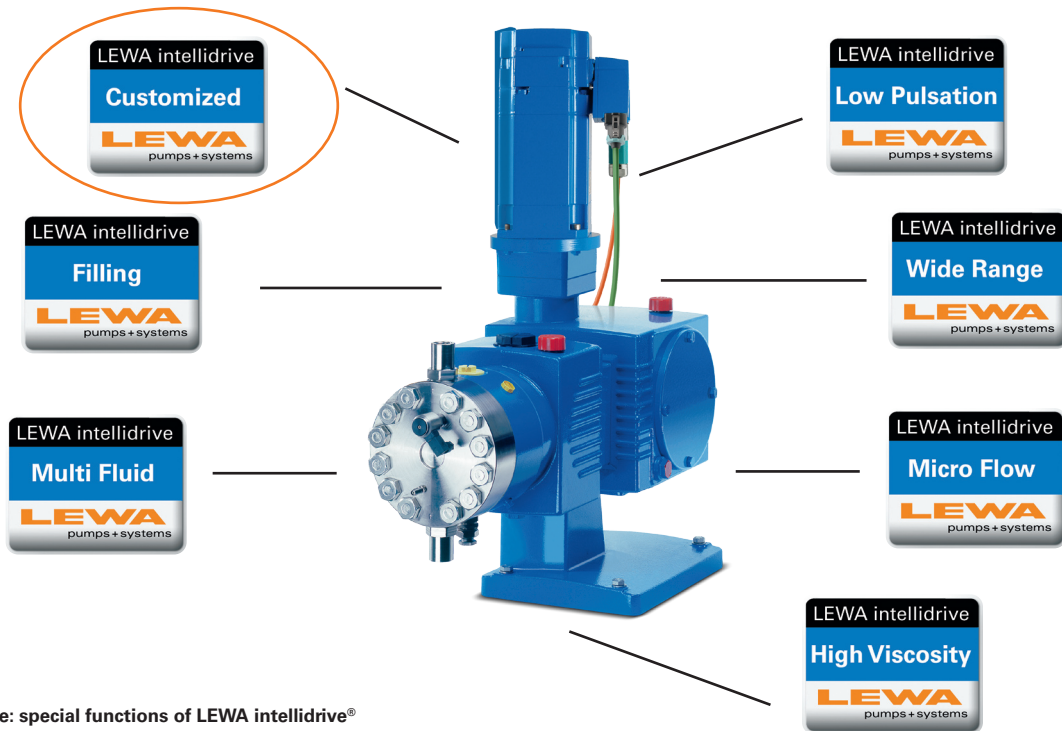




LEWA INTELLIDRIVE - CUSTOMIZED



Picture: special functions of LEWA intelligidrive®

Introduction

LEWA intelligidrive® is a combination of the proven LEWA metering pump mechanics and state of the art servo motors with application oriented programming of the plunger and diaphragm movement.

The dynamics of practical adjustment periods of conventional positive displacement reciprocating pumps, with frequency controlled asynchronous motors exceeds the sequence duration of the suction and discharge stroke. Therefore they can only be used for time averaged volume flow with closed loop control. The shortest useable start-stop sequence covers one full stroke at a minimum.

The improved dynamics of the new LEWA intelligidrive®, system allows a free adaptation of the travel time diagram of the period formed by a suction and discharge stroke. This not only means that the suction and discharge stroke can have a variable duration and now the sequence of the period itself is continuously adjustable.

The technology

LEWA intelligidrive® follows the modular concept employed in all of the modular systems of the LEWA plunger and diaphragm pumps. Designs for hazardous areas are possible in all sizes.

Functions and advantages

The moving sequence can be programmed absolutely free. LEWA has worked out basic solutions that are designed to meet the highest requirements for handling critical fluids or problematic applications.



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The application

Batch metering of different chemicals, e.g. hydrofluoric acid (50% by volume), conveying of very small to high batches, metering range > 1: 3000 (30 ml to 100 l within a metering time of 20 minutes)
Metering error < +/- 0,5%.

The standard solution

Uses several different metering pumps of differing size.

The LEWA intellidrive® solution

Uses a standard ecodos 350 pump with servo motor in PVDF design with servo motor. The electronic modules are supplied as components for installation into the onsite Programmable Logic Controller (PLC).

In detail

The operation of the servo controller is controlled from the customer's process control via Profibus. Position pre-setting and feed-back is provided by an integrated position transmitter having a resolution of 1/1000°. In actual operation batch sizes between 30 ml and 100 l are being metered. The filling of the biggest batch volume of 100 l takes place within 20 minutes. The number of strokes is recorded.

For metering of the smallest batch of 30 ml the pump is operated by shortened strokes where only a fraction of the volume of a single stroke is being measured.



Picture: LEWA intellidrive®: LEWA ecodos 350 with servo motor

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