# EWYD4004ZXRB2

INVERTER +VVR

> Air to water 4 pipe unit
> Inverter Driven Single Screw compressor
> Gold efficiency version
> Reduced sound configuration
> R134a refrigerant

**Unit description**: Daikin air to water 4 pipe unit with inverter driven screw compressor and R134a refrigerant. Color: Ivory White (Munsell code 5Y7.5/1) (±RAL7044).

**Compressor**: Latest design Daikin single screw compressor enjoying Variable Volume Ratio (VVR) technology for optimized unit performances at any load and operating condition. Daikin design refrigerant cooled inverter integrated within compressor casing. Sophisticated unit control logic allows the inverter to modulate compressor speed minimizing power consumption and noise emission at any load condition.

**Cold side heat exchanger**: New generation shell and tube assuring optimal heat transfer and minimized water pressure drops.

**Hot side heat exchanger**: New generation shell and tube assuring optimal heat transfer and minimized water pressure drops.

**Source heat exchanger**: The source heat exchanger is manufactured with internally enhanced seamless copper tubes arranged in a staggered row pattern and mechanically expanded into lanced and rippled aluminum condenser fins with full fin collars. An integral sub-cooler circuit provides sub-cooling to effectively eliminate liquid flashing and increase capacity without increasing the power input.

**Coil fans**: The condenser fans are propeller type with high efficiency design blades to maximize performances. The material of the blades is glass-reinforced resin and each fan is protected by a guard. Fan motors are internally protected from over temperature and are IP54.

**Refrigerant circuit**: Each unit has two independent refrigerant circuits and each one includes: Compressor Inverter driven with integrated oil separator, Electronic expansion valve for heating and cooling, Discharge line shut off valve, Liquid line shut off valve, Sight glass with moisture indicator, Filter drier, Charging valves, High pressure switch, High pressure transducers, Low pressure transducers, Oil pressure transducer, Suction temperature sensor.

**Electrical**: Control and power sections are located in the main panel that is manufactured to ensure protection against all weather conditions. The electrical panel is IP54 and internally protected against possible accidental contact with live parts. The main panel is fitted with a main switch interlocked door that shuts off power supply when opening.

**Controller**: Latest generation MicroTech 4 Type. Providing monitoring and control functions required for an efficient and trouble free operation of the air to water 4 pipe unit. Sophisticated software with predictive logic selects the most energy efficient combination of compressor load and electronic expansion valve position keeping stable operating conditions and maximizing the air to water 4 pipe efficiency and reliability. Unit is compatible with Daikin on Site platform for remote monitoring, preventive maintenance and system optimization.

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Performances calculated according to EN14511-3:2013

## Cooling only mode performances

| | | | |
|---|---|---|---|
| Cooling capacity | 382.6 kW | Cold heat exchanger water IN/OUT | 15.00 °C / 9.00 °C |
| Power input | 120.6 kW | Cold heat exchanger water flow rate | 16.00 l/s |
| EER Cooling Efficiency | 3.172 kW / kW | Cold heat exchanger water pressure drop | 28.9 kPa |
| SEER | 4.64 kW / kW | Ambient temperature | 35.0 °C |
| | | Lw / Lp @ 1m | 87 dB(A) / 66 dB(A) |
| | | Cold heat exchanger fluid | Ethylene glycol 15% |
| | | Cold heat exchanger fouling factor | 0.000 m2°C/W |

Sound power level according to ISO 9614-1.

## Heating only mode performances

| | | | |
|---|---|---|---|
| Heating capacity | 249.0 kW | Hot heat exchanger water IN/OUT | 42.00 °C / 48.00 °C |
| Power input | 105.2 kW | Hot heat exchanger water flow rate | 10.00 l/s |
| COP Heating Efficiency | 2.370 kW / kW | Hot heat exchanger pressure drop | 12.0 kPa |
| SCOP | 3.200 kW / kW | Ambient temperature | -5.0 °C |
| | | Hot heat exchanger fluid | Water |
| | | Hot heat exchanger fouling factor | 0 m2°C/W |

F2_4P_notes

## Cooling + Heating mode performances

| | | | |
|---|---|---|---|
| Cooling capacity | 192.23 kW | Cold heat exchanger water IN/OUT | 12.03 °C / 9.00 °C |
| Heating capacity | 251.62 kW | Cold heat exchanger water flow rate | 16.00 l/s |
| Power input | 59.4 kW | Hot heat exchanger water IN/OUT | 41.96 °C / 48.00 °C |
| TER Cooling + Heating Efficiency | 7.47 kW / kW | Hot heat exchanger water flow rate | 10.00 l/s |

F3_4P_notes

## Unit information

| | | | |
|---|---|---|---|
| Compressor type | Inverter Driven Single Screw | Source heat exchanger type | Shell & Tubes |
| Capacity control | Inverter | Fans N° | 10 |
| Compressor N° | 2 | Condenser fans control | VFD |
| Circuit N° | 2 | Altitude | 000 MSL |
| Refrigerant type | R134a | Cold/Hot heat exchanger type | HFP |
| Refrigerant charge | 206 kg | | |

Actual refrigerant charge depends on the final unit construction, refer to unit nameplate.

## Electrical information

| | | | |
|---|---|---|---|
| Power supply | 400 V / 50.0 Hz / 3 Ph | Max. inrush current | 0 A |

LOOP BY DAIKIN

The refrigerant charge for this unit is covered by a third party verified reclaimed refrigerant allocation. Reclaimed refrigerant compliant with AHRI700 standard. With this initiative, Daikin commits in reducing environmental impact of refrigerants, by avoiding emissions related to end-of-life refrigerants' destruction. Find out more info at: https://www.daikin.eu/en_us/daikin-blog/building-a-circular-economy.html

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| | | | |
|---|---|---|---|
| Running current | 204 A | Compressor starting method | Inverter |
| Max. Running current | 335 A | | |
| Max. current wires sizing | 368.5 A | | |

Voltage tolerance ± 10%. Phase Voltage unbalance ± 3%. Electrical data referred to standard unit without options, refer to unit name plate data.

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## Acoustic information

Sound pressure level at 1 m from the unit (rif. 2 x 10-5 Pa)

| 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | 8000 Hz | db(A) |
|---|---|---|---|---|---|---|---|---|
| 67.0 | 64.0 | 63.0 | 66.0 | 61.0 | 56.0 | 49.0 | 41.0 | **66.0** |

Values referred to Cold heat exchanger water IN/OUT 12/7°C and 35°C Amb. Temp., full load operation, standard unit configuration without options. Sound pressure level calculated from sound power level. Sound pressure in octave band is for information only and not considered binding.

## Physical information

| | | | |
|---|---|---|---|
| Cold heat exchanger connections size | **219.1 mm** | Length | **5825 mm** |
| Hot heat exchanger connections size | **219.1 mm** | Width | **2285 mm** |
| Weight shipping/operating | **6240 kg / 6705 kg** | Height | **2465 mm** |

Information referred to standard unit configuration without options, refer to certified unit drawing.

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## Certification notes

## General notes

For more information about the above selected product, please go to http://www.daikineurope.com/industrial/. Unit performances are reproducible in laboratory test environment only in accordance to recognized industry standards. This technical data sheet is generated by Daikin Applied Tool software designed and distributed by Daikin Applied Europe S.p.A. The present software does not constitute an offer binding upon Daikin Applied Europe S.p.A who compiled the content of this software to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Product images are indicative only and are intended for illustrative purposes only; pictures may be differed from the ordered product and are subject to change without prior notice. Daikin Applied Europe S.p.A. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this document. 

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