

## PRESS INFORMATION

### ACHEMA 2009: LEWA intellidrive

## The intelligent and precise mechatronic all-in-one pump system

Operators in the process-engineering industry want to automate their central processes as extensively as possible while satisfying cost and quality constraints. That becomes all the more challenging, the more frequently and severely process parameters change in production. Wherever the volumetric flow rate of a medium (e.g. additive, colorant, aromatic material) needs to be modified quickly and over a broad adjustment range, the new LEWA intellidrive product offers a good approach to a solution.

That is because LEWA intellidrive now unifies what was previously separate in diaphragm metering pumps: pumps with their frequency-controlled standard drives and separate adjustment drive for stroke length adjustment can now be combined in one compact and space-saving unit. First, this simplifies installation and wiring effort: pre-wired connectors at the pump motor interconnect the supply and signal lines with the control module.

It also offers an entirely new type of functionality: a partial stroke mode handles the task of stroke length adjustment to adjust the volumetric flow rate. Here, the pump piston does not fully travel to front dead center in the pressure stroke phase – the piston stops before this point as a function of the desired volumetric flow rate and travels in reverse for the suction stroke.

The innovative capability of altering the angular velocity during a revolution (i.e. within the pressure and/or suction phases too) not only offers variable modification of the stroke speed. This highly dynamic solution also offers a maximum of flexibility and the ability to react to highly challenging engineering process requirements; this is entirely in keeping with the LEWA motto: Creating Fluid Solutions!

Closed-loop speed and position control with feedback of actual kinematic data (displacement-time data) for the electric drive make it possible to implement entirely new functions – giving you more potential applications. For example, high-resolution and exact piston positioning enable very precise pumping of defined material volumes for filling purposes.

Flexibility achieved by software-based functionality – that is what makes the LEWA intellidrive a mechatronic system. For example, a second pump in the network lets you generate nearly pulsation-free volume flows by precise electronic synchronization of the mechanically decoupled pumps. If required, LEWA intellidrive can also synchronize itself to the cycle speed of a filling machine. Or it can combine and mix two media in one pump head. And it can handle – thanks to the availability of different suction and pressure stroke frequencies – the known difficulties in precisely metering high-viscosity media.

As is the usual practice at LEWA, along with standard pump heads, special material variants may also be implemented, e.g. acid-resistant pump heads with PTFE linings.

LEWA intellidrive is available as a stand-alone variant with a user interface and the necessary open and closed loop control intelligence compactly integrated in the drive unit. As an option, the system may also be integrated as a field device in the customer's higher-level process control system. Interfaces such as Ethernet and Profibus assure trouble-free system integration. Analog inputs and outputs are expandable – e.g. for valve control.

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Figure 1:



Figure 2:

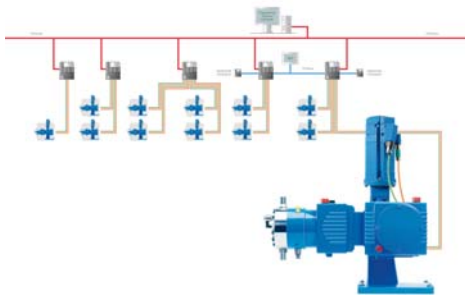


Figure 1: LEWA intelligidrive integrates flexible proven and precise LEWA pump technology – with an intelligent and highly dynamic drive unit.

Figure 2: LEWA intelligidrive is the mechatronic all-in-one pump system with nearly unlimited application potential.

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<b>Produkte &amp; Leistungen:</b> <ul style="list-style-type: none"> <li>• Dosierpumpen</li> <li>• Prozessmembranpumpen</li> <li>• Dosier- u. Mischanlagen</li> <li>• On- &amp; Offshore Anlagen &amp; Systeme</li> <li>• Condition Monitoring Systeme</li> <li>• Odorieranlagen</li> <li>• Weltweite After Sales Services</li> </ul>	<b>Products &amp; Services:</b> <ul style="list-style-type: none"> <li>• <i>Metering pumps</i></li> <li>• <i>Process diaphragm pumps</i></li> <li>• <i>Metering and mixing systems</i></li> <li>• <i>On- &amp; offshore skids, systems &amp; packages</i></li> <li>• <i>Condition monitoring systems</i></li> <li>• <i>Odorizing systems</i></li> <li>• <i>Worldwide after sales service</i></li> </ul>
<b>Branchen:</b> <ul style="list-style-type: none"> <li>• Öl &amp; Gas (upstream &amp; downstream)</li> <li>• Chemie &amp; Petrochemie</li> <li>• Pharma &amp; Kosmetik</li> <li>• Lebensmittel &amp; Getränke</li> <li>• Kunststoffe</li> <li>• Wasch- &amp; Reinigungsmittel</li> <li>• Energie &amp; Umwelt</li> <li>• Specials (wie z.B. Odorierung)</li> </ul>	<b>Key industries:</b> <ul style="list-style-type: none"> <li>• <i>Oil &amp; gas (upstream &amp; downstream)</i></li> <li>• <i>Chemicals &amp; petrochemicals</i></li> <li>• <i>Pharmaceuticals &amp; personal care</i></li> <li>• <i>Food &amp; beverages</i></li> <li>• <i>Plastic processes</i></li> <li>• <i>Cleaning &amp; detergents</i></li> <li>• <i>Energy &amp; Environment</i></li> <li>• <i>Specials (such as gas odorizing)</i></li> </ul>

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