

Chillers

R-410A

- » High efficiency values both in cooling and heating mode
- » Extremely wide operating range, outside ambient temperatures up to 52°C
- » One or two refrigerant circuits
- » Low sound levels
- » Reliable and efficient ON/OFF scroll compressor
- » Huge range of options for a complete customization
- » Plug&play unit concept and straightforward maintenance accessibility
- » Small footprint and reduced installation cost

Air cooled multi-scroll chillers and heat pumps



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EWAQ-E-/F-
EWYQ-F-



EUROVENT EFFICIENCY CLASS **A**

EER \geq 3.1
COP \geq 3.2

The highest partial load efficiency values in its range:

ESEER up to **4.83**

Efficient → reduces operating costs

Quiet → sound ratings

Ideal for retrofit → reduces installation costs

Environmentally responsible → thanks to R-410A refrigerant



Multi-scroll air cooled chillers and heat pumps

The new multi-scroll family is a new complete range of on-off air cooled chillers for outdoor installations.

EWAQ-E-/F-range for cooling only applications and EWYQ-F-series for heat pump installations are the right choices for high efficiency and sound sensitive projects at affordable price.

The scroll-family range has been designed with the aim to provide maximum energy efficiency, low noise emissions, reduced footprint, easy installation, versatile for every kind of applications and able to be integrated in any monitoring system.

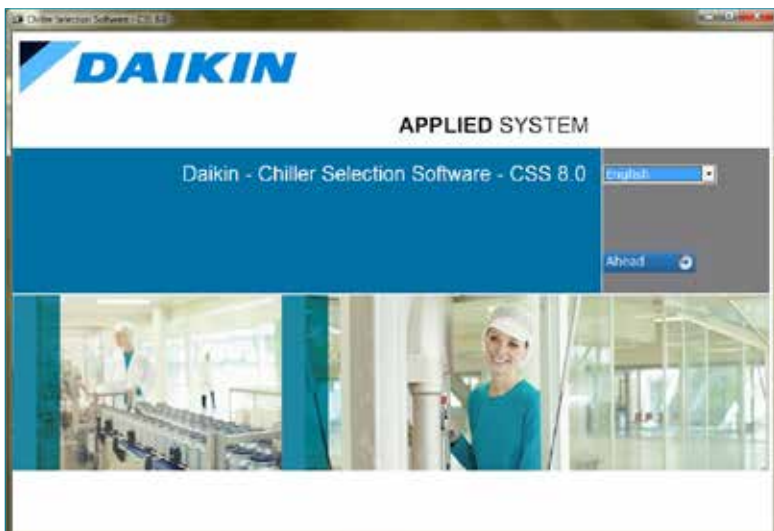
Eurovent certified series and design fully based on new European directives

Both multiple scroll chillers and heat pumps have been optimized and entirely designed in accordance with EN14511 and EN14825 normatives.

Multi-scroll series

low-priced efficiency
in cooling & heating mode

With this range Daikin makes good on its commitment to supply the market with superior solutions suitable for all your applications all year round



Selection flexibility

Thanks to the advanced Daikin chiller selection software every kind of multi-scroll chiller selection is easily performed. Full load and part load performances at whichever running conditions can be simulated to suit any job requirement.

High efficiency values

Top level performances at full and partial loads thanks to high efficient components. ESEER up to 4.83 and Class A efficiencies both for cooling only and heat pump series.

- > EER for multiple scroll cooling only > 3.1
- > COP for multiple scroll heat pump > 3.2

Small footprint & reduced installation cost

Reduced footprint installation, thanks to «V» and «W» shape frame ; the multi-scroll chiller family is the ideal solution for unit replacements and tight installations.



cooling up to
+52°C
ambient

heating down to
-17°C
ambient

Extremely wide operation range

The multi-scroll series are equipped with scroll compressor and its condensing section is properly sized in order to achieve +52°C ambient temperature in cooling and -17°C in heating .

Superior control system

MicroTech III controller is the user friendly controller designed for efficiency optimization, high reliability and easy integration in any monitoring system.

- > PID logic (proportional, integrative, derivative)
- > Easy visual interface with 4 rows display and 3 keypads
- > Push and roll navigating wheel
- > Extendable with additional I/O modules



ON-OFF scroll compressors

The best on-off scroll compressor technology allowing top efficiency levels, high reliability, very low sounds emissions and easy serviceability.



Huge range of options for a complete customization

Main standard factory mounted options:

- › Evaporator victaulic kit
- › Evaporator electric heater
- › Evaporator flow switch
- › Electronic expansion valve
- › Water filter

An extensive list of tailor-made options complete multi-scroll series to suit any application requirements.

- › Heat recovery
- › Power factor correction
- › Energy meter
- › Inverter driven fans (for an enhanced part loads efficiencies and sound reduction)
- › Integrated hydronic module
- › Nordic kit (to improve working conditions in heating mode and specially during defrost cycles)

Water pump selectable according to custom available pressure needs



Plug & play unit concept and straightforward maintenance accessibility

Multi-scroll design allows faster chiller installation with consequent reduction of commissioning cost.

- › Standard factory functional test
- › Full refrigerant and oil charge
- › Integrated Control Logic
- › Single evaporator
- › Single main power connection point
- › Optional on-board inline dual-pumps

One or two refrigerant circuits

The highest cooling capacity in a single circuit with multi-scroll compressors. The new range is available in one refrigerant circuit with two or three compressors from 173 to 336 kW on a "V" shape frame. Dual refrigerant circuits range with four to six compressors for a capacity range up to 675 kW available on "V" or "W" shape frame.

Low sound levels

3 different versions to cope with whichever sound target:

- › **STANDARD**
- › **LOW**
- › **REDUCED**

Cooling only

High efficiency Standard sound

| EWAQ-E-XS | | | | 180 | 200 | 230 | 260 | 320 | 340 | |
|----------------------|-----------------------------|---|-----------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|
| Cooling capacity | Nom. | kW | | 178 ¹ | 200 ¹ | 226 ¹ | 263 ¹ | 315 ¹ | 334 ¹ | |
| Capacity control | Method | Step | | | | | | | | |
| | Minimum capacity | % | | 50 | 43 | 50 | 33 | 27 | 33 | |
| Power input | Cooling | Nom. | kW | | 58.0 ¹ | 65.3 ¹ | 73.8 ¹ | 86.2 ¹ | 103 ¹ | 110 ¹ |
| EER | | | | | 3.99 | 3.06 | | 3.05 | | |
| ESEER | | | | | 3.99 | 4.06 | 3.87 | 4.09 | 4.04 | |
| Dimensions | Unit | HeightxWidthxDepth | mm | | 2,271x1,224x4,413 | | | | | |
| Weigh | Unit | kg | | 1,722 | 1,807 | 1,871 | 2,173 | 2,304 | 2,492 | |
| | Operation weight | kg | | 1,734 | 1,819 | 1,885 | 2,188 | 2,318 | 2,507 | |
| Water heat exchanger | Type | Plate heat exchanger | | | | | | | | |
| | Water volume | l | | 12 | | | | 14 | | |
| | Nominal water flow | Cooling | l/s | | 8.5 | 9.6 | 10.8 | 12.6 | 15.1 | 16.0 |
| | Nominal water pressure drop | Cooling | kPa | | 27 | 34 | 35 | 47 | 54 | |
| Air heat exchanger | Type | High efficiency fin and tube type with integral subcooler | | | | | | | | |
| Fan | Air flow rate | Nom. | l/s | | 21,845 | 21,148 | 26,874 | 25,884 | 32,953 | 32,065 |
| | Speed | rpm | | 900 | | | | | | |
| Sound power level | Cooling | Nom. | dBA | | 93 ² | 94 ² | 96 ² | 95 ² | 96 ² | 97 ² |
| Sound pressure level | Cooling | Nom. | dBA | | 75 | | 76 | | 77 | |
| Compressor | Type | Scroll compressor | | | | | | | | |
| Operation range | Water side | Cooling | Min.-Max. | °CDB | | -15~-18 | | | | |
| | Air side | Cooling | Min.-Max. | °CDB | | -18~-52 | | | | |

Cooling only

High efficiency Standard sound

| EWAQ-F-XS | | | | 170 | 200 | 220 | 250 | 310 | 320 | 350 | 360 | 400 | 430 | 450 | 520 | 610 | 680 | | | | | | |
|----------------------|-----------------------------|---|-----------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------|--|----|--|--|--|
| Cooling capacity | Nom. | kW | | 170 ¹ | 194 ¹ | 220 ¹ | 244 ¹ | 316 ¹ | | 356 ¹ | | 403 ¹ | 428 ¹ | 457 ¹ | 528 ¹ | 607 ¹ | 672 ¹ | | | | | | |
| Capacity control | Method | Step | | | | | | | | | | | | | | | | | | | | | |
| | Minimum capacity | % | | 25 | 21 | 25 | 22 | 23 | | 25 | | 21 | 20 | 25 | 17 | 14 | 17 | | | | | | |
| Power input | Cooling | Nom. | kW | | 54.8 ¹ | 62.2 ¹ | 70.6 ¹ | 78.3 ¹ | 102 ¹ | | 115 ¹ | 130 ¹ | 137 ¹ | 146 ¹ | 170 ¹ | 198 ¹ | 219 ¹ | | | | | | |
| EER | | | | | 3.11 | 3.13 | 3.12 | | 3.09 | | 3.10 | | 3.12 | 3.10 | 3.07 | | | | | | | | |
| ESEER | | | | | 3.89 | 4.08 | 3.91 | 4.03 | 4.05 | 4.30 | 4.06 | 4.33 | 4.22 | 4.26 | 4.22 | 4.29 | 4.24 | 4.14 | | | | | |
| Dimensions | Unit | HeightxWidthxDepth | mm | | 2,271x1,224x4,413 | | | | | | | | | | | | | | | | | | |
| Weigh | Unit | kg | | 1,688 | 1,958 | 2,210 | 2,339 | 2,500 | 2,600 | 2,632 | 2,732 | 2,744 | 2,845 | 2,861 | 3,569 | 3,667 | 4,054 | | | | | | |
| | Operation weight | kg | | 1,700 | 1,973 | 2,225 | 2,353 | 2,514 | | 2,672 | 2,772 | 2,784 | 2,891 | 2,907 | 3,615 | 3,727 | 4,115 | | | | | | |
| Water heat exchanger | Type | Plate heat exchanger | | | | | | | | | | | | | | | | | | | | | |
| | Water volume | l | | 12 | | | | 14 | | | | 40 | | | | 46 | | | | 60 | | | |
| | Nominal water flow | Cooling | l/s | | 8.2 | 9.3 | 10.5 | 11.7 | 15.1 | | 17.0 | 19.3 | 20.5 | 21.8 | 25.3 | 29.0 | 32.2 | | | | | | |
| | Nominal water pressure drop | Cooling | kPa | | 25 | 27 | 34 | 42 | 22 | | 23 | 31 | 29 | 30 | 41 | 44 | 55 | | | | | | |
| Air heat exchanger | Type | High efficiency fin and tube type with integral subcooler | | | | | | | | | | | | | | | | | | | | | |
| Fan | Air flow rate | Nom. | l/s | | 21,845 | 21,148 | 26,874 | 25,204 | 31,722 | | 30,245 | 42,295 | 40,326 | | 50,408 | 60,489 | | | | | | | |
| | Speed | rpm | | 900 | | | | | | | | | | | | | | | | | | | |
| Sound power level | Cooling | Nom. | dBA | | 91 ² | 93 ² | 94 ² | 95 ² | | 96 ² | | 97 ² | | 98 ² | | 99 ² | 100 ² | | | | | | |
| Sound pressure level | Cooling | Nom. | dBA | | 72 | 74 | 75 | 76 | 77 | 76 | 77 | 78 | 79 | 78 | 79 | 79 | | | | | | | |
| Compressor | Type | Scroll compressor | | | | | | | | | | | | | | | | | | | | | |
| Operation range | Water side | Cooling | Min.-Max. | °CDB | | -15~-18 | | | | | | | | | | | | | | | | | |
| | Air side | Cooling | Min.-Max. | °CDB | | -18~-52 | | | | | | | | | | | | | | | | | |

Heating & Cooling

High efficiency Standard sound

| EWYQ-F-XS | | | | 160 | 190 | 210 | 230 | 310 | 340 | 380 | 400 | 430 | 510 | 570 | 630 | | | | | | | | | | | | | |
|----------------------|-----------------------------|---|-----------|------------------|-------------------|------------------|------------------|------------------|-------------------|---|------------------|------------------|-------------------|------------------|------------------|------|-------------------|--|--|----|-------------------|--|--|----|-------------------|--|--|--|
| Cooling capacity | Nom. | kW | | 164 ¹ | 184 ¹ | 205 ¹ | 231 ¹ | 304 ¹ | 335 ¹ | 376 ¹ | 401 ¹ | 427 ¹ | 501 ¹ | 565 ¹ | 624 ¹ | | | | | | | | | | | | | |
| Heating capacity | Nom. | kW | | 173 ¹ | 197 ¹ | 227 ¹ | 254 ¹ | 329 ¹ | 362 ¹ | 404 ¹ | 429 ¹ | 463 ¹ | 535 ¹ | 607 ¹ | 674 ¹ | | | | | | | | | | | | | |
| Capacity control | Method | Step | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power input | Cooling | Nom. | kW | | 57.6 | 63.3 | 70.3 | 79.3 | 102 | 114 | 129 | 138 | 145 | 172 | 195 | 214 | | | | | | | | | | | | |
| | Heating | Nom. | kW | | 54.0 | 61.6 | 70.5 | 79.2 | 101 | 113 | 126 | 133 | 140 | 167 | 190 | 210 | | | | | | | | | | | | |
| EER | | | | | 2.84 | 2.91 | 2.92 | | 2.99 | 2.93 | 2.91 | 2.90 | 2.94 | 2.91 | 2.90 | 2.91 | | | | | | | | | | | | |
| ESEER | | | | | 3.73 | 3.89 | 3.81 | 3.71 | 4.07 | 4.19 | 3.99 | 3.96 | 4.14 | 4.20 | 3.98 | 4.06 | | | | | | | | | | | | |
| COP | | | | | 3.20 | 3.22 | 3.21 | 3.24 | 3.24 | 3.21 | 3.21 | 3.23 | 3.30 | 3.21 | 3.20 | 3.21 | | | | | | | | | | | | |
| Dimensions | Unit | HeightxWidthxDepth | mm | | 2,270x1,200x4,370 | | | | 2,270x1,200x5,270 | | | | 2,220x2,258x4,125 | | | | 2,220x2,258x5,025 | | | | 2,220x2,258x5,925 | | | | 2,220x2,258x6,825 | | | |
| Weigh | Unit | kg | | 1,430 | 1,850 | 2,300 | 2,350 | 2,900 | 2,910 | 2,920 | 3,730 | 3,750 | 4,250 | 4,280 | 4,670 | | | | | | | | | | | | | |
| | Operation weight | kg | | 1,470 | 1,890 | 2,340 | 2,390 | 2,980 | 2,990 | 3,000 | 3,840 | 3,850 | 4,370 | 4,400 | 4,780 | | | | | | | | | | | | | |
| Water heat exchanger | Type | Plate heat exchanger | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Water volume | l | | 18 | | | | 44 | | | | 60 | | | | 70 | | | | | | | | | | | | |
| | Nominal water flow | Cooling | l/s | | 7.8 | 8.8 | 9.8 | 11.1 | 14.6 | 16.0 | 18.0 | 19.2 | 20.4 | 24.0 | 27.1 | 29.9 | | | | | | | | | | | | |
| | Nominal water pressure drop | Cooling | kPa | | 22 | 28 | 36 | 40 | 21 | 27 | 30 | 29 | 34 | 37 | 42 | 56 | | | | | | | | | | | | |
| Air heat exchanger | Type | High efficiency fin and tube type with integral subcooler | | | | | | | | High efficiency fin and tube type with integral subcooler | | | | | | | | | | | | | | | | | | |
| Compressor | Type | Scroll compressor | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan | Quantity | | | 4 | | | | 5 | | | | 8 | | | | 10 | | | | 12 | | | | 14 | | | | |
| | Air flow rate | Nom. | l/s | | 22,577 | 21,593 | 26,992 | | 43,187 | | 43,187 | 55,213 | 53,983 | 64,780 | 75,577 | | | | | | | | | | | | | |
| Sound power level | Cooling | Nom. | dBA | | 92 ² | 94 ² | 95 ² | | 97 ² | | 98 ² | | 99 ² | | 100 ² | | | | | | | | | | | | | |
| Sound pressure level | Cooling | Nom. | dBA | | 72 | 74 | 75 | 76 | 77 | 77 | 78 | | 79 | | 80 | | | | | | | | | | | | | |
| Operation range | Water side | Cooling | Min.-Max. | °CDB | | -15~-15 | | | | | | | | -15~-15 | | | | | | | | | | | | | | |
| | | Heating | Min.-Max. | °CDB | | 25~-50 | | | | | | | | 25~-50 | | | | | | | | | | | | | | |
| | Air side | Cooling | Min.-Max. | °CDB | | -10~-46 | | | | | | | | -10~-46 | | | | | | | | | | | | | | |
| | | Heating | Min.-Max. | °CDB | | -17~-20 | | | | | | | | -17~-20 | | | | | | | | | | | | | | |

All values refer to standard sound levels. For low and reduced sound levels, please have a look in our Applied systems catalogue or general catalogue. (1) Cooling mode: 12/7°C evaporator water temperature, 35°C ambient temperature; Heating mode: 40/45°C condenser leaving water temperature, 7°C ambient temperature. Data in accordance with EN14511. (2) At full load and at nominal conditions.

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