

The powerful solution
for the coating of
packaging films

PRO-M



LEYBOLD OPTICS



Meeting individual requirements

The name of LEYBOLD OPTICS is known for well thought-out solutions for the coating industry. Our philosophy: manufacturing coating systems that do not only excel in their absolute process stability and the perfect results they produce, but also in low costs of ownership. Our systems always meet the highest demands on handling while requiring only the least possible amount of maintenance work. But LEYBOLD OPTICS stands for even more: unique systems with tailor-made manufacturing processes.

Our division 'Reflection & Protection / Web' focus on the metallization of packaging and capacitor films and also on the coating of work pieces that have complex geometries. Evaporation, sputtering, plasma polymerization and treatment: e.g. light reflectors or candy wrappers are at the center of our experts' attention.

LEYBOLD OPTICS does not only supply systems for the coating of the various component parts which are needed in car headlights with clear glass optics (made

possible only by high-grade thin film technique), we also develop processes for applying the thin reflective and protective layers which turn a common plastic part into a real designer model. Our special solutions for the automotive and plastics industries as well as our Web coating systems have been among the leading systems on the market for many years and have always set standards in the industry.

The department of research and development is responsible for the constant technological lead of LEYBOLD OPTICS. Adhering to the 150 year-old tradition of our company, we give priority to research: in the pioneering spirit of our founders, Ernst Leybold from Cologne and Wilhelm Karl Heraeus from Hanau, we aim at finding new manufacturing processes in the field of vacuum technology. We are also continuously improving even the smallest details of our existing systems. Our focus is always on achieving better results within even shorter periods of time and at even lower costs for our customers. This philosophy makes us one of the top producers in the worldwide market.

Stay one step ahead - with LEYBOLD OPTICS.



Polypropylene, polyester, paper, and others

Pro-M can work on polypropylene, polyester, paper, and other materials. Our system for the coating of packaging films is therefore one of the most flexible on the market. It captivates with perfect results and high throughput in all areas. Pro-M is a real multi-value platform that helps our customers to strengthen their position on the market.



Reliability and easy handling

Due to our philosophy, Pro-M is more than just an excellent, modern production system. It also keeps all opportunities open for expansion to our customers. LEYBOLD OPTICS offers them a number of possibilities of adding on to their system. Pro-M is fit for the future!

Unique packaging web coating with the Pro-M multi-value platform

Pro-M is special. Based on a variable component structure this coating system for packaging films is highly adaptable to customers' individual needs. Heat-sensitive films, papers or even hot stamping films - Pro-M is a real multi-talent. Customers are not limited in their choice. Pro-M meets even special demands: common or individual wire feed, crucibles or boats, plasma pre-treatment and a post-cooling drum are only a few of the options.

But the most interesting feature about the multi-value platform Pro-M is not the various options themselves, even though their performance definitely deserves to be noticed. It is the unique combination of all options, substrates, and processes on a single platform.

For example, Pro-M can quickly and easily be changed from CPP to hot stamping mode. Our engineers have managed to combine some totally different demands in just one machine, e.g. for the coating of papers, large rolls with a diameter of up to 1.5 meters can be metalized with ease.

Pro-M even meets customers' demands for a printing system. The new LEYBOLD OPTICS FlexoPrintTechnology uses a small amount of oil to obtain free areas in metalization. This method usually produces view windows, but basically any conceivable pattern is possible.



A real masterpiece

Pinhole free coatings and various layers: the structure of the Pro-M system is based on a principle of component parts. It can therefore be easily adjusted to the individual requirements of the customers. Thus, customers acquire a tailor-made system, which enables them to react flexibly to any new demands. And: LEYBOLD OPTICS Pro-M does not only make our customers fit for future challenges, but also sets new standards in terms of throughput and layer properties even today.

A powerful boat evaporator is the core of any packaging system made by LEYBOLD OPTICS. The well-known plasma treatment system, the preliminary treatment of the substrate with oxygen, and the fast and efficient pumping system also come with our Pro-M. Full web width coating avoids the standard edge masking and later edge trim.

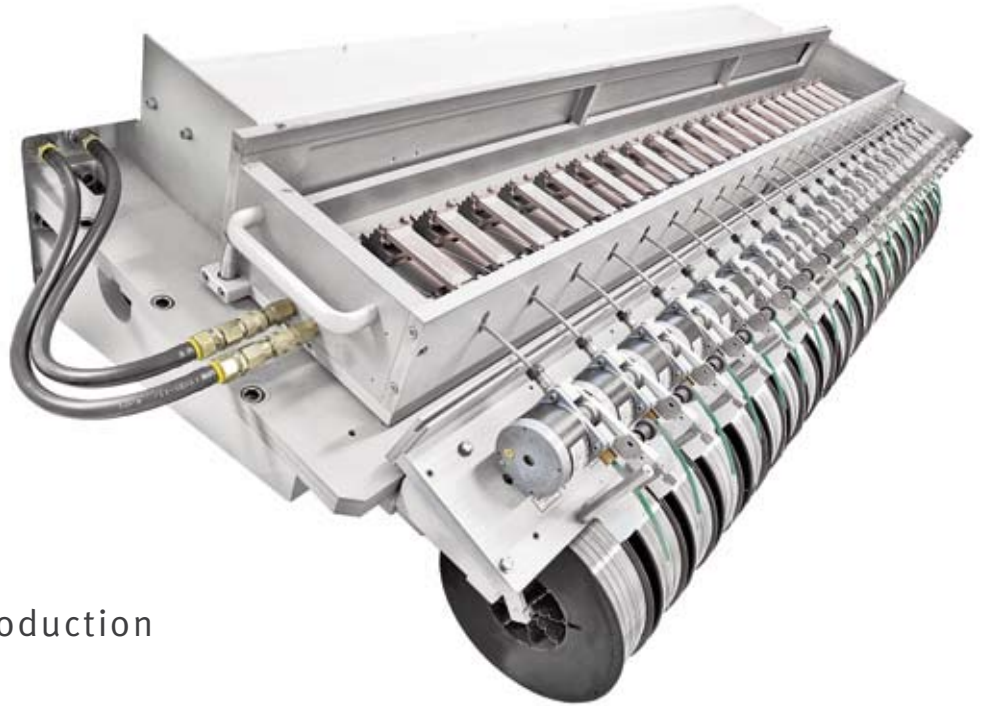
The high-speed winding system achieves a web speed of up to 14 meters per second. Its special features are a quick response digital drive with synchronized AC

motors and remote-controlled wrinkle-free winding with four spreader rollers. It does not matter if customers choose to metallize paper or film, PRO-M gives the flexibility to get perfect results on every material at lowest production costs.

The highly efficient and very fast pumping system of Pro-M can be extended by a high-power cold trap for the metallization of paper. All actions of the system's components are monitored by a special PC based control system. Apart from these well-known components, diverse PC features can be used, for example optical layer measurement and layer resistance measurement as well as a modem input for update and services. A further highlight is our leading edge technology cooling and heating unit for the coating drum. This device provides minimized cycle times and reduces energy consumption at the same time.

In combination, all these features make PRO-M what it is: a reliable and powerful Web coating system which meets every demand. In short - a real masterpiece...





Flexibility for a production edge

Great variety: if customers' requirements change, the Pro-M system can change as well. The LEYBOLD OPTICS solution for the coating of packaging films focuses on the future - just like all our other system concepts offering customers great competitive advantage. Coating width, the choice of substrates and processes, and of course the upgrades: this coating system is a unique platform of technical refinement and it is fit for future challenges even today. The combination of our philosophy about flexibility and the interesting cost-of-ownership features makes Pro-M a veritable LEYBOLD OPTICS product and our company one of the leading manufacturers of the industry.

Exceeding customers' expectations

High uptime, high output and uncompromising quality: all this comes standard with the Pro-M coating system. LEYBOLD OPTICS has always been a capable and professional partner in order to meet customers' business goals. As usual, the LEYBOLD OPTICS philosophy has been given top priority in the development of the latest generation of Pro-M: state-of-the-art technology, high throughput, perfect results, and individual adaptability - all achieved at low costs of investment.

CUSTOMER SUPPORT

Even after the products of the various spheres of our business have been handed over to our customers, our customer support provides comprehensive service worldwide. Our staff offer assistance in production and process planning, supply spare parts, vacuum components, and testing agents. The support specialists also concern themselves with used systems and conversions.

Stay one step ahead - with LEYBOLD OPTICS.



CHINA
LEYBOLD OPTICS BEIJING Co. Ltd.
#25, Kangsheng Industrial Park
No. 11 Kangding Street
Beijing BDA, 100176, China
Phone: +86 10 67803366 - 0
Fax: +86 10 67803366 - 100

FRANCE
LEYBOLD OPTICS FRANCE
7 Avenue du Québec
91140 Villebon sur Yvette
Z.A. de Courtaboeuf, France
Phone: +33 1 698248 - 12
Fax: +33 1 698248 - 40

GERMANY
LEYBOLD OPTICS DRESDEN
Zur Wetterwarte 50
Haus 303
01109 Dresden, Germany
Phone: +49 351 86695 - 16
Fax: +49 351 86695 - 42

GREAT BRITAIN /
IRELAND
LEYBOLD OPTICS UK
St. Modwen Road, Stretford
Manchester M32 OZE, Great Britain
Phone: +44 161 86628 - 00
Fax: +44 161 86628 - 01

ITALY / AUSTRIA / SLOVENIA
LEYBOLD OPTICS ITALIA
Via Trasimeno 8
20128 Milano, Italy
Phone: +39 02 263050 - 84
Fax: +39 02 272096 - 95

JAPAN
LEYBOLD OPTICS JAPAN
Kazama Bldg.
19-5, Nishi Shinbashi 2-chome,
Minato-ku, Tokyo, 105-0003, Japan
Phone: +81 35 77755 - 51
Fax: +81 35 77755 - 53

KOREA
LEYBOLD OPTICS KOREA
1406, HyunDae 41 Tower, 917-9
Mok-1Dong, Yangcheon-Gu
Seoul 158-051, Korea
Phone: +82 2 2168 - 2136
Fax: +82 2 2168 - 2078

SINGAPORE
Leybold Optics Asia Pacific Pte Ltd
11 Toh Guan Road East
#04-02 APP Enterprise Building
Singapore 608603
Phone: +65 6897 5855
Fax: +65 6897 5955

SPAIN / PORTUGAL
LEYBOLD OPTICS IBÉRICA
C/Carles Buigas 57-59
08980 Sant Feliu de Llobregat
Barcelona, Spain
Phone: +34 93 666 - 0778
Fax: +34 93 666 - 4612

TAIWAN
LEYBOLD OPTICS TAIWAN
82, Shien-Cheng 11th St., Chu-Bei City
302, Hsinchu County
Taiwan
Phone: +886 35 5831 - 23
Fax: +886 35 5831 - 39

USA / CANADA / SOUTH AMERICA
LEYBOLD OPTICS USA
539 James Jackson Ave.
Cary, NC 27513, USA
Phone: +1 919 65771 - 00
Fax: +1 919 65771 - 01

HEADQUARTERS

LEYBOLD OPTICS GmbH
Siemensstrasse 88
63755 Alzenau, Germany
Phone: +49 6023 500 - 0
Fax: +49 6023 500 - 150
e-mail: info@leyboldoptics.com
www.leyboldoptics.com