

# EVOLUX

ADVANCED ANILOX LASER CLEANING MACHINE

# An Evolution in the Laser Cleaning of Anilox Rollers



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## Laser cleaning of both sleeves and rollers for:



Ceramics



Chromed



Micro Embossing



SCAN THE QR CODE  
TO DOWNLOAD  
THE PDF



## Technology Highlights:

NEW



QR Code  
Anilox Digital



Integrated 3D  
Microscope



D.A.M. Software



Spot Laser  
Technology

INTEGRATED  
3D MICROSCOPE

FAST  
CLEAN



**D.A.M.**  
Dynamic Anilox Management















LOW  
MAINTENANCE

OFFICIAL PARTNER  
**ZECHER**

# The evolution in the Laser Cleaning of Aniloxes

**Evolux** is the innovative concept for cleaning and analytical control of aniloxes, designed and developed by Ulmex to become an integral part of your production printing processes. **Evolux** technology allows you to obtain powerful cleaning on all types of anilox sleeves and rollers, both ceramic and chrome ones. Cleaning time is significantly reduced. Residues are homogeneously and durably removed, without the use of any chemicals. There are several models available in the **Evolux Laser Cleaning Line**, including the **Basic Compact Machine 1700 model**, the **Plus Machine model** (available in various formats starting from 2000 up to 3500) which is the top of the range machine in the laser cleaning concept, and

it is characterized by advanced technology and versatility, which guarantees maximum reliability and efficiency even in case of intensive use, as well as our **Mobile Smart** Cleaning Machine for the doorstep service. Ulmex engineered the entire **Evolux** range to clean, while preserving the integrity of the anilox surface **"Ceramic Care System"**, thanks to the consolidated know-how and expertise shared with our long-time partner Zecher. The whole range of **Evolux** machines are **Zecher "APPROVED"**. In addition to cleaning, Evolux also provides continuous and accurate control of your anilox inventory thanks to the integrated 3D Microscope and exclusive, proprietary software, **D.A.M. Dynamic Anilox Management**.

Main Features	Innovative because	Specifications
 <b>Robust:</b> for industrial applications, for continuous use	 Fast turn speed rotation	 Laser class 1
 <b>Versatile:</b> both sleeves and rollers	 Short cleaning time	 From 100 mm up to 4000 mm anilox length
 <b>Easy Operation:</b> intuitive process software	 Ceramic Care System	 Min. 80 mm
 <b>Database:</b> D.A.M. Dynamics Anilox Management	 Cleaning Lens System	 Max. 500 mm
	 Based on the consumer's aniloxes, we define the most suitable machine setting	 Max. weight 1500 kg

## Eco Friendly Process



In addition, Evolux has a **green soul**. As a matter of fact, all our systems meet important requirements in the field of environmental sustainability since they **do not use any chemical solvents, detergents, bicarbonate or other polluting substances**. A particularly important aspect, especially for printers who work in the food packaging sector and who have embraced green processes by focusing on sustainable technologies and materials.



Water



Chemical



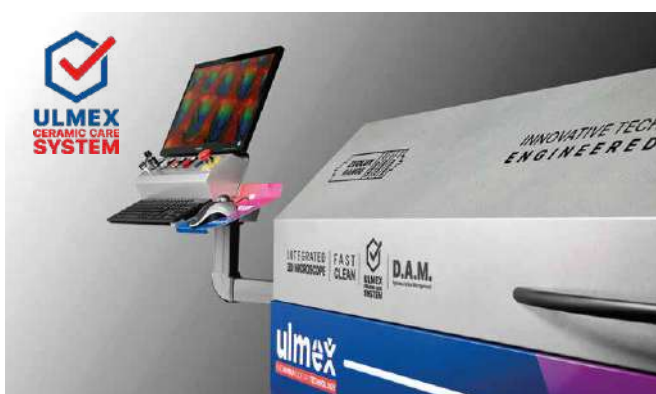
Waste



Dust

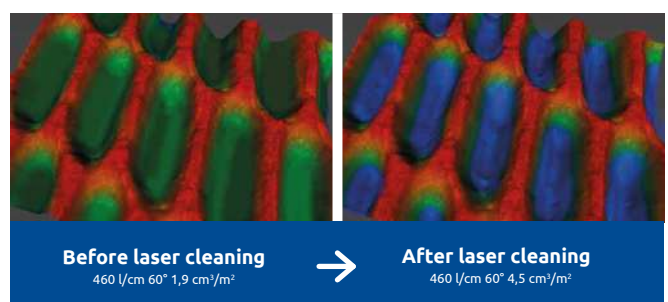
## Ulmex Ceramic Care System

The entire Evolux range is equipped with the exclusive Ceramic Care System process, developed together with our technological partner Zecher to guarantee the integrity of the ceramic surface during the cleaning process.



## Key factors for effective cleaning

Laser cleaning is based on a high intensity focused laser pulse that hits the surface of the anilox roll, where the energy of the laser beam is absorbed. The system parameters programmed on the Evolux machines allow the so-called "cold" vaporization of the layers and particles of dirt without affecting the ceramic. All primary parameters of the cleaning process such as: the pulse frequency, the scanning width of the laser beam and the advancement and rotation speed of the laser are correctly harmonized.



# Everything under control with the innovative Evolux functions



## QR Code - Anilox Digital

- ▶ Detection through a dedicated and exclusive APP (developed by Zecher) of the information contained in the QR code
- ▶ Automatic insertion of the anilox nominal data into the D.A.M. database.
- ▶ Automatic matching of the cleaning programme



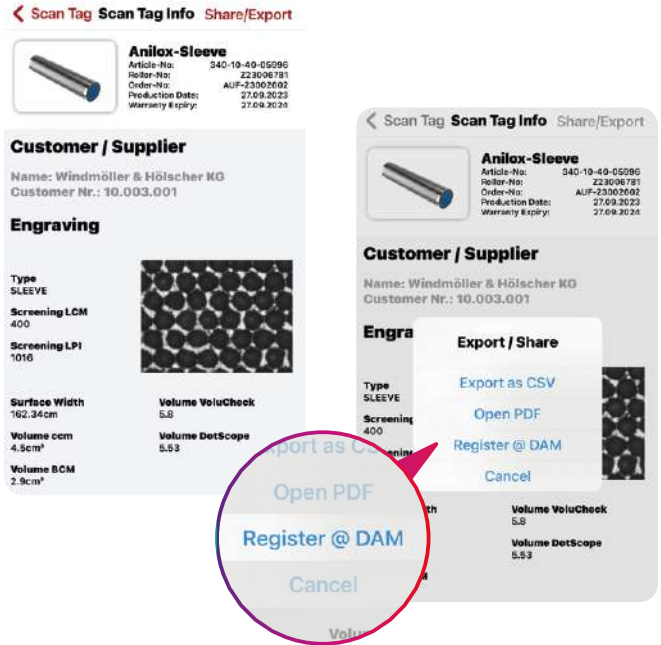
## Integrated 3D microscope

- ▶ Automatic measurement of volume flow through a microscope integrated directly into the machine
- ▶ Transfer of data collected during measurement directly to the database for archiving



## D.A.M. software and database

The proprietary software developed by ULMEX, called D.A.M., allows you to monitor the status of the aniloxes in real time, divided by printing machines, and to create a chronology to accurately evaluate the saturation level of the anilox itself in real time. Thanks to the integration between the measurement system and the D.A.M. software, cleaning interventions can be planned and scheduled with a view to predictive maintenance. The main innovative component of the D.A.M. software, in support of production managers and the purchasing office, consists in the constant control of the saturation of the flow volume. In fact, this allows planning and, if necessary, anticipating any economic and time evaluations for regenerations or the purchase of new aniloxes.



## Integrated volume flow measurement

All Evolux models are equipped with an integrated measurement system for the analytical control of aniloxes, both ceramic and chromed. Quick, reliable and intuitive, the system allows you to obtain all the data relating to the status of the anilox. This information is transmitted to the D.A.M. software for recording and archiving, in order to obtain timely statistics during the entire usage cycle of each individual anilox. For each measurement taken, the system issues a detailed report that can be stored and printed.



# What makes us different



## On-site and remote assistance and ever ready Ulmex spare parts

The ULMEX team of specialized technicians provides direct assistance for all Evolux systems, both remotely and at the installation site. Remote interventions are carried out via an instant and secure screen sharing system, to solve any problems or simply guide the customer in using the machine.



## Prompt Customer Support Service

Ulmex is characterized by its prompt response and customer assistance in case of need, during and after the warranty period. Our network of partners and technical staff is ready to satisfy every request of yours with a continuous service all year round, all-over the world.



## Education and training

ULMEX technicians are available for complete training of the staff in charge of Evolux functioning with various levels of authorization, both admin and basic levels. The great ease of use, via keyboard or touch screen, and the specifically designed software, make this machine usage very intuitive. Predefined programs are available for various cleaning levels and it can be customized for specific needs for anilox dirt removal.



## Laser Spot Technology

Excellent horizontal and radial spot overlap, the ceramic surface does not present lines or barcode effects after cleaning.

Translation overlap



Rotation overlap



## Completely in-house machine production

Our production is aimed at the assembly production of machines. The basis of our production is the use of standardized components and controlled step-by-step assembly. Controlling the quality and functionality of our machines are two essential and necessary factors to guarantee the high quality and repeatability of the process.

The processing of the Evolux machine frame is carried out with extreme precision to guarantee the frame the maximum level of stability and precision. Only with this process we are able to rotate the anilox at high speed without vibration. Even with rollers weighing over **1000 kg**, the frame does not show any vibrations.





# EVOLUX COMPACT

ADVANCED ANILOX LASER CLEANING MACHINE

EVOLUX RANGE

Anilox Length  
1700, 2000 mm

Security Class 1



## EVOLUX COMPACT

Designed for the flexible packaging and paper printing world, it can clean anilox up to 1700 mm in length. Evolux Compact 1700 is our model dedicated to companies with a medium anilox fleet, and with medium-long cleaning intervals. The Compact 1700 is able to remove from the anilox not only ink residue dirt whether solvent or water based, but also the white

for two-component solid bases and paints. This machine is also designed for the offset and narrow web sector, as thanks to the multiroller system it is possible to clean multiple aniloxes at the same time. The anilox rotation system lays on 4 Vulkollan wheels, and it allows the operator to simplify the aniloxes loading and unloading.

### Basic equipment:

- ▶ Industrial PC for managing the process program
- ▶ Camera for constant visualization during the cleaning process
- ▶ Multi-colour LED bar to indicate the status of the machine and the cleaning progress
- ▶ Simple and intuitive process software
- ▶ Assisted cleaning mode
- ▶ D.A.M. "mini" database software for managing the cleaning history

### Options available that can be included:

- ▶ D.A.M. for the dynamic management of aniloxes
- ▶ 3D microscope to determine the volume and depth of the cell, both in the integrated version and in the version implemented within the machine process with automatic measurement
- ▶ Identification and data management of the identifying QR code from the anilox
- ▶ Multirollers to be able to clean multiple aniloxes at the same time

### Laser output type

- ▶ Converged Spot through the MOPA Fiber Laser Source

### Maintenance required

- ▶ Cleaning the protective glass
- ▶ Replacement of the pre-filter and/or the activated carbon filter cassette

### Ceramic Care System

- ▶ Included

### Anilox fastening devices

- ▶ Anilox laying on Vulkollan wheels

## Technical Data

MACHINE MODEL	EVOLUX C1700	EVOLUX C2000
Max. Anilox table length Sleeve	1700 mm	2000 mm
Min. Anilox table length Sleeve	150 mm	150 mm
Max. Anilox Roll Length including hubs	1700 mm	1700 mm
Min. Anilox Roll Length	150 mm	150 mm
Max. Anilox Diameter	250 mm	250 mm
Min. Anilox Diameter	80mm	80mm
Max. Anilox weight	100 kg	100 kg
Laser power	40	40
Laser power	70	70
Aspirator	Included	Included
Machine dimensions	L 2789 x P 730 x A 1331 mm	L 2789 x P 730 x A 1331 mm
Machine weight	625 kg	625 kg
Sector of use	Narrow-Web, Midi-Web	Narrow-Web, Midi-Web

# EVOLUX PLUS

ADVANCED ANILOX LASER CLEANING MACHINE

EVOLUX RANGE

Anilox Length  
2000, 2500, 3000, 3500 mm

Security Class 1



## EVOLUX PLUS

EVOLUX PLUS is our advanced machine, dedicated to companies with a quantitatively high anilox fleet and with an anilox weight range that goes from a medium weight up to very high weights. The EVOLUX PLUS is suitable for companies that have printing machines with both sleeves and rollers. The strong point of the EVOLUX PLUS is the very short cleaning

time. Thanks to the high-speed rotation system (over 5 meters per second) we are able to significantly reduce cleaning times. The EVOLUX PLUS has innovative systems for fixing the sleeves or rollers, as well as designed moon-shaped supports to be able to rotate even very heavy rollers in total safety.

### Basic equipment:

- ▶ Industrial PC for managing the process program
- ▶ Camera for constant visualization during the cleaning process
- ▶ Multi-color LED bar to indicate the status of the machine and the cleaning progress
- ▶ Simple and intuitive process software
- ▶ Assisted cleaning mode
- ▶ D.A.M. "mini" database software for managing the cleaning history

### Options available that can be included:

- ▶ D.A.M. for the dynamic management of aniloxes
- ▶ 3D microscope to determine the volume and depth of the cell, both in the integrated version and in the version implemented within the machine process with automatic measurement
- ▶ Identification and data management of the identifying QR code from the anilox
- ▶ Designed moon-shaped support for the safe rotation of very heavy rollers

### Laser output type

- ▶ Converged Spot through the MOPA Fiber Laser Source

### Maintenance required

- ▶ Cleaning the protective glass
- ▶ Replacement of the pre-filter and/or the activated carbon filter cassette

### Ceramic Care System

- ▶ Included

### Anilox fastening devices

- ▶ Cones, Chucks, Moon-shaped Supports

## Technical Data

MACHINE MODEL	EVOLUX PLUS 2000	EVOLUX PLUS 2500	EVOLUX PLUS 3000	EVOLUX PLUS 3500
Max. Anilox table length Sleeve	2000 mm	2500 mm	3000 mm	3500 mm
Min. Anilox table length Sleeve	100 mm	100 mm	100 mm	100 mm
Max. Anilox Roll Length including hubs	2000 mm	2600 mm	3000 mm	3500 mm
Min. Anilox Roll Length	100 mm	100 mm	100 mm	100 mm
Max. Anilox Diameter	250 mm	330 mm	330 mm	330 mm
Min. Anilox Diameter	20 mm	20 mm	20 mm	20 mm
Max. Anilox weight	350 kg	500 kg	1000 kg	1000 kg
Laser power	40	40	40	40
Laser power	70	70	70	70
Aspirator	Included	Included	Included	Incluso
Machine dimensions	L 2807 x P 698 x A 1300 mm	L 3559 x P 793 x A 1349 mm	L 4039 x P 788 x A 1349 mm	L 4550 x P 998 x A 1349 mm
Machine weight	750 kg	1220 kg	1250 kg	1500 kg
Sector of use	Midi-Web, Wide-Web, Cardboard	Wide-Web, Cardboard, Coating, Tissue	Wide-Web, Cardboard, Coating, Tissue	Wide-Web, Cardboard, Coating, Tissue

# EVOLUX SMART

## ADVANCED ANILOX LASER CLEANING MACHINE

EVOLUX RANGE

Security Class 4



## EVOLUX SMART

The Smart model is intended for all printers who need to use a machine when dismantling an anilox is not possible or involves considerable difficulty in terms of time. It is specially designed for the in-line cleaning of chrome or ceramic anilox cylinders. However, thanks to its versatile structure in steel and aluminium, our Evolux Smart can be also used for the

off-line cleaning of any type of sleeves or rollers with hubs, regardless of their length and their diameter. Engineered and CE certified by ULMEX, Evolux Smart is very versatile and easy to use.

## Cleaning Service Provider

ULMEX has developed a Cleaning Service Program which is implemented by ULMEX and its partners by using our Evolux Smart, a very versatile machine that allows the laser cleaning service to be offered at your doorstep both in-line and off-line. Thanks to its high flexibility, Evolux Smart allows you to satisfy every need in the field of flexo printing: flexible printing, printing on paper, printing on cardboard, printing on labels, coating and flatbed offset coaters. Regardless of the sleeve or roll size and the weight, ULMEX provides,

in addition to the laser machine, the necessary equipment to manage the cleaning of sleeves and rolls from 1 kg up to over 1,000 kg. Furthermore, the Cleaning Service offers to ULMEX partners the chance for their customers to test the effectiveness of laser cleaning. Once verified the advantages of our laser technology, ULMEX can offer to the interested customers the necessary consultancy to guide them in purchasing the Evolux model best suited to their individual needs.

## Technical Data

MACHINE MODEL	EVOLUX SMART
Max. Anilox table length Sleeve	-
Min. Anilox table length Sleeve	-
Max. Anilox Roll Length including hubs	-
Min. Anilox Roll Length	-
Max. Anilox Diameter	-
Min. Anilox Diameter	-
Max. Anilox weight	-
Laser power	100
Laser power	200
Aspirator	Included
Machine dimensions	L 750 x 680 x 1100 mm
Machine weight	150 kg
Sector of use	Narrow-Web, Midi-Web, Wide-Web, Cardboard, Coating, Tissue

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THE HUMAN SIDE OF TECHNOLOGY

MORE THAN

**25**  
YEARS

SINCE 1999

**EVOLUX**

ADVANCED ANILOX LASER CLEANING MACHINE



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