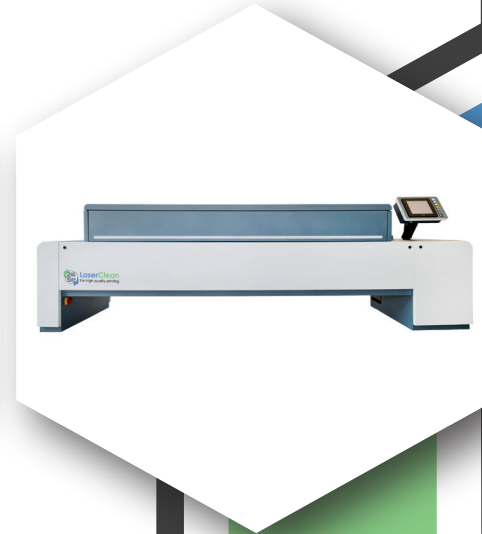


Laser Cleaning Equipment

for Anilox Rollers and Sleeves





25 years of laser cleaning experience 2

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ALCS 1000 S / SF

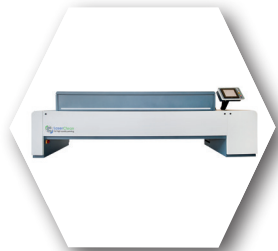
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25 years of laser cleaning experience

Laserclean is a global supplier of innovative laser cleaning solutions for Anilox rollers and sleeves. The company specializes in laser cleaning since 1994. In 2003 Laserclean chose to focus entirely on the cleaning of ceramic rollers used in corrugated-, flexo-, label-, and offset printing industry.

With over 25 years of experience we are comfortable with all circumstances and demands facing the industry. We successfully deploy the knowledge and insights we gain in the field to design and manufacture the best, fastest, lightest, and most user friendly solutions.

Advantages:

- ✓ Consistent highest printing quality
- ✓ Removes all types of residues and dirt
- ✓ Effective restoring cell volume and surface tension
- ✓ No use of water, chemicals or granulates
- ✓ Easy to use: fully automated and maintenance light
- ✓ Most environmental friendly method
- ✓ Smart connected machines

Our equipment portfolio encompasses mobile cleaning machines for in-press cleaning and a complete range of cleaning machines for Narrow Web, Mid Web and Wide Web rollers and sleeves.

We want to improve your cleaning and printing process. That is why our machines are internet connected, have data logging, and offer smart management solutions for printers.



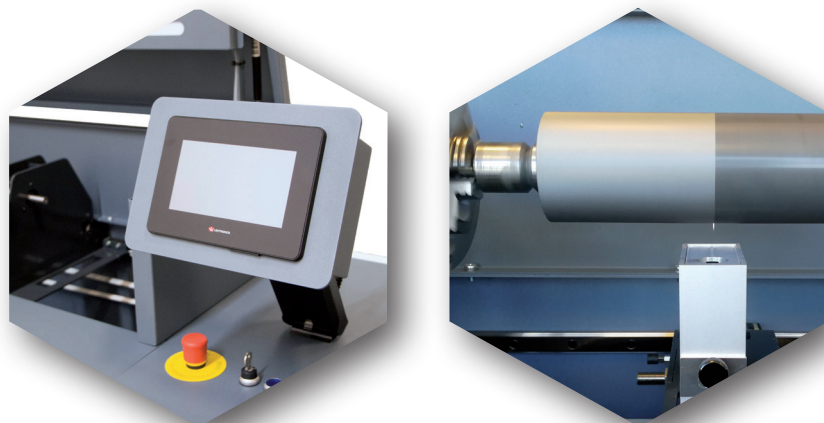
Narrow Web laser cleaning system

ALCS 1000 S / SF

Excellent cleaning solution for label printers

LaserClean develops and manufactures state-of-the-art machines for laser cleaning of Anilox rollers. The ALCS 1000 S / SF is an off-press laser cleaning machine for sleeves and smaller rollers used in label printing. This innovative machine is suitable for rollers up to 1000 mm and 25 kg, and is specifically designed for frequent (e.g. daily) cleaning.

It takes just 7 minutes to deep clean a roller of 500 mm, and the clean roller can be used for printing at once. The user friendliness of an ALCS 1000 S / SF is exceptional as the machine is easy to (un)load, fully automated and possesses the most stringent safety features.



ALCS 1000 S / SF - Narrow Web Laser Cleaning System

| | |
|--------------------------------|------------------------|
| Maximum length of the roller | 1.000 mm |
| Minimum diameter of the roller | 50 mm |
| Maximum diameter of the roller | 200 mm |
| Maximum weight of the roller | 25 kg |
| Machine dimensions (L x W x H) | 2.240 x 770 x 1.200 mm |
| Weight | 350 kg |
| Laser power S / SF | 20 W / 40 W |

Mid Web laser cleaning system

ALCS 1700 / 2100 / 2300 S / SF

The fastest laser cleaning machine for flexo printers

The Mid Web laser cleaning system offers flexo printers a perfect in-house cleaning solution. This off-press machine is designed to safeguard the highest printing quality because it makes frequent deep cleaning (daily if needed) simple and convenient, even for high line count Aniloxes. Sleeves (and rollers) up to 2300 mm and 250 kg can be cleaned in this machine.

A sleeve of 1300 mm takes just 30 minutes to clean, and can be redeployed right away. The machine is easy to (un)load, fully automated and possesses the most stringent safety features. Just like other ALCS machines, this machine is maintenance light and doesn't consume any water, chemicals or granulates.



ALCS 1700 / 2100 / 2300 S / SF - Mid Web Laser Cleaning System

| | <u>1700 S / SF</u> | <u>2100 S / SF</u> | <u>2300 SF</u> |
|--------------------------------|------------------------|------------------------|------------------------|
| Maximum length of the roller | 1.700 mm | 2.100 mm | 2.300 mm |
| Minimum diameter of the roller | 70 mm | 70 mm | 70 mm |
| Maximum diameter of the roller | 250 mm | 250 mm | 250 mm |
| Maximum weight of the roller | 250 kg | 250 kg | 250 kg |
| Machine dimensions (L x W x H) | 2.650 x 770 x 1.200 mm | 3.050 x 770 x 1.200 mm | 3.250 x 770 x 1.200 mm |
| Weight | 400 kg | 445 kg | 485 kg |
| Laser power S / SF | 20 W / 40 W | 20 W / 40 W | 40 W |

*"Maintaining
the highest
printing quality
was never
more easy"*

Wide Web laser cleaning system

ALCS 2500 / 3500 S / SF

Mastering the largest rollers

Where the competition focusses on smaller rollers and sleeves, LaserClean proudly services the entire printing industry. The ALCS 2500 / 3500 S / SF is the Rolls Royce of laser cleaning machines. Besides many convenience and safety options that distinguish ALCS off-press machines, this machine handles rollers up to 3500 mm and 700 kg.

With plenty of laser power, the cleaning speed is 2500 mm per hour, even for the largest diameters. Difficult pollutions such as glue are no problem for this giant, oftentimes rendering refurbishing of Aniloxes unnecessary. The ALCS 2500 / 3500 S / SF can be customized for rollers up to 4000 mm.



ALCS 2500 S / SF - Wide Web Laser Cleaning System

| | <u>2500 S / SF</u> | <u>3500 S / SF</u> |
|--------------------------------|------------------------|------------------------|
| Maximum length of the roller | 2.500 mm | 3.500 mm |
| Minimum diameter of the roller | 100 mm | 100 mm |
| Maximum diameter of the roller | 300 mm | 300 mm |
| Maximum weight of the roller | 700 kg | 700 kg |
| Machine dimensions (L x W x H) | 3.945 x 810 x 1.237 mm | 4.945 x 810 x 1.237 mm |
| Weight | 850 kg | 1.050 kg |
| Laser power S / SF | 70 W / 140 W | 70 W / 140 W |

Mobile laser cleaning system

ALCS 2500

The perfect machine for service providers

LaserClean is specialized in laser cleaning service for 25 years. In printing houses all over Europe, we daily work with our own design and customized service trucks and currently manufacture and deploy the fourth generation mobile laser cleaning system ALCS 2500.

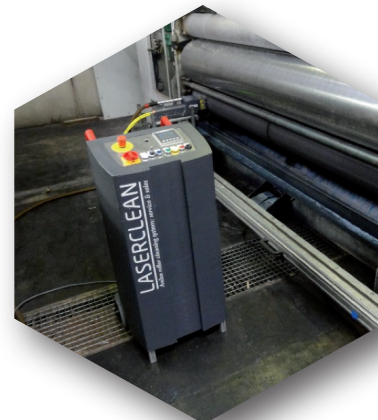
This mobile laser cleaning system weighs just 70 kg and is easy to install and operate. It can be used both in a service truck or static setup, as well as in-press. Especially corrugated printers rely on in-press laser cleaning service for professional periodic deep cleaning of their Anilox rollers.

Because of the hefty but adjustable laser power the ALCS 2500 cleans with high speed and great efficiency. The many safety features ensure safe operations for the roller surface and operator. This machine is designed for Anilox cleaning companies and only sold in combination with an agreement for geographic exclusivity.



ALCS 2500 - Mobile Laser Cleaning System

| | |
|--------------------------------|----------------------|
| Maximum length of the roller | No limitation |
| Minimum diameter of the roller | 80 mm |
| Maximum diameter of the roller | No limitation |
| Maximum weight of the roller | No limitation |
| Machine dimensions (L x W x H) | 360 x 460 x 1.050 mm |
| Weight | 70 kg |
| Laser power | 160 W |



*"Finally
all customers
can enjoy
the advantages of
laser cleaning"*

Unmatched printing quality and sustainability

All ALCS machines have the same cleaning process: the roller is being driven and turns, while the laser gun is being moved from left to right, parallel to the dirty roller. The energy of the laser beam is absorbed by the pollution, which consists of pigments and polymers, and then disintegrates.

The laser beam is enough powerful to remove the pollution but doesn't possess the power to damage the ceramic surface of the roller. After laser cleaning cell volume and surface tension are fully restored and the roller can be immediately used for printing. Laser cleaning is the most controlled and efficient way to clean Anilox surfaces, resulting in the highest constant printing quality.

Laser cleaning is based on indirect contact; the roller isn't touched other than by the laser beam. No granulates, chemicals or water are needed. Smart machine design ensures suction of all disintegrated particles into a filter unit. ALCS laser cleaning machines offer the most sustainable and environmental friendly cleaning method for Anilox rollers.





**“Convenience
redefined:
cleaning service
on-site and
in-press”**

Laserclean at your doorstep

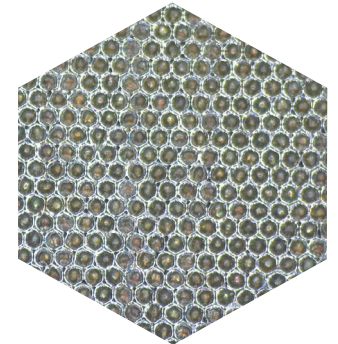


A need for periodic deep cleaning

Many printers are used to daily cleaning with chemicals. However, over time the cells of the Anilox rollers get plugged with ink and polymer residues. Before printing results deteriorate to unacceptable levels, an external cleaning service company is ordered for deep cleaning.

Customer convenience: in-line and off-line cleaning

Laserclean operates service trucks throughout Europe that are fully equipped to clean all type of rollers and sleeves. Cleaning can be done in the service truck (off-line) or in the printing press (in-line). Depending on the time and effort for removing and installing the rollers one chooses the best option. Large corrugated printing presses are oftentimes serviced in-press, saving valuable time.

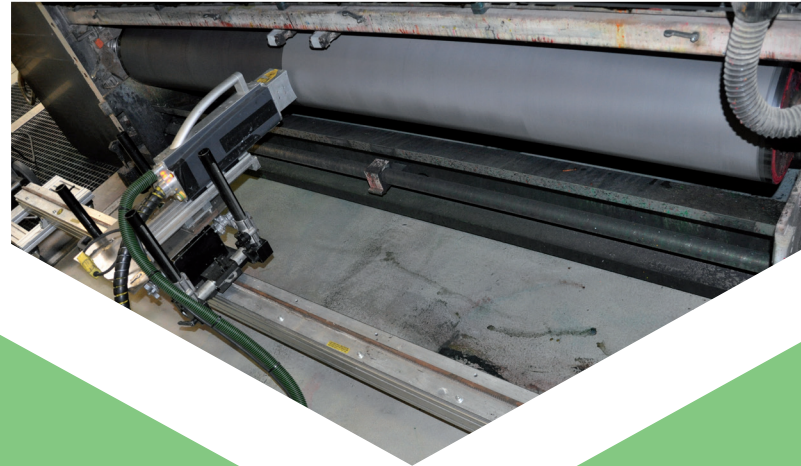


Before laser cleaning



*"Deep cleaning
3 times a year
safeguards high
printing quality"*

**"Laserclean
works fast and
efficient, reducing
downtime"**

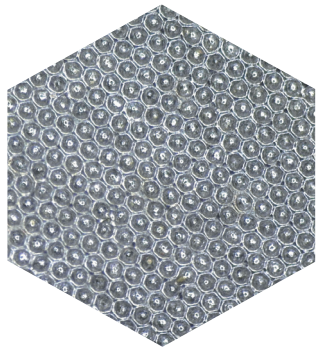


Laser cleaning tops all other cleaning methods

The advantages of laser cleaning are most noticeable when rollers have become very dirty: cell volume is fully recuperated and due to restored surface tension the roller prints like new. Laser cleaning is the only method that doesn't require any consumables such as water, chemicals or granulates. It is clean, efficient and environmental friendly. Besides supporting the highest printing quality, laser cleaning is the only cleaning method that removes all polymers and glues. Laserclean services several customers that were used to refurbishing their Aniloxes frequently, at huge expense, only to learn that periodic laser cleaning service delivers the same result at a fraction of the cost.

Laser cleaning service: a successful business

In recent years Laserclean started to sell mobile laser cleaning systems including all tools, equipment and training to exclusive service providers outside its own working territory. The business model of laser cleaning as a service is very strong, especially for existing service companies that operate with an outdated cleaning method and wish to better service their customers. In many countries the success of Laserclean is rapidly replicated. If you are interested, Laserclean invites you to discuss your business case.



After laser cleaning





LaserClean
For high quality printing

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lasclean b.v.

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