INDUSTRY

ENVIRONMENT - WASTEWATER TREATMENT AND WATER PURIFICATION

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PCM | keep it moving

YOUR DAILY PARTNER FOR WATER AND LIQUID WASTE TREATMENT

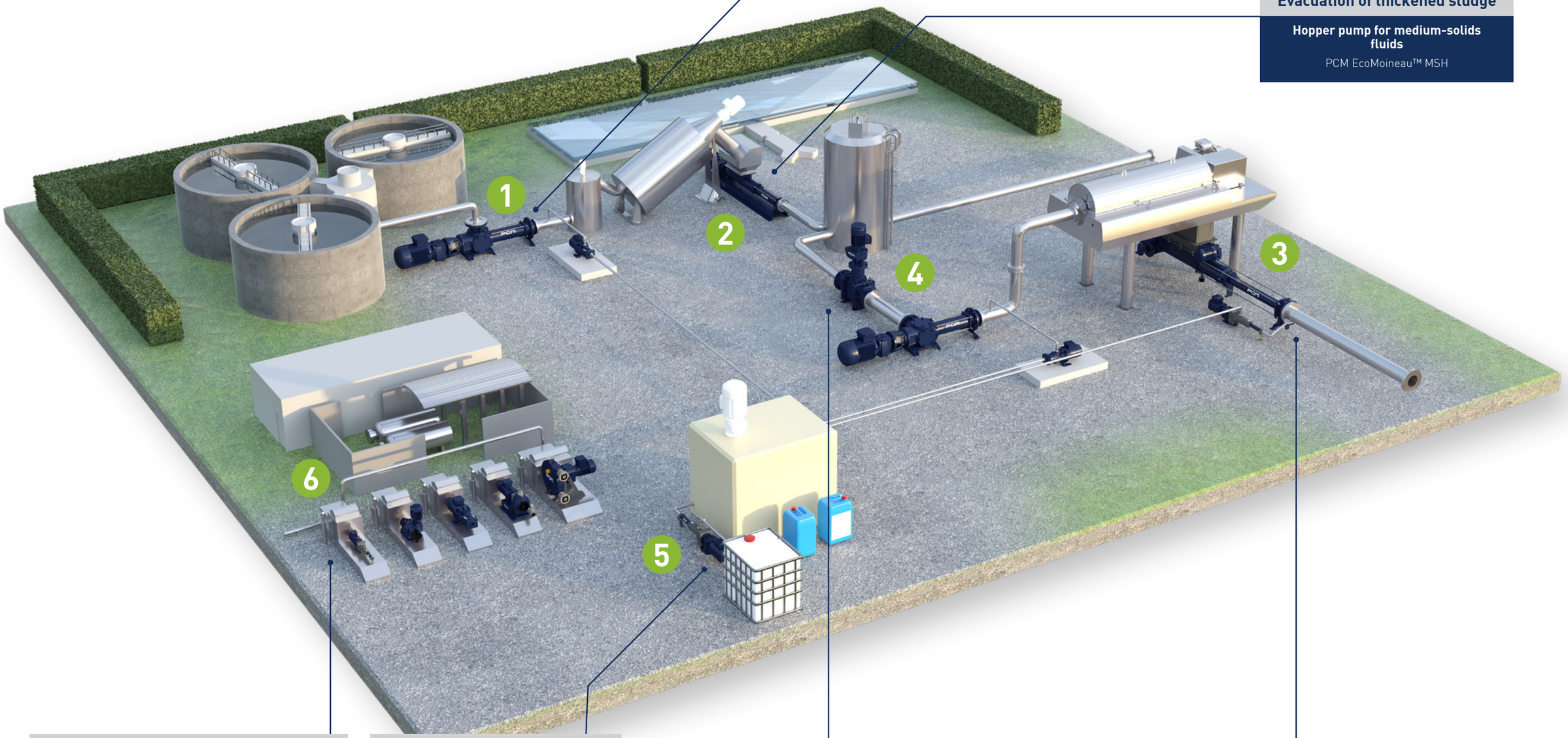
Efficient wastewater management is an essential aspect of environmental protection. PCM pumps serve this market by helping to transfer and dose the various fluids involved in the process, such as feeding dewatering equipment or dosing chemicals precisely to avoid wastage.

Pumping equipment plays a key role in treatment and potabilization plants. They guarantee the **profitability** of operations by enabling the proper management of the various stages.

PCM's pumping solutions cover a wide range applications, and are designed to **deliver the high performance** required in wastewater treatment plants for **sludge transfer** (liquid, thick or dewatered) and **chemical dosing** (milk of lime, polymer, ferric chloride).

PCM supports every stage of the process, from pre-treatment to residual waste disposal. Thanks to its **expertise and know-how** dating back to **1932, PCM** has a perfect understanding of the hydraulic aspects of its pumps, which means **lower energy consumption** for the same performance as the competition. to serve you and the environment, just as you do!

WASTEWATER TREATMENT **PROCESS**



Liquid sludge transfer

Progressive cavity pump with maintenance in place as standard

PCM EcoMoineau™ MX

Evacuation of thickened sludge

Hopper pump for medium-solids fluids

PCM EcoMoineau™ MSH

Chemical dosing

Dosing solutions: lime milk, ferric chloride, sulfuric acid, hydrogen peroxide, etc.

PCM Delasco™ DX, et PMA
PCM EcoMoineau™ C, CF et MF
PCM Lagoa

Polymer preparation

Progressive cavity pump for dosing concentrated polymers and transferring diluted polymers

PCM EcoMoineau™ C et MF

Pump protection

Grinding large particles to protect equipment

PCM X-Guard

Pumping dewatered sludge

Hopper pump for high-solids and sticky fluids

PCM EcoMoineau™ MVA-FF

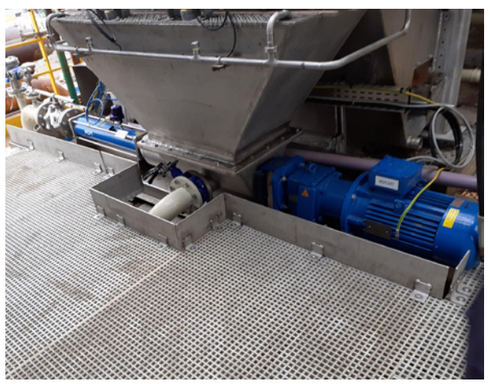
1 Liquid sludge transfer

The transfer of liquid sludge is the first stage in the treatment of wastewater in a wastewater plant . With a concentration of 0.5% to 5% dry matter, liquid sludge is abrasive, and may contain sand or particles. PCM pumps are particularly resistant to abrasion. This is why they are installed at the beginning of the treatment cycle.

PCM Moineau™ pumps transfer liquid sludge from settling tanks from primary to secondary sedimentation, or feed directly into dewatering systems such as screw presses, centrifugal decanters or thickeners.

2 Evacuation of thickened sludge

The dewatering process begins by treating the sludge fluid to reduce its water content. Depending on the technology, this fluid can contain up to 10% solid content, which considerably increases its viscosity. A progressive cavity pump with hopper is then required to transfer this fluid; and the use of an Archimedes screw depends on the concentration of solids and the risk of settling. Below 6/8%, it is not mandatory. For higher concentrations, however, it is highly recommended.



Moineau™ pumps are used upstream to feed dewatering equipment and downstream to discharge thickened sludge from dewatering tables or screw presses.

3 Pumping dewatered sludge

This is the last stage in sludge dewatering before storage or drying. The fluid leaving the machines, in particular the screw press, centrifugal decanter and filter press, can reach up to 45% solid content.

Dewatered sludge is highly viscous, sticky and sometimes has a solid, powdery appearance. The only way to transport this fluid is to use a progressive cavity pump fitted with a hopper and an Archimedean screw.

Depending on certain parameters, it may be necessary to install a bridge breaker to prevent sludge blockage in the hopper, and to install a lubrication system in the discharge pipe by injecting polymer to reduce pressure losses.

The PCM Moineau™ progressive cavity pump offers many advantages over the conventional screw conveyor, such as the ability to transfer products over long distances, even around curves, avoiding unpleasant odors and dirty working environments.

4 Polymer preparation: concentrated polymer

Polymer is a chemical that promotes sludge flocculation, which separates the solid phase from the water. In its pure form, the polymer concentration is 2%. Depending on its formulation, it may be cationic or anionic, and therefore reacts differently with elastomer compounds. PCM Moineau™ progressive cavity or PCM Delasco™ peristaltic pumps transfer this fluid to achieve precise dosing in the polypreparator, which also ensures compatibility of the materials in contact.

5 Polymer preparation: diluted polymer

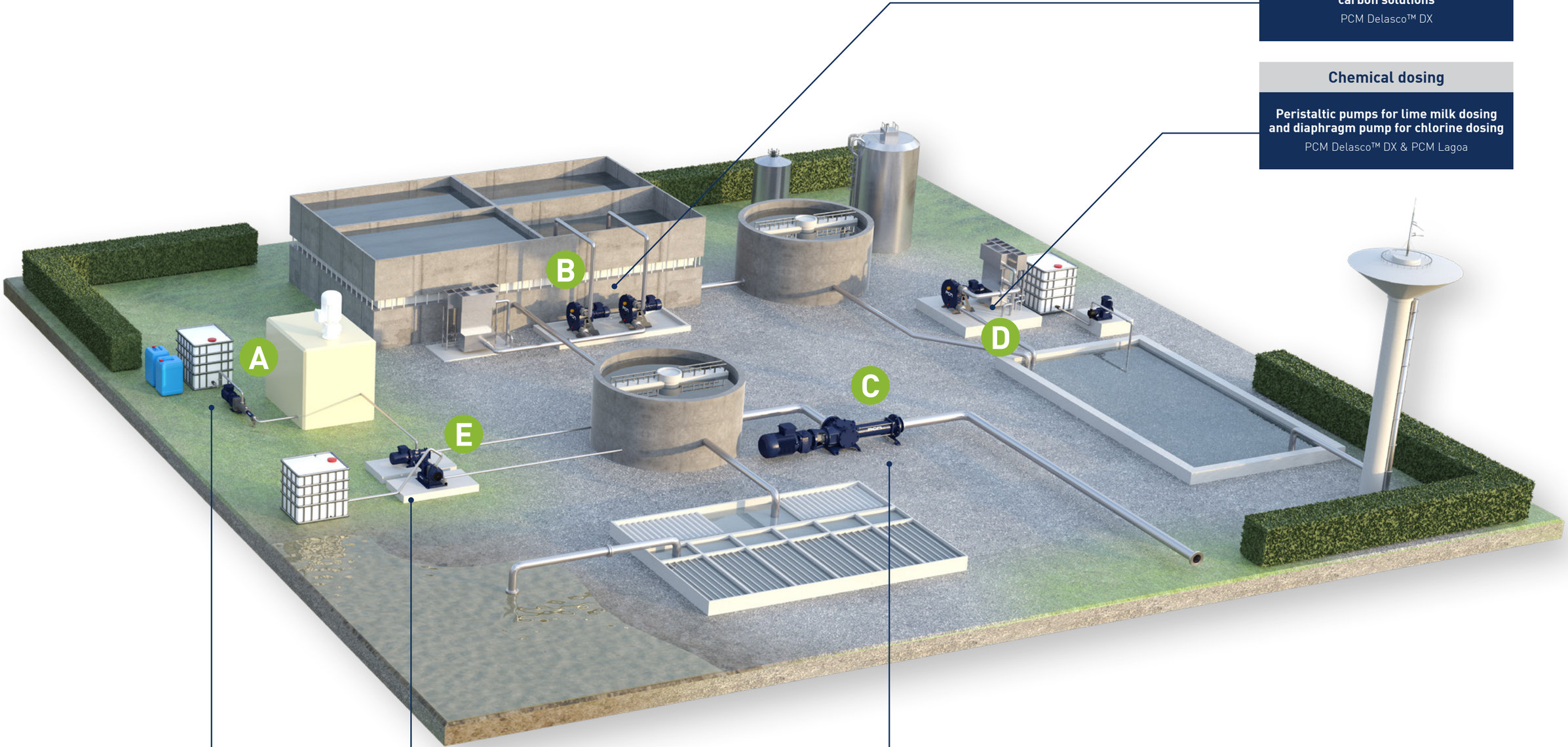
This is the liquid obtained by mixing the concentrated polymer with water. It is generally diluted to a concentration of 0.2% and then dosed into the liquid sludge, just before the dewatering systems. The polymer is made up of molecular chains that react with the sludge to cause flocculation. PCP technology is ideal for maintaining the integrity of these chains, thanks to the low shear of its pumping action. What's more, precise dosing is essential to achieve high coagulation rates and maximize the efficiency of downstream equipment.

6 Chemical dosing

Lime milk is the result of diluting lime with water. This product (liquid or solid) is used to help neutralize sludge, at various stages of the sludge dewatering process. Its main characteristic is its abrasiveness, which has an impact on the choice of pumping technology. For low flow rates, peristaltic pumping is the preferred technology, and for high flow rates, progressive cavity pumping.

It's important to use special elastomers designed to withstand this type of abrasiveness, and to choose right pump sizing. The ideal choice: a low rotation speed and a multi-step pump!

WATER POTABILIZATION
PROCESS



Activated carbon dosing

Peristaltic pumps for dosing activated carbon solutions

PCM Delasco™ DX

Chemical dosing

Peristaltic pumps for lime milk dosing and diaphragm pump for chlorine dosing

PCM Delasco™ DX & PCM Lagoa

Polymer preparation

Progressive cavity pumps for dosing concentrated polymers and transferring diluted polymers

PCM EcoMoineau™ C et MF

Polymer and ferric chloride dosing

Progressive cavity pump for polymer dosing and diaphragm pump for ferric chloride dosing

PCM EcoMoineau™ MF & PCM Delasco™ Z

Liquid sludge transfer

Progressive cavity pump for evacuating flocculated and coagulated liquid sludge after sedimentation

PCM EcoMoineau™ MX

A Polymer preparation

Polymer is a chemical agent that facilitates sludge flocculation, resulting in the separation of the solid phase from the water. In its pure state, it has a concentration of 2%. Depending on its formulation, it can be cationic or anionic, thus influencing its interaction with the elastomer compounds.PCM Moineau™ progressive cavity pumps and PCM Delasco™ peristaltic pumps ensure precise handling of this fluid, guaranteeing optimal dosing within the polypreparator while preserving the compatibility of the materials in contact.

B Polymer and ferric chloride dosing

After mixing in the polypreparator, the diluted polymer reaches a concentration of 0.2%. It is then dosed into the dirty water (from rivers or other water sources) to enable flocculation, i.e. the separation of sludge from the water and promote filtration. PCM EcoMoineu™ MF floating-stator pumps help maintain polymer integrity thanks to the low shear of its pumping action. A coagulant, such as ferric chloride or aluminum , is also added to this mixture to agglomerate sludge and simplify treatment. PCM Lagoa or PCM Delasco™ Z pumps, ensure efficient dosing while guaranteeing long equipment life, particularly resistant to corrosion.

C Liquid sludge transfer

The agglomerated coagulated and flocculated sludge resulting from sedimentation is then discharged for treatment. This liquid sludge is sent to the wastewater treatment process (see step 1 of the wastewater treatment process: transfer of liquid sludge). With a concentration of 0.5% to 5% dry matter, liquid sludge evacuation is the first stage of the purification cycle in wastewater treatment plants. Liquid slurries are abrasive; they contain sand or particles, which is why PCM EcoMoineau™ MX or C pumps, which are particularly resistant to abrasion, are used to transfer this type of fluid.

D Activated carbon dosing

Filtration is a compulsory physical process designed to filter water containing micro-organisms and suspended solids. Settled water passes through a layer of anthracite, activated carbon and sand. The result is crystal-clear water. Because of its abrasive nature, activated carbon must be handled with care.

Delasco™ DX PCM pumps thanks to their low operating speed and agitation-free tube passage, are ideal for transferring highly abrasive fluids.

E Chemical dosing

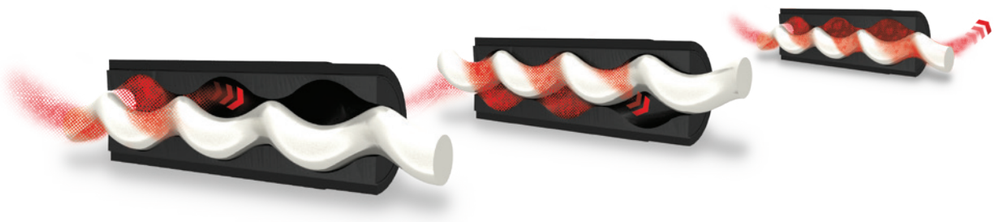
Before being stored and redistributed to municipal water system, the water is disinfected. Chlorine is injected into the filtered water. In addition, all the elements used water treatment influence the water's pH level. Caustic soda is used to ensure a pH level of 7.20.

PCM Lagoa diaphragm pumps are an efficient solution for dosing chlorine or caustic soda, and ensure complete reliability of the dosed products.

PCM TECHNOLOGIES FOR YOUR BUSINESS

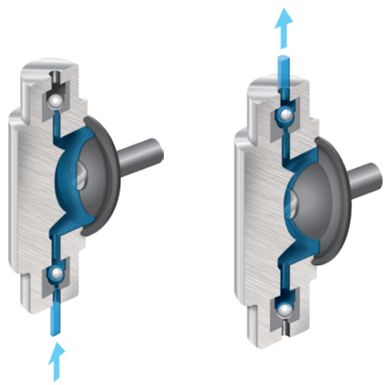
PRINCIPLE OF MOINEAU™ TECHNOLOGY

A Moineau™ pump consists of a helical rotor turning into a helical stator. When the rotor turns inside the stator, the honeycomb progresses spirally along the axis of the pump without changing either shape or volume. This action transfers the product from the pump suction to the pump discharge without degrading the product. This basic principle of Moineau™ pumps allows a high accuracy of flow and pressure, making these pumps extremely efficient for transferring and dosing the most complex fluids



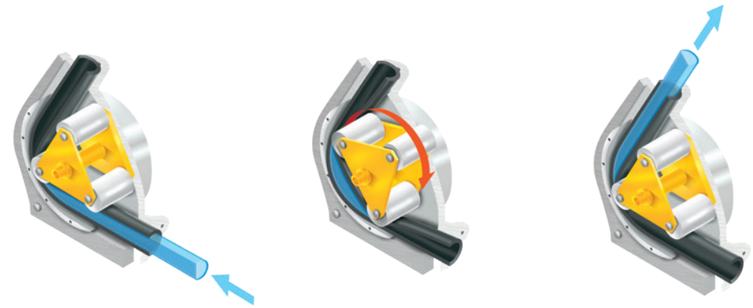
PRINCIPLE OF THE METERING PUMP LAGOA

The PCM Lagoa pump is composed of a diaphragm connected to a piston, whose alternating movement successively fills and empties the pump head. This pump is most used in the dosing of chemically aggressive reagent, thanks to its stainless steel or plastic mono-material construction, with a PTFE membrane. Dosing accuracy and repeatability are guaranteed.



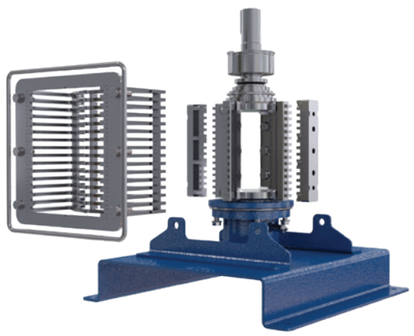
PRINCIPE OF THE PERISTALTIC PCM DELASCO™ TECHNOLOGY

The peristaltic pumping principle is based on the capacity of a soft elastomer hose to accept a deformation and subsequently recover its initial shape. Peristaltic pumps are provided with either high- or low-pressure hoses, covering a wide range of applications which need versatility and flexibility. Thanks to its all-elastomers construction, this technology is perfect for the dosing of reagent and chemicals that are not compatible with metallic parts. Moreover, the peristaltic pumps are seal-less constructed, are able to dry run, and quiet (very low shear of the pumping action).

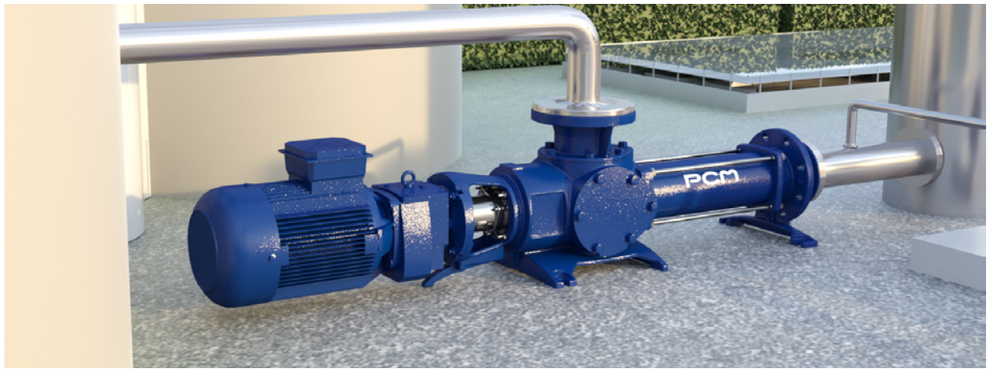


PRINCIPLE OF THE GRINDER PCM X-GUARD

The mechanical action of the rotating knife throwing the static knife, makes the PCM Xguard the best solution to protect your equipment. Installed before the pumps and the dewatering machines, it prevents failures by grinding all the large pieces found in the liquid. Its heavy duty design makes the PCM X-Guard machine a real asset in minimizing downtime and maintenance operations.



PCM SOLUTIONS FOR WASTEWATER TREATMENT



PCM ECOMOINEAU™ MX : HIGH-PRESSURE LIQUID SLUDGE TRANSFER

The easy-to-use progressive cavity pump designed to adapt to your wastewater treatment processes:

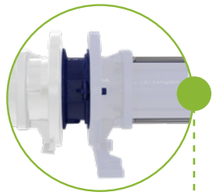
- Withstands up to **48 bar** pressure
- **High-performance**, with flow rates of up to **500 m3/h**
- Transfers low-viscosity, low-solids fluids
- **Robust**, highly resistant abrasion
- **Easy transfer** of particle-laden fluids
- Its maintenance-in-place system allows the stator and rotor to be replaced without moving the pump from its installation
- Patented **3-screw** connection system for easy seal replacement quickly

Compared with other technologies such as the lobe pump, the **PCM EcoMoineau™ MX** is better suited to transferring abrasive or particle-laden products. It therefore requires **very little maintenance** on wastewater treatment applications, which greatly reduces its operating cost.

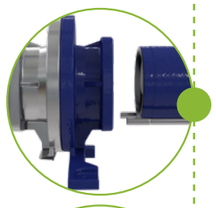
PERFORMANCE	CONSTRUCTION
• **Flowrate:** 500 m3/h • **Pressure:** 48 bar • **Viscosity:** 20 000 cPo • **Permissible particle size:** 40mm	• Integrated mounting • PCM NBR or CR elastomer stator • AISI 420 stainless steel rotor, chrome-plated 100µ • Lubricated packing gland or lubricated mechanical seal (depending on concentration level) • Cast iron body

MAINTENANCE IN PLACE SYSTEM

The new maintenance system in place as standard on the entire **PCM EcoMoineau™ MX** range allows the stator and/or rotor to be replaced in just 5 steps and without having to remove the pump from its installation. Maintenance time is considerably reduced, which in turn reduces downtime and life-cycle costs.



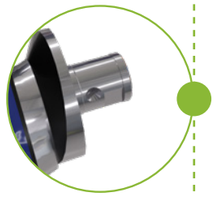
STEP 1 :
Unscrew the two screws on the MIP ring to remove it.
Then unscrew the tie rods on the suction pipe and remove the top two.



STEP 2 :
Unscrew the suction flange.
Shift it towards the pipe to hold and support it.

STEP 3 :
Remove the inspection hatches from the body.
Then unscrew the 3 screws on the shaft line to release the rotor head.

STEP 4 :
The rotor/stator assembly is now free. The space left by the MIP ring makes it easy to remove them.



STEP 5 :
The rotor head has two flats. These allow the rotor to be removed from the stator using a simple spanner.

Then simply repeat these steps in reverse to reassemble the pump.
Maintenance is now completed!!!

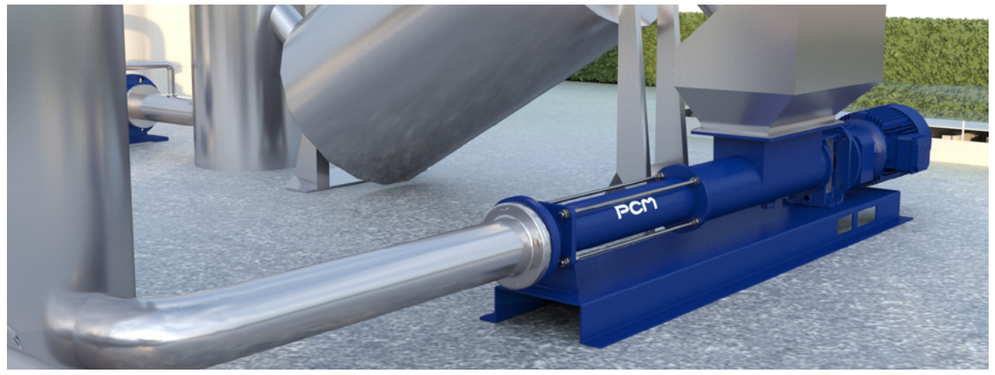
PCM ECOMOINEAU™ C : THE VERSATILE, CORROSION-RESISTANT TRANSFER PUMP

With its robust design, the **PCM EcoMoineau™ C** pump is built with materials capable of withstanding all the challenges imposed by corrosive chemical transfer applications. What's more, it uses the variety of hydraulics developed by **PCM** to **optimize pump life** according to the product being pumped.

The **PCM EcoMoineau™ C** progressive cavity pump offers a **lighter** design, requiring fewer raw materials, while **less energy** than other pump technologies.

- **Stainless steel** pump body and flanges for corrosion resistance
- **Durable, robust** E-CTFE-coated shaft design: extended service life for corrosive and abrasive applications
- Patented **three-screw** connection system for fast, easy maintenance of wear parts
- **Wide choice** of stator and rotor materials and a wide range of flanges to all environments
- **Reduced** energy compared to other pump technologies

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 500 m3/h • **Pressure:** 48 bar • **Maximum temperature:** 110°C • **Particle size:** 40 mm	• Integral or monobloc mounting • 316L stainless steel body • Elastomer stator PCM EPDM, NBR, FKM • ISO PN40 CLASS 150 flange • E-CTFE articulated shaft line



PCM MSH HOPPER PUMP : TRANSFER AND DISCHARGE OF THICKENED SLUDGE

The PCM MSH range of hopper pumps transfers dry, viscous materials such as thickened sludge. Applications involving fluids that are viscous, pasty, sticky, rich in dry matter or contain solid particles are common and pose considerable challenges. They require pumps specially designed to cope with these difficult conditions.

Its stainless steel or carbon steel design also enables it to resist chemical attack by certain products.

- **Closed Archimedean** screw for viscous, non-sticky products
- **Open auger** for transferring products at risk of compaction
- Thanks to its short hopper, it is **ideal** for small environments or after primary dewatering systems such as screw presses or dewatering tables

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 70 m3/h • **Pressure:** 24 bar • **Maximum temperature:** 110°C • **Particle size:** 40 mm • **Maximum dryness:** 18% • **Maximum viscosity:** 40 000 cPo	• Stainless steel or carbon steel body • Archimedes screw open or closed according to of pumped product • Elastomer stator PCM EPDM, NBR, FKM, NR, • IR, CR

PCM MVA-FF HOPPER PUMP : TRANSFERRING DEWATERED SLUDGE AND HIGH-DRYING FLUIDS

The **PCM MVA-FF** range is specially designed for transferring sticky fluids with high viscosity and high dry matter content, such as dewatered sludge. In fact, this pump is capable of transferring products containing up to 40% dry matter.

Its **reinforced** articulation, combined with an **open Archimedean screw**, enables efficient transfer of sticky sludge, greatly reducing the risk of the pump stalling. The pump body is fitted a **feed cannon**, which increases the amount of sludge reaching the stator, thus pumping efficiency.

To secure the installation and optimize pump performance, a number of accessories can be added to this configuration:

- **A bridge breaker:** installed on the hopper, this breaks up solid, overly compact blocks to protect the Archimedes screw feeding efficiency
- **Polymer lubrication system:** Injection of a lubricant film on the inner walls of the discharge piping ensures greater efficiency and lower operating costs by reducing discharge pressure and stress on wearing parts
- **Level management module:** controls pump speed and prevents overflow
- **Control hopper:** adapts to upstream equipment, allowing manual or gravity loading when located under dewatering equipment

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 45 m3/h • **Pressure:** 48 bar • **Maximum temperature:** 110°C • **Particle size:** 40 mm • **Maximum dryness:** 40% • **Maximum viscosity:** 80 000 cPo	• Cast-iron body • Open Archimedes screw • PCM NBR or CR elastomer stator abrasive • fluids • Chrome-plated stainless steel rotor 100µ or 400µ

PCM ECOMOINEAU™ MF : FLOATING STATOR METERING PUMPS FOR POLYMER TRANSFER

PCM EcoMoineau™ progressive cavity pumps with floating stator, based on the Moineau™ technology, are perfectly suited to space-constrained environments.

Equipped with a frequency converter, they can be used as a dosing pump, outperforming conventional dosing pumps for viscous, loaded or abrasive liquids.

Their compact, rugged design makes them the ideal choice for integration into multi-preparation machines or other systems.

With its simple design, this range combines several advantages:

- **Small footprint,** rotor is directly connected to drive
- **Simple, robust** construction
- Ideal for dosing fragile, viscous fluids
- Very low maintenance costs (few wearing parts)
- Easy integration into small spaces or existing installations
- Can be integrated on cart for versatile use

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 15 à 6500 l/h • **Pressure:** 5 bar (10 bar – 4M12F) • **Maximum temperature:** 80°C • **Particle size:** 8 mm	• Cast iron body • 316L stainless steel or 100µ chrome-plated rotor • PCM NBR, CR or FKM stator

PCM DELASCO™ DX : PERISTALTIC PUMPS FOR FRAGILE, ABRASIVE AND CORROSIVE PRODUCTS

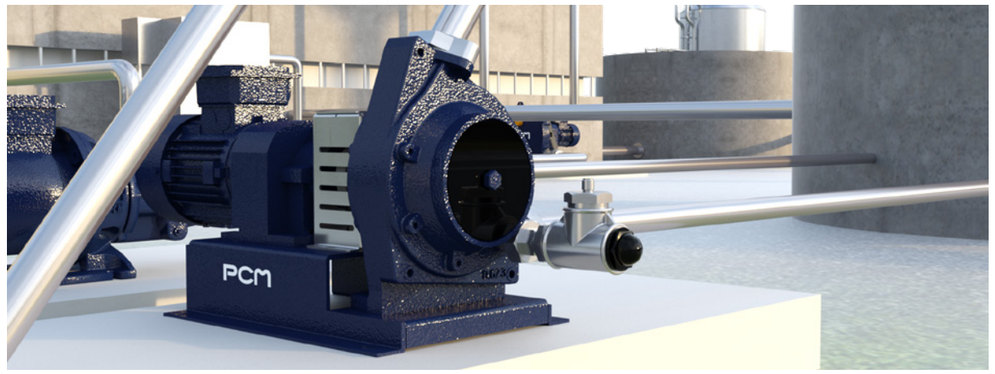
PCM Delasco™ DX peristaltic pumps, by virtue of their construction, offer **versatility** in many applications in terms of **transferring or dosing** chemicals required for wastewater treatment.

Their simple operation and maintenance make them suitable for a wide range of applications. Their low-speed operation and agitation-free passage through the tube make them **ideal pumping solutions** for fragile and/or abrasive liquids such as milk of lime.

What's more, they're the perfect solution for corrosive liquids, since only the inside of the tube is in contact with the pumped products.

- **Suitable** for pumping abrasive fluids with high solids content (up to 80%), high density, corrosive, shear-sensitive/fragile, viscous, multiphase/gaseous, crystallizing fluids
- **Low energy** thanks to low operating speeds
- **High suction power,** self-priming and dry-running possible without damaging the pump
- **Anti-pollution design:** 100% leakproof body contains fluid in the event of tube rupture
- **Ergonomic integration** of accessories, accessible from the rear of the pump
- On-site maintenance and reduced downtime thanks to **quick-change** system tube

PERFORMANCE	CONSTRUCTION
• **Flowrate:** De 20 à 100 000 l/h • **Pressure:** 15 bar • **Maximum temperature:** 80°C • **Particle size:** 33 mm	• Cast-iron body • NR, EPDM or NBR tube • Stainless steel or polypropylene connection • Tube compression with skids



PCM DELASCO™ Z : PERISTALTIC PUMPS FOR FRAGILE, ABRASIVE AND CORROSIVE PRODUCTS

PCM Delasco™ Z peristaltic pumps offer incomparable versatility of use and flexibility thanks to their **various constructions** and the **variety of elastomers** available. In fact, thanks to **peristaltic technology**, the **PCM Delasco™ Z** is suitable for dosing low-flow products such as ferric chloride.

What's more, they're the **perfect solution** for corrosive liquids, since only the inside of the tube is in contact with the pumped products.

- Design **without dynamic sealing**
- Suitable for pumping **abrasive fluids** with high solids content (up to 80%), high density, corrosive, shear-sensitive/fragile, viscous, multiphase/ gaseous, crystallizing fluids
- **Low** energy consumption thanks to low operating speeds
- **Can be run dry** without damaging the pump, self-priming
- **Simple design** with few parts, the **Delasco™ Z** pump has a **low life cycle cost**

PERFORMANCE	CONSTRUCTION
• **Flowrate:** De 50 à 20 000 l/h • **Pressure:** 2 bar • **Maximum temperature:** 80°C • **Particle size:** 33 mm	• Cast-iron body • Tube CSM, EPDM, NR, CR, Silicone • Stainless steel or polypropylene connection • Tube compression by rollers

PCM LAGOA : PRECISION AND RELIABILITY FOR SUCCESSFUL DOSING

PCM Lagoa pumps are designed to dose a wide variety of products for chemical applications in the wastewater or clear water treatment process.

The part of the membrane in contact with the product is chemically inert, and the dosing heads are available in several types of material to guarantee total compatibility with different types of fluid.

The pump's capacity is adjusted by a graduated micrometric vernier which can be locked to prevent inadvertent adjustment. This makes the **PCM Lagoa** diaphragm pump an efficient solution for precise, reliable dosing in all types of industry.

Customizable, the **PCM Lagoa** range offers several advantages:

- Pumps can be **multiplexed** for proportional dosing of different fluids
- Different dosing head materials available to meet the requirements of all types of fluids
- **Wide range** accessories available to secure installation and optimize dosage
- Dry running possible without risk pump damage
- **Robust pump body** and stroke greatly **reduce** maintenance costs maintenance

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 315 l/h par doseur • **Pressure:** 12 bar • **Maximum temperature:** 90°C • **Particle size:** no particles • **Dosing accuracy:** +/- 1%	• Body: cast iron • Dispenser in polypropylene, PVC, stainless steel or food-grade stainless steel, PVDF

PCM X-GUARD : PROTECTS YOUR PUMPS

The **PCM X-Guard** in-line shredder reduces the size of solids contained in wastewater or other fluids to fine particles. **It crushes and shreds rags, pieces of wood, plastics or other solid or semi-solid parts to a size of 5-6mm** so as not to damage pumps or other downstream treatment equipment.

Its extremely robust cartridge cutting system, offering high torque at low rotational speeds, is **ideal for improving the performance of equipment** used to treat and dewater sludge or highly contaminated fluids.

PCM X-Guard helps avoid costly damage, time-consuming repairs and unscheduled maintenance.

PERFORMANCE	CONSTRUCTION
• **Flowrate:** 234 m3/h • **Pressure:** 4 bars • **Particles:** réduites à 5-6 mm	• 4 interchangeable and reversible knives • 4 gearmotor ratings available

PCM ELASTOMERS EXPERTISE

René Moineau™ invented the progressing cavity pumps in 1932. **For over 90 years,** PCM has been dedicated to continuous research, development, and testing of new elastomer blends tailored to meet the diverse requirements of various industries. Throughout this time, **PCM has accumulated extensive knowledge and expertise**, investing in essential equipment and resources to enhance our ability to select, develop, and produce optimal elastomers for our customers' specific applications.

Elastomer selection demands specialized knowledge and experience, qualities that few companies possess worldwide. PCM stands out as the only progressing cavity pump **manufacturer managing its own elastomer production**. Leveraging our expertise, laboratory facilities, and dedicated production unit, we can meticulously develop and customize each elastomer blend to align with the unique characteristics of every type of fluid.

PCM's customers encounter a wide array of fluids requiring careful consideration and solutions to ensure that the elastomers used in **PCM equipment deliver optimal functional characteristics.** These include:

- Mechanical resistance to abrasion,
- Chemical resistance to the pumped fluid,
- Desired color,
- Regulations compliance and rules,
- Optimized lifetime,
- Product integrity (structure, turbidity...),
- Resistance to cleaning procedures.

ELASTOMERS TESTING

From laboratory testing equipment to large mixers, injection presses and vulcanization ovens, PCM has all the necessary equipment and knowledge within its premises to assure **perfect control of its elastomer selection and manufacturing.**

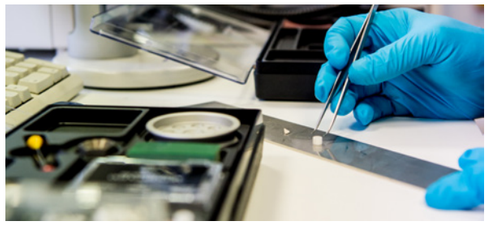
- Mechanical tests (static, dynamic, compression, bonding),
- Tribology (abrasion, friction),
- Chemical tests (swelling tests, volume and hardness variation, thermal analysis, infra-red spectroscopy.

MAIN ELASTOMERS USED IN INDUSTRY APPLICATIONS

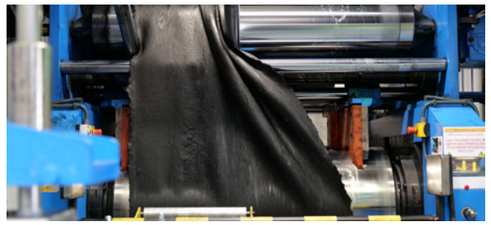
NBR	PCM 164	**NITRILE** Good general resistance in many applications especially with oil, grease products and resists abrasion. PCM NBR 164 has a good mechanical property.
	PCM 209	Certified EU, FDA US & 3A, PCM NBR 209 is a versitale elastomer, that can be used in a lot of different food applications.
	PCM 246	White elastomer, which has good mechanical properties. Mainly use in food application to transfer oil and fat product, due to his EU certification.
	PCM 159	**NITRILE - "4-WHEEL DRIVE"** Most versatile with its high ACN content, providing top performance across many applications.
	PCM 194 PCM 205	**SOFT NITRILE** High resistance to abrasion and top performer for handling solids with varying water cuts.
HNBR	PCM 198	**HYDROGENATED NITRILE** For higher temperature (150°C/300°F) applications and H2S&CO2 resistance.
	PCM 206	Extends the limits of 159.
EPDM	PCM 185	**TERPOLYMERE ETHYLENE PROPYLENE DIENE** Used mainly for his resistance to acids and alcohols. Meet with chemical challenge.
FKM	PCM 186	**FLUOROCARBON** Excellent chemical resistance. Top-of-the-range elastomer capable of withstanding extreme conditions.
	PCM 189	Use to transfer chemical product in food application. PCM FKM 189 is certified FDA US & 3A.
	PCM 204	Best performer for higher aromatics, and a good choice when nitriles are no longer effective.
CR	PCM 174	**POLYCHLOROPREN** Mainly used for pumped fluids with particles. Has a good property to fight against abrasion and has good general properties to withstand chemical products.
IR, NR	PCM 156 PCM 201	**NATURAL RUBBER** Very good mechanical properties and resists abrasion.

PCM ELASTOMER MANUFACTURING PROCESS

Numerical simulation: fine-tune our injection parameters to ensure the efficiency of production and guarantee the good properties of our parts



Chemical formulation: define each ingredient and its quantity to achieve the desired characteristics



Elastomer mixing: thanks to our mixer, we mix all our blends in our plant. This ensures the quality and performance of our elastomers.

Injection, moulding : Elastomer is then injected and moulded in metal frame to produce the stator.

Control : Then all stators are controlled to guarantee their performance. The tightening is very important and must be precise to have the right flowrate. Other parameters controlled are the dimensions, gluing, thickening ...

Failure analysis : Thanks to our expertise and knowledge we are able to analyze the different stators failures to bring personalized solutions to fix it.

PCM SERVICES

At PCM, we offer a comprehensive range of services to analyze, start up, perform maintenance, and upgrade your pumps and equipment, ensuring optimal performance and reliability.

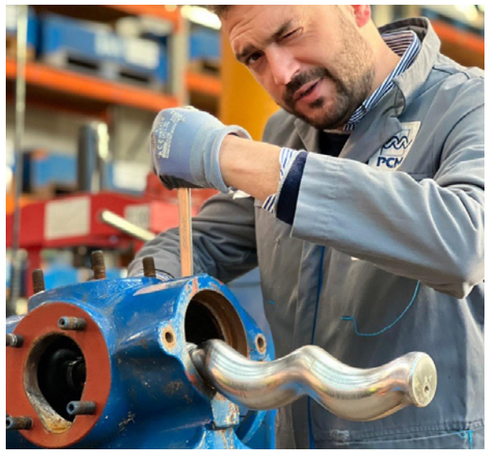
Our team of experts is dedicated to ensuring that your pumps operate at peak efficiency, delivering the best possible outcomes for your applications. By leveraging our deep industry knowledge and cutting-edge technologies, we are able to provide tailored solutions that address the unique challenges and requirements of your pumping solutions.

Our expertise spans from initial installation and auditing to ongoing maintenance and technical support, catering to all your needs to keep your systems running efficiently and effectively.

AFTER SALES

Maintaining your equipment is paramount for safety. Our Field Service engineers are here to support you with frequent inspections, create a service plan and carry out regular servicing of your pumps such as replacing stators/ hoses, rotor within the pumps and all seals and rings.

PCM has a dedicated after sales support team for all maintenance steps. This can include yearly service agreements to maintain and extend the life of the pumps. We can also renew third party equipment where we can offer on-site refurbishments to ensure safe operation of existing pumps and minimizing downtime at site.

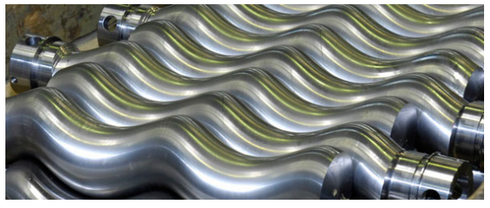


MAINTENANCE

Maintenance is key to extending the life of your pumps and equipment. At PCM, we offer tailored maintenance solutions, including training, corrective maintenance, and preventive maintenance, to meet your specific requirements. Our goal is to help you maximize uptime and minimize the risk of unexpected failures.

ROTOR AND MECHANICAL SEAL RENEWAL

Committed to reducing material waste, we also offer the possibility to renew rotors and mechanical seal. PCM can rechrome rotors to give them a second life. Similarly, we can reshape the faces of the mechanical seals so they can be reused on pumps.



RENTAL

For those in need of temporary solutions, we provide pumps and equipment rental. We understand the importance of keeping a plant operating whilst conducting regular service or refurbishment of existing critical equipment. We can rent pumps to keep your plant operating, which also allows engineers to conduct their work in a safe way, if the pump can be taken completely offline.

INSTALLATION AUDIT

Our installation audit service is designed to enhance the performance of your PCM pumps and equipment. Through detailed evaluations, we identify areas for improvement and provide actionable recommendations to optimize equipment operation and reduce maintenance costs. Our audits help you achieve higher efficiency and reliability in your installations, ensuring that your systems are always performing at their best.

TRAINING & DIGITAL SUPPORT

Our experienced staff can provide on-site training for new or existing pumps to maintenance engineers or operators. This can help increase site safety, hazard awareness, and improve asset management. We can provide tailored training on operation, servicing, or hazard identification.

For easy access to information on installation and maintenance, our HELLO PCM digital application provides a fast and convenient way to access data and resources related to your pumps and equipment. This application ensures that you have all the information you need at your fingertips, helping you manage your systems more efficiently.

contact@pcm.eu
www.pcm.eu

Index A- 03/2025 - non-contractual pictures