HEAT PUMPS

ENERGY - HP V, M, D

DOMESTIC HOT WATER 60°C
VENTILATION FUNCTION CMV

The unit energy produces sanitary warm water using the well-established technology of the heat pumps.
The principle of functioning is the following:

- The refrigerating fluid changes its state in the evaporator taking heat from the low temperature source (the external air).
- The compressor, that is the beating heart of the system, makes the energy level of the taken heat higher: in fact, the refrigerating fluid, by increasing its pressure, reaches temperatures near to 90°C.
- In the condenser it is possible to give thermal energy to the sanitary water, warming it until 60°C.The accumulation (200, 300 litres) allows to store up and keep for a long time the heat, thanks to insulating shell in polyurethane 50mm thick.
- Crossing in the end the expansion element, the fluid returns to low pressure, cools down and it is available to “load” other “ecological” heat again from external air.

It is also possible to employ auxiliary sources, with additional exchangers connected to boilers or solar panels .The standard unit adopts a 1.5 kW single-phase electrical resistance. The boiler is made of carbon steel, with inside treatment of two layers SMALGLASS, inspection-flange, magnesium-anode, external, coating in plastic material (PVC).

TECHNOLOGIC PLUS:

- Tank in steel with two layers vitrificazione.
- Front flange ø 180mm.
- Condenser, which is winded externally to the boiler; it is exempt from incrustations and gas-water contamination.
- Auxiliary coil for the use in combination with boilers or solar panels..
- NTC integrated probe for the control of water temperature..
- External air probe for the automatic insertion of the resistance with tempera tures that are not favourable to the heat pump.
- Magnesium anode antic-corrosion
- Hydraulic connections on the back side
- Thermal insulation in expanded polyurethane with high thickness (PU).
- External covering in grey plastic material RAL 7001.
- Adjustable supports.
- Ecological gas R134A
- 1,5 KW 230V ELECTRICAL RESISTANCE.
- IEC supply connector, which is endowed with double fuse and insulating sheath (UL, CSA, IMQ, SEMKO, VDE approval).
- Safety device for high pressure
- Alternative hermetic compressor.

BOILERNOVA INDIA

HEAT PUMPS

- Radial fan with capacity control..
- Support handles for a safe and easy transport..
- Electronic running:
- Regulation water set-point
- Recording of external air temperature;
- Self-diagnosis with display high/low pressure alert, over-temperature water, disconnected probes/feelers;
- Recording functioning hours;
- Management of minimum time intervals between successive starting of the compressor;
- Setting out parameters by keyboard;
- Management of the electrical resistance in manual way or in automatic integration with low values of the external temperature;
- Insertion of the cyclic antibacterial treatment to eliminate and avoid the formation of legionnaire.
- - User interface for the setting of the functioning mode and of the various parameters with differents steps of accessibility by password.

Heat pumps energy use the thermal energy of the air for the production of sanitary warm water. The process takes place in the most effective and profitable way, with C.O.P.> 3 (average). The energetic advantage of the heat pumps energy, therefore, allows to safeguard the environment, using above all the energy of the solar radiation. The easeness of installation, the silent and reliable functioning and the very small need of maintenance, complete the advantages of this greatly ecological and economic system.

MODELLO / MODEL / MODELE / MODELL		HP V 300	HP M 300	HP D 300
Capacita accumulo / Accumulation capacity Capacite ballon / Speicherkapazitat	litri / litres litre / litrer	300	295	290
Superficie serpentino / coil surface Surface de'lechangeur / Flache der rhorshlange	m^2	/	1,5	0,8 / 1,5
Portata necessaria al serpentino / Flow required by the coil Debit d'eau necessaire a l'echangeur / Erfordelicher durchfluss zur rochrshlange	m^3/h	/	1,6	0,8 / 1,6
TUTTI I MODELLI / ALL MODELS / TOUS LE MODELES / ALLE MODELLE				energy
Pressione di lavoro / Operating pressure / Pression de service / Arbeitsdruk			bar	6
Alimentazione elettrica / Power supply / Alimentation electrique / Spannungsversongung			V / Ph / Hz	230 / 1 /50
Temperatura max acqua / Max water temperature / Temperature maximale de l'eau / Max wassertemperatur			°C	60
Temperatura ambiente (min / max) / Min / max room temperature / Temperature ambiante / Raumtemperatur (min/max)			°C	8/32
Potenza termica resistenza / Electrical resistance / Puissance de la resistance electrique / Warmeleistung Elektroheizung			W	1500
Potenza termica (45° - media) / Heating capacity (45° - average) / Puissance thermique (45° - moyenne) / Warmeleistung (45° - mittlerer)			W	1940
Potenza assorbita (media) / Power absorption (average) / Puissance absorbee (moyenne) / Aufgenommene Leistung (mittlerer) [00]			W	655
Refrigerante / Refrigerant / Refrigerant / Kaltemittel			tipo / type	R134A
Carica refrigerante / Refrigerant charge / Capacite du refrigerant / Kaltemittelfullung [(2)]			g	950
Livello sonoro / Sound pressure level / Niveau sonore / Geraushpegel			db (A)	52
C.O.P (45°)[(1)]				3,25
Portata d'ana / Air flow rate / Volume d'air / Luftmenge			m^3/h	450
Max lunghezza canalizzazioni / Max ducting lenght / Longueur maximale des gaines			m	10
Diametro minimo canale / Min ducting diameter / Diametre minimal des gaines			mm	160