



Grundfos is proud to be an official sponsor of Expo Zaragoza 2008

As a leading pump manufacturer and a company committed to environmental conservation, we value our opportunity to act as an official sponsor of Expo 2008 and its theme of 'Water and Sustainable Development'.

Expo 2008 takes place from June 14th to September 14th on the banks of the river Ebro in the beautiful Spanish city of Zaragoza. All its vast assembly of exhibitions, architecture, culture, happenings and technology will be based around water and its value to mankind. With 61,667 m² of easily accessed pavilion space, a spectacular 73 metre water tower and six themed-squares, Expo 2008 will cover all the important water related issues, including thirst, energy, water's life giving properties and it's creation.

Over 70 countries will be represented at Expo 2008, a level of representation that reflects the global importance of water conservation. Grundfos are proud to be a sponsor – we want to play our part in keeping the world's water clean.



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Just what you need

Grundfos sanitary pumps for industrial beverage applications



MAXA/MAXANA



Euro-HYGIA®



SIPLA

Pumps that treat your product right

In a competitive industry you need premium pumps that contribute to the quality of your product. Grundfos sanitary pumps are manufactured and certified to the highest industry standards. With our solutions you know your product's integrity is guaranteed and its level of quality reproduced every time.

Our pumps are constructed from deep-drawn and/or forged stainless steel for a hygienic, pore- and blowhole-free surface. Maximum hygiene is further assured by design features such as metal-to-metal contact seal areas and the absence of pump casing dead-ends.

In beverage applications all ingredients are kept separate from one another. Our pumps are designed for easy CIP (Cleaning In Place) and SIP (Sterilisation In Place) cleaning so there is no chance of residue tainting the next batch. And like all Grundfos pumps, our sanitary solutions are designed for maximum user-friendliness.

SIPLA

The SIPLA range features robust self-priming side channel pumps designed for reliable operation even with highly oxygenated liquids. Every surface in contact with the pumped liquid is constructed from electro-polished stainless steel, (AISI 316L).

Euro-HYGIA®

Euro-HYGIA® comprises a range of flexible single-stage, end-suction centrifugal pumps designed to cope with the toughest working environments. Three impeller designs are available: semi-open, closed and free-flow. The design of the wet-end parts complies with the strictest

hygiene certification standards. The pump casing is made from deep-drawn stainless steel (AISI 316L) to create an entirely smooth surface.

MAXA/MAXANA

The MAXA and MAXANA ranges are single-stage end-suction centrifugal pumps designed for heavy-duty operation in industrial processes. These robust and flexible stainless steel pumps feature optimised blade entry angles, and a two-channel impeller. Pump casings are made from deep-drawn stainless steel, (AISI 316L), creating a smooth surface.

SIPLA – the key CIP return pump in premium beverages

SIPLA is a range of single-stage side channel pumps. Robust and self-priming, these pumps are capable of handling high air content without air locking. The single inboard mechanical shaft seal ensures efficient cleaning as well as cooling.

Several variants and installation options are available to meet specific needs, including electronically speed-controlled versions; all comply with the 3A Hygienic Standard. Pipe connections range from DN 32 to DN 80 and motor sizes from 0.55 to 18.5 kW. Sucking depth up to 5 meters.



Star impeller - Electro-polished highly efficient self priming impeller. Available in 8 sizes depending on the needed performance.



Grundfos has sanitary and general process pumps for each phase in the process: from the reception of ingredients through to packaging.

FACTS
Flow: Max. 90 m ³ /h
Head: Max. 50 m
Operating pressure: Max. 10 bar
Operating temp.: +95°C (+140°C on request)



Sanitary Standards



Dosing in the digital age

DME pumps for CIP/SIP duties

Grundfos Alldos DME Digital Dosing™ pumps make the CIP (Cleaning In Place) and SIP (Sterilisation In Place) processes easy. The trial and error is taken out of programming, and recalibration isn't necessary when the capacity is adjusted. You can make the pump run at full capacity simply by pressing the 100% key. This means that the pump is fully primed for the next cycle. And with a turndown ratio of 1-1000, DME pumps are accurate down to the smallest dose. Dosing has never been this precise or straightforward!

What you set is what you get

Grundfos Alldos Digital Dosing™ is made easy thanks to the user-friendly control panel. Simply use the multi-lingual five-button interface to specify the dose required and the pump will take care of the rest.

Smooth, constant dosing

You have full control over the speed, acceleration and position of the diaphragm. The design also eliminates vibrations allowing the additive to be applied evenly and precisely.

Full-stroke length

Full-stroke length makes the pump less vulnerable to gas build-up in the dosing head. This ensures maximum precision and smooth discharge.

Our range just got bigger – much bigger

Our product range already boasted the broadest Digital Dosing™ flow range (0.0025 l/h to 150 l/h) on the market – but now we have introduced two units for larger applications with flows of 375 l/h and 940 l/h. No other manufacturer does digital dosing on this scale.



Milko – a modern dairy enterprise with modern day requirements

Dairy experts with open minds

The people at Milko know their dairy products. Milko is not only the largest dairy co-operative wholly owned by Swedish farmers; it is also the fifth-largest food industry in Sweden. But even through they are large, they are not afraid to explore new ways of doing things. Committed to ideals of natural food, openness, and innovation, the Milko team was naturally drawn to the groundbreaking DME range.

Already a big DME fan

"We already had DME dosing pumps elsewhere in our plant – and were very pleased with them," says Lars Rudh, operations engineer at Milko. "So naturally we wanted to use them in our CIP system as well."

Dosing acid and lye in CIP system

The CIP system in question cleans vats used to float cheeses in a saline solution, and the vats need daily cleaning to maintain top quality and hygiene. "We changed the system from a fully manual to a semi-automatic system," says Lars Rudh. "The DME pumps are used to dose acid and lye in exactly the right amounts, and have worked every bit as well as the other DMEs in the plant."

"Work well, easy to use"

When asked why Milko is so happy with the DME pumps, Lars Rudh explains: "Well, quite simply, they work very well! And they're very easy to use – you know straight away what to do to achieve the best results. In fact, we're planning to put in more DME pumps in other parts of our system."

Preserving traditions at Jacobsen's Brewhouse

Old-fashioned beers are back!

The kettles at Husbryggeriet Jacobsen (Jacobsen's Brewhouse), located in Copenhagen's historic Carlsberg headquarters, are brewing specialty beers as never before. In recent years the beer market has gone full circle, with consumers increasingly demanding beer that reflects old-fashioned tastes and traditions.

Accordingly, in June 2005 Carlsberg opened Jacobsen's Brewhouse – a microbrewery dedicated to faithfully recreating the beer recipes of 1897, the year the old Carlsberg brewery was established.

Delicate processes need quality equipment

The production processes behind traditional beers call for special care – as well as flexible, high-quality hygienic production equipment.

The fermentation process is critical. Several beer labels are brewed on the same production line. High-grade sanitary pumps help prevent cross-contamination during the fermentation processes ensuring that each beer label tastes exactly as it should.

ACIP (Clean in Place) solution outfitted with Grundfos pumps thoroughly cleans the system after each batch to maintain homogeneous quality and taste.

When standards must be upheld

Grundfos sanitary pumps are designed to provide no breeding grounds for bacteria and germs. The designs comply with the industry's strictest hygienic requirements, a must for the complex fermentation processes at Jacobsen's Brewhouse. All Grundfos sanitary pumps are backed by the appropriate certification and comply with formalised market standards.

A happy master brewer

Today the full range of Grundfos high-grade stainless steel sanitary pumps are represented at Jacobsen's Brewhouse. Master brewer Jens Magnus Eiken says: "A good sanitary pump is a pump that adds excellence to the brewing process – and it is a pump that you don't even notice is there! Only the best sanitary pumps on the market are good enough for our processes, and the Grundfos range helps us ensure a high-quality production of specialty beers."





Grundfos is a full-line supplier of premium pump solutions. Our range has a variety of models suited to different stages in industrial processes.

We can outfit your entire application with general process pumps capable of handling problematic media, and sanitary

pumps that fulfil the strictest hygienic criteria. At Grundfos we know that reliability and easy maintenance are critical factors in keeping the production flow going. That is why our pumps are SIP/CIP compatible and can be adapted for optimal performance.

Process application overview – Industrial Solutions 2007	BEVERAGE				
	Breweries	Soft drink	Wineries	Juice production	Distilleries
DISINFECTION/DISTILLATION	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*
PURIFICATION	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*
CIP/SIP	F&B-HYGIA, SIPLA, Oxiperm, DME, M&C*	F&B-HYGIA, SIPLA, Oxiperm, DME, M&C*	F&B-HYGIA, SIPLA, Oxiperm, DME, M&C*	F&B-HYGIA, SIPLA, Oxiperm, DME, M&C*	F&B-HYGIA, SIPLA, Oxiperm, DME, M&C*
BOTTLE WASHING	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*	Oxiperm, DME, M&C*
MIXING	F&B-HYGIA, DME, M&C*	F&B-HYGIA, Durietta 0, DME, M&C*	F&B-HYGIA, Durietta 0, DME, M&C*	F&B-HYGIA, Durietta 0, DME, M&C*	F&B-HYGIA, Durietta 0, DME, M&C*
CARBONATE	F&B-HYGIA, Contra, Durietta 0, DME, M&C*	F&B-HYGIA, Contra, Durietta 0, DME, M&C*	Durietta 0, DME, M&C*	DME, M&C*	DME, M&C*
FLAVOUR ADDITIVE	DME, M&C*	DME, M&C*	DME, M&C*	DME, M&C*	DME, M&C*
LIQUID TRANSFER LOW VISCOSITY	F&B-HYGIA, MAXA	F&B-HYGIA, Durietta 0	F&B-HYGIA, Durietta 0	F&B-HYGIA, Durietta 0	F&B-HYGIA
LIQUID TRANSFER HIGH VISCOSITY	NOVALobe	NOVALobe	NOVALobe	NOVALobe	NOVALobe

*Measurement & Controls