

ARRC



Condenserless chiller unit for indoor applications

Range:

Cooling capacity: 50 ÷ 100 kW

Available versions:

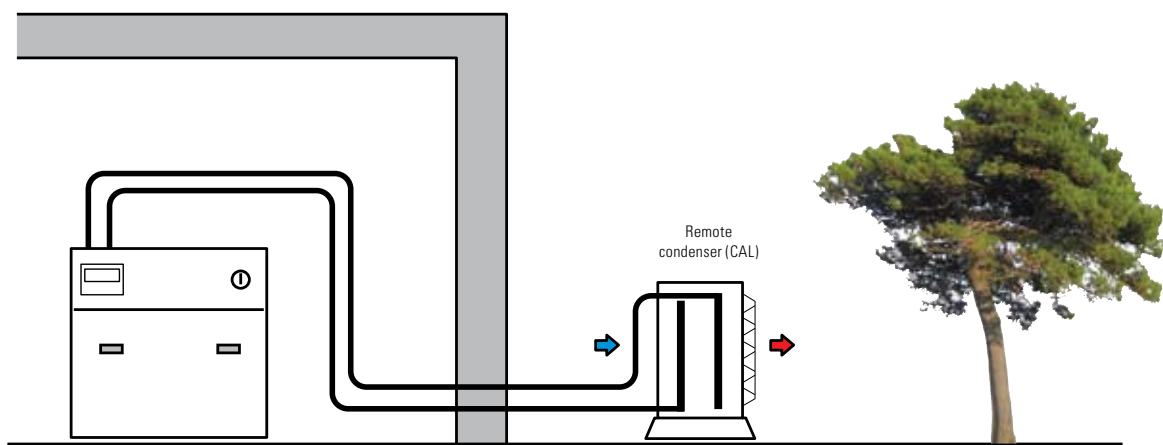
- basic
- low noise

Refrigerant R407C

Scroll Compressors

STANDARD FEATURES

- Self-supporting frame in galvanised steel with panels finished in epoxy powders (colour RAL9001) in compliance with ASTM B117
- Motor protection grade IP44
- Hermetic scroll compressor with incorporated thermal protection and anti-vibration supports
- Stainless steel brazed plate heat exchangers insulated with closed-cell expanded polyurethane
- Two refrigerant circuits conforming to EC Directives (PED 97/23/EC directive) including: filter dryer, flow indicator, thermostatic valves
- Electric panel conforming to EC Directive 73/23/EC and Directive EMC 89/336/EC with auxiliary transformer 24V circuit, general door lock switch, magneto-thermal protection cut-off switches
- Sequence phase control
- Water flow differential pressure switch
- Microprocessor control system including: local user control and monitoring terminal with LCD display and LED signals for all working parameters
 - chilled water temperature regulation
 - anti-freeze protection
 - compressor timing and protection
 - compressor function display
 - alarm code signalling and centralisation for general alarm control transmission
 - remote ON-OFF switch



TECHNICAL DATA

| ARRC MODEL | | 0182A | 0202A | 0232A | 0252A | 0302A | 0403A | 0504A |
|--------------------------------------|-----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Power supply | V/ph/Hz | 400 / 3 + N / 50 | | | | | | |
| Cooling capacity (1) | kW | 43.3 | 49.4 | 57.1 | 63.3 | 74.7 | 86.5 | 96.0 |
| Absorbed power (1) | kW | 16.33 | 19.62 | 22.52 | 26.51 | 29.15 | 34.26 | 40.27 |
| Circuits / compressors | nr. | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 3 | 2 / 4 |
| Condenser | nr. x mod | 2xCAL0801 | 2xCAL0801 | 2xCAL1011 | 2xCAL1011 | 2xCAL1301 | 2xCAL3002 | 2xCAL3002 |
| Partial heat recovery (2) | kW | 12.1 | 13.5 | 16.2 | 18.0 | 20.5 | 22.8 | 25.1 |
| Water flow (2) | l/h | 2080 | 2330 | 2790 | 3100 | 3540 | 3930 | 4320 |
| Pressure drop (2) | kPa | 15 | 7 | 10 | 9 | 11 | 13 | 12 |
| Water flow evaporator | l/h | 7450 | 8500 | 9830 | 10910 | 12850 | 14890 | 16520 |
| Airflow | l/h | 18990 | 18990 | 18090 | 18090 | 23630 | 31200 | 31200 |
| Pressure drop evaporator | kPa | 22 | 23 | 25 | 26 | 26 | 30 | 34 |
| Available head pressure (evaporator) | kPa | 205 | 186 | 167 | 162 | 153 | 180 | 166 |
| Noise pressure level (3) | dB(A) | 50.5 | 51.0 | 52.5 | 54.5 | 55.5 | 56.0 | 56.0 |
| Hydraulic connections inlet/outlet | | 2" gas f. | | | | | | |
| Dimensions and weight | | | | | | | | |
| Height | mm | 1452 | 1452 | 1452 | 1452 | 1452 | 1452 | 1452 |
| Width | mm | 1191 | 1191 | 1191 | 1191 | 1191 | 1191 | 1191 |
| Depth | mm | 905 | 905 | 905 | 905 | 905 | 905 | 905 |
| Weight (basic version) (4) | kg | 305 | 310 | 325 | 335 | 360 | 425 | 490 |

(1) Data refer to nominal conditions: water temperature 12/7°C; ambient temperature 35°C; R407C refrigerant

(2) Data refer to nominal conditions: chilled water temperature 12/7°C, recovery water temperature 40/45°C; ambient temperature 35°C; R407C refrigerant

(3) Measured in free-field conditions at 1 mt. from the front of the unit (at nominal conditions)

(4) Data refer to empty unit

Available pump groups (external)

| ARRC | 0182A | 0202A | 0232A | 0252A | 0302A | 0403A | 0504A |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| A (1.34 kW) | opz. | opz. | n.d. | n.d. | n.d. | n.d. | n.d. |
| B (1.50 kW) | opz. | opz. | opz. | opz. | opz. | n.d. | n.d. |
| C (2.35 kW) | opz. | opz. | opz. | opz. | opz. | opz. | opz. |

opz.= option; n.a.= not available

Available water tank (external)

| ARRC | 0182A | 0202A | 0232A | 0252A | 0302A | 0403A | 0504A |
|-----------|-------|-------|-------|-------|-------|-------|-------|
| A (210 l) | opz. | opz. | opz. | opz. | opz. | opz. | opz. |
| B (300 l) | opz. | opz. | opz. | opz. | opz. | opz. | opz. |
| C (500 l) | opz. | opz. | opz. | opz. | opz. | opz. | opz. |

opz.= option; n.a.= not available

CONSTRUCTION OPTIONS

- Low-noise version
- Management of Uniflair pump group to be installed externally for ARRC
- Microprocessor control advanced mP20 II
- Electronic expansion valve (*)
- RS485 serial adapter used to communicate with Uniflair supervision system or to interface with external BMS
- LAN card for the local network connection mP20 II control (only ARRC)
- Cascade management ready for 2, 3 or 4 units installed on

- a parallel hydraulic circuit connection (only with standard control)
 - High and low refrigerant pressure gauges
 - Version for the production of glycol water mixture at low temperatures (down to - 8 °C) (*)
 - Compressor power phase correction capacitors
 - R22 Refrigerant (available on request according to Reg. UE 2037/2000 standards)
 - R134a Refrigerant (*)
- (*) on request

OPTIONS

- External Uniflair pump groups with 1 or 2 circulation pumps (1 + 1 in stand-by), reservoir tank, safety valves: pump motor IP55
- External reservoir tank
- Remote user terminal (up to 150 meters) for:
 - display / changing set points
- display unit status and alarms
- Remote user terminal mP20 II (up to 200 meters) for:
 - display / changing set points
 - display unit status and alarms
- Rubber anti-vibration kit