



AIR SOURCE HEAT PUMP HIGH TEMPERATURE

ecological & economical

Heat more efficiently and heat cleanly, consuming less energy to preserve resources for future generations.

Because this is the only planet we have !

The high temperature heat pump Dakota type uses an innovative technology that fully meets the specific constraints of renovation : in total replacement or replacing an existing fossil fuel heater. It works with R134a and R410A fluids and contributes to effectively fight against the greenhouse effect. An ecological heater range, which does not emit CO₂.

Because the air we breathe is more precious than we realize !

Each day, the air is heated by the sun. So, the air contains thermal energy available in unlimited quantities.

This free energy in the outside air is pumped into the home by our Dakota for heating.

TEMPORARY DOCUMENTATION
Product marketed in September 2010



Intelligent design

The high temperature Dakota is an air-to-water heat pump able to produce hot **water for house heating up to 70°C even down -15°C outside temperature**. It also allows the production of domestic hot water (**integrated DHW function**).

The inverter technology prevents over current at startup and modules the capacity according to the heating needs. 3 capacities available in single and / or 3 phases : 11.5kw, 14.5kw and 16.5kw, to meet your expectations.

It is a ready-to-use solution that includes all water connections, and several integrated components (brazed plate heating exchangers, 3-speed circulating pumps, flow switch, controller, air purging valve, hydraulic filter sieve...).

The indoor unit has been designed for easy access to all components, providing easier maintenance.



Your personalized assessment

Consopac software, developed by Airpac, estimates your energy and environmental balance from your heating loss.

It allows to compare consumption, costs and impact on the greenhouse of the Dakota System, in relation to different types of heating systems on the market (electric, gas, oil ..)

The most accomplished technology...

... In the field of high temperature heat pump : the two-stage system applied to Dakota.

The R410A first stage operates alone when outdoor temperatures are mild. A «booster» stage using R134a complete the capacity and increase the temperature for the coldest periods of winter. So you get an outlet temperature till 70°C, even for temperatures as low as -15°C outside. The R134a «booster» stage operates only when it's needed, allowing to achieve real savings for maximum comfort.

A general design that respects the operation limits related to the compressors and their fluids, and increase the products lifetime.



Printed on recycled paper.

Efficient and quiet

The technology used in the design of Dakota high temperature heat pump allows the profit of exceptional performance of the heat pump using R410A DC Inverter when the outdoor temperature stays above +5°C. In these conditions, it will offer you one of the best COP in its class. So,

for 1 kWh of electricity consumption, the system produces up to 4kWh of heating.

In winter, when temperatures are low or extra low (from +5°C to -15°C outside temperature), Dakota product offers you a constant heating for a water temperature up to +70°C without the use of any complementary electrical heaters. The indoor unit has a reinforced acoustic insulation, that makes it very quiet.

Your installer :

Dakota Characteristics		Dakota 11	Dakota 15	Dakota 17
Heating capacity ⁽¹⁾	kW	11,5	14,5	16,5
Coefficient of performance COP ⁽¹⁾	kWh/kWh	3,90	4,02	3,95
Heating capacity ⁽²⁾	kW	7,5	11,5	13,5
Coefficient of performance COP ⁽²⁾	kWh/kWh	1,6	1,8	1,8
Maximum outlet water temperature	°C	+70°C down to - 15°C outside		
Minimum operating outside temperature	°C	-20°C		
Power supply	V/Ph/Hz	Single Phase 220-240 V/1N+T/50 Three phase 380-415 V/3N+T/50		
Refrigerant types	-	R 410 A and R134 a		
Indoor unit				
Weight (+ water charge)	kg	200 (+50)	220 (+50)	220 (+50)
Heigh x width x depth	mm	1700 x 700 x 800		
External optional electric heater	kW	2/4/6	2/4/6	2/4/6
Outdoor unit				
Weight	kg	65	109	111
Heigh x width x depth	mm	1330 x 940 x 410		
Acoustic power Lw	dB(A)	69	69	70
Acoustic pressure Lp at 1m/2m/5m ⁽³⁾	dB(A)	58/52/44	58/52/44	59/53/45

⁽¹⁾ Conditions NF EN14511 : Air 7°C/6°C - Water 30°C/35°C - ⁽²⁾ Conditions : Air -7°C/-8°C - Water */65°C

⁽³⁾ According to the product environment, the sound pressure measured on site can be substantially higher than the value declared.

Preliminary technical data given as guidelines, subject to change without notice as part of the continuous improvement of our products.

Ref. 35132 - 07/2010

Non-building pictures

Concept and creation tfv.fr