

2BRAC



Air-cooled water chillers with axial fans for outdoor installation

Range:

Cooling capacity: 820 ÷ 1492 kW

Available versions:

- basic
- low noise

Refrigerant R407C/R134a*
Screw Compressors

STANDARD FEATURES

- Self-supporting frame in galvanized steel with panels finished in epoxy powders (RAL7037 colour)
- Four semi-hermetic double Screw compressors with internal thermal protection, oil heaters and anti-vibration supports; moreover the compressors can be equipped with the Economiser (optional)
- Four refrigerant circuits conforming to EC norms (PED 97/23/CE) in copper tubes mainly including: filter dryer, flow indicator, thermostatic valves with external equalisation (EEV optional), discharge shut-off valve, high and low pressure switches and high and low pressure transducers
- Two shell & tube evaporator with two independent cooling side circuits and one hydraulic circuit: the heat exchanger is insulated with closed-cell expanded neoprene
- Condensing coil with aluminium fins and internally grooved copper tubes
- Water flow pressure switch
- Sickle-blade axial fans, statically and dynamically balanced with safety protection grilles, protection grade IP54
- Modulating condensation control by fan speed regulation
- Double electric panel conforming to EC (Directive 73/23/EC and Directive EMC 89/336/EC, protection grade IP54) with anti-condensation heater (with low external temperature option), maximum internal temperature control, general cut-off switch, magneto-thermal protection for fans and auxiliaries, fuses for compressors and cut-off switches
- Sequence phase monitor
- Microprocessor control system UPC1m including:
 - local user terminal mP20 II visible on unit with panel
 - outlet chilled water temperature regulation
 - advanced 16 steps of the compressors management through automatic set-point sensitivity regulation;
 - compressor rotation with FIFO system (run time, protection and function)
 - monitoring of refrigerant charge (only with E.E.V.)
- rotation of pump group setting functioning and start of pump in stand-by (alarm display) in the event of pump breakdown
- advanced anti-freeze protection on evaporator
- integrated LAN card for local network connection of a group of chillers (up to 5 units)
- Integrated clock card
- Moreover microprocessor control system permits:
 - set-point adjustment from external signal 0-10V
 - management of double set-point and selection
 - free-contact for general alarm and 2 addressable alarm management
 - remote ON-OFF switch
 - ability to interface with Modbus protocol directly on RS485 serial card
 - ability to interface with main external communication protocols: Bacnet, Lonworks, Metasys, TCP/IP and SNMP

TECHNICAL DATA

²BRAC MODEL		3604A	4004A	4404A	5004A	5604A	6004A
Power supply	V/ph/Hz	400 / 3 + N / 50					
Compressors / circuits	n _o x mod	4 x Screw / 2					
Evaporator	n _o x mod	2 x Shell & Tube					
N _o of fans / N _o of poles		12 / 6	16 / 6	16 / 6	16 / 6	16 / 6	20 / 6
Basic version							
Cooling capacity (1)	kW	820	910	1022	1114	1254	1394
Cooling capacity ECO (2)	kW	876	980	1090	1186	1336	1492
Absorbed power (1)	kW	315	299	364	439	501	494
Absorbed power ECO (2)	kW	321	303	370	446	511	504
Noise pressure level (3)	dB(A)	66,0	67,0	67,5	67,5	70,0	70,5
Low noise version							
Cooling capacity (1)	kW	764	848	940	1024	1132	1266
Cooling capacity ECO (2)	kW	812	910	998	1084	1200	1348
Absorbed power (1)	kW	350	321	396	478	590	546
Absorbed power ECO (2)	kW	358	327	404	487	607	559
Noise pressure level (3)	dB(A)	59,0	59,5	60,0	60,0	60,0	60,5
Dimensions							
Height	mm	2525	2525	2525	2525	2525	2525
Length	mm	9860	12720	12720	12720	12720	15570
Width	mm	2200	2200	2200	2200	2200	2200

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

(2) Unit equipped with economiser, data refer to nominal conditions: water temperature 12/7°C; ambient temperature 35°C; refrigerant R407C

(3) Measured in free field at 10 m (Q=2, coil side) from the unit running in nominal conditions

CONSTRUCTION OPTIONS

- Low noise version
- Electronic expansion valve (E.E.V.)
- Economiser
- Partial heat recovery
- Production of glycol water mixture at low temperatures (down to - 10°C)
- High and low pressure gauges
- Integrated hydronic system with 1 or 2 pumps (1 + 1)
- Anti-freeze protection on evaporator, and pump group
- Evaporator / pumps protection grilles
- Condensing coils equipped with safety grilles and filter
- Suction shut-off valves on compressors
- RS485 serial adaptor used to communicate with Uniflair supervisory system or to interface with external BMS
- LON FTT10 serial adaptor used to communicate with external BMS managed with LON protocol
- Condensing coil cataphoresis treatment (*)

(*) on request

OPTIONS

Units can be supplied with the following construction options:

- Remote user terminal mP20II (up to 200 meters) for:
 - entering of commands
 - display unit status and alarms.
- Spring anti-vibration kit