

## Time for change ... Lutz-Jesco's new generation of pumps



LUTZ-JESCO COMPANY NEWSLETTER

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## LUTZ-JESCO'S NEW GENERATION OF PUMPS

### INNOVATIVE NEW DEVELOPMENTS FOR VIRTUALLY ANY APPLICATION

The new MAGDOS LK and MAGDOS LP solenoid diaphragm dosing pumps are each available in seven capacity ranges. The power ranges cover from 0.5 to 15 l/h with back pressures up to 16 bar. Double-ball valves ensure accurate dosing. To adapt the dosing capacity, the MAGDOS LK's stroke frequency can be adjusted manually or via an external control contact. With the MAGDOS LP, the stroke frequen-

cy can also be adjusted via a 0/4 ... 20 mA signal. This means you can dose with just a turn of your hand.

Several different materials and connections are available for suction and discharge side, depending on the specific application. By matching the materials, both pumps can be used in most process applications. A matching accessory set consisting of hoses, injection noz-

zles and suction lines from our comprehensive accessory range means that nothing stands in the way of a quick installation, and you get the best results.

Thanks to the sturdy, low-maintenance solenoid drive, the media being supplied (acids, alkalis, coagulants and flocculants, for example) are reliably and accurately dosed. The MAGDOS LK and LP don't just impress with their elegant design; the graphical display with a multi-language menu as well as the dosing pumps' operation using the integrated keyboard simplifies their use.

The MAGDOS LP is also available with an optional Ethernet interface. This network connection enables you to control the stroke frequency and the number of strokes. In addition, all fault messages can be transmitted in the opposite direction.

The dosing pumps are compact and, thanks to the small mounting area, can be integrated into every dosing system in a very space-saving way. They can be mounted in three different positions without further attachments: standing, left- or right-oriented on a wall.

### MOTOR-DRIVEN DIAPHRAGM DOSING PUMPS

The MEMDOS LB and LP series are each available in two different sizes. A large coverage in terms of performance and resistance is available, thanks to the variety of dosing heads, combined with a wide range of dosing head materials.

The performance ranges from 0 – 4 up to 0 – 150 l/h for the first size, and 0 – 110 up to 0 to 1010 l/h for the second size. The maximum permitted pressure, depending on the size, is between 4 and 16 bar. Thanks to the sturdy tappet drive with manual or automatic capacity adjustment, the conveyed media such as acids, lyes, coagulants and flocculants are dosed reliably and precisely. On request, the both dosing pumps can also be supplied with a double-diaphragm system. Uncontrolled leakage of the medium is avoided even if the dosing diaphragm wears out.

For constant dosing without a controller, the motor of MEMDOS LB is directly connected to the terminal box. A great variety of three-phase and single-phase motors is available for this purpose. To adapt the dosing capacity, either the stroke length can be adjusted mechanically or the speed of the

three-phase motor can be regulated by means of a separate frequency converter.

The MEMDOS LP is used when the integration of the pump into controls or control circuits is required. For integration into demanding automation networks, a version with an Ethernet-based MODBUS interface is available.

The MEMDOS LP series doesn't just impress with its elegant design; the graphical display with a multi-language menu as well as the dosing pump's operation using the integrated keyboard simplifies its use. If required, the dosing pump can be controlled via an analogue or pulse input. To react to any variations in the control circuit, the pump has many additional functions; stroke remote reporting, external operation consent, level monitoring, fault reporting via a relay as well as diaphragm rupture monitoring.

### STEPPER MOTOR-DRIVEN DIAPHRAGM DOSING PUMPS

The new MEMDOS SMART LB and MEMDOS SMART LP are each available in four capacity ranges that deliver between 5 and 20 l/h at back pressures of up to 16 bar. The compact stepper motor pumps, coupled with their intelligent drive concept, combines the big advantages of a solenoid diaphragm dosing pump with the precision of a motor-driven diaphragm dosing pump.

Several different materials and connections are available for suction and discharge side, depending on the specific applications. By matching the materials, the stepper motor pumps can be used in most process applications. A matching accessory set consisting of hoses, injection points and suction lines from our comprehensive accessory range means that nothing stands in the way of a quick installation, and you get the best results. The drive of both pumps is fully adjustable. The stepper motor with its wear-free tooth belt drive, ensures a particularly



homogeneous and gentle dosing process. Pressure and suction strokes can be performed at different speeds. This produces a constant supply stream, which gives you a low-pulsation dosing.

In addition, the MEMDOS SMART LP gives you the possibility to reduce the suction speed in two steps to easily and more precisely dose even viscous dosing media.

As a plug & play dosing pump with a large-range power supply unit, the MEMDOS SMART LB is ready for immediate and world-wide use, without any restriction. They can be mounted on the wall in three different positions - upright, left-oriented or right-oriented - without further auxiliary equipment.

The MEMDOS SMART LP doesn't just impress with its elegant design; the graphical display with a multi-language menu as well as the dosing pump's operation using the integrated keyboard simplifies its use. If required, the dosing pump can be controlled via an analogue or pulse input. For integration into demanding automation networks, a version with an Ethernet-based MODBUS interface is available. Over-dosage as a result of unexpected pump shut-down and the associated downtime is ruled out thanks to the diaphragm position detector. //

# INDOOR SWIMMING POOL HALL FOR HIGH-PERFORMANCE SPORT

## MEMBRANE CELL CHLORINE ELECTROLYSIS PLANT EASYMEM FOR DISINFECTING THE POOL WATER

In Halle (Saale, Germany) a modern swimming training hall for high-performance sport was opened in Autumn 2011, to offer a training opportunity under the best possible conditions for the athletes in the training group of our world champion Paul Biedermann and the double European champion, Daniela Schreiber in the SV Halle.

The commissioning of the water treatment plant was done at the end of August 2011. Water treatment was needed for a total volume of approximately 2,500 m<sup>3</sup> in three pool circuits: the 50 m pool, the counter-current pool, and the relaxation pool.

Strength, condition and technique are the things which are particularly trained in the counter-current pool. After every strenuous training session, the relaxation pool with its 35 °C water temperature is used.



## WATER TREATMENT IN ACCORDANCE WITH DIN 19643



The membrane cell chlorine electrolysis system EASYMEM 1000

Naturally the requirements of DIN 19643 are complied with, but in high-performance sport there are additional requirements for the water, like a particular "feel" for example.

EASYMEM 1000, the new membrane cell chlorine electrolysis system from Lutz-Jesco, plays a key role in the water treatment. EASYMEM uses outstanding new processes to cater for current market requirements, ensuring greater safety in the area of disinfecting water. EASYMEM's chlorine electrolysis system produces a watery sodium hypochlorite solution (chlorine bleach) directly at the location of usage according to requirements. The product tank's optimised, relatively small size ensures the chlorine bleach remains fresh at all times and is free of unwanted side products. This is particularly important when applying the new limit values for chlorite and chlorate according to DIN 19643. This means that more water analyses to check for chlorate are carried out. With average values of 0.4 mg/l for free

chlorine, the chlorate values were always below 3 mg/l, i.e. less than one tenth of the permitted limit value of 30 mg/l.

The EASYMEM model series comprises system sizes ranging from 200 – 6000 g of active chlorine/hour. Bleaching lye concentration is between 25 and 30 g of chlorine/litre. Starting from the product tank, any number of downstream dosage points can be supplied. EASYMEM is an innovative product that can hold its own against competitors and boasts first-class performance data. A key feature for customers is the 5-year warranty for the membrane cells offered by Lutz-Jesco. Further benefits for the operator include its modular construction and the resultant possibilities for flexible arrangement of components. //

# LUTZ-JESCO ACTIVE IN CREATING POLICY DOCUMENTS

## DR. HANS-JOACHIM DIEDERICH, TINO KREBS AND THOMAS BEUTEL – OUR EXPERTS FOR TRADE ASSOCIATION WORK

Regulations and technical guidelines are recommendations and technical proposals which suggest a way to comply with a law, a regulation or a technical procedure. They are not legal standards, and therefore do not have the same mandatory characteristics of legal regulations. Technical rules, however, can carry the force of the law – for example, in the context of a building regulation or by other laws, such as the Infection Protection Act. If these policy documents are observed, it can be assumed that the system meets the generally recognised state of the art if it is operated accordingly. In the case of an accident, the employer can prove that he is innocent of any negligence. The policy documents of individual associations and institutions are a description of the generally recognised state of the art and a prescribed system with a partially binding character.

Lutz-Jesco is a member of several organisations and is active in the bodies of CEN (Comité Européen de Normalisation), DIN (Deutsches Institut für Normung - German Institute for Standards), ASI (Austrian Standards Institute), FIGAWA (Bundesvereinigung der Firmen im Gas- und



### The standards committee visits Lutz-Jesco

Wasserfach - Federal Association of Gas and Water Firms), DVGW (Deutscher Verein des Gas- und Wasserfaches - German Association of Gas and Water Trades), DGfdB (Deutsche Gesellschaft für das Badewesen - German Association for the Spa Industry), EWA (European Waterpark Association) and the BSW (Bundesverband Schwimmbad und Wellness - German association of Pools and Spas).

CEN TC 402 works on the current standards for private swimming pools, and is supported by our employee Mr Krebs at ASI and Mr Beutel at CEN and the DIN Standards Committee for Sport.

Another working group in the Sport Standards Committee, where our expert Thomas Beutel takes part, is the sub-committee for pool facilities and equipment. In these bodies, safety standards are worked on for the planning, construction and operation of swimming pool facilities like, for example, slides and extraction devices. The DIN EN 15288-1 and 2 as well as the 13451 series of standards are represented here. The Sport Standards Committee has recently celebrated its 40th anniversary, which was celebrated in Berlin. 65 experts from the various sub-committees displayed their hidden talents in a dragon boat race. Finally, a toast

was made for the Sport Standards Committee and many specialist discussions were held.

A milestone in the standards within the swimming pool industry is the forthcoming DIN 19643. Mr Beutel worked on the chapter about chemical dosing, chlorine electrolysis systems in in-line operation and the measurement and control systems as a part of the swimming pool water working group for the authoring of the water practices standard. The 14th meeting of the committee was hosted by Lutz-Jesco and they were welcomed by the management. A total of 21 meetings and 7 years were needed to create the new DIN 19643.

Additional standards for water treatment for drinking, swimming and pool water will be developed as a part of the water treatment standard group. In this body, chemicals and systems for water treatment will be standardised. Examples of the approximately 150 standards are here the DIN 19606 for chlorination systems or the DIN EN 16370 for salt from membrane electrolysis plants. Responsible in various working groups are Mr Krebs for questions about the topic of swimming pool technology and Dr Diederich on the subject of chlorine and chlorine compounds and drinking water. In the FIGAWA

working groups, the creation and presentation of information from science, technology and the practice form the important basis for further associations and institutions.

Our experts are also involved in innovative and new projects. Mr Beutel leads the Floating working group of the DGfdB which is creating a completely new set of rules for the new trend: floating in salt water baths.

In addition, Mr Beutel also works in the technical committee and in the water treatment working group within the DGfdB as well as in the technical advisory board of the Bundesverbandes Schwimmbad und Wellness (BSW - German association of Pools and Spas). Technical knowledge, industry experience and practical competence – that's what the members of the technical advisory board bring to the table. The BSW experts develop guidelines and practical tips for private pool construction. Another focus of their work is the support of the discussion in the national and European standards bodies DIN and CEN as well as dialogue with external specialists in pool technology. The board brings together experts from all the value chain of the industry, acts collectively as a competence centre for all technical questions related to privately used pools.

The committee work is mostly done by volunteers and the time used for this must be made up in daily business. However, we have recognised the advantage of assisting in the creation and in the use of the policy documents. Policy documents give quality assurance, consumer protection, safety in use and rationalisation. Companies which participate in the production of policy documents gain benefits in terms of a lead in terms of knowledge and time. They can use this to lower the research risk and development costs. As a strategic instrument, policy documents and standards benefits emerge for almost all business sectors: e.g. research and development, sales, purchasing, production, quality assurance, management, environmental protection, and health and safety at work. //

### CONVENTION AND EXHIBITION DATES

+ interbad, 09.10. – 12.10.12, Stuttgart

+ biogas expo & congress, 24.10. – 25.10.12, Offenburg

+ DVGW Master craftspersons experience exchange, 04.12. – 05.12.12, Lübeck



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