

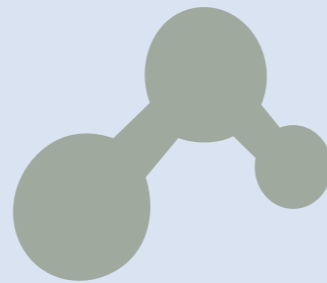
Anilox Cleaning

Label Industry

Sustainable cleaning solutions

Liquids for all needs

The Flexo Wash cleaning systems are built to clean with sustainable cleaning solutions and to consume as little cleaning liquid as possible. In all our machines the liquid is always filtrated and recirculated to be reused. The Flexo Wash solutions are of high durability and formulated for easy handling, trouble-free operation, and long service intervals. This makes sustainable cleaning liquids an affordable alternative to solvents, thus providing a safer cleaning of press parts and a cleaner environment. The solutions are developed to meet today's demands of high print quality and productivity. This is only possible to obtain if you make sure that your aniloxes, printing plates, and other press parts are kept clean.



Automatic cleaning equipment is only as good as the liquid you use, which is why we do not compromise the quality, durability, and sustainability of our cleaning liquids. You need to use the right cleaning liquid, for the specific type of ink, in your cleaning machine to get the optimal cleaning results.

Own consumables brand

Our own Flexo Wash consumables brand CleanSolution offers many types of liquid that all solve specific or the same problems. Additionally, we offer filters, brushes, sponges, and manual cleaning equipment.

Our experts guide you towards better cleaning

We are always ready to guide you towards better and more efficient cleaning of your aniloxes, plates, parts, screens etc.

Our experts are ready to guide

you to the right liquids for you based on your specific combination of inks or varnishes. We can develop a test report, which specifies different cleaning results from our test lab using different liquids to clean your inks.

Each ink type or combination of several inks requires a different specialized cleaning liquid. Here you will find our recommended products to clean each different type of ink.

However, we always recommend you to contact us for an in-depth evaluation of your specific needs. We can provide the liquid that works best with our cleaning systems, but we also provide cleaning liquids for all other cleaning machine brands.

We work together with you

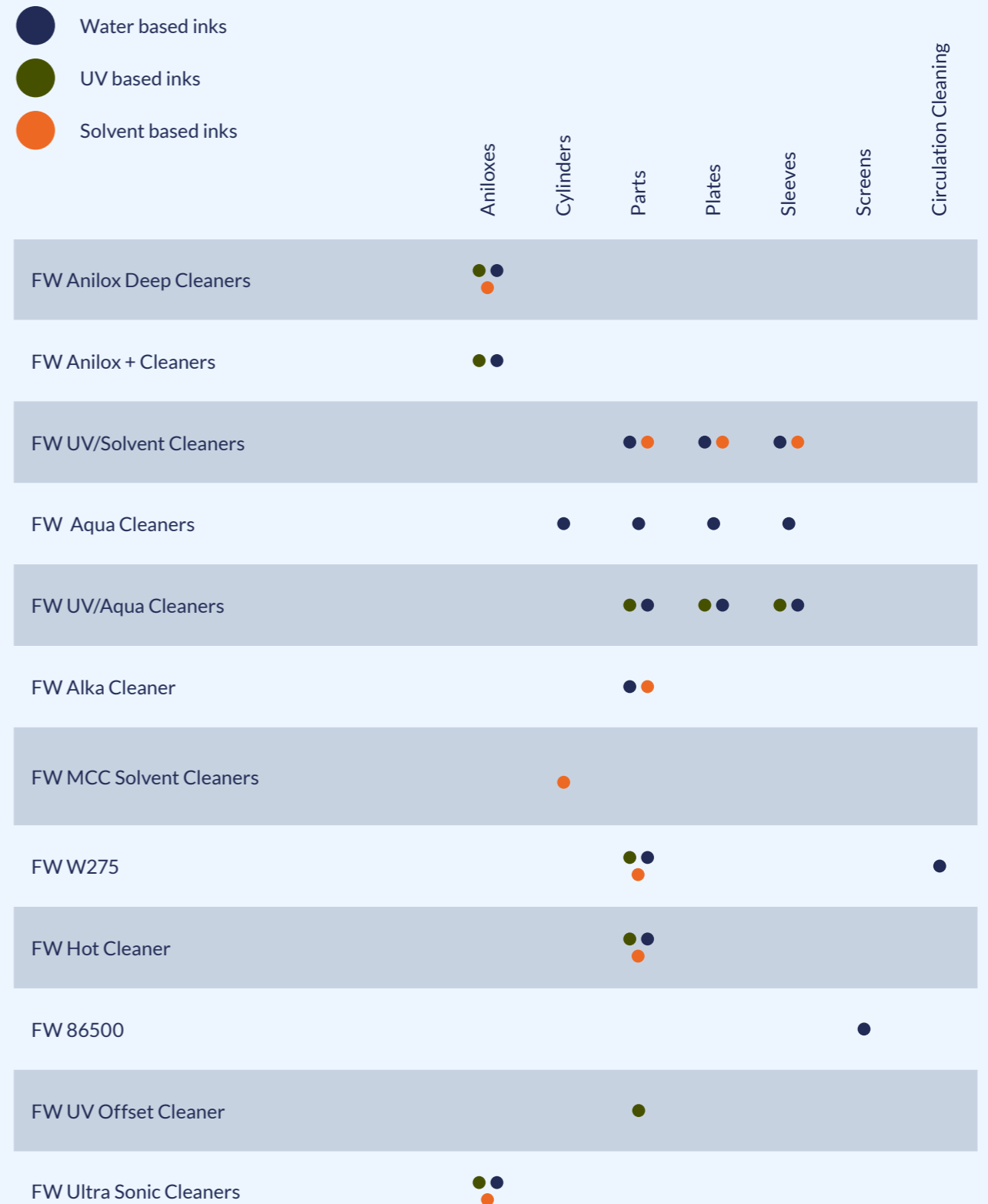
Flexo Wash provides you with easy ordering or re-ordering of liquids,

reliable on time delivery, and experts and service people always ready to guide or problem solve any issues that may occur.

Eco-friendly cleaning solutions

Flexo Wash continues to develop cleaning solutions with the focus on minimizing the environmental impact and you will find both low VOC and VOC-free cleaning solutions in the Flexo Wash product portfolio as well as food packaging compliant solutions certified by ISEGA.

Furthermore, Flexo Wash also offers cleaning solutions with a low COD (chemical oxygen demand), which reduces the oxygen demand in the wastewater.



Anilox Liquid Cleaning

If the anilox roll is the heart of the flexo printing process and critical to maintaining a well-run operation, proper cleaning, along with care and maintenance of your anilox inventory is essential to your business. The absence of good cleaning practices will always lead to inconsistent print results and increased downtime.

Our Solution

- Fully automatic cleaning
- Clean after 5-20 minutes
- No wear or tear on the aniloxes
- Wash up to 9 aniloxes simultaneously



Anilox Liquid Cleaning

The Flexo Wash Way

The FW Anilox Cleaners work with environmentally friendly cleaning liquid, which is specially made for deep cleaning of aniloxes used with all types of ink.

The water from the high-pressure rinse is automatically led directly to the drain (depending on local legislation), to a tank for re-use or to one of our water reuse units.

Washing

The anilox rotates while heated liquid is sprayed onto the surface. Due to the special tensides in the liquid, the ink can easily be removed from the anilox cells by high-pressure rinsing.

The average washing time is 5-10 minutes.



Draining

After the washing cycle, the liquid is drained back into the wash tank for re-use. The drain time is 2-3 minutes.



Rinsing

High-pressure 120 bar adjustable water nozzles complete the cleaning process and remove any remaining ink particles and cleaning liquid.



Re-use

The cleaning liquid is filtrated and recirculated to be reused to minimize liquid consumption. The rinse water can also be led to a recirculation unit (optional) to be filtrated and ready for reuse.



Drying

High-pressure air drying completes the cleaning process leaving the anilox ready for immediate use or storage. Duration is 1-3 minutes, depending on roll length.

Case Story

Flexo-Graphics was having a problem – and it was a good problem to have. Business was growing rapidly, but they realized their internal processes were not keeping up with production demands. As their business grew and expanded, the need to clean their aniloxes effectively grew and expanded as well. Their problem was that the method of cleaning they used to clean their aniloxes “broke down too often and too fast.” Due to this unreliable cleaning system, Flexo-Graphics employees spent a few hours a day cleaning rolls by hand as well.

Two employees were dedicated to the manual cleaning of not only the anilox rolls, but the trays and parts as well. They used a combination of solvents and other cleaners but were having a hard time getting everything truly clean. Tim McDonough President & CEO of Flexo-Graphics (an Inovar company) tells us that:

“Our eyes were really opened when an ink vendor showed us how dirty our ‘clean’ aniloxes were” despite all the time and effort they had put into cleaning them.

After performing a demo of their dirty anilox rolls in the Flexo Wash anilox cleaner and found the results to be “remarkable” and that their rolls “were not nearly as clean” as they thought they were, according to John Witmer, Operations Manager. They learned how just a slight change in the cleanliness of an anilox roll really affects the color. It was also clear that “staying at color” was dependent on the cleanliness of the anilox roll. McDonough explains:

“Much of our customer base was moving to tight color tolerances and we felt the Flexo Wash solution would give us the cleanest rollers and best chance to regularly reproduce spot colors within the acceptable Delta.”

Time was also a huge factor in their decision. Before, determining the time to clean the anilox rolls took some planning, because it would mean the press was down for an hour. Figuring out when the cleaning would take place during the day, between jobs and all while trying to keep up with an increased production schedule. Also they could only clean two anilox rolls at a time in their ultrasonic cleaner and it would take one hour.

In 2017, they purchased their first anilox cleaner, a FW Handy 2x2. It could clean four rolls at a time with a much shorter turnaround time of 15-20 minutes maximum.

In 2018, they purchased a new press, which was a 17” press with 10 colors. This new press, and the fact that their work was much more in the “UV World”, taxed their ability to keep everything clean. Flexo-Graphics went from a negligible use of UV Ink to using UV Ink 50% of the time, in just three short years.

The improvements in their system were evident: “We spent far less time at the sink which resulted in more time running the press. In addition, clean rolls led to more repeatable color and tones which is critical in a highly repetitive business. Our ability to easily hit color led to more press up time due to less time spent dialing in color or changing anilox rolls.”

McDonough also cites that:

“We also improved press run time by not having to clean an anilox roll that was already in the press. Prior to Flexo Wash it was not uncommon for us to run up a job with a “clean” anilox only to see that color was lacking and that we need to give the anilox another cycle to try to get it cleaner. Now a roller is either clean or it is not. There no longer is almost clean”.

Here are some statistics of their results:

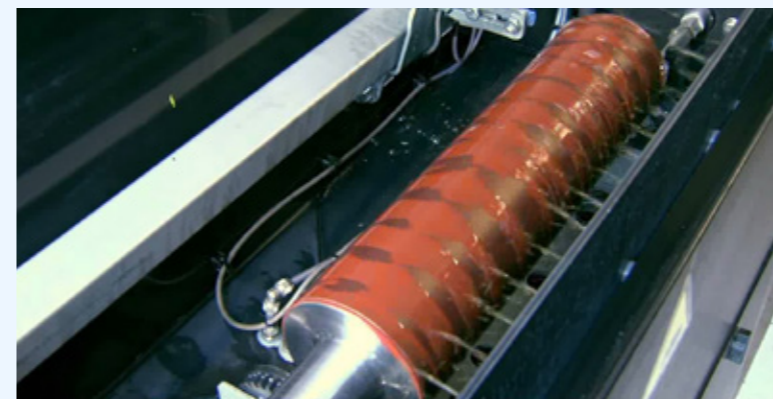
- They print 250 days a year.
- They used to spend 10 minutes prepping each roll and then one hour cleaning in the old system. After the cleaning, they would rinse the roll again.
- Now they spend about five minutes to load and unload four rolls into the Flexo Wash unit. The cleaning process takes 15 to 20 minutes.
- Upgrading to the Flexo Wash system took them from two rolls per hour cleaning capacity to a potential of 12 to 16 rolls an hour.
- Cleaning supply cost was 1800 EUR a year. The first year with Flexo Wash system, the cost was 1590 EUR, but they cleaned four times more anilox rolls.
- Cleaner rolls have improved their print quality.

“We spent far less time at the sink which resulted in more time running the press. In addition, clean rolls led to more repeatable color and tones which is critical in a highly repetitive business.”
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Anilox Liquid Cleaning

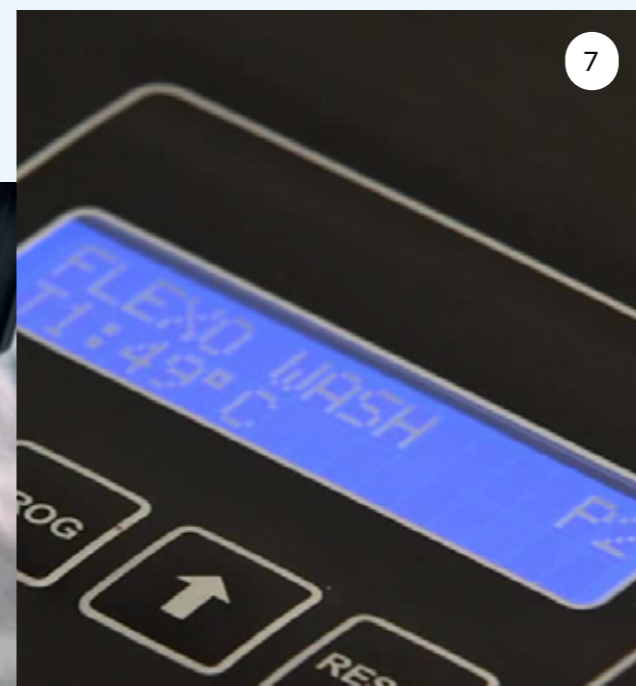
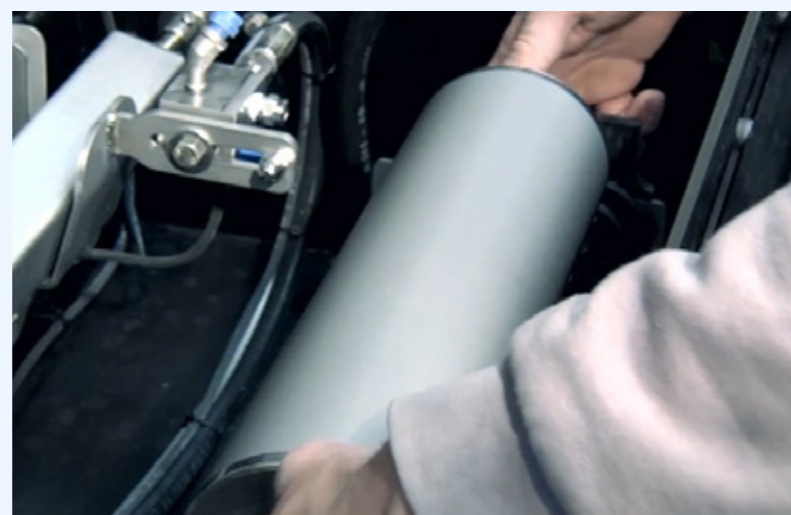
Quick & gentle washing process

The Flexo Wash system is based on liquid and high-pressure water. Therefore, the system is effective even for high-line aniloxes. The quick and gentle cleaning process leaves the aniloxes clean and ready for immediate use after just 5-20 minutes of cleaning without causing any wear or tear to the anilox. This makes it possible to always keep your aniloxes clean ensuring a high and consistent print quality and a long lifetime of the aniloxes.



Before

After



1. Moving spray bar with both air and liquid nozzles, leaving the anilox completely dry and ready to use.
2. Pull-out liquid tank for easy maintenance.
3. Semi-automatic liquid filling. The filling will automatically stop when the tank is full.
4. The high-pressure nozzles clean with a pressure of 120 bar.
5. Liquid and water are sprayed onto the anilox through the stainless-steel high-pressure nozzles. Afterwards, the blue nozzles air-dry the surface leaving the roll dry and ready for immediate use or storage.
6. The process indicator lamp lights green when the cleaning cycle is in progress.
7. The control system gives you the opportunity to see cleaning time, temperature, number of washes etc. Furthermore, it is possible to have several cleaning programs with different settings set up and managed from the microprocessor.

Anilox Liquid Cleaning

Which machine should I choose?

The Flexo Wash Anilox Cleaners come in many different models which can be modified by combining the standard unit with one or more of the various options.



FW Handy Series

Our cost-efficient FW Handy models have been developed to serve a broad part of the label industry. The FW Handy-products are fully automatic units designed to deep clean/restore aniloxes of all sizes and provide you with a very good and cost-efficient tool for the daily cleaning and maintenance of aniloxes etc.

.NXT Generation

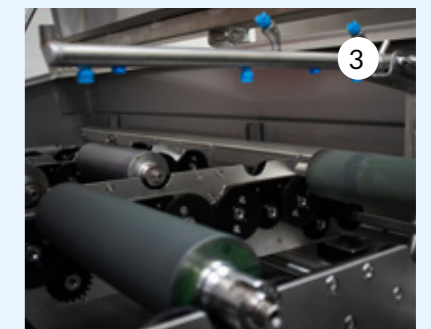
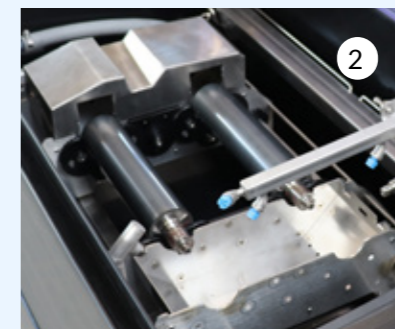
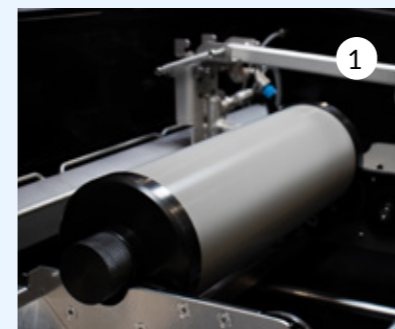
With the .NXT units we present a new generation of anilox cleaning systems. All are produced with the .NXT features which mean easier handling, improved technology & focus on sustainable solutions.

	Max aniloxes per wash	Max diameter	Max cleaning length	Max weight per aniloxes:
FW Handy Mini 2	2	150 mm (5.9")	640 mm (25.2")	15kg (33 lbs)
FW Handy Midi 2X2	2 or 4	150 mm (5.9")	2 aniloxes: 1120 mm (44.1") 4 aniloxes: 480 mm (18.9")	2 aniloxes: 20kg (44 lbs) 4 aniloxes: 15kg (33 lbs)
FW Handy Maxi	1 or 2	230 mm (9.1")	1 anilox 1120 mm (44.1") 2 aniloxes: 470 mm (18.5")	1 anilox: 50 kg (110 lbs) 2 aniloxes: 25 kg (55 * lbs)
FW 993 XL.NXT	3, 6, or 9	150 mm (5.9")	3 aniloxes: 1600 mm (63") 6 aniloxes: 715 mm (28.1")* 9 aniloxes: 420 mm (16.5")*	15 kg (33lbs)
FW 993 XXL.NXT	3, 6, or 9	150 mm (5.9")	3 aniloxes: 2000 mm (78.7") 6 aniloxes: 915 mm (36")* 9 aniloxes: 553 mm (27.7")*	15 kg (33lbs)

* Requires option

Options and Accessories

- Adaptor for sleeves
- Gear Covers
- Double tank system for 2nd cleaning liquid
- Systems for reuse of rinse water
- Automatic liquid filling system



1: For anilox sleeves, an adaptor can be made according to the specific measures of the anilox. 2: For anilox rolls, the units can be made with gear covers to protect the shafts. 3: By adding extra traction stations in the FW 993 units, you can wash up to 9 aniloxes in one cleaning cycle.

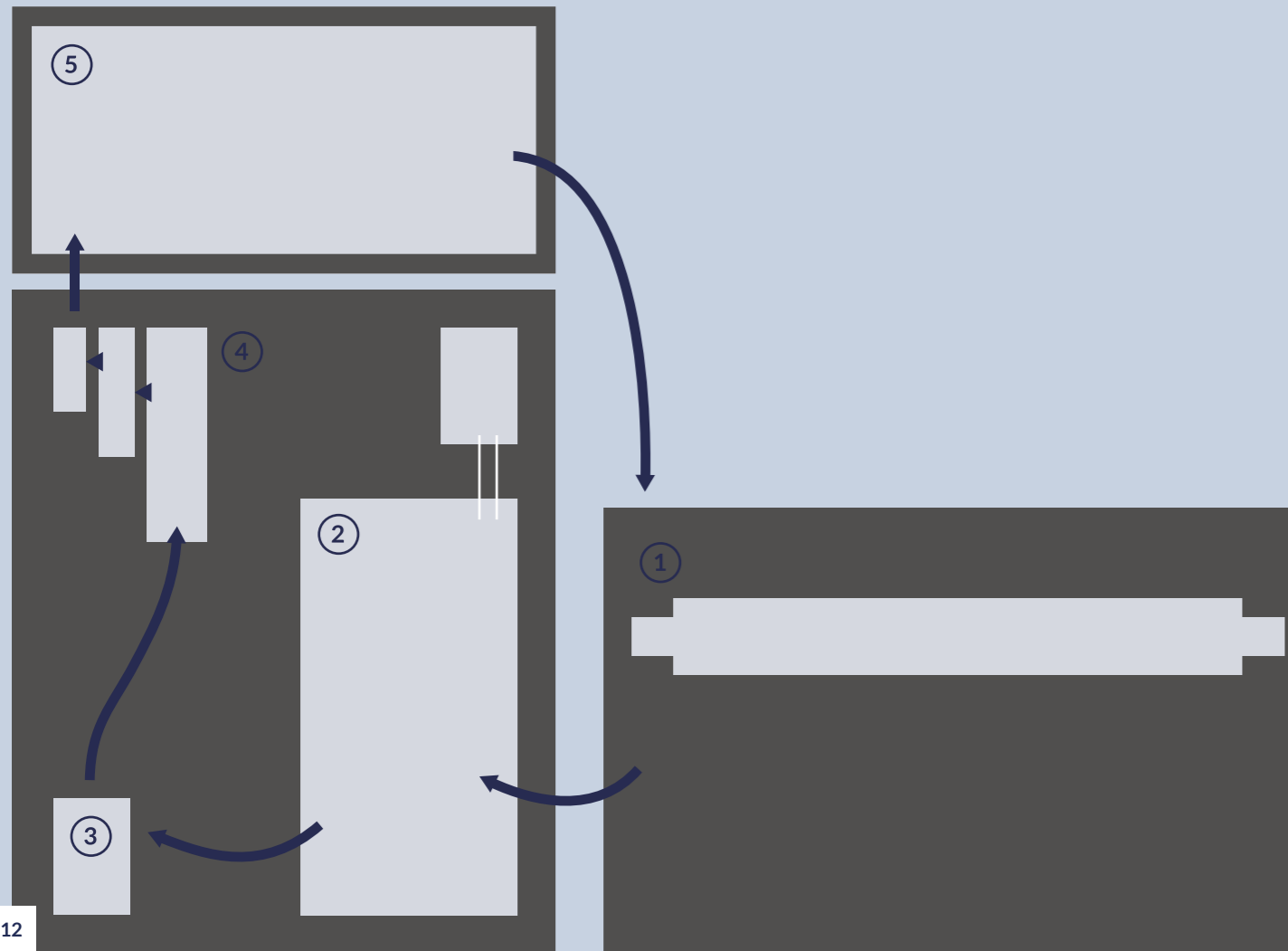
Reuse of rinse water

with the Recirculation system

The FW Recirculation System is designed for re-use of the rinse water in a closed-loop system. The system is controlled by several sensors constantly measuring the pH and liquid levels. The process runs independently of the washing unit.

The process of the Recirculation system will ensure that the rinse water can be reused in the FW cleaning unit, reducing the amount of wastewater to a minimum. In this way, you will still have high-quality cleaning.

1. The rinse water runs from the Anilox Cleaning machine to the mixing tank.
2. In the mixing tank the water is automatically treated with phosphoric acid and FW Antifoam.
3. A pump pumps the rinse water from the mixing tank to the filters.
4. The rinse water is passed through high-performance filters, removing solids and dried ink. The 3 filters removes solids and ink particles.
5. The filtered and treated water is pumped to the holding tank from where the water is reused for rinsing in the anilox cleaner.



Recirculation benefits

The Recirculation System elevates your anilox cleaning to an even more sustainable solution. In re-using the rinse water in your cleaning cycle, you achieve several benefits:

- You reduce your water consumption which saves you both money and is better for the environment.
- The system allows you to have approx. 75 washes from a tank of 140 liters of water (depending on water quality, ink type etc.).
- You can put the Anilox Cleaner anywhere as the Recirculation System eliminates the need for freshwater supply and draining.
- The system ensures a completely hands-free operation as the closed-loop system is fully automatic.

Recirculation Unit

- Secures high-quality cleaning with reused water
- Reuse of rinse water reduces water consumption significantly
- Hands-free fully automatic and environmentally friendly.



Anilox Laser Cleaning

Get a waste-free, completely safe, and automatic anilox cleaner that will give you a more sustainable cleaning solution. The FW Laser Anilox Cleaners can be installed without requiring water supply, drain or safety equipment.

Our Solution

- Waste-free and completely safe
- Only requires air and power
- Sustainable cleaning method



Anilox Laser Cleaning

The Flexo Wash Way

The FW Laser Anilox Cleaners are developed with the newest laser technology and software systems. It is a waste-free and sustainable cleaning method with no liquid handling or consumption.

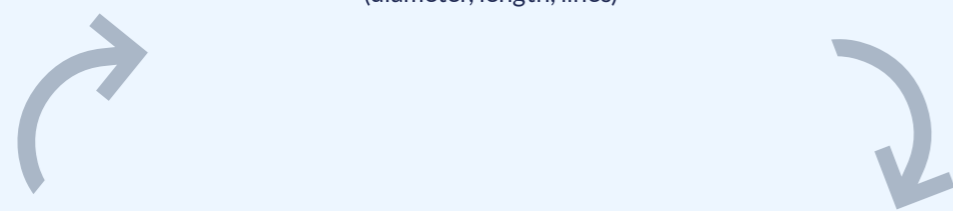
Anilox Laser Cleaning

How does it work?

Get a waste-free, completely safe and automatic anilox cleaner that will give you a sustainable cleaning solution.
The FW LASER Anilox Cleaner only requires air and power.

Loading

Place the anilox on the traction stations.
Choose the anilox from the database where all the properties are defined (diameter, length, lines)

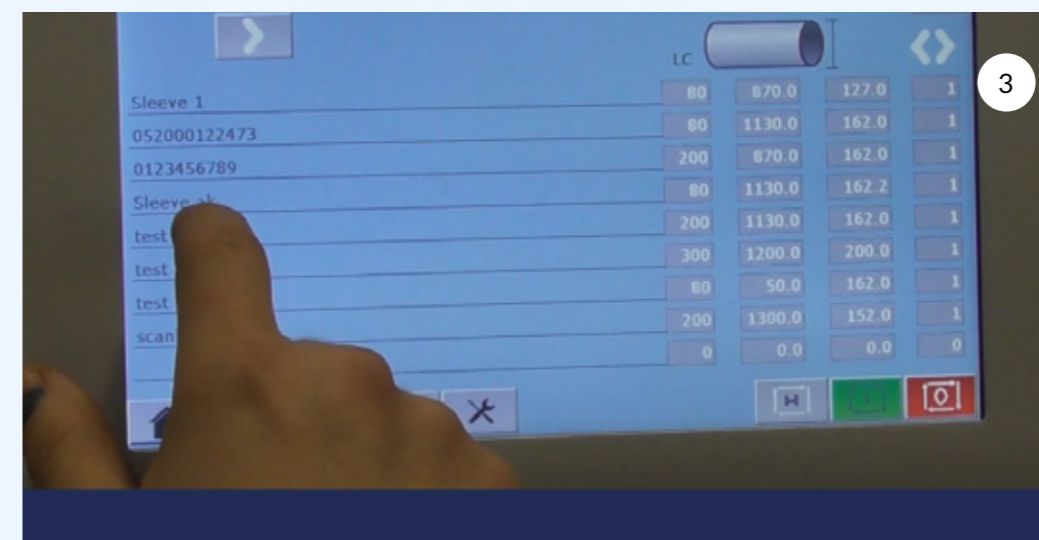
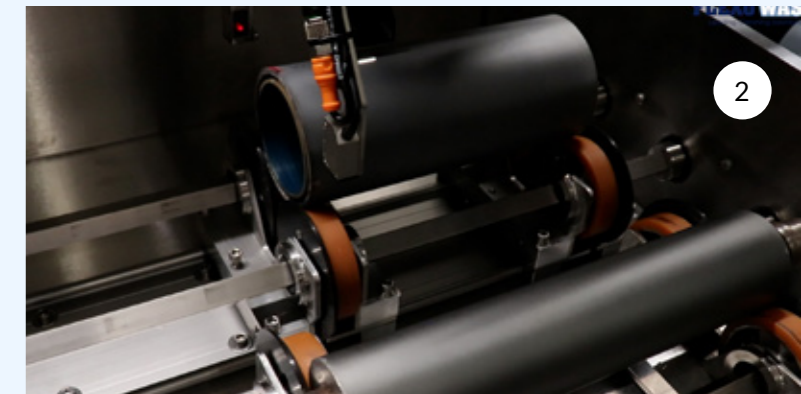
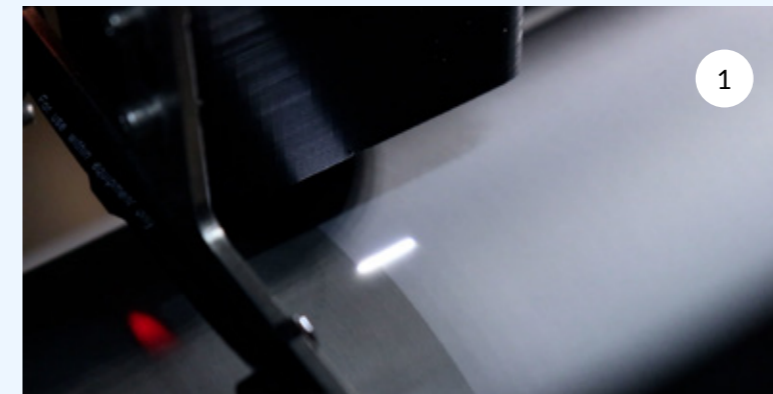


Extraction

The extraction system removes all dust and fumes, making sure no nanoparticles will enter the room.
The cleaning program stops automatically when the cleaning and extraction process is finalized.

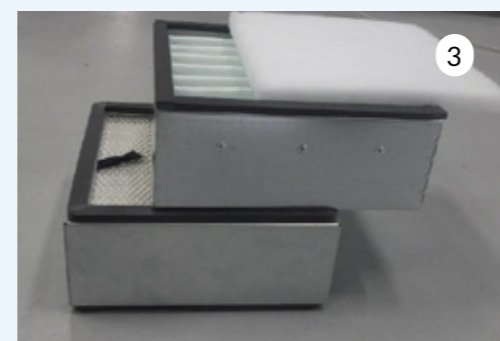
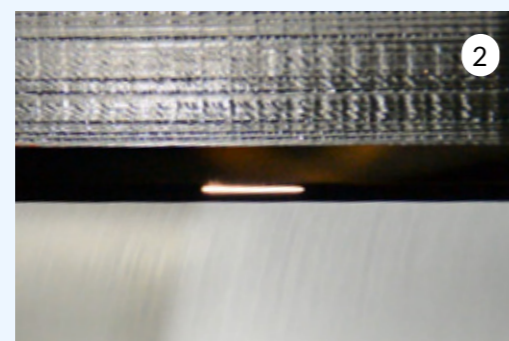
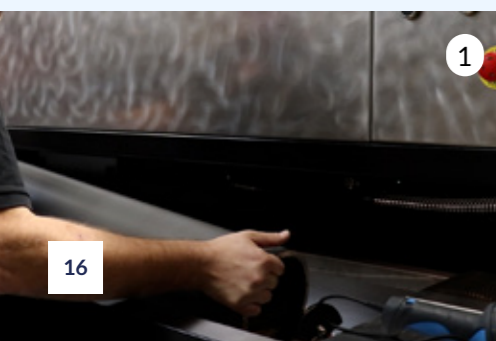
Cleaning

The high-frequency laser will clean the anilox with a precisely defined pulse which ensures an even distribution of energy.



1. Class 1 laser system which is safe under all conditions of normal use - no need for safety goggles or other safety equipment.
2. Clean multiple small aniloxes of variable sizes in one machine.
3. Database over with anilox inventory that contains data regarding cleaning and alarms. The data is available directly on screen but can also be accessed via LAN connections.
4. Before and after: The laser cleaning system provides high-quality cleaning results.
5. The easily accessible filter consists of two different combination filters. Both a filter mat, a HEPA & an active carbon filter are integrated ensuring that all particles are collected within the unit by the extraction system.

1: Loading. 2: Cleaning. 3: Extraction through a 3-filter configuration.



Anilox Laser Cleaning

Which machine should I choose?

Factors like cleaning speed, how many aniloxes you wish to clean per cleaning cycle etc. determine which laser unit you should choose. On these pages, you will find a brief introduction to the different units and their specifications - for more info ask your FW sales representative.



FW Laser

The FW Laser Anilox Cleaners are developed with newest laser technology and software systems. It is a waste-free and sustainable cleaning method with no liquid handling or consumption.

FW LaserX

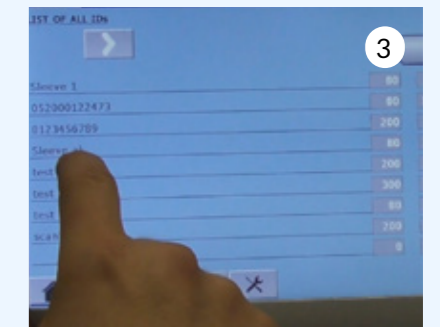
Improved technology makes it possible for the LaserX to perform efficient cleaning with the high degree of safety the Flexo Wash laser cleaning systems are known for, but twice as fast. The LaserX is the optimal choice for customers wanting to invest in new technology with reduced cleaning time and still keeping the high degree of safety that Flexo Wash is known for.

	Max aniloxes per wash	Max diameter	Max cleaning length	Max weight per aniloxes:
FW 850 Laser	1 or 2*	180 mm (7.1")	700 mm (27,6")	50 kg (110lbs")
FW 850-2 Laser	2 or 4*	180 mm (7.1")	700 mm (27,6")	50 kg (110lbs")
FW 850 LaserX	1 or 2*	180 mm (7.1")	700 mm (27,6")	50 kg (110lbs")
FW 850-2 LaserX	2 or 4*	180 mm (7.1")	700 mm (27,6")	50 kg (110lbs")

* Requires option. Reduces max cleaning length.

Options and Accessories

- Q-cam
- Barcode Reader
- Automatic anilox identification (RFID) possible



1: Camera - watch the cleaning process in real-time on the display. 2: Easy access to the anilox details in the database either by Barcode Reader or Automatic anilox identification (RFID). 3: Cleaning data on each anilox is registered in the database.



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