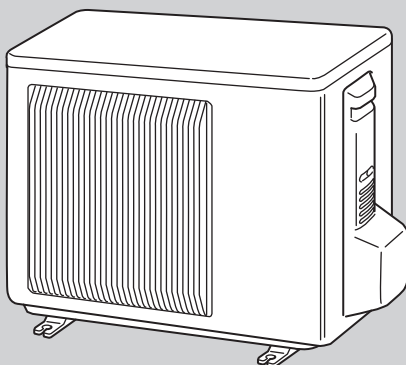


TECHNICAL & SERVICE MANUAL

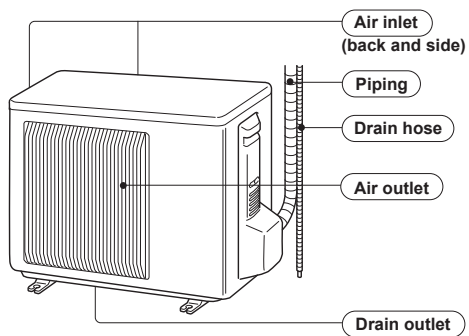
[Model Name]	[Service Ref.]	
PU-P18VAKD	PU-P18VAKD.TH	
	PU-P18VAKD.TH-D	PU-P18VAKD.TH-N
PU-P24VAKD	PU-P24VAKD.TH	
	PU-P24VAKD.TH-D	PU-P24VAKD.TH-N
PU-P30VAKD	PU-P30VAKD.TH	
	PU-P30VAKD.TH-D	PU-P30VAKD.TH-N
PU-P36VAKD	PU-P36VAKD.TH	
	PU-P36VAKD.TH-D	PU-P36VAKD.TH-N
PU-P36YAKD	PU-P36YAKD.TH	
	PU-P36YAKD.TH-D	PU-P36YAKD.TH-N
PU-P42YAKD	PU-P42YAKD.TH	
	PU-P42YAKD.TH-D	PU-P42YAKD.TH-N



PU-P18VAKD

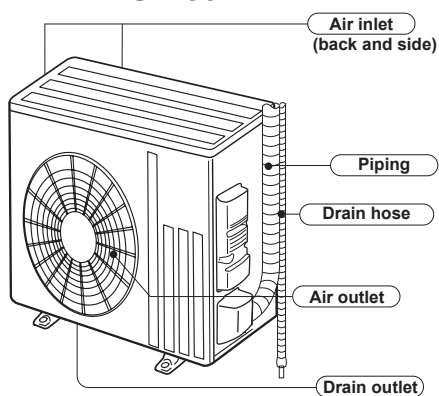
PARTS NAMES AND FUNCTIONS

PU-P18VAKD



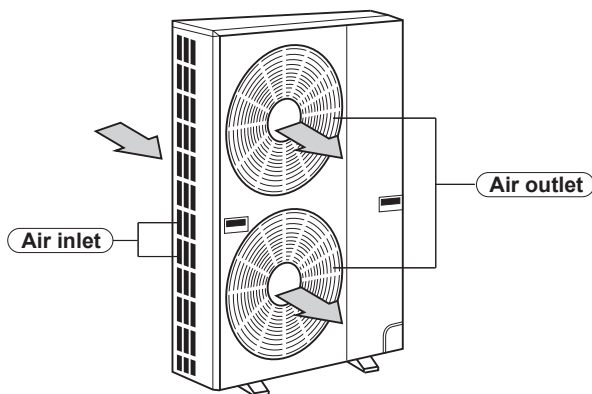
PU-P24VAKD

PU-P30VAKD

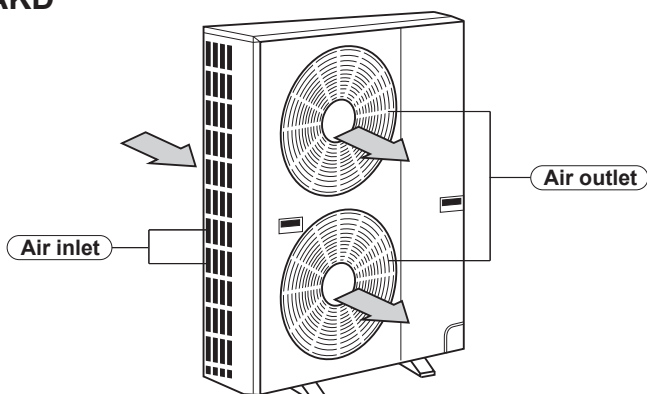


PU-P36VAKD

PU-P36YAKD



PU-P42YAKD



Note: Unit of pressure is based on ISO (International Standardization Organization)
[kgf/cm²] → [MPa] (1MPa=10.2kgf/cm²)

SPECIFICATION

Outdoor model			PU-P18VAKD	PU-P24VAKD	PU-P30VAKD	
Function			Cooling			
Power supply			Single phase 220–240 V, 50 Hz			
Compressor	Output	W	1,300	1,800	2,200	
	Compressor motor current	A	6.90	8.87	11.48	
	Winding resistance (at 20°C)	Ω	C-R 1.99 C-S 4.06	C-R 1.23 C-S 2.31	C-R 0.68 C-S 1.80	
Fan motor	Fan motor current	A	0.30	0.50	0.60	
	Winding resistance (at 20°C)	Ω	WHT-BLK 171 BLK-RED 226	WHT-BLK 71.5 BLK-RED 89.5	WHT-BLK 64.3 BLK-RED 84.0	
Dimensions W × H × D		mm	800 × 550 × 285	840 × 880 × 330	840 × 880 × 330	
Weight		kg	36	56	72	
	Air flow	m³/h	1,860	3,174	3,018	
	Sound level (SPL)	dB(A)	51	54	55	
	Fan speed	rpm	850	830	830	
	Fan speed regulator			1		
	Refrigerant filling capacity (R410A)	kg	1.20	1.35	1.85	
	Refrigeration oil (Model)	L	0.44	0.67	1.3	

Outdoor model			PU-P36VAKD	PU-P36YAKD	PU-P42YAKD	
Function			Cooling			
Power supply			Single phase 220–240 V, 50 Hz	3 phase 380–415 V, 50 Hz		
Compressor	Output	W	2,700	2,700	4,600	
	Compressor motor current	A	14.08	3.58	7.58	
	Winding resistance (at 20°C)	Ω	C-R 0.63 C-S 1.55	U-V-W 3.32	U-V-W 1.79	
Fan motor	Fan motor current	A	1.22	1.22	1.12	
	Winding resistance (at 20°C)	Ω	WHT-BLU 119 BLU-RED 83	WHT-BLU 119 BLU-RED 83	WHT-BLU 90.4 BLU-RED 89.6	
Dimensions W × H × D		mm	870 × 1258 × 295	870 × 1258 × 295	970 × 1258 × 345	
Weight		kg	85	85	108	
	Air flow	m³/h	3,350	3,350	3,530	
	Sound level (SPL)	dB(A)	54	54	56	
	Fan speed	rpm	720	720	780	
	Fan speed regulator			1		
	Refrigerant filling capacity (R410A)	kg	2.3	2.3	2.8	
	Refrigeration oil (Model)	L	1.3	1.3	1.2	

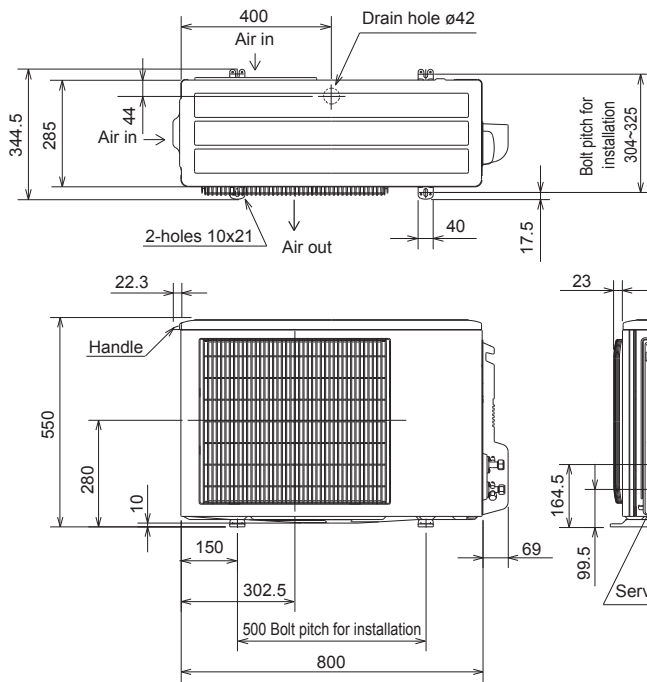
OUTLINES AND DIMENSIONS

PU-P18VAKD.TH

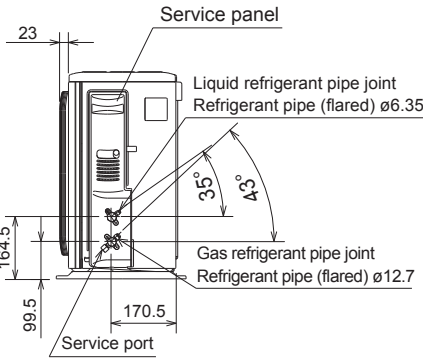
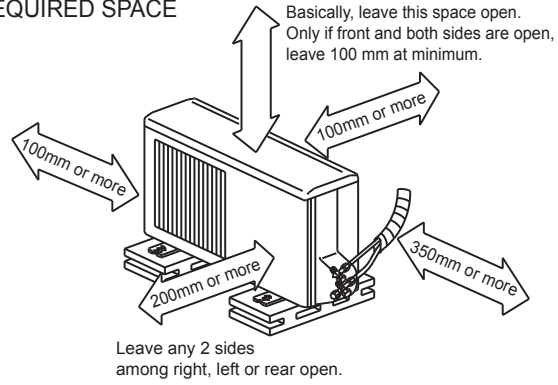
PU-P18VAKD.TH-D

PU-P18VAKD.TH-N

Unit: mm



REQUIRED SPACE

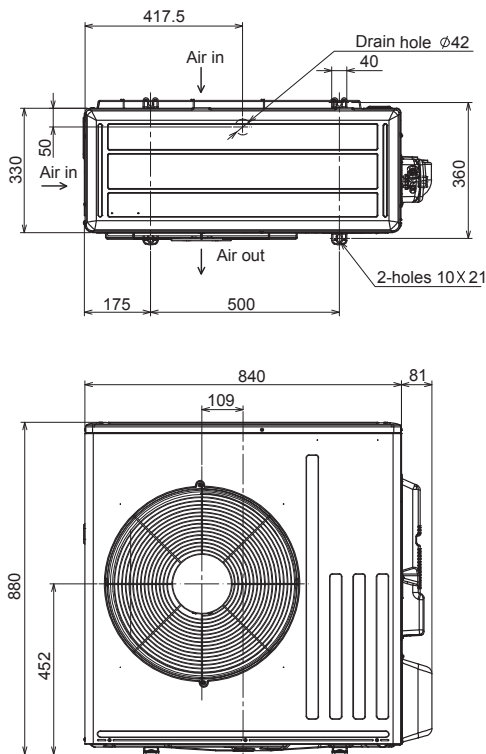


PU-P24VAKD.TH
PU-P30VAKD.TH

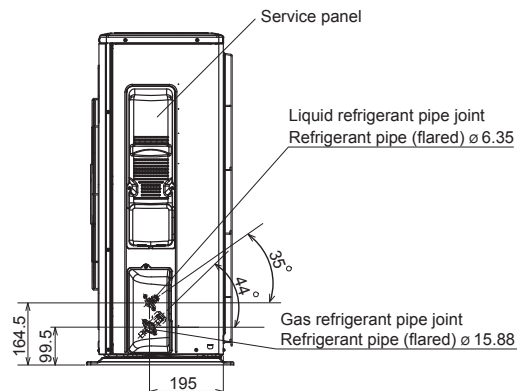
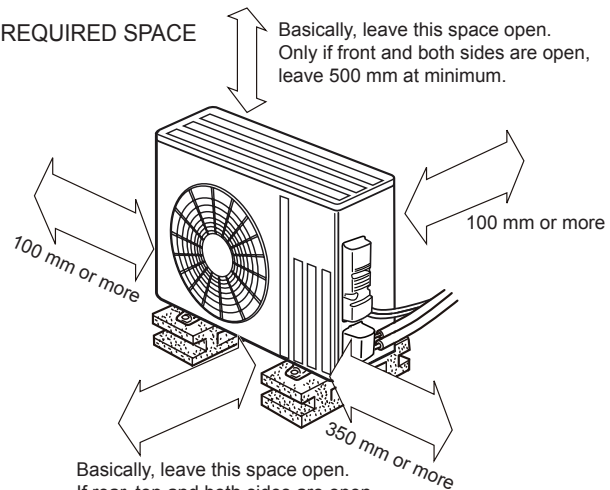
PU-P24VAKD.TH-D
PU-P30VAKD.TH-D

PU-P24VAKD.TH-N
PU-P30VAKD.TH-N

Unit: mm



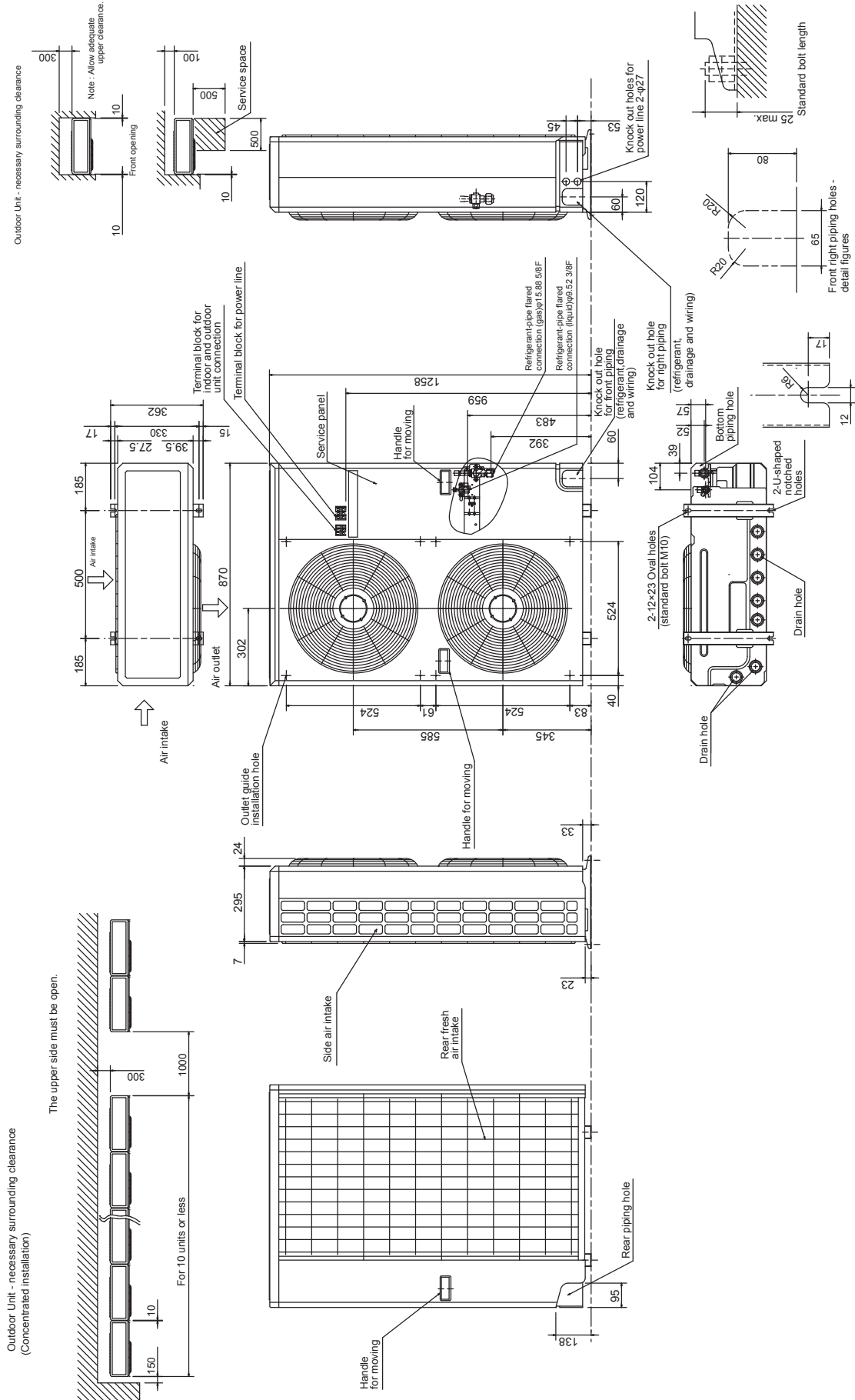
REQUIRED SPACE



PU-P36VAKD.TH
PU-P36YAKD.TH

PU-P36VAKD.TH-D
PU-P36YAKD.TH-D

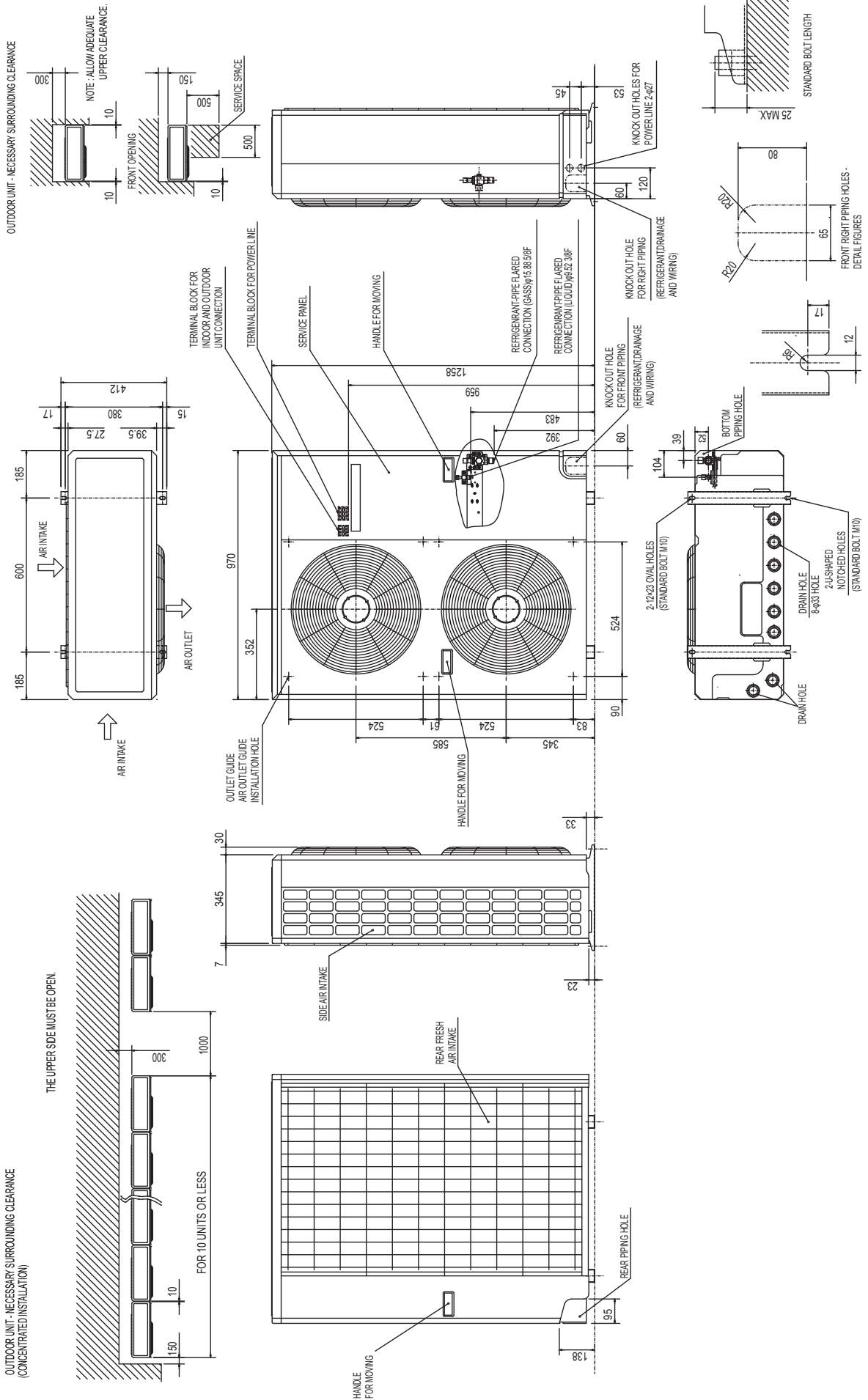
PU-P36VAKD.TH-N
PU-P36YAKD.TH-N



PU-P42YAKD.TH

PU-P42YAKD.TH-D

PU-P42YAKD.TH-N

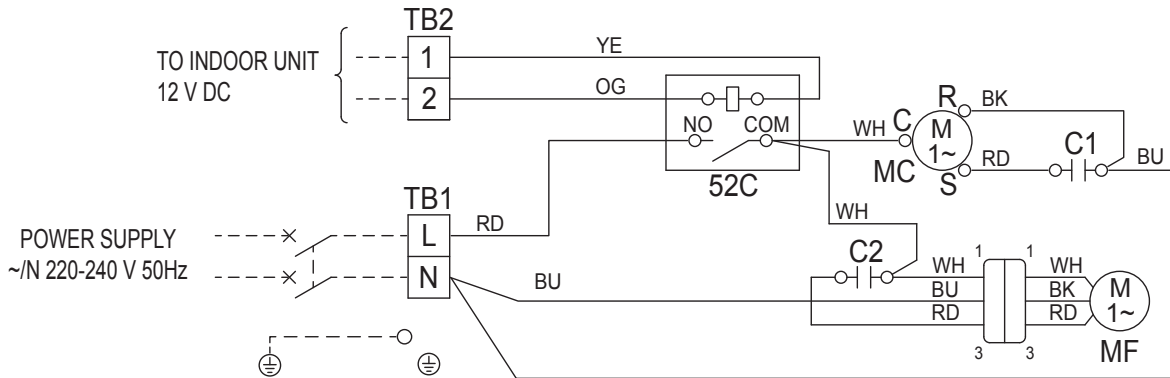


WIRING DIAGRAM

PU-P18VAKD.TH

PU-P18VAKD.TH-D

PU-P18VAKD.TH-N



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR	MC	COMPRESSOR (INNER PROTECTOR)	TB1	TERMINAL BLOCK (POWER SUPPLY)
C2	FAN MOTOR CAPACITOR	MF	FAN MOTOR (INNER FUSE)	TB2	TERMINAL BLOCK (CONNECTING WIRES INDOOR/OUTDOOR)
52C	COMPRESSOR CONTACTOR				

PU-P24VAKD.TH

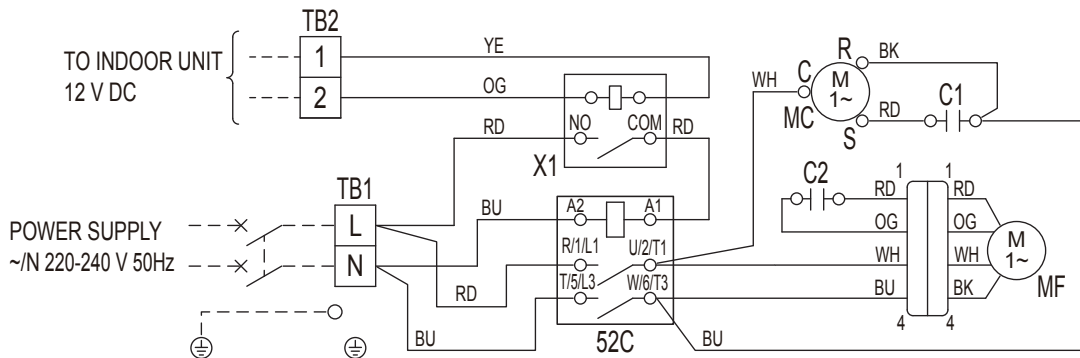
PU-P24VAKD.TH-D

PU-P24VAKD.TH-N

PU-P30VAKD.TH

PU-P30VAKD.TH-D

PU-P30VAKD.TH-N

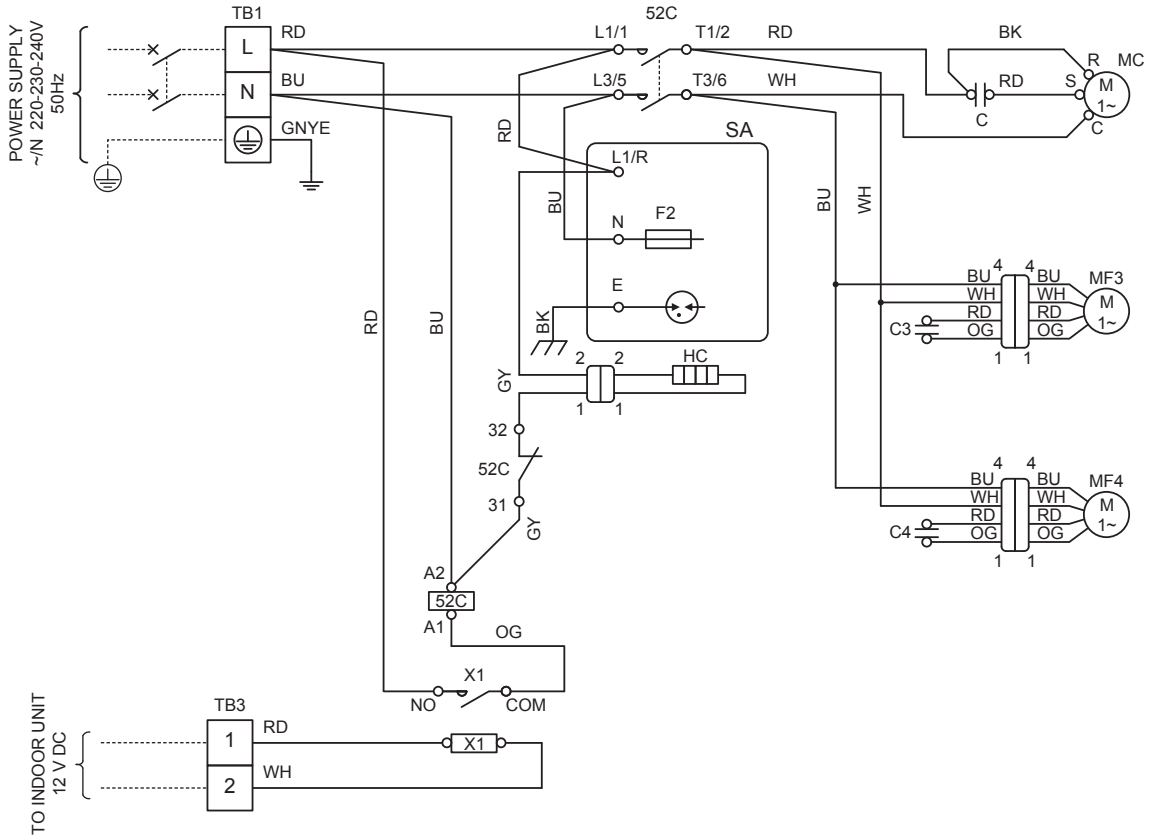


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR	MC	COMPRESSOR (INNER PROTECTOR)	TB1	TERMINAL BLOCK (POWER SUPPLY)
C2	FAN MOTOR CAPACITOR	MF	FAN MOTOR (INNER THERMOSTAT)	TB2	TERMINAL BLOCK (CONNECTING WIRES INDOOR/OUTDOOR)
52C	COMPRESSOR CONTACTOR	X1	52C RELAY		

PU-P36VAKD.TH

PU-P36VAKD.TH-D

PU-P36VAKD.TH-N

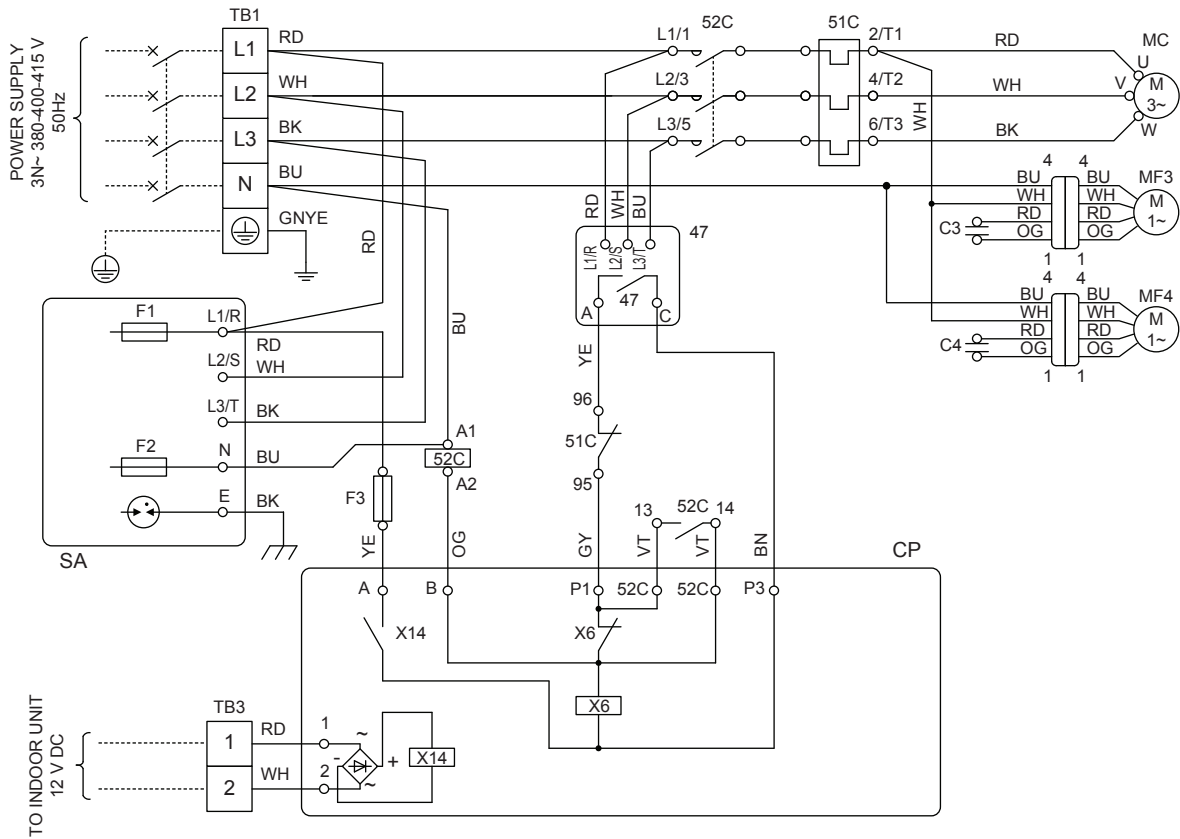


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
C	COMPRESSOR CAPACITOR	MC	COMPRESSOR (INNER THERMOSTAT)	TB3	TERMINAL BLOCK (CONNECTING WIRES INDOOR/OUTDOOR)
C3, 4	FAN MOTOR CAPACITOR	MF3, 4	FAN MOTOR (INNER THERMOSTAT)	X1	52C RELAY
F2	FUSE (6.3A/250V)	SA	SURGE ABSORBER	52C	COMPRESSOR CONTACTOR
HC	CRANKCASE HEATER	TB1	TERMINAL BLOCK (POWER SUPPLY)		

PU-P36YAKD.TH

PU-P36YAKD.TH-D

PU-P36YAKD.TH-N

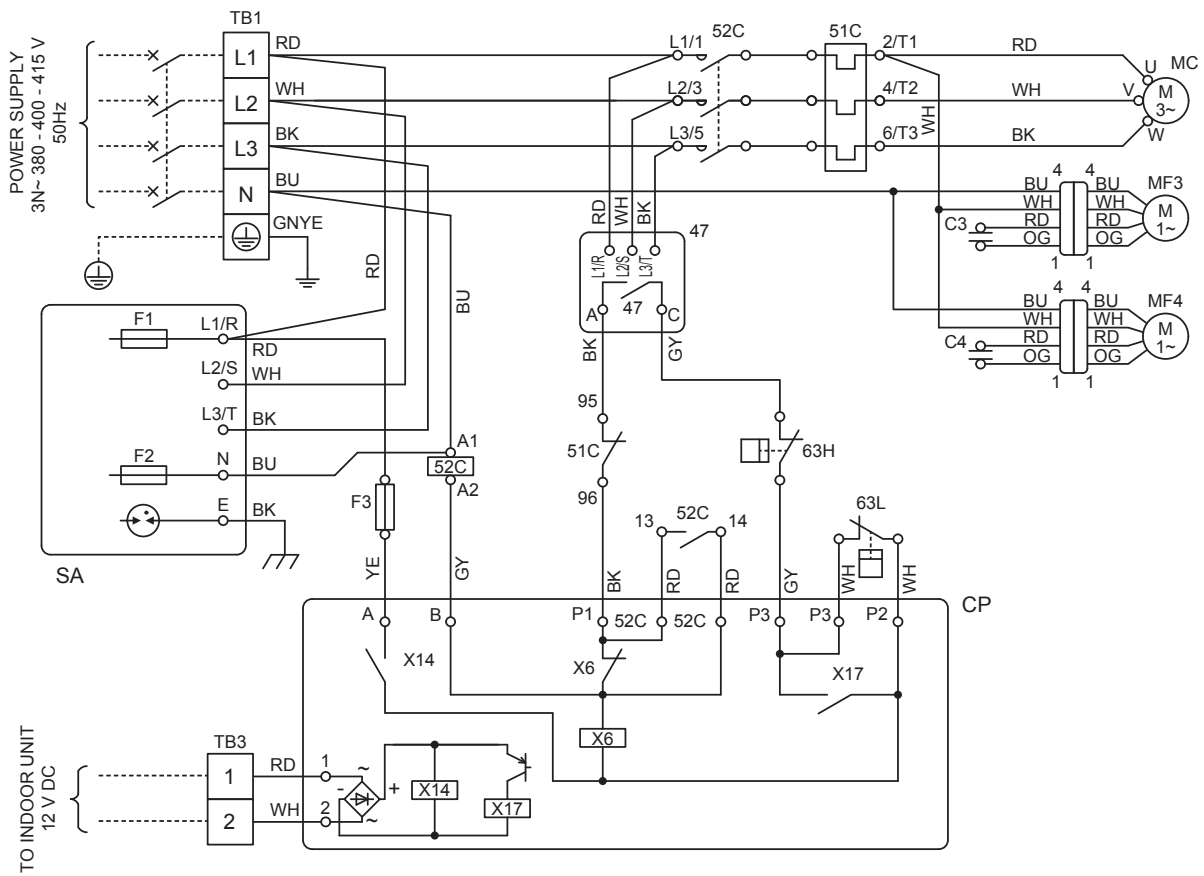


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CP	COMPRESSOR PROTECTOR	MC	COMPRESSOR (INNER THERMOSTAT)	SA	SURGE ABSORBER
C3, 4	FAN MOTOR CAPACITOR	MF3, 4	FAN MOTOR (INNER THERMOSTAT)	47	ANTI-PHASE PROTECTOR
F1, 2	FUSE (6.3A/250V)	TB1	TERMINAL BLOCK (POWER SUPPLY)	51C	THERMAL RELAY
F3	FUSE (5.0A/250V)	TB3	TERMINAL BLOCK (CONNECTING WIRES INDOOR/OUTDOOR)	52C	COMPRESSOR CONTACTOR

PU-P42YAKD.TH

PU-P42YAKD.TH-D

PU-P42YAKD.TH-N



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CP	COMPRESSOR PROTECTOR	MF3, 4	FAN MOTOR (INNER THERMOSTAT)	51C	THERMAL RELAY
C3, 4	FAN MOTOR CAPACITOR	SA	SURGE ABSORBER	52C	COMPRESSOR CONTACTOR
F1, 2	FUSE (6.3A/250V)	TB1	TERMINAL BLOCK (POWER SUPPLY)	63H	HIGH PRESSURE SWITCH
F3	FUSE (5.0A/250V)	TB3	TERMINAL BLOCK (CONNECTING WIRES INDOOR/OUTDOOR)	63L	LOW PRESSURE SWITCH
MC	COMPRESSOR (INNER THERMOSTAT)	47	ANTI-PHASE PROTECTOR		

⚠ Caution:

Prohibit: reverse-phase connection
The compressor will be damaged.

When the buzzer of reverse-phase protector sounds after the power supply is turned on, this indicates reverse-phase connection. Please confirm the phase of the power supply, and reconnect the power supply.

⚠ Caution:

Be sure to install N-line. Without N-line, it could cause damage to the unit.

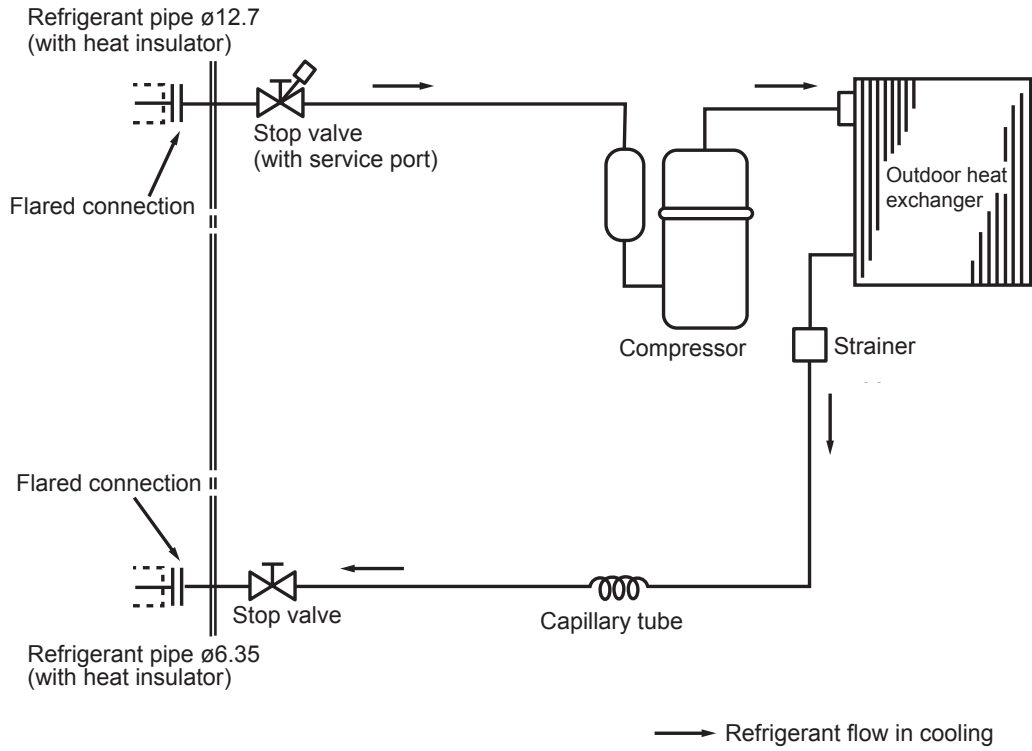
REFRIGERANT SYSTEM DIAGRAM

PU-P18VAKD.TH

PU-P18VAKD.TH-D

PU-P18VAKD.TH-N

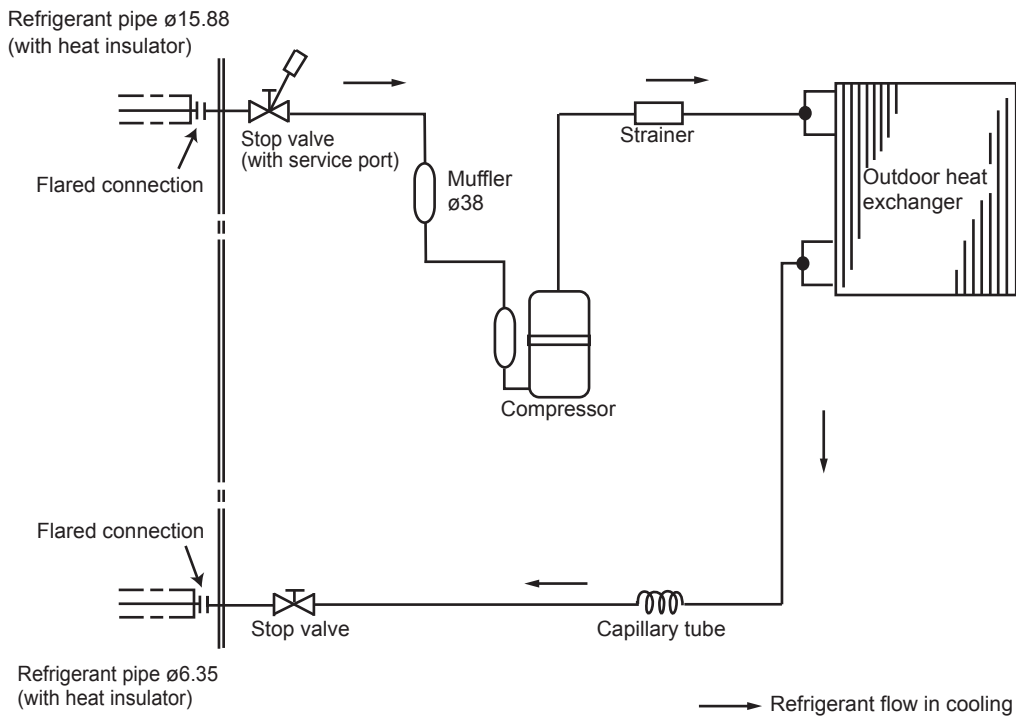
Unit: mm



PU-P24VAKD.TH

PU-P24VAKD.TH-D

PU-P24VAKD.TH-N

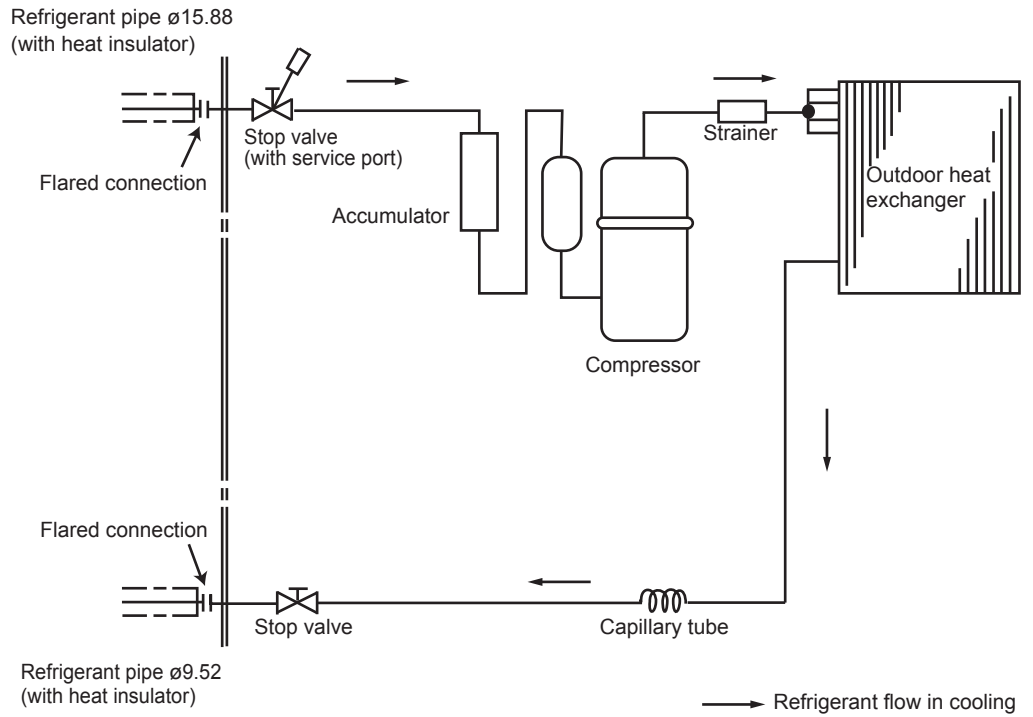


PU-P30VAKD.TH

PU-P30VAKD.TH-D

PU-P30VAKD.TH-N

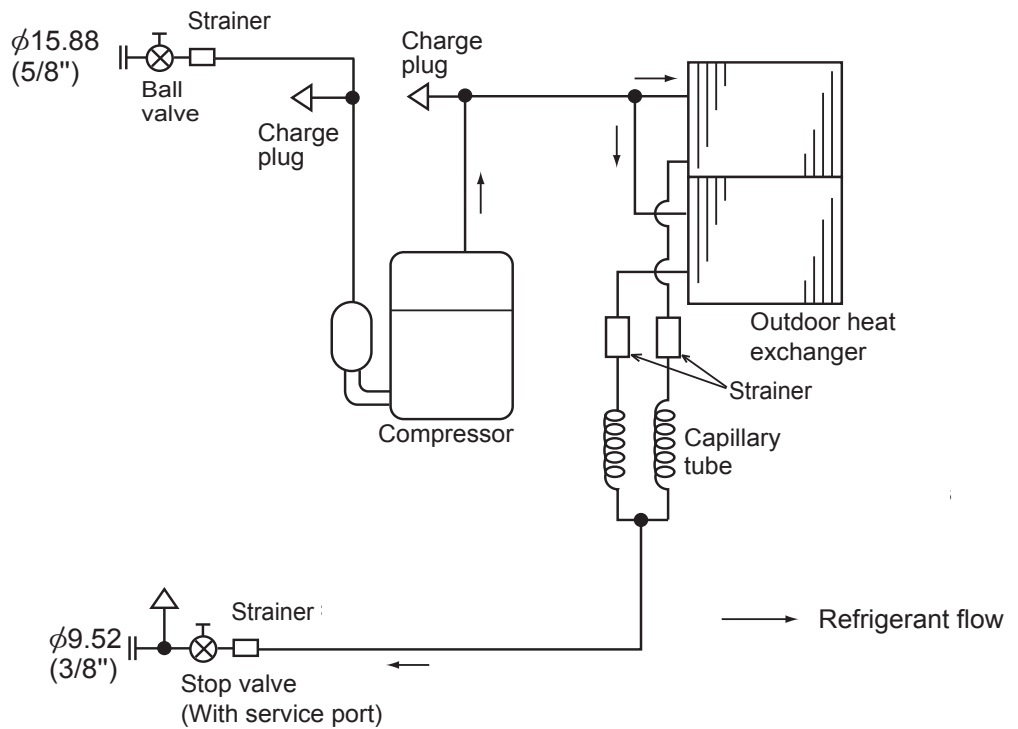
Unit: mm



PU-P36VAKD.TH
PU-P36YAKD.TH

PU-P36VAKD.TH-D
PU-P36YAKD.TH-D

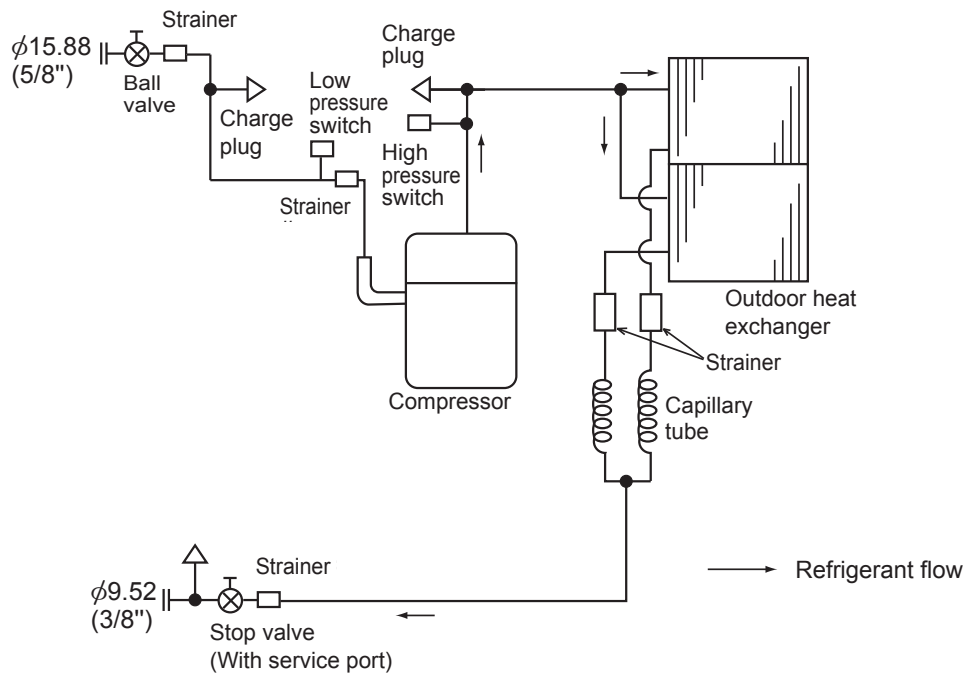
PU-P36VAKD.TH-N
PU-P36YAKD.TH-N



PU-P42YAKD.TH

PU-P42YAKD.TH-D

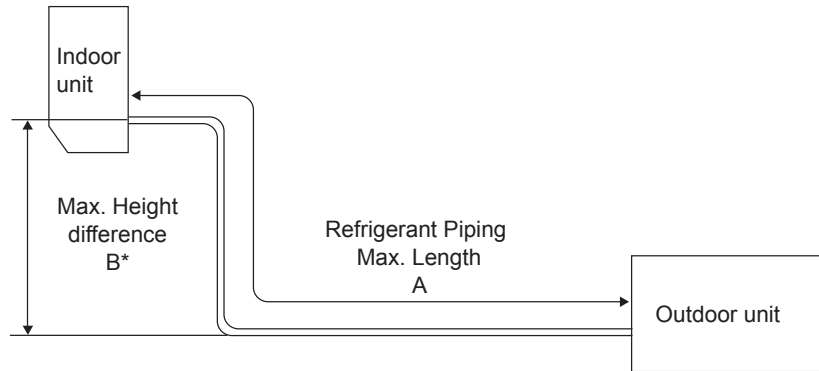
PU-P42YAKD.TH-N



MAX. REFRIGERANT PIPING LENGTH and MAX. HEIGHT DIFFERENCE

	Refrigerant piping: m		Piping size O.D: mm	
	Max. Length A	Max. Height difference B	Gas	Liquid
PU-P18VAKD	30	10	12.7	6.35
PU-P24VAKD	30	10	15.88	6.35
PU-P30VAKD	30	15	15.88	9.52
PU-P36VAKD PU-P36YAKD	40	30	15.88	9.52
PU-P42YAKD	50	30	15.88	9.52

MAX. HEIGHT DIFFERENCE



*Height difference limitations are binding regardless of the height position at which either indoor or outdoor is placed higher.

ADDITIONAL REFRIGERANT CHARGE (R410A: g)

Model	Outdoor unit precharged	Refrigerant piping length (one way)										
		7.5 m	10 m	15 m	20 m	25 m	30 m	35 m	40 m	45 m	45 m	
PU-P18VAKD	1,200	0										
PU-P24VAKD	1,350		50	150	250	350	450	—	—	—	—	
PU-P30VAKD	1,850											
PU-P36VAKD PU-P36YAKD	2,300		75	225	375	525	675	825	975	—	—	
PU-P42YAKD	2,800									1125	1275	

Calculation: PU-P18/24/30VAKD: $X \text{ g} = 20 \text{ g/m} \times (\text{Refrigerant piping length (m)} - 7.5)$

PU-P36V/YAKD, PU-P42YAKD: $X \text{ g} = 30 \text{ g/m} \times (\text{Refrigerant piping length (m)} - 7.5)$

Note: Refrigerant piping exceeding 7.5 m requires additional refrigerant charge according to the calculation.