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## 1 . Specification

			18K	24K
TRANE Model		IDU	4MXC6518G1000AA	4MXC6524G1000AA
		Panel	4MXL2318BF0W0AA	4MXL2324BF0W0AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	6,500 ~ 17,700 ~ 19,200	9,800 ~ 24,000 ~ 28,400
	Capacity (min ~ nor ~ max)	W	1,900 ~ 5,190 ~ 5,625	2,870 ~ 7,030 ~ 8,320
	Input	W	1,587	2,150
	EER	W/W	3.27	3.27
Heating	Capacity (min ~ nor ~ max)	Btu/h	10,000 ~ 18,300 ~ 20,000	10,200 ~ 24,500 ~ 27,400
	Capacity (min ~ nor ~ max)	W	2,930 ~ 5,362 ~ 5,860	2,990 ~ 7,175 ~ 8,028
	Input	W	1,675	2,242
	COP	W/W	3.20	3.20
Indoor fan motor	Model		ZW465C03	ZWK465B500011
	Qty		1	1
	Input	w	33	72
	Capacitor	uF	/	/
	Speed(hi/mi/lo)	r/min	850/700/600	500/430/360
Indoor coil	a.Number of rows		2	2
	b.Tube pitch(a)x row pitch(b)	mm	21x13.3	21x13.3
	c.Fin spacing	mm	1.25	1.4
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	φ7 / Inner grooved	φ7 / Inner grooved
	f.Coil length x height x width	mm	1330x210x26.6	2242x168x26.6
	g.Number of circuits		10	8
Indoor air flow (Hi/Med/Lo)		m	700/620/500	1260/1070/820
Sound level (sound pressure)		dB(A)	44/39/37	36/33/29
Throttle type			In ODU	In ODU



			18K	24K
TRANE Model		IDU	4MXC6518G1000AA	4MXC6524G1000AA
		Panel	4MXL2318BF0W0AA	4MXL2324BF0W0AA
Indoor unit	Dimension (W x Dx H)(body)	mm	570×570×260	840×840×246
	Packing (W x Dx H)(body)	mm	718×680×380	990×990×340
	Dimension (W x Dx H)(panel)	mm	620×620×60	950×950×50
	Packing (W x Dx H)(panel)	mm	660×660×115	1000×1000×110
	Net/Gross weight(body)	kg	19/22	31/36
	Net/Gross weight(panel)	kg	2.8/4.8	6.5/9
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe dia.		mm	32	32
Refrigerant piping	Liquid side/ Gas side	mm	6.35/12.7	9.52/15.88
Controller			Remote control	Remote control
Operation temperature			16~30	16~30
Room temperature	Cooling		18"32	18"32
	Heating		15"27	15"27
Qty'per 20' /40' /40'HQ			118/240/284	55/125/144

			36K	48K
TRANE Model		IDU	4MXC6536G1000AA	4MXC6548G1000AA
		Panel	4MXL2324BF0W0AA	4MXL2324BF0W0AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	14,000 ~ 34,000 ~ 35,000	19,200 ~ 46,200 ~ 50,200
	Capacity (min ~ nor ~ max)	W	4,100 ~ 9,960 ~ 10,260	5,625 ~ 13,540 ~ 14,710
	Input	W	3,018	4,140
	EER	W/W	3.30	3.27
Heating	Capacity (min ~ nor ~ max)	Btu/h	14,500 ~ 36,500 ~ 42,300	19,000 ~ 48,500 ~ 50,300
	Capacity (min ~ nor ~ max)	W	4,248 ~ 10,695 ~ 12,395	5,567 ~ 14,210 ~ 14,738
	Input	W	3,342	4,440
	COP	W/W	3.20	3.20
Indoor fan motor	Model		ZWK511B51008	ZWK511B51008
	Qty		1	1
	Input	w	90	90
	Capacitor	uF	/	/
	Speed(hi/mi/lo)	r/min	650/550/450	850/750/650
Indoor coil	a.Number of rows		2	2
	b.Tube pitch(a)x row pitch(b)	mm	21×13.3	21×13.3
	c.Fin spacing	mm	1.4	1.3
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	φ7 / Inner grooved	φ7 / Inner grooved
	f.Coil length x height x width	mm	2242×210×26.6	2127×252×26.6
	g.Number of circuits		10	11
Indoor air flow (Hi/Med/Lo)		m	1600/1440/1260	1950/1600/1440
Sound level (sound pressure)		dB(A)	50/46/42	52/48/45
Throttle type			In ODU	In ODU



			36K	48K
TRANE Model		IDU	4MXC6536G1000AA	4MXC6548G1000AA
		Panel	4MXL2324BF0W0AA	4MXL2324BF0W0AA
Indoor unit	Dimension (W x Dx H)(body)	mm	840×840×246	840×840×288
	Packing (W x Dx H)(body)	mm	990×990×340	990×990×380
	Dimension (W x Dx H)(panel)	mm	950×950×50	950×950×50
	Packing (W x Dx H)(panel)	mm	1000×1000×110	1000×1000×110
	Net/Gross weight(body)	kg	31/36	40/45
	Net/Gross weight(panel)	kg	6.5/9	6.5/9
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe dia.		mm	32	37
Refrigerant piping	Liquid side/ Gas side	mm	9.52/19.05	9.52/19.05
Controller			Remote control	Remote control
Operation temperature			16~30	16~30
Room temperature	Cooling		18"32	18"32
	Heating		15"27	15"27
Qty'per 20' /40' /40'HQ			55/125/144	54/110/125

		60K	
TRANE Model		IDU	4MXC6560G1000AA
		Panel	4MXL2324BF0W0AA
Power supply		V-ph-Hz	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	20,800 ~ 51,000 ~ 55,200
	Capacity (min ~ nor ~ max)	W	6,090 ~ 14,940 ~ 16,170
	Input	W	4,611
	EER	W/W	3.24
Heating	Capacity (min ~ nor ~ max)	Btu/h	21,100 ~ 52,000 ~ 56,300
	Capacity (min ~ nor ~ max)	W	6,180 ~ 15,235 ~ 16,500
	Input	W	4,789
	COP	W/W	3.20
Indoor fan motor	Model		ZWK511B51008
	Qty		1
	Input	w	90
	Capacitor	uF	/
	Speed(hi/mi/lo)	r/min	880/760/590
Indoor coil	a.Number of rows		2
	b.Tube pitch(a)x row pitch(b)	mm	21x13.3
	c.Fin spacing	mm	1.3
	d.Fin type (code)		Hydrophilic aluminium
	e.Tube outside dia.and type	mm	φ7 / Inner grooved
	f.Coil length x height x width	mm	2127x252x26.6
	g.Number of circuits		11
Indoor air flow (Hi/Med/Lo)		m	1950/1600/1440
Sound level (sound pressure)		dB(A)	52/48/45
Throttle type			In ODU

			12K	18K
TRANE Model			4MXD6512G1000AA	4MXD6518G1000AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	2,800 " 12,000 " 14,000	9,500 " 18,000 " 19,800
	Capacity (min ~ nor ~ max)	W	820 " 3,516 " 4,100	2,783 " 5,275 " 5800
	Input	W	1,160	1,761
	EER	W/W	3.03	3.03
Heating	Capacity (min ~ nor ~ max)	Btu/h	3,000 " 13,000 " 15,000	10,000 " 18,300 " 20,000
	Capacity (min ~ nor ~ max)	W	880 " 3,810 " 4,395	2,930 " 5,362 " 5,860
	Input	W	1,270	1,787
	COP	W/W	3.00	3.00
Indoor fan motor	Model		ZWK511B50502	ZWK511B50703
	Qty		1	1
	Input	W	28	55
	Speed(Hi/Med/Lo)	r/min	950/850/750	900/800/700
Indoor coil	Number of rows		2	2
	Tube pitch(a)*row pitch(b)	mm	21×13.3	21×13.3
	Fin spacing	mm	1.4	1.4
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	(1)7 / Inner grooved	(1)7 / Inner grooved
	Coil length * height * width	mm	640×210×26.6	960×210×26.6
	Number of circuits		10	10
Indoor air flow (Hi/Med/Lo)		m	600/480/420	900/780/660
ESP	Rated	Pa	50	50
	Range	Pa	10-50	10-50
Indoor noise level (Hi/Med/Lo)		dB(A)	37/34/31	36/34/32
Throttle type			In ODU	In ODU
Indoor unit	Dimension (WxDxH)	mm	850×420×185	1170×420×185
	Packing(WxDxH)	mm	1045×540×270	1365×540×270
	Net/Gross weight	kg	16/21	22/28
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe diameter		mm	27	27
Refrigerant piping	Liquid side/ Gas side	mm	6.35/9.52	6.35/12.7
Controller			Wired control	Wired control
Operation temperature			16"30	16"30
Room temperature	Cooling		18"32	18"32
	Heating		15"27	15"27
Qty'per 20' /40' /40'HQ			176/352/272	128/264/264
Remarks:1.The above design and specifications are subject to change without prior notice for product improvement.				

TRANE Model			24K	36K
TRANE Model			4MXD6524G1000AA	4MXD6536G1000AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	9,700 " 24,000 " 27,000	14,000 " 36,000 " 42,000
	Capacity (min ~ nor ~ max)	W	2,842 " 7,032 " 7,911	4,100 " 10,550 " 12,300
	Input	W	2,321	3,481
	EER	W/W	3.03	3.03
Heating	Capacity (min ~ nor ~ max)	Btu/h	10,200 " 24,500 " 27,400	14,500 " 36,500 " 42,300
	Capacity (min ~ nor ~ max)	W	2,990 " 7,179 " 8,028	4,248 " 10,695 " 12,395
	Input	W	2,393	3,565
	COP	W/W	3.00	3.00
Indoor fan motor	Model		ZWK511B50703	ZWK702B000027
	Qty		1	1
	Input	W	55	200
	Speed(Hi/Med/Lo)	r/min	1250/1100/1000	1194/1065/964
Indoor coil	Number of rows		3	4
	Tube pitch(a)*row pitch(b)	mm	21×13.3	21×13.3
	Fin spacing	mm	1.4	1.3
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ7 / Inner grooved	Φ7,innergroove tube
	Coil length * height * width	mm	640×210×39.9	1001×294×39.9
	Number of circuits		15	10
Indoor air flow (Hi/Med/Lo)		m	1000/950/850	1630/1488/1421
ESP	Rated	Pa	50	50
	Range	Pa	10-50	10-50
Indoor noise level (Hi/Med/Lo)		dB(A)	38/35/33	49/47/44
Throttle type			In ODU	In ODU
Indoor unit	Dimension (WxDxH)	mm	1170×420×185	1140×710×275
	Packing(WxDxH)	mm	1365×540×270	1342×841×358
	Net/Gross weight	kg	24/30	46/52
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe diameter		mm	27	38
Refrigerant piping	Liquid side/ Gas side	mm	9.52/15.88	9.52/19.05
Controller			Wired control	Wired control
Operation temperature			16"30	16"30
Room temperature	Cooling		18"32	18"32
	Heating		15"27	15"27
Qty'per 20' /40' /40'HQ			128/264/264	66/132/154

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			48K	60K
TRANE Model			4MXD6548G1000AA	4MXD6560G1000AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	19,000 " 48,000 " 50,000	20,000 " 50,500 " 54,000
	Capacity (min ~ nor ~ max)	W	5,567 " 14,064 " 14,650	5,860 " 14,800 " 15,822
	Input	W	4,642	4,884
	EER	W/W	3.03	3.03
Heating	Capacity (min ~ nor ~ max)	Btu/h	19,000 " 48,500 " 50,300	20,100 " 52,600 " 58,000
	Capacity (min ~ nor ~ max)	W	5,567 " 14,210 " 14,738	5,890 " 15,412 " 17,000
	Input	W	4,737	5,138
	COP	W/W	3.00	3.00
Indoor fan motor	Model		Y7S423C21	ZWK702B500025
	Qty		1	1
	Input	W	280	375
	Speed(Hi/Med/Lo)	r/min	1260/1145/1100	1400/1300/1200
Indoor coil	Number of rows		4	3
	Tube pitch(a)*row pitch(b)	mm	21×13.3	21×13.3
	Fin spacing	mm	1.3	1.8
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	C17 / Inner grooved	C17 / Inner grooved
	Coil length * height * width	mm	1001×294×39.9	1062×425×39.9
	Number of circuits		10	5
Indoor air flow (Hi/Med/Lo)		m	2090/1097/1792	2600/2200/1950
ESP	Rated	Pa	100	100
	Range	Pa	10-100	10-100
Indoor noise level (Hi/Med/Lo)		dB(A)	49/47/44	52/47/42
Throttle type			In ODU	In ODU
Indoor unit	Dimension (WxDxH)	mm	1140×710×275	1197×650×360
	Packing(WxDxH)	mm	1342×841×358	1345×770×390
	Net/Gross weight	kg	46/52	56/59
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe diameter		mm	38	38
Refrigerant piping	Liquid side/ Gas side	mm	9.52/19.05	9.52/19.05
Controller			Wired control	Wired control
Operation temperature		°C	16"30	16"30
Room temperature	Cooling	°C	18"32	18"32
	Heating	°C	15"27	15"27
Qty'per 20' /40' /40'HQ			66/132/154	60/125/150
Remarks:1.The above design and specifications are subject to change without prior notice for product improvement.				

			18K	24K
TRANE Model			4MXX6518G1000AA	4MXX6524G1000AA
Power supply		V-ph-Hz	220-1-60	220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	6,500 ~ 18,000 ~ 19,300	9,800 ~ 24,000 ~ 28,500
	Capacity (min ~ nor ~ max)	W	1,900 ~ 5,270 ~ 5,655	2,870 ~ 7030 ~ 8,350
	Input	W	1,612	2,099
	EER	W/W	3.27	3.35
Heating	Capacity (min ~ nor ~ max)	Btu/h	10,000 ~ 18,300 ~ 20,000	10,200 ~ 24,500 ~ 29,400
	Capacity (min ~ nor ~ max)	W	2,930 ~ 5,362 ~ 5,860	2,990 ~ 7,175 ~ 8,615
	Input	W	1,675	2,242
	COP	W/W	3.20	3.20
Indoor fan motor	Model		ZWK511A800053	ZWK511A800054
	Qty		1	1
	Input	W	90	260
	Capacitor	uF	/	/
	Speed(Hi/Med/Lo)	r/min	850/800/750	850/750/650
Indoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	21x18.186	21x18.186
	Fin spacing	mm	1.3	1.3
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ7 / Inner grooved	φ7 / Inner grooved
	Coil length x height x width	mm	679x294x36.37	1007x294x36.37
	Number of circuits		14	14
Indoor air flow(Hi/Med/Lo)		m <sup>3</sup> /h	880/750/650/500	1250/1128/930
Indoor noise level (sound pressure)(Hi/Med/Lo)		dB(A)	46/40/36	46/44/42
Throttle type			In ODU	In ODU
Indoor unit	Dimension (WxDxH)	mm	1000x680x230	1325x680x230
	Packing (WxDxH)	mm	1100x779x305	1425x779x305
	Net/Gross weight	kg	26/32	33.5/41.9
Design pressure		MPa	4.15/1.5	4.15/1.5
Drainage water pipe diameter		mm	25	25
Refrigerant piping	Liquid side/Gas side	mm(inch)	6.35/12.7	6.35/15.88
Controller			Remote control	Remote control
Operation temperature		°C	16~30	16~30
Room temperature	Cooling	°C	18~32	18~32
	Heating	°C	15~27	15~27
Qty'per 20' /40' /40'HQ (indoor unit)			112/224/256	84/168/192

		36K		48K	
TRANE Model		4MX6536G1000AA		4MX6548G1000AA	
Power supply		V-ph-Hz	220-1-60		220-1-60
Cooling	Capacity (min ~ nor ~ max)	Btu/h	14,000 ~ 36,000 ~ 37,000		19,200 ~ 47,000 ~ 50,500
	Capacity (min ~ nor ~ max)	W	4,100 ~ 10,550 ~ 10,840		5,625 ~ 13,770 ~ 14,800
	Input	W	3,149		4,211
	EER	W/W	3.35		3.27
Heating	Capacity (min ~ nor ~ max)	Btu/h	14,500 ~ 36,500 ~ 42,300		19,500 ~ 48,500 ~ 51,300
	Capacity (min ~ nor ~ max)	W	4,248 ~ 10,695 ~ 12,395		5,710 ~ 14,210 ~ 15,030
	Input	W	3,342		4,440
	COP	W/W	3.20		3.20
Indoor fan motor	Model	ZWK511A800054		ZWK511B500030	
	Qty	1		1	
	Input	W	120		150
	Capacitor	uF	/		/
	Speed(Hi/Med/Lo)	r/min	1050/950/900		1030/950/870
Indoor coil	Number of rows	2		2	
	Tube pitch(a)x row pitch(b)	mm	21x18.186		21x18.186
	Fin spacing	mm	1.3		1.3
	Fin type	Hydrophilic aluminium		Hydrophilic aluminium	
	Tube outside dia.and type	mm	φ7 / Inner grooved		φ7 / Inner grooved
	Coil length x height x width	mm	1007x294x36.37		1333x294x36.37
	Number of circuits	7		7	
Indoor air flow(Hi/Med/Lo)		m <sup>3</sup> /h	1820/1750/1600		2150/1980/1800
Indoor noise level (sound pressure)(Hi/Med/Lo)		dB(A)	52/49/46		52/49/46
Throttle type		In ODU		In ODU	
Indoor unit	Dimension (WxDxH)	mm	1325x680x230		1650x680x230
	Packing (WxDxH)	mm	1425x779x305		1750x779x305
	Net/Gross weight	kg	33.5/41.9		41.8/49.5
Design pressure		MPa	4.15/1.5		4.15/1.5
Drainage water pipe diameter		mm	25		25
Refrigerant piping	Liquid side/Gas side	mm(inch)	9.52/19.05		9.52/19.05
Controller		Remote control		Remote control	
Operation temperature		°C	16~30		16~30
Room temperature	Cooling	°C	18~32		18~32
	Heating	°C	15~27		15~27
Qty'per 20' /40' /40'HQ (indoor unit)		84/168/192		63/133/152	

12K		18K	
TRANE Model		4TXK6512G1000AA	4TXK6518G1000AA
Power supply		V-ph-Hz	220-1-60
Max. input consumption		W	2000
Max. input current		A	10
Compressor	Model	ASD102RKQA6JT6B	
	Type	ROTARY	
	Brand	HITACHI	
	Capacity	Btu/h	
	Input	W	789
	Rated current(RLA)	A	2.72
	Locked rotor Amp(LRA)	A	21.84
	Thermal protector position	INTERNAL	
	Refrigerant oil	ml	320±20
Outdoor fan motor	Model	RD-310-50-8A	
	Qty	1	
	Input	W	40
	Speed	r/min	850
Outdoor coil	Number of rows	1	
	Tube pitch(a)* row	mm	21x18.186
	Fin spacing	mm	1.35
	Fin type	Hydrophilic aluminium	
	Tube outside dia.and type	mm	φ7 / Inner grooved
	Coil length * height * width	mm	780x504x18.186
	Number of circuits	3	
Outdoor noise level (sound pressure)		dB(A)	
Throttle type		EEV	
Outdoor unit	Dimension(WxDxH)	mm	780x260x545
	Packing(WxDxH)	mm	905x336x594
	Net/Gross weight	kg	31/33
Refrigerant type/ Quantity	Type	R410A	
	Charged volume	kg	0.95
Design pressure		MPa	4.15/1.5
Refrigerant piping	Liquid side/ Gas side	mm(inch)	6.35/9.52
	Max. pipe length	m	30
	Max. difference in level	m	10
Ambient temperature	Cooling	18-43	
	Heating	-15-24	
Qty'per 20' /40' /40'HQ		Outdoor unit	126/261/261
			108/216/216

Remarks:1.The above design and specifications are subject to change without prior notice for product improvement.

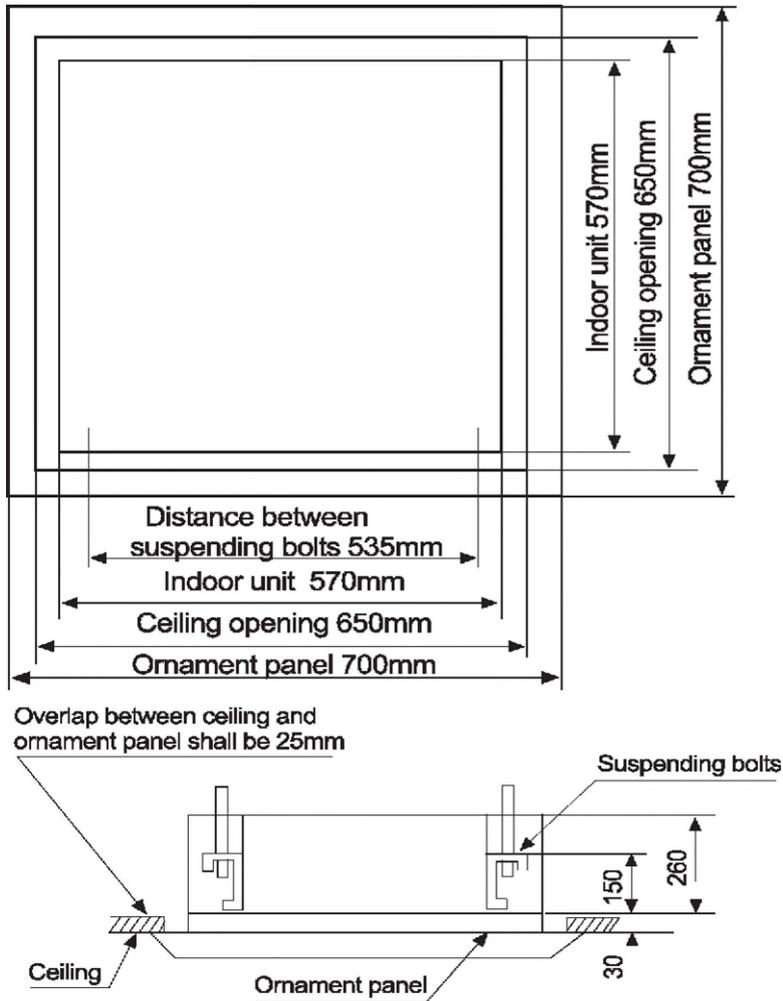
TRANE Model		24K	36K	
		4TXK6524G1000AA	4TXK6536G1000AA	
Power supply	V-ph-Hz	220-1-60	220-1-60	
Max. input consumption	W	3000	4500	
Max. input current	A	15	20.5	
Compressor	Model	SNB140FULMC	SNB200FNMMC	
	Type	ROTARY	ROTARY	
	Brand	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	
	Capacity	Btu/h	14880	21070
	Input	W	1310	1960
	Rated current(RLA)	A	4.4	6.7
	Locked rotor Amp(LRA)	A	18.4	/
	Thermal protector position		INTERNAL	INTERNAL
Refrigerant oil	ml	350	400	
Outdoor fan motor	Model	ZWK465B50503	EHDS82AAS	
	Qty	1	1	
	Input	W	41	90
	Speed	r/min	900	700
Outdoor coil	Number of rows	2	2	
	Tube pitch(a)* row	mm	21x18.186	21x18.186
	Fin spacing	mm	1.4	1.45
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ7 / Inner grooved	φ7 / Inner grooved
	Coil length * height * width	mm	795x566x36.37	940x714x36.37
	Number of circuits		4	7
Outdoor noise level (sound pressure)	dB(A)	59	58	
Throttle type		EEV	EEV	
Outdoor unit	Dimension(WxDxH)	mm	810x288x680	950x370x965
	Packing(WxDxH)	mm	1031x445x745	1050x450x1095
	Net/Gross weight	kg	42/47	83/89
Refrigerant type/ Quantity	Type		R410A	R410A
	Charged volume	kg	1.5	2.45
Design pressure	MPa	4.15/1.5	4.15/1.5	
Refrigerant piping	Liquid side/ Gas side	mm(inch)	9.52/15.88	9.52/19.05
	Max. pipe length	m	30	50
	Max. difference in level	m	10	20
Ambient temperature	Cooling		18~43	18~43
	Heating		-15~24	-15~24
Qty'per 20' /40' /40'HQ	Outdoor unit	78/145/145	52/106/106	
Remarks:1.The above design and specifications are subject to change without prior notice for product improvement.				

TRANE Model		48K	60K	
		4TXK6548G1000AA	4TXK6560G1000AA	
Power supply	V-ph-Hz	220-1-60	220-1-60	
Max. input consumption	W	5500	6200	
Max. input current	A	25.5	28	
Compressor	Model	TNB306FWSMC	MNB40F	
	Type	ROTARY	ROTARY	
	Brand	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	
	Capacity	Btu/h	33800	44000
	Input	W	3065	4020
	Rated current(RLA)	A	9.48	15
	Locked rotor Amp(LRA)	A	/	/
	Thermal protector position		INTERNAL	INTERNAL
	Refrigerant oil	ml	1070	1100
Outdoor fan motor	Model	ZWK511B51006	"ZWK511B50004 SIC-71FW-F190-4"	
	Qty	2	2	
	Input	W	100x2	140x2
	Speed	r/min	850	750
Outdoor coil	Number of rows	2	3	
	Tube pitch(a)* row	mm	21x18.186	21x18.186
	Fin spacing	mm	1.4	1.45
	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	φ7 / Inner grooved	φ7 / Inner grooved
	Coil length * height * width	mm	970x1197x36.37	1005x1302x39.9
	Number of circuits		12	12
Outdoor noise level (sound pressure)	dB(A)	58	61	
Throttle type		EEV	EEV	
Outdoor unit	Dimension(WxDxH)	mm	948x340x1250	960x370x1350
	Packing(WxDxH)	mm	1095x410x1400	1090x480x1500
	Net/Gross weight	kg	104/112	106/120
Refrigerant type/ Quantity	Type		R410A	R410A
	Charged volume	kg	3.0	4.2
Design pressure	MPa	4.15/1.5	4.15/1.5	
Refrigerant piping	Liquid side/ Gas side	mm(inch)	9.52/19.05	9.52/19.05
	Max. pipe length	m	50	50
	Max. difference in level	m	20	20
Ambient temperature	Cooling	°C	18~43	18~43
	Heating	°C	-15~24	-15~24
Qty'per 20' /40' /40'HQ	Outdoor unit	27/55/55	24/48/48	
Remarks:1.The above design and specifications are subject to change without prior notice for product improvement.				

		60K	
TRANE Model		4MXX6560G1000AA	
Power supply		V-ph-Hz	220-1-60
Cooling	Capacity (min - nor - max)	Btu/h	21,000 - 54,000 - 58,000
	Capacity (min - nor - max)	W	6,150 - 15,820 - 17,000
	Input	W	4,883
	EER	W/W	3.24
Heating	Capacity (min - nor - max)	Btu/h	21,100 - 55,000 - 58,300
	Capacity (min - nor - max)	W	6,180 - 16,115 - 17,080
	Input	W	5,036
	COP	W/W	3.20
Indoor fan motor	Model	ZWK511B500030	
	Qty	1	
	Input	W	150
	Capacitor	uF	/
	Speed(Hi/Med/Lo)	r/min	1250/1020/870
Indoor coil	Number of rows	3	
	Tube pitch(a)x row pitch(b)	mm	21x13.3
	Fin spacing	mm	1.3
	Fin type	Hydrophilic aluminium	
	Tube outside dia.and type	mm	φ7 / Inner grooved
	Coil length x height x width	mm	1333x294x39.9
	Number of circuits	10	
Indoor air flow(Hi/Med/Lo)		m <sup>3</sup> /h	2350/1980/1800
Indoor noise level (sound pressure)(Hi/Med/Lo)		dB(A)	52/49/46
Throttle type		In ODU	
Indoor unit	Dimension (WxDxH)	mm	1650x680x230
	Packing (WxDxH)	mm	1750x779x305
	Net/Gross weight	kg	46.8/54.5
Design pressure		MPa	4.15/1.5
Drainage water pipe diameter		mm	25
Refrigerant piping	Liquid side/Gas side	mm(inch)	9.52/19.05
Controller		Remote control	
Operation temperature		°C	16-30
Room temperature	Cooling	°C	18-32
	Heating	°C	15-27
Qty'per 20' /40' /40'HQ (indoor unit)		63/133/152	

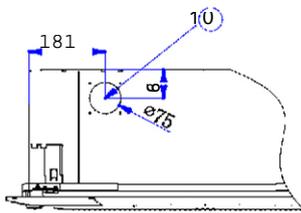
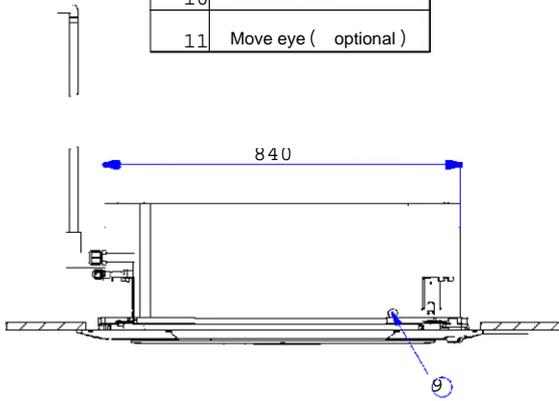
## 2 . Dimension

### 2.1 Dimension -4MXC6518G1000AA

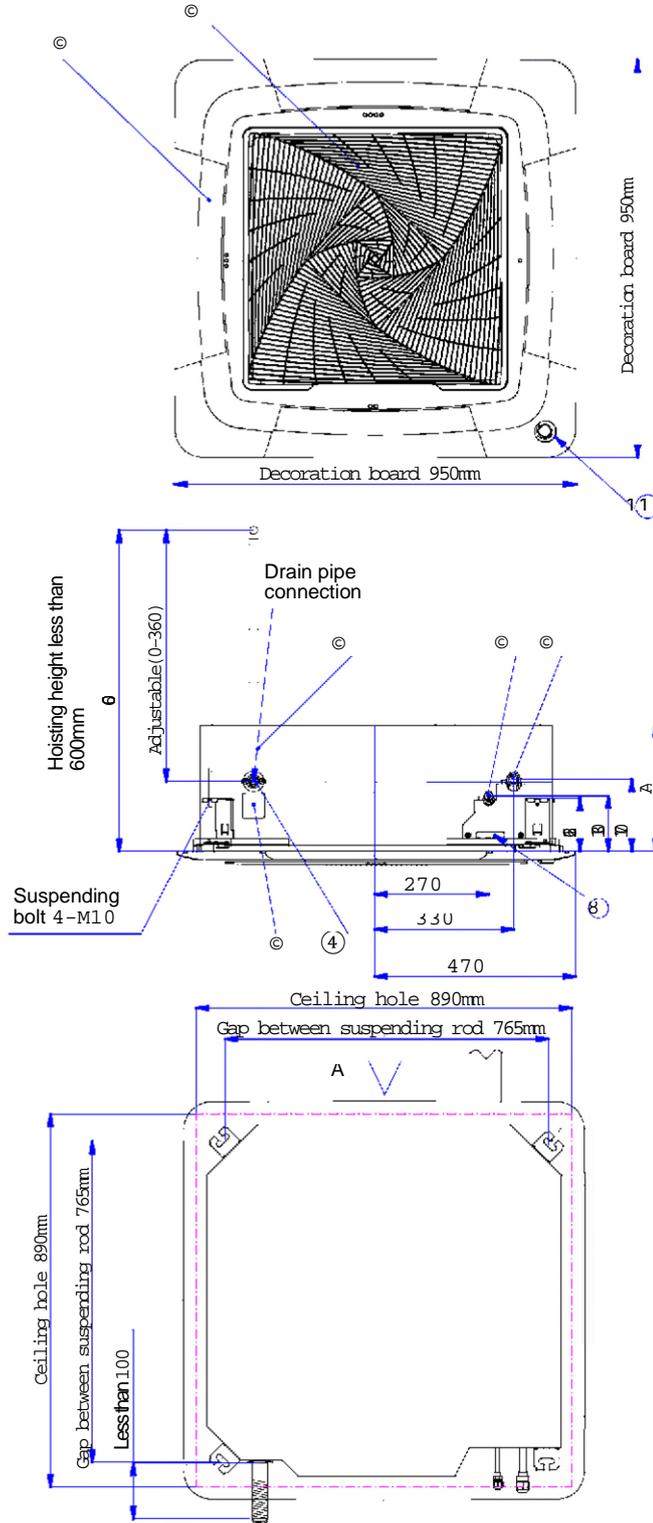


## 2.2 Dimension -4MXC6524G1000AA

Code	Name
1	Gas pipe
2	Liquid pipe
3	Observe plate
4	Drain pipe
5	Air return grille
6	Air outlet
7	Drain soft pipe (accessory)
8	Power supply inlet
9	PQ line inlet
10	Fresh air inlet
11	Move eye ( optional )



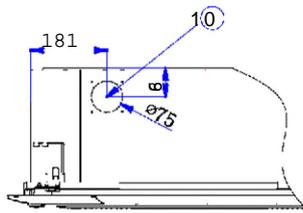
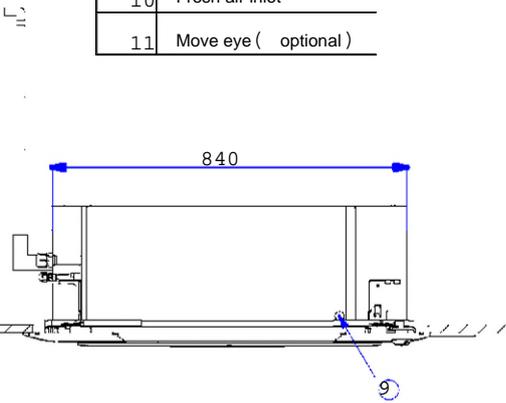
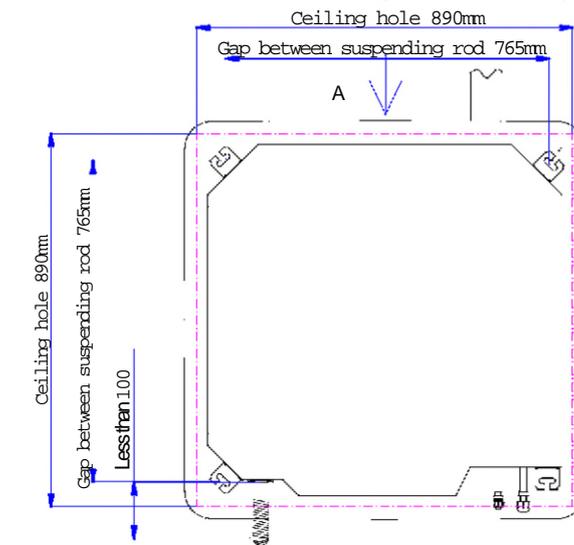
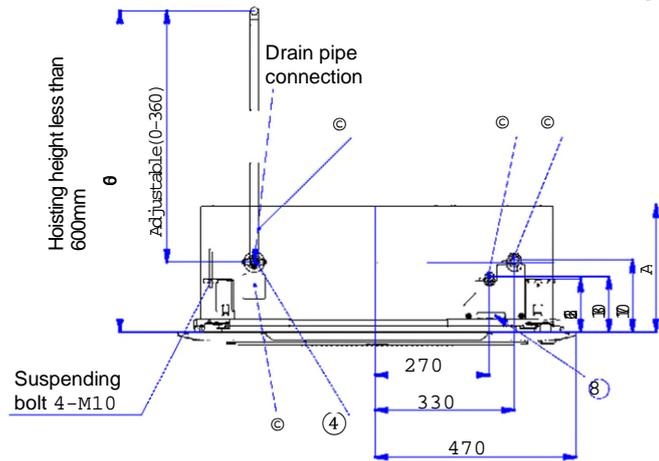
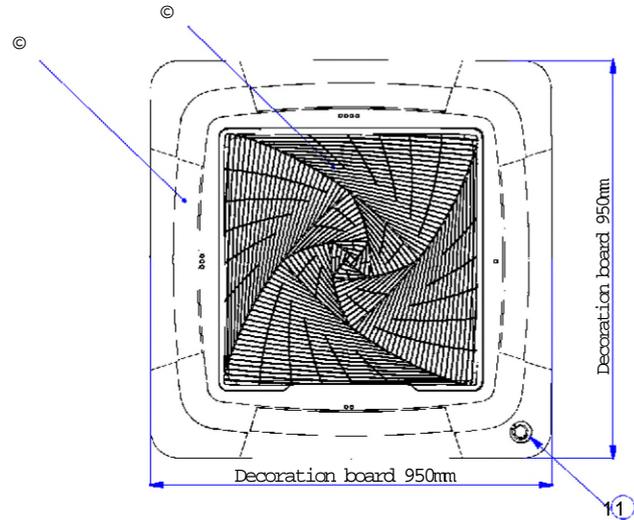
View A



Model	A (mm)
4MXC6524G1000AA	246

### 2.3 Dimension -4MXC6536G1000AA

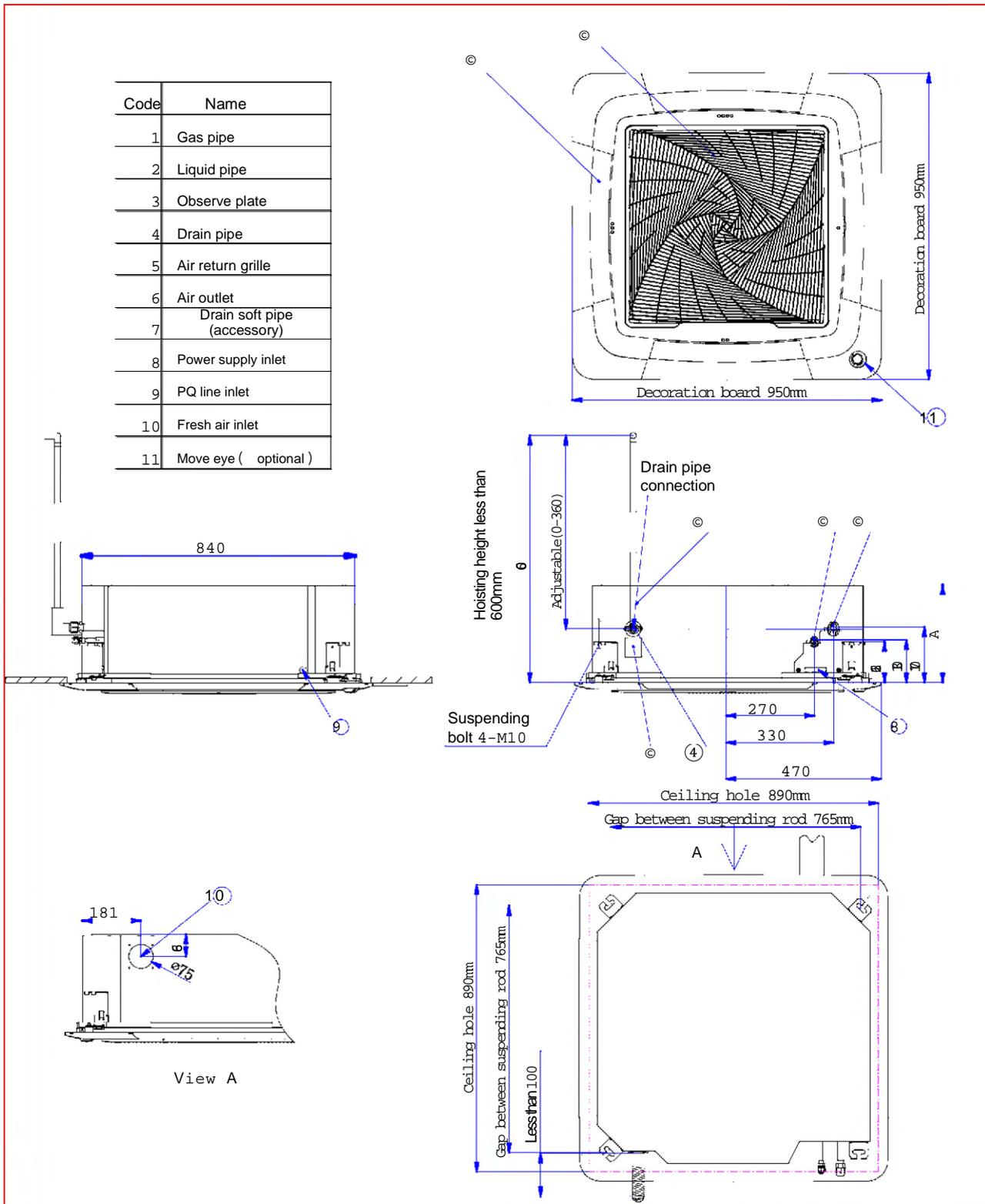
Code	Name
1	Gas pipe
2	Liquid pipe
3	Observe plate
4	Drain pipe
5	Air return grille
6	Air outlet
7	Drain soft pipe (accessory)
8	Power supply inlet
9	PQ line inlet
10	Fresh air inlet
11	Move eye ( optional )



View A

Model	A (mm)
4MXC6536G1000AA	246

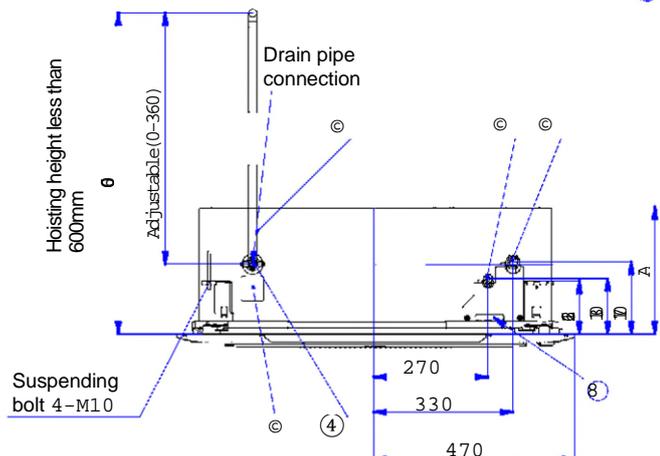
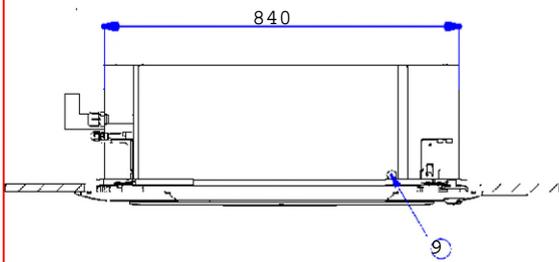
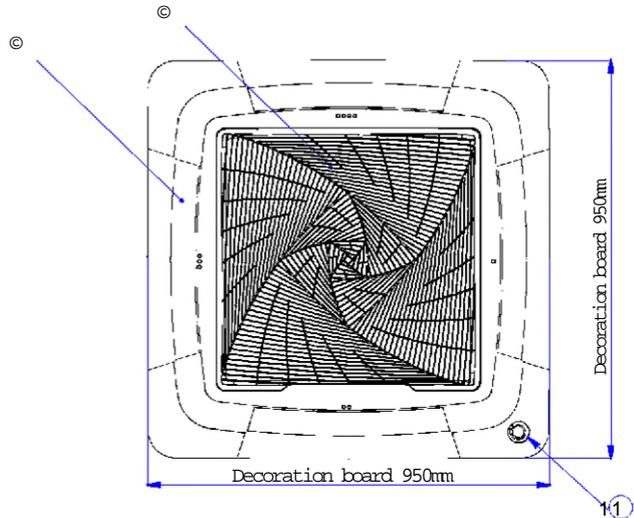
## 2.4 Dimension -4MXC6548G1000AA



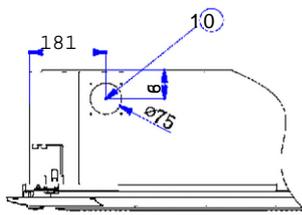
Model	A (mm)
4MXC6548G1000AA	288

## 2.5 Dimension -4MXC6560G1000AA

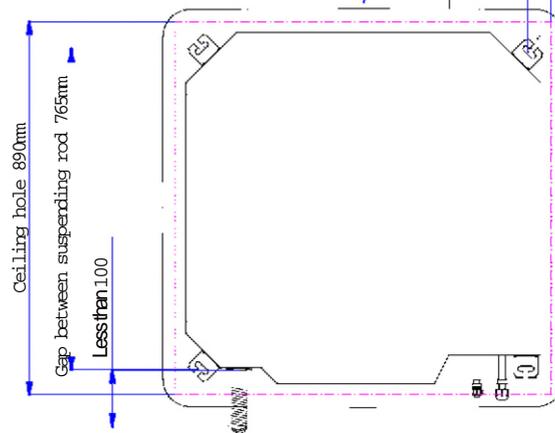
Code	Name
1	Gas pipe
2	Liquid pipe
3	Observe plate
4	Drain pipe
5	Air return grille
6	Air outlet
7	Drain soft pipe (accessory)
8	Power supply inlet
9	PQ line inlet
10	Fresh air inlet
11	Move eye ( optional )



Ceiling hole 890mm  
Gap between suspending rod 765mm

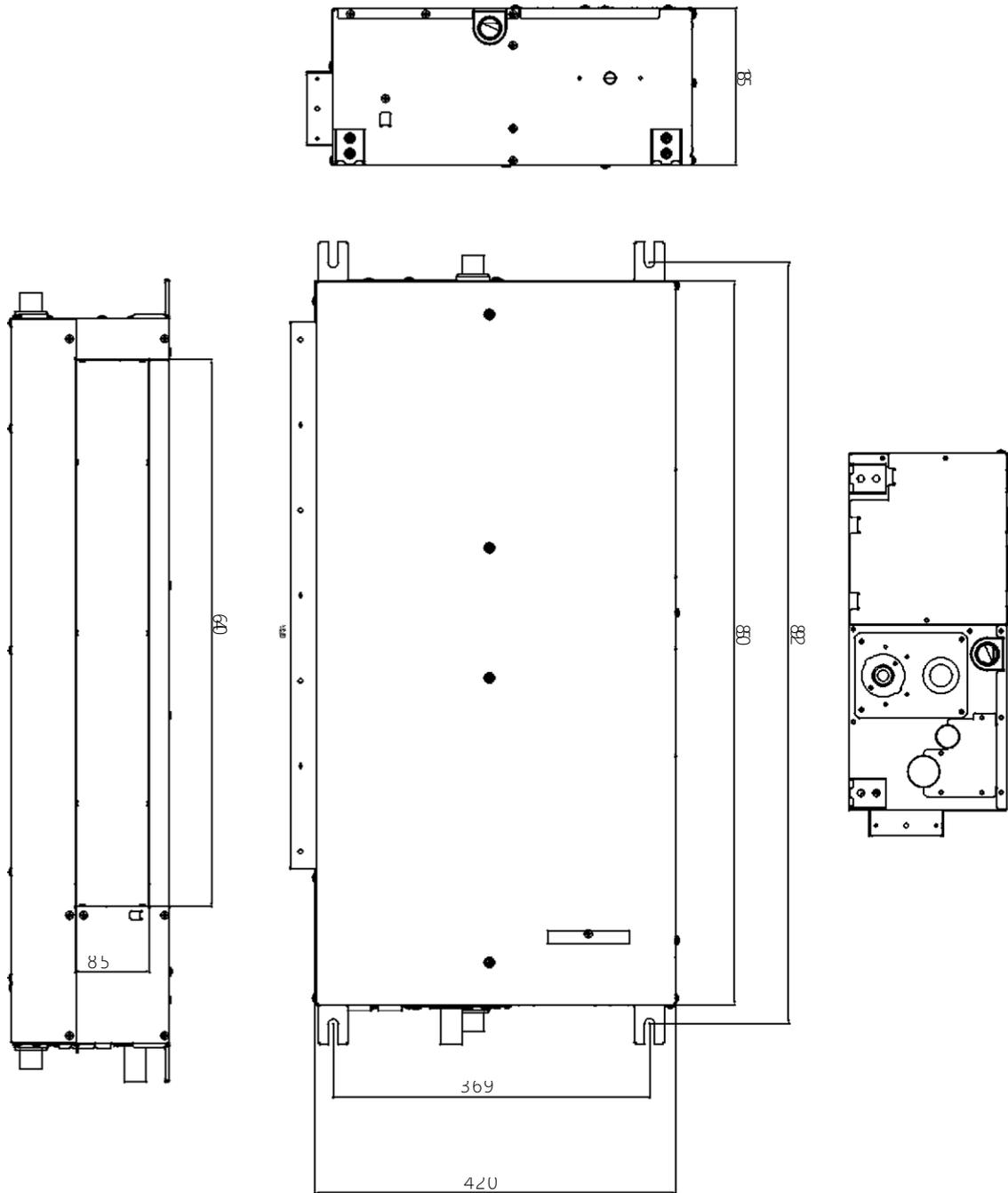


View A

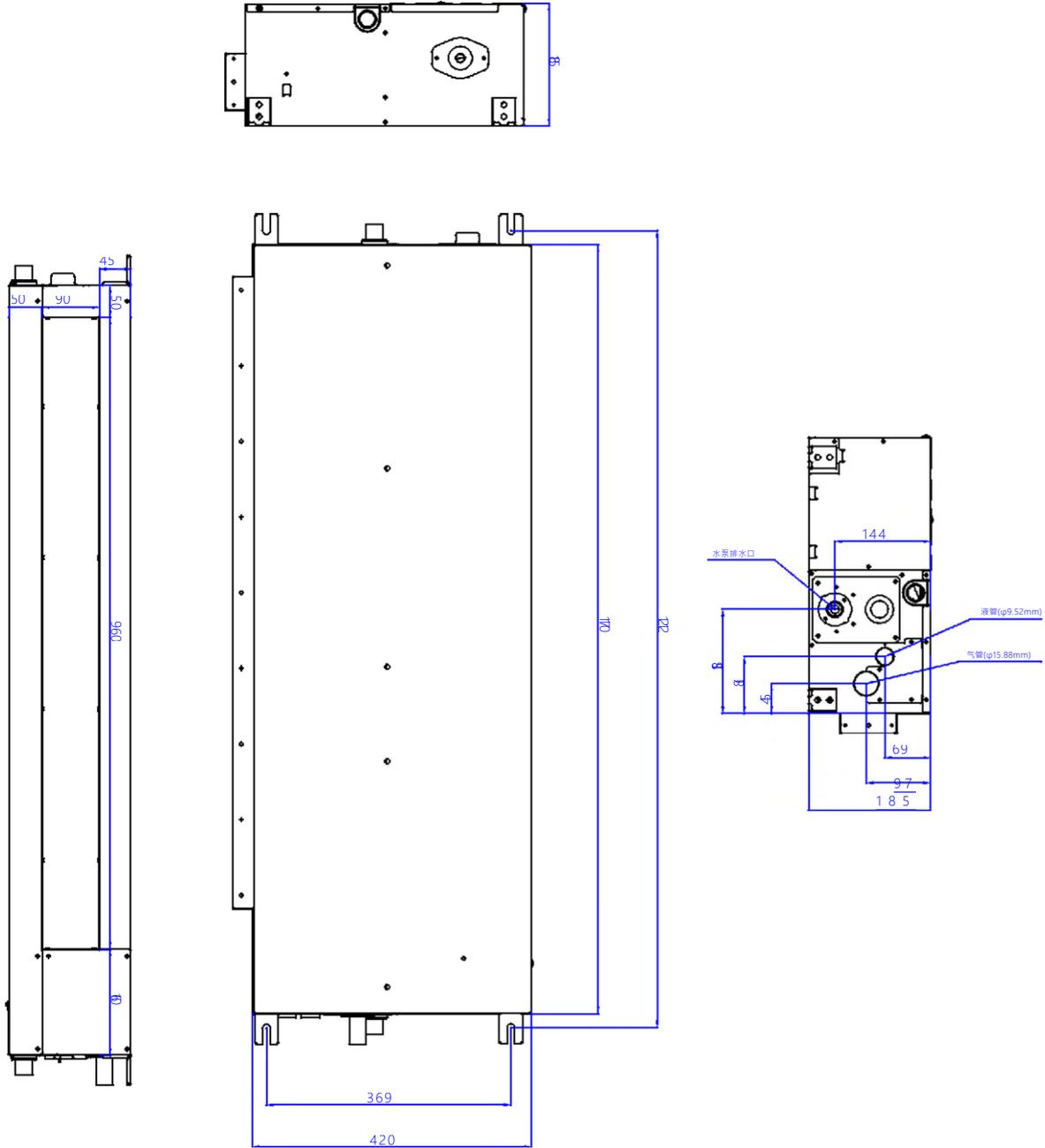


Model	A (mm)
4MXC6560G1000AA	288

## 2.6 Dimension -4MXD6512G1000AA

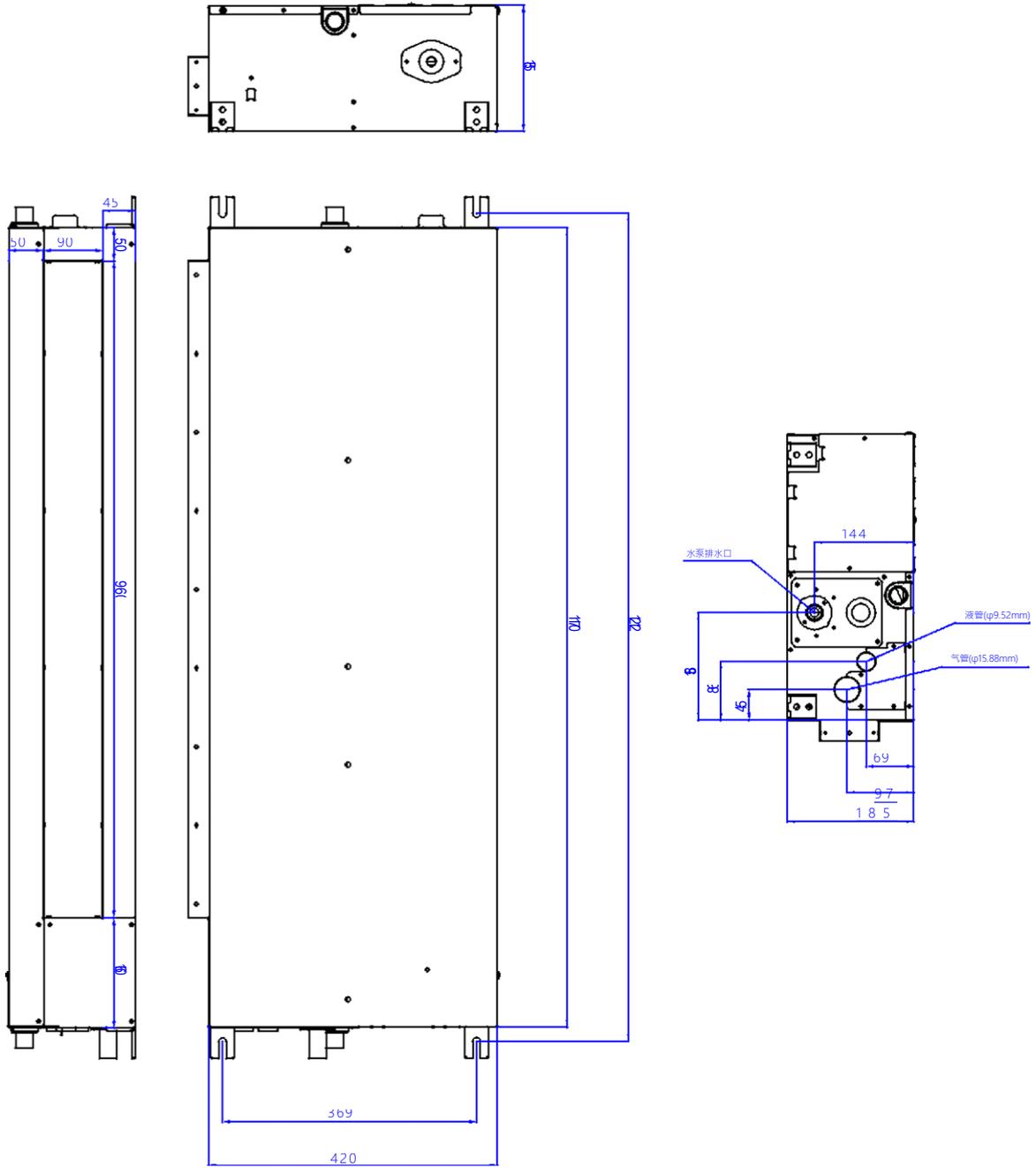


## 2.7 Dimension -4MXD6518G1000AA

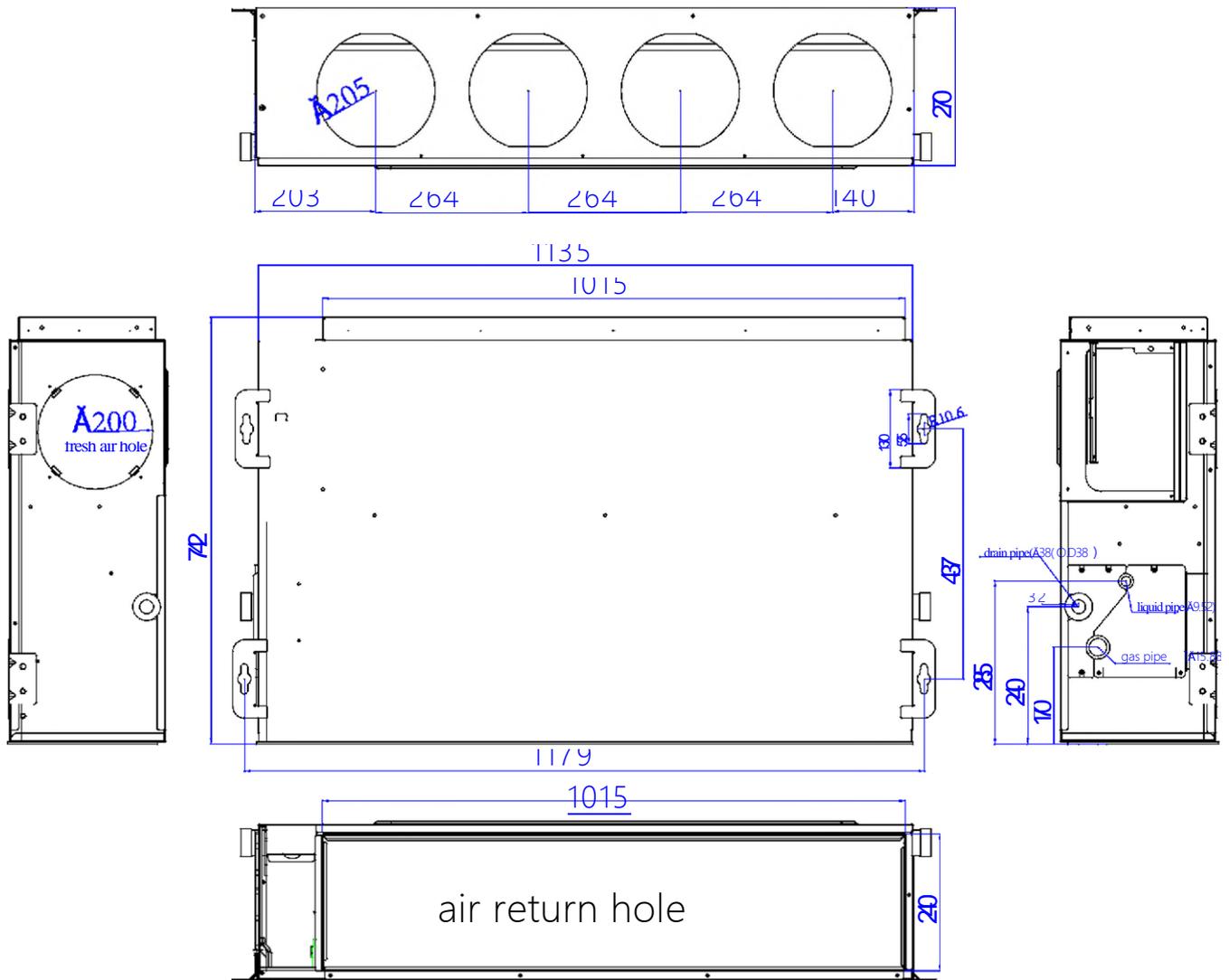




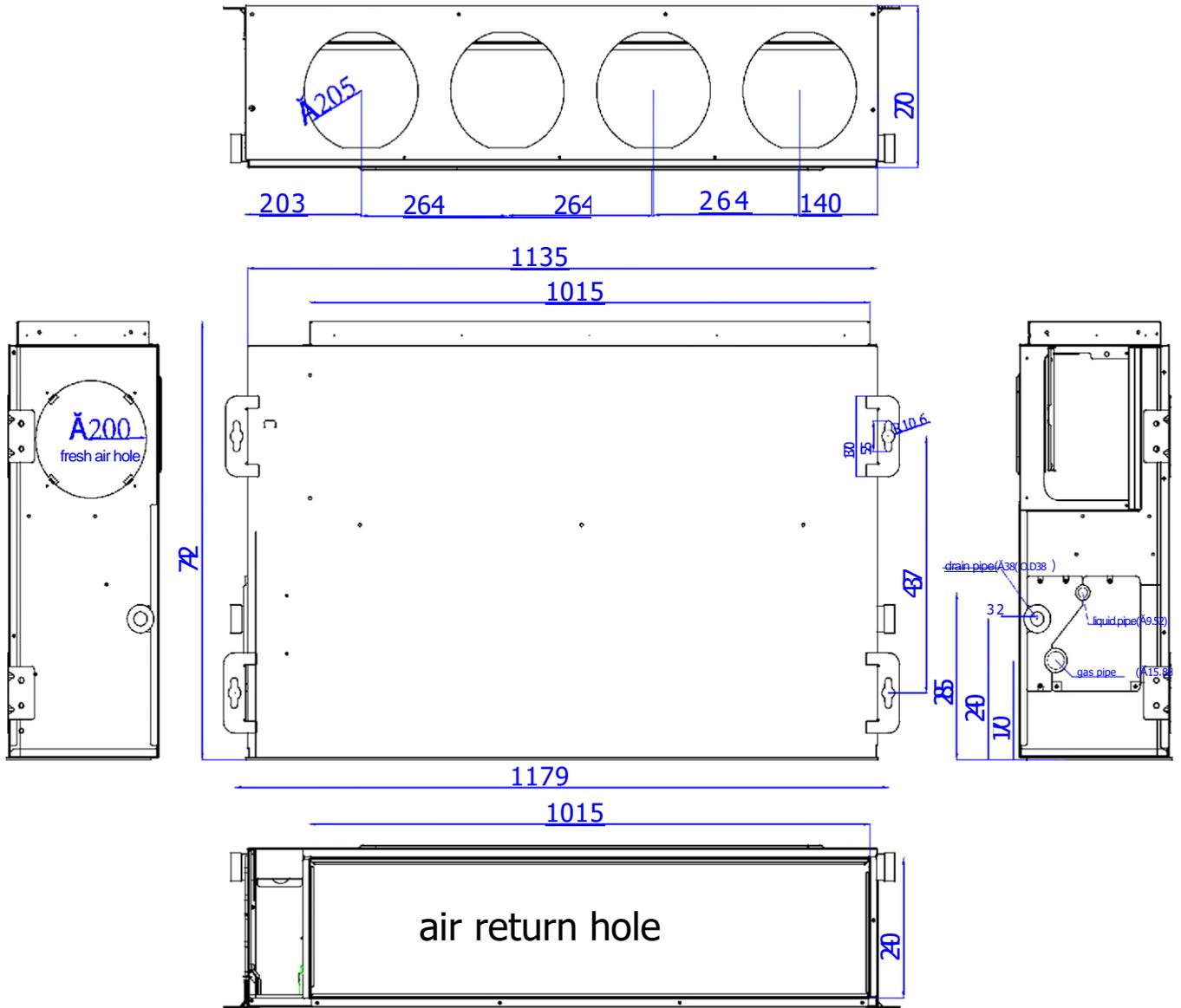
## 2.8 Dimension -4MXD6524G1000AA



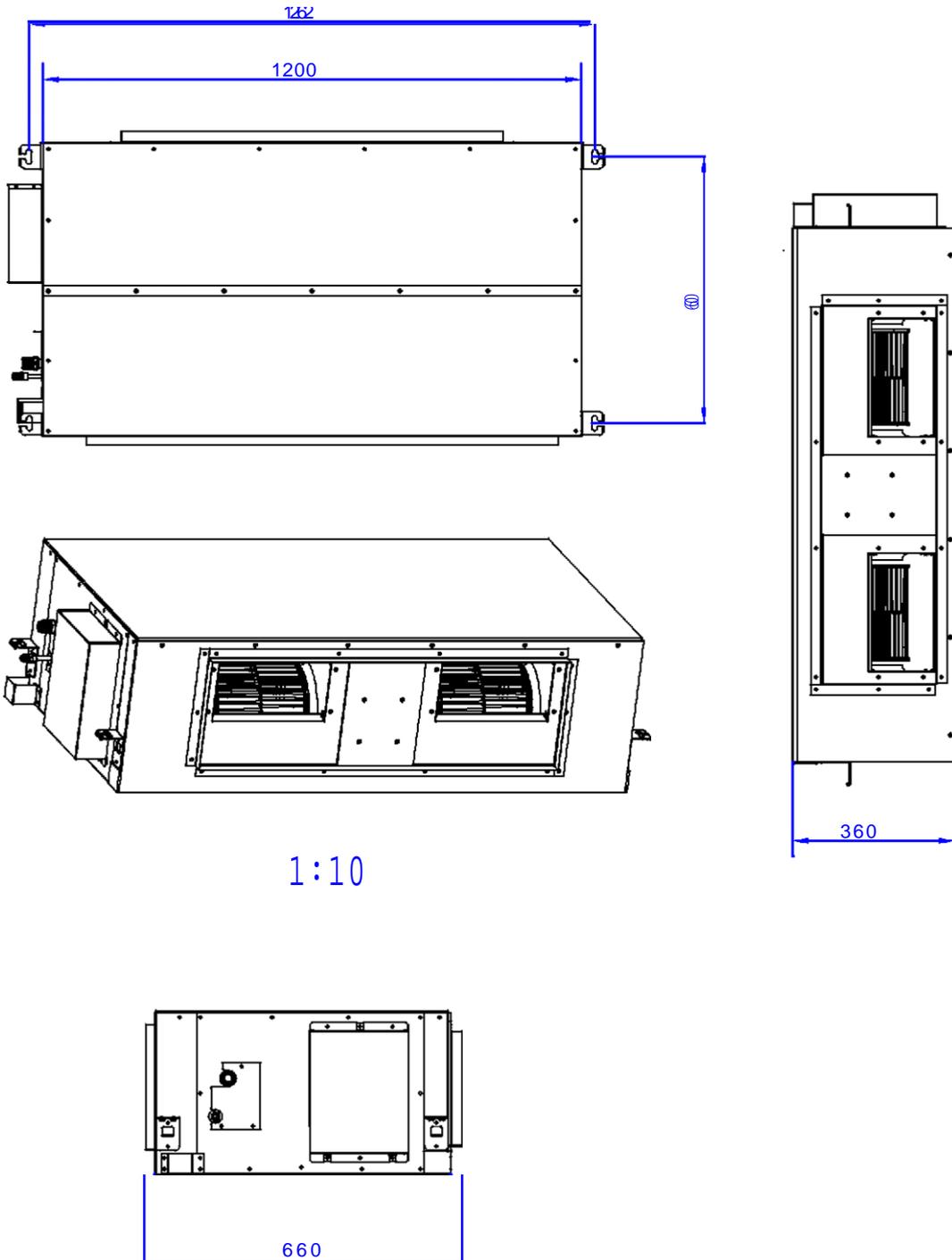
### 2.9 Dimension -4MXD6536G1000AA



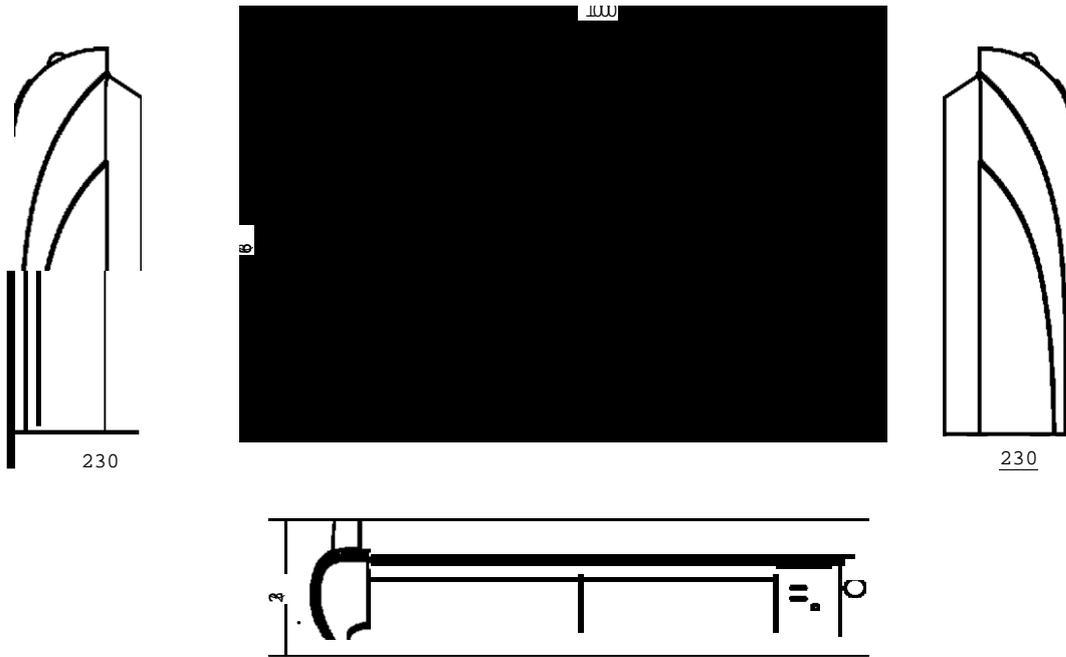
### 2.10 Dimension -4MXD6548G1000AA



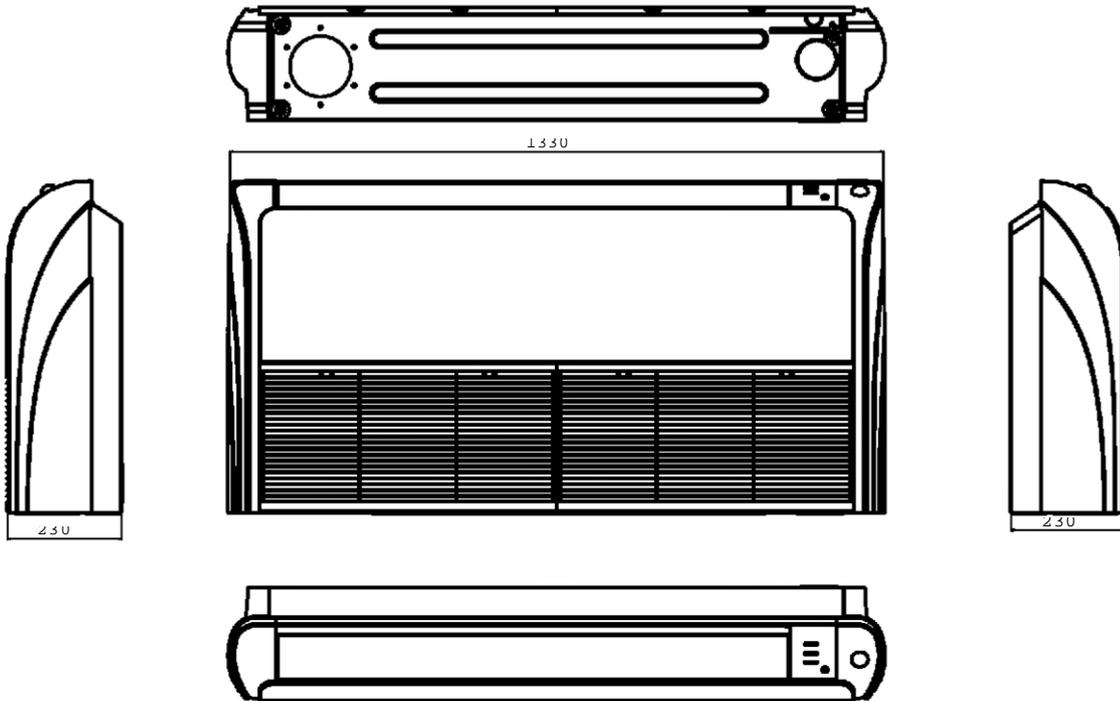
### 2.11 Dimension 4MXD6560G1000AA



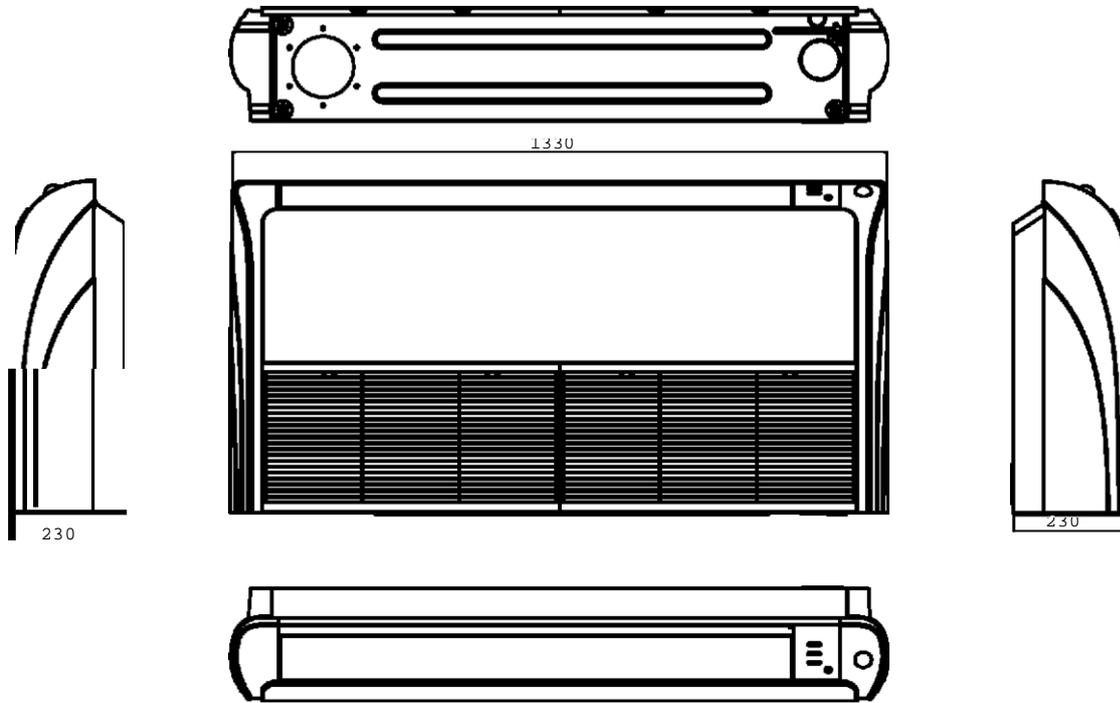
## 2.12 Dimension4MXX6518G1000AA



### 2.13 Dimension 4MXX6524G1000AA

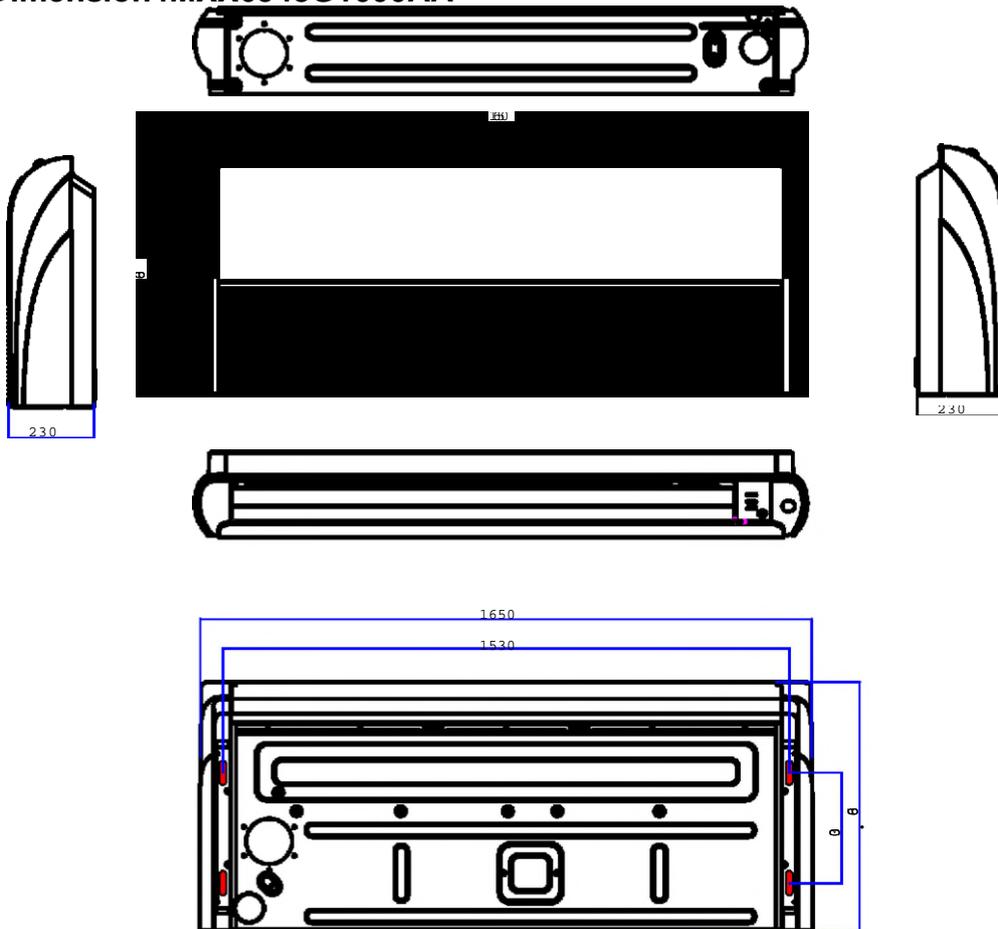


### 2.14 Dimension 4MXX6536G1000AA



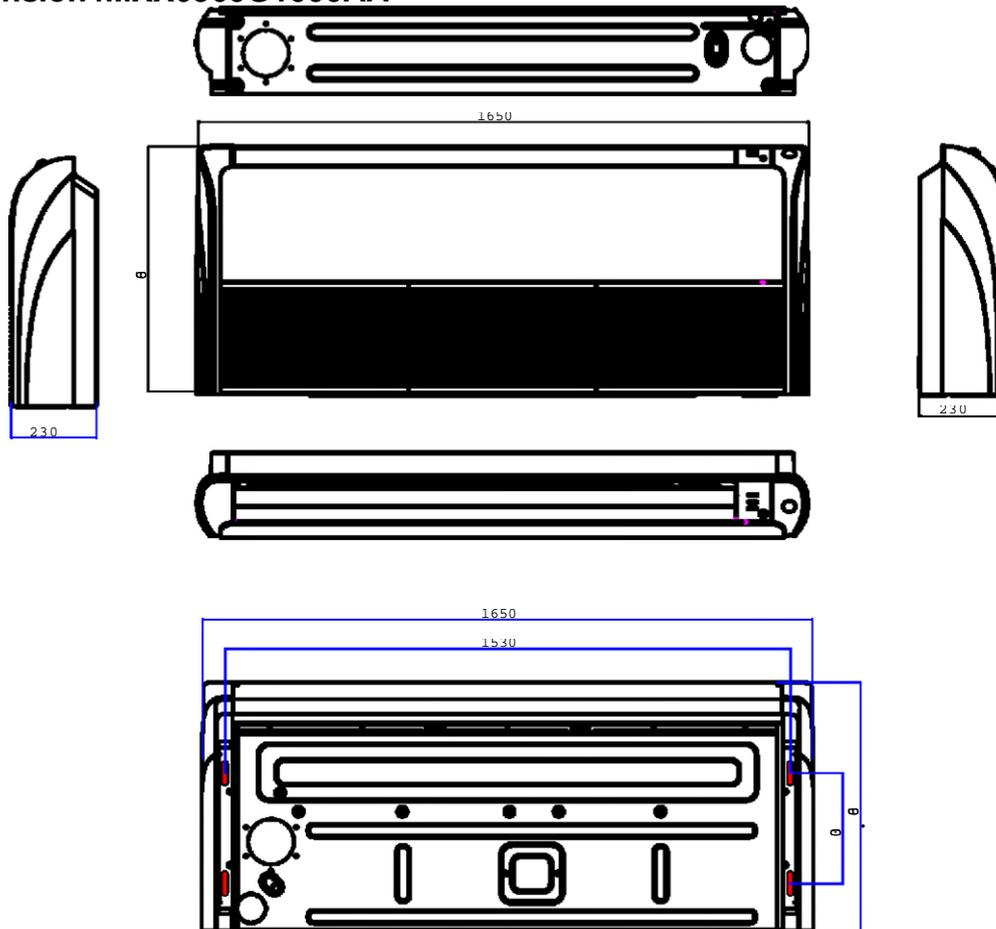
2<sup>5</sup>S<sup>2</sup>SK<sup>1</sup>FA AC<sup>140</sup>S<sup>2</sup>SK<sup>1</sup>FA

2.15 Dimension 4MXX6548G1000AA

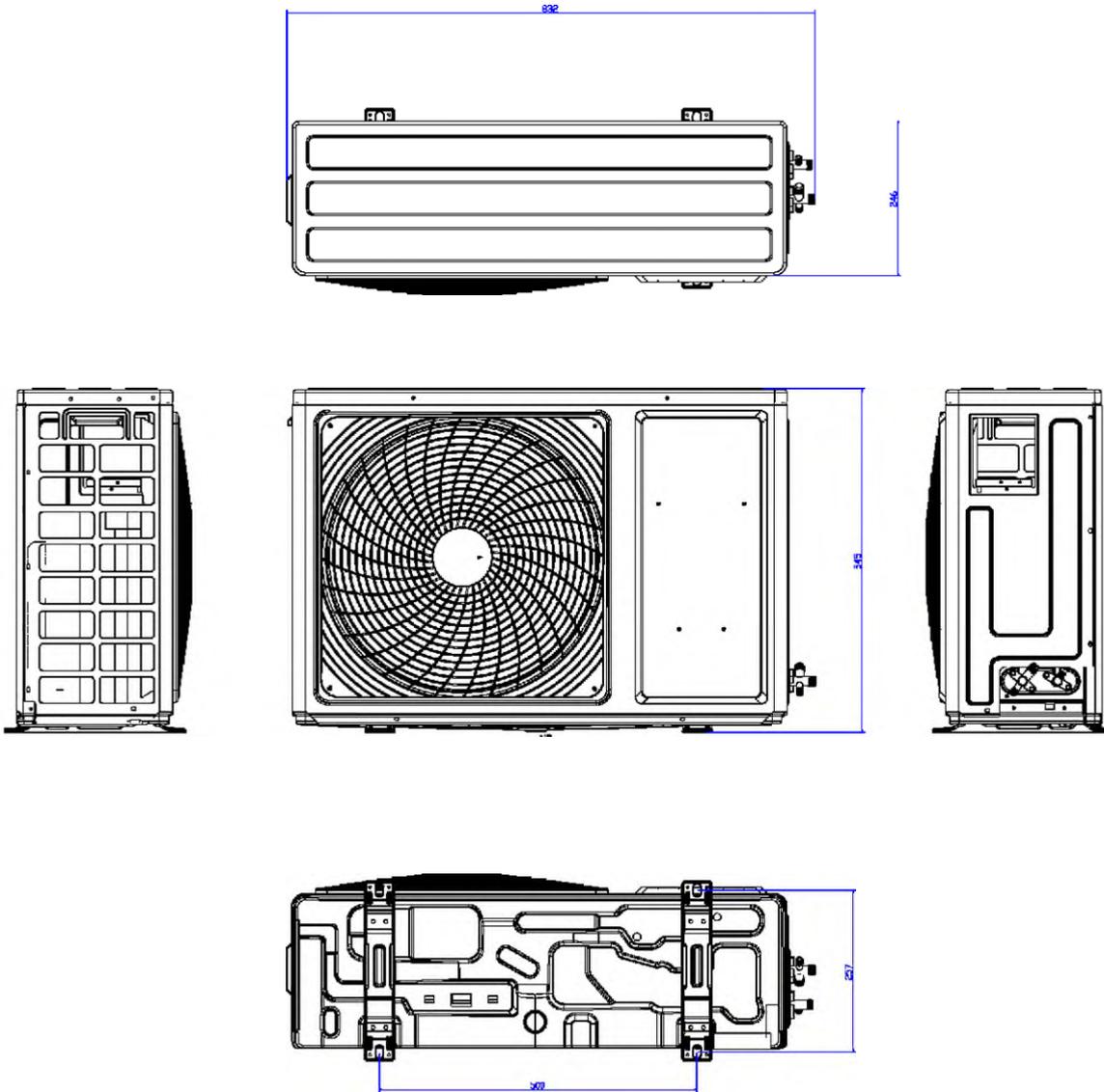


AC<sup>125</sup>S<sup>2</sup>SK<sup>1</sup>FA AC<sup>140</sup>S<sup>2</sup>SK<sup>1</sup>FA

### 2.16 Dimension 4MXX6560G1000AA

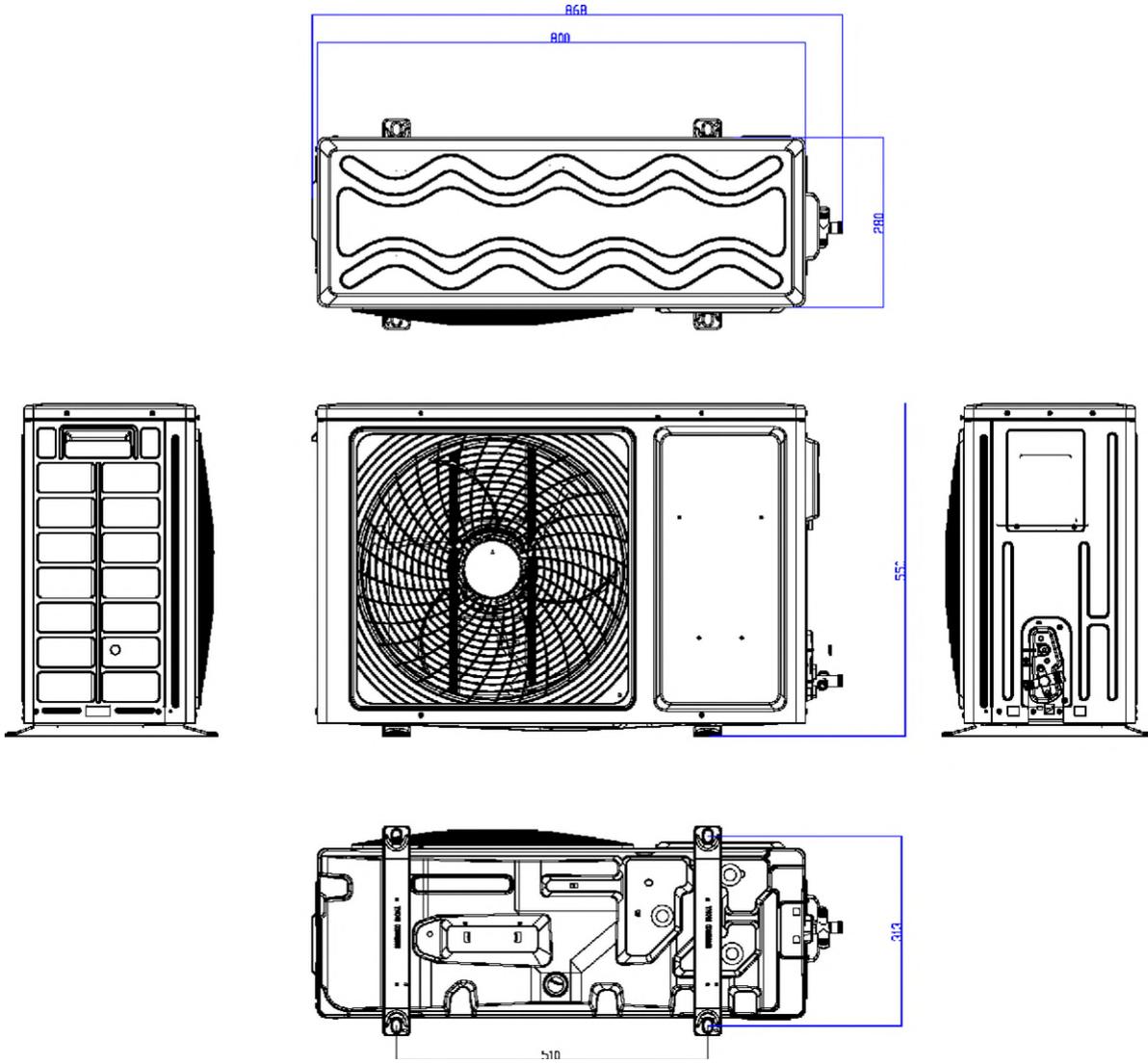


## 2.17 Dimension 4TXK6512G1000AA

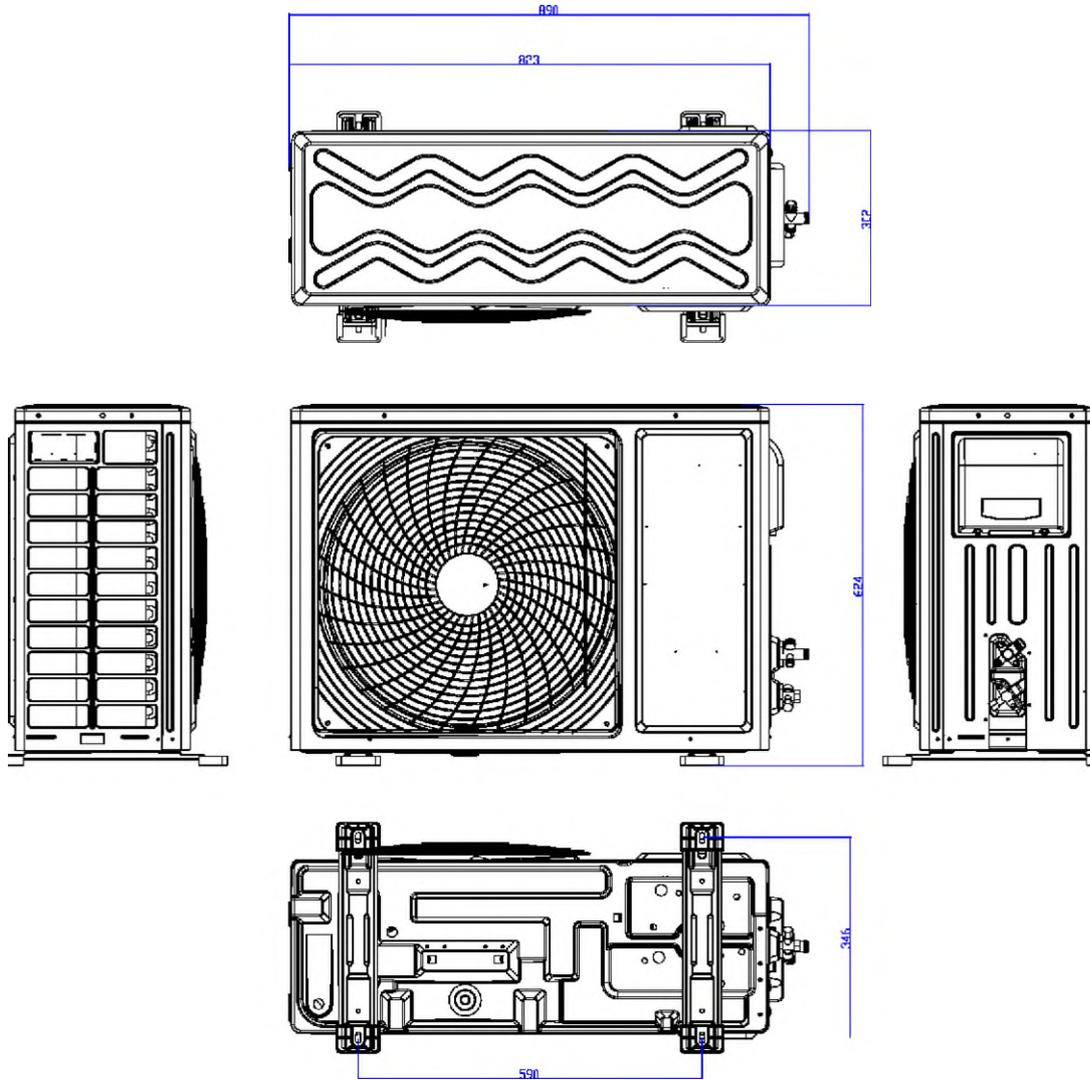




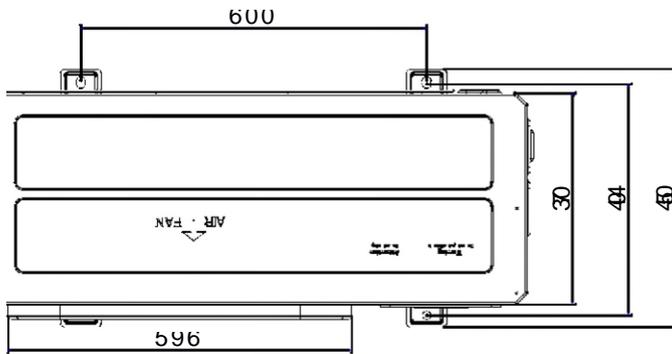
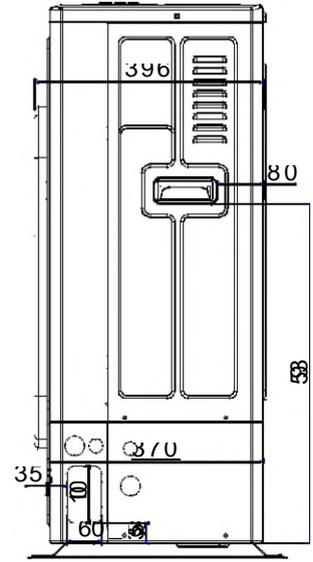
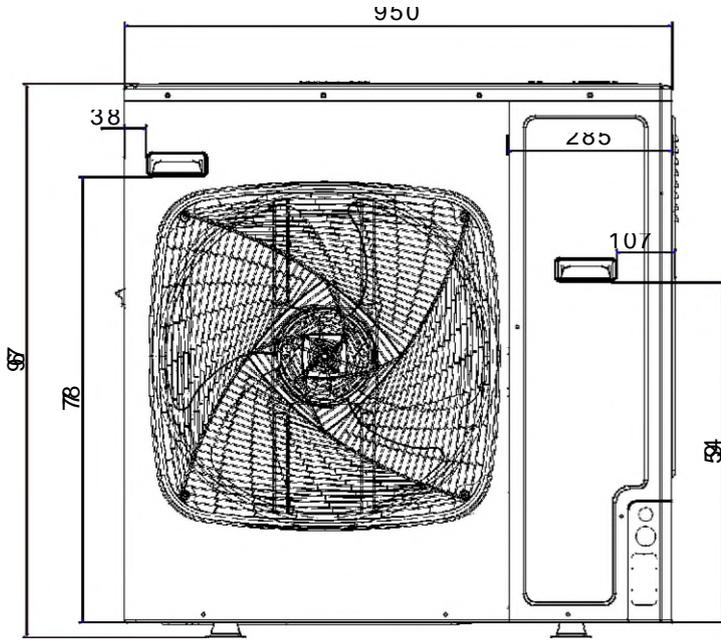
## 2.18 Dimension 4TXK6518G1000AA



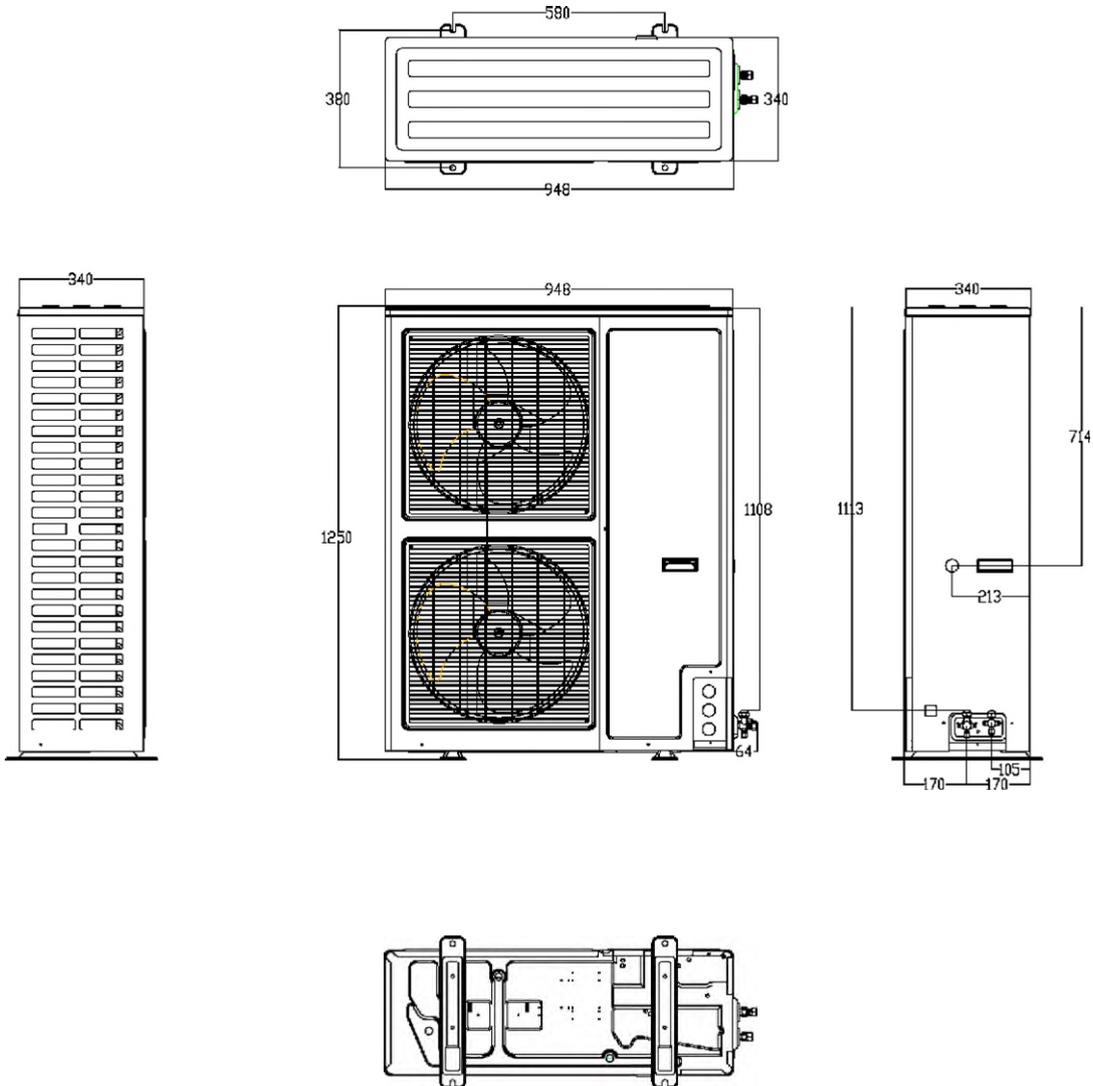
## 2.19 Dimension 4TXK6524G1000AA



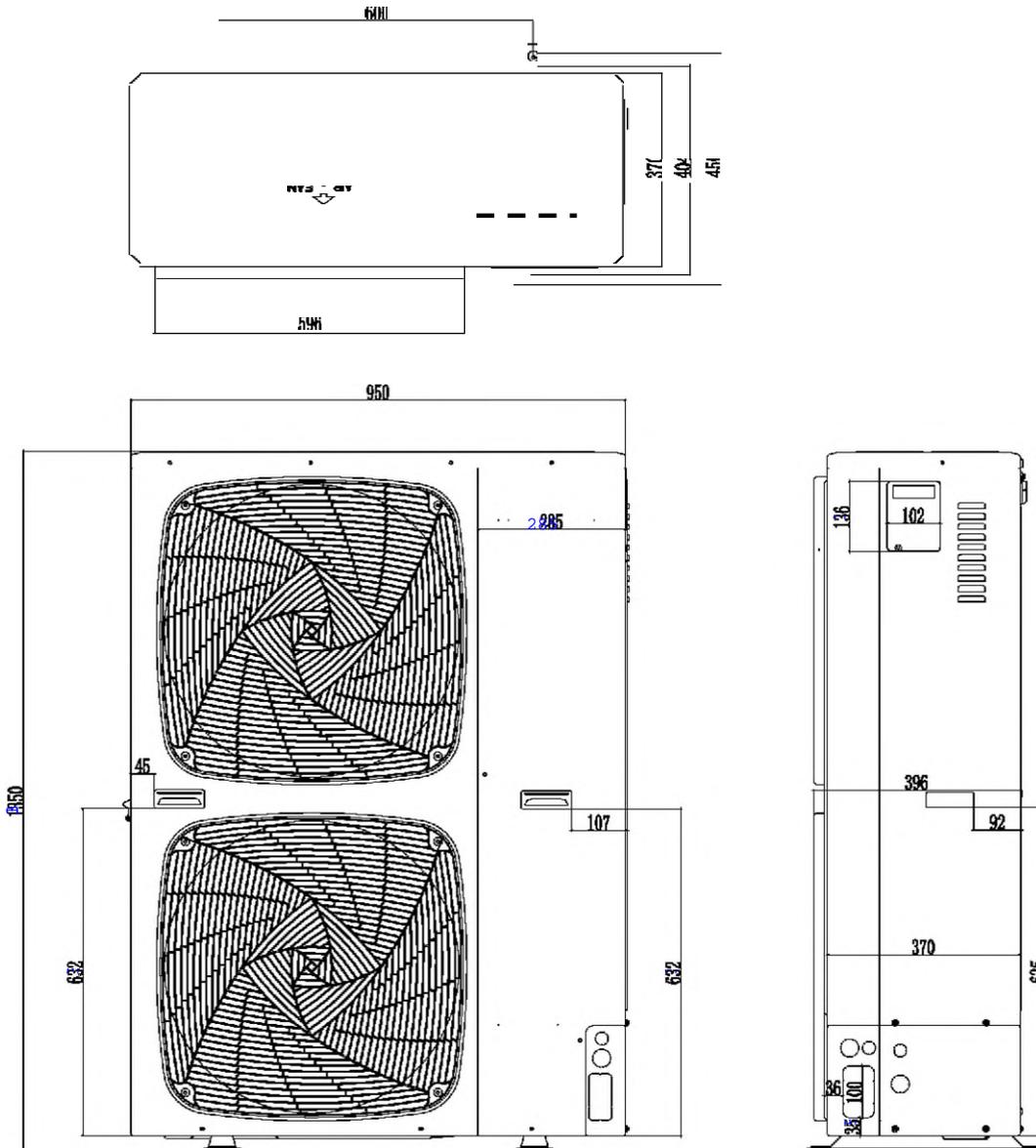
## 2.20 Dimension 4TXK6536G1000AA



## 2.21 Dimension 4TXK6548G1000AA

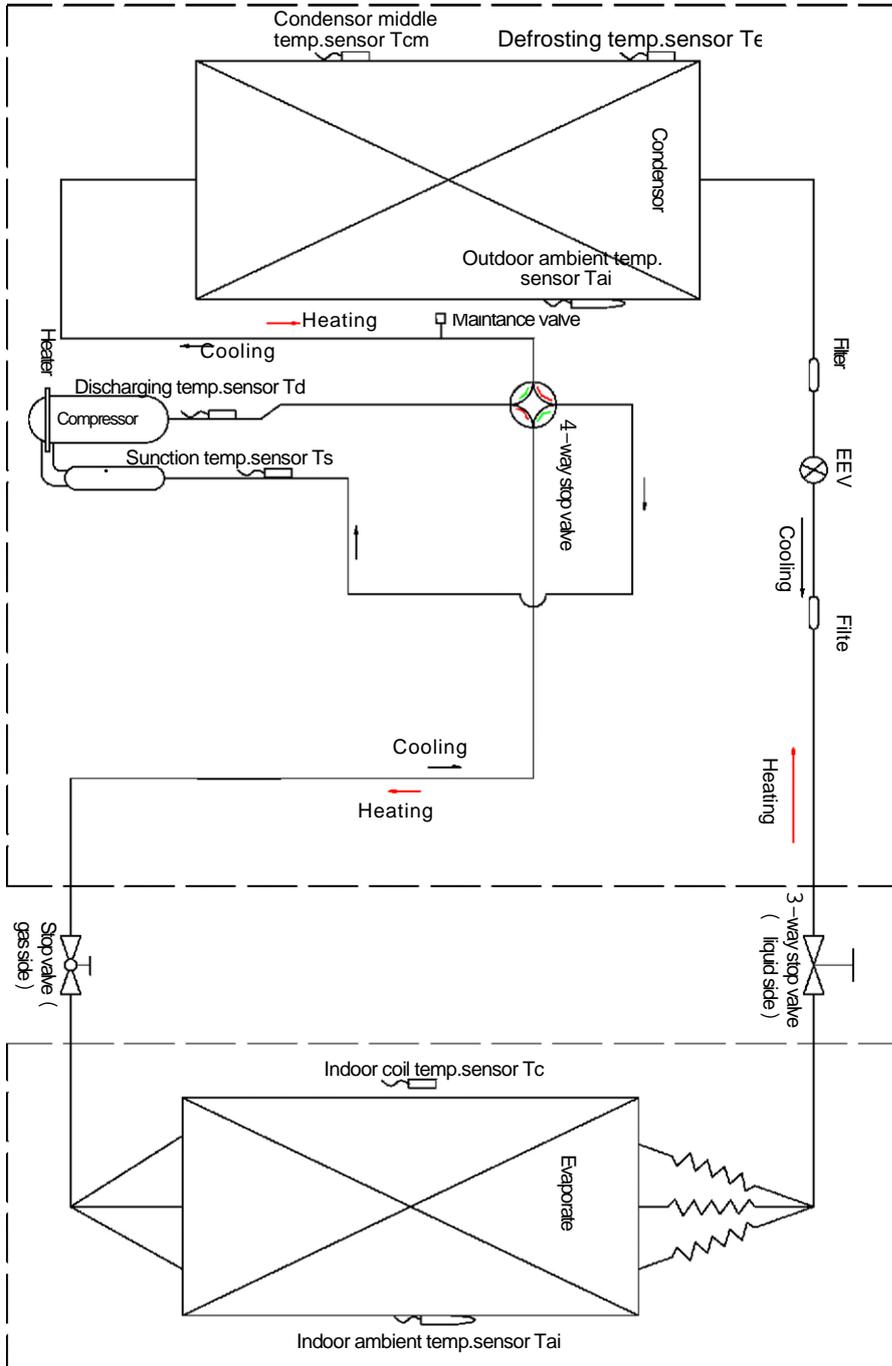


### 2.22 Dimension 4TXK6560G1000AA

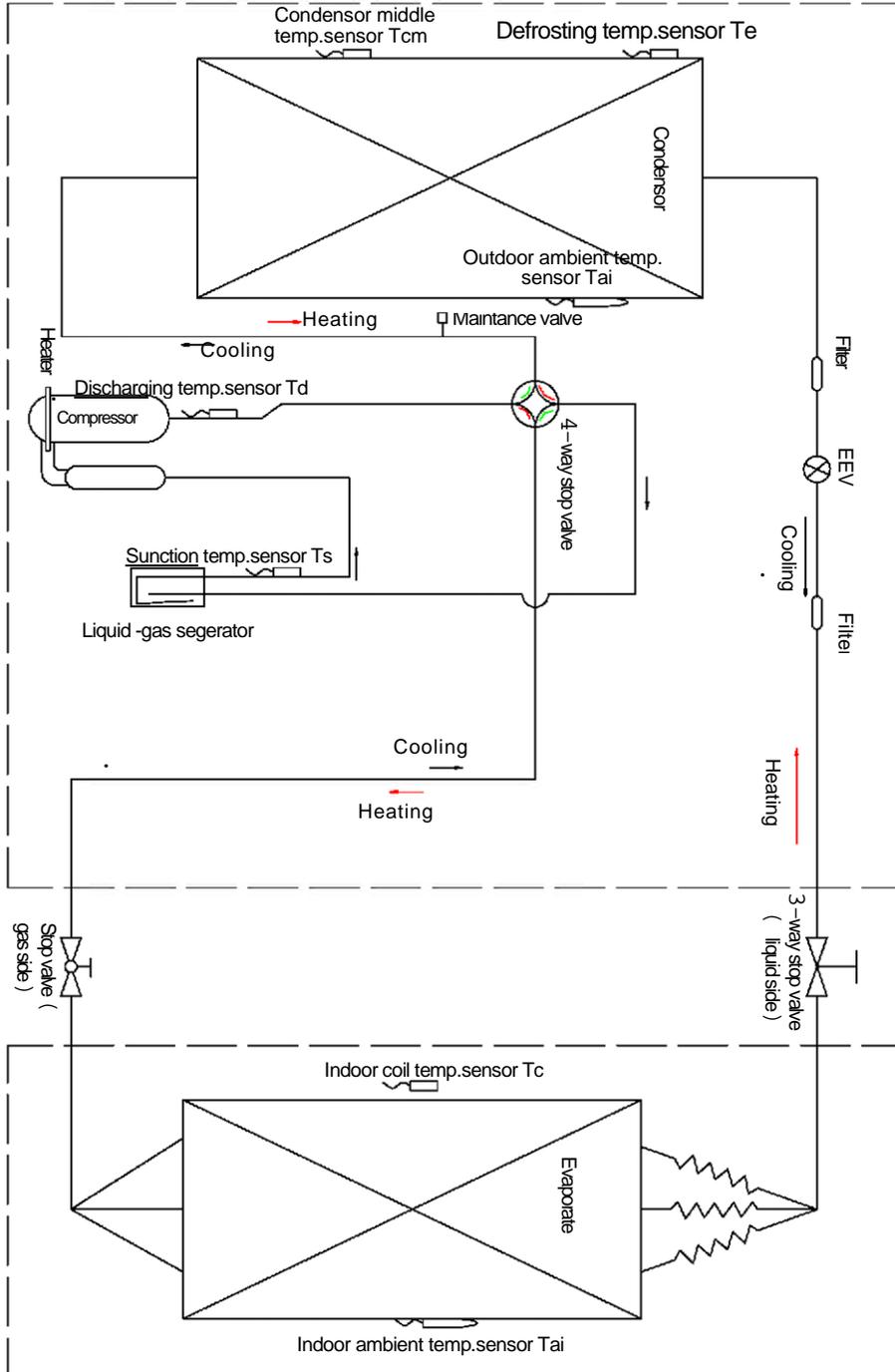


### 3 . Piping diagram

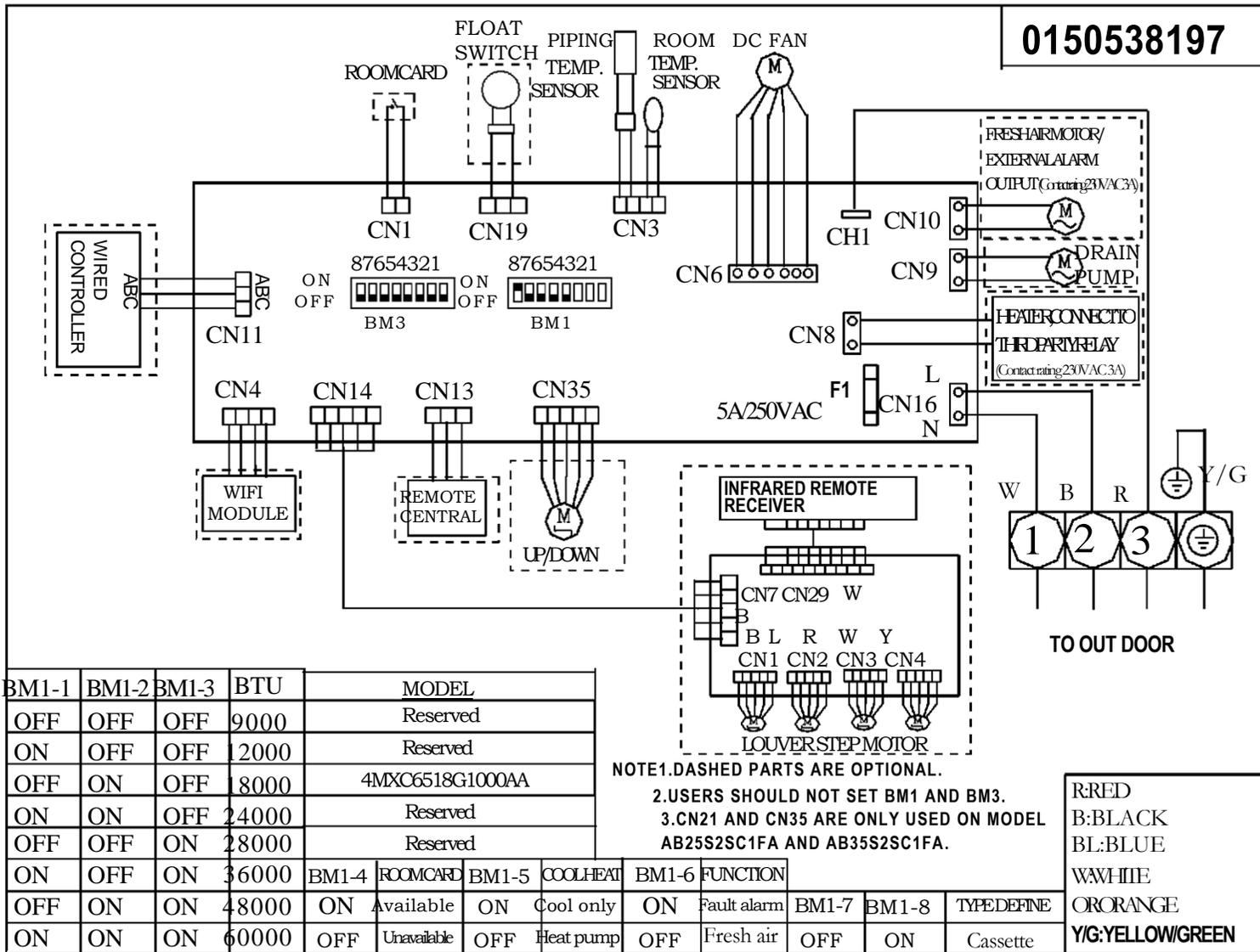
4TXK6512G1000AA 4TXK6518G1000AA 4TXK6524G1000AA



4TXK6536G1000AA 4TXK6548G1000AA 4TXK6560G1000AA



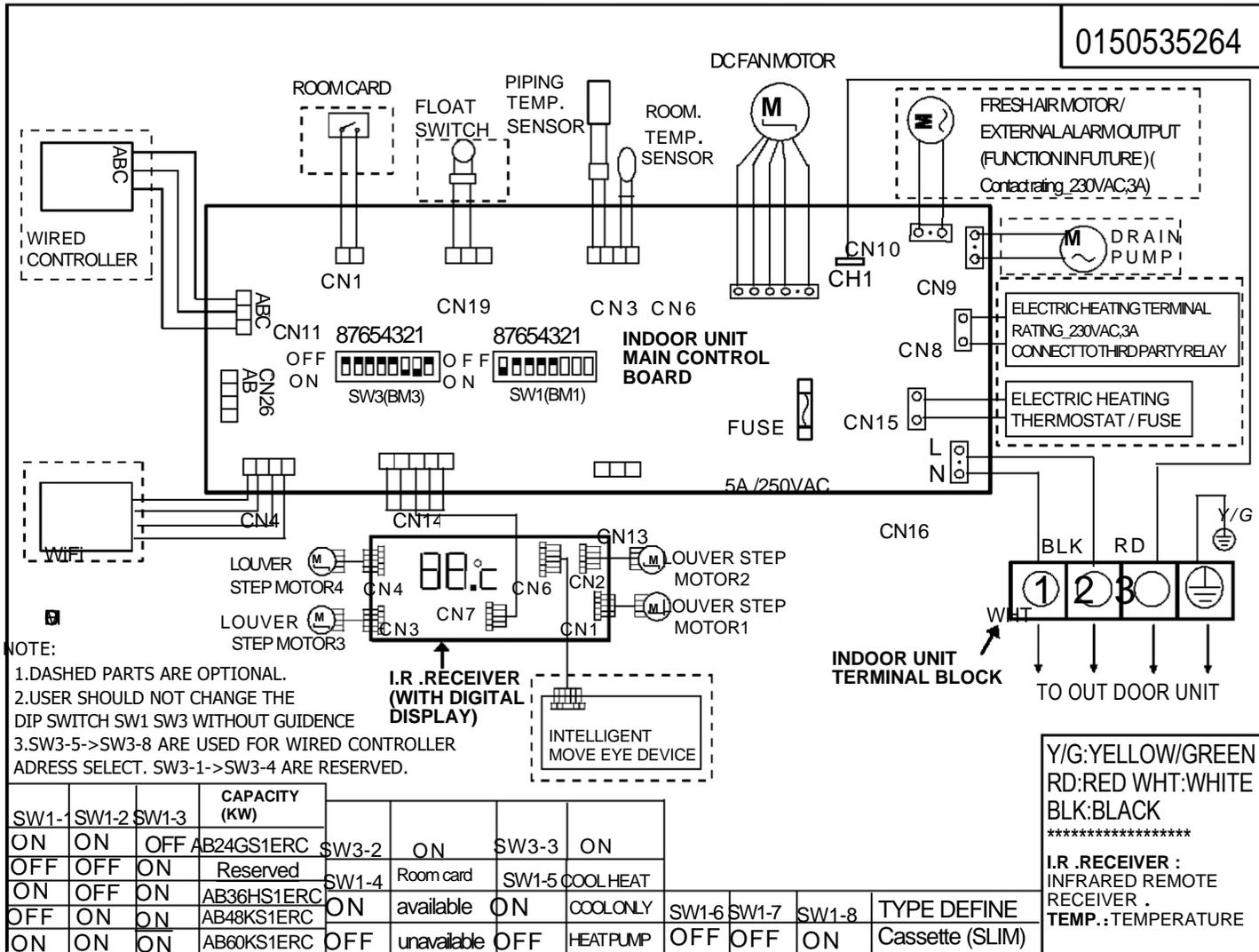
4. Wiring diagram  
4.1 4MXC6518G1000AA



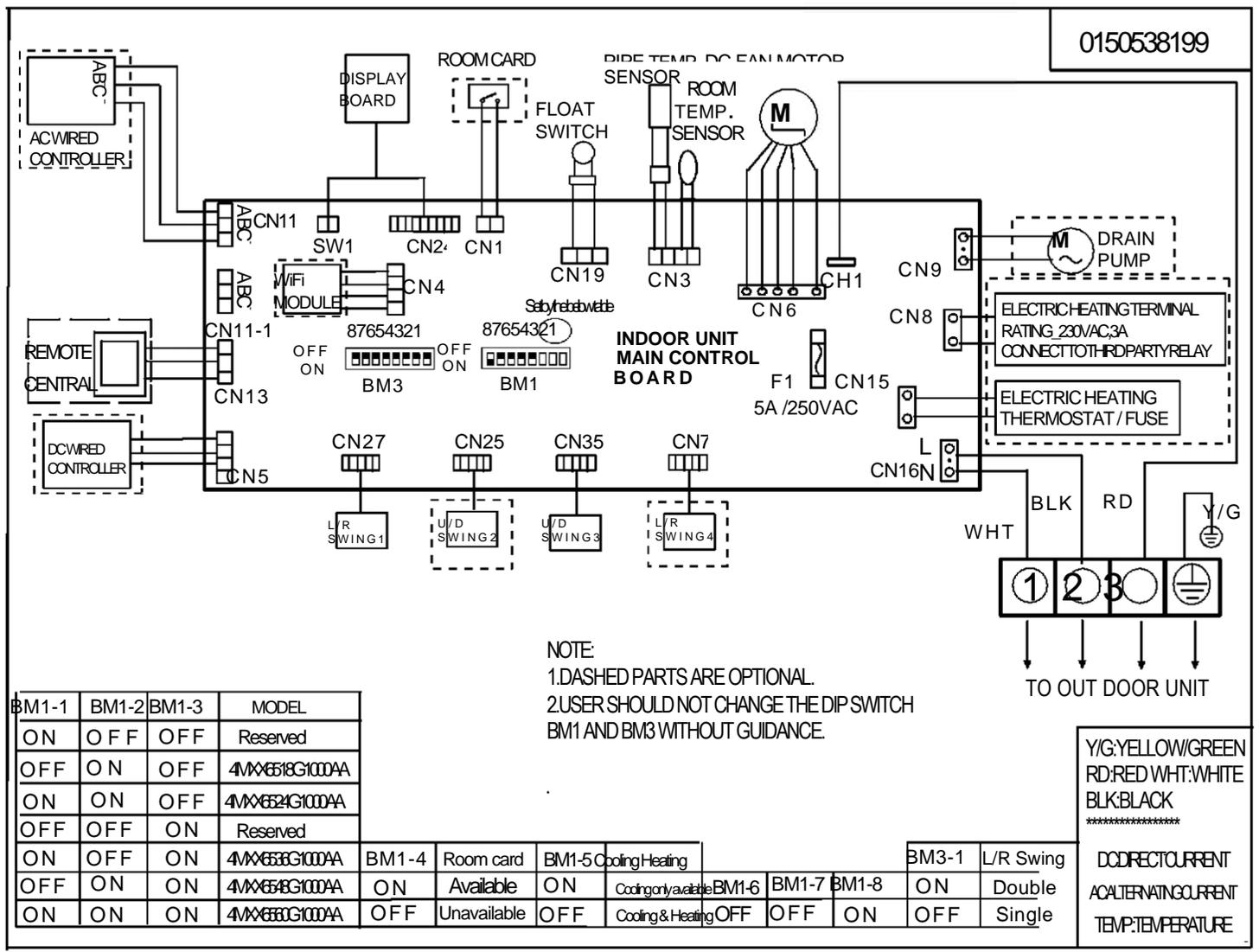


**TRANE**

4.2 4MXC6524G1000AA 4MXC6536G1000AA 4MXC6548G1000AA  
4MXC6560G1000AA



4.3 4MXX6518G1000AA 4MXX6524G1000AA 4MXX6536G1000AA 4MXX6548G1000AA  
 4MXX6560G1000AA



NOTE:  
 1. DASHED PARTS ARE OPTIONAL.  
 2. USER SHOULD NOT CHANGE THE DIP SWITCH  
 BM1 AND BM3 WITHOUT GUIDANCE.

BM1-1	BM1-2	BM1-3	MODEL
ON	OFF	OFF	Reserved
OFF	ON	OFF	4MXX6518G1000AA
ON	ON	OFF	4MXX6524G1000AA
OFF	OFF	ON	Reserved

BM1-4	Room card	BM1-5	Cooling/Heating	BM1-6	BM1-7	BM1-8	BM3-1	L/R Swing
ON	Available	ON	Cooling only available	ON	ON	ON	ON	Double
OFF	Unavailable	OFF	Cooling & Heating	OFF	OFF	ON	OFF	Single

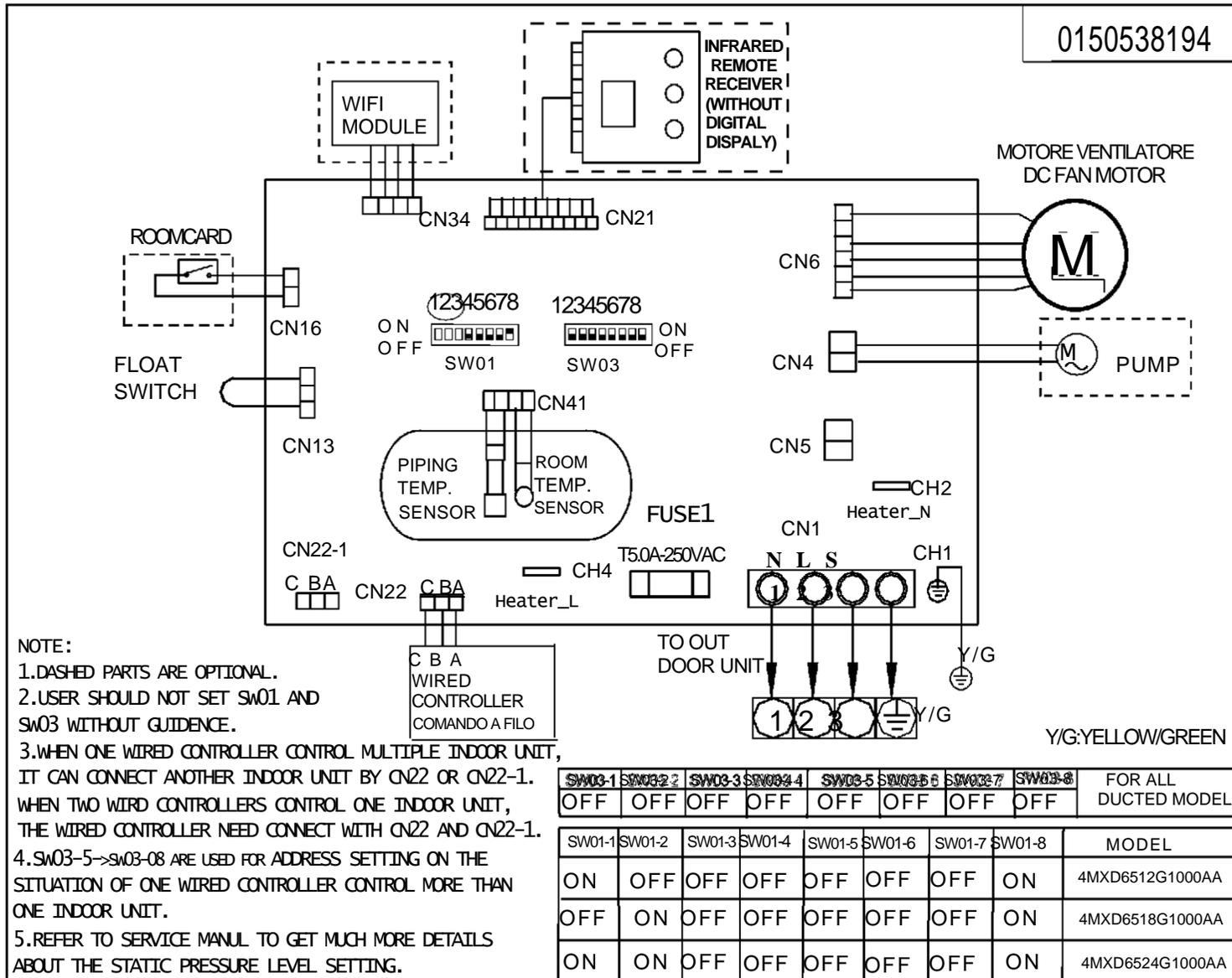
Y/G: YELLOW/GREEN  
 RD: RED WHT: WHITE  
 BLK: BLACK  
 \*\*\*\*\*  
 DD: DIRECT CURRENT  
 AC: ALTERNATING CURRENT  
 TEMP: TEMPERATURE

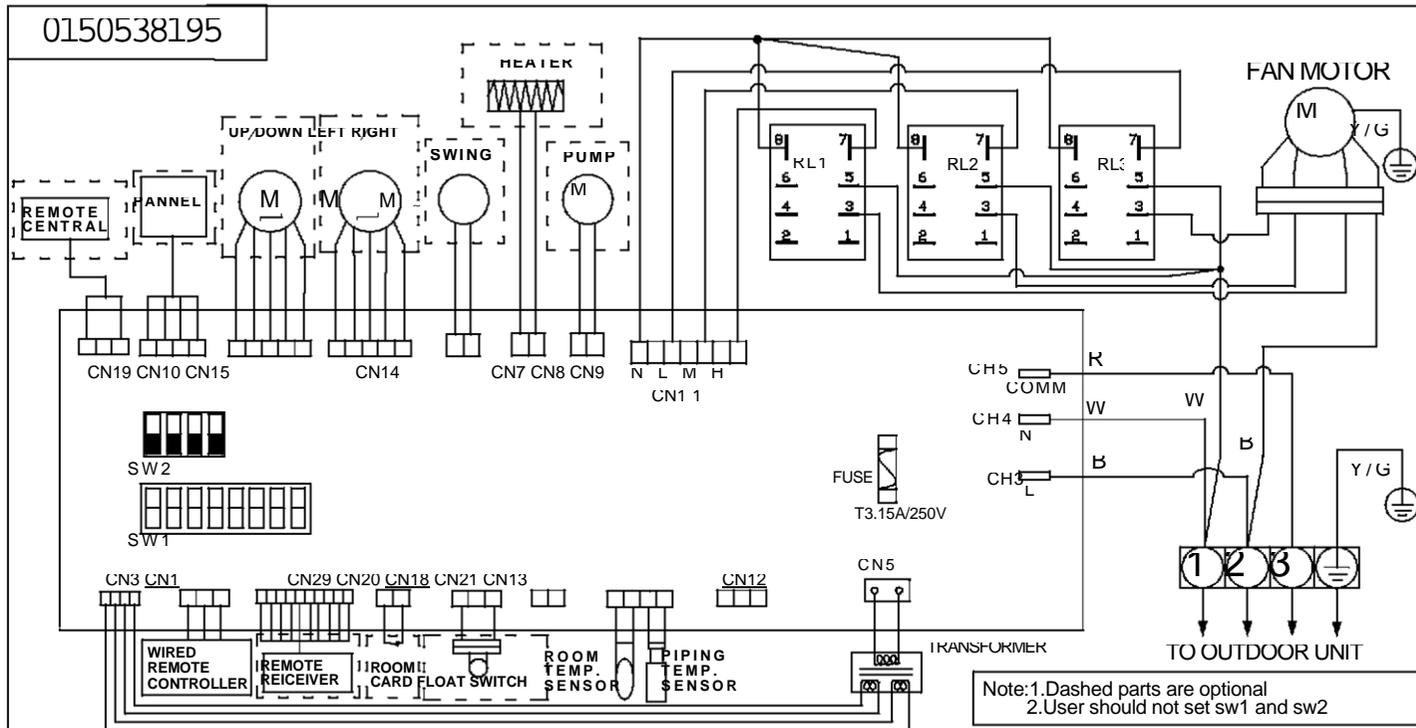




**TRANE**

4.4 4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA





SW1-1	SW1-2	SW1-3	TYPE	SW1-7	SW1-8	Type	SW1-4	ON	Room card available
OFF	ON	ON	/	OFF	OFF	Cassette	SW1-4	OFF	Room card unavailable
ON	ON	ON	4MXD6536G1000AA	ON	ON	Convertible	SW1-5	ON	Cool only
ON	ON	OFF	4MXD6548G1000AA	ON	OFF	Duct	SW1-6	OFF	Heat pump
ON	ON	OFF	/	OFF	ON	Floor standing	SW1-6	ON	With temperature compensate
								OFF	Without temperature compensate

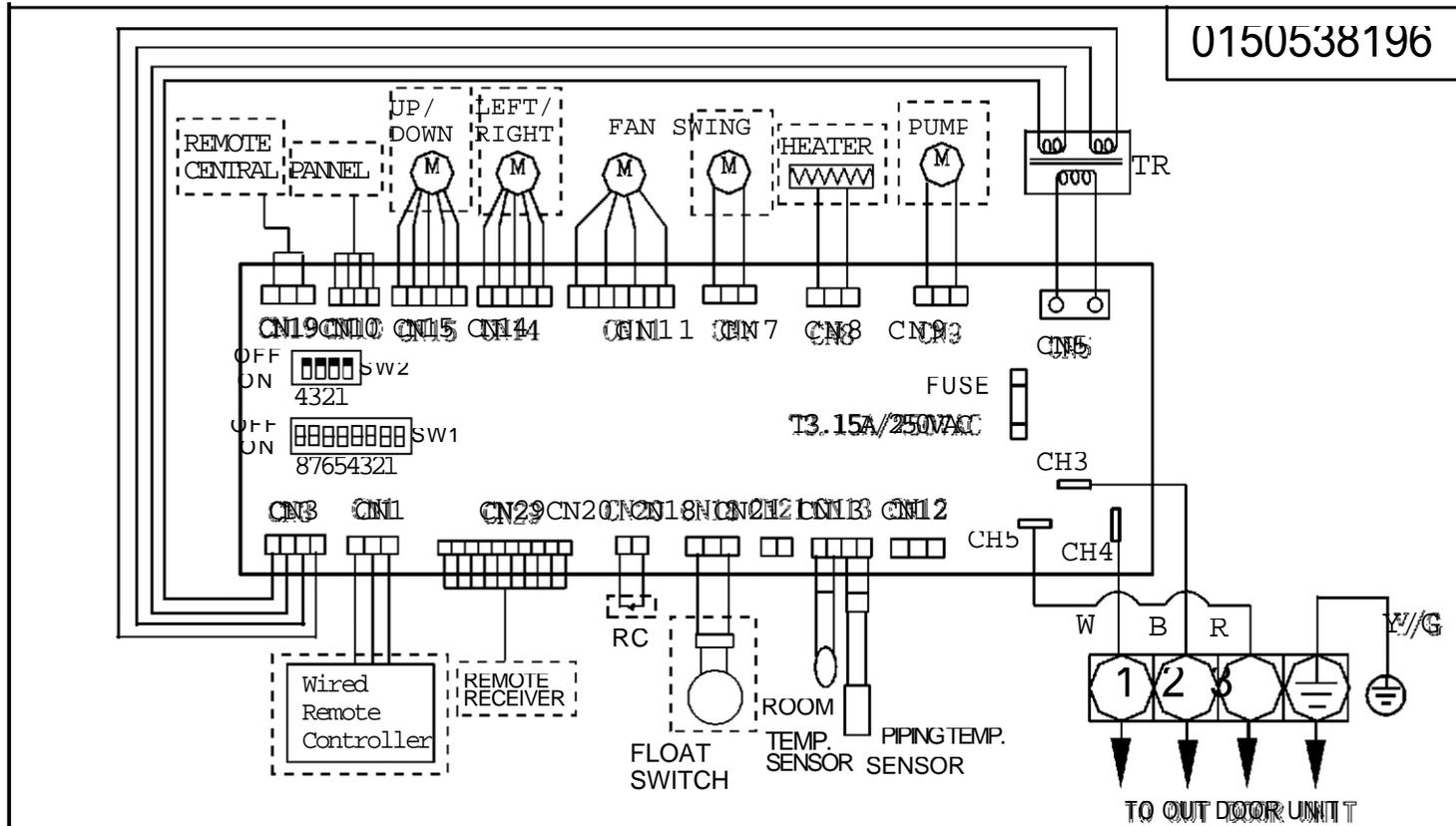
R: RED  
B: BLACK  
W: WHITE  
Y/G: YELLOW/GREEN





**TRANE**

4.6 4MXD6560G1000AA



0150538196

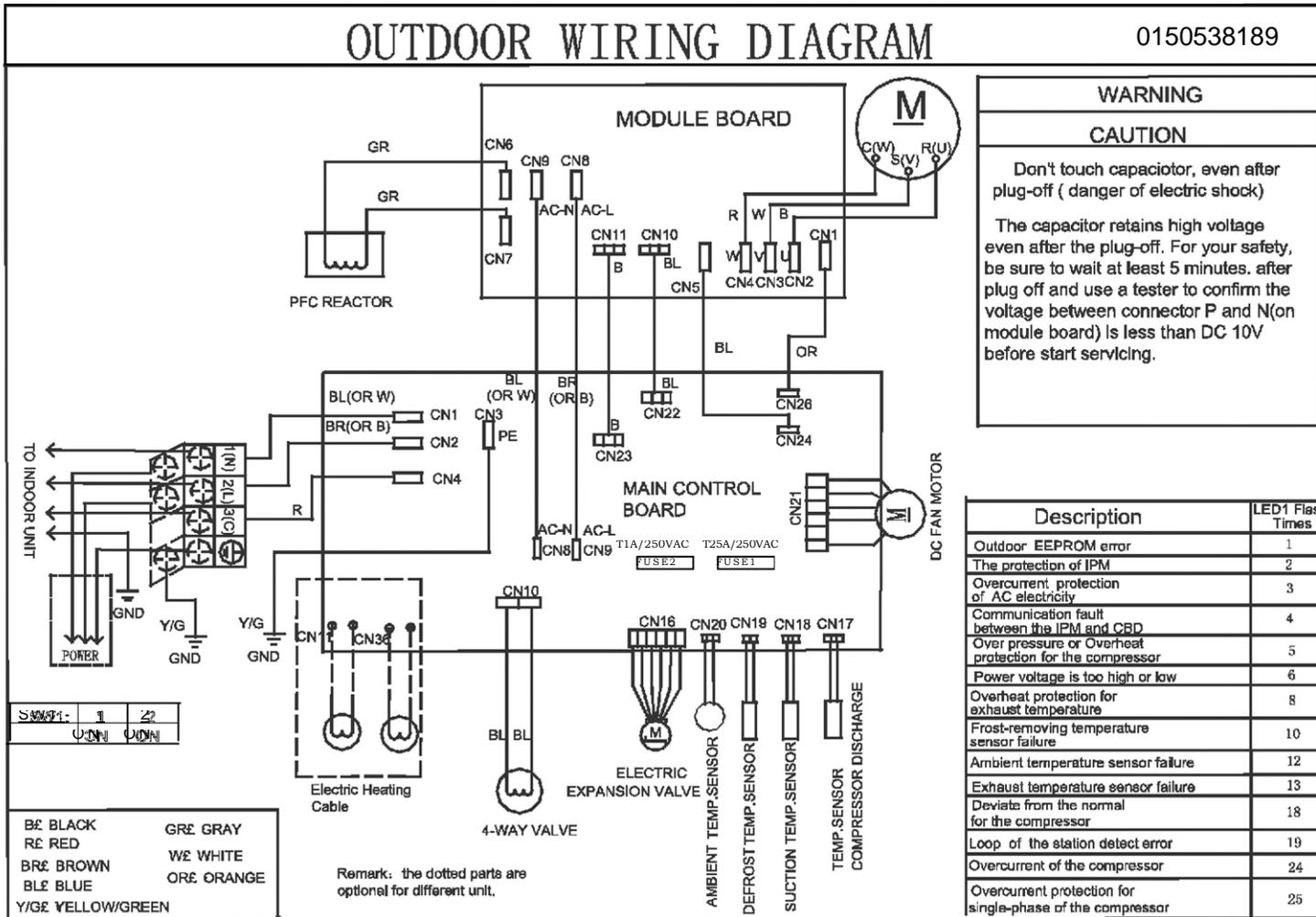
SW1-1	SW1-2	SW1-3	Type
OFF	ON	ON	/
ON	ON	ON	/
ON	ON	OFF	/
ON	ON	OFF	4MXD6560G1000AA

SW1-7	SW1-8	Type	SW1-4	ON	Room card available
OFF	OFF	Cassette			Room card unavailable
ON	ON	Convertible	SW1-5	ON	Cool only
ON	OFF	Duct		OFF	Heat pump
			SW1-6	ON	With temperature compensate
OFF	ON	Floor standing		OFF	Without temperature compensate

RR: RED  
 B: BLACK  
 W: WHITE  
 Y/G: YELLOW/GREEN

# OUTDOOR WIRING DIAGRAM

0150538189



**WARNING**

**CAUTION**

Don't touch capacitor, even after plug-off ( danger of electric shock)

The capacitor retains high voltage even after the plug-off. For your safety, be sure to wait at least 5 minutes. after plug off and use a tester to confirm the voltage between connector P and N(on module board) is less than DC 10V before start servicing.

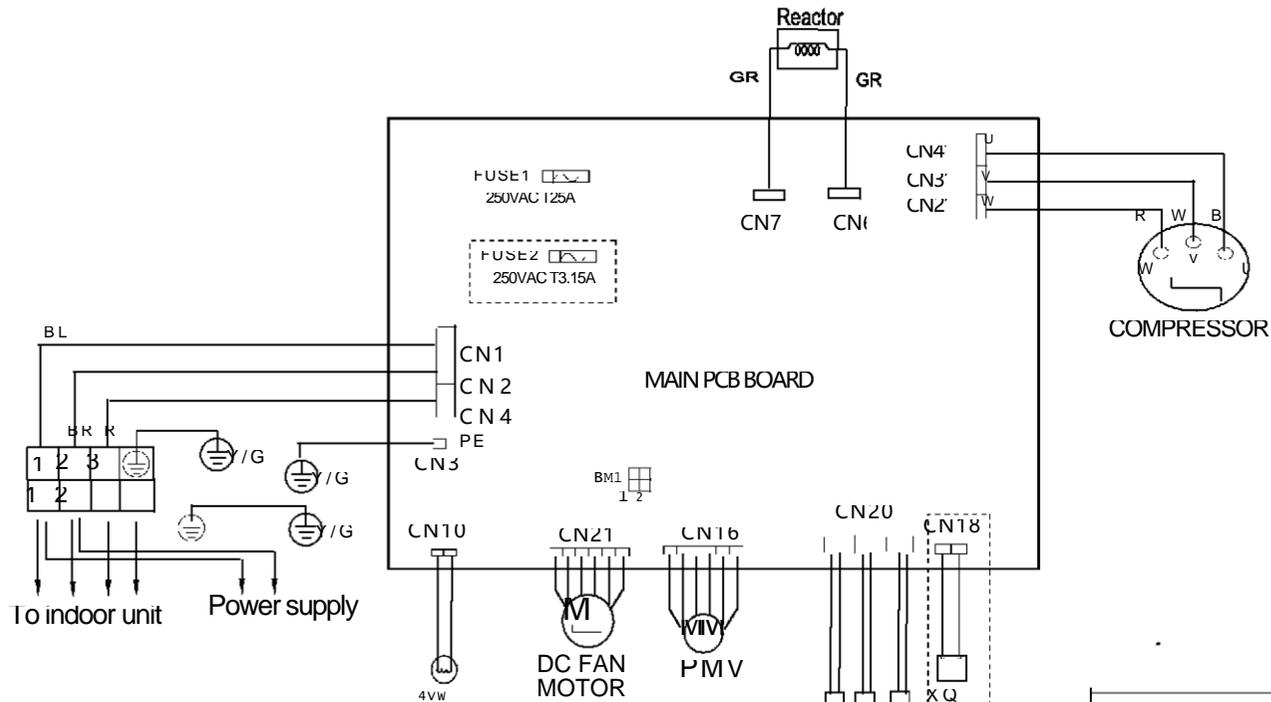




TRANE®

4.8 4TXK6518G1000AA

### CIRCUIT DIAGRAM OF OUTDOOR UNIT



1	2	3	4
1	2		

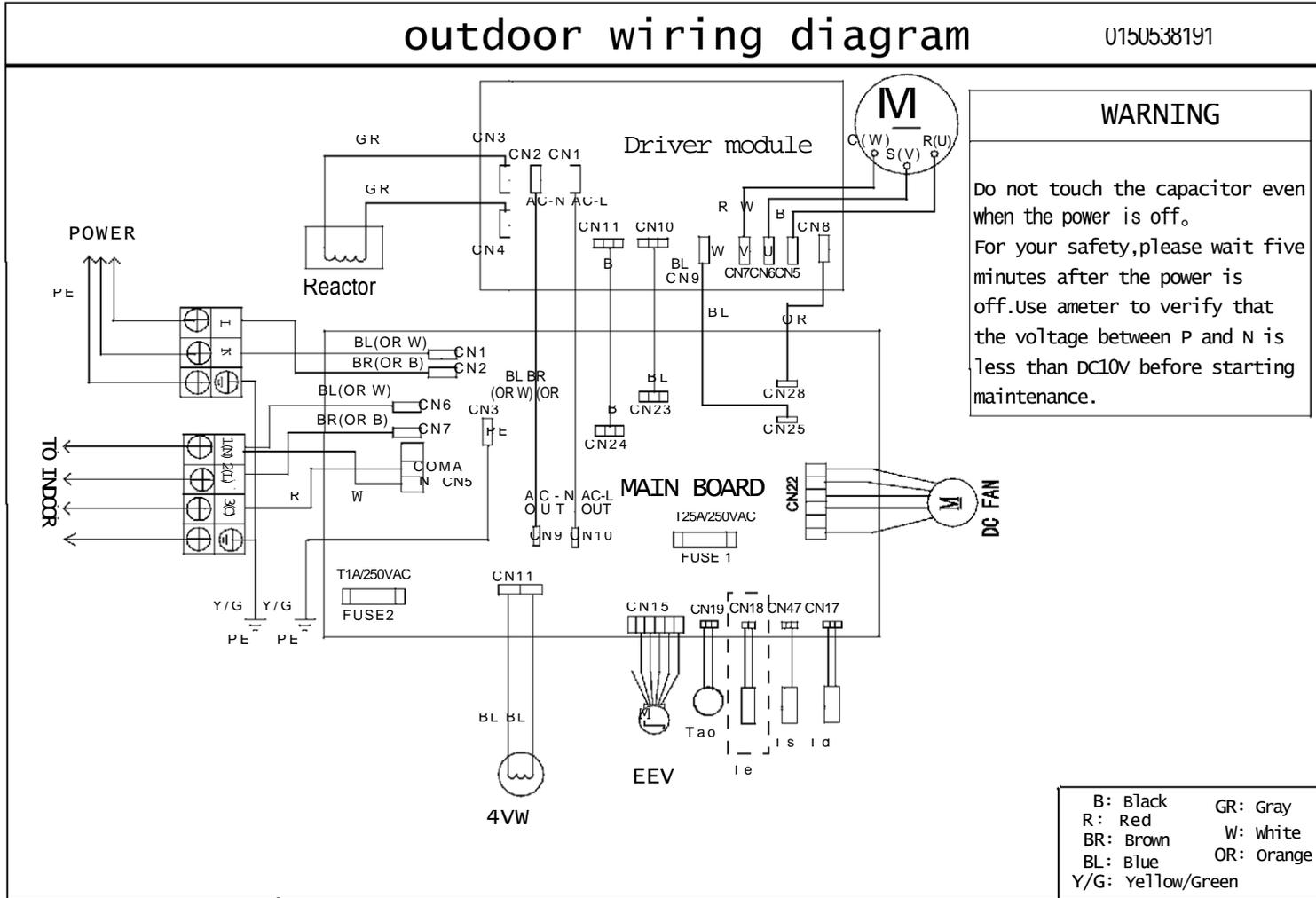
OR: Orange B: Black BL: Blue  
 BRN: brown Y/G: Yellow/Green  
 R: Red W: white

XQ: Compressor Suction Temp. Sensor  
 HW: Ambient Temp. Sensor  
 TQ: Compressor Discharge Temp. Sensor  
 CS: Defrosting Temp. Sensor

\*Dashed part is optional  
 0150538190

# outdoor wiring diagram

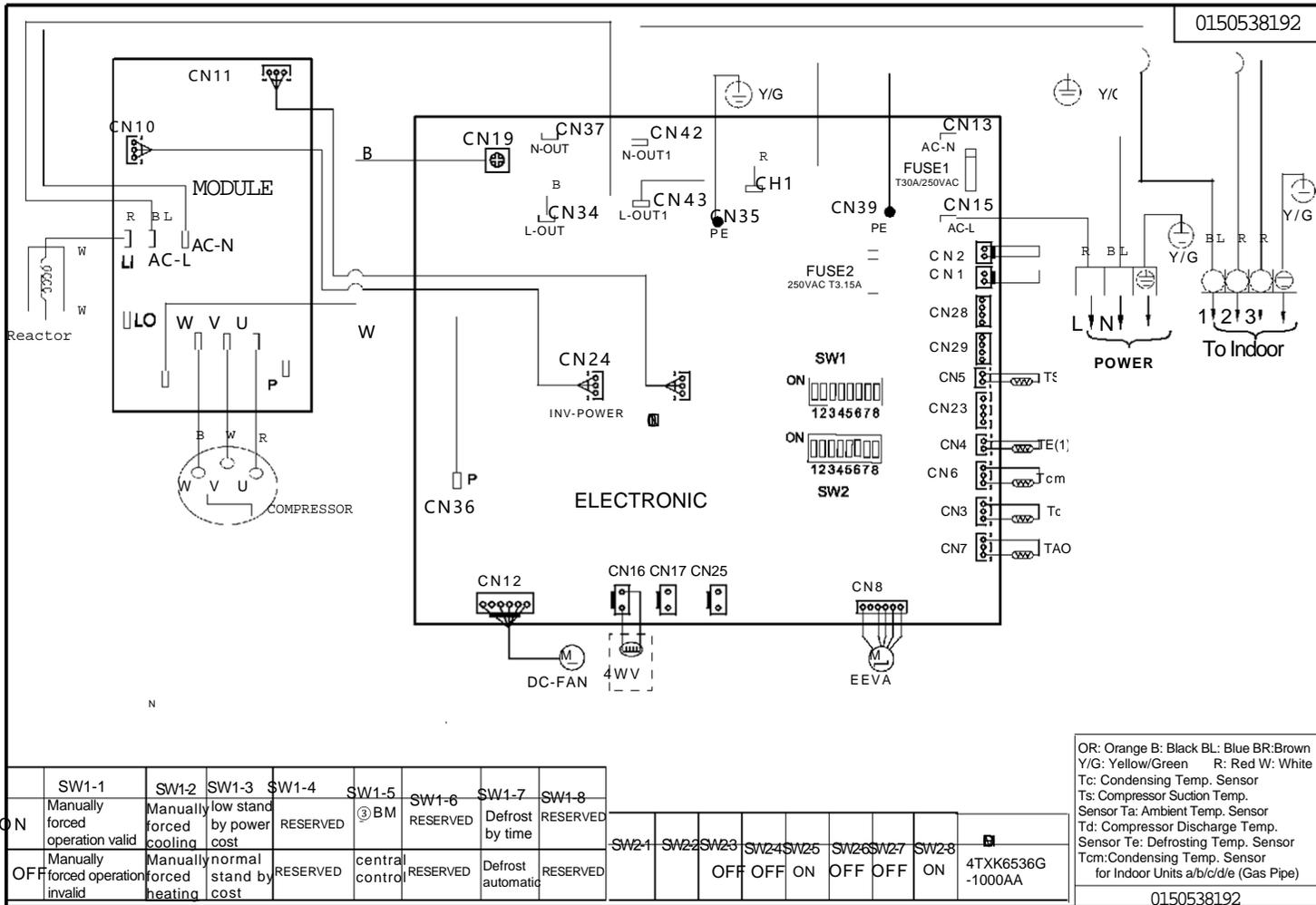
U15U538191





**TRANE**

4.10 4TXK6536G1000AA



	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8										
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	RESERVED	BM	RESERVED	Defrost by time	RESERVED										
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	RESERVED	central control	RESERVED	Defrost automatic	RESERVED										

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	
		OFF	OFF	ON	OFF	OFF	ON	
								4TXK6536G-1000AA

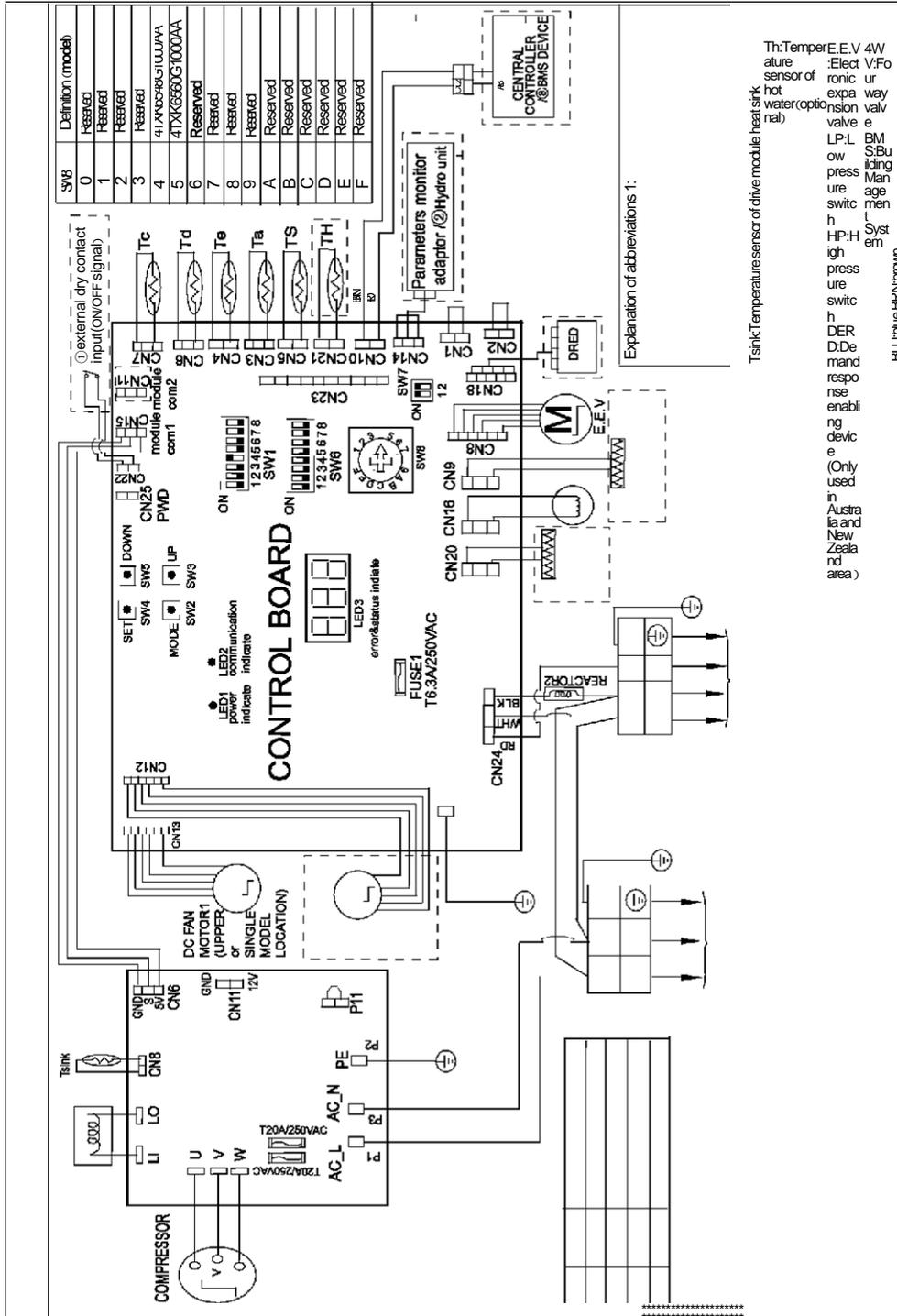
0150538192

OR: Orange B: Black BL: Blue BR:Brown  
 Y/G: Yellow/Green R: Red W: White  
 Tc: Condensing Temp. Sensor  
 Ts: Compressor Suction Temp.  
 Sensor Ta: Ambient Temp. Sensor  
 Td: Compressor Discharge Temp.  
 Sensor Te: Defrosting Temp. Sensor  
 Tcm: Condensing Temp. Sensor  
 for Indoor Units a/b/c/d/e (Gas Pipe)

CONTROL

OFF OFF

### 4.11 4TXK6548G1000AA 4TXK6560G1000AA



Tc: Temperature sensor of condenser's middle position  
 Ts: Compressor suction temperature sensor  
 Te: Defrost temperature sensor  
 Ta: Outdoor unit ambient temperature sensor  
 Td: Compressor discharge temperature sensor



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## 5 . Performance cure

### 5.1 4TXK6512G1000AA

#### 4TXK6512G1000AA---heating

Indoor unit temperature ( °C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	2836	1147	2.47	2914	1165	2.50	3119	1168	2.67
18/12	2788	1158	2.41	2876	1181	2.43	3058	1196	2.56
20/14.5	2756	1168	2.36	2828	1189	2.38	3013	1200	2.49
21/15	2728	1175	2.32	2825	1191	2.37	2991	1200	2.49
22/16	2675	1184	2.26	2791	1193	2.34	2971	1204	2.47
24/17	2637	1196	2.21	2749	1199	2.29	2926	1214	2.41
26/18	2612	1199	2.18	2711	1213	2.24	2883	1213	2.38

Indoor unit temperature ( °C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	3167	1160	2.73	3536	1161	3.05	3730	1220	3.06
18/12	3141	1170	2.69	3532	1164	3.04	3826	1229	3.11
20/14.5	3110	1178	2.64	3435	1150	2.99	3810	1270	3.00
21/15	3082	1181	2.61	3390	1154	2.94	3664	1242	2.95
22/16	3041	1190	2.56	3375	1174	2.87	3556	1239	2.87
24/17	3002	1195	2.51	3319	1179	2.81	3369	1150	2.93
26/18	2982	1199	2.49	3244	1192	2.72	3247	1155	2.81

Indoor unit temperature ( °C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	3778	1098	3.44	4077	1083	3.77	3746	949	3.95
18/12	3730	1130	3.30	3948	1074	3.68	3710	981	3.78
20/14.5	3697	1140	3.24	3874	1070	3.62	3690	1015	3.63
21/15	3684	1152	3.20	3743	1025	3.65	3652	1009	3.62
22/16	3589	1132	3.17	3483	1034	3.37	3636	1021	3.56
24/17	3286	1063	3.09	3285	945	3.48	3593	1013	3.55
26/18	3243	1082	3.00	3122	942	3.31	3399	986	3.45

### 4TXK6512G1000AA---Cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	3427	1073	3.19	928	3416	1111	3.08	3012	3387	1134	2.99	2985
20/14	3639	1105	3.29	951	3507	1131	3.10	3078	3478	1154	3.01	3051
22/16	3702	1115	3.32	968	3575	1139	3.14	3164	3545	1163	3.05	3137
25/18	3831	1126	3.40	964	3648	1143	3.19	3184	3619	1167	3.10	3157
27/19	3923	1157	3.39	1008	3745	1167	3.21	3327	3715	1191	3.12	3300
29/19	3945	1180	3.34	875	3832	1184	3.24	3381	3803	1209	3.15	3354
30/22	3961	1195	3.32	1019	3907	1201	3.25	3398	3878	1225	3.16	3371
32/23	4086	1223	3.34	1051	3970	1214	3.27	3479	3941	1238	3.18	3452

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	3291	1136	2.90	2958	3062	1425	2.15	2748	2898	1541	1.88	2595
20/14	3352	1146	2.92	3024	3182	1469	2.17	2873	2983	1501	1.99	2686
22/16	3411	1152	2.96	3110	3236	1441	2.25	2901	3056	1478	2.07	2746
25/18	3472	1152	3.01	3130	3308	1444	2.29	2952	3120	1477	2.11	2808
27/19	3516	1160	3.03	3164	3361	1445	2.33	3021	3185	1483	2.15	2831
29/19	3617	1183	3.06	3229	3411	1455	2.34	3053	3261	1506	2.17	2920
30/22	3672	1194	3.08	3292	3556	1505	2.36	3172	3361	1539	2.18	2966
32/23	3712	1200	3.09	3316	3591	1509	2.38	3251	3421	1523	2.25	3074

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	1589	1.73	2406	
20/14	1570	1.79	2466	
22/16	1580	1.83	2520	
25/18	1539	1.90	2572	
27/19	1546	1.92	2656	
29/19	1559	1.97	2773	
30/22	1570	2.01	2833	
32/23	1558	2.06	2863	

## 5.2 4TXK6518G1000AA

### 4TXK6518G1000AA---heating

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	3992	1513	2.64	4101	1536	2.67	4390	1541	2.85
18/12	3923	1527	2.57	4047	1558	2.60	4304	1577	2.73
20/14.5	3879	1541	2.52	3981	1568	2.54	4241	1582	2.68
21/15	3839	1549	2.48	3976	1571	2.53	4209	1582	2.66
22/16	3764	1561	2.41	3928	1574	2.50	4182	1588	2.63
24/17	3712	1577	2.35	3868	1581	2.45	4118	1601	2.57
26/18	3676	1581	2.33	3815	1599	2.39	4057	1600	2.54

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	4458	1530	2.91	4977	1531	3.25	5250	1609	3.26
18/12	4421	1543	2.87	4971	1535	3.24	5384	1621	3.32
20/14.5	4377	1554	2.82	4835	1517	3.19	5362	1675	3.20
21/15	4338	1558	2.78	4770	1521	3.14	5156	1638	3.15
22/16	4280	1569	2.73	4750	1549	3.07	5004	1634	3.06
24/17	4225	1576	2.68	4671	1556	3.00	4741	1516	3.13
26/18	4197	1581	2.66	4566	1573	2.90	4569	1523	3.00

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	5317	1448	3.67	5738	1428	4.02	5272	1251	4.21
18/12	5250	1490	3.52	5557	1416	3.92	5222	1293	4.04
20/14.5	5203	1504	3.46	5453	1411	3.87	5193	1339	3.88
21/15	5185	1519	3.41	5267	1352	3.90	5140	1331	3.86
22/16	5051	1493	3.38	4901	1364	3.59	5118	1346	3.80
24/17	4625	1402	3.30	4623	1246	3.71	5057	1336	3.79
26/18	4564	1426	3.20	4394	1243	3.53	4784	1300	3.68



### 4TXK6518G1000AA---Cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	5058	1468	3.44	1370	5043	15203.32	4446	5000	15523.22	4406		
20/14	5372	1512	3.55	1404	5177	15473.35	4545	5134	15793.25	4505		
22/16	5465	1526	3.58	1429	5277	15593.39	4671	5233	15913.29	4631		
25/18	5655	1541	3.67	1423	5385	15643.44	4700	5341	15963.35	4660		
27/19	5790	1583	3.66	1488	5527	15963.46	4912	5484	16293.37	4871		
29/19	5823	1614	3.61	1292	5657	16203.49	4992	5614	16543.39	4952		
30/22	5847	1635	3.58	1504	5767	16433.51	5016	5724	16773.41	4976		
32/23	6032	1673	3.61	1551	5860	16603.53	5136	5817	16943.43	5096		

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	4858	1554	3.13	4366	4520	19502.32	4058	4277	21082.03	3831		
20/14	4947	1568	3.15	4465	4697	20102.34	4242	4403	20532.14	3965		
22/16	5034	1577	3.19	4591	4777	19712.42	4282	4511	20222.23	4054		
25/18	5125	1577	3.25	4620	4883	19762.47	4358	4606	20212.28	4146		
27/19	5190	1587	3.27	4671	4961	19762.51	4461	4701	20282.32	4179		
29/19	5339	1619	3.30	4767	5034	19902.53	4507	4814	20602.34	4310		
30/22	5421	1634	3.32	4860	5248	20592.55	4683	4961	21052.36	4378		
32/23	5480	1642	3.34	4896	5300	20642.57	4799	5050	20842.42	4539		

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	4057	2174	1.87	3552
20/14	4153	2148	1.93	3641
22/16	4261	2161	1.97	3721
25/18	4312	2105	2.05	3797
27/19	4375	2116	2.07	3921
29/19	4533	2133	2.13	4094
30/22	4649	2149	2.16	4182
32/23	4736	2132	2.22	4226

### 5.3 4TXK6524G1000AA

#### 4TXK6524G1000AA--heating

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	5341	2025	2.64	5488	2056	2.67	5874	2062	2.85
18/12	5250	2044	2.57	5415	2085	2.60	5760	2111	2.73
20/14.5	5191	2062	2.52	5326	2099	2.54	5675	2118	2.68
21/15	5137	2074	2.48	5320	2103	2.53	5633	2118	2.66
22/16	5037	2090	2.41	5256	2106	2.50	5595	2125	2.63
24/17	4966	2111	2.35	5176	2116	2.45	5511	2142	2.57
26/18	4919	2116	2.32	5104	2141	2.38	5429	2141	2.54

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	5965	2047	2.91	6660	2049	3.25	7025	2154	3.26
18/12	5916	2065	2.86	6652	2055	3.24	7205	2170	3.32
20/14.5	5857	2080	2.82	6470	2030	3.19	7175	2242	3.20
21/15	5805	2085	2.78	6383	2036	3.13	6899	2193	3.15
22/16	5727	2101	2.73	6357	2073	3.07	6696	2188	3.06
24/17	5653	2109	2.68	6250	2082	3.00	6344	2029	3.13
26/18	5616	2116	2.65	6110	2105	2.90	6114	2039	3.00

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	7115	1939	3.67	7678	1911	4.02	7055	1675	4.21
18/12	7025	1995	3.52	7436	1895	3.92	6988	1731	4.04
20/14.5	6962	2013	3.46	7296	1888	3.86	6949	1792	3.88
21/15	6937	2033	3.41	7048	1810	3.89	6878	1782	3.86
22/16	6758	1999	3.38	6558	1825	3.59	6848	1802	3.80
24/17	6189	1877	3.30	6186	1667	3.71	6767	1788	3.78
26/18	6107	1909	3.20	5880	1664	3.53	6401	1741	3.68

### 4TXK6524G1000AA---cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	6851	1942	3.53	1855	6831	2010	3.40	6023	6772	2052	3.30	5969
20/14	7277	2000	3.64	1902	7012	2046	3.43	6156	6954	2089	3.33	6102
22/16	7402	2018	3.67	1936	7147	2061	3.47	6327	7089	2104	3.37	6273
25/18	7660	2038	3.76	1928	7294	2068	3.53	6367	7235	2111	3.43	6312
27/19	7843	2094	3.75	2016	7487	2111	3.55	6653	7428	2155	3.45	6599
29/19	7887	2135	3.69	1751	7663	2143	3.58	6761	7604	2187	3.48	6707
30/22	7920	2162	3.66	2037	7812	2173	3.60	6795	7754	2217	3.50	6740
32/23	8170	2213	3.69	2101	7938	2196	3.61	6957	7879	2241	3.52	6903

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	6580	2056	3.20	5914	6122	2579	2.37	5496	5794	2788	2.08	5189
20/14	6701	2074	3.23	6047	6362	2658	2.39	5746	5964	2715	2.20	5371
22/16	6819	2085	3.27	6218	6471	2607	2.48	5800	6110	2674	2.29	5491
25/18	6942	2085	3.33	6258	6614	2613	2.53	5903	6239	2673	2.33	5616
27/19	7030	2099	3.35	6327	6720	2614	2.57	6042	6368	2683	2.37	5661
29/19	7232	2141	3.38	6457	6819	2632	2.59	6104	6520	2724	2.39	5838
30/22	7343	2161	3.40	6583	7109	2724	2.61	6343	6720	2785	2.41	5931
32/23	7423	2172	3.42	6631	7179	2730	2.63	6501	6840	2756	2.48	6148

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	2876	1.91	4812	
20/14	2841	1.98	4931	
22/16	2859	2.02	5040	
25/18	2784	2.10	5143	
27/19	2798	2.12	5311	
29/19	2821	2.18	5545	
30/22	2842	2.22	5664	
32/23	2819	2.28	5724	

## 5.4 4TXK6536G1000AA

### 4TXK6536G1000AA---heating

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	7962	3019	2.64	8180	3065	2.67	8756	3074	2.85
18/12	7825	3046	2.57	8072	3108	2.60	8585	3147	2.73
20/14.5	7738	3074	2.52	7940	3129	2.54	8458	3157	2.68
21/15	7657	3091	2.48	7931	3135	2.53	8396	3157	2.66
22/16	7508	3115	2.41	7835	3140	2.50	8340	3168	2.63
24/17	7403	3147	2.35	7716	3154	2.45	8214	3194	2.57
26/18	7332	3154	2.32	7609	3191	2.38	8092	3192	2.54

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	8891	3052	2.91	9927	3054	3.25	10471	3211	3.26
18/12	8818	3079	2.86	9916	3063	3.24	10739	3235	3.32
20/14.5	8730	3100	2.82	9643	3027	3.19	10695	3342	3.20
21/15	8653	3108	2.78	9515	3036	3.13	10284	3269	3.15
22/16	8536	3131	2.73	9475	3090	3.07	9981	3261	3.06
24/17	8426	3144	2.68	9316	3104	3.00	9456	3025	3.13
26/18	8372	3154	2.65	9107	3138	2.90	9114	3039	3.00

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	10605	2890	3.67	11445	2849	4.02	10516	2496	4.21
18/12	10471	2973	3.52	11084	2825	3.92	10416	2581	4.04
20/14.5	10377	3000	3.46	10876	2815	3.86	10358	2671	3.88
21/15	10341	3030	3.41	10506	2698	3.89	10252	2656	3.86
22/16	10074	2980	3.38	9776	2721	3.59	10208	2686	3.80
24/17	9225	2798	3.30	9221	2485	3.71	10086	2665	3.78
26/18	9104	2846	3.20	8764	2480	3.53	9541	2595	3.68

### 4TXK6536G1000AA---Cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	10282	2913	3.53	2784	10251	3016	3.40	9039	10163	3079	3.30	8957
20/14	10920	3000	3.64	2854	10524	3069	3.43	9238	10436	3134	3.33	9157
22/16	11108	3028	3.67	2905	10726	3093	3.47	9495	10638	3157	3.37	9413
25/18	11495	3058	3.76	2893	10946	3103	3.53	9554	10858	3167	3.43	9473
27/19	11770	3142	3.75	3026	11236	3168	3.55	9984	11148	3233	3.45	9903
29/19	11836	3203	3.69	2627	11500	3215	3.58	10147	11412	3281	3.48	10066
30/22	11885	3244	3.66	3057	11724	3260	3.60	10197	11636	3327	3.50	10115
32/23	12261	3319	3.69	3153	11913	3295	3.62	10440	11825	3362	3.52	10359

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	9875	3084	3.20	8876	9187	3869	2.37	8248	8695	4182	2.08	7788
20/14	10057	3112	3.23	9075	9548	3988	2.39	8623	8950	4073	2.20	8061
22/16	10234	3128	3.27	9332	9710	3911	2.48	8704	9170	4012	2.29	8240
25/18	10418	3128	3.33	9391	9926	3920	2.53	8859	9363	4010	2.34	8427
27/19	10550	3149	3.35	9495	10084	3921	2.57	9067	9557	4025	2.37	8496
29/19	10853	3212	3.38	9691	10234	3949	2.59	9161	9785	4087	2.39	8761
30/22	11019	3242	3.40	9879	10669	4086	2.61	9519	10084	4178	2.41	8900
32/23	11139	3258	3.42	9951	10774	4096	2.63	9756	10265	4134	2.48	9226

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	4314	1.91	7221	
20/14	4263	1.98	7400	
22/16	4289	2.02	7563	
25/18	4177	2.10	7718	
27/19	4198	2.12	7971	
29/19	4231	2.18	8321	
30/22	4263	2.22	8501	
32/23	4230	2.28	8590	

## 5.5 4TXK6548G1000AA

### 4TXK6548G1000AA---heating

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	10578	4011	2.64	10869	4072	2.67	11634	4084	2.85
18/12	10397	4047	2.57	10725	4129	2.60	11407	4181	2.73
20/14.5	10281	4084	2.52	10549	4157	2.54	11238	4195	2.68
21/15	10173	4106	2.48	10537	4164	2.53	11156	4195	2.66
22/16	9975	4139	2.41	10410	4171	2.50	11082	4208	2.63
24/17	9836	4181	2.35	10251	4191	2.45	10914	4243	2.57
26/18	9741	4191	2.32	10109	4239	2.38	10752	4241	2.54

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	11813	4055	2.91	13189	4058	3.25	13913	4266	3.26
18/12	11716	4090	2.86	13175	4069	3.24	14269	4298	3.32
20/14.5	11600	4119	2.82	12813	4021	3.19	14210	4440	3.20
21/15	11496	4130	2.78	12642	4033	3.13	13664	4343	3.15
22/16	11342	4160	2.73	12589	4106	3.07	13262	4333	3.06
24/17	11196	4176	2.68	12378	4123	3.00	12564	4019	3.13
26/18	11123	4191	2.65	12101	4169	2.90	12109	4038	3.00

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	14091	3839	3.67	15207	3785	4.02	13973	3316	4.21
18/12	13913	3950	3.52	14727	3754	3.92	13839	3429	4.04
20/14.5	13788	3986	3.46	14450	3740	3.86	13762	3549	3.88
21/15	13740	4026	3.41	13959	3584	3.89	13621	3529	3.86
22/16	13385	3959	3.38	12989	3614	3.59	13562	3568	3.80
24/17	12257	3717	3.30	12252	3302	3.71	13401	3541	3.78
26/18	12096	3781	3.20	11645	3295	3.53	12677	3447	3.68

### 4TXK6548G1000AA---Cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	13420	3896	3.44	3634	13380	40333.32	11797	13265	41183.22	11691		
20/14	14253	4012	3.55	3725	13736	41043.35	12058	13621	41913.25	11952		
22/16	14499	4049	3.58	3791	14000	41363.39	12393	13885	42223.29	12287		
25/18	15004	4089	3.67	3776	14286	41503.44	12471	14172	42353.35	12364		
27/19	15363	4201	3.66	3949	14665	42363.46	13031	14550	43233.37	12925		
29/19	15448	4284	3.61	3429	15009	43003.49	13244	14895	43883.39	13138		
30/22	15513	4337	3.58	3991	15302	43593.51	13309	15187	44493.41	13203		
32/23	16003	4439	3.61	4115	15549	44063.53	13627	15434	44963.43	13521		

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	12889	4124	3.13	11585	11991	51742.32	10765	11349	55932.03	10164		
20/14	13126	4161	3.15	11845	12462	53332.34	11255	11682	54472.14	10521		
22/16	13357	4184	3.19	12180	12674	52302.42	11361	11968	53652.23	10755		
25/18	13598	4183	3.25	12258	12955	52422.47	11563	12221	53622.28	10999		
27/19	13770	4211	3.27	12393	13162	52442.51	11835	12473	53822.32	11089		
29/19	14166	4295	3.30	12648	13357	52812.53	11957	12772	54652.34	11436		
30/22	14383	4335	3.32	12894	13925	54642.55	12425	13162	55862.36	11616		
32/23	14539	4357	3.34	12989	14063	54772.57	12733	13398	55292.42	12042		

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	10764	5769	1.87	9425
20/14	11018	5700	1.93	9659
22/16	11306	5735	1.97	9872
25/18	11441	5585	2.05	10074
27/19	11607	5614	2.07	10404
29/19	12026	5659	2.13	10861
30/22	12336	5701	2.16	11095
32/23	12565	5656	2.22	11212

## 5.6 4TXK6560G1000AA

### 4TXK6560G1000AA---heating

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	-6/-7			-4/-5			-1/-2		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	11996	4549	2.64	12326	4619	2.67	13194	4632	2.85
18/12	11791	4590	2.57	12162	4683	2.60	12936	4743	2.73
20/14.5	11659	4632	2.52	11963	4715	2.54	12745	4758	2.68
21/15	11537	4658	2.48	11950	4723	2.53	12651	4758	2.66
22/16	11312	4694	2.41	11806	4731	2.50	12567	4773	2.63
24/17	11155	4742	2.35	11626	4753	2.45	12377	4812	2.57
26/18	11047	4753	2.32	11465	4808	2.38	12193	4810	2.54

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	1/0			6/5			7/6		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	13397	4599	2.91	14958	4602	3.25	15778	4839	3.26
18/12	13287	4639	2.86	14941	4615	3.24	16181	4875	3.32
20/14.5	13155	4672	2.82	14531	4561	3.19	16115	5036	3.20
21/15	13037	4684	2.78	14337	4574	3.13	15496	4926	3.15
22/16	12862	4719	2.73	14277	4657	3.07	15040	4914	3.06
24/17	12697	4737	2.68	14038	4677	3.00	14249	4558	3.13
26/18	12614	4753	2.65	13723	4728	2.90	13733	4580	3.00

Indoor unit temperature (°C)	Outdoor temperature( °C)								
	12/10			16/15			27/18		
	heating capacity	power input	COP	heating capacity	power input	COP	heating capacity	power input	COP
16/10	15980	4355	3.67	17246	4293	4.02	15846	3761	4.21
18/12	15778	4480	3.52	16701	4258	3.92	15694	3889	4.04
20/14.5	15636	4521	3.46	16388	4242	3.86	15606	4025	3.88
21/15	15582	4566	3.41	15831	4065	3.89	15447	4003	3.86
22/16	15179	4490	3.38	14730	4100	3.59	15380	4047	3.80
24/17	13900	4216	3.30	13894	3745	3.71	15198	4016	3.78
26/18	13717	4289	3.20	13206	3737	3.53	14377	3910	3.68

### 4TXK6560G1000AA---Cooling

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	20				25				32			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	15418	4518	3.41	4175	15372	4676	3.29	13554	15240	4775	3.19	13431
20/14	16375	4652	3.52	4280	15780	4759	3.32	13853	15649	4859	3.22	13731
22/16	16657	4695	3.55	4356	16084	4796	3.35	14238	15952	4895	3.26	14116
25/18	17237	4742	3.64	4338	16413	4812	3.41	14327	16281	4910	3.32	14205
27/19	17650	4872	3.62	4537	16848	4912	3.43	14971	16716	5013	3.33	14849
29/19	17748	4967	3.57	3939	17244	4986	3.46	15216	17112	5088	3.36	15094
30/22	17823	5030	3.54	4585	17580	5055	3.48	15290	17448	5159	3.38	15168
32/23	18385	5147	3.57	4728	17863	5109	3.50	15656	17732	5213	3.40	15533

Indoor unit temperature (°C)	Outdoor temperature( °C)											
	35				40				46			
	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity	cooling capacity	power input	EER	Sensible cooling capacity
18/12	14808	4782	3.10	13309	13777	6000	2.30	12368	13038	6486	2.01	11678
20/14	15080	4826	3.13	13609	14317	6184	2.32	12930	13421	6317	2.12	12087
22/16	15345	4851	3.16	13994	14561	6065	2.40	13053	13750	6221	2.21	12356
25/18	15622	4851	3.22	14083	14884	6078	2.45	13285	14040	6218	2.26	12637
27/19	15820	4884	3.24	14238	15121	6081	2.49	13596	14330	6241	2.30	12740
29/19	16275	4980	3.27	14531	15345	6124	2.51	13737	14673	6338	2.32	13138
30/22	16524	5027	3.29	14814	15998	6336	2.52	14275	15121	6478	2.33	13346
32/23	16703	5052	3.31	14922	16156	6351	2.54	14629	15393	6411	2.40	13835

Indoor unit temperature (°C)	Outdoor temperature( °C)			
	52			
	cooling capacity	power input	EER	Sensible cooling capacity
18/12	12366	6690	1.85	10828
20/14	12659	6610	1.92	11097
22/16	12990	6650	1.95	11342
25/18	13144	6477	2.03	11574
27/19	13335	6510	2.05	11953
29/19	13816	6562	2.11	12478
30/22	14172	6611	2.14	12747
32/23	14436	6559	2.20	12881

## 6 . Capacity compensation rate for pipe length and height defference

4TXK6512G1000AA cooling		Pipe length (m)					
		5	7.5	10	20	30	
Height difference (m)	Indoor unit is upper than outdoor unit	10		0.980	0.956	0.933	
		7.5		0.990	0.984	0.960	0.937
		5	1.000	0.994	0.988	0.964	0.940
		0	1.008	1.002	0.996	0.972	0.948
	Indoor unit is lower than outdoor unit	-5	1.008	1.002	0.996	0.972	0.948
		-7.5		1.002	0.996	0.972	0.948
		-10			0.996	0.972	0.948

4TXK6512G1000AAheating		Pipe length (m)					
		5	10	15	20	30	
Height difference (m)	Indoor unit is upper than outdoor unit	10		0.978	0.968	0.957	
		7.5		0.988	0.978	0.968	0.957
		5	1.005	0.988	0.978	0.968	0.957
		0	1.003	0.988	0.978	0.968	0.957
	Indoor unit is lower than outdoor unit	-5	0.998	0.988	0.978	0.968	0.957
		-7.5		0.983	0.973	0.963	0.952
		-10			0.971	0.961	0.950

4TXK6518G1000AA cooling		Pipe length (m)					
		5	7.5	10	20	30	
Height difference (m)	Indoor unit is upper than outdoor unit	10		0.981	0.957	0.934	
		7.5		0.991	0.985	0.961	0.938
		5	1.000	0.995	0.989	0.965	0.941
		0	1.009	1.003	0.997	0.973	0.949
	Indoor unit is lower than outdoor unit	-5	1.009	1.003	0.997	0.973	0.949
		-7.5		1.003	0.997	0.973	0.949
		-10		0.000	0.997	0.973	0.949

4TXK6518G1000AA heating		Pipe length (m)					
		5	10	15	20	30	
Height difference (m)	Indoor unit is upper than outdoor unit	10		0.996	0.986	0.976	
		7.5		0.999	0.996	0.986	0.976
		5	1.000	0.999	0.996	0.986	0.976
		0	1.000	0.999	0.996	0.986	0.976
	Indoor unit is lower than outdoor unit	-5	0.997	0.994	0.991	0.981	0.971
		-7.5	0.000	0.992	0.989	0.979	0.969
		-10	0.000	0.000	0.986	0.976	0.966

4TXK6524G1000AA cooling			Pipe length (m)				
			5	7.5	10	20	30
Height difference (m)	Indoor unit is upper than outdoor unit	10			0.980	0.956	0.933
		7.5		0.990	0.984	0.960	0.937
		5	1.000	0.994	0.988	0.964	0.940
		0	1.008	1.000	0.996	0.972	0.948
	Indoor unit is lower than outdoor unit	-5	1.008	1.000	0.996	0.972	0.948
		-7.5		1.002	0.996	0.972	0.948
		-10		0.000	0.996	0.972	0.948

4TXK6524G1000AA heating			Pipe length (m)				
			5	10	15	20	30
Height difference (m)	Indoor unit is upper than outdoor unit	10			0.999	0.989	0.979
		7.5		1.000	0.999	0.989	0.979
		5	1.005	1.000	0.999	0.989	0.979
		0	1.005	1.000	0.999	0.989	0.979
	Indoor unit is lower than outdoor unit	-5	0.999	0.997	0.994	0.984	0.974
		-7.5		0.995	0.992	0.982	0.972
		-10			0.989	0.979	0.969

4TXK6536G1000AA cooling		Pipe length (m)						40	50
		5	7.5	10	20	30	40		
Height difference (m)	Indoor unit is upper than outdoor unit	20			0.955	0.914	0.873	0.833	
		10		0.996	0.955	0.914	0.873	0.833	
		7.5		0.980	0.975	0.955	0.914	0.873	0.833
		5	1.003	0.980	0.975	0.955	0.914	0.873	0.833
		0	1.003	0.980	0.975	0.955	0.914	0.873	0.833
	Indoor unit is lower than outdoor unit	-5	0.998	0.975	0.970	0.950	0.909	0.868	0.828
		-7.5		0.973	0.968	0.948	0.907	0.866	0.826
		-10			0.965	0.944	0.904	0.863	0.823
-20					0.934	0.894	0.854	0.813	

4TXK6536G1000AA heating		Pipe length (m)					40	50	
		5	10	15	20	30			
Height difference (m)	Indoor unit is upper than outdoor unit	20			0.987	0.977	0.966	0.956	
		10		0.997	0.987	0.977	0.966	0.956	
		7.5		1.000	0.997	0.987	0.977	0.966	0.956
		5	1.003	1.000	0.997	0.987	0.977	0.966	0.956
		0	1.003	1.000	0.997	0.987	0.977	0.966	0.956
	Indoor unit is lower than outdoor unit	-5	0.998	0.995	0.992	0.982	0.972	0.961	0.951
		-7.5		0.993	0.990	0.980	0.970	0.959	0.949
		-10			0.987	0.977	0.967	0.956	0.946
-20					0.967	0.957	0.947	0.937	

4TXK6548G1000AA cooling			Pipe length (m)					40	50
			5	7.5	10	20	30		
Height difference (m)	Indoor unit is upper than outdoor unit	20			0.947	0.907	0.866	0.826	
		10		0.967	0.947	0.907	0.866	0.826	
		7.5		0.980	0.967	0.947	0.907	0.866	0.826
		5	1.003	0.980	0.967	0.947	0.907	0.866	0.826
		0	1.003	0.980	0.967	0.947	0.907	0.866	0.826
	Indoor unit is lower than outdoor unit	-5	0.998	0.975	0.962	0.942	0.902	0.861	0.821
		-7.5		0.973	0.960	0.940	0.900	0.859	0.819
		-10			0.957	0.937	0.897	0.856	0.816
		-20				0.927	0.887	0.847	0.807

4TXK6548G1000AA heating			Pipe length (m)					40	50
			5	10	15	20	30		
Height difference (m)	Indoor unit is upper than outdoor unit	20			0.985	0.975	0.964	0.954	
		10		0.995	0.985	0.975	0.964	0.954	
		7.5		0.998	0.995	0.985	0.975	0.964	0.954
		5	1.001	0.998	0.995	0.985	0.975	0.964	0.954
		0	1.001	0.998	0.995	0.985	0.975	0.964	0.954
	Indoor unit is lower than outdoor unit	-5	0.996	0.993	0.990	0.980	0.970	0.959	0.949
		-7.5		0.991	0.988	0.978	0.968	0.957	0.947
		-10			0.985	0.975	0.965	0.954	0.944
		-20				0.965	0.955	0.945	0.935

4TXK6560G1000AA cooling			Pipe length (m)					40	50
			5	7.5	10	20	30		
Height difference (m)	Indoor unit is upper than outdoor unit	20				0.963	0.923	0.882	0.842
		10			0.973	0.963	0.923	0.882	0.842
		7.5		0.980	0.973	0.963	0.923	0.882	0.842
		5	1.003	0.980	0.973	0.963	0.923	0.882	0.842
		0	1.003	0.980	0.973	0.963	0.923	0.882	0.842
	Indoor unit is lower than outdoor unit	-5	0.998	0.975	0.968	0.958	0.918	0.877	0.837
		-7.5		0.973	0.966	0.956	0.916	0.875	0.835
		-10			0.963	0.953	0.913	0.872	0.832
		-20				0.943	0.903	0.863	0.823

4TXK6560G1000AA heating			Pipe length (m)					40	50
			5	10	15	20	30		
Height difference (m)	Indoor unit is upper than outdoor unit	20				0.984	0.974	0.963	0.953
		10			0.994	0.984	0.974	0.963	0.953
		7.5		0.997	0.994	0.984	0.974	0.963	0.953
		5	1.000	0.997	0.994	0.984	0.974	0.963	0.953
		0	1.000	0.997	0.994	0.984	0.974	0.963	0.953
	Indoor unit is lower than outdoor unit	-5	0.995	0.992	0.989	0.979	0.969	0.958	0.948
		-7.5		0.990	0.987	0.977	0.967	0.956	0.946
		-10			0.984	0.974	0.964	0.953	0.943
		-20				0.964	0.954	0.944	0.934

## 7 . Installtion

### 7.1 Cassette

#### Installation Procedure

 **Caution**

carefully before working. After installation, start the unit correctly and show customers how to operate and maintain the unit.

- To ensure proper installation, read “Cautions”

 **Meanings of Warning and Cautions:**

 **WARNING:** Serious injury or even death might happen, if it is not observed .

**CAUTION:** Injury to people of damages to machine might happen, if it is not observed .



**Warning**

- Installation shall be done by professional people, don't install unit by yourself. Incorrect installation will cause water leakage, electric shock or fire.
- Install unit as per the Manual. Incorrect installation will cause water leakage, electric shock or fire accident.
- Be sure to use specified accessories and parts. Otherwise, water leakage, electric shock, fire accident or unit falling down may happen.
- Unit should be placed on a place strong enough to hold the unit. Or, unit will fall down causing injuries.
- When install the unit, take in consideration of storms, typhoon, earthquake. Incorrect installation may cause unit to fall down.
- All electric work shall be done by experienced people as per eocal code, regulations and this Manual.
- Use exclusive wire for the unit. Incorrect installation or undersized electric wire may cause electric shock or fire accident.
- All the wires and circuit shall be safe. Use exclusive wire firmly fixed. Be sure that external force will not affect terminal bolck and electric wire. Poor contact and installation may cause fire accident.
- Arrange wire correctly when connectin indoor and outdoor power supply. Fix terminal cover firmly to avoid overhear, electric shock or even fire accident.
- In case retrigerant leakage occurred during unit installation, keep a good ventilation in the room.
- Poisonous gas will occur when meet with fire.
- Check the unit upon installation. Be sure there is no leakage. Refrigerant will induce poisonous gas when meet heat source as heater, oven, etc.
- Cut power supply before touching terminal bolck.



 **Caution**

Unit shall be grounded. But grounding shall not be connected to gas pipe water pipe, telephone line. Poor grounding

- will cause electric shock.
- Be sure to install a leakage breaker to avoid electric shock.
- Arrange water drainage according to this Manual. Cover pipe with insulation materials in case dew may occur. Unproper installation of water drainage will cause water leakage and wer your furniture.
- To maintain good picture or reduce noise, keep at least 1 m from T.V. radio, when install indoor and outdoor unit, connecting wire and power line. (If the radio wave is relatively strong, 1 m is not enough to reduce noise).
- Don't install unit in following places:
  - (a) Oil mist or oil gas exists, such as kitchen, or, plastic parts may got aged, or water leakage.
  - (b) Where there is corrosive gas. Copper tube and welded part may be damaged due to corrosion, causing leakage.
  - (c) Where there is strong radiation. This will affect unit's control system, causing malfunction of the
  - (d) Where flammable gas, dirt, and volatile matter (thinner, gasoline) exist, These matter might cause fire accident.



Earthing

### Cautions for the installation personnel

Don't fail to show customers how to operate unit .

### BEFORE INSTALLATION <Don't discard any accessories until comp>

- Determine the way to carry unit to installation place .
- Don't remove packing until unit reaches installation place .
- If unpacking is unkaavoidable, protect unit properly .

### SELECTION OF INSTALLATION PLACE

(1) Installation place shall meet the following and agreed by customers:

- Place where proper air flow can be ensured .
- No block to air flow .
- Water drainage is smpoth .
- Place strong enough to support unit weight .
- Place where inclination is not evident on ceiling .
- Enough space for mainenance .
- Indoor and outdoor unit piping length is within limit . (Refer to Installation Manual for outdoor unit .)
- Indoor and outdoor unit, power cable, inter unit cable are at least 1 m away fromT .V . radop . This is helpful to avoid picture disturbance and noise . (Even if 1 m iskept, noise can still appear if radio wave is strong)

(2) Ceiling height

Indoor unit can be installed on ceiling of 2 .5-3m in height . (Refer to Foeld setting and Installation Manual of ornament panel .)

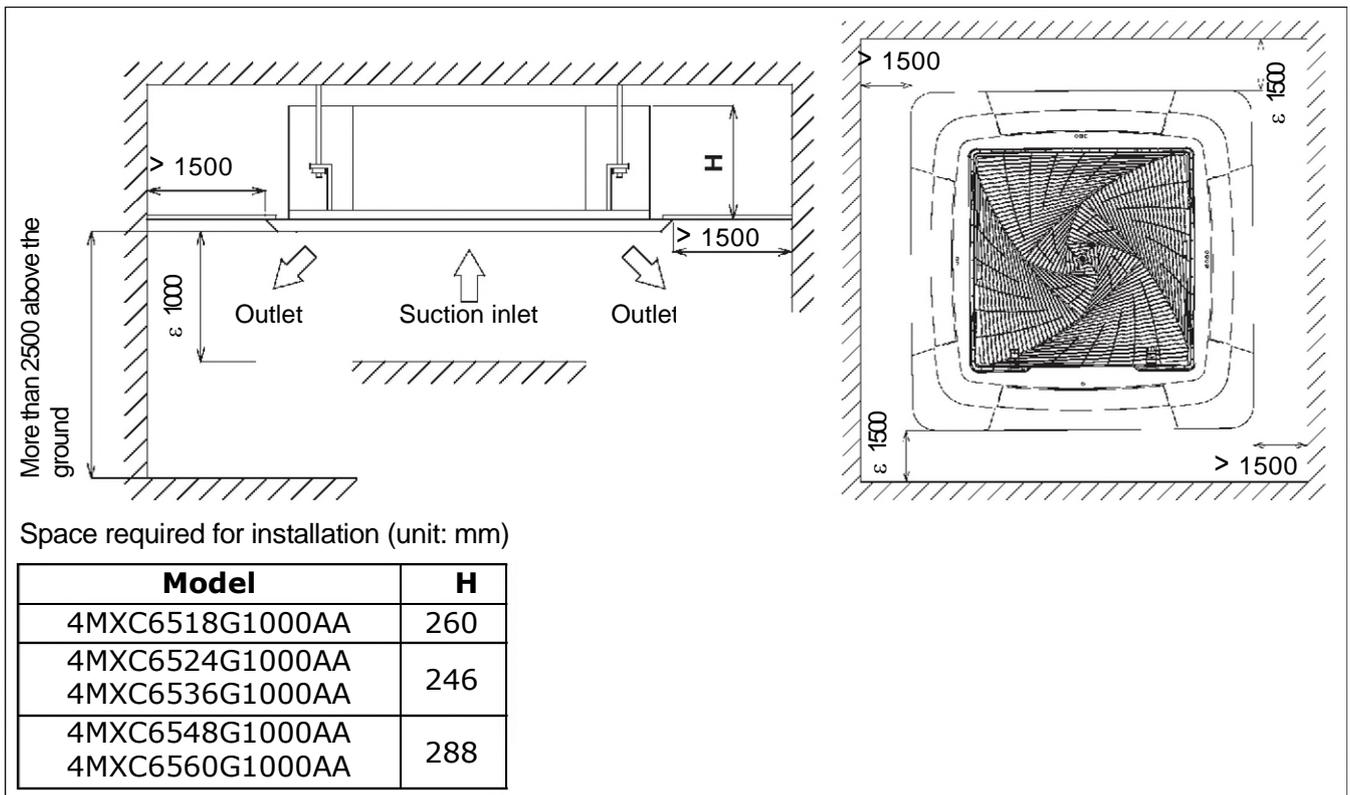
(3) Install suspending bolt .

Check if the installation place is strong enough to hold weight . Take necessary measures in case it is not safe .

(Distance between holes are marked on paper pattern . Refer to paper pattern for place need be reinforced)

(4) Selection of installation location of outdoor With consent from the user, installation location shall:

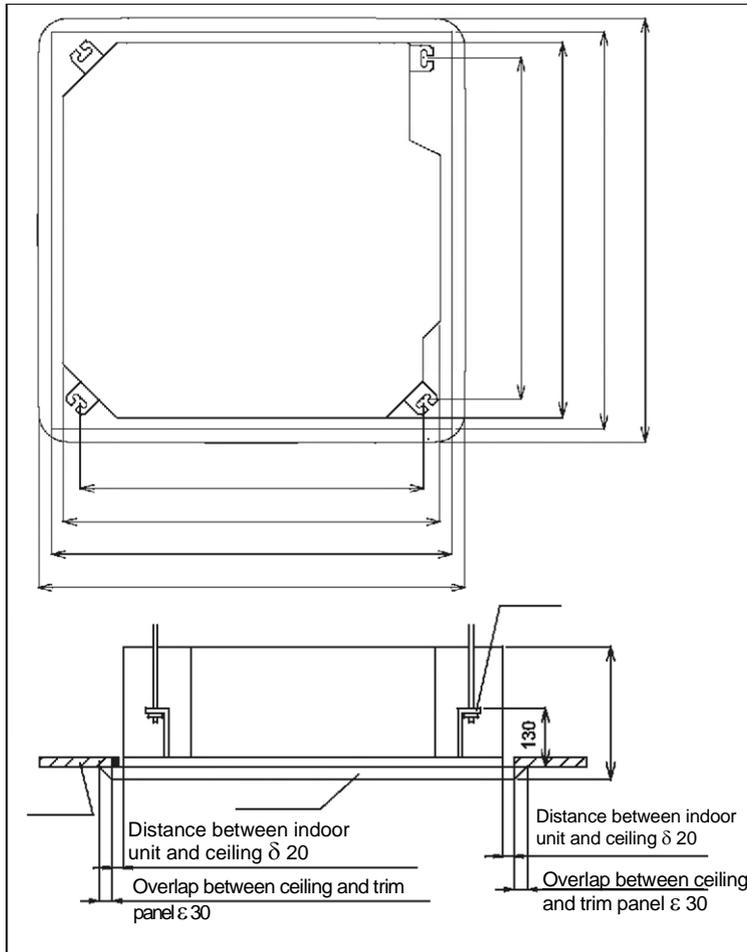
- Be sufficient to bear weight of the units, with air circulation .
- Avoid direct radiation from heat sources or other heat sources .
- Facilitate the drainage of condensate . Holes in wall shall also facilitate drainage .
- Be such that noise and heat air will not disturb neighbors .
- Be free of heavy snow in winter .
- Allow air inlets and outlets to be free of barriers .
- Not allow air outlet to directly face strong airflow .
- Facilitate installation at four corners, with 1m space above the unit .
- Be convenient for maintenance and repair .
- For installation of multiple units, sufficient space shall be ensured to avoid short circuit .
- The air conditioner shall not be mounted on a non-dedicated metal frame (e .g . burglar mesh) .
- When the outdoor unit is installed on a street side, its height shall not be less than 2 .5m



### Preparation before installation

(1) Location relationships between ceiling opening and hanging screw

4MXC6524G1000AA 4MXC6536G1000AA  
4MXC6548G1000AA 4MXC6560G1000AA



765 (spacing of hanging screw)  
850 (indoor unit)  
890 (ceiling opening)  
950 (trim panel)

765 (spacing of hanging screw)  
850 (indoor unit)  
890 (ceiling opening)  
950 (trim panel)

Hanger bracket

H

Ceiling

Trim panel

Model	H
4MXC6518G1000AA	320
4MXC6524G1000AA 4MXC6536G1000AA	299
4MXC6548G1000AA 4MXC6560G1000AA	341

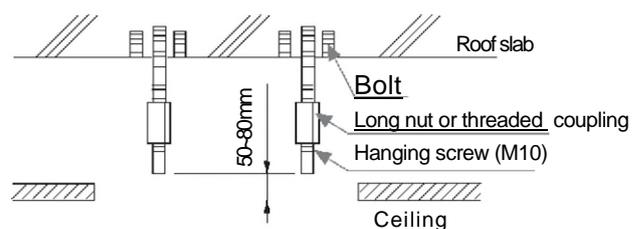
### Note:

Overlap between the ceiling and decorative panel shall be 30mm or more . The distance between indoor unit and ceiling shall be 20mm or less . If it's more than 20mm, add ceiling materials at i or repair the ceiling .

(2) Complete all pipes (for refrigerants and drainage) and wires (for connection of indoor and outdoor units) to be connected to indoor unit before installation so that they can be connected to indoor unit immediately after installation .

(3) Install hanging screws

- o bearing the unit weight, use foundation bolts on existing ceilings, or embedded bolts, buried bolts or other parts that is provided on site on new ceilings . Before installation is continued, adjust the distance from ceiling .



<Installation example>

Note: All the above parts are to be provided on installation sites .

Diameter of hanging screws is M10 .



### Installation of indoor unit

Installation sequence on new ceiling: (1) -± (2) -± (3) -± (4) -± (5) -± (6)

Installation sequence on new ceiling: (1) -± (3) -± (4) -± (5) -± (6)

#### (1) Temporary installation of indoor unit

- Attach hangers to hanging screws, and make sure to use nuts and washers on both upper and lower ends of hangers so as to fix them firmly . A washer fixing plate (to be provided on site) can prevent the washer from dropping off .

<Work at ceilings>

(2) Adjust units to appropriate installation locations . Refer to “(3) Preparation before installation .”

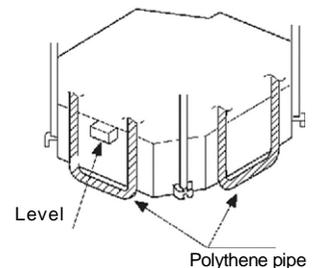
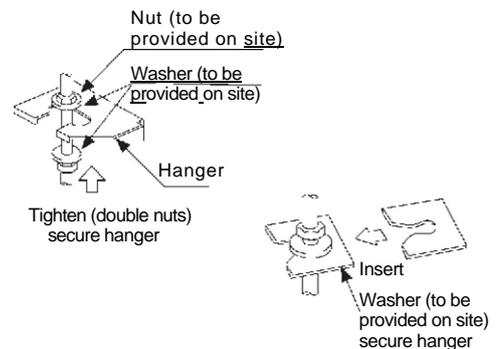
(3) Correct levelness of air conditioner units .

- The indoor unit is equipped with a built-in drainage pump and a float switch . Correct levelness with a level or water-filled polyethylene pipe .

Note: if the unit inclines towards reverse direction of condensate flow, the float switch can not work normally and water leakage will be resulted .

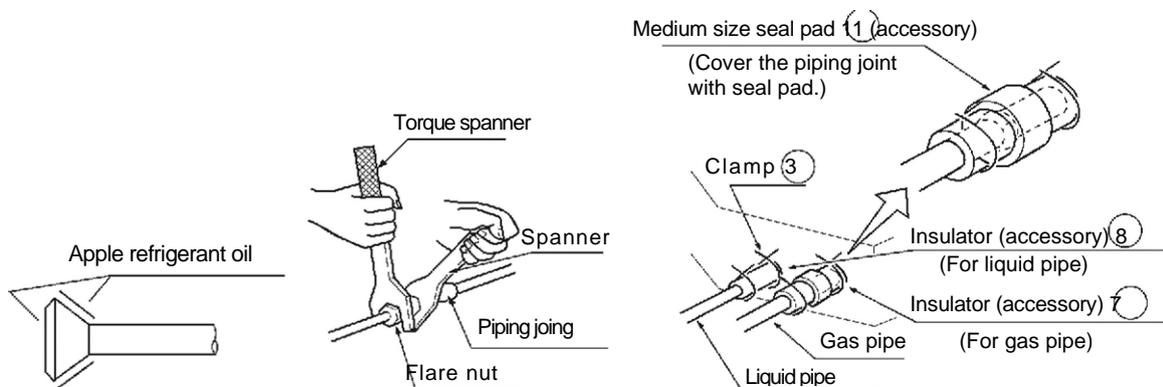
(4) Pull out the original fixing plate that prevents the washer from dropping off, and tighten nuts .

(5) Remove the installation cardboard .



### REFRIGERANT PIPING (As for outdoor piping, please refer to installation Manual of outdoor unit.)

- Outdoor is precharged with refrigerant .
- Be sure to see the Fig .1, when connecting and removing piping from unit .
- For the size of the flare nut, please refer to Table 1 .
- Apply refrigerant oil at both inside and outside of flare nut . Tighten it band tight 3-4 turns then tighten it .
- Use torque specified in Table 1 . (Too much force may damage flare nut, causing gas leakage) .
- Check piping joints for gas leakage . Insulate piping as shown in Fig . below .
- Cover joint of gas piping and insulator ® with seal .

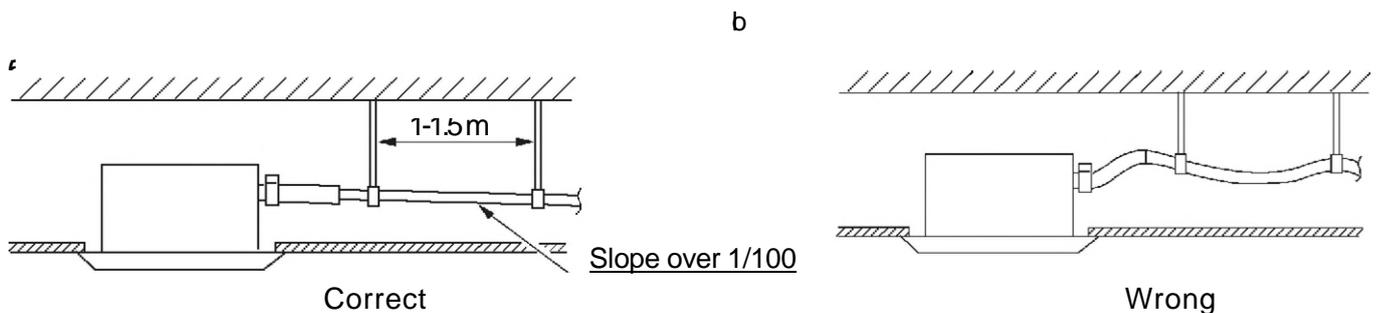


Pipe size	Tighten torque	A(mm)	Flare shape
4) 6.35	1420~ <a href="#">1720N.cm</a> (144~ <a href="#">176kgf.cm</a> )	8.3-8.7	R 0.4 ~ 0.8   $90^{\circ} \pm$
4) 9.52	3270~ <a href="#">3990N.cm</a> (333~ <a href="#">407kgf.cm</a> )	12.0-12.4	
4) 12.7	4950~ <a href="#">6030N.cm</a> (490~ <a href="#">500kgf.cm</a> )	12.4-16.6	
4) 15.88	6180~ <a href="#">7540N.cm</a> (630~ <a href="#">770kgf.cm</a> )	18.6-19.0	
4) 19.05	9720-11860 N.cm (990-1210 <a href="#">kgf.cm</a> )	22.9-23.3	

### Installation of drain pipe

#### (1) Install drain pipe

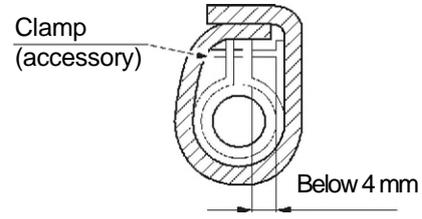
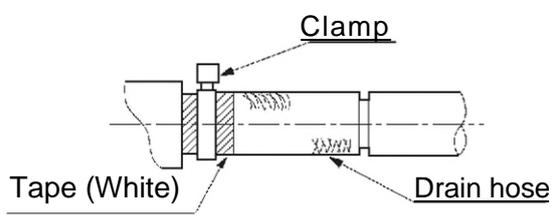
- Diameter of the drain pipe shall be greater than or equal to that of the connecting pipe .  
(PE pipe: size: 25mm; O .D .: 32mm)
- The drain pipe shall be short and have a downward slope of at least 1/100 to prevent pockets .
- If it is impossible to provide sufficient slope to the drain pipe, a drain lift pipe shall be installed .
- To avoid bending of the drain pipe, hangers shall be kept 1-1.5m away from each other .



Use a drain hose and clamp .  
 Insert the drain hose into the drainage outlet until it reaches the white tape . Then tighten the clamp .

For heat insulation, wind the drain hose with sealing gaskets . Provide heat insulation to indoor drain hose .

Large-size sealing gasket  
(accessory)

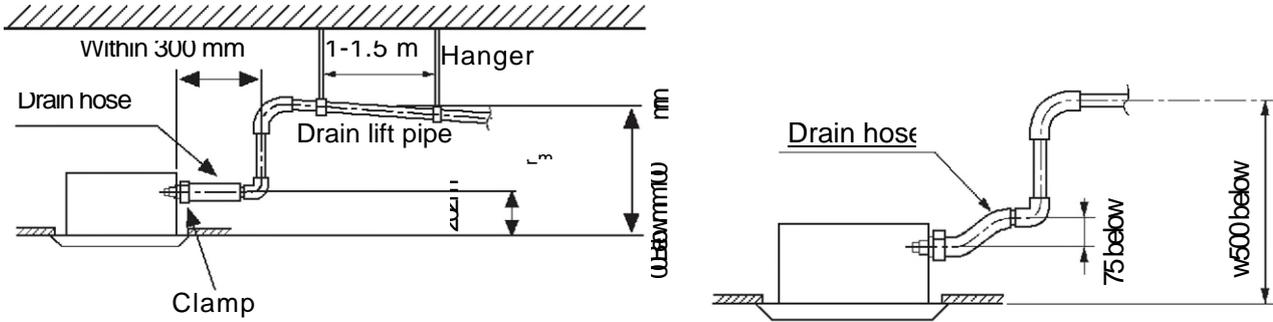


mm

**Precautions for drain lift pipe**

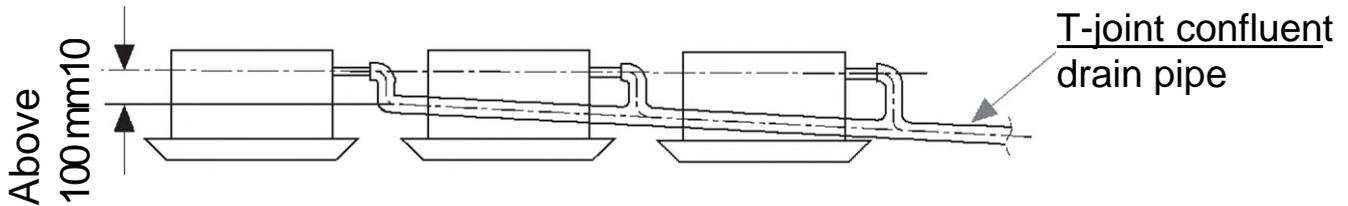
The drain lift pipe shall be installed as low as possible.

The drain lift pipe shall be perpendicular to the unit and not more than 300mm away from the unit.



**Note:**

- The slope of accessory drain pipe shall be within 75mm so that the drainage outlet does not necessarily bear excessive external force .
- If multiple drain pipes join together, install them as follows .



The size of confluent drain pipe selected shall be suitable for operating capacity of the ur

(2) Check drainage is smooth after installation .

- Check drainage by filling in 1200cc water slowly from air outlet or inspection hole .

**Installation Instruction for Embedded Air-Conditioning Panel**

1 . Before instalation

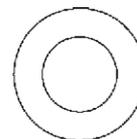
**Warning**

- The trim panel shall be put on buffer materials when unpacked to prevent being scratched by hard objects.

Please confirm the following accessories delivered with the product:

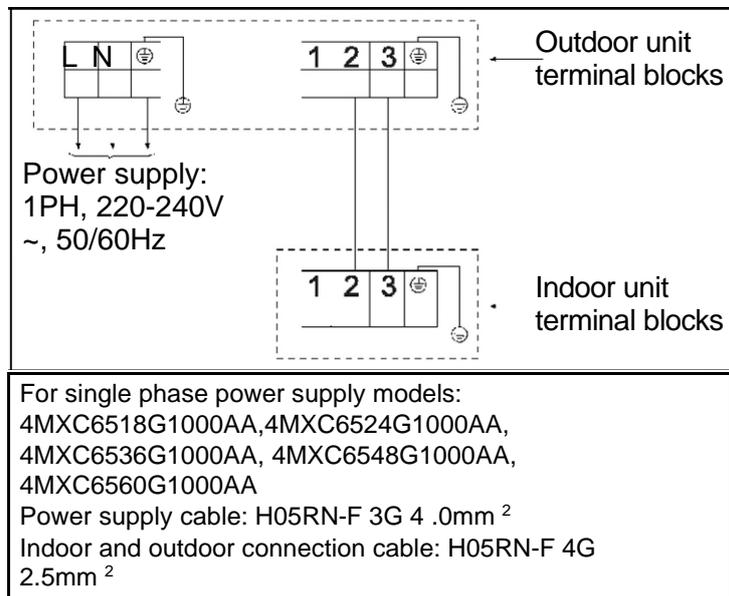


Bolt (M5\*25) Qty: 4  
Bolt (M5 25)



asket Qty:  
Gasket Qty: 4

Connect and fix the power supply cable, indoor-outdoor connection cable as following:

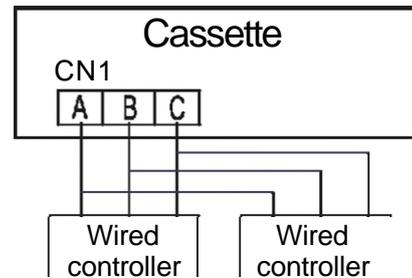
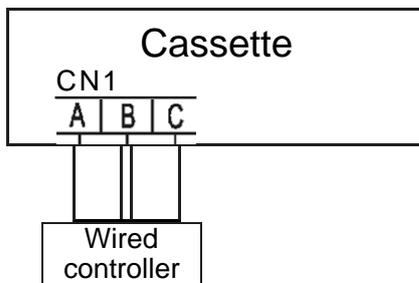


### Wired controller wiring instruction

Alert! Ensure do any of the operating during power off .

A . One Wired controller controls one indoor unit

B . Double wired controllers control one indoor unit



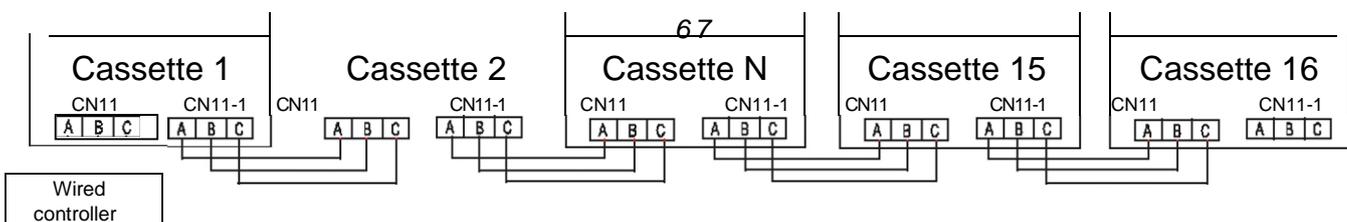
C . Connection method for ONE wired controller with MULTIPLE indoor units

For wired controller connect with cassette

Step1: The wiring connection between 1 .wired controller-the master unit(directly connected to the wired controller),

2 .master unit-slave unit, 3 .slave unit-slave unit should be one to one match of all three lines .

The connection wiring is as following, and max . Quantity of the connected indoor units is16 .

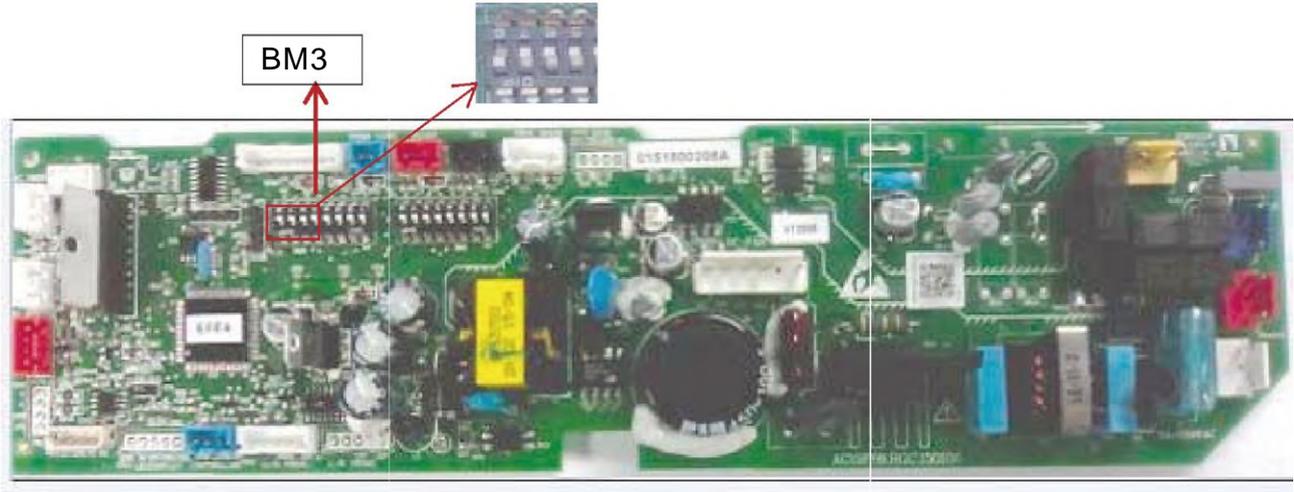


**Note:**

1) Shielded lays of the communication line should be connected as a daisy chain from the first master unit to the last slave unit .

2) The shielding lay of the communication line must be grounded at the end of the last slave unit .

Step2 Setting the dip switch BM3, and the indoorunit should be set according to the following table:



Wired controller address	BM3-8	BM3-7	BM3-6	BM3-5
Master indoor unit	0	0	0	0
Slave unit 1	0	0	0	1
Slave unit 2	0	0	1	0
Slave unit 3	0	0	1	1
Slave unit 4	0	1	0	0
Slave unit 5	0	1	0	1
Slave unit 6	0	1	1	0
Slave unit 7	0	1	1	1
Slave unit 8	1	0	0	0
Slave unit 9	1	0	0	1
Slave unit 10	1	0	1	0
Slave unit 11	1	0	1	1
Slave unit 12	1	1	0	0
Slave unit 13	1	1	0	1
Slave unit 14	1	1	1	0
Slave unit 15	1	1	1	1

“1” stands for ON, “0” stands for OFF .

**Note:**

The above step 1, step 2, and step 3 must be operated in power off status .

The power supply terminals L1 L2 of all the outdoor units must be in the same phase sequence .

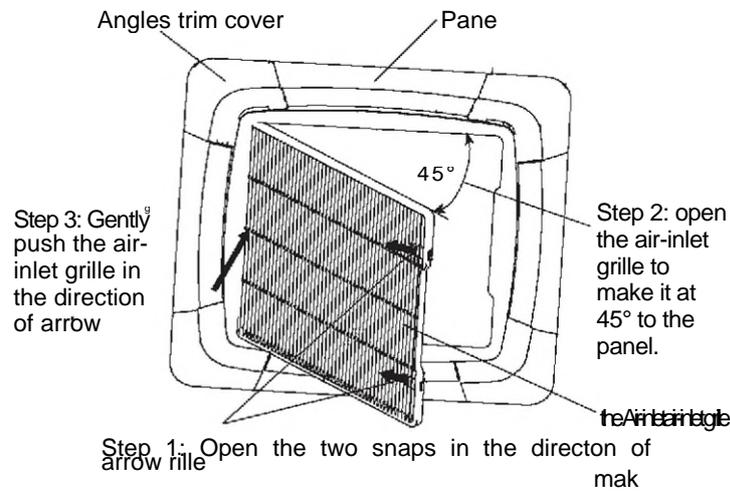
**1.Installation**

(1) Confirming the position of unit hanger

Please confirm the installation position of the hanger for indoor unit is about 130mm above the ceiling . For details, please refer to the Instructions for Installation and Maintenance of indoor unit .

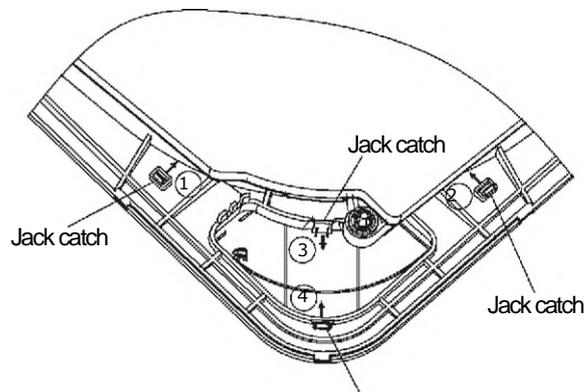
(2) Removing the air-inlet grille

Open the air-inlet grille to make it at an angle of 45 i a to the trim panel . As shown in the following figure, please remove the air-inlet grille as per the operation requirements .



### (3) Installing the panel

1) Please remove the four (4) angle trim panels . Removal method: Flip the jack catches of the angle trim panel in the order of c c c c , as shown in the following figure . The flipping direction is indicated by the arrows . Then the



angle trim panel can be removed.

Jack catch

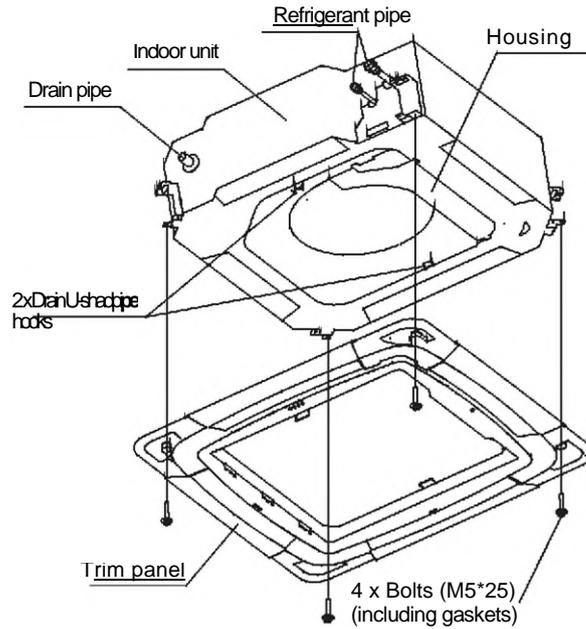
2) Pull out the two (2) U-shaped hooks on the indoor unit from below .

3) Adjust the panel direction to make the angle side engraved with "Pipe side" consistent with the refrigerant pipe of the indoor unit, and make the angle side engraved with "Drain side" consistent with the drain side of the indoor unit . Then hang the 2 hooks in the inner side of the panel on the 2 U-shaped hooks of the indoor unit .

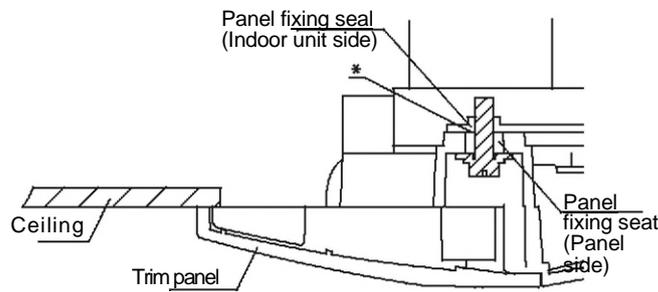
4) Finally fix the panel on the indoor unit with the bolts (M5\*25) and gaskets delivered with the unit .

Caution: Gaskets must be used for fixing, or else the panel would be easy to fall off .



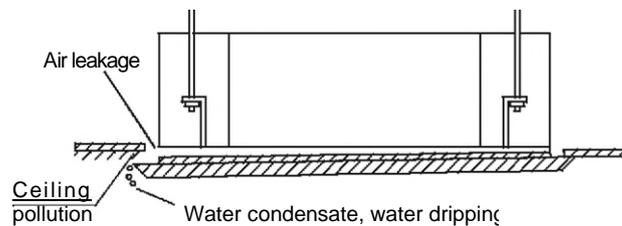


5) When tightening the four (4) bolts, please make sure there is no clearance between the panel fixing seat on the side of the indoor unit and the panel fixing seat on the side of the panel. That is to say: the bolts shall be fully tightened (see \* in the figure) . If there is a clearance, air leakage or water leakage is likely to occur .

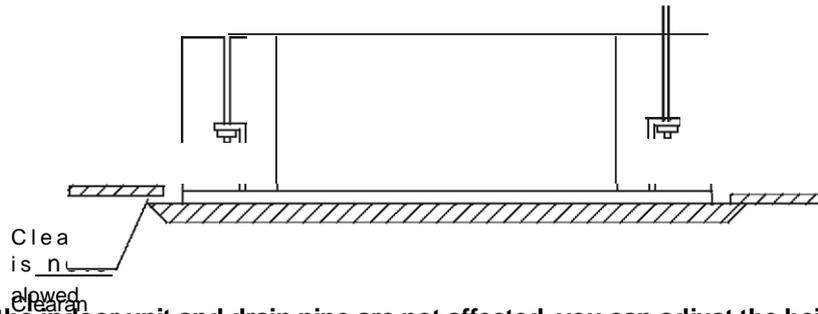


**Caution:**

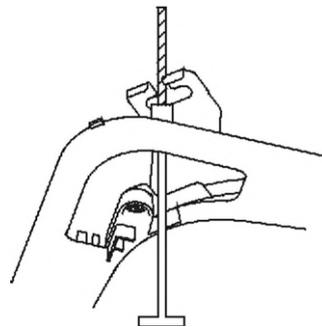
- Improper tightening of bolts would lead to the faults shown in the following figure .



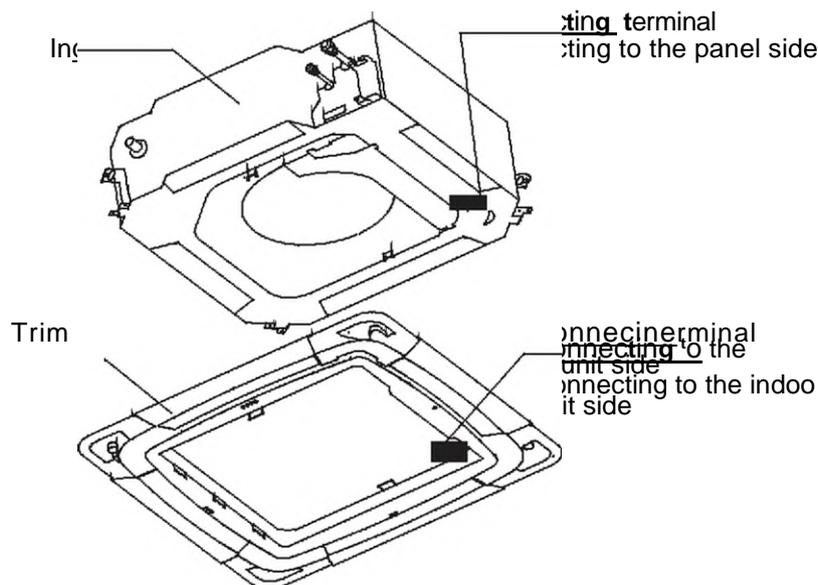
- After tightening the bolts, if there is a clearance between the ceiling and the trim panel, please readjust the height of the indoor unit



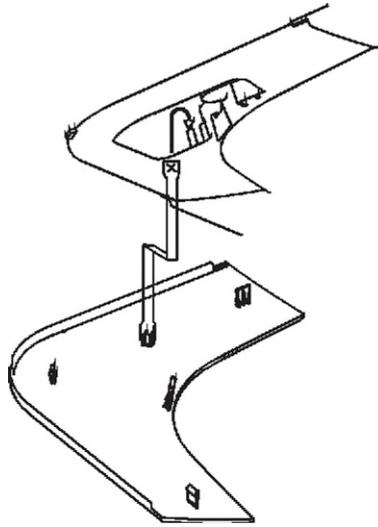
If the elevation level of the indoor unit and drain pipe are not affected, you can adjust the height of the indoor unit through the corner pore on the trim panel . Please keep the unit horizontal in the process of adjustment, or else water leakage is easy to occur .



- Please do not swing the louver blade by hand, or else the blade mechanism would be damaged .
- 6) Connection of trim panel . Connect the black lead-out terminal of the panel to the black lead-out terminal of the indoor unit housing .



- 7) When the installation of panel is complete, please fix the four (4) angle trim panels .
- Hang and tighten the strap of the angle trim panel on the shackle of the trim panel, as shown in the figure .
  - Fix the angle trim panel on the trim panel .



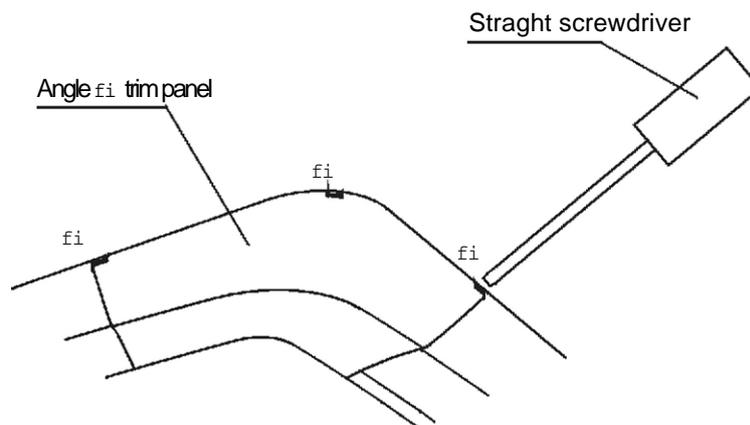
8) Installing the air-inlet grille .

Install the air-inlet grille with the steps opposite to that for removing .

For reference

The method for removing angle trim panels when the installation of trim panel is complete:

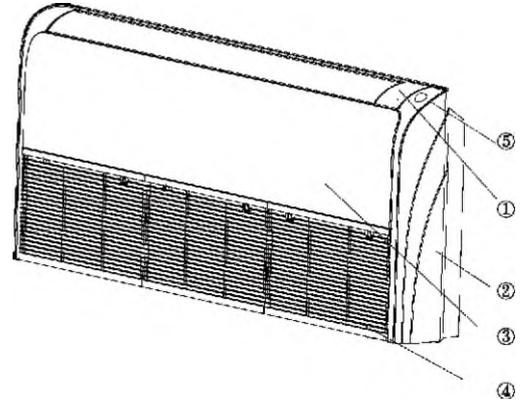
- 1) Insert a straight screwdriver in the notch c . Gently turn the screwdriver downward, and slowly insert it in, and then move it up and down to make the angle fall off .
- 2) Make the angle C and C fall off in the same way .
- 3) Take off the angle trim panel by hand .



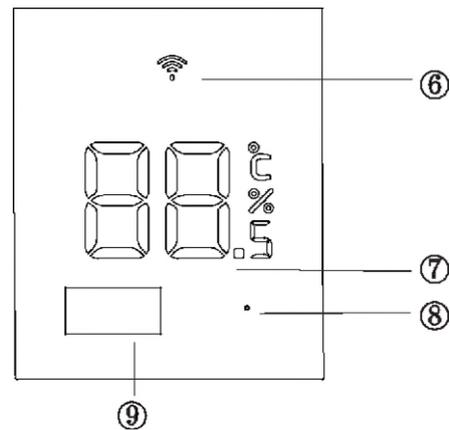
## 7.2 Convertible - EN

### Parts and Functions

#### Indoor Unit



- Operating Control Panel 2
- (1) Operation Control Panel
  - (2) Cover Plate
  - (3) Front Panel
  - (4) Inlet Grill(Filter inside)
  - (5) Human Sensor
  - (6) WIFI Indicator Lamp
  - (7) Display Indicator Lamp
  - (8) Emergency Switch
  - (9) Remote Receiver



#### Installation Procedure

Please ask the dealer or specialist to install, never try by the users themselves . After the installation please be sure of the following conditions .

#### Warning

- Please call dealer to install the air-conditioner. Incorrect installation may cause water leaking, shock and fire hazard.

**Warning**

- Air-conditioner can't be installed in the environment with inflammable gases because the inflammable gases near air-conditioner may cause fire hazard.

- Installed electrical-leaking circuit breaker.

It easily cause electrical shock without circuit breaker.

- Connect earthing wire.

Earthing wire should not be connected to the gas pipe, water pipe, lightning rod or phone line, incorrect earthing may cause shock.

- Use discharge pipe correctly to ensure efficient discharge.

Incorrect pipe use may cause water leaking.

- Wiring

Air-conditioner should be equipped with special power supply wire.

- Location

- Air-conditioner should be located in well-vented and easily accessible place.

- Air-conditioner should not be located in the following places:

(1) Places with machine oils or other oil vapours.

(2) Seaside with high salt content in the air.

(3) Near hot spring with high content of sulfide gases.

(4) Area with frequent fluctuation of voltage e.g. factory, etc.

(5) In vehicles or ships.

(6) Kitchen with heavy oil vapour or humidity.

(7) Near the machine emitting electric-magnetic waves.

(8) Places with acid, alkali vapour.

- Choose the following locations:

(1) Capable of supporting air conditioner weight. Don't increase operating noise and vibration.

(2) Hot vapour from outdoor unit outlet and operating noise don't disturb neighbour.

(3) No obstacles around the outdoor unit outlet.

- TV, radio, acoustic appliances etc. are at least 1 m far away from the indoor unit, outdoor unit, power supply wire, connecting wire, pipes, otherwise images may be disturbed or noises be created.

- As required, take measures against heavy snow.

**Earthing****For authorized service personnel only**

**Warning**

- (1) For the room air conditioner to operate satisfactorily, install it as outlined in this installation manual.
  - (2) Connect the indoor unit and outdoor unit with the room air conditioner piping and cords available from our standard parts. This installation manual describes for the correct connections so that the installation set available from our standard parts should be used.
  - (3) Installation work must be performed in accordance with national wiring standards by authorized personnel only.
  - (4) Never cut the power cord, lengthen or shorten the cord, or change the plug. Do not use an extension cord.
  - (5) Plug in the power cord plug firmly. If the receptacle is loose, repair it before using the room air conditioner.
  - (6) Do not turn on the power until all installation work is done.
- 



 **Caution**

- when handing it.
- (1) Be careful not to scratch the room air conditioner
- (2) After installation, explain correct operation to the customer, according to the operating manual.
- (3) Let the customer keep this installation manual because it will be used when the room air conditioner is serviced or moved.

**Selecting The Mounting Position**

 **Warning**

- Install at a place that can withstand the weight of the indoor unit and install it positively so that the unit will not topple or fall.

 **Caution**

- Do not install the unit where there is the danger of combustible gas leakage.
- Do not install near heat sources.
- If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows .

- (1) Install the indoor unit level on a strong wall which is not subject to vibration .
- (2) The inlet and outlet ports should not be obstructed, and the air should be able to blow all over the room .
- (3) Do not install the unit where it will be exposed to direct sunlight
- (4) Install the unit where connection to the outdoor unit is easy .
- (5) Install the unit where the drain pipe can be easily installed .
- (6) Take servicing, etc . into consideration and leave the spaces shown in “Maintenance space dimension” .
- (7) Install the unit where the filter can be removed

**Accessories For Installation**

The following installation parts are optional parts . Use them as required .

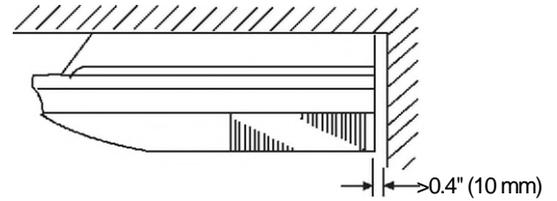
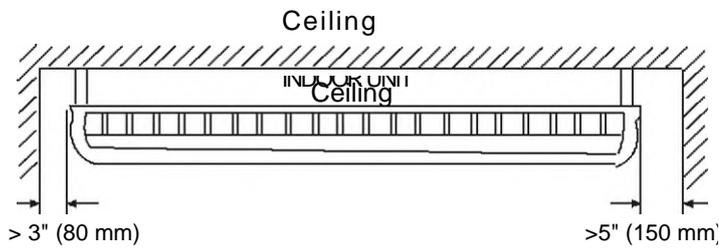
Optional parts

Adhesive tape
Saddle (L.S) with screws
Drain hose
Heat insulation material
Piping hole cover
Putty
Plastic clamp

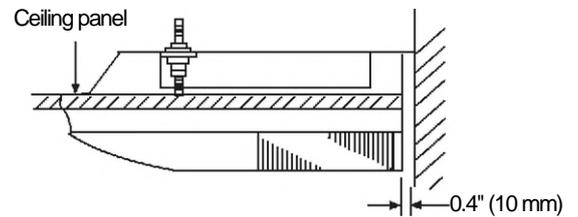
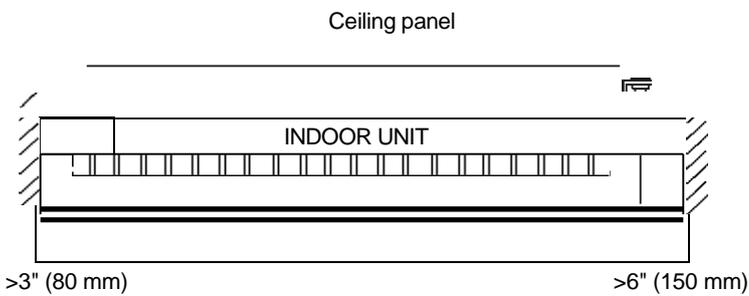


## Maintenance Space Dimension

### For ceiling installation



### For half concealed installation



## Installing The Indoor Unit

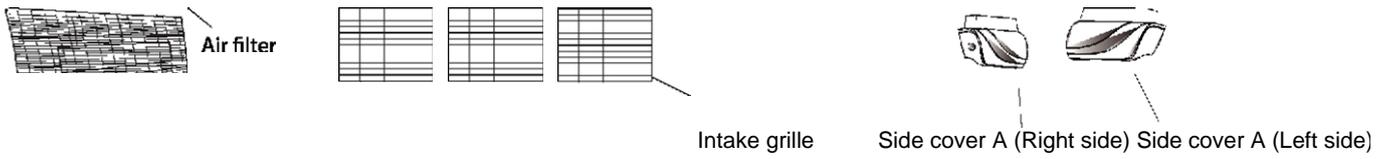
### Connection pipe requirement

Model	Diameter		Maximum length	Maximum height (between indoor and outdoor)
	Liquid side	Gas side		
4MXX6518G1000AA	6.35 mm	12.70 mm	20 m	10 m
4MXX6524G1000AA	9.52 mm	15.88 mm	20 m	10 m
4MXX6536G1000AA 4MXX6548G1000AA	9.52 mm	19.05 mm	30 m	20 m
4MXX6560G1000AA	9.52 mm	19.05 mm	50 m	30 m

### Install the room air conditioner as follows

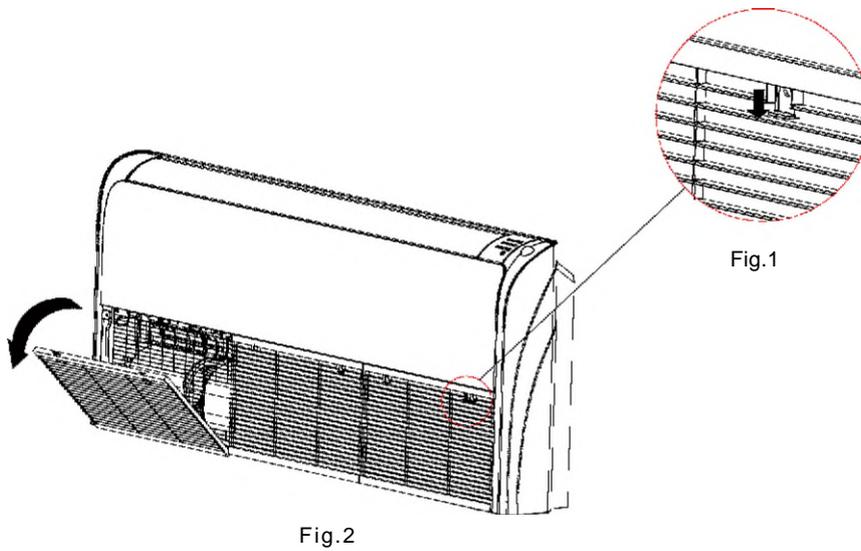
Remove the intake grill and side cover

- (1) Open the intake grill
- (2) Remove the Side cover(Right and left side)
- (3) This air conditioner can be set up to intake fresh air . The information about how to install for fresh-air intake refer to "Fresh air intake" .



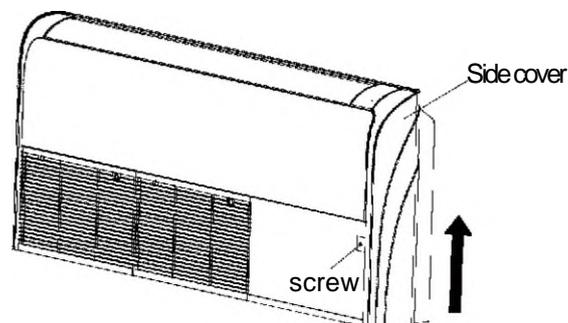
### Open the intake grille

- (1) Push the embedding switch according to the direction of the arrowhead .(Refer to Fig .1)
- (2) Turn into the intake grille according to the direction of the arrowhead .(Refer to Fig .2)



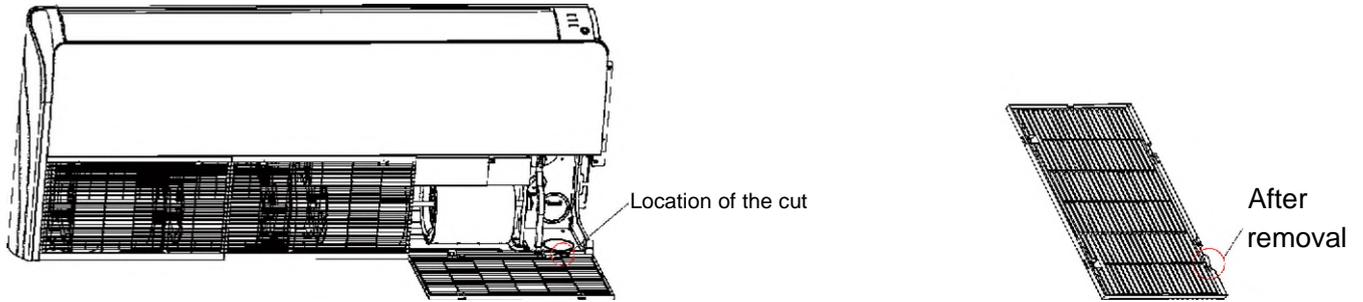
### Remove the Side cover

- (1) Remove the screw .
- (2) Push the Side cover according to the direction of the arrowhead .
- (3) Then remove the Side cover .



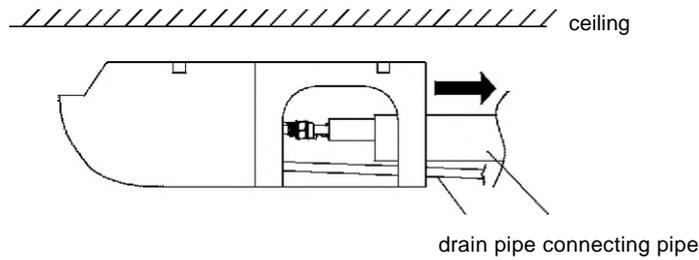
### Cut intake grill for drain pipe

- (1) Tools: Knife or Pliers .
- (2) Cut the intake grill before installing the drain pipe, Then, pass the drain pipe through the hole .As the following schematic .



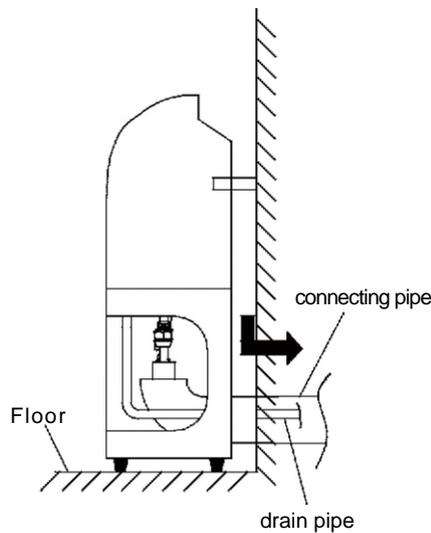
### Installing the drain pipe and the connecting pipe

- (1) When the unit is installed in the ceiling, Installing them as below .



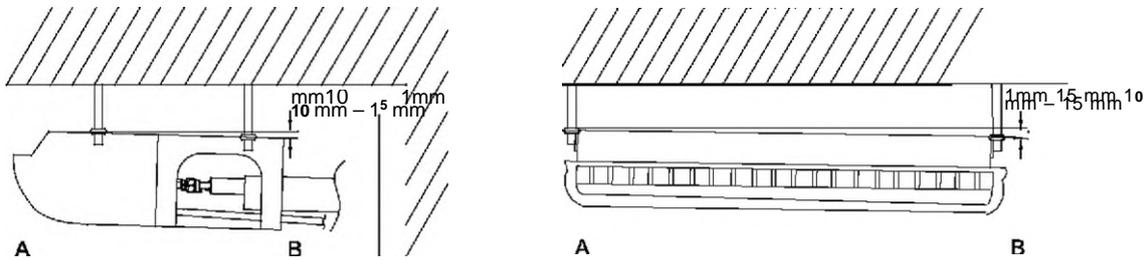
### Installing the drain pipe and the connecting pipe

- (1) When the unit is installed in the ceiling, Installing them as below

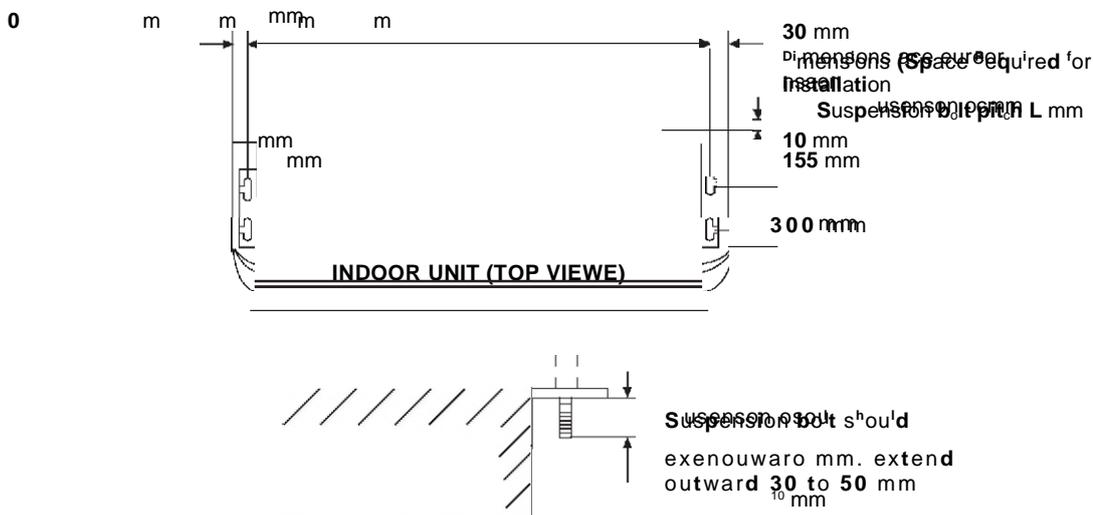


**Caution**

- When the unit is installed in the ceiling, side B is lower than side A for condensate discharge. As below.



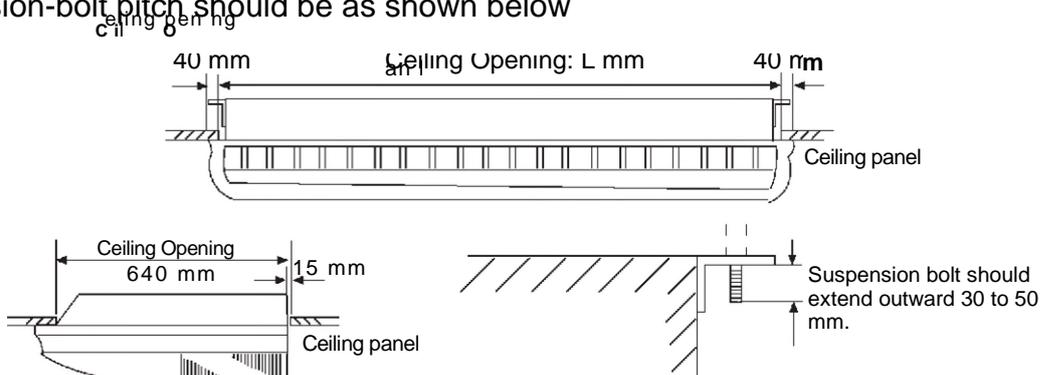
**Location of ceiling suspension bolts**



MODEL	L
4MXX6518G1000AA	880
4MXX6524G1000AA	
4MXX6536G1000AA	1204
4MXX6548G1000AA	
4MXX6560G1000AA	1530

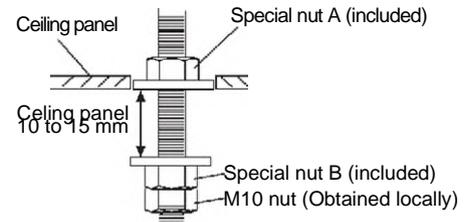
**For half-concealed installation**

Suspension-bolt pitch should be as shown below



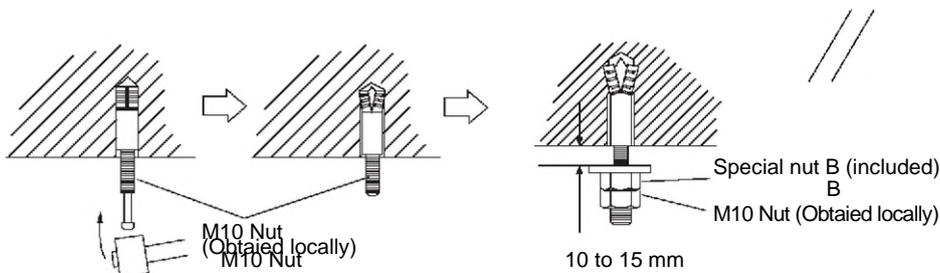
### Drilling the holes and attaching the suspension bolts

- (1) Drill 4  $\phi$  25mm holes at the suspension-bolt locations . The two special nuts are provided with the unit . The M10 nut must be obtained locally .
  - (2) Install the bolts, then temporarily attach Special nuts A and B and a normal M10 nut to each bolt .
- Bolt strength: 980 to 1470 N (100 TO 150 kgf)



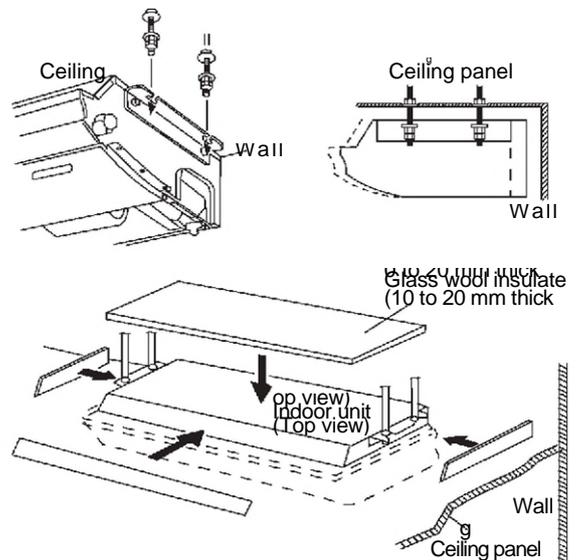
### If using anchor bolts

- (1) Drill holes for anchor bolts at the locations at which you will set the suspension bolts . Note that anchor bolts must be obtained locally .
  - (2) Install the anchor bolts, then temporarily attach special nut "B" (included) and a locally-procured M10 nut to each of the bolts .
- Anchor-bolt strength: 980 to 1470 N (100 TO 150 kgf)



### Installing the indoor unit

- (1) Lift unit so that suspension bolts pass through suspension fittings at the sides (four places), and slide the unit back .
- (2) Fasten the indoor unit into place by tightening-up the special "B" bolts and the M10 nuts . Make sure that unit is secure and will not shift back and forth . **For half-concealed installation**  
When installing the indoor unit in a semi-concealed orientation, make sure to reinforce the insulation of the unit on all sides .  
Drops of water may fall from the unit if it is not thoroughly insulated .



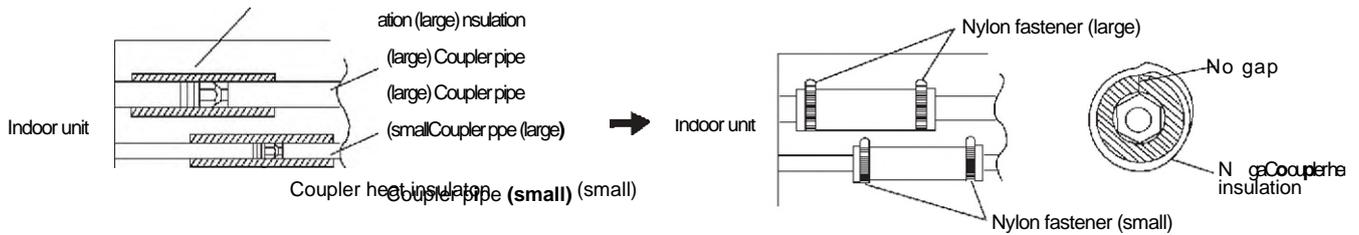
#### Caution

- In order to check the drainage, be sure to use a level during installation of the indoor unit. If the installation site of the indoor unit is not level, water leakage may occur.



### Installing the coupler heat insulation

After checking for gas leaks, insulate by wrapping insulation around the two parts (large and small) of the indoor unit coupling, using the coupler heat insulation. After installing the coupler heat insulation, wrap both ends with vinyl tape so that there is no gap. Secure both ends of the heat insulation material using nylon fasteners.



When using an auxiliary pipe, make sure that the fastener used is insulated in the same way.

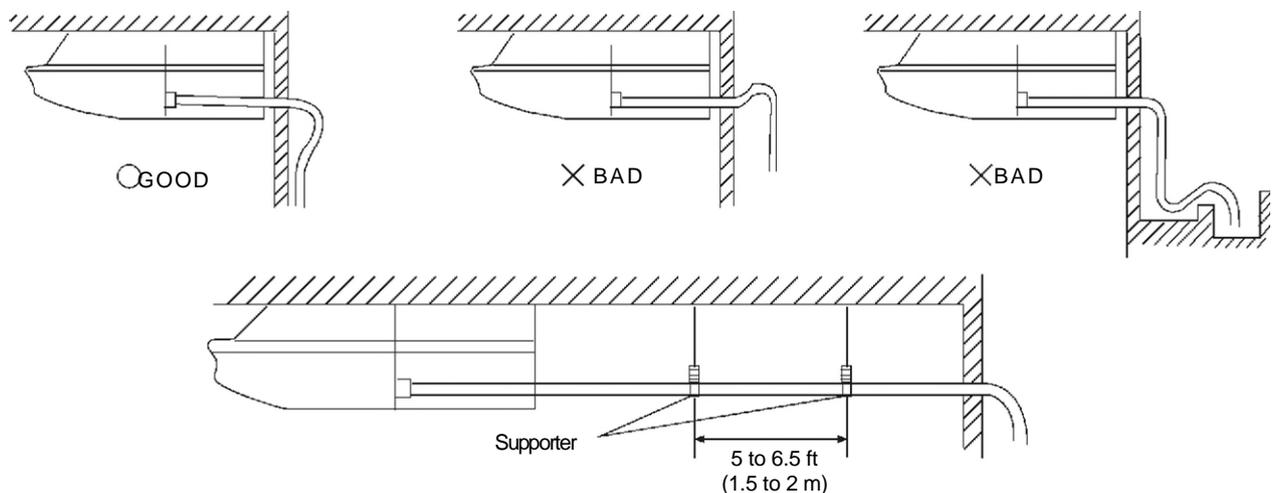
Note:

When installing the unit on the floor, fix the four rubber base feet in the accessories on the bottom plate of the unit with four 4x16 screws and 4 flat washers, as the position in the figure.



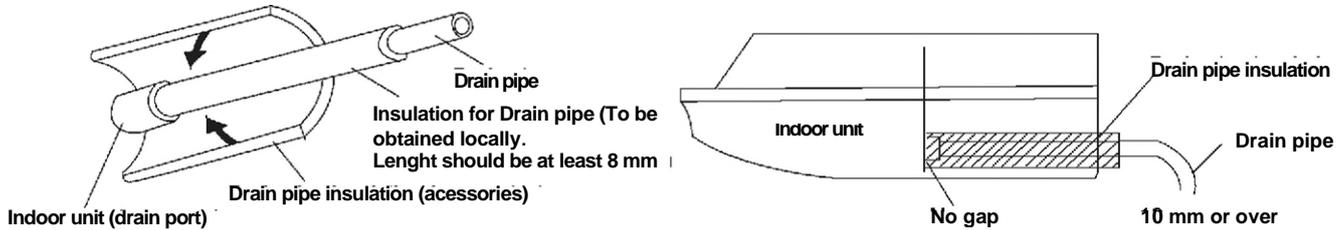
### Installing The Drain Hose

- Install the drain pipe with downward gradient (1/50 to 1/100) and so there are no rises or traps in the pipe.
- Use general hard polyvinyl chloride pipe (VP25) (outside diameter 38 mm)
- During installation of the drain pipe, be careful to avoid applying pressure to the drain point of the unit.
- When the pipe is long, install supporters.
- Do not perform air bleeding.
- Always heat insulate (8mm or over thick) the indoor side of the drain pipe.



## Install insulation for the drain pipe

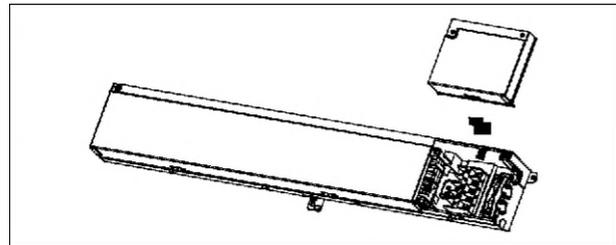
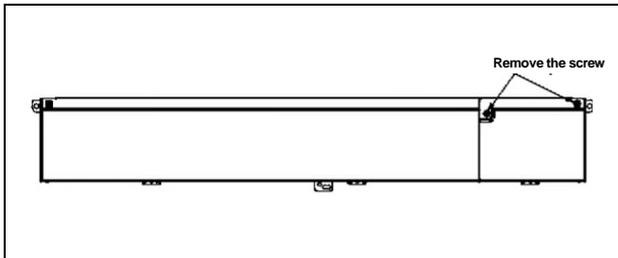
Cut the included insulation material to an appropriate size and adhere it to the pipe .



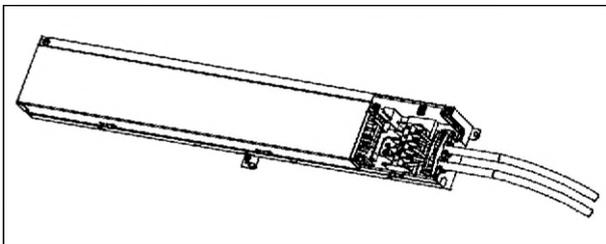
## Electrical Wiring

### A. Connect wiring to the terminals

(1) Remove the screw



(3) Connect the wiring

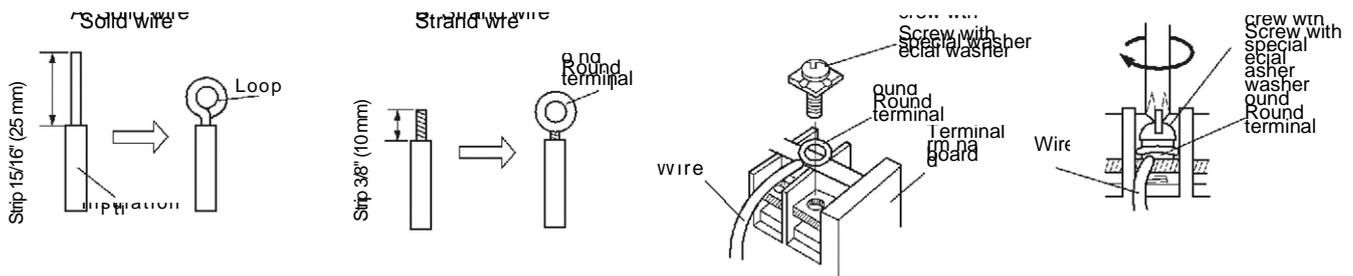


### B. For solid core wiring (or F-cable)

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 15/16"(25mm) to expose the solid wire .
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board .
- (3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw .
- (4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver .

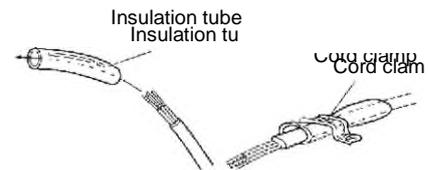
### C. For strand wiring

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 3/8"(10mm) to expose the solid wire .
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board .
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end .
- (4) Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver .



### Fix connection cord and power cable at the cord clamp

After passing the connection cord and power cable through the insulation tube, fasten it with the cord clamp. Use VW-1, 0.5 to 1.0 mm thick, PVC tube as the insulation tube.



### Electrical requirement

Select wire sizes and circuit protection from table below. (This table shows 20m length wires with less than 2% voltage drop).

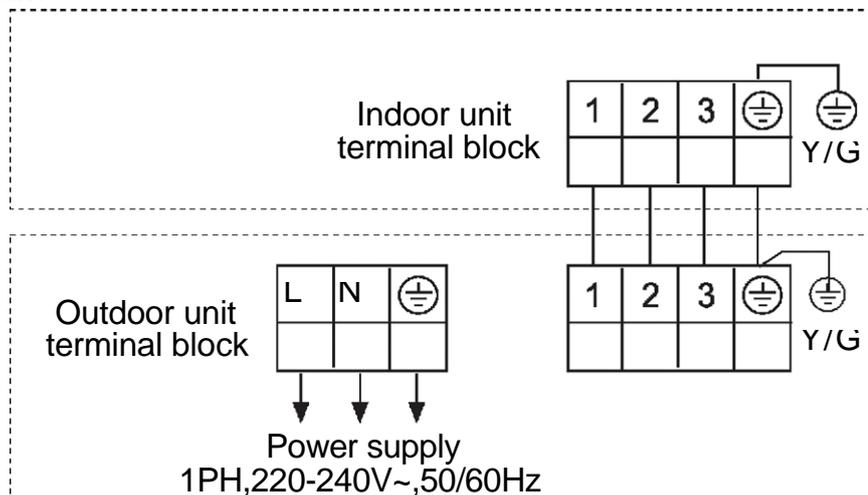
#### Caution

- Match the terminal block numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning the electric parts.
- Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord with the cord clamp. If the insulator is chafed, electric leakage may occur.
- Always connect the ground wire.
- The Unit has default temperature compensation setting, please cancel it when floor standing installation.

### Connect indoor unit and outdoor unit

- (1) Remove the cord clamp.
- (2) Process the end of the connection cords to the dimensions shown in wiring diagram.
- (3) Connect the end of the connection cord fully into the terminal block.
- (4) Fasten the connection cord with a cord clamp.
- (5) Fasten the end of the connection cord with the screw.

### Wiring diagram



The specification of cable between indoor unit to outdoor unit is HO5RN-F4G 2.5 mm<sup>2</sup>

 **Warning**

- The power cable and connecting cable are self-provided.
- Always use a special branch circuit and install a special receptacle to supply power to the room air conditioner.
- Use a circuit breaker and receptacle matched to the capacity of the room air conditioner.
- The circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.
- Perform wiring work in accordance with standards so that the room air conditioner can be operated safely and positively.
- Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

 **Caution**

- The power source capacity must be the sum of the room air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
- When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.

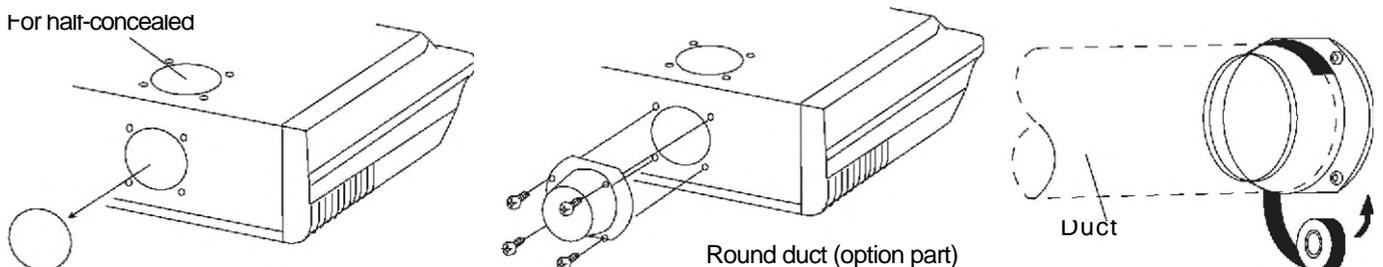
### Fresh Air Intake

1 . Open up the knockout hole for the fresh air intake . If using half-concealed installation, open up the top knockout hole instead.

 **Caution**

- When removing the cabinet (iron plate), be careful not to damage the indoor unit internal parts and surrounding area (outer case).
- When processing the cabinet (iron plate), be careful not to injury yourself with burrs, etc.

- 2 . Fasten the round flange (optional) to the fresh air intake . If using half- concealed installation, attach to the top .
- 3 . Connect the duct to the round flange .
- 4 . Seal with a band and vinyl tape, etc . so that air does not leak from the connection .



## 7.3 Convertible - EN

### Safety Precautions

1 . Applicable ambient temperature range:

Cooling	Indoor temperature	max. DB/WB min. DB/WB	32/23 °C 18/14 °C
	Outdoor temperature	max. DB/WB min. DB/WB	46/24 °C 18 °C
Heating	Indoor temperature	max. DB/WB min. DB/WB	27 °C 15 °C
	Outdoor temperature	max. DB/WB min. DB/WB	24/18 °C -15 °C

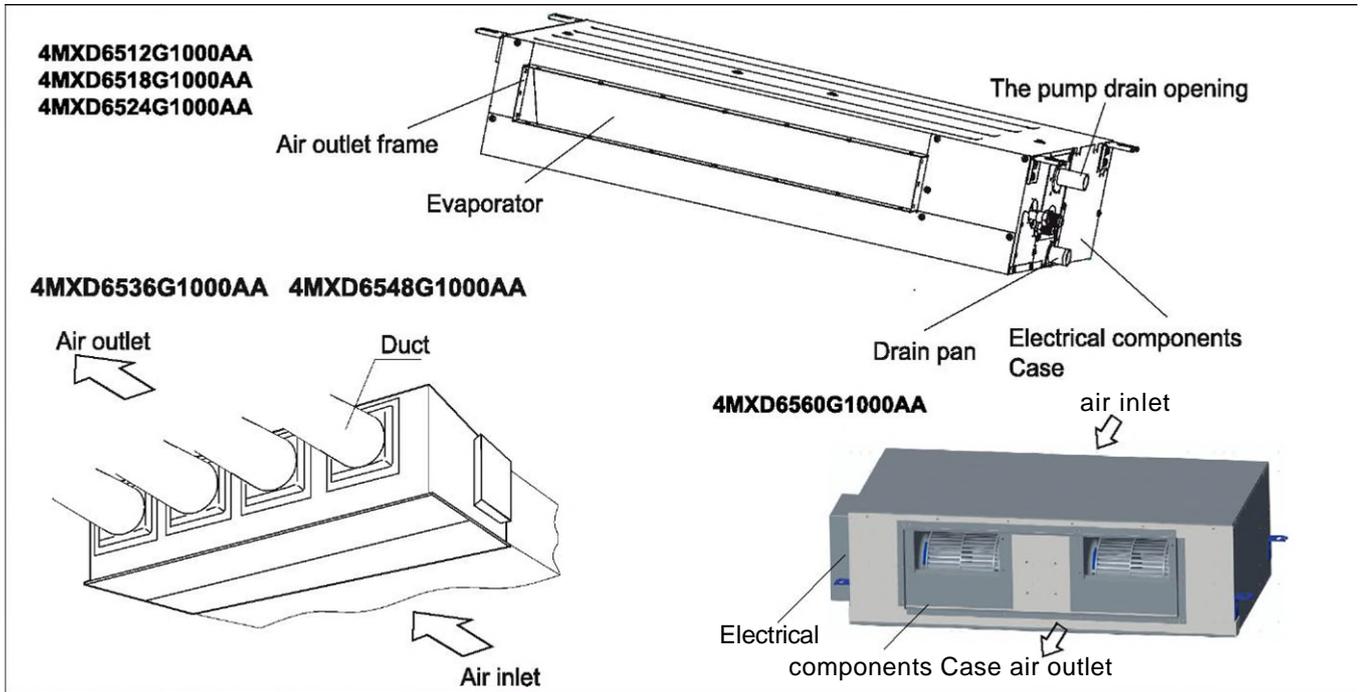
- 2 . If the supply cord is damaged, it must be replaced by the anufacturer or its service agent or a similar qualified person .
- 3 . If the fuse on PC coard is broken please change it with the type of T 3 .15A/250VAC .
- 4 . The wiring method should be in line with the local wiring standard .
- 5 . The breaker of the air conditioner should be all-pole switch, and the distance between its two contacts should be no less than 3mm . Such means for disconnction must be incorporation in the fixed wiring .
- 6 . The installation heigh of the indoor unit is recommended from 2 .5m to 2 .7m .
- 7 . The distance between its two terminal blocks of indoor unit and outdoor unit should not be over 5m . If exceeded, the diameter of the wire should be enlarged according to the local wired standard .
- 8 . The waste battery shall be disposed properly .
- 9 . We can get 4 different ESP through adjust the indoor unit .

PCB SW1-4 and SW1-5, please refer below:

SW01								Static pressure	Model
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		
--	--	--	0	0	--	--	--	0Pa	4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA
--	--	--	0	1	--	--	--	10Pa	
--	--	--	1	0	--	--	--	20Pa	
--	--	--	1	1	--	--	--	30Pa	4MXD6536G1000AA 4MXD6548G1000AA 4MXD6560G1000AA
--	--	--	0	0	--	--	--	10Pa	
--	--	--	0	0	--	1	--	30Pa	
--	--	--	0	0	--	1	--	50Pa	
--	--	--	0	0	--	1	--	70Pa	

Attention:cut out the power supply to adjust the SW1-4, and SW1-5, or else the operation is invalid

## Parts and Functions



## Installation Procedure

### Indoor Unit

 **Caution**

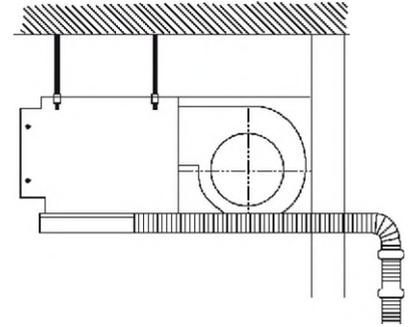
- Please do not install the unit in places where flammable gases may be leaked. In case that gas is leaked and accumulated around the unit, it may cause dangers of fire etc.

**The indoor unit shall be installed at locations where cold and hot air could evenly circulated. The following locations should be avoided**

- Places with rich saline matters (seaside regions) .
  - Places with plenty of gas sulfides (mainly in warm spring areas where the copper tube and braze weld is prone to corrosion) . Locations with much oil (including mechanical oil) and steam .
  - Locations using organic solvents .
  - Places where there are machines generating HF electromagnetic waves .
  - Positions adjacent to door or window in contact with high-humidity external air . (Easy to generate dew) .
- Locations frequently using special aerosols .

### Selecting the mounting position to install the indoor units

- Select suitable places where the outlet air can be sent to the entire room, and convenient to lay out the connection pipe, connection wire and the drainage pipe to outdoor .
- The ceiling structure must be strong enough to support the unit weight .
- The connecting pipe, drain pipe and connection wire shall be able to go through the building wall to connect between the indoor and outdoor units .
- The connecting pipe between the indoor and outdoor units as well as the drain pipe shall be as short as possible.
- If it is necessary to adjust the filling amount of the refrigerant, please refer to the installation manual attached with the outdoor unit .
- The connecting flange should be provided by the user himself .
- The indoor unit has two water outlets one of which is obstructed at the factory (with a rubber cap) . Only the outlet not obstructed (liquid inlet and outlet side) will be generally used during installation . If applicable, both the outlets should be used together .
- An access port must be provided during installation of indoor unit for maintenance .

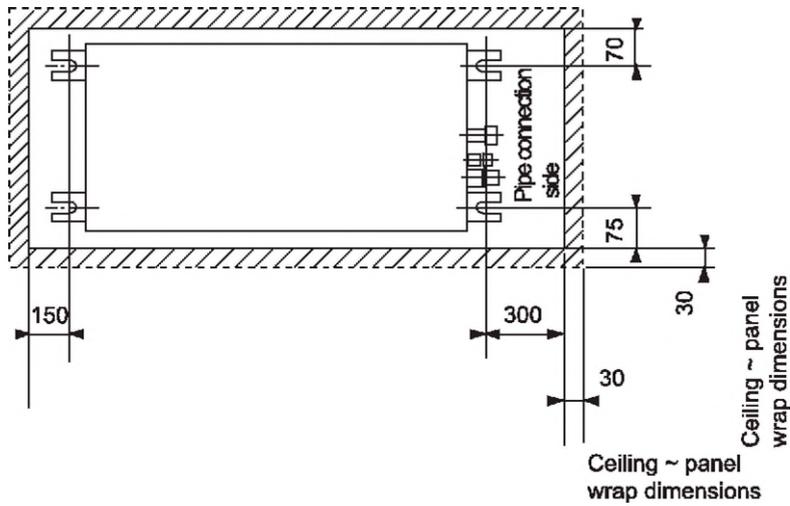


### Select places for installation satisfying following conditions and at the same time obtain the consent on the part of your client user.

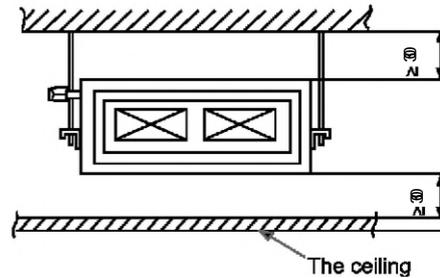
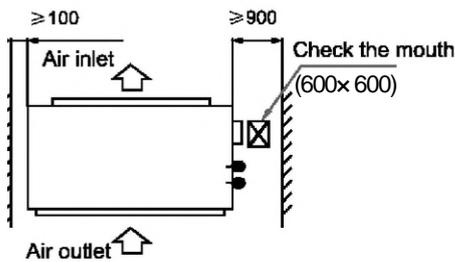
- Places where chilled or heated air circulates freely . When the installation height exceeds 3m warmed air stays close to the ceiling . In such cases, suggest your client users to install air circulators .
- Places where perfect drainage can be prepared and sufficient drainage .
- Places free from air disturbances to the suction port and blowout hole of the indoor unit, places where the fire alarm may not malfunction or short-circuit .
- Places with the environmental dew-point temperature is lower than 28 C and the relative humidity is less than 80 % . (When installing at a place under a high humidity environment, pay sufficient attention to the prevention of dewing such as thermal insulation of the unit . )
- Ceiling height shall have the following height.



4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA 4MXD6536G1000AA 4MXD6548G1000AA

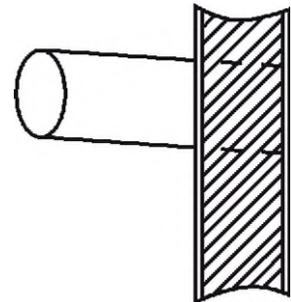


4MXD6560G1000AA



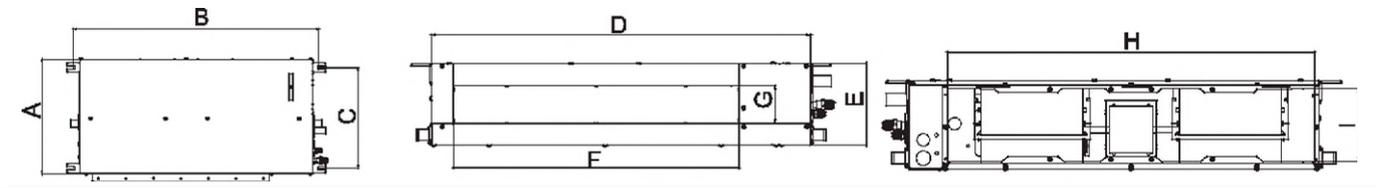
**After selecting the unit installation location, proceed the following steps:**

1. Drill a hole in the wall and insert the connecting pipe and wire through a PVC wall-through tube purchased locally. The wall hole shall be with a outward down slope of at least 1/100 .
2. Before drilling check that there is no pipe or reinforcing bar just behind the drilling position . Drilling shall avoid at positions with electric wire or pipe .
3. Mount the unit on a strong and horizontal building roof . If the base is not firm, it will cause noise, vibration or leakage .
4. Support the unit firmly .
5. Change the form of the connection pipe, connection wire and drain pipe so that they can go through the wall hole easily .



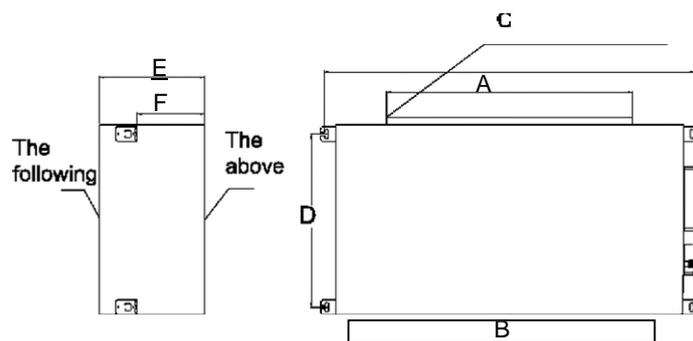
## Installation Procedure

### Installation dimension



Indoor unit dimensions (unit:mm)

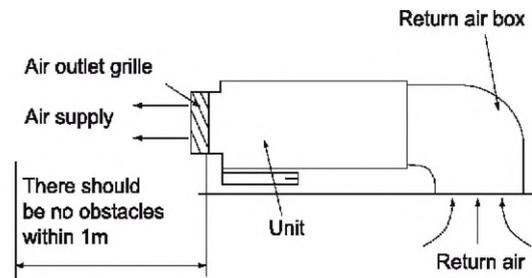
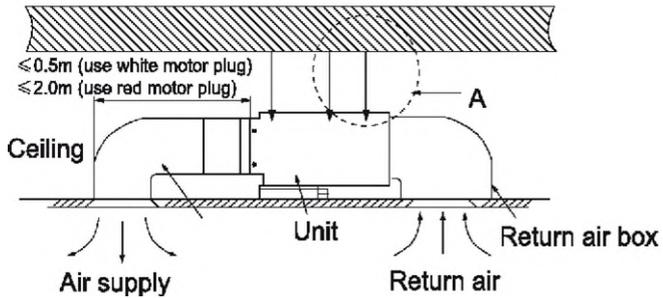
Unit model	A	B	C	D	E	F	G	H	I
4MXD6512G1000AA	420	892	370	850	185	640	90	760	152
4MXD6518G1000AA 4MXD6524G1000AA	420	1212	370	1170	185	960	90	1080	152



Model	Dimensions	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)
4MXD6536G1000AA 4MXD6548G1000AA		966	1012	1170	480	269	0
4MXD6560G1000AA		850	1050	1272	600	363	233

### Air Duct

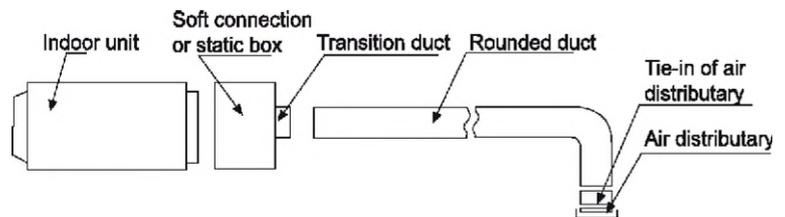
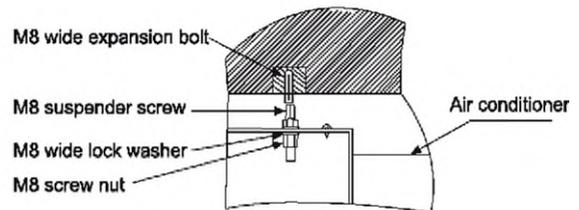
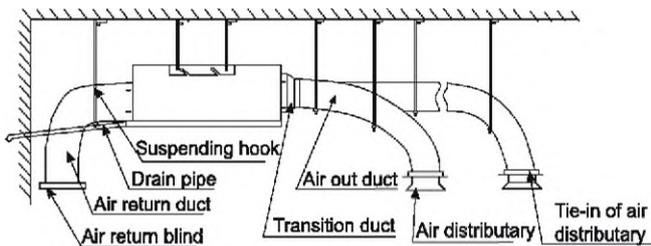
- Each of the air sending duct and air return duct shall be fixed on the prefabricated panel of the floor by the iron bracket . The recommended distance between the edge of the air return duct and the wall is over 150mm .
- The gradient of the condensate water pipe shall keep over 1% .
- The condensate water pipe shall be thermal insulated .
- When installing the ceiling Concealed type indoor unit, the air return duct must be designed and installed as figure shown .



### Building roof of installation

#### Note:

- For model AD\*\*LS1ERA, when connecting the short ducts, use the low static terminals, which color is white . The distance L from the air outlet of the duct to the air outlet of the air conditioner shall be no more than 0.5 m .
- For model AD\*\*LS1ERA, when connecting the long ducts, use the middle static terminals, which color is red . The distance L from the air outlet of the duct to the air outlet of the air conditioner shall be no more than 2.0 m .



## The sketch map of long duct

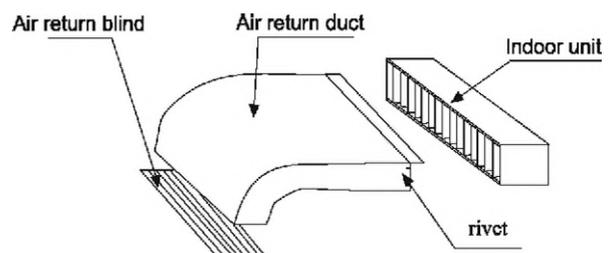
### 1. Installation of air sending duct

- This unit uses rounded duct, the diameter of the duct is 180mm .
- The rounded duct needs to add a transition duct to connect with the air-sending duct of indoor unit, then connect with respective separator . As Figure shown, all the fan speed of any of the separator's air outlet shall be adjusted approximately the same to meet the requirement for the room air conditioner .

## 2. Installation of air return duct

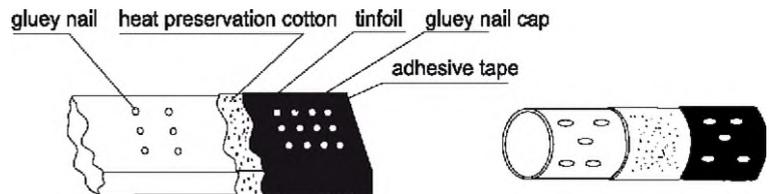
- Use rivet to connect the air return duct on the air return inlet of the indoor unit, then connect the other end with the air return blind as Figure shown .

90



### 3. Thermal insulation of duct

• Air-sending duct and air return duct shall be thermally insulated . First stick the gluey nail on the duct, then attach the heat preservation cotton with a layer of tinfoil paper and use the gluey nail cap to fix . Finally use the tinfoil adhesive tape to seal the connected part . As Figure shown .

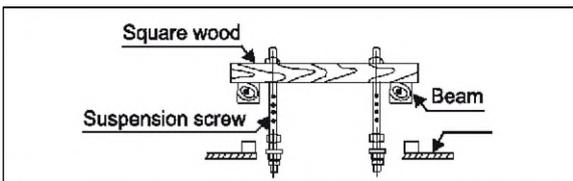


### Installing the suspension screw

Use M8 or M10 suspension screws (4, prepared in the field) (when the suspension screw height exceeds 0.9m, M10 size is the only choice) . These screws shall be installed as follows with space adapting to air conditioner overall dimensions according to the original building structures .

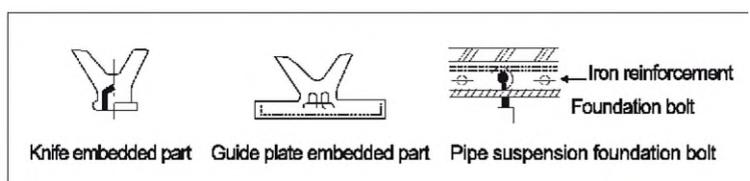
#### Wooden structure

A square wood shall be supported by the beams and then set the suspension screws .



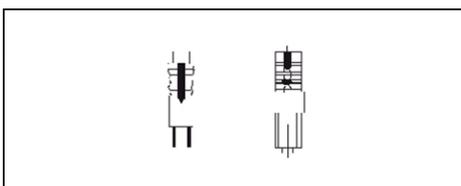
#### New concrete slab

To set with embedded parts, foundation bolts etc .



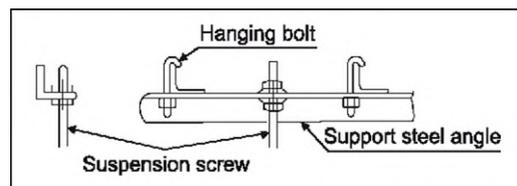
#### Wooden structure

Use hole hinge, hole plunger or hole bolt .



#### New concrete slab

Use steel angle or new support steel angle directly .



### Hanging of the indoor unit

- Fasten the nut on the suspension screw and then hang the suspension screw in the T slot of the suspension part of the unit .
- Aided with a level meter, adjust level of the unit within 5mm

#### Installation of indoor unit

Fix the indoor to the hanger bolts .

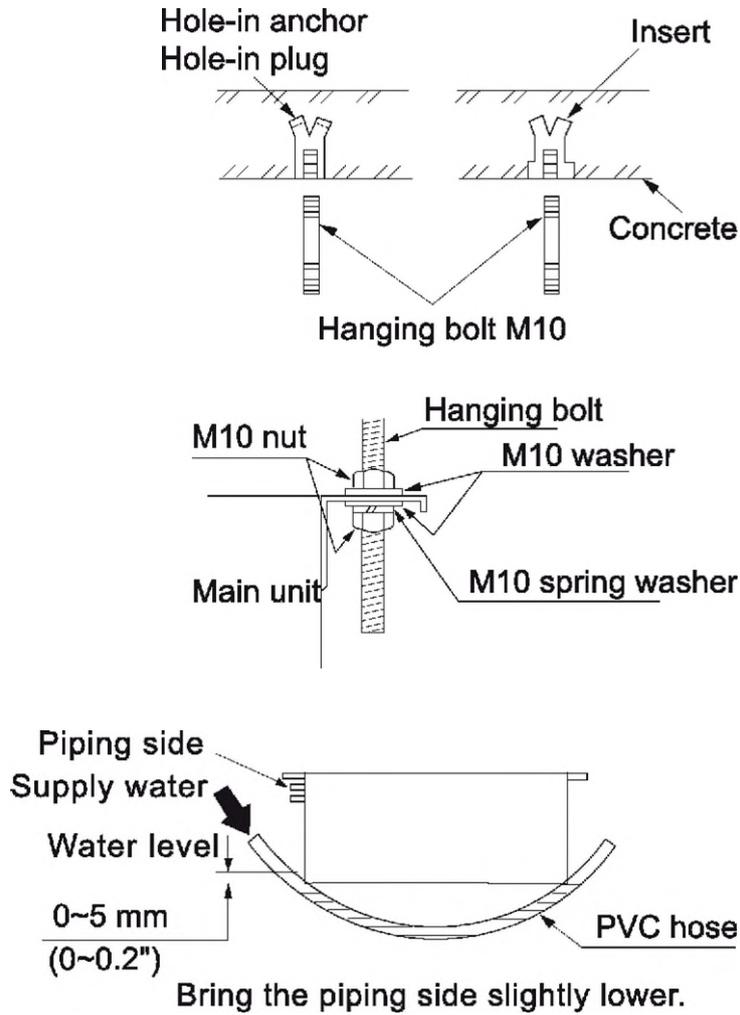
If required, it is possible to suspend the unit to the beam, etc . Directly by use of the bolts without using the hanger bolts .

#### Note

When the dimensions of main unit and ceiling holes does not match, it can be adjusted with the slot holes of hanging brackets .

#### Adjusting to levelness

- Adjust the out-of levelness using a level or by the following method . Make adjustment so that the relation between the lower surface of the unit proper and water level in the hose becomes as given below .
- Unless the adjustment to the levelness is made properly, malfunctioning or failure of the float switch may occur .



**⚠ Caution**

- In installation, if there is refrigerant gas leakage, please take ventilation measures immediately. The refrigerant gas will generate poisonous gas upon contacting fire.
- After installation, please verify that there is no refrigerant leakage. The leaked refrigerant gas will produce poisonous gas when meeting fire source such as heater and furnace etc.

Pipe size (unit:mm)

Model	Gas side	Liquid side
4MXD6512G1000AA	Ø9.52	Ø6.35
4MXD6518G1000AA	Ø12.7	Ø6.35
4MXD6524G1000AA	Ø15.88	Ø9.52
4MXD6536G1000AA 4MXD6548G1000AA 4MXD6560G1000AA	Ø19.05	Ø9.52

### Pipe material

Phosphorus deoxidized copper seamless pipe (TP2M) for air conditioner .

### Allowable pipe length and drop

These parameters differ according to the outdoor unit . See the instruction manual attached with the outdoor unit for details .

### Supplementary refrigerant

The refrigerant supplementation shall be as specified in the installation instructions attached with the outdoor unit . The adding procedure shall be aided with a measuring meter for a specified amount of supplemented refrigerant .

#### Note:

Overfilling or underfilling of refrigerant will cause compressor fault . The amount of the added refrigerant shall be as specified in the instructions .

### Connection of refrigerant pipe

Conduct flared connection work to connect all refrigerant pipes .

- The connection of indoor unit pipes must use double spanners .
- The installing torque shall be as given in the following table .
- Wall thickness of connection pipe 0.8mm

Connecting pipe O.D. (mm)	Installing torque (N-m)	Double-spanner operation
Ø6.35	11.8 (1.2kgf-m)	
Ø9.52	24.5 (2.5kgf-m)	
Ø12.7	49.0 (5.0kgf-m)	
Ø15.88	78.4 (8.0kgf-m)	
Ø19.05	97.2 (9.9kgf-m)	

### Creating vacuum

With a vacuum pump, create vacuum from the stop valve of the outdoor unit . Emptying with refrigerant sealed in the outdoor unit is absolutely forbidden .

### Open all valves

Open all the valves on the outdoor unit .

### Gas leakage detection

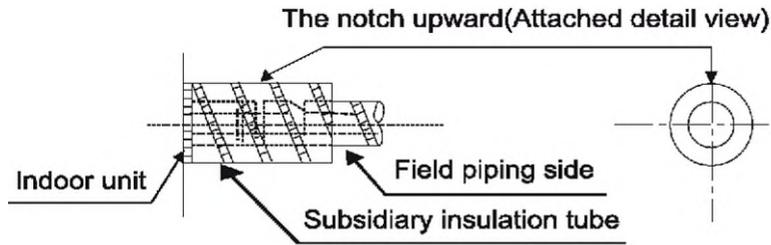
Check with a leakage detector or soap water if there is gas leakage at the pipe connections and bonnets .

### Insulation treatment

Conduct insulation treatment on both the gas side and liquid side of pipes respectively .

During cooling operation, both the liquid and gas sides are cold and thus shall be insulated so as to avoid dew generation .

- The insulating material at gas side shall be resistant to a temperature above 120 C
- The indoor unit pipe connection part shall be insulated .



## Drain Pipe

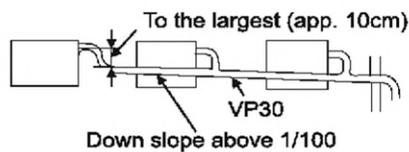
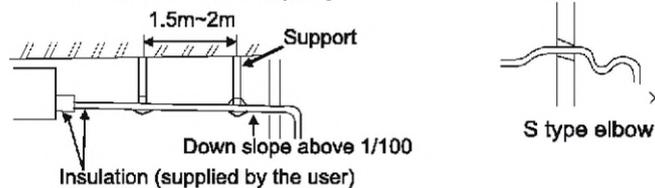
### Caution

In order to drain water normally, the drain pipe shall be processed as specified in the installation manual and shall be thermal insulated to avoid dew generation. Improper hose connection may cause indoor water leakage.

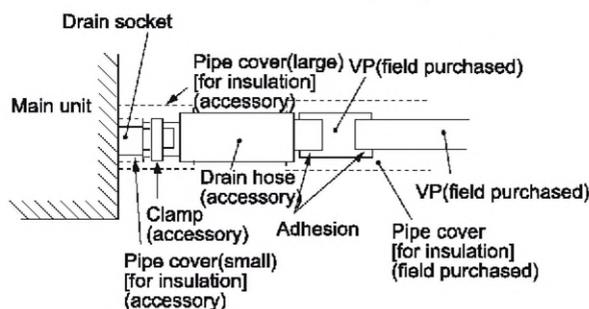
## Requirements

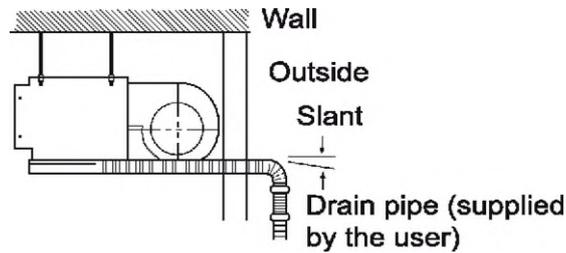
- The indoor drain pipe shall be thermal insulated .
- The connection part between the drain pipe and the indoor unit shall be insulated so as to prevent dew generation.
- The drain pipe shall be slant downwards (greater than 1/100).The middle part shall not be of S type elbow, otherwise abnormal sound will be produced .
- The horizontal length of the drain pipe shall be less than 20 m.In case of long pipe, supports shall be provided every 1.5 \_ 2m to prevent wavy form .
- Central piping shall be laid out according to the right figure .
- Take care not to apply external force onto the drain pipe connection part .
- For unit with water pump drain pipe use hard PVE general purpose pipe VP which can be purchased locally . When connecting, insert a PVE pipe end securely into the drain socket before tightening securely using the attached drain hose and clamp . Adhesive must not be used for connection of the drain socket and drain hose (accessory) .

### For unit without water pump



### For unit with water pump





## Pipe and insulation material

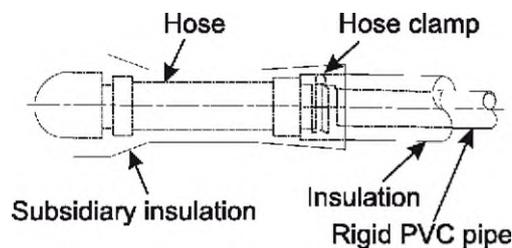
Pipe	Rigid PVC pipe VP20 mm (internal diameter)
Insulation	Foamed PE with thickness above 7mm

## Electrical Wiring Hose

Drain pipe size:

The hose is used for adjusting the off-center and angle of the rigid PVC pipe .

- Directly stretch the hose to install without making any deformation .
- The soft end of the hose must be fastened with a hose clamp .
- Please apply the hose on horizontal part Insulation treatment .
- Wrap the hose and its clamp up to the indoor unit without any clearance with insulating material, as shown in the figure.



Unit model	The size of drain opening
4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA	Ø31
4MXD6536G1000AA 4MXD6548G1000AA 4MXD6560G1000AA	Ø33

## Drain confirmation

During trial run, check that there is no leakage at the pipe connection part during water draining even in winter .

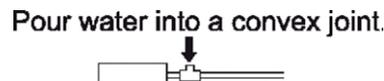
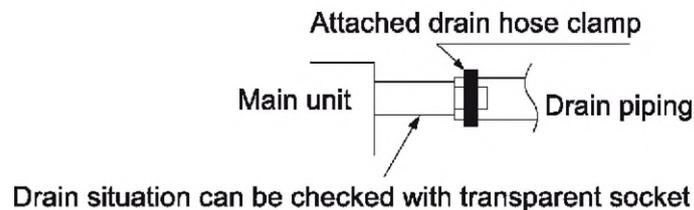
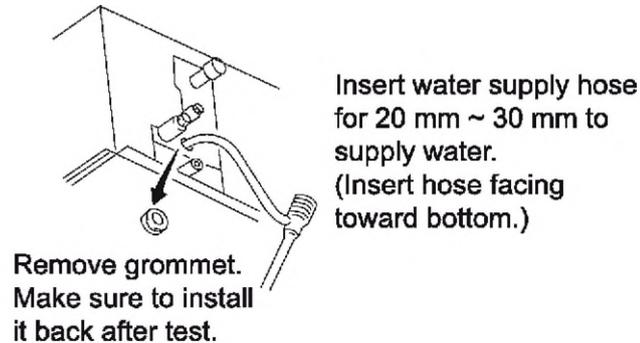
## Drainage Test

- (1) Conduct a drainage test after completion of the electrical work .
- (2) During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.
- (3) In case of a new building, conduct the test before it is furnished with the ceiling .
- (4) Be sure to conduct this test even when the unit is installed in the heating season .

## Procedures

- (a) Supply about 1000 cc of water to the unit through the air outlet using a feed water pump .
- (b) Check the drain while cooling operation .

Before the electrical work has not been completed, connect a convex joint in the drain pipe connection to provide a water inlet . Then, check if water leaks from the piping system and that drain flows through the drain pipe normally .



## Air Duct

### Installation work for air outlet ducts

Calculate the draft and external static pressure and select the length, shape and blowout .

A Blowout duct

- 2-spot, 3-spot and 4-spot with  $\varnothing$  200 type duct are the standard specifications

Note:

- (1) Shield the central blowout hole for 2-spot .
  - (2) Shield the blowout hole around the center for 3-spot .
- Limit the difference in length between spots at less than 2:1 .
  - Reduce the length of duct as much as possible .
  - Reduce the number of bends as much as possible . (Corner R should be as larger as possible .)
  - Use a band . etc . to connect the main unit and the blowout duct flange .
  - Conduct the duct installation work before finishing the ceiling .

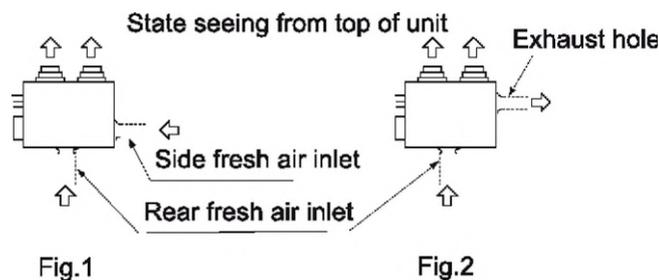
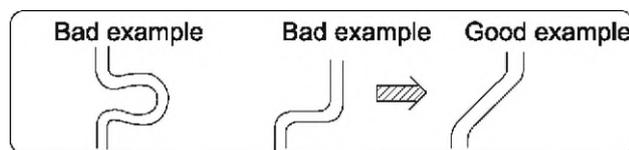
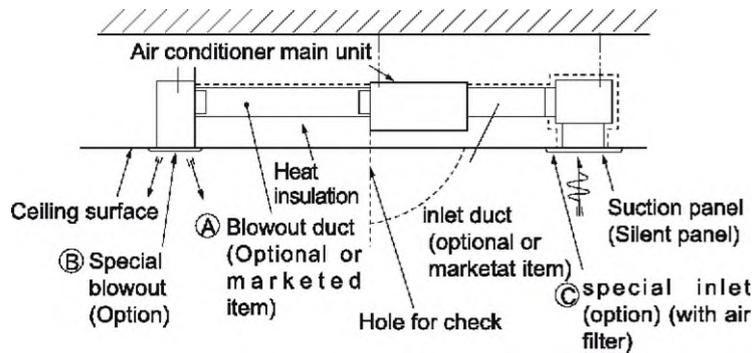
### Connection of suction, exhaust ducts

#### a. Fresh air inlet

- Inlet can be selected from the side or rear faces depending on the working conditions .
- Use the rear fresh air inlet when the simultaneous intake and exhaust is conducted . (Side inlet cannot be used .)

#### b. Exhaust (Make sure to use also the suction.)

Use the side exhaust port .



## Electrical Wiring



**Warning**

DANGER OF BODILY INJURY OR DEATH  
 TURN OFF ELECTRIC POWER AT CIRCUIT BREAKER OR POWER SOURCE BEFORE MAKING ANY ELECTRIC CONNECTIONS. GROUND CONNECTIONS MUST BE COMPLETED BEFORE MAKING LINE VOLTAGE CONNECTIONS.

### Precautions for Electrical wiring

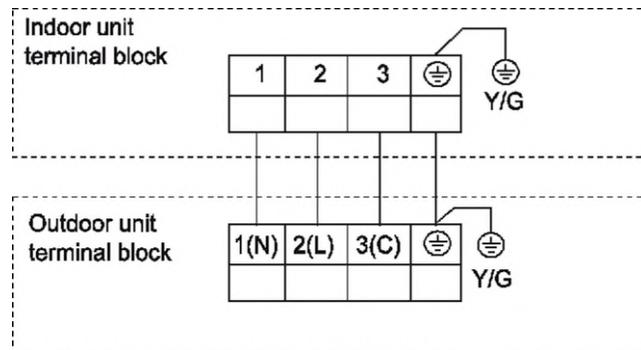
- Electrical wiring work should be conducted only by authorized personnel .
- Do not connect more than three wires to the terminal block . Always use round type crimped terminal lugs with insulated grip on the ends of the wires .
- Use copper conductor only .

Model	Item	Phase	Circuit breaker		Power source wire size (minimum) (mm <sup>2</sup> )	Earth leakage breaker	
			Switch breaker (A)	Overcurrent protector rated capacity (A)		Switch breaker (A)	Leak current(mA)
4MXD6536G1000AA		1	40	30	6.0	40	30
4MXD6548G1000AA							

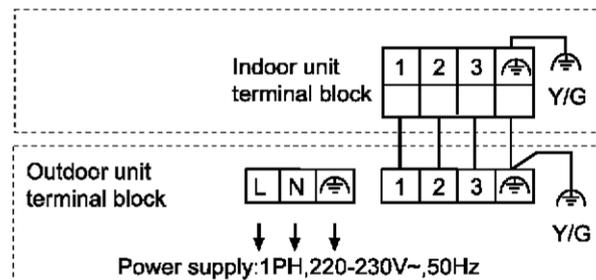
## Wiring connection

Make wiring to supply power to the outdoor unit, so that the power for the indoor unit is supplied by terminals .

4MXD6512G1000AA  
4MXD6518G1000AA  
4MXD6524G1000AA



4MXD6536G1000AA, 4MXD6548G1000AA, 4MXD6560G1000AA



## 7.4 ODU-EN

### Selecting installation site

#### General



#### Caution

- Be sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.

Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.

- Select an installation site where the following conditions are satisfied and that meets with your customer's approval .
- Places which are well-ventilated .
- Places where the unit does not bother next-door neighbours .
- Safe places which can withstand the unit's weight and vibration and where the unit can be installed level .
- Places where there is no possibility of flammable gas or product leak .
- The equipment is not intended for use in a potentially explosive atmosphere .
- Places where servicing space can be well ensured .
- Places where the indoor and outdoor units's piping and wiring lengths come within the allowable ranges .
- Places where water leaking from the unit cannot cause damage to the location (e .g . in case of a blocked drain pipe)
- Places where the rain can be avoided as much as possible .
- Do not install the unit in places often used as work place . In case of construction works (d .g .grinding works ) where a lot of dust is created, the unit must be covered .
- Do not place any objects or equipment on top of the unit( top plate) .
- Do not climb, sit or stand on top of the unit .
- Be sure that sufficient precautions are taken, in accordance with applicable legislation, in case of refrigerant leakage .

**Notice**

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

- When installing the unit in a place exposed to strong wind, pay special attention to the following . Strong winds of 5 m/sec or more blowing against the outdoor unit's air outlet causes short circuit (suction of discharge air), and this may have the following consequences:
  - Deterioration of the operational capacity .
  - Frequent frost acceleration in heating operation .
  - Disruption of operation due to rise of high pressure .
  - When a strong wind blows continuously on the face of the unit, the fan can start rotating very fast until it breaks . Refer to the figures for installation of this unit in a place where the wind direction can be foreseen .
  - Repair a water drainage channel around the foundation, to drain waste water from around the unit .
  - If the water drainage of the unit is not easy, please build up the unit on a foundation of concrete blocks, etc .(the height of the foundation should be maximum 150mm) .
  - If you install the unit on a frame, please install a waterproof plate(field supplu) within 150mm of the underside of the unit in order to prevent the invasion of water from the lower direction .
- When installing the unit in a place frequently exposed to snow, pay special attention to elevate the foundation as high as possible .
- Make sure that the unit is installed level .

**General**

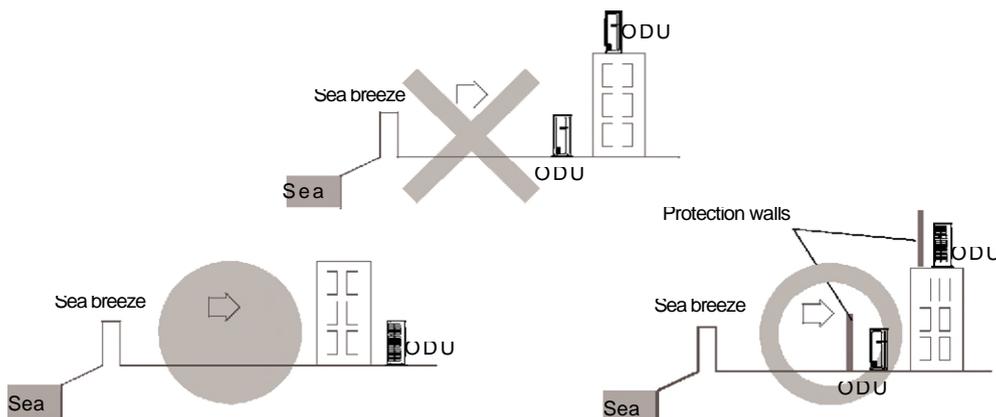
**Notice**

When operating the outdoor unit in a low outdoor ambient temperature, be sure to follow the instructions described below.

- To prevent exposure to wind, install the outdoor unit with its suction side facing the wall .
  - Never install the outdoor unit at a site where the suction side may be exposed directly to wind .
  - To prevent exposure to wind, install a baffle plate on the air discharge side of the outdoor unit .
- In heavy snowfall areas it is very important to select an installation site where the snow will not affect the unit and set the outlet side at a right angle to the direction of the wind .

**General**

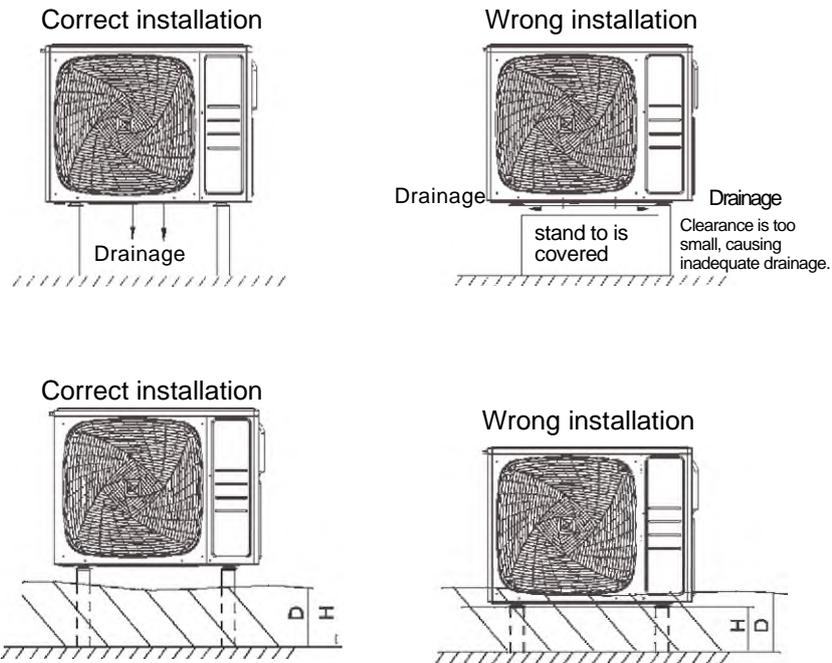
- For seacoast applications, block the unit from direct exposure to sea breeze by installing the unit behind a structure (such as a building) or a protective wall that is 1.5 times higher than the unit, leaving 700 mm of space between the wall and unit for air circulation . Consult an installation expert about taking anti-corrosion measures, such as removing salinity on the heat exchanger and applying a rust inhibitor more frequently than once a year .



- Set the unit on mounting brackets or pad. To avoid the adverse effects of snow, ice and defrosting issues, install the unit on heat pump risers to ensure a sufficient height from the ground. In all cases, refer to local code for correct riser height.

Make sure the outdoor unit is installed level and is stable.

Install snow protection hood as necessary.



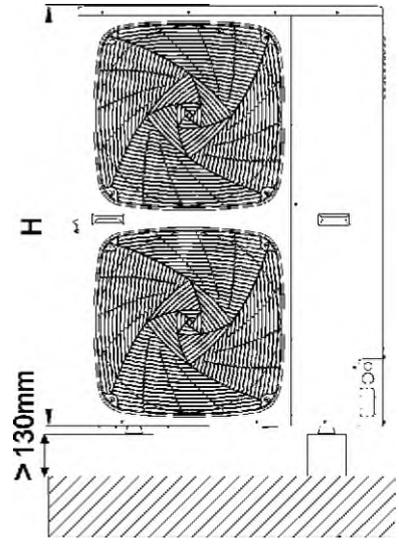
Minimum height (H) should be higher than the highest snowfall depth (D) ( $H=D+20\text{cm}$ )

unit may become covered in snow if the stand height is insufficient.

## Precautions on

### Notice

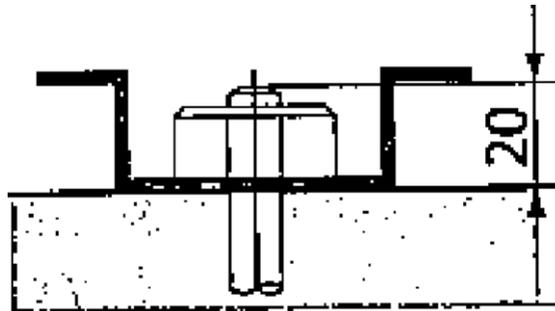
If drain holes of the outdoor unit are covered by a mounting base or by floor surface, raise the unit in order to provide a free space of more than 130mm under the outdoor unit.



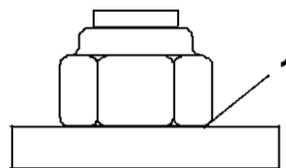
	12	18	24	36	48	60
A	500	510	590	600	580	600
B	266	313	320	405-410	380	405-410
C	286	347	365	450	413	450
D	243	278	298	367	340	368
W	775	798	818	947	960	950
H	535	525	600	960	1250	1350

### Foundation work

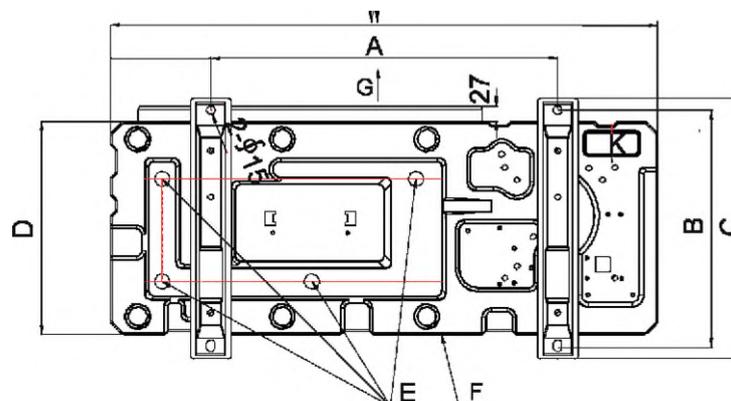
- Check the strength and level of the installation ground so that the unit will not cause any operating vibration or noise after installation .
- In accordance with the foundation drawing in the figure, fix the unit securely by means of the foundation bolts . (Prepare four sets of M12 foundation bolts, nuts and washers each which are available on the market .)
- It is best to screw in the foundation bolts until their length are 20mm from the foundation surface .



- Fix the outdoor unit to the foundation bolts using nuts with resin washers(1) as shown in the figure .



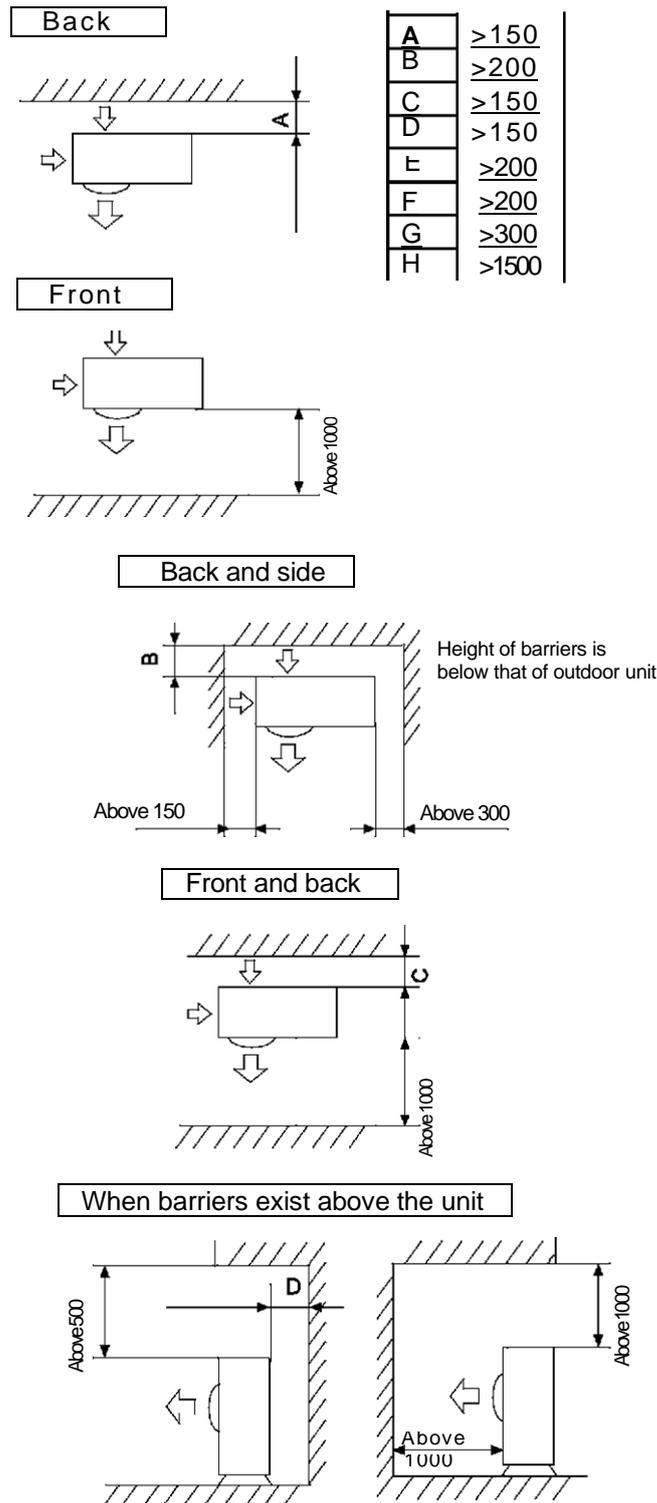
If the coating on the fastening area is stripped off, the nuts rust easily .  
 Dimensions (bottom view)(unit of measurement:mm)



- A leg pitch 1
- B leg pitch2
- C Front grill (air outlet side)
- D Drain hole
- E Bottom frame
- K Knock-out hole (for piping line)

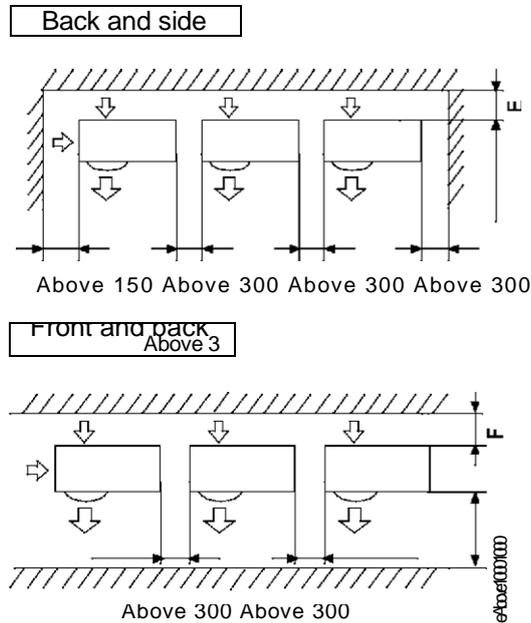
### Selection of installation location of outdoor

1 . Single-unit installation (unit: mm)



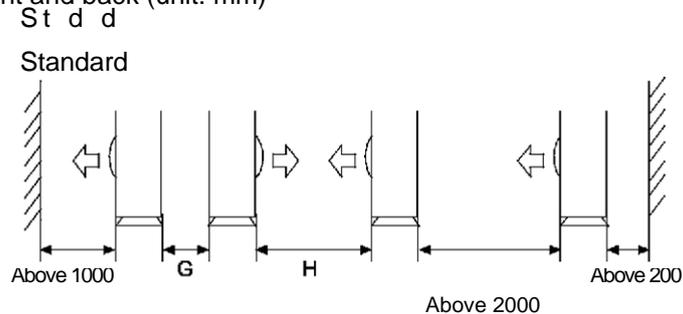
The top and two side surfaces must be exposed to open space, and barriers on at least one side of the front and back shall be lower than the outdoor unit .

## 2 . Multi-unit installation (unit: mm)



Height of barriers is below that of outdoor unit

## 3 . Multi-unit installation in front and back (unit: mm)



The top and two side surfaces must be exposed to open space, and barriers on at least one side of the front and back shall be lower than the outdoor unit .

- The installation service spaces shown in the illustrations are based on an air intake temperature of 35 °C(DB) for COOL operation . In regions where the air intake temperature regularly exceeds 35°C(DB), or if the heat load of outdoor units is expected to regularly exceed the maximum operating capacity, reserve a larger space than that indicated at the air intake side of units .

- Regarding the required air outlet space, position the units with consideration to the space required for the onsite refrigerant piping work as well . Consult your dealer if the work conditions do not match those in the drawings .

## Drain pipe disposal

- Make sure the drain works properly .
- In regions where buildups of snow can be expected, the accumulation and freezing of snow in the space between the heat exchanger and external plate may lower operating efficiency .
- After punching the knock-out hole, the application of repair-type paint on the surface around the edge sections is recommended to prevent rust .

## Refrigerant pipe size and allowable pipe length



### Danger

- Piping an other pressure containing parts shall comply with the applicable legislation and shall be suitable for refrigerant. Use phosphoric acid deoxidised seamless copper for refrigerant.
- Installation shall be done by an installer, the choice of materials and installation shall comply with applicable legislation.



### Information

It is forbidden to discharge refrigerant into the atmosphere. Collect the refrigerant in accordance with the freon collection and destruction law.



### Notice

To persons in charge of piping work:

Be sure to open the stop valve after piping installing and vacuuming is complete. (Running the system with the valve closed may break the compressor.)



### Notice

Do not use flux when brazing the refrigerant piping.

For brazing, use phosphor copper brazing filler metal (BCuP) which does not require a flux.

(If a chlorine flux is used, the piping will corrode, and if the flux contains fluoride, it will cause the coolant oil to deteriorate, adversely affecting the coolant piping system.)

## Necessary Tools and Materials

Prepare the following tools and materials necessary for installing and servicing the unit . Necessary tools for use with R410A(Adaptability of tools that are for use with R22 and R407C) .

1 . To be used exclusively with R410A ( Not to be used if used with R22 or R407C )

Tools/Materials	Use	Notes
Gauge Manifold	Evacuating,refrigerant charging	5.09MPa on the High-pressure side.
Charging Hose	Evacuating, refrigerant charging Refrigerant recovery	Hose diameter larger than the conentional ones.
Refrigerant Recovery Equipment	Refrigerant recovery	
Refrigerant Cylinder	Refrigerant charging	Write down the refrigerant type. Pink in color at the top of the cylinder.
Refrigerant Cylinder Charging Port	Refrigerant charging	Hose diameter larger than the conventional ones.
Flare Nut	Connecting the unit to piping	Use Type-2 Flare nuts.



2 . Tools and materials that may be used with R410 with some restrictions

Tools/Materials	Use	Notes
Gas leak detector	Detection of gas leaks	The ones for HFC type refrigerant may be used.
Vacuum Pump	Vacuum drying	May be used if a reverse flow check adaptor is attached.
Flare Tool	Flare machining of piping	Chages have been made in the flare machining dimension.Refer to the next page.
Refrigerant Recovery Equipment	Recovery of refrigerant	May be used if designed for use with R410A.

3 . Tools and materials that are used with R22 or R407C that can also be used with R410A

Tools/Materials	Use	Notes
Vacuum Pump with a Check Valve	Vacuum drying	
Bender	Bending pipes	Only #2.70 (1/2") and # 15.88(5/8") have a larger flare machining dimension.
Torque Wrench	Tightening flare nuts	
Pipe Cutter	Cutting pipes	
Welder and Nitrogen Cylinder	Welding pipes	
Refrigerant Charging Meter	Refrigerant charging	
Vacuum Gauze	Checking vacuum degree	

4 . Tool and materials that must not used with R410A

Tools/Materials	Use	Notes
Charging Cylinder	Refrigerant Charging	Must not be used with R410-type units.

Tools for R410A must be handled with special care, and keep moisture and dust from entering the cycle .

## Piping Materials

### Types of Copper Pipes (Reference)

Maximum Operation Pressure	Applicable Refrigerants
3.4MPa	R22, R407C
4.15MPa	R410A

- Use pipes that meet the local standards .

### Piping Materials/Radial Thickness

Use pipes made of phosphorus deoxidized copper .

Since the operation pressure of the units that use R410A is higher than that of the units for use with R22, use pipes with at least the radial thickness specified in the chart below . (Pipes with a radial thickness of 0.7mm or less may not be used .)

Size(mm)	Size(inch)	Radial Thickness(mm)	Type
Φ6.35		1/4"0.8t	Type-O pipes
Φ9.52		3/8"0.8t	
Φ12.7	1/2"	0.8t	
Φ15.88	5/8"	1.0t	
Φ19.05		3/4"1.0t	Type-1/2H or Hpipes

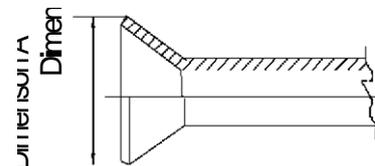
- Although it was possible to use type-O for pipes with a size of up to Φ 19.05(3/4") with conventional refrigerants, use type- 1/2H pipes for units that use R410A .(Type-O pipes may be used if the pipe size is Φ 19.05 and the radial thickness is 1.2t .)
- The table shows the standards in Japan . Using this table as a reference, choose pipes that meet the local standards .

### Flare Machining (type-O and OL only)

The flare machining dimensions for units that use R410A is larger than those for units that use R22 in order to increase air tightness .

Flare Machining Dimension(mm)

External dimension of pipes	Size	Dimension A	
		R410A	R22
Φ6.35		1/4"9.1	9.0
Φ9.52		3/8"13.2	13.0
Φ12.7	1/2"	16.6	16.2
Φ15.88	5/8"	19.7	19.4
Φ19.05		3/4"24.0	23.3



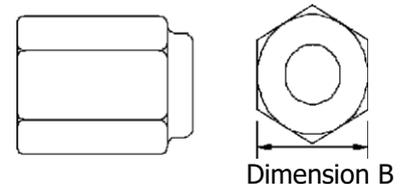
If a clutch type flare tool is used to machine flares on units that use R410A, make the protruding part of the pipe between 1.0 and 1.5mm . Copper pipe gauge for adjusting the length of pipe protrusion is useful .

### Flare Nut

Type-2 flare nuts instead of type-1 nuts are used to increase the strength . The size of some of the flare nuts have also been changed .

Flare nut dimension(mm)

External dimension of pipes	Size	Dimension A	
		R410A	R22
Φ6.35		1/4"17.0	17.0
Φ9.52		3/8"22.0	22.0
Φ12.7	1/2"	26.0	24.0
Φ15.88	5/8"	29.0	27.0
Φ19.05		3/4"36.0	36.0



- Using this table as a reference, choose pipes that meet the local standards.



 **Notice**

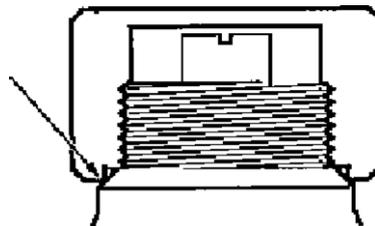
- For new installations, use the standard pipe sizes. When using existing pipes, size-up is allowed as mentioned in the table above. Additional restrictions towards allowable pipe lengths, as mentioned in the table 7.3 on page 13, must be taken into account.

Not using the standard pipe size may result in capacity decrease. The installer must acknowledge this and judge this very carefully in function of the complete installation.

- Existing or pre-installed piping can be used
  - 1 . Piping must comply with the criteria below .
    - Piping diameter must comply with the limitations as indicated in paragraph “7 .2 . Refrigerant pipe size “ .
    - Piping length must be within limits of the allowable piping length as in paragraph “7 .3 . Allowable pipe length and height difference” .
    - Piping must be designed for R410A . See paragraph “6 .2 . Selection of piping material” .
  - 2 . Piping can be reused without cleaning when:
    - Total 1-way piping length: < 50m .
    - No compressor breakdown has occurred in the history of the unit to be replaced .
    - A correct pump down operation can be executed:
      - Operate the unit continuously for 30minutes in cooling mode .
      - Execute a pump down operation .
      - Remove the air conditioning units to be replaced .
    - Check the contamination inside the existing piping . If you cannot meet all these requirements, the existing pipes must be cleaned or replaced after removing the air conditioning units to be replaced .
  - 3 . Prepare the flare connections for higher pressure . See paragraph 6 .2

Cautions on handling the stem cap

- The stem cap is sealed where indicated by the arrow . Take care not to damage it .
- After handling the stop valve, make sure to tighten the stem cap securely . For the tightening torque, refer to the table below .
- Check for refrigerant leaks after tightening the stem cap .

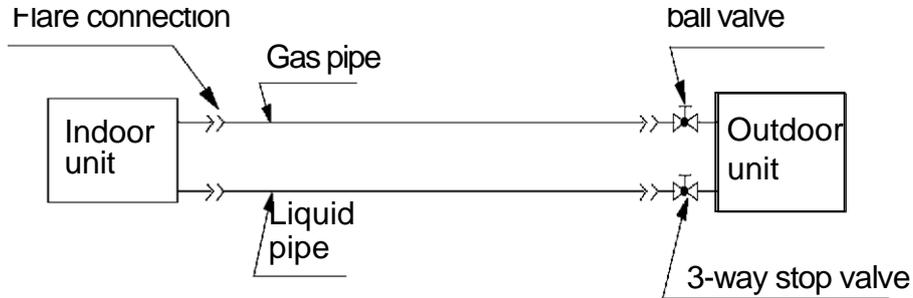


Cautions on handling the service port

- Always use a charge hose equipped with a valve depressor pin, since the service port is a Schrader type valve .
- After handling the service port, make sure to tighten the service port cap securely . For the tightening torque, refer to the table below .
- Check for refrigerant leaks after tightening the service port cap .

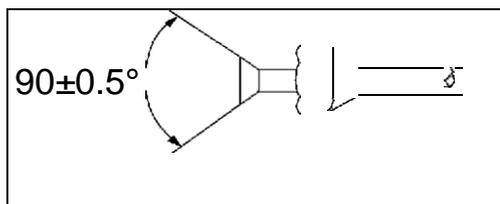
### Refrigerant piping

#### Piping diagram for single split



#### Piping size for single split

Model	F	Pipe	Diameter of pipe	Connecting method
4TXK6512G1000AA		Gas pipe	6.35mm	Flaring connection
		Liquid pipe	9.52mm	
4TXK6518G1000AALq 90		Liquid pipe	6.35mm	Flaring connection
		Gas pipe	12.7mm	
4TXK6524G1000AA		Liquid pipe	9.52mm	Flaring connection
		Gas pipe	15.88mm	
4TXK6536G1000AA		Liquid pipe	9.52mm	Flaring connection
4TXK6548G1000AA		Gas pipe	19.05mm	
4TXK6560G1000AA		Gas pipe	19.05mm	



Install the removed flare nuts to the pipes to be connected, then flare the pipes.

#### Limitations for one way piping length and vertical height difference for single split

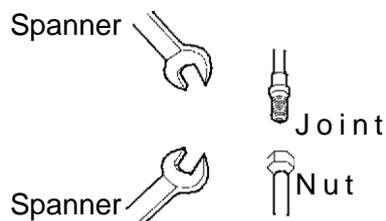
Mode	4TXK6512G1000AA 4TXK6518G1000AA 4TXK6524G1000AA	4TXK6536G1000AA 4TXK6548G1000AA 4TXK6560G1000AA
One way piping length	Less than 20m	Less than 50m
Vertical height difference (between indoor and outdoor)	Less than 10m	Less than 20m

### Precautions for refrigerant piping

- Do not twist or crush piping .
- Be sure that no dust is mixed in piping .
- Bend piping with as wide angle as possible .
- Keep insulating both gas and liquid piping .
- Check flare-connected area for gas leakage .

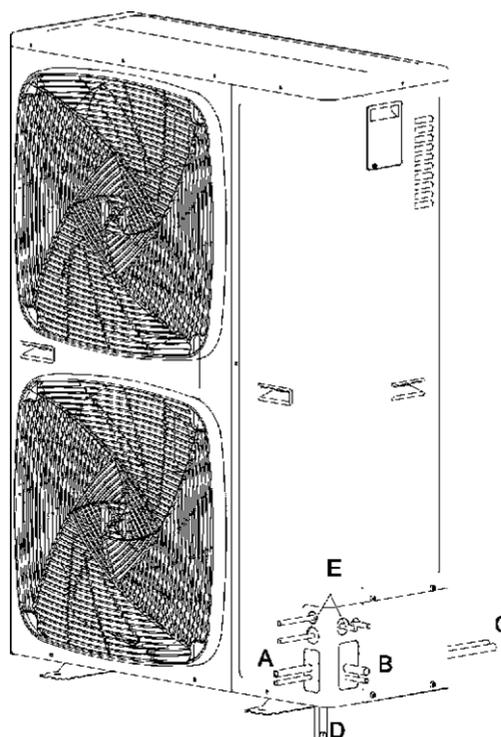
### Piping connection method

- Apply refrigerant oil to the joint and the flange .
- To bend a pipe, give the roundness as possible not to crush the pipe .
- When connecting pipe, hold the pipe centre to centre and then screw nut on by hand, refer to Fig .
- Be careful not to let foreign matters, such as sands enter the pipe .



Pipe diameter	Fastening torque (N.m)
Liquid pipe $\Phi 6.35\text{mm}$	14.2-17.2
Liquid pipe $\Phi 9.52\text{mm}$	32.7-39.9
Gas pipe $\Phi 12.7\text{mm}$	49.5-60.3
Gas pipe $\Phi 15.88\text{mm}$	61.8-75.4
Gas pipe $\Phi 19.05\text{mm}$	97.2-118.6

- Field pipes can be installed in four directions (A, B, C D, E) .



A: Forward

B: Sideways

C: Backward

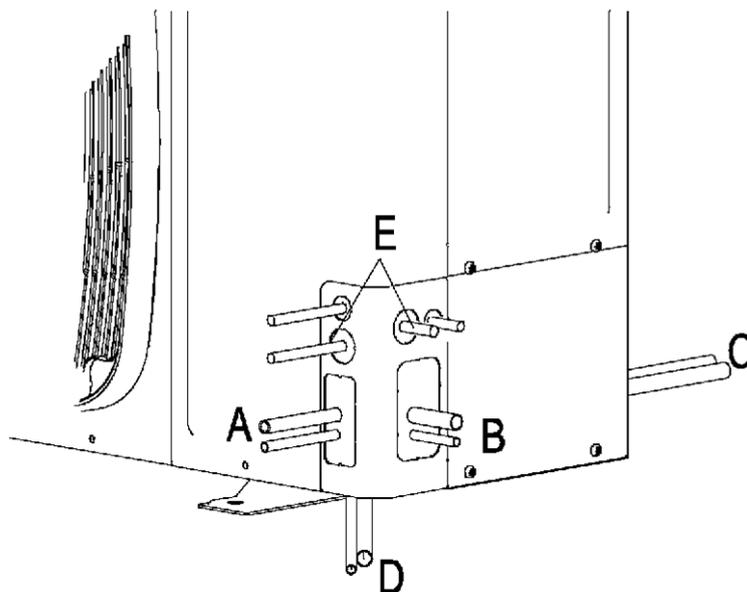
D: Downward

E: Power supply cable, outdoor and indoor connection cable

- Cutting out the two slits makes it possible to install as shown in the figure "Field pipes in 4 directions" . (Use a metal saw to cut out the slits .)
- To install the connecting pipe to the unit in a downward direction, make a knock-out hole by penetrating the centre area around the knock-out hole using a 6mm drill (4x) .
- After knocking out the knock-out hole, it is recommended to apply repair paint to the edge and the surrounding end surfaces to prevent rusting .
- When passing electrical wiring through the knock-out holes, remove any burrs from the know-out holes and wrap the wiring with protective tape to prevent damage .

### Preventing foreign objects from entering

Plug the pipe through-holes with putty or insulating material (procured locally) to stop up all gaps, as shown in the figure .



1 Putty or insulating material (produced locally)

If there is any possibility that small animals enter the system through the knock-out holes, plug the holes with packing materials (field supplied) .

Insects or samall animals entering the outdoor unit may cause a short circuit in teh electrical box .

Seal knock-out holes to avoid snow and humidity entering .

## Preventing foreign objects from entering

- Be careful not to let the indoor and outdoor piping come into contact with the compressor terminal cover .  
If the liquid-side piping insulation might come into contact with it, adjust the height as shown in the figure below .  
Also, make sure the field piping does not touch the bolts or outer panels of the compressor .
- When the outdoor unit is installed above the indoor unit the following can occur:  
The condensed water on the stop valve can move to the indoor unit . To avoid this, please cover the stop valve with sealing material .
- If the temperature is higher than 30°C and the humidity is higher than RH 80%, then thickness of the sealing materials should be at least 20mm in order to avoid condensation on the surface of the sealing .
- Be sure to insulate the liquid and gas-side field piping .

### Notice

Any exposed piping may cause condensation.

(The highest temperature that the gas-side piping can reach is around 120°C, so be sure to use insulating material which is very resistant .)

### Danger

No not touch piping and internal parts.

## Cautions for necessity of a trap

To avoid the the risk of oil held inside the riser piping flowing back into the compressor when stopped and causing liquid compression phenomenon, or cases of deterioration of oil return, it will be necessary to provide a trap at each difference in height of 10m in the riser gas piping .

- A trap is not necessary when the outdoor unit is installed at higher position than the indoor unit .

## Leak test and vacuum drying

When all piping work is complete and the outdoor unit is connected to the indoor unit, it is necessary to :

- check for any leakages in the refrigerant piping
- to perform vacuum drying to remove all moisture in the refrigerant piping .

If there is a possibility of moisture being present in the refrigerant piping (for example, rainwater may have entered the piping), first carry out the vacuum drying procedure below until all moisture has been removed .

### General guidelines

- All piping inside the unit has been factory tested for leaks .
- Use a 2-stage vacuum pump with a non-return valve which can evacuate to a gauge pressure of-100 .7kPa(5 Torr absolute,-755mm Hg) .
- Connect the vacuum pump to both the service port of the gas stop valve and the liquid stop valve to increase efficiency .

### Notice

Do not purge the air with refrigerants. Use a vacuum pump to evacuate the installation. No additional refrigerant is provided for air purging. Make sure that the gas stop valve and liquid stop valve are firmly closed before performing the leak test or vacuum drying.

## Leak test

The leak test must satisfy specification

### 1 . Vacuum leak test

1 .1 Evacuate the system from the liquid and gas piping to -100 .7 kPa(5 Torr) .

1 .2 Once reached, turn off the vacuum pump and check that the pressure does not rise for at least 1 minute .

1 .3 Should the pressure rise, the system may either contain moisture (refer to the paragraph “ Vacuum drying “) or have leaks .

### 2 . Pressure leak test

2 .1 Break the vacuum by pressurizing with nitrogen gas to a minimum gauge pressure of 0 .2 MPa (2 bar) .

Never set the gauge pressure higher than the maximum operation pressure of the unit, i .e . 4 .0MPa (40bar) .

2 .2 Test for leaks by applying a bubble test solution to all piping connections .

### Notice

Make sure to use a recommended bubble test solution from your wholesaler.

Do not use soap water, which may cause cracking of flare nuts (soap water may contain salt, which absorbs moisture that will freeze when the piping gets cold). and/or lead to corrosion of flared joints (soap water may contain ammonia which causes a corrosive effect between the brass flare nut and the copper flare).

## Vacuum drying

To remove all moisture from the system, proceed as follows:

1 . Evacuate the system for at least 2 hours to a target vacuum of -100 .7 kPa(=-1 .007 bar) .

2 . Check that, with the vacuum pump turned off, the target vacuum is maintained for at least 1 hour .

3 . Should you fail to reach the target vacuum within 2 hours or maintain the vacuum for 1 hour, the system may contain too much moisture .

4 . In that case, break the vacuum by pressurizing with nitrogen gas to a gauge pressure of 0 .05 MPa (0 .5bar) and repeat steps 1 to 3 until all moisture has been removed .

5 . The stop valves can now be opened, and/or additional refrigerant can be charged .

### Information

After opening the stop valve, it is possible that the pressure in the refrigerant piping does not rise. This might be caused by e.g. the closed state of the expansion valve in the outdoor unit circuit, but does not present any problem for correct operation of the unit.

## Charging refrigerant

Important information regarding the refrigerant used

- This product contains fluorinated greenhouse gases covered by the Kyoto Protocol . Do not vent gases into the atmosphere .
- Evacuate Indoor Unit and interconnecting pipework to a vacuum pressure of 500 microns and hold for 15 minutes.
- The Outdoor unit is supplied with refrigerant HFC-410A (R410A) sufficient for 30m line length .

Calculate additional refrigerant to suit your line length; refer supplied Specification Sheet .

- Open the service valve at the Outdoor unit to allow refrigerant to flow throughout the system .
- For long line lengths, oil (of the correct type) should be added to the refrigerant system at the rate shown in the Specification Data table .(see paragraph 9 .5)
- Leak check all brazed and fitted joints .

Precautions and general guidelines

- When servicing the unit requires the refrigerant system to be opened, treatment and evacuation of refrigerant must be done in accordance with applicable legislation .
- Refrigerant can not be charged until field wiring has been completed .

Refrigerant may only be charged after performing the leak test and vacuum drying .



**Caution**

When charging a system, care shall be taken that its maximum permissible charge is never exceeded, in view of the danger of liquid hammer.

**Warning**

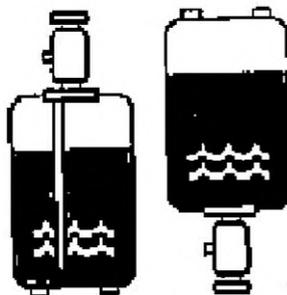
- Refrigerant cylinders shall be opened slowly.
- Always use protective gloves and protect your eyes when charging refrigerant.

**Danger**

• When the power is on, please close the front panel when leaving the unit unattended. Charging with an unsuitable substance may cause explosions and accidents, so always ensure that the appropriate refrigerant (R410A) is charged.

- This unit requires additional charging of refrigerant according to the length of refrigerant piping connected at the site .
- Make sure to charge the refrigerant in liquid state to the liquid pipe . Since R410A is a mixed refrigerant, its composition changes if charged in its gaseous state and normal system operation would then no longer be assured .
- Before charging, check whether the refrigerant cylinder has a siphon attached or not and position the cylinder accordingly .

Fill using a cylinder with a siphon attached Charge the liquid refrigerant with the cylinder in upright position .



Fill using a cylinder with a siphon attached Charge the liquid refrigerant with the cylinder in up-side-down position .

On this model it is not necessary to charge additionally if the piping length  $\leq 30\text{m}$  .

## Complete recharging

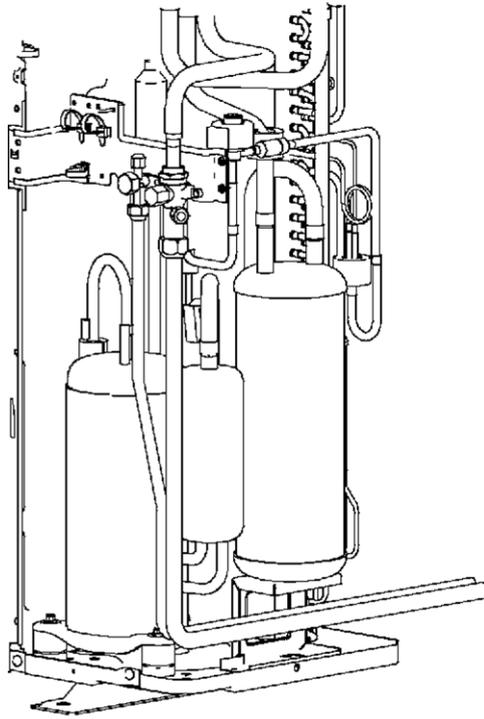
**Notice**

Before recharging, make sure to execute vacuum drying of the internal piping of the unit as well. To do so, use the internal service port of the unit. Do not use the service ports located on the stop valve, since vacuum drying can not be performed properly from these ports. Outdoor units have 1 port on the piping. It is between the heat exchanger and the 4-way valve.

In case complete recharging is required (after a leak, etc .), refer to the information below to determine the necessary amount of refrigerant .

**Warning**

Some sections of the refrigerant circuit may be isolated from other sections caused by components with specific functions (e.g. valves). The refrigerant circuit therefore features additional service ports for vacuuming, pressure relief or pressurizing the circuit. In case it is required to perform brazing on the unit, ensure that there is no pressure remaining inside the unit. Internal pressures need to be released with ALL the service ports indicated on the figures below opened. The location is depending on mode type.



**Total charging weight of the refrigerant (after a leak, etc.)**

The total charging amounts relate to the refrigerant piping length .

When the total length (L) of the two indoor units' connecting pipe is less than 7 .5m, it is unnecessary to charge additional refrigerant .

When the connecting pipe (L) exceeds 7 .5m, it shall charge M(g) additional refrigerant per meter . That is: Refrigerant charging amount = (L-7 .5m) x M(g/m)

For 4TXK6512G1000AA, 4TXK6518G1000AA, M=30(g/m)

For 4TXK6524G1000AA, 4TXK6536G1000AA, 4TXK6548G1000AA, 4TXK6560G1000AA, M=65(g/m)

Only in COOLING operation it can charge the additional refrigerant .

When charging, the refrigerant shall be charged from the charging nozzle of low pressure valve .

Be careful when charging refrigerant, do not let the air mix into the system, and it must charge the additional refrigerant in liquid state .

**Add oil instruction**

The cumout of oil added can be calculated by the following formula :  $Q = (A + (L - 30) * B) / 4 - C$



Model	Factory oil charging
4TXK6512G1000AA	320
4TXK6518G1000AA	350
4TXK6524G1000AA	350
4TXK6536G1000AA	400
4TXK6548G1000AA	1070
4TXK6560G1000AA	1100

Note:

a . when  $Q < 0$ , oil added = 0;

b . when  $Q > 0$ , oil added =  $Q(cc)$ ;

c . L is the liquid pipe length , unit(m)

## Electrical wiring work

### Warning

electrician.

- All wiring must be performed by an authorized

All components procured on the side and all electric construction shall comply with the applicable legislation.



### **Danger:High Voltage**

To avoid electrical shock, make sure to disconnect the power supply 1 minute or more before servicing the electrical parts. Even after 1 minute, always measure the voltage at the terminals of main circuit capacitors or electrical parts and, before touching , make sure that those voltages are 50VDC or less.



### Notice

To persons in charge of electrical wiring work:

Do not operate the unit until the refrigerant piping is complete. (Running it before the piping is ready will break the compressor.)

## Precautions on electrical wiring work



- When servicing the unit requires the refrigerant system to be opened, treatment and evacuation of refrigerant must be done in accordance with applicable legislation . Refrigerant can not be charged until field

wiring has been completed .

Refrigerant may only be charged after performing the leak test and vacuum drying .

### Danger

- Before obtaining access to terminal devices, all supply circuits must be interrupted.
- Be sure to install an earth leakage circuit breaker in accordance with applicable legislation. Failure to do so may cause electrical shock.



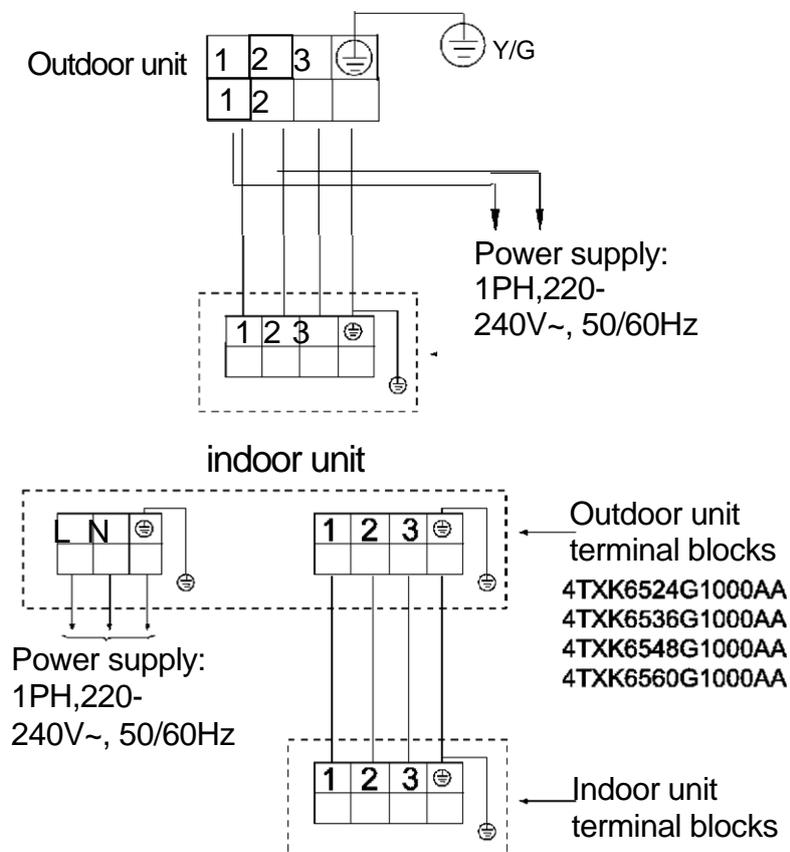
- Use only copper wires .
- A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in the fixed wiring in accordance with applicable legislation . Do not turn on the main switch until all the wiring is completed .
- Make sure to connect power supply cables in normal phase .
- Never squeeze bundled cables into a unit .
- Fix cables so that cables do not make contact with the pipes (especially on high pressure side) .
- Secure the electrical wiring with cable ties as shown in the figure in 10 .2 .
- Make sure no external pressure is applied to the terminal connectors .
- When installing the earth leakage circuit breaker make sure that it is compatible with the inverter (resistant to high frequency electrical noise ) to avoid unnecessary opening of the earth leakage circuit breaker .
- As this unit is equipped with an inverter, installing a phase advancing capacitor not only will deteriorate power factor improvement effect, but also may cause capacitor abnormal heating accident due to high-frequency waves . Therefore, never install a phase advancing capacitor.

**! Caution**

Be sure to install the required fuses or circuit breakers.

**Connecting power supply and inter-unit wiring**

- Connect and fix the power supply cable, indoor-outdoor connection cable as following:



For single phase power supply models:  
50/60Hz

4TXK6524G1000AA,4TXK6536G1000AA

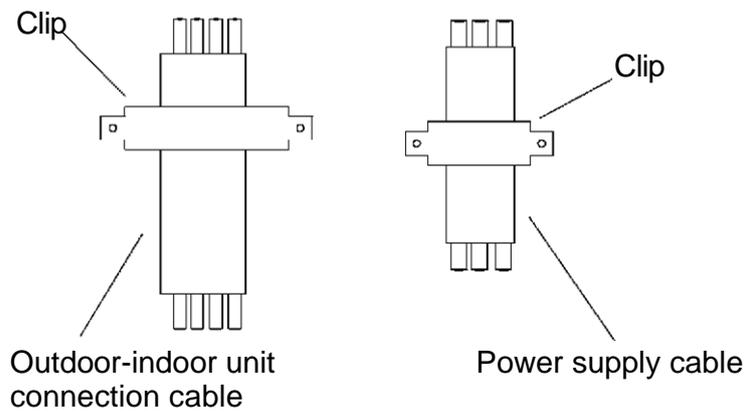
4TXK6512G1000AA,4TXK6518G1000AA

Power supply cable: H05RN-F 3G 4 .0mm 2 4TXK6548G1000AA, 4TXK6560G1000AA Power supply cable:  
H05RN-F 3G

6 .0mm 2 Indoor and outdoor connection cable: H05RN-F 4G 2 .5mm 2 (\* 1 Note: If the indoor and outdoor unit connection cable length L satisfied condition  $40m < L < 55m$ , please change the connection cables specification to H07RN-F 4G

4 .0mm 2 . If the indoor and outdoor unit connection cable length L satisfied condition  $55m \leq L \leq 75m$ , please change the connection cables specification to H07RN-F 4G 6 .0mm 2 )

- Fix the cable with the clip to prevent slide .



## 8 . Indoor

### 8.1 Indoor unit

Indoor unit type	MODEL	Main control pcb Spare part code
Cassette	4MXC6518G1000AA	0151800244AF 0151800332
	4MXC6524G1000AA	0151800208CH
	4MXC6536G1000AA	
	4MXC6548G1000AA	
	4MXC6560G1000AA	
Duct	4MXD6512G1000AA	0151800267E
	4MXD6518G1000AA	
	4MXD6524G1000AA	
	4MXD6536G1000AA	0151800106G
	4MXD6548G1000AA	
	4MXD6560G1000AA	
Convertible	4MXX6518G1000AA	0151800459A
	4MXX6524G1000AA	
	4MXX6536G1000AA	
	4MXX6548G1000AA	
	4MXX6560G1000AA	

**0151800244AF**  
**4MXC6518G1000AA**



**0151800208CH**  
**4MXC6524G1000AA 4MXC6536G1000AA 4MXC6548G1000AA 4MXC6560G1000AA**



**0151800459A**  
**4MXX6518G1000AA 4MXX6524G1000AA 4MXX6536G1000AA 4MXX6548G1000AA**  
**4MXX6560G1000AA**



**0151800267E**  
**4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA**



**0151800106G**  
**4MXD6536G1000AA      4MXD6548G1000AA 4MXD6560G1000AA**



## 8.2 Indoor unit dip switch setting

Model: 4MXC6518G1000AA

PCB CODE: 0151800244AF

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
OFF	ON	OFF	--	--	--	--	--	4MXC6518G1000AA
--	--	--	OFF	--	--	--	--	Room card unavaible( default)
--	--	--	ON	--	--	--	--	Room card available
--	--	--	--	OFF	--	--	--	Heating pump( default)
--	--	--	--	ON	--	--	--	Cooling only
--	--	--	--	--	OFF	--	--	Fresh air available(default)
--	--	--	--	--	ON	--	--	Fault alarm available
--	--	--	--	--	--	OFF	--	Filter remind unavailable(default)
--	--	--	--	--	--	ON	--	Filter remind available
--	--	--	--	--	--	--	OFF	USA region
--	--	--	--	--	--	--	ON	Non-USA region(default)

SW3(1-ON,0-OFF)				Decription
SW3-1	SW3-2	SW3-3	SW3-4	
OFF	OFF	OFF	OFF	Reserve

SW3(1-ON,0-OFF)				indoor unit address No. in group controller
SW3-5	SW3-6	SW3-7	SW3-8	
OFF	OFF	OFF	OFF	0#(master unit)
OFF	OFF	OFF	ON	1#(slave unit)
OFF	OFF	ON	OFF	2#(slave unit)
OFF	OFF	ON	ON	3#(slave unit)
OFF	ON	OFF	OFF	4#(slave unit)
OFF	ON	OFF	ON	5#(slave unit)
OFF	ON	ON	OFF	6#(slave unit)
OFF	ON	ON	ON	7#(slave unit)
ON	OFF	OFF	OFF	8#(slave unit)
ON	OFF	OFF	ON	9#(slave unit)
ON	OFF	ON	OFF	10#(slave unit)
ON	OFF	ON	ON	11#(slave unit)
ON	ON	OFF	OFF	12#(slave unit)
ON	ON	OFF	ON	13#(slave unit)
ON	ON	ON	OFF	14#(slave unit)
ON	ON	ON	ON	15#(slave unit)



Model: 4MXC6524G1000AA 4MXC6536G1000AA 4MXC6548G1000AA 4MXC6560G1000AA  
 PCB CODE:0151800208CH

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
ON	ON	OFF	--	--	--	--	--	4MXC6524G1000AA
ON	OFF	ON	--	--	--	--	--	4MXC6536G1000AA
ON	ON	ON	--	--	--	--	--	4MXC6548G1000AA
ON	ON	ON	--	--	--	--	--	4MXC6560G1000AA
--	--	--	OFF	--	--	--	--	Room card unavaible( default)
--	--	--	ON	--	--	--	--	Room card available
--	--	--	--	OFF	--	--	--	Heating pump( default)
--	--	--	--	ON	--	--	--	Cooling only
--	--	--	--	--	OFF	--	--	Fresh air available(default)
--	--	--	--	--	ON	--	--	Fault alarm available
--	--	--	--	--	--	OFF	--	Filter remind unavailable(default)
--	--	--	--	--	--	ON	--	Filter remind available
--	--	--	--	--	--	--	OFF	USA region
--	--	--	--	--	--	--	ON	Non-USA region(default)

SW3(1-ON,0-OFF)				Decription
SW3-1	SW3-2	SW3-3	SW3-4	
OFF	OFF	OFF	OFF	Reserve

SW3(1-ON,0-OFF)				indoor unit address No. in group controller
SW3-5	SW3-6	SW3-7	SW3-8	
OFF	OFF	OFF	OFF	0#(master unit)
OFF	OFF	OFF	ON	1#(slave unit)
OFF	OFF	ON	OFF	2#(slave unit)
OFF	OFF	ON	ON	3#(slave unit)
OFF	ON	OFF	OFF	4#(slave unit)
OFF	ON	OFF	ON	5#(slave unit)
OFF	ON	ON	OFF	6#(slave unit)
OFF	ON	ON	ON	7#(slave unit)
ON	OFF	OFF	OFF	8#(slave unit)
ON	OFF	OFF	ON	9#(slave unit)
ON	OFF	ON	OFF	10#(slave unit)
ON	OFF	ON	ON	11#(slave unit)
ON	ON	OFF	OFF	12#(slave unit)
ON	ON	OFF	ON	13#(slave unit)
ON	ON	ON	OFF	14#(slave unit)
ON	ON	ON	ON	15#(slave unit)



Model: 4MXX6518G1000AA 4MXX6524G1000AA 4MXX6536G1000AA  
4MXX6560G1000AA

4MXX6548G1000AA

PCB CODE:0151800459A

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
OFF	ON	OFF	--	--	--	--	--	4MXX6518G1000AA
ON	ON	OFF	--	--	--	--	--	4MXX6524G1000AA
ON	OFF	ON	--	--	--	--	--	4MXX6536G1000AA
ON	ON	ON	--	--	--	--	--	4MXX6548G1000AA
ON	ON	ON	OFF	--	--	--	--	4MXX6560G1000AA
--	--	--	OFF	--	--	--	--	Room card unavaible(default)
--	--	--	ON	--	--	--	--	Room card available
--	--	--	--	OFF	--	--	--	Heating pump( default)
--	--	--	--	ON	--	--	--	Cooling only
--	--	--	--	--	OFF	--	--	Fresh air available(default)
--	--	--	--	--	ON	--	--	Fault alarm available
--	--	--	--	--	--	OFF	--	Filter remind unavaible(default)
--	--	--	--	--	--	ON	--	Filter remind available
--	--	--	--	--	--	--	OFF	USA region
--	--	--	--	--	--	--	ON	Non-USA region(default)

SW3(1-ON,0-OFF)				Description
SW3-1	SW3-2	SW3-3	SW3-4	
OFF	OFF	OFF	OFF	Reserve

SW3(1-ON,0-OFF)				"indoor unit address No. in group controller"
SW3-5	SW3-6	SW3-7	SW3-8	
OFF	OFF	OFF	OFF	0#(master unit)
OFF	OFF	OFF	ON	1#(slave unit)
OFF	OFF	ON	OFF	2#(slave unit)
OFF	OFF	ON	ON	3#(slave unit)
OFF	ON	OFF	OFF	4#(slave unit)
OFF	ON	OFF	ON	5#(slave unit)
OFF	ON	ON	OFF	6#(slave unit)
OFF	ON	ON	ON	7#(slave unit)
ON	OFF	OFF	OFF	8#(slave unit)
ON	OFF	OFF	ON	9#(slave unit)
ON	OFF	ON	OFF	10#(slave unit)
ON	OFF	ON	ON	11#(slave unit)
ON	ON	OFF	OFF	12#(slave unit)
ON	ON	OFF	ON	13#(slave unit)
ON	ON	ON	OFF	14#(slave unit)
ON	ON	ON	ON	15#(slave unit)



Model: 4MXD6512G1000AA 4MXD6518G1000AA AD24SS1ERC

PCB CODE:0151800267E

Model: AD36NS1ERC 4MXD6548G1000AA AD48HS1ERC

PCB CODE:0151800106G

SW1(ON/OFF)								Description
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	
ON	OFF	OFF	--	--	--	--	--	4MXD6512G1000AA
OFF	OFF	ON	--	--	--	--	--	4MXD6518G1000AA
ON	ON	OFF	--	--	--	--	--	4MXD6524G1000AA
--	--	--	OFF	--	--	--	--	Room card unavaible( default)
--	--	--	ON	--	--	--	--	Room card available
--	--	--	--	OFF	--	--	--	Heating pump( default)
--	--	--	--	ON	--	--	--	Cooling only
--	--	--	--	--	OFF	--	--	Fresh air available(default)
--	--	--	--	--	ON	--	--	Fault alarm available
--	--	--	--	--	--	OFF	--	Filter remind unavailable(default)
--	--	--	--	--	--	ON	--	Filter remind available
--	--	--	--	--	--	--	OFF	USA region
--	--	--	--	--	--	--	ON	Non-USA region(default)

For 4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA, SW03 dip switch setting as below:

SW3-1	SW3-2	SW3-3	SW3-4	Description
OFF	--	--	--	swing motor QTY:1 (default)
--	OFF	--	--	Reverse
--	--	OFF	--	Reverse
--	--	--	OFF	Static pressure level: 4 (default)
--	--	--	ON	Reverse

SW03(1-ON,0-OFF)				Indoor unit address No.in group controller
SW3-5	SW3-6	SW3-7	SW3-8	
OFF	OFF	OFF	ON	1#(slave unit)
OFF	OFF	ON	OFF	2#(slave unit)
OFF	OFF	ON	ON	3#(slave unit)
OFF	ON	OFF	OFF	4#(slave unit)
OFF	ON	OFF	ON	5#(slave unit)
OFF	ON	ON	OFF	6#(slave unit)
OFF	ON	ON	ON	7#(slave unit)
ON	OFF	OFF	OFF	8#(slave unit)
ON	OFF	OFF	ON	9#(slave unit)
ON	OFF	ON	OFF	10#(slave unit)
ON	OFF	ON	ON	11#(slave unit)
ON	ON	OFF	OFF	12#(slave unit)
ON	ON	OFF	ON	13#(slave unit)
ON	ON	ON	OFF	14#(slave unit)
ON	ON	ON	ON	15#(slave unit)

Model: 4MXD6548G1000AA 4MXD6548G1000AA 4MXD6560G1000AA  
 PCB CODE:0151800106G

SW1(ON/OFF)								Description
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	
ON	ON	ON	--	--	--	--	--	4MXD6536G1000AA
ON	ON	OFF	--	--	--	--	--	4MXD6548G1000AA
ON	ON	OFF	--	--	--	--	--	4MXD6560G1000AA
--	--	--	OFF	--	--	--	--	Room card unavaible( default)
--	--	--	ON	--	--	--	--	Room card available
--	--	--	--	OFF	--	--	--	Heating pump(default)
--	--	--	--	ON	--	--	--	Cooling only
--	--	--	--	--	OFF	--	--	Temperature compensate unavaible( default)
--	--	--	--	--	ON	--	--	Temperature compensate available
--	--	--	--	--	--	ON	OFF	Duct

SW03(1-ON,0-OFF)				Indoor unit address No.in group controller
SW3-1	SW3-2	SW3-3	SW3-4	
OFF	OFF	OFF	OFF	0#(master unit)
OFF	OFF	OFF	ON	1#(slave unit)
OFF	OFF	ON	OFF	2#(slave unit)
OFF	OFF	ON	ON	3#(slave unit)
OFF	ON	OFF	OFF	4#(slave unit)
OFF	ON	OFF	ON	5#(slave unit)
OFF	ON	ON	OFF	6#(slave unit)
OFF	ON	ON	ON	7#(slave unit)
ON	OFF	OFF	OFF	8#(slave unit)
ON	OFF	OFF	ON	9#(slave unit)
ON	OFF	ON	OFF	10#(slave unit)
ON	OFF	ON	ON	11#(slave unit)
ON	ON	OFF	OFF	12#(slave unit)
ON	ON	OFF	ON	13#(slave unit)
ON	ON	ON	OFF	14#(slave unit)
ON	ON	ON	ON	15#(slave unit)



## 8.3 Indoor unit function

### 1. Dry mode Operation

- 1)  $T_{ai} < 16^{\circ}\text{C}$ , indoor unit stops running and sends stop-unit signal to outdoor.
- 2)  $T_{ai} > T_{set} + 2^{\circ}\text{C}$ , indoor unit runs at cooling mode and sends cooling -mode signal to outdoor
- 3)  $T_{se} < T_{ai} \leq T_{set} + 2^{\circ}\text{C}$ , indoor unit send DRY mode signal to outdoor unit
- 4)  $T_{ai} \leq T_{se}$ , indoor unit runs at low speed and sends stop-unit signal to outdoor.

### 2. auto mode:

1): If the unit enters Auto mode for the first time, the system will adjust the operation mode according to the room

temp. and the set temp.

When  $T_{ai} \geq T_{set}$ , entering auto cooling mode;

When  $T_{ai} < T_{set}$ , entering auto heating mode.

- 2): Auto cooling mode is as the same as the cooling mode. After the thermostat is OFF for 15 minutes, or the unit will still stay at auto cooling mode and stop when it reaches the set temperature;
- 3): Auto heating mode is as the same as the heating mode. After the thermostat is OFF for 15 minutes, if  $T_{ai} \geq T_{set} + 1 + T_{comp1} + T_{dif}$ , the unit will enter auto cooling mode, or the unit will still stay at auto heating mode;
- 4): In this mode, the Sleep function is available, run as cooling sleep in cooling mode and as heating sleep in heating mode. Once sleep mode is set, the mode will not change after the unit stops for 15 minutes when it arrives  $T_{set}$ .

### 3. Abnormal Operation

- 1): When outdoor modes from the request of indoor unit conflict, the one entering firstly will take priority.
- 2): After indoor receives the ON command from wired controller, it will firstly confirm the outdoor current operation mode. If they are the same modes, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode and send the "standby" signal to wired controller until outdoor stops or outdoor mode the requested mode of wired controller are the same, the unit will run as the requested mode of wired controller.
- 3): After indoor receives the ON command from remote controller, it will firstly confirm the outdoor current operation mode. If they are the same mode, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode. After setting on remote controller, if the buzzer sounds two times, that shows abnormal operation. Indoor will run until the outdoor mode and the requested mode of remote controller are the same.
- 4): COOL (included AUTO COOL), DRY, FAN are not abnormal mode.

### 4. Room Card Function

The unit adopts room card function (5VAC input), which only make ON/OFF control. When it is connected, the unit is ON; when it is disconnected, the unit is OFF, and the other parameters will be as default or the data in memory.

A: When room card function is available

The central control, remote control/wired control and the room card are "AND" logical relationship. On the condition that the room card is connected, the unit can be controlled by remote controller or wired controller; indoor unit will run at the set state by the central controller, remote controller or wired controller; otherwise, if room card is not connected, the unit cannot be controlled.

B: When room card function is not available, the unit will be controlled by the remote controller, the wired controller or the central controller.



## 6. water pump and flow switch control

- 1): Water pump will be electrified when indoor unit enters non-heating mode until indoor unit stops. 5 minutes later after indoor unit stops, water pump will stop.
- 2): When indoor unit is in heating mode, water pump will not operate.
- 3): In the cooling standby, heating and air supply modes, the pump does not run when the float switch is closed. After the water tank is full, the float switch is turned off, and the controller detects this signal and after 2 seconds, the pump starts to work. After the float is restored, the pump continues to work for 5 minutes;
- 4) After continuously detecting the water full signal for more than 5 minutes, the compressor stops working; after the compressor stops, the water pump continues to run for 5 minutes. If the float switch is still disconnected, the drainage system is reported to be faulty. After the fault, the water pump continues to run until the float switch is detected to be closed. After 5 minutes of lag, it turns to normal operation mode.

## 7. Timer operation

A: Wired control type: wired controller will control the unit ON/OFF;

B: Remote control type: indoor unit will confirm the unit ON or OFF according to the current clock and the timer clock set by remote controller. When setting timer function, the timer LED will be ON.

## 8. Sleep Function

A: The ON/OFF for Wired control type unit is controlled by wired controller

B: Remote control type unit includes cooling sleep and heating sleep, after the sleep is set, the unit will change mode; the sleep will begin to count.

a: In cooling/dry mode, after running for 1 hour, the set temp. will increase 1oC, another 1 hour later, the set temp. will increase 1oC again, then 6 hours (or set time-2) later, it will stop.

b: In heating mode, after running for 1 hour, the set temp. will reduce 2oC, another 1 hour later, the set temp. will reduce 2oC again, then 3 hours later, the set temp. will increase 1oC, and another 3 hours(or set time-5), it will stop.

## 9. Auto-Restart Function

A. Wired control type unit: Please refer to the DIP switch setting SW4: ON means auto-restart unavailable; OFF means auto-restart available(SW4=OFF is factory default setting)

B. Remote control type unit:

In 5 seconds, press SLEEP button 10 times continuously in 5 seconds, the buzzer will beep 4 times and enter auto-restart function. Within 5 seconds, press SLEEP 10 times continuously, the buzzer will beep twice and quit auto-restart function

C. Memory information: ON/OFF state, mode, fan speed, set temp., health, swing position;

D: If the memory includes timer or sleep function, when being electrified again, timer and sleep will be cancelled;

## 10. Compulsory Defrosting Operation

A: After indoor receives the compulsory defrosting signal, it will send continuously the signal to outdoor for 10 times, in this period, indoor unit will work normally and it will enter defrosting operation until it receives the enter-defrost signal from outdoor unit.

B: Wired control type: receive the compulsory defrosting signal to enter compulsory defrosting.

C: Remote control type: In heating mode, high speed, 30oC, press SLEEP button 6 times in 5s, and the buzzer will sound 3 times, then enter the manual defrosting.

## 9 . Outdoor

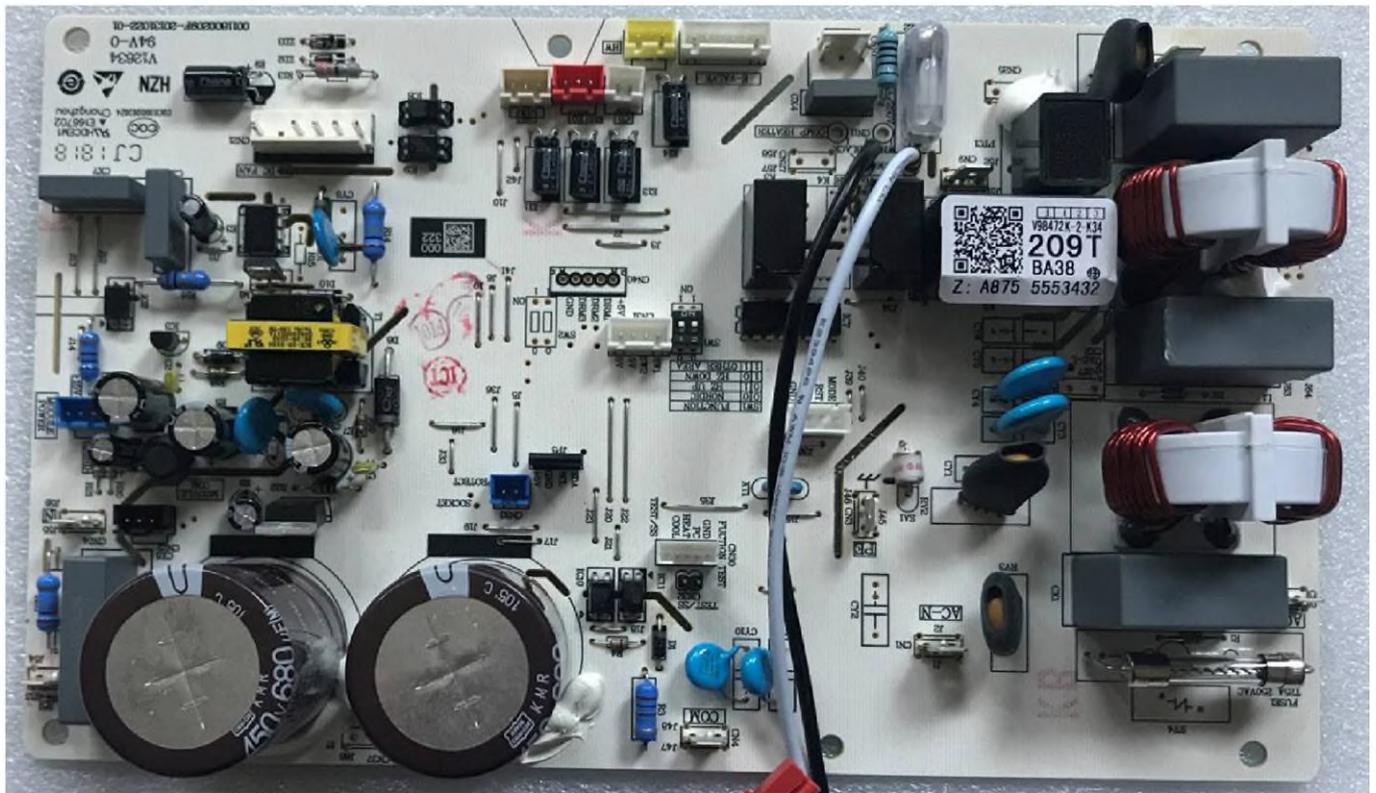
### 9.1 Outdoor unit PCB

MODEL	Main Control PCB	Power module
4TXK6512G1000AA	0011800209T	0011800328BM
4TXK6518G1000AA	0011800966AL	/
4TXK6512G1000AA	0011800241C	0011800377CA
4TXK6536G1000AA	0151800349A	0011800377AK
4TXK6548G1000AA	0151800054BG	0150401945CD
4TXK6560G1000AA	0151800054BK	0150401945CE

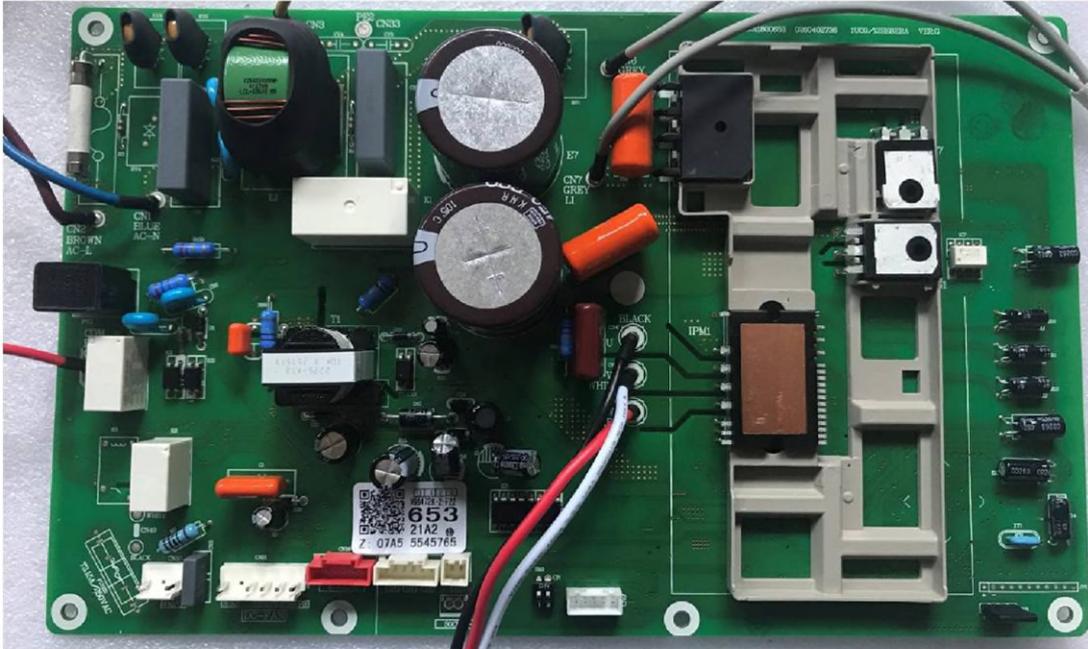
### 9.2 Outdoor Unit PCB photo

0011800209T

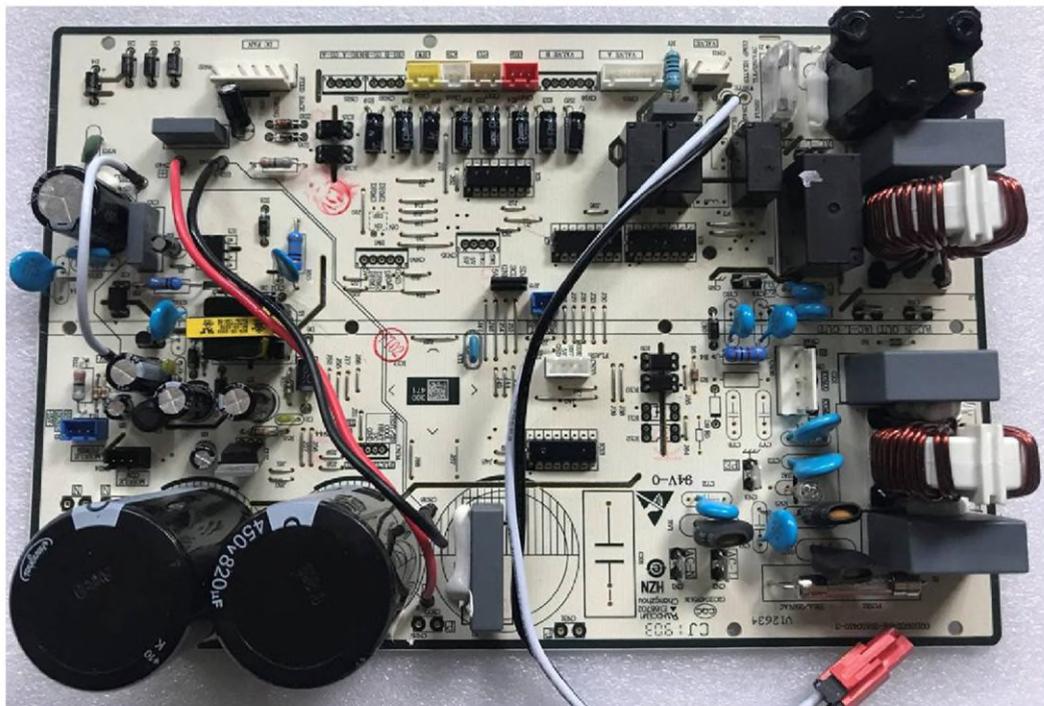
4TXK6512G1000AA



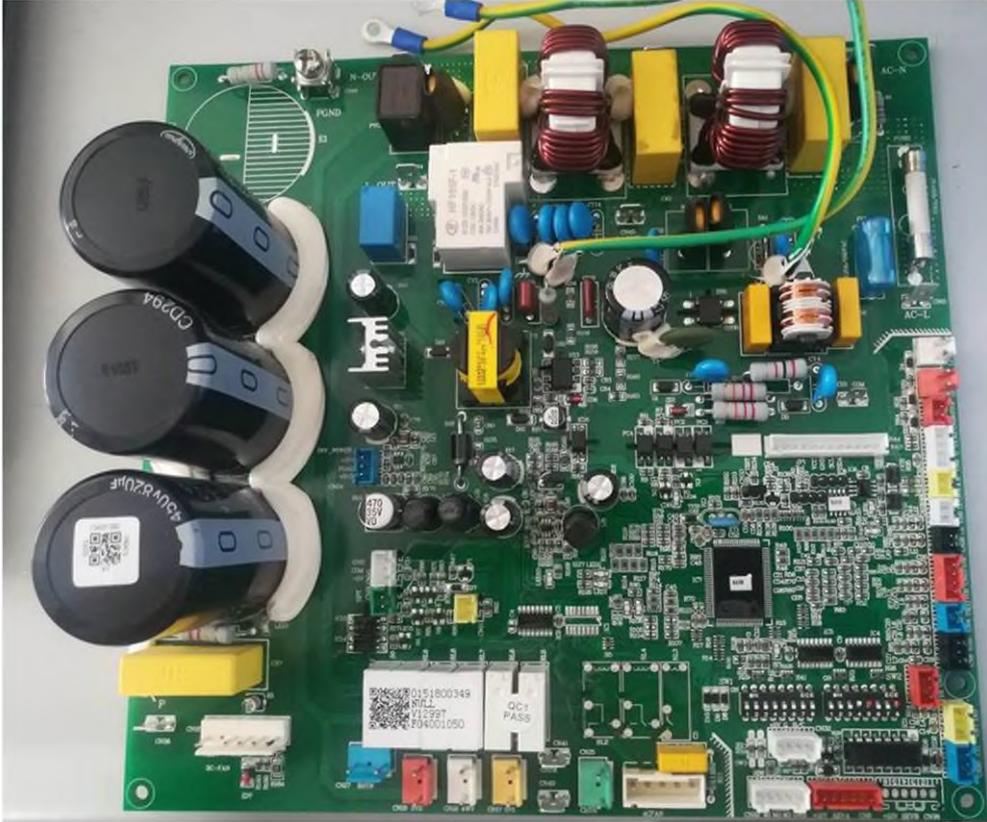
0011800966AL  
4TXK6518G1000AA



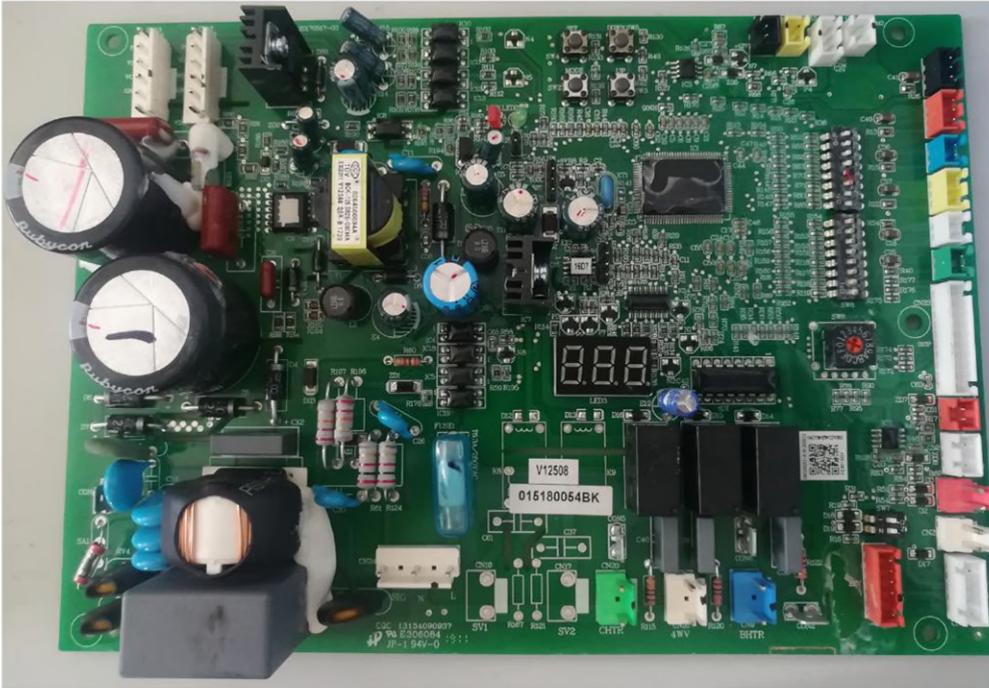
0011800241C  
1U24RS1ERA



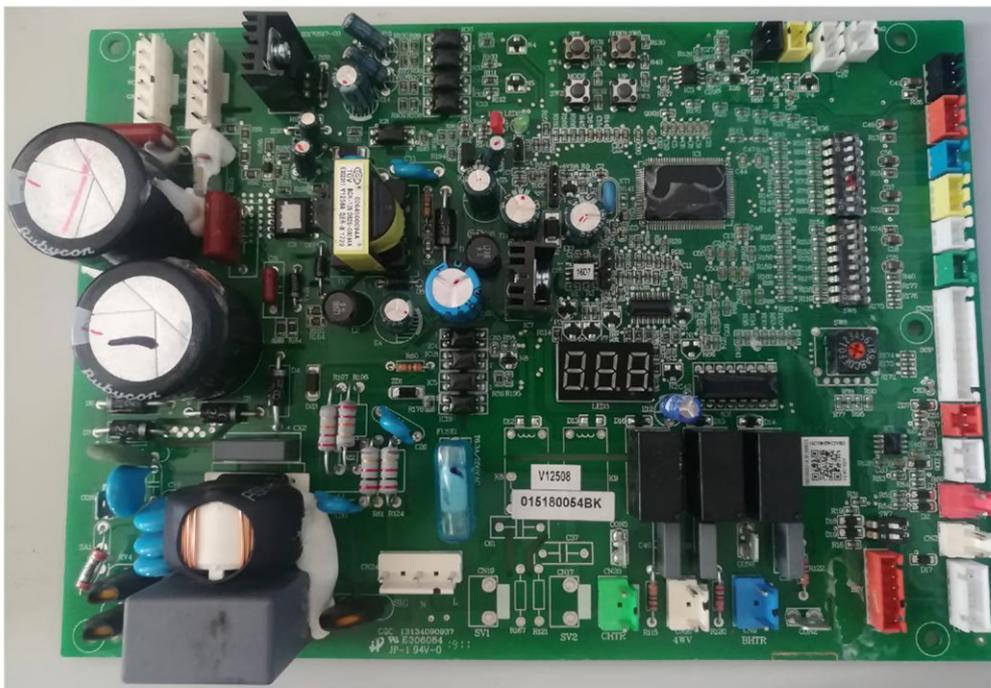
0151800349A  
4TXK6536G1000AA



**0151800054BG**  
**4TXK6548G1000AA**



**0151800054BK**  
**4TXK6560G1000AA**



### 9.3 Outdoor dip swith setting

MODEL	Main Control PCB	Power module
4TXK6512G1000AA	0011800209T	0011800328BM
4TXK6518G1000AA	0011800966AL	/
1U24RS1ERA	0011800241C	0011800377CA
4TXK6536G1000AA	0151800349A	0011800377AK
4TXK6548G1000AA	0151800054BG	0150401945CD
4TXK6560G1000AA	0151800054BK	0150401945CE

4TXK6512G1000AA

SW1-1	SW1-2	Model
ON	ON	1U12CS1ERC

4TXK6518G1000AA

SW1-1	SW1-2	Model
ON	ON	4TXK6518G1000AA

4TXK6536G1000AA

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
OFF	ON	--	--	--	--	--	--	Force heating
ON	ON	--	--	--	--	--	--	Force cooling
OFF	OFF	--	--	--	--	--	--	Without force heating & force cooling(default)
--	--	OFF	--	--	--	--	--	Low standby unavailable(default)
--	--	ON	--	--	--	--	--	Low standby available(default)
--	--	--	OFF	--	--	--	--	Reverse
--	--	--	--	OFF	--	--	--	Central controller(default)
--	--	--	--	ON	--	--	--	BMS system
--	--	--	--	--	OFF	--	--	Reverse
--	--	--	--	--	--	OFF	--	Auto defrosting available(default)
--	--	--	--	--	--	ON	--	Auto defrosting unavailable(default)
--	--	--	--	--	--	--	OFF	Quiet function unavailable(default)
--	--	--	--	--	--	--	ON	Quiet function available

4TXK6548G1000AA 4TXK6560G1000AA

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
OFF	ON	--	--	--	--	--	--	Force heating
ON	ON	--	--	--	--	--	--	Force cooling
OFF	OFF	--	--	--	--	--	--	Without force heating&force cooling ( default)
--	--	OFF	--	--	--	--	--	Low standby unavailable(default)
--	--	ON	--	--	--	--	--	Low standby available(default)
--	--	--	OFF	--	--	--	--	Protocal selection-wrong
--	--	--	ON	--	--	--	--	Protocal selection--right (default)
--	--	--	--	OFF	--	--	--	Central controller(default)
--	--	--	--	ON	--	--	--	BMS system
--	--	--	--	--	OFF	--	--	Reverse
--	--	--	--	--	--	OFF	--	Auto defrosting available(default)
--	--	--	--	--	--	ON	--	Auto defrosting unavailable(default)
--	--	--	--	--	--	--	OFF	Quiet function unavailable(default)
--	--	--	--	--	--	--	ON	Quiet function available

Note:

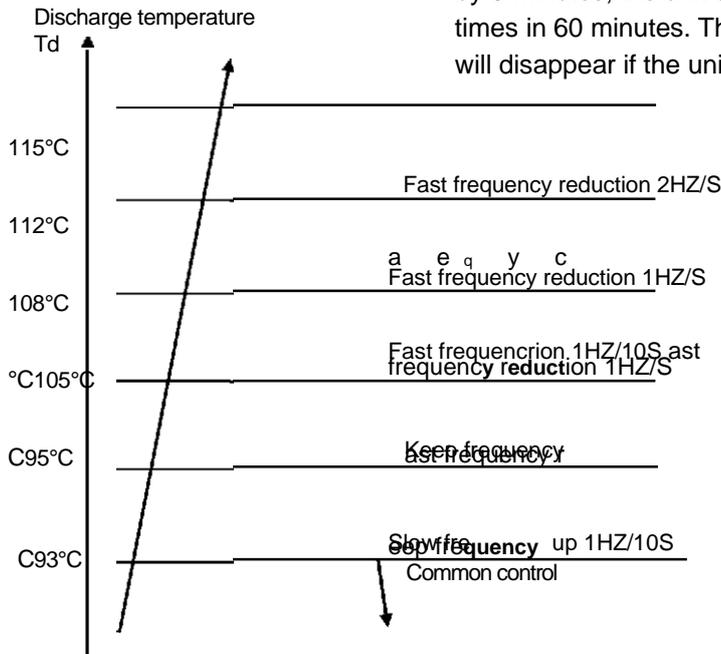
If SW1-4 is OFF ,the unit will display error code means there are some communication error between PCB and power module

SW8 arrow point	
Number	Model
4	4TXK6548G1000AA
5	4TXK6560G1000AA

## 9.4 Outdoor unit function

### 9.4.1 Compressor discharge temp. (TD) high temp. protection function.

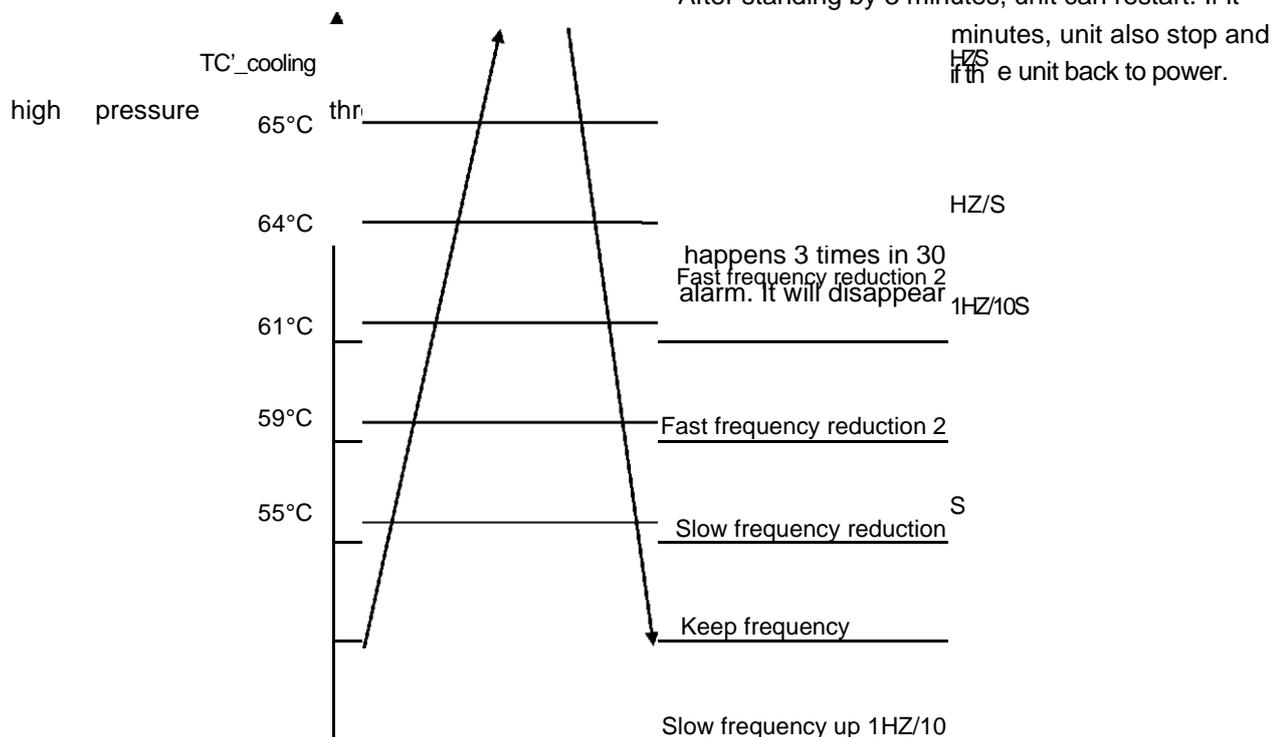
If it lasts 3 seconds, the unit will stop. After standing by 3 minutes, the unit can restart. If it happens 3 times in 60 minutes. The unit will stop and alarm. It will disappear if the unit back to power.



### 9.4.2 Condenser overheat protection

When cooling, compare TC with TE. Choose the bigger one, TC'.  $TC' = \text{MAX.}[TC, TE]$ . You can control the

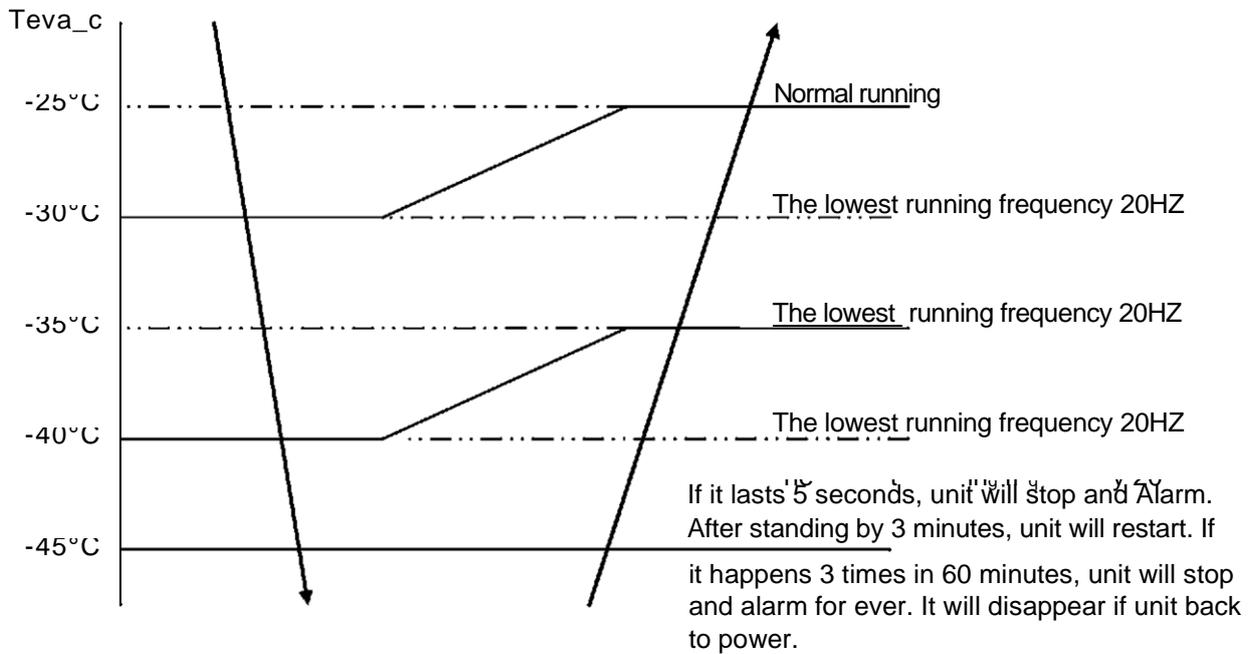
If it lasts 5 seconds, the unit will stop and alarm. After standing by 3 minutes, unit can restart. If it



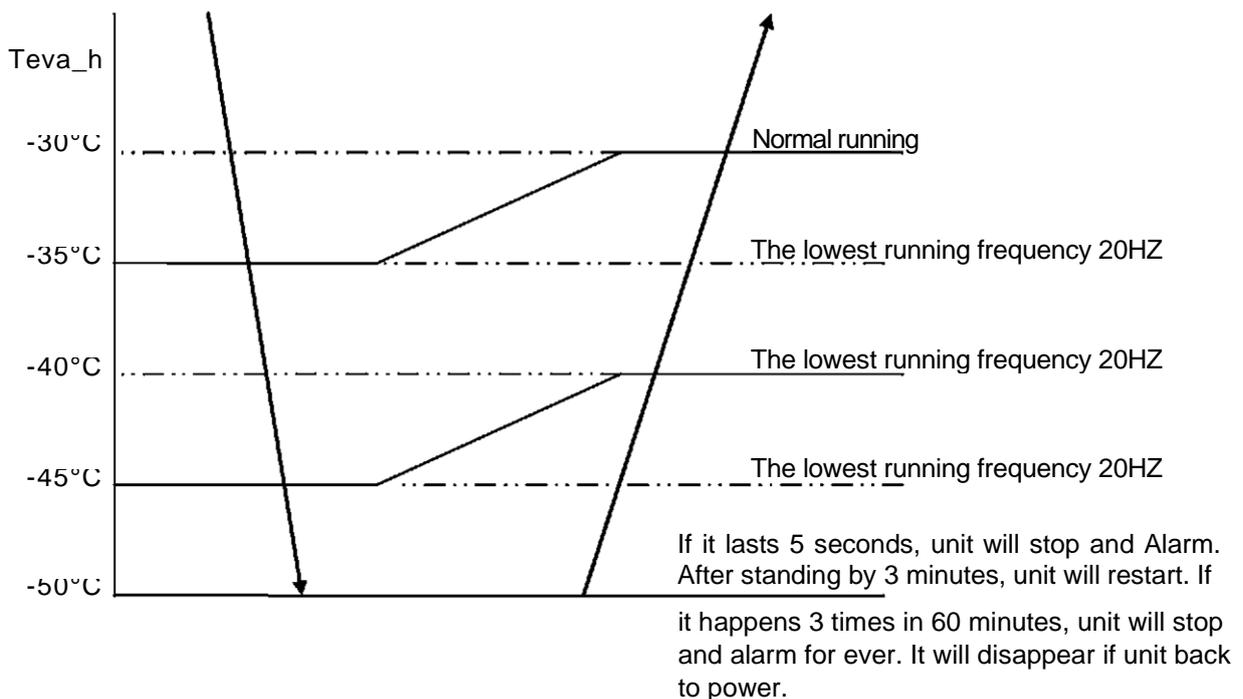


### 9.4.3 Condenser overheat protection

In order to realize low pressure protection, the low pressure is controlled by simulating evaporating temperature: When cooling, compare the evaporating temp. with the compressor suction temp. and choose the lower one (Teva c) to simulate judgment.



When heating, you can judge through comparing defrost temp. (Te) with environment temp. (Tc) and choose the lower one (Teva h) .



### 9.4.4 Oil return control

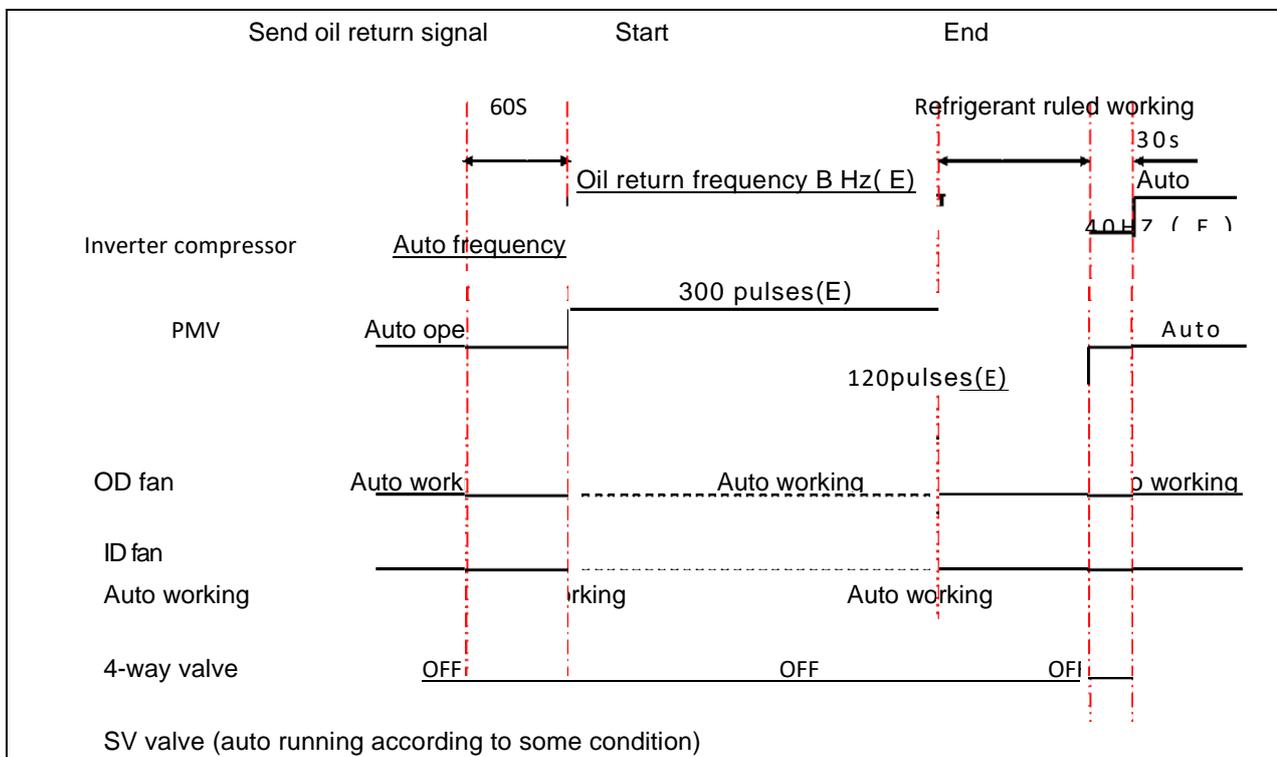
Control purpose: Make the system oil regularly return to the compressor when the compressor work in a low frequency.

Condition:

When the indoor units are working, if the compressor continuous frequency is lower than the parameters C HZ (E) and the temperature TC is lower than 50°C (E), and it lasts 5 hours. Unit will enter oil return mode. When changing the mode or manual stop or protective stop, time will pause. After the compressor restart, it will continue to time. When timing, if the compressor working frequency is higher than B HZ (E) and lasts more than 10 minutes, the time reset.

When heating, the time will reset if the defrost mode work.

After oil return, oil return timer reset



Process control

chart of oil return:

After oil return, the

OR

condition of end of refrigerant ruled running

Oil return after 1

minutes

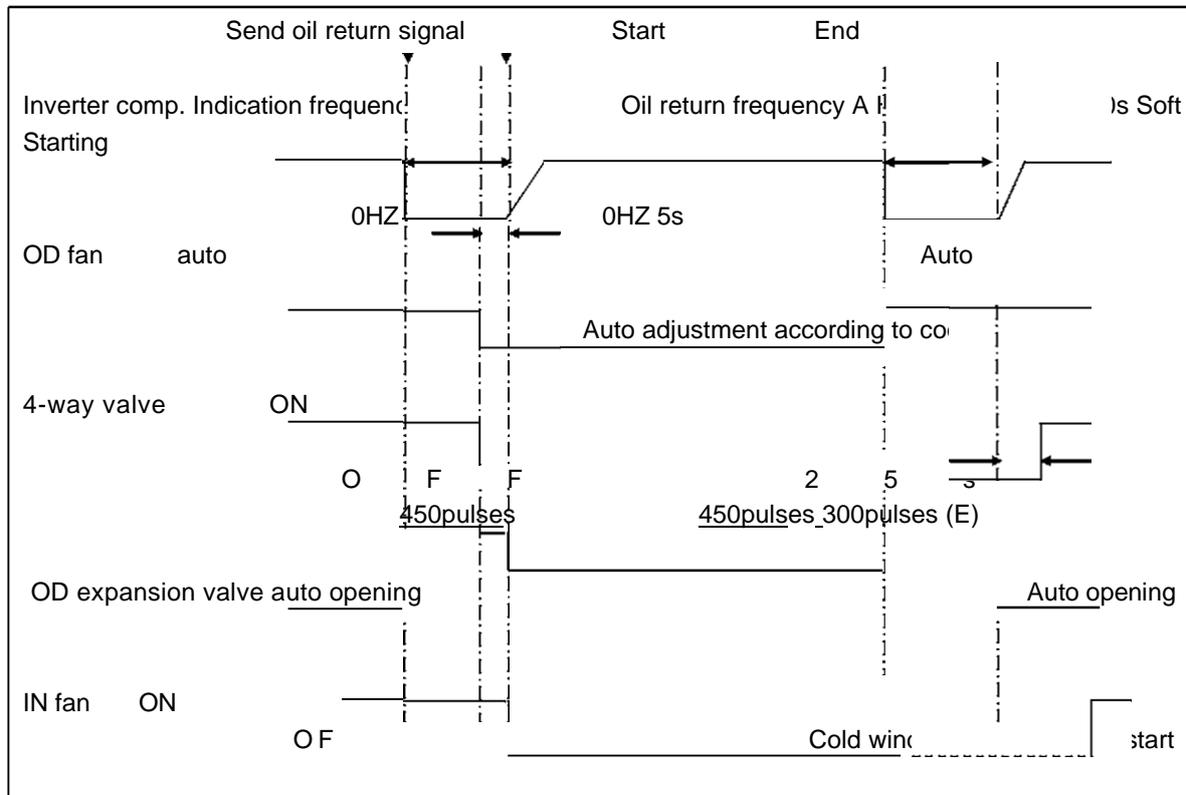
Td-TC>30°C

Ts-TM>30°C

TM<-35°C

OR

Process control chart of oil return:



- OR
- OR
    - The longest 9 minutes
    - Td-TC<20°C lasts 30 minutes (it will start to judge after oil return lasting 30 seconds.)
    - Ts-TM<15°C lasts 30 minutes (it will start to judge after oil return lasting 30 seconds.)
  - The shortest running 3 minutes

**9.4.5 Control of operating EEV**

1. Set one general EEV on outdoor unit board, control the EEV by indoor unit, outdoor unit board is regarded as executing agency.

- (1) Reset the electrify valve: act one full-closed action when the first electrifying of the outdoor valve board.
- (2) Power source: switch power source, outdoor unit 13.5V (input voltage of the EEV) are the same line.

2. The electronic property of the EEV

Largest opening	500 pulse
Driving speed	PPS

Remark: considering the application of MAXI, the EEV of each model should be larger, when operating as one outdoor unit with one indoor unit, the opening of the EEV should be stable lower than 200 steps. Leave the system adjustment margin of MAXI.

3. The initialization action of the EEV.

Driving speed of the EEV: Open-way: 31.25 PPS (32MS) , Closed-way: 31.25 PPS (32MS)

full open action and full closed action of EEV: full open action: open as 470 pulse (E) , full closed action: after closing 540 pulse, repeat three times (close as 60 pulse and open as 5 pulse, it means stop at opening of 5)

#### 4. The limitation of the EEV opening

State of the unit	Requirement of the opening	Lower limit	Upper limit
Shut down	Standard opening of the model, according to the opening of last time	/	/
Standby (temperature sensor off)	Standard opening of the model, according to the mode before the temperature sensor is off	/	/
Cooling startup process	Execute the standard cooling opening of the model	Standard opening	400
Heating startup process	Execute the standard heating opening of the model	150	400
Cooling, dehumidification	Adjust automatically	70	470
Heating	Adjust automatically	70	470
Defrosting	Fixed opening	200	400
Oil return	Fixed opening	150	400
Refrigerant discharge	Fixed opening	150	400

#### 9.4.6 Control of shutdown

##### 1. Initiative shutdown mode (shutdown normally without protection)

When the air conditioner is in cooling or heating mode, the compressor get the shutdown signal, the current frequency of the compressor is more than 55HZ (EE) , the compressor will decrease to 48HZ at the speed of 2HZ/s and shut down directly.

If the current frequency of the compressor is lower than 55HZ, it will shut down directly after it receives the signal. Avoid that the sudden shutdown will cause too strong stress when in high working frequency.

After the compressor stops, the fan motor will execute the left heat blowing and then stops.

Shutdown because of the anti-freeze protection, the compressor will stop as initiative shut down mode/

##### 2. Passive shut down mode (Error protection shut down)

When the system come to the pressure protection, over-current protection, high module temperature protection, high condensation temperature protection and the unit shut down, no matter the frequency of the compressor come to 55HZ, the unit will shut down directly.

#### 9.4.7 Defrosting control in heating mode

In heating mode, condenser heat exchanger defrosting condition is detected by outdoor coil temperature sensor, and defrosting is controlled by outdoor ambient temperature and coil temperature.

##### 1. Defrosting starting condition:

1) After compressor running in heating for continuous 10 minutes (E) and for accumulated 50 minutes (E) , by testing  $T_e$  (defrosting temp sensor) or TC (testing of outdoor exchanger frosting condition) and outdoor ambient temp sensor TA, when it meeting the following condition for continuous 5 minutes, the unit will enter defrosting operation. In case of no defrosting operation caused by imbalanced refrigerant flow (caused by refrigerant lack or other reason) , the unit will enter defrosting when any one of the two conditions are meet.

Entering condition:

$T_e \leq C \times T_A - \alpha$  OR  $T_C \leq C \times T_A - \alpha$  and lasts for 5 minutes

Note: C:

$T_A < 0^\circ\text{C}$ ,  $C=0.8$

$T_A \geq 0^\circ\text{C}$ ,  $C=0.6$

- a. Entering temp. limit of defrosting 1:  $-15^\circ\text{C} \leq C \times T_A - \alpha \leq -2^\circ\text{C}$
- b. Entering temp limit of defrosting 2:  $C \times T_A - \alpha < -15^\circ\text{C}$  &  $T_e \leq -15^\circ\text{C}$  for continuous 5 minutes & accumulated running time reaching 90 minutes.
- c. Defrosting entering limit condition: indoor coil temp lower than 40 degree
- d. Heating mode compressor running accumulated time stop/pause condition:

Detecting stop (end) : shifting from heating to cooling mode

Detecting pause: thermostat OFF, unit off.

2. Defrosting end condition:

After defrosting condition starts, it will last no more than 10 minutes (E) . Using  $T_e$  to test outdoor heat exchanger frosting condition, if it lasts over accumulative 60 seconds of  $7^\circ\text{C}$  (E) or over accumulative 30 seconds of  $12^\circ\text{C}$  (E) or over  $15^\circ\text{C}$  (E) , defrosting will stop.

3. Forced defrosting control

Starting condition of forced defrosting: in heating operation (including standby state) , unit will start forced defrosting after receiving forced defrosting signal by indoor.

Stopping condition of forced defrosting: refer to 7.3

Indoor manual defrosting signal will keep until outdoor enters defrosting.

Note: It can enter manual defrosting when compressor in OFF state, but it needs to follow 3-minute protection rule.

4. Timing defrosting mode condition:

Starting condition: after setting outdoor function dip switch, it will execute timing defrosting in heating mode.

A. If outdoor ambient temp is over 10 degree (E) , even if timing defrosting is set, it will follow the auto defrosting condition, meaning auto entering and auto quitting.

B. When outdoor ambient temp is lower than 10 degree (E) (including 10 degree ) , it will follow the defrosting operation as below:

When compressor runs for continuous 10 minutes (E) and runs for accumulative 50 minutes (E) , it will enter defrosting operation.

C. Timing defrosting operation and quit condition is the same as auto defrosting.

#### 9.4.8 Four way valve control:

1. When powering on, four way valve is in OFF state.
2. In other modes except heating, the four way valve is powered off.
3. In heating mode, when thermostat is off, the four way valve will keep ON, but in heating mode, under the following conditions, four way valve should be OFF.

1) in heating mode, in initial starting time of compressor to ensure the pressure difference ;

1) in defrosting operation:

a, if there is no compressor stopping, power four way valve off;

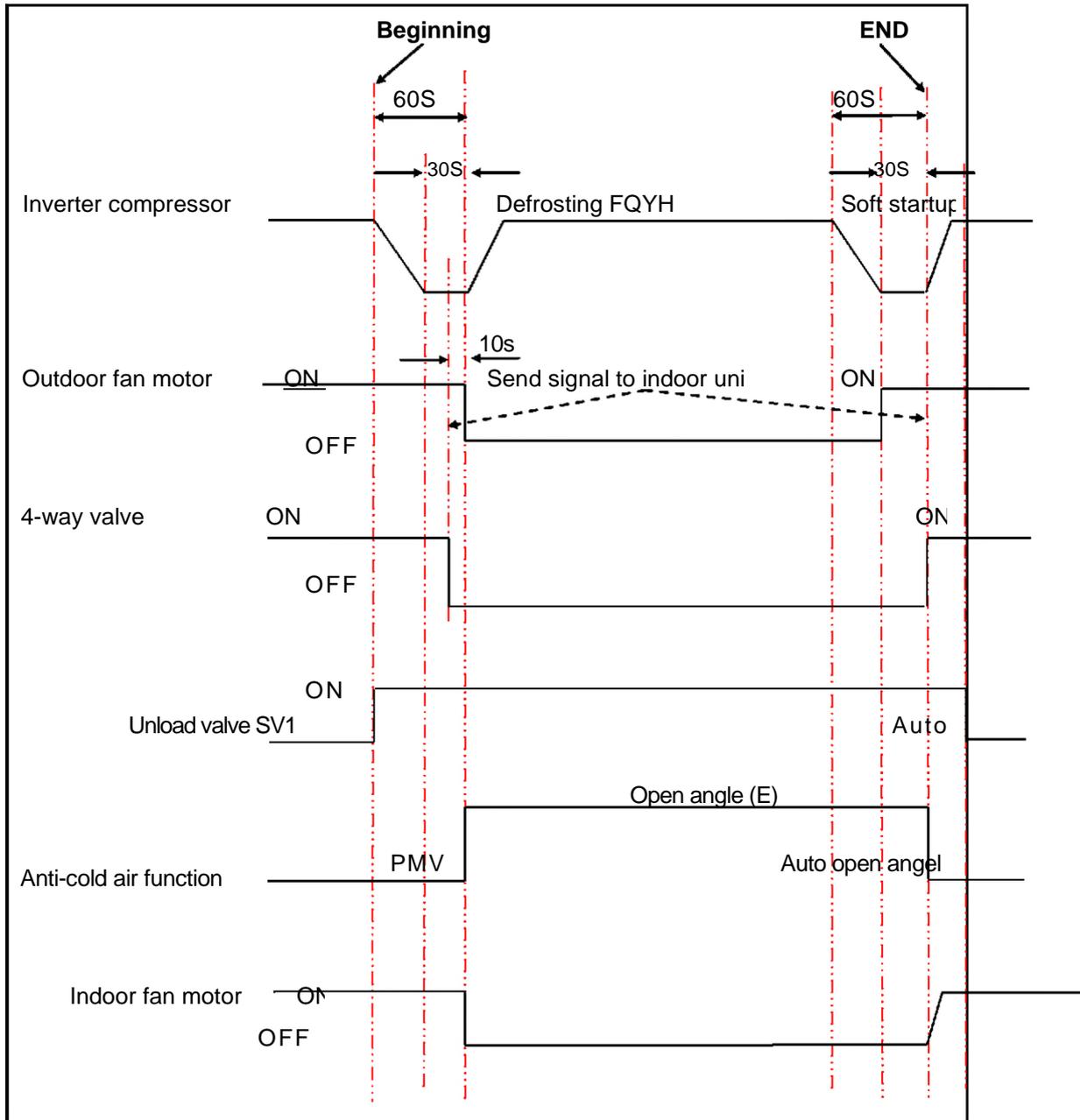
4. When shifting from heating to other modes, four way valve will power off after a while. Besides, four way valve will keep powering on when from other mode changing to heating mode.

5. Protection of fault operation of four way valve.

In heating mode, after continuous running of compressor for 10 minutes, if  $T_m$  (indoor sensor) < indoor ambient temp  $-2^\circ\text{C}$  (E) and  $T_e$  (outdoor sensor)  $> 15^\circ\text{C}$  (E) for continuous 1 minute, four way valve will be powered off, reporting four way valve error. But if start after 3 minutes, and it happens 3 times continuously in 1 hour, it will report four way valve switching error. It will not detect in heating defrosting and within 10 minutes after quitting defrosting; It will not detect in heating oil return and within 10 minutes after quitting oil return;

6. Only in initial starting of compressor of heating mode, outdoor fan motor and four way valve will powering on simultaneously.
7. If compressor frequency is higher than regulated frequency before off, it will lower to required frequency and then stop.
8. Compressor inverter frequency and outdoor fan speed will operate in accordance with other requirement.

Defrosting time sequence is as follows



## 10 . Failure code

### 10.1 4MXC6518G1000AA failure code

LED flash times of indoor PCB		Panel display	Malfunction Description	Possible reasons
LED5	LED1			
0	1	1	Malfunction of indoor unit ambient temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	2	2	Malfunction of indoor unit piping temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	4	4	EEPROM wrong of indoor PCB	EEPROM chip disconnected or broken or wrong programmed or PCB broken
7	0	7	Abnormal communication between indoor and outdoor units	Wrong connection or the wires be disconnected or wrong address setting of indoor unit or faulty power supply or faulty PCB
/			Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken or PCB fault
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected, or DC Fan broken or circuit broken
<p>Note:</p> <ol style="list-style-type: none"> <li>The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED4 flash times represents tens digit, LED3 flash times represents units digit, use the number at tens digit minus 20, then will get the outdoor error code. For example, if the outdoor error code is 15, LED4 will flash 3 times firstly(30-20=10), two seconds later, LED3 will flash 5 times. Four seconds later, the process will repeat again.</li> <li>LED5 is a yellow one on the indoor PCB, LED1 is a green one.</li> <li>To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list</li> </ol>				

## 10.2 4MXC6524G1000AA 4MXC6536G1000AA 4MXC6548G1000AA 4MXC6560G1000AA failure code

LED flash times of indoor PCB		Panel display	Malfunction Description	Possible reasons
LED4	LED1			
0	1	1	Malfunction of indoor unit ambient temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	2	2	Malfunction of indoor unit piping temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	4	4	EEPROM wrong of indoor PCB	EEPROM chip disconnected or broken or wrong programmed or PCB broken
7	7		Abnormal communication between indoor and outdoor units	Wrong connection or the wires be disconnected or wrong address setting of indoor unit or faulty power supply or faulty PCB
0	8	8	Abnormal communication between wired controller and indoor unit, or	Wrong connection or wired controller broken or PCB fault
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected, or DC Fan broken or circuit broken
<p>Note:</p> <p>1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: If the outdoor error code is M(DECIMAL), the indoor unit's display board will show the after converted hexadecimal code of "M+20"(DECIMAL). For example, if the outdoor error code is 2, the indoor unit display board will show the error code 16 (2→2+20=22→change decimal 22 to hexadecimal code, get 16)</p> <p>2.LED4 is a red one on the indoor PCB, LED1 is a yellow one.</p> <p>3.To get much more details about the out door unit failure, please refer to the outdoor unit trouble shooting list.</p>				

### 10.3 4MXD6512G1000AA 4MXD6518G1000AA 4MXD6524G1000AA failure code

LED flash times of indoor PCB		Panel display	Malfunction Description	Possible reasons
LED4	LED3			
0	1	1	Malfunction of indoor unit ambient temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	2	2	Malfunction of indoor unit piping temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	4	4	EEPROM wrong of indoor PCB	EEPROM chip disconnected or broken or wrong programmed or PCB broken
7	0	7	Abnormal communication between indoor and outdoor units	Wrong connection or the wires be disconnected or wrong address setting of indoor unit or faulty power supply or faulty PCB
/			Abnormal communication between	Wrong connection or wired controller broken
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected, or DC Fan broken or circuit broken
<p>Note:</p> <p>1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED4 flash times represents tens digit, LED3 flash times represents units digit, use the number at tens digit minus 20, then will get the outdoor error code. For example, if the outdoor error code is 15, LED4 will flash 3 times firstly (30-20=10), two seconds later, LED3 will flash 5 times. Four seconds later, the process will repeat again.</p> <p>2.LED4 is a yellow one on the indoor PCB,LED3 is a green one.</p> <p>3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.</p>				

## 10.4 4MXD6536G1000AA 4MXD6548G1000AA 4MXD6560G1000AA

LED flash times of indoor PCB		Panel display	Malfunction Description	Possible reasons
LED4	LED3			
0	1	1	Malfunction of indoor unit ambient temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	2	2	Malfunction of indoor unit piping temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	4	4	EEPROM wrong of indoor PCB	EEPROM chip disconnected or broken or wrong programmed or PCB broken
7	0	7	Abnormal communication between indoor and outdoor units	Wrong connection or the wires be disconnected or wrong address setting of indoor unit or faulty power supply or faulty PCB
/			Abnormal communication between	Wrong connection or wired controller broken
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	16	10	Indoor abnormal mode operation	Different from outdoor unit mode
<p>Note:</p> <p>1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED4 flash times represents tens digit, LED3 flash times represents units digit, use the number at tens digit minus 20, then will get the outdoor error code. For example, if the outdoor error code is 15, LED4 will flash 3 times firstly(30-20=10), two seconds later, LED3 will flash 5 times. Four seconds later, the process will repeat again.</p> <p>2.LED4 is a yellow one on the indoor PCB,LED3 is a green one.</p> <p>3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.</p>				

### 10.5 4MXX6518G1000AA 4MXX6524G1000AA 4MXX6536G1000AA 4MXX6548G1000AA 4MXX6560G1000AA failure code

LED flash times of indoor PCB		Malfunction display	Malfunction Description	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconnected or broke or at wrong position or short circuit
0	4	E4	EEPROM wrong of indoor PCB	EEPROM chip disconnected or broken or wrong programmed or PCB broken
0	7	E7	Abnormal communication between indoor and outdoor units	Wrong connection or the wires be disconnected or wrong address setting of indoor unit or faulty power supply or faulty PCB
0	8	E8	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken or PCB fault
0	12	E10	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position or the short circuit bridge disconnected
0	13	C1	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	E14	Indoor abnormal mode operation	DC Fan motor disconnected,or DC Fan broken or circuit broken
<p>Note:</p> <p>1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for ten's place,and LED1 flash times stands for one's place,use this ten-digit number minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.</p> <p>2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.</p> <p>3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.</p>				

## 10.6 4TXK6512G1000AA failure code

LED flash times of outdoor PCB	indoor display	Contents of Malfunction	Diagnosis and Analysis
1	F12	EEPROM ERROR	EEPROM chip damaged or data fault
2	F1	IPM protection	Input over current occurred been detected by PIM hardware
3	F22	AC overcurrent protection	The AC current value exceeds the total current stop value in EE. Error lock if appear 3 times within 30 minutes.
4	F3	Communication fault	Communication failure between outdoor board and module
5	F20	Press overload	Send from the module.
6	F19	Overvoltage or undervoltage protection	The voltage of P/N exceed or below the EE voltage limit of the module board.
7	F27	Press blocked/stoped	Send from the module, 3 times within 30 minutes send to indoor board
8	F4	Discharging temp. sensor Td abnormal	After the press is started for 10 minutes, the Td temp. exceed the temp. in EE. 3 times within 30 minutes send to indoor board.
9	F8	DC fan motor fault	Error status confirm and lock if occurs 3 times within 30 minutes
10	F21	Te resistance fault	Start up and test immediately
11	F7	Ts resistance fault	Start up and test immediately
12	F6	Ta resistance fault	Start up and test immediately
13	F25	Td resistance fault	After starting up 10 minutes to test, 3 times within 30 minutes send to indoor board.
14	F30	The press suction <a href="#">tpmp.is</a> too high	After starting up 10 minutes to test, for 5 minutes, the Ts temp. was detected to be over 40°C then shut down compressor send to indoor board. Starting again in three minutes.
15	E7	Communication fault	Communication failure between indoor unit and outdoor unit
16	F13	Lack of refrigerant	The compressor runs continuously for more than 5 minutes and the current value of outdoor unit is 0.6A-1.6A. Meet the cool/ heat conditions, flashing outdoor lights.
17	F14	Four-way valve fault	Check the indoor unit coil temp., after the heating compressor starts up 10 minutes, Tc ≤ 0°C last on one minute, then stop the compressor. Defrosting and defrosting exit will not be detected within 5 minutes

LED flash times of outdoor PCB	indoor display	Contents of Malfunction	Diagnosis and Analysis
18	F11	Compressor out of step	From the module board
19	F28	Position detection ioop fault	From the module board,Appear 3 times in 10 minutes and confirm
21	E9	Indoor overload shutdown	Compressor start up 2 minutes after the start of testing.If $T_c \geq 63^\circ\text{C}$ last on 5 minutes the compressor stop.When the compressor stops for more than 5 minutes and $T_c < 39^\circ\text{C}$ the compressor resumes
21	E5	Indoor anti-frost stop	Compressor start up 2 minutes after the start of testing.If $T_c \leq 1^\circ\text{C}$ last on 2 minutes the compressor stop.When the compressor stops for more than 3 minutes and $T_c > 9^\circ\text{C}$ the compressor resumes.
23	F5	Module temperature is too high( $95^\circ\text{C}$ )	Module temperature is too high for protection.
24	F2	Compressor software over current	From the module board.1.35 times the total current.
25	F23	Phase current over current	If the phase current of the compressor is greater than the phase current stop value in EE of the outdoor unit during runing,then compressor stop. After 3 minutes compressor restart.
27	F24	CT of bolt	When the total current of the compressor is detected to be less than 0.5A and the compressor frequency is greater than 50Hz, the duration is one minute. Then force the compressor to stop for 3 minutes,no fault confirmed
37	F34	Outdoor condenser temp. too high protection	Error lock if it occurs 3 times in 30 minutes
38	F35	Module unknown fault	
43	F41	High pressure protection	System high pressure protection
45	F42	Low pressure protection	System low pressure protection
46	F43	Type matching exception	Indoor unit and outdoor unit do not match

## 10.7 4TXK6518G1000AA failure code

LED flash times of outdoor PCB	Indoor display	Contents of Malfunction	Diagnosis and Analysis
1	F1	EEPROM fault	EEPROM chip damaged or data fault
2	F2	IPM protection	Input overcurrent occurred been detected by PIM hardware
4	F4	Communication between main board and power module	Communication fail over 4 min
5	F5	High pressure protection	System high pressure over 4.15Mpa
6	F6	Power module over/lack-voltage protection	Send from power module
8	F8	Compressor Td temp. protection	Compressor Td temp. over 110°C
9	F9	DC fan motor fault	Jam of DC motor or motor fault
10	F10	Abnormal of coil sensor	Coil sensor short-circuit or open-circuit
11	F11	Suction temperature sensor failure	Suction temperature sensor short-circuit or open-circuit or the compressor connection is poor
12	F12	Outdoor ambient sensor fault	Outdoor ambient sensor short-circuit or open-circuit
13	F13	Compressor Td sensor fault	Compressor Td sensor short-circuit or open-circuit
15	F15	Communication between indoor and outdoor unit	Communication fail over 4min
16	F16	Lack of refrigerant	Check if there is leakage in the unit
17	F17	4-way valve reverse failure	Alarm and stop if detect Td-Tci≤15 last for 1 min after compressor has started for 10 min in heating mode, confirm the failure if it appears 3 times in one hour.
18	F18	Compressor jam	Compressor jammed internally
19	F19	Power module PWM select circuit fault	Power module PWM selects wrong circuit
25	F25	Compressor U-phase over-current	The current of compressor U-phase is too high
25	F25	Compressor V-phase over-current	The current of compressor V-phase is too high
25	F25	Compressor W-phase over-current	The current of compressor W-phase is too high

## 10.8 4TXK6524G1000AA failure code

LED flash times of outdoor PCB	Indoor display	Contents of Malfunction	Diagnosis and Analysis
15	E7	Communication fault	Communication fault between indoor and outdoor units
--	E1	Sensor fault	Room temperature sensor fault
--	E2	Sensor fault	Heat-exchange sensor fault
--	E4	EEPROM ERROR	Indoor EEPROM error
--	E14	Fan motor fault	Indoor fan motor malfunction
1	F12	EEPROM ERROR	Outdoor EEPROM error
2	F1	IPM protection	The protection of IPM
3	F22	Overcurrent fault	Overcurrent protection of AC electricity for the outdoor model
4	F3	Communication fault	Communication fault between the IPM and outdoor PCB
6	F19	Power fault	Power voltage is too high or low
8	F4	High Td temperature	Overheat protection for discharge temperature
9	F8	DC fan motor fault	Outdoor DC fan motor fault
10	F21	Te fault	Defrost temperature sensor fault
11	F7	Ts fault	Suction temperature sensor fault
12	F6	Tao fault	Ambient temperature sensor fault
13	F25	Td fault	Discharge temperature sensor fault
18	F11	Compressor fault	Compressor abnormal running
19	F28	Detection loop fault	Loop of the station detect error
24	F2	Overcurrent protection	Overcurrent of the compressor
25	F23	Overcurrent protection	Overcurrent protection for one phase of the compressor

## 10.9 4TXK6536G1000AA 4TXK6548G1000AA 4TXK6560G1000AA failure code

Error code	Indoor display	Malfunction Description	Diagnosis and Analysis
01	F1	EEPROM fault	EEPROM chip damaged or data wrong or related circuit damaged
02	F2	PIM (power intelligent module) hardware over current	Input over current occurred been detected by PIM's hardware
03	F3	Compressor over current during deceleration	Over current occurred during compressor deceleration period
04	F4	Communication abnormal between control board and compressor driver module	Control board can not communicating with compressor driver module over 4 minutes
05	F5	Compressor overcurrent detected by control board	Compressor over current been detected by control board
06	F6	DC voltage or AC voltage high	AC power supply of the driver module get voltage over 280VAC or driver module get high DC-BUS voltage over 390VDC
07	F7	Compressor current sampling circuit fault	The driver module's Compressor current sampling circuit damaged
08	F8	Discharge temperature too high protection	Compressor discharge temperature over 115°C,error clear within 3 minutes if temperature goes down and lower than 115°C. Error status lock if it occurs 3 times in 1 hour.
09	F9	DC fan motor fault	DC fan motor damage or not connected or related circuit broken. Error status confirm and lock if occurs 3 times within 30 minutes
10	F10	Outdoor defrosting temp. sensor Te abnormal	Sensor temperature been detected below -55°C or higher than 90 °C
11	F11	Suction temp.sensor Ts abnormal	or been detected as short circuit or open circuit.
12	F12	Outdoor ambient temp. sensor Ta abnormal	Sensor temperature been detected below -40°C or higher than 90 °C or been detected short circuit or open circuit
13	F13	Discharging temp. sensor Td abnormal	Sensor temperature been detected below -40°C or higher than 150 °C or been detected short circuit or open circuit .
14	F14	PFC circuit loop high voltage	Overvoltage been detected in driver module's power factor correction circuit loop.
15	F15	Communication abnormal between indoor unit and outdoor unit	Outdoor unit control board can not communicating with indoor unit control board over 4 minutes
16	F16	Lack of refrigerant or discharging pipe blocked	Discharge & suction temperature $T_d - T_s \geq 80^\circ\text{C}$ after compressor started 10 minutes. Error status lock if it occurs 3 times in 1 hour.
17	F17	4-way valve converse abnormal	Indoor pipe & indoor ambient temperature $T_m - T_{ai} \geq -2^\circ\text{C}$ after compress-or started 10 minutes. Error status lock if it occurs 3 times in 1 hour.
18	F18	Compressor motor desynchronizing	Rotor desynchronizing occurred ,caused by overload or load sharply fluctuating or compressor current sensor circuit abnormal or one of the inverter's gate drive signal missing

Error code	Indoor display	Malfunction Description	Diagnosis and Analysis
19	F19	DC voltage or AC voltage low	AC power supply of the driver module get voltage lower than 155VAC (1phase)or driver module get high DC-BUS voltage lower than 180VDC
20	F20	Indoor pipe temperature too high protection	Indoor pipe temperature T <sub>m</sub> over 63°C, error clear within 3 minutes. if temperature goes down and lower than 52°C.
21	F21	Indoor pipe temperature sensor too low protection	Indoor pipe temperature too low, outdoor unit stop to prevent indoor heat exchange system icing and to prevent the indoor unit outlet air too low at the same time.
22	F22	PFC circuit loop overcurrent	Overcurrent been detected in power factor correction circuit loop.
23	F23	Temperature too high for compressor driver module	Compressor driver module's PIM temperature over 90°C, Error stat-us lock if it occurs 3 times in 1 hour.
24	F24	Compressor start failure	Compressor start failure been detected by driver driver module or wrong compressor wiring
25	F25	Input overcurrent of the drive module	Input current of the compressor drive module higher than EEPROM setting(details refer to service manual) Lock if occurs 3 times in 1 hour
26	F26	Lack phase of the drive module	Lack phase of the drive module's power supply (three phase type)
27	F27	Input current sampling circuit fault	The driver module's input current sampling circuit damaged
28	F28	No wiring of the compressor	No wiring between compressor and it's driver module
37	F37	Compressor overcurrent detected by compressor driver module	Compressor phase U or V or W over current detected by compressor driver module (details refer to service manual)
38	F38	Drive module's ambient temp. sensor abnormal	The temperature detected is not within the range of -25°C to 150 °C
39	F39	Mid-condenser temp. sensor TC abnormal	The temperature detected is not within the range of -55°C to 90 °C
44	F44	Outdoor condenser temperatureTC too high protection	The maximum temperature value of T <sub>c</sub> and T <sub>e</sub> is over 65 °C, Error lock if it occurs 3 times in 30 minutes
45	F45	System low pressure protection	The minimum temperature value of indoor pipe T <sub>m</sub> and outdoor T <sub>s</sub> is lower than-45 °C at cooling mode or minimum temperature value of outdoor T <sub>c</sub> and outdoor T <sub>e</sub> is lower than-45 °C at heating mode
<p>1. 4TXK6536G1000AA: The outdoor control board's LED1 and LED2 indicates the outdoor error code. for example,the error code 12, LED1 will flashing 1 and LED2 will flashing 2,alternating flashing.</p> <p>4TXK6548G1000AA.4TXK6560G1000AA: The outdoor control board's LED3 indicates the outdoor error code. for example,the error code 12, LED3 will display 12 and keep flashing.</p> <p>2.NO-resumable means error will not clear unless:a. clean out the fault factor b. Cut the power supply off and re-offer again after point a achieved.</p> <p>3. The indoor unit can also indictes the outdoor malfuction code too. Please refer to indoor unit manul or indoor trouble shooting to get the method .</p>			

## 11 . Sensor code and B&R value

Model	Ambient temp.sensor		Coil temp.sensor	
	Part code	B&R value	Part code	B&R value
4MXD6512G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXD6518G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXD6524G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXD6536G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXD6548G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXD6560G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXX6518G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXX6524G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXX6536G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXX6548G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%"
4MXX6560G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	"R25=10K0±3% B25/50=3700K±3%
4MXC6518G1000AA	001A3900159	R25=23K0±3% B25/50=4200K±3%	001A3900006	R25=10K0±3% B25/50=3700K±3%
4MXC6524G1000AA	0150402268	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXC6536G1000AA	0150402268	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXC6548G1000AA	0150402268	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%
4MXC6560G1000AA	0150402268	R25=23K0±3% B25/50=4200K±3%	0010401922	R25=10K0±3% B25/50=3700K±3%

Model	Coil temp.sensor		Defrost temp.sensor	
	Part code	B&R value	Part code	B&R value
4TXK6512G1000AA	001A3900056	R25=10KΩ±3% B25/50=3700K±3%	001A3900055	R25=10KΩ±3% B25/50=3700K±3%
4TXK6518G1000AA	0010401830E	R25=10KΩ±3% B25/50=3700K±3%	0010401830E	R25=10KΩ±3% B25/50=3700K±3%
4TXK6524G1000AA	001A3900056	R25=10KΩ±3% B25/50=3700K±3%	001A3900055	R25=10KΩ±3% B25/50=3700K±3%

Model	Ambient temp.sensor		Coil temp.sensor	
	Part code	B&R value	Part code	B&R value
4TXK6536G1000AA 001045019		R25=10KΩ±3% B25/50=3700K±3%	0010451329	R25=10KΩ±3% B25/50=3700K±3%
4TXK6548G1000AA 001045019		R25=10KΩ±3% B25/50=3700K±3%	0010451329	R25=10KΩ±3% B25/50=3700K±3%
4TXK6560G1000AA 001045019		"R25=10KΩ±3% B25/50=3700K±3%"	0010451329	"R25=10KΩ±3% B25/50=3700K±3%"

Model	Suction temp.sensor		Defrost temp.sensor	
	Part code	B&R value	Part code	B&R value
4TXK6536G1000AA	0010451307	R25=10KΩ±3% B25/50=3700K±3%	0010450194	R25=10KΩ±3% B25/50=3700K±3%
4TXK6548G1000AA	0010451307	R25=10KΩ±3% B25/50=3700K±3%	0010450194	R25=10KΩ±3% B25/50=3700K±3%
4TXK6560G1000AA	0010451307	R25=10KΩ±3% B25/50=3700K±3%	0010450194	R25=10KΩ±3% B25/50=3700K±3%

Model	Discharging temp.sensor	
	Part code	B&R value
4TXK6536G1000AA	0010451303	R80=50KΩ±3% B25/50=4450K±3%
4TXK6548G1000AA	0010451303	R80=50KΩ±3% B25/50=4450K±3%
4TXK6560G1000AA	0010451303	R80=50KΩ±3% B25/50=4450K±3%



