

Daikin Altherma HPC

Heat pump convectors
A fresh approach to comfort



FWXV-ABTV3(R)
FWXT-ABTV3(C)(L)(CL)
FWXM-ATV3(R)



reddot winner 2020

Heat pump convectors

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What is

a heat pump convector?

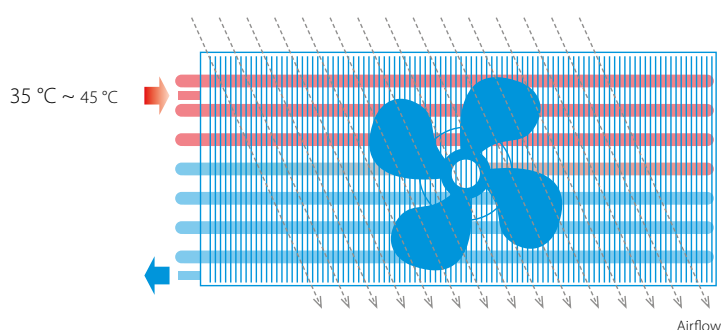
Daikin Altherma HPC provides both cooling and heating. The system is compatible with underfloor piping and radiators in a multi-zoning installation, or can replace radiators in combination with low temperature heat pumps. The unit is suited for use in bedrooms and living rooms thanks to its silent operation.

How does it work?

The way a heat pump convector works is similar to a radiator, as both use convection to heat a room. A radiator creates convection by running water through its pipes. With a heat pump convector, the convection process is faster because there is a small fan behind it, speeding up the heating cycle.

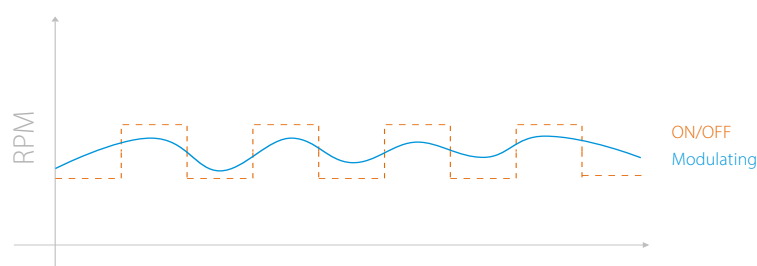
A heat pump convector creates the same room temperature as a traditional radiator, but with lower water temperatures inside the radiator, which in the long run contributes to direct energy savings for end users.

- › Optimized for newly built houses.
- › Can be set at low water temperature (35 °C) which makes it ideal for heat pump applications.



Modulated airflow

When there is less heating demand, the unit modulates its airflow to slow down the fan rate, and in the process, lowers the operational sound. A standard ON/OFF fan running simultaneously at full speed can increase sound pressure.



DC Inverter

Daikin Altherma HPC uses the latest technologies to consume less electricity down to 3W of standby power input.

Natural symbiosis

with heat pumps

By running on low temperature, Daikin Altherma heat pump convectors naturally fit with Daikin heat pumps. The heat pump convector range is made of 3 models:

- 1 Floor standing model with indoor air quality control (optional)
- 2 Wall mounted model with remote control
- 3 Concealed model hidden in the ceiling or wall



Daikin Altherma HPC Floor standing model



The floor standing heat pump convector impresses with its low sound operations, and its slim design that received the RedDot Award 2020. Next to heating and cooling, the unit can also provide indoor air quality control.

Why Indoor Air Quality Matters

Indoor Air Quality (IAQ) refers to the air quality in a building or structure, breathed in every day by the building's occupants.

When planning new residential buildings, schools, offices or light commercial buildings, many things must be considered. Besides structural factors, there are also the topics of heating, cooling and something often neglected: indoor air quality.

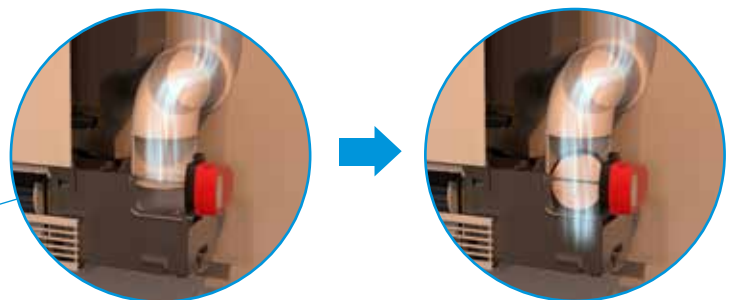
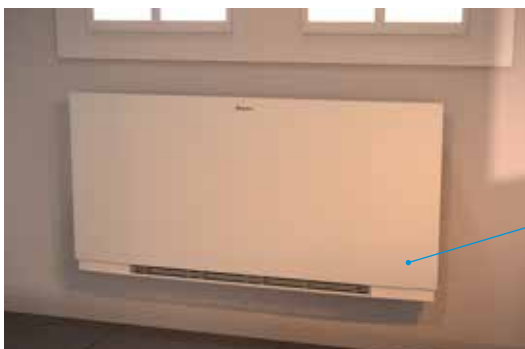
Did you know that the indoor air we breathe, whether at home, at the office, or in a hotel room could in fact be much more polluted than the air outside?

- › 90% of our lives is spent indoors
- › Indoor air quality can be 2 to 5 times worse than outdoor air quality because of pollutants, such as pollen, bacteria, etc.



How does Daikin Altherma HPC ensure a healthy and comfortable indoor air quality?

When a pollutant level of indoor air is reached, the IAQ sensor opens a damper, which allows fresh air to come in. The incoming fresh air is immediately heated or cooled (depending on the demand) by the heat pump convector. In this way the indoor air remains of good quality while comfort is ensured.

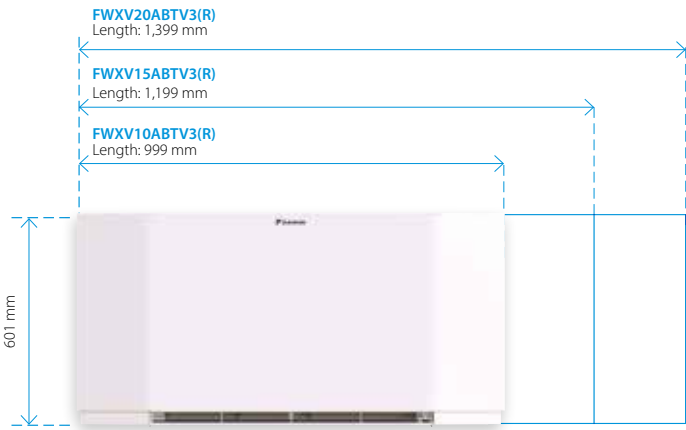




Slim design



The floor standing Daikin Altherma HPC has a depth of only 135 mm that fits any house or apartment. Its optimised design was rewarded with the Reddot Design Award 2020.



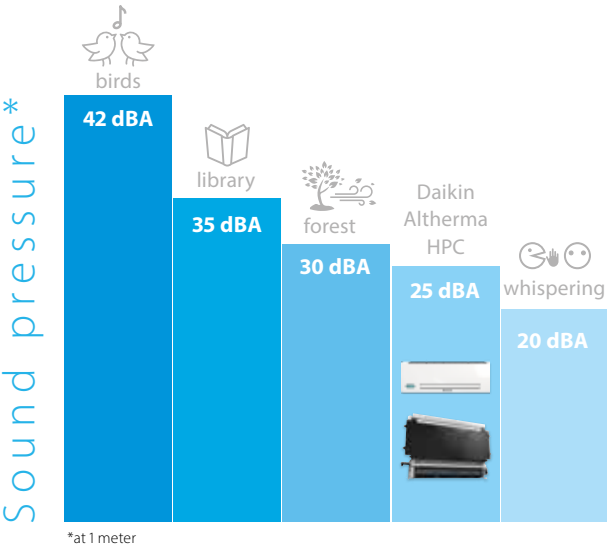
Fast and high capacity

The Daikin Altherma HPC combines the advantages of residential underfloor heating and radiators. It delivers high-capacity heating or cooling faster and can be set at ultra-low temperatures (35/30 °C regime).








Discreet

As the unit reaches its set point, a continuous modulating fan gradually reduces its speed and creates less noise. For the wall mounted and concealed units, the sound pressure measures 25dB(A) at 1m when the fan is on low-speed setting. Even lower sound pressure in super-silent mode (night mode).



Controls

Daikin offers a wide variety of controllers that are functional and have a great design.

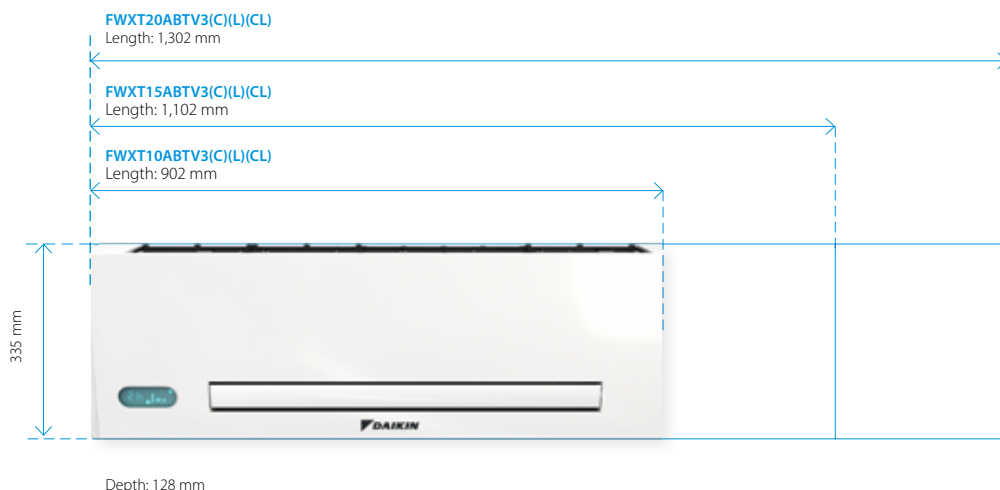
- EKRTCTRL1**

 - > Built-in controller
 - > Fully modulating
 - > Multicolor display
- EKRTCTRL2**

 - > Built-in controller
 - > 4 speed settings
- EKWHCTRL1**

 - > Wall controller
 - > Fully modulating
 - > In combination with EKWHCTRL0
- EKPCBO**

 - > Built-in controller
 - > ON/OFF
 - > In combination with external thermostats
- EKWHCTRL1A**

 - > Wall controller
 - > Fully modulating
 - > In combination with EKWHCTRL0
 - > Includes indoor air quality sensor



Thanks to its slim design, our wall-mounted unit blends in with your interior discreetly while helping you save valuable floor space.

Slim design

Daikin Altherma HPC is a compact unit made of a design metal casing including all valves.



Controls

Choice of:

- > Fully modulating controller allowing for remote control of the unit.
- > Infrared remote controller and on-board touch panel.

EKWHCTRL1



- > Wall controller
- > Fully modulating
- > For models FWXT-ABTV3(L)

Infrared remote controller



- > Remote
- > Fully modulating
- > For models FWXT-ABTV3C(L)

Compactness



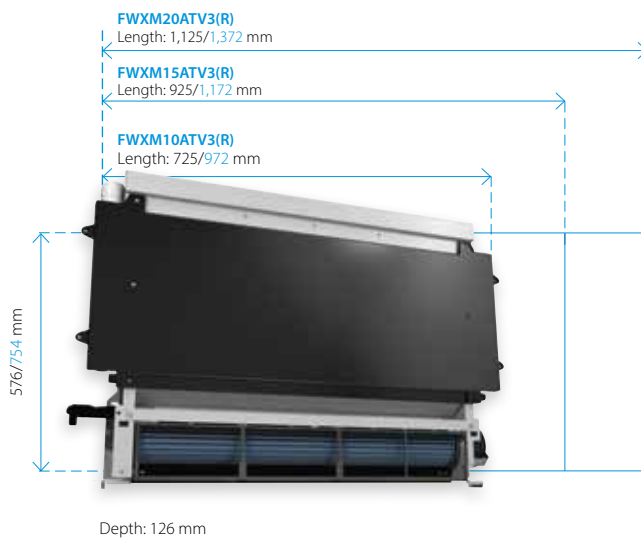
- 1 Slim depth**
The depth of 128 mm is an outstanding technical achievement that ensures a perfect fit in any home.
- 2 More space for valves**
Ease of installation: the space for hydraulic valves is wide and easily accessible.

- 3 Modulated airflow**
When there is less heating demand, the unit modulates its airflow to slow down the fan rate, and in the process, lowers the operational sound.



Forget about your heating or cooling installation altogether: our concealed model vanishes into the wall or ceiling for visual comfort while preserving its unique heating and cooling capabilities.

Slim design



Blue dimensions are for the front cover.

Controls

EKWHCTRL1



- > Wall controller
- > Fully modulating
- > In combination with EKWHCTRL0

Flexible installation

Daikin Altherma HPC can be installed in four different ways, allowing you to install it in almost all conditions. The unit can be positioned horizontally or vertically. For horizontal, in-ceiling installation, three different possibilities are offered:

- > Horizontal cover panel and vertical grille for air outlet
- > Horizontal intake grille and vertical grille for air outlet
- > Horizontal intake and outlet grilles



Heat pump convectors - FWXV-ABTV3(R)

Indoor unit				FWXV10ABTV3(R)	FWXV15ABTV3(R)	FWXV20ABTV3(R)
Cooling capacity at 7/12 °C	Min.		kW	0.78	1.10	1.13
	Med.		kW	1.11	1.65	1.98
	Max.		kW	1.62	2.64	2.99
Sensible cooling capacity at 7/12 °C	Min.		kW	0.58	0.82	0.85
	Med.		kW	0.71	1.15	1.55
	Max.		kW	1.25	1.91	2.33
Heating capacity at 45/40 °C	Min.		kW	0.87	1.12	1.11
	Med.		kW	1.27	1.83	2.32
	Max.		kW	1.96	2.86	3.50
Power input	Min.		W	6	7	8
	Med.		W	10	13	15
	Max.		W	19	25	31
Fan speed	Min.		RPM		720	
	Med.		RPM		1,220	
	Max.		RPM		1,700	
Casing	Colour	White, RAL 9003				
	Material	Metal sheet				
Dimensions	Unit	Height	mm	601		
		Width	mm	999	1,199	1,399
		Depth	mm	135		
	Packed unit	Height	mm	690		
		Width	mm	1,230	1,430	1,630
		Depth	mm	210		
Weight	Unit		kg	20	23	26
	Packed unit		kg	21	24	27
Packing	Material	Carton				
	Weight		kg	1		
Heat exchanger	Quantity	1				
	Internal coil volume		l	0.80	1.13	1.46
		Max Operating pressure		bar	10	
Water circuit	Piping connections diameter		inch	3/4" male		
	Piping material			Copper		
	Heating - Water pressure drop at 45/40 °C	Min.	kPa	7	9	8
		Med.	kPa	8	14	15
		Max.	kPa	11	23	22
	Cooling - Water pressure drop at 7/12 °C	Min.	kPa	7	9	8
		Med.	kPa	8	14	15
		Max.	kPa	11	23	22
	Heating - Water flow rate at 45/40 °C	Min.	kg/h	150	193	191
		Med.	kg/h	218	315	399
		Max.	kg/h	337	492	602
	Cooling - Water flow rate at 7/12 °C	Min.	kg/h	134	189	194
		Med.	kg/h	191	284	341
		Max.	kg/h	279	454	514
	Pressure	Heating/Max.	bar	10		
Sound power level	Min.		dB(A)	40	42	43
	Med.		dB(A)	47	49	50
	Max.		dB(A)	56	57	58
Operation range	Heating	Water side	Min.	°C	30	
			Max.	°C	85	
	Cooling	Water side	Min.	°C	5	
			Max.	°C	18	
	Indoor installation	Ambient	Min.	°CDB	0	
			Max.	°CDB	45	
Control systems	Infrared remote control	no				
	On-board control	yes				
Electrical specifications				FWXV10ABTV3(R)	FWXV15ABTV3(R)	FWXV20ABTV3(R)
Power supply	Phase	1				
	Frequency		Hz	50		
	Voltage		V	230		
Electrical power consumption	Max.		W	19	25	31
	Standby		W	3	4	5
Current	Maximum running current		A	0.15	0.21	0.27

Heat pump convectors - FWXT-ABTV3(C)(L)(CL)

Indoor unit				FWXT10ABTV3(C)(L)(CL)	FWXT15ABTV3(C)(L)(CL)	FWXT20ABTV3(C)(L)(CL)
Cooling capacity at 7/12 °C	Min.		kW	0.49	0.62	0.70
	Med.		kW	0.88	1.08	1.21
	Max.		kW	1.24	1.61	1.94
Sensible cooling capacity at 7/12 °C	Min.		kW	0.37	0.52	0.57
	Med.		kW	0.70	0.86	1.02
	Max.		kW	0.98	1.27	1.52
Heating capacity at 45/40 °C	Min.		kW	0.55	0.79	0.74
	Med.		kW	1	1.36	1.55
	Max.		kW	1.50	2.01	2.13
Power input	Min.		W		5	
	Mid.		W	8	9	10
	Max.		W	19	20	29
Fan speed	Min.		RPM		680	
	Med.		RPM		1,100	
	Max.		RPM		1,500	
Casing	Colour			White, RAL 9003		
	Material			Metal sheet		
Dimensions	Unit	Height	mm		335	
		Width	mm	902	1,102	1,302
		Depth	mm		128	
	Packed unit	Height	mm		490	
		Width	mm	1,030	1,230	1,430
		Depth	mm		210	
Weight	Unit		kg	14	16	19
	Packed unit		kg	15	17	20
Packing	Material			Carton		
	Weight		kg		1	
Heat exchanger	Quantity				1	
	Internal coil volume		l	0.50	0.61	0.77
		Max Operating pressure		bar		10
Water circuit	Piping connections diameter		inch	3/4" male		
	Piping material			Copper		
	Heating - Water pressure drop at 45/40 °C	Min.	kPa	5.10	4.81	6
		Med.	kPa	12	6.30	6.40
		Max.	kPa	16.30	7.20	8.10
	Cooling - Water pressure drop at 7/12 °C	Min.	kPa	4.80	4.70	5.50
		Med.	kPa	10.50	5.60	5.40
		Max.	kPa	11.70	5.10	5.30
	Heating - Water flow rate at 45/40 °C	Min.	kg/h	100	140	150
		Med.	kg/h	170	240	300
		Max.	kg/h	260	350	420
	Cooling - Water flow rate at 7/12 °C	Min.	kg/h	80	110	120
		Med.	kg/h	150	190	210
		Max.	kg/h	210	280	330
	Pressure	Heating/Max.	bar		10	
Sound power level	Min.		dBA	35	36	37
	Med.		dBA	46	47	48
	Max.		dBA	53	54	55
Operation range	Heating	Water side	Min.	°C	30	
			Max.	°C	85	
	Cooling	Water side	Min.	°C	5	
			Max.	°C	18	
	Indoor installation	Ambient	Min.	°CDB	0	
			Max.	°CDB	45	
Control systems	Infrared remote control			yes for -C models		
	On-board control			yes		
Electrical specifications				FWXT10ABTV3(C)(L)(CL)	FWXT15ABTV3(C)(L)(CL)	FWXT20ABTV3(C)(L)(CL)
Power supply	Phase			1		
	Frequency		Hz	50		
	Voltage		V	230		
Electrical power consumption	Max.		W	19	20	29
	Standby		W	3	4	5
Current	Maximum running current		A	0.16	0.18	0.24

Heat pump convectors - FWXM-ATV3(R)

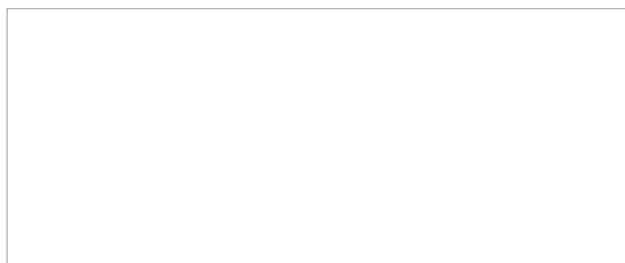
Indoor unit				FWXM10ATV3(R)	FWXM15ATV3(R)	FWXM20ATV3(R)	
Cooling capacity at 7/12 °C	Min.		kW	0.75	1.15	1.32	
	Med.		kW	1.36	2.08	2.39	
	Max.		kW	2.12	2.81	3.30	
Sensible cooling capacity at 7/12 °C	Min.		kW	0.59	0.83	1.02	
	Med.		kW	1.07	1.51	1.84	
	Max.		kW	1.72	2.11	2.71	
Heating capacity at 45/40 °C	Min.		kW	0.82	1.20	1.47	
	Med.		kW	1.53	2.16	2.59	
	Max.		kW	2.21	3.02	3.81	
Power input	Min.		W	4	6	5	
	Med.		W	8	11	11	
	Max.		W	19	20	29	
Fan speed	Min.		RPM	680			
	Med.		RPM	1,100			
	Max.		RPM	1,500			
Casing	Material			No casing			
Dimensions	Unit	Height	mm	576			
		Width	mm	725	925	1,125	
		Depth	mm	126			
	Packed unit	Height	mm	690			
		Width	mm	830	1,030	1,230	
		Depth	mm	210			
Weight	Unit		kg	12	15	18	
	Packed unit		kg	13	16	19	
Packing	Material			Carton			
	Weight			kg			
Heat exchanger	Quantity			1	1	1	
	Internal coil volume			l	0.80	1.13	1.46
	Max Operating pressure			bar	10		
Water circuit	Piping connections diameter			inch			
	Piping material			3/4" male Copper			
	Heating - Water pressure drop at 45/40 °C	Min.		kPa	1.50	2.70	3
		Med.		kPa	4.30	9.30	8.90
		Max.		kPa	1.90	19.10	21.20
	Cooling - Water pressure drop at 7/12 °C	Min.		kPa	1.90	2.70	2.50
		Med.		kPa	4.30	9.90	8.80
		Max.		kPa	8.20	17.10	18
	Heating - Water flow rate at 45/40 °C	Min.		kg/h	141	206	253
		Med.		kg/h	263	372	445
		Max.		kg/h	380	519	655
	Cooling - Water flow rate at 7/12 °C	Min.		kg/h	129	198	227
Med.			kg/h	234	358	411	
Max.			kg/h	365	483	568	
Pressure		Heating/Max.	bar	10			
Sound power level	Min.			dBA	35	36	36
	Med.			dBA	45	46	47
	Max.			dBA	53	54	55
Operation range	Heating	Water side	Min.	°C	30		
			Max.	°C	85		
	Cooling	Water side	Min.	°C	5		
			Max.	°C	18		
	Indoor installation	Ambient	Min.	°CDB	0		
			Max.	°CDB	45		
Control systems	Infrared remote control			no			
	On-board control			no			
Electrical specifications				FWXM10ATV3(R)	FWXM15ATV3(R)	FWXM20ATV3(R)	
Power supply	Phase			1			
	Frequency			Hz			
	Voltage			V			
Electrical power consumption	Max.			W	19	20	29
	Standby			W	3	4	5
Current	Maximum running current			A	0.16	0.18	0.26

FWXV10ABTV3(R)	FWXT10ABTV3(C)(L)(CL)	FWXM10ATV3(R)	FWXM15ATV3(R)	FWXM20ATV3(R)
FWXV15ABTV3(R)	FWXT15ABTV3(C)(L)(CL)			
FWXV20ABTV3(R)	FWXT20ABTV3(C)(L)(CL)			

Description	Picture	Material name				
On-board electronic control SMART TOUCH with PID full modulating fan and thermostat		EKRTCTRL1	●			
On-board electronic control SMART TOUCH 4 speeds with thermostat		EKRTCTRL2	●			
On-board 4 speeds control switch to be combined with Daikin compatible thermostats		EKPCB0	●		●	●
On board 4 speeds control box to be combine with 4 speed thermostats		EKPCB4S	●		●	●
On board 1-10V control box to be combine with 1-10V thermostats		EKPCB10	●		●	●
On-board controller for EKWHCTRL1		EKWHCTRL0	●		●	●
SMART LCD wall controller with temperature probe, white casing		EKWHCTRL1	●	● (excl. FWXT-ABTV3(C)/CL)	●	●
SMART LCD wall controller with temperature probe, white casing, including indoor air quality sensor		EKWHCTRL1A	●			
IR remote control				Standard (only FWXT-ABTV3(C)/CL)		
Fresh air damper kit		EKFCD80	●			
Aesthetical feet		EKFA	●			
Motorised 2-way valve (FWXV/M)		EK2VK0	●		●	●
Motorised 2-way valve (FWXT)		EKT2VK0		●		
Motorised 3-way valve (FWXV/M)		EK3VK1	●		●	●
Motorised 3-way valve (FWXT)		EKT3VK1		●		
L-bow 90 °C		EKEUR90	●		●	●
Extension piece		EKDIST	●		●	●
Condensate collector tray for horizontal installation		EKM10COH	●			
		EKM15COH	●			
		EKM20COH	●			
Metal casing		EKM10CS			●	
		EKM15CS				●
		EKM20CS				
Front cover for ceiling installation		EKM10CH			●	
		EKM15CH				●
		EKM20CH				
Front cover for wall installation		EKM10CV			●	
		EKM15CV				●
		EKM20CV				
Air intake fitting		EKM10DH			●	
		EKM15DH				●
		EKM20DH				
90 °C exhaust bend (Horizontal)		EKM10D90			●	
		EKM15D90				●
		EKM20D90				
Telescopic air flow duct		EKM10DT			●	
		EKM15DT				●
		EKM20DT				
Aluminum air intake grille with straight airflow		EKM10IS			●	
		EKM15IS				●
		EKM20IS				
Straight airflow vent		EKM10SV			●	
		EKM15SV				●
		EKM20SV				
Aluminum air intake grille with curved airflow		EKM10IC			●	
		EKM15IC				●
		EKM20IC				
Aluminum air outlet grille with curved airflow		EKM10CA			●	
		EKM15CA				●
		EKM20CA				



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