

PRODUCT CATALOGUE | 2020

COMMERCIAL AIR CONDITIONERS



R32
FREON

CH
Cooper & Hunter



HEAD OFFICE OF THE COOPER&HUNTER

MIAMI, FLORIDA

EIN ASSIGNED 47-3995007

3550 NW 113TH COURT

DORAL, FL 33178





About the company

The trademark C&H (COOPER&HUNTER) belongs to the company COOPER AND HUNTER INTERNATIONAL CORPORATION (USPTO/United States Patent & Trademark/№ 4494682)

Having inherited the best traditions of leading companies in the area of climate control equipment production in the USA, the company Cooper&Hunter International Corporation in 2003 started production of a wide spectrum of climate control equipment under their own trademark.

Two ideologies, two directions, two leaders have united to create a new project.

Elegant design corresponding to the fashionable trend, ergonomics and comfort are combined with innovative solutions, modern technology and high quality.

The words "COMFORT INNOVATIONS" became the motto of the COOPER&HUNTER brand.

COOPER&HUNTER is an international climate control brand. Sales geography covers a big quantity of countries on various continents, and it is constantly growing. It is the proof of deserved popularity of the trade mark.

SALES OF COOPER&HUNTER CLIMATE CONTROL EQUIPMENT

Austria, Albania, Armenia, Azerbaijan, Bangladesh, Belgium, Belarus, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, El Salvador, Estonia, Finland, Ghana, Guinea, Greece, Georgia, Germany, Hungary, Italy, Kosovo, Latvia, Lebanon, Lithuania, Macedonia, Malta, Moldova, Morocco, Montenegro, Netherlands, Norway, Palestine, Poland, Russia, Romania, Sierra Leone, Slovakia, Slovenia, Spain, Sri Lanka, South Africa, Sweden, UAE, Ukraine, USA.

* Cooper&Hunter is constantly working to improve their products, so the information in this manual is subject to change without prior notice.



"COOPER AND HUNTER" SOCIAL RESPONSIBILITY PROJECT "WE SAVE THE PLANET" LAUNCHED

In the autumn of 2019, Cooper&Hunter, the global brand of air conditioning and heating equipment, announced the launch of the long-term project "We Save the Planet". It will cover all areas where the sale of Cooper&Hunter HVAC equipment is carried out, including more than 45 countries.

By definition, corporate social responsibility is a voluntary contribution of a business to the social, economic and environmental sphere, which is directly related to the core business of the company. The company has decided to implement strategic and systematic support of environmental efforts, sports associations, and socially significant actions."

“ THE LOGO WITH THE SLOGAN "WE SAVE THE PLANET" HAS BEEN ASSIGNED AS THE OFFICIAL SYMBOL OF THE PROJECT.

Within the framework of this project, Cooper&Hunter, the largest manufacturer of HVAC equipment, made a number of commitments, and announced the implementation of measures, in the long term, that will help to improve the environment and preserve the ozone layer while improving the population, reducing harmful emissions, and restoring parks, squares and other green spaces.





THE PROJECT IMPLEMENTATION INCLUDES THE FOLLOWING OBLIGATIONS:

1

“Cooper&Hunter” is committed to adhering, in the manufacturing of HVAC equipment, to the highest quality standards, ensuring the use of ozone–safe freon R32, the global warming potential of which is reduced by more than 65%, compared with the previous generation of freon – R410. This obligation applies to all countries in which C&H equipment is sold, regardless of the certification requirements of each country, as well as to all equipment lines: from premium to economy class.

2

“Cooper&Hunter” agrees to use, in the manufacturing of HVAC equipment, technologies that ensure maximum energy efficiency. Thanks to new inverter technologies, with energy efficiency ratings of A+++, power plant costs, energy consumption, and the wasteful use of natural resources it can be minimized up to 40%.

3

Understanding the environmental problems of large settlements, the company will allocate funds and, in collaboration with local organizations and volunteers, organize actions to restore green areas, plant trees, and rehabilitate the environment.

4

Informing people about technologies that are designed to protect our planet. Conducting advertising campaigns, creating educational programs, and participating in informational occasions that increase awareness of social and environmental threats.

5

Traditional sponsorship of various types of sporting associations and events, at the district, city, and national level. Support activities that promote a healthy lifestyle, popularize sports among young people, and improve the quality of life of every person.



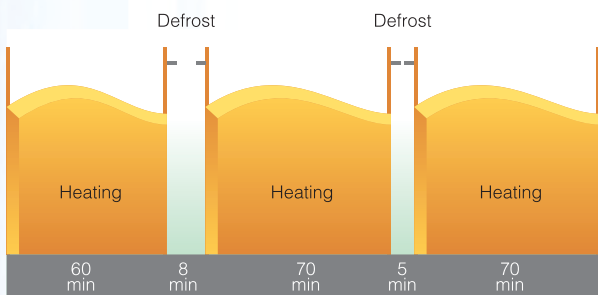
"I FEEL" FUNCTION

The function controls the air temperature by means of the sensor in remote control.

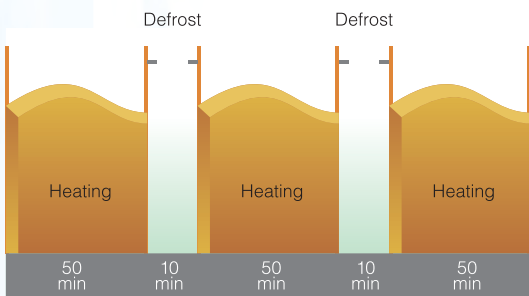
The temperature detector measures air temperature at the place and transfers the information to the air conditioner indoor unit.

"I feel" adjusts in such way to achieve necessary parameters of climate comfort directly where the remote control is.

INTELLIGENT DEFROST



Intelligent defrost Cooper&Hunter



Traditional defrost

COMFORT FOR LIFE



Intelligent defrost

Contrary to the previous programs and old models, the "Intelligent defrost" program activates the process if only it is really necessary.



Hot start

the air conditioner turns off only after the required air temperature is achieved.



Control panel lock

defends from the undesirable control.



Turbo mode

is a quick and powerful function to achieve the required temperature.



Night mode

very quiet operation and support of comfort temperature during the night.



"I feel" function

provides personalised environment since the temperature can be detected where the remote controller is located.



Welcome to Cooper&Hunter Business Portal

This business portal is intended for dealers and business partners of "Cooper&Hunter". "Cooper&Hunter" – is a modern-tech brand. We appreciate our partners and support them with continuous communications. Here you will find the information necessary for the successful sale of TM C&H:

- promotional materials (catalogs, brochures, layouts, samples, corporate identity, commercials video)
- technical manuals (user manuals, datasheets, certificates)

- detailed information for engineers and installers about the maintenance, and troubleshooting (technical catalogs, videos)
- on individual page, the dealer can see the personal commercial information, a list of equipment ready for sale and place a pre-order.

The list of services on our business portal is constantly growing. We are always ready to listen and implement your requests. Please apply in writing (portal@cooperandhunter.com).

Support of COOPER&HUNTER INTERNATIONAL CORPORATION

www.ch-business.com

*only to the registered dealers (the 1st level)

Cooper&HunterComfort Innovations I-Action Inverter Technology

C&H inverters are hi-tech systems controlled by the innovative built-in microprocessor based on unique technology I-Action Inverter Technology.

This means that the rotor compressor achieving the specified

temperature does not turn off and continues to work at the extremely low 1 hz frequency consuming only 40 watt. Thus Cooper&Hunter saves up to 50% of consumed electric power and extends the service period up to 10 years.

Advantages of I-Action Technology:



Extremely low frequency of compressor rotation

- Accurate temperature control
- Saves up to 40% of energy consumption

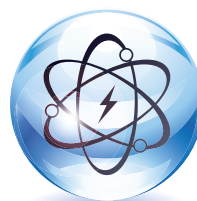


Refrigerant R410A

- Ozone-safe
- Effective cooling

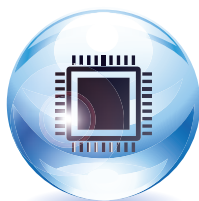
Refrigerant R32

- Low Global Warming Potential (GWP)
- Zero Ozone Depleting Potential (ODP)



Voltage automatic adjustment (150-265 V)

- Operation at unstable power level



Modern high-speed microprocessor

- High functional control
- Effective control of parameters



Noiseless operation

- As low 18 dB in the room
- Silent and comfort



Performance reliability

- Quality control at all production stages
- Perfect characteristics and high capacity



Precise temperature control

- Accuracy in the air temperature control up to 0,1°C
- Control of the specified parameters



Turbo mode

- High-speed achievement of the necessary temperature
- Quick cooling and space heating



Continuous operation

- Operates in the modes from maximum to minimum without turn off
- Saves the electric energy

NORDIC COMMERCIAL
DUCT TYPE



SERIES N4 |C:-15~+48 H:-20~+24| *INVERTER*

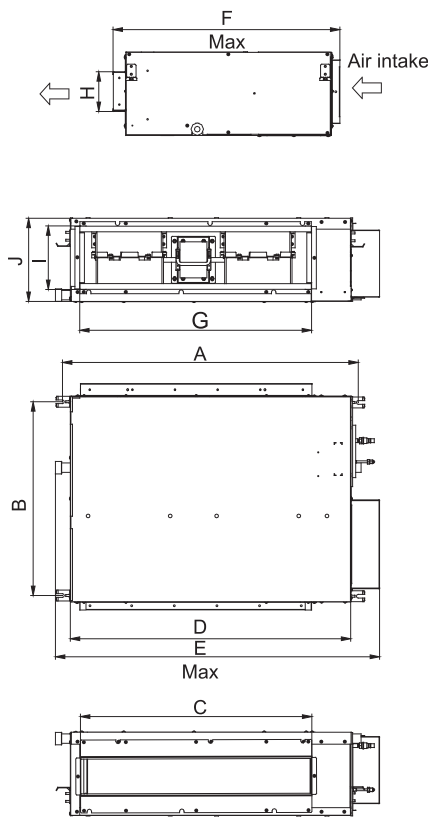


- ▶ Compact size;
 - ▶ Drain pump;
 - ▶ Low noise level;
 - ▶ Long life washable filter;
 - ▶ Remote and wired controllers as standard;
- ▶ Self-diagnosis of the main units and modes;
 - ▶ Multi-level protection system;
 - ▶ Intelligent defrost;
 - ▶ Length pipeline up to 50 m.

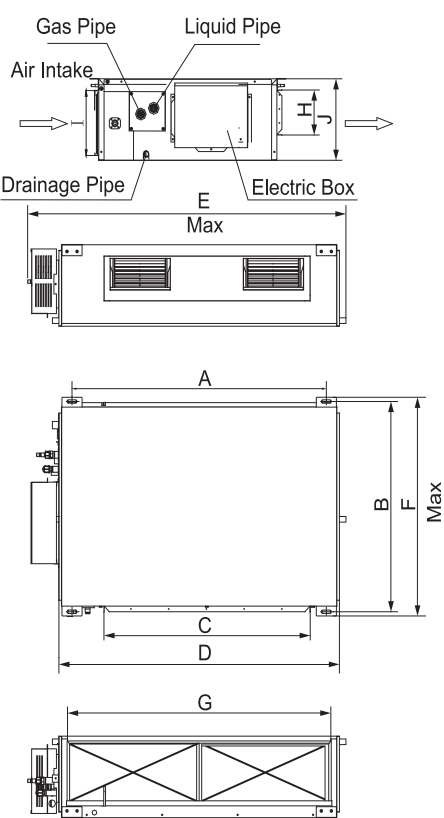
Model			CH-ID09NK4 / CH-IU09NM4	CH-ID12NK4 / CH-IU12NM4	CH-ID18NK4 / CH-IU18NM4	CH-ID24NK4 / CH-IU24NM4	CH-ID30NK4 / CH-IU30NM4	CH-ID36NK4 / CH-IU36NM4	CH-ID42NK4 / CH-IU42NM4	CH-ID48NK4 / CH-IU48NM4	CH-ID60NK4 / CH-IU60NM4	
Capacity	Cooling/Heating	kW	2.7/2.9	3.50/3.80	5.0/5.6	7.00/8.00	8.3/9.2	10.00/12.00	11.50/13.50	14.00/15.50	16.00/16.50	
Electric power supply			~220-240 V/50 Hz/1 Ph						~380-415 V/50 Hz/3 Ph			
Rated input	Cooling/Heating	kW	0.84/0.8	1.17/1.05	1.55/1.55	2.18/2.21	2.67/2.57	3.12/3.32	4.0/3.9	5.1/4.5	5.6/4.57	
Input rate	Cooling	A	3.9	5.40	7.50	10.10	12.4	5.40	6.90	8.80	9.7	
	Heating		3.7	4.90	7.40	10.20	12.0	5.80	6.70	7.80	7.9	
Energy performance	Cooling/Heating	EER/COP	3.21/3.61	3.0/3.61	3.23/3.61	3.21/3.62	3.11/3.58	3.21/3.61	2.88/3.46	2.75/3.44	2.86/3.61	
Air flow	Indoor unit	m³/h	650	750	1000	1400	1400	2100	2100	2400	3000	
Nominal pressure	Indoor unit	Pa	25	25	25	25	37	37	37	50	50	
Pressure level	Indoor unit	Pa	0-30	0-35	0-35	0-75	0-75	0-100	0-100	0-125	0-150	
Sound-pressure level	Indoor unit	dB (A)	36/34/28/26 52	37/36/34/28 52	40/39/36/28 56	47/46/44/40 57	47/46/44/40 58	53/52/48/44 63	53/52/48/44 61	55/53/49/45 59	57/56/54/49 63	
	Outdoor unit											
Type of refrigerant coolant			R410A									
Refrigerant coolant		kg	1.2	1.2	1.4	2.2	2.4	3.5	3.7	4.0	5.0	
Weight	Indoor unit	kg	27	33	33	34	34	46	46	56	57	
	Outdoor unit	kg	34	34	47	67	71	98	108	114	126	
Operational temperature range	Cooling	°C	-15/+48									
	Heating	°C	-20/+24									
Liquid pipeline diameter		mm/inch	6.38/ 1/4"	6.38/ 1/4"	6.38/ 1/4"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	
Gas pipeline diameter		mm/inch	9.53/ 3/8"	9.53/ 3/8"	12.70/ 1/2"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	19.05/ 3/4"	
Maximum pipeline level difference		m	15						30			
Pipeline maximum length		m	20						50			
Quantity of interblock strands (for control)			2*0.75 if longer than 20 m						2*1.0 if longer than 20 m			
Main power supply area			Outdoor unit									
Quantity of the strands (powersupply outdoor/indoor)	Indoor unit		3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	3(Ø1.0 mm²)	
	Outdoor unit		3(Ø1.5 mm²)	3(Ø1.5 mm²)	3(Ø2.5 mm²)	3(Ø2.5 mm²)	3(Ø2.5 mm²)	5(Ø1.5 mm²)	5(Ø2.5 mm²)	5(Ø2.5 mm²)	5(Ø2.5 mm²)	
Factory Freon fill (for the number of the running meters)			m	5						5		7.5
Freon per one running meter (surplus. for one running meter)			g/m	30	30	30	60	60	60	60	60	
SEER/SCOP				5.6/3.8	5.6/4.0	5.6/3.8	6.1/4.0	6.1/4.0	6.1/4.0	5.6/4.0	5.6/3.8	

INDOOR UNIT

CH-ID09NK4 – CH-ID18NK4

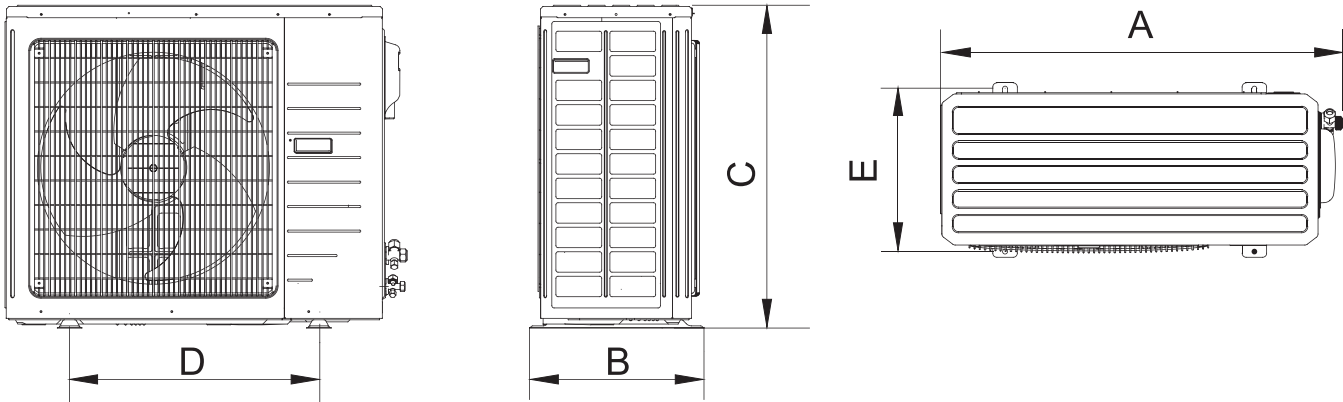


CH-ID24NK4 – CH-ID60NK4



Model	A	B	C	D	E	F	G	H	I	J
CH-ID09NK4	840	561	635	790	925	665	738	125	203	250
CH-ID12NK4	945	618	738	892	1037	721	738	125	203	266
CH-ID24NK4	1101	517	820	1159	1279	558	1002	160	235	268
CH-ID30NK4	1011	748	820	1115	1226	775	979	160	231	290
CH-ID48NK4	1177	646	852	1150	1340	750	953	190	316	350
CH-ID60NK4										

OUTDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
CH-IU09NK4	848	320	540	540	286
CH-IU12NK4	955	396	700	560	360
CH-IU18NK4	980	427	790	610	395
CH-IU24NK4	1107	440	1100	631	400
CH-IU30NK4	958	412	1349	572	376
CH-IU36NM4	1085	427	1365	620	395
CH-IU42NM4					
CH-IU48NM4					
CH-IU60NM4					

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL
DUCT TYPE



SERIES E |C:-15~+48 H:-15~+24|

INVERTER

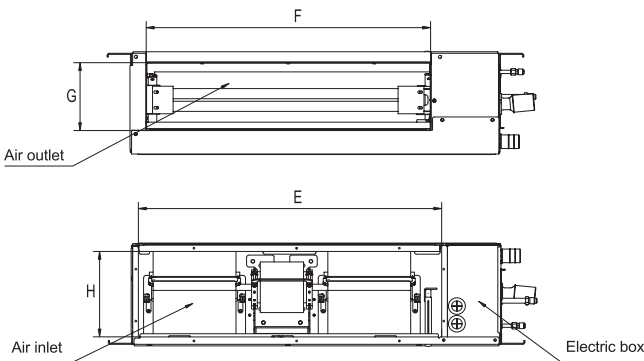
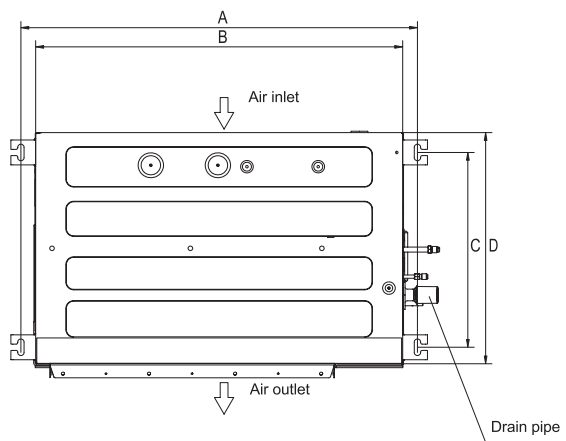


- ▶ Compact size;
- ▶ Low noise level;
- ▶ Long life washable filter;
- ▶ Self-diagnosis of the main units and modes;
- ▶ Multi-level protection system;
- ▶ Intelligent defrost;
- ▶ Length pipeline 50 m (for high power models).

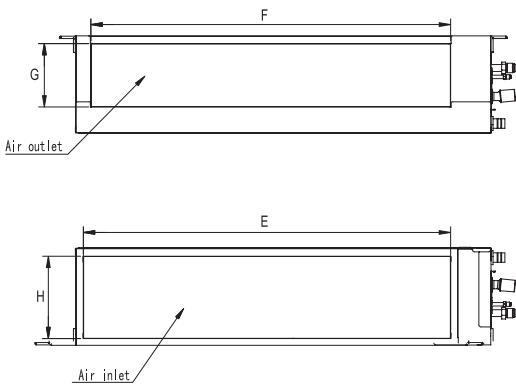
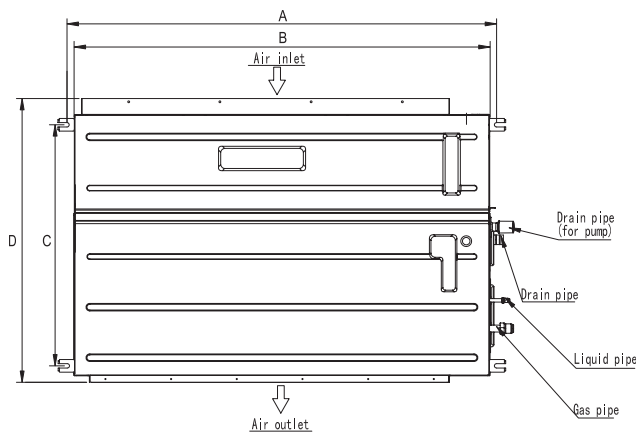
Model			CH-ID030RKE/ CH-IU030RKE	CH-ID035RKE/ CH-IU035RKE	CH-ID050RKE/ CH-IU050RKE	CH-ID071RKE/ CH-IU071RKE	CH-ID085RKE/ CH-IU085RKE	CH-ID100RKE/ CH-IU100RKE	CH-ID125RKE/ CH-IU125RME	CH-ID140RKE/ CH-IU140RME	CH-ID160RKE/ CH-IU160RME
Capacity	Cooling	kW	2.90	3.52	5.30	7.20	8.80	10.5	12.50	14.40	17.50
	Heating	kW	3.10	3.80	5.80	7.90	9.00	11.5	13.40	17.30	18.50
Electric power supply			~220-240V/1Ph/50Hz						~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	0.83	1.01	1.61	2.23	2.67	3.75	4.22	4.78	6.60
	Heating	kW	0.78	1.00	1.54	2.13	2.40	3.38	4.07	4.67	6.10
Energy performance	Cooling	EER	3.50	3.50	3.29	3.23	3.30	2.80	2.96	3.01	2.65
	Heating	COP	3.97	3.80	3.77	3.71	3.75	3.40	3.29	3.70	3.03
Air flow	Indoor unit	m³/h	520/420/350	600/484/400	900/770/650	1000/810/650	1450/1120/900	1800/1600/1400	1750/1500/1300	2400/2200/1900	2400/2200/1900
Sound-pres- sure level	Indoor unit	dB (A)	32/29/26	36/33/30	41/37/33	38/34/31	42/39/35	50/47/43	42/39/36	48/45/42	49/46/43
	Outdoor unit	dB (A)	48	50	51	55	51	57	61	59	63
Type of refrigerant coolant			R32								
Volume of refrigerant coolant		kg	0.75	0.85	0.97	1.40	1.45	2.00	2.50	3.00	3.40
ESP (Rated/Range)		Pa	0/0~50	0/0~50	0/0~50	40/0~40	47/0~120	37/0~120	50/0~120	50/0~120	50/0~120
Weight	Indoor unit	kg	18.0	18.0	22.5	22.5	24.0	37.5	37.5	51.0	51.0
	Outdoor unit	kg	28.0	34.0	36.0	49.0	49.0	70.0	85.0	101.5	117.0
Operational temperature range	Cooling	°C	-15-48								
	Heating	°C	-15-24								
Liquid piepline diameter		mm/ inch	6.35/1/4"	6.35/1/4"	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas piepline diameter		mm/ inch	9.53/3/8"	9.53/3/8"	12.7/1/2"	15.88/5/8"	15.88/5/8"	19.05/3/4"	19.05/3/4"	19.05/3/4"	19.05/3/4"
Maximum piepline level difference		m	10	15	15	15	30	30	30	30	30
Pipeline maximum length		m	25	25	30	30	50	50	50	50	50
Number of interblock strands (for control)			4x1.5mm²								
Main power supply area			Outdoor unit								
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	3x2.5mm²	3x2.5mm²	3x4.0mm²	5x2.5mm²	5x2.5mm²	5x2.5mm²
Factory Freon fill (for the number of the running meters)		m	5	5	5	5	5	5	5	5	5
Freon per one running meter (surplus, for one running meter)		g/m	12	12	12	28	28	28	28	28	28
SEER/SCOP			6.27/4.23	6.30/4.01	6.40/4.0	6.43/4.18	6.20/4.0	6.13/4.0	-	-	-
Energy performance class			A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	-	-	-

INDOOR UNIT

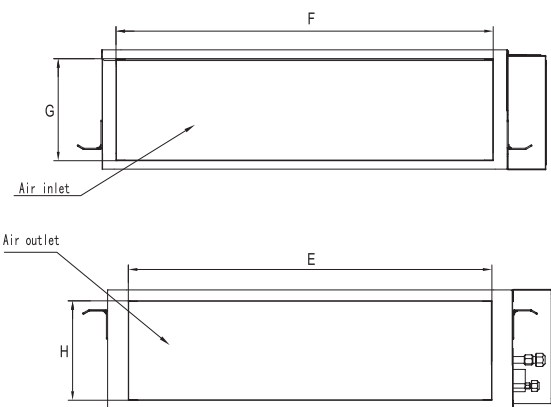
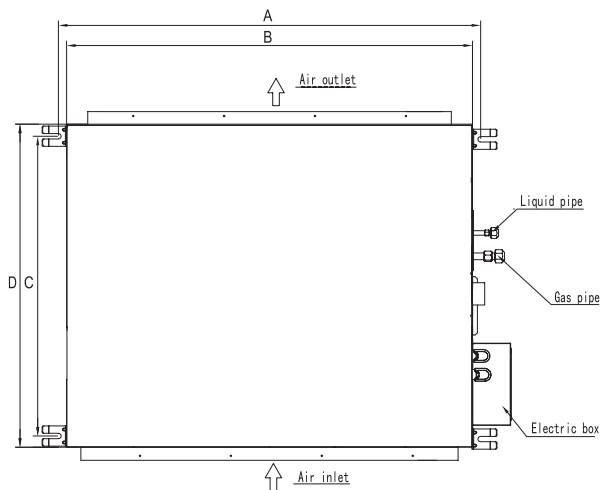
CH-ID030RKE
CH-ID035RKE
CH-ID050RKE
CH-ID071RKE



CH-ID085RKE
CH-ID100RKE



CH-ID125RKE
CH-ID140RKE
CH-ID160RKE

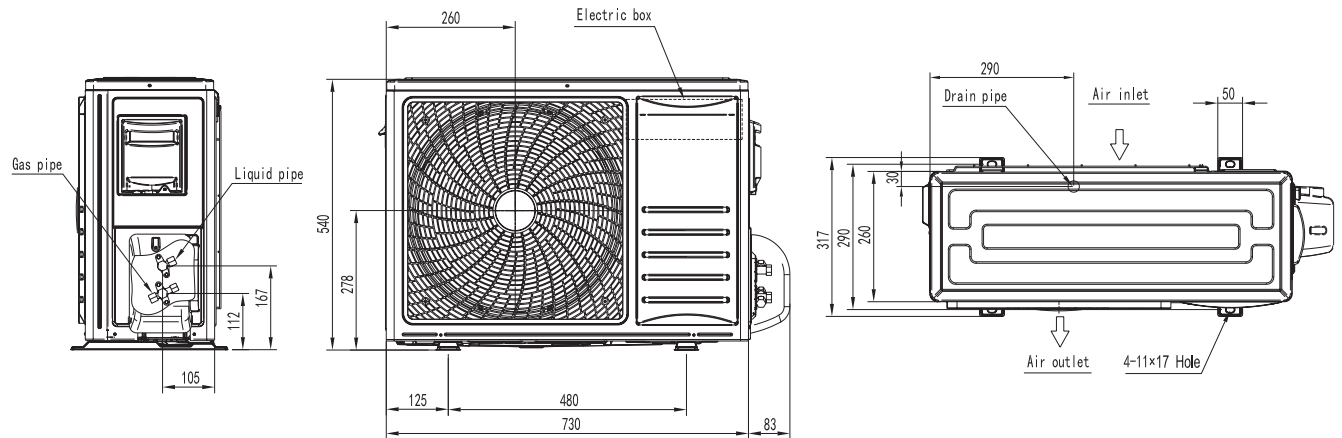


Model	CH-ID030RKE	CH-ID035RKE	CH-ID050RKE	CH-ID071RKE	CH-ID085RKE	CH-ID100RKE	CH-ID125RKE	CH-ID140RKE	CH-ID160RKE
A	961	961	1231	1231	1177	1177	1334	1334	1334
B	910	910	1180	1180	1140	1140	1300	1300	1300
C	375	375	375	375	666	666	756	756	756
D	447	447	447	447	784	784	800	800	800
E	786	786	1056	1056	1006	1006	1205	1205	1205
F	749	749	1019	1019	986	986	1235	1235	1235
G	131	131	131	131	175	175	308	308	308
H	165	165	165	165	228	228	222	222	222

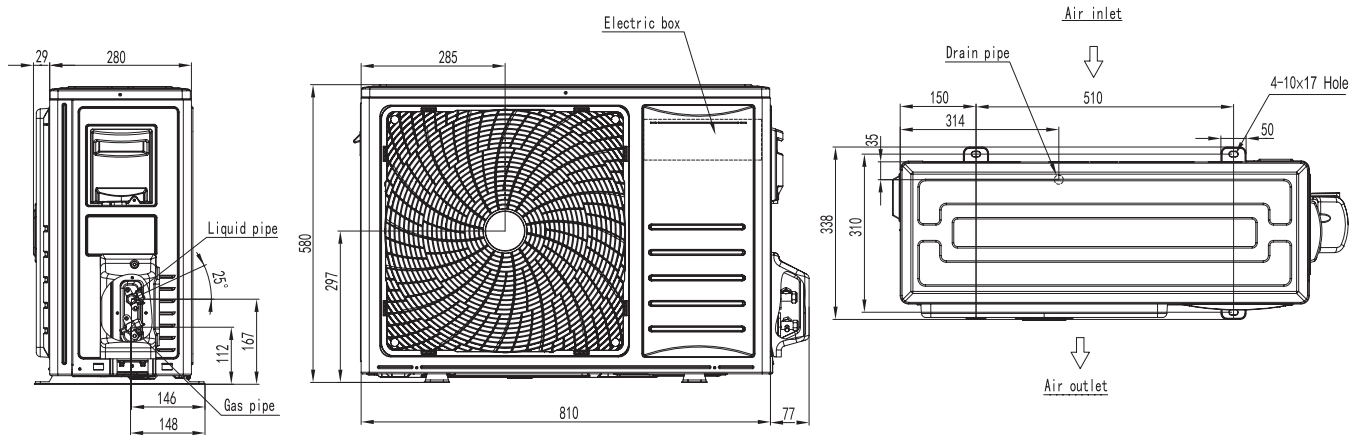
*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

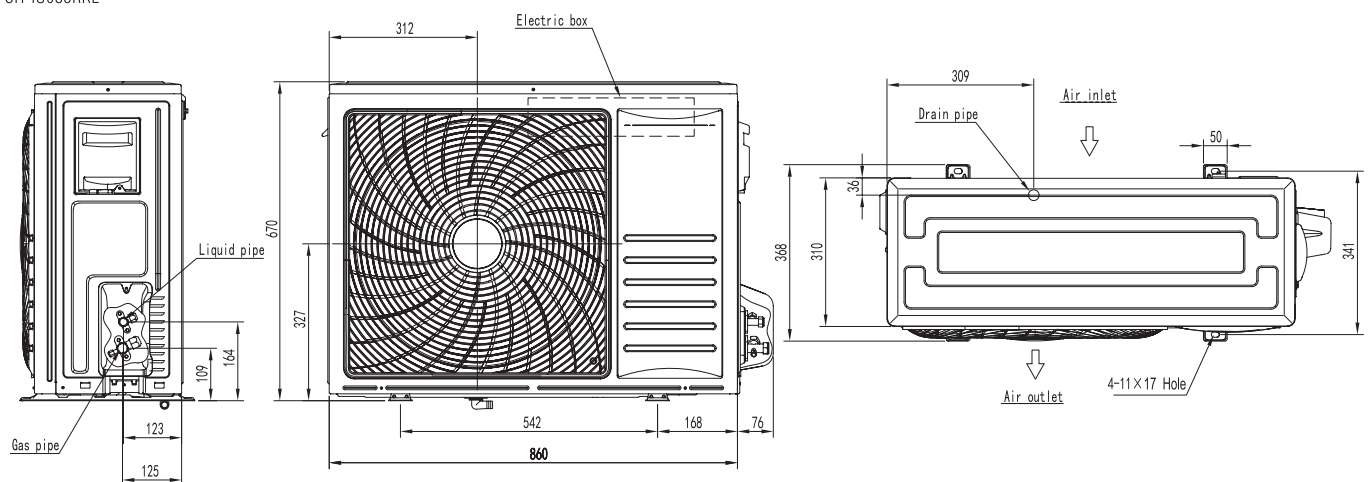
CH-IU030RKE



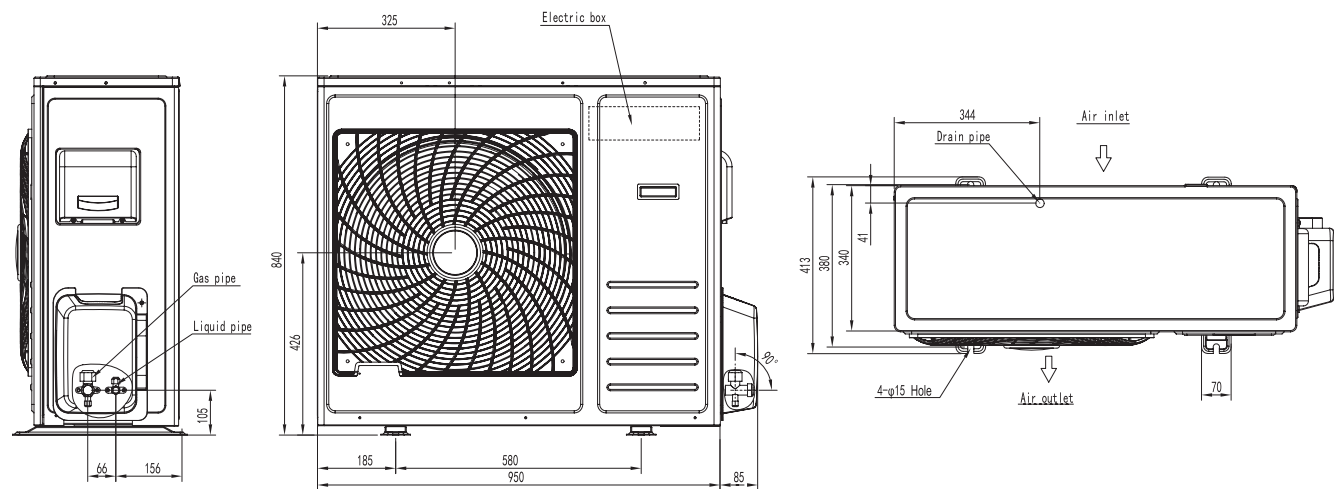
CH-IU035RKE
CH-IU050RKE



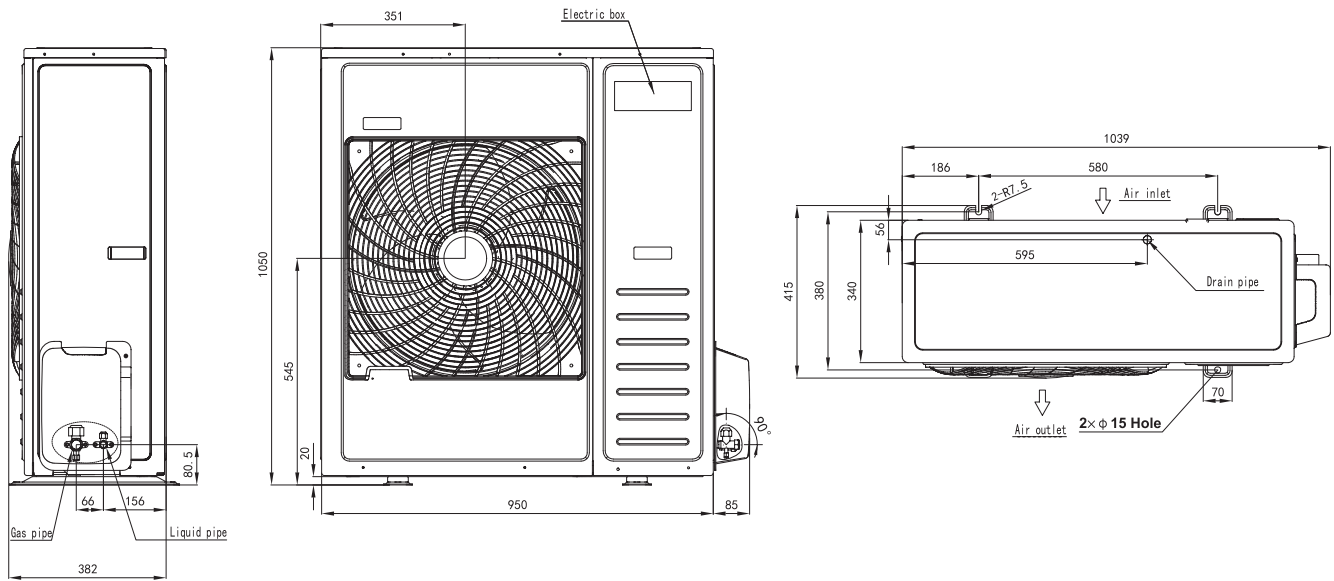
CH-IU071RKE
CH-IU085RKE



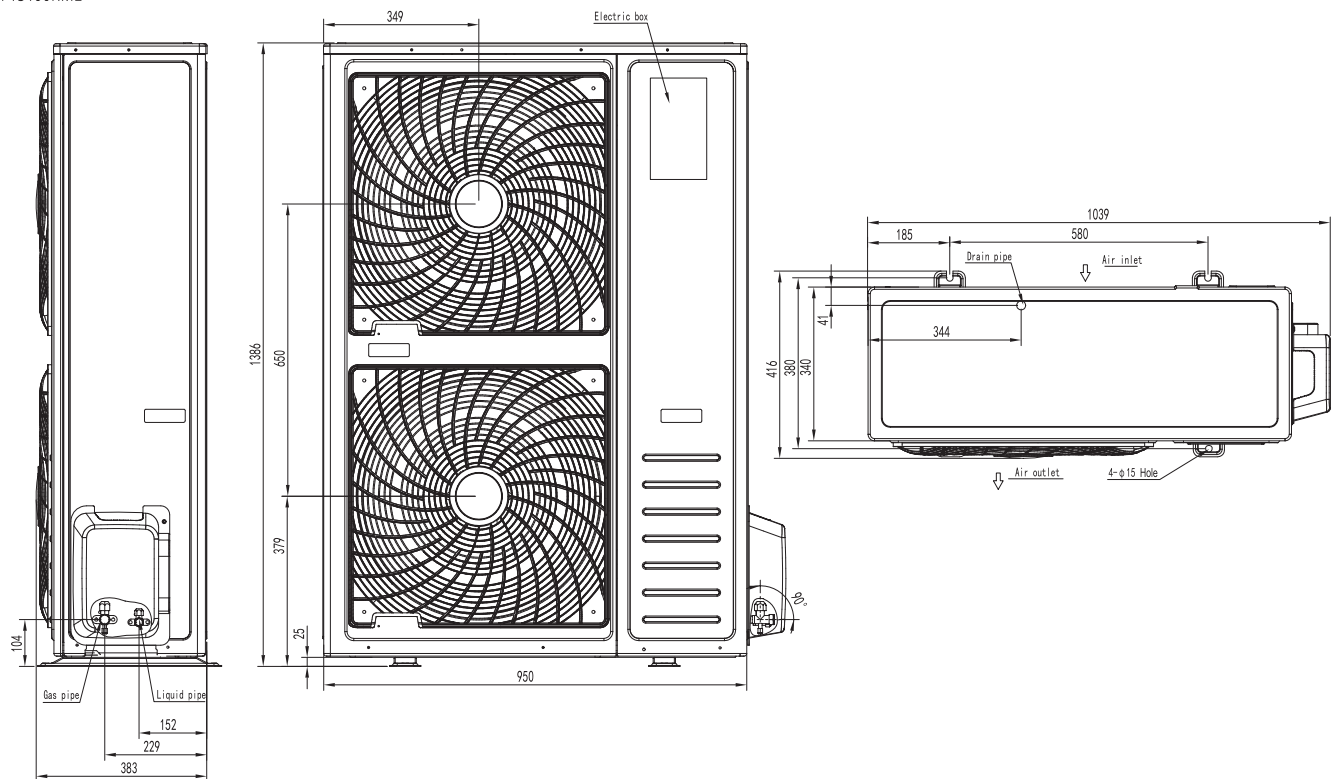
CH-IU100RKE



CH-IU125RME



CH-IU140RME
CH-IU160RME



NORDIC COMMERCIAL
DUCT TYPE

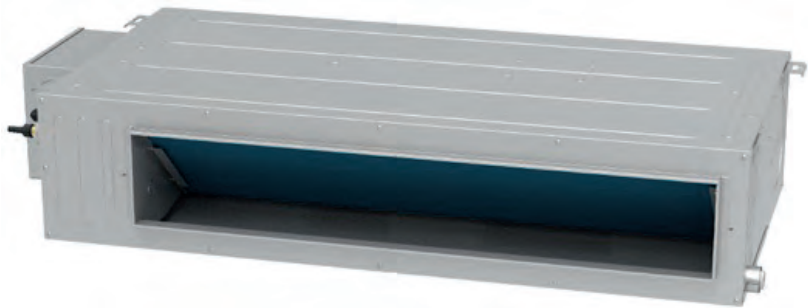


SERIES IN |C:-15~+48 H:-20~+24|

SERIES N |C:-15~+48 H:-15~+24|

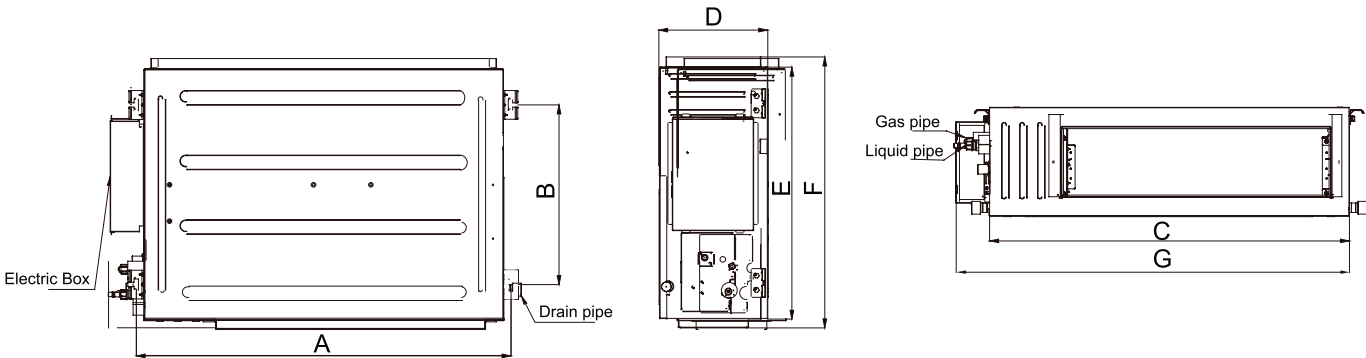
INVERTER

ON/OFF



- ▶ Compact size;
- ▶ Drain pump;
- ▶ Low noise level;
- ▶ Long life washable filter;
- ▶ Remote and wired controllers as standard (series IN);
- ▶ Self-diagnosis of the main units and modes;
- ▶ Multi-level protection system;
- ▶ Intelligent defrost;
- ▶ Length pipeline to 75 m.

INDOOR UNIT



INVERTER

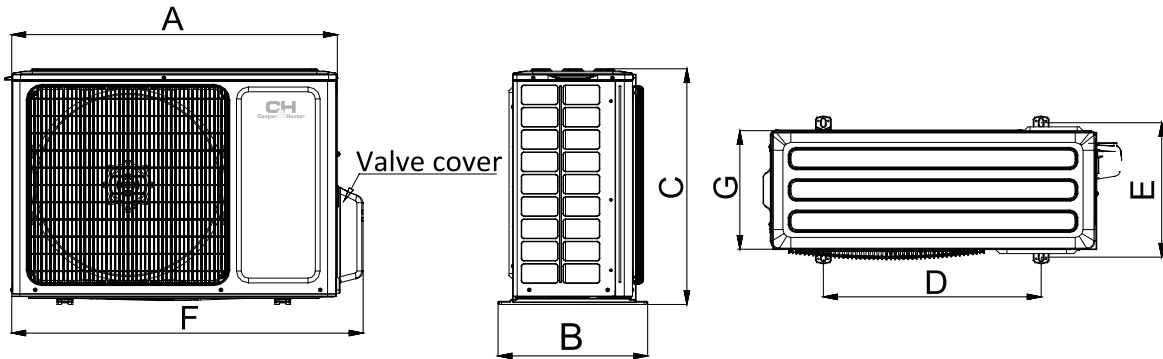
Model	A	B	C	D	E	F	G
CH-IDS035NK/CH-IDS035PNK	760	415	700	200	450	474	768
CH-IDS050NK/CH-IDS050PNK	1060	415	1000	200	450	474	1068
CH-IDS071NK/CH-IDS071PNK	1060	415	1000	200	450	474	1068
CH-IDH100NK/CH-IDH100PNK	1040	500	1000	300	700	754	1092
CH-IDH125NK/CH-IDH125PNK	1040	500	1000	300	700	754	1092
CH-IDH140NK/CH-IDH140PNK	1440	500	1400	300	700	754	1492
CH-IDH160NK/CH-IDH160PNK	1440	500	1400	300	700	754	1543

ON/OFF

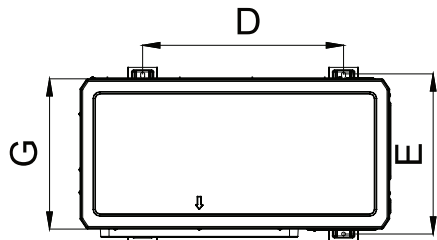
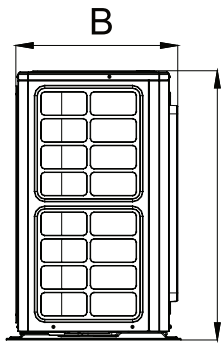
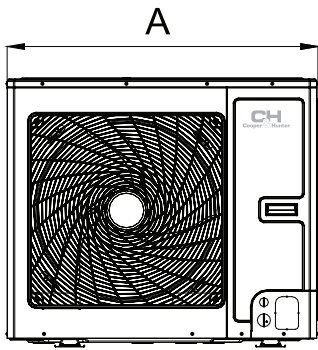
Model	A	B	C	D	E	F	G
CH-D050PNK	1060	415	1000	200	450	474	1068
CH-D071PNK	1360	415	1300	220	450	474	1368
CH-D085PNK	1360	415	1300	220	450	474	1368
CH-DH100PNK	1040	500	1000	300	700	754	1092
CH-DH125PNK	1040	500	1000	300	700	754	1092
CH-DH140PNK	1440	500	1400	300	700	754	1492
CH-DH160PNK	1440	500	1400	300	700	754	1492

OUTDOOR UNIT

CH-IU035NK
CH-IU050NK
CH-IU071NK
CH-IU100NK
CH-U050NK
CH-U071NK
CH-U085NK
CH-U100NK



CH-IU125NM
CH-IU140NM
CH-IU160NM
CH-U125NK
CH-U140NK
CH-U160NK



INVERTER

Model	A	B	C	D	E	F	G
CH-IU035NK	818	378	602	550	348	887	302
CH-IU050NK	818	378	602	550	348	887	302
CH-IU071NK	892	396	698	560	364	952	340
CH-IU100NK	920	427	790	610	395	1002	370
CH-IU125NM	940	530	820	610	486	/	460
CH-IU140NM	940	530	820	610	486	/	460
CH-IU160NM	940	530	820	610	486	/	460

ON/OFF

Model	A	B	C	D	E	F	G
CH-U050NK	761	320	548	540	286	825	256
CH-U071NK	892	396	698	560	364	957	340
CH-U085NK	892	396	698	560	364	957	340
CH-U100NM	920	427	790	610	395	985	370
CH-U125NM	940	530	820	610	486	1010	460
CH-U140NM	940	530	820	610	486	1010	460
CH-U160NM	940	530	820	610	486	1010	460

Model	INVERTER	CH-IDS035PNK/ CH-IU035NK	CH-IDS050PNK/ CH-IU050NK	CH-IDS071PNK/ CH-IU071NK	CH-IDH100PNK/ CH-IU100NK	CH-IDH125PNK/ CH-IU125NM	CH-IDH140PNK/ CH-IU140NM	CH-IDH160PNK/ CH-IU160NM
Capacity	Cooling	kW	3.50	5.30	7.10	10.10	12.02	14.00
	Heating	kW	4.00	5.80	8.00	11.00	14.00	17.00
Electric power supply			220-240V/1Ph/50Hz				~380-415 V/50 Hz/3 Ph	
Rated input	Cooling	kW	1.09	1.65	2.40	3.40	4.50	5.40
	Heating	kW	1.15	1.60	2.45	3.20	4.30	4.80
Energy performance	Cooling	EER	3.21	3.21	2.96	2.97	2.67	2.89
	Heating	COP	3.48	3.63	3.27	3.44	3.26	3.54
Air flow	Indoor unit	m³/h	650	950	1050	1800	2000	2800
Sound-pressure level	Indoor unit	dB (A)	39/37/35/34	40/39/37/35	42/41/40/38	43/41/39/37	44/42/39/37	50/45/44/42
	Outdoor unit	dB (A)	51	55	55	55	58	60
Type of refrigerant coolant					R410a			
Volume of refrigerant coolant		kg	1.00	1.25	2.00	2.45	3.40	3.80
External static pressure		Pa	0-50	0-50	0-70	0-150	0-150	0-150
Weight	Indoor unit	kg	20	26	26	41	41	57
	Outdoor unit	kg	37	41	53	61	90	100
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-20-24					
Liquid pipeline diameter		mm/inch	6.35/1/4"	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter		mm/inch	9.53/3/8"	12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference		m	15	20	25	30	30	30
Pipeline maximum length		m	30	35	50	50	65	75
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	3x2.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)		m	7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)		g/m	22	22	30	30	35	50

Model	ON/OFF	CH-D050PNK/ CH-U050NK	CH-D071PNK/ CH-U071NK	CH-D085PNK/ CH-U085NK	CH-DH100PNK/ CH-U100NM	CH-DH125PNK/ CH-U125NM	CH-DH140PNK/ CH-U140NM	CH-DH160PNK/ CH-U160NM
Capacity	Cooling	kW	4.75	7.00	8.30	10.10	12.00	14.60
	Heating	kW	4.90	7.40	9.30	12.00	14.60	19.00
Electric power supply			220-240V/1Ph/50Hz				~380-415 V/50 Hz/3 Ph	
Rated input	Cooling	kW	1.60	2.15	2.70	3.20	4.35	5.50
	Heating	kW	1.40	1.95	2.60	3.20	4.60	5.40
Energy performance	Cooling	EER	2.97	3.26	3.07	3.16	2.76	3.24
	Heating	COP	3.50	3.79	3.58	3.75	3.17	3.79
Air flow	Indoor unit	m³/h	650	1150	1250	1650	1700	2200
Sound-pressure level	Indoor unit	dB (A)	35/32/30/27	37/33/30/28	40/36/33/32	44/42/38/35	44/41/38/35	45/44/41/37
	Outdoor unit	dB (A)	51	53	55	56	58	58
Type of refrigerant coolant					R410a			
Volume of refrigerant coolant		kg	1.20	1.90	2.10	2.10	2.85	3.30
External static pressure		Pa	0-60	0-60	0-80	0-100	0-100	0-150
Weight	Indoor unit	kg	25	32	32	40	42	53
	Outdoor unit	kg	39	59	61	70	97	103
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-15-24					
Liquid pipeline diameter		mm/inch	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter		mm/inch	12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference		m	15	15	15	20	30	30
Pipeline maximum length		m	30	30	30	30	50	50
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x1.5mm²	3x1.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)		m	7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)		g/m	22	30	30	45	45	54

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

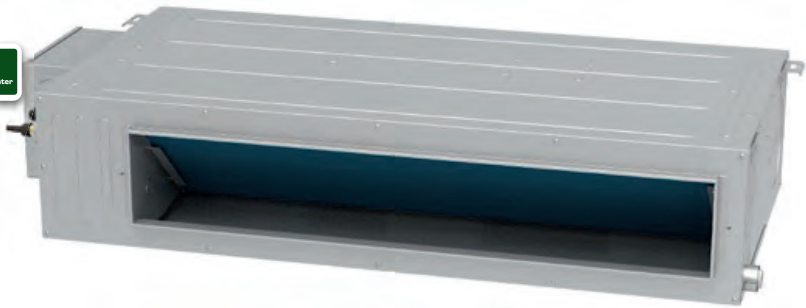
*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL
DUCT TYPE



SERIES R |C:-20~+48 H:-20~+24|

INVERTER



- Compact size;

► Drain pump;

► Low noise level;

► Long life washable filter;

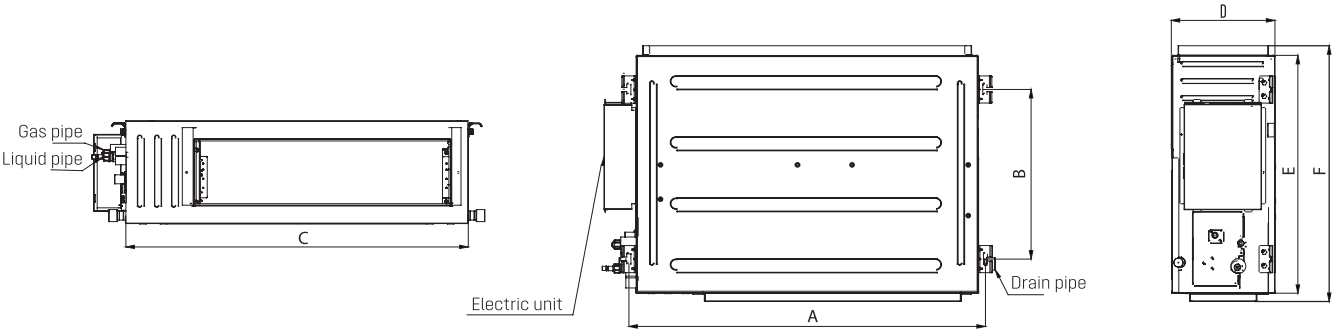
► Self-diagnosis of the main units and modes;
- Multi-level protection system;

► Intelligent defrost;

► Length pipeline to 75 m (for high power models).

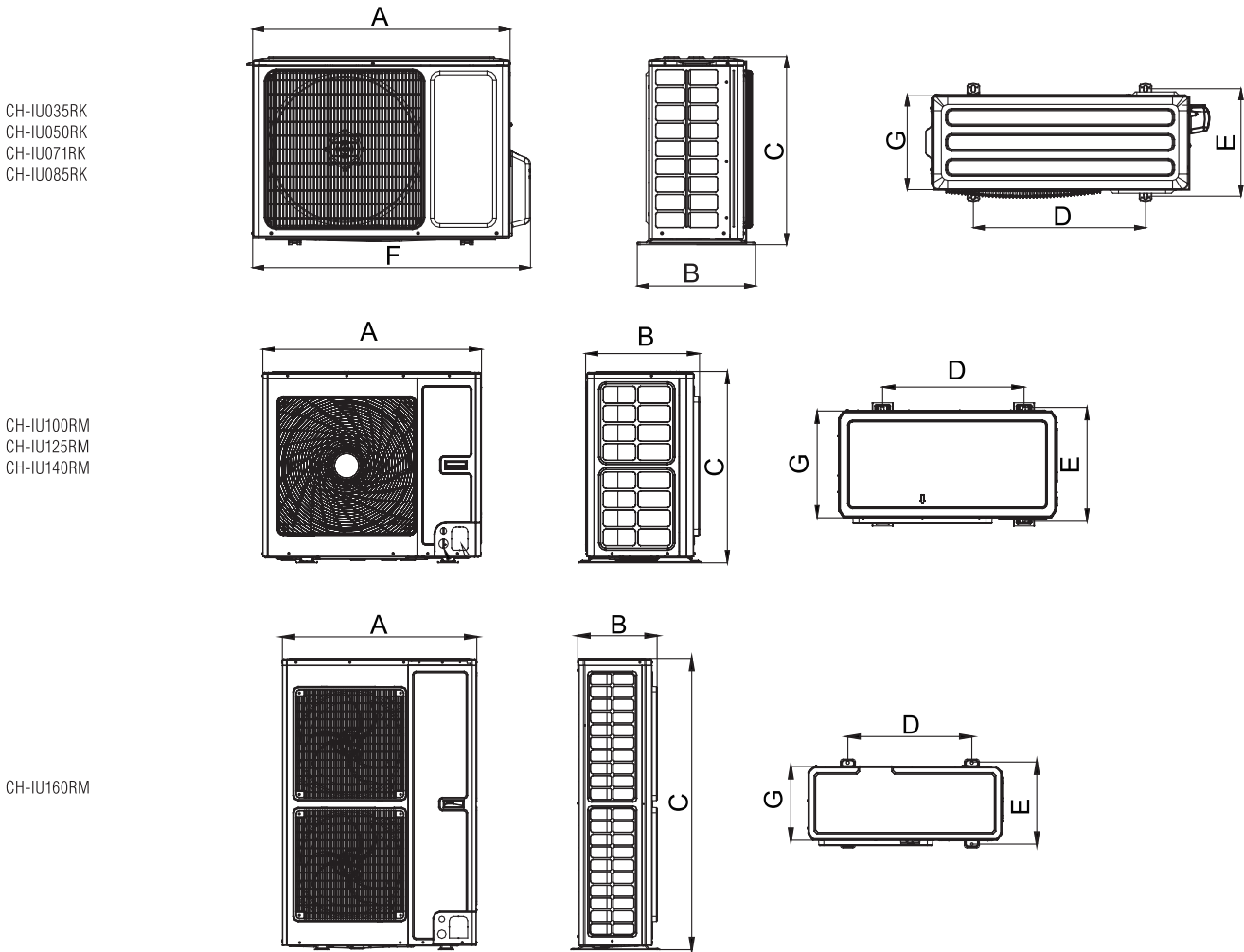
Model			CH-IDS035PRK / CH-IU035RK	CH-IDS050PRK / CH-IU050RK	CH-IDS071PRK / CH-IU071RK	CH-IDS085PRK / CH-IU085RK	CH-IDH100PRK / CH-IU100RM	CH-IDH125PRK / CH-IU125RM	CH-IDH140PRK / CH-IU140RM	CH-IDH160PRK / CH-IU160RM
Capacity	Cooling	kW	3,5	5,00	7,00	8,50	10,00	12,10	13,40	16,00
	Heating	kW	4,00	5,50	8,00	8,80	12,00	13,50	15,50	17,00
Electric power supply			~220-240 V/50 Hz/1 Ph				~380-415 V/50 Hz/3 Ph			
Rated input	Cooling	kW	0,95	1,55	2,10	2,70	3,15	3,80	4,70	5,45
	Heating	kW	1,05	1,45	2,25	2,65	3,50	3,90	4,45	5,00
Energy performance	Cooling	EER	3,68	3,23	3,33	3,15	3,17	3,18	2,85	2,94
	Heating	COP	3,81	3,79	3,56	3,32	3,43	3,46	3,48	3,40
Air flow	Indoor unit	m³/h	650	950	1200	1500	1800	2000	2200	2400
Pressure range (nominal/ maximal)		Pa	25/50	25/50	25/75	37/75	37/100	50/150	50/150	50/200
Sound-pressure level	Indoor unit	dB (A)	41/38/36/34	43/42/39/36	40/39/37/36	42/40/37/35	46/44/42/40	42/40/39/37	43/41/40/38	44/41/39/38
	Outdoor unit	dB (A)	50	53	52	53	55	56	57	57
Type of refrigerant coolant			R32							
Volume of refrigerant coolant		kg	0,78	1,00	1,60	1,80	2,50	2,65	2,80	3,60
Weight	Indoor unit	kg	20	26	31	31	41	50	50	57
	Outdoor unit	kg	37	39	53	60	89	95	99	112
Operational temperature range	Cooling	°C	-20–48							
	Heating	°C	-20–24							
Liquid piepline diameter		mm/ inch	6,38//1/4"	6,38//1/4"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"
Gas piepline diameter		mm/ inch	9,53//3/8"	12,70//1/2"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"
Maximum piepline level difference		m	15	20	25	25	30			
Pipeline maximum length		m	30	35	50	65	75			
Number of interblock strands (for control)			2x0,75mm²							
Main power supply area			Outdoor unit							
Number of the strands (power supply)	Indoor unit		3 (Ø 1,0mm²)							
	Outdoor unit		3 (Ø 1,5mm²)	3 (Ø 1,5mm²)	3 (Ø 2,5mm²)	3 (Ø 2,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)
Factory Freon fill (for the number of the running meters)		m	5	5	5	5	5	5	7,5	7,5
Freon per one running meter (surplus. for one running meter)		g/m	16	16	40	40	40	40	40	40
SEER/SCOP			6,10/4,00	6,10/4,00	6,80/4,00	6,10/4,00	6,10/4,00	5,80/3,80	5,40/3,70	6,10/4,00
Energy performance class			A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A+/A	A+/A	A++/A+

INDOOR UNIT



Model	A	B	C	D	E	F
CH-IDS035PRK	760	415	700	200	450	474
CH-IDS050PRK	1060	415	1000	200	450	474
CH-IDS071PRK	1360	415	1300	220	450	474
CH-IDS085PRK						
CH-IDH100PRK	1040	500	1000	300	700	754
CH-IDH125PRK						
CH-IDH140PRK	1440	500	1400	300	700	754
CH-IDH160PRK						

OUTDOOR UNIT



Model	A	B	C	D	E	F	G
CH-IU035RK / CH-IU050RK	818	378	596	550	348	887	302
CH-IU071RK	892	396	698	560	364	952	340
CH-IU085RK	920	427	790	610	395	1002	370
CH-IU100RM / CH-IU125RM / CH-IU140RM	940	530	820	610	486	/	460
CH-IU160RM	900	412	1345	572	378	/	340

*EER - seasonal coefficient of system cooling capacity.
 ** SEER - seasonal coefficient of system cooling capacity.
 ** COP - seasonal coefficient of system heating capacity.
 ** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL

CASSETTE TYPE

SERIES N4 |C:-15~+48 H:-20~+24|



INVERTER



- ▶ Compact size;

▶ Drain pump;

▶ Low noise level;

▶ Long life washable filter;

▶ Automatic air distribution in Swing mode;
- ▶ Remote and wired controllers as standard;

▶ Self-diagnostics of the main units and modes;

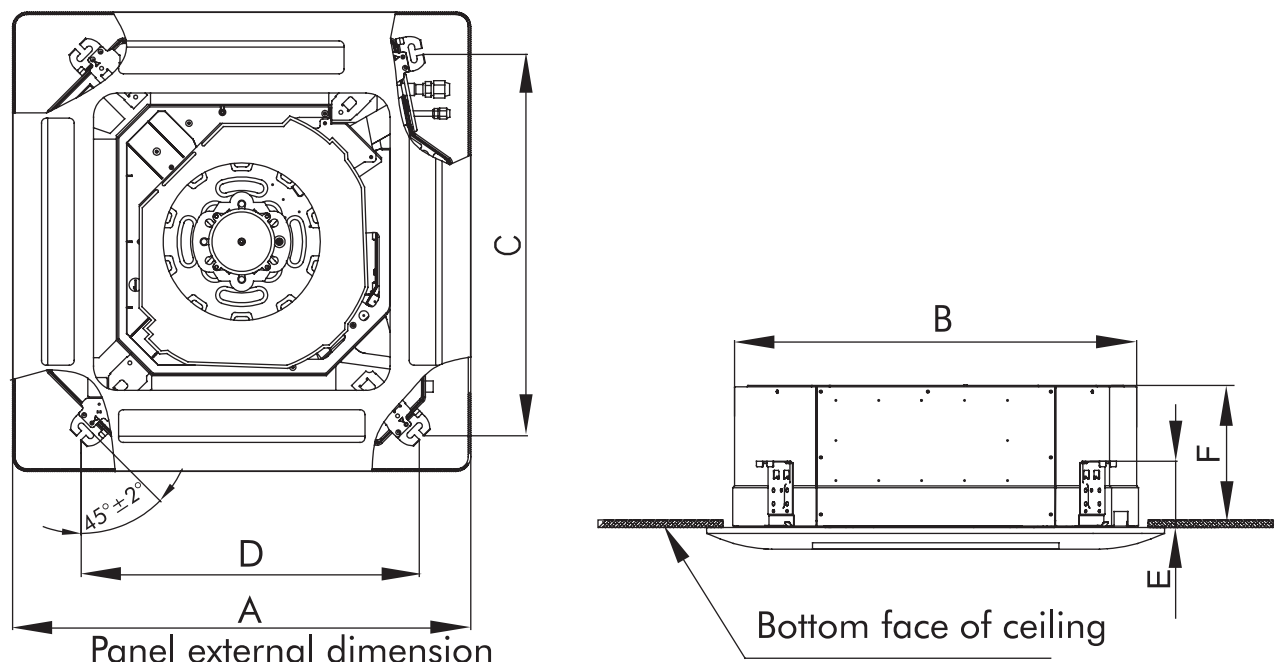
▶ Multi-level protection system;

▶ Intelligent defrost;

▶ Length pipeline to 50 m

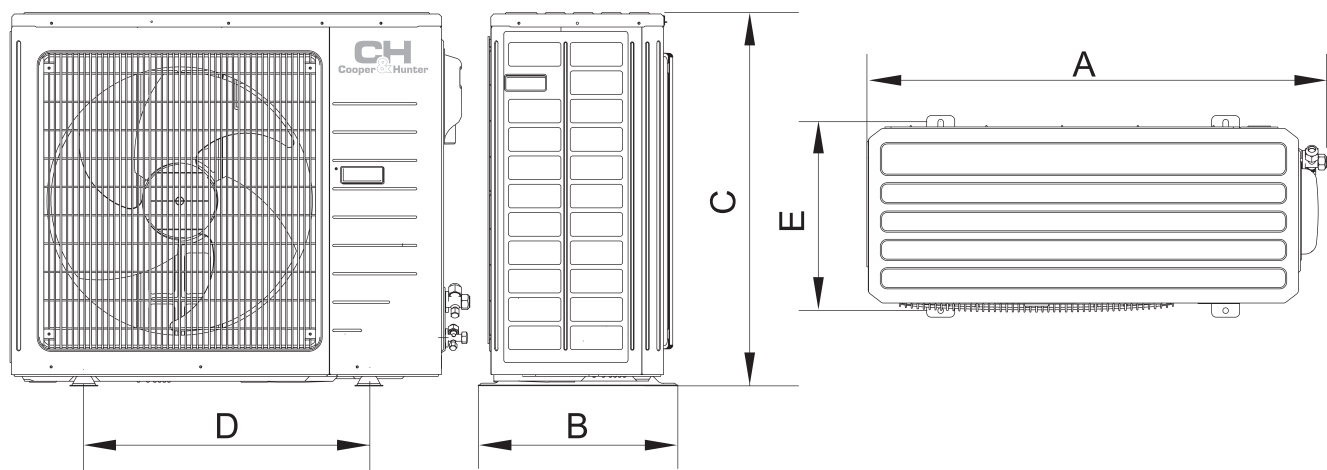
Model			CH-IC12NK4/ CH-IU12NK4	CH-IC18NK4/ CH-IU18NK4	CH-IC24NK4/ CH-IU24NK4	CH-IC36NK4/ CH-IU36NM4	CH-IC42NK4/ CH-IU42NM4	CH-IC48NK4/ CH-IU48NM4	CH-IC60NK4/ CH-IU60NM4
Capacity	Cooling	kW	3.5	5.0	7.0	10.0	11.0	14.0	16.0
	Heating	kW	3.8	5.5	8.0	12.0	12.5	16.0	17.0
Electric power supply			~220-240 V/50 Hz/1 Ph			~380-415 V/50 Hz/3 Ph			
Rated input	Cooling	kW	1.09	1.6	2.18	3.12	3.9	5.15	5.7
	Heating	kW	1.05	1.58	2.21	3.32	3.8	4.5	4.2
Rated input	Cooling	A	5	7.2	10.1	5.4	6.7	8.9	9.8
	Heating	A	4.9	7.6	10.2	5.8	6.6	7.8	8.2
Energy performance	Cooling	EER	3.21	3.12	3.21	3.2	2.82	2.72	2.81
	Heating	COP	3.61	3.48	3.61	3.6	3.29	3.56	3.6
Air flow	Indoor unit	m³/h	700	760	1300	1860	1860	2300	2400
Sound-pressure level	Indoor unit/ Outdoor unit	dB (A)	46/45/41/36 52	47/46/44/37 56	47/46/42/38 57	51/49/46/43 63	51/49/46/43 61	53/52/47/41 59	55/53/47/46 63
Type of refrigerant coolant			R410A						
Refrigerant coolant type		kg	1.2	1.4	2.2	3.5	3.7	4	5
Weight	Indoor unit	kg	20	20	26	31	31	43	43
	Outdoor unit	kg	34	47	67	98	108	114	126
Operational temperature range	Cooling	°C	-15/+48						
	Heating	°C	-20/+24						
Liquid pipeline diameter		mm/inch	6.38/ 1/4"	6.38/ 1/4"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"
Gas pipeline diameter		mm/inch	9.53/ 3/8"	12.70/ 1/2"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	19.05/ 3/4"
Maximum pipeline level difference		m	15				30		
Pipeline maximum length		m	20			30		50	
Number of interblock strands (for control)			2*0.75 if longer than 20 m			2*1.0 if longer than 20 m			
Main power supply area			Outdoor unit						
Number of the strands (power supply)	Indoor unit		3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)
	Outdoor unit		3 (Ø1.5 mm²)	3 (Ø2.5 mm²)	3 (Ø2.5 mm²)	5 (Ø1.5 mm²)	3 (Ø2.5 mm²)	5 (Ø2.5 mm²)	5 (Ø2.5 mm²)
Factory Freon fill (for the number of the running meters)		m	5						
Freon per one running meter (surplus. for one running meter)		g/m	30	30	60	60	60	60	60
SEER/SCOP			5.6/4.0	5.6/3.8	6.1/4.0	6.1/4.0	6.1/4.0	5.6/3.8	5.6/3.8

INDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
CH-IC12NK4	670	596	592	571	145	240
CH-IC18NK4	950	840	780	680	160	240
CH-IC24NK4	950	840	780	680	160	320
CH-IC36NK4	1040	910	842	788	170	290

OUTDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
CH-IU12NK4	848	320	540	540	286
CH-IU18NK4	955	396	700	560	360
CH-IU24NK4	980	427	790	610	395
CH-IU30NK4	1107	440	1100	631	400
CH-IU36NM4	958	412	1349	572	376
CH-IU42NM4	1085	427	1365	620	395

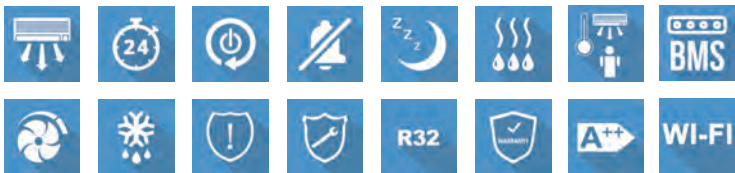
*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL
CASSETTE TYPE
SERIES E |C:-15~+48 H:-15~+24|



INVERTER

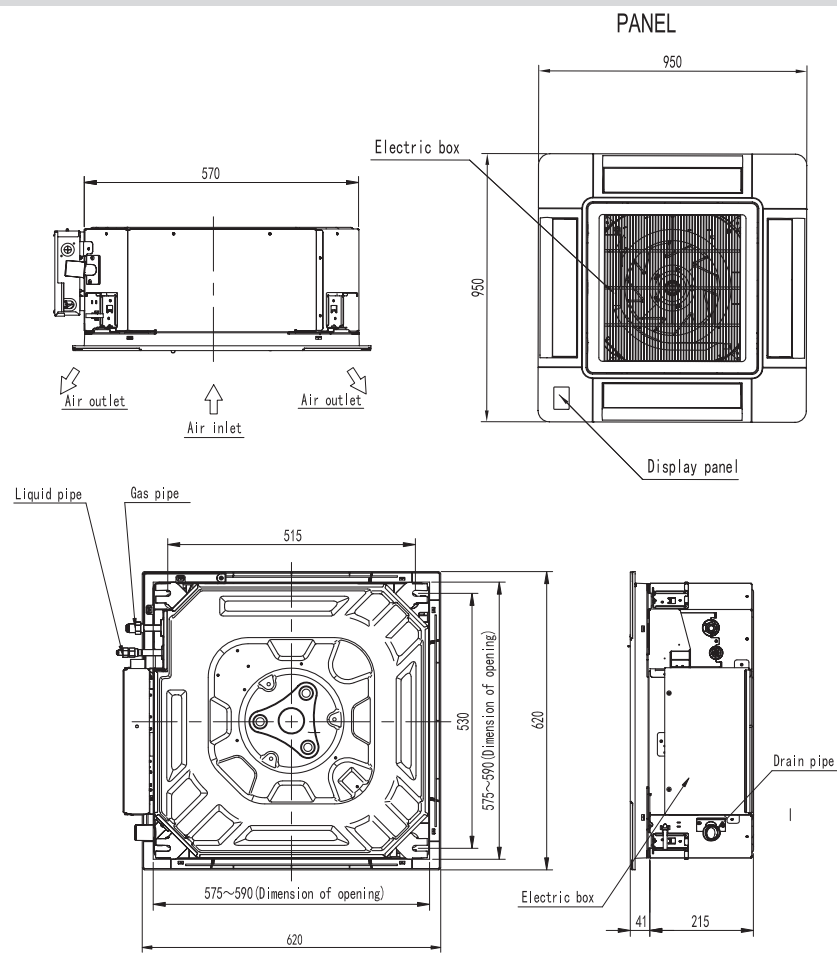


- ▶ Simple installation
- ▶ Compact overall dimensions
- ▶ Low noise fan;
- ▶ Long life washable filter;
- ▶ Drain pump;
- ▶ Self-testing of main units and modes to identify malfunctions;
- ▶ Multi-level protection system.
- ▶ Pipeline length is up to 50 m (for high power models);
- ▶ The possibility of selecting an indoor air temperature sensor for controlling.

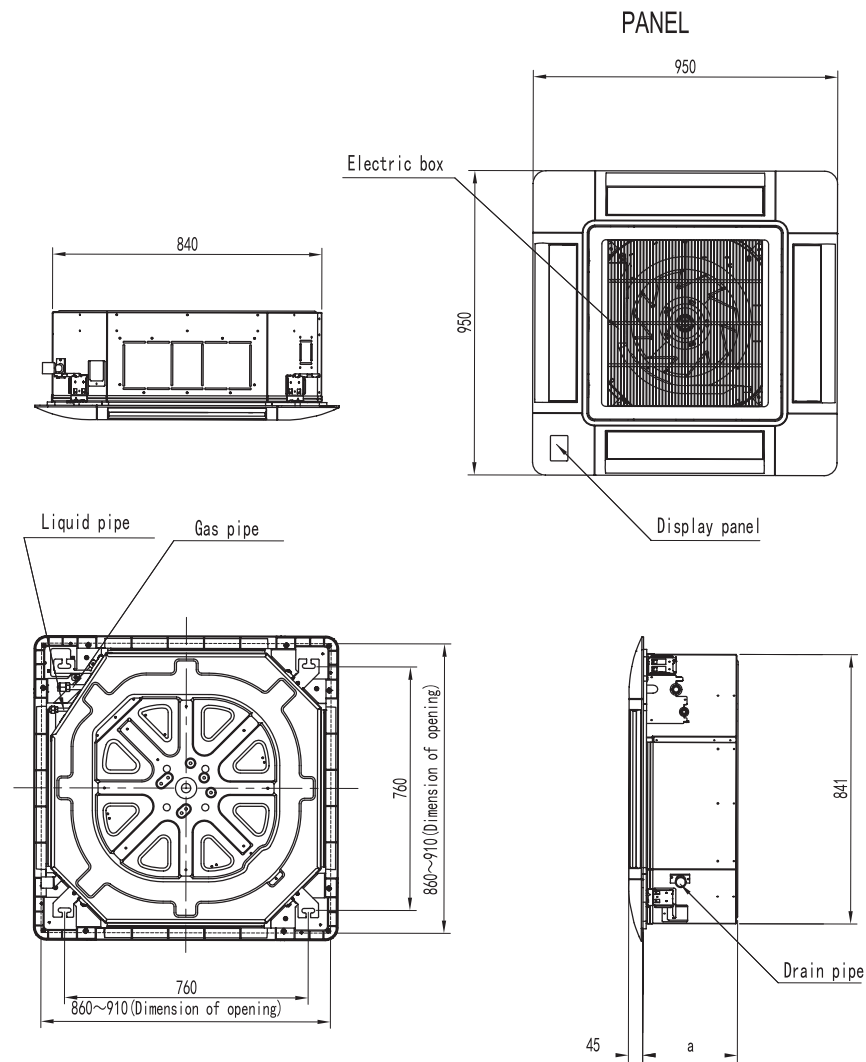
Model			CH-IC030RKE/ CH-IU030RKE	CH-IC035RKE/ CH-IU035RKE	CH-IC050RKE/ CH-IU050RKE	CH-IC071RKE/ CH-IU071RKE	CH-IC085RKE/ CH-IU085RKE	CH-IC100RKE/ CH-IU100RKE	CH-IC125RKE/ CH-IU125RME	CH-IC140RKE/ CH-IU140RME	CH-IC160RKE/ CH-IU160RME
Capacity	Cooling	kW	2.84	3.75	5.20	7.30	8.30	10.50	12.50	14.40	17.20
	Heating	kW	3.13	4.00	5.90	8.30	9.00	11.30	13.50	17.00	20.00
Electric power supply			~220-240V/1Ph/50Hz						~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	0.81	1.00	1.55	2.10	2.71	3.62	4.24	4.77	6.60
	Heating	kW	0.74	1.00	1.59	2.17	2.25	3.23	3.70	4.64	6.65
Energy performance	Cooling	EER	3.49	3.75	3.35	3.48	3.25	2.9	2.95	3.02	2.61
	Heating	COP	4.22	4.00	3.71	3.83	3.85	3.50	3.65	3.66	3.01
Air flow	Indoor unit	m³/h	520/410/320	580/500/400	700/600/510	1100/976/852	1400/1120/900	1600/1300/1000	1850/1700/1550	2100/1700/1400	2100/1700/1400
Sound-pres- sure level	Indoor unit	dB (A)	39/35/31	41/37/33	47/42/40	44/41/37	43/40/37	47/43/40	50/48/46	53/46/44	53/46/44
	Outdoor unit	dB (A)	48	50	51	55	53	57	61	59	63
Type of refrigerant coolant			R32								
Volume of refrigerant coolant		kg	0.75	0.85	0.97	1.40	1.45	2.00	2.50	3.00	3.40
Weight	Indoor unit	kg	14.5	15.5	15.5	25.0	27.0	27.0	32.0	32.0	32.0
	Panel	kg	2.6	2.6	2.6	6.5	6.5	6.5	6.5	6.5	6.5
	Outdoor unit	kg	28.0	34.0	36.0	49.0	49.0	70.0	85.0	101.5	117.0
Operational temperature range	Cooling	°C	-15-48								
	Heating	°C	-15-24								
Liquid piepline diameter		mm/ inch	6.35/1/4"	6.35/1/4"	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas piepline diameter		mm/ inch	9.53/3/8"	9.53/3/8"	12.7/1/2"	15.88/5/8"	15.88/5/8"	19.05/3/4"	19.05/3/4"	19.05/3/4"	19.05/3/4"
Maximum piepline level difference		m	10	15	15	15	30	30	30	30	30
Pipeline maximum length		m	25	25	30	30	50	50	50	50	50
Number of interblock strands (for control)			4x1.5mm²								
Main power supply area			Outdoor unit								
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	3x2.5mm²	3x2.5mm²	3x4.0mm²	5x2.5mm²	5x2.5mm²	5x2.5mm²
Factory Freon fill (for the num- ber of the running meters)		m	5	5	5	5	5	5	5	5	5
Freon per one running meter (surplus, for one running meter)		g/m	12	12	12	28	28	28	28	28	28
SEER/SCOP			6.10/4.30	6.90/4.40	6.60/4.40	6.590/4.410	6.10/4.230	6.15/4.00	-	-	-
Energy performance class			A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	A++/A+	-	-	-

INDOOR UNIT

CH-IC030RKE
CH-IC035RKE
CH-IC050RKE



CH-IC071RKE
CH-IC085RKE
CH-IC100RKE
CH-IC125RKE
CH-IC140RKE
CH-IC160RKE



Model	A
CH-IC071RKE	248
CH-IC085RKE	248
CH-IC100RKE	248
CH-IC125RKE	298
CH-IC140RKE	298
CH-IC160RKE	298

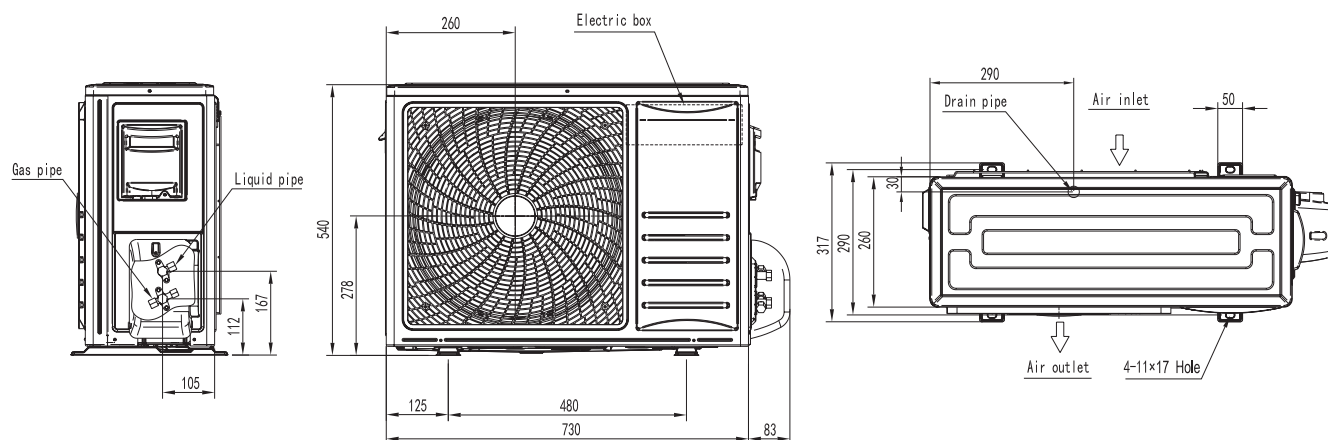
*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

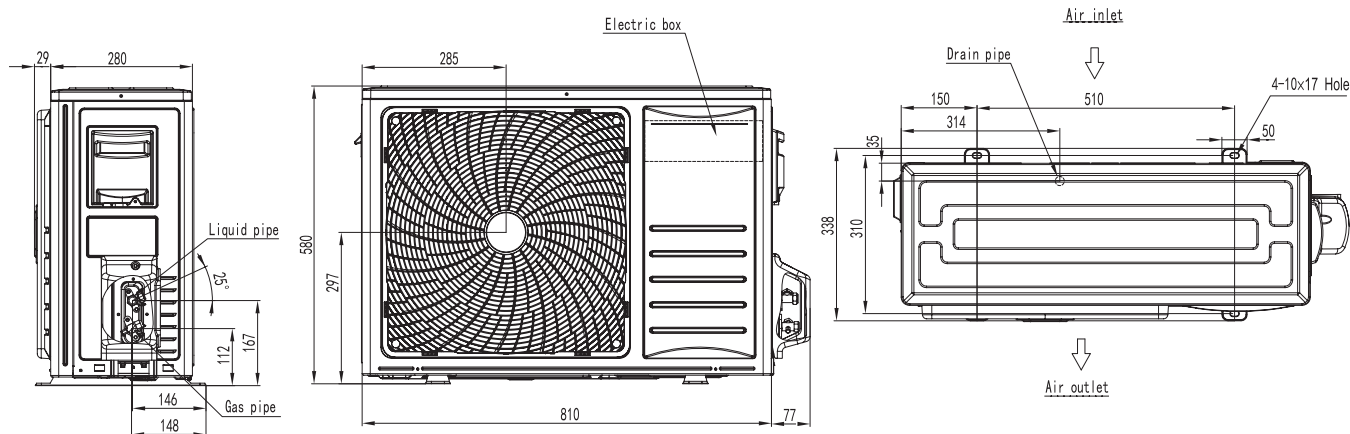
SERIES E

OUTDOOR UNIT

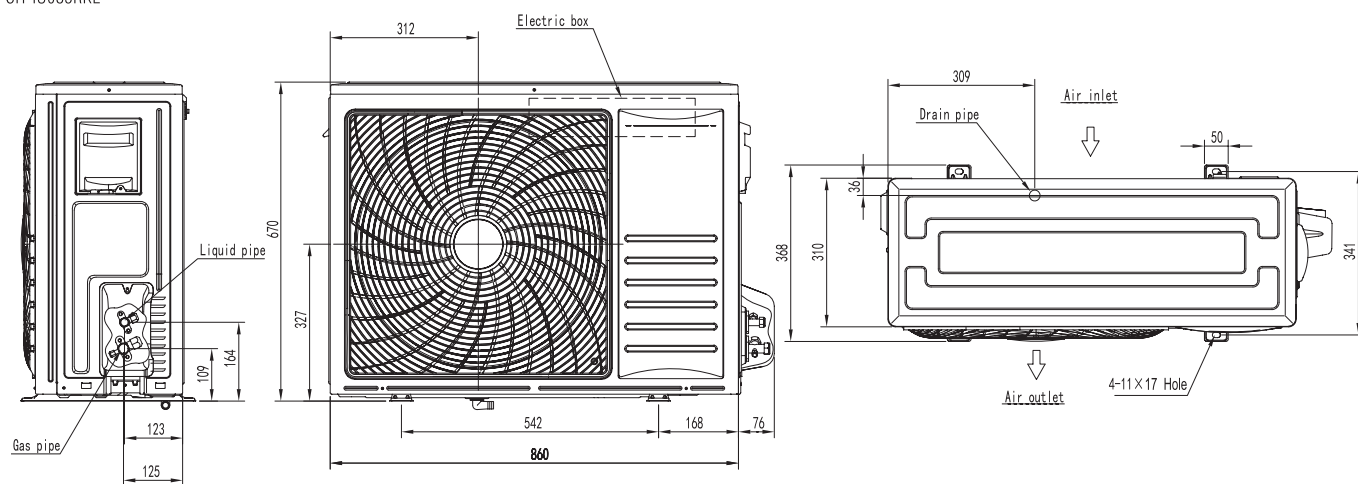
CH-IU030RKE



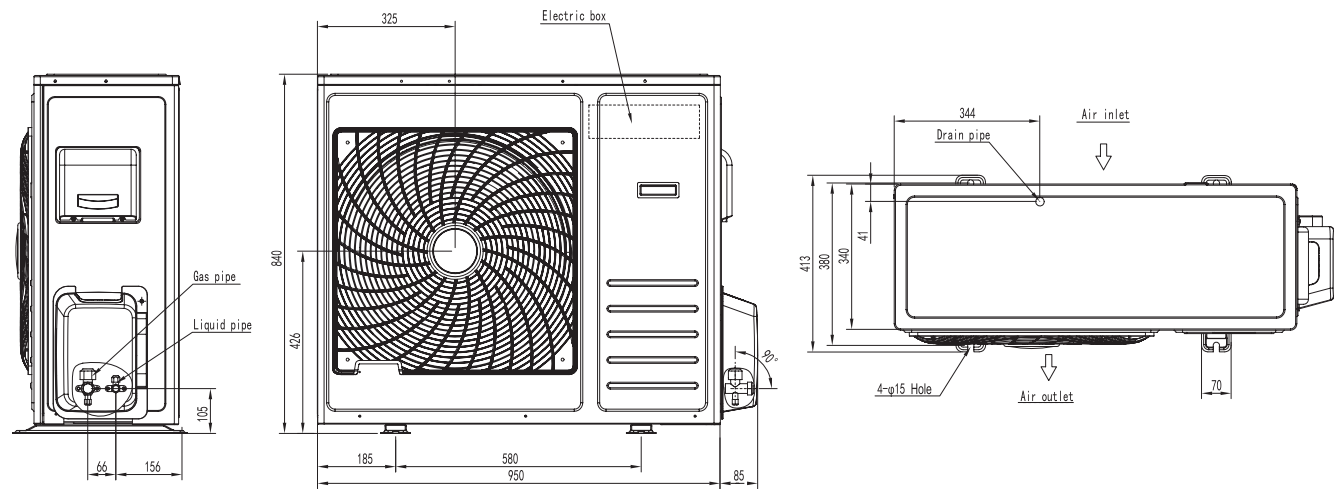
CH-IU035RKE
CH-IU050RKE



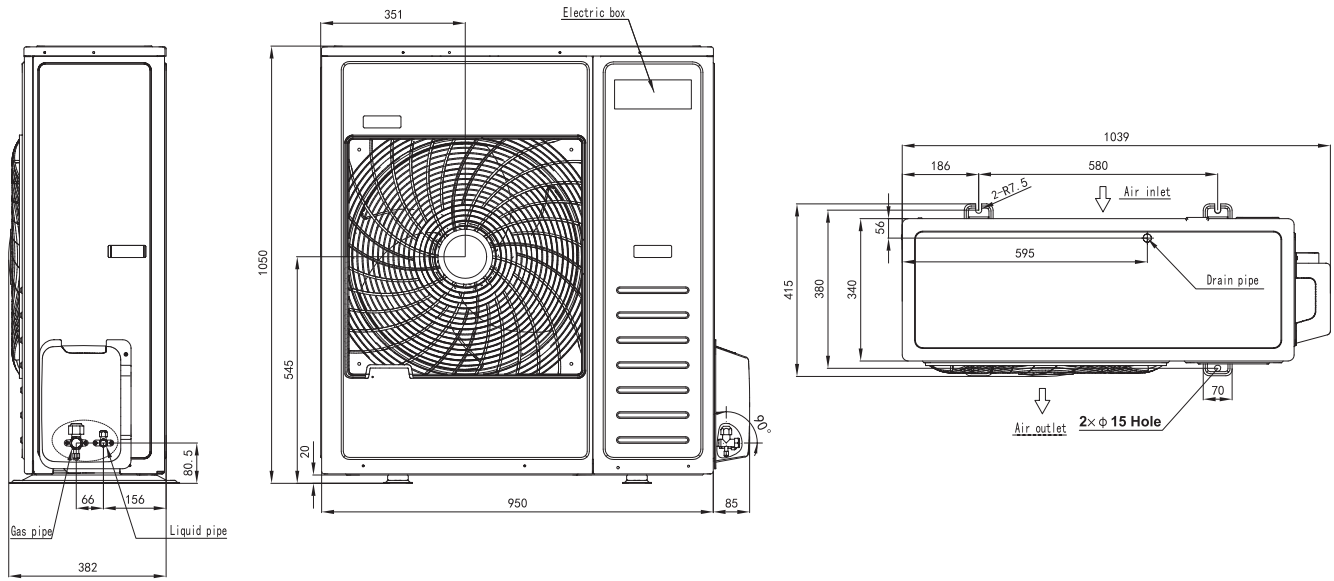
CH-IU071RKE
CH-IU085RKE



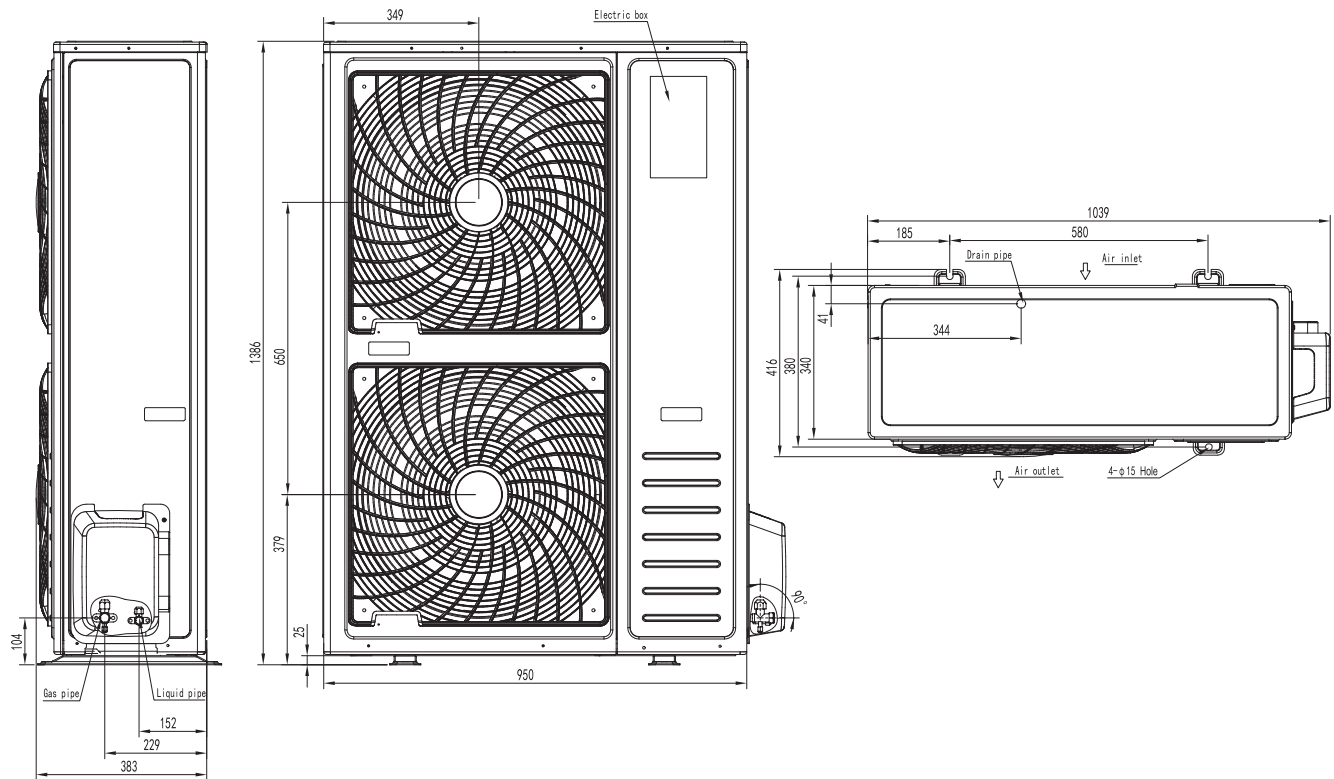
CH-IU100RKE



CH-IU125RME



CH-IU140RME
CH-IU160RME



NORDIC COMMERCIAL
CASSETTE TYPE



SERIES IN |C:-15~+48 H:-20~+24|

SERIES N |C:-15~+48 H:-15~+24|

INVERTER
ON/OFF



- ▶ Simple installation
- ▶ Compact overall dimensions
- ▶ Low noise fan;
- ▶ Remote and wired controllers as standard (series IN);
- ▶ Long life washable filter;
- ▶ Drain pump;
- ▶ Self-testing of main units and modes to identify malfunctions;
- ▶ Multi-level protection system.
- ▶ Pipeline length is up to 75 m (for high power models);
- ▶ The possibility of selecting an indoor air temperature sensor for controlling.

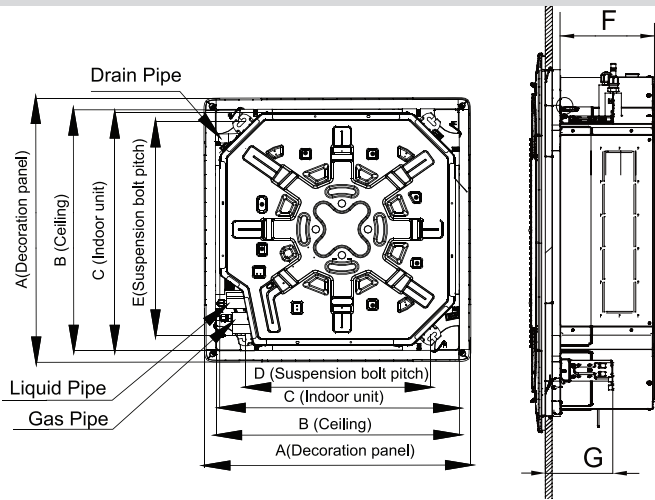
INDOOR UNIT

INVERTER

Model	A	B	C	D	E	F	G
CH-IC035NK	620	580	570	520	560	265	170
CH-IC050NK	620	580	570	520	560	265	170
CH-IC071NK	950	870	840	660	790	200	165
CH-IC100NK	950	870	840	660	790	200	165
CH-IC100NK	950	870	840	660	790	200	165
CH-IC140NK	950	870	840	660	790	200	165
CH-IC160NK	950	870	840	660	790	200	165

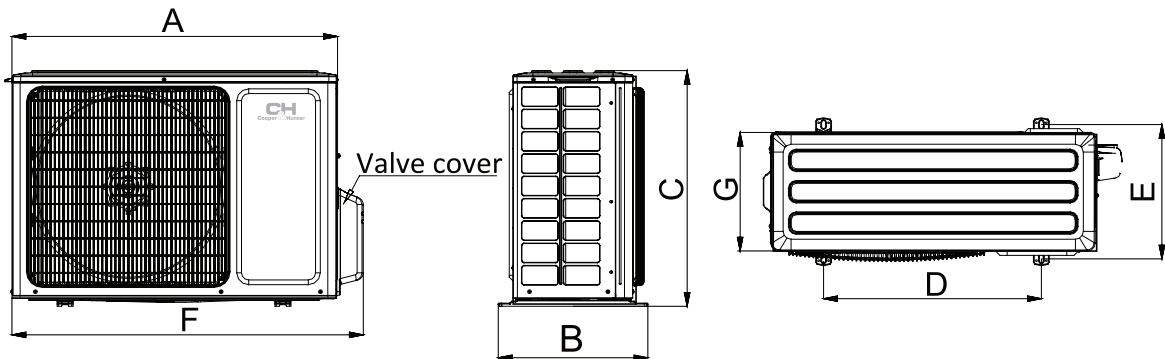
ON/OFF

Model	A	B	C	D	E	F	G
CH-C050NK	620	580	570	520	560	265	170
CH-C071NK	950	870	840	660	790	240	165
CH-C085NK	950	870	840	660	790	240	165
CH-C100NK	950	870	840	660	790	240	165
CH-C125NK	950	870	840	660	790	240	165
CH-C140NK	950	870	840	660	790	240	165
CH-C160NK	950	870	840	660	790	240	165

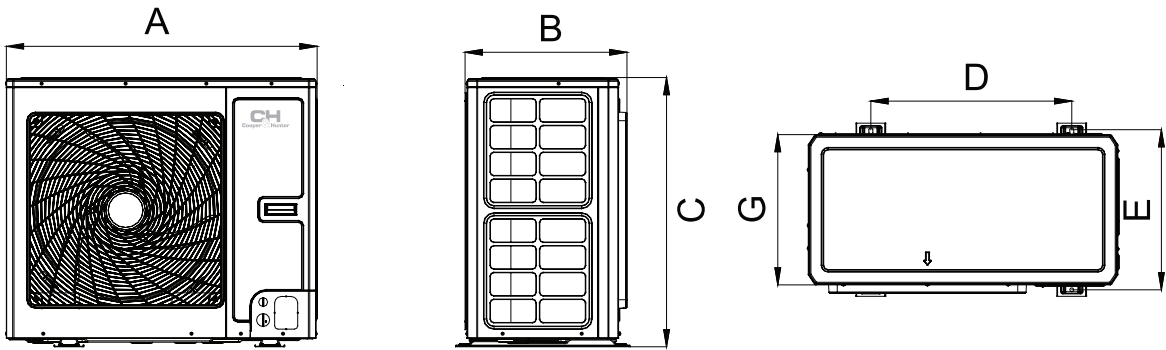


OUTDOOR UNIT

CH-IU035NK
CH-IU050NK
CH-IU071NK
CH-IU100NK
CH-U050NK
CH-U071NK
CH-U085NK
CH-U100NK



CH-IU125NM
CH-IU140NM
CH-IU160NM
CH-U125NK
CH-U140NK
CH-U160NK



INVERTER

Model	A	B	C	D	E	F	G
CH-IU035NK	818	378	602	550	348	887	302
CH-IU050NK	818	378	602	550	348	887	302
CH-IU071NK	892	396	698	560	364	952	340
CH-IU100NK	920	427	790	610	395	1002	370
CH-IU125NM	940	530	820	610	486	/	460
CH-IU140NM	940	530	820	610	486	/	460
CH-IU160NM	940	530	820	610	486	/	460

ON/OFF

Model	A	B	C	D	E	F	G
CH-U050NK	761	320	548	540	286	825	256
CH-U071NK	892	396	698	560	364	957	340
CH-U085NK	892	396	698	560	364	957	340
CH-U100NM	920	427	790	610	395	985	370
CH-U125NM	940	530	820	610	486	1010	460
CH-U140NM	940	530	820	610	486	1010	460
CH-U160NM	940	530	820	610	486	1010	460

Model	INVERTER	CH-IC035NK/ CH-IU035NK	CH-IC050NK/ CH-IU050NK	CH-IC071NK/ CH-IU071NK	CH-IC100NK/ CH-IU100NK	CH-IC125NK/ CH-IU125NM	CH-IC140NK/ CH-IU140NM	CH-IC160NK/ CH-IU160NM
Capacity	Cooling	kW	3.5	5.00	7.00	10.10	12.02	15.00
	Heating	kW	4.00	5.60	8.00	11.00	14.00	17.00
Electric power supply			220-240V/1Ph/50Hz			~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1.03	1.56	2.18	3.40	4.50	5.20
	Heating	kW	1.10	1.60	2.20	3.00	4.20	4.70
Energy performance	Cooling	EER	3.40	3.21	3.21	2.97	2.67	2.88
	Heating	COP	3.64	3.50	3.64	3.67	3.33	3.62
Air flow	Indoor unit	m³/h	650	700	1250	1500	1800	2000
Sound-pressure level	Indoor unit	dB (A)	41/37/33/29	44/39/35/31	47/45/41/39	50/48/46/42	51/49/46/42	54/52/50/48
	Outdoor unit	dB (A)	51	55	55	55	58	60
Type of refrigerant coolant								
R410a								
Volume of refrigerant coolant		kg	1.00	1.25	2.00	2.45	3.40	3.80
Weight	Indoor unit	kg	17	17	31	31	33	36
	Panel	kg	3	3	6	6	6	6
	Outdoor unit	kg	37	41	53	61	90	100
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-20-24					
Liquid pipeline diameter		mm/inch	6.35/1/4"	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter		mm/inch	9.53/3/8"	12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference		m	15	20	25	25	30	30
Pipeline maximum length		m	30	35	50	50	65	75
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	5x2.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)		m	7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)		g/m	22	22	30	30	35	50

Model	ON/OFF	CH-C050NK/ CH-U050NK	CH-C071NK/ CH-U071NK	CH-C085NK/ CH-U085NK	CH-C100NK/ CH-U100NM	CH-C125NK/ CH-U125NM	CH-C140NK/ CH-U140NM	CH-C160NK/ CH-U160NM
Capacity	Cooling	kW	4.80	7.10	8.30	10.01	12.00	14.01
	Heating	kW	5.00	7.40	9.20	12.00	14.80	17.40
Electric power supply			220-240V/1Ph/50Hz			~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1.55	2.15	2.65	3.25	4.20	5.30
	Heating	kW	1.35	2.05	2.50	3.20	4.20	5.60
Energy performance	Cooling	EER	3.10	3.30	3.13	3.08	2.86	2.83
	Heating	COP	3.70	3.61	3.68	3.75	3.52	3.11
Air flow	Indoor unit	m³/h	700	1250	1250	1600	1600	2000
Sound-pressure level	Indoor unit	dB (A)	44/43/38/35	46/45/42/39	46/45/42/39	52/50/48/45	52/50/49/47	54/51/47/45
	Outdoor unit	dB (A)	51	53	55	56	58	60
Type of refrigerant coolant								
R410a								
Volume of refrigerant coolant		kg	1.20	1.90	2.10	2.10	2.85	4.20
Weight	Indoor unit	kg	17	30	30	30	33	34
	Panel	kg	3	6	6	6	6	6
	Outdoor unit	kg	39	59	61	70	97	103
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-15-24					
Liquid pipeline diameter		mm/inch	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter		mm/inch	12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference		m	15	15	15	20	30	30
Pipeline maximum length		m	30	30	30	30	50	50
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x1.5mm²	5x1.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)		m	7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)		g/m	22	30	30	45	45	54

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

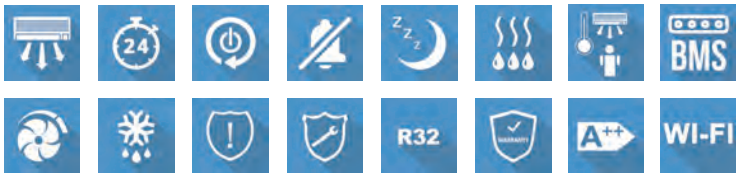
NORDIC COMMERCIAL

CASSETTE TYPE

SERIES R |C:-20~+48 H:-20~+24|



INVERTER



- Simple installation

► Compact overall dimensions

► Low noise fan;

► Long life washable filter;

► Drain pump;
- Self-testing of main units and modes to identify malfunctions;

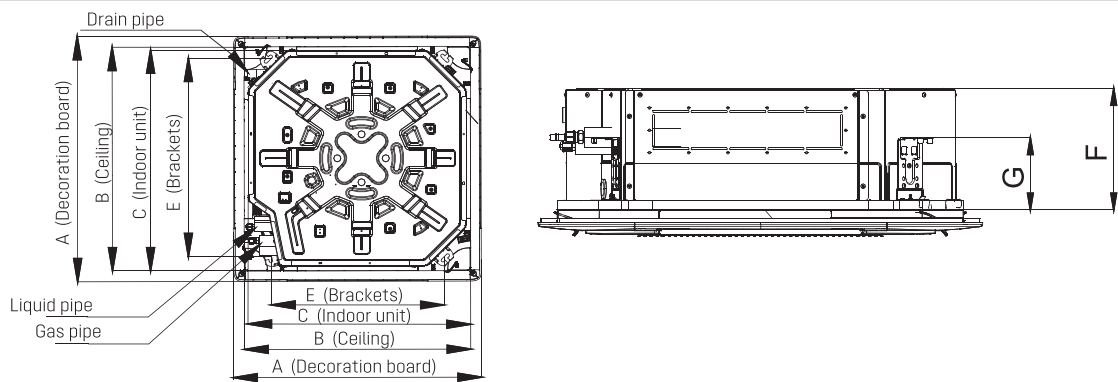
► Multi-level protection system.

► Pipeline length is up to 75 m (for high power models);

► The possibility of selecting an indoor air temperature sensor for controlling.

Model			CH-IC035RK / CH-IU035RK	CH-IC050RK / CH-IU050RK	CH-IC071RK / CH-IU071RK	CH-IC085RK / CH-IU085RK	CH-IC100RK / CH-IU100RM	CH-IC125RK / CH-IU125RM	CH-IC140RK / CH-IU140RM	CH-IC160RK / CH-IU160RM
Capacity	Cooling	kW	3,50	5,00	7,00	8,50	10,00	12,10	13,40	14,50
	Heating	kW	4,00	5,50	8,00	8,80	12,00	13,50	15,50	17,00
Electric power supply			~220-240 V/50 Hz/1 Ph					~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1,00	1,56	2,05	2,80	3,00	4,05	4,70	5,20
	Heating	kW	1,05	1,65	2,20	2,65	3,40	4,15	4,45	4,80
Energy performance	Cooling	EER	3,50	3,21	3,41	3,04	3,33	2,99	2,85	2,94
	Heating	COP	3,81	3,33	3,63	3,06	3,53	3,25	3,48	3,54
Air flow	Indoor unit	m³/h	650	700	1100	1400	1500	1800	1900	2000
Sound-pressure level	Indoor unit	dB (A)	44/39/36/33	44/39/36/33	43/42/40/39	49/47/44/41	50/48/46/42	51/49/46/42	52/51/48/45	54/52/50/48
	Outdoor unit	dB (A)	50	53	52	53	55	56	57	57
Type of refrigerant coolant			R32							
Volume of refrigerant coolant		kg	0,78	1,00	1,60	1,80	2,5	2,65	2,80	3,60
Weight	Indoor unit	kg	17	17	29	29	31	33	36	36
	Panel	kg	3	3	6	6	6	6	6	6
	Outdoor unit	kg	37	39	53	60	89	95	99	112
Operational temperature range	Cooling	°C	-20~48							
	Heating	°C	-20~24							
Liquid piepline diameter		mm/ inch	6,38//1/4"	6,38//1/4"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"
Gas piepline diameter		mm/ inch	9,53//3/8"	12,70//1/2"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"
Maximum piepline level difference		m	15	20	25	30				
Pipeline maximum length		m	30	35	50	65	75			
Number of interblock strands (for control)			2x0,75mm²							
Main power supply area			Outdoor unit							
Number of the strands (power supply)	Indoor unit		3 (Ø 1,0mm²)							
	Outdoor unit		3 (Ø 1,5mm²)	3 (Ø 1,5mm²)	3 (Ø 2,5mm²)	3 (Ø 2,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)
Factory Freon fill (for the number of the running meters)		m	5	5	5	5	5	5	7,5	7,5
Freon per one running meter (surplus. for one running meter)		g/m	16	16	40	40	40	40	40	40
SEER/SCOP			5,90/- A+/-	5,90/4,00 A+/A+	7,20/3,90 A++/A	6,10/4,00 A++/A	6,10/4,00 A++/A+	6,10/3,80 A++/A	6,10/4,00 A++/A+	6,10/3,80 A++/A
Energy performance class										

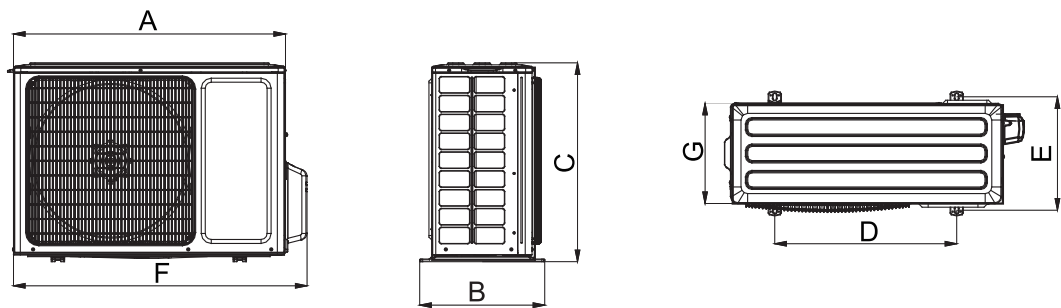
INDOOR UNIT



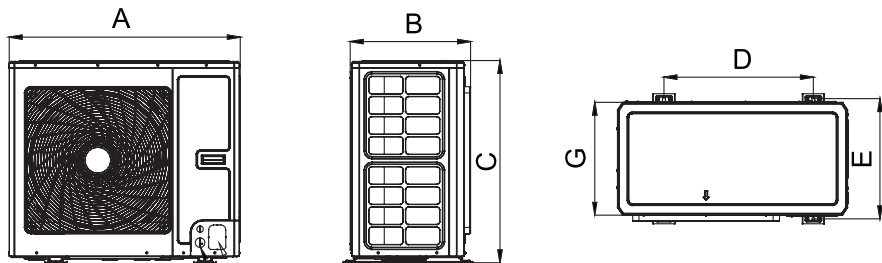
Model	A	B	C	D	E	F	G
CH-IC035RK	620	580	570	520	560	265	140
CH-IC050RK	620	580	570	520	560	265	140
CH-IC071RK	950	870	840	660	790	240	134
CH-IC085RK	950	870	840	660	790	240	134
CH-IC100RK	950	870	840	660	790	240	134
CH-IC125RK	950	870	840	660	790	290	134
CH-IC140RK	950	870	840	660	790	290	134
CH-IC160RK	950	870	840	660	790	290	134

OUTDOOR UNIT

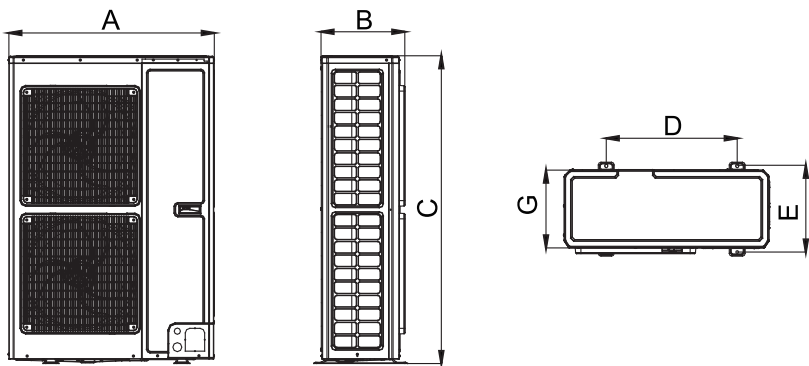
CH-IU035RK
CH-IU050RK
CH-IU071RK
CH-IU085RK



CH-IU100RM
CH-IU125RM
CH-IU140RM



CH-IU160RM

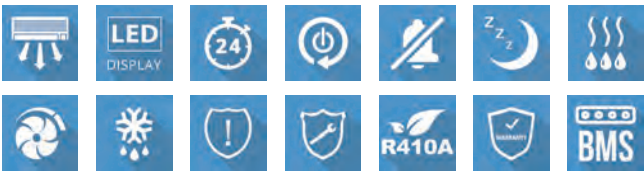


Model	A	B	C	D	E	F	G
CH-IU035RK / CH-IU050RK	818	378	596	550	348	887	302
CH-IU071RK	892	396	698	560	364	952	340
CH-IU085RK	920	427	790	610	395	1002	370
CH-IU100RM / CH-IU125RM / CH-IU140RM	940	530	820	610	486	/	460
CH-IU160RM	900	412	1345	572	378	/	340

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL
FLOOR-CEILING TYPE
SERIES N4 |C:-15~+48 H:-15~+24| *INVERTER*

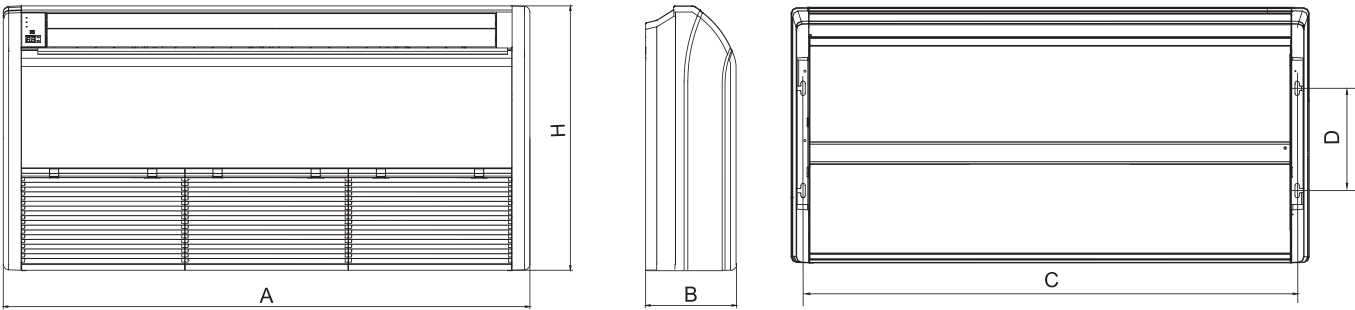


- ▶ Compact size;
 - ▶ Low noise level;
 - ▶ Long life washable filter;
 - ▶ Automatic air distribution in Swing mode;
 - ▶ Self-diagnosis of the main units and modes;
- ▶ Remote and wired controllers as standard;
 - ▶ Multi-level protection system;
 - ▶ Intelligent defrost;
 - ▶ Length pipeline to 50 m.



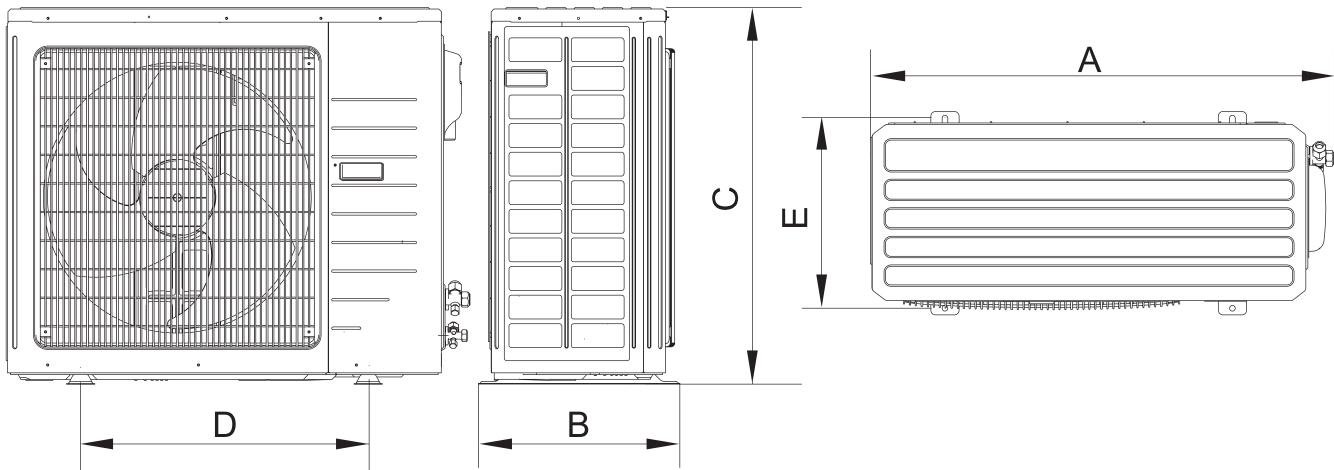
Model			CH-IF09NK4/ CH-IU09NM4	CH-IF12NK4/ CH-IU12NM4	CH-IF18NK4/ CH-IU18NM4	CH-IF24NK4/ CH-IU24NM4	CH-IF30NK4/ CH-IU30NM4	CH-IF36NK4/ CH-IU36NM4	CH-IF42NK4/ CH-IU42NM4	CH-IF48NK4/ CH-IU48NM4	CH-IF60NK4/ CH-IU60NM4	
Capacity	Cooling/Heating	kW	2.7/2.9	3.50/3.80	5.00/5.60	7.00/8.00	8.50/9.20	10.00/12.00	11.50/13.50	14.00/16.00	16.00/17.00	
Electric power supply			~220-240 V/50 Hz/1 Ph						~380-415 V/50 Hz/3 Ph			
Rated input	Cooling/Heating	kW	0.84/0.8	1.09/1.05	1.55/1.55	2.18/2.21	2.67/2.57	3.12/3.32	3.9/3.74	5.2/4.5	5.75/4.7	
Current rate	Cooling/Heating	A	3.9/3.7	5/4.9	7.2/7.2	10.1/10.2	12.4/12	5.4/5.8	6.7/6.5	8.6/7.8	10.0/10.2	
Energy performance	Cooling/Heating	EER/COP	3.21/3.61	3.21/3.61	3.23/3.61	3.21/3.62	3.18/3.58	3.21/3.61	3.21/3.61	2.80/3.56	3.78/3.62	
Air flow		m³/h	600	700	1000	1200	1500	1900	1900	2300	2500	
Sound-pressure level	Outdoor unit	dB (A)	31/29/26/24 52	35/33/30/27 52	44/42/38/32 56	49/48/46/40 57	49/46/44/38 58	54/53/51/46 63	55/54/52/47 61	56/52/50/46 59	58/56/52/46 63	
Type of refrigerant coolant			R410A									
Refrigerant coolant type		kg	1.2	1.2	1.4	2.2	2.4	3.5	3.7	4	5	
Weight	Indoor unit	kg	38	39	39	40	48	48	50	59	59	
	Outdoor unit	kg	34	34	47	67	71	98	108	114	126	
Operational temperature range	Cooling/Heating	°C	-15/+48									
	Cooling/Heating	°C	-20/+24									
Liquid pipeline diameter		mm/inch	6.38/ 1/4"	6.38/ 1/4"	6.38/ 1/4"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	9.53/ 3/8"	
Gas pipeline diameter		mm/inch	9.53/ 3/8"	9.53/ 3/8"	12.70/ 1/2"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	15.88/ 5/8"	19.05/ 3/4"	
Maximum pipeline level difference		m	15						30			
Pipeline maximum length		m	20			30			50			
Number of interblock strands (for control)			2*0.75 if longer than 20 m				2*1.0 if longer than 20 m					
Main power supply area			Outdoor unit					Outdoor unit				
Number of the strands (power supply)	Indoor unit		3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	3 (Ø1.0 mm²)	
	Outdoor unit		3 (Ø1.5 mm²)	3 (Ø1.5 mm²)	3 (Ø2.5 mm²)	3 (Ø2.5 mm²)	5 (Ø2.5 mm²)	5 (Ø1.5 mm²)	5 (Ø2.5 mm²)	5 (Ø2.5 mm²)	5 (Ø2.5 mm²)	
Factory Freon fill (for the number of the running meters)		m	5					5		7.5		
Freon per one running meter (surplus. for one running meter)		g/m	30	30	60	60	60	60	60	60	60	
SEER/SCOP			6.1/3.8	6.1/4.0	6.1/4.0	5.6/4.0	6.1/4.0	6.1/4.0	5.6/4.0	5.6/4.0	5.1/4.0	

INDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	H (mm)
CH-IF09NK4	1220	225	1158	280	700
CH-IF12NK4					
CH-IF18NK4					
CH-IF24NK4					
CH-IF30NK4	1420	245	1354	280	700
CH-IF36NK4					
CH-IF42NK4					
CH-IF48NK4	1700	245	1634	280	700
CH-IF60NK4					

OUTDOOR UNIT



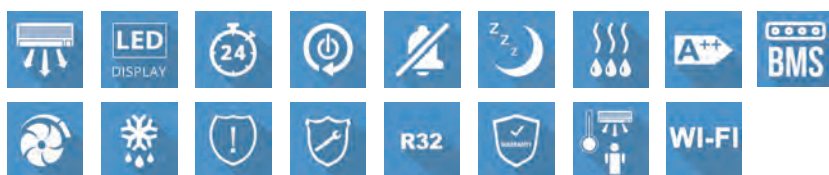
Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
CH-IU09NK4	848	320	540	540	286
CH-IU12NK4					
CH-IU18NK4	955	396	700	560	360
CH-IU24NK4					
CH-IU30NK4	980	427	790	610	395
CH-IU36NM4					
CH-IU42NM4	958	412	1349	572	376
CH-IU48NM4					
CH-IU60NM4	1085	427	1365	620	395

NORDIC COMMERCIAL FLOOR-CEILING TYPE



SERIES E |C:-15~+48 H:-15~+24|

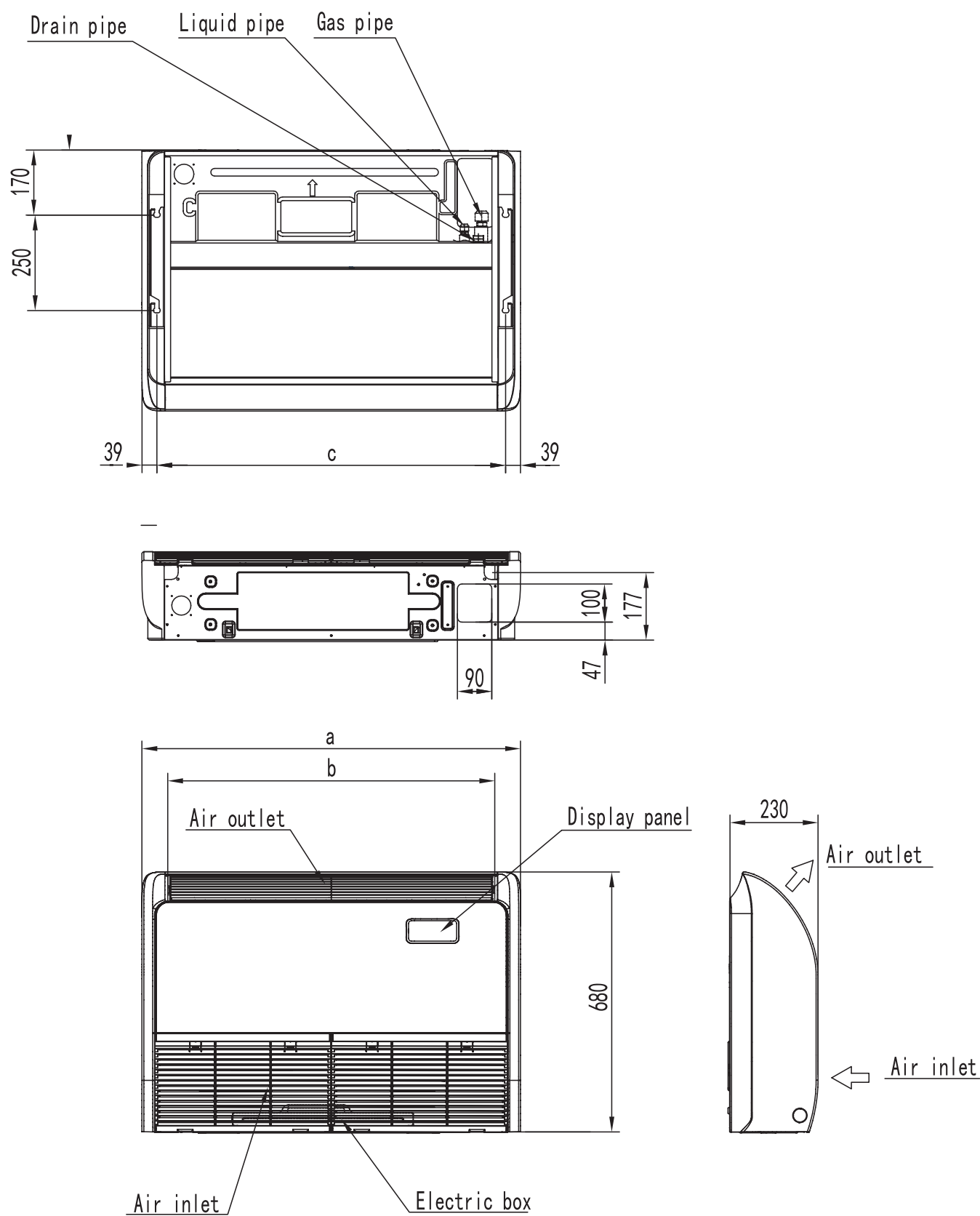
INVERTER



- Simple installation
- Self-testing of main units and modes to identify malfunctions;
- Multi-level system protection;
- Pipeline length is up to 50 m. (for high power models).



Model			CH-IF050RKE/ CH-IU050RKE	CH-IF071RKE/ CH-IU071RKE	CH-IF085RKE/ CH-IU085RKE	CH-IF100RKE/ CH-IU100RKE	CH-IF125RKE/ CH-IU125RME	CH-IF140RKE/ CH- IU140RME	CH-IF160RKE/ CH- IU160RME
Capacity	Cooling	kW	5.28	6.90	8.80	10.00	12.30	14.30	17.00
	Heating	kW	5.60	7.80	9.00	11.30	13.50	16.70	18.00
Electric power supply			~220-240V/1Ph/50Hz				~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1.63	2.15	2.91	3.57	4.40	4.71	6.60
	Heating	kW	1.42	2.35	2.30	3.42	4.17	5.58	6.10
Energy perfor- mance	Cooling	EER	3.23	3.21	2.95	2.80	2.80	3.04	2.58
	Heating	COP	3.94	3.32	3.90	3.30	3.24	2.99	2.95
Air flow	Indoor unit	m³/h	800/690/600	1100/950/800	1450/1120/900	1700/1500/1300	2000/1800/1600	2000/1600/1200	2000/1700/1500
Sound-pressure level	Indoor unit	dB (A)	40/36/33	51/48/45	49/43/40	50/49/47	53/50/47	55/51/48	55/51/48
	Outdoor unit	dB (A)	51	55	51	57	61	59	63
Type of refrigerant coolant			R32						
Volume of refrigerant coolant		kg	0.97	1.40	1.45	2.00	2.50	3.00	3.40
Weight	Indoor unit	kg	30	30	37	37	48	48	50
	Outdoor unit	kg	36.0	49.0	49.0	70.0	85.0	101.5	117.0
Operational tem- perature range	Cooling	°C	-15-48						
	Heating	°C	-15-24						
Liquid pipeline diameter		mm/inch	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter		mm/inch	12.7/1/2"	15.88/5/8"	15.88/5/8"	19.05/3/4"	19.05/3/4"	19.05/3/4"	19.05/3/4"
Maximum pipeline level difference		m	15	15	30	30	30	30	30
Pipeline maximum length		m	30	30	50	50	50	50	50
Number of interblock strands (for control)			4x1.5mm²						
Main power supply area			Outdoor unit						
Number of the strands (power supply)	Outdoor unit		3x2.5mm²	3x2.5mm²	3x2.5mm²	3x4.0mm²	5x2.5mm²	5x2.5mm²	5x2.5mm²
Factory Freon fill (for the number of the running meters)		m	5	5	5	5	5	5	5
Freon per one running meter (surplus. for one running meter)		g/m	12	28	28	28	28	28	28
SEER/SCOP			6.30/4.40	6.11/4.18	6.10/4.10	6.10/4.00	-	-	-
Energy performance class			A++/A+	A++/A+	A++/A+	A++/A+	-	-	-

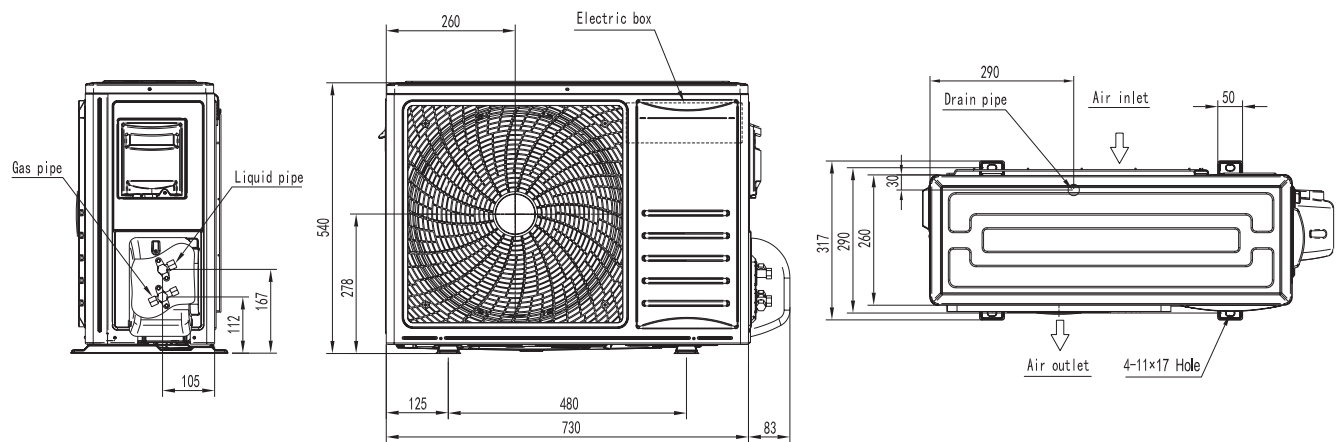


Model	A	B	C
CH-F050NK	990	855	912
CH-F071NK	990	855	912
CH-F085NK	1285	1150	1207
CH-F100NK	1285	1150	1207
CH-F125NK	1580	1445	1502
CH-F140NK	1580	1445	1502
CH-F160NK	1580	1445	1502

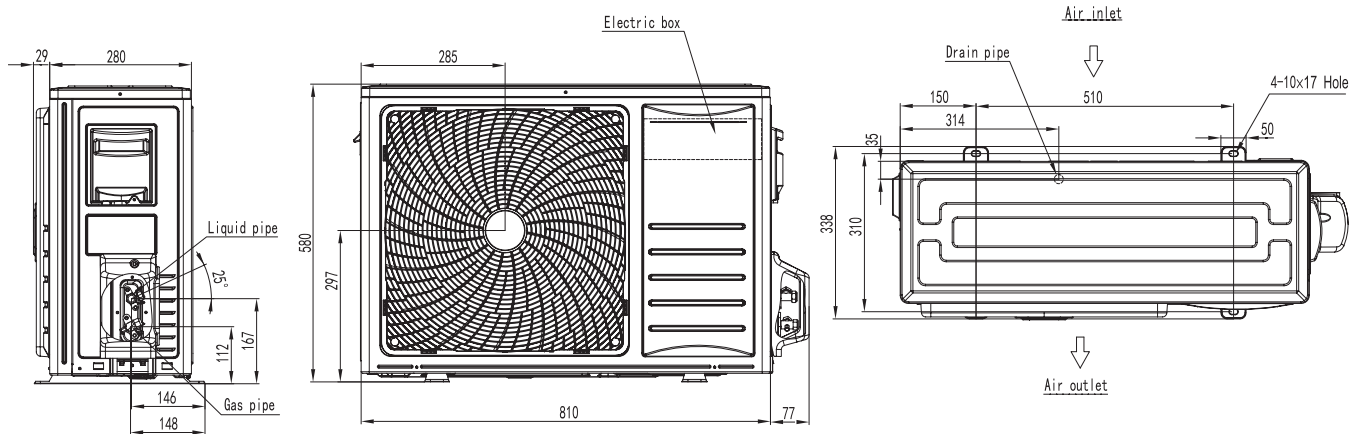
SERIES E

OUTDOOR UNIT

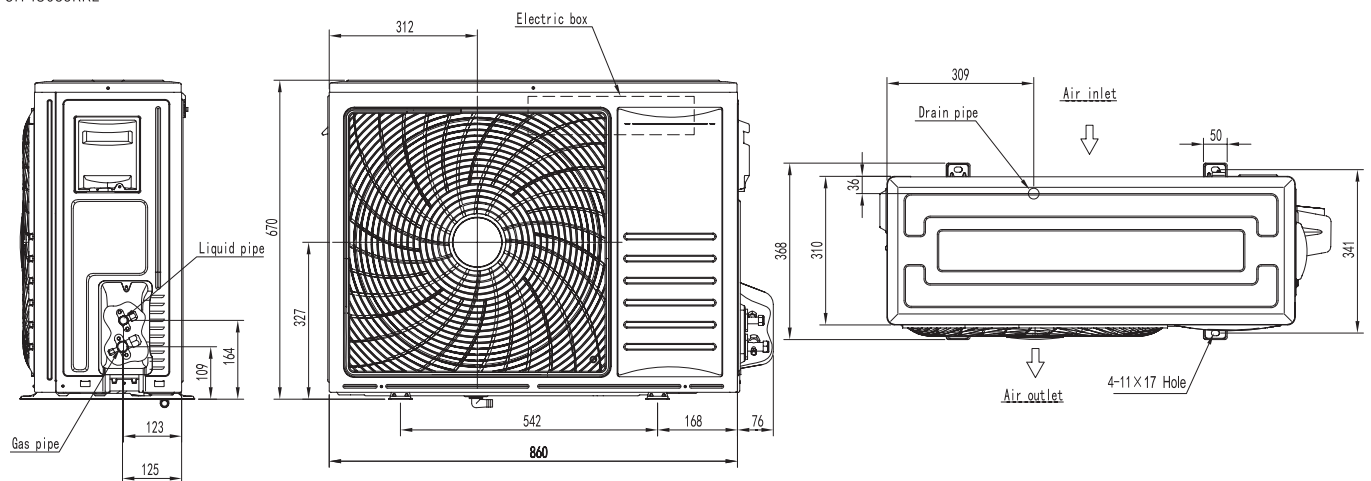
CH-IU030RKE



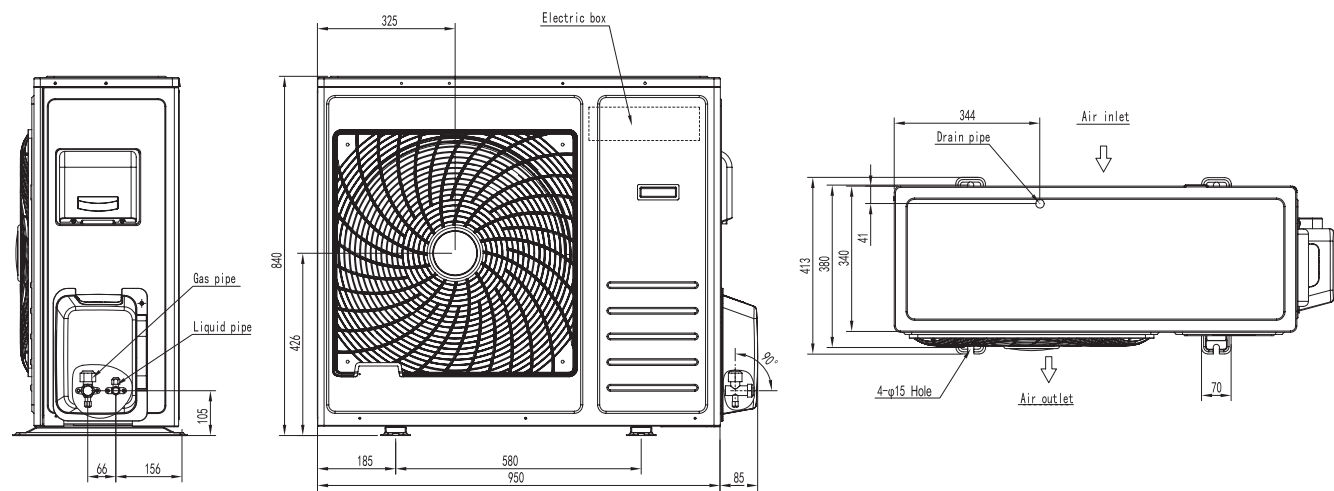
CH-IU035RKE
CH-IU050RKE



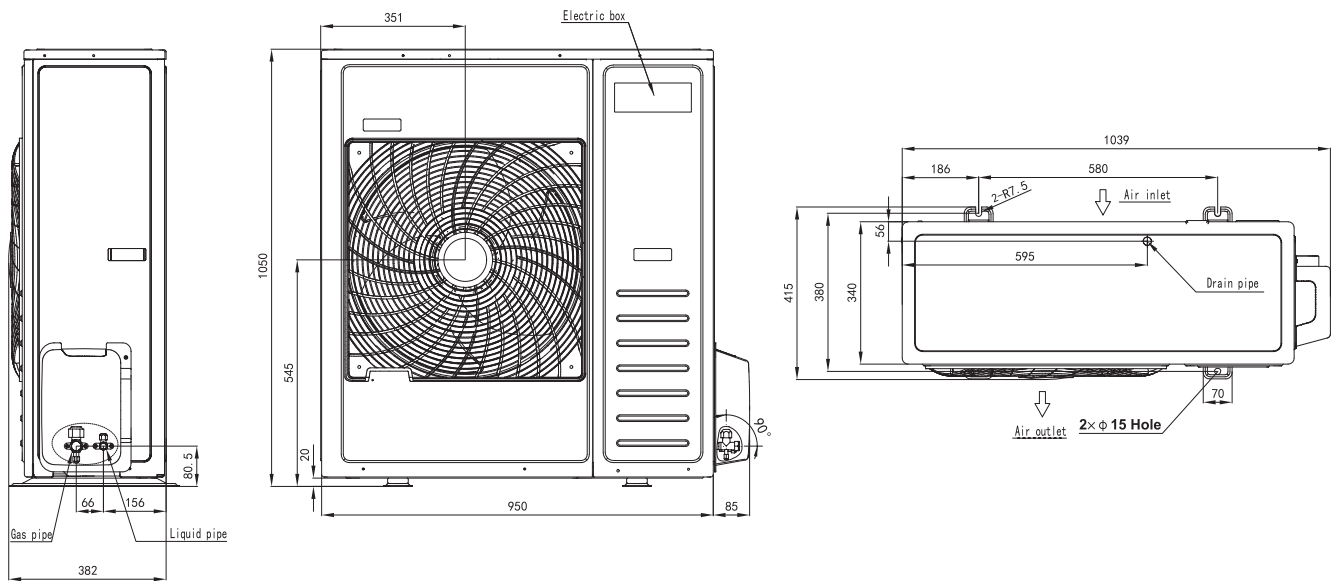
CH-IU071RKE
CH-IU085RKE



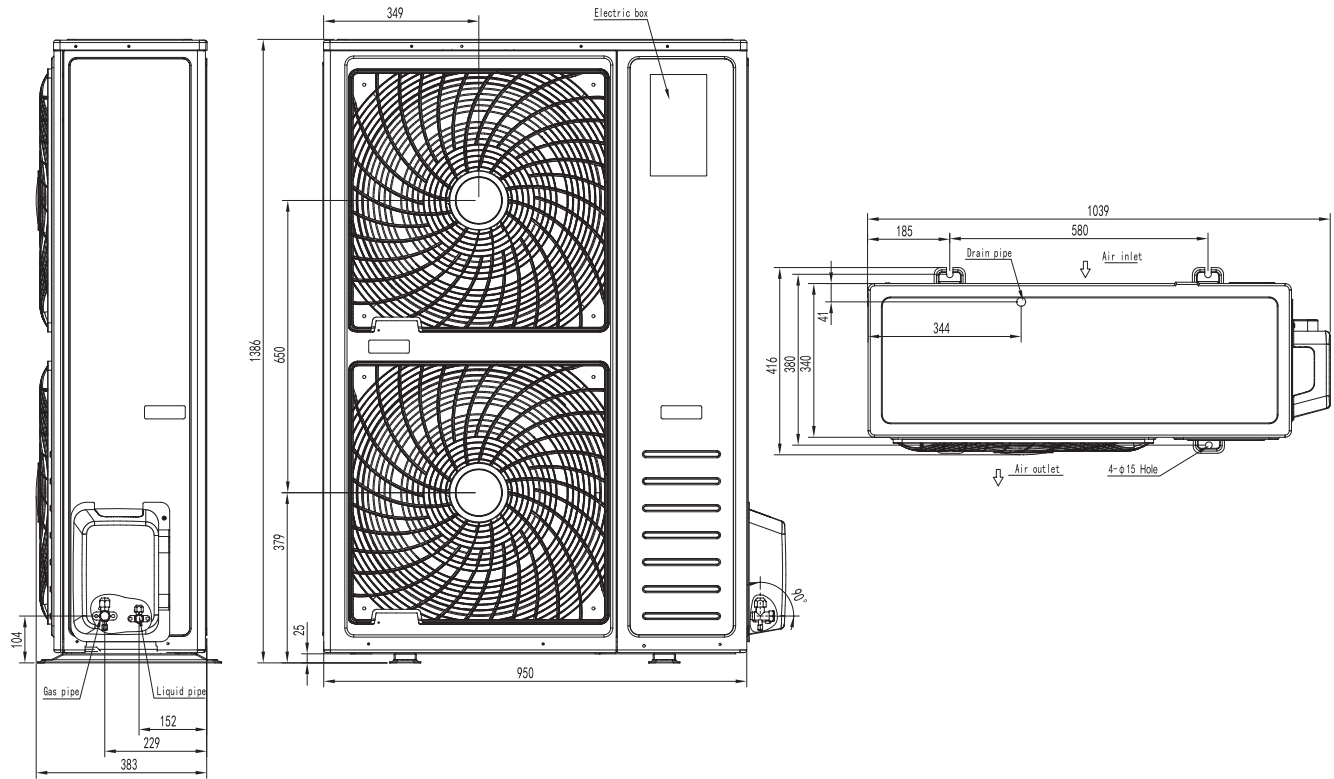
CH-IU100RKE



CH-IU125RME



CH-IU140RME
CH-IU160RME



NORDIC COMMERCIAL FLOOR-CEILING TYPE



SERIES IN |C:-15~+48 H:-20~+24|
SERIES N |C:-15~+48 H:-15~+24|

INVERTER
ON/OFF



- ▶ Compact size;
- ▶ Low noise level;
- ▶ Long life washable filter;
- ▶ Automatic air distribution in Swing mode;
- ▶ Self-diagnostics of the main units and modes;
- ▶ Remote and wired controllers as standard (series IN);
- ▶ Multi-level protection system;
- ▶ Intelligent defrost;
- ▶ Length pipeline to 75 m.



INDOOR UNIT

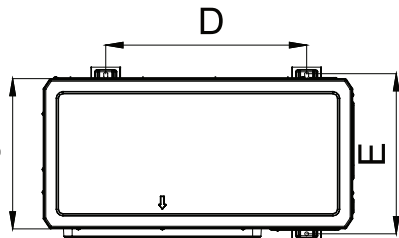
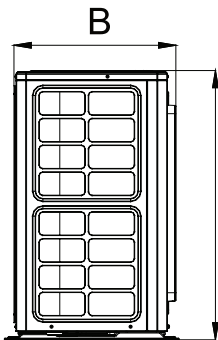
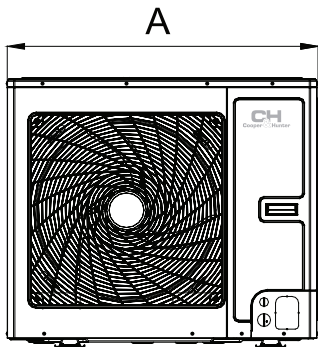
Model	A	B	C	D	H
CH-IF035NK	870	235	812	318	665
CH-IF050NK	870	235	812	318	665
CH-IF071NK	870	235	812	318	665
CH-IF100NK	1200	235	1142	318	665
CH-IF100NK	1200	235	1142	318	665
CH-IF140NK	1570	235	1512	318	665
CH-IF160NK	1570	235	1512	318	665

Model	A	B	C	D	H
CH-F050NK	870	235	812	318	665
CH-F071NK	1200	235	1142	318	665
CH-F085NK	1200	235	1142	318	665
CH-F100NK	1200	235	1142	318	665
CH-F125NK	1200	235	1142	318	665
CH-F140NK	1570	235	1512	318	665
CH-F160NK	1570	235	1512	318	665

OUTDOOR UNIT

Model	A	B	C	D	E	F	G
CH-IU035NK	870	235	812	318	665	1200	235
CH-IU050NK	870	235	812	318	665	1200	235
CH-IU071NK	870	235	812	318	665	1200	235
CH-IU100NK	1200	235	1142	318	665	1200	235
CH-U050NK	1200	235	1142	318	665	1200	235
CH-U071NK	1200	235	1142	318	665	1200	235
CH-U085NK	1200	235	1142	318	665	1200	235
CH-U100NK	1200	235	1142	318	665	1200	235

CH-IU125NM
CH-IU140NM
CH-IU160NM
CH-U125NK
CH-U140NK
CH-U160NK



INVERTER

Model	A	B	C	D	E	F	G
CH-IU035NK	818	378	602	550	348	887	302
CH-IU050NK	818	378	602	550	348	887	302
CH-IU071NK	892	396	698	560	364	952	340
CH-IU100NK	920	427	790	610	395	1002	370
CH-IU125NM	940	530	820	610	486	/	460
CH-IU140NM	940	530	820	610	486	/	460
CH-IU160NM	940	530	820	610	486	/	460

ON/OFF

Model	A	B	C	D	E	F	G
CH-U050NK	761	320	548	540	286	825	256
CH-U071NK	892	396	698	560	364	957	340
CH-U085NK	892	396	698	560	364	957	340
CH-U100NM	920	427	790	610	395	985	370
CH-U125NM	940	530	820	610	486	1010	460
CH-U140NM	940	530	820	610	486	1010	460
CH-U160NM	940	530	820	610	486	1010	460

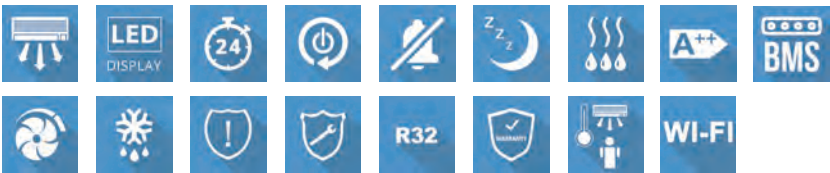
Model	INVERTER	CH-IF035NK/ CH-IU035NK	CH-IF050NK/ CH-IU050NK	CH-IF071NK/ CH-IU071NK	CH-IF100NK/ CH-IU100NK	CH-IF125NK/ CH-IU125NM	CH-IF140NK/ CH-IU140NM	CH-IF160NK CH-IU160NM
Capacity	Cooling	kW	3.50	5.20	7.10	10.00	12.02	15.40
	Heating	kW	4.00	5.80	8.00	11.00	14.00	17.00
Electric power supply			~220-240V/1Ph/50Hz			~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1.03	1.62	2.20	3.40	4.10	5.40
	Heating	kW	1.20	1.77	2.40	3.20	4.00	4.80
Energy performance	Cooling	EER	3.40	3.21	3.23	2.94	2.93	2.85
	Heating	COP	3.30	3.41	3.33	3.44	3.50	3.54
Air flow	Indoor unit	m³/h	650	850	1000	1600	1600	2300
Sound-pressure level	Indoor unit	dB (A)	39/36/32/28	46/44/41/37	50/49/46/44	49/47/45/43	49/47/45/43	52/50/48/44
	Outdoor unit	dB (A)	51	55	55	55	58	59
Type of refrigerant coolant			R410a					
Volume of refrigerant coolant	kg		1.00	1.25	2.00	2.45	3.40	3.80
External static pressure	Pa		25	26	31	32	33	40
Weight	Indoor unit	kg	37	41	53	61	90	100
	Outdoor unit	kg	37	41	53	61	90	100
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-20-24					
Liquid pipeline diameter	mm/inch		6.35/1/4"	6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter	mm/inch		9.53/3/8"	12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference	m		15	20	25	25	30	30
Pipeline maximum length	m		30	35	50	50	75	75
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	5x2.5mm²	5x1.5mm²	5x1.5mm²
	Indoor unit		3x1.5mm²	3x1.5mm²	3x2.5mm²	5x2.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)	m		7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)	g/m		22	22	30	30	35	50

Model	ON/OFF	CH-F050NK/ CH-U050NK	CH-F071NK/ CH-U071NK	CH-F085NK/ CH-U085NK	CH-F100NK/ CH-U100NM	CH-F125NK/ CH-U125NM	CH-F140NK/ CH-U140NM	CH-F160NK/ CH-U160NM
Capacity	Cooling	kW	5.00	7.30	8.60	10.10	12.00	15.80
	Heating	kW	5.20	7.70	9.30	12.00	14.50	19.10
Electric power supply			220-240V/1Ph/50Hz			~380-415 V/50 Hz/3 Ph		
Rated input	Cooling	kW	1.65	2.25	2.75	3.20	4.20	5.50
	Heating	kW	1.45	2.20	2.80	3.40	4.45	5.40
Energy performance	Cooling	EER	3.03	3.24	3.13	3.16	2.86	3.13
	Heating	COP	3.59	3.50	3.32	3.53	3.26	3.75
Air flow	Indoor unit	m³/h	700	1400	1500	1700	1700	2200
Sound-pressure level	Indoor unit	dB (A)	41/40/37/33	47/46/44/41	49/48/47/44	51/50/49/48	52/50/49/48	54/53/52/51
	Outdoor unit	dB (A)	51	53	55	56	58	58
Type of refrigerant coolant			R410a					
Volume of refrigerant coolant	kg		1.20	1.90	2.10	2.10	2.85	4.20
External static pressure	Pa		25	33	33	36	37	43
Weight	Indoor unit	kg	39	59	61	70	97	103
	Outdoor unit	kg	39	59	61	70	97	103
Operational temperature range	Cooling	°C	-15-48					
	Heating	°C	-15-24					
Liquid pipeline diameter	mm/inch		6.35/1/4"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"	9.53/3/8"
Gas pipeline diameter	mm/inch		12.7/1/2"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"	15.88/5/8"
Maximum pipeline level difference	m		15	15	15	20	30	30
Pipeline maximum length	m		30	30	30	30	50	50
Number of interblock strands (for control)			2x0.75mm²					
Main power supply area			Outdoor unit					
Number of the strands (power supply)	Outdoor unit		3x1.5mm²	3x1.5mm²	3x1.5mm²	5x1.5mm²	5x1.5mm²	5x1.5mm²
	Indoor unit		3x1.5mm²	3x1.5mm²	3x1.5mm²	5x1.5mm²	5x1.5mm²	5x1.5mm²
Factory Freon fill (for the number of the running meters)	m		7	7	7	7	9.5	9.5
Freon per one running meter (surplus. for one running meter)	g/m		22	30	30	45	45	54

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

NORDIC COMMERCIAL
FLOOR-CEILING TYP
SERIES R |C:-20~+48 H:-20~+24| *INVERTER*

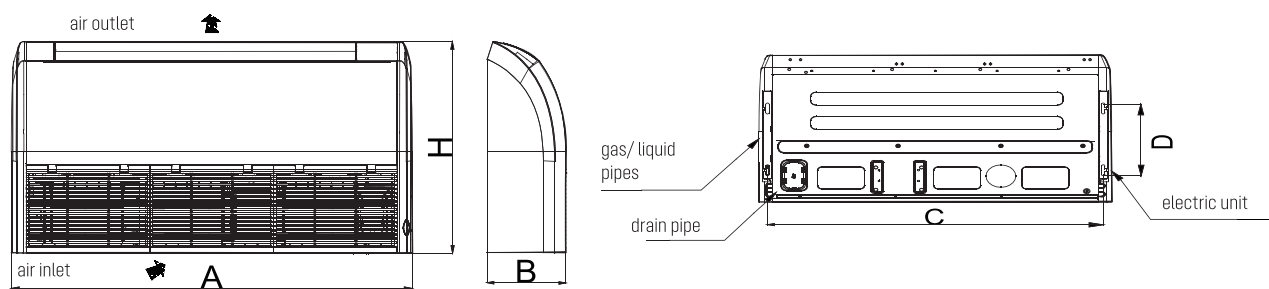


- ▶ Simple installation
- ▶ Self-testing of main units and modes to identify malfunctions;
- ▶ Multi-level system protection;
- ▶ Pipeline length is up to 75 m (for high power models).



Model			CH-IF035RK / CH-IU035RK	CH-IF050RK / CH-IU050RK	CH-IF071RK / CH-IU071RK	CH-IF085RK / CH-IU085RK	CH-IF100RK / CH-IU100RM	CH-IF125RK / CH-IU125RM	CH-IF140RK / CH-IU140RM	CH-IF160RK / CH-IU160RM
Capacity	Cooling	kW	3,5	5,00	7,00	8,50	10,00	12,10	13,40	16,00
	Heating	kW	4,00	5,50	8,00	8,80	12,00	13,50	15,50	17,00
Electric power supply			~220-240 V/50 Hz/1 Ph				~380-415 V/50 Hz/3 Ph			
Rated input	Cooling	kW	0,90	1,55	1,90	2,80	3,30	4,05	4,30	5,40
	Heating	kW	0,95	1,60	2,45	2,65	3,50	4,00	4,40	5,40
Energy performance	Cooling	EER	3,98	3,23	3,68	3,04	3,03	3,18	3,12	2,96
	Heating	COP	4,21	3,44	3,26	3,32	3,43	3,38	3,52	3,15
Air flow	Indoor unit	m³/h	650	850	1300	1500	1600	1800	2100	2300
Sound-pressure level	Indoor unit	dB (A)	39/36/32/28	44/42/39/36	45/44/41/38	49/47/45/43	49/47/45/43	49/47/44/42	52/50/48/44	54/53/49/45
	Outdoor unit	dB (A)	50	53	52	53	55	56	57	57
Type of refrigerant coolant			R32							
Refrigerant coolant type		kg	0,78	1,00	1,60	1,80	2,50	2,70	2,80	3,60
Weight	Indoor unit	kg	25	26	31	31	32	40	42	42
	Outdoor unit	kg	37	39	53	60	89	95	99	112
Operational temperature range	Cooling	°C	-20~48							
	Heating	°C	-20~24							
Liquid pipeline diameter		mm/ inch	6,38//1/4"	6,38//1/4"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"	9,53//3/8"
Gas pipeline diameter		mm/ inch	9,53//3/8"	12,70//1/2"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"	15,88//5/8"
Maximum pipeline level difference		m	15	20	25		30			
Pipeline maximum length		m	30	35	50		65		75	
Number of interblock strands (for control)			2x0,75mm²							
Main power supply area			Outdoor unit							
Number of the strands (power supply)	Indoor unit		3 (Ø 1,0mm²)							
	Outdoor unit		3 (Ø 1,5mm²)	3 (Ø 1,5mm²)	3 (Ø 2,5mm²)	3 (Ø 2,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)	5 (Ø 1,5mm²)
Factory Freon fill (for the number of the running meters)	m		5	5	5	5	5	5	7,5	7,5
Freon per one running meter (surplus. for one running meter)	g/m		16	16	40	40	40	40	40	40
SEER/SCOP			6,70/4,00	6,10/4,00	6,80/3,90	6,10/4,00	6,10/4,00	6,10/3,80	6,10/4,00	6,10/4,00
Energy performance class			A++/A+	A++/A+	A++/A	A++/A+	A++/A+	A++/A	A++/A+	A++/A+

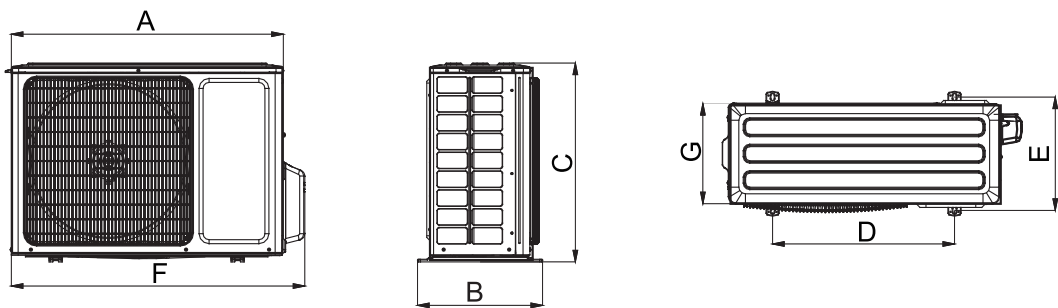
INDOOR UNIT



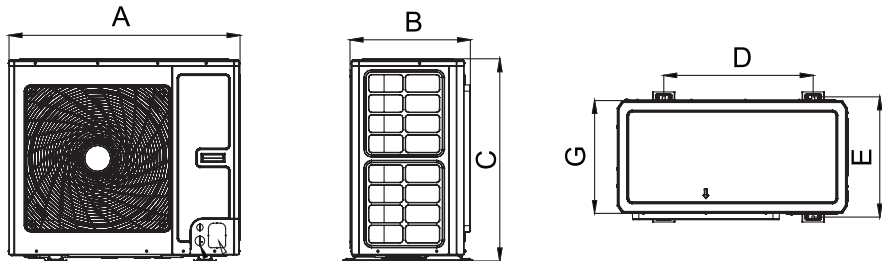
Model	A	B	C	D	H
CH-IF035RK	870	235	812	318	665
CH-IF050RK					
CH-IF071RK					
CH-IF080RK					
CH-IF100RK	1200	235	1142	318	665
CH-IF125RK					
CH-IF140RK	1570	235	1512	318	665
CH-IF160RK					

OUTDOOR UNIT

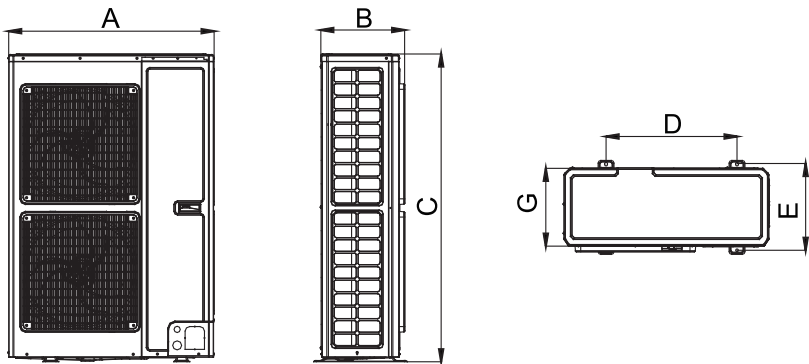
CH-IU035RK
CH-IU050RK
CH-IU071RK
CH-IU085RK



CH-IU100RM
CH-IU125RM
CH-IU140RM



CH-IU160RM



Model	A	B	C	D	E	F	G
CH-IU035RK / CH-IU050RK	818	378	596	550	348	887	302
CH-IU071RK	892	396	698	560	364	952	340
CH-IU085RK	920	427	790	610	395	1002	370
CH-IU100RM / CH-IU125RM / CH-IU140RM	940	530	820	610	486	/	460
CH-IU160RM	900	412	1345	572	378	/	340

*EER - seasonal coefficient of system cooling capacity.
** COP - seasonal coefficient of system heating capacity.

*SEER - seasonal coefficient of system cooling capacity.
** SCOP - seasonal coefficient of system heating capacity.

BIG DUCT SPLIT UNIT



INVERTER

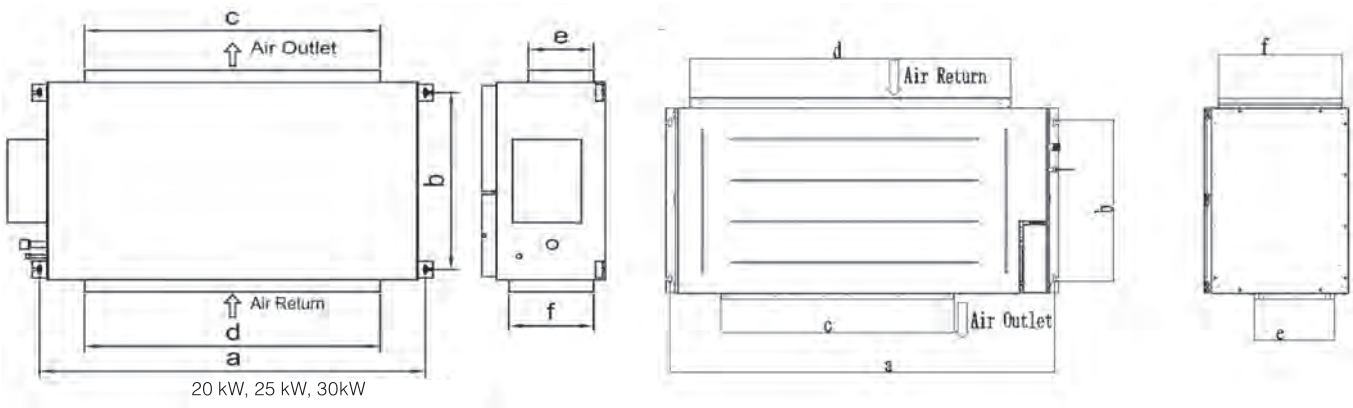


- ▶ All DC inverter for high capacity and energy saving.
- ▶ High static units for longer ducted runs.
- ▶ ESP reach up to 250Pa high.
- ▶ Static pressure is adjustable.
- ▶ Long-distance control is optional, with intelligent filter cleaning reminding function.
- ▶ Indoor fan can be adjusted according to the static pressure of air duct installed by customers.

Model		Heat pump	CH-IBD20NM	CH-IBD25NM	CH-IBD30NM	CH-IBD40N (2) M *
Capacity	Cooling	kW	20	25	30	40
		BTU/h	68200	85303	102364	136486
	Heating	kW	23	28	34	43
		BTU/h	78479	95540	116013	146722

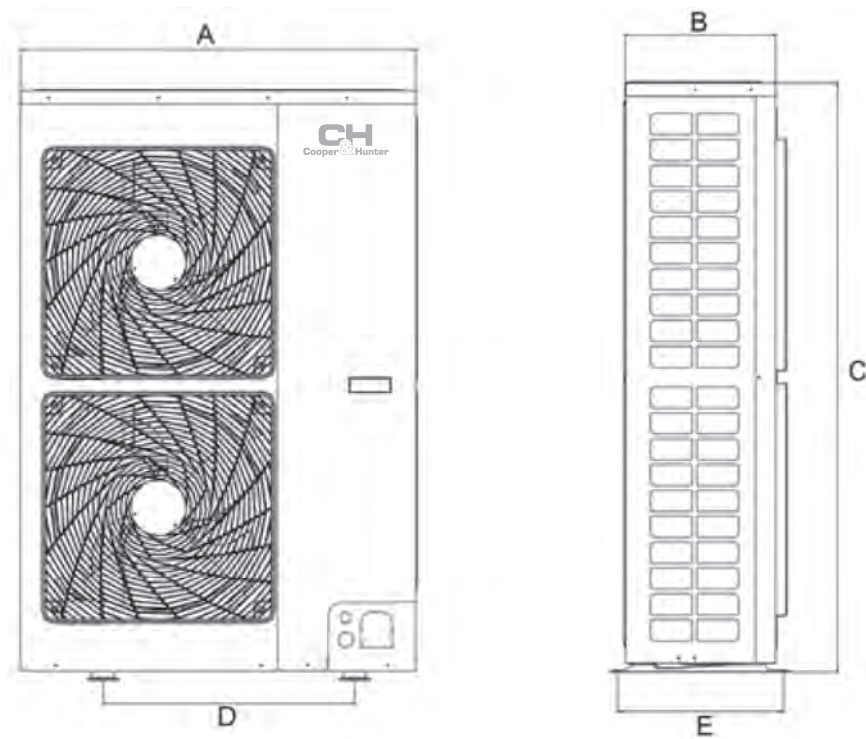
* A 40 kW model consists of two outdoor units and one indoor unit

INDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
CH-IBD20NM(I)	1334	632	990	1150	192	363
CH-IBD25NM(I)	1541	705	980	1350	270	420
CH-IBD30NM(I)	1541	705	980	1350	270	420
CH-IBD40N(2)M(I)	1730	760	1054	1450	360	560

OUTDOOR UNIT



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
CH-IBD20NM(O)	940	320	1430	632	350
CH-IBD25NM(O)	940	460	1615	610	486
CH-IBD30NM(O)	940	460	1615	610	486

Model		Heat pump		CH-IBD20NM	CH-IBD25NM	CH-IBD30NM	CH-IBD40N (2) M	
Capacity	Cooling		kW	20	25	30	40	
			BTU/h	68200	85303	102364	136486	
	Heating		kW	23	28	34	43	
			BTU/h	78479	95540	116013	146722	
EER/COP			W/W	2.70/3.15	2.70/3.15	2.70/3.15	2.70/3.15	
Power supply			~380-415 V/50 Hz/3 Ph					
Power input	Cooling		kW	7.4	9.3	11.1	14.8	
	Heating		kW	7.3	8.9	10.8	13.7	
Current input	Cooling		A	14.5	18.2	21.7	29	
	Heating		A	14.3	17.4	21.2	26.8	
Refrigerant charge volume			kg	5.5	7.1	9.5	11	
Type of refrigerant coolant				R410A				
Indoor unit	Air flow volume			CFM	2236	2590	3178	4120
				m³/h	3800	4400	5400	7000
	External static pressure	Rated	Pa	120	120	120	120	
		Range	Pa	0-250	0-250	0-250	0-250	
	Sound pressure level		dB(A)	53	54	55	56	
	Net weight/Gross weight		Kg	82/104	99/134	105/140	175/210	
Outdoor unit	Sound pressure level		dB(A)	62	64	65	66	
	Net weight/Gross weight		Kg	115/126	146/162	165/182	230/252	
Connection pipe	Outer diameter	Liquid	Inch (mm)	3/8" (9.52)	3/8" (9.52)	1/2" (12.7)	3/8" (9.52)	
		Gas	Inch (mm)	3/4" (19.05)	7/8" (22)	1" (25.4)	3/4" (19.05)	
	Max. distance	Height	m	40	40	40	40	
		Length	m	70	70	70	70	

	Nominal operating condition (temperature)				Operating range (temperature)
	Outdoor condition		Indoor condition		Outdoor condition
	DB (°C)	WB (°C)	DB (°C)	WB (°C)	DB (°C)
Cooling	35	24	27	19	-7~48
Heating	7	6	20	15	-15~24

COMMERCIAL AIR CONDITIONERS

FLOOR STANDING TYPE



- ▶ Timer;
 - ▶ «Turbo” mode;
 - ▶ Informative display;
 - ▶ Self–diagnosis;
 - ▶ Self–cleaning system;
 - ▶ Autorestart;
 - ▶ Display with a clock;
- ▶ Locking of the remote;
 - ▶ Intellegent defrosting;
 - ▶ The presence of an additional electric heater in the indoor unit of model CHF60AH–K3NNA5A

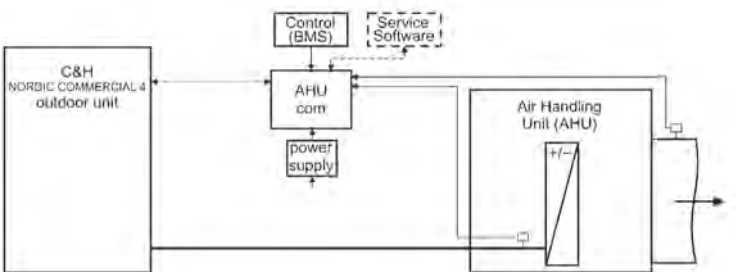
Model		CHF24AG-K3NNA5A		CHF36AH-M3NNA5A		CHF48AH-M3NNA5A		CHF60AH-M3NNA5A	
Function		Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Rated Voltage		~220-240 V/50 Hz/1 Ph		~380-415 V/50 Hz/3 Ph					
Total Capacity (W)		7050	7800	11000	12700	12400	13600	15530	19000
Power Input (W)		2430	2350	3920	4220	4940	4840	6190	6530
Air Flow Volume (m³/h)		1100		1700		1800		2000	
Dehumidifying Volume (l/h)		3		4.5		6		6	
EER / C.O.P (Bt/Bt)		2.9/3.32		2.81/3.01		2.51/2.81		2.51/2.91	
Indoor unit	Sound Pressure Level dB (A) (H/M/L)	48/45/42/40		51/49/47/45		52/50/48/46		54/52/50/47	
	Dimension (W/H/D) (mm)	500x175x300		518x1870x395					
	Net Weight (kg)	40		60		63			
Outdoor unit	Sound Pressure Level dB (A) (H/M/L)	56		59			63		
	Dimension (W/H/D) (mm)	1018x840x412		1032x1250x412					
	Net Weight (kg)	69		105		110		117	
	Refrigerant Charge (kg)	R410A		R410A		R410A		R410A	

AHU KIT inverter for Light Commercial

TYPE: COMMERCIAL

Technical parameters

Application	C&H NORDIC COMMERCIAL R series (CH-IUXXXXRX) + any airhandling units equipped with direct expansion air exchanger
AHU unit capacity	2,6-16kW (more with parallel connection)
Power voltage	220-240V/1Ph/50Hz (CH-IUXXXXRK) 380-415V/3Ph/50Hz (CH-IUXXXXRM)
Control signal setting	0-100% (0-8.5V, stepless), 3 floating contact signals master control
Control device	system (AHU control system, BMS)
Outdoor temperature operation range	-15 to 48°C (cooling), -20 to 24°C (heating)

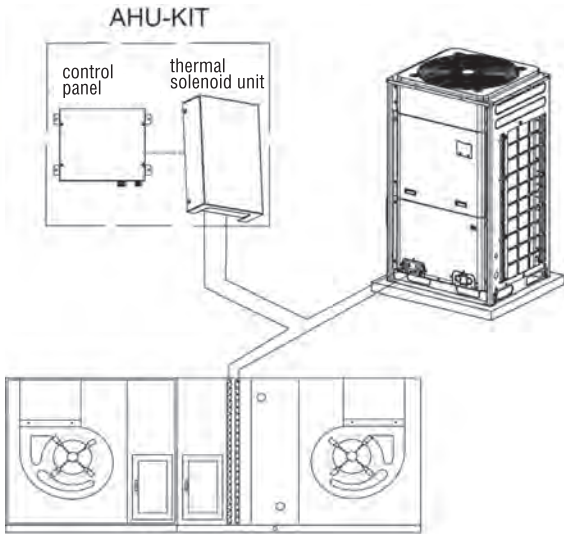


OUTDOOR UNITS

VERSION 1.05:

- CH-IU035RK
CH-IU050RK
CH-IU071RK
CH-IU085RK
CH-IU100RK
CH-IU125RK
- CH-IU140RK
CH-IU100RM
CH-IU125RM
CH-IU140RM
CH-IU160RM

AHU-KIT for VRF CVH5



Technical parameters

Model	Max power (kW)	Adjustable cooling capacity (kW)
CHV-AK036NK2	3.6	2.8/3.6
CHV-AK071NK2	7.1	4.5/5.6/7.1
CHV-AK140NK2	14.0	9.0/11.2/14.0
CHV-AK280NK2	28.0	22.4/28/33.5/40/45
CHV-AK560NK2	56.0	50.4/56/64

VRF SYSTEM CHV5



INVERTER



High Static Pressure
Duct Type Indoor Unit



Compact 4-way
Cassette Indoor Unit



Slim Duct
Type Indoor Unit



Low Static Pressure
Duct Type Indoor Unit



1-way Cassette
Indoor Unit



4-way Cassette
Indoor Unit



Floor-Ceiling
Type Indoor Unit



Console
Indoor Unit



Wall-mounted
Indoor Unit



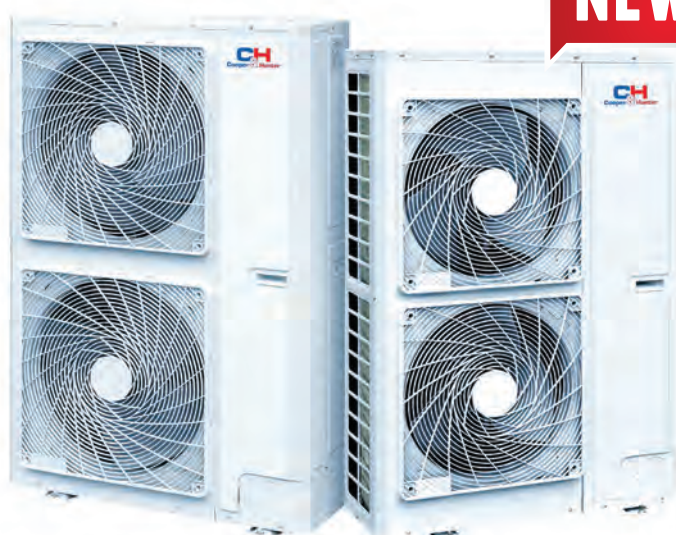
Fresh Air Processing
Indoor Unit

- ▶ Inverters and motor drive on the indoor and outdoor units;
- ▶ Heat braking unit made it possible to raise IPLV up to 6,8, making it 33 % higher than the previous version;
- ▶ Patented principle of oil return (99 % of all oil do not leave the compressor!) completely removes the problem of oil starving;
- ▶ Almost 80 indoor units of 10 types: 3 standart sizes of AHU-KITs: 14kW, 28kW, 56kW;
- ▶ Maximum length of the pipeline is 1000 m;
- ▶ Elevation difference – up to 90 m: standart sizes of the outdoor units of CHV5 min: 12kW, 14kW, 16kW; standart sizes of the outdoor units of CHV5 Slim: 22.4kW, 25kW, 28kW, 33.5kW;
- ▶ Standard sizes of the outdoor units of CHV5: from 22,4 kW to 61,5 kW;
- ▶ Modular composition – up to 246 kW;
- ▶ Operational temperature range: from – 20°C to + 50°C;
- ▶ In CHV5 a new up-to-date CAN bus protocol is used;
- ▶ Small “USB Data Converter” can be connected to any block and using PC provides the system control, adjustment and maintenance;
- ▶ There are special modes: 9 variants of energy saving settings, noiseless operation (for outdoor unit making 22,4 kW, 45 dB), background heating (keeping +8°C) etc.;
- ▶ System engineering, turn-key project in .xls and .dwg formats are executed using CHV

VRF SYSTEM CHV5 MINI R32

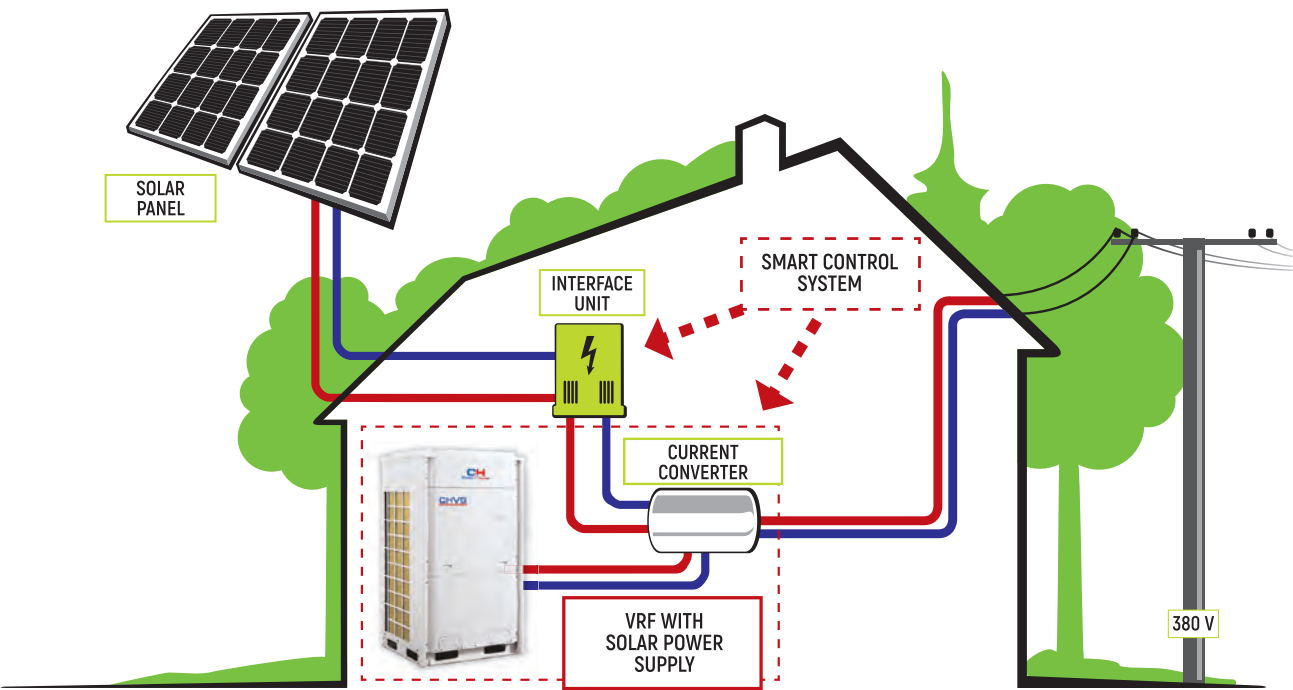


NEW



Model	Cooling Capacity (kW)	Power supply	Refrigerant
CHV-5S120RK	12.10	220-240V/1Ph/50Hz	R32
CHV-5S140RK	14.00		
CHV-5S160RK	16.00		

VRF SYSTEM CHV5 SOLAR



Photovoltaic direct-driven inverter VRF: all series of basic model are 22.4kW, 28.0kW, 33.5kW, combined type model is 22.4–134.0kW

Model	Cooling Capacity (kW)	Heat Capacity (kW)	Power supply	Appearance
CHV-5SL224NMX	22.4	25.0	AC source: 380-415V 3–50/60Hz DC source: 370-900Vdc	
CHV-5SL280NMX	28.0	31.5		
CHV-5SL335NMX	33.5	37.5		



HEAT
PUMPS



Heat pumps for heating, cooling and HWS



FUNCTIONS AND ADVANTAGES

- ▶ Room heating;
- ▶ Room cooling;
- ▶ Water heating for a hot water supply system;
- ▶ Cooling a room and water heating;
- ▶ Room heating and water heating;
- ▶ Weather dependent mode;
- ▶ Automatic climate control;
- ▶ Water heating in emergency mode (installed tubular electric heater);
- ▶ Quick water heating;
- ▶ Noiseless (night time) mode;
- ▶ Freezing protection mode;
- ▶ Sanitary mode (water heating in the tank up to 80°C).
- ▶ Programming unit for 7 days of operation;
- ▶ Central control (ModBus);

▶ OUTDOOR UNIT

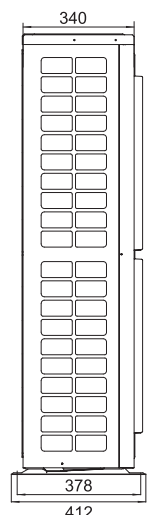
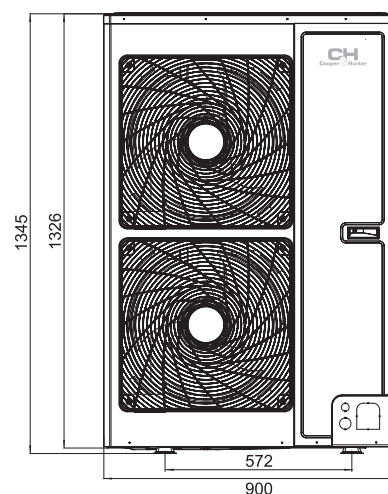
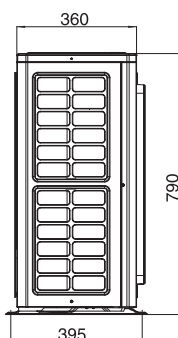
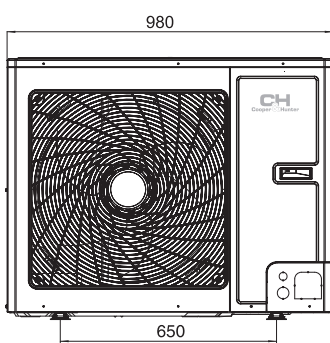
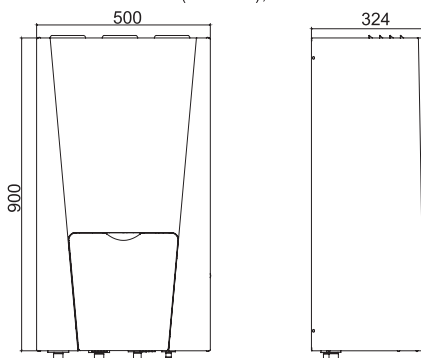
- ▶ Two-stage compressor" technology, DC inverter motor (UNITERM 3);
- ▶ DC-inverter two rotor compressor of new generation (UNITERM 2);
- ▶ Highest class of energy efficiency A: 4,5;
- ▶ Safe start;
- ▶ Efficient operation wide temperature range:
from -30°C to generate heat and up to 48°C to generate cold (UNITERM3);
from -25°C to generate heat and up to 48°C to generate cold (UNITERM2);
- ▶ Compressor starting system without inrush current;
- ▶ Multi-level protection system;
- ▶ Energy saving operation mode;

INDOOR UNIT

- ▶ Excellent design and compact dimensions (900x500x324 mm);
- ▶ Plate heat exchanger with maximal energy efficiency coefficient COP;
- ▶ Reliable inverter pump;
- ▶ Smart control system;
- ▶ A tubular electric heater allows to use the indoor unit as an electric boiler.

TANK FOR WATER (200 L., 300 L.)

- ▶ It shall be installed into a hot water supply system.
- ▶ The tank and heat exchanger are made of stainless steel;
- ▶ Magnesium anode (reliable protection against limescale)
- ▶ Two temperature sensors;
- ▶ Simple in operation and maintenance.



-25°C



UNITHERM2
SERIES

Model			CH-HP8.0SINK2	CH-HP10SINK2	CH-HP12SINK(M)2	CH-HP14SINK(M)2	CH-HP16SINK(M)2
Capacity*	Cooling	kW	7.8	8.2	12.5(13.5)	13.5(14.5)	14.5(15)
	Heating	kW	8	10	12(12)	14(14)	15.5 (15.5)
Power supply	Cooling	kW	1.95	2.1	3(3.55)	3.4(3.95)	3.8(4.2)
	Heating	kW	1.778	2.273	2.8(2.8)	3.3(3.35)	3.75(3.85)
Energy performance	Cooling	EER	3.9	4.0	4.2(3.8)	4(3.7)	3.8(3.6)
	Heating	COP	4.4	4.5	4.3(4.3)	4.2(4.2)	4.1(4.05)
Capacity**(for fan coil unit or radiator)	Cooling	kW	6.3	7.2	8.5(10)	9(10.5)	9.5(11)
	Heating	kW	7.6	9.5	11.5(12)	12.5(13.5)	14.5(14)
Rated input **(for fan coil unit or radiator)	Cooling	kW	2.33	2.77	2.7(3.35)	3(3.6)	3.3(3.8)
	Heating	kW	2.24	2.88	3.4(3.55)	3.8(4.05)	4.5(4.25)
Energy performance**(for fan coil unit or radiator)	Cooling	EER	2.6	2.7	3.1(3)	3(2.95)	2.9(2.9)
	Heating	COP	3.3	3.4	3.35(3.4)	3.3(3.35)	3.2(3.3)
Weight of refrigerant coolant		kg	2.3		3.6		
Sound-pressure level	Outdoor unit	Cooling	dB (A)		54		
		Heating	dB (A)		56 (55)		
	Indoor unit	Cooling	dB (A)		31		
		Heating	dB (A)		31 (57)		
Dimensions (WxDxH)	Outdoor unit	mm	980x427x788		900x412x1345		
	Indoor unit	mm			981x324x500		
Net weight/Gross weight	Outdoor unit	kg	80/85		107(114)/117(124)		
	Indoor unit	kg	56/65		57(58)/66(67)		
Sanitary water Temperature		°C	40–80				
Operational temperature range	Cooling	°C	-25 – +35				
	Heating	°C	+10 – +48				
Liquid pipeline diameter			3/8" (9,52 mm)				
Gas pipeline diameter			5/8" (15,9 mm)				
Maximum pipeline level difference		m	15				
Pipeline maximum length		m	30				

*the meanings in brackets are for the models operating from the power supply –380–415V/50 Hz/3Ph and marked (M)

-30°C



UNITHERM3
SERIES

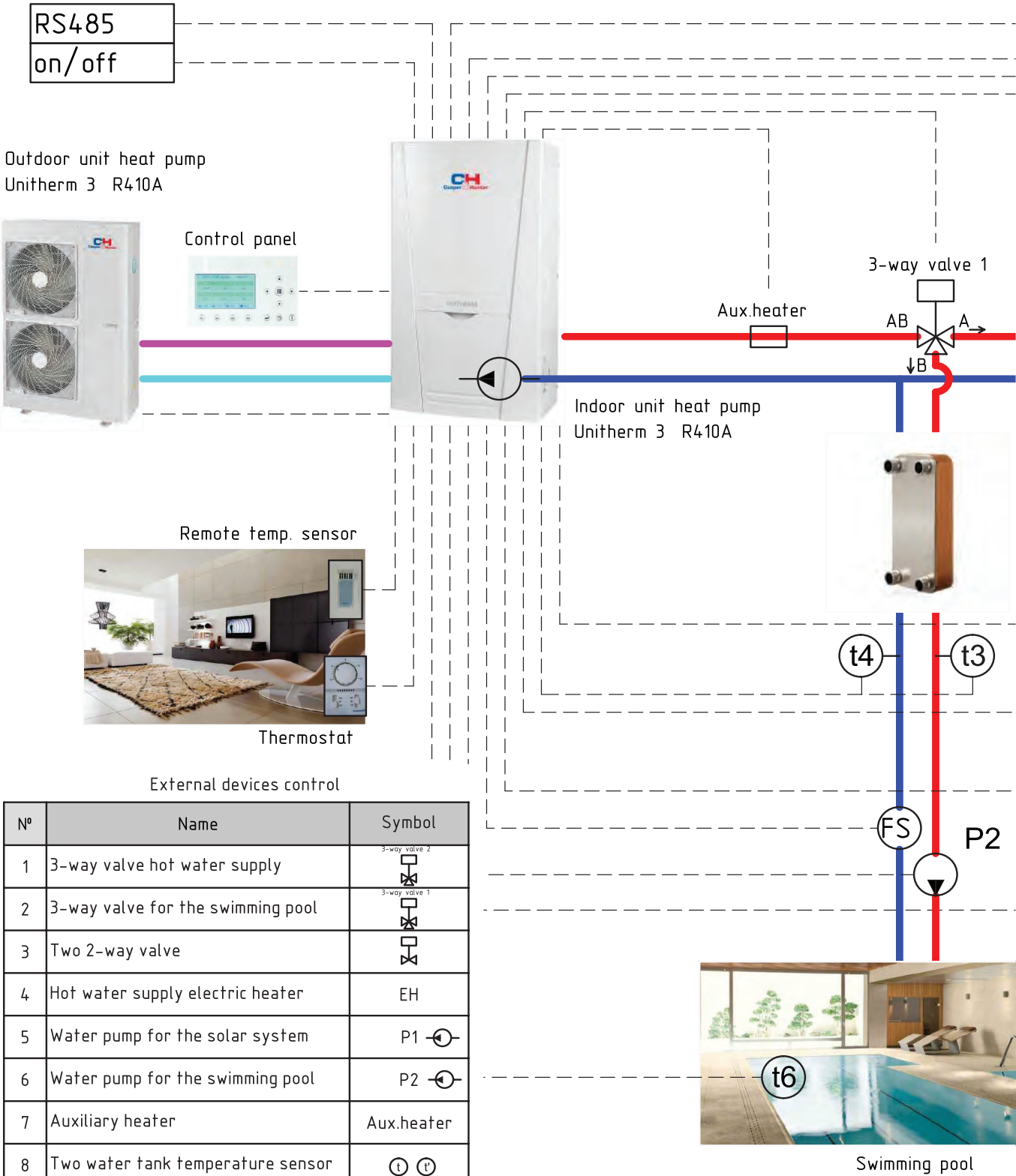
UNITHERM3 split unit is designed specially for the European market.
The whole series of products strictly comply with EN14511–2100 and EVROVENT energy efficiency class A.

Model			CH-HP8.0SINK3	CH-HP10SINK3	CH-HP12SINM3	CH-HP14SINM3
Capacity*	Cooling	kW	8.2	9.7	13.5	14
	Heating	kW	8	9.2	12	14
Power supply			~220-240 V/50 Hz/1 Ph		~380-415 V/50 Hz/3 Ph	
Rated input *	Cooling	kW	1.86	2.46	3.46	3.68
	Heating	kW	1.85	2.19	2.67	3.33
Energy performance	Cooling	EER	4.41	3.94	3.90	3.80
	Heating	COP	4.32	4.20	4.49	4.20
Capacity**(for fan coil unit or radiator)	Cooling	kW	5.5	6.9	9.6	10
	Heating	kW	7.7	9	12	12.8
Rated input **(for fan coil unit or radiator)	Cooling	kW	1.85	2.34	3.02	3.22
	Heating	kW	2.26	2.65	3.24	3.56
Energy performance**(for fan coil unit or radiator)	Cooling	EER	2.97	2.95	3.18	3.11
	Heating	COP	3.41	3.40	3.70	3.60
Weight of refrigerant coolant		kg	5.3	5.3	5.3	5.3
Sound-pressure level	Indoor unit	dB (A)	31			
	Outdoor unit	dB (A)	53	53	57	57
Dimensions (WxDxH)	Indoor unit	mm	981x324x500			
	Outdoor unit	mm	980x427x788		900x412x1345	
Net Weight/Gross Weight	Indoor unit	kg	56/65		58/67	
	Outdoor unit	kg	85/87		126/136	
Sanitary water Temperature		°C	40—80			
Operational temperature range	Cooling	°C	-30 — +45			
	Heating	°C	-10 — +48			
Liquid pipeline diameter			3/8" (9,52 mm)			
Gas pipeline diameter			5/8" (15,9 mm)			
Maximum pipeline level difference		m	15			
Pipeline maximum length		m	30			

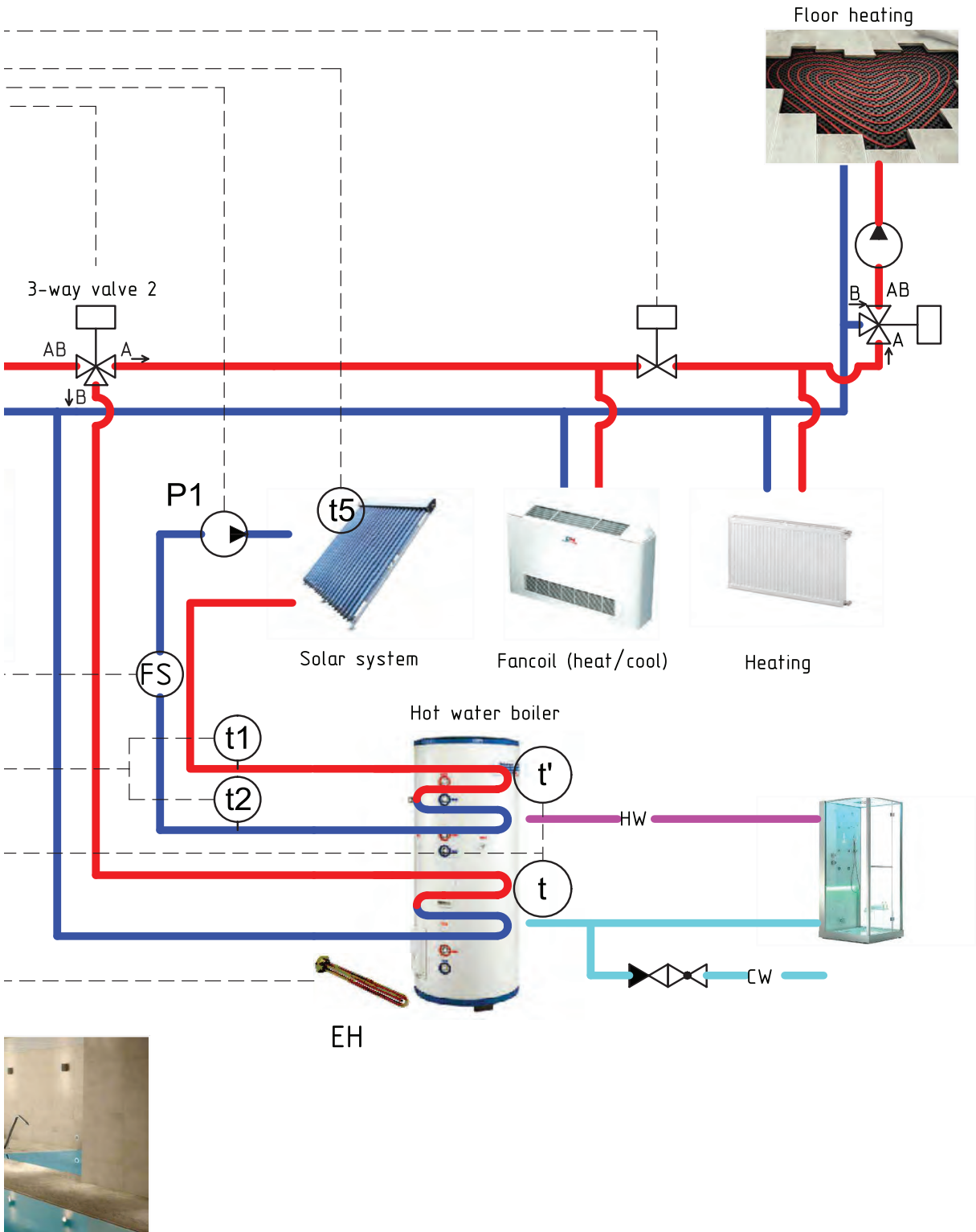
*indicates the capacity and power input are tested based on the conditions below: Cooling. Indoor Water Temperature: 23°C/18°C, Outdoor Temperature: 35°CDB/24°CWB; Heating. Indoor Water Temperature: 30°C/35°C, Outdoor Temperature: 7°CDB/6°CWB

** indicates the capacity and power input are tested based on the conditions below: Cooling. Indoor Water Temperature: 12°C/7°C, Outdoor Temperature: 35°CDB/24°CWB; Heating. Indoor Water Temperature: 40°C/45°C, Outdoor Temperature: 7°CDB/6°CWB

TYPICAL DIAGRAM CONECTION HEAT PUMP



SERIES UNITHERM



HEAT PUMP FOR HEATING, COOLING AND HWS UNITHERM MONOTYPE



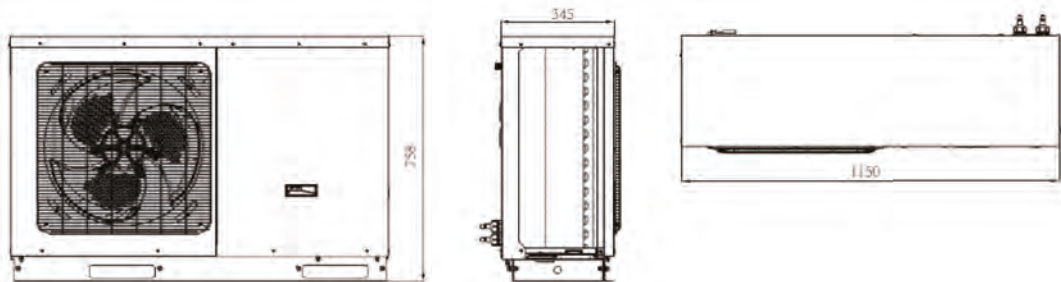
INVERTER



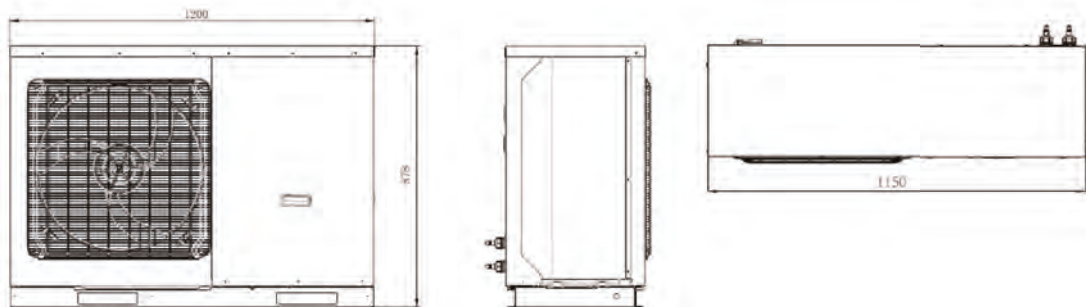
- ▶ The A-class high-efficiency inverter water pump which complies with the European ErP directive can control the running frequency based on the actual load. Therefore, it can enhance the operation efficiency and control the water temperature more accurately.
- ▶ The DC inverter fan can control the air volume accurately and make the system run more stably and save more energy.
- ▶ The high-efficiency plate heat exchanger will improve the unit's performance largely
- ▶ **All-in-one Design** The unit can integrate with terminal units, like the radiator, floor heating device, FCU, water heating device, solar kit, gas furnace etc. Unitherm Monotype functions can meet various kinds of demands from different users and enhance applicability of this product. The all-in-one structure design can save more installation cost, reduce risks of refrigerant leak, and improve safety and reliability of the system.
- ▶ **Brand-new Controller** White appearance, exquisite design, and the wall-mounted design will facilitate installation. liquid crystal display and touch-screen operation The 12V JACK interface can supply power to the control separately and lengthen the communication distance. The remote monitoring interface can monitor the unit through the Mobus interface and be integrated into the BMS system.
- ▶ **Smart Control, Powerful Function** The running mode can be switched freely. Furthermore, based on different demands, the holiday mode, weather-dependent mode, quite timer, temperature timer and floor commissioning can be activated. Multiple protections can make this product much safer. The added electric heater will prevent the plate heat exchanger from being frostbitten owing to too low water temperature and resultantly extend the service life of the product and enhance its safety and reliability.
- ▶ The newly developed smart defrosting control program, – do defrost when necessary; do not defrost when unnecessary; defrost more when it frosts heavily; defrost less when it frosts lightly II, can bring more comfortability, avoid inadequacy of heat supply and ensure sustainable heat supply for the users.

OUTLINE DIMENSIONS

CH-HP4.0MIRK
CH-HP6.0MIRK
CH-HP8.0MIRK



CH-HP10MIRK
CH-HP12MIRK
CH-HP14MIRK
CH-HP16MIRK
CH-HP10MIRM
CH-HP12MIRM
CH-HP14MIRM
CH-HP16MIRM



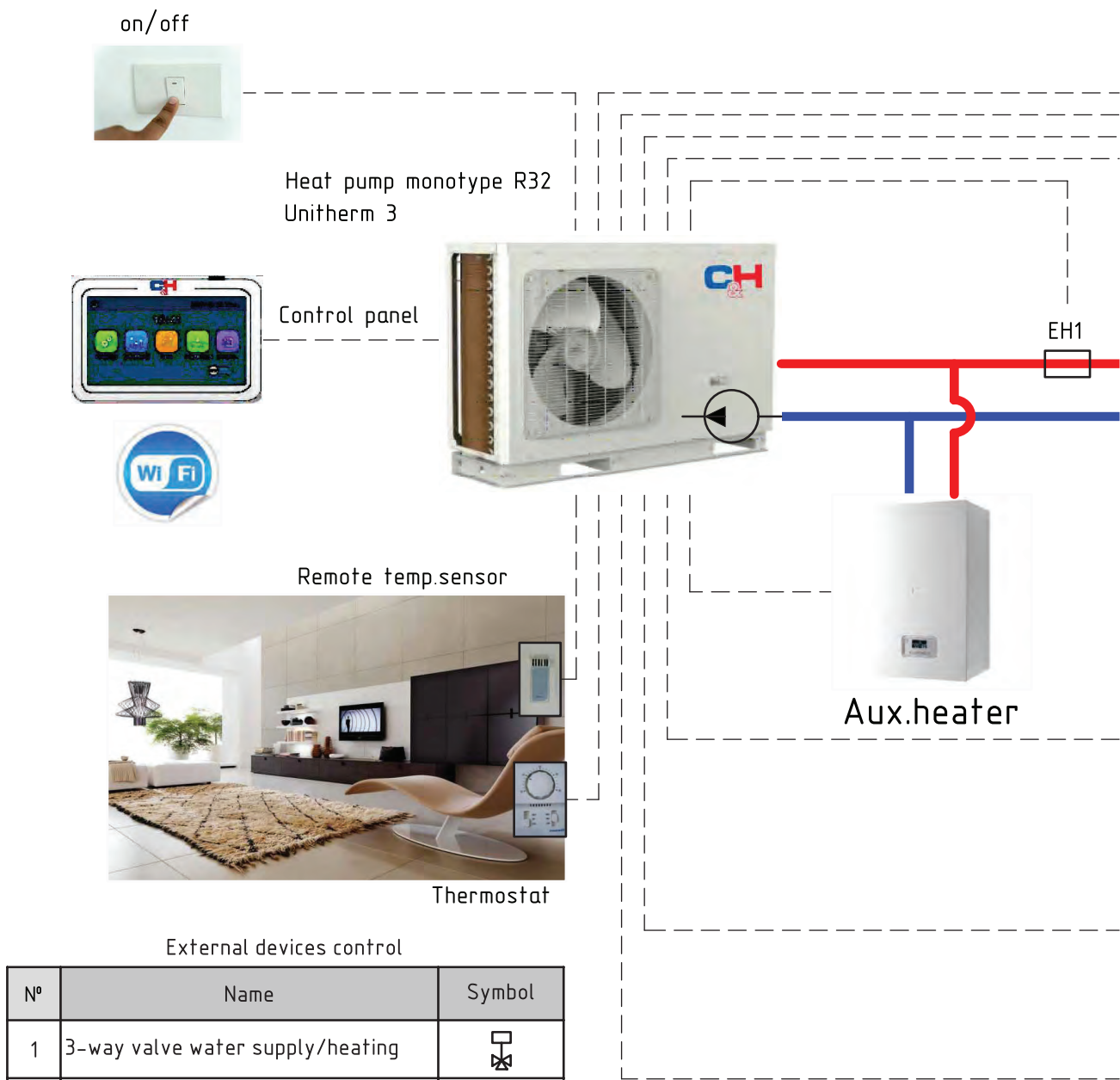
Model			CH-HP4.0MIRK	CH-HP6.0MIRK	CH-HP8.0MIRK	CH-HP10MIRK	CH-HP10MIRM	CH-HP12MIRK
Capacity*1 (Floor cooling/ heating)	Cooling	kW	3.8	5.8	6.8	8.8	8.8	11.0
	Heating	kW	4.0	6.0	7.5	10	10.0	12.0
Power input*1 (Floor cooling/ heating)	Cooling	kW	0.82	1.32	1.55	1.96	1.96	2.56
	Heating	kW	0.78	1.20	1.63	2.15	2.15	2.64
EER*1 (Floor cooling)			4.65	4.4	4.4	4.5	4.5	4.2
COP*1 (Floor heating)			5.1	5.0	4.6	4.65	4.65	4.55
Capacity*2 (Fan coil or Radiator)	Cooling	kW	3.0	4.0	5.0	7.8	7.8	9.5
	Heating	kW	4.0	6.0	7.5	10.0	10.0	12.0
Power input*2 (Fan coil or Radiator)	Cooling	kW	0.94	1.27	1.56	2.48	2.48	3.11
	Heating	kW	0.98	1.56	2.00	2.67	2.67	3.48
EER*2 (Fan coil)			3.2	3.15	3.2	3.15	3.15	3.05
COP*2 (Fan coil or Radiator)			4.1	3.85	3.75	3.75	3.75	3.6
Refrigerant charge volume		kg	0.87			2.2		
Sanitary water Temperature		°C	40~80					
Suond Pressure Level	Cooling	db(A)	56			59		
	Heating	db(A)	58			61		
Dimensions (WxDxH)	Outline	mm	1150x345x758			1200x460x878		
	Packaged	mm	1258x488x900			1288x588x1020		
Weight	Net	kg	96			151		
	Gross	kg	109			166		
Operation range	Cooling	°C	10~48					
	Heating	°C	-30~35					
	Water heating	°C	-30~45					
Water circulating pipe inlet/outlet			1"Male BSP					

–*1II indicates the capacity and power input are tested based on the conditions below: (1) Cooling: Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB
 –*2II indicates the capacity and power input are tested based on the conditions below: (1) Cooling: Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

Model			CH-HP12MIRM	CH-HP14MIRK	CH-HP14MIRM	CH-HP16MIRK	CH-HP16MIRM
Capacity*1 (Floor cooling/ heating)	Cooling	kW	11.0	12.5	12.5	14.5	14.5
	Heating	kW	12.0	14.0	14.0	15.5	15.5
Power input*1 (Floor cooling/ heating)	Cooling	kW	2.56	3.05	3.05	3.82	3.82
	Heating	kW	2.64	3.22	3.22	3.60	3.60
EER*1 (Floor cooling)			4.2	4.0	4.2	3.7	4.0
COP*1 (Floor heating)			4.5	4.35	4.55	4.3	4.35
Capacity*2 (Fan coil or Radiator)	Cooling	kW	9.5	12.0	12.0	13.0	13.0
	Heating	kW	12.0	14.0	14.0	15.5	15.5
Power input*2 (Fan coil or Radiator)	Cooling	kW	3.11	4.14	4.14	4.73	4.73
	Heating	kW	3.48	4.18	4.18	4.70	4.70
EER*2 (Fan coil)			3.0	2.9	3.05	2.75	2.9
COP*2 (Fan coil or Radiator)			3.50	3.55	3.6	3.40	3.55
Refrigerant charge volume		kg	2.2				
Sanitary water Temperature		°C	40~80				
Suond Pressure Level	Cooling	db(A)	59				
	Heating	db(A)	61				
Dimensions (WxDxH)	Outline	mm	1200x460x878				
	Packaged	mm	1288x588x1020				
Weight	Net	kg	151				
	Gross	kg	166				
Operation range	Cooling	°C	10~48				
	Heating	°C	-30~35				
	Water heating	°C	-30~45				
Water circulating pipe inlet/outlet			1"Male BSP				

–*1II indicates the capacity and power input are tested based on the conditions below: (1) Cooling: Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB
 –*2II indicates the capacity and power input are tested based on the conditions below: (1) Cooling: Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

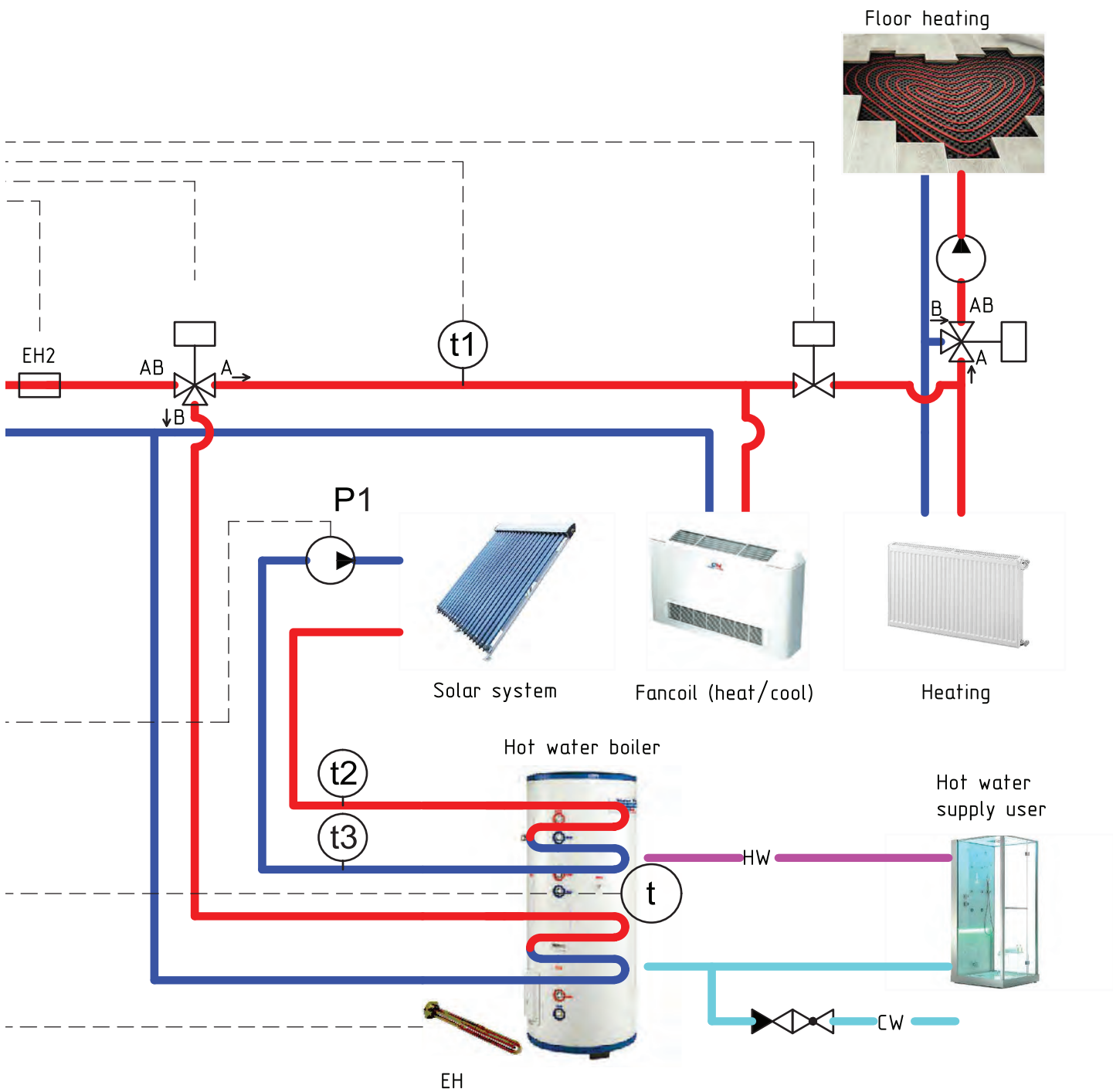
TYPICAL DIAGRAM CONECTION HEAT PUMP



External devices control		
N°	Name	Symbol
1	3-way valve water supply/heating	
2	2-way valve	
3	Electric heater water supply	EH
4	Electric heater 1*	EH1
5	Electric heater 2*	EH2
6	Other heat source*	Aux.heater
7	Solar system pump	P1
8	Remote control on/off	on/off
9	Room temperature control	Remote temp.sensor
10	Temperature sensor control	Thermostat

*optional sensor required t1 (RT5)
E-heaters 1 and 2 cannot be integrated
with aux.heater.

SERIES UNITERM-MONOTYPE



Heat pumps for heating, cooling and HWS UNITERM R32



INVERTER



Two-stage
Compressor



Model			CH-HP6.0SIRK	CH-HP8.0SIRK	CH-HP10SIRK	
Capacity*1	Cooling (Floor cooling)		kW	6.00	8.00	9.50
	Heating (Floor heating)		kW	5.80	7.00	8.50
Power input*1	Cooling (Floor cooling)		kW	1.20	1.70	2.07
	Heating (Floor heating)		kW	1.32	1.75	2.24
EER*1(Floor cooling)				4.40	4.00	3.79
COP*1(Floor heating)				5.00	4.71	4.59
Capacity*2	Cooling(Fan coil)		kW	5.90	8.00	9.50
	Heating(Fan coil or Radiator)		kW	4.09	5.30	6.50
Power input*2	Cooling(Fan coil)		kW	1.51	2.14	2.64
	Heating(Fan coil or Radiator)		kW	1.28	1.73	2.27
EER*2(Fan coil)				3.20	3.06	2.86
COP*2(Fan coil or Radiator)				3.91	3.74	3.60
Refrigerant charge volume			kg	1.0	1.6	1.6
Suond Pressure Level	Indoor unit	Cooling	db(A)	29		
		Heating	db(A)	29		
	Outdoor unit	Cooling	db(A)	52	55	
		Heating	db(A)	52	55	
Dimensions (HxWxD)	Indoor unit	Outline	mm	860x318x460		
		Packaged	mm	1133x568x690		
	Outdoor unit	Outline	mm	975x702x396	982x787x427	
		Packaged	mm	1028x830x830	1097x478x937	
Weight	Indoor unit	Net	kg	62		
		Gross	kg	71		
	Outdoor unit	Net	kg	62	82	
		Gross	kg	71	92	
Operation range	Cooling		°C	10~48		
	Heating		°C	-25~35		
	Water heating		°C	-25~45		

-*1II indicates the capacity and power input are tested based on the conditions below: (1) Cooling: Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB

-*2II indicates the capacity and power input are tested based on the conditions below: (1) Cooling:Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB (2) Heating: Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

Household Heat Air-water pump with HWS boiler

INVERTER



Two-stage
Compressor

- ▶ Two-stage compressor;
- ▶ Operation range of outdoor temperature: from -25 to +45°C;
- ▶ Range of incoming temperatures of the sanitary water is from +35°C to +70°C;
- ▶ Multi-speed ventilator;
- ▶ HWS Systems on freon R410A; Build-in heating element for 1500 W (to compensate losses of useful heat when the outdoor temperature goes down);
- ▶ Basic configuration "plug-and-play": outdoor unit, GAM boiler, wire-connected controller;

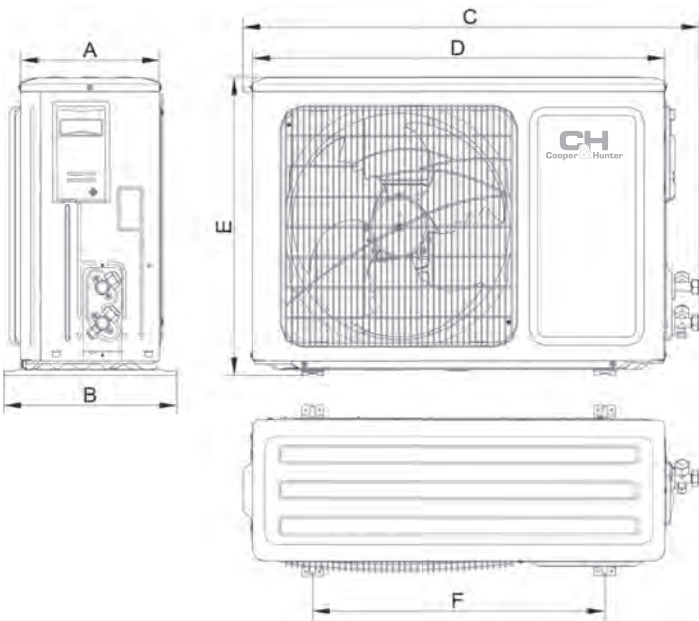


Outdoor unit model		CH-HP3.5SWNK
Rated heat power	W	3500
Rated power consumption	W	850

WATER TANK

Model		WT200SW1.5EHK
Volume	l	185
Power supply parameters of the heating element	W	~220-240 V/50 Hz/1 Ph
Heating element power intake	W	1500
Dimension (WxDxH)	mm	545 x 545 x 1919
Diameters of connected freon pipelines	mm	Ø6.38/Ø9.52

OUTDOOR UNIT



Model		CH-HP3.5SWHK
Normal heat release	W	3500
Rated input	W	850
Load type	A	L
COP		3.17
Energy performance ratio		A
Maximum Power intake	W	1500+1500 W (EHT)
Output water temperature	°C	Standard: 55°C. 35°C–55°C
Power supply parmeters		~220-240 V/50 Hz/1 Ph
Isolation class		I
Protection class		IPX4
Type of refrigerant coolant		R410A
Fill of refrigerant coolant	kg	1.40
Sound-pressure level	dB (A)	63
Operational range of outdoor temperatures	°C	-25–+45

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
CH-HP3.5SWHK	260	320	842	784	591	540

Inverter industrial pump for heating and HWS systems



INVERTER



- ▶ High-efficiency and energy-saving, with all DC inverter compressor and fan;
 - ▶ Quiet and wide operational range;
 - ▶ Easy installation, modularized combination, intelligent control;
- ▶ With water pump switch function for prolonging service life of water pump;
 - ▶ Long-distance one-key ON/OFF control

Model			CH-HP36UIMNM	CH-HP65UIMNM	CH-HP70UIMNM	CH-HP77UIMNM
Capacity	Heating	kW	36	65	70	77
	Cooling	kW	33	60	65	69
Power input	Heating	kW	10.65	20.20	21.90	25.16
	Cooling	kW	12.45	21.90	24.80	24.73
COP			3.38	3.22	3.20	3.06
EER			2.65	2.74	2.62	2.79
Specified range of hot water temperature		°C	35-50			
Water flow volume		m3/h	5,7	10,3	11,2	11,7
Water side heat exchanger pressure drop		kPa	50	55	60	60
Electric power supply			~380-415V/50Hz/3 Ph			
Automatic switch off		A	32	63	63	63
Electric power supply cable			5 (Ø 6 mm²)	5 (Ø 16 mm²)	5 (Ø 16 mm²)	5 (Ø 16 mm²)
Type of refrigerant coolant			R-410a			
Volume of refrigerant coolant		kg	7.8	7.8x2	7.8x2	7.8x2
Compressor type			Inverter Rotary			
Quantity of compressor		piece	1	2	2	2
Operational temperature range	Heating	°C	-20 - 40			
	Cooling	°C	-15 - 52			
Water in/outlet pipe diameter		mm	DN 32	DN 50	DN 50	DN 50
Sound pressure level		dB(A)	62	68	68	69
Weight	Netto	kg	379	689	689	675
	Brutto	kg	391	725	725	709

Industrial pump for heating and HWS systems



ON/OFF



23 kW, 33 kW

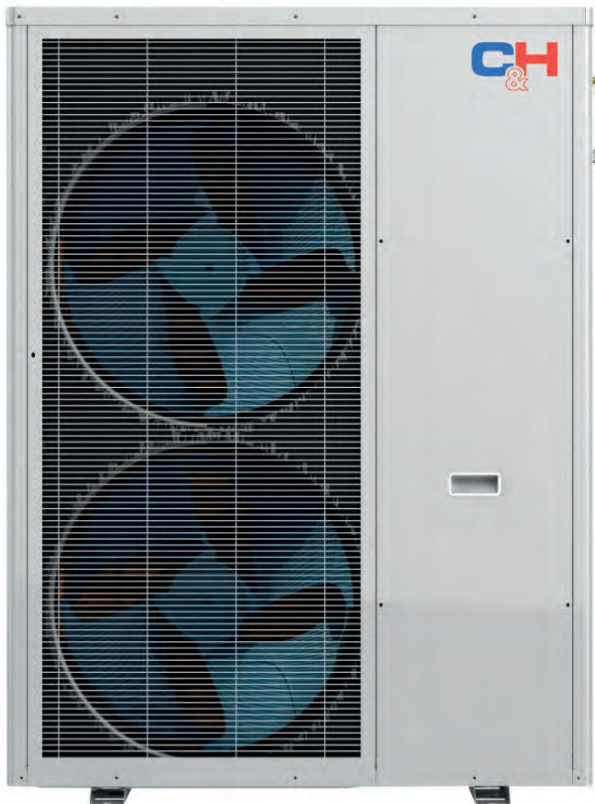


48 kW

- ▶ Simple installation;
 - ▶ Compact dimensions;
 - ▶ Wide range of operation temperatures: -26°C ... +46°C
 - ▶ Quick water heating;
- ▶ Reliable and high Capacity scroll compressor DANFOSS with a high COP value;
 - ▶ Anti-corrosion treatment of the heat exchanger;
 - ▶ Noise low level;
 - ▶ The possibility to install up to 16 units into one system of up to 768 kW;
 - ▶ Group control.

Model		CH-HP23MFNM	CH-HP33MFNM	CH-HP48MFNM
Heating capacity	kW	23	33	48
Power input	kW	8.1	10	15
Current input	A	14.5	19	28
COP		3.8	4	4
Standard hot water supply	l/h	667	860	1300
Specified rage of hot water temperature	°C	35-70		
Electric power supply		~380-415 V/50 Hz/3 Ph		
Automatic switch off	A	25	32	40
Electric power supply cable	mm²	5*4.0	5*4.0	5*6.0
Type of refrigerant coolant		R-410A		
Volume of refrigerant coolant	kg	3.9	4.73	6.5
Compressor type		scroll		
Quantity of compressor	piece	1	1	1
Operational temperature range	°C	-26 — +46	-26 — +46	-26 — +46
Diameters of connected water pipelines	Outdoor water supply	DN 25	DN 25	DN 32
	Recirculatinginlet water	DN 32	DN 32	DN 50
	Output water	DN 32	DN 32	DN 50
Dimensions (WxDxH)	mm	930x800x1605	930x800x1605	1340x800x1605
Sound-pressure level	dB (A)	67	67	67
Netto/Brutto	kg	238/252	264/286	362/378

HEAT PUMP FOR HEATING, COOLING AND HWS EVIPOWER INVERTER



- Five operation modes: Heating, Cooling, HWS, Heating + HWS, Cooling + HWS;
- User friendly sensor display of a wired control;
- Efficient operation wide temperature range: from -25°C to +43°C;
- EVI technology compressors with an inverter drive.

Model			CH-HP20UIMPRM
Capacity*	Cooling	kW	14
	Heating	kW	20
Energy performance	Cooling	EER	2,0
	Heating	COP	3,33
Rated input	Cooling	kW	7,0
	Heating	kW	6,0
Current input	Cooling	A	10,2
	Heating	A	8,1
Sound-pressure level		dB (A)	58
Power supply			~380-415 V/50 Hz/3 Ph
Operational temperature range		°C	-25--+43
Type of refrigerant coolant			R32
Maximum water temperature		°C	60
Net weight		kg	155
Nominal water flow		m³/h	2,15

*Cooling: outdoor temperature DB/WB 35°C/24°C, water temperature at outlet: 7°C, water temperature at inlet: 12°C.
*Heating: outdoor temperature: DB/WB 7°C/6°C, water temperature at outlet: 35°C, water temperature at inlet: 30°C.

HEAT PUMP FOR HEATING,
COOLING AND HWS
MINIPOWER ON/OFF

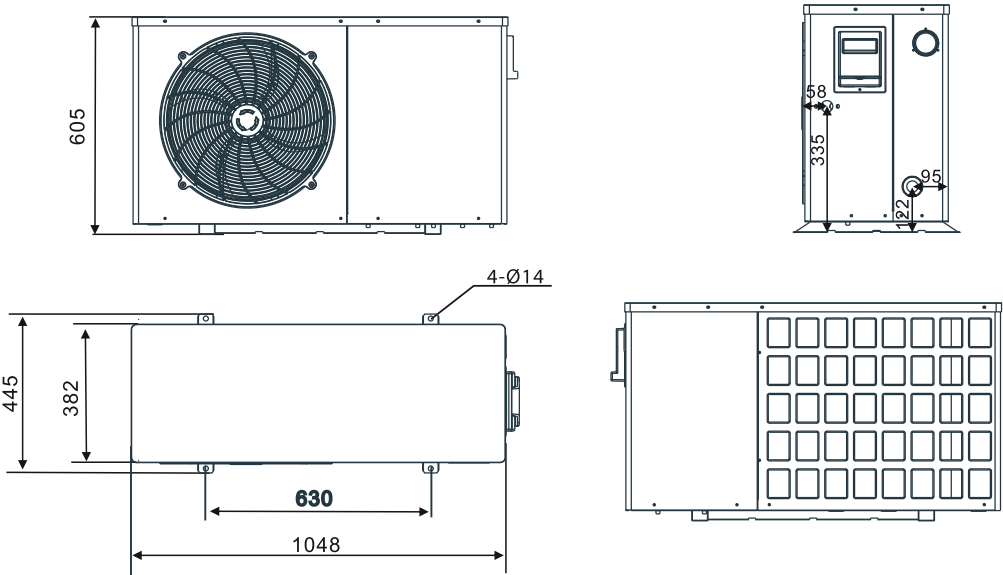


- ▶ Five operation modes: Heating, Cooling, HWS, Heating + HWS, Cooling + HWS;
- ▶ User friendly sensor display of a wired control;
- ▶ Anti-freezing protection;
- ▶ Compressor overheat protection.

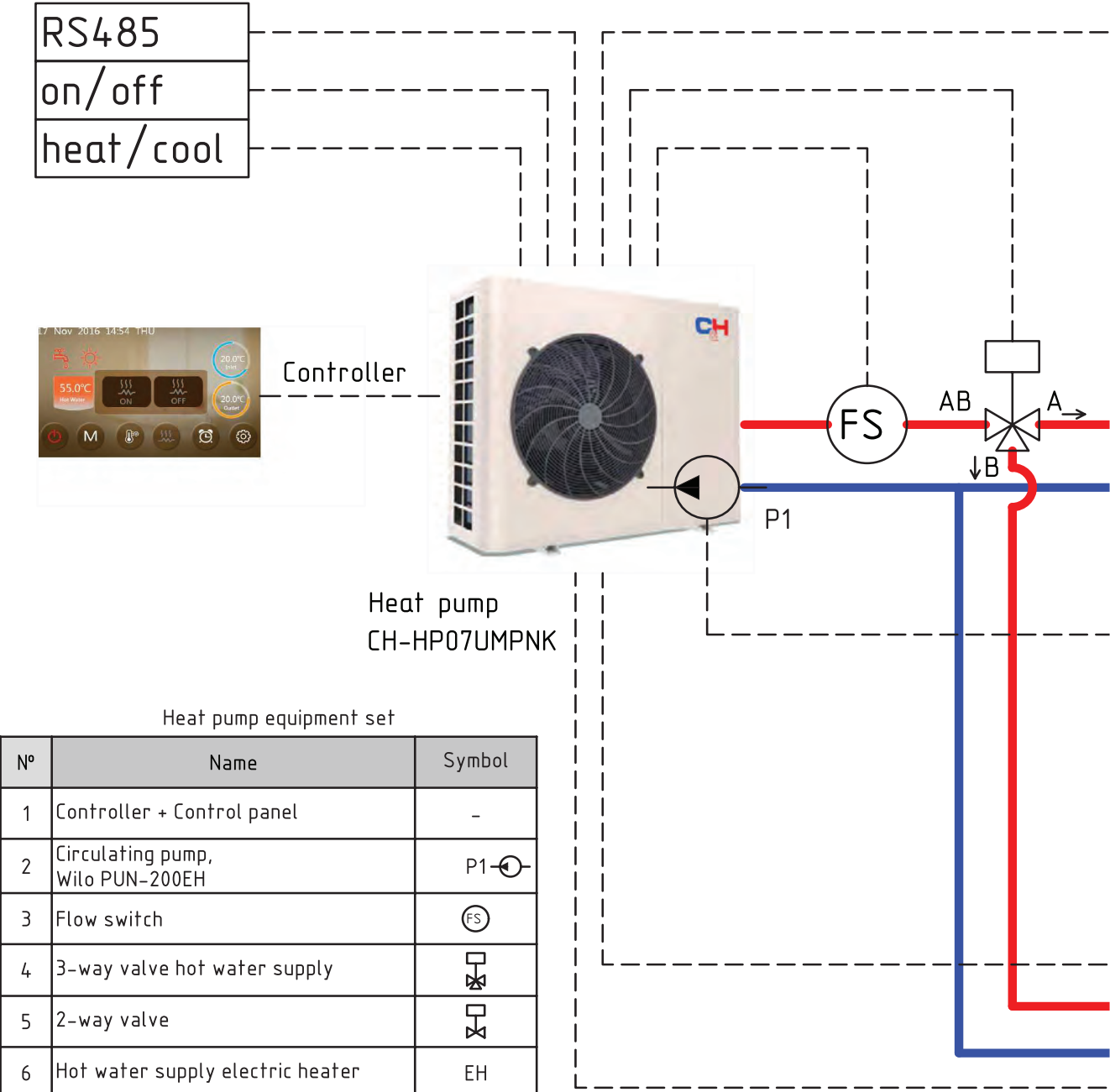
Model		CH-HP07UMPKNK	
Capacity*	Cooling	kW	5,9
	Heating	kW	7,4
Energy performance	Cooling	EER	2,56
	Heating	COP	4,11
Rated input	Cooling	kW	2,3
	Heating	kW	1,8
Current input	Cooling	A	10,2
	Heating	A	8,1
Sound-pressure level		dB (A)	56
Power supply		~220-240V/50Hz/1 Ph	
Operational temperature range		°C	-15~+45
Connection pipe diameter		inch	1
Maximum water temperature		°C	60
Nominal water flow		m³/h	1,55

*Cooling: outdoor temperature DB/WB 35°C/24°C, water temperature at outlet: 7°C, water temperature at inlet: 12°C.

*Heat: outdoor temperature: DB/WB 7°C/6°C, water temperature at outlet: 35°C, water temperature at inlet: 30°C.

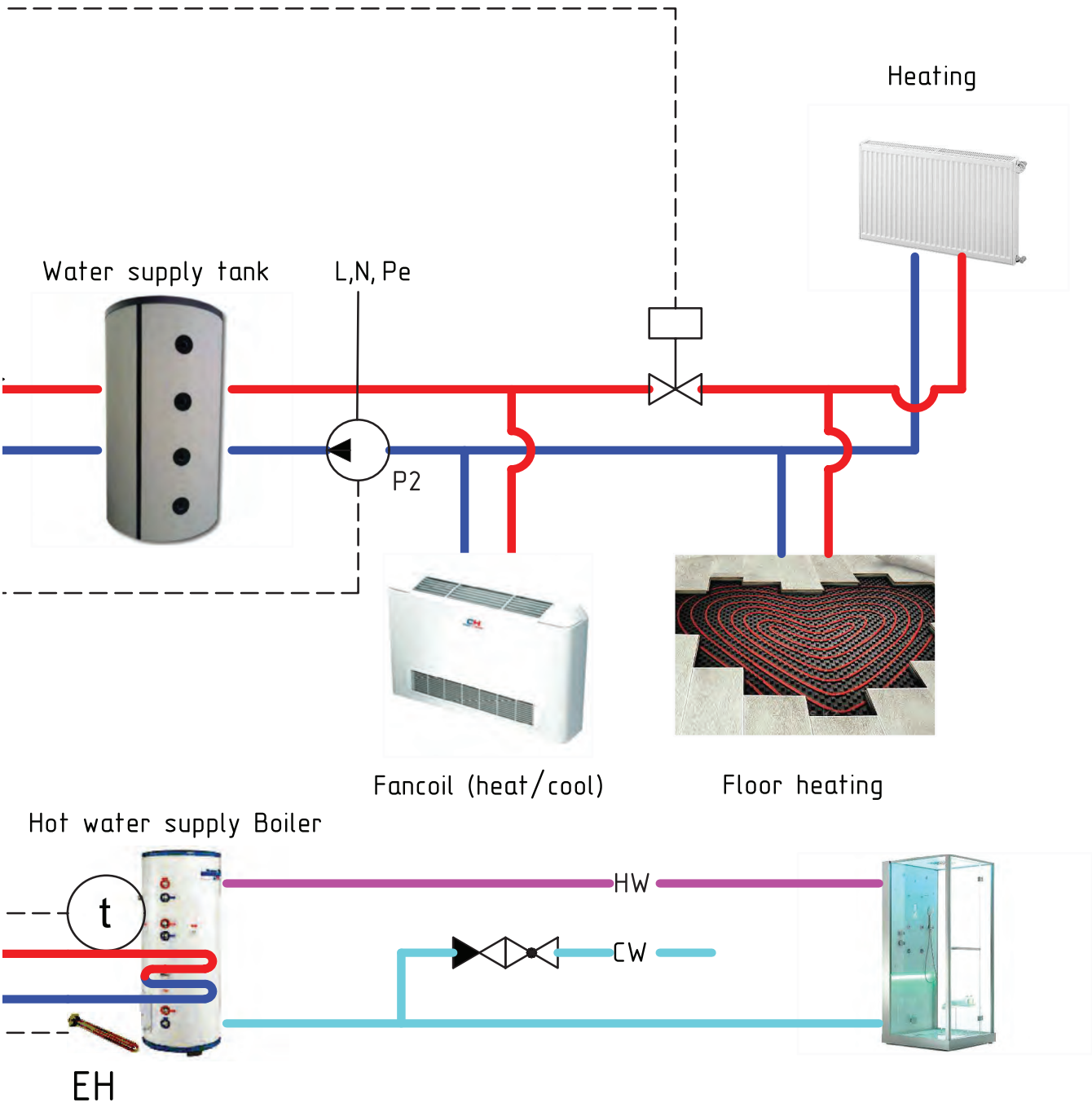


TYPICAL DIAGRAM CONECTION HEAT PUMP



Heat pump equipment set		
N°	Name	Symbol
1	Controller + Control panel	-
2	Circulating pump, Wilo PUN-200EH	P1
3	Flow switch	FS
4	3-way valve hot water supply	
5	2-way valve	
6	Hot water supply electric heater	EH
7	Water tank temperature sensor	t
8	Water supply pump*	-
9	Remote on/off control	on/off
10	Remote mode switch from heat to cool	heat/cool
11	Modbus	RS485

* water pump doesn't described on outline, pump used in water supply system on heat water side user (HW).



HEAT PUMP FOR HEATING,
COOLING AND HWS
EVIPOWER

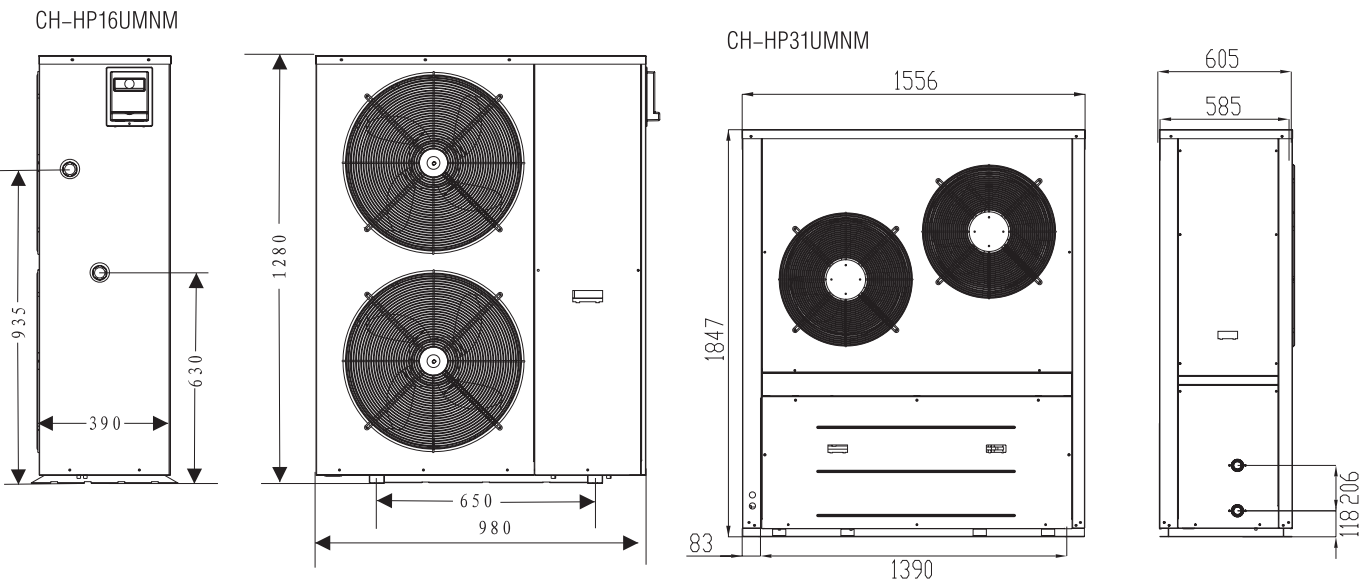


- Five operation modes: Heating, Cooling, HWS, Heating + HWS, Cooling + HWS;
- Scroll compressors of EVI technology;
- Smart defrost;
- Control over several modules;
- Automatic reset in case of partial fault;
- Wide temperature range of effective operation: from -30°C to generate heat and up to +45°C to generate Cooling;
- Quiet mode;
- Remote control;
- Compressor overload protection;
- Protection against high/ low water temperatures at the outlet;
- Unique patented heat exchanger;
- In case of power loss it doesn't freeze during 20 hours at temperature -30°C.

Model			CH-HP16UMNM	CH-HP31UMNM	CH-HP42UMNM	CH-HP84UMNM
Capacity*	Cooling	kW	11,50	18,00	27,30	59,00
	Heating	kW	15,70	31,10	42,00	84,00
Power supply			~380-415V/50 Hz/3 Ph			
Energy performance	Cooling	EER	2,88	2,40	2,58	2,69
	Heating	COP	4,53	4,20	4,20	4,20

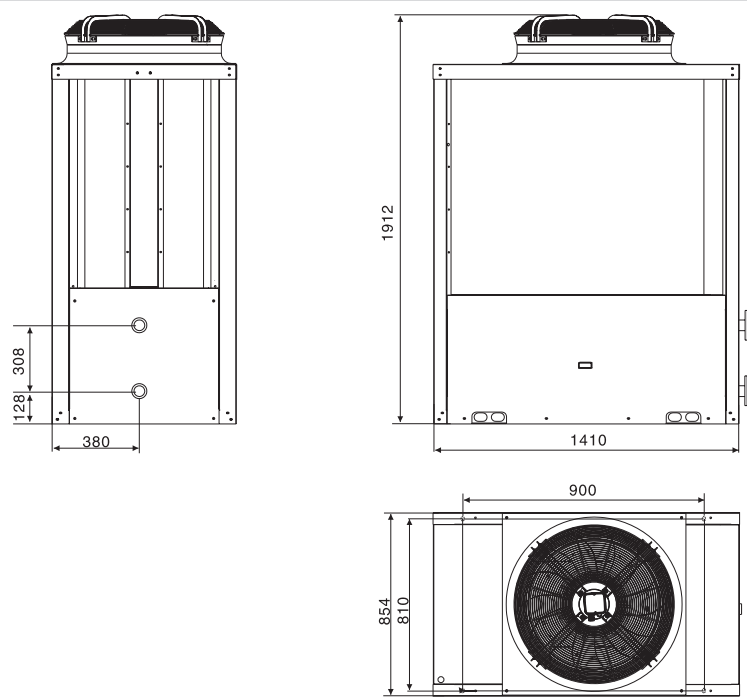
*Cooling: outdoor temperature DB/WB 35°C/24°C, water temperature at outlet: 7°C, water temperature at inlet: 12°C.
Heating: outdoor temperature: DB/WB 7°C/6°C, water temperature at outlet: 35°C, water temperature at inlet: 30°C.

OUTDOOR UNIT

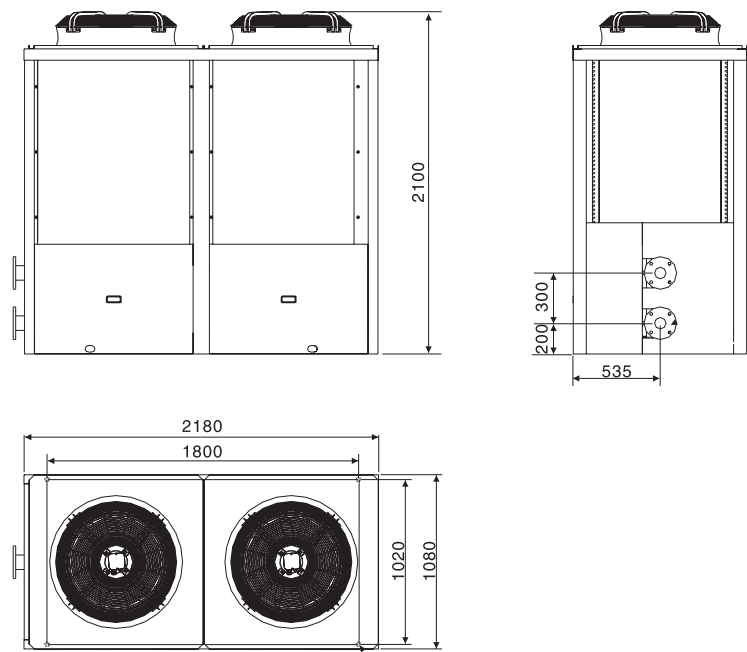


OUTDOOR UNIT

CH-HP42UMNM



CH-HP84UMNM

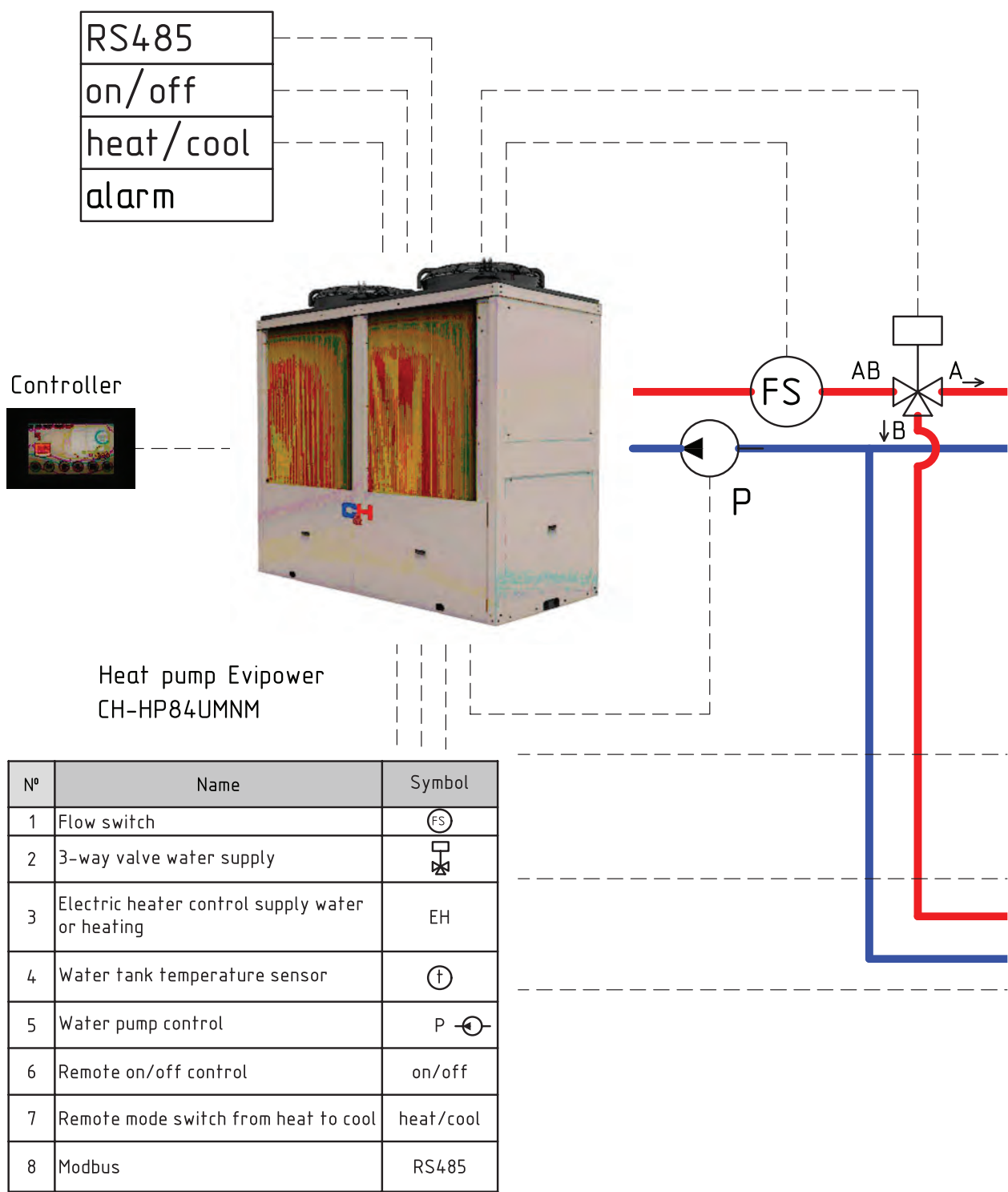


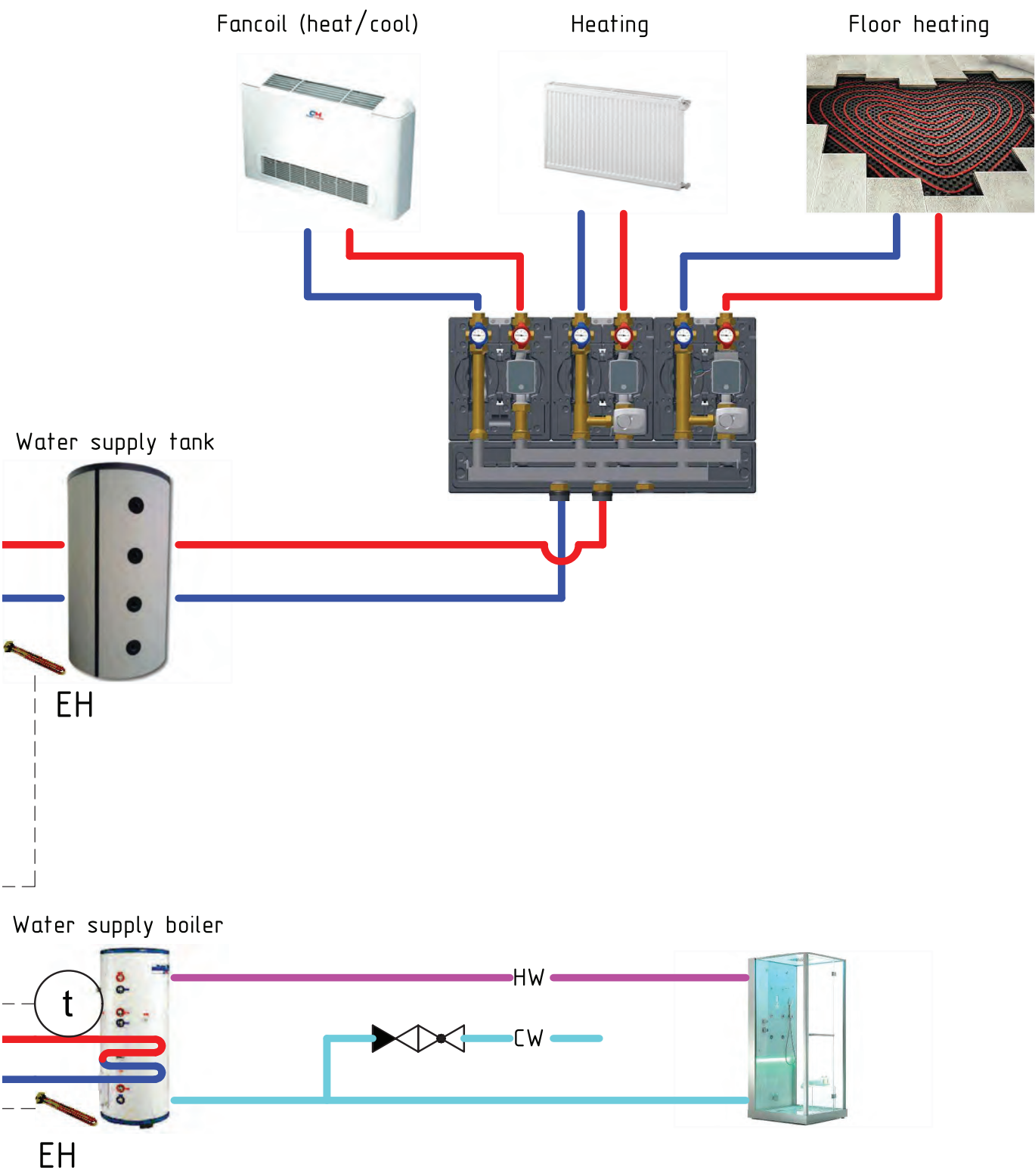
Model			CH-HP16UMNM	CH-HP31UMNM	CH-HP42UMNM	CH-HP84UMNM
Capacity*	Cooling	kW	11,50	18,00	27,30	59,00
	Heating	kW	15,70	31,10	42,00	84,00
Energy performance	Cooling	EER	2,88	2,40	2,58	2,69
	Heating	COP	4,53	4,20	4,20	4,20
Power supply			~380-415V/50 Hz/3 Ph			
Rated input	Cooling	kW	4,00	7,50	10,60	21,90
	Heating	kW	3,47	7,40	10,00	20,00
Current input	Cooling	A	6,90	13,00	18,80	46,50
	Heating	A	6,00	12,80	17,80	42,40
Sound pressure level		dB (A)	60	65	68	73
Dimensions (WxDxH)		mm	980x390x1280	1556x605x1850	1413x854x2000	2180x1080x2100
Package (WxDxH)		mm	1050x430x1400	1630x700x2010	1490x900x2160	2260x1130x2260
Weight	Net	kg	143	331	475	778
	Gross	kg	159	366	500	843
Operational temperature range		°C	-30°C~45°C			
Liquid pipeline diameter		Inch	1	1,5	1,5	DN80 flange

*Cooling: outdoor temperature DB/WB 35°C/24°C, water temperature at outlet: 7°C, water temperature at inlet: 12°C.

*Heating: outdoor temperature: DB/WB 7°C/6°C, water temperature at outlet: 35°C, water temperature at inlet: 30°C.

TYPICAL DIAGRAM CONECTION HEAT PUMP

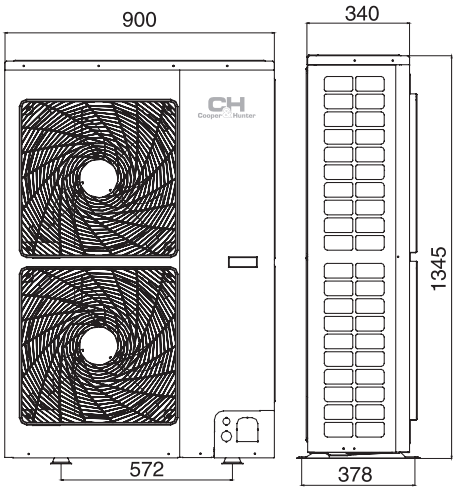
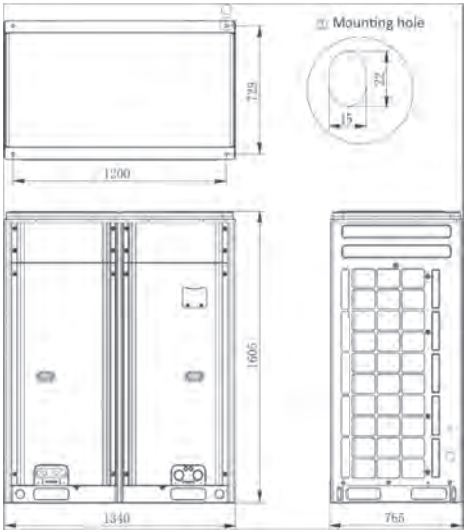




HYBRID VRF CHV5 HOME



- The newest hybrid VRF system with heat recovery and simultaneous capability: cooling / heating of indoor air, hot water supply and floor heating;
- The area of the serviced room is increased, over 200 m²;
- 16 kW hydrobox produce with a high-Capacity plate heat exchanger;
- Control by means of «CAN network control»

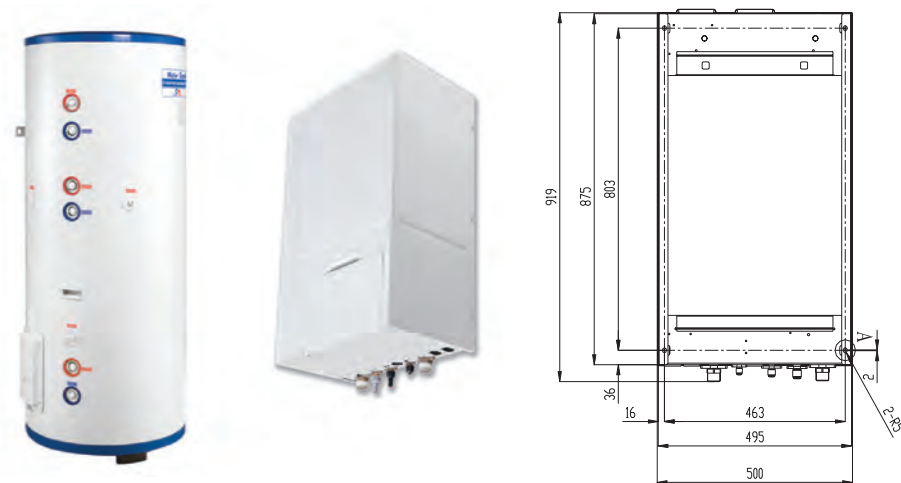


OUTDOOR UNIT

Model			CHV-5SHH120NK	CHV-5SHH140NK	CHV-5SHH160NK	CHV-5SHH224NMX	CHV-5SHH280NMX
Capacity	Cooling	kW	12.1	14	16	22.4	28
	Heating	kW	14	16.5	18	25	31.5
ECOP		kW/ kW	-	-	-	7.0	7.0
Power supply		V/Hz/Phases	~220-240 V/50Hz/1Ph			~380- 415 V/50Hz/3Ph	
Refrigerant quantity		kg	5	5	5	10.5	11.0
Consumed power	Air cooling	kW	3.05	3.98	4.85	5.35	7.7
	Heating	kW	3.3	4.1	4.67	5.8	7.6
	DHW	kW	3.3	3.8	4.2	5.0	5.2
Air flow		m ³ /h	6000	6300	6600	14000	14000
Sound pressure level		dB(A)	55	56	58	57	58
Connecting wire diameter	Gas (air conditioner)	mm (inch)	Ø 15.9 (5/8)	Ø 15.9 (5/8)	Ø 19.05 (3/4)	Ø 19.05 (3/4)	Ø 22.2 (7/8)
	Liquid (air conditioner)	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas (water)	mm (inch)	Ø 12.7 (1/2)	Ø 12.7 (1/2)	Ø 12.7 (1/2)	Ø 15.9(5/8)	Ø 15.9(5/8)
	Liquid (water)	mm (inch)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	-	-
Overall dimensions	External	mm	900x340x1345	900x340x1345	900x340x1345	1340x765x1605	1340x765x1605
	Transporting	mm	988x458x1515	988x458x1515	988x458x1515	1420x840x1775	1420x840x1775
Weight netto/brutto		kg	113/123	113/123	113/123	295	295

INDOOR UNIT

HYDRO-BOX



Model				HB16NK	
Heating capacity			kW	4.5 (3.6-16)	
Overall dimensions	External		mm	500x919x328	
	Transporting		mm	1155x605x385	
Power supply			Phase/V/Hz	220-240V/50/60Hz/1 Ph	
Diameter of cables connected to	connected to	Gas	mm (inch)	Ø 15.9 (5/8)	
		Liquid	mm (inch)	Ø 9.52 (3/8)	
	the tank		mm	25	
Water pump	View		PB-2.5/11-A		
	Consumed power		kW	1700	
	Water flow			l/h	1700
				GPM	7.48
	Head of water		m	6	
Net / Gross weight	Liquid (water)		kg	56/62	

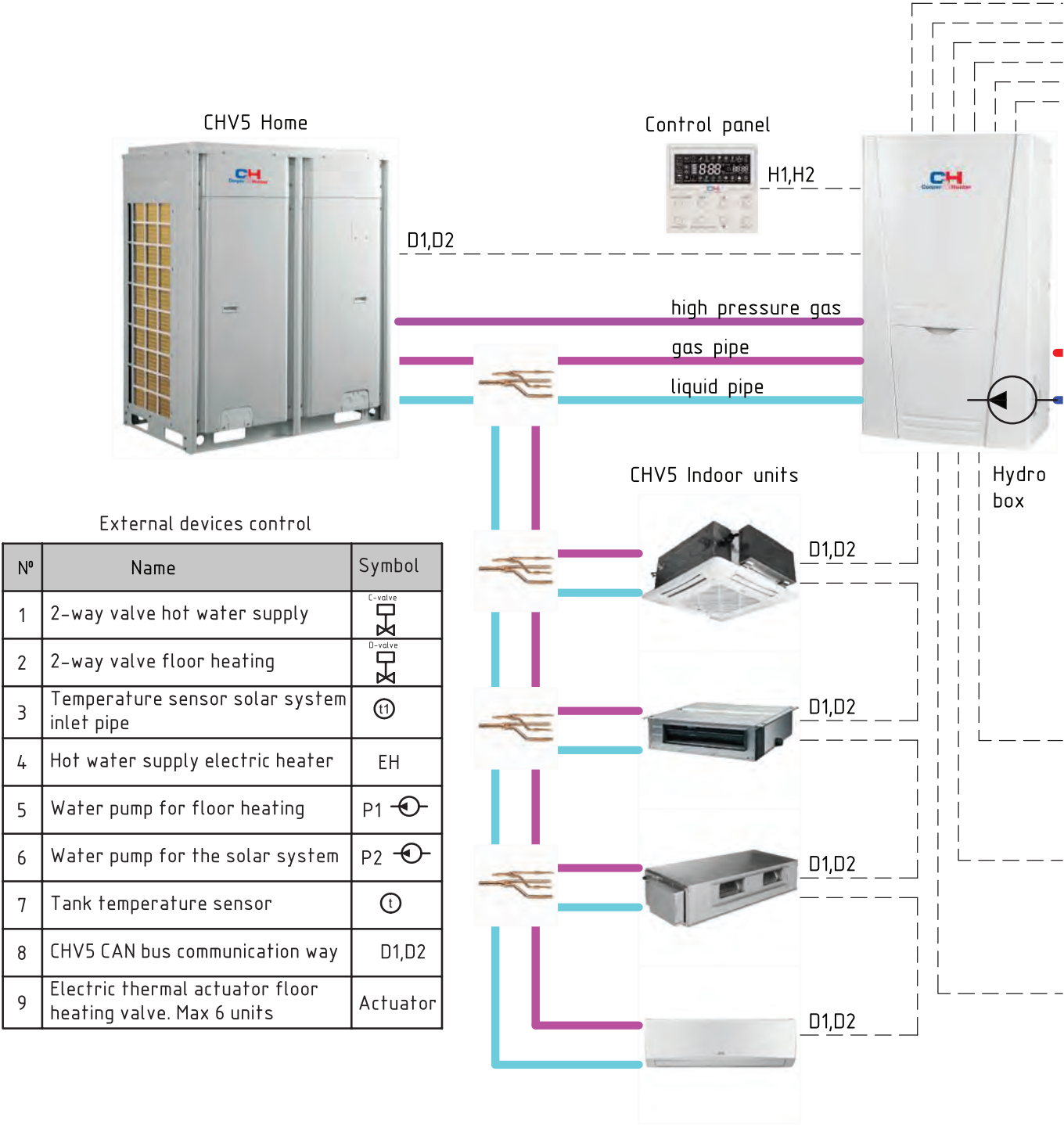


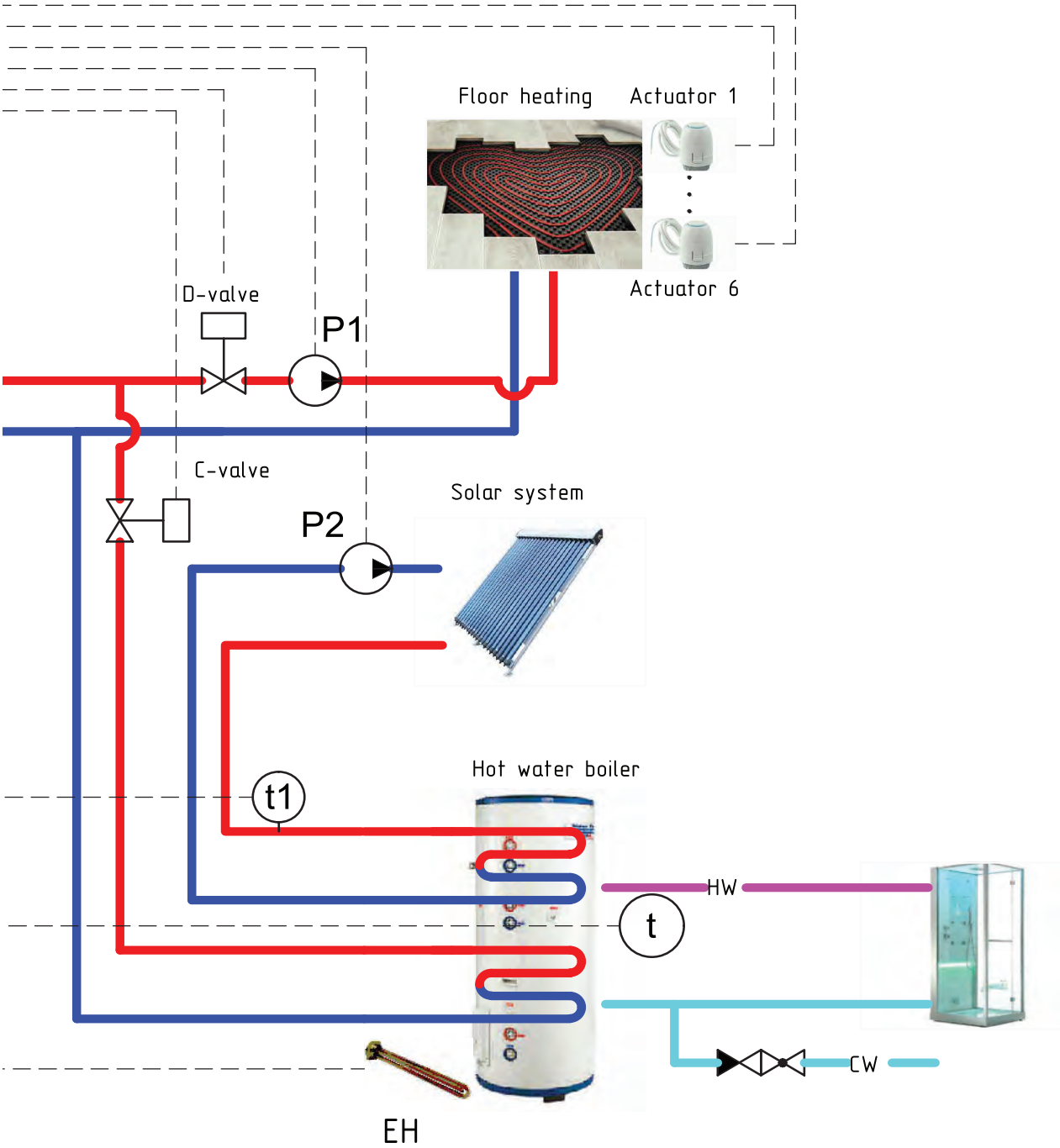
HOT WATER

GENERATOR

Model				HWC-16NK
Heating capacity		kW	4.5(2.6-5.6)	
Overall dimensions	External	mm	370x135x485	
	Transporting	mm	648x473x225	
Power supply		Phase/V/Hz	220-240V/50/60Hz/1 Ph	
Diameter of cables connected to to external Liquidunits	Gas	mm (inch)	Ø 15.9 (5/8)	
	Liquid	mm (inch)	Ø 9.52 (3/8)	
	Gas (high pressure)	mm (inch)	Ø 12.7 (1/2)	
	Liquid (water)	kg	8.5/13.5	

TYPICAL DIAGRAM CONECTION





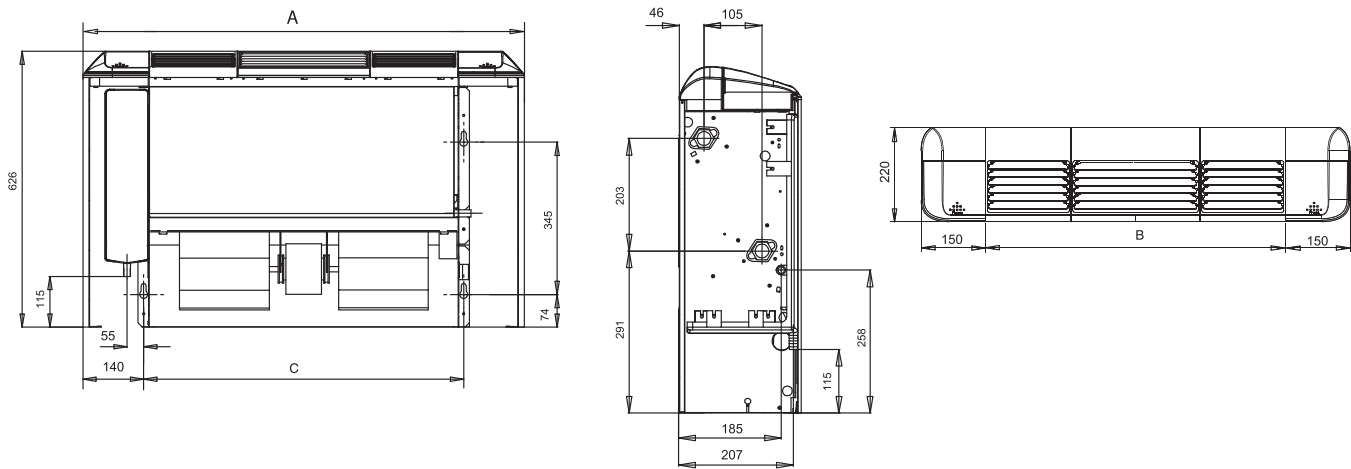
FLOOR-CEILING TYPE FAN COIL UNIT



- ▶ Finned coil type heat-exchanger consisting of copper tubes and aluminum fins, with connections on the left reversible to fit on the right.
- ▶ Three-speed centrifugal blower with aluminum blades statically and dynamically balanced.
- ▶ Directly-coupled motor equipped with internal thermal protection and condenser permanently in circuit.

- ▶ Casing in pre-painted galvanized steel sheet, clad in a protective film of PVC, complete with the acoustic insulation, grilles in heat-resistant ABS polymer with fixed vanes.
- ▶ Condensation collection tray with natural drainage, complete with anti-condensation insulation.
- ▶ Mesh filter in regenerable polypropylene.

Model	CH-FFC015K2	CH-FFC020K2	CH-FFC025K2	CH-FFC035K2	CH-FFC040K2	CH-FFC050K2	CH-FFC060K2	CH-FFC065K2	CH-FFC090K2
Cooling capacity (W)	1150	1870	2530	3270	3970	4850	5640	6520	7850
Heating capacity (W)	1520	2530	3490	4580	5640	6980	8230	9580	11690
Air volume (m³/h)	255	425	510	680	765	850	1020	1360	1530
Sound pressure (dB (A))	32	35	37	39	41	43	44	46	48
Rated input (W)	29	30	44	44	36	51	64	95	143
Weight (kg)	22.5	22.5	26	26	32.5	32.5	39	39	39
Power supply	~220-240 V/50 Hz/1 Ph								



Model	CH-FFC015K2	CH-FFC020K2	CH-FFC025K2	CH-FFC035K2	CH-FFC040K2	CH-FFC050K2	CH-FFC060K2	CH-FFC065K2	CH-FFC090K2
A (mm)	800	800	1000	1000	1200	1200	1500	1500	1500
B (mm)	500	500	700	700	900	900	1200	1200	1200
C (mm)	526	526	726	726	926	926	1226	1226	1226

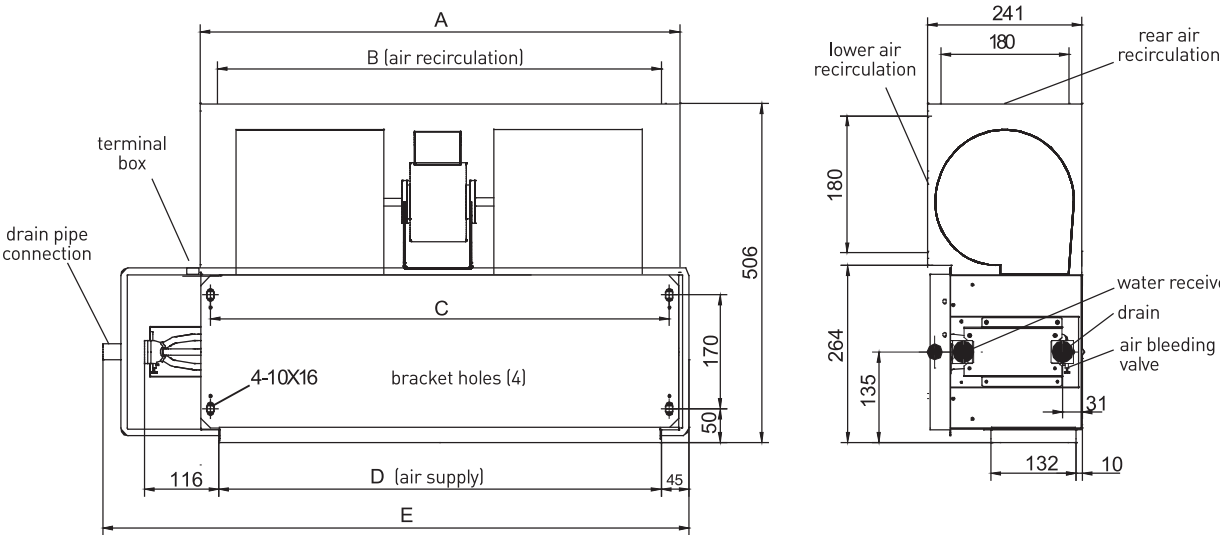
DUCT TYPE 2-ROWS FAN COIL UNIT

- ▶ Left or right hand piping connection, field convertible.
- ▶ Quiet operation.
- ▶ A patent design is able to prevent abnormal noise caused by blowing fins.
- ▶ Superior air distribution.
- ▶ As the conditioner air can be distributed to every corner of the area by air duct, this will ensure more pleasant living environment, thus provide extra comfort to the occupants.
- ▶ Fresh air supply makes life healthier and more comfortable.
- ▶ Air return plenum
- ▶ Units with air return plenum is standard and units without air return plenum can be customized.
- ▶ Washable filter.
- ▶ Iron frame filter is standard, and aluminum frame filter can be customized.



- ▶ Air outlet flange and multi-direction pull-out filter can be customized.
- ▶ Optional wired controller.
- ▶ Optional wired controller offers simple and flexibility in controlling the unit.

Model		CH-FDH 020K2	CH-FDH 030K2	CH-FDH 035K2	CH-FDH 045K2	CH-FDH 060K2	CH-FDH 075K2	CH-FDH 100K2	CH-FDH 110K2	CH-FDH 120K2
Cooling capacity (W)	H	2000	2700	3600	4400	5500	7500	8900	10800	12300
	M	1740	2310	3110	3740	4580	6330	7610	9130	10460
	L	1520	2030	2660	3250	4090	5680	6410	7930	9270
Heating capacity (W)	H	3200	4300	5400	6800	8100	11000	13500	16500	19500
	M	2750	3740	4640	5780	6770	9480	11720	14050	16850
	L	2370	3230	4050	5070	5920	8250	10030	12240	14630
Air flow (m³/h)	H	340	510	680	850	1020	1360	1700	2040	2380
	M	255	385	510	640	765	1020	1275	1530	1785
	L	170	255	340	425	510	680	850	1020	1190
Sound pressure (dB (A))	H	41	41	42	45	46	46	47	48	49
	M	37	37	39	41	41	41	43	44	44
	L	31	32	33	34	35	36	37	38	39
Rated input (W)		45	60	67	89	110	130	171	212	249
Weight (kg)		16	18.5	20	20	24	33	38	43	47
Power supply		~220-240 V/50 Hz/1 Ph								



Model	CH-FDH 020K2	CH-FDH 030K2	CH-FDH 035K2	CH-FDH 045K2	CH-FDH 060K2	CH-FDH 075K2	CH-FDH 100K2	CH-FDH 110K2	CH-FDH 120K2
A (mm)	547	647	747	747	967	1267	1372	1662	1828
B (mm)	515	615	715	715	935	1235	1340	1630	1796
C (mm)	513	613	713	713	933	1233	1338	1628	1794
D (mm)	485	585	685	685	905	1205	1310	1600	1766
E (mm)	757	812	912	912	1135	1435	1540	1830	1992

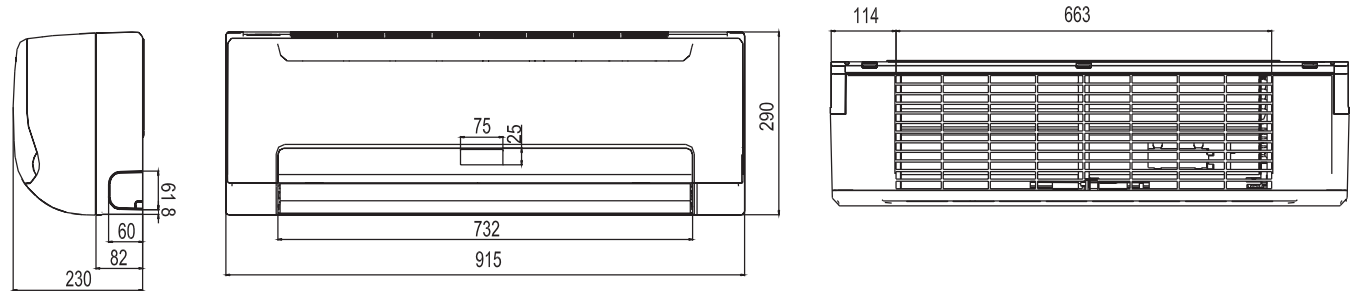
WALL MOUNTED TYPE FAN COIL UNIT



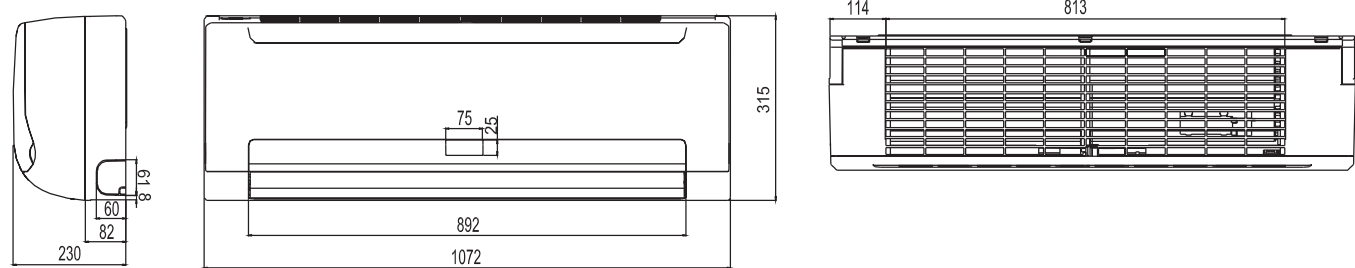
- ▶ New panel supplies more choice for customs
 - ▶ Multi-connection outlet pipe method: left/right/rear, more flexible for installation
 - ▶ Wind direction adjustment can be in horizontal and vertical way for auto swing louver
 - ▶ Built-in 3 way electromagnetic valve
- ▶ Easy maintenance has been realized as the front panel can be removed for easy access
 - ▶ Remote controller with LCD display is standard, wired controller and central controller are optional
 - ▶ Four-speed motor with super high speed reserved for more choice

Model		CH-FW025K2	CH-FW030K2	CH-FW040K2	CH-FW050K2	CH-FW060K2
Cooling capacity (W)	H	2630	2970	3280	4250	5000
	M	2410	2470	2830	3850	4470
	L	2160	2120	2410	3320	3970
Heating capacity(W)	H	3360	3910	4370	5810	6700
	M	3100	3260	3730	5170	6000
	L	2790	2770	3170	4430	5280
Air flow (m³/h)	H	425	510	680	850	1020
	M	360	430	580	720	870
	L	320	380	510	640	770
Sound pressure(dB (A))	H	30	35	37	39	40
	M	24	29	31	33	34
	L	20	24	26	28	29
Rated input (W)		24	37	40	50	66
Weight (kg)		13		13.3	15.8	
Power supply		~220-240 V/50 Hz/1 Ph				

CH-FW025K2, CH-FW030K2, CH-FW040K2



CH-FW050K2, CH-FW060K2



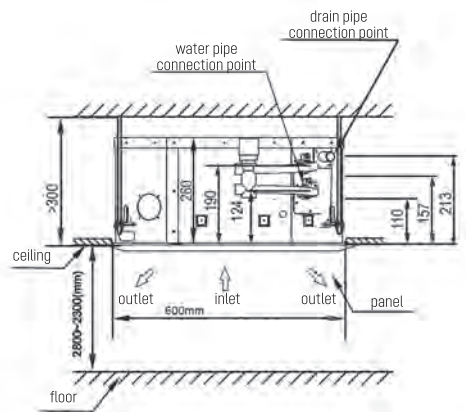
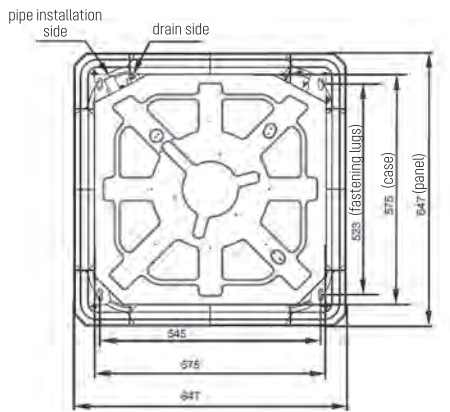
FOUR-WAY CASSETTE TYPE FAN COIL UNIT



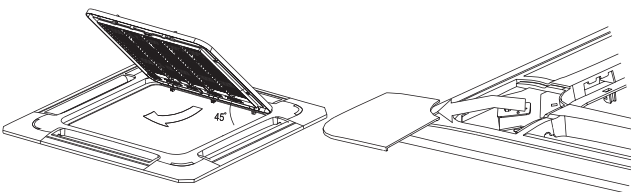
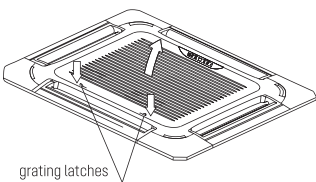
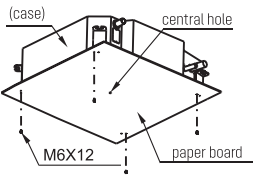
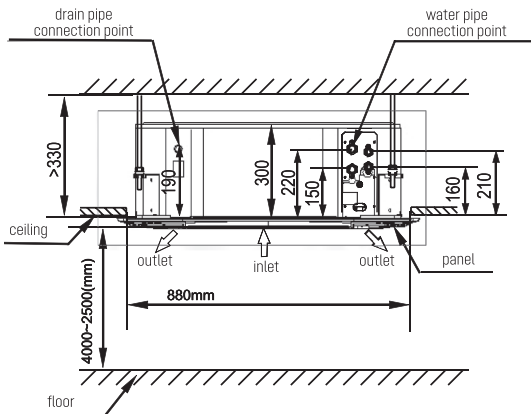
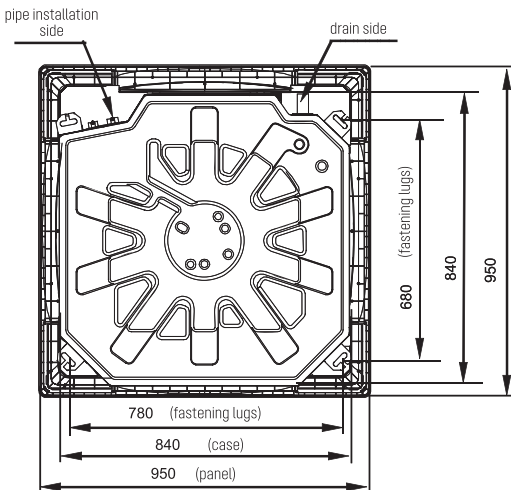
- ▶ Chilled water/Hot water (2 pipes)
- ▶ Low height for easy installation
- ▶ Low noise fan direct driven by single phase, 3 speed permanent split capacitor motor.
- ▶ Copper tube/aluminum fin coils
- ▶ Hydrophilic aluminum fin coils coated (optional)
- ▶ Unit constructed by electrostatic galvanized sheet, providing maximum protection against corrosion
- ▶ Heavy gauge zinc coated steel drainage pan with good insulation processing, avoiding sweating and corrosion Mesh filter in regenerable polypropylene.

Model		CH-FC030K2	CH-FC040K2	CH-FC050K2	CH-FC060K2	CH-FC075K2	CH-FC085K2	CH-FC100K2	CH-FC120K2	CH-FC150K2
Cooling capacity (W)		3000	3700	4500	5700	7000	7270	8220	10390	12900
Heating capacity(W)		4000	5100	6000	9660	11550	12420	13850	17580	17600
Air flow (m³/h)	H	510	680	850	1000	1250	1400	1600	2000	2550
	M	440	580	730	850	1060	1190	1360	1700	2170
	L	360	480	600	720	900	1010	1150	1440	1840
Sound pressure(dB (A))		36	42	45	45	46	47	48	49	50
Rated input (W)		35	60	75	120	125	145	150	185	185
Weight (kg)	Indoor unit	17.5			25		30.5			35
	Panel	3			6					
Power supply		~ 220-240 V/50 Hz/1 Ph								

CH-FC030K2, CH-FC040K2, CH-FC050K2



CH-FC060K2, CH-FC075K2, CH-FC085K2, CH-FC100K2, CH-FC120K2, CH-FC150K2

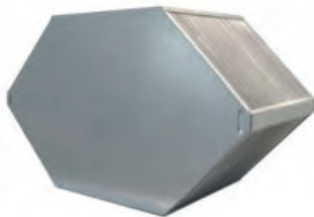


ENERGY RECOVERY VENTILATION SYSTEM



- ▶ Temperature display
 - ▶ Speed selection
 - ▶ Weekly timer
 - ▶ Bypass
(not available on models CH-HRV15K2, CH-HRV20K2, CH-HRV25K2, CH-HRV30K2)
 - ▶ External ON/OFF
 - ▶ Comfortable heater control
 - ▶ Defrosting
 - ▶ CO2 control (Optional)
- ▶ Filter alarm
 - ▶ Fault alarm
 - ▶ Data memory
 - ▶ Night free cooling
(not available on models CH-HRV15K2, CH-HRV20K2, CH-HRV25K2, CH-HRV30K2)
 - ▶ BMS integration
 - ▶ Humidity control (Optional)
 - ▶ Defrosting heater control
 - ▶ Working condition monitor

ON/OFF



Model			CH-HRV2K2	CH-HRV3K2	CH-HRV4K2	CH-HRV6K2	CH-HRV8K2	CH-HRV10K2	CH-HRV13K2
Airflow	(m³/h)	L	150	250	350	500	700	900	1000
		M	200	300	400	600	800	1000	1300
		H	200	300	400	600	800	1000	1300
External pressure	(Pa)	L	60	75	80	89	92	80	75
		M	70	82	85	92	96	85	85
		H	75	85	88	97	100	86	90
Enthalpy Eff.(%)	Cooling	L	60	62	62	63	57	60	58
		M	55	57	57	59	55	58	56
		H	55	57	57	59	55	58	56
	Heating	L	63	65	65	67	63	64	62
		M	59	61	60	61	57	62	59
		H	59	61	60	61	57	62	59
Temp.Eff	(%)	L	75	73	74	76	74	76	76
		M	70	68	69	70	68	70	70
		H	70	68	69	70	68	70	70
Noise	dB (A)	L	22	23	25	25	32	32	37
		M	25	27	29	31	37	36	40
		H	27	30	32	35	39	40	42
Voltage (V)			220	220	220	220	220	220	220
Current (A)			0.5	0.56	0.72	0.96	1.7	2.1	3.4
Input Power (W)			105	117	150	200	355	440	710
Net Weight (KG)			23	25	31	36	60	70	79

ON/OFF



*1 - Cellulose heat exchanger



*2 - Aluminum heat exchanger

Model			CH-HRV15K2*1 CH-HRV15AK2*2	CH-HRV20K2*1 CH-HRV20AK2*2	CH-HRV25K2*1 CH-HRV25AK2*2	CH-HRV30K2*1 CH-HRV30AK2*2		
Airflow	(m³/h)	L	1000	1200	2000	2500		
		M	1500	2000	2500	3000		
		H	1500	2000	2500	3000		
External pressure	(Pa)	L	84	110	140	150		
		M	135	132	170	180		
		H	163	176	200	210		
Enthalpy Eff.(%)	Cooling	L	69	65	64	63		
		M	66	62	61	60		
		H	66	62	61	60		
	Heating	L	74	73	72	71		
		M	70	71	70	69		
		H	70	71	70	69		
		Temp.Eff	(%)	L	74	74	73	73
				M	71	71	70	70
H	71			71	70	70		
Noise	dB (A)	L	46	49	50	51		
		M	49	51	52	54		
		H	51	53	55	57		
Voltage (V)			220	220	220	220		
Current (A)			2.3/3.6/3.8	3.0/4.6/4.8	4.5/6.0/6.3	6.5/8.7/9.0		
Input Power (W)			485/740/785	650/980/1020	940/1250/1300	1400/1870/1950		
Net Weight (KG)			110	112	130	142		



INVERTER



Model		CH-HRV1.5KDC	CH-HRV2.5KDC	CH-HRV3.5KDC	CH-HRV5KDC	CH-HRV6.5KDC	CH-HRV8KDC	CH-HRV10KDC	CH-HRV15KDC	CH-HRV20KDC
Airflow (m³/h)		150	250	350	500	650	800	1000	1500	2000
Airflow (l/s)		43	71	100	143	186	229	286	429	571
Enth. Eff (%)	Heating	70	70	69	67	68	71	71	71	71
	Cooling	63	63	66	62	62	65	65	65	65
Temp. Eff (%)		75	75	75	75	75	75	75	75	75
Noise DB (A)		23	24	28	30	32	35	35	38	38
Power Supply		~ 220-240 V/50 Hz/1 Ph								
Input Power (W)		51	81	112	143	205	290	305	580	610
Power Cable		2x1,5mm								
Control Cable		2x0,5mm								
Control	Standard	Yes (7-Day Time-clock)							No	
	(BMS) Modbus	Yes								
Fan Type		DC Fan Motors								
Fan Speeds (Supply)		10 Speed Fan Control								
Fan Speeds (Exhaust)		10 Speed Fan Control								
Summer Bypass		Yes (Automatic with adjustable range)								
Defrost		Yes (Automatic with adjustable range)								
CO ₂ Control		Optional controller available (On / Off control with adjustable range)								
Fan Boost Contacts		Yes (3x available connections to Contacts: Closed = Boost to High Speed)								
Fire Shutdown		Yes (1x available connection to Contact: Closed = Shutdown)								
Weight (Kg)		25	29	37	43	64	71	83	165	189
Size (WxHxD)		580x264x808	599x264x882	804x270x882	904x270x962	884x340x1222	884x388x1322	1134x388x1322	884x785x1322	1134x785x1322
Duct Size		150	150	150	200	200	250	250	300	300

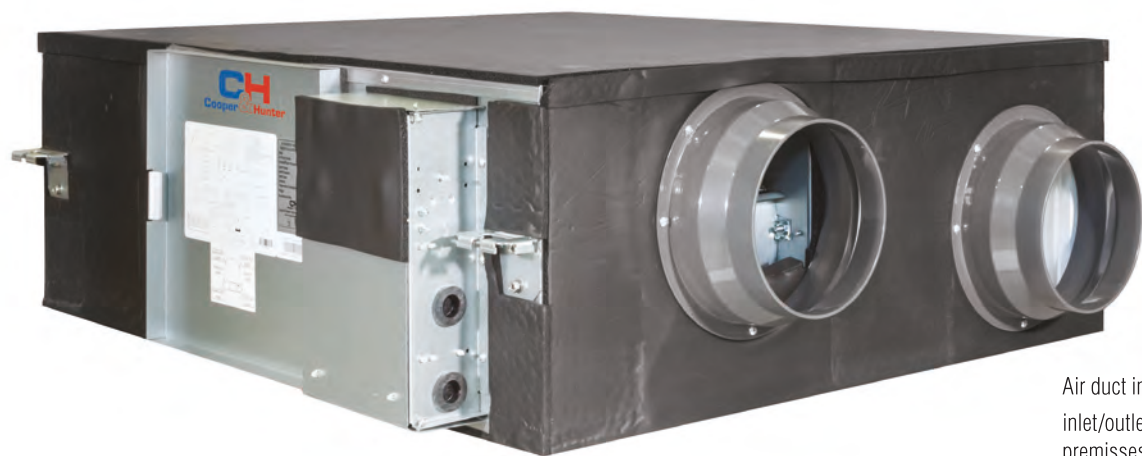
STANDARD		TOUCH SCREEN (OPTION)		CENTRAL CONTROLLER	
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Models HRV	CH-HRV2... 13K2 CH-HRV1.5... 20KDC	CH-HRV15... 30K2 CH-HRV15... 30AK2	CH-HRV2... 13K2 CH-HRV1.5... 20KDC	CH-HRV15... 30K2 CH-HRV15... 30AK2
Comfortable heater control	+		+	
Temperature display	OA/RA/SA/FA temp		OA/RA/SA/FA temp	
Speed selection	+		+	
Weekly timer	+		+	
Automatic By-pass	Auto	-	Auto	-
External control contact	+		+	
Automatic defrost	+		+	
CO ₂ control (Option)	+		+	
Filter alarm	+		+	
Fault alarm	+		+	
Data memory	+		+	
Night free cooling	+	-	+	-
Humidity control (Option)	-		+	
BMS integration	+		+	
Defrosting heater control	+		+	
Working condition monitor	+		+	

Models HRV	CH-HRV2... 13K2 CH-HRV1.5... 20KDC	CH-HRV15... 30K2 CH-HRV15... 30AK2
Speed selection	+	
Temperature display	OA/RA/SA/FA temp	
Multiple control units up to 16 pcs	+	
Individual on/off control unit	+	
On/off mode	+	
Data memory	+	
Bypass	Auto	-
Defrosting	+	
Humidity control (Option)	+	
Working condition monitor	+	
Fault alarm	+	

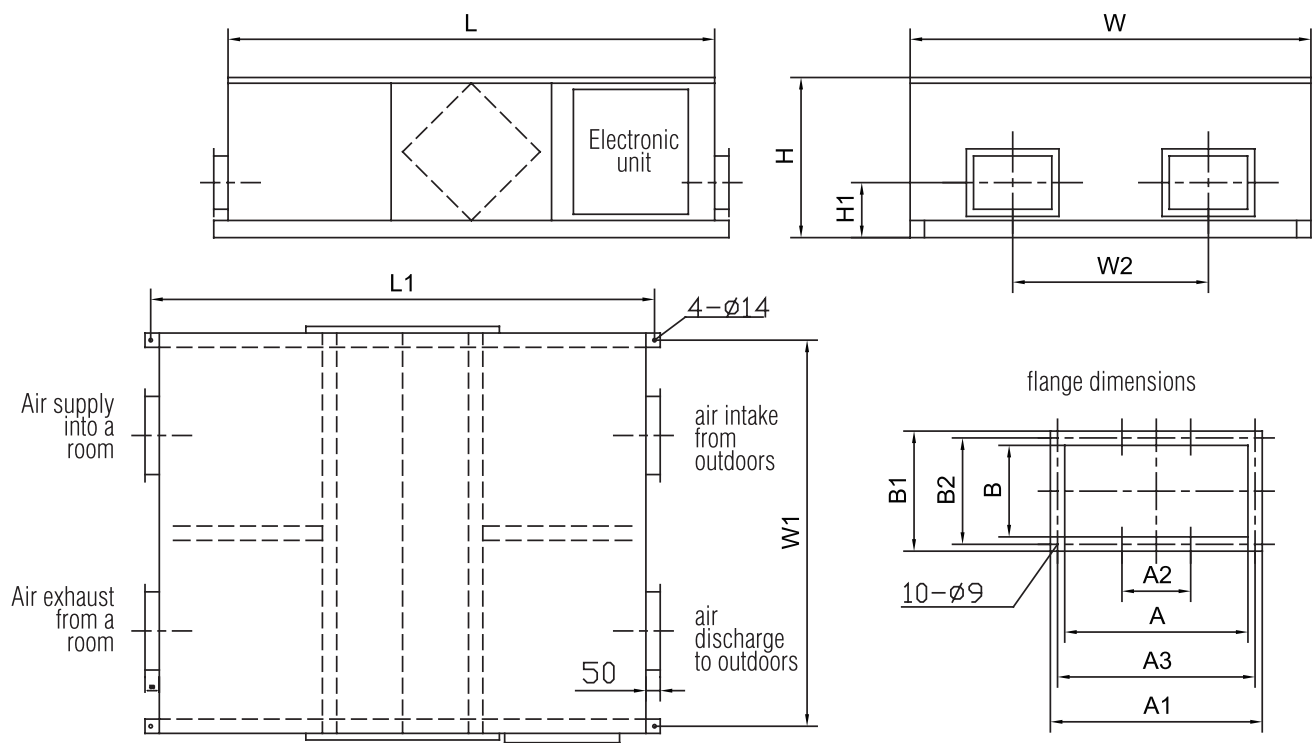
ENERGY RECOVERY VENTILATION SYSTEM

ON/OFF

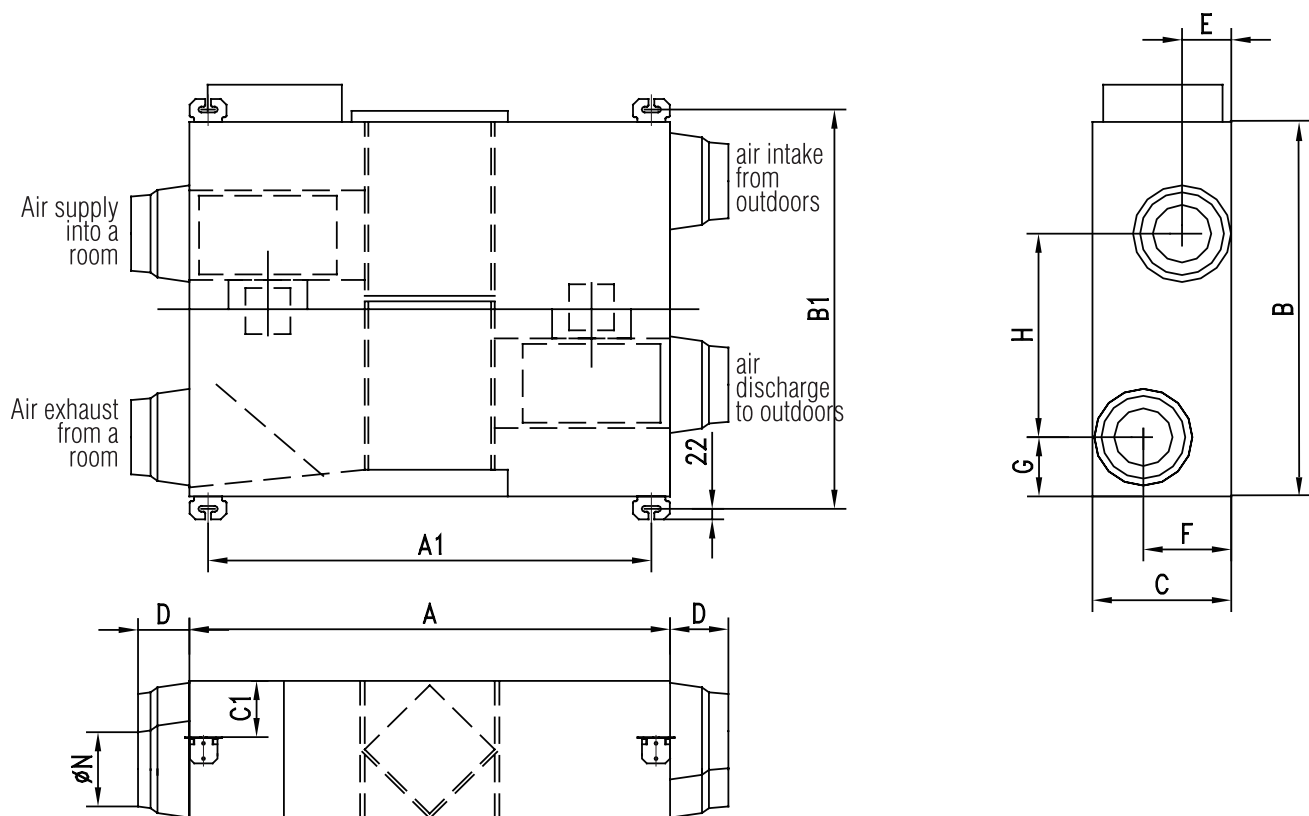


Air duct installation:
inlet/outlet ducts "from" and "to" premisses should be insulated well to prevent the condensation. Insulation required only in case of under ceiling installation with high humidity and temperature.

- ▶ Low noise and compact dimensions;
- ▶ Three speed fan operation (for models CH-HRV15M, CH-HRV20M, CH-HRV30M – only one speed fans);
- ▶ Don't require condensate discharge since heat exchanger made of cellulose
- ▶ Bypass



Model	L	L1	W	W1	W2	H	H1	A	A1	A2	A3	B	B1	B2
CH-HRV30M	1550	1650	1340	1310	670	572	249	346	386	180	366	332	372	352



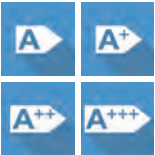
Model	A	A1	B	B1	C	C1	D	E	F	G	H	N
CH-HRV3.5K	879	823	800	852	306	125	90	125	175	136	416	197
CH-HRV5K	879	823	800	852	306	125	90	125	175	136	416	197
CH-HRV8K	1016	960	832	884	380	165	90	150	230	155	372	246
CH-HRV10K	1016	960	832	884	380	165	90	150	230	155	372	246
CH-HRV15M	1215	1159	1210	1262	452	200	100	190	277	178	737	297
CH-HRV20M	1215	1159	1210	1262	452	200	100	190	277	178	737	297

Model: CH-HRV_K(M)			3.5	5	8	10	15	20	30
Power Supply			~220-240 V/50 Hz/1 Ph				~380-415 V/50 Hz/3 Ph		
Airflow (m³/h)	H		350	500	800	1000	1500	2000	3000
	M		360	380	600	750			
	L		210	300	480	600			
External pressure (Pa)	H		100	100	110	110	150	150	220
	M		80	80	85	85			
	L		60	60	65	65			
Temperature Capacity (%)	H		71	68	70	75	73	71	70
	M		73	70	72	77			
	L		75	72	74	79			
Air ducts diameter		mm	200	200	250	250	300		332*346
Enthalpy Capacity (%)	Heating	H	65	62	63	66	65	62	62
		M	67	64	65	68			
		L	68	65	67	70			
	Cooling	H	61	57	60	62	60	58	58
		M	63	59	62	64			
		L	65	61	64	65			
Power supply cable	Quantity		3				5		
	Area of cross-section	mm²	1,0				1,5		
Input power		W	165	262	400	440	600	950	2800
Sound pressure level		dB(A)	37	39	45	46	48	50	54
Dimensions (mm)	Height		306	306	380	380	452	452	572
	Width		800	800	832	832	1210	1210	1340
	Depth		879	879	1016	1016	1215	1215	1550
Weight		kg	45	45	70	70	100	100	211

Note

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Designation

 RoHS certificate	 Intelligent defrost system	 GREEN-FIN – anticorrosive cover of the heat exchangers
 CE certificate	 LED-Display of indoor unit	 ECO-FRESH – electret dust filter
 Energy saving specification	 Multi speed fan	 CH SMART-ION Filter – new generation technology for complete purification of air
 Energy Class capacity type	 Type of refrigerant	 Warranty
 Timer	 Sleep mode	 The unique technology of CH 7-SKY means the seven air purification steps
 Self-diagnostics system	 Noise Analysis Technology – noiseless operation	 Step-less Fan Control - controlled by step-less regulation technology, the fan speed be adjust 1% to 100% between the highest and lowest speed.
 Auto-protection	 The Wi-Fi function module to manage the air conditioner via a Smartphone/Tablet (OS: Android, iOS)	 Two-stage Compressor
 Automatic restart	 The evaporator of indoor unit will be blown after the unit is stopped to avoid mould	 EVI-scroll technology
 Swing mode – wide angle louvers	 Backlight of indoor unit display	 Can operate with BMS
 Dry mode – dehumidifying	 “I Feel” The controller will automatically adjust the indoor temperature according to the temperature detected by the remote	
 Inverter technology	 Defends your home from frizzing: function “+8 degrees”.	
 High quality Plasma air cleaner: unique removing system of bacteria, viruses, foulodors, and allergens from air		



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