DAIKIN

technical data

air conditioning systems

RKH-C

Pair Application,
Inverter Controlled Unit

Split Sky Air

Split - Sky Air

ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment

Daikin units comply with the European regulations that guarantee the safety of the product.

Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.

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Specifications are subject to change without prior notice.

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RKH-C

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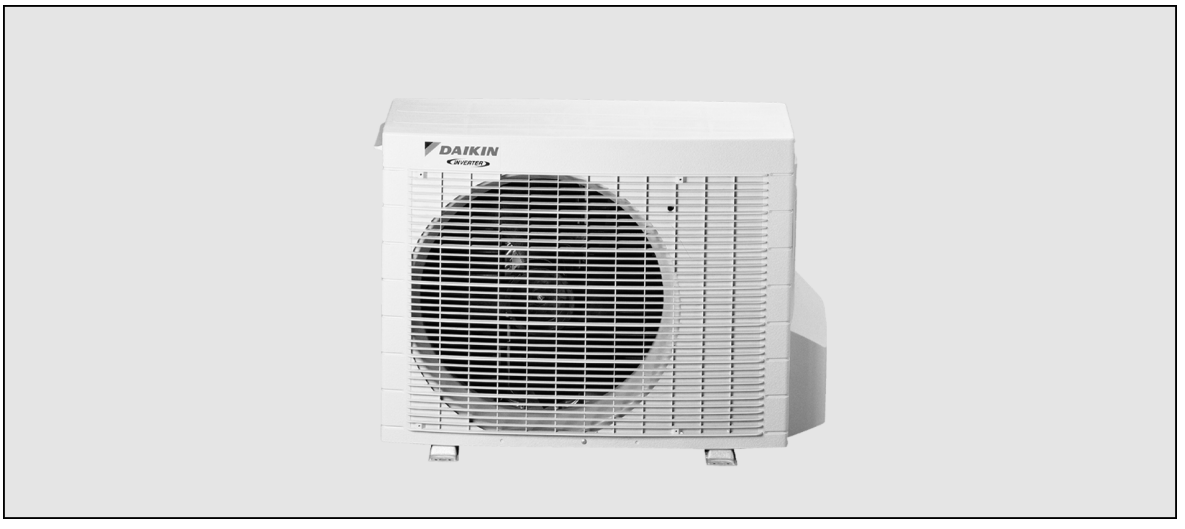
OPTIMISED DESIGN R-410A

1 Features

1 Outdoor units for pair application

- Daikin outdoor units can be mounted easily on a roof or terrace or simply placed against an outside wall. They are fitted with a swing compressor, renowned for its low noise and high energy efficiency.



2 Specifications

TECHNICAL SPECIFICATIONS						
OUTDOOR UNITS				**RKH20CVMB**	**RKH25CVMB**	**RKH35CVMB**
DIMENSIONS	Unit	H	mm	560		
		W	mm	695		
		D	mm	265		
WEIGHT			kg	31		
COLOUR	Unit			Ivory white		
SOUND LEVEL	Sound pressure (1) (Cooling)	high/low	dB(A)	46/*	46/*	48/*
	Sound power (2) (Cooling)	high	dB(A)	61	61	63
FAN	Air flow rate (cooling)	high/low	rpm	29/*	29/*	27.5/*
	Speed	high	rpm	720	720	710
	Model			Propeller fan		
	Motor output		W	25		
HEAT EXCHANGER	Type			Colgate fin, ⌀ 8 grooved tube		
	Rows x stages x fin pitch		mm	1 x 24 x 1.49		2 x 24 x 1.41
REFRIGERANT CIRCUIT	Refrigerant type			R-410A		
	Refrigerant charge		kg	0.79	0.79	1.01
	Maximum allowable distance between indoor and outdoor		m	15	15	15
	Maximum allowable level difference			15	15	15
	Refrigerant control			Motor operated expansion valve		
COMPRESSOR	Type			Hermetically sealed swing type		
	Model			1YC23NXD#A		
	Motor output			600		
	Oil type			FVC50K		
	Oil charge volume		ℓ	0.375		
PIPING CONNECTIONS		liquid	mm	ϕ6.4		
		gas	mm	ϕ9.5		
		drain	mm	ϕ18.0		
INSULATION MATERIAL	Heat insulation			Both liquid and gas pipes		

* This information was not available at the time of publication.

ELECTRICAL SPECIFICATIONS						
OUTDOOR UNITS				**RKH20CVMB**	**RKH25CVMB**	**RKH35CVMB**
CURRENT	Nominal running current	cooling	A	3.12	3.52	4.72
	Max. running current	cooling	A	Please refer to electrical data		
	Starting current	cooling	A	4.0	4.4	4.9

OUTDOOR UNITS			**RKH20CVMB**	**RKH25CVMB**	**RKH35CVMB**
POWER SUPPLY			VM		
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase		1~		
	Frequency	Hz	50		
	Voltage	V	230		

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NOTES

1 The sound pressure level is measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. For measuring conditions: please refer to item 8 of this chapter.

2 The sound power level is an absolute value indicating the "power" which a sound source generates.

2 Specifications

2 ELECTRICAL DATA

RKH20CVMB

Indoor unit	Outdoor unit	Power supply				Compressor		OFM		IFM	
		Hz-Volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTKS20CVMB	RKH20CVMB	50-230	MAX. 50Hz 253V MIN. 50Hz 207V	13.0	15	42	2.81	25	0.35	18	0.20

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RKH25CVMB

Indoor unit	Outdoor unit	Power supply				Compressor		OFM		IFM	
		Hz-Volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTKS25CVMB	RKH25CVMB	50-230	MAX. 50Hz 253V MIN. 50Hz 207V	13.0	15	47	3.21	25	0.35	18	0.20

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RKH35CVMB

Indoor unit	Outdoor unit	Power supply				Compressor		OFM		IFM	
		Hz-Volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTKS35CVMB	RKH35CVMB	50-230	MAX. 50Hz 253V MIN. 50Hz 207V	13.0	15	70	4.41	25	0.35	18	0.20

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SYMBOLS

MCA : Min. Circuit Amps (A)
MFA : Max. Fuse Amps (A)
RHz : Rated operating frequency(Hz)
RLA : Rated Load Amps (A)
OFM : Outdoor Fan Motor
IFM : Indoor Fan Motor
FLA : Full Load Amps
W : Rated motor output (W)

NOTES

1. RLA is based on the following conditions:
   Indoor temp.: 27°CDB/19.0°CWB
   Outdoor temp. : 35°CDB
2. Maximum allowable voltage unbalance between phases is 2%
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.
5. For more details concerning conditional connections, see http://www.daikineurope.com/extranet, select "Daikin Documentation" and select "conditional connection", "the requested product type" and "English" from the drop down lists, click the search button.
   Finally, click on the document title of your choice.

3 Capacity tables

FTKS20CVMB + RKH20CVMB

AFR	7.7
BF	0.23

Cooling capacity **230V [50Hz]**

Indoor		Outdoor temperature (°C)																	
EWB	EDB	20			25			30			32			35			40		
(°C)	(°C)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	1.86	1.68	0.46	1.80	1.62	0.52	1.74	1.57	0.57	1.71	1.54	0.58	1.67	1.50	0.59	1.60	1.44	0.64
16.0	22	2.01	1.81	0.47	1.95	1.75	0.53	1.88	1.69	0.58	1.85	1.66	0.59	1.80	1.62	0.60	1.72	1.55	0.65
18.0	25	2.16	1.95	0.48	2.09	1.88	0.54	2.02	1.82	0.59	1.98	1.79	0.60	1.93	1.74	0.61	1.85	1.67	0.67
19.0	27	2.24	2.01	0.48	2.16	1.95	0.54	2.09	1.88	0.60	2.05	1.85	0.61	2.00	1.80	0.62	1.92	1.72	0.67
22.0	30	2.47	2.22	0.50	2.39	2.15	0.56	2.31	2.08	0.61	2.27	2.04	0.62	2.21	1.99	0.64	2.12	1.91	0.69
24.0	32	2.63	2.36	0.51	2.54	2.29	0.57	2.45	2.21	0.63	2.41	2.17	0.64	2.35	2.12	0.65	2.25	2.03	0.70

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FTKS25CVMB + RKH25CVMB

AFR	7.7
BF	0.23

Cooling capacity **230V [50Hz]**

Indoor		Outdoor temperature (°C)																	
EWB	EDB	20			25			30			32			35			40		
(°C)	(°C)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	2.10	1.78	0.52	2.03	1.72	0.58	1.96	1.66	0.65	1.92	1.63	0.66	1.87	1.59	0.67	1.80	1.52	0.72
16.0	22	2.26	1.92	0.53	2.19	1.86	0.59	2.11	1.79	0.66	2.08	1.76	0.67	2.02	1.72	0.68	1.94	1.65	0.74
18.0	25	2.43	2.06	0.54	2.35	2.00	0.61	2.27	1.93	0.67	2.23	1.89	0.68	2.17	1.85	0.69	2.08	1.77	0.75
19.0	27	2.52	2.14	0.55	2.43	2.06	0.61	2.35	1.99	0.67	2.31	1.96	0.68	2.25	1.91	0.70	2.16	1.83	0.76
22.0	30	2.78	2.36	0.56	2.69	2.28	0.63	2.60	2.20	0.69	2.55	2.17	0.70	2.49	2.11	0.72	2.38	2.02	0.78
24.0	32	2.96	2.51	0.57	2.86	2.43	0.64	2.76	2.34	0.71	2.71	2.30	0.72	2.64	2.24	0.73	2.53	2.15	0.79

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FTKS35CVMB + RKH35CVMB

AFR	7.7
BF	0.18

Cooling capacity **230V [50Hz]**

Indoor		Outdoor temperature (°C)																	
EWB	EDB	20			25			30			32			35			40		
(°C)	(°C)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	2.93	2.14	0.78	2.84	2.07	0.87	2.74	2.00	0.96	2.69	1.97	0.98	2.62	1.92	1.00	2.51	1.84	1.08
16.0	22	3.17	2.31	0.80	3.06	2.24	0.89	2.96	2.16	0.98	2.91	2.12	1.00	2.83	2.07	1.02	2.72	1.98	1.10
18.0	25	3.40	2.49	0.81	3.29	2.40	0.90	3.18	2.32	1.00	3.13	2.28	1.01	3.04	2.22	1.04	2.92	2.13	1.12
19.0	27	3.52	2.57	0.82	3.41	2.49	0.91	3.29	2.40	1.01	3.23	2.36	1.02	3.15	2.30	1.05	3.02	2.20	1.13
22.0	30	3.89	2.84	0.84	3.76	2.75	0.94	3.63	2.65	1.04	3.57	2.61	1.05	3.48	2.54	1.08	3.33	2.43	1.16
24.0	32	4.14	3.02	0.86	4.00	2.92	0.96	3.86	2.82	1.06	3.80	2.77	1.07	3.70	2.70	1.10	3.55	2.59	1.19

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SYMBOLS

AFR:	Air flow rate	(m^3/min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)

NOTES

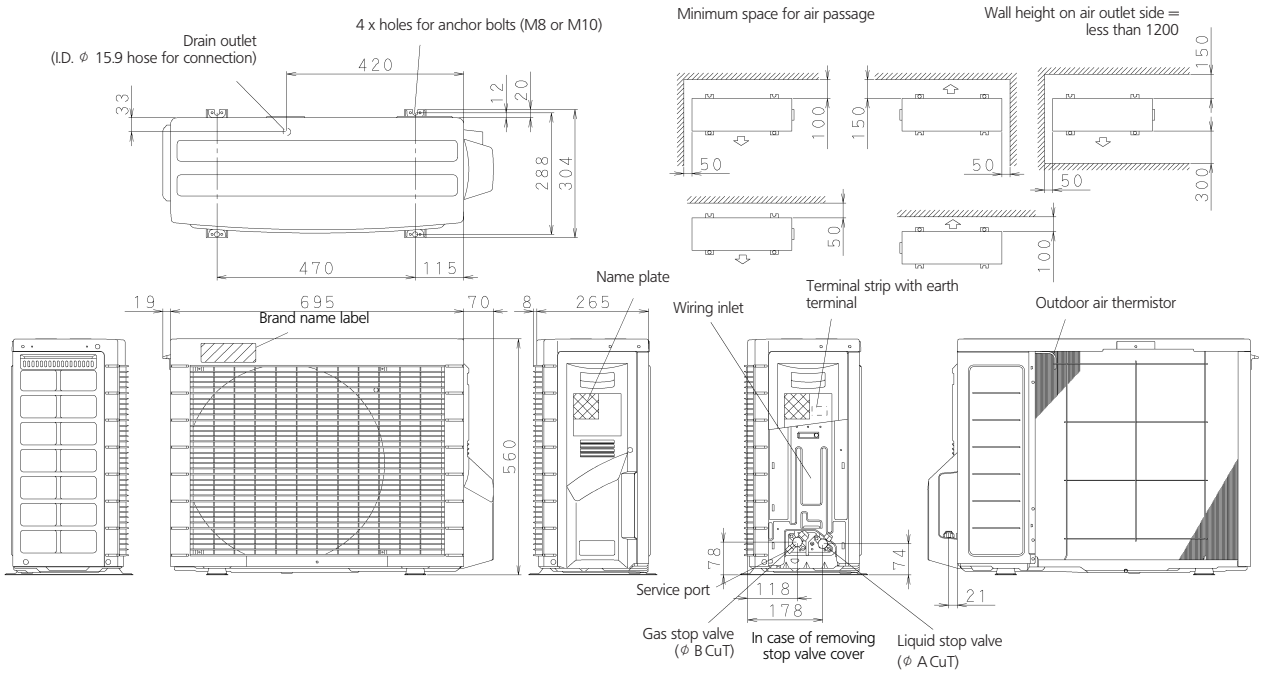
1. Ratings shown are net capacities which include a deduction for indoor fan motor heat
2. ▭ Shows nominal cooling capacities and power input
3. TC, PI and SHC must be calculated by interpolation using the figures in the above tables. (Figures out of the tables should not be used for calculation.)
4. SHC is based on each EWB and EDB
   SHC* = SHC correction for other dry bulb
   SHC* = 0.02 x AFR (m^3/min) x (1-BF) x (DB-EDB)
   Add SHC* to SHC.
5. Capacities are based on the following conditions:
   Corresponding refrigerant piping length: 5 m
   Level difference: 0 m
6. Air flow rate (AFR) and Bypass factor (BF) are taburated above.

4 Dimensional drawings

4

RKH20,25,35C

unit (mm)



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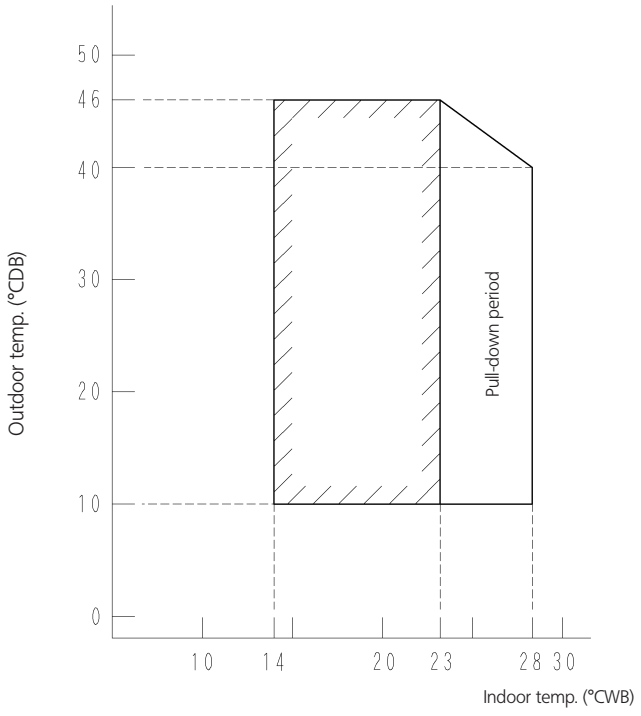
5 Operation range

RKH20,25,35C



Notes:

The graph is based on the following conditions:

1. Equivalent piping length	7.5 m
2. Level difference	0 m
3. Air flow rate	high

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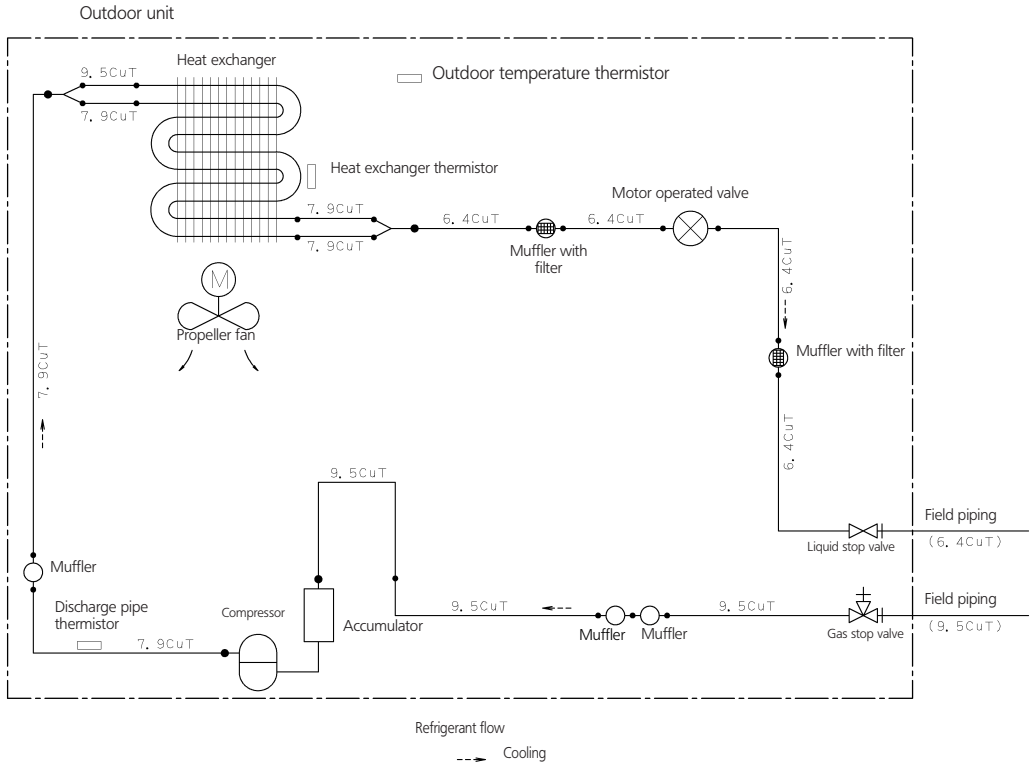
6 Piping diagrams

RKH20,25C



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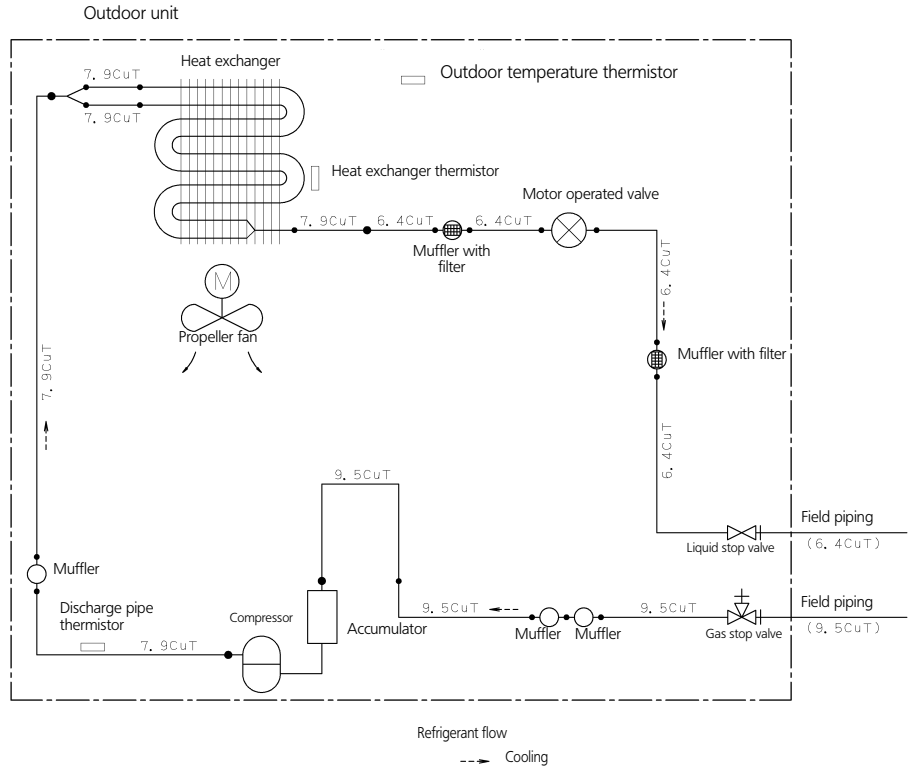
RKH35C



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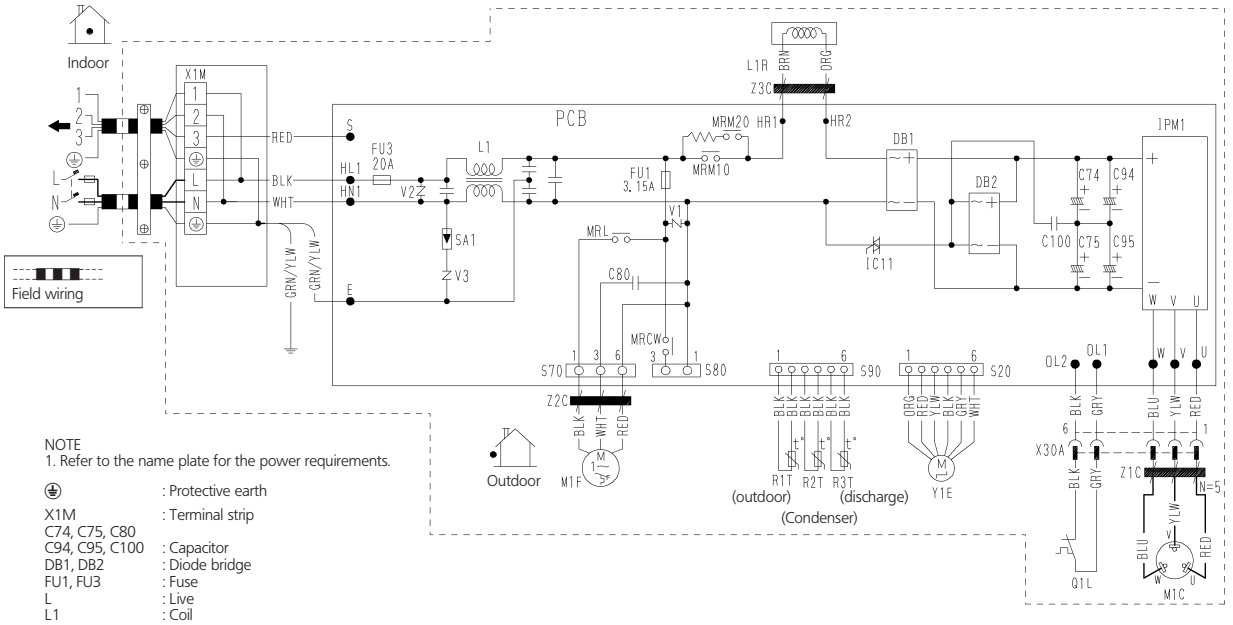
7 Wiring diagrams

RKH20,25,35C



NOTE
1. Refer to the name plate for the power requirements.

⏚	: Protective earth
X1M	: Terminal strip
C74, C75, C80	
C94, C95, C100	: Capacitor
DB1, DB2	: Diode bridge
FU1, FU3	: Fuse
L	: Live
L1	: Coil
L1R	: Reactor
M1C	: Compressor motor
M1F	: Fan motor
PCB	: Printed circuit board
MRCW, MRL,	
MRM10, MRM20	: Magnetic relay
N	: Neutral
Q1L	: Overload protector
R1T, R2T, R3T,	: Thermistor
S20, S75, S80, S90	: Connector
SA1	: Surge arrester
Z1C, Z2C, Z3C	: Ferrite core
IC11	: Solid state relay
IMP1	: Intelligent power module
V1, V2, V3	: Varistor
Y1E	: Electronic expansion valve coil

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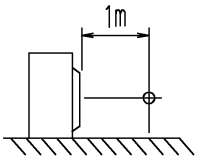
8 Sound level

8-1 Sound level data

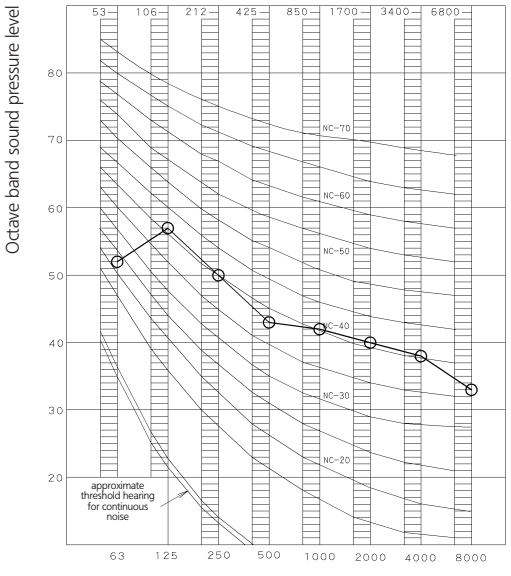
Cooling only

Model	Sound pressure level		Measuring location	Sound power level (cooling)
	230V, 50Hz			
	Cooling			
	H	L		
RKH20C	46	*		61
RKH25C	46	*		61
RKH35C	48	*		63

* This information was not available at the time of publication.

8-2 Sound pressure spectrum

RKH20,25C (Cooling)



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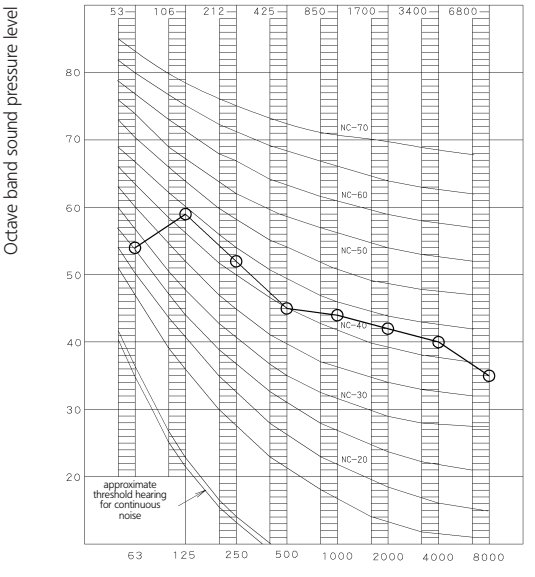
Octave band center frequency (Hz)

RKH35C (Cooling)



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Octave band center frequency (Hz)

Legend

50/60Hz, 220-240/220-230V

NOTES

1 Operation sound is measured in an anechoic chamber.
2 Operation sound level differs with operation and ambient conditions.
3 Reference acoustic pressure 0dB = 20μPa

9 Accessories

9-1 Standard accessories

RKH-C

Accessories supplied with the outdoor unit:	
Installation manual	1

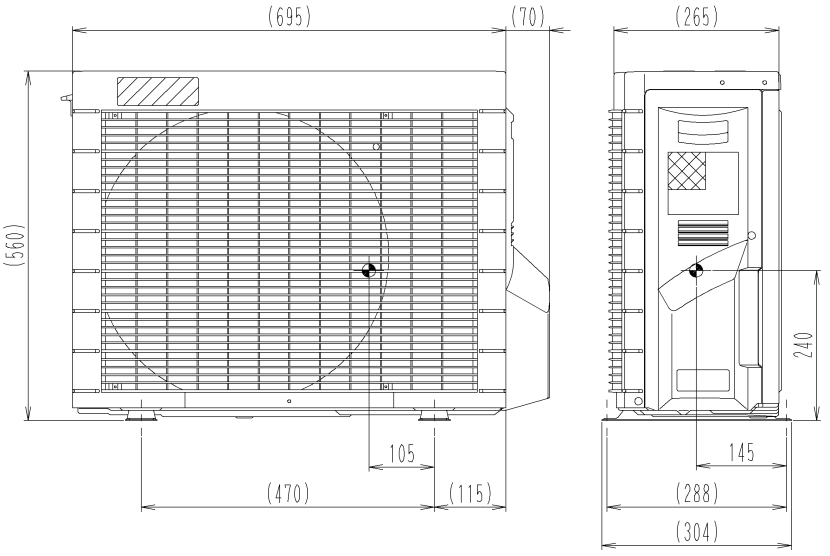
9-2 Optional accessories

RKH-C

	RKH20CVMB	RKH25CVMB	RKH35CVMB
Air direction adjustment grille	KPW937A4		

10 Center of gravity

RKH20,25C



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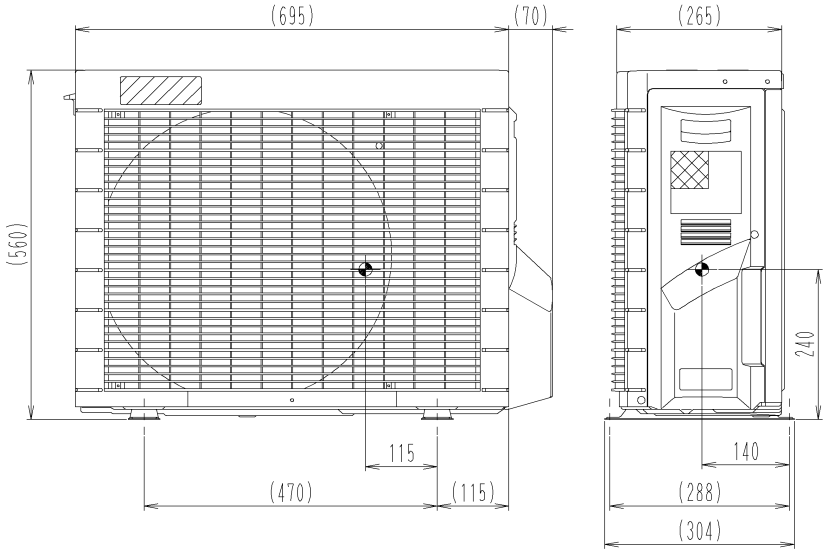
RKH35C



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11 Installation

RKH20,25,35C

Outdoor unit installation drawings

Model	20 / 25 / 35 class
Max. allowable length	15m
Max. allowable height	15m
Additional refrigerant required for refrigerant pipe exceeding 10 m in length.	20 g/m
Gas pipe	O.D. 9.5 mm
Liquid pipe	O.D. 6.4 mm

* Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.