



Why Franklin Electric's multistage EH and EV pumps are ideal for increasing water pressure in irrigation systems.

Approx. 30 multistage pumps of the EH (horizontal) and EV (vertical) series have been installed in various irrigation systems in Veneto (Italy) for pressure delivery in the distribution of water-fertiliser mixtures in distribution channels.



Horizontal multistage pumps EH Series

Features & Benefits

- Compact close coupled design, robust and corrosion resistant
- Superior efficiency and performances
- Flexible application base plate
- Floating neck ring in PPS
- Heavy duty oversize motor shaft
- Impellers and diffusers are made of stainless steel in order to achieve durability
- Easy maintenance
- Mechanical seal*:
 - Type E0 (Carbon graphite/Ceramic alumina/EPDM) EH 3-5-9, EHsp 3-5
 - Type E1 (Carbon graphite/SiC/EPDM) EH 15-20

Pump specification

- Up to 29 m³/h - 104 m (50 Hz)
- Connections: Rp threaded for inlet and outlet
- Max. working pressure: 10 Bar
- Max. ambient temperature: 40 °C
- Liquid temperature range: Min. from -15 °C to -10 °C according to gasket material; Max.: +90 °C for domestic use (CEI EN Standard 60335-2-41) / +110 °C only for industrial use (CEI EN Standard 60335- 2-41)

* Special mechanical seal for specific applications available on request

Requirements for irrigation systems constantly increasing

In cooperation with Irrigazione Gastaldelli, who organises the installation of irrigation systems, Franklin Electric supplied about 30 multistage pumps to 10 local agri-food companies in Rovigo, Verona, Padua and Ferrara. Both for fruit growing (pears and blueberries) and for vegetable cultivation in greenhouses and in the ground, the ideal suitability of Franklin Electric's pump systems was demonstrated.

Fertiliser irrigation technology is becoming increasingly common in agriculture as it maximises the management of raw materials such as water and water-soluble fertilisers, and reduces the risks associated with water shortages. Advanced technologies can optimise the fertiliser irrigation process enormously. However, this requires high precision in dosing and scheduling of the system to distribute the necessary nutrients to the plants in a targeted manner.

The advantages of fertiliser irrigation lie in the reduced manpower requirements due to the automated processes, in the reduced impact on the soil due to tillage without use of agricultural equipments and in the better distribution of the fertiliser. In addition, there are fewer scattering losses with nutrient-water solutions, as drip irrigation precisely targets the root of the plant. However, this technique also has disadvantages, as it can only be used for irrigated crops and it is always necessary to use a technologically advanced and therefore often expensive system compared to traditional methods.



Avoidance of corrosion, unnecessary repairs and downtime

Because the technical demands on the irrigation systems (greenhouse or ground) are high, all parts of the system must meet the highest quality standards in terms of performance, materials and flexibility.

For this reason, Franklin Electric's multistage pumps are the first choice for these systems. The Stainless steel construction ensures good resistance to the highly corrosive fertilisers and long-term reliability, avoiding unnecessary system downtime due to component replacement.

The excellent performances and the wide range of flow rates, up to 29 m³/h for the horizontal EH series and up to 115 m³/h for the vertical EV series, allow pressure modulation to meet the requirements of any system. Appropriate water pressure is needed to ensure the necessary mixing of water and fertiliser, and thus the supply and growth of the plants.

Franklin Electric's multistage pumps can ensure this high pressure and thus distribute the perfectly composed solution with micro-sprinklers in the right amount over the entire extent of the plant. This guarantees each seedling the necessary nutrient supply.

Flexibility for all needs

The pressure booster pumps must transport the water-fertiliser solution from the tanks into the system. The space available to place the pumps and the distances that have to be covered when transporting the liquid to the plant vary greatly. Franklin Electric therefore offers a wide range of pumps to provide the optimum solution for each application. The horizontal multistage pumps make it possible to save space at height, while the vertical multistage pumps are suitable for applications with little usable installation space.

In addition, Franklin Electric offers a wide range of accessories, from pressure vessels to shut-off valves and special designs such as self-priming horizontal pumps or vertical high-pressure pumps connected in series.

Last but not least, the Drive-Tech and Drive-Tech MINI frequency converters optimise the operation of the pumps through state-of-the-art electronic technology.



Fertigation distributes the water-fertiliser solution precisely and with high pressure. The multistage pumps are used to increase the system pressure.

Vertical multistage pumps EV Series

Features & Benefits

- Compact and solid structure
- Easy installation in-line ports
- All wetted parts in Stainless Steel
- Shaft bearing and journal sleeve made of tungsten carbide
- PPS (1-3-6-10-15-20) / PTFE (30-45-65-95)
- Easily replaceable cartridge mechanical seal Type E1 (Graphite/SiC/EPDM), no need to disassemble the pump; for models higher than 4 kW no need to remove the motor. Version balanced (BE1 form 30 to 95)*
- Reduced service and maintenance time
- Replaceable Stainless Steel wear ring in the neck of the impeller (only for 30-45-65-95)
- Stainless steel impeller and diffuser for corrosion resistance
- Standard IE3 motor, size B14 up to 4 kW / size B5 from 5.5 kW and above
- Tungsten carbide intermediate bearing to stabilize the hydraulic with large number of stages

Pump specification

- Up to 115 m³/h - 326 m (50 Hz)
- Discharge and suction port: Oval, Round flanges, Victaulic and Clamp connections
- Liquid temperature range: from -15 °C to +120 °C
- Maximum working pressure: Oval flange 16 Bar; Round Flange, Victaulic and Clamp connections 25 bar

* Special mechanical seal for specific applications available on request



For further information about Franklin Electric multistage pumps please refer to franklinwater.eu/

