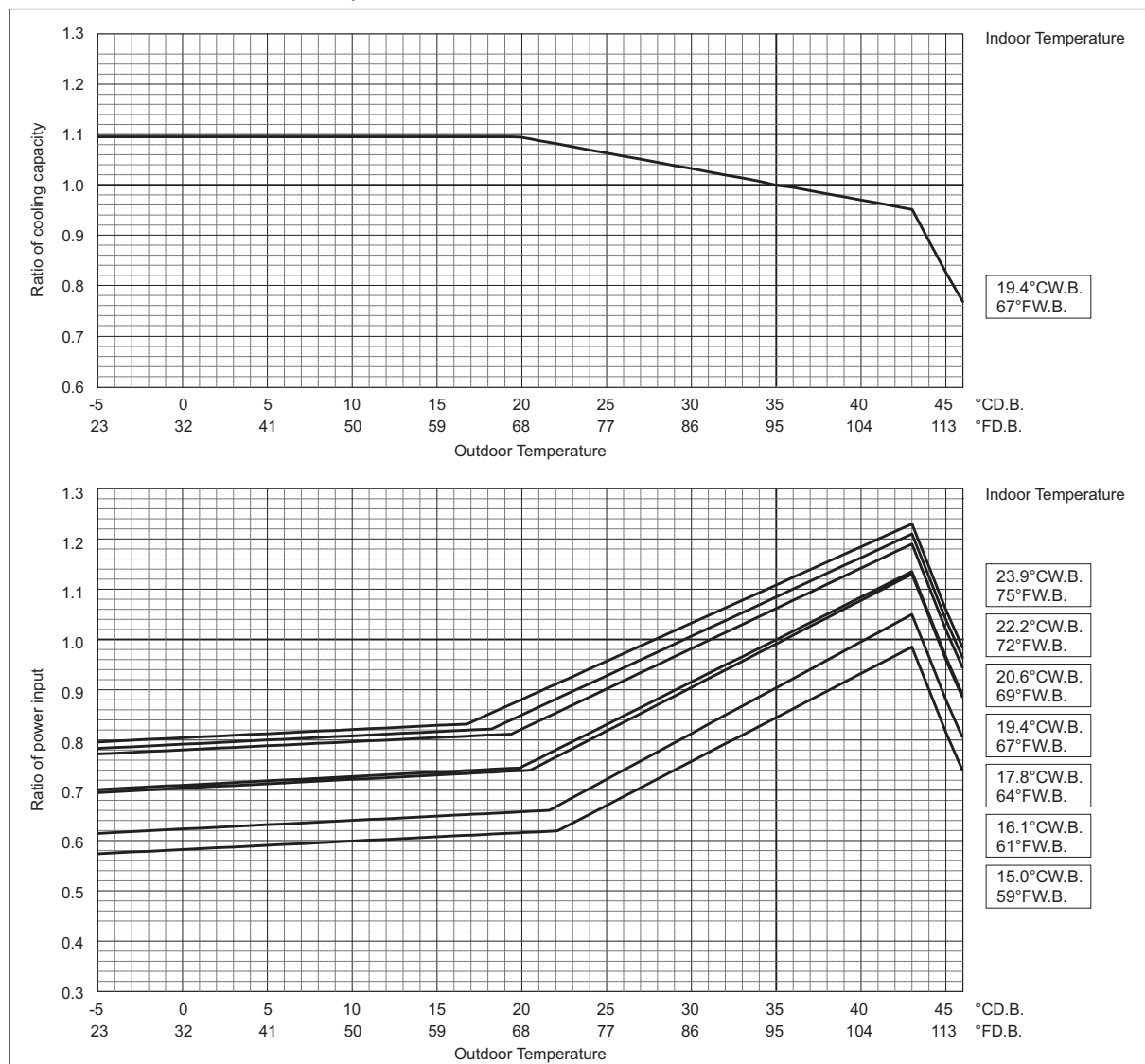
Indoor unit temperature correction

To be used to correct indoor unit capacity only



Outdoor unit temperature correction

To be used to correct outdoor unit only



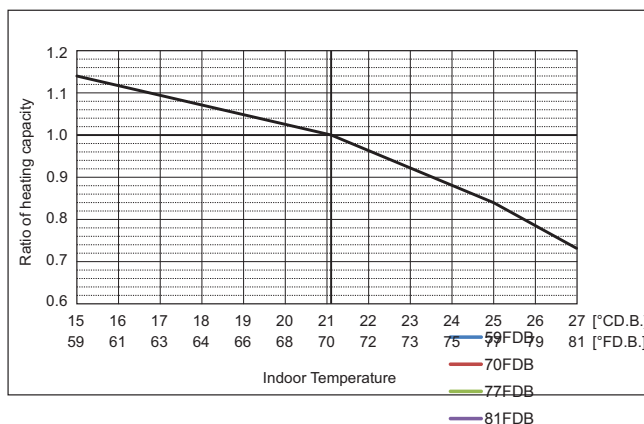
Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

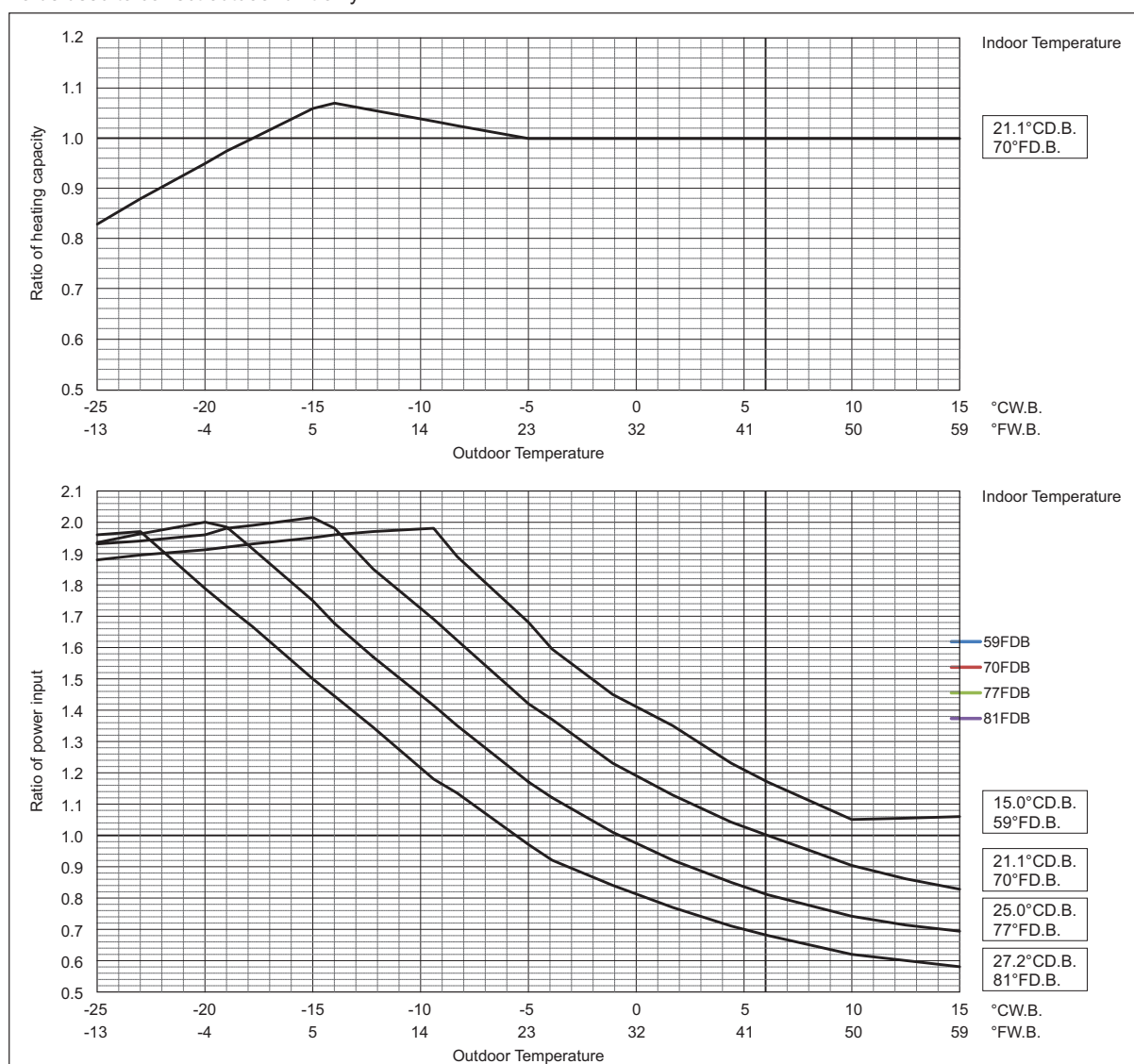
PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000		108,000	
	kW	23.4		31.7	
Rated Heating capacity	BTU/h	76,000		103,000	
	kW	22.3		30.2	
Input	kW	5.98	5.60	8.33	8.10

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000		215,000	
	kW	46.9		63.0	
Rated Heating capacity	BTU/h	152,000		205,000	
	kW	44.5		60.1	
Input	kW	12.50	11.87	17.44	16.84

Indoor unit temperature correction To be used to correct indoor unit capacity only



Outdoor unit temperature correction To be used to correct outdoor unit only



Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

7-4. Correction by Temperature (Intelligent Heat Performance)

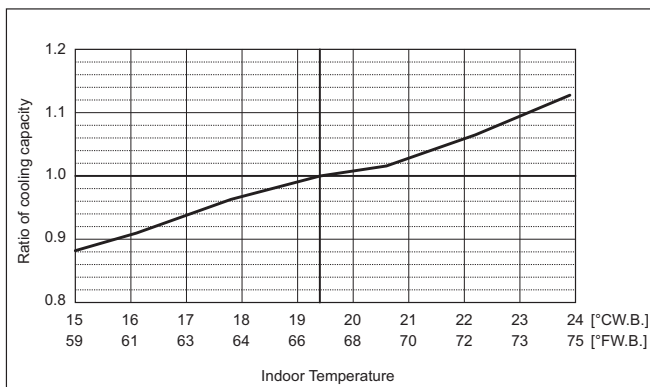
CITY MULTI could have various capacities at different design temperatures. Using the nominal cooling/heating capacity value and the ratio below, the capacity can be observed at various temperatures.

PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000		96,000	
	kW	21.1		28.1	
	Input kW	5.08		7.66	
Rated cooling capacity	BTU/h	69,000		92,000	
	kW	20.2		27.0	
	Input kW	4.95	4.45	6.84	7.34

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000		192,000	
	kW	42.2		56.3	
	Input kW	10.85		15.86	
Rated cooling capacity	BTU/h	137,000		183,000	
	kW	40.2		53.6	
	Input kW	10.23	9.86	14.36	15.01

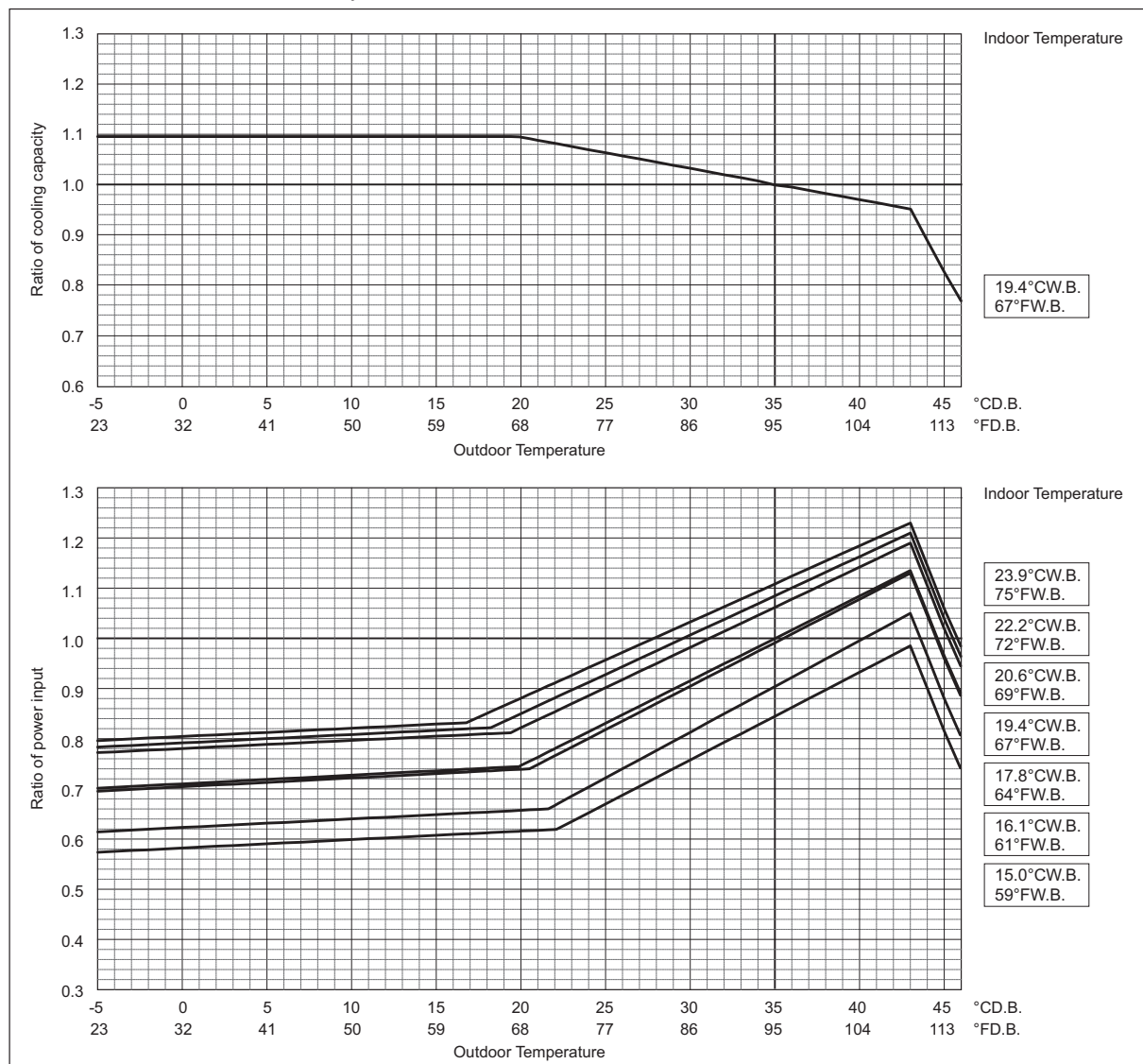
Indoor unit temperature correction

To be used to correct indoor unit capacity only



Outdoor unit temperature correction

To be used to correct outdoor unit only



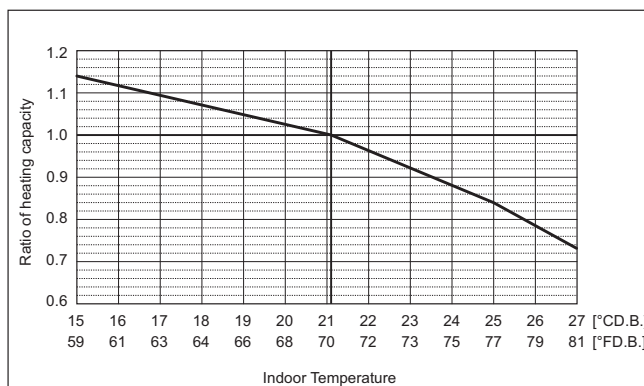
Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

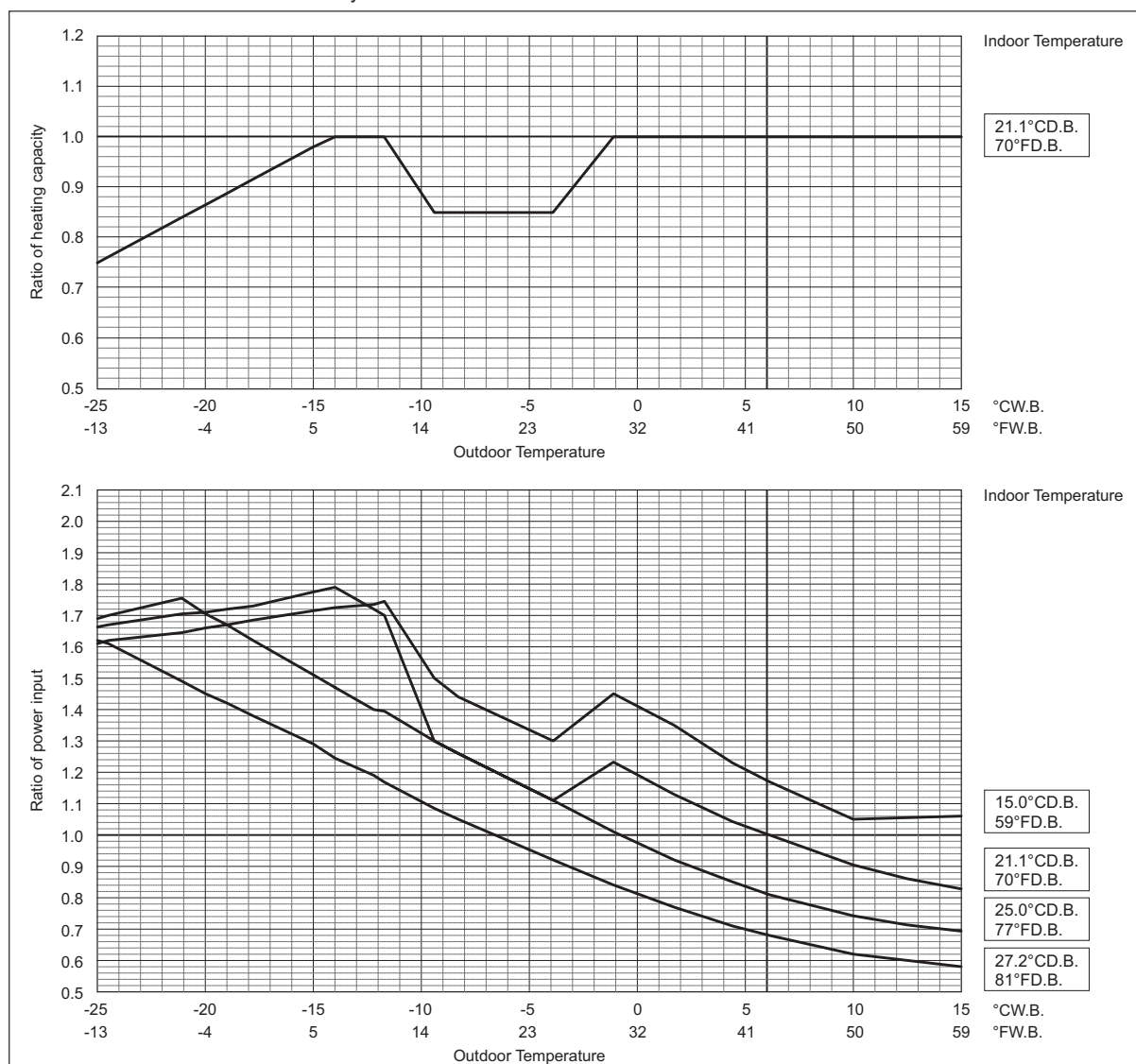
PURY-		HP72TKMU/YKMU		HP96TKMU/YKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000		108,000	
	kW	23.4		31.7	
Rated Heating capacity	BTU/h	76,000		103,000	
	kW	22.3		30.2	
Input	kW	5.98	5.60	8.33	8.10

PURY-		HP144TSKMU/YSKMU		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted	Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000		215,000	
	kW	46.9		63.0	
Rated Heating capacity	BTU/h	152,000		205,000	
	kW	44.5		60.1	
Input	kW	12.50	11.87	17.44	16.84

Indoor unit temperature correction To be used to correct indoor unit capacity only



Outdoor unit temperature correction To be used to correct outdoor unit only



Outdoor unit power input is affected by the indoor and outdoor temperatures as shown in the graph above. Please consult the sales office for details.

7. CAPACITY TABLES

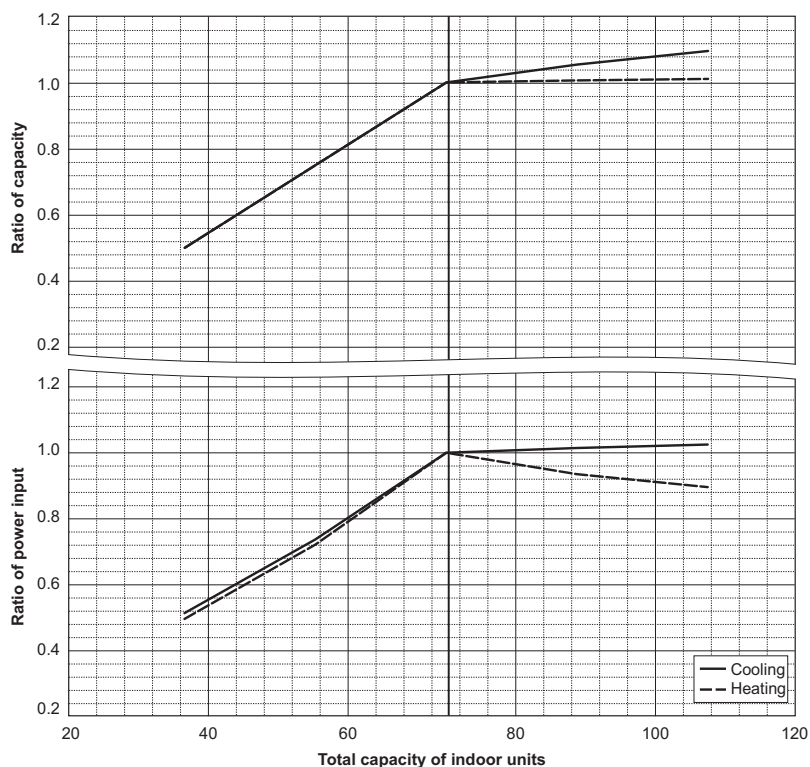
7-5. Correction by Total Indoor

CITY MULTI system have different capacities and inputs when many 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.

PURY-		HP72TKMU/YKMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	72,000	
	kW	21.1	
	Input kW	5.08	
Rated cooling capacity	BTU/h	69,000	
	kW	20.2	
	Input kW	4.95	4.45

PURY-		HP72TKMU/YKMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	80,000	
	kW	23.4	
	Input kW	6.26	
Rated Heating capacity	BTU/h	76,000	
	kW	22.3	
	Input kW	5.98	5.60

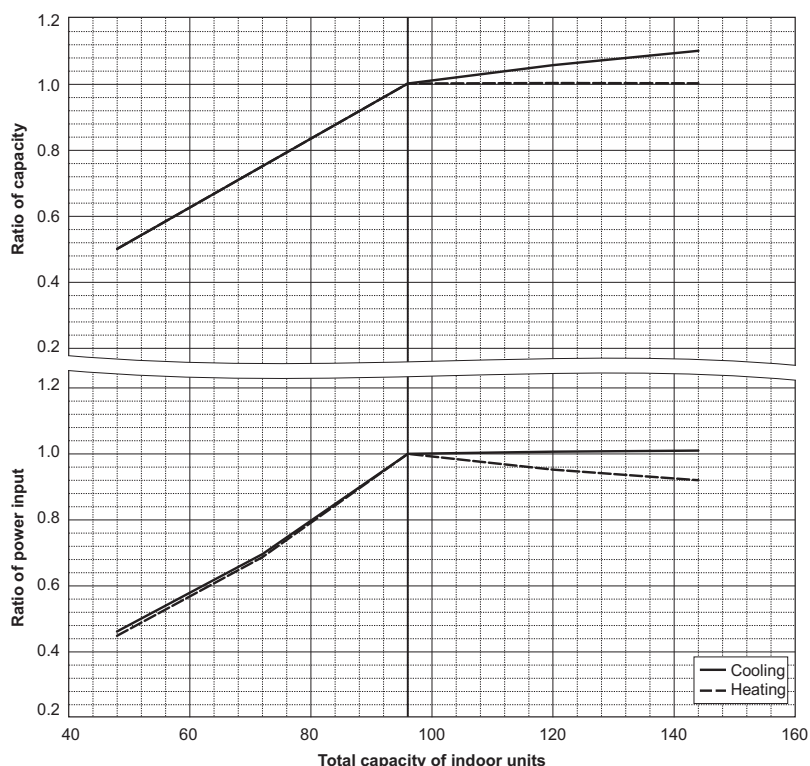
PURY-HP72TKMU/YKMU-A-H



PURY-		HP96TKMU/YKMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	96,000	
	kW	28.1	
	Input kW	7.66	
Rated cooling capacity	BTU/h	92,000	
	kW	27.0	
	Input kW	6.84	7.34

PURY-		HP96TKMU/YKMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	108,000	
	kW	31.7	
	Input kW	8.88	
Rated Heating capacity	BTU/h	103,000	
	kW	30.2	
	Input kW	8.33	8.10

PURY-HP96TKMU/YKMU-A-H

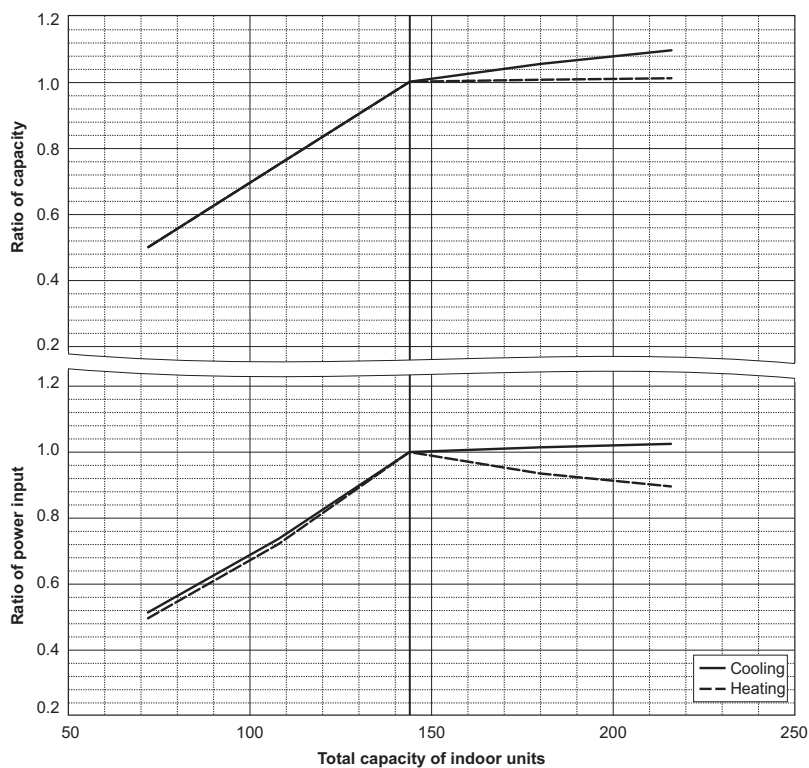


7. CAPACITY TABLES

PURY-		HP144TSKMU/YSKMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	144,000	
	kW	42.2	
	Input kW	10.85	
Rated cooling capacity	BTU/h	137,000	
	kW	40.2	
	Input kW	10.23	9.86

PURY-		HP144TSKMU/YSKMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	160,000	
	kW	46.9	
	Input kW	13.16	
Rated Heating capacity	BTU/h	152,000	
	kW	44.5	
	Input kW	12.50	11.87

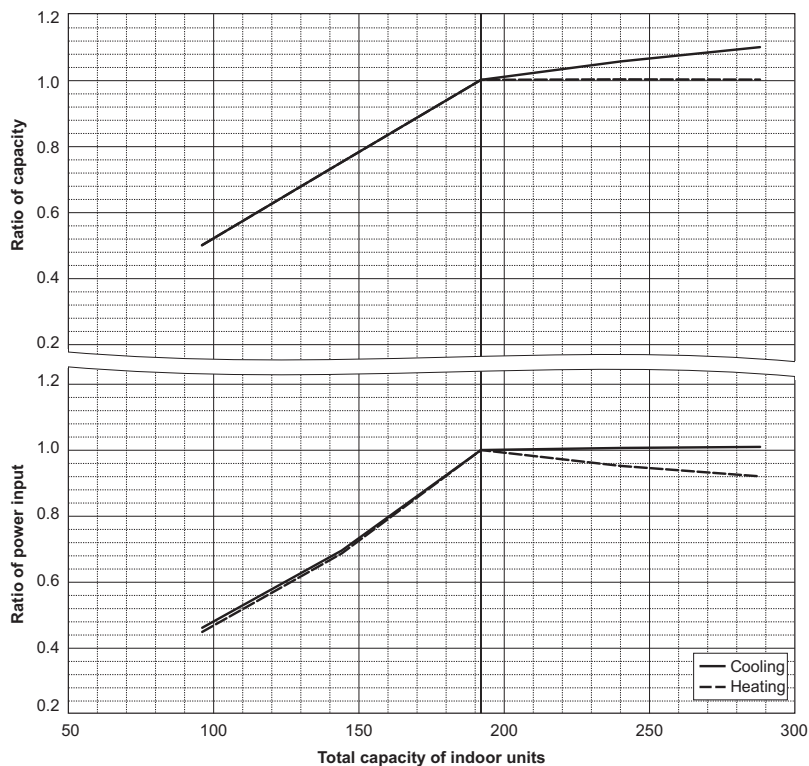
PURY-HP144TSKMU/YSKMU-A-H



PURY-		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted
Nominal cooling capacity	BTU/h	192,000	
	kW	56.3	
	Input kW	15.86	
Rated cooling capacity	BTU/h	183,000	
	kW	53.6	
	Input kW	14.36	15.01

PURY-		HP192TSKMU/YSKMU	
		Non-Ducted	Ducted
Nominal Heating capacity	BTU/h	215,000	
	kW	63.0	
	Input kW	18.52	
Rated Heating capacity	BTU/h	205,000	
	kW	60.1	
	Input kW	17.44	16.84

PURY-HP192TSKMU/YSKMU-A-H

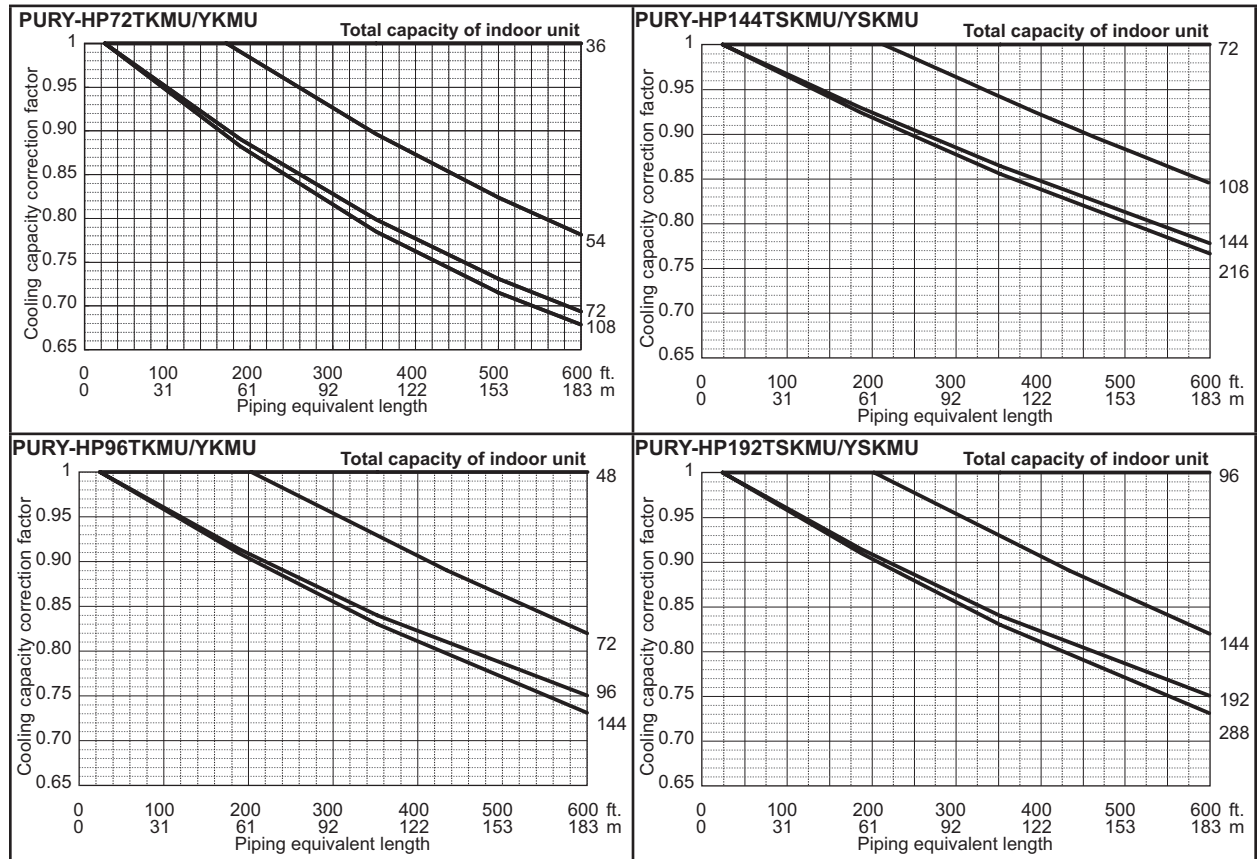


7. CAPACITY TABLES

7-6. Correction by Refrigerant Piping Length

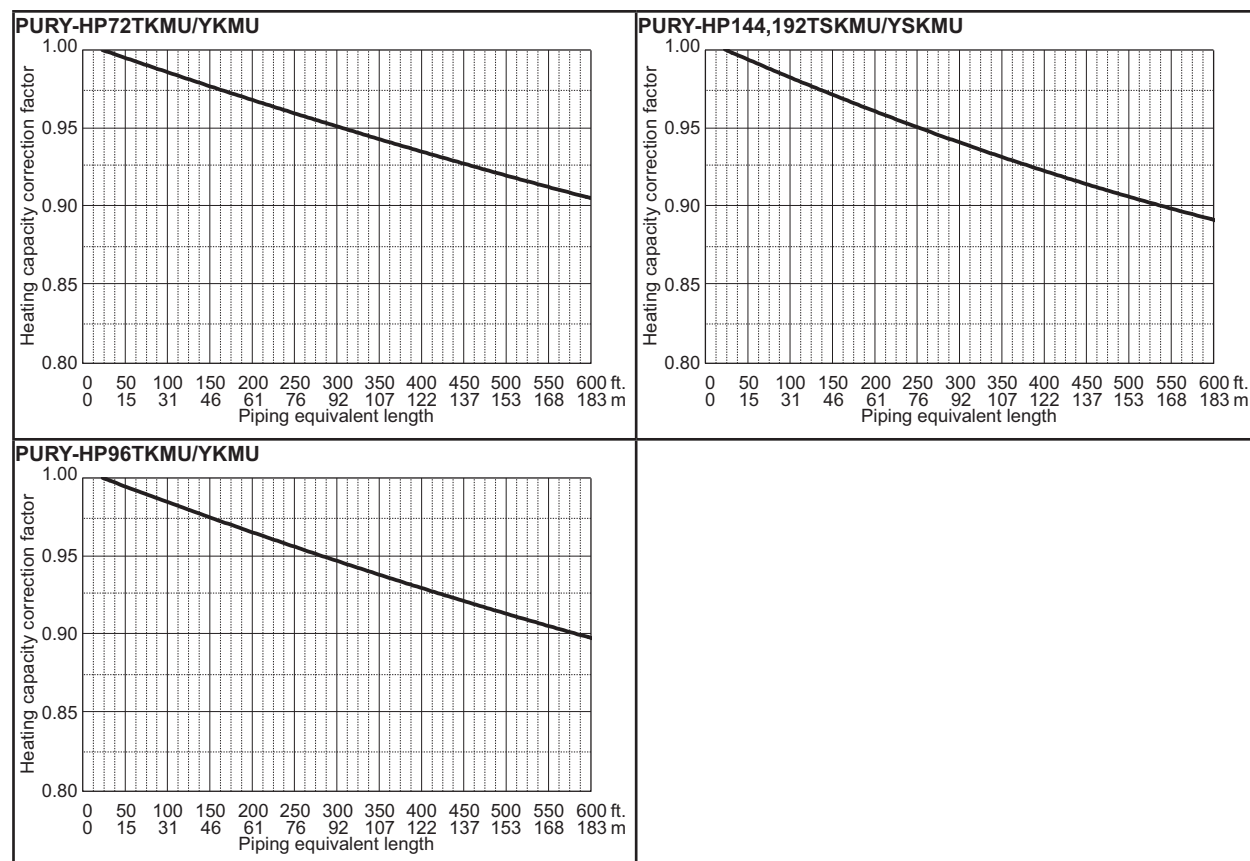
CITY MULTI systems can have extended piping lengths if certain limitations are followed, but cooling/heating capacity could be reduced. Using following correction factor by equivalent piping length shown at 6-2-1 and 6-2-2, capacity can be found. 6-2-3 shows how to obtain the equivalent piping length.

7-6-1. Cooling capacity correction



7. CAPACITY TABLES

7-6-2. Heating capacity correction



7-6-3. How to obtain the equivalent piping length

(1) PURY-HP72TKMU/YKMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.15 x number of bent on the piping) [ft.]
 Equivalent length = (Actual piping length to the farthest indoor unit) + (0.35 x number of bent on the piping) [m]

(2) PURY-HP96TKMU/YKMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.38 x number of bent on the piping) [ft.]
 Equivalent length = (Actual piping length to the farthest indoor unit) + (0.42 x number of bent on the piping) [m]

(3) PURY-HP144TSKMU/YSKMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]
 Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

(4) PURY-HP192TSKMU/YSKMU

Equivalent length = (Actual piping length to the farthest indoor unit) + (1.64 x number of bent on the piping) [ft.]
 Equivalent length = (Actual piping length to the farthest indoor unit) + (0.50 x number of bent on the piping) [m]

7. CAPACITY TABLES

7-7. Correction at Frost and Defrost

Due to frost at the outdoor heat exchanger and the automatic defrost operation, the heating capacity of the outdoor unit can be calculated by multiplying the correction factor shown in the table below.

Table of correction factor at frost and defrost

Outdoor inlet air temp. ° C	6	4	2	1	0	-2	-4	-6	-8	-10	-20
Outdoor inlet air temp. ° F	43	39	36	34	32	28	25	21	18	14	-4
PURY-HP72TKMU-A-H	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP96TKMU-A-H	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP144TSKMU-A-H	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95
PURY-HP192TSKMU-A-H	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95
PURY-HP72YKMU-A-H	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP96YKMU-A-H	1.00	0.95	0.84	0.83	0.83	0.87	0.90	0.93	0.93	0.95	0.95
PURY-HP144YSKMU-A-H	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95
PURY-HP192YSKMU-A-H	1.00	0.98	0.89	0.86	0.88	0.90	0.91	0.92	0.92	0.95	0.95

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

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 above : K_0

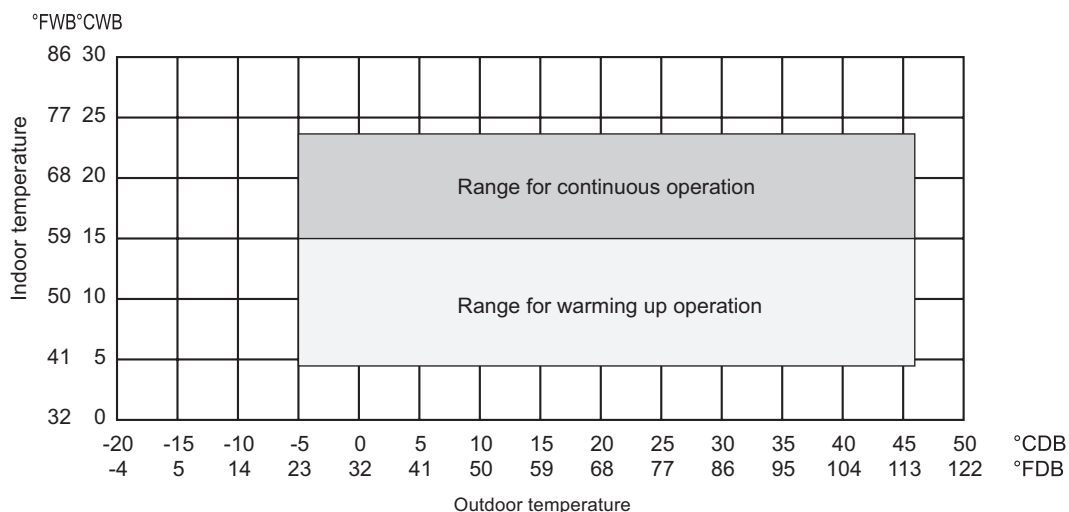
Partial load factor : A

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

7. CAPACITY TABLES

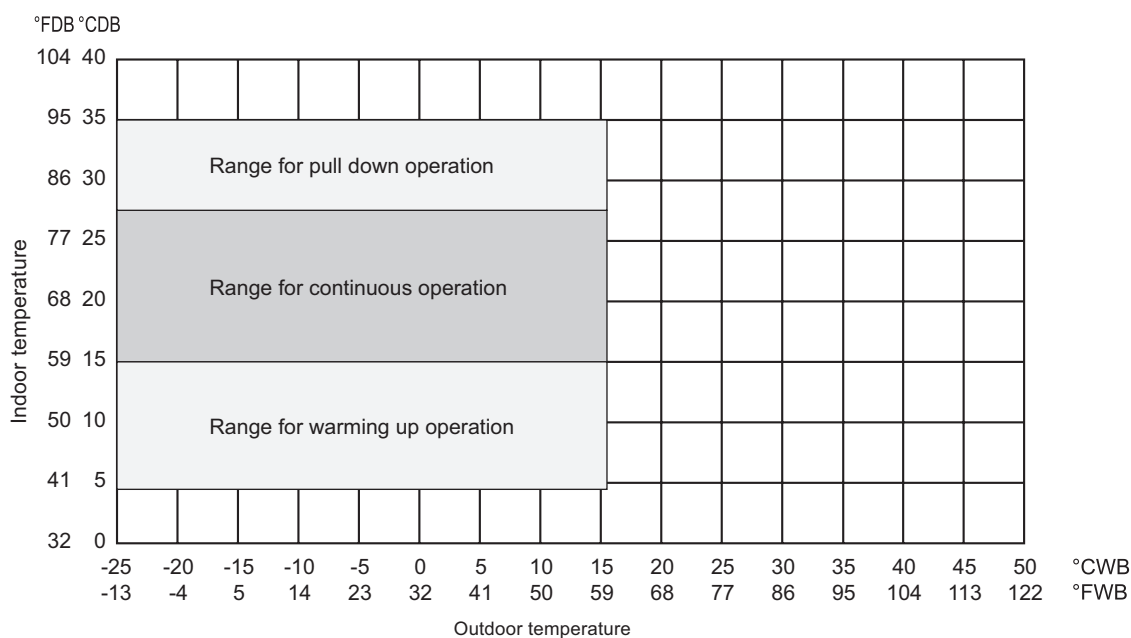
7-8. Operation Temperature Range

• Cooling



* The operation temperature of outdoor unit is limited into 0~43°CDB(32~109°FDB) when the outdoor unit is installed in a location that is positioned lower than the indoor units.

• Heating



Ref.: tr-ygm-y

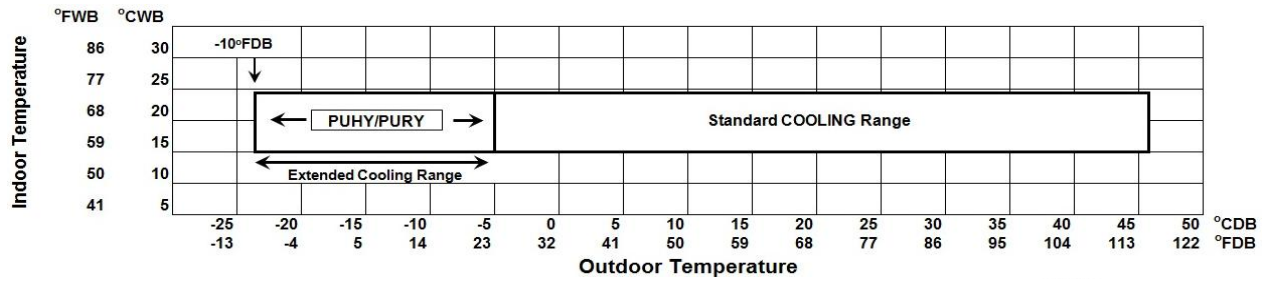
• Combination of cooling/heating operation (Cooling main or Heating main)

Outdoor temperature	Indoor temperature	
	Cooling	Heating
-4 to 70°FDB (-20 to 21°CDB)	—	59 to 81°FDB (15 to 27°CDB)
-5.8 to 60°FDB (-21 to 15.5°CDB)	59 to 75°FDB (15 to 24°CDB)	—

Installation of the low ambient kit is recommended to operate in cooling and cooling main mode in conditions under 50°F [10°C].

7. CAPACITY TABLES

7-9. Extended Cooling Range with Low Ambient Kit



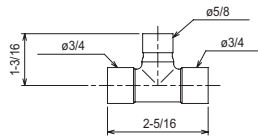
8. OPTIONAL PARTS

8-1. Branch Joints

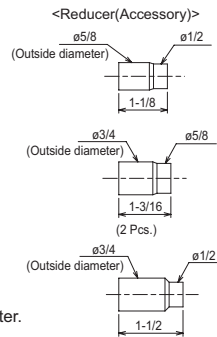
Piping for CITY MULTI systems can be easily performed with branch joints and headers provided by Mitsubishi Electric Corp. For PURY-HP-T(S)KMU/Y(S)KMU, three sets of branch joints are available. Details for installing the branch joint sets are found in the System Design section or in the Branch Joint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

CMY-Y102SS-G2

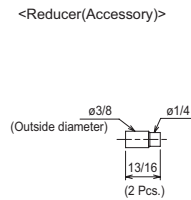
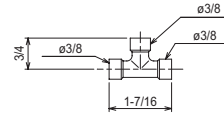
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



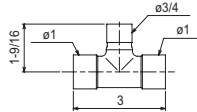
For Liquid pipe:



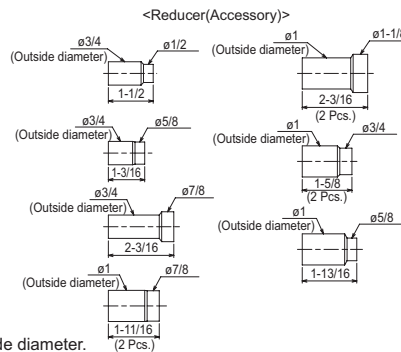
in.

CMY-Y102LS-G2

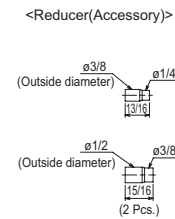
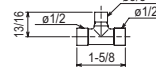
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



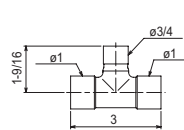
For Liquid pipe:



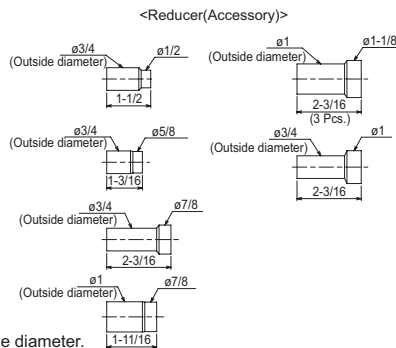
in.

CMY-Y202S-G2

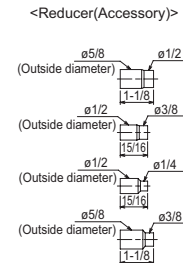
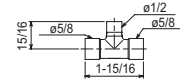
For Gas pipe:



*Pipe diameter is indicated by inside diameter.



For Liquid pipe:

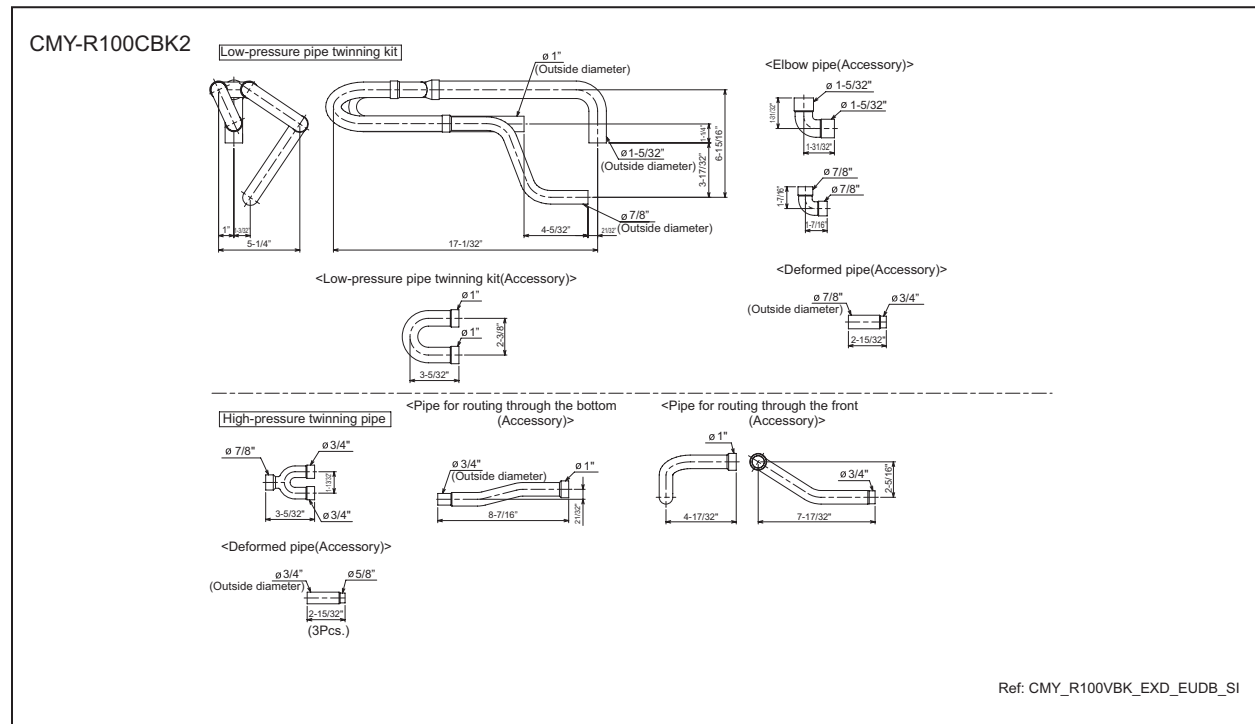


in.

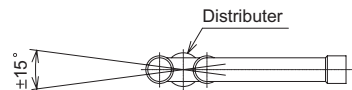
8. OPTIONAL PARTS

8-2. Twinning Kit

Twinning kit is needed to combine the refrigerant flows of the PURY-HP-TKMU/YKMU units for the combined PURY-HP-TSKMU/YSKMU systems.



Note 1. Reference the attitude angle of the branch pipe below the fig.



The angle of the branch pipe for high pressure is within $\pm 15^\circ$ against the horizontal plane.

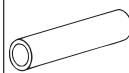
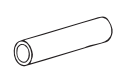
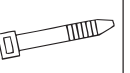
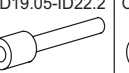
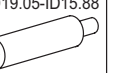
2. Use the attached pipe to braze the port-opening of the distributor.
3. Pipe diameter is indicated by inside diameter.
4. Only use the Twinning pipe by Mitsubishi (optional parts).

8. OPTIONAL PARTS

8-3. Joint Adapter Kit

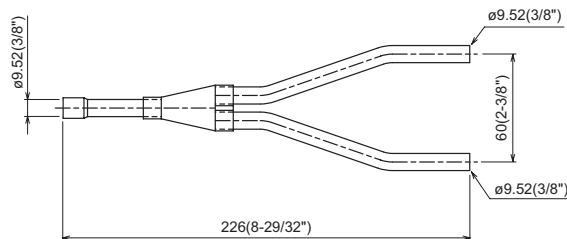
Joint kit "CMY-R160-J1" for BC controller is used to combine 2 ports of the BC controller at a PURY/PQRY system so as to enable down-stream Indoor capacity above P54 as shown in Fig. 1.

The Joint kit include following items:

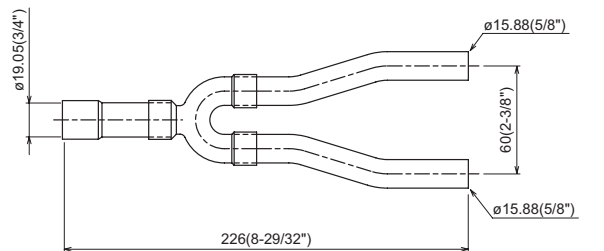
① Instruction	② Joint pipe (Small)	③ Joint pipe (Large)	④ Cover 1	⑤ Cover 2	⑥ Cover 3	⑦ Band	⑧ Reducer 1	⑨ Reducer 2
 This sheet 1pc	 1pc	 1pc	 2pcs	 1pc for gas side	 1pc for liquid side	 8pcs	 OD19.05-ID22.2 1pc	 OD19.05-ID15.88 1pc

Please prepare the following items in the field. ① Tape for insulation material sealing ② Extension pipe for refrigerant circuit

② Joint pipe (for liquid side)



③ Joint pipe (for gas side)



mm (in.)

1. Designing CMY-R160-J1 to a PURY/PQRY system

The maximum down-stream Indoor capacity for 1 port of BC controller is P54. When the down-stream Indoor capacity is above P54, Joint kit CMY-R160-J1 is needed to combined 2 ports of BC controller to enlarge the capacity, like Group 2 and 3 in Fig. 1.

Maximum 3 Indoor units are allowed to connect to 1 port of BC controller or 2 combined ports of BC controller using CMY-R160-J1.

When connecting Indoor units to 1 port of BC controller or 2 combined ports of BC controller using CMY-R160-J1 or CMY-Y102SS-G2 is applicable, like Group 1 and 2 in Fig. 1

Caution: Mixed cooling and heating mode at the same time for Indoor units connecting to 1 port or 2 combined ports is not available.

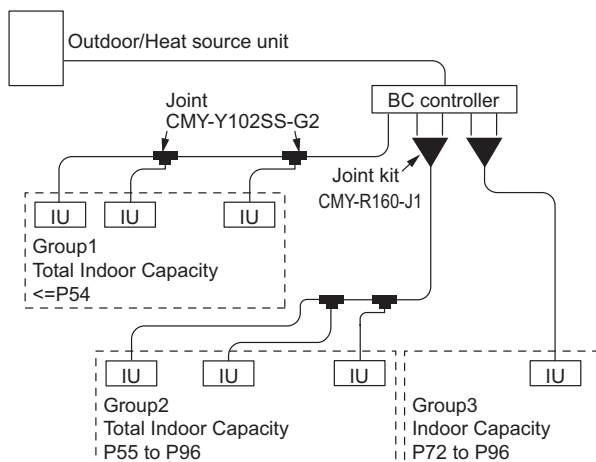


Fig.1. CMY-R160-J1 applying scheme

2. Piping at the installation site

The connection of CMY-R160-J1 to BC controller and pipe leading to Indoor units is referable to Fig. 2. Non-oxidized brazing is necessary. All piping must be careful to avoid foreign material getting inside.

After piping and air-tight testing, insulation work to the Joint and pipe should be done. Details is available at the Installation Manual.

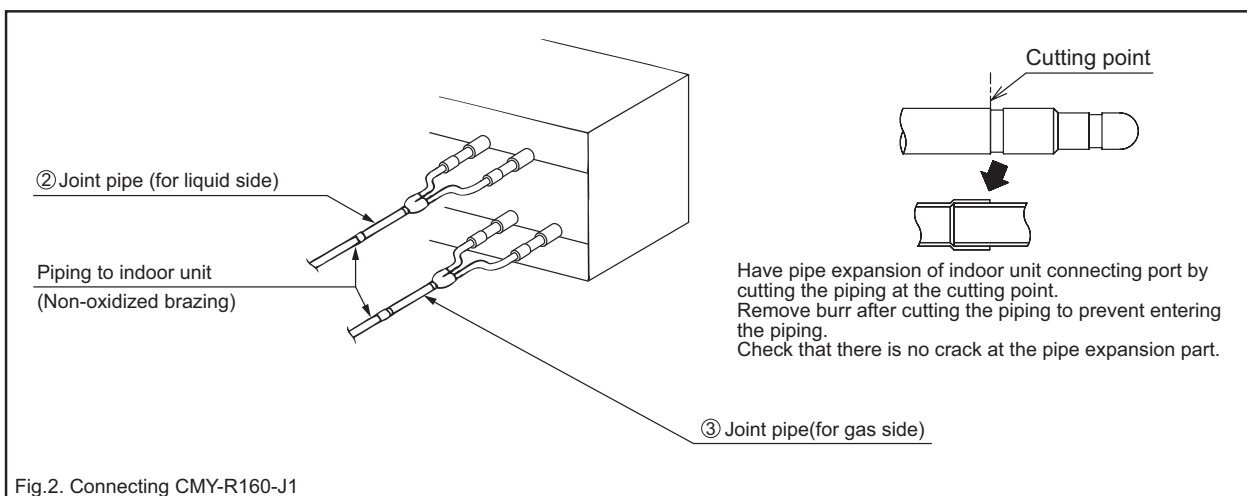


Fig.2. Connecting CMY-R160-J1

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.

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

PURY R2-Series Outdoor Units - Down to -10° F DB (-23° 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 need to cover the two outside module coil surfaces.

PURY-HP-T(S)KMU-A-H Series

Unit model	Module Size			Component Quantity				
	S	L	XL	LAHK-1	LAHK-2	SWDK-1	RWDK-1	RWDK-2
PURY-HP72TKMU-A-H		1		1		1		1
PURY-HP96TKMU-A-H		1		1		1		1
PURY-HP144TSKMU-A-H		2		2		1		2
PURY-HP192TSKMU-A-H		2		2		1		2

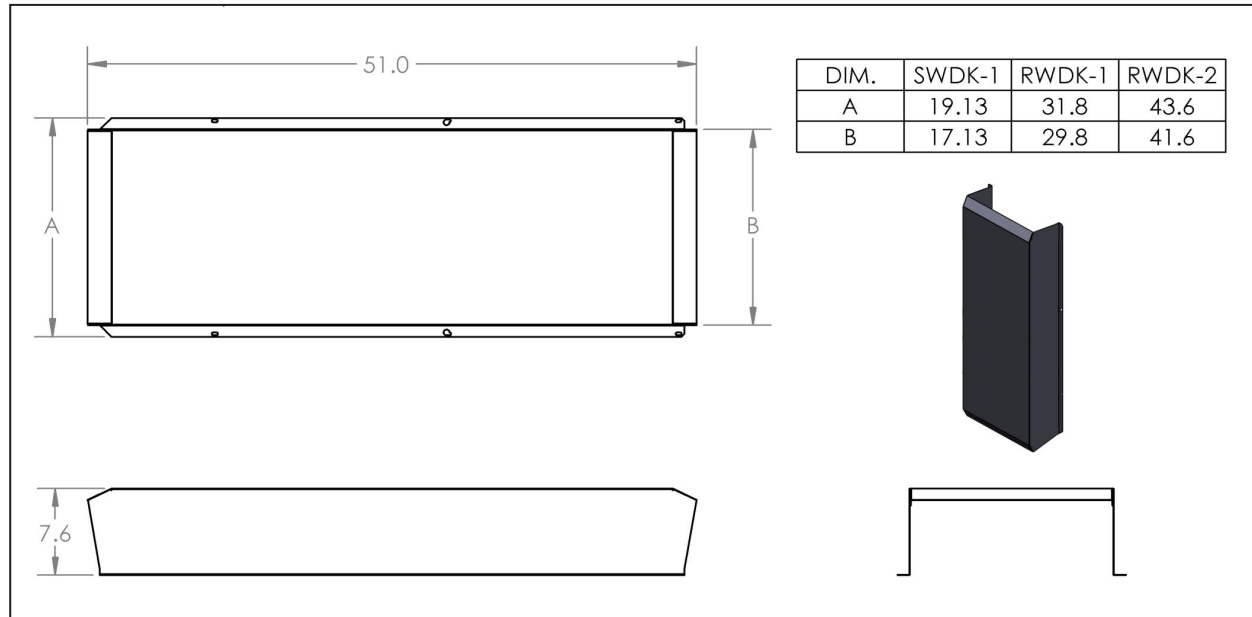
PURY-HP-Y(S)KMU-A Series

Unit model	Module Size			Component Quantity				
	S	L	XL	LAHK-1	LAHK-2	SWDK-1	RWDK-1	RWDK-2
PURY-HP72YKMU-A-H		1		1		1		1
PURY-HP96YKMU-A-H		1		1		1		1
PURY-HP144YSKMU-A-H		2		2		1		2
PURY-HP192YSKMU-A-H		2		2		1		2

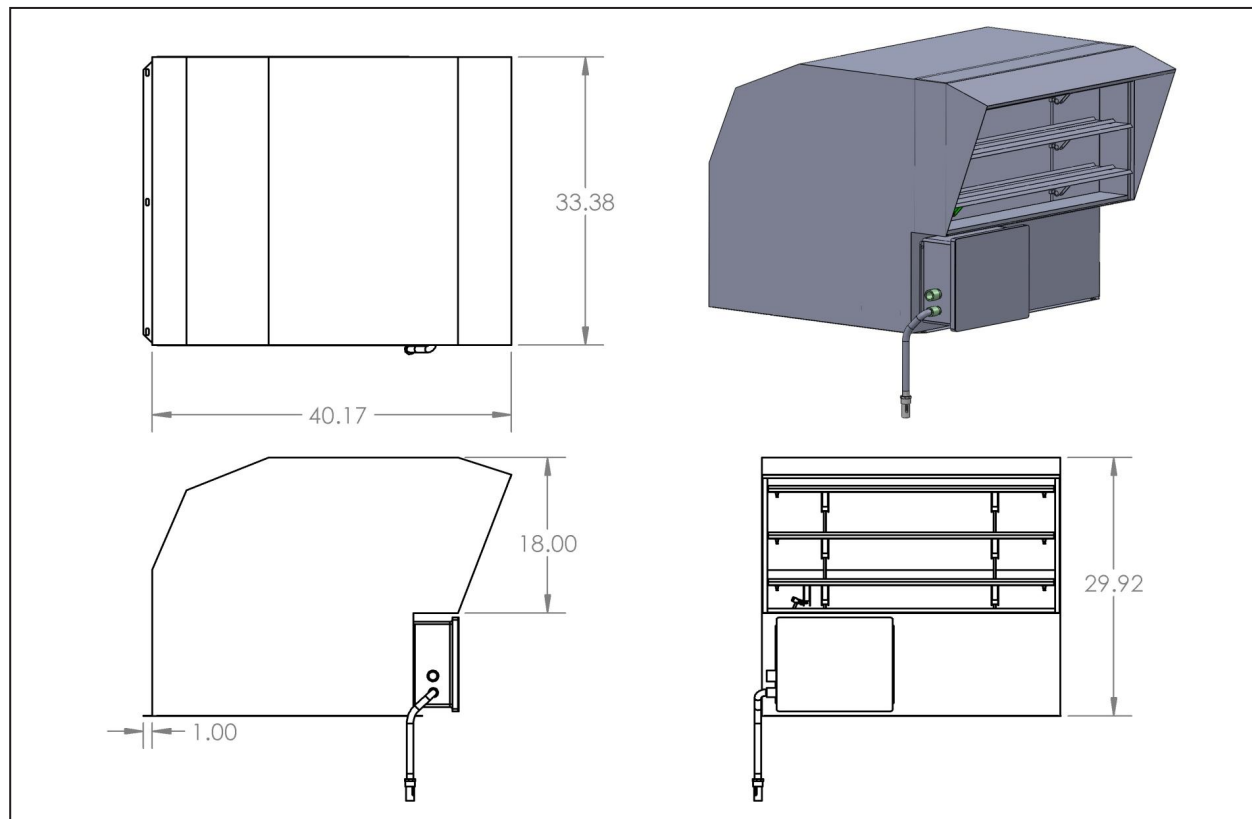
8. OPTIONAL PARTS

Dimensions

Wind Deflectors SWDK-1, RWDK-1 and RWDK-2

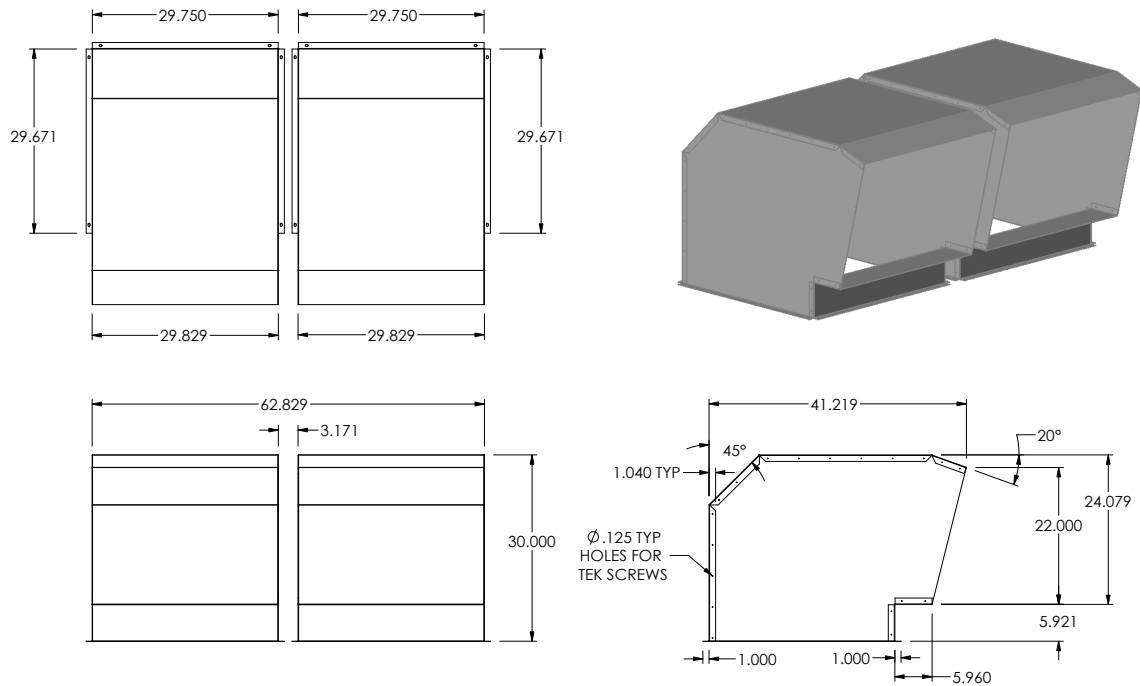


Low Ambient Hood LAHK-1 (used alone for single fan modules P72 and P96 sizes)



8. OPTIONAL PARTS

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



8. OPTIONAL PARTS

8-5. Snow/Hail Guards Kit

- Protects outdoor unit coil surfaces from hail damage and snow build-up in severe climates.
- 20-gauge, hot-dipped galvanized G-90 steel construction.
- Heavy-duty polyester-based powder paint finish to match equipment.
- Installs easily using existing wire guard fasteners

Notes:

- Outdoor unit must be mounted at least 12" off the ground or 12" above the highest average snow depth, whichever is greater.
- Clearances for the sides and back of the outdoor unit must be at least 17" greater than standard installation guidelines.
- For best coil protection, two and three module units must be mounted with the minimum 1-3/16" separation.
- For best snow and hail protection use SHK-1 with SGK series snow/hail guards.

Kit Number	Description	Net Weight	Ship Weight	Carton Dimensions L x W x H
SGK-1	Side Snow/Hail Guards 19-1/8" wide (2 per kit)	(2) x 18 lbs.	41 lbs.	52"L x 20"W x 20"H
SGK-2	Rear Snow/Hail Guard 31-3/4" wide	19 lbs.	24 lbs.	52"L x 33"W x 20"H
SGK-3	Rear Snow/Hail Guard 43-1/2" wide	24 lbs.	29 lbs.	52"L x 45"W x 20"H
SHK-1	Snow Hood for Snow/Hail Protection	41 lbs.	47 lbs.	32"L x 34"W x 30-1/2"H

Components Required per Outdoor unit(s)

For models with two or three units, selections are based on a distance of 1-3/16" separation between the modules.
For further separation between the modules, additional components may be required.

PURY-HP-T(S)KMU-A-H Series

Unit model	Module Size			Component Qty			
	S	L	XL	SGK-1	SGK-2	SGK-3	SHK-1
PURY-HP72TKMU-A-H		1		1		1	1
PURY-HP96TKMU-A-H		1		1		1	1
PURY-HP144TSKMU-A-H		2		1		2	2
PURY-HP192TSKMU-A-H		2		1		2	2

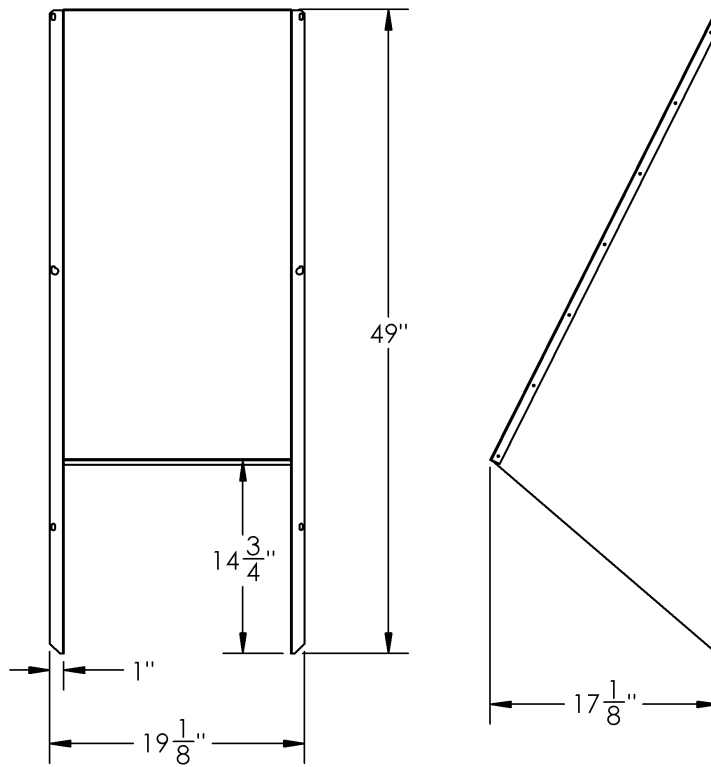
PURY-HP-Y(S)KMU-A Series

Unit model	Module Size			Component Qty			
	S	L	XL	SGK-1	SGK-2	SGK-3	SHK-1
PURY-HP72YKMU-A-H		1		1		1	1
PURY-HP96YKMU-A-H		1		1		1	1
PURY-HP144YSKMU-A-H		2		1		2	2
PURY-HP192YSKMU-A-H		2		1		2	2

8. OPTIONAL PARTS

Dimensions

Snow/Hail Guards SGK-1 (2 PER KIT)



8. OPTIONAL PARTS

Dimensions

Snow/Hail Guards SHK-1

