

HEAT PUMP PACK



Tailored made solutions for
heat pump installations.

VISION

WE BELIEVE IN EDUCATION

We are committed to make our deep knowledge at disposal of our customers to help UK hydronic industry to advance and create more healthy places where people live, work, learn and play.

MISSION

IMPROVING BUILDING COMFORT

We feel responsible for the environment, therefore we constantly look for supplying innovative solutions to enable our customers to win everywhere, everyday, sustainably.

PETTINAROLI GROUP



A GLOBAL
PRESENCE

HEAT PUMPS – THE FACTS

Heat pumps supply more energy than they consume, by extracting heat from their surroundings. Currently heat pump systems can supply as much as 3kW of heat output for just 1kW of energy input. Unlike other heating systems heat pumps can also be used for cooling. They are used for commercial space heating, domestic heating and process heating.

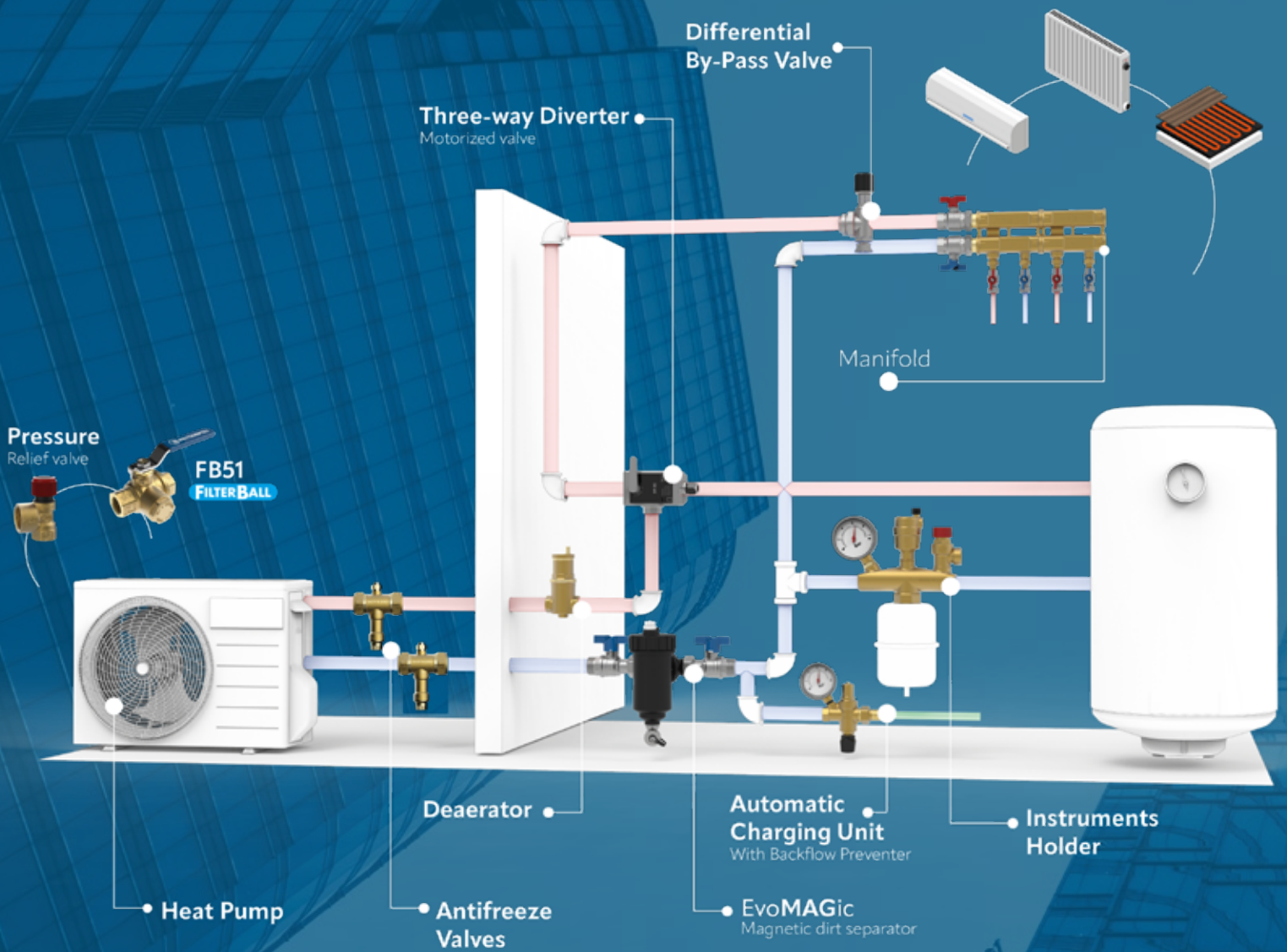
SOME OF THE **KEY ADVANTAGES** OF USING **HEAT PUMPS** ARE:

- ✓ **Zero emissions** – reduce your environmental impact
- ✓ The utilisation of **natural**, inexhaustible **energy sources**
- ✓ **Efficiency**: renewable energy sources are up to 5 times more efficient than traditional energy sources, such as gas

LIKE MOST TECHNOLOGY, **HEAT PUMPS** WILL ONLY PRODUCE THEIR **GREATEST BENEFITS** IF THEY ARE **FULLY UNDERSTOOD BY SPECIFIERS, INSTALLERS AND USERS**



DISCOVER OUR HEAT PUMPS SOLUTION





Antifreeze
Valve

PE.AG100



Dirt
Separator

PEK103/2



By-Pass
Valve

PEC309VE



Long Neck
Ball Valve

PE51L

BASIC



Deareator

PE740



Automatic
Filling Unit

PE11X



Diverting Valve +
Actuator

PE88MEC34+SM90



Instrument
Holder

PE135

PREMIUM

PE.AG100



The antifreeze valve protects the circuit from frost allowing the discharge of the system fluid when the temperature drops below 3 °C preventing the formation of ice in the circuit avoiding the risk of damage to the circuit and the generator components.

Code	Size	Connection
PE.AG100.08M	DN25	1" M
PE.AG100.08MS	DN25	1" M x Swivel
PE.AG100.10M	DN32	1 1/4" M
PE.AG100.10MS	DN32	1 1/4" M x Swivel
PE.AG100.28	28mm	28mm Compression Fitting

PE51L



A ball valve is a quarter-turn shut-off valve that uses a rotary ball to control the flow of various liquids. These valves allow the through-hole configuration to be blocked, open, or partially open to regulate the flow of liquid or gas. A ball valve is a common choice for several industrial and common household applications because of its air-tight sealing, ease of use, manual operation, and reliability.

Code	Size	Connection
PE51L.04	DN15	1/2" F
PE51L.06	DN20	3/4" F
PE51L.08	DN25	1" F
PE51L.10	DN32	1 1/4" F
PE51L.12	DN40	1 1/2" F
PE51L.16	DN50	2" F

PEC309VE



In heat pump systems, it's essential to ensure a minimum flow rate is consistently maintained. When the system includes both primary and secondary circuits, this flow rate is maintained by a hydraulic separator. In other scenarios, a bypass valve (or differential bypass valve) is typically used. This valve is installed at the end of the line before any possible shut-off points (such as zone valves) managed by thermostats.

The valve should be placed after the thermal storage tank to ensure it can always access the necessary thermal energy when the system is operating.

Code	Size	Connection
PEC309VE.08	DN25	1" M

PE740



Deaerators are utilized to continuously eliminate the air present in the hydraulic circuits of heating and cooling systems. They can automatically remove all air from the system, including micro-bubbles. A completely deaerated medium enables the system to function optimally, without noise, corrosion, localized overheating, or mechanical damage.

Code	Size	Connection
PE740.06	DN20	3/4" F
PE740.08	DN25	1" F
PE740.10	DN32	1 1/4" F

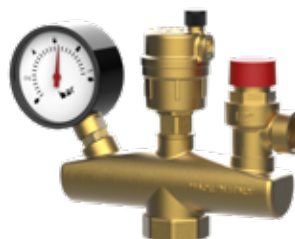
PEK103/2



Magnetic dirt separator filter with 360° rotating fitting.
Features: with M 1" ball valves

Code	Size	Connection
PE.K103-2.08	DN25	1" M x 1" M

PE135



Instrument Holder Manifold supplied with an automatic air vent, gauge and safety valve.

Code	Size	Connection
PE135.33.G	DN15	1/2" M x F

PE88MEC34+SM90



Motorized diverter valves are employed to control the flow between the heating and cooling system and the domestic water system. This flow management is typically handled by the heat pump's electronics, using a sensor installed on the domestic water boiler.

Effective flow diversion requires no leakage and minimal operating time. Therefore, three-way ball diverter valves are preferred over piston-type valves due to their design.

Code	Size	Connection
PE88MEC34+SM90.230	DN20	3/4" F - 230V
PE88MEC34+SM90.24	DN20	3/4" F - 24V
PE88MEC1+SM90.230	DN25	1" F - 230V
PE88MEC1+SM90.24	DN25	1" F - 24V
PE88MEC114+SM90.230	DN32	1 1/4" F - 230V
PE88MEC114+SM90.24	DN32	1 1/4" F - 24V

PE11X



The charging unit and hydraulic backflow preventer assembly carry out two essential functions for the system's operation:

- It maintains the system pressure at an optimal level (charging unit), typically around 1.5 bar;
- It prevents water from the system from flowing back into the domestic hot water circuit (hydraulic backflow prevention).

Code	Size	Connection
PE111.R.04 without pressure gauge	DN15	1/2" M x F
PE112.R.04 with pressure gauge	DN15	1/2" M x F

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