

Air cooled chiller

AQL 40-75



40-76 kW



Technical feature

- 6 sizes.
- Cooling capacity from 40 to 76 kW.
- 2 versions:
 - STD (standard version);
 - SIF (special inverter fans).
- 2 Low Noise versions:
 - Standard version (STD) and Extra Low Noise version (ELN).
- One refrigerant circuit.
- Scroll tandem compressors.
- ILTC control.
- Operating low water content in the plant.

Accessories and options

- Hydrokit with 1 or 2 pumps with or without buffer tank.
- Water filter (standard).
- Water pressure switch (standard).
- Flow switch (standard).
- Fan speed control (standard).
- Sequence phases control (standard).
- Automatic circuit breaker.
- Compressors acoustic box (standard on ELN).
- Mechanical gauges.
- Hydrometer (standard).
- Softstart.
- Power factor corrector capacitors.
- Coils treatments.
- Coils grilles (standard).
- Desuperheater.
- Compressors jackets (standard ELN).



Operating limit

| AQL | | 40 | | 45 | | 50 | | 60 | | 65 | | 75 | |
|----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| Leaving water temperature* | °C | -8 | 18 | -8 | 18 | -8 | 18 | -8 | 18 | -8 | 18 | -8 | 18 |
| Δ T water | K | 3 | 8 | 3 | 8 | 3 | 8 | 3 | 8 | 3 | 8 | 3 | 8 |
| Air temperature** | °C | -10 | 50 | -10 | 50 | -10 | 50 | -10 | 50 | -10 | 50 | -10 | 50 |

* Below 5°C, glycol is required.

** -10°C is given for unit with fan speed controller (optional). Without fan speed controller, the limit is 10°C.

Chillers suitable for operation without buffer tank for water content greater than 2.5 liters of water per kW of output.

Technical feature AQL 40-75 BLN

| Model AQL BLN | | 40 | 45 | 50 | 60 | 65 | 75 |
|----------------------------------|-------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Cooling capacity (1) | kW | 40,0 | 44,0 | 51,0 | 60,0 | 67,9 | 75,8 |
| Power input (2) | kW | 12,7 | 14,8 | 17,2 | 18,1 | 21,0 | 25,4 |
| GROSS EER | | 2,92 | 2,79 | 2,81 | 2,99 | 2,95 | 2,77 |
| Energy class | | B | C | C | B | B | C |
| GROSS ESEER | | 4,32 | 4,11 | 4,14 | 4,27 | 4,34 | 3,99 |
| EER | | 2,75 | 2,59 | 2,55 | 2,83 | 2,69 | 2,54 |
| ESEER | | 3,87 | 3,62 | 3,58 | 3,85 | 3,77 | 3,50 |
| Number of refrigerant circuits | | 1 | 1 | 1 | 1 | 1 | 1 |
| Part load steps | % | 0-50-100 | 0-50-100 | 0-50-100 | 0-44-56-100 | 0-50-100 | 0-50-100 |
| Power supply | V/Ph/Hz | 400/3+N/50 | | | | | |
| Startup type | | Direct | | | | | |
| Refrigerant | | | | | | | |
| Type | | HFC 410A | | | | | |
| Charge | kg | 8,2 | 9,5 | 10,6 | 11,6 | 13,5 | 14,0 |
| Compressor | | | | | | | |
| Qty | | 2 | 2 | 2 | 2 | 2 | 2 |
| Type | | Scroll | | | | | |
| Cranckcase heater | W | 90 | 90 | 90 | 90 | 90 | 90 |
| Evaporator | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Type | | Plate exchanger AISI 316 | | | | | |
| Water flow | l/h | 6.880,0 | 7.568,0 | 8.772,0 | 10.320,0 | 11.678,8 | 13.037,6 |
| Antifreeze heater | W | 35 | 35 | 35 | 35 | 35 | 35 |
| Connection type | | Male gas threaded | | | | | |
| Inlet/outlet diameter | inch | 2" | 2" | 2" | 2" | 2" | 2" |
| Water drain connection | inch | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" |
| Condenser | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Frontal surface | mm | 2.160x1.200 | 2.160x1.200 | 2.160x1.200 | 2.650x1.200 | 2.650x1.200 | 2.650x1.200 |
| Number of rows | | 2 | 2 | 3 | 3 | 3 | 3 |
| Fan | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Air flow | m ³ /h | 14.000 | 14.000 | 13.200 | 21.100 | 21.100 | 21.100 |
| Speed | rpm/min | 680 | 680 | 680 | 900 | 900 | 900 |
| Power input | kW | 0,98 | 0,98 | 0,98 | 2,00 | 2,00 | 2,00 |
| Weight | | | | | | | |
| Shipping | kg | 403 | 411 | 436 | 476 | 483 | 488 |
| Operating | kg | 413 | 421 | 446 | 489 | 496 | 502 |
| Dimensions | | | | | | | |
| Length | mm | 1.750 | 1.750 | 1.750 | 2.200 | 2.200 | 2.200 |
| Width | mm | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 |
| Height | mm | 1.580 | 1.580 | 1.580 | 1.580 | 1.580 | 1.580 |
| Acoustical data | | | | | | | |
| Sound power level (3) | db(A) | 80,5 | 81,0 | 81,0 | 85,5 | 85,6 | 85,8 |
| Sound pressure level at 10 m (4) | db(A) | 48,9 | 49,4 | 49,4 | 53,8 | 53,9 | 54,1 |

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.

(2) Compressors only.

(3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.

(4) Sound pressure values in accordance with ISO 3744.

GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.

EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQL 40-75 ELN

| Model AQL ELN | | 40 | 45 | 50 | 60 | 65 | 75 |
|----------------------------------|---------|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Cooling capacity (1) | kW | 38,7 | 42,4 | 48,7 | 58,0 | 63,1 | 72,8 |
| Power input (2) | kW | 13,4 | 15,7 | 18,4 | 19,0 | 21,9 | 26,9 |
| GROSS EER | | 2,77 | 2,61 | 2,57 | 2,86 | 2,72 | 2,58 |
| Energy class | | C | D | D | C | C | D |
| GROSS ESEER | | 4,09 | 3,84 | 3,79 | 4,09 | 4,00 | 3,73 |
| EER | | 2,90 | 2,76 | 2,78 | 2,95 | 2,91 | 2,72 |
| ESEER | | 4,08 | 3,87 | 3,89 | 4,01 | 4,07 | 3,73 |
| Number of refrigerant circuits | | 1 | 1 | 1 | 1 | 1 | 1 |
| Part load steps | % | 0-50-100 | 0-50-100 | 0-50-100 | 0-44-56-100 | 0-50-100 | 0-50-100 |
| Power supply | V/Ph/Hz | 400/3+N/50 | | | | | |
| Startup type | | Direct | | | | | |
| Refrigerant | | | | | | | |
| Type | | HFC 410A | | | | | |
| Charge | kg | 8,2 | 9,5 | 10,6 | 11,6 | 13,5 | 14,0 |
| Compressor | | | | | | | |
| Qty | | 2 | 2 | 2 | 2 | 2 | 2 |
| Type | | Scroll | | | | | |
| Crankcase heater | W | 90 | 90 | 90 | 90 | 90 | 90 |
| Evaporator | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Type | | Plate exchanger AISI 316 | | | | | |
| Water flow | l/h | 6.656,4 | 7.292,8 | 8.376,4 | 9.976,0 | 10.853,2 | 12.521,6 |
| Antifreeze heater | W | 35 | 35 | 35 | 35 | 35 | 35 |
| Connection type | | Male gas threaded | | | | | |
| Inlet/outlet diameter | inch | 2" | 2" | 2" | 2" | 2" | 2" |
| Water drain connection | inch | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" |
| Condenser | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Frontal surface | mm | 2.160x1.200 | 2.160x1.200 | 2.160x1.200 | 2.650x1.200 | 2.650x1.200 | 2.650x1.200 |
| Number of rows | | 2 | 2 | 3 | 3 | 3 | 3 |
| Fan | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Air flow | m³/h | 11.000 | 11.000 | 10.300 | 16.000 | 16.000 | 16.000 |
| Speed | rpm/min | 530 | 530 | 530 | 720 | 720 | 720 |
| Power input | kW | 0,57 | 0,57 | 0,57 | 1,27 | 1,27 | 1,27 |
| Weight | | | | | | | |
| Shipping | kg | 403 | 411 | 436 | 476 | 483 | 488 |
| Operating | kg | 413 | 421 | 446 | 489 | 496 | 502 |
| Dimensions | | | | | | | |
| Length | mm | 1.750 | 1.750 | 1.750 | 2.200 | 2.200 | 2.200 |
| Width | mm | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 |
| Height | mm | 1.580 | 1.580 | 1.580 | 1.580 | 1.580 | 1.580 |
| Acoustical data | | | | | | | |
| Sound power level (3) | db(A) | 74,0 | 75,3 | 75,3 | 78,0 | 78,5 | 79,0 |
| Sound pressure level at 10 m (4) | db(A) | 42,4 | 43,7 | 43,7 | 46,3 | 46,8 | 47,3 |

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.
 (2) Compressors only.
 (3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.
 (4) Sound pressure values in accordance with ISO 3744.
 GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.
 EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQL 40-75 SIF

| Model AQL SIF | | 40 | 45 | 50 | 60 | 65 | 75 |
|----------------------------------|-------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Cooling capacity (1) | kW | 42,1 | 46,6 | 54,3 | 60,8 | 66,4 | 77,0 |
| Power input (2) | kW | 11,7 | 13,5 | 15,5 | 17,7 | 20,3 | 24,7 |
| GROSS EER | | 2,93 | 2,89 | 2,99 | 2,98 | 2,89 | 2,81 |
| Energy class | | B | C | B | B | C | C |
| GROSS ESEER | | 4,33 | 4,24 | 4,39 | 4,27 | 4,13 | 3,99 |
| Number of refrigerant circuits | | 1 | 1 | 1 | 1 | 1 | 1 |
| Part load steps | % | 0-50-100 | 0-50-100 | 0-50-100 | 0-44-56-100 | 0-50-100 | 0-50-100 |
| Power supply | V/Ph/Hz | 400/3+N/50 | | | | | |
| Startup type | | Direct | | | | | |
| Refrigerant | | | | | | | |
| Type | | HFC 410A | | | | | |
| Charge | kg | 8,2 | 9,5 | 10,6 | 11,6 | 13,5 | 14,0 |
| Compressor | | | | | | | |
| Qty | | 2 | 2 | 2 | 2 | 2 | 2 |
| Type | | Scroll | | | | | |
| Crankcase heater | W | 90 | 90 | 90 | 90 | 90 | 90 |
| Evaporator | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Type | | Plate exchanger AISI 316 | | | | | |
| Water flow | l/h | 7.243,7 | 8.012,5 | 9.346,0 | 10.451,7 | 11.426,8 | 13.242,6 |
| Antifreeze heater | W | 35 | 35 | 35 | 35 | 35 | 35 |
| Connection type | | Male gas threaded | | | | | |
| Inlet/outlet diameter | inch | 2" | 2" | 2" | 2" | 2" | 2" |
| Water drain connection | inch | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" |
| Condenser | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Frontal surface | mm | 2.160x1.200 | 2.160x1.200 | 2.160x1.200 | 2.650x1.200 | 2.650x1.200 | 2.650x1.200 |
| Number of rows | | 2 | 2 | 3 | 3 | 3 | 3 |
| Fan | | | | | | | |
| Qty | | 1 | 1 | 1 | 1 | 1 | 1 |
| Air flow | m ³ /h | 25.284 | 25.284 | 24.300 | 25.284 | 25.284 | 25.284 |
| Speed | rpm/min | 1.110 | 1.110 | 1.110 | 1.110 | 1.110 | 1.110 |
| Power input | kW | 2,67 | 2,67 | 2,67 | 2,67 | 2,67 | 2,67 |
| Weight | | | | | | | |
| Shipping | kg | 403 | 411 | 436 | 476 | 483 | 488 |
| Operating | kg | 413 | 421 | 446 | 489 | 496 | 502 |
| Dimensions | | | | | | | |
| Length | mm | 1.750 | 1.750 | 1.750 | 2.200 | 2.200 | 2.200 |
| Width | mm | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 |
| Height | mm | 1.685 | 1.685 | 1.685 | 1.685 | 1.685 | 1.685 |
| Acoustical data | | | | | | | |
| Sound power level (3) | db(A) | 95,2 | 95,2 | 95,2 | 95,3 | 95,3 | 95,3 |
| Sound pressure level at 10 m (4) | db(A) | 63,6 | 63,6 | 63,6 | 63,6 | 63,6 | 63,6 |

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.

(2) Compressors only.

(3) Acoustical data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.

(4) Sound pressure values in accordance with ISO 3744.

GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.