PRODUCT LINEUP: VRF

VENTILATION

For LIGHT COMMERCIAL & RESIDENTIAL, COMMERCIAL

Effective heat exchange and simultaneous fresh air ventilation

High Efficiency and low noise levels are achieved by using a highly efficient heat exchange process. A comfortable air conditioned space is achieved by conveniently selecting whether to use heat exchange or normal ventilation setting, according to the requirements of the conditioned space.

AIRSTAGE™

LINEUP

Airflow rate (m^3/h)	250	350	500	800	1000
Energy Recovery Ventilator Page 182	 UTZ-BD025C	 UTZ-BD035C	 UTZ-BD050C	 UTZ-BD080C	 UTZ-BD100C

Connectable Capacity class (kW)	5.0	6.3	8.0	10.0	12.5	14.0	20.0	25.0	40.0	50.0
DX-Kit for air handling applications Page 184	 EEV unit UTP-VX30A	 Control unit UTY-VDGX	 EEV unit UTP-VX60A	 Control unit UTY-VDGX	 EEV unit UTP-VX90A	 Control unit UTY-VDGX	 EEV unit UTP-VX90A × 2	 Control unit UTY-VDGX		

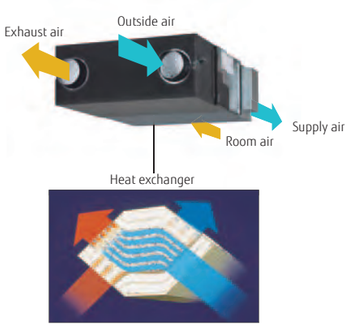
Energy Recovery Ventilator

Energy recovery ventilator unit offers maximum comfort and greater energy savings.

Heat exchange ventilation and normal ventilation

Heat exchange ventilation
When a room is cooled or heated, the exhausted cooling / heating energy is recovered by heat-exchange ventilation.

Normal ventilation
The operation is used during periods when the room space requires no cooling or heating effect, i.e. when there is minimal temperature difference between the indoor and outdoor environments.



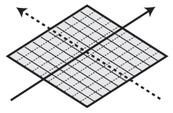
Energy efficiency and ecology

Energy consumption is dramatically reduced by using a counter-flow heat-exchange element. Air conditioning load is reduced by approximately 20%, resulting in significant energy savings. Recovers up to 77% of the heat in the outgoing air.

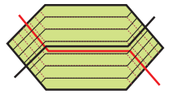
Adopts a highly efficient counter-flow heat exchange element

Features of heat exchange element

With the cross-flow element, air moves in a straight line across the element. With the counter-flow element, air flows through the element for a longer time (longer distance), so the heat-exchange effect remains unchanged.



Other element
(Cross-flow element)



Fujitsu element
(Counter-flow element)

Quiet operation

Significantly reducing low pressure loss and noise allows low-noise operation.

25.5dB
(UTZ-BD035C)

Extended range of an external static pressure

An external static pressure is improved by adopting a powerful fan motor. This allows for application in a wide variety building.

Slim shape and easier installation

Counter-flow heat exchange element used for reduced noise and slimmer, more compact body shape.

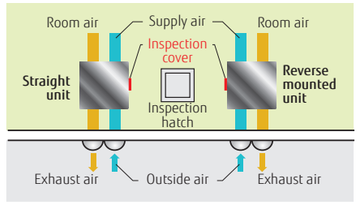
Height 270 mm
UTZ-BD025C

Height 388 mm
UTZ-BD080C/BD100C

Height 317 mm
UTZ-BD035C/BD050C

Reverse mountable direct air supply / exhaust system

Adoption of straight air supply / exhaust system: Duct design is simplified because the air supply / exhaust ducts are straight.
Since each unit can be mounted in reverse position, only one inspection hole is needed for two units: Two units can share one inspection hole so duct work is easier and more flexible.



Simple remote operation

Easy operation by connecting a liquid crystal switch

- POWER ON/OFF
- ON/OFF Timer
- Air volume High/Low
- Clean filter display
- Heat exchange/Normal Ventilation

Model : UTZ-BD025C / UTZ-BD035C / UTZ-BD050C / UTZ-BD080C / UTZ-BD100C

UTZ-BD025C

UTZ-BD035C

UTZ-BD050C

UTZ-BD080C

UTZ-BD100C

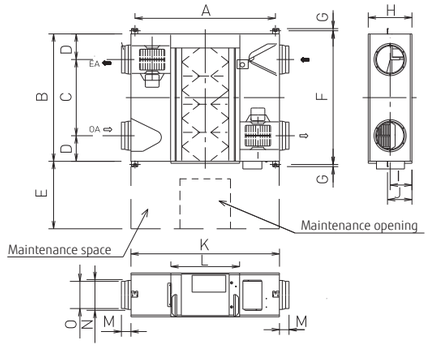
Specifications

Rated flow rate				250 m³/h	350 m³/h	500 m³/h	800 m³/h	1000 m³/h
Model No.				UTZ-BD025C	UTZ-BD035C	UTZ-BD050C	UTZ-BD080C	UTZ-BD100C
Power source				220 - 240 V, 50Hz				
Heat Exchange Ventilation	Input power	(Extra high)/High/Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311
	Air flow rate	(Extra high)/High/Low	m³/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700
	External static pressure	(Extra high)/High/Low	Pa	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75
	Temperature Exchange Efficiency	(Extra high)/High/Low	%	75 / 75 / 77	75 / 75 / 78	75 / 75 / 76	75 / 75 / 76	75 / 75 / 79
	Energy Exchange Efficiency Cooling	(Extra high)/High/Low	%	63 / 63 / 65	66 / 66 / 71	62 / 62 / 64	65 / 65 / 68	65 / 65 / 70
	Energy Exchange Efficiency Heat pump	(Extra high)/High/Low	%	70 / 70 / 72	69 / 69 / 73	67 / 67 / 69	71 / 71 / 74	71 / 71 / 76
	Sound pressure level	(Extra high)/High/Low	dB*	31.5 / 30.5 / 26.5	33.0/31.0 / 25.5	37.5 / 35.5 / 32.5	37.5 / 37.0 / 34.5	38.5 / 37.5 / 34.5
Normal Ventilation	Input power	(Extra high)/High/Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311
	Air flow rate	(Extra high)/High/Low	m³/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700
	External static pressure	(Extra high)/High/Low	Pa	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75
	Sound pressure level	(Extra high)/High/Low	dB*	31.5 / 30.5 / 26.5	33.0 / 31.0 / 25.5	38.5 / 38.0 / 32.5	37.5 / 37.0 / 34.5	40.5 / 39.5 / 36.5
Dimensions		W×D×H	mm	882 × 599 × 270	1050 × 804 × 317	1090 × 904 × 317	1322 × 884 × 388	1322 × 1134 × 388
Weight			kg	29	49	57	71	83
Outlet duct diameter			mm	150	150	200	250	250
Operation range			℃	-10 to 40	-10 to 40	-10 to 40	-10 to 40	-10 to 40
Maximum humidity			%	85	85	85	85	85

* The noise level must be measured 1.5 m below the centre of the unit.

Dimensions

(Unit : mm)

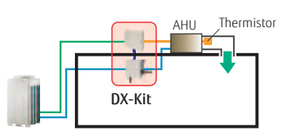


	UTZ-BD025C	UTZ-BD035C	UTZ-BD050C	UTZ-BD080C	UTZ-BD100B
A	810	978	1018	1250	1250
B	599	804	904	884	1134
C	315	580	640	428	678
D	142	112	132	228	228
E	600	600	600	600	600
F	655	860	960	940	1190
G	19	19	19	19	19
H	270	317	317	388	388
I	135	159	159	194	194
J	159	182	182	218	218
K	882	1050	1090	1322	1322
L	414	470	470	612	612
M	95	70	70	85	85
N	Ø164	Ø164	Ø210	Ø258	Ø258
O	Ø144	Ø144	Ø194	Ø242	Ø242

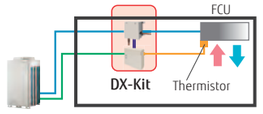
DX-Kit
for Air Handling Applications

These kits enable other manufacturers air handling units (AHU) and fan coil units (FCU) to be incorporated into a Fujitsu VRF system or, be connected to a dedicated Fujitsu VRF outdoor unit as a 1:1 system to control outside air ventilation (AHU) or room temperature (FCU).

Multiple temperature sensors optimally control the air handling unit and fan coil unit.

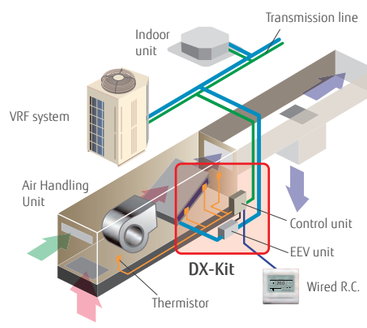


When connecting to an air handling unit, the supply air temperature is controlled by the discharge sensor.



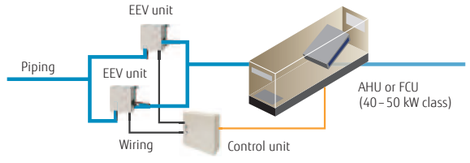
When connecting to a fan coil unit, the room temperature is controlled by the return air temperature sensor.

Arrangement as part of a VRF system



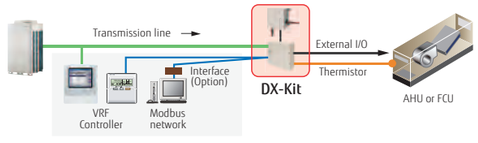
Supports a wide range of capacity classes

- 2 EEV units can be connected in parallel and up to 20 HP (50 kW) large capacity units. (Separation Tube of UTP-LX180A is required.)
- Connectable capacity range: 5 kW to 50 kW

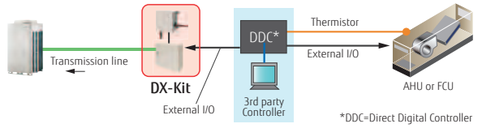


A variety of controls to match the application

Central control using our VRF controllers or central management controllers



Central control from external controllers



*DDC=Direct Digital Controller

Functions Summary

Inputs
- ON/OFF
- Setting temperature
- Capacity demand
- Heating / Cooling operation mode
- Fault information

Outputs
- ON/OFF indication
- Fan ON/OFF indication
- Thermo ON/OFF indication
- Defrost indication
- Fault indication

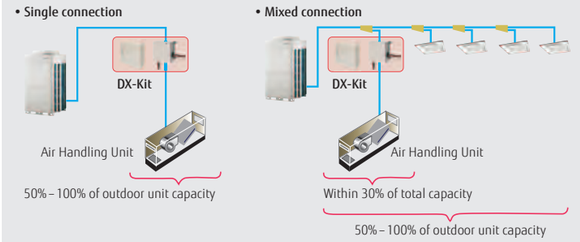
MODBUS® Control
Possible to control via a MODBUS enabled BMS by using optional interface.

For 2 EEV units connection (option)
Separation Tube: UTP-LX180A

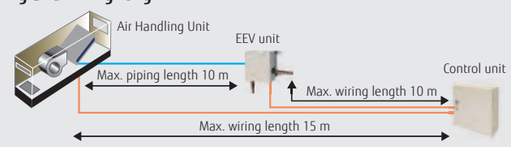
Installation Limitation

- Connectable VRF series: All VRF series
- Connectable DX-Kit system capacity range: 50 to 100% of the outdoor unit capacity
- Connectable DX-Kit system capacity range with indoor units: 30% or less of the outdoor unit capacity
- Max. wiring length from control unit: 10 m
- Max. piping length between EEV unit and indoor unit: 5 m
- Outdoor installation: Control unit (IP54 class) and EEV unit can be installed at an outdoor space.

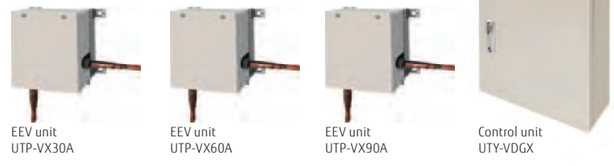
Connectable capacity



Piping and wiring length



Control unit: UTY-VDGX
EEV unit: UTP-VX30A / UTP-VX60A / UTP-VX90A



Specifications

Connectable Capacity class			5.0 kW	6.3 kW	8.0 kW	10.0 kW	12.5 kW	14.0 kW	20.0 kW	25.0 kW	40.0 kW	50.0 kW
Capacity	Cooling	kW	5.6	6.3	8.0	10.0	12.5	14.0	22.4	25.0	40.0	50.4
	Heating		6.3	7.1	9.0	11.2	14.0	16.0	25.0	28.0	45.0	56.5

Control unit		UTY-VDGX
Power source	V/Ø/Hz	230/1/50
Dimensions (H × W × D)	mm	400 × 400 × 120

EEV unit		UTP-VX30A	UTP-VX60A	UTP-VX90A	UTP-VX90A×2
Connection pipe diameter (Liquid)	mm	Ø9.53	Ø12.7	Ø12.7	Ø12.7
Dimensions (H × W × D)		160 × 220 × 90			

Note: Specifications are based on the following conditions.
Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length: 7.5 m Voltage : 230 [V].