

EcoPump™

The complete turn-key solution to
effluent pumping

WaterForce



The EcoPump™ has been developed as a modular “turn-key” solution to effluent pumping using progressive cavity pumping technology. The EcoPump™ uses the EcoMoineau™ progressive cavity pump manufactured by PCM. The French company PCM invented the progressive cavity pump in 1930 and has continuously worked to improve their original design as a market leader in the technology with their highly efficient, environmentally friendly pumps.

By upgrading your existing effluent pump to an EcoPump™ you will have the ability to irrigate effluent further away from your farm dairy.

Applications

The pumps are suitable for all effluent pumping solutions including:

- Replacement of existing pontoon and shore mounted pump systems
- New installations
- Effluent transfer to ponds & separators and other treatment services
- Use with rotary irrigators to improve their performance for greater compliance
- Use with pod and long line sprinkler irrigation systems
- Use with hard hose irrigation systems
- Use with pivot irrigation systems
- Injection into irrigation systems.

Key Features of EcoPump™

- High operating performance ensures the ability to irrigate effluent further away from the farm dairy
- Dispersing effluent on paddocks further away from the farm dairy allows a reduction in annual fertiliser costs
- Ability to maintain low uniform application rates using new or often existing travelling irrigators
- Designed to futureproof your farm effluent system to ensure compliance with local regulations
- Unique pumping technology that delivers improved system performance and reduction of power costs – half your power consumption
- Highly efficient, handling a wide range of media including sludge and slurries, chemicals and will process sand/water slurries & solid particles up to 22mm in size
- Heavyduty construction
- Advanced pump design ensures reliable service with minimal maintenance – no bearings that need regular greasing or pontoons requiring supervised access.

EcoPump™ Package Design

The EcoPump™ is designed as a complete unit to be installed beside the storage pond on a solid pad without the need for a shed and electrical controls.

Offered as standard package:

- Solid galvanised self-supporting steel base with fixing bolt holes and forklift or tractor prong access
- Heavyduty galvanised steel plate case which has been powdercoated for extra protection
- Removable hinged lid with chain and prop
- Ventilated motor housing
- 10m power cable with three phase plug
- PCM EcoMoineau™ progressive cavity pump
- Dry pump protection
- Schneider™ control system with LCD display and heavyduty control switches
- Murphy™ pressure gauge with adjustable high and low pressure cut out setting
- Manual timer (0-12hours offered as standard)
- Xenon strobe lamp on pole
- Lamp
- Heater with thermostat (option for colder climates)
- Effluent ball check valve
- Pressure relieving valve.

The pump station includes all of the electrical and controls required. The controls are installed into the enclosure for protection. Standard controls for the pump station include:

- Operation by a manual switch, timer or remote control
- Automatic shut down of pump station and the warning lamp will flash when;
 - the pump runs dry or loses prime
 - the pond level is signalled low
 - the pump faults
 - the irrigator finishes its run: i.e. signal / time-out or high pressure cutout from irrigator auto-shutoff valve
- Low pressure cutout – possible hydrant or pipe blowout protection
- Facility for connection to remote monitoring
- Hours run indication via LCD display
- Diagnostics indication via LCD display
- Power supply for additional controls (eg flow meter)
- Custom controls are available on request.



EcoPump Accessories

The EcoPump™ system is designed in modular form. For a standard set-up you can order your system, have it delivered to farm and bolt it together. Parts and modules are interchangeable, so the replacement of worn and damaged parts is made easy. If you want to start simply and upgrade as compliance and other farming requirements evolve, order the base unit and add accessories when required.

Accessories include:

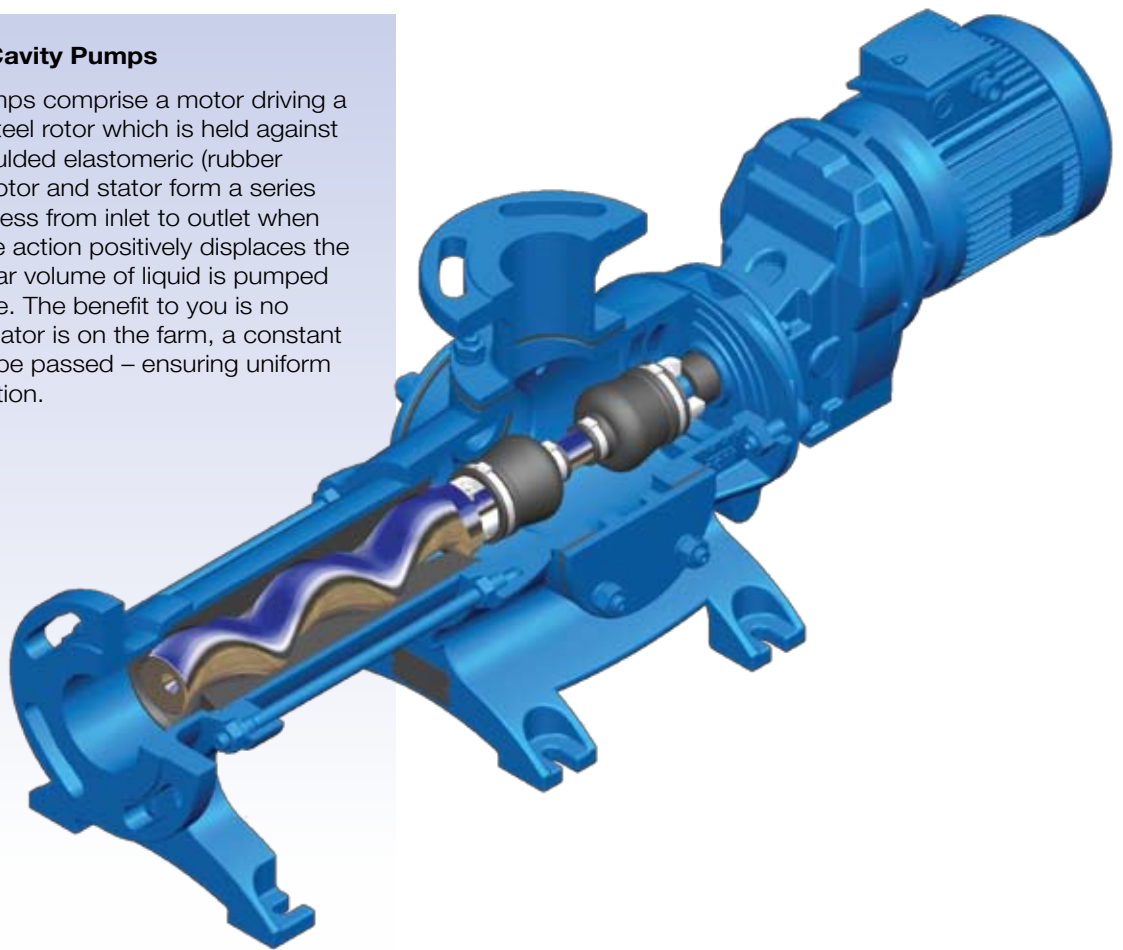
- Pond intake: screen or basket set-up
- Pond intake float: mussel buoy or drum bracket
- Pond intake boom: 7m standard
- Pond intake bracket assembly, c/w flexible coupling hose
- Pond high/low level sensor
- Tank intake
- Electronic effluent flow meter, c/w pipework
- Filtration
- Outlet manifold (specify number of outlets) c/w isolation valves (manual and automatic)
- Coupling to pipeline: camlock, compression coupling, flanged couplings above or below ground
- Remote monitoring services: soil moisture, text & email monitoring, flow volume, run time and service notification
- Wind and temperature lockout.



EcoPump™ technical data

About Progressive Cavity Pumps

Progressive cavity pumps comprise a motor driving a hardened chromium steel rotor which is held against and rolls around a moulded elastomeric (rubber stator). Together, the rotor and stator form a series of cavities which progress from inlet to outlet when the rotor is turned. The action positively displaces the liquid, meaning a similar volume of liquid is pumped irrespective of pressure. The benefit to you is no matter where your irrigator is on the farm, a constant volume of effluent will be passed – ensuring uniform and compliant application.



Technical Specifications

- 415Vac, three phase supply by way of a 20A PDL plug on 10m lead
- 4.0kW to 9.0kW (Standard)
- Flow up to 60m³/hr
- Pressure up to 240m (350psi)
- Operating temperature: up to 100°C
- Self-priming
- Horizontal mounting (Vertical pontoon or tank mounting available)
- 3" or 4" flanged inlet (a variety of options are offered)
- 2" or 3" flanged outlet (a variety of options are offered)

Standard Models	Nominal power kw (hp)	Flow rate range (m ³ /hr)	Nominal mainline size (OD)	Nominal pumping distance (m)
ECOP-40	4.0 (5.4)	9.5-13.5	63-75mm	0-2500
ECOP-55	5.5 (7.4)	13.5-15.0	75-90mm	0-3000
ECOP-75	7.5 (10.0)	13.0-22.0	75-110mm	0-5000
ECOP-90	9.0 (12.0)	21.0-26.5	90-110mm	0-3500

Note: Nominal pumping distance assumes a pump and pipe pressure up to 8.0 bar (116psi), a residual pressure of 2.0 bar (29 psi) to drive an irrigator, an allowance for 150m of drag hose and assumes there is no elevation change.

On-farm Advisory Service

WaterForce offer a full on-farm no-obligation advisory service to discuss and work through your present and future requirements.



WaterForce

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