

# LÜTZE-REPORT

The international magazine of the Lutze Group

**LUTZE PRESENCE**  
AT INTERNATIONAL  
TRADE FAIRS

**PRESENCE  
WITH COMPETENCE**  
SPECIAL APPLICATIONS  
OF LUTZE

**LUTZE LSC SYSTEM**  
IN INSTALLATIONS FOR AUTO-  
MOBILE MANUFACTURERS

**DEK MACHINES**  
LUTZE PROVES ITSELF IN TESTS

**CABLEFIX**  
TURBO PROCEDURE FOR  
CABLE TERMINATION

**EDITOR'S CHOICE PRIZE**  
AWARDED TO LUTZE USA

# e d i t o r i a l

## EDITORIAL



Friedrich Lutze  
Founder of the  
Lutze Group

### The alliance of the creative ones

The driving force behind innovation is the idea. These ideas are said to originate from the creative ones among us. It therefore makes sense to advance and encourage their creative power so that they can realize their wealth of ideas.

As the users recognize customer benefits much more quickly, we carry out the individual problem solving processes in mixed teams which consist on the one hand of Lutze engineers and on the other hand of representatives from our customers.

Experience has shown that only one out of seven innovations can be successfully put into practice. This ratio can only be improved in close cooperation with the users and this is precisely what our development engineers are seeking through an alliance with our customers.

We are keen to accept such challenges. As specialists in plant and machine construction we had to crack many "tough nuts" in control system building.

Put us to the test - we are gladly at your disposal.

With best regards

F. Lutze

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# TRADE FAIR PRESENCE

## Lutze goes around the world:

Fair	Location	Date	
Interkama	Dusseldorf	Oct. 18 – 23, 1999	Lutze Germany
PLC/IPC Drives	Nuremberg	Nov. 23 – 25, 1999	Lutze Germany
Scanautomatic	Gothenburg	Nov. 23 – 26, 1999	Lutze Germany
Industrial Automation Show	Chicago	Mar. 13 – 16, 2000	Lutze USA
Drives & Controls	Telford	Mar. 14 – 16, 2000	Lutze GB
Ampere	Prague	Mar. 21 – 24, 2000	Lutze Austria
Hannover Fair 99	Hannover	Mar. 20 – 25, 2000	Lutze Germany

**SEEN, HEARD, EXPERIENCED... at the Lutze trade fair stands**  
**"INELTEC 99, Basel" (Aug. 31 – Sept. 3, 1999)**  
**"ELECTROTECHNIK, Dortmund" (Sept. 1 – 4, 1999)**

The visitor interest in Lutze products at the above two trade shows was great.

In an inviting atmosphere at our fair stands, many stimulating discussions between our staff and current or future customers took place at which personal desires and suggestions could be voiced. Of course, we shall integrate this input in our development work.

In addition to numerous new components that were exhibited within the framework of the Lutze program "Innovation 99", the convincing presentation of the efficient, cost-saving "LSC wiring systems" was met with particularly high interest.

Impressive for many visitors was the presentation of the "DIONET PC", an intelligent field bus for PCs used in work and process visualization. Much attention was received also by the advantageous cable feed-through system "Cablefix" for sensor / actuator and bus lines.

We, from Lutze, would like to thank all visitors who have accepted our invitation to visit our stands.

Friedrich Lutze GmbH & Co., Weinstadt/Germany  
Lutze AG, Siebnen/Switzerland

# PRESENCE WITH COMPETENCE SPECIAL APPLICATIONS FROM LUTZE

The triumphant advance of the automation technology continues relentlessly. We, at Lutze, take this development into consideration. With a continuous flow of new developments and product improvements, we enhance our comprehensive product range.

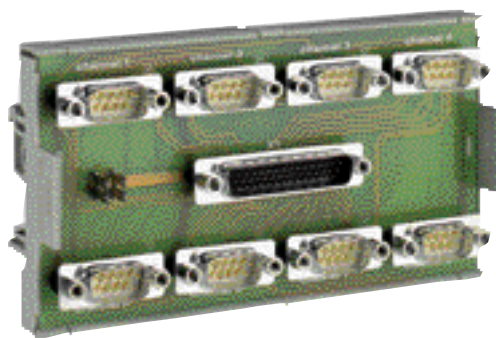
Close contact with our customers and our "ear to the market" are part of our philosophy.

With know-how and innovative ideas, with product quality and reliability, we develop and produce also custom components and special lines.

As a leading company in the automation technology, it is our duty to continually perfect our products and to adapt them to the latest developments. The reason why we succeed in this endeavor is because we flexibly, quickly and reliably define individual solutions in a constructive dialog with our customers on site.

4

Do not hesitate to call us for assistance in solving your particular problems. Within a short time you will have the result, tailored to your requirements, in your hands so that you can successfully integrate it into your concept.



## Transfer/distribution element

Type: Lutze Varioprint 2000

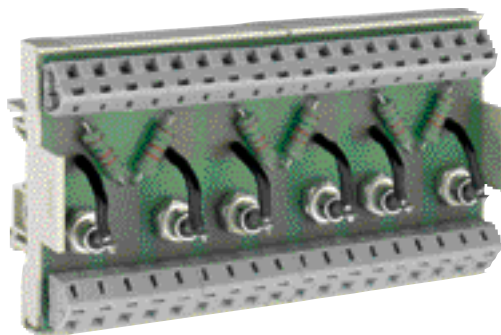
Application: distribution of peripheral devices



## Sensor module

Type: Lutze Varioprint 2000

Application: Positioning control



## Resistance diode wiring for power applications

Type: Lutze Varioprint 2000

Connection technique: Spring pressure terminals

Application: Rail vehicles



## Relay amplifier for valves

Type: Lutze Variocompact, DIN 43650/A

Application: Switching of heavy-duty valves

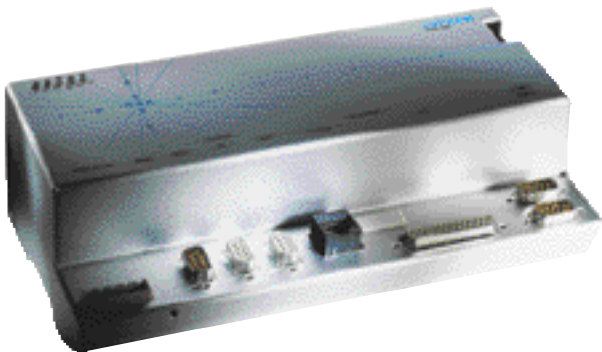


## Operating module

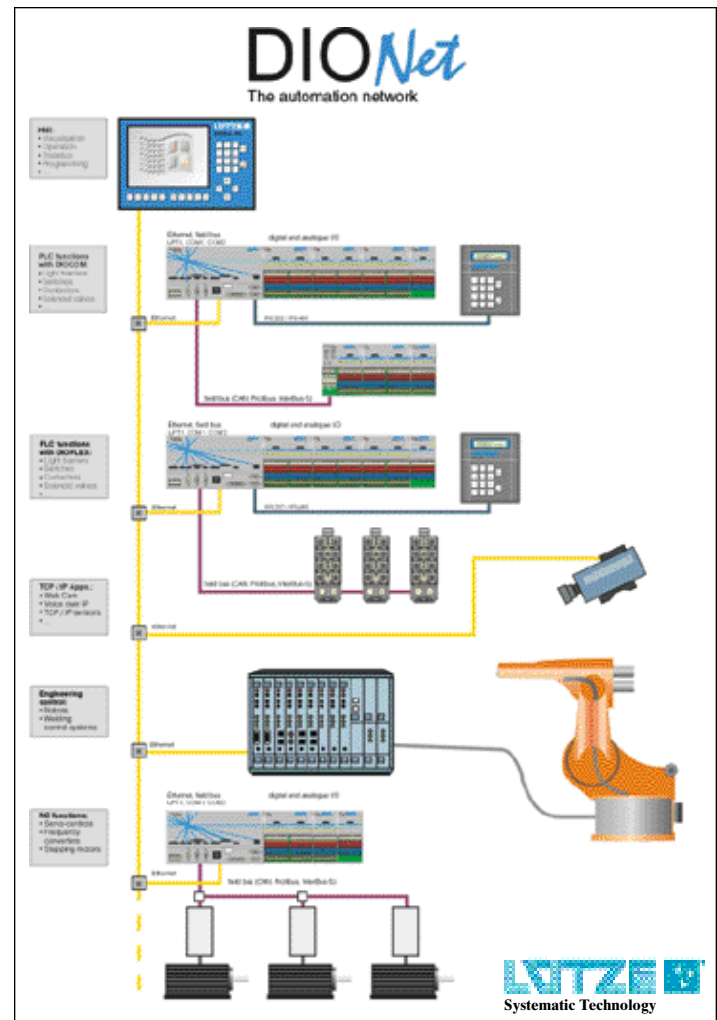
Type: Lutze Variocompact

Application: Manual operation on machines and equipment

Something that has already established itself in the office world is now starting its successful advance into the field of automation: the decentralisation of intelligence. Thanks to the use of PC and Ethernet technology, this new approach is now a possibility in the control technology sector. The main reason is the worldwide use of the standardised TCP/IP protocol with Ethernet. This technology enables all components that are connected to the network to be handled equally and, therefore, does away with the conventional hardware hierarchy that has been necessary in industrial networks up to now. Each component can directly exchange information with all others, without the need for programming alternative routes. In this respect, Lutze is proud to offer various compatible solutions, starting with a PC-based decentralised control system, via the use of a PC for processing and operating visualisation, right up to interfaces for field bus systems.



**Network-capable, PC-based, miniature control systems**  
form the basis of future automation systems



**The future of automation:** Open control system networked using the worldwide standards Ethernet and TCP/IP



# THE LUTZE LSC-SYSTEM IN CAR MANUFACTURING PLANT INSTALLATIONS AT VA TECH ELIN EBG

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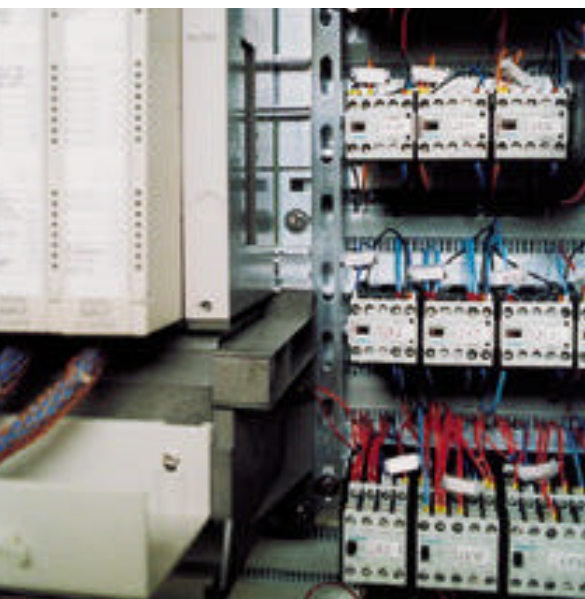
VA TECH ELIN EBG in Linz, Austria, a company of the VA-TECH Group, has for a number of years, manufactured control cabinets for various car manufacturers such as VW, Mercedes, Opel and Audi. These systems are principally used in body assembly directly by the plants, or they control large painting systems of renowned manufacturers.

In these installations, the LSC wiring system from Lutze is used. Instead of a mounting plate, horizontal aluminum ribs are connected via mounting brackets on vertical aluminum rails. Between the ribs with integrated cap rail there are wiring combs which cleanly support and fix the jumper wires. This eliminates the need for horizontal ducts and the vertical ducts are replaced by the mounting brackets.

Due to the loose arrangement of the conductors from the front to the left and right into the lateral mounting brackets, access to the rear of the cabinet is not needed. Numerous accessories allow installation of large devices such as motor controls or large PLCs as well as quick snapping in of many terminals on slanted cap rails.

The result is respectable: Large space savings in the width as well as height of

the cabinet. This means a smaller cabinet footprint and more room for car assembly. Lutze/Weinstadt supports the planning of car plants on site and Lutze/Vienna provides consulting services for the design at ELIN EBG in Linz. The LSC racks are supplied fully assembled. This means that only a single part number is required for the entire rack. The resulting cost savings flow directly into the building of the control systems and the space savings are highly advantageous to the end-user. The latter aspect is one of the reasons why the LSC system from Lutze is listed with numerous car manufacturers and even prescribed by some of them. The most recent LSC frames were delivered for the production of the Smart, the Mercedes E-Class and for the production of the new, small Audi A2 as well as the new version of the A4.



# LUTZE QUALITY PROVEN IN TESTING FOR DEK MACHINES

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The Lutze company has been manufacturing highly flexible cables for over 25 years and during this period we have worked to constantly improve the design of our products to meet the demands of our customers.

In recent years the application for cable carriers (often referred to as cable chains) and "Superflex" cables has widened considerably. These applications include robotics, pick and place and automatic assembly machines. The physical size of these machines often dictates that designers must use small cable carriers with tight bend radii. The cables within the carriers have to withstand considerable stress and with customers requiring increased productivity from their machines, the cable carriers are required to perform at high speeds. The cables within the carriers are often transmitting electronic control signals, therefore making the use of screened cables essential.

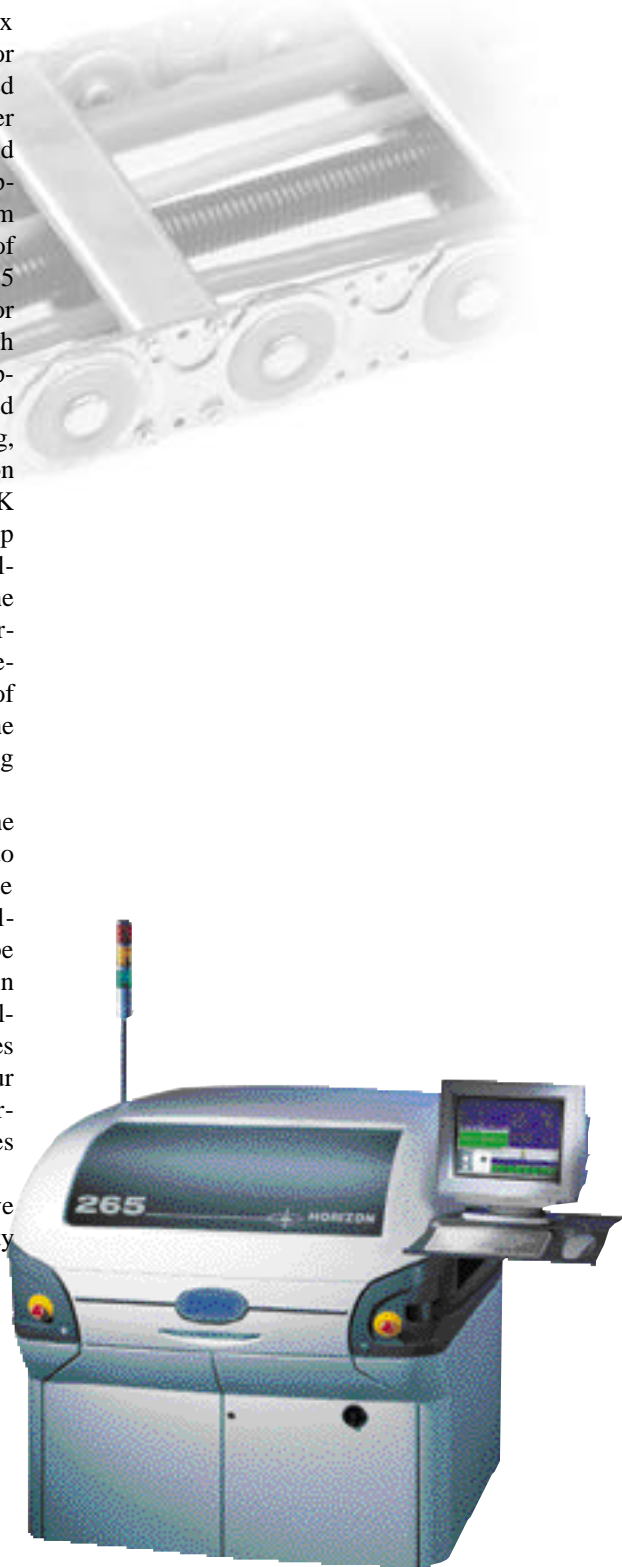
These demands can produce premature failures if careful thought has not been given to the selection of products and the design and installation of the cable carrier system.

DEK Printing Machines Ltd, based in Weymouth in the UK, are market leaders in supplying screen printing technology to the SMT Industry and were looking to increase the reliability and service intervals on a new range of machines. Their development team highlighted the cable carrier assemblies as an area that could be improved. Lutze, in conjunction with Kabelschlepp, one of the world leaders in the design and manufacture of cable carriers, commissioned testing to simulate the most demanding of the applications

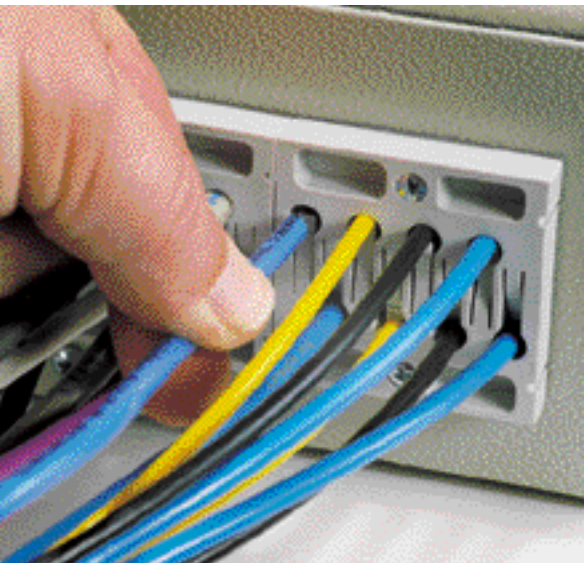
that DEK required. Lutze "Superflex Plus" screened cables were selected for the test. These cables are manufactured from halogen free materials (PUR outer jacket, TPE insulated conductors) and are designed for the most arduous of applications. The test required a 38mm bend radius for the cable carrier, speed of 1.7m per second and acceleration of 4.5 m/s<sup>2</sup>. The volt drop on each conductor within the cable was measured with high accuracy computer controlled test equipment, enabling results to be logged and trends analysed. At the time of writing, the test cycles are approaching 10 million cycles which has demonstrated to DEK the quality of Lutze and Kabelschlepp products. In addition Lutze and Kabelschlepp have given assistance on the design and installation of the cable carrier systems on the DEK machines, resulting in the specification by DEK of Lutze and Kabelschlepp products on the new machines due to be launched during 1999.

Lutze seek to continually develop the range of Superflex cables as we strive to ensure that our product range reflects the needs of our customers. A new test facility capable of speeds of 15m/sec will be installed in our Development Centre in Weinstadt towards the end of '99, allowing us to expand our testing facilities as we anticipate the demand from our customers to achieve ever greater performance and reliability from the cables they require.

If you have a demanding application give us a call as we welcome the opportunity of assisting you find a solution.



# CABLE FLANGE INSTEAD OF SCREWED FITTINGS TURBO METHOD FOR CABLE CONNECTION



Switch cabinets, control systems and larger machine units require reliable cable connections. The most common form of a cable feed-through today is the screwed fitting. Each of these requires a separate mounting hole to be drilled which is a lot of work for a single cable feed-through. In addition, the necessary spacing between the screwed fittings considerably limits the number of installable cables. Modern compact systems require better solutions.

Cable feed-throughs with conventional screwed fittings waste space and are inconvenient because a mounting hole must be drilled for each fitting. This also consumes valuable time, for example, when a cable in the center of a dense cluster needs to be detached for maintenance purposes. To prevent these problems Lutze has developed the new Cablefix clamping flange. With this cost-saving feed-through, cables for active element and sensor terminals, or field bus systems can be introduced into the housing within a small space. The sequentially positionable flanges measure 50x50 mm. In the version with 5 mm terminals spacing up to eight cables, with diameters from 3 to 6 mm, can be connected. A version with four feed-throughs for cable diameters from 6 to 11 mm is also available. This technology requires only half the surface space of screw-type fittings.

The simple installation greatly shortens the fabrication time. For example with the screw-fitting technology; 40 active elements/sensors and 4 voltage feeders require 44 individual drill holes. For the flanges, only one square housing cut-out is required 5 flanges with 8 feed-throughs, and one with the 4 voltage feed-throughs are mounted next to each other. The cables can then be pushed through the flange, stripped and fastened. They are unmistakably assigned to the terminals. The flanges themselves are fastened by two captive claws to the



housing. Its wall thickness can range from 0.5 to 4 mm. The strain relief closes automatically when the cable is pushed through. An integrated molded rubber element automatically seals the cable. For troubleshooting, maintenance or retrofits, the individual cables can be easily detached through the spring clip and replaced. The connection flange is rated IP65. With the high packing density of the compact Cablefix system and





fast assembly, this new connection flange is an economical alternative to the traditional screw connection technique.

# LUTZE INTERNATIONAL

**Think global, act local**  
**Make direct contact with your local Lutze partner.**



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Topic \_\_\_\_\_ Page \_\_\_\_\_  
\_\_\_\_\_ Page \_\_\_\_\_  
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☐ Please send me information on the entire product range

☐ We need your advice. Please call us.

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# LUTZE, INC. SPONSORS OCA PAVILION AT THE MANUFACTURING WEEK



**Lutze, Inc. sponsors second annual OCA-Pavilion at National Manufacturing Week 1999 in Chicago**

**Charlotte, NC** - For the second year in a row Lutze, Inc. sponsored the Open Control Architecture Pavilion at the National Manufacturing Week. This is one of the largest tradeshows in our field. It is attended by visitors from almost all customer segments and provides an excellent marketing opportunity.

Lutze, Inc. founded the OCA Open Control Architecture Pavilion in 1997. This tradeshow within a tradeshow provides a home for all major field bus organizations and numerous suppliers of Open Control Architecture products. The purpose of this pavilion is to create a forum where suppliers and customers can meet. The pavilion is open to all Open Bus Organizations and also to providers of products and services that use the Open Control Architecture. It is a place where the customer can compare different technologies. The sales organizations can exhibit solutions and show where certain standards are positioned within the market. The Open Control Architecture is defined as an architecture in which open system technology is used for integrating controller components. The technology, such as the software standards or field bus architecture, must be available to all vendors and suppliers. The components required for the Open Control Standards

must be readily available on the open market. It is important that products of different suppliers can be integrated into the same system. They must also be mutually interchangeable.

The following field bus organizations participated in 1999:

- PTO Profibus
- Asi
- Device Net
- Control Net
- Interbus
- CIA CAN open
- OMAC
- SERCOS Interface

In view of this strong presence and the far-reaching technology support the 1999 pavilion was a real success. The customers had the opportunity to update their knowledge on systems, products and technologies to the state of the art. As all important elements were combined in a single pavilion, the customers had excellent comparison possibilities and were able to inform themselves better, and without influence, on the available products and solutions. For the first time WESCO, one of the distribution partners of Lutze, Inc., took part in the OCA pavilion and presented support from the dis-

tribution side. From the standards to the manufacturers and the distributors, the entire chain was present at this year's exhibition.

The customers and visitors of Lutze, Inc. also had the opportunity to explore our own stand where they were introduced to the latest developments in our own product ranges.

The following products were exhibited:

- Diocom individual 32-channel I/O solution
- LSC-C wiring system for small housings and distribution cabinets
- E.Lutze.com, our on-line e-Commerce service in the internet
- Lutze integrated solution

A fully integrated solution display showed all Lutze products in a centralized, decentralized and housing-less environment. This display clearly demonstrated how our products serve the area between the controller and sensor/actuator level. OCA 1999 was a great success and we hope to make the OCA 2000 pavilion even bigger and better. All of us here at Lutze, Inc. hope to see you in the year 2000 at the next Open Control Architecture pavilion.

Lutze, Inc. is part of the Lutze International Group. The latter, founded in 1958, has production and distribution subsidiaries in Germany, Austria, France, Switzerland, Great Britain and USA. Lutze produces flexible cable and wiring systems, field bus technology, controller and interface components, power supplies, and surge protection technology for industrial applications.

## PRIZE AWARDED TO LUTZE USA EDITOR'S CHOICE PRIZE OF THE CONTROL ENGINEERING MAGAZINE

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**Charlotte, NC** - At the National Manufacturing Week in Chicago Lutze, Inc. was awarded a prize by the Control Engineering Magazine.

The award winning LUTZE DIOCOM is truly one of the outstanding innovations presented by the magazine during the past year.

Mr. Friedrich Lutze and his son Udo Lutze accepted the Editor's Choice Award for Lutze Diocom within the framework of a celebration held on Sunday, March 14, 1999, at the Ritz-Carlton Hotel in Chicago.

The prize winners were chosen from among all new products that were introduced in the 1998 editions of the magazine Control Engineering, Control Engineering International, and Process Instrumentation Digest. The publishers of Control Engineering reviewed hundreds of new products "of which only the best are published in the magazine".

Toward the end of the year the winners are determined from among the published products based on the following



**Udo Lütze, Friedrich Lütze, Matthew Peach (European Market Editor for Control Engineering Magazine, Jim Montague (News Editor for Control Engineering Magazine).**

criteria: Benefit to the industry, technological progress and market influence. We at Lutze, Inc. USA are proud to have

been awarded the Editor's Choice prize of one of the most popular US magazines.