DAIKIN

altherma

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 Daikin Altherma HPC

What is

a heat pump convector?

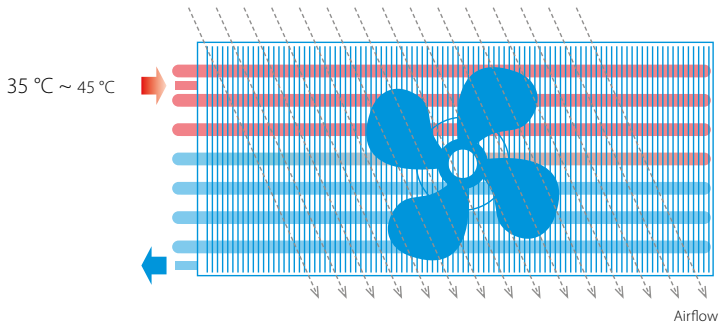
Daikin Altherma HPC provides both cooling and heating. The system is compatible with underfloor piping and radiators in a multi-zoning installation, or can replace radiators in combination with low temperature heat pumps. The unit is suited for use in bedrooms and living rooms thanks to its silent operation.

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.

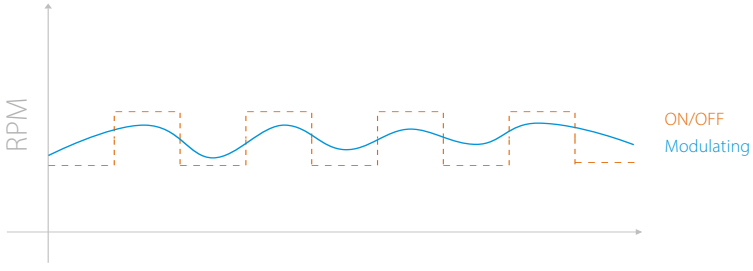
A heat pump convector creates the same room temperature as a traditional radiator, but with lower water temperatures inside the radiator, which in the long run contributes to direct energy savings for end users.

- 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.

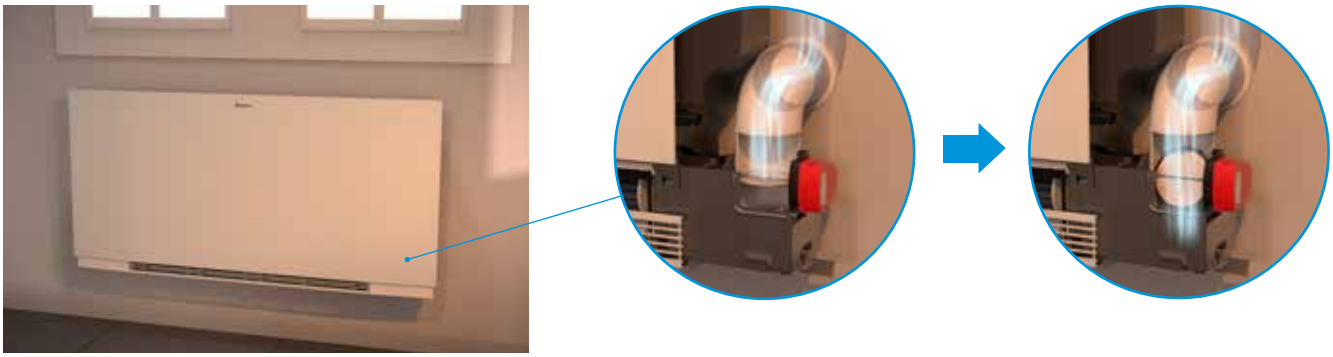
When planning new residential buildings, schools, offices or light commercial buildings, many things must be considered. Besides structural factors, there are also the topics of heating, cooling and something often neglected: indoor air quality.

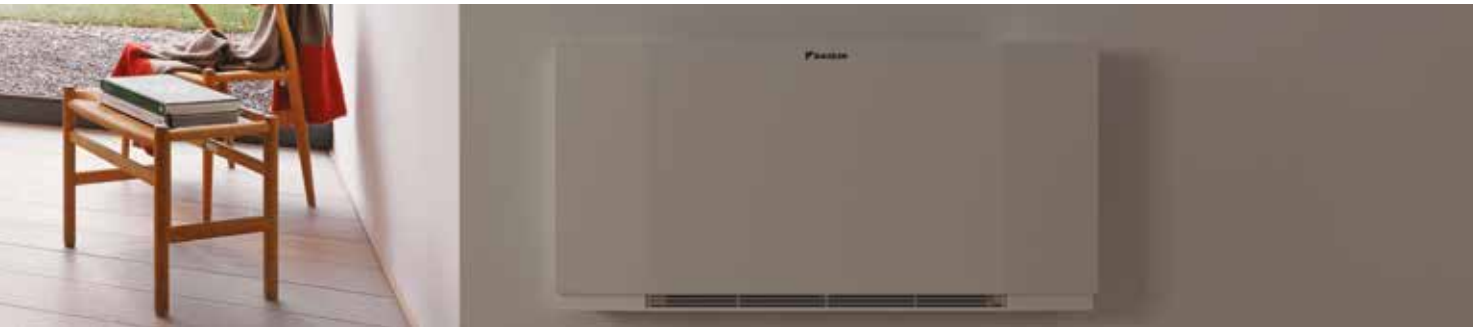
Did you know that the indoor air we breathe, whether at home, at the office, or in a hotel room could in fact be much more polluted than the air outside?

› 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.

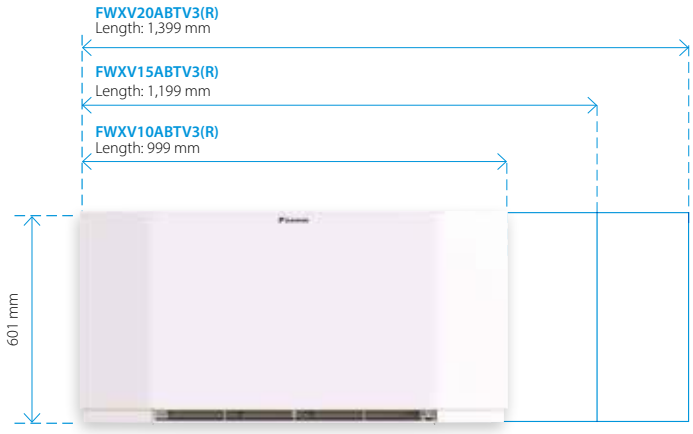




Slim design

reddot winner 2020

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.

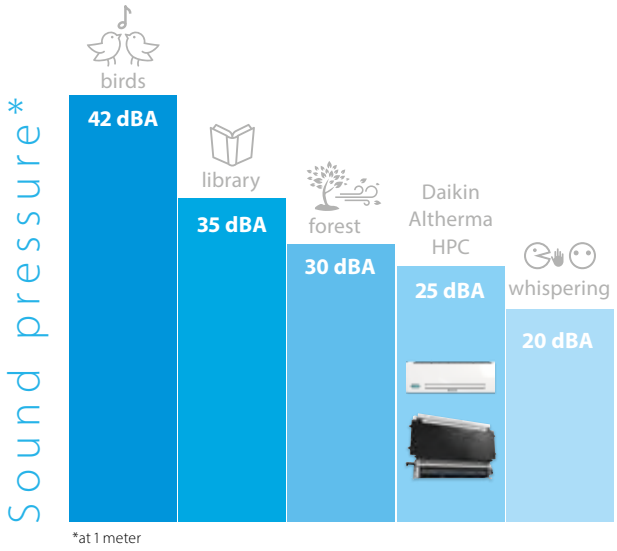


Fast and high capacity

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).



*at 1 meter

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

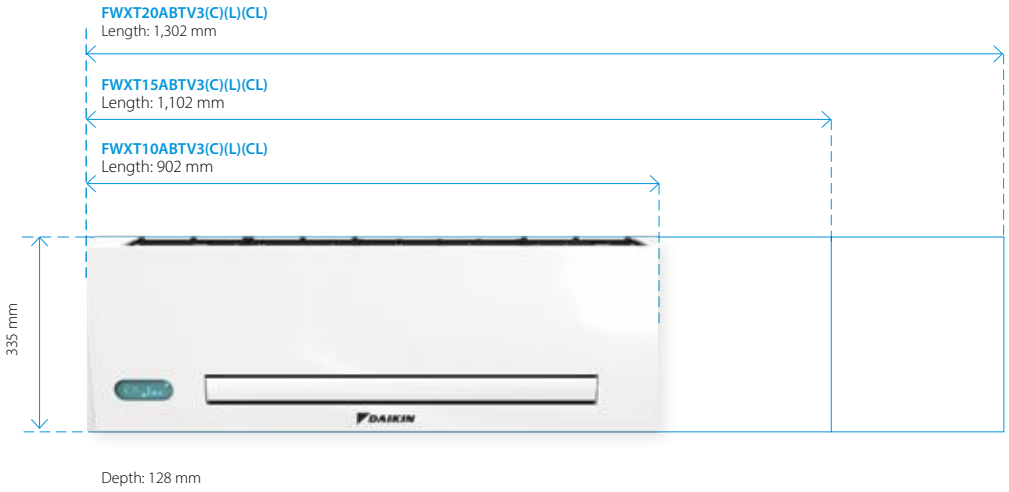
- Wall controller
- Fully modulating
- In combination with EKWHCTRL0
- Includes indoor air quality sensor

Wall-mounted model

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.

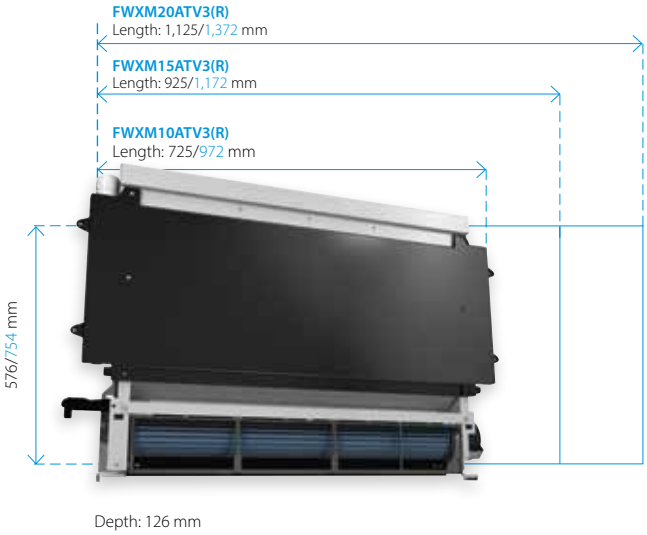
2 More space for valves
Ease of installation: the space for hydraulic valves is wide and easily accessible.

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.

Concealed model

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:

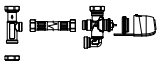
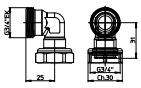
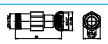
- Horizontal cover panel and vertical grille for air outlet
- Horizontal intake grille and vertical grille for air outlet
- Horizontal intake and outlet grilles

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.			dBA	40	42	43
	Med.			dBA	47	49	50
	Max.			dBA	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

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

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		1	
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		3/4" male	
	Piping material					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		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	0.26

						
		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 compatibe thermostats		EKPCBO	●		●	●	●
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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