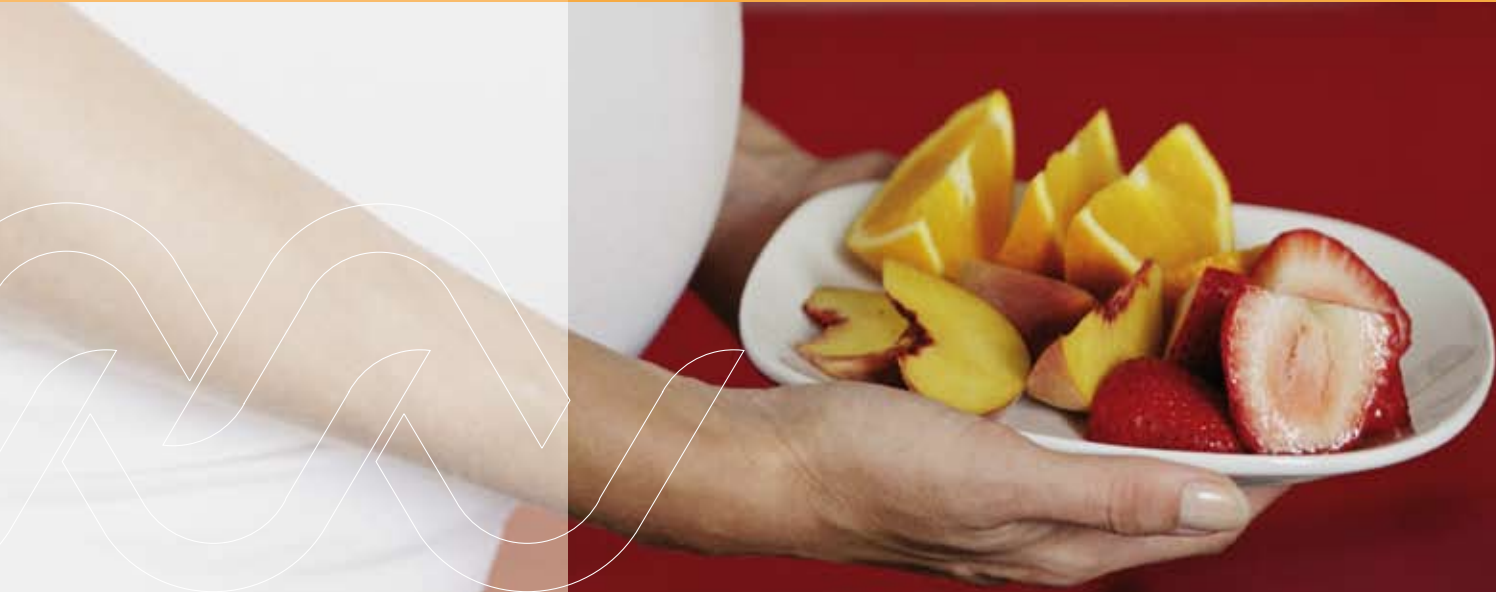


PCM Food ▶ When care is required





➤ At your service: Your partner in innovation

PCM is a leading manufacturer of pumping, dosing, mixing and filling systems for the Food industry.

Bringing your ideas to the shelves

If your industrial processes are the engine of the food industry, then innovation is the fuel. New ideas enable you to expand into new markets and revitalize mature ones. The only limit to your creativity is the industrial feasibility—and that's where PCM comes in. Our systems unlock the creative possibilities of your industrial processes.



Jam topping trial: Highly viscous jam had to be laid perfectly on biscuit.

End-to-end product integrity

Today's high value foodstuffs are made with highly valuable ingredients. And the market trend is towards more recognizable processed foods with whole vegetables and fruits. Our systems enable you to handle - transfer, dose, mix and fill - challenging ingredients with minimal damage.

Performance you can count on

Reliability and productivity are your best allies when faced with the non-stop nature of today's just-in-time retail supply chain. PCM pumping, dosing, mixing and filling systems enable you to produce the same recipe identically from the start of your production run until the finish.

Low life cycle costs

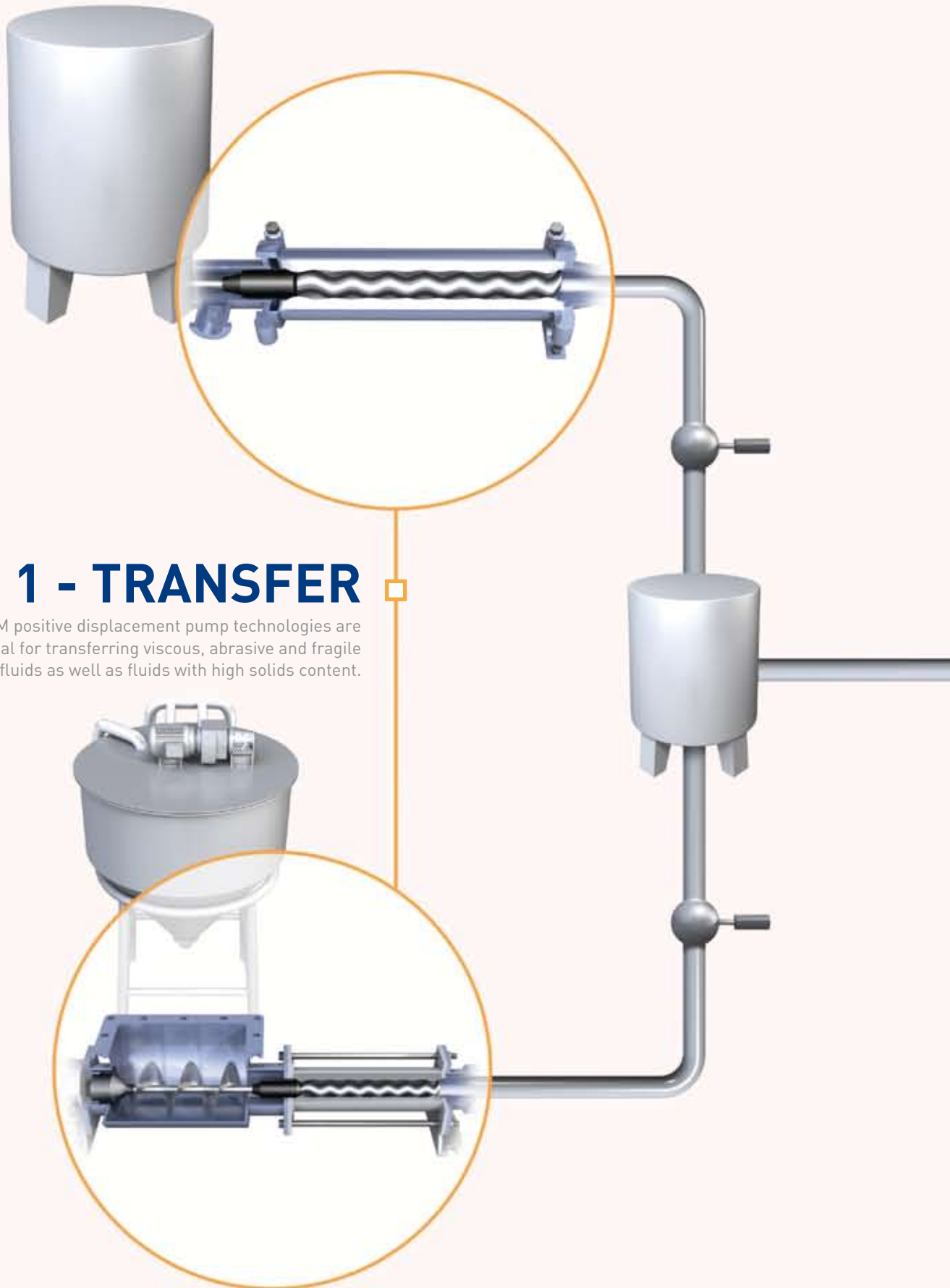
A pump that is not well adapted to its operational parameters can cost you money in terms of production, maintenance downtime and energy consumption. We use Life Cycle Cost (LCC) analysis to find the most cost-effective pumping solution for your industrial processes.

Meeting the strictest standards

We share your commitment to ensuring consumer safety. To begin with, all our systems are CIP (Cleanable in Place). In addition, we continually invest in innovations that enable you to anticipate constantly evolving food safety regulations. Finally, our vast international experience enables us to design systems that meet both local regulations and international standards.

Our Markets:

<p>Dairy</p> 	<p>Beverages</p> 	<p>Convenience foods</p> 	<p>Fruit & vegetables</p> 
 <p>Meat, fish & animal food</p>	 <p>Baked goods</p>	 <p>Sugar & starches</p>	 <p>Personal care</p>





2 - DOSING

PCM dosing systems enable you to accurately and reliably distribute the ingredients for complex recipes during your entire production run.



3 - MIXING

PCM mixing systems mix by progressive contact rather than beating, which preserves the product's texture and properties.



4 - FILLING

PCM filling systems enable you to fill, layer or inject a wide range of products using the same system.



➤ **Transfer:** Protect valuable ingredients

Although product integrity is a concern at every step of food processing, the risk of damage is highest during the transfer stage.

Handle with care

Making sure your final product lives up to its marketing claim starts the moment the ingredients enter the industrial process. The risk to the quality and texture of ingredients is highest during this transfer stage. PCM positive displacement pump technologies handle delicate ingredients with the highest level of care. Our systems are designed to reduce costly wastage and preserve all the properties of your recipe's ingredients.



Ice cream: The challenge is how to transfer a highly viscous chocolate without introducing air bubbles.



PCM Moineau™ Hygienic Progressing Cavity pump for yogurt transfer.

Reliable performance

Difficult-to-handle ingredients can affect pump performance and reliability. PCM transfer systems are designed to perform reliably, no matter how fast or varied your production runs are. Ideal for transferring viscous, abrasive and fragile fluids as well as fluids with high solids content, they will never slow you down.



Viscofeeder™ transfer system with homogenization chamber for highly viscous product.

Pushing back the limits

Customers regularly approach us to help them create new products that were previously considered to be unworkable. They know that PCM pumps can safely and effectively perform extreme transfer tasks that other pumps cannot handle.

Recorded performances

Viscosity	Over 4 million cps (caramel)
Temperature	140°C
Pressure	60 bar
Solids size	500 mm long (whole fish)
Operating lifetime without changing parts	5 years
Delivery time	2 days

Pumping the un-pumpable

"In a food segment that thrives on innovation, the ViscoFeeder enabled one of our customers to bring a hitherto unheard of product to the market: a fresh avocado snack with a short shelf life. The ViscoFeeder transfers the avocado to the extruder with an accurate, constant flow and can be cleaned entirely in place."

Cyril Avare, PCM Food sales engineer





➤ **Dosing:** Never waste a drop

Dosing of valuable ingredients requires accuracy and flexibility.

Accurate performance

When a customer buys a six-pack of whole-fruit yogurt, they expect to find the same number and quantity of fruit in each and every pot. PCM dosing systems enable you to accurately and reliably distribute the ingredients for complex recipes during your entire production run.



Precision dosing: Dosys™ piston pump with position sensors provides +/-0,5 % accuracy.



Accurate multi-nozzle dosing of fragile raspberry pastry coating.

Ideal for complex end products

The never-ending push to market increasingly innovative processed foods can create dosing headaches for manufacturers. We provide systems that adapt to varying quantities and properties of ingredients. When one of our clients wanted to add muesli to yogurt they turned to PCM to design a DoseyFruit™ system capable of handling the highly abrasive and very dry cereal mixture.



Doseyfruit system with automatic empty tank switch-over and alert.

On-demand flexibility

Shelf life is an important feature of high value-added foods; consumers avoid buying products that are too close to their sell-by date. The flexibility of PCM dosing systems allows you to supply your distributors with small production runs with maximum shelf life, rather than large batches. This flexibility comes without extra costs associated with wasted ingredients and production downtime.

Recorded performances

Accuracy	± 0.5% (in volume)
Product wastage	Product losses down to 1%
Solids size	40 mm diameter
Container switching time	0 (continuous process)
Pressure	20 bar
Solids content	90%

Improving ROI

"We were tired of wasting expensive flavors when adding them to the yogurt base. We switched to a PCM Dosys system that was so accurate that it quickly paid for itself in just a few months."

Smain Delmi, CEO, Hodna Lait, Algeria





➤ **Mixing:** Mix with care

We make the impossible possible: mixing ingredients without altering the texture.

Damage-free blending

Our expertise in mixing fluids protects not only the quality of the incoming ingredients but the quality of the outgoing mixture. Our PCM Dosymix™ systems mix by progressive contact rather than beating, which preserves the texture and properties of the different products. To improve the regularity of product distribution downline, our mixers are available with multiple outlets.



To ensure even product distribution, each Dosymix output feeds one downstream dosing head.



Low shear screw profile preserves product texture and flow rate.

Create any composition

Our inline mixers are capable of blending a wide range of fluids, from the very liquid to the very viscous, and including high solids content. This versatility gives you the freedom to manufacture products with fragile and/or complex compositions. Whipped egg whites in cream, chopped vegetables in soup and whole fruit in yogurt are a few of the challenges we have met for our customers.



Dosemix integrated into Dosefruit station.

Perfect for continuous processes

Our inline mixers enable you to move from batch mixing to continuous mixing, without worrying about changes to product texture. Our mixers integrate easily into your existing production line and require less room for installation than a mixing tank. Because there's no mixing tank, you never waste valuable ingredients by producing more mixture than is required for production, and there's no risk of decanting.

Recorded performances

Mixer outlets	16
Products mixed	Whole raspberry with yogurt with minimal damage
Solids content	Up to 80%
Solids size	40 mm
Flow	6 000 l/h (continuous process)
Viscosity loss due to dynamic mixing	10% for stirred yogurt

Protecting ingredients

"When we wanted to bring a new yogurt containing whole pieces of fruit to the Chinese market, we opted for a PCM mixer with multiple outputs. Not only does it handle the fruit with care, it also evenly distributes the mix to the filling machine, so now all the yogurt pots contain the same amount of fruit."

Wang An Yong, Equipment Manager, Weigang Dairy, China





➤ **Filling:** Freedom to be creative

Breathe new life into your existing products and production facilities.

Easy to integrate

Our filling systems enable you to add value to your production facility by filling new and more complex compositions using your existing packaging equipment. Moreover, you can add new filling stations to an existing production line, thanks to our portable filling systems.



PCM Filling system with 32-needle injection array produces up to 21,000 buns hourly



Experts at dosing highly viscous products.

Custom creations

PCM filling systems are tailored to your process requirements and product recipes. They enable you to fill, layer or inject a wide range of products using the same system. All you have to do is change the filling nozzles. For example, using the same PCM filling system one of our customers fills single-dose pouches with liquid sauces on one shift and big bags of thick sauces with chopped vegetables on the next.



Special nozzles for filling yogurt with whole pieces of fruit.

Fill any container

At PCM, the word container takes many forms, and our systems can fill all of them accurately with minimal wastage. Our equipment can be used to spread toppings onto biscuits and to inject liquid, viscous, near-solid and dry ingredients into baked goods and convenience foods. They can also be used to fill any pot, jar, mold, tube, bag, bottle, carton or dish.

Recorded performances

Accuracy	± 0.5% (in volume)
Viscosity	Over 4 million cps
Solids size	40 mm
Number of filling heads	120
Maximum stroking speed	57 strokes / min
Solid content	90%

Cooking up new products

"The best ideas are the simplest. To boost sales of its line of dry biscuits, one of our customers created a new version of the product by using a PCM portable filling system to add a jam topping before baking. It was an instant hit. Competing systems would have required them to change their entire production line."

Laurent Hourcade, PCM Food engineer





➤ Our expertise at work for you

Co-development

Our expertise can give you a precious edge in bringing new products to market. By determining the economic and industrial feasibility of a system as early as possible we help you reduce the risk of a costly failure and accelerate the path to reward.

International parts distribution

Thanks to our worldwide network of sales offices and distributors, you can obtain genuine PCM spare parts quickly. Using PCM spare parts ensures that PCM products last as long as possible, benefit from warranty protection and maintain their CE conformity until their end of life. We also provide a comprehensive portfolio of maintenance services.

Consulting & training

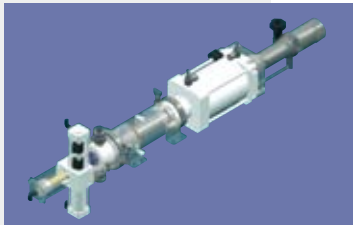
To ensure optimum operational efficiency of PCM systems, we provide upstream testing of product compatibility, viscosity and abrasiveness. We bring pumping solutions online faster with start-up assistance. To accelerate knowledge transfer with our customers, our Field Services Teams provide training services for your staff.

Repairs & upgrades

Maintenance can be performed on site or in our facilities. Our technicians can also ensure ATEX conformity, upgrade existing systems with new technologies, upgrade drive units, and convert the seals on Moineau™ pumps for new requirements.

➤ Powering your process

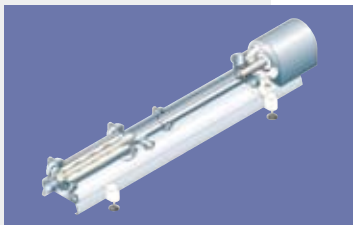
Because of the vital role they play in your applications, our pumps are designed to provide a lifetime of trouble-free and efficient operation.



Dosys piston pump.

Dosys™ pumps

Our Dosys pump is the only pump on the market today that lets you accurately dose fluids with high solid content at low flow rates. It gives you an unrivaled level of control and cleanability (CIP and SIP) that make it perfect for processing semi-solid ingredients.



H Series Moineau pump with flexible shaft for optimized cleanability.

Moineau™ progressing cavity pumps

Pulsation-free and offering very low shear operations, our Moineau pumps are ideal for tasks that require a steady flow regardless of product viscosity or pressure. They can operate at higher pressure than other positive displacement pumps and can be cleaned in place (CIP).



DL Series Delasco pump with roller technology to extend hose lifespan.

Delasco™ hose pumps

When you need versatile and robust pumping, Delasco pumps are the best choice. They are ideal for tasks that require dry priming and offer simplified cleaning and maintenance, since only the tube is in contact with the fluid.

Enabling creativity

"The hallmark of today's food industry is ceaseless creativity. The speed at which food manufacturers need to develop and bring new products to market has never been faster. Our expertise enables our customers to rapidly take their innovations from the drawing board to the production line by creating efficient, reliable industrial processes."

Jacques Fay, Chief Executive Officer, PCM



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