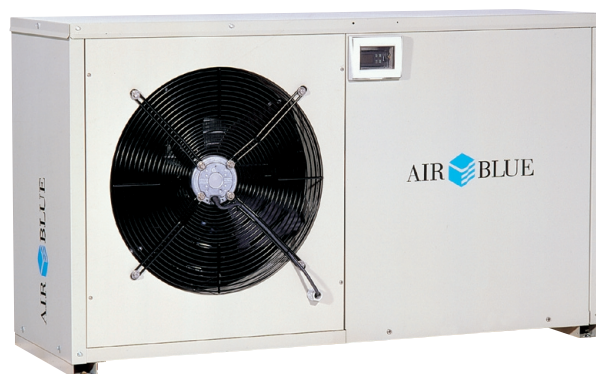


AIR  BLUE
a i r c o n d i t i o n i n g

Air/Water chillers and heat pumps with axial fans, scroll compressors, storage tank and water pump, evaporator of the coaxial type.



GENERAL DESCRIPTION

Unit Frame.

Galvanized steel frame with 180° baked-on epoxy-polyester powder paint for maximum weather resistance even in marine environments. RAL 7032 colour paint.

Compressor.

Lownoise, scroll type compressor with thermal overload cutout included in motor windings and rubber vibration-damping supports. The three-phase models are equipped with a safety device (phase sequence relay), that prevents reverse compressor rotation, and a crankcase heater.

Condenser.

Copper tube coils with aluminium fins. The finned coil pack is protected by a galvanized metal guard.

Fans.

Axial fans directly coupled to 6-pole single-phase motor, IP 54 fan protection grading. Fitted with accident-prevention guard.

Evaporator.

Of the coaxial type, immersed in storage tank with anti-condensate insulation consisting of closed-cell foam material, chilled water pump and flow switch.

Refrigerant circuit.

With charging connection, drier filter, liquid sight glass (on models 410-610-810 only), thermostatic valve, melting plug.

Electrical panel.

The panel includes:

- main switch (on models 410-610-810 only);
- compressor and control circuit protections;
- compressor contactor;
- 230÷24 V transformer.

Microprocessor.

It controls the following functions:

- water temperature control;
- anti-freeze protection;
- compressor operation timing;
- alarm reset;
- alarm buzzer;
- digital input for external ON/OFF signal
- potential contact for remote alarm signals.

Digital display of:

- inlet and outlet water temperature;
- temperature and differential settings;
- hour meter readouts of compressor and pump operation;
- alarm description;
- operating status indicator (summer/winter) - green LED;
- compressor status indicator - green LED.

Other controls.

- manual-reset high pressure switch;
- automatic-reset low pressure switch;
- flow switch on evaporator water circuit.

Testing.

The units are factory tested and come with anti-foaming synthetic oil and R 407C refrigerant.

AVAILABLE VERSIONS

FREEZY/HP reversible heat pump. In addition to the basic version components, the unit also includes:

Refrigerant circuit:

four-way diverting valve, liquid receiver, check valve, second thermostatic valve.

Electrical panel:

- a microprocessor also controls the following functions: summer/winter changeover, automatic defrost.

ACCESSORIES

- remote control terminal;
- card for RS485 serial line;
- rubber vibration dampers;
- special voltages: 400V/3pH/50Hz for models 210 to 360;
- fan speed control;
- coils with special treatments.

**Water chillers and air/water heat pumps
with axial fans and scroll compressors.**



GENERAL DESCRIPTION

Unit Frame.

Galvanized steel frame with baked-on epoxy-polyester powder paint. RAL 7032 colour.

Hermetic compressors.

Scroll and reciprocating type (mod. 181-201) with thermal overload cutout, mounted on rubber vibration-dampers, installed in a technical compartment separated from the air flow.

Refrigerant circuit.

With charging connection, liquid sight glass (except 21-31-36), drier filter, thermostatic expansion valve, high and low pressure switches, safety devices.

Evaporator.

Braze-welded plate type with anti-condensate insulation, anti-freeze protection and mechanical flow switch.

Condenser.

With finned coils and galvanized metal protection guard.

Axial fans.

Directly coupled to single-phase, 6-pole motors with speed control and accident-prevention guard.

Electrical panel.

With main switch, power and control circuit protection, compressor contactor.

Microprocessor-controlled unit with function display mode.

Testing.

Units are factory tested and supplied with initial refrigerant and oil charge.

AVAILABLE VERSIONS

ALFA

Water chiller.

ALFA/HP

Heat pump equipped with four-way diverting valve, liquid receiver, second thermostatic expansion valve and suction line separator (mod. 181-201).

Defrosting for summer/winter changeover.

ALFA/ST

Hydraulic circuit featuring insulated storage tank, water pump, safety valve and expansion vessel (for heat pump only).

ACCESSORIES

- no-frost electric heater on evaporator (for /ST, installed also in tank, pumps and pipes);
- desuperheater for 20% recovery of condensation heat (from 91 to 201);
- 100% condensation heat recovery condenser (from 91 to 201);
- rubber vibration dampers;
- coils with special treatments;
- special voltages;
- expansion vessel (standard on ALFA/ST/HP);
- automatic filling unit with gauge;
- additional heaters for ALFA/ST/HP units);
- remote control terminal;;
- card for RS 422 or RS 485 serial line.

ALFA - R407C TECHNICAL DATA

Unit size		21	31	36	41	61	81
Cooling(*)							
Nominal capacity	kW	4,6	7,0	8,2	10,0	12,4	14,9
Heating (**)							
Nominal capacity	kW	5,2	8,0	9,2	11,2	13,6	16,4
Compressor							
Quantity	n°	1	1	1	1	1	1
Type	/	scroll	scroll	scroll	scroll	scroll	scroll
Cooling power input	kW	1,6	2,5	2,8	3,4	4,1	4,8
Heating power input	kW	1,8	2,7	3,1	3,7	4,4	5,1
Fans							
Air flow	m³/s	0,83	0,83	0,83	1,8	1,8	1,8
N° X installed capacity	n° x kW	1 x 0,14	1 x 0,14	1 x 0,14	1 x 0,37	1 x 0,37	1 x 0,37
Refrigerant charge							
For water chiller version	kg	1,7	2,0	2,1	3,0	3,2	3,7
For heat pump version	kg	2,2	2,5	2,6	4,0	4,2	4,7
Oil charge	kg	1,00	1,10	1,10	1,85	1,55	1,65
Heat exchanger water volume	dm³	0,50	0,85	0,85	1,03	1,41	1,41
ST version							
Pump nominal power	kW	0,22	0,22	0,22	0,46	0,46	0,46
Water flow rate	l/s	0,220	0,334	0,392	0,478	0,592	0,712
Pump available pressure	kPa	69	67	64	165	155	131
Storage tank capacity	l	70	70	70	70	70	70
Expansion vessel	l	2	2	2	2	2	2
Shipping weight (#)	kg	96	100	101	136	138	141
Shipping weight ST vers. (#)	kg	152	156	157	192	194	197
Unit size		91	101	141	161	181	201
Cooling(*)							
Nominal capacity	kW	20,1	26,3	32,9	38,2	43,0	49,8
Heating (**)							
Nominal capacity	kW	21,9	29,8	36,5	42,9	44,1	52,6
Compressor							
Quantity	n°	1	1	1	1	1	1
Type	/	scroll	scroll	scroll	scroll	reciprocating	reciprocating
Cooling power input	kW	6,5	8,9	10,8	12,7	14,6	17,8
Heating power input	kW	6,8	9,3	11,3	13,4	13,3	16,3
Fans							
Air flow	m³/s	2,12	2,12	5,0	5,0	3,5	3,5
N° X installed capacity	n° x kW	1 x 0,53	1 x 0,53	2 x 0,53	2 x 0,53	2 x 0,53	2 x 0,53
Refrigerant charge							
For water chiller version	kg	4,5	5,5	7,2	9,0	10,0	12,0
For heat pump version	kg	6,0	7,0	8,8	10,6	14,0	16,0
Oil charge	kg	2,5	2,5	4,0	4,0	6,6	6,6
Heat exchanger water volume	dm³	1,60	2,35	2,91	3,57	3,57	4,00
ST version							
Pump nominal power	kW	0,62	0,62	0,82	0,82	0,90	0,90
Water flow rate	l/s	0,960	1,256	1,572	1,825	2,054	2,379
Pump available pressure	kPa	116	93	124	110	153	121
Storage tank capacity	l	100	100	200	200	200	200
Expansion vessel	l	2	2	5	5	5	5
Shipping weight (#)	kg	189	243	337	357	391	400
Shipping weight vers. ST (#)	kg	240	292	401	423	460	479

(*) Ambient air temperature 32 °C; evaporator inlet/outlet water temperature 12-7 °C.

(**) Ambient air temperature 8 °C DB, 6 °C WB; condenser inlet/outlet water temperature 40-45 °C.

(#) For heat pump units increase weight by 10%.

Air-condensed liquid chillers with axial fans and free-cooling coils.



GENERAL DESCRIPTION

Unit Frame.

Galvanized steel frame with baked-on epoxy-polyester powder paint. RAL 7032 colour.

Hermetic compressors.

Scroll type compressors with thermal overload cutout, mounted on rubber vibration dampers, installed in a technical compartment separated from the air flow.

Refrigerant circuit.

With charging connection, liquid sight glass, drier filter, thermostatic expansion valve, low ambient liquid back-up kit, high and low pressure switches, safety devices.

Evaporator.

Braze-welded plate type with anti-condensate insulation, anti-freeze protection and mechanical flow switch.

Condenser.

Of the finned-coil type, with copper tubes and aluminium fins.

Axial fans.

Directly coupled to single-phase, 6-pole motors, with accident-prevention guard. Free-cooling coils

charged with a water/glycol mixture and encased in an aluminium frame. Vent valves and discharge valves, galvanized metal protection guard.

Hydraulic circuit.

With insulated storage tank, water pump, safety valve, three-way valve for free-cooling.

Electrical panel.

With main switch, power and control circuit automatic breakers, pump motor overload cutout, compressor and pump contactors. Microprocessor-controlled unit with function display mode. Free-cooling logic.

Testing.

Units are factory tested and supplied with refrigerant and oil charge.

ACCESSORIES

- no frost kit (evaporator, storage tank, pumps and pipings);
- rubber vibration dampers;
- coils with special treatment;
- special voltages;
- expansion vessel;
- automatic filling unit with gauge;
- remote control terminal;
- card for RS 485 serial line.

ALFA/ST/FC - R407C TECHNICAL DATA

Unit size

Cooling(*)

Total nominal capacity	kW
Sensible nominal capacity	kW

Heating (**)

Nominal capacity	kW
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Compressors

Quantity	n°
Capacity steps	%
Refrigerant circuits	n°
Cooling power input (*)	kW
Heating power input (**)	kW

Evaporator

Air flow	m³/s
Fan motors X installed capacity	n° x kW
Available static pressure	Pa

Condenser

Air flow	m³/s
Fan motors X installed capacity	n° x kW

Refrigerant charge

For water chiller version	kg
For heat pump version	kg

Oil charge

	kg
--	----

Shipping weight (#)

	kg
--	----

*Data currently being updated.
Please contact our sales office*

Unit size

Cooling(*)

Total nominal capacity	kW
Sensible nominal capacity	kW

Heating (**)

Nominal capacity	kW
------------------	----

Compressors

Quantity	n°
Capacity steps	%
Refrigerant circuits	n°
Cooling power input (*)	kW
Heating power input (**)	kW

Evaporator

Air flow	m³/s
Fan motors X installed capacity	n° x kW
Available static pressure	Pa

Condenser

Air flow	m³/s
Fan motors X installed capacity	n° x kW

Refrigerant charge

For water chiller version	kg
For heat pump version	kg

Oil charge

	kg
--	----

Shipping weight (#)

	kg
--	----

*Data currently being updated.
Please contact our sales office*

ALFA/ST/FC

Prices Units	91	101
ALFA/ST/FC	13.974	15.398
2.5% reduction in price of basic unit for R22 refrigerant.		

Prices Accessories	91	101
Remote control terminal for "main" microprocessor	282,03	282,03
Card for RS 485 serial line for "main" microprocessor	266,02	266,02
Expansion vessel	223,66	223,66
Rubber vibration dampers	80,07	80,07
Anti-freeze kit (evaporator, tank, pumps and piping)	691,64	691,64
Automatic filling unit with gauge	112,09	112,09
Coil with cataphoretic treatment °	893,60	893,60
Copper/copper coil °	893,60	2.154,96
Copper/tin-plated copper coil °	2.444,74	2.740,19
Special supply voltage: 400/3/50+N*	S	S
Special supply voltage: 220/3/50*	+3%	+3%

(*) % increase calculated on the basic unit.

(S) Standard.

(-) Not available.

(°) The price refers to a single coil.

ALFA/ST/FC

141	161
18.138	20.111

141	161
282,03	282,03
266,02	266,02
223,66	223,66
80,07	80,07
691,64	691,64
112,09	112,09
989,67	989,67
2.372,94	2.372,94
3.032,55	3.032,55
S	S
+3%	+3%