

Ceiling Cassette Type (900x900) With Brushless DC Motor



FWKE-E



Wireless Remote Controller BRC52A



Wired Remote Controller BRC51A

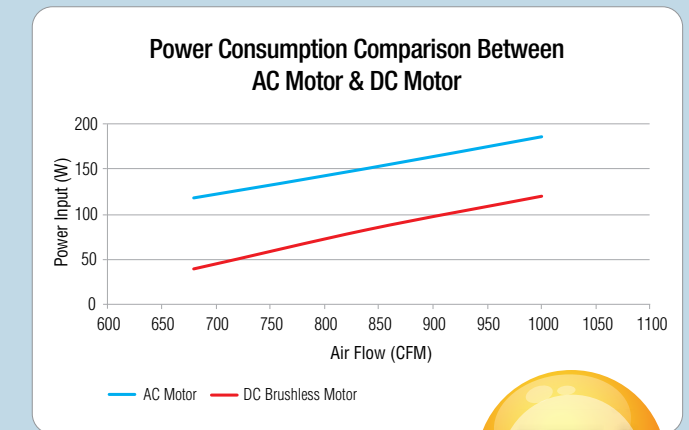
- › Comfortable
- › Energy Saving
- › Low Noise
- › Low Maintenance & No Brush Sparking
- › 4 Pipe System Available*
- › Modulating Fan Speed Control
- › Optimum Air Discharge
- › Multi Comfort - 3 Air Swing Pattern Control
- › Branch Duct Connection
- › Low Height Design
- › Built In High Head Drain Pump & Water Flow Switch
- › Superior Sound Level
- › Fresh Air Intake
- › Low Water Pressure Drop
- › Sleep Function For Cool And Heat Mode
- › Choices Of Wired Or Withless Remote Controller



Energy Saving

Compared to the traditional AC motor, DC motor offers the advantages of lower power input, higher efficiency and hence more energy saving.

- Brushless DC motor has less internal resistance and better heat dissipation in the stator coils. As a result, it has higher operating efficiencies since heat can more efficiently dissipate via the stationary motor housing.
- With the green building and development being so welcomed now, this Ceiling Cassette type with Brushless DC motor gives you another excellent option to consider.



Energy Saving Maximum

67%

Recommended Applications

Ceiling Cassette type fan coil with Brushless DC motor provides a green and pleasant environment.



Office



Home



Restaurant

Low Noise

Due to no brushes or a mechanical commutator, it has less shaft friction or inertia and hence less audible noise as low as 16 dBA.



Low Maintenance & No Brush Sparking

Brushless DC motor does not use carbon brushes or a mechanical commutator, thus, it is low maintenance and non-sparking.

4 Pipe System Available*

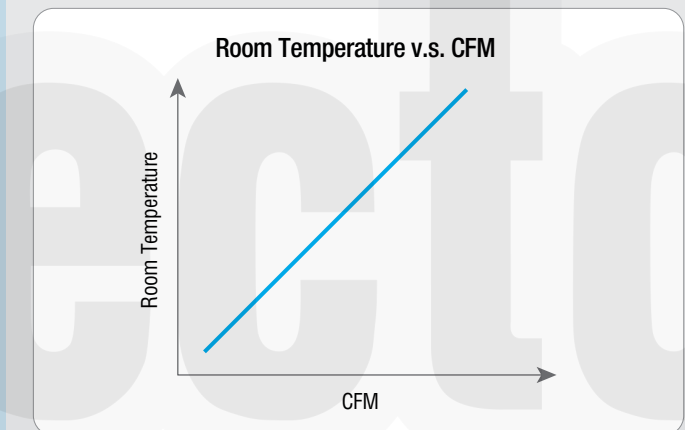
4 pipe system allows a distribution system that contains both hot water supply with return lines and a chilled water supply with return lines.

* FWKE-EH model

Modulating Fan Speed Control

Fan speed modulates steplessly based on room temperature to reduce the difference between room temperature and set temperature and hence provides maximum comfort and reduces energy consumption.

* Available in auto fan mode



Specification for Ceiling Cassette Type ~ 50Hz (2 Pipe System)

| MODEL | FWKE05E | | | | FWKE08E | | | | FWKE11E | | | | | |
|---|--------------------------|--|----------|-------|---------|--------|--------|-------------------------------------|---------|--------|--------|-------|-------|--|
| | QUIET | LOW | MEDIUM | HIGH | QUIET | LOW | MEDIUM | HIGH | QUIET | LOW | MEDIUM | HIGH | | |
| NOMINAL COOLING CAPACITY | Btu/h | 8200 | 11900 | 15900 | 20100 | 15200 | 19800 | 24700 | 30000 | 21000 | 26800 | 33100 | 40100 | |
| | W | 2400 | 3500 | 4650 | 5900 | 4550 | 5800 | 7250 | 8800 | 6150 | 7850 | 9700 | 11750 | |
| NOMINAL SENSIBLE COOLING CAPACITY | Btu/h | 5800 | 8700 | 11700 | 15400 | 11000 | 14500 | 18500 | 21900 | 14600 | 18900 | 23800 | 28600 | |
| | W | 1710 | 2540 | 3440 | 4510 | 3220 | 4260 | 5410 | 6430 | 4270 | 5540 | 6970 | 8370 | |
| NOMINAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C) | Btu/h | 11300 | 15200 | 19800 | 24200 | 18400 | 23900 | 30400 | 38200 | 24100 | 31600 | 39100 | 46700 | |
| | W | 3300 | 4450 | 5800 | 7100 | 5400 | 7000 | 8900 | 11200 | 7050 | 9250 | 11450 | 13700 | |
| FAN INPUT POWER | W | 7 | 12 | 19 | 37 | 17 | 26 | 50 | 90 | 23 | 39 | 83 | 120 | |
| NOMINAL RUNNING CURRENT | A | 0.11 | 0.13 | 0.19 | 0.26 | 0.19 | 0.28 | 0.43 | 0.74 | 0.21 | 0.35 | 0.55 | 0.95 | |
| POWER SOURCE | V/Ph/Hz | 220-240 / 1 / 50 | | | | | | | | | | | | |
| REFRIGERANT TYPE | | N/A | | | | | | | | | | | | |
| CONTROL OPERATION | AIR DISCHARGE | 4 WAY AUTOMATIC LOUVER (UP & DOWN) | | | | | | | | | | | | |
| | OPERATION | LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL | | | | | | | | | | | | |
| AIR FLOW | CFM | 220 | 350 | 470 | 620 | 420 | 560 | 720 | 890 | 510 | 680 | 870 | 1060 | |
| EXTERNAL STATIC PRESSURE (H/M/L) | Pa | N/A | | | | | | | | | | | | |
| NOMINAL WATER FLOW RATE | USGPM | 1.84 | 2.68 | 3.56 | 4.52 | 3.41 | 4.44 | 5.55 | 6.74 | 4.71 | 6.01 | 7.43 | 9.00 | |
| | Litres/min | 6.96 | 10.15 | 13.48 | 17.10 | 12.90 | 16.81 | 21.02 | 25.51 | 17.83 | 22.76 | 28.12 | 34.06 | |
| HEAD LOSS (COOLING) | kPa | 5 | 10 | 15 | 24 | 7 | 9 | 14 | 20 | 15 | 22 | 30 | 41 | |
| HEAD LOSS (HEATING) : 50°C | kPa | 4 | 8 | 13 | 21 | 5 | 8 | 12 | 18 | 12 | 20 | 26 | 37 | |
| MAX. WORKING PRESSURE | kPa | 1608 | | | | | | | | | | | | |
| SURFACE AIR VELOCITY | m/s | 0.27 | 0.42 | 0.60 | 0.64 | 0.43 | 0.55 | 0.68 | 0.81 | 0.45 | 0.57 | 0.71 | 0.83 | |
| SOUND PRESSURE LEVEL | dBA | 16 | 23 | 31 | 37 | 31 | 37 | 42 | 47 | 34 | 41 | 46 | 51 | |
| UNIT DIMENSION - () WITH PANEL H X W X D | mm | 265 X 820 X 820 (340 X 990 X 990) | | | | | | 300 X 820 X 820 (375 X 990 X 990) | | | | | | |
| PACKING DIMENSION - () PANEL H X W X D | mm | 341 X 916 X 916 (125 X 1020 X 1020) | | | | | | 376 X 916 X 916 (125 X 1020 X 1020) | | | | | | |
| UNIT WEIGHT | kg | 26 + 4 | | | | 28 + 4 | | | | 32 + 4 | | | | |
| CONDENSATE DRAIN SIZE | mm | 19.05 | | | | | | | | | | | | |
| PIPE CONNECTION | mm | 19.05 | | | | | | | | | | | | |
| FAN | TYPE | TURBO FAN | | | | | | | | | | | | |
| | DRIVE | DIRECT | | | | | | | | | | | | |
| FAN SPEED | RPM | 200 | 280 | 360 | 450 | 350 | 440 | 550 | 660 | 400 | 510 | 630 | 750 | |
| FAN MOTOR | TYPE | BLDC | | | | | | | | | | | | |
| | INDEX OF PROTECTION (IP) | IP20 | | | | IP20 | | | | IP20 | | | | |
| INSULATION GRADE | | E | | | | E | | | | E | | | | |
| RATED RUNNING CURRENT | A | 0.11 | 0.13 | 0.19 | 0.26 | 0.19 | 0.28 | 0.43 | 0.74 | 0.21 | 0.35 | 0.55 | 0.95 | |
| STARTING CURRENT | A | 1.5 | | | | 2.2 | | | | 2.2 | | | | |
| MOTOR OUTPUT | W | 70 | | | | 70 | | | | 100 | | | | |
| POLES | | 8 | | | | 8 | | | | 8 | | | | |
| COIL | TUBE | MATERIAL | COPPER | | | | | | | | | | | |
| | | DIAMETER | 7.00 | | | | | | | | | | | |
| | FIN | MATERIAL | ALUMINUM | | | | | | | | | | | |
| | | FACE AREA | 0.39 | | | | 0.37 | | | | 0.46 | | | |
| ROW | 2 | | | | 3 | | | | 3 | | | | | |
| WATER VOLUME | Litre | 1.36 | | | | 1.97 | | | | 2.35 | | | | |
| AIR QUALITY FILTER | TYPE | WASHABLE SARANET FILTER | | | | | | | | | | | | |
| | QUANTITY | 1 | | | | | | | | | | | | |
| CASING | COLOUR | LIGHY GREY | | | | | | | | | | | | |

NOTE:
 A) BASED ON EUROVENT CONDITIONS
 B) ADDITIONAL 10W IS REQUIRED FOR CONDENSATE DRAIN PUMP
 C) SOUND PRESSURE LEVEL IS TESTED AS PER JIS STANDARD AS BELOW:
 FWKE05E MODEL - 1.4M BELOW THE FACE CENTER OF AIR RETURN OF THE UNIT
 FWKE08/11E MODEL - 1.5M BELOW THE FACE CENTER OF AIR RETURN OF THE UNIT

| MODE | COOLING | HEATING |
|----------------------------|-------------------|--|
| ENTERING AIR TEMPERATURE | 27°C DB / 19°C WB | 20°C DB |
| ENTERING WATER TEMPERATURE | 7°C | 50°C (2 Pipes System) 70°C (4 Pipes System) |
| LEAVING WATER TEMPERATURE | 12°C | 45°C (2 Pipes System) 60°C (4 Pipes System) |

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Specification for Ceiling Cassette Type ~ 50HZ (4 Pipe System)

| MODEL | FWKE05EH | | | | FWKE08EH | | | | FWKE11EH | | | | | |
|---|--------------------------|--|----------|-------|----------|--------|--------|-------------------------------------|----------|--------|--------|-------|-------|--|
| | QUIET | LOW | MEDIUM | HIGH | QUIET | LOW | MEDIUM | HIGH | QUIET | LOW | MEDIUM | HIGH | | |
| NOMINAL COOLING CAPACITY | Btu/h | 6800 | 9600 | 12300 | 15000 | 13300 | 17100 | 20800 | 24600 | 17700 | 22200 | 26400 | 30700 | |
| | W | 2000 | 2800 | 3600 | 4400 | 3900 | 5000 | 6100 | 7200 | 5200 | 6500 | 7750 | 9000 | |
| NOMINAL SENSIBLE COOLING CAPACITY | Btu/h | 5300 | 7600 | 10200 | 13100 | 9900 | 13000 | 16600 | 19600 | 13300 | 16700 | 20700 | 24500 | |
| | W | 1560 | 2240 | 2990 | 3850 | 2910 | 3810 | 4850 | 5750 | 3890 | 4900 | 6060 | 7170 | |
| NOMINAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C) | Btu/h | 12800 | 17200 | 21700 | 26100 | 21800 | 27300 | 32800 | 38200 | 31900 | 39100 | 46200 | 53400 | |
| | W | 3750 | 5050 | 6350 | 7650 | 6400 | 8000 | 9600 | 11200 | 9350 | 11450 | 13550 | 15650 | |
| FAN INPUT POWER | W | 7 | 12 | 19 | 37 | 17 | 26 | 50 | 90 | 23 | 39 | 83 | 120 | |
| NOMINAL RUNNING CURRENT | A | 0.11 | 0.13 | 0.19 | 0.26 | 0.19 | 0.28 | 0.43 | 0.74 | 0.21 | 0.35 | 0.55 | 0.95 | |
| POWER SOURCE | V/Ph/Hz | 220-240 / 1 / 50 | | | | | | | | | | | | |
| REFRIGERANT TYPE | | N/A | | | | | | | | | | | | |
| CONTROL OPERATION | AIR DISCHARGE | 4 WAY AUTOMATIC LOUVER (UP & DOWN) | | | | | | | | | | | | |
| | OPERATION | LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL | | | | | | | | | | | | |
| AIR FLOW | CFM | 220 | 350 | 470 | 620 | 420 | 560 | 720 | 890 | 510 | 680 | 870 | 1060 | |
| EXTERNAL STATIC PRESSURE (H/M/L) | Pa | N/A | | | | | | | | | | | | |
| NOMINAL WATER FLOW RATE (COOLING) | USGPM | 1.53 | 2.14 | 2.76 | 3.37 | 2.99 | 3.83 | 4.67 | 5.51 | 3.98 | 4.98 | 5.93 | 6.89 | |
| | Litres/min | 5.80 | 8.12 | 10.44 | 12.75 | 11.31 | 14.49 | 17.68 | 20.87 | 15.07 | 18.84 | 22.47 | 26.09 | |
| NOMINAL WATER FLOW RATE (HEATING) | USGPM | 1.44 | 1.93 | 2.43 | 2.93 | 2.45 | 3.06 | 3.68 | 4.29 | 3.58 | 4.38 | 5.19 | 5.99 | |
| | Litres/min | 5.44 | 9.20 | 9.20 | 11.09 | 9.28 | 13.91 | 13.91 | 16.23 | 13.55 | 16.60 | 19.64 | 22.68 | |
| HEAD LOSS (COOLING) | kPa | 5 | 9 | 13 | 18 | 6 | 10 | 15 | 19 | 12 | 19 | 24 | 32 | |
| HEAD LOSS (HEATING) : 50°C | kPa | 7 | 10 | 17 | 22 | 13 | 18 | 25 | 32 | 21 | 30 | 39 | 52 | |
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| | DRIVE | DIRECT | | | | | | | | | | | | |
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| COIL | TUBE | MATERIAL | COPPER | | | | | | | | | | | |
| | | DIAMETER | 7.00 | | | | | | | | | | | |
| | FIN | MATERIAL | ALUMINUM | | | | | | | | | | | |
| | | FACE AREA | 0.39 | | | | 0.37 | | | | 0.46 | | | |
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| | QUANTITY | 1 | | | | | | | | | | | | |
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