ECOMOINEAU™
MVA - MVA FF

MAKING SOLIDS FLOW

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PCM EcoMoineau™ MVA series is designed to bring simplicity for transferring and/or dosing the many complex fluids found in a wide range of industrial applications. High viscosity, pasty, sticky, high dry matter content, non-flowing fluids with big chunks or that have a tendency to bridge are found across many industries and often entail challenging conditions.

With a simple yet rugged design, PCM EcoMoineau™ MVA series allows you to combine constant productivity and cost-effectiveness even with the most complex fluids.

Moineau™ technology
Based upon the progressive cavity pump technology, the EcoMoineau™ MVA series features an enlarged rectangular inlet coupled with a feeding screw enabling the manual or gravity feeding of the most viscous or non-flowing fluids into the pumping element.

The EcoMoineau™ MVA series offers therefore all the advantages of the Moineau™ principle:

- Product integrity
- Constant and pulsation-free flow rate
- Flow directly proportional to the speed
- Easy maintenance
- Valve-less operations

Advantages of PCM EcoMoineau™ MVA range

- Stators available for corrosive or abrasive fluids
- Spare parts inventory common to all EcoMoineau™ range
- Easy and quick maintenance: the rotor/drive train has a connecting rod with only 3 screws
- Z dimension reduced to the feeding barrel dimensions which slides to enable maintenance
- Standardized flushing/Injection port on the feeding barrel

Performances

- Flow-rate: from 0.003 to 300 m³/h
- Pressure: 24 bars
- Viscosities: up to 1,000,000 cP
- Max. solids content: 40%
ECOMOINEAU™ MVA RANGE

- **EcoMoineau™ MVA Series**
  Fluids with high viscosity or low capacity to flow and requiring manual feeding or gravity fed pumps

- **EcoMoineau™ MVA FF Series**
  Fluids with high viscosity, high dry-matter, sticky with a low capacity to flow or that tend to bridge and requiring manual feeding or gravity fed pumps.

**Industrial markets**
- Pulp & Paper: Starches, glues, kaolin slurry, soapstock
- Minerals and construction: Cement milk, clay sludge, gypsum slurries, shotcrete, mortars, bentonite slurries, magnesium uranate, explosive preparations
- Mechanics: Grease, lubricant wastes, putties
- Chemicals: Viscose, pigments, precipitated silica production, styrene resin, paints
- New energies: Bio-mass application, bagasse, crop residues, liquid manure, cassava pulps
- Food wastes

**Waste Water Treatment market**
- Centrifuged & dehydrated sludge from urban and industrial origin
- Dewatered sludge recovery further to mechanical dehydration (belt-press, screw-press, centrifuge, filter-press)
ECOMOINEAU™ MVA SERIES

Fluids with high viscosity or low capacity to flow and requiring manual feeding or gravity fed pumps

Pump construction

- Enlarged hopper: 275 mm x 400 mm
- Manual loading, gravity fed pump
- Built-in draining ports
- On both sides allowing complete draining, preventing corrosion from residual fluid
- Feeding screw
- With open screw profile for high viscosity or high dry matter content fluids
- Conical high yield hydraulic feeding barrel
- No heavy baseframe
- Foot included in discharge pipe. Facilitating pump anchoring and reducing civil engineering costs
- Reinforced articulation
- Metal casing adapted to abrasive fluids
- Grease sealing
- Cost-effective and user-friendly automatic lubrication dispensing self-contained lubricant at the desired rate regardless of the residual level
- Stator
- Available in Nitrile, Neoprene, Polyisoprene, Viton, EPDM
- Rotor
- Available in AISI 420, chrome plated AISI 420, Tempered steel, Duplex 329LN
- Body
- Cast iron
- Screws
- Stainless steel screws in contact with the fluids
- Injection port

Expertise in elastomers

Elastomer is a very unique material that plays a critical role in the operational efficiency of positive displacement pumps.

To ensure that our pumps always feature the highest quality, most compatible elastomers, we manufacture our own. Over 80 years of experience developing, mixing and producing our own elastomers have given us an unparalleled expertise in this domain. We have a unique database of elastomer formulas and fluid compatibilities.

Reduced maintenance time

The EcoMoineau™ MVA Series features a sliding feeding barrel to facilitate maintenance. With only 15 cms of clearance, the easy access to the 3 screws provide fast and easy maintenance times with the Z dimension reduced to the feeding barrel dimensions.
Fluids with high viscosity, high dry-matter, sticky with a low capacity to flow or that tend to bridge and requiring manual feeding or gravity fed pumps.

**Pump construction**

1. Enlarged hopper + bridge-breaker (option)
2. Built-in draining ports
3. Feeding screw
4. Hydraulic feeding barrel
5. Reinforced articulation
6. Grease sealing
7. Stator
8.Rotor
9. Injection port

**PCM MVA - MVA FF**

- **Enlarged hopper:** 275 mm x 1000 mm
  - Manual loading, gravity fed pump
- **Built-in draining ports**
  - DN150 allowing complete draining, preventing corrosion from residual fluid
- **Feeding screw**
  - With open screw profile for sticky, pasty and fluids that tend to bridge
- **Conical high yield hydraulic feeding barrel**
- **No heavy baseframe**
  - Foot included in discharge pipe
  - Facilitating pump anchoring
- **Reinforced articulation**
  - Metal casing adapted to abrasive fluids
- **Grease sealing**
  - Cost-effective and user-friendly automatic lubrication dispensing self-contained lubricant at the desired rate regardless of the residual level

**Stators**
- Available in Nitrile, Neoprene, Polyisoprene, Viton, EPDM

**Rotors**
- Available in AISI 420, chrome plated AISI 420, Tempered steel, Duplex 329LN

**Body**
- Cast iron

**Screws**
- Stainless steel screws in contact with the fluids

**Add-on options**
- Bridge breaker
- Polymer lubrication
- Flow management: level control module controlling the pump speed and preventing overflow

**Polymer lubrication & level management**

Polymer lubrication as an add-on option is highly recommended when transferring over long distances. The injection of a lubricating layer on the discharge pipe internal diameter guarantees better yield and reduced operating costs.

- Reduction of discharge pressure
- Reduces strain on wearing parts

**Flow Management:** level control module controlling the pump speed and preventing overflow

- adaptable to equipment configurations
- variable flow-rates functioning
- suitable for difficult environments
- compatible with lime treatment configuration

**Control hopper for optimized process**

The control hopper adapts to up-stream process, from manual feeding batch or gravity-fed when placed underneath dehydrating equipment.

Made to measure, the control hopper:
- includes the sludge loading zone,
- has one or several visit holes to ease inspection,
- facilitates the incorporation of accessories such as level sensors,
- accommodates lime injection and relevant air-vent port.

**Finite element analysis brings reliability**

High pressure and abrasion from high dry content fluids coupled with gravity feeding may entail difficult conditions. The observations of the constraints through FEA are keys to identify the most reliable designs and materials of construction required for complex fluids and conditions. Operating conditions are simulated and underline the constraints on the pump elements, enabling sound technical choices.

FEA stressing the effect of dewatered sludge falling on the pump feeding screw after being centrifuged in waste water treatment applications.
ENVIRONMENT SELECTION

PCM EcoMoineau™ series with their modular design and add-on options offer a complete solution for all waste water treatment applications while keeping your spare parts inventory to a minimum.

PCM Eco-conception approach to pump design enables to achieve lower life cycle costs by reducing maintenance time and costs as well as energy consumption.

- For liquid sludge
- For thickened sludge, recovery from dripping tables
- For dehydrated sludge, recovery from centrifuge, screw press, belt-filter
- For dehydrated sludge with a tendency to bridge, recovery from centrifuge, screw press, belt-filter