

## Split air conditioners and air/air heat pumps with hermetic scroll compressors

40 ÷ 85 kW



### DELTA 2002

Air conditioner

#### Unit frame

Self supporting, galvanized steel frame with baked-on polyester powder coating. The two sections are separate, both equipped with removable panelling insulated with an interior sound absorbing mat.

#### Compressors

Hermetic scroll compressors, connected in parallel (tandem).

Equipped with crankcase heater, thermal overload protection, sight glass and oil equalisation line.

#### Refrigerant circuit

Includes: liquid line shut-off valve, solenoid valve on liquid line, charge connection, sight glass, filter dryer, thermostat expansion valve, high and low pressure switches, safety valve

#### Condenser

High performance finned coil with metal guard.

#### Condenser side fans

Centrifugal with 4-pole, 3-phase electric motors, belt/pulley drive and safety guard on delivery outlet. Vertical air flow (horizontal on request).

Axial version on request with directly coupled 6-pole electric motors and safety guard.

#### Evaporator

High performance finned coil with copper tubes and aluminium fins.

#### Evaporator side fans

Centrifugal with 4-pole, 3-phase electric motors, belt/pulley drive and safety guard on delivery outlet. Horizontal air flow (vertical on request).

#### Air filter

Synthetic, regenerable and self-extinguishing with EU3 filtration grade. Mounted on suction side and accessible from both sides.

#### Electrical panel

With main switch, power and control circuit protection, contactors for compressors and fans, terminals for external enabling, voltage-free contacts for general alarm.

Microprocessor control with function display and control panel for remote installation.

#### Testing

Units are factory-tested and supplied with oil charge.

Refrigerant fluid charged in condensing unit section; evaporating section supplied with nitrogen charge.

### DELTA 2002 /HP

Reversible heat pump

In addition to the components featured on Delta 2002, this model includes: liquid receiver, 4-way reversing valve and additional thermostatic expansion valve. Reverse cycle defrost function.

### ACCESSORY VERSIONS

#### DELTA 2002 /LN

Low noise unit: compressor compartment insulated with sound absorbing mat and high acoustic impedance material.

### MAIN ACCESSORIES

- Condensing pressure control:
  - with modulating damper (air down to -12 °C), for units with centrifugal fans
  - with fan speed control (air down to -20 °C), for units with axial fans.
 In both cases signals are delivered from pressure transducers
- Electric heating coil
- Water heating coil, with or without 3-way valve
- Condenser coils with special treatments
- Liquid receivers
- RS 485 microprocessor serial interface card for remote supervision or tele-assistance via personal computer. Carel communication protocol
- User terminal on board the condensing unit.

## DELTA 2002 - R407C TECHNICAL DATA

Unit size		3.2	4.2	5.2
<b>Nominal cooling capacity total (*)</b>	kW	39,5	47,5	55,5
<b>Nominal cooling capacity sensible (*)</b>	kW	25,7	30,7	35,7
<b>Nominal heating capacity (**)</b>	kW	36,8	45,2	52,6
<b>Compressor</b>				
Quantity/Refrigerant circuits	n°	2/1	2/1	2/1
Cooling power input (*)	kW	12,2	14,8	17,1
Heating power input(**)	kW	9,9	12,3	14,3
Capacity steps	%	50-100	50-100	50-100
<b>Evaporator characteristics</b>				
Air flow	m³/s	3,333	3,333	4,028
Available static pressure	Pa	80	80	80
No. of fan motors. X installed power	n° x kW	1 x 1,5	1 x 1,5	1 x 2,2
<b>Condenser characteristics ( centrifugal fans)</b>				
Air flow	m³/s	5,278	5,278	5,278
Available static pressure	Pa	50	50	50
No. of fan motors. X installed power	n° x kW	2 x 1,5	2 x 1,5	2 x 1,5
<b>Noise level</b>				
Basic unit condensing section (***)	dB(A)	71,4	71,8	71,9
LN version condensing section (***)	dB(A)	68,9	69,4	69,3
Evaporating section (****)	dB(A)	69,0	69,0	72,1
<b>Power supply</b>	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50
<b>Condensing section dimensions and weight</b>				
Width	mm	2.233	2.233	2.233
Depth	mm	1.090	1.090	1.090
Height (vertical delivery)	mm	1.630	1.630	1.630
Operating weight	kg	658	669	676
<b>Evaporating section dimensions and weight</b>				
Width	mm	2.203	2.203	2.203
Depth	mm	1.147	1.147	1.147
Height	mm	1.100	1.100	1.100
Operating weight	kg	298	298	306

Unit size		6.2	7.2	8.2
<b>Nominal cooling capacity total (*)</b>	kW	65,5	74,3	85,4
<b>Nominal cooling capacity sensible (*)</b>	kW	41,9	47,4	55,4
<b>Nominal heating capacity (**)</b>	kW	60,6	68,7	79,8
<b>Compressor</b>				
Quantity/Refrigerant circuits	n°	2/1	2/1	2/1
Cooling power input (*)	kW	19,6	22,2	26,0
Heating power input(**)	kW	16,4	18,6	21,6
Capacity steps	%	50-100	50-100	50-100
<b>Evaporator characteristics</b>				
Air flow	m³/s	4,028	4,028	4,444
Available static pressure	Pa	80	80	100
No. of fan motors. X installed power	n° x kW	1 x 3,0	1 x 3,0	1 x 3,0
<b>Condenser characteristics ( centrifugal fans)</b>				
Air flow	m³/s	5,833	5,833	6,111
Available static pressure	Pa	50	50	50
No. of fan motors. X installed power	n° x kW	2 x 2,2	2 x 2,2	2 x 3,0
<b>Noise level</b>				
Basic unit condensing section (***)	dB(A)	72,4	72,6	73,6
LN version condensing section (***)	dB(A)	69,9	69,9	70,9
Evaporating section (****)	dB(A)	72,3	72,3	74,0
<b>Power supply</b>	V/ph/Hz	400/3~/50	400/3~/50	400/3~/50
<b>Condensing section dimensions and weight</b>				
Width	mm	2.233	2.233	2.233
Depth	mm	1.090	1.090	1.090
Height (vertical delivery)	mm	1.630	1.630	1.630
Operating weight	kg	725	739	782
<b>Evaporating section dimensions and weight</b>				
Width	mm	2.203	2.203	2.203
Depth	mm	1.147	1.147	1.147
Height	mm	1.100	1.100	1.100
Operating weight	kg	318	338	338

(\*) Ambient air temperature 35°C; evaporator inlet air temperature 26°C DB, 19°C WB.

(\*\*) Ambient air temperature 8°C DB, 50% R.H.; condenser inlet air temperature 20°C DB.

(\*\*\*) Sound pressure levels measured in free field conditions at 1m from the unit, according to ISO 3746.

(\*\*\*\*) Sound pressure levels referred to fans only, measured at 1 metre from the delivery outlet at an angle of 45°.

This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation