

# Uniflair ERAF



## Range

Cooling capacity: 50 ÷ 120 kW

## Available versions

- Low noise
- Ultra-low noise

Refrigerant R410A  
Scroll compressors

## Standard features

- Exclusive free-cooling system completely managed by the microprocessor control.
  - Self-supporting frame in galvanized steel with panels varnished with epoxy powders (color RAL9022).
  - Access panel to the unit equipped with handles and fast screws.
  - Two hermetic scroll compressors with internal thermal protection, anti-vibration supports, and crankcase heaters.
  - Single refrigerant circuit\* conforming to EC Directives (PED 97/23/CE) in copper tubing including filter dryer, liquid sight glass, dual flow thermostatic valve with external equalization, high and low pressure switches, and high pressure transducers.
  - Environmentally friendly R410A refrigerant.
  - Water side brazed plate heat exchanger in stainless steel insulated with closed cell expanded polyurethane.
  - Free-cooling air side exchange coil with aluminum fins and mechanically expanded copper tubes.
  - Free-cooling pump driven by microprocessor control.
  - Water flow differential pressure switch.
  - Acousti-Composite fans: sickle-blade axial fans, statically and dynamically balanced and made from composite materials for high efficiency and low acoustic impact with internal and external safety protection grilles (motor with IP54 protection grade).
  - Modulating condensation control based on the condensation pressure.
  - Electrical panel conforming to EC Directives (2006/95/EC and EMC 2004/108/EC), protection grade IP54 with auxiliary transformer, lockable general cut-off switch, anti-condensation heaters, automatic magneto-thermal cut-off switches, and remote control.
  - Sequence phase control.
- Evolved UpCO1m control for:
    - Discharge water temperature regulation
    - Management of the electronic thermostatic valve
    - Management of intelligent free-cooling
    - Monitoring of the refrigerant load
    - Self-adjustment of the set-point regulation
    - Integrated LAN card
    - Compatibility with Modbus protocol via RS485
    - Compatibility with the most common external BMS: LonWorks, BACnet, TCP/IP, Trend

\* ERAF models with \*\*22A suffix are available with two compressors on two circuits.

Technical Data											
ERAF Model		0521A	0621A	0721A	0821A	0921A	0922A	1021A	1022A	1221A	1222A
Power supply	V/ph/Hz	400/3 + N/50									
Fans	nr.	2	2	2	3	3	3	3	3	4	4
Refrigerant circuits	nr.	1	1	1	1	1	2	1	2	1	2
Compressors	nr. x mod.	2 x scroll									
Evaporator	nr.	1	1	1	1	1	2	1	2	1	2
Evaporator	mod	Plate									
ERAF — Low Noise Version											
Cooling capacity (1)	kW	48	56	66	76	84	84	97	97	112	112
Absorbed power (1)(2)	kW	14,8	18,9	20,9	23,5	27,8	27,8	32	32	37,7	37,7
EER (1)(2)		3,24	2,96	3,16	3,23	3,02	3,02	3,03	3,03	2,97	2,97
Free-cooling capacity (3)(4)	kW	35	37	43	52	53	53	62	62	71	71
ERAF — Ultra Low Noise Version											
Cooling capacity (1)	kW	46	55	64	74	81	82	94	94	109	109
Absorbed power (1)(2)	kW	15,6	19,5	21,8	24,8	28,9	28,9	33,2	33,2	39,1	39,1
EER (1)(2)		2,95	2,82	2,94	2,98	2,80	2,84	2,83	2,83	2,79	2,79
Free-cooling capacity (3)	kW	35	36	43	51	53	53	62	62	71	71
Dimensions and Weights											
Height	mm	1,560	1,560	1,560	1,560	1,560	1,560	1,875	1,875	1,875	1,875
Depth	mm	1,190	1,190	1,190	1,190	1,190	1,190	1,190	1,190	1,190	1,190
Width	mm	2,010	2,010	2,805	2,805	2,805	2,805	3,075	3,075	3,075	3,075
Weight (basic version)(6)	kg	700	705	855	884	890	881	1,128	1,107	1,157	1,137

1. Data refer to nominal conditions: water temperature 10/15 °C, external temperature 35 °C, glycol 20%, R410A refrigerant, fouling factor 0.0 m<sup>2</sup> °C/W
2. Data refer to total absorbed power (compressors and fans)
3. Data refer to nominal conditions: inlet water temperature 15 °C, external temperature 5 °C, glycol 20%, fouling factor 0.0 m<sup>2</sup> °C/W
4. Data refer to the absorbed power of the fans and the free-cooling pump
5. Data measured in free field at 10 meters from the unit operating without pump at nominal conditions, with fans at nominal conditions, coil side, Q=2 directional factor. At different conditions, with different configurations and/or with EC fans, noise values may vary.
6. Data refer to empty unit

## Construction options

- Ultra-low noise version via a specific algorithm and soundproofing of the compressors.
- Partial condensation heat recovery.
- Integrated hydraulic module with one or two pumps (1 + 1 standby) with heat-protected circulation, expansion vessel and safety valve.
- Internal water tank.
- Internal water tank including a pump to manage the primary circuit.
- Power factor improvement compressors.
- Compressor soft start.
- Cataphoresis treatment for the condensing coils.
- Shut-off taps on the compressor discharge.
- Evaporator, water tank, and pump group antifreeze heaters.
- Modification of the set point by external 0 V – 10 V signal.

## Options

- Remote user terminal mP20 II (up to 200 meters) for:
  - Entering of commands
  - Display unit status and alarms
- Electronic expansion valve directly controlled by the unit microprocessor control.
- Clock card.
- RS485 serial card, FTT-10, or TCP/IP for connection to external BMS.
- Metal filters and protection grilles for the condensing coils.
- Rubber or spring anti-vibration supports.