



Dear Customers and Partners,

A company is only as good as its employees. At Wölco, we are proud of the fact that we have steadily grown with our employees over the years and today can look back at the long-term success of our company. This growth, however, has made a restructuring necessary this year, and I am happy to welcome our long-term employee Ralph Siegmund to our board of directors. Ralph studied business administration (University of Applied Sciences) and has been leading the Controlling/Accounting department since 2005. He is deeply invested in the company. Our board of directors' member Uwe Dessecker will concentrate entirely on the area of technology in the future, and Ralph Siegmund will take over the areas of finance and sales.

Also new this year is our move from our previous location on Mercedesstrasse to a modern building in the industrial area "Im Letten," as well as the expansion of our company headquarters at Waldstrasse. Thanks to these steps, we believe that we are extremely well positioned for the future and look forward to the challenges in the coming years.

Dieter Wölfe  
CEO



## Move to the industrial area "Im Letten" in Ehningen

### Fit for the future

This year a significant restructuring of the locations in Ehningen took place in order to optimize the work processes and to make them even more sustainable.

The actual company headquarters on Waldstrasse was expanded and modified in order to bring the complete business area of labeling with production and assembly under one roof. We gave up our manufacturing and logistics location on Mercedesstrasse in favor of a new, more modern building which allows for greater sustainability. The building "Im Letten 16/1" now houses the entire area of automation of dispensing, application, printing, and scanning systems including design and assembly as well as shipping. The HR department of the entire Wölco Group has also moved into its new office space. The building next door "Im Letten 16" is equipped with a large storage area with a high rack

system, which guarantees quick handling and delivery. From the receipt of adhesive materials to shipping, "Im Letten" is home to the entire Wölco logistics team. As part of the effective closed-loop system, the production materials are transported from there to the Waldstrasse location where the labels are produced. Then, the finished labels are loaded and brought to the warehouse on the way back so that they are available upon customer request. The processes at all locations have been carefully planned, optimized, and coordinated with one another in order to set the course for an economically sustainable future. The following page shows you an overview of our locations. ■

## Locations of Wölco AG Ehningen



Waldstraße

- Management
- Administration / Sales
- Research and Development
- Marketing
- Label Manufacturing
- Packaging



Im Letten 16/1

- Labeling & Automation
- Construction
- Assembly
- Delivery
- HR



Im Letten 16

- Logistic Department
- Receiving
- Shipping
- Finished Goods Warehouse

**“Attracting and retaining new customers comes first”**

## New sales manager at Wölco

**Wölco News:** “Alexander, you have been working as the general sales manager at Wölco for about 185 days now. How have you settled in during this time?”

**Alexander Herm:** “I’ve settled in really well. The support that I’ve received from the first day has been impressive and, for me, as a newcomer to the industry, extremely important. The management team used its expertise to prepare me very quickly and thoroughly for my responsibilities and helped me acquire the knowledge I needed for a successful start.”

**Wölco News:** “What are your next goals and what challenges are you facing?”

**Alexander Herm:** “It is my job to develop a future-oriented sales concept which takes our traditional strengths and the growing needs of our customers into account. In doing so, it is important not to lose our own identity, but to still break new ground in sales and customer service. I would also like to continue to expand the cooperation with our subsidiaries in the United States and China in order to make all of the synergies of the Wölco Group available to our customers who work internationally.”

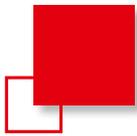
**Wölco News:** “In your opinion, what has distinguished the sales area at Wölco in the past?”



*Alexander Herm has been working as the general sales manager at Wölco since February 2014. The 49-year-old is married, has one daughter, and is a trained business economist. Previously, he worked in a variety of sales positions for 13 years for an industrial representative, was the managing director for three years for a distribution company with focus in marketing and sales, and, most recently, has worked as a self-employed consultant for American and Asian customers in Europe.*

**Alexander Herm:** “We have always been close to our customers, whether on-site with our qualified sales representatives or at our subsidiaries with our customer service representatives on the phone. This high-quality customer support should continue and be implemented in new sales channels.”

**Wölco News:** “Alexander, thank you for the interview and we wish you lots of success in this new endeavor!”



## “Bosch preferred supplier” – status for Woelco



Woelco received the preferred supplier status for the Bosch Group for the 5th time in a row on April 28, 2014. Quality, reliability, technology, innovation, pricing, and continuous improvement are the criteria by which the best suppliers for the Bosch Group are selected. This award continues to make us very proud. We are pleased that the con-

tinued hard work of Woelco and its employees is recognized by this confirmation, and it also strengthens us in our endeavor to continue to make progress with top performances. ■

## German Chamber honors Woelco Employees

As part of the Chamber of Commerce and Industry awards ceremony on October 7, 2014, Leon Bartsch received a prize and praise for his outstanding degree in mechatronics. The Wölco Prize from the Rolf & Dieter Wölfle Foundation is awarded to the best apprentices each year in the area of label printing. It was bestowed to four apprentices this year, one of them

being Abdullah Bahadir, an apprentice at Wölco AG. The foundation has set itself the task of promoting young talent in the specialized field of label printing. The president of the German Regional Chamber Böblingen, Andreas Hadler, and the chairman of Wölco AG, Dieter Wölfle, awarded the prize to this year's winners. ■



The CL4NX series stands out as it is easy to adjust and repair without using any tools. Its superior print quality for a wide variety of consumable supplies and qualities is impressive with razor-sharp print images at print resolutions

### The new generation of thermal printers: Sato CL4NX

## The user-friendly all-rounder

*The new thermal printers from SATO are surprisingly powerful. The first thermal printer series designed for universal use meets even the highest requirements in regard to ease of operation, robustness, durability, and versatility. It combines revolutionary technology and design innovations and it features a particularly high level of user friendliness.*

of 203 to 609 dpi. The performance of print speed, memory capacity, and processor power leaves nothing to be desired.

In addition, integrated interfaces and various emulations facilitate external communication and network integration. The label printer CL4NX reaches high print speeds of 250 mm/sec and also achieves very good printing results at this speed.

Numerous data formats and fonts can

be stored thanks to the large memory. In addition, all major languages are supported and a wide variety of fonts are available. This makes the printer ideal for both the export industry and installations abroad. ■

### I M P R I N T

Publisher: Wölco AG – Innovative Labeling,  
Waldstraße 15, D-71139 Ehningen (Germany)  
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Editorial staff: Franz Schmiedecker  
Stand: November 2014 / 1.000



Ideal solution for severe weather conditions

# Labeling under running water

For most companies, it is very important to provide information both within the company and to the outside world. In the process the information provided should ensure a quick and precise overview, easy re-order capability, as well as other factors.

In nurseries and garden centers, it is often a big problem to label the products with permanent information since they are exposed to severe weather conditions. Many labels lose their adhesion due to continual watering or fade and discolor due to constant sunlight. WLS has developed a solution that allows nurseries to permanently label their products. The labels are resistant to severe weather

conditions such as heat, sunlight, and moisture, and can even be easily applied under running water. The special material developed by WLS for this special situation is also well suited for other companies whose products are exposed to severe weather. ■



Adhesive material for extreme conditions

# Label withstands high-pressure cleaning

In the technical industry, water-pressure tests are increasingly being used to test the durability of materials. This type of test places enormous demands on the quality and adhesion of the label material.

WLS has developed various solutions providing water-pressure resistance in the past. Once again, WLS had to meet the increased requirements of a customer: using a material recommendation from WAG, WLS performed the required durability test on the original components. For this, a

flat spray nozzle with a straight water stream and a pressure of 2,000 psi (approx. 140 bar) was directed at the object to be tested for 60 seconds and at a distance of 4 inches (approx. 10 cm). The tests performed showed that the recommended material ultimately withstood the water pressure.



These labels are therefore the perfect solution for components that undergo high-pressure cleaning. ■

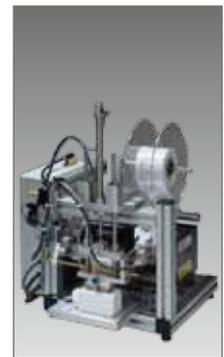


Opening of the showroom: labeling and automation area

## Insights into the labeling technology

In mid-October, Changzhou Woelco Technology opened a new showroom for labeling and automation, which exhibits among others, the following systems: Lupo HSLPA-05, Lupino HSA-80, Lupo PA-36, and Lupino HS-100 as well as two TT printers, a Zebra ZM-600, and a CAB A4+ .

The head of the labeling and automation department at WLC, Hans Pei, can now inform interested customers about the benefits of the individual types by demonstrating how the machines work. In addition, customers have the opportunity to take part in an introduction to Wölco's labeling technology, which gives them a concrete picture of the high production quality as well as the accuracy and reliability of the machines. Numerous customers and potential new customers were invited to the opening of the showroom in mid-October. Dieter Wölfle opened the showroom ceremoniously with General Manager Jochen Schleiss and Hans Pei. As part of an open house, customers had the possibility to learn more about WLC and the range of solutions they offer. ■



### VOID label material as tamper-proof protection

As a result of intensive cooperation with a material supplier, WLC now has the possibility to offer a new material for VOID labels. The label features a visually attractive design and new functions. It works extremely well, for example, as a functional security label. After affixing the label, it will leave clearly visible "VOID" lettering on both the product and the label itself. The two-dimensional superimposition of images does not allow the label to be affixed again after it is removed, thereby guaranteeing tamper-proof protection.



Proximity to customers in the northern part of China

## New office in Changchun

With the new representation in Changchun, customers in northern China will have better access to local support.



The capital city of the province of Jilin is one of the major economic centers in China, focusing mainly on heavy industries such as metal processing, mechanical engineering, and

automotive engineering. The focus of the representation in Changchun lies primarily on the large number of automotive suppliers in the region, who, as a result of the geographical proximity, will receive more reliable service and the best consultation on-site. Our new employee Jenny Pei will take care of customers' needs in Changchun. The representation consists of an office with an air-conditioned warehouse to ensure optimal storage of labels even with the difficult climatic conditions in the northeast of China. ■

## How do I find the right label adhesive?

The adhesive can't be just any adhesive as each application, each surface to which the labels are affixed, and any external influence on the adhesive labels play a role in the selection of the right adhesive. A variety of different adhesives are therefore available so that you can find the optimal label for every situation.

Selecting the best label adhesive requires that you consider a large number of factors. Among other things, the surface finish, the stresses caused by external influences, and the final bonding of the label must be carefully taken into account.

*Factors influencing the adhesion of the adhesive:*

surface	stresses	bonding
roughness	solvents	time
contour	moisture	temperature
surface tension	UV-radiation	contact pressure
	aging	contamination
	temperature	

Other things, of course, determine whether or not the label will be permanently affixed or removable from the surface. Therefore, we would like to give you a brief introduction to the topic of affixing labels. The performance of the adhesive depends to a large extent on the surface where the contact will be made. In order to optimize the bonding of the adhesive to the surface, the following principles must be regarded:

- The surface must be dry and completely clean.
- Intense pressure increases the flow and the contact of the adhesive on the surface.
- Curing time, temperature, and pressure increase the surface contact and degree of bonding.

Bonding or adhesion refers to the attraction of two surfaces between the same or different substances. The strength of this attraction is partly determined by the surface energy of the subsurface. The attraction increases with a higher surface energy, whereas it decreases with a lower surface energy. A greater attraction therefore results in better contact between the adhesive and surface. Imagine a car that hasn't been waxed for a long time. If water gets on the surface, large water puddles form quickly since the unwaxed surface of the car has a high surface energy and the water can spread out freely across the surface. In comparison, water rolls off a freshly waxed car because the surface energy is low and the water doesn't adhere well to the surface.

*Table of surface energy for different materials:*



High Surface Energy:		Low Surface Energy:	
	mN/m		mN/m
Aluminium (Al)	840	PE	31
Lead (Pb)	450	PP	29
Polyester	41	Silicon	24
Polyvinyl chloride (PVC)	39	Teflon	18

Below is a brief explanation of some of the most important types of adhesives offered in our adhesive materials.

### Rubber-based adhesives

Used for most labels and stickers where no specific requirement is given. These permanent adhesives designed for universal use inside have good adhesion to most surfaces and are temperature-resistant in practice. The aging and fade resistance is not as good as with acrylates.

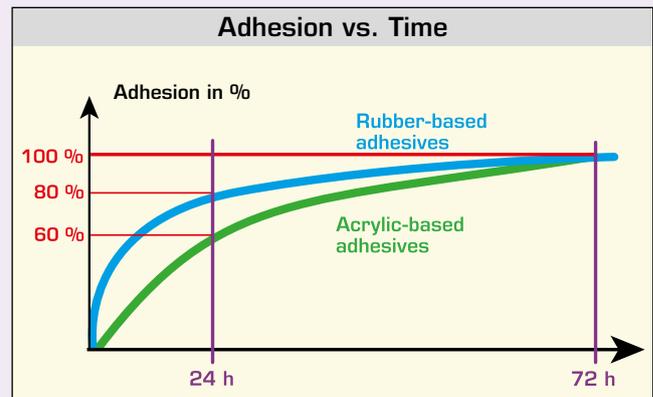
### Acrylic-based adhesives

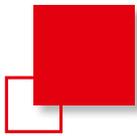
In conjunction with the films, we frequently offer acrylic adhesives which have a high resistance to aging, plasticizers, chemicals, very high temperatures, UV radiation, extreme weather conditions, and mechanical, physical, or other substantial affects. Adhesion to very rough or very smooth and high- or low-energy surfaces is also guaranteed. These high-performance labels are used, for example, in the electronics, automotive, and chemical industries as well as in laboratory, research, and medical technology.

### Removable adhesives

Some applications only require temporary identification. In this case, it is important that the labels can be removed after use without leaving any residue. No matter whether in the laboratory, in shipping, as part of quality assurance, or in the area of service and repair, removable adhesives allow products, packaging, components, and devices to be labeled temporarily, simplifying overview and control during testing and production processes. High-quality products and gifts which may not show any adhesive residue can also be easily labeled using removable labels. Here, the inner strength of the adhesive is higher than the adhesion to the surface. Removable adhesives are available as rubber-based or acrylic-based adhesives.

True for all types of adhesives is that each adhesive needs a certain amount of time to develop its full adhesion. The final adhesion is generally achieved after 72 hours.





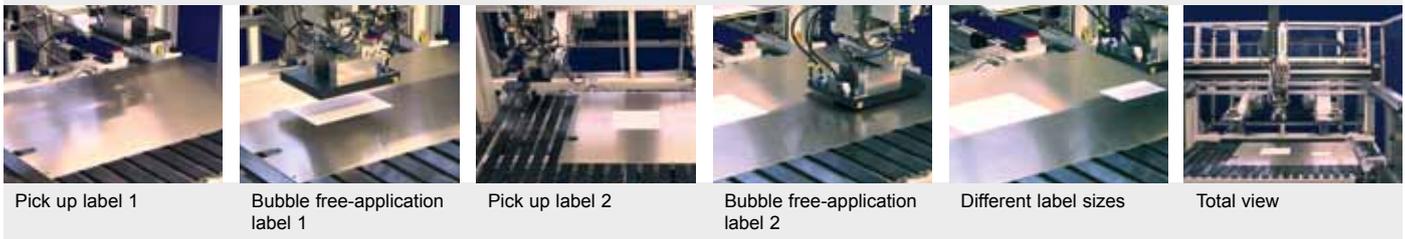
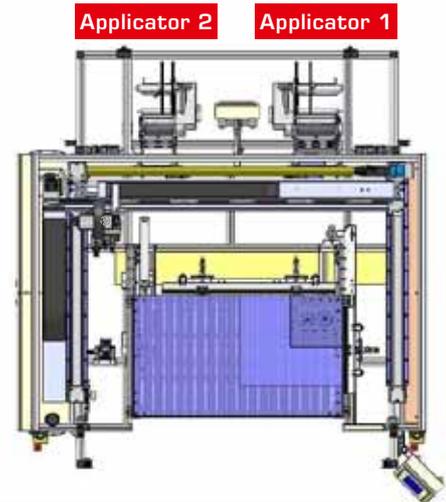
**Lupo HSAB 53 – flexible application of labels**

# An applicator for various sizes

*The labeling system Lupo HSAB 53 ensures the greatest possible flexibility for a variety of applications.*

It allows labels of various sizes from a minimum of 40 × 40 mm to a maximum of 150 × 150 mm to be taken up by an applicator stamp at two different labeling stations and then applied to variable positions on plates of at least 300 × 300 mm up to a maximum of 1,200 × 700 mm in size. During this process, the speed of the axes is approximately 350 mm/sec.

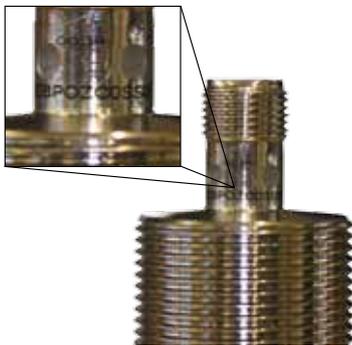
A label with the largest plate and longest travel therefore requires approximately ten seconds, without needing the time for inserting and removing. Blank labels are currently being applied as protective films with special properties. Printing the labels is also possible which can be achieved with some machine modifications. ■



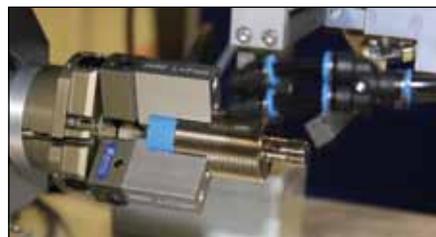
**Lupo HPA 36 – wrap around labeling of cylindrical products**

# Wrapped labels for permanent protection

*The semi-automatic labeling system Lupo HPA-36 makes the wraparound labeling of cylindrical components incredibly easy.*



Standard product sizes currently have a diameter of 5 to 40 mm, but other sizes are possible upon request. The labeling speed is up to 350 parts per hour. The component is inserted by hand into a gripper. Next, the trans-



parent label is printed and transferred to the applicator. The vacuum tamp holds the label and ensures precise positioning of the wraparound application. Thanks to multiple rotations, the blank part of the label serves as an additional protective laminate to protect the printed part permanently. And the labeling of different product sizes is possible as a result of the use of various print engines. Depending on the print engine used, the width of the label liner can be up to 112 mm, which corresponds to wraparound labels that are 17 mm on average. A high level of process reliability is guaranteed by various sensors. ■

Extremely strong for safe transport to the next station

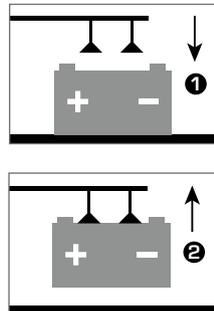
# The label keeps its promises

In past years we have supplied well-known car battery manufacturers with several labeling systems. Our labeling system Lupo TVSP-20 not only provides precise positioning of labels, but also ensures a safe finishing process.



The labels used previously were no longer compatible with the modified production process and therefore further development of the labels became necessary. The adhesive force of the labels had to be increased in order to be able to transport the batteries via a transport system with suction cups. The adhesion on the top of the battery had to be so strong to allow lifting of the batteries using suction cups. This task was an interesting challenge because of the low-energy surfaces of the batteries. The mixture of plastics coupled with the use of various release

agents made applying adhesives difficult, and the extreme weight of the batteries only added to the challenge. The material 3005 1100 with its modified acrylic adhesive was able to provide strong adhesion and ensure the transport of the batteries. In addition to these transport requirements, the battery labels are also compliant to VW TL52038 standards for media resistance and temperature requirements. ■



Picture: © Exide Technologies GmbH

## Certified converter of 3M Germany

Wölco AG receives the Partner Profile – certified converter of labeling products from 3M Germany. With this award, the label manufacturer wants to offer end customers better orientation because under the umbrella of the 3M Germany certified processors for labeling solutions, there are only converters who meet 3M's required standards for 3M labeling products. The partner profile "Certified converter" will continue to only be granted to partner companies that have at least one UL Repacker and ISO 9001:2008 certification. Wölco AG is in this category! The partner profile allows us to show you at a glance that you will find a strong global brand on our side. The 3M brand stands for high quality and reliability, and is one of the world's 100 most valuable brands.

*The partner profile makes the difference*



Zertifizierter Verarbeiter  
Kennzeichnungsprodukte

### Technical Product Information:

