



ENVIRONMENT

» SOLUTIONS FOR A CLEANER
WORLD

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CLEAR CHOICE FOR TREATING LIQUID WASTE

Pump systems play a crucial role in the environmental industry, ensuring that industrial and municipal wastewater is handled economically and reliably.

EXPERTISE WHERE IT MATTERS MOST

PCM pump systems are available for a wide range of key applications in the treatment of wastewater. They are designed to offer the robust performance required for transferring wastewater, dewatered sludge, and metering chemicals, such as lime slurry, ferric chloride or polymer, in traditional wastewater treatment plants.

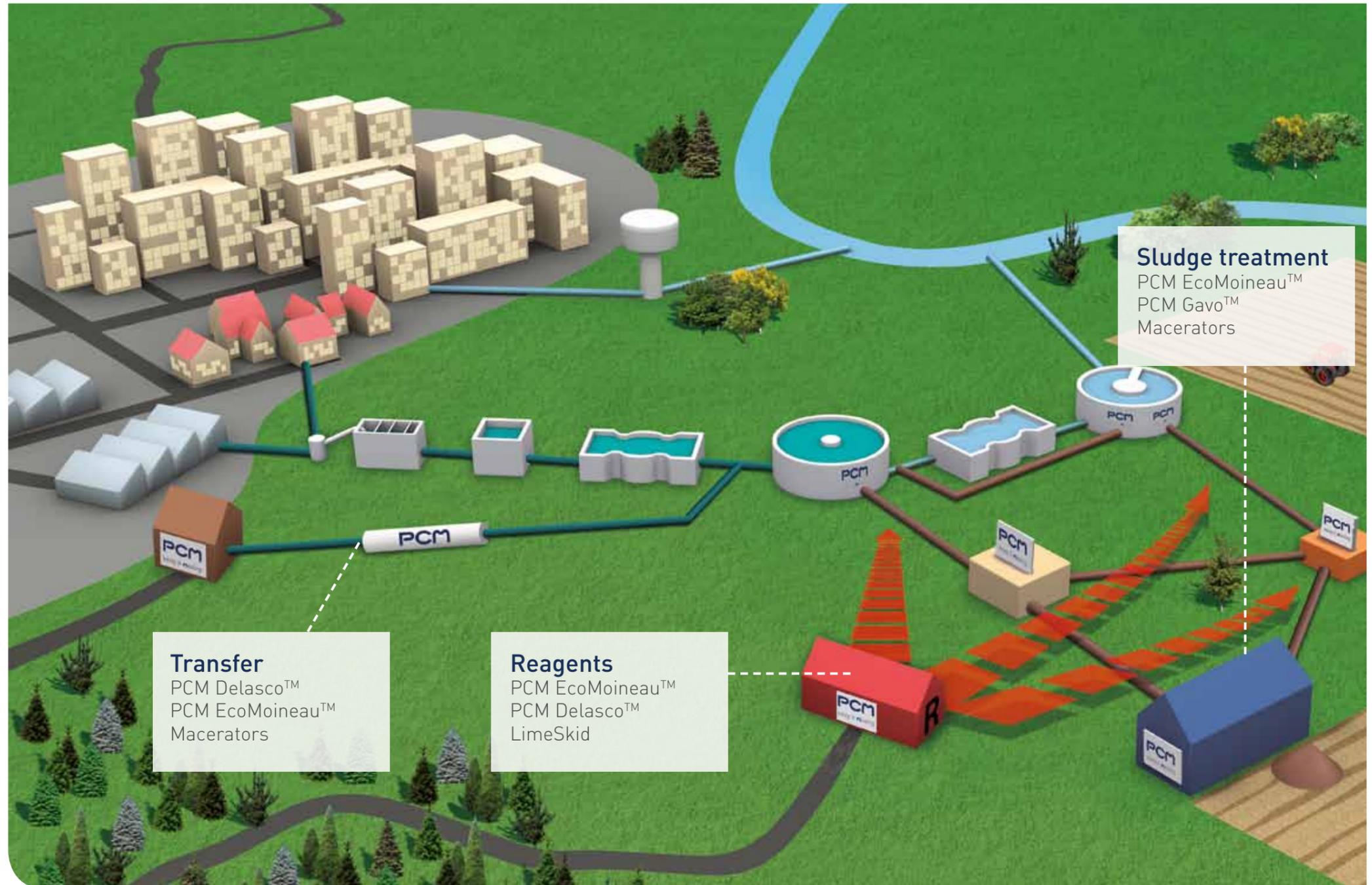
We also provide solutions for other water treatment applications, such as flue gas clean-up, landfill leachate, recovering hydrocarbons and performing ground remediation.

BUILT-IN PEACE OF MIND

An effective environmental pumping solution is a reliable one. The complex biological, mechanical and chemical processes used to treat wastewater can wreak havoc on a pumping system – unless it is designed by experts who know how to build, install and maintain systems that provide maximum uptime and operational safety.

KEEP TOTAL COST OF OWNERSHIP UNDER CONTROL

PCM pump systems provide a lifetime of cost-effective operation. We use a unique Life Cycle Cost (LCC) methodology to select pumps and design systems that meet your performance and reliability criteria at the best price. So in addition to a competitive purchase price, our systems provide an unmatched level of budgetary predictability over the life of the installation.



NON-STOP PRODUCTIVITY

Fluid transfer is the most common, and the most critical, task in wastewater treatment. PCM pump technology can be used for traditional wastewater transfer applications or more sophisticated tasks, such as desulphurizing flue gases, transferring oily water or treating polluted groundwater.

WATER TREATMENT

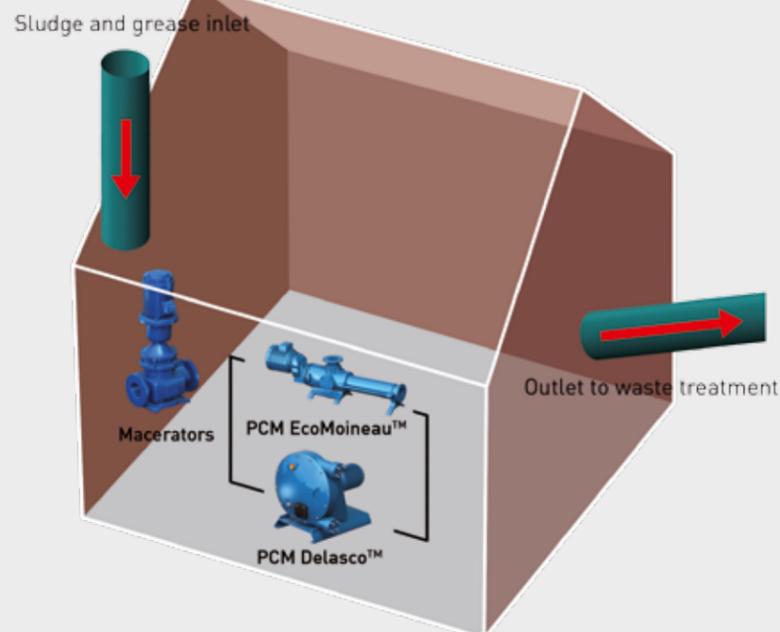
PCM pump technology can be used to move wastewater through all the steps on a modern wastewater treatment plant, from the loading of effluents to the transfer of liquid and dewatered sludge. All PCM pumps are designed to ensure a maximum level of efficiency and reliability.

INDUSTRIAL WASTEWATER

Liquid sludge with hydrocarbons or other residues presents a special challenge for transfer pumps, as the liquid is often corrosive and abrasive and the viscosity can vary. PCM pump technology is highly efficient for this task, thanks to the low-shear pumping action and its ability to pump multiphase liquids.

Simplifying upstream collection

PCM pump systems are particularly well suited to the transfer of wastewater and sludge from small-capacity holding tanks and ponds to a main waste treatment facility. They provide reliable performance and adapt well to variations in flow rates and fluid characteristics. Moreover, the addition of a macerator protects the pump system from clogging caused by solid or fibrous components.



ADDITIONAL APPLICATIONS

Landfill leachate

PCM pump technology can meet your suction and pressure requirements while resisting the aggressive chemicals of the soluble pollutants contained in landfill run-off. Suitable for horizontal installation, they are ideal for reducing ground-water pollution.

Ground remediation

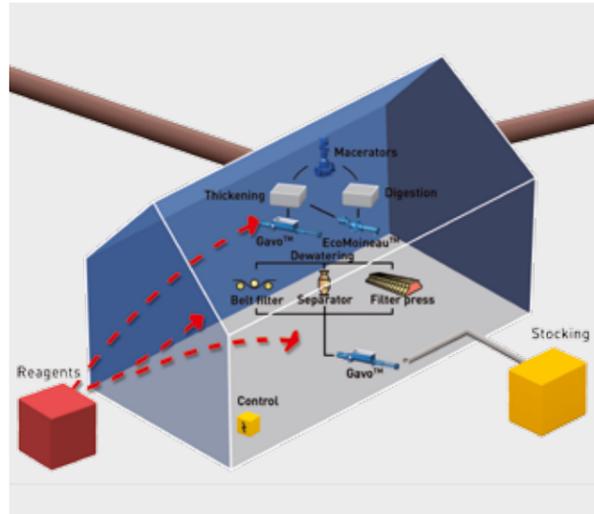
The low shear pumping action and multiphase capabilities of PCM pumps make them ideal for integration into in-situ ground remediation applications including sand filtration, oil/water separation and multiphase extraction.

Flue gas treatment

PCM pump technology is the ideal choice for handling the lime slurry and waste sludge encountered during flue gas desulphurization. PCM pump technology resists the highly abrasive and corrosive nature of the slurry and sludge.



LONG LIFE AT EVERY STEP



During wastewater treatment, gravity is used to clarify wastewater by collecting sludge in a series of settlement tanks. The sludge is drawn off and thickened before being dewatered and disposed of.

› LIQUID SLUDGE

PCM pump technology enables liquid sludge to be transferred between the different stages of the wastewater treatment process. PCM pumps can also be used for scum recovery as well as for feeding concentrators and dewatering equipment. They produce a constant flow rate regardless of fluctuating discharge pressures and variations in the level of solids.

› STABILIZATION

PCM Lime systems are the ideal turnkey solution for adding lime to liquid sludge during the lime stabilization process. PCM pump technology is an excellent choice for feeding sludge into stabilization ponds, when suction lift is important.



› THICKENING

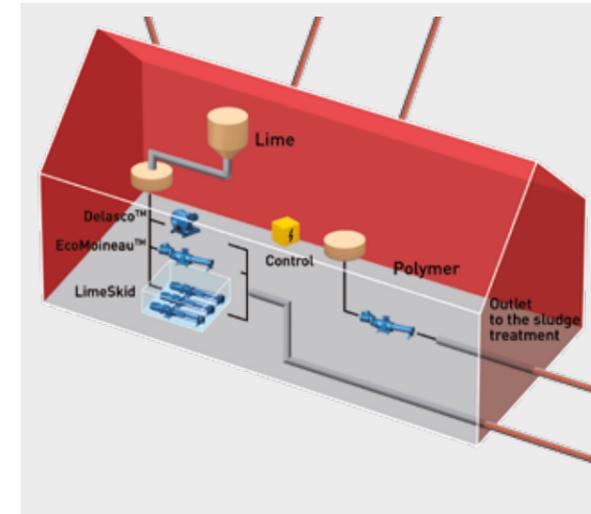
PCM pump technology is well suited to handling the different levels of viscosity of the sludge generated during the thickening process. A PCM macerator can be added to crush solids in sludge that have managed to pass through primary treatment, before they enter the pump.

› DEWATERING

During the dewatering process, PCM pump technology can be used to feed dewatering machines and to transfer dewatered sludge cake with very high levels of dry solids content over long distances.



REAGENTS



PCM pump solutions provide accurate metering of hard-to-handle chemical products.

› POLYMER

Polymers are added to liquid sludge to increase the efficiency of the separation process. PCM pump technology with a floating stator is ideally suited to handling this fragile mixture. The pump's design enables higher operating speeds without shearing and provides high quality metering.

› LIME

Adding lime slurry for sludge conditioning or to kill off water-borne germs in stabilization, but also for neutralisation in flue gas and landfill leachate treatment is a critical part of the water treatment process. PCM progressing cavity pumps are adapted to high-flow metering applications that require accuracy at an economical price. These pumps are the core technology of PCM LimeSkid, LimeMix and Lime Control Systems.



PCM PUMP SOLUTIONS

PCM pump solutions provide cost-effective, reliable performance and are built to the highest standards for trouble-free operations. To accelerate and simplify their integration into your environmental processes, they are also available as part of ready-to-use turnkey systems.

Progressing cavity pumps:

UNBEATABLE COMPETITIVENESS



Ideal for fragile, abrasive and viscous fluids, PCM EcoMoineau™ progressing cavity pumps offer low Life Cycle Costs, thanks to their low energy consumption, inherent reliability and high suction capabilities.



Moineau™ range

Peristaltic pumps:

EASIEST MAINTENANCE



The gentle pumping action of PCM peristaltic or hose pumps is adapted to shear sensitive fluids. Their simplicity and robustness also make them ideal for medium flow, medium pressure pumping of abrasive, fragile and corrosive fluids. They are low cost and easy to maintain, because only the hose is in contact with the fluid.



Delasco™ range



Transfer:

GAVO CAKE PUMP

Complete solution for Gavo cake pumps, including polymer lubrication, sludge level control in the hopper and lime addition monitoring. Compatible with the PCM Lime Control System.

Includes all accessories and associated equipment (connecting hopper and sensors) including pipe system and control panel.



Separation:

FILTER PRESS FEED

Complete solution for chamber filter press feeding, including low and high pressure PCM progressing cavity pumps, and polymer injection pump for sludge conditioning.

Includes all control and safety equipment accessories for better control, higher efficiency and maximum safety of the installation.



Metering:

LIME MILK/ACTIVATED CARBON

Complete system including pumps and all accessories for lime milk or activated carbon injection. Designed for maximum efficiency with total operator safety and easy maintenance.

Available with lime milk preparation unit including tank, mixer and all fittings. Compatible with the PCM Lime Control System.



Monitoring:

LIME CONTROL SYSTEM

The PCM Lime Control System is a complete solution for monitoring and controlling the storage, metering and injection of lime during wastewater applications. It can be used for lime milk systems (LimeMix & LimeSkid) and for powdered lime injection with Gavo Cake Pump solutions.

PCM SERVICES

When you buy a PCM pump you get more than just a piece of machinery. We provide a full range of value-added services that enable you to get the most out of your investment.

Testing:
› MAKING THE RIGHT CHOICE

To ensure the performance and lifespan of a pump or pump system, we provide viscosity, elastomer and abrasion testing.

Installation:
› ENSURING TROUBLE-FREE OPERATION

Our installation services take the guesswork out of pump integration. We provide start-up assistance, system integration engineering, and training for operators.

Servicing:
› GUARANTEEING EFFICIENCY

To ensure your pump investment meets your expectations, we provide extended warranties, field maintenance for PCM and non-PCM pumps, repair services and wear analysis.

Life Cycle Services:
› EXTENDING LIFESPAN

We provide rotor and mechanical seal refurbishment to extend a pump's lifespan. We can also decommission pumps in compliance with today's strict environmental regulations.

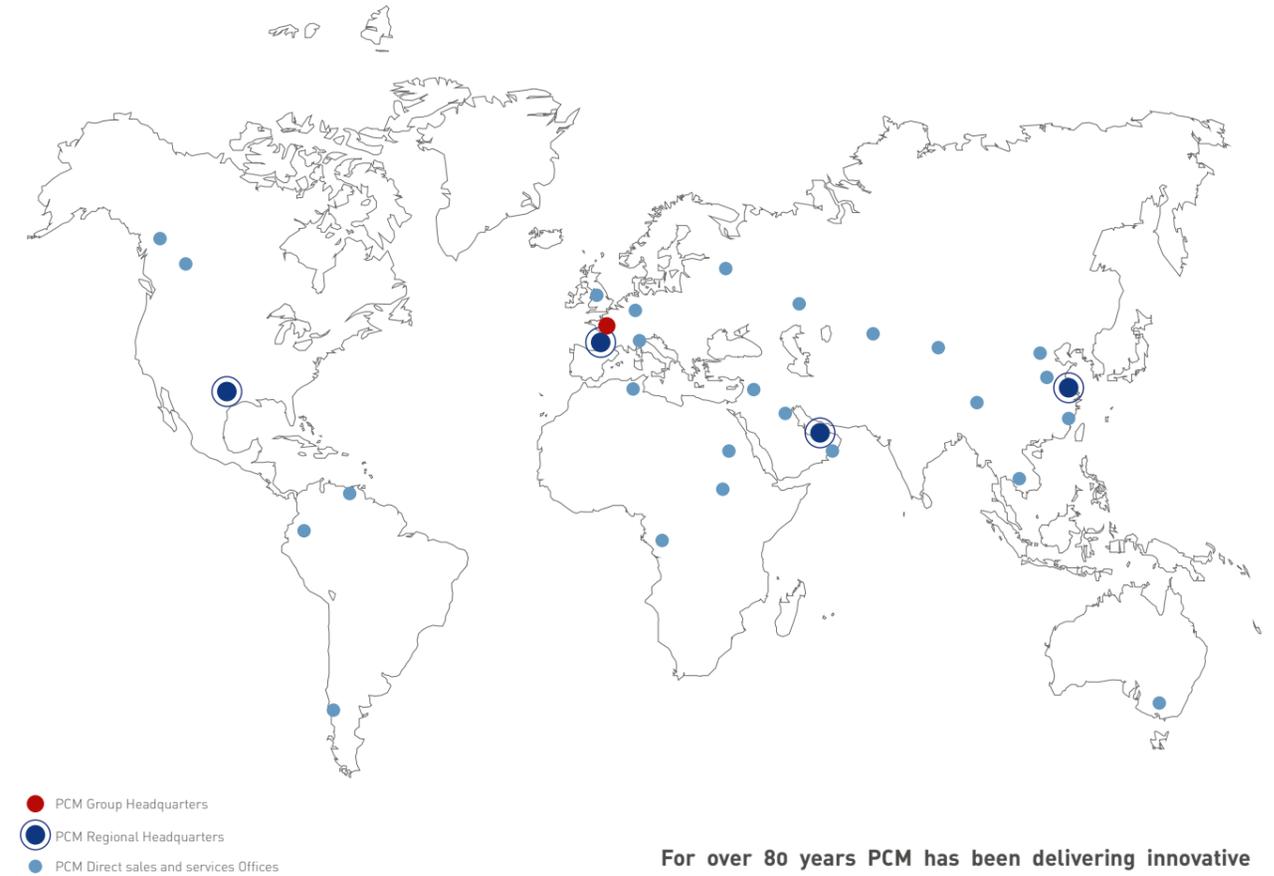
Optimization:
› DELIVERING LOWEST OPERATING COST

Our system optimization services, such as Life Cycle Cost (LCC) audits, seal and motor upgrades, and ATEX conformity, ensure your pumps provide a lifetime of efficiency.

Spare parts:
› RAPID WORLDWIDE DISTRIBUTION

Available from our worldwide network of sales offices and distributors, PCM spare parts ensures that PCM products last as long as possible and benefit from warranty protection and CE conformity.

PCM AT A GLANCE



For over 80 years PCM has been delivering innovative pump solutions to customers around the globe. Today we are one of the world's leading manufacturers of positive displacement pumps and fluid-handling equipment.

PCM serves six highly demanding industrial markets: Environment, Mechanical Engineering, Chemicals, New energies, Minerals and Paper. While all of them share similar requirements in terms of reliability, cost effectiveness and productivity, each has special needs that PCM meets with perfectly adapted pumping systems.

