



BOSCH Climate 5000  
**Ceiling Suspend  
Air Handling Unit**



**BOSCH**  
Invented for life

## Introduction to Bosch Thermotechnology

Bosch Thermotechnik GmbH is a leading supplier of resource-efficient heating products and hot water solutions in Europe. In fiscal 2011, the company generated sales of 3.1 billion Euros (68% outside Germany) and employed approx. 13,900 people. Bosch Thermotechnology has strong international and regional brands and manufactures a diversified product range in 21 plants in 11 European, North American and Asian countries. In 2011, Bosch Thermotechnology invested 127 million Euros in research and development, roughly 10.4% more than in the previous year. Intelligent networks and local systems for heating, ventilation, air-conditioning and electricity generation are fundamental technologies for the future building standard, which will generate more energy than is used.

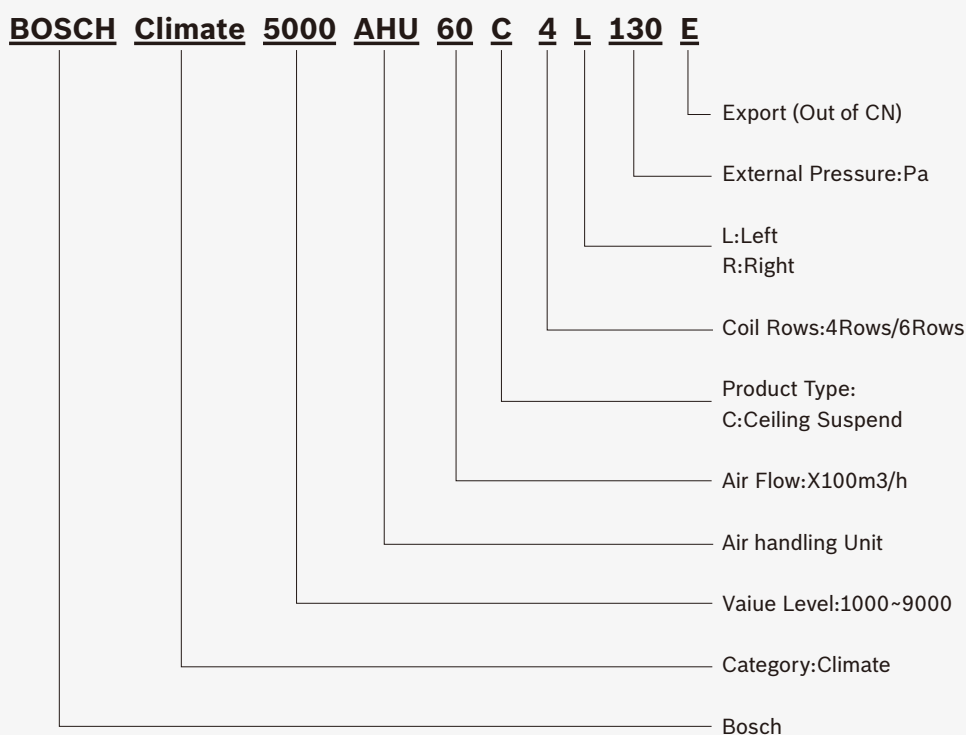
Bosch Thermotechnology (Shandong) Co. Ltd is a division of Bosch Thermotechnology with focus on providing energy efficient cooling, heating and comfort hot water equipment & solutions for commercial and industrial segments.

The division employs approx. 260 people with more than 40 engineers, and has a plant of 80000sqm with state-of-art manufacturing facility and high-demanding quality management system.

A comprehensive range of renewable heat pumps, chillers, fan coil units and air handling units meets almost all kinds of requirement from buildings like office, hospital, hotel, shopping mall or industrial plants.

Bosch Climate 5000 ceiling suspend air handling unit featuring double skin panel and combining Bosch's delicate industrial design and state-of-the-art engineering technologies enjoys lower air and cooling capacity leakage, and provides customers with high quality, high reliability and outstanding cost performances, creating a comfortable environment for customers.

## Nomenclature



## Explosive View

### 1) Removable Side Panel

Removable inspection door on side panel provides convenience for service and maintenance work.

### 2) Double Skin Casing

Bosch innovative double skin casing structure contributes to good mechanical strength and effectively reduces thermal transmittance, casing air leakage and thermal bridging factor.

### 3) Air Filters

Product is equipped with washable nylon filter.

### 4) Heat Exchanger Complex

High quality hydrophilic fins and seamless copper tubes are made into state-of-the-art heat exchangers, ensuring a smooth and even energy transfer.

### 5) Wiring Box

Compact and reliable.

### 6) Drain Pan

5mm PE Insulation secures a dew-free running all the time.

### 7) Base

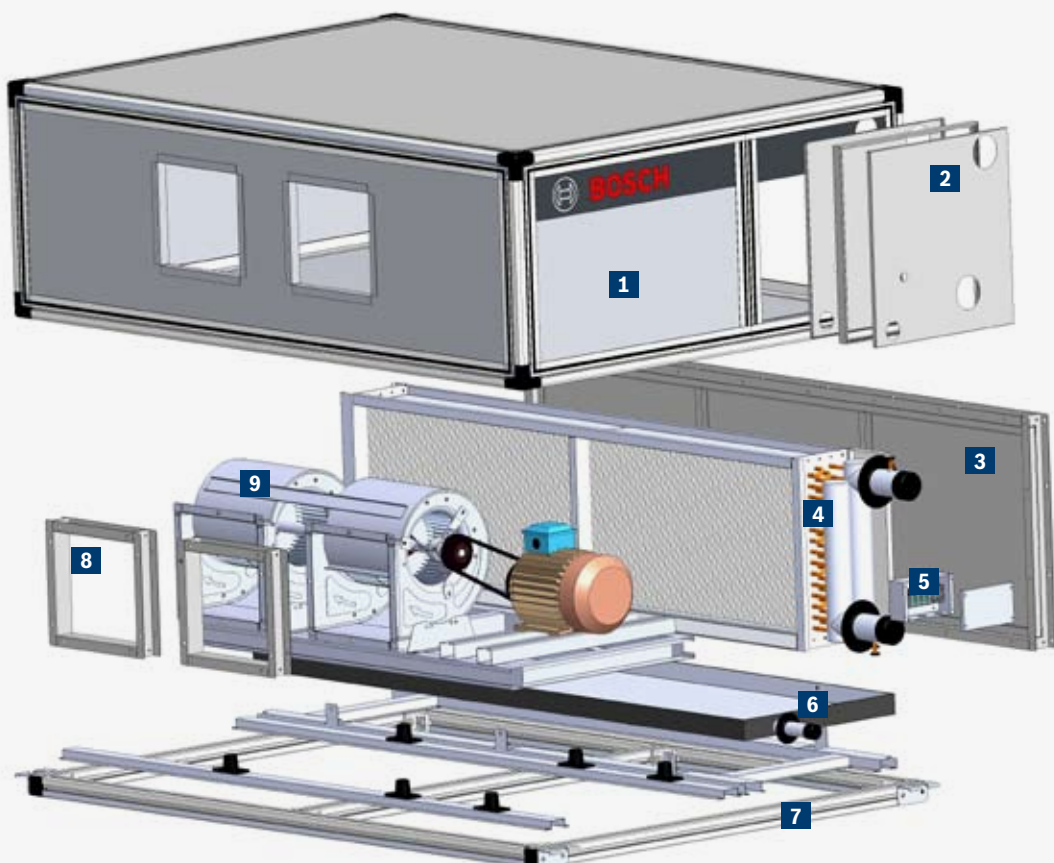
Fans and motor are tightly connected to this strong but light base, eliminating the threat of instability and prolonging whole product's service life.

### 8) Air Outlet

No canvas connection, convenient installation and disassembly, convenience for service and maintenance work.

### 9) Fan-motor Structure

Name brand galvanized volute fans, featuring high quality and long service life, bring stable and quiet air flow for our customers. High efficiency motor is from a famous supplier, enjoying a reputation of safe and quiet running.



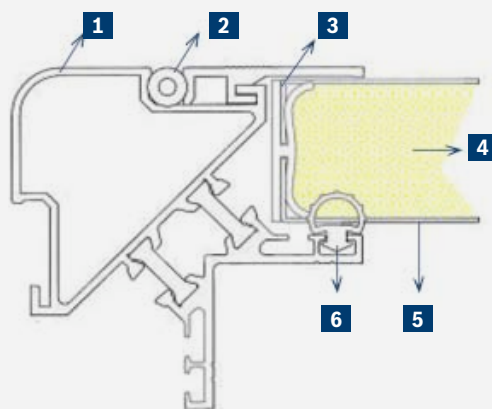
## Features

### Excellent Industrial Design

Professional German industrial design won 2013 Focus public design awards in Baden - Wuerttemberg International Design Competition.

### Double Skin Casing Structure

- ▶ Bosch ceiling suspend AHU is unique for its innovative double skin casing structure. Double skin panels are tightly fixed onto a strong aluminum alloy frame with engineering plastic junctions.
- ▶ This casing structure is created with Bosch TT's excellent anti-freezing technology and tested with highest standards, which contributes to its outstanding performance: not only high mechanical strength, but also less thermal transmittance, air leakage and thermal bridging factor.



1. Aluminum Profile
2. Rubber Sealing Strip
3. PVC Profile for Cover the Edge
4. High Density PU Foam (25mm thickness)
5. Metal Panel
6. Sealing Strip

- ▶ Outer Panel: Color Painted Sheet;
- ▶ Inner Panel: Zinc-galvanized Sheet;
- ▶ Insulation: Polyurethane Foam.

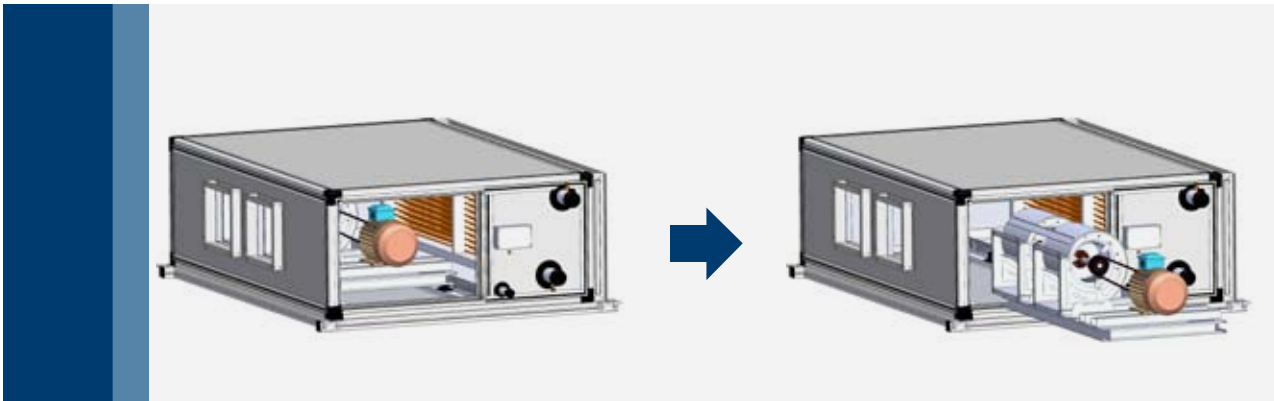
### Optimized Frame

Bosch ceiling suspend AHU adopts high strength aluminum frame base, light weight, delicate yet strongly and steadily connected. Furthermore, it makes the position adjustment of lifting hook more free.



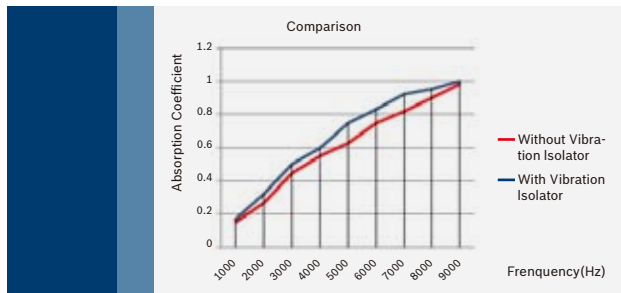
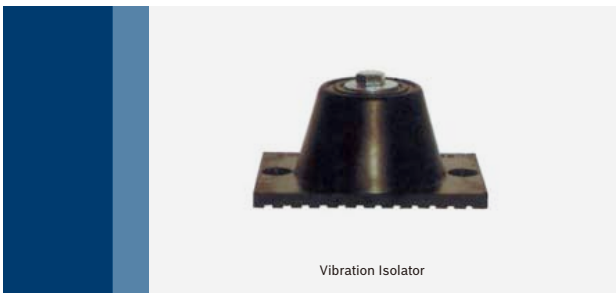
### Convenient to Maintenance

Bosch ceiling suspend AHU is designed with inspection doors on side panel and equipped with drawable fan motor base, providing convenience for service and maintenance work.



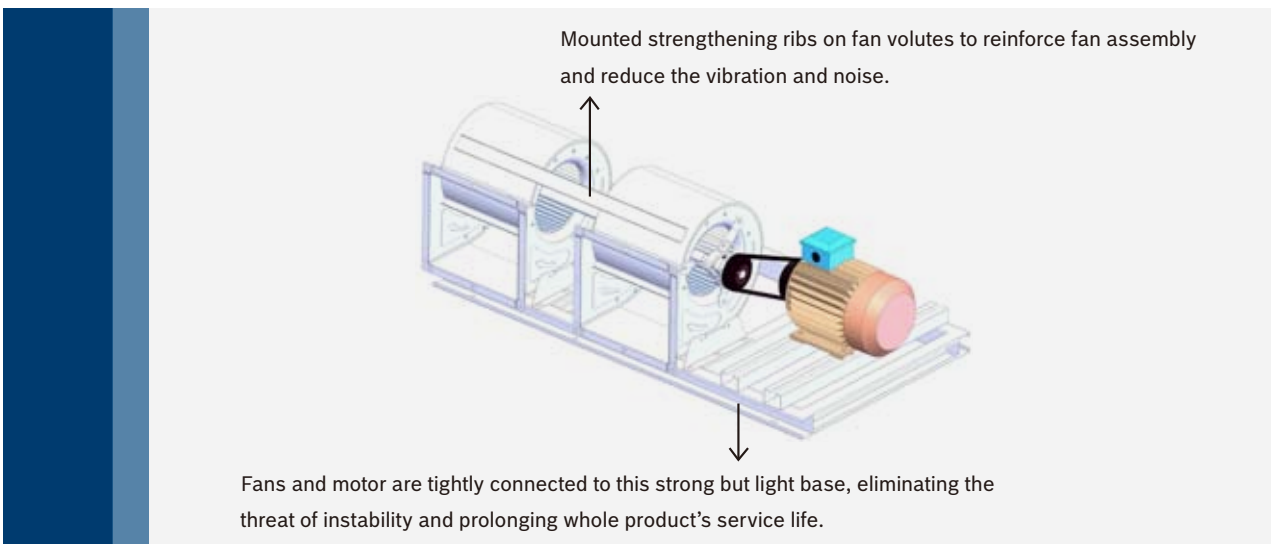
### Effective Vibration Isolation

Bosch adopts name brand vibration isolator for fan motor, which reduces the unit vibration and lowers the operation noise.



### High Efficient Fan Motor and Heat Exchanger

- ▶ Name brand high efficient motor and fan contribute to long lifespan and quiet operation.
- ▶ High quality heat exchanger made of hydrophilic aluminum fins and seamless copper pipes ensures high efficiency and stable performance.



## Specifications

Model		AHU20C4	AHU25C4	AHU30C4	AHU40C4	AHU50C4	AHU60C4
Air Flow	m³/h	2000	2500	3000	4000	5000	6000
Power Supply		380V-3Ph-50Hz					
Recycling Air							
Cooling Capacity	kW	11.6	14.3	16.9	23.8	28.6	35.9
Heating Capacity 1*)	kW	19.5	24.5	29.2	39.6	51.5	61.2
Heating Capacity 2*)	kW	23.3	29.3	34.9	47.4	58.5	73.1
Water Flow	m³/h	2.0	2.5	2.9	4.1	4.9	6.2
Water Pressure Drop	kPa	18	23	32	48	58	64
Fresh Air							
Cooling Capacity	kW	20.1	25.6	31.6	42.0	52.6	65.2
Heating Capacity	kW	34.7	43.5	53.5	71.7	88.8	110.6
Water Flow	m³/h	3.5	4.4	5.2	7.1	8.7	10.9
Water Pressure Drop	kPa	36.0	45.1	63.1	95.3	116.6	128.4
External Static Pressure							
ESP1	Pa	80	80	80	130	130	130
Power Input for ESP1	kW	0.55	0.75	0.75	1.1	1.1	1.5
ESP2	Pa	130	130	130	180	180	180
Power Input for ESP2	kW	0.55	0.75	0.75	1.5	1.5	2.2
Net Weight	kg	126	139	152	189	216	243
Sound Level	dB(A)	56	57	58	60	61	62
Water Pipe Size	DN	40	40	40	50	50	65
Drainage Pipe Size	DN	25	25	25	25	25	25

Model		AHU70C4	AHU80C4	AHU90C4	AHU100C4	AHU120C4	AHU150C4
Air Flow	m³/h	7000	8000	9000	10000	12000	15000
Power Supply		380V-3Ph-50Hz					
Recycling Air							
Cooling Capacity	kW	42.6	47.1	51.5	57.1	67.6	86.1
Heating Capacity 1*)	kW	70.2	78.6	88.1	98	114.6	147.4
Heating Capacity 2*)	kW	83.9	94	105.3	117.2	137	170.9
Water Flow	m³/h	7.3	8.1	8.9	9.8	11.7	14.8
Water Pressure Drop	kPa	78	59	64	68	72	77
Fresh Air							
Cooling Capacity	kW	74.2	83.6	94.8	105.3	127.6	155.0
Heating Capacity	kW	127.5	140.5	158.7	177.2	204.2	260.6
Water Flow	m³/h	12.5	14.0	15.7	17.4	21.2	26.2
Water Pressure Drop	kPa	156.0	118.1	128.9	136.8	144.0	153.4
External Static Pressure							
ESP1	Pa	180	180	180	230	230	230
Power Input for ESP1	kW	2.2	2.2	2.2	3	4	5.5
ESP2	Pa	240	240	240	290	290	290
Power Input for ESP2	kW	3	3	3	4	4	5.5
Net Weight	kg	261	288	327	360	388	421
Sound Level	dB(A)	64	64	65	66	67	68
Water Pipe Size	DN	65	65	65	65	65	65
Drainage Pipe Size	DN	25	25	25	25	25	25

Notes:

1.Nominal Testing condition:

Cooling: entering air temp 27°C DB/19.5°C WB; entering water temp 7°C, leaving water temp 12°C;

Heating: 1\*) entering air temp 21°C; 2\*) entering air temp 15°C; entering water temp 60°C, the same water flow as in cooling;

2.Sound pressure level are measured in acoustic room, position of the measure point is 1m in the front and 1m below the vertical center line of the unit;

Model		AHU20C6	AHU25C6	AHU30C6	AHU40C6	AHU50C6	AHU60C6
Air Flow	m³/h	2000	2500	3000	4000	5000	6000
Power Supply		380V-3Ph-50Hz					
Recycling Air							
Cooling Capacity	kW	13.8	17.2	22.6	27.7	37.1	47.9
Heating Capacity 1*)	kW	22.3	28.3	36.9	47.3	60.3	77.7
Heating Capacity 2*)	kW	27.0	34.2	44.6	57.2	72.9	93.9
Water Flow	m³/h	2.4	3.0	3.9	4.8	6.4	8.3
Water Pressure Drop	kPa	27	34	47	59	64	82
Fresh Air							
Cooling Capacity	kW	23.6	30.3	39.1	51.2	65.0	84.0
Heating Capacity	kW	40.6	51.8	67.6	87.3	111.4	143.8
Water Flow	m3/h	4.1	5.1	6.7	8.6	10.9	14.0
Water Pressure Drop	kPa	54	68	95	118	128	164
External Static Pressure							
ESP1	Pa	60	60	60	110	110	110
Power Input for ESP1	kW	0.55	0.75	0.75	1.1	1.1	1.5
ESP2	Pa	110	110	110	160	160	160
Power Input for ESP1	kW	0.55	0.75	0.75	1.5	1.5	2.2
Net Weight	kg	144	163	176	221	246	281
Sound Level	dB(A)	56	57	58	60	61	62
Water Pipe Size	DN	40	40	40	50	50	65
Drainage Pipe Size	DN	25	25	25	25	25	25

Model		AHU70C6	AHU80C6	AHU90C6	AHU100C6	AHU120C6	AHU150C6
Air Flow	m³/h	7000	8000	9000	10000	12000	15000
Power Supply		380V-3Ph-50Hz					
Recycling Air							
Cooling Capacity	kW	53.6	61.5	66.8	73.9	86.0	111.1
Heating Capacity 1*)	kW	89.4	100.4	111.3	121.2	141.4	180.2
Heating Capacity 2*)	kW	108.1	121.3	134.4	146.4	170.9	217.7
Water Flow	m³/h	9.2	10.6	11.5	12.7	14.8	19.2
Water Pressure Drop	kPa	90	75	87	91	98	105
Fresh Air							
Cooling Capacity	kW	98.7	105.7	120.7	133.0	155.1	197.0
Heating Capacity	kW	165.7	185.2	192.9	225.0	262.6	335.1
Water Flow	m3/h	16.2	18.1	20.1	21.9	25.5	32.6
Water Pressure Drop	kPa	180	150	174	182	196	210
External Static Pressure							
ESP1	Pa	160	160	160	210	210	210
Power Input for ESP1	kW	2.2	2.2	2.2	3	4	5.5
ESP2	Pa	220	220	220	270	270	270
Power Input for ESP1	kW	3	3	3	4	4	5.5
Net Weight	kg	317	342	384	437	445	503
Sound Level	dB(A)	64	64	65	66	67	68
Water Pipe Size	DN	65	65	65	65	65	65
Drainage Pipe Size	DN	25	25	25	25	25	25

Notes:

1. Nominal Testing condition:

Cooling: entering air temp 27°C DB/19.5°C WB; entering water temp 7°C, leaving water temp 12°C;

Heating: 1\*) entering air temp 21°C; 2\*) entering air temp 15°C; entering water temp 60°C, the same water flow as in cooling;

2. Sound pressure level are measured in acoustic room, position of the measure point is 1m in the front and 1m below the vertical center line of the unit;

## Correction Factors

### Cooling Capacity Correction Factors

EWT (C)	5	6	7	8	9	10	11	12
Correction Factor	1.15	1.07	1	0.92	0.85	0.77	0.7	0.62

Note: air side condition, entering DB 27C, WB 19.5C.

### Heating Capacity Correction Factors

EWT (C)	35	40	45	50	55	60	65	70
Correction Factor	0.36	0.49	0.62	0.74	0.87	1	1.13	1.26

Note: air side condition, entering DB 21C.

### Cooling Capacity Correction Factors Based on Different Ambient Conditions

WB (C) \ DB (C)	24	25	26	27	28	29	30
17	0.76						
18		0.85					
19			0.94				
19.5				1			
20					1.06		
21						1.15	
22							1.25

Note: entering cooling water temperature 7C.

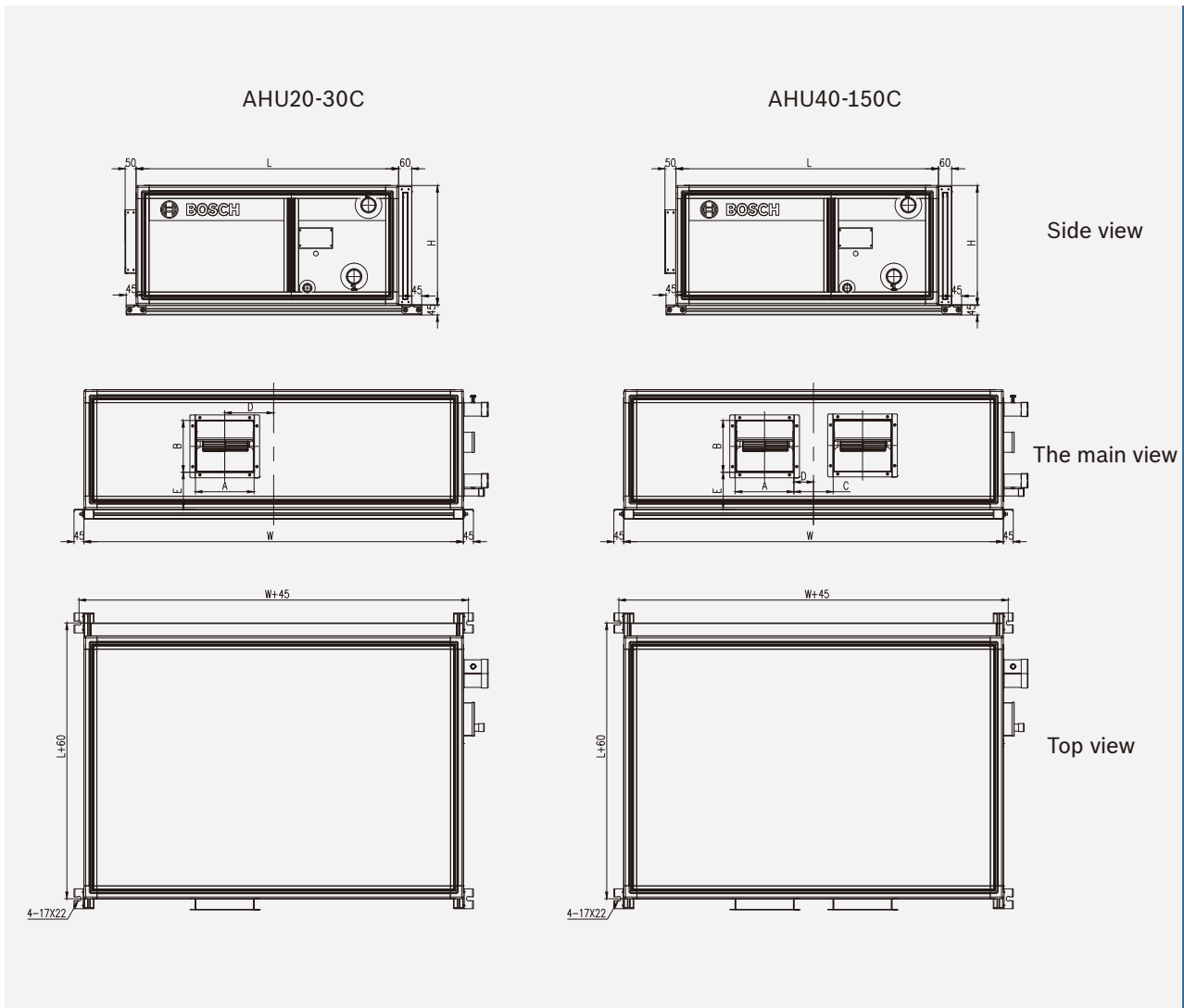
### Heating Capacity Correction Factors Based on Different Ambient Conditions

DB (C)	15	16	17	18	19	20	21	22	23	24
Correction Factor	1.19	1.149	1.125	1.1	1.07	1.02	1	0.97	0.94	0.9

Note: entering heating water temperature 60C.



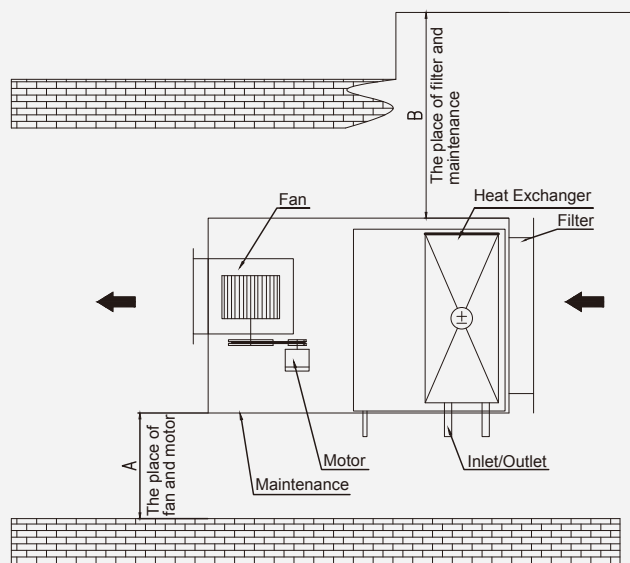
## Dimensions



Model	Units dimensions			Air outlet dimensions				
	L	W	H	A	B	C	D	E
AHU20C	1107	816	540	265	234	/	124	167
AHU25C	1107	964	540	265	234	/	138	167
AHU30C	1127	1112	540	293	256	/	0	167
AHU40C	1187	1420	540	265	234	178	189	167
AHU50C	1187	1716	540	265	234	178	89	167
AHU60C	1187	1820	592	293	256	208	104	169
AHU70C	1241	2081	592	304	268	238	119	167
AHU80C	1292	2116	647	337	295	258	129	167
AHU90C	1292	2347	647	337	295	258	129	167
AHU100C	1184	2434	679	337	295	258	129	167
AHU120C	1238	2457	775	401	342	318	159	167
AHU150C	1265	2528	903	401	342	318	159	167

# Installation

## Installation Space

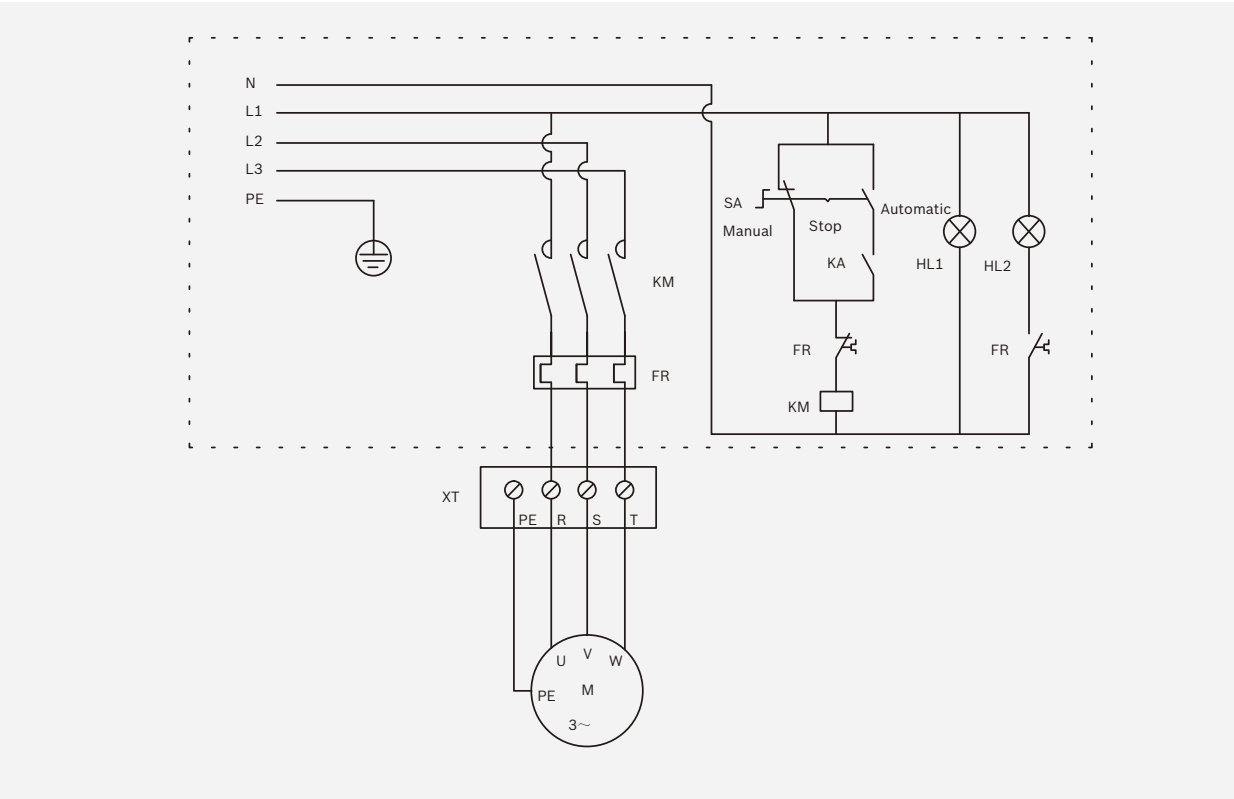


Model	Minimum A	Minimum B
AHU20C	635	816
AHU25C	635	964
AHU30C	659	1112
AHU40C	1086	1420
AHU50C	1111	1716
AHU60C	1236	1820
AHU70C	1286	2081
AHU80C	1377	2116
AHU90C	1377	2347
AHU100C	1396	2434
AHU120C	1632	2457
AHU150C	1702	2528

## Hoisting



# Wiring diagram



Code	Component	Code	Component
KA	Auto-control Switch	HL2	Failure Indicator
KM	AC Contactor	HL1	Power Indicator
XT	Wire Board	SA	Select Switch
M	Motor		



Bosch reserves the right to change any specification, design and information without any prior notice for further improvement on quality and performance. 201410A

