TM_GP(GA)_R32_3D INV_EU_NB1_2509

KIZURA

TECHNICAL MANUAL

GLORY PRO R32 3D INVERTER CONTROL

INDOOR UNIT

KIZ-PR-09HDI-I
KIZ-PR-12HDI-I
KIZ-PR-18HDI-I
KIZ-PR-24HDI-I

OUTDOOR UNIT

KIZ-PR-09HDI-O
KIZ-PR-12HDI-O
KIZ-PR-18HDI-O
KIZ-PR-24HDI-O

KI
ZU
RA

Table of Contents

1. Specifications
   - 1.1 Technical Specifications
   - 1.2 Electrical Characteristics
2. Capacity Tables
   - 2.1 Cooling
   - 2.2 Heating
3. Capacity Correction Factor for Height Difference
4. Dimensional Drawings & Centre of gravity
   - 4.1 Dimensional Drawings
   - 4.2 Centre of gravity
5. Electrical Wiring Diagrams
   - 5.1 Indoor unit
   - 5.2 Outdoor Unit
6. Refrigerant Cycle Diagrams
7. Noise Criterion Curves
   - 7.1 Indoor Unit
   - 7.2 Outdoor Unit
8. Air Velocity and Temperature Distributions

1. Specifications

1.1 Technical Specifications

Model			KIZ-PR-09HDI-I
Power supply		V- Ph-Hz	220-240-1-50
Rated Power Input		W	2200
Rated Current		A	10
Compressor	Model		KSN98D13UEZ32
	Type		ROTARY
	Brand		GMCC
	Capacity	W	1915/3050
	Input	W	310/800
	Rated current(RLA)	A	2.35/4.95
	Locked rotor Amp(LRA)	A	/
	Thermal protector		/
	Thermal protector position		/
	Capacitor	uF	/
	Refrigerant oil/oil charge	ml	POE VG74 280
Indoor fan motor	Model		ZKFP-31-8-1L
	Input	W	48.6
	Output	W	31
	Insulation class		B
	Waterproofing class		IP20
	Capacitor	uF	/
	Speed(Hi/Mi/Lo)	r/min	1150/990/910
Indoor coil	Number of rows		1
	Tube pitch(a)x row pitch(b)	mm	18x17.3
	Fin spacing	mm	1.3
	Fin type (code)		Hydrophilic aluminium
	Tube outside dia.and type	mm	Φ5,inner groove tube
	Coil length x height x width	mm	530x72x17.3+530x108x17.3+530x108x17.3
	Number of circuits		2
Indoor side air flow(Si/Lo/Mi/Hi/SH)		m3/h	140/300/380/510/580
Indoor noise level (Turbo/Hi/Mi/Lo/Si)		dB(A)	46/38/33/24/19
Indoor sound power level		dB(A)	54
Indoor unit	Dimension(W*D*H)	mm	723x199x286
	Packing (W*D*H)	mm	780x270x365
	Net/Gross weight	kg	7.0/9.2
Outdoor fan motor	Model		ZKFN-25-10-6L
	Input	W	55.5
	Output	W	25
	Insulation class		B
	Waterproofing class		IP24
	Capacitor	uF	/
	Speed	r/min	800/700/600

Outdoor coil	Number of rows		1
	Tube pitch(a)x row pitch(b)	mm	18x17.3
	Fin spacing	mm	1.3
	Fin type (code)		Hydrophilic aluminum
	Tube outside dia.and type	mm	Φ5,inner groove tube
	Coil length x height x width	mm	695x468x17.3
	Number of circuits		3
Outdoor air flow		m3/h	1750
Outdoor sound pressure level		dB(A)	54.5
Outdoor sound power level		dB(A)	62
Outdoor unit	Dimension(W*D*H)	mm	720x270x495
	Packing (W*D*H)	mm	835x300x540
	Net/Gross weight	kg	20.4/22.3
Refrigerant	Type		R32
	GWP		675
	Charged quantity	kg	0.46
Design pressure		MPa	4.3/1.7
Refrigerant piping	Liquid side/ Gas side	mm (inch)	Φ6.35/Φ9.52(1/4"/3/8")
	Max. refrigerant pipe length	m	25
	Max. difference in level	m	10
Connection wiring			5x1.5
Plug type			3x1.5 / no-plug
Thermostat type			Remote Control
Operation temperature			16-32
Ambient temperature	Indoor(cooling/ heating)	°C	16~32/0~30
	Outdoor(cooling/heating)	°C	-15~50/-20~24
Qty'per 20' /40' /40'HQ			140/290/320

Notes:

1) Capacities are based on the following conditions:

Cooling(T1): - Indoor Temperature 27°C(80.6°F) DB /19 °C(66.2°F) WB
-Outdoor Temperature 35 °C(95°F) DB /24 °C(75.2°F) WB
-Interconnecting Piping Length 5m
- Level Difference of Zero.

Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
-Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
- Interconnecting Piping Length 5 m
- Level Difference of Zero.

2) Capacities are Net Capacities.

3) Due to our policy of innovation some specifications may be changed without notification.

Model		KIZ-PR-12HDI-I
Power supply		220-240~1~50
Rated Power Input		2200
Rated Current		10
Compressor	Model	KSN98D13UEZ32
	Type	ROTARY
	Brand	GMCC
	Capacity	1915/3 050
	Input	310/800
	Rated current(RLA)	2.35/4.95
	Locked rotor Amp(LRA)	/
	Thermal protector	/
	Thermal protector position	/
	Capacitor	/
	Refrigerant oil/oil charge	POE VG74 280
Indoor fan motor	Model	ZKFN-25-10-6L
	Input	48.6
	Output	25
	Insulation class	B
	Waterproofing class	IP20
	Capacitor	/
	Speed(Hi/Mi/Lo)	1020/890/820
Indoor coil	Number of rows	1
	Tube pitch(a)x row pitch(b)	18x17.3
	Fin spacing	1.3
	Fin type (code)	Hydrophilic aluminium
	Tube outside dia.and type	Φ7,inner groove tube
	Coil length x height x width	620x72x17.3+620x108x23.2+620x108x17.3
	Number of circuits	2
Indoor side air flow(Si/Lo/Mi/Hi/SH)		190/340/420/590/740
Indoor noise level (Turbo/Hi/Mi/Lo/Si)		46/39.5/32.5/21.5
Indoor sound power level		56
Indoor unit	Dimension(W*D*H)	813x201x289
	Packing (W*D*H)	870x270x365
	Net/Gross weight	7.4/9.7
Outdoor fan motor	Model	ZKFN-25-10-6L
	Input	55.5
	Output	25
	Insulation class	B
	Waterproofing class	IP24
	Capacitor	/
	Speed	810/700/600

Outdoor coil	Number of rows		1
	Tube pitch(a)x row pitch(b)	mm	18x17.3
	Fin spacing	mm	1.3
	Fin type (code)		Hydrophilic aluminum
	Tube outside dia.and type	mm	Φ5,inner groove tube
	Coil length x height x width	mm	695x468x17.3
	Number of circuits		3
Outdoor air flow		m3/h	1750
Outdoor sound pressure level		dB(A)	56
Outdoor sound power level		dB(A)	62.5
Outdoor unit	Dimension(W*D*H)	mm	720x270x495
	Packing (W*D*H)	mm	835x300x540
	Net/Gross weight	kg	20.4/22.3
Refrigerant	Type		R32
	GWP		675
	Charged quantity	kg	0.49
Design pressure		MPa	4.3/1.7
Refrigerant piping	Liquid side/ Gas side	mm (inch)	Φ6.35/Φ9.52(1/4"/3/8")
	Max. refrigerant pipe length	m	25
	Max. difference in level	m	10
Connection wiring			5x2.5
Plug type			3x1.5 / no-plug
Thermostat type			Remote Control
Operation temperature			16-32
Ambient temperature	Indoor(cooling/ heating)	°C	16~32/0~30
	Outdoor(cooling/heating)	°C	-15~50/-20~24
Qty'per 20' /40' /40'HQ			130/275/310

Notes:

1) Capacities are based on the following conditions:

Cooling(T1): - Indoor Temperature 27°C(80.6°F) DB /19 °C(66.2°F) WB
-Outdoor Temperature 35 °C(95°F) DB /24 °C(75.2°F) WB
-Interconnecting Piping Length 5m
- Level Difference of Zero.

Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
-Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
- Interconnecting Piping Length 5 m
- Level Difference of Zero.

2) Capacities are Net Capacities.

3) Due to our policy of innovation some specifications may be changed without notification.

Model			KIZ-PR-18HDI-I	KIZ- PR-24HDI-I
Power supply		V- Ph-Hz	220-240-1-50	220-240-1-50
Rated Power Input		W	2,800	3,900
Rated Current		A	13	19
Compressor	Model		KSN140D33UFZB3	KTM29000D27UKT3
	Type		ROTARY	TWIN-ROTARY
	Brand		GMCC	GMCC
	Capacity	W	2690/4350	4505/7270
	Input	W	434/1127	767/1980
	Rated current(RLA)	A	3.18/6.9	4.15/9.15
	Locked rotor Amp(LRA)	A	/	/
	Thermal protector		/	/
	Thermal protector position		NA	NA
	Capacitor	uF	/	/
	Refrigerant oil/oil charge	ml	ESTER OIL VG74 440	POE VG74 500
Indoor fan motor	Model		ZKFP-35-10-188L	ZKFP-58-8-26L
	Input	W	55	88
	Output	W	35	58
	Insulation class		B	B
	Waterproofing class		IP20	IP20
	Capacitor	uF	/	/
	Speed(Hi/Mi/Lo)	r/min	1000/868/802	1050/910/840
Indoor coil	Number of rows		2	2
	Tube pitch(a)x row pitch(b)	mm	19.5x11.6	19.5x11.6
	Fin spacing	mm	1.3	1.3
	Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	Tube outside dia.and type	mm	Φ5,inner groove tube	Φ5,inner groove tube
	Coil length x height x width	mm	770x195x23.2+770x117x23.2	820x214.5x23.2+820x117x23.2
	Number of circuits		4	6
Indoor Indoor side air flow(Si/Lo/Mi/Hi/SH)		m3/h	315/462/568/850/-	-/606/752/1039/-
Indoor noise level (Turbo/Hi/Mi/Lo/Si)		dB(A)	48/43/36/34/20	51/45/40/36/20
Indoor sound power level		dB(A)	58	60
Indoor unit	Dimension(W*D*H)	mm	975×218×308	1055×231×330
	Packing (W*D*H)	mm	1035×295×385	1130×405×310
	Net/Gross weight	kg	10.3/13.3	12.4/15.9
Outdoor fan motor	Model		ZKFN-34-10-1L-1	ZKFN-80-10-1L
	Input	W	54.5	99.28
	Output	W	34	80
	Insulation class		B	B
	Waterproofing class		IP24	IP24
	Capacitor	uF	/	/
	Speed	r/min	830/700/650	900/550

Outdoor coil	Number of rows		2.0	1.6
	Tube pitch(a)x row pitch(b)	mm	18x17.3	18x17.3
	Fin spacing	mm	1.3	1.3
	Fin type (code)		Hydrophilic aluminum	Hydrophilic aluminum
	Tube outside dia.and type	mm	Φ5,inner groove tube	Φ5,inner groove tube
	Coil length x height x width	mm	870x504x34.6	900*612*17.3+540*612*17.3
	Number of circuits		8	8
Outdoor air flow		m3/h	2100	3500
Outdoor sound pressure level		dB(A)	57.5	60.0
Outdoor sound power level		dB(A)	65.0	68.0
Outdoor unit	Dimension(W*D*H)	mm	805×330×554	890×342×673
	Packing (W*D*H)	mm	915×370×615	995×398×740
	Net/Gross weight	kg	30.3/32.8	38.3/41.5
Refrigerant	Type		R32	R32
	GWP		675	675
	Charged quantity	kg	0.8	0.95
Design pressure		MPa	4.3/1.7	4.3/1.7
Refrigerant piping	Liquid side/ Gas side	mm (inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ6.35/Φ12.7(1/4"/1/2")
	Max. refrigerant pipe length	m	30	50
	Max. difference in level	m	20	25
Connection wiring			5x1.5	5x2.5
Plug type			3x1.5 / no-plug	3x2.5 / no-plug
Thermostat type			Remote Control	Remote Control
Operation temperature			16-32	16-32
Ambient temperature	Indoor(cooling/ heating)	°C	16~32/0~30	16~32/0~30
	Outdoor(cooling/heating)	°C	-15~50/-20~24	-15~50/-20~24
Qty'per 20' /40' /40'HQ			86/182/208	65/130/150

Notes:

1) Capacities are based on the following conditions:

Cooling(T1): - Indoor Temperature 27°C(80.6°F) DB /19 °C(66.2°F) WB
-Outdoor Temperature 35 °C(95°F) DB /24 °C(75.2°F) WB
-Interconnecting Piping Length 5m
- Level Difference of Zero.

Heating: - Indoor Temperature 20°C(68°F) DB / 15°C(59°F) WB
-Outdoor Temperature 7°C(44.6°F) DB / 6°C(42.8°F) WB
- Interconnecting Piping Length 5 m
- Level Difference of Zero.

2) Capacities are Net Capacities.

3) Due to our policy of innovation some specifications may be changed without notification.

1.2 Electrical Characteristics

Model	Outdoor Unit			Power Supply			IFM		Compressor		OFM		
	Phase	Hz	Voltage	MCA	MOP	MFA	W	FLA	MSC	RLA	Qty	W	FLA
KIZ-PR-09HDI-O	1	50	220-240 Min:198 Max:264	7.08	12.03	15	31	0.218	/	4.95	1	25	0.674
KIZ-PR-12HDI-O				7.08	12.03	15	31	0.218	/	4.95	1	25	0.674
KIZ-PR-18HDI-O				9.67	16.57	20	35	0.31	/	6.9	1	34	0.73
KIZ-PR-24HDI-O				12.73	21.88	25	58	0.52	/	9.15	1	80	0.852

Notes:

MCA: Minimum Circuit Amperes (A)

MOP: Maximum rating over current protective device

MFA: Maximum Fuse Amperes (A)

MSC: Maximum Starting Current

RLA: Rated Load Amperes (A)

IFM: Indoor Fan Motor

OFM: Outdoor Fan Motor

FLA: Full Load Amperes (A)

2. Capacity Tables

2.1 Cooling

KIZ-PR-09HDI-I + KIZ-PR-09HDI-O																		
INDOOR AIRFLOW (CMH)	OUTDOOR DB(℃)	ID WB (℃)	16.0				18.0				19.0				22.0			
		ID DB (℃)	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0
510	-15	TC	2.86	2.86	2.86	2.87	3.03	3.03	3.04	3.04	3.21	3.22	3.22	3.22	3.40	3.41	3.41	3.42
		S/T	0.63	0.74	0.84	0.96	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81
		PI	0.44	0.44	0.44	0.44	0.46	0.46	0.46	0.47	0.49	0.49	0.49	0.49	0.52	0.52	0.52	0.52
	-10	TC	2.70	2.70	2.70	2.71	2.86	2.86	2.87	2.87	3.03	3.04	3.04	3.04	3.21	3.22	3.22	3.23
		S/T	0.62	0.73	0.83	0.94	0.59	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79
		PI	0.42	0.42	0.42	0.42	0.45	0.45	0.45	0.45	0.47	0.47	0.48	0.48	0.50	0.50	0.50	0.50
	-5	TC	2.64	2.64	2.64	2.65	2.79	2.80	2.80	2.80	2.96	2.97	2.97	2.97	3.14	3.14	3.15	3.15
		S/T	0.61	0.72	0.81	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78
		PI	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.48	0.48	0.48	0.48
	0	TC	2.62	2.63	2.63	2.63	2.78	2.78	2.79	2.79	2.95	2.95	2.95	2.96	3.12	3.13	3.13	3.14
		S/T	0.60	0.71	0.80	0.91	0.57	0.67	0.76	0.86	0.54	0.63	0.71	0.81	0.50	0.59	0.67	0.77
		PI	0.38	0.38	0.38	0.38	0.40	0.41	0.41	0.41	0.43	0.43	0.43	0.43	0.45	0.46	0.46	0.46
	5	TC	2.47	2.48	2.48	2.48	2.62	2.62	2.63	2.63	2.78	2.78	2.78	2.79	2.95	2.95	2.95	2.96
		S/T	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.73	0.83	0.51	0.60	0.69	0.78
		PI	0.35	0.35	0.35	0.35	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.39	0.42	0.42	0.42	0.42
	10	TC	2.32	2.32	2.32	2.33	2.46	2.46	2.46	2.47	2.60	2.61	2.61	2.61	2.76	2.76	2.77	2.77
		S/T	0.62	0.73	0.82	0.94	0.58	0.68	0.78	0.89	0.55	0.65	0.73	0.84	0.52	0.61	0.69	0.79
		PI	0.34	0.34	0.34	0.34	0.36	0.36	0.36	0.36	0.38	0.38	0.38	0.38	0.40	0.40	0.40	0.40
	15	TC	2.29	2.29	2.30	2.30	2.43	2.43	2.43	2.44	2.57	2.58	2.58	2.58	2.73	2.73	2.73	2.74
		S/T	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81	0.50	0.59	0.67	0.76
		PI	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.39	0.41	0.41	0.41	0.42	0.44	0.44	0.44	0.44
	20	TC	2.26	2.27	2.27	2.27	2.40	2.40	2.40	2.41	2.54	2.55	2.55	2.55	2.70	2.70	2.70	2.71
		S/T	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78	0.48	0.57	0.65	0.74
		PI	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.48	0.48	0.48	0.48
	25	TC	2.24	2.24	2.24	2.24	2.37	2.37	2.38	2.38	2.51	2.51	2.52	2.52	2.66	2.67	2.67	2.67
		S/T	0.55	0.65	0.74	0.84	0.52	0.61	0.70	0.80	0.49	0.58	0.66	0.75	0.47	0.55	0.62	0.71
		PI	0.44	0.44	0.44	0.44	0.46	0.46	0.46	0.46	0.49	0.49	0.49	0.49	0.52	0.52	0.52	0.52
	30	TC	2.26	2.26	2.26	2.27	2.39	2.40	2.40	2.40	2.54	2.54	2.54	2.55	2.69	2.69	2.70	2.70
		S/T	0.58	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79	0.49	0.58	0.65	0.75
		PI	0.56	0.56	0.56	0.56	0.59	0.59	0.59	0.59	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67
	35	TC	2.31	2.31	2.31	2.32	2.45	2.45	2.45	2.46	2.59	2.60	**2.60**	2.60	2.75	2.75	2.76	2.76
		S/T	0.64	0.75	0.85	0.97	0.60	0.71	0.81	0.92	0.57	0.67	**0.76**	0.87	0.54	0.63	0.72	0.82
		PI	0.73	0.73	0.73	0.73	0.77	0.77	0.77	0.77	0.82	0.82	**0.82**	0.82	0.87	0.87	0.87	0.87
	40	TC	2.00	2.00	2.01	2.01	2.12	2.12	2.13	2.13	2.25	2.25	2.25	2.26	2.38	2.39	2.39	2.39
		S/T	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88
		PI	0.65	0.65	0.65	0.65	0.69	0.69	0.69	0.69	0.73	0.73	0.73	0.73	0.77	0.77	0.77	0.77
	45	TC	1.55	1.55	1.55	1.55	1.64	1.64	1.64	1.65	1.74	1.74	1.74	1.75	1.84	1.85	1.85	1.85
		S/T	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.77	0.87	0.99	0.62	0.72	0.82	0.94
		PI	0.53	0.53	0.53	0.53	0.56	0.56	0.56	0.57	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.64
	50	TC	0.88	0.88	0.88	0.88	0.93	0.93	0.93	0.93	0.98	0.98	0.99	0.99	1.04	1.04	1.04	1.05
		S/T	0.75	0.88	1.00	1.00	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99
		PI	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.39	0.41	0.41	0.41	0.41	0.43	0.44	0.44	0.44

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZURA

KIZ-PR-12HDI-I + KIZ-PR-12HDI-O																		
INDOOR AIRFLOW (CMH)	OUTDOOR DB(℃)	ID WB (℃)	16.0				18.0				19.0				22.0			
		ID DB (℃)	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0
590	-15	TC	3.85	3.85	3.86	3.86	4.08	4.08	4.09	4.09	4.32	4.33	4.33	4.34	4.58	4.59	4.59	4.60
		S/T	0.63	0.74	0.84	0.96	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81
		PI	0.72	0.72	0.72	0.72	0.76	0.76	0.77	0.77	0.81	0.81	0.81	0.81	0.86	0.86	0.86	0.86
	-10	TC	3.63	3.64	3.64	3.65	3.85	3.86	3.86	3.86	4.08	4.09	4.09	4.10	4.33	4.33	4.34	4.34
		S/T	0.62	0.73	0.83	0.94	0.59	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79
		PI	0.69	0.70	0.70	0.70	0.74	0.74	0.74	0.74	0.78	0.78	0.78	0.78	0.83	0.83	0.83	0.83
	-5	TC	3.55	3.55	3.56	3.56	3.76	3.77	3.77	3.78	3.99	3.99	4.00	4.00	4.23	4.23	4.24	4.24
		S/T	0.61	0.72	0.81	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78
		PI	0.66	0.66	0.66	0.67	0.70	0.70	0.70	0.71	0.75	0.75	0.75	0.75	0.79	0.79	0.79	0.79
	0	TC	3.53	3.54	3.54	3.54	3.74	3.75	3.75	3.76	3.97	3.97	3.98	3.98	4.21	4.21	4.22	4.22
		S/T	0.60	0.71	0.80	0.91	0.57	0.67	0.76	0.86	0.54	0.63	0.71	0.81	0.50	0.59	0.67	0.77
		PI	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67	0.71	0.71	0.71	0.71	0.75	0.75	0.75	0.75
	5	TC	3.33	3.33	3.34	3.34	3.53	3.53	3.54	3.54	3.74	3.74	3.75	3.75	3.97	3.97	3.97	3.98
		S/T	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.73	0.83	0.51	0.60	0.69	0.78
		PI	0.58	0.58	0.58	0.58	0.61	0.61	0.61	0.61	0.65	0.65	0.65	0.65	0.69	0.69	0.69	0.69
	10	TC	3.12	3.12	3.13	3.13	3.31	3.31	3.31	3.32	3.51	3.51	3.51	3.52	3.72	3.72	3.72	3.73
		S/T	0.62	0.73	0.82	0.94	0.58	0.68	0.78	0.89	0.55	0.65	0.73	0.84	0.52	0.61	0.69	0.79
		PI	0.55	0.55	0.55	0.55	0.58	0.59	0.59	0.59	0.62	0.62	0.62	0.62	0.66	0.66	0.66	0.66
	15	TC	3.08	3.09	3.09	3.09	3.27	3.27	3.28	3.28	3.46	3.47	3.47	3.48	3.67	3.68	3.68	3.69
		S/T	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81	0.50	0.59	0.67	0.76
		PI	0.61	0.61	0.61	0.61	0.64	0.64	0.64	0.65	0.68	0.68	0.68	0.68	0.72	0.72	0.72	0.73
	20	TC	3.05	3.05	3.05	3.06	3.23	3.23	3.24	3.24	3.42	3.43	3.43	3.44	3.63	3.63	3.64	3.64
		S/T	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78	0.48	0.57	0.65	0.74
		PI	0.66	0.66	0.66	0.66	0.70	0.70	0.70	0.70	0.74	0.74	0.75	0.75	0.79	0.79	0.79	0.79
	25	TC	3.01	3.01	3.02	3.02	3.19	3.19	3.20	3.20	3.38	3.39	3.39	3.39	3.58	3.59	3.59	3.60
		S/T	0.55	0.65	0.74	0.84	0.52	0.61	0.70	0.80	0.49	0.58	0.66	0.75	0.47	0.55	0.62	0.71
		PI	0.72	0.72	0.72	0.72	0.76	0.76	0.76	0.76	0.81	0.81	0.81	0.81	0.85	0.85	0.86	0.86
	30	TC	3.04	3.04	3.05	3.05	3.22	3.23	3.23	3.24	3.42	3.42	3.42	3.43	3.62	3.63	3.63	3.64
		S/T	0.58	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79	0.49	0.58	0.65	0.75
		PI	0.92	0.92	0.92	0.92	0.97	0.98	0.98	0.98	1.03	1.03	1.04	1.04	1.10	1.10	1.10	1.10
	35	TC	3.11	3.11	3.11	3.12	3.29	3.30	3.30	3.31	3.49	3.50	**3.50**	3.50	3.70	3.71	3.71	3.72
		S/T	0.64	0.75	0.85	0.97	0.60	0.71	0.81	0.92	0.57	0.67	**0.76**	0.87	0.54	0.63	0.72	0.82
		PI	1.20	1.20	1.20	1.20	1.27	1.27	1.27	1.28	1.35	1.35	**1.35**	1.35	1.43	1.43	1.43	1.43
	40	TC	2.69	2.70	2.70	2.70	2.86	2.86	2.86	2.87	3.03	3.03	3.03	3.04	3.21	3.21	3.22	3.22
		S/T	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88
		PI	1.06	1.07	1.07	1.07	1.13	1.13	1.13	1.13	1.20	1.20	1.20	1.20	1.27	1.27	1.27	1.27
	45	TC	2.08	2.09	2.09	2.09	2.21	2.21	2.21	2.22	2.34	2.34	2.35	2.35	2.48	2.49	2.49	2.49
		S/T	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.77	0.87	0.99	0.62	0.72	0.82	0.94
		PI	0.87	0.88	0.88	0.88	0.93	0.93	0.93	0.93	0.98	0.98	0.99	0.99	1.04	1.04	1.04	1.05
	50	TC	1.18	1.18	1.18	1.18	1.25	1.25	1.25	1.25	1.32	1.33	1.33	1.33	1.40	1.40	1.41	1.41
		S/T	0.75	0.88	1.00	1.00	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99
		PI	0.60	0.60	0.60	0.60	0.64	0.64	0.64	0.64	0.68	0.68	0.68	0.68	0.72	0.72	0.72	0.72

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZ-PR-18HDI-I + KIZ-PR-18HDI-O																		
INDOOR AIRFLOW (CMH)	OUTDOOR DB(℃)	ID WB (℃)	16.0				18.0				19.0				22.0			
		ID DB (℃)	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0
850	-15	TC	5.80	5.81	5.81	5.82	6.15	6.16	6.16	6.17	6.52	6.52	6.53	6.54	6.91	6.92	6.92	6.93
		S/T	0.63	0.74	0.84	0.96	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81
		PI	0.85	0.85	0.86	0.86	0.91	0.91	0.91	0.91	0.96	0.96	0.96	0.96	1.02	1.02	1.02	1.02
	-10	TC	5.47	5.48	5.49	5.49	5.80	5.81	5.82	5.82	6.15	6.16	6.17	6.17	6.52	6.53	6.54	6.54
		S/T	0.62	0.73	0.83	0.94	0.59	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79
		PI	0.82	0.82	0.83	0.83	0.87	0.87	0.87	0.88	0.93	0.93	0.93	0.93	0.98	0.98	0.98	0.98
	-5	TC	5.35	5.36	5.36	5.37	5.67	5.68	5.68	5.69	6.01	6.02	6.02	6.03	6.37	6.38	6.39	6.39
		S/T	0.61	0.72	0.81	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78
		PI	0.79	0.79	0.79	0.79	0.83	0.83	0.84	0.84	0.88	0.88	0.89	0.89	0.94	0.94	0.94	0.94
	0	TC	5.32	5.33	5.33	5.34	5.64	5.65	5.65	5.66	5.98	5.99	5.99	6.00	6.34	6.35	6.35	6.36
		S/T	0.60	0.71	0.80	0.91	0.57	0.67	0.76	0.86	0.54	0.63	0.71	0.81	0.50	0.59	0.67	0.77
		PI	0.74	0.75	0.75	0.75	0.79	0.79	0.79	0.79	0.84	0.84	0.84	0.84	0.89	0.89	0.89	0.89
	5	TC	5.02	5.02	5.03	5.04	5.32	5.33	5.33	5.34	5.64	5.64	5.65	5.66	5.98	5.98	5.99	6.00
		S/T	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.73	0.83	0.51	0.60	0.69	0.78
		PI	0.68	0.68	0.68	0.68	0.72	0.72	0.72	0.73	0.77	0.77	0.77	0.77	0.81	0.81	0.81	0.81
	10	TC	4.70	4.71	4.71	4.72	4.99	4.99	5.00	5.00	5.28	5.29	5.30	5.30	5.60	5.61	5.61	5.62
		S/T	0.62	0.73	0.82	0.94	0.58	0.68	0.78	0.89	0.55	0.65	0.73	0.84	0.52	0.61	0.69	0.79
		PI	0.65	0.65	0.66	0.66	0.69	0.69	0.69	0.70	0.73	0.74	0.74	0.74	0.78	0.78	0.78	0.78
	15	TC	4.65	4.65	4.66	4.66	4.93	4.93	4.94	4.94	5.22	5.23	5.23	5.24	5.54	5.54	5.55	5.56
		S/T	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81	0.50	0.59	0.67	0.76
		PI	0.72	0.72	0.72	0.72	0.76	0.76	0.76	0.76	0.81	0.81	0.81	0.81	0.86	0.86	0.86	0.86
	20	TC	4.59	4.60	4.60	4.61	4.87	4.87	4.88	4.89	5.16	5.17	5.17	5.18	5.47	5.48	5.48	5.49
		S/T	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78	0.48	0.57	0.65	0.74
		PI	0.78	0.79	0.79	0.79	0.83	0.83	0.83	0.83	0.88	0.88	0.88	0.88	0.93	0.94	0.94	0.94
	25	TC	4.54	4.54	4.55	4.55	4.81	4.81	4.82	4.83	5.10	5.10	5.11	5.12	5.40	5.41	5.41	5.42
		S/T	0.55	0.65	0.74	0.84	0.52	0.61	0.70	0.80	0.49	0.58	0.66	0.75	0.47	0.55	0.62	0.71
		PI	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.95	0.96	0.96	0.96	1.01	1.01	1.01	1.02
	30	TC	4.58	4.59	4.59	4.60	4.86	4.87	4.87	4.88	5.15	5.16	5.16	5.17	5.46	5.47	5.47	5.48
		S/T	0.58	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79	0.49	0.58	0.65	0.75
		PI	1.09	1.09	1.09	1.09	1.16	1.16	1.16	1.16	1.22	1.23	1.23	1.23	1.30	1.30	1.30	1.30
	35	TC	4.68	4.69	4.70	4.70	4.97	4.97	4.98	4.98	5.26	5.27	**5.28**	5.28	5.58	5.59	5.59	5.60
		S/T	0.64	0.75	0.85	0.97	0.60	0.71	0.81	0.92	0.57	0.67	**0.76**	0.87	0.54	0.63	0.72	0.82
		PI	1.42	1.42	1.42	1.43	1.51	1.51	1.51	1.51	1.60	1.60	**1.60**	1.60	1.69	1.69	1.70	1.70
	40	TC	4.06	4.07	4.07	4.08	4.31	4.31	4.32	4.32	4.56	4.57	4.57	4.58	4.84	4.84	4.85	4.86
		S/T	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88
		PI	1.26	1.26	1.27	1.27	1.34	1.34	1.34	1.34	1.42	1.42	1.42	1.42	1.50	1.51	1.51	1.51
	45	TC	3.14	3.15	3.15	3.15	3.33	3.33	3.34	3.34	3.53	3.53	3.54	3.54	3.74	3.75	3.75	3.76
		S/T	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.77	0.87	0.99	0.62	0.72	0.82	0.94
		PI	1.04	1.04	1.04	1.04	1.10	1.10	1.10	1.10	1.17	1.17	1.17	1.17	1.24	1.24	1.24	1.24
	50	TC	1.78	1.78	1.78	1.78	1.88	1.88	1.89	1.89	2.00	2.00	2.00	2.00	2.12	2.12	2.12	2.12
		S/T	0.75	0.88	1.00	1.00	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99
		PI	0.71	0.71	0.71	0.72	0.76	0.76	0.76	0.76	0.80	0.80	0.80	0.80	0.85	0.85	0.85	0.85

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZ-PR-24HDI-I + KIZ-PR-24HDI-O																		
INDOOR AIRFLOW (CMH)	OUTDOOR DB(℃)	ID WB (℃)	16.0				18.0				19.0				22.0			
		ID DB (℃)	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0	23.0	25.0	27.0	29.0
1039	-15	TC	7.73	7.74	7.75	7.76	8.20	8.21	8.22	8.23	8.69	8.70	8.71	8.72	9.21	9.22	9.23	9.24
		S/T	0.63	0.74	0.84	0.96	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81
		PI	1.39	1.39	1.39	1.39	1.47	1.47	1.47	1.48	1.56	1.56	1.56	1.56	1.65	1.65	1.66	1.66
	-10	TC	7.30	7.31	7.32	7.33	7.74	7.75	7.76	7.77	8.20	8.21	8.22	8.23	8.69	8.70	8.71	8.73
		S/T	0.62	0.73	0.83	0.94	0.59	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79
		PI	1.34	1.34	1.34	1.34	1.42	1.42	1.42	1.42	1.50	1.51	1.51	1.51	1.59	1.60	1.60	1.60
	-5	TC	7.13	7.14	7.15	7.16	7.56	7.57	7.58	7.59	8.01	8.02	8.03	8.04	8.50	8.50	8.51	8.53
		S/T	0.61	0.72	0.81	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78
		PI	1.28	1.28	1.28	1.28	1.35	1.36	1.36	1.36	1.43	1.44	1.44	1.44	1.52	1.52	1.52	1.53
	0	TC	7.10	7.11	7.11	7.12	7.52	7.53	7.54	7.55	7.97	7.98	7.99	8.00	8.45	8.46	8.47	8.48
		S/T	0.60	0.71	0.80	0.91	0.57	0.67	0.76	0.86	0.54	0.63	0.71	0.81	0.50	0.59	0.67	0.77
		PI	1.21	1.21	1.21	1.22	1.28	1.28	1.29	1.29	1.36	1.36	1.36	1.37	1.44	1.44	1.45	1.45
	5	TC	6.69	6.70	6.71	6.71	7.09	7.10	7.11	7.12	7.52	7.53	7.53	7.54	7.97	7.98	7.99	8.00
		S/T	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88	0.54	0.64	0.73	0.83	0.51	0.60	0.69	0.78
		PI	1.11	1.11	1.11	1.11	1.17	1.18	1.18	1.18	1.24	1.25	1.25	1.25	1.32	1.32	1.32	1.32
	10	TC	6.27	6.28	6.28	6.29	6.65	6.66	6.66	6.67	7.04	7.05	7.06	7.07	7.47	7.48	7.49	7.50
		S/T	0.62	0.73	0.82	0.94	0.58	0.68	0.78	0.89	0.55	0.65	0.73	0.84	0.52	0.61	0.69	0.79
		PI	1.06	1.06	1.06	1.07	1.13	1.13	1.13	1.13	1.19	1.20	1.20	1.20	1.27	1.27	1.27	1.27
	15	TC	6.20	6.20	6.21	6.22	6.57	6.58	6.58	6.59	6.96	6.97	6.98	6.99	7.38	7.39	7.40	7.41
		S/T	0.60	0.70	0.80	0.91	0.56	0.66	0.75	0.86	0.53	0.62	0.71	0.81	0.50	0.59	0.67	0.76
		PI	1.17	1.17	1.17	1.17	1.24	1.24	1.24	1.24	1.31	1.31	1.32	1.32	1.39	1.39	1.39	1.40
	20	TC	6.12	6.13	6.14	6.14	6.49	6.50	6.50	6.51	6.88	6.89	6.89	6.90	7.29	7.30	7.31	7.32
		S/T	0.58	0.68	0.77	0.88	0.54	0.64	0.72	0.83	0.51	0.60	0.68	0.78	0.48	0.57	0.65	0.74
		PI	1.27	1.28	1.28	1.28	1.35	1.35	1.35	1.36	1.43	1.43	1.44	1.44	1.52	1.52	1.52	1.52
	25	TC	6.05	6.06	6.06	6.07	6.41	6.42	6.43	6.43	6.79	6.80	6.81	6.82	7.20	7.21	7.22	7.23
		S/T	0.55	0.65	0.74	0.84	0.52	0.61	0.70	0.80	0.49	0.58	0.66	0.75	0.47	0.55	0.62	0.71
		PI	1.38	1.38	1.38	1.39	1.46	1.47	1.47	1.47	1.55	1.55	1.55	1.56	1.64	1.65	1.65	1.65
	30	TC	6.11	6.12	6.13	6.13	6.48	6.49	6.49	6.50	6.87	6.88	6.88	6.89	7.28	7.29	7.30	7.31
		S/T	0.58	0.69	0.78	0.89	0.55	0.65	0.74	0.84	0.52	0.61	0.69	0.79	0.49	0.58	0.65	0.75
		PI	1.77	1.77	1.78	1.78	1.88	1.88	1.88	1.88	1.99	1.99	1.99	2.00	2.11	2.11	2.11	2.12
	35	TC	6.25	6.25	6.26	6.27	6.62	6.63	6.64	6.65	7.02	7.03	**7.03**	7.04	7.44	7.45	7.46	7.47
		S/T	0.64	0.75	0.85	0.97	0.60	0.71	0.81	0.92	0.57	0.67	**0.76**	0.87	0.54	0.63	0.72	0.82
		PI	2.31	2.31	2.31	2.32	2.45	2.45	2.45	2.46	2.59	2.60	**2.60**	2.60	2.75	2.75	2.76	2.76
	40	TC	5.41	5.42	5.43	5.44	5.74	5.75	5.75	5.76	6.08	6.09	6.10	6.11	6.45	6.46	6.46	6.47
		S/T	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99	0.61	0.72	0.82	0.93	0.58	0.68	0.77	0.88
		PI	2.05	2.05	2.06	2.06	2.17	2.18	2.18	2.18	2.30	2.31	2.31	2.31	2.44	2.45	2.45	2.45
	45	TC	4.19	4.19	4.20	4.20	4.44	4.45	4.45	4.46	4.71	4.71	4.72	4.72	4.99	4.99	5.00	5.01
		S/T	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.77	0.87	0.99	0.62	0.72	0.82	0.94
		PI	1.69	1.69	1.69	1.69	1.79	1.79	1.79	1.79	1.89	1.90	1.90	1.90	2.01	2.01	2.01	2.01
	50	TC	2.37	2.37	2.37	2.38	2.51	2.51	2.52	2.52	2.66	2.66	2.67	2.67	2.82	2.82	2.83	2.83
		S/T	0.75	0.88	1.00	1.00	0.73	0.86	0.98	1.00	0.69	0.81	0.92	1.00	0.65	0.76	0.87	0.99
		PI	1.16	1.16	1.16	1.16	1.23	1.23	1.23	1.23	1.30	1.30	1.30	1.31	1.38	1.38	1.38	1.38

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

Note: The table shows the case where the operation frequency of a compressor is fixed.

2.2 Heating

KIZ-PR-09HDI-I + KIZ-PR-09HDI-O									[SI_Unit]
INDOOR AIRFLOW (CMH)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE								
	OUTDOOR DB(°C)	TC:TOTAL CAPACITY IN KILOWATTS (KW)				PI:TOTAL POWER IN KILOWATTS (KW)			
		Indoor Conditions (DB °C)				Indoor Conditions (DB °C)			
		16.0	20.0	22.0	24.0	16.0	20.0	22.0	24.0
510	-20.0	1.62	1.60	1.57	1.57	0.43	0.44	0.46	0.47
	-15.0	1.75	1.73	1.70	1.70	0.47	0.48	0.51	0.52
	-10.0	1.87	1.85	1.82	1.82	0.50	0.51	0.54	0.55
	-7.0	1.96	1.93	1.91	1.91	0.54	0.55	0.57	0.58
	-5.6	2.08	2.05	2.02	2.02	0.55	0.57	0.58	0.60
	-2.8	2.19	2.16	2.14	2.14	0.58	0.61	0.62	0.64
	0.0	2.25	2.22	2.22	2.19	0.61	0.64	0.66	0.68
	2.8	2.42	2.40	2.37	2.37	0.66	0.69	0.71	0.72
	5.6	2.68	2.66	2.63	2.60	0.70	0.73	0.75	0.77
	7.0	2.96	2.93	2.84	2.81	0.72	0.79	0.78	0.80
	11.1	3.13	3.10	3.08	3.08	0.78	0.82	0.84	0.86
	13.9	3.31	3.28	3.25	3.22	0.82	0.86	0.88	0.90
	16.7	3.48	3.42	3.42	3.39	0.86	0.90	0.92	0.95
	18.0	3.57	3.51	3.48	3.48	0.88	0.92	0.94	0.97

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZ-PR-12HDI-I + KIZ-PR-12HDI-O									[SI_Unit]
INDOOR AIRFLOW (CMH)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE								
	OUTDOOR DB(°C)	TC:TOTAL CAPACITY IN KILOWATTS (KW)				PI:TOTAL POWER IN KILOWATTS (KW)			
		Indoor Conditions (DB °C)				Indoor Conditions (DB °C)			
		16.0	20.0	22.0	24.0	16.0	20.0	22.0	24.0
590	-20.0	2.10	2.08	2.05	2.05	0.65	0.66	0.69	0.71
	-15.0	2.27	2.25	2.22	2.22	0.71	0.72	0.76	0.78
	-10.0	2.43	2.40	2.37	2.37	0.75	0.77	0.81	0.83
	-7.0	2.54	2.51	2.49	2.49	0.80	0.82	0.86	0.88
	-5.6	2.69	2.66	2.63	2.63	0.82	0.86	0.88	0.90
	-2.8	2.83	2.80	2.77	2.77	0.88	0.92	0.94	0.96
	0.0	2.95	2.89	2.89	2.86	0.93	0.97	1.00	1.02
	2.8	3.15	3.12	3.09	3.06	0.99	1.04	1.07	1.09
	5.6	3.47	3.44	3.41	3.38	1.06	1.11	1.13	1.16
	7.0	3.84	3.81	3.69	3.66	1.09	1.19	1.17	1.20
	11.1	4.10	4.04	4.01	3.98	1.18	1.24	1.26	1.29
	13.9	4.30	4.25	4.22	4.19	1.24	1.30	1.33	1.36
	16.7	4.54	4.48	4.45	4.39	1.30	1.36	1.39	1.42
	18.0	4.62	4.57	4.54	4.51	1.32	1.39	1.42	1.45

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZ-PR-18HDI-I + KIZ-PR-18HDI-O									[SI_Unit]
INDOOR AIRFLOW (CMH)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE								
	OUTDOOR DB(°C)	TC:TOTAL CAPACITY IN KILOWATTS (KW)				PI:TOTAL POWER IN KILOWATTS (KW)			
		Indoor Conditions (DB °C)				Indoor Conditions (DB °C)			
		16.0	20.0	22.0	24.0	16.0	20.0	22.0	24.0
850	-20.0	3.08	3.04	3.04	3.01	0.76	0.77	0.81	0.83
	-15.0	3.33	3.29	3.29	3.26	0.83	0.85	0.88	0.91
	-10.0	3.56	3.51	3.51	3.48	0.88	0.90	0.94	0.97
	-7.0	3.73	3.68	3.68	3.65	0.94	0.96	1.00	1.03
	-5.6	3.94	3.88	3.88	3.85	0.96	1.01	1.04	1.06
	-2.8	4.14	4.08	4.08	4.05	1.03	1.08	1.10	1.13
	0.0	4.31	4.25	4.23	4.20	1.09	1.14	1.17	1.19
	2.8	4.63	4.57	4.51	4.49	1.16	1.22	1.25	1.27
	5.6	5.12	5.04	5.01	4.98	1.24	1.29	1.32	1.34
	7.0	5.66	5.57	5.39	5.37	1.28	1.39	1.37	1.40
	11.1	5.97	5.92	5.86	5.83	1.38	1.44	1.48	1.51
	13.9	6.29	6.21	6.18	6.15	1.44	1.51	1.55	1.58
	16.7	6.61	6.53	6.50	6.44	1.51	1.58	1.62	1.66
	18.0	6.79	6.70	6.64	6.58	1.55	1.62	1.66	1.69

Note: The table shows the case where the operation frequency of a compressor is fixed.

KIZ-PR-24HDI-I + KIZ-PR-24HDI-O									[SI_Unit]
INDOOR AIRFLOW (CMH)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE								
	OUTDOOR DB(°C)	TC:TOTAL CAPACITY IN KILOWATTS (KW)				PI:TOTAL POWER IN KILOWATTS (KW)			
		Indoor Conditions (DB °C)				Indoor Conditions (DB °C)			
		16.0	20.0	22.0	24.0	16.0	20.0	22.0	24.0
1039	-20.0	4.04	3.99	3.97	3.95	1.16	1.20	1.25	1.28
	-15.0	4.37	4.32	4.30	4.27	1.27	1.31	1.37	1.40
	-10.0	4.67	4.62	4.59	4.56	1.36	1.40	1.46	1.49
	-7.0	4.89	4.84	4.81	4.78	1.44	1.48	1.55	1.58
	-5.6	5.18	5.13	5.10	5.07	1.49	1.56	1.60	1.63
	-2.8	5.47	5.39	5.36	5.33	1.58	1.66	1.70	1.74
	0.0	5.68	5.59	5.56	5.50	1.68	1.76	1.80	1.84
	2.8	6.08	5.99	5.97	5.94	1.79	1.88	1.92	1.97
	5.6	6.75	6.63	6.60	6.54	1.91	2.00	2.05	2.09
	7.0	7.46	7.33	7.10	7.07	1.97	2.15	2.12	2.17
	11.1	7.88	7.76	7.73	7.67	2.13	2.23	2.28	2.34
	13.9	8.31	8.20	8.14	8.08	2.24	2.34	2.40	2.45
	16.7	8.72	8.60	8.54	8.49	2.34	2.45	2.51	2.57
	18.0	8.92	8.80	8.75	8.69	2.39	2.51	2.56	2.62

Note: The table shows the case where the operation frequency of a compressor is fixed.

3. Capacity Correction Factor for Height Difference

Capacity(Btu/h)	9k		Pipe Length (m)			
Indoor Upper than Outdoor			5	10	20	25
Height difference H (m)	Cooling	10		0.969	0.936	0.920
		5	0.995	0.979	0.946	0.929
		0	1.000	0.984	0.951	0.934
	Heating	10		0.989	0.967	0.956
		5	1.000	0.989	0.967	0.956
		0	1.000	0.989	0.967	0.956
Outdoor Upper than Indoor			5	10	20	30
Height difference H (m)	Cooling	0	1.000	0.984	0.951	0.934
		5	1.000	0.984	0.951	0.934
		10		0.984	0.951	0.934
	Heating	0	1.000	0.989	0.967	0.956
		5	0.992	0.981	0.959	0.948
		10		0.973	0.952	0.941

Capacity(Btu/h)	12k		Pipe Length (m)			
Indoor Upper than Outdoor			5	10	20	25
Height difference H (m)	Cooling	10		0.973	0.948	0.936
		5	0.995	0.983	0.958	0.945
		0	1.000	0.988	0.963	0.950
	Heating	10		0.993	0.978	0.970
		5	1.000	0.993	0.978	0.970
		0	1.000	0.993	0.978	0.970
Outdoor Upper than Indoor			5	10	20	30
Height difference H (m)	Cooling	0	1.000	0.988	0.963	0.950
		5	1.000	0.988	0.963	0.950
		10		0.988	0.963	0.950
	Heating	0	1.000	0.993	0.978	0.970
		5	0.992	0.985	0.970	0.962
		10		0.977	0.962	0.955

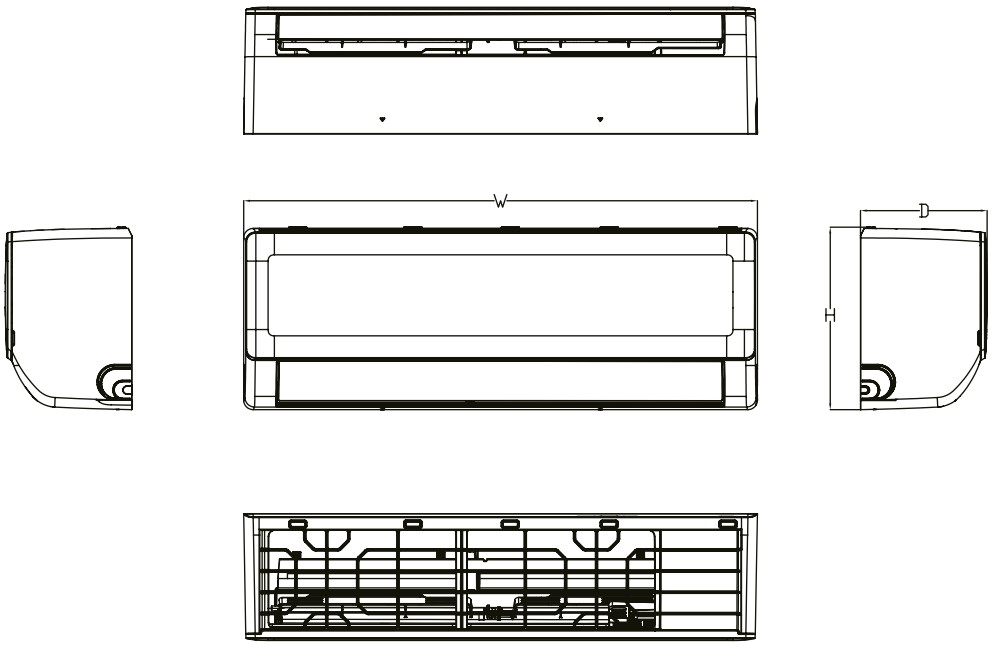
Capacity(Btu/h)	18k		Pipe Length (m)			
Indoor Upper than Outdoor			5	10	20	30
Height difference H (m)	Cooling	20			0.928	0.912
		10		0.969	0.937	0.921
		5	0.995	0.979	0.946	0.930
		0	1.000	0.984	0.951	0.935
	Heating	20			0.982	0.976
		10		0.994	0.982	0.976
		5	1.000	0.994	0.982	0.976
		0	1.000	0.994	0.982	0.976
Outdoor Upper than Indoor			5	10	20	30
Height difference H (m)	Cooling	0	1.000	0.984	0.951	0.935
		5	1.000	0.984	0.951	0.935
		10		0.984	0.951	0.935
		20			0.951	0.935
	Heating	0	1.000	0.994	0.982	0.976
		5	0.992	0.986	0.974	0.968
		10		0.978	0.966	0.960
		20			0.959	0.953

Capacity(Btu/h)	24k		Pipe Length (m)					
Indoor Upper than Outdoor			5	10	20	30	40	50
Height difference H (m)	Cooling	25				0.914	0.894	0.874
		20			0.944	0.924	0.903	0.883
		10		0.975	0.954	0.933	0.912	0.891
		5	0.995	0.984	0.963	0.942	0.921	0.900
		0	1.000	0.989	0.968	0.947	0.926	0.905
	Heating	25				0.983	0.977	0.97
		20			0.990	0.983	0.977	0.97
		10		0.997	0.990	0.983	0.977	0.97
		5	1.000	0.997	0.990	0.983	0.977	0.97
		0	1.000	0.997	0.990	0.983	0.977	0.97
Outdoor Upper than Indoor			5	10	20	30	40	50
Height difference H (m)	Cooling	0	1.000	0.989	0.968	0.947	0.926	0.905
		5	1.000	0.989	0.968	0.947	0.926	0.905
		10		0.989	0.968	0.947	0.926	0.905
		20			0.968	0.947	0.926	0.905
		25				0.947	0.926	0.905
	Heating	0	1.000	0.997	0.990	0.983	0.977	0.970
		5	0.992	0.989	0.982	0.975	0.969	0.962
		10		0.981	0.974	0.968	0.961	0.955
		20			0.966	0.960	0.953	0.947
		25				0.952	0.946	0.939

4. Dimensional Drawings & Centre of gravity

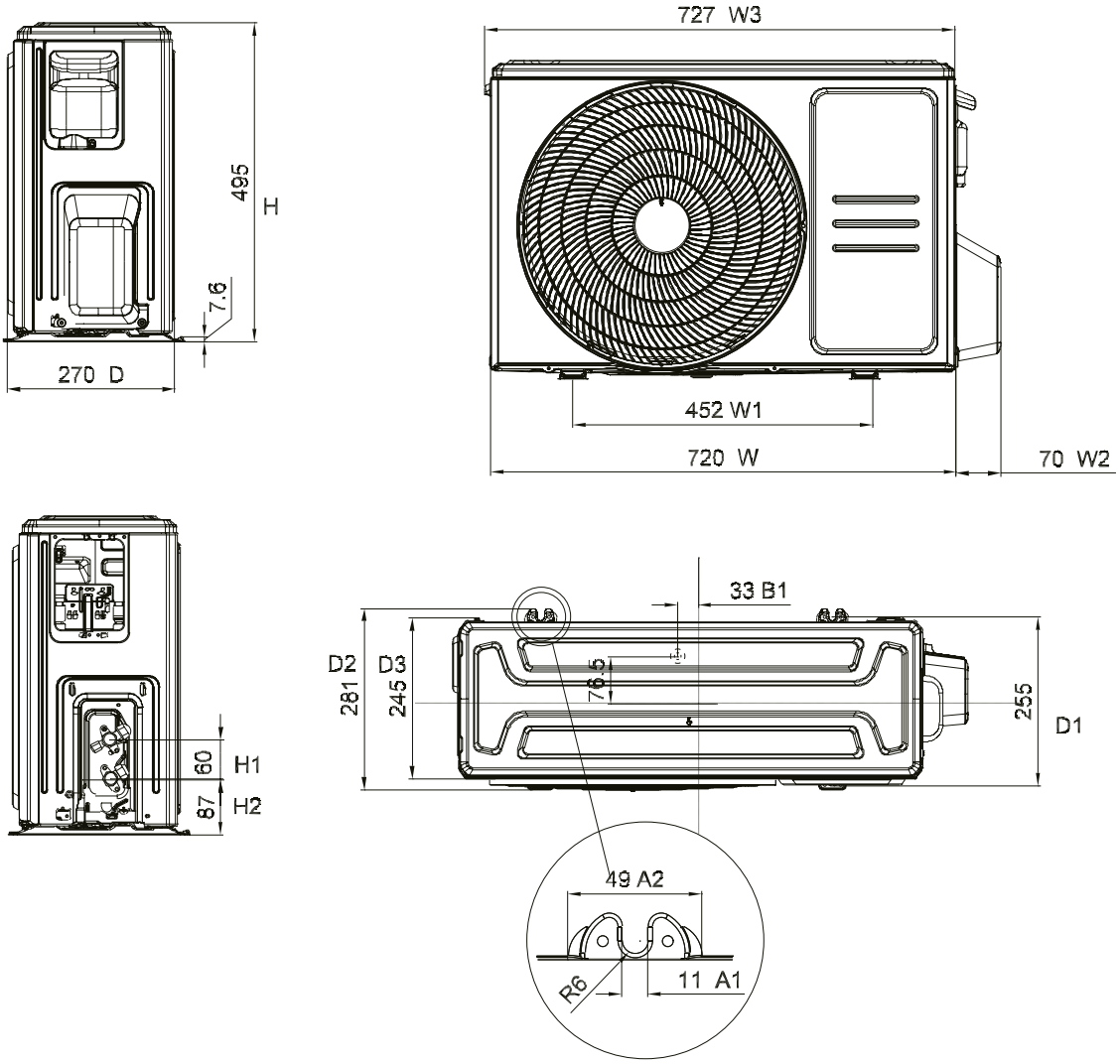
4.1 Dimensional Drawings

4.1.1 Indoor Unit

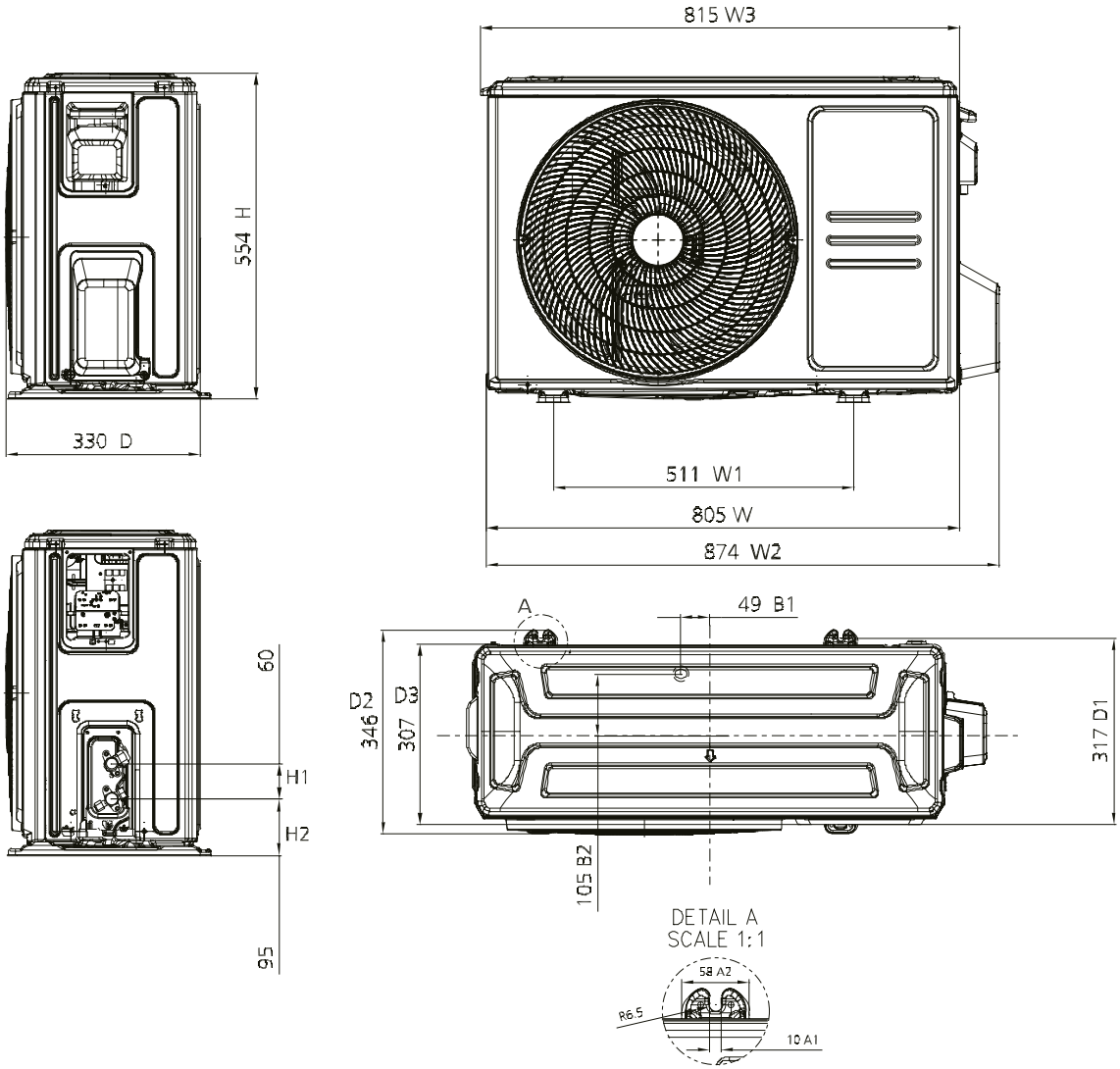


Capacity (Btu/h)	Unit	W	D	H
9k	mm	723	199	286
12k	mm	813	201	289
18k	mm	975	218	308
24k	mm	1055	231	330

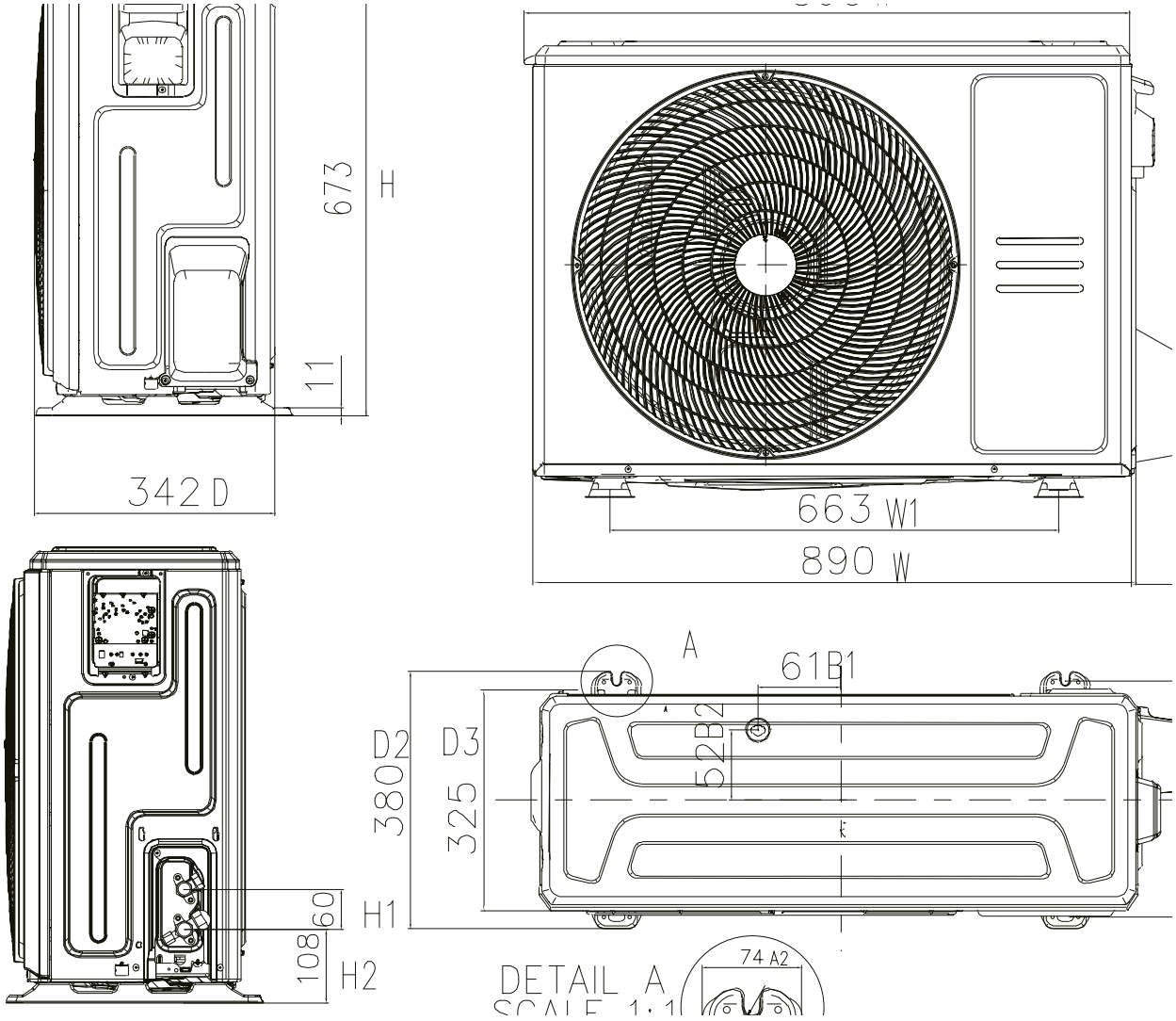
9k/12k


727 W3
495
H
7.6
270 D
452 W1
720 W
70 W2
60
H1
87
H2
33 B1
D2
281
D3
245
76.5
255
D1
49 A2
R6
11 A1

18k

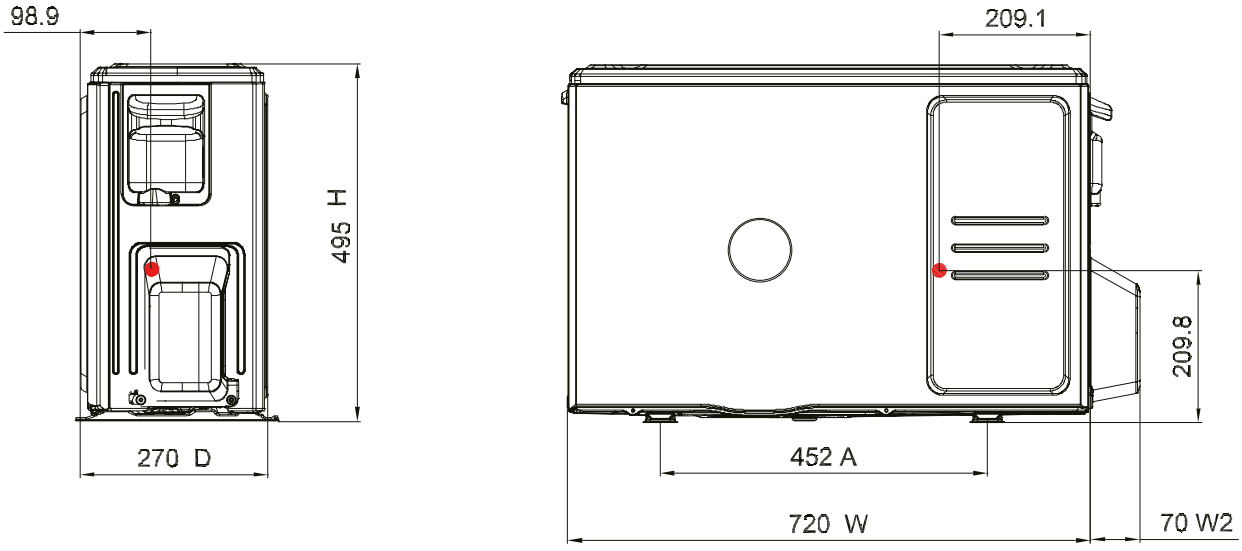

815 W3
554 H
330 D
511 W1
805 W
874 W2
60
H1
H2
95
A
49 B1
D2
346
D3
307
317 D1
105 B2
DETAIL A
SCALE 1:1
58 A2
R6.5
10 A1

24k

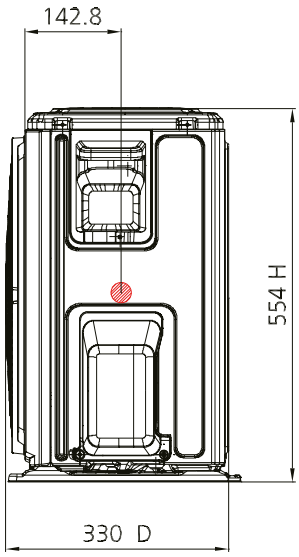

673
H
11
342 D
663 W1
890 W
A
61B1
62B2
D2
D3
380
325
60
H1
108
H2
DETAIL A
74 A2

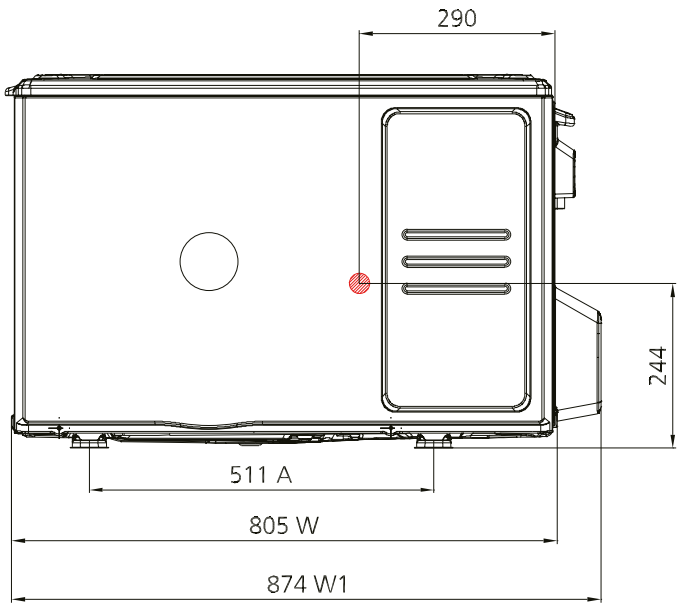
4.2 Centre of gravity

9k/12k

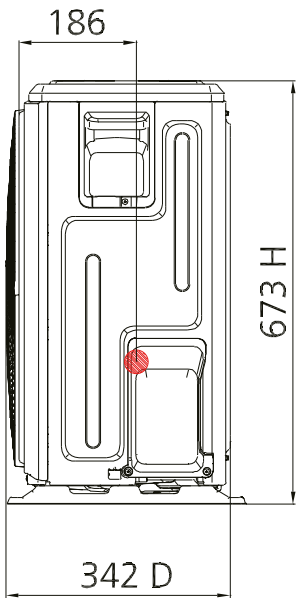


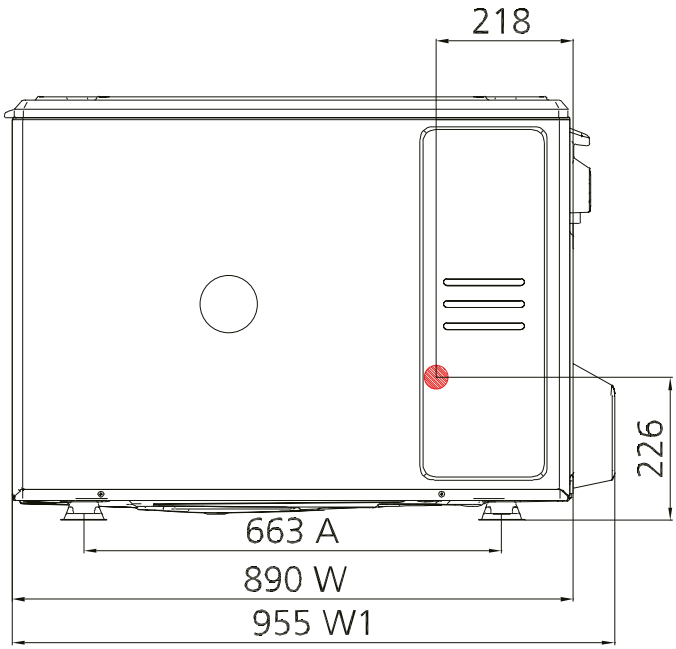
18k


142.8
554 H
330 D


290
244
511 A
805 W
874 W1

24k

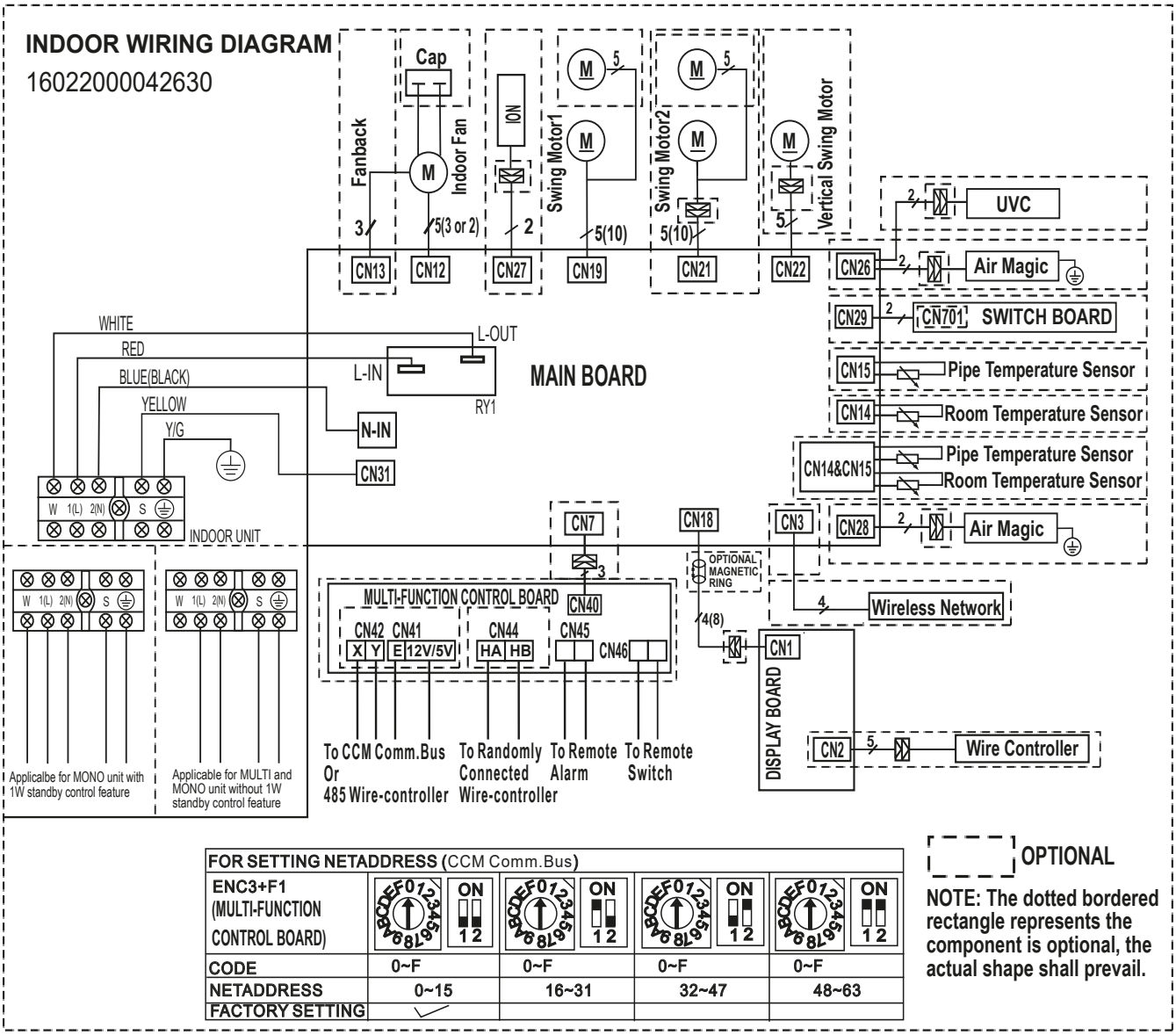

186
673 H
342 D


218
226
663 A
890 W
955 W1

5. Electrical Wiring Diagrams

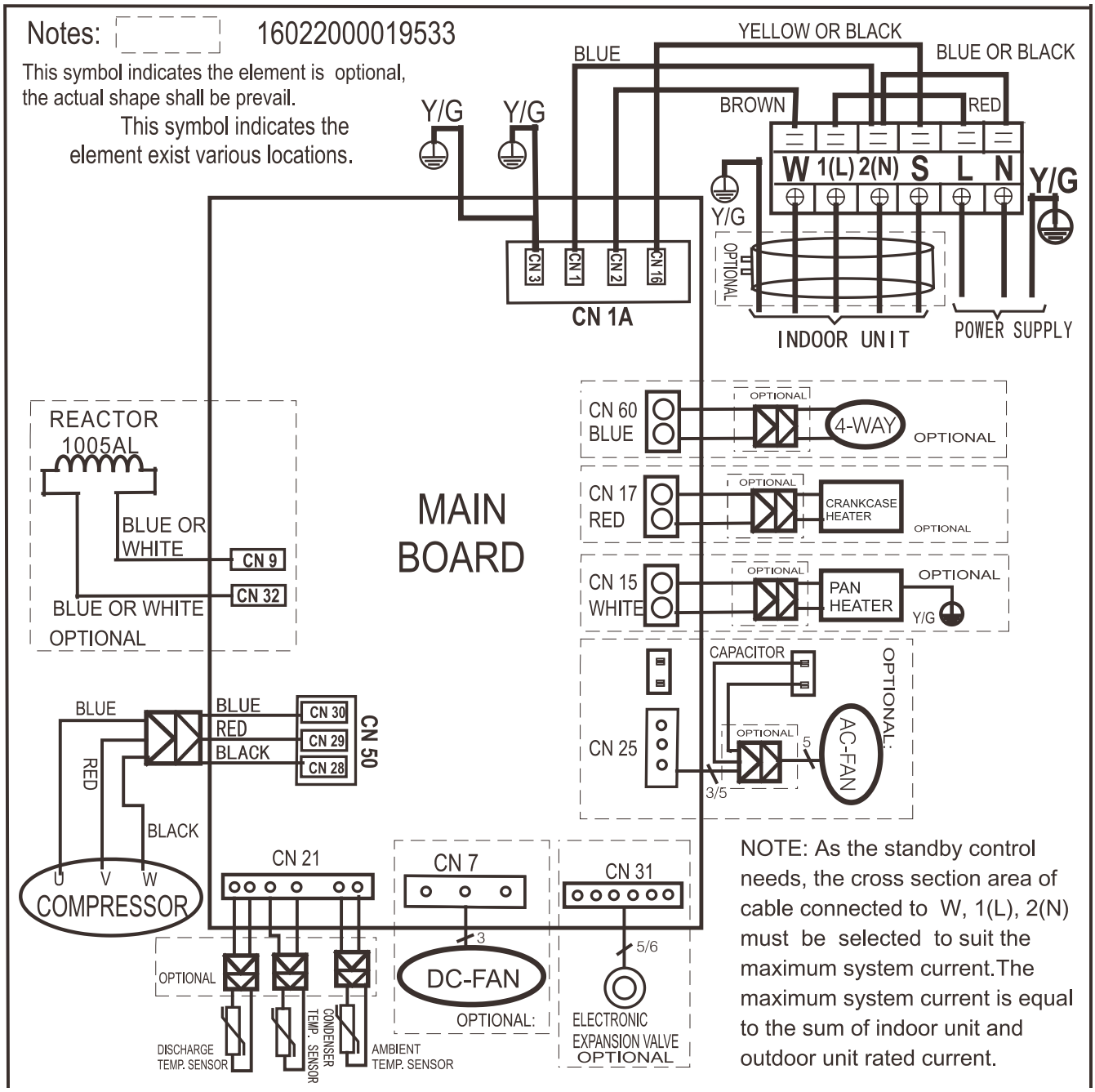
5.1 Indoor unit

Abbreviation	Paraphrase
Y/G	Yellow-Green Conductor
ION	Positive and Negative Ion Generator
CAP	Capacitor
PLASMA	Electronic Dust Collector
L	LIVE
N	NEUTRAL



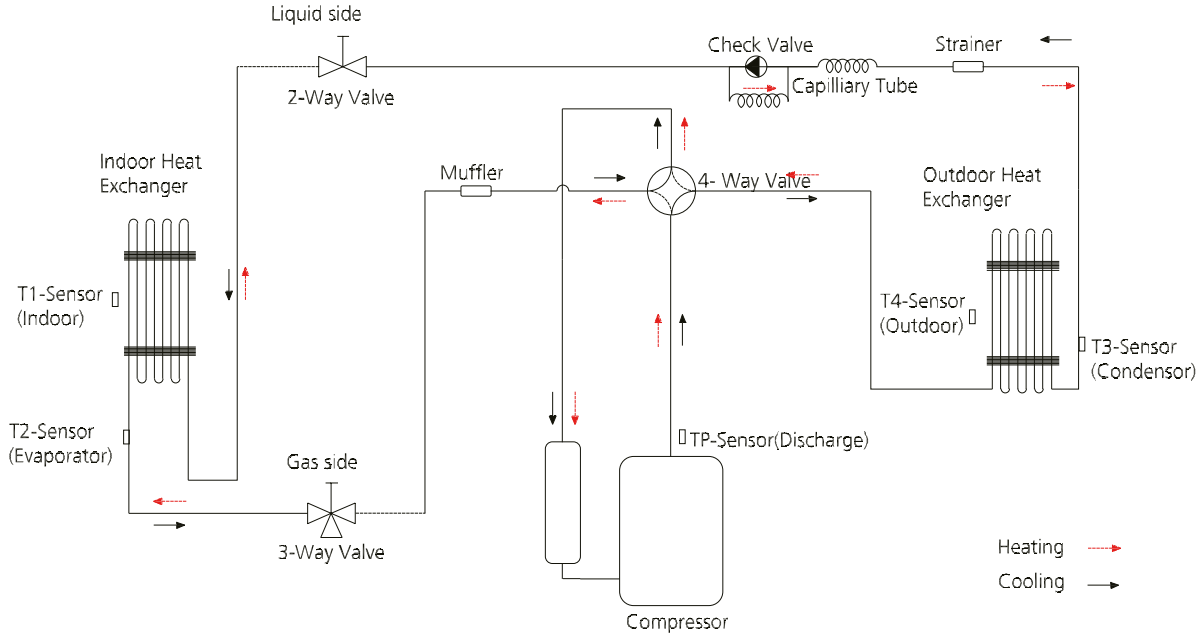
5.2 Outdoor Unit

Abbreviation	Paraphrase
4-WAY	Gas Valve Assembly/4-WAY VALVE
AC-FAN	Alternating Current FAN
DC-FAN	Direct Current FAN
COMP	Compressor

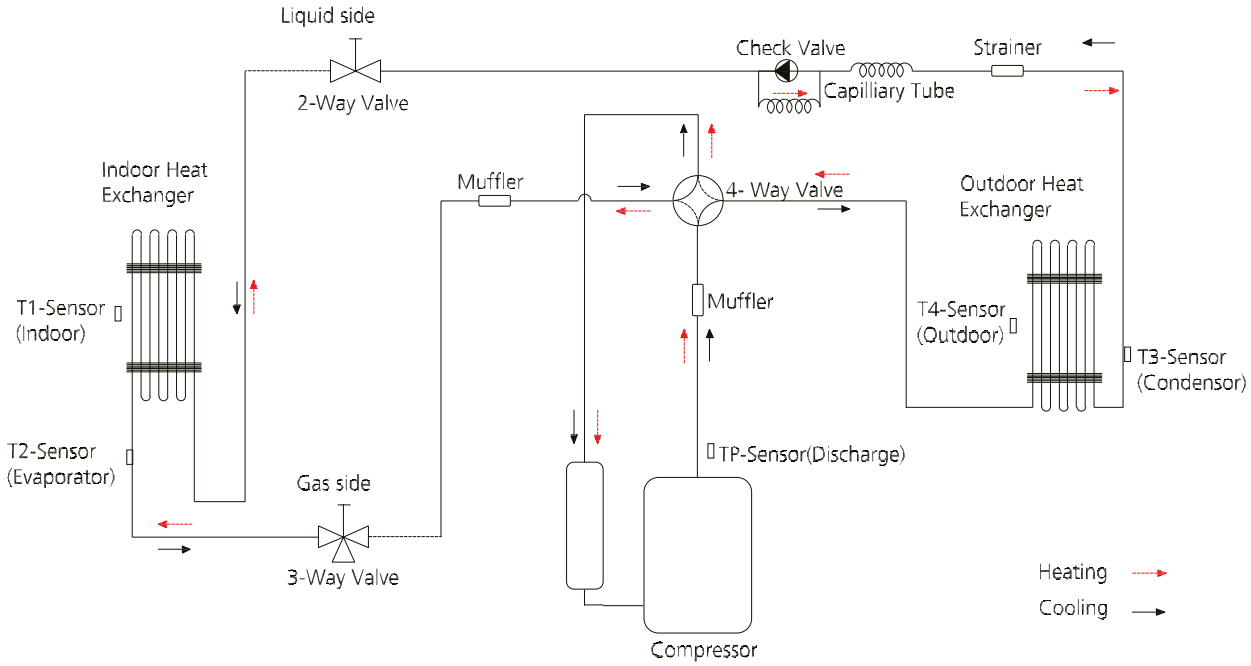


6. Refrigerant Cycle Diagrams

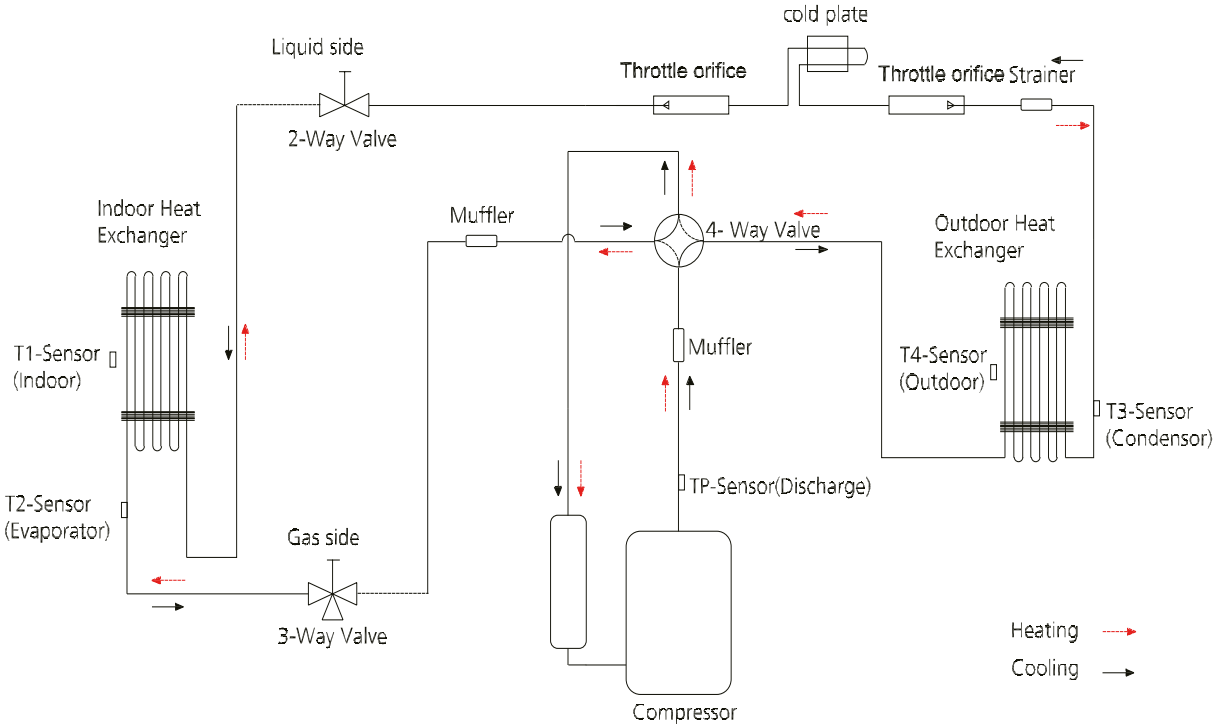
9k/12k



18k

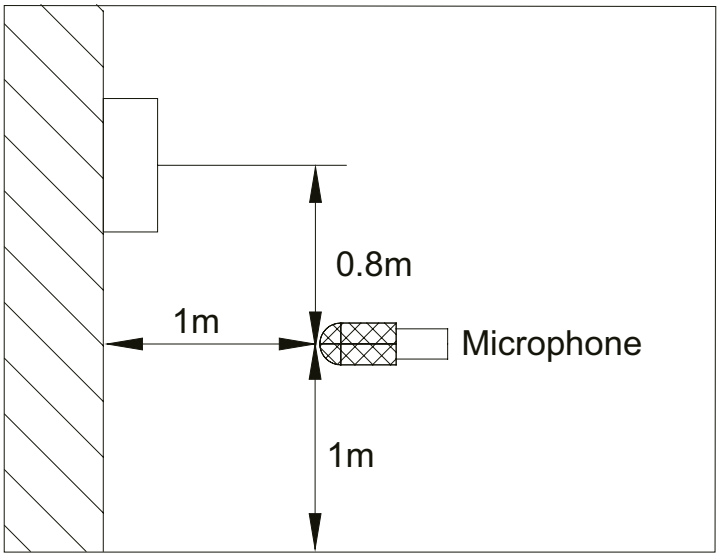


24K


cold plate
Liquid side
Throttle orifice
Throttle orifice Strainer
2-Way Valve
Indoor Heat Exchanger
Muffler
4- Way Valve
Outdoor Heat Exchanger
T1-Sensor (Indoor)
Muffler
T4-Sensor (Outdoor)
T3-Sensor (Condensor)
T2-Sensor (Evaporator)
TP-Sensor(Discharge)
Gas side
3-Way Valve
Heating
Cooling
Compressor

7. Noise Criterion Curves

7.1 Indoor Unit



Notes:

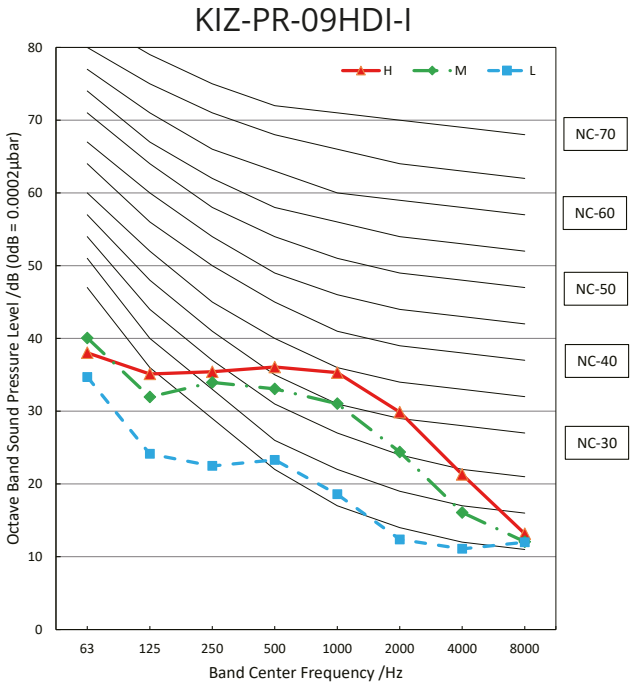
-Sound measured at 1.0m away from the center of the unit.

-Data is valid at nominal operation condition

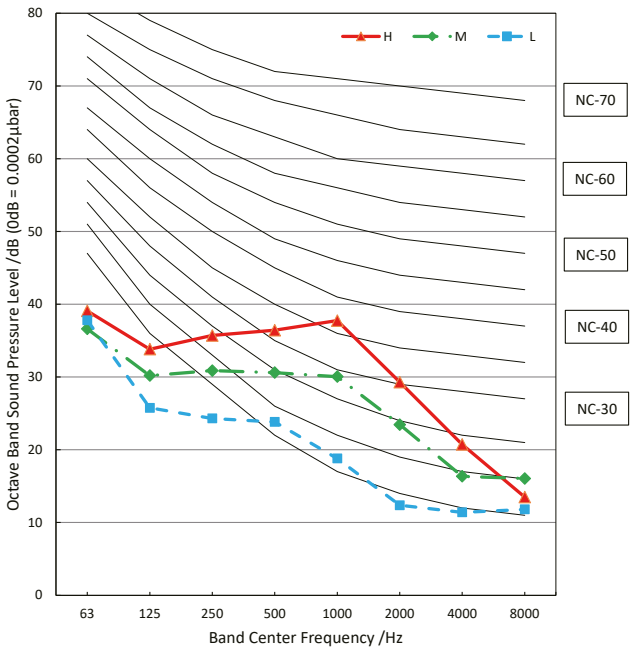
-Reference acoustic pressure OdB = 20μPa

-Sound level will vary depending on a range of factors such as the construction -(acoustic absorption coefficient) of particular room in which the equipment is installed.

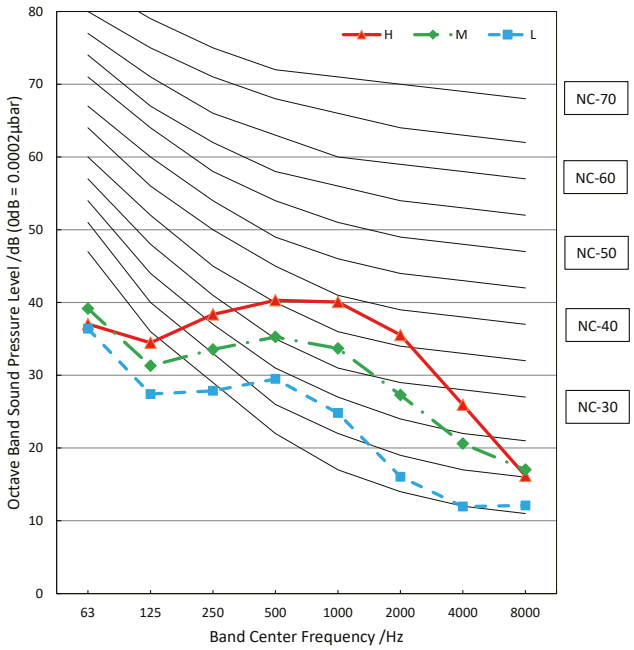
-The operating conditions are assumed to be standard.



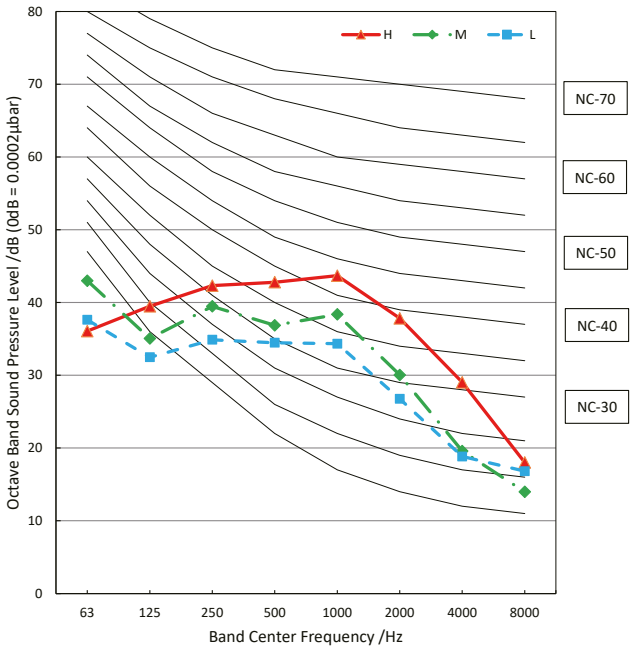
KIZ-PR-12HDI-I



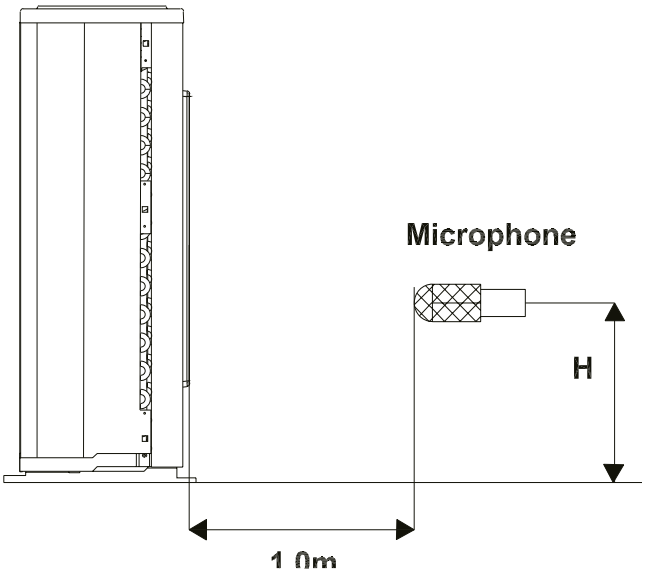
KIZ-PR-18HDI-I



KIZ-PR-12HDI-I



7.2 Outdoor Unit



Note: H= 0.5 × height of outdoor unit

Notes:

-Sound measured at 1.0m away from the center of the unit.

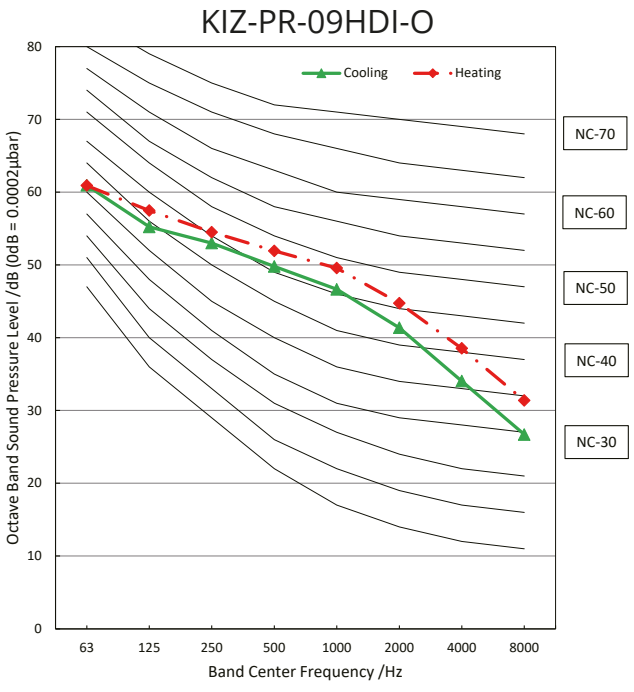
-Data is valid at free field condition

-Data is valid at nominal operation condition

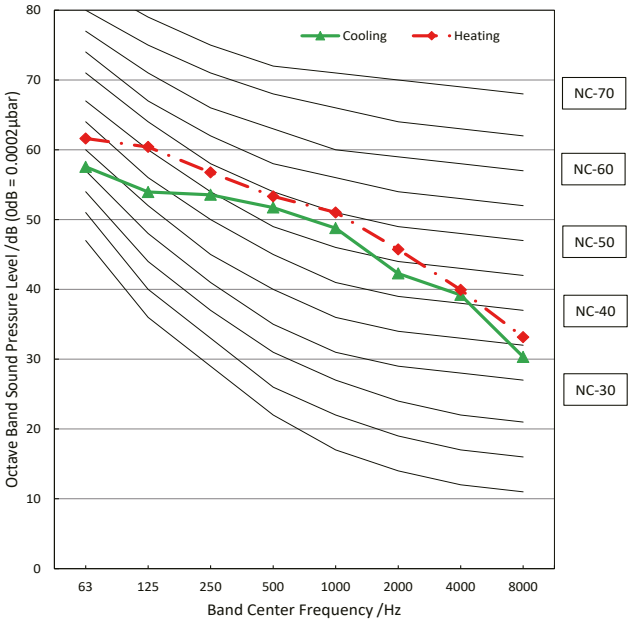
-Reference acoustic pressure OdB=20μPa

-Sound level will vary depending on arrange off actors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

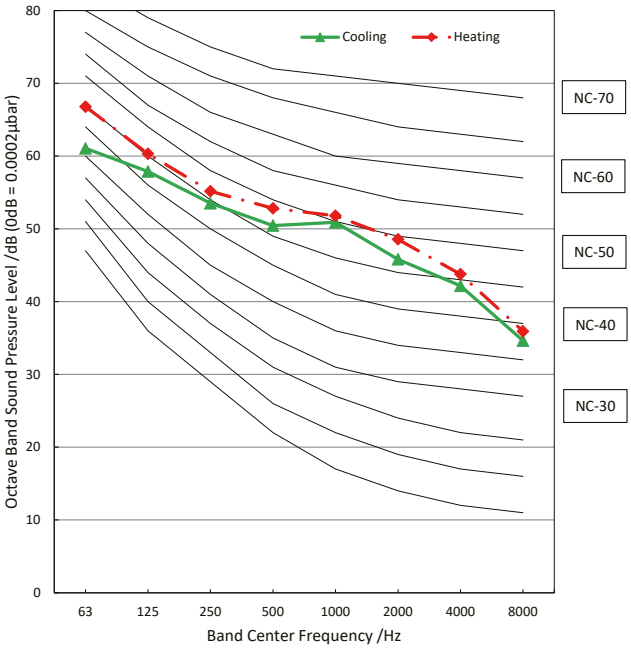
-The operating conditions are assumed to be standard.



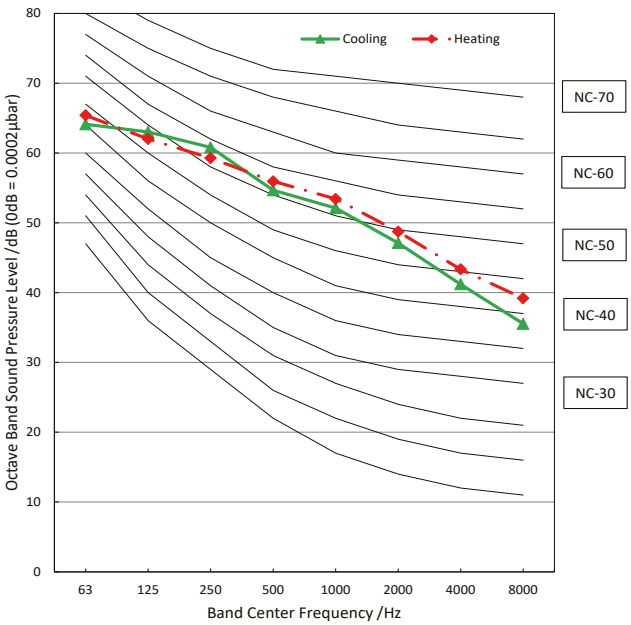
KIZ-PR-12HDI-O



KIZ-PR-18HDI-O



KIZ-PR-24HDI-O



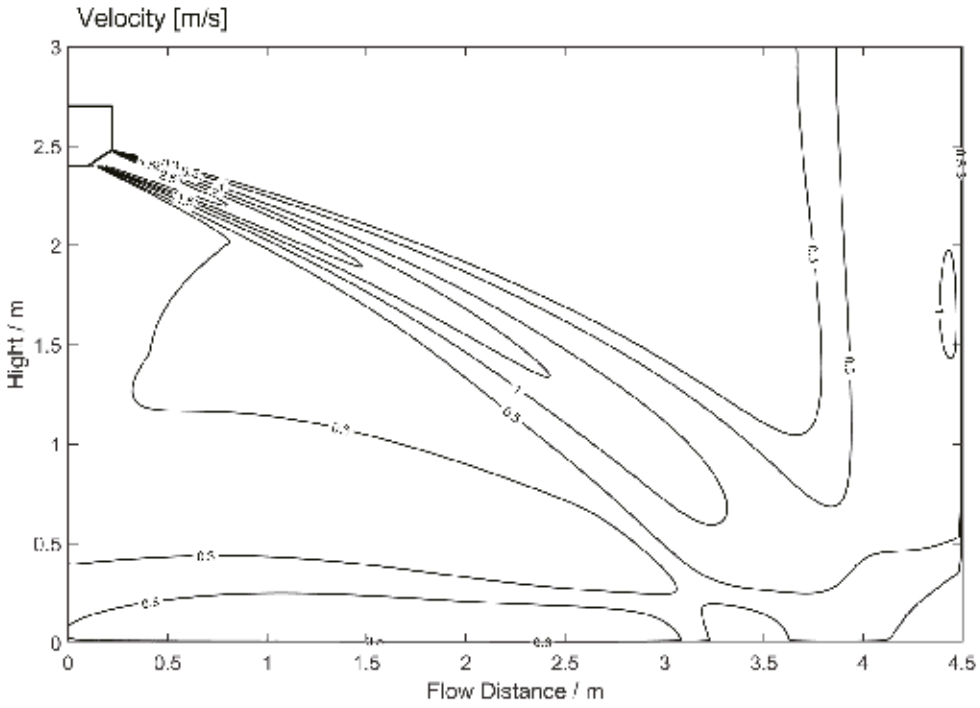
8. Air Velocity and Temperature Distributions

'9k

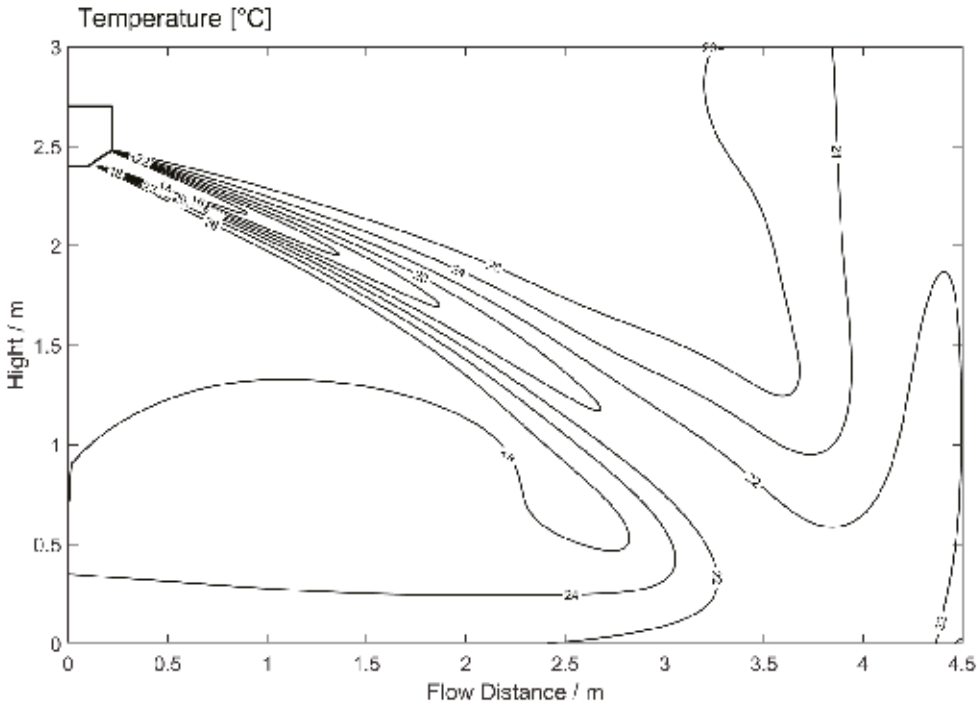
Cooling(ID: 27°C/80.6°F, OD: 35°C/95°F)

Discharge Angle 20°

Airflow velocity distributions



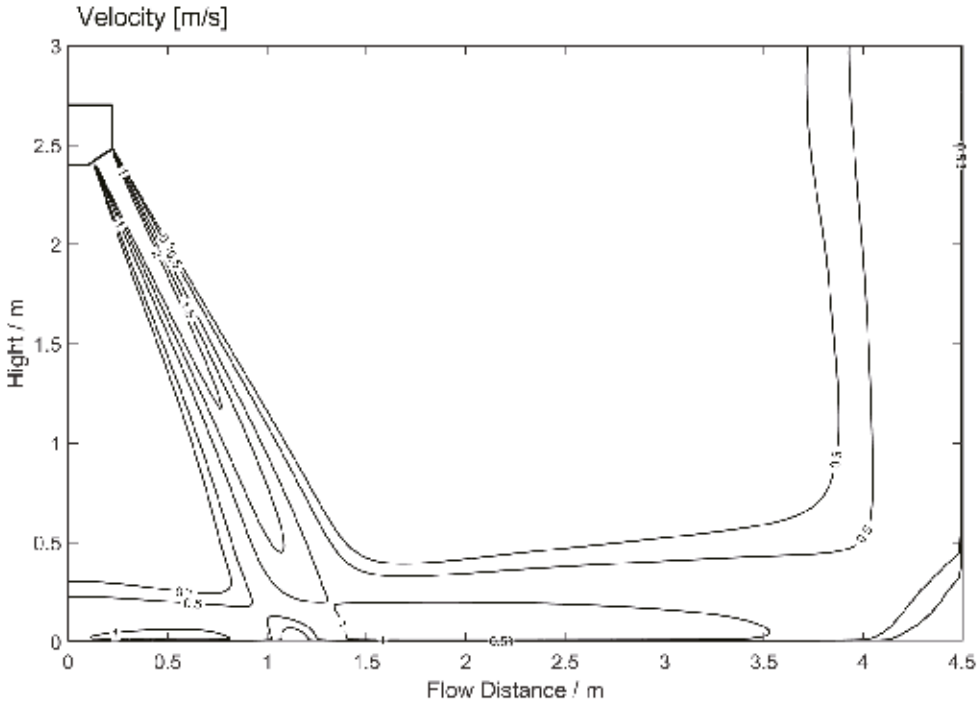
Temperature distributions



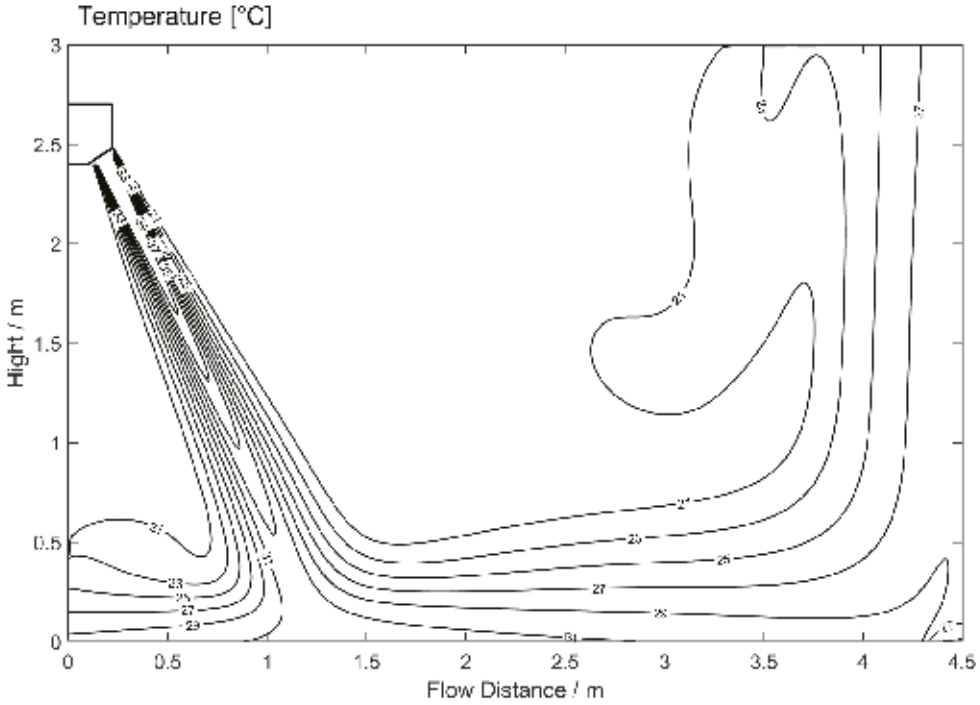
Heating(ID: 20°C/68°F, OD: 7°C/44.6°F)

Discharge Angle 65°

Airflow velocity distributions



Temperature distributions

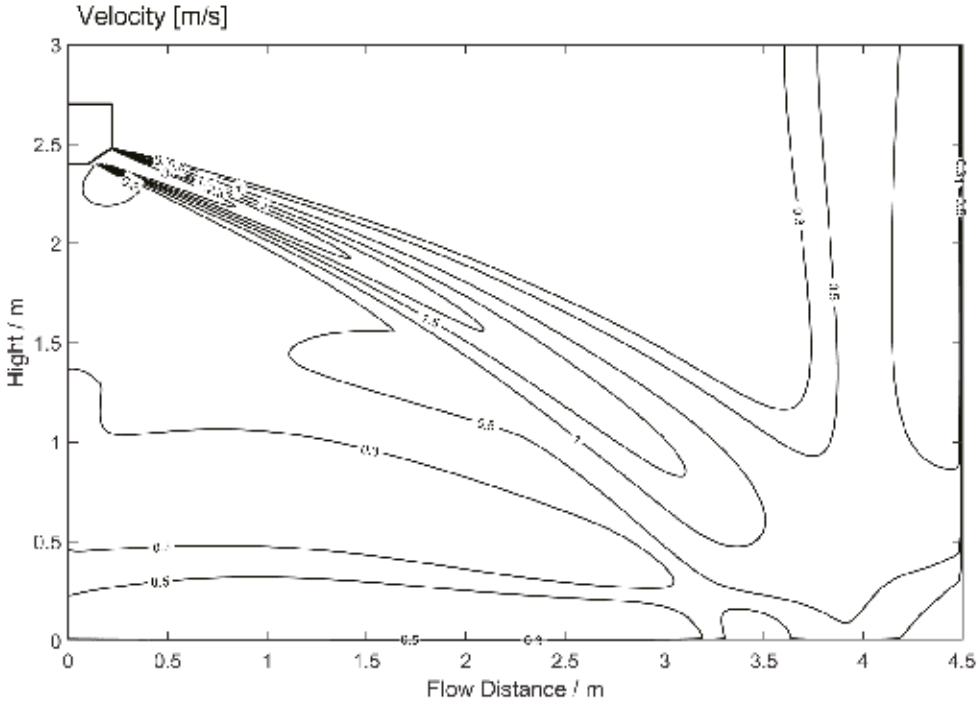


12k

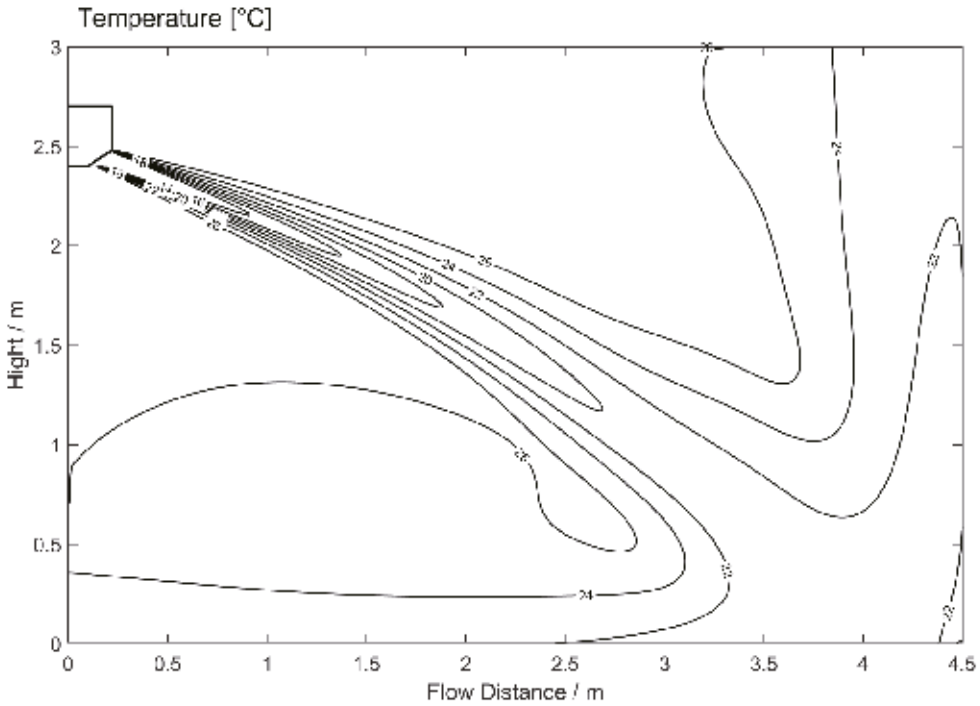
Cooling(ID: 27°C/80.6°F, OD: 35°C/95°F)

Discharge Angle 20°

Airflow velocity distributions



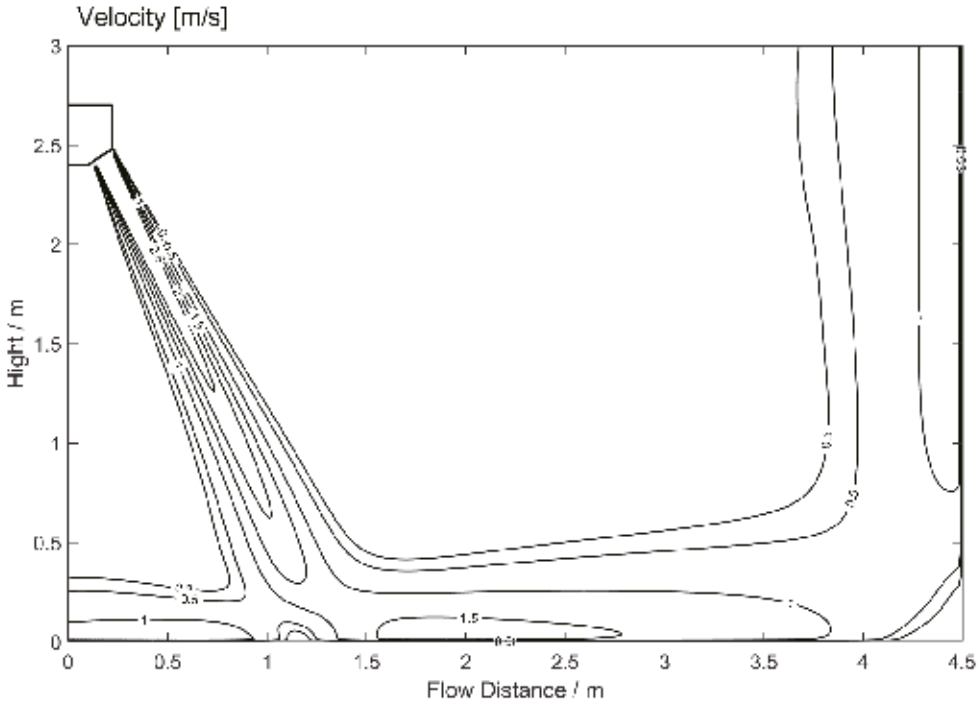
Temperature distributions



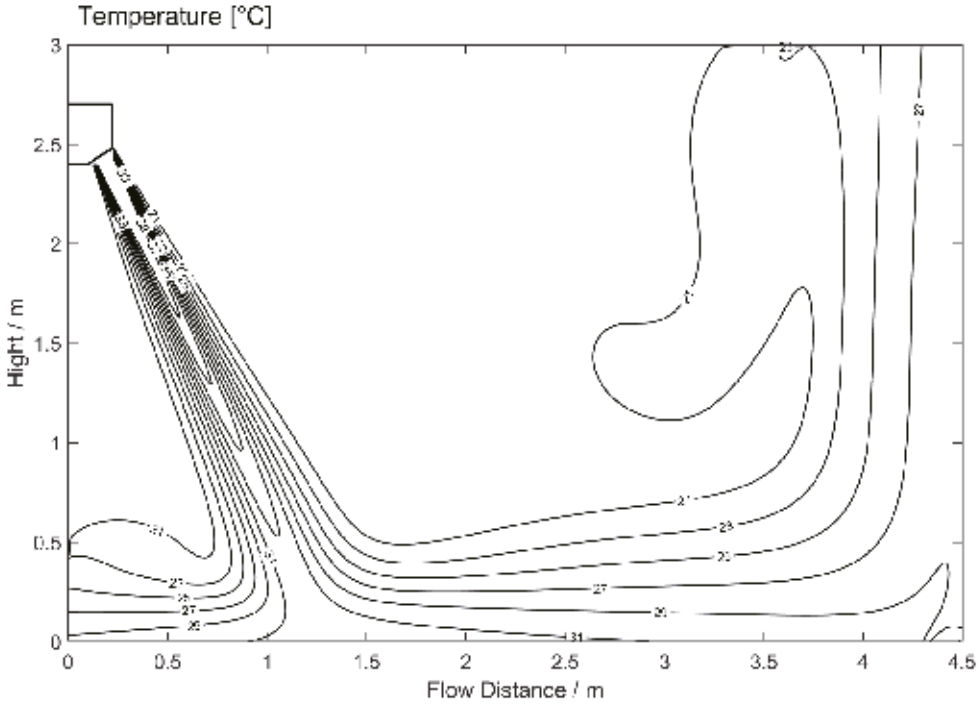
Heating(ID: 20°C/68°F, OD: 7°C/44.6°F)

Discharge Angle 65°

Airflow velocity distributions



Temperature distributions

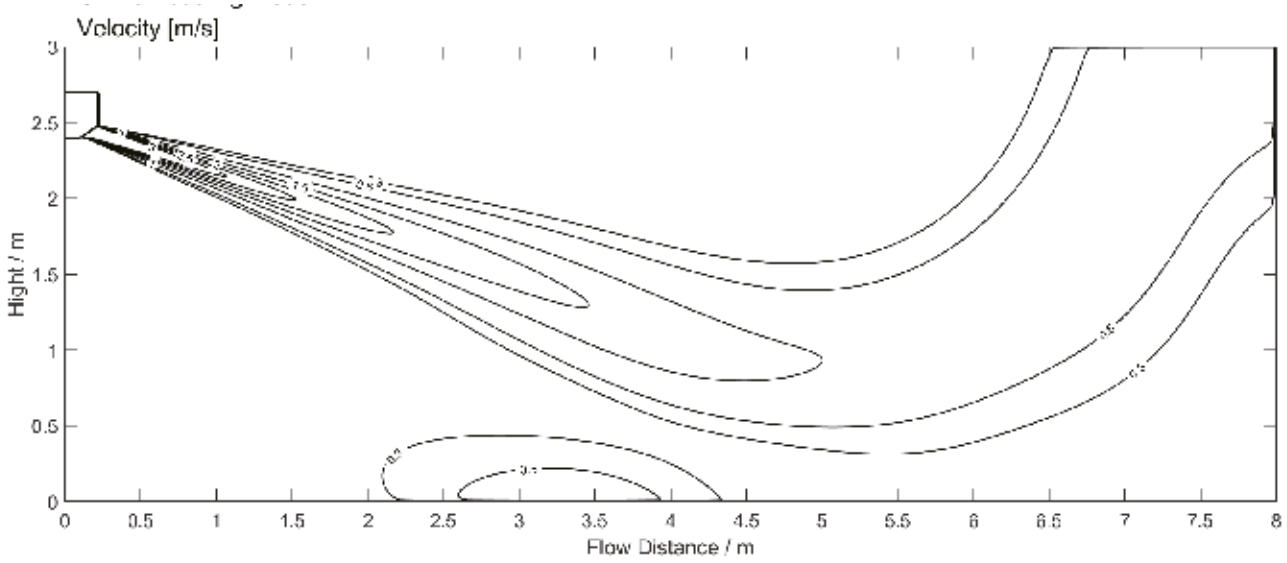


18k

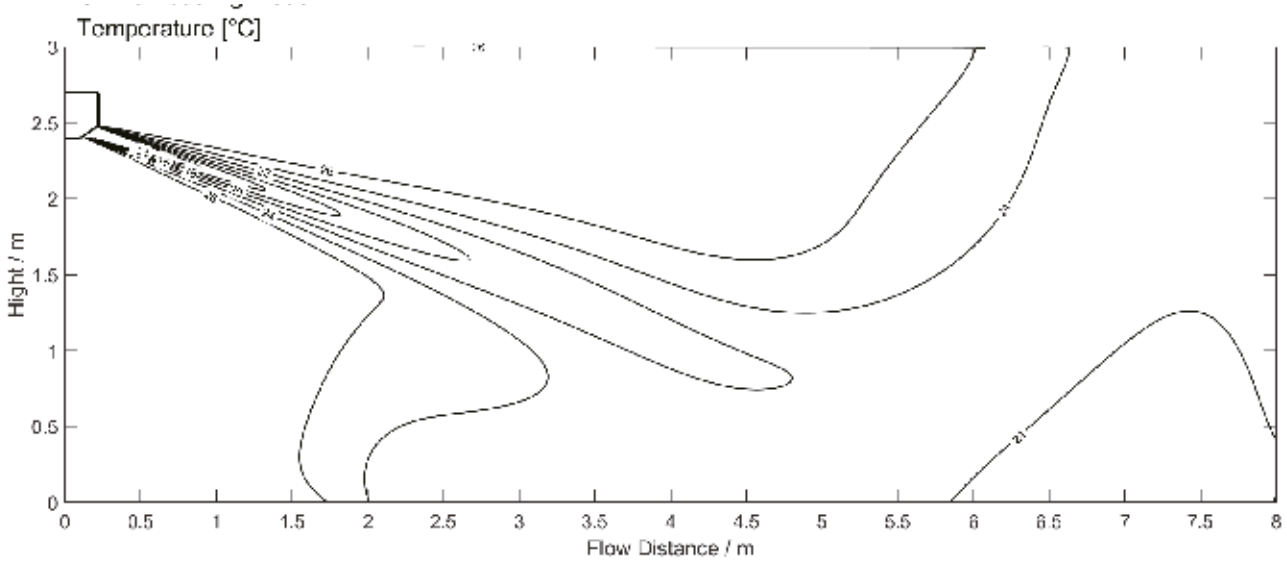
Cooling(ID: 27°C/80.6°F, OD: 35°C/95°F)

Discharge Angle 18°

Airflow velocity distributions



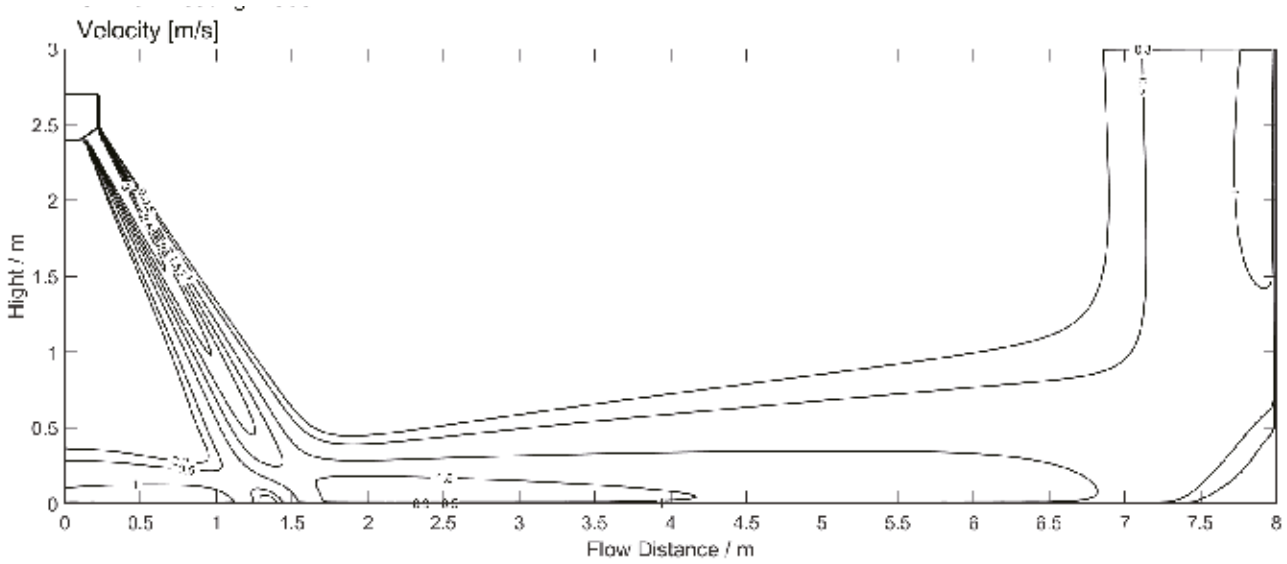
Temperature distributions



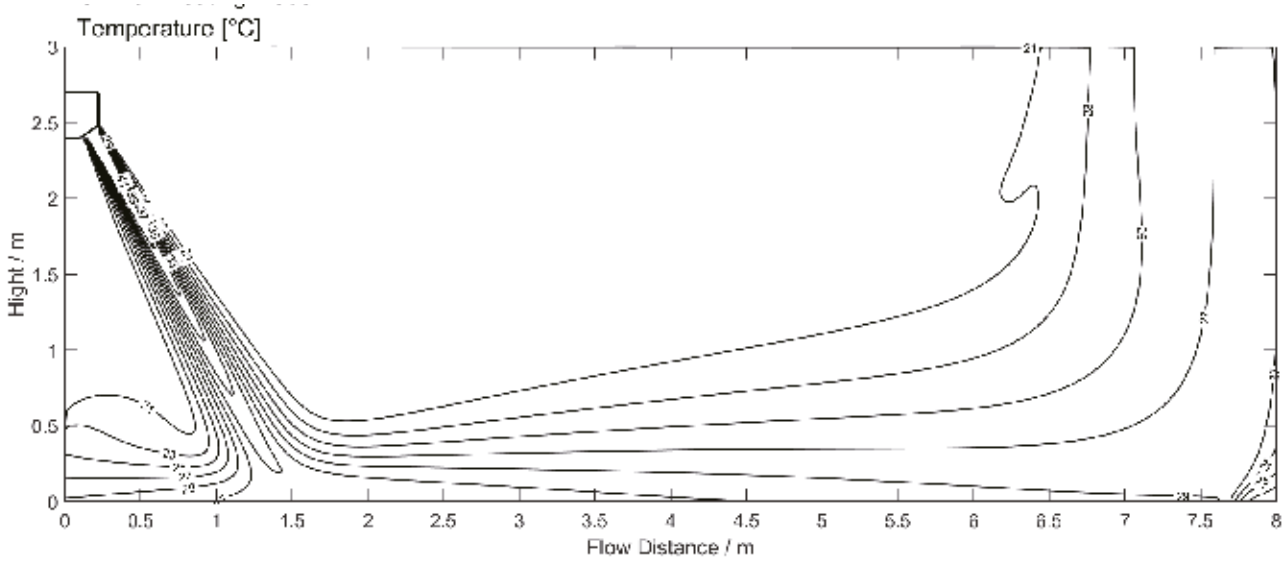
Heating(ID: 20°C/68°F, OD: 7°C/44.6°F)

Discharge Angle 62°

Airflow velocity distributions



Temperature distributions

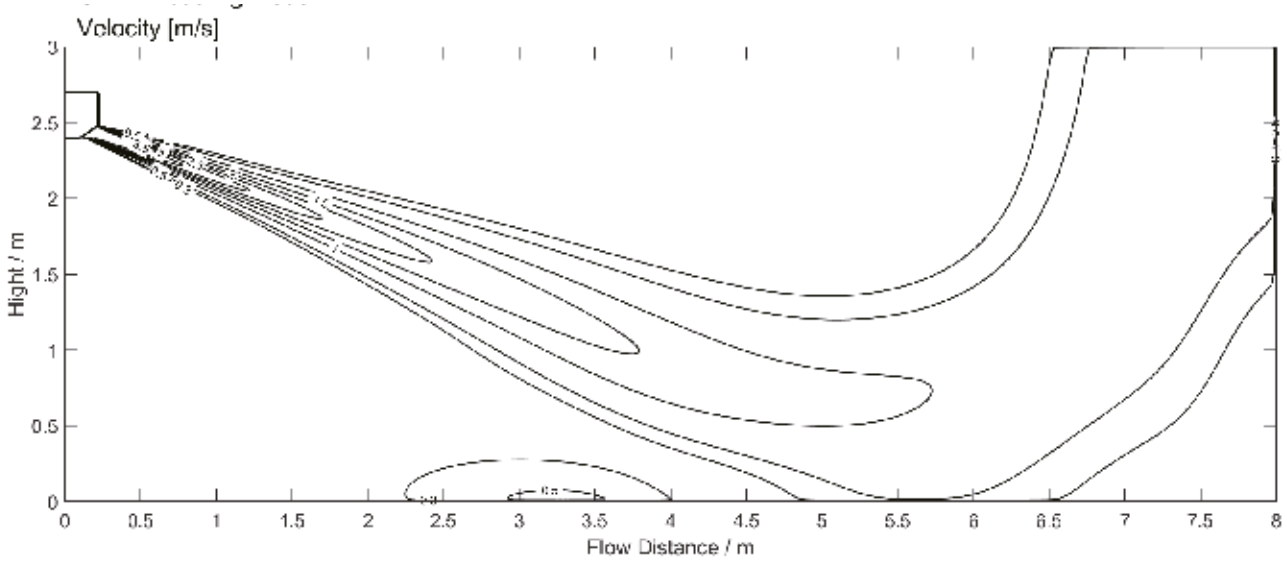


24k

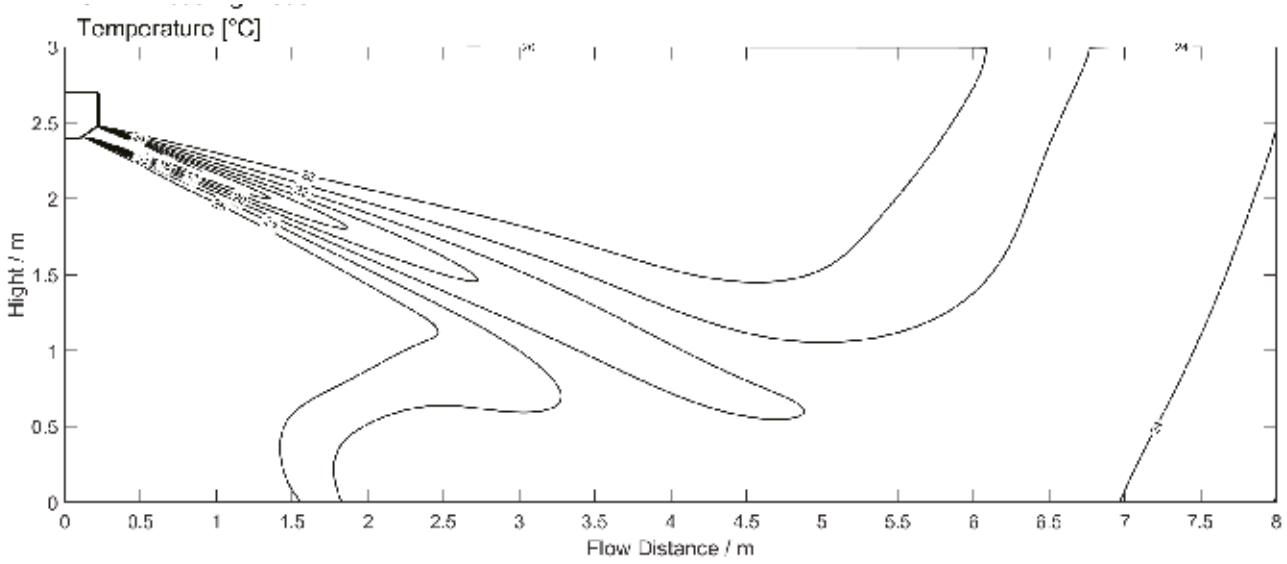
Cooling(ID: 27°C/80.6°F, OD: 35°C/95°F)

Discharge Angle 20°

Airflow velocity distributions



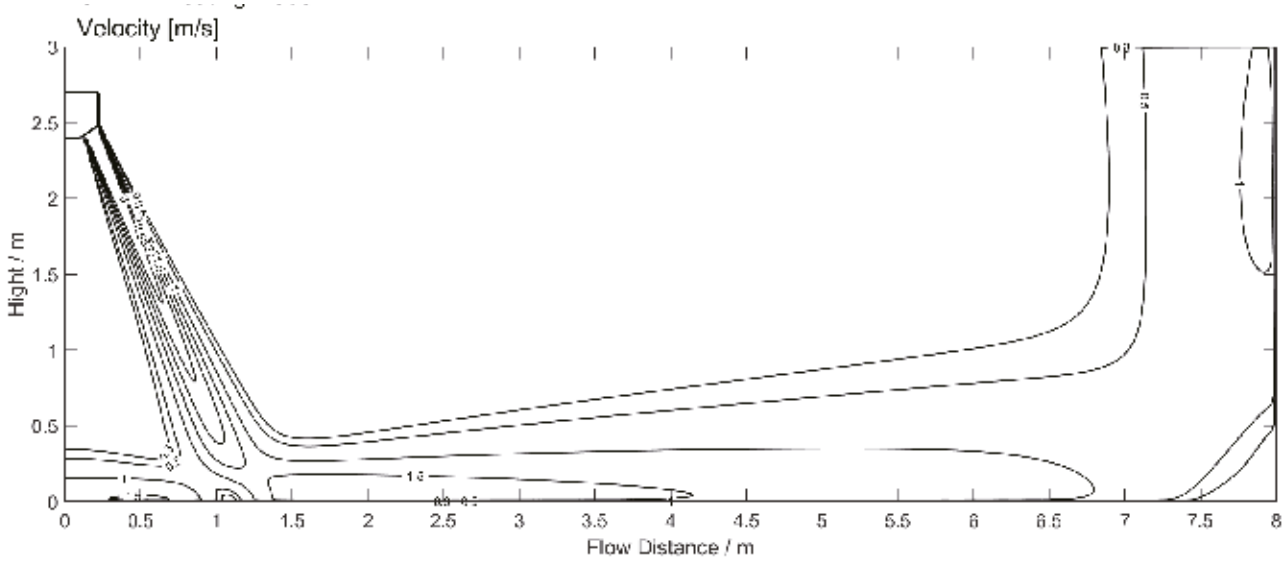
Temperature distributions



Heating(ID: 20°C/68°F, OD: 7°C/44.6°F)

Discharge Angle 68°

Airflow velocity distributions



Temperature distributions