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ENGLISH
PRINTING INDUSTRY



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ALPHASONICS
ULTRASONIC CLEANING SYSTEMS

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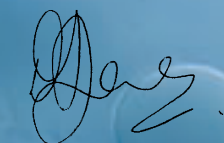
Welcome to Alphasonics Limited, one of the UK's leading developers and manufacturers of award-winning ultrasonic cleaning systems.

Founded in Liverpool, England, in 1993 Alphasonics has developed a worldwide reputation for innovation and technical excellence, greatly assisting our customers in the printing industry in particular, to deliver a superior quality product to their customers.

As one of the true pioneers of using ultrasonic systems for the regular cleaning of delicate components, the cutting edge modern products developed by Alphasonics have resulted in our global clients winning a wealth of quality awards.

We are delighted to be able to offer highly affordable, top quality Alphasound cleaning equipment tailored to your needs, either directly from our UK headquarters or via our worldwide network of distributors.

Our highly trained staff will be pleased to answer any queries you may have and we look forward to being of service.



David Jones
Managing Director



Ultrasonic Cleaning – Outstanding Results

The success story of Alphasound ‘dual frequency’ technology began in 2000.

This “designer waveform technology” is ideal for any application where delicate parts need regular cleaning, Alphasound DF is flexible enough to deliver the absolute best cleaning action whatever the component, whatever the regularity of cleaning required.

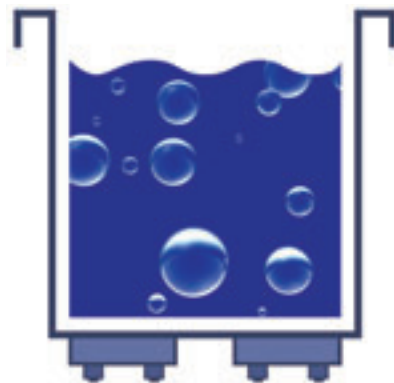


Fig 1

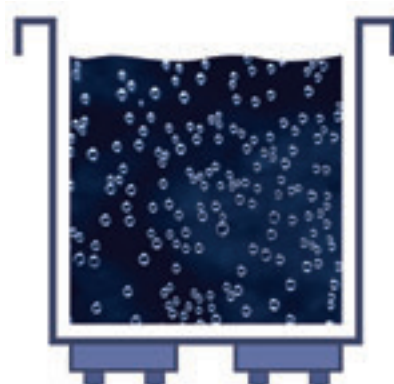


Fig 2

Ultrasonic cleaning works by applying high frequency sound to a vessel containing fluid. This creates millions of vacuum chambers that expand and subsequently implode. If they implode near to or against the component submerged in the fluid, the result is instant and impressive – a shock wave is produced, sucking away contamination from the component’s surface.

It’s a flexible technology too. Cleaning action can be gentle or it can be aggressive. This depends on the component to be cleaned and the ultrasonic frequency used. Dual frequency Alphasound technology has also been specifically developed to give the best results when cleaning delicate components such as high screen anilox rolls on a regular basis.

Here at Alphasonics, we produce a range of high quality, affordable ultrasonic cleaning systems. We can also design and manufacture a system to suit your specific needs. All it takes is a phone call!

The representational sketches show how different frequencies produce different vacuum cavities. Fig 1 represents cavities produced by low frequency and fig 2 represents cavities produced by high frequency when the power input remains constant.

The cleaning process and safety is further enhanced by altering the power level or watts per litre between the high and low frequency settings. The factory settings are high frequency / low power and low frequency / high power. The low frequency setting is generally used to get the component clean and the high frequency setting is used to keep the component clean through regular cleaning.

An Alphasound Solution for every Printing Process

Whichever printing process your company uses, we can offer an Alphasound cleaning solution.

Flexography

Users of the flexographic printing process often face problems cleaning high screen anilox rolls and digitally produced plates without damaging them. The good news is that we have developed Alphasound systems that have pioneered the safe and effective regular cleaning of both these delicate items.

UV inks are being used more and more in flexography today. The downside however, is the cost of disposal and environmental impact that can have. Here at Alphasonics, we have developed a highly innovative parts washing device for use with UV inks and coatings that removes the pigment from the wash water. This in turn enables the parts to be thoroughly cleaned and the wash water re-used. What’s more, the pigment is rendered to a form that enables it to be disposed of economically.

We have also developed a methodology beneficial to the corrugated sector. This enables the cleaning of the roll on press, saving lost production time whilst greatly improving print quality.

Gravure

Our Alphasound cleaning systems provide an ideal way to keep gravure cylinders in absolutely pristine condition between print runs. Up to 12 cylinders can now be cleaned simultaneously.

Offset

Several major press manufacturers use a Blanket Wash Module as part of the press. This module is extremely difficult to clean by conventional means, so Alphasonics have created a range of innovative machinery to make cleaning quick and easy.

Alphasound Products - at a glance

The secret of our success lies in our commitment to innovation and technical excellence.

At Alphasonics, our innovation and technical expertise has led to the development of a range of Alphasound products which can be tailored to suit your cleaning requirements. With a total commitment to state of the art design and complete user friendliness, we can offer single tank, multi tank and special bespoke equipment - all manufactured in house at our Liverpool HQ.

Alphasound Systems							
Printing Process	Off Press Anilox Roll/ Gravure Cylinder cleaning systems	On Press Anilox Roll/ Gravure Cylinder cleaning systems	Non contact Flexo Plate cleaning systems	UV Ink Parts washing systems (AS1000)	Water based Parts washing system (AS80)	Parts Washers for all ink types (AS2000)	Blanket Wash Module Cleaning Systems
Gravure							
Flexographic							
Offset							

Alphasound Off Press Cleaning Systems for Anilox Rolls and Gravure Cylinders

Alphasonics offer customers worldwide a choice of quality standard or bespoke cleaning systems.

We can design an Alphaplus system to meet your individual needs, or you can choose from our range of standard units: our 'cleaning ladies' Melanie, Mia, Miranda and Megan.

The diagram below shows the features of our standard cleaning systems. You'll find further details on these and our bespoke models in following pages.

Features	Melanie	Mia	Miranda	Megan	AlphaPlus
Feature	Bench top model	Bench top model	Floor standing model	Floor standing model	Floor standing model
Available tank sizes	600mm, 710mm, 900mm, 1120mm, 1380mm	430mm to 2300mm in 10mm increments	430mm to 2300mm in 10mm increments	430mm to 2300mm in 10mm increments	430mm to 5000mm
Number of rolls/cylinders capable of cleaning at a time	1, 2, 3, 4, 6	1, 2, 3, 4, 6	1, 2, 3, 4, 6	1, 2, 3, 4, 6	To suit requirements
Single frequency	✓	✓	✓		✓
Dual frequency	✓	✓		✓	✓
Supersweep Generator	✓	✓	✓	✓	✓
Dual cycle time			✓	✓	✓
Fallback temp. control			✓	✓	✓
Rotation	✓	✓	✓	✓	✓
Auto-pumping			✓	✓	✓
Manual pumping		✓	✓	✓	✓
Filtration		✓	✓	✓	✓
Flow switch		✓	✓	✓	✓
Integral rinse tank		✓	✓	✓	✓
Pump only cycle		✓	✓	✓	✓
Digital temp. control			✓	✓	✓
Level detection			✓	✓	✓
Auto roll idle	Option	Option	✓	✓	✓
End cycle alarm	Option	Option	Option	Option	Option
Filter status indicator			✓	✓	✓
Plumbing bulkhead		✓	✓	✓	✓
Height adjustable feet	✓	✓	✓	✓	✓
Inclusive roll supports	✓	✓	✓	✓	✓
Inclusive of lid	✓	✓	✓	✓	✓
Low level cut-out	✓	✓	✓	✓	✓
Hand spray gun		✓	✓	✓	✓

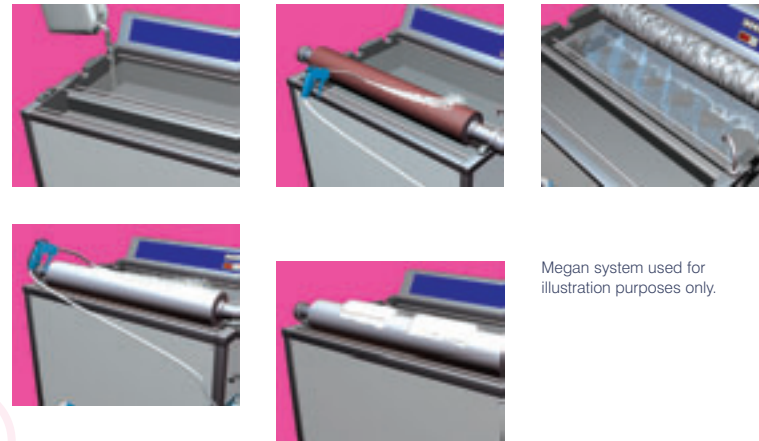
'Melanie'

Available in either single or dual frequency.

Features/Benefits

The Melanie series offers several outstanding features:

- Dedicated budget bench top roll cleaning system
- 5 tank lengths available – 600, 710, 900, 1120 and 1380mm
- Tank widths 250mm & 350mm
- Includes manual fill and simple drain
- Up to 6 x 16" face rolls or 1 x 40" coating roll
- Closed rotation
- Largest length will accommodate one offset coating, or flexible packaging anilox up to 1100mm face and 200mm diameter
- Available in Single or Dual Frequency



Megan system used for illustration purposes only.

Available in either single or dual frequency, Melanie is our most affordable bench top cleaning system. Yet it can clean one, two, three, four or even six rolls simultaneously. It's quality cleaning ability offers you the opportunity to take advantage of Alphasound technology at a low cost.

'Mia'

A highly affordable system with high specification features.

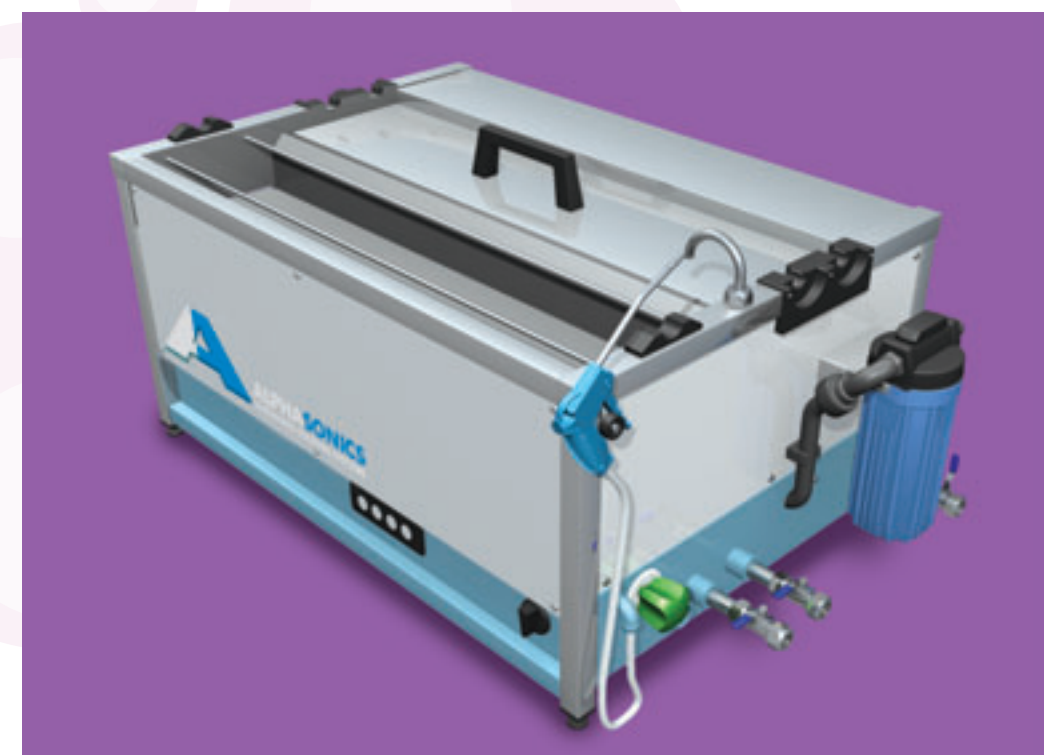
Features/Benefits

- Compact and simple to control
- Tank lengths from 430mm to 2300mm
- Tank standard widths 250mm & 350mm
- Non-standard tank widths available
- Includes rinse tank, spray wash facility and services management bulkhead
- Manually activated pump and filtration system for tank cleanliness and chemical longevity
- Closed rotation
- Available in Single or Dual Frequency

Megan system used for illustration purposes only.



An exciting development in bench top roll cleaning equipment, Mia series is a highly affordable system with features normally only found on high specification units.



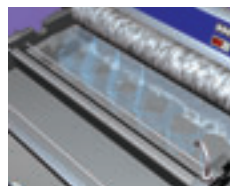
'Miranda'

Top quality Alphasound technology at an affordable price.

Features/Benefits

- Safe, regular effective cleaning of rolls with screen counts up to 800lpi (315lpc)
- Floor standing type machinery in single frequency only
- Standard format includes lengths from 430mm to 2300mm
- Tank widths 250mm & 350mm
- Non-standard widths also available
- Automatic pump and filtration cycle for tank cleanliness and chemical longevity
- Closed rotation
- Includes rinse tank, spray wash facility and services management bulkhead
- PLC control

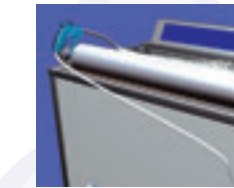
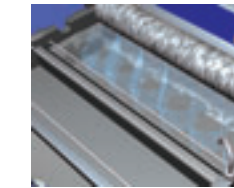
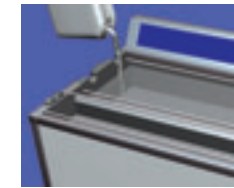
The Miranda series of floor standing models guarantees top quality Alphasound technology at an affordable price. Manufactured to exacting standards, Miranda can be found in pressrooms around the world.



'Megan'

PLC control offers greater flexibility of cleaning cycle options.

Alphasonics' Megan series of floor standing models incorporates the very latest technological advantages in Alphasound research. With PLC control, operators can quickly and easily access a variety of cleaning options. What's more, the system automatically defaults to its most gentle setting at end of cycle.



Features/Benefits

The Megan series offers an outstanding range of features. Here are just some of them:

- Floor standing model
- Dual frequency, for safe precise cleaning of the highest screen count rolls
- Closed rotation
- Auto pumping and filtration for tank cleanliness and chemical longevity
- Low level lock out
- Temperature fall back
- Includes rinse tank, spray wash facility and services management bulkhead
- Tank lengths from 430mm to 2300mm
- Standard tank widths 250mm & 350mm
- Non-standard widths also available
- PLC control



Alphaplus Cleaning Systems

Providing superior, safe cleaning at highly competitive cost.

Features/Benefits

- Up to 5 metre roll face width systems available
- Single or Dual Frequency
- Multi roll capacities available
- Incorporates advanced Alphasound logic for programming and control
- Specifically designed to suit individual requirements
- No problem with heavy aniloxes/cylinders

Part of the Alphasonic range of bespoke ultrasonic cleaning systems, Alphaplus large roll systems raise the standards of large end and specialised anilox roll and gravure cylinder cleaning within the printing industry.

Our Alphaplus machinery provides superior, safe cleaning at a highly competitive cost and can deal effectively with the most difficult roll cleaning tasks in wider web flexo or gravure. Alphaplus is the ideal cleaning system for companies with a wide variety of presses.



Megan system used for illustration purposes only.



Alphasound On Press Cleaning for Anilox Rolls and Gravure Cylinders

Chamber or tray sited ultrasonics delivers startling results.

Single Frequency Alphasound

By applying Alphasound into a chamber or ink tray between your print run, you benefit from thorough on press cleaning. This is Alphasound on press cleaning in its basic format.

Features/Benefits

- Huge cost savings
- Greatly improves cleaning of anilox cylinder resulting in improved print quality
- Enables reduced make ready time

Dual Frequency Alphasound

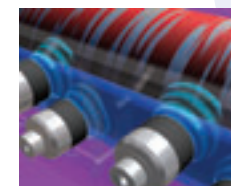
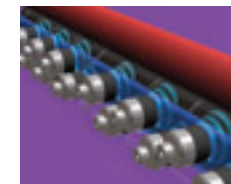
Applying high frequency Alphasound into the chamber during the run offers many distinctive advantages:

- Ultrasonic 'tickling' of the cells will greatly reduce the rate of contamination
- Reduction in viscosity of ink allows for improved flow across the web
- Purging of air from ink provides for a stronger colour

What's more, as each of the generators is variable power enabled, control of colour across the web is possible via an interface to a colour monitoring system. This is particularly useful where colour starvation at the ends of the web occurs.

These features give rise to the following benefits:

- Huge cost savings
- Greatly improved print quality
- Longer run between cleaning
- Colour control "on the run"



Alphasound Flexo Plate Cleaning Systems

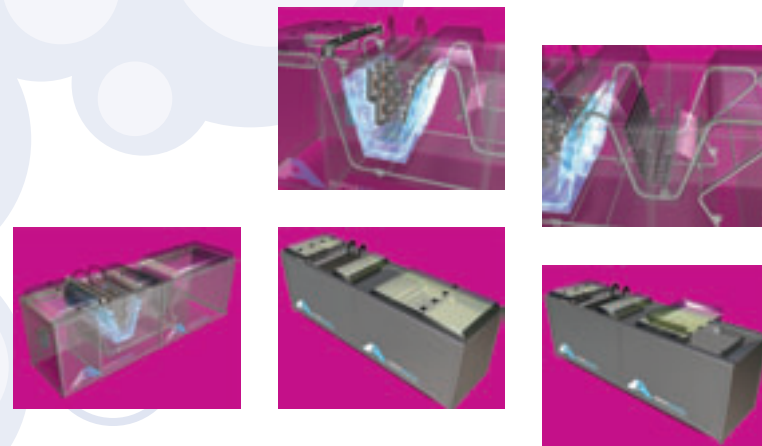
PC Series

Automatic totally non contact plate cleaning system.

Features/Benefits

- Systems available from narrow web through to corrugated
- 250mm up to 3 metres tank width
- Alphasound cleaning technology - total non-contact cleaning
- Plates microscopically cleaned
- Automated process – no operator needed
- Greatly reduced risk of damage to high screen plates
- Rinsing and drying stations – plates can be stored almost immediately after cleaning
- Low ph chemistry
- Easy loading/unloading
- PLC control

As you know, one of the major problems in using high screen plates in flexo is how to effect safe and effective cleaning. The good news is that the Alphasound PC Series plate cleaning system requires no contact at all with the image area.



PW Series

A compact lower cost system offering totally non contact plate cleaning.

Features/Benefits

- Systems available from narrow web through to corrugated
- 400mm up to 3 metres tank length
- Alphasound technology - totally non contact plate cleaning
- Plates microscopically cleaned
- Easy loading/unloading
- Semi automatic process - up to 6 plates cleaned at a time
- Rinsing station - plates can be stored after a short period
- Greatly reduced risk of plate damage - even high line plates
- Low ph chemistry
- PLC control

The problems associated with the cleaning of high line plates are eliminated with our PW series units. The Alphasound PW series system cleans without any contact at all with the plate.





Parts Washing - General Introduction

An innovative range of parts washing systems for UV and water based inks.

As environmental legislation continues apace, the flexo printer increasingly needs to stay one step ahead to ensure compliance with the law and the effective management of waste disposal costs. The good news is that Alphasonics have developed an innovative range of parts washing systems for both UV and water based inks/coatings that includes the process of flocculation. This process separates the pigment from the wash water following the cleaning cycle. It also works on water wash out photopolymer too. Flocculation works by reversing the polarity of the pigment and rendering the pigments into floccs that simply fall out of suspension. It is a simple process to filter out these floccs, enabling the resulting clear water to be re-used. The flocculated pigment can then be disposed of safely and economically.

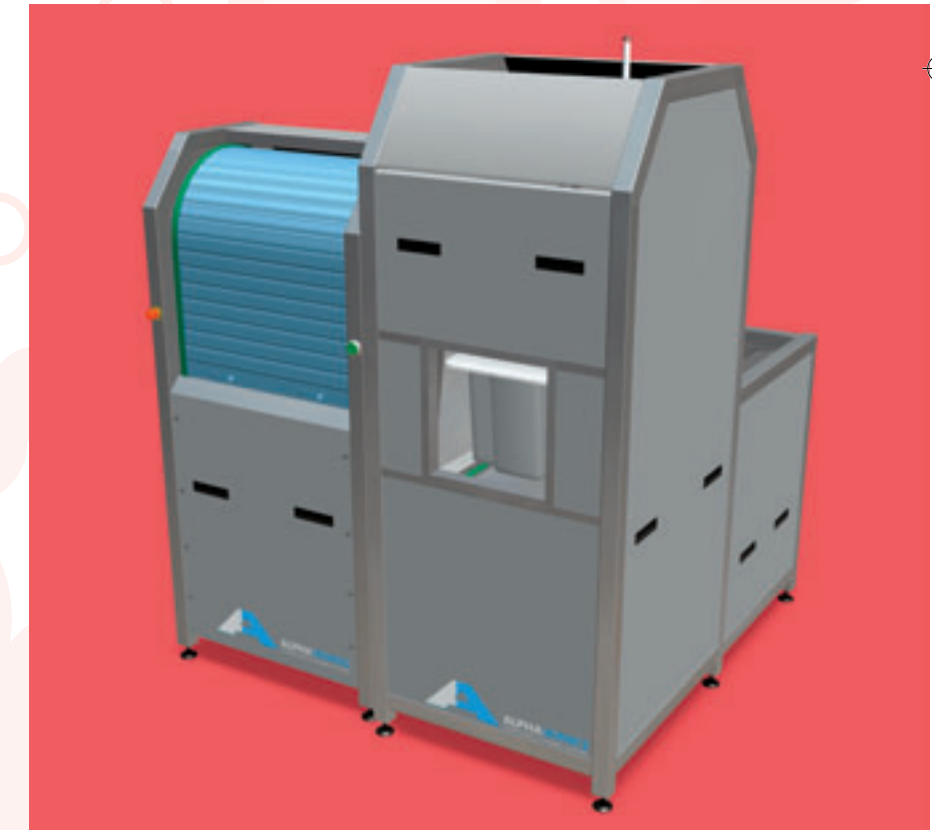
AS1000 Trojan Parts Washing System

Specially designed to deal with the problems of UV Ink.

Specially designed to deal with the problems of cleaning parts contaminated with UV ink, the Trojan combines the power of Alphasound with automatic on-board flocculation of the waste water. The flocculated waste can be compressed for a more economical disposal and the water is continually used. This system delivers excellent cleaning results on all parts, including aluminium ones and delivers real payback compared with other systems on the market.

Features/Benefits

- Powerful Alphasound cleaning to every corner of the tray/chamber
- Fully, user friendly automated process
- Simple loading/unloading – no skill required
- Enables quick changeover from free radical to cationic inks
- Enables faster make ready time
- Neutral chemistry – environmentally friendly
- Closed loop on board water treatment system saves money
- Greatly reduces running and disposal costs
- Legislation compliant
- PLC control





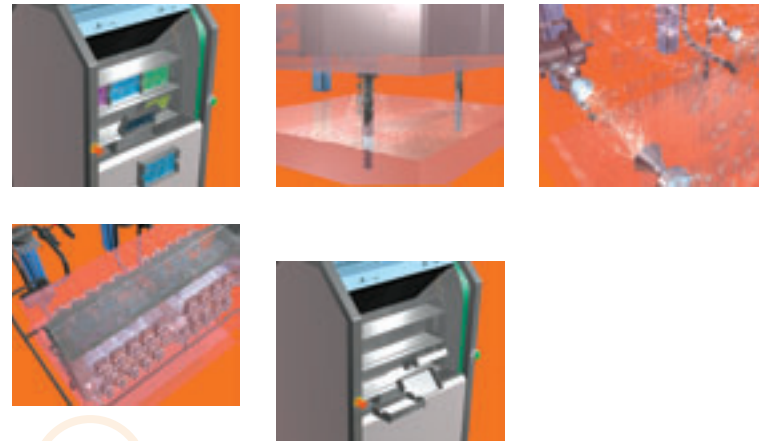
AS2000 Parts Washing System

Designed to cope with most ink types, the AS2000 offers exceptional cleaning in a simple and easy to use configuration.

Parts Washing System for UV, water based and solvent based inks.

Features/Benefits

- Powerful Alphasound cleaning to every corner of the tray/chamber
- User friendly semi automated process
- Simple loading/unloading - no skill required
- Enables quick changeover from free radical to cationic inks
- Enables faster make ready time
- Greatly reduces running and disposal costs
- Legislation compliant
- PLC control



AS80 Parts Washing System

Highly versatile, cost effective and environmentally friendly, the AS80 is perfect for the manual washing of parts contaminated with water based inks and coatings. The on board flocculation system removes the pigment from the wash water, enabling the water to be re-used and the pigment safely disposed of.

Highly versatile, cost effective and environmentally friendly.

Features/Benefits

- Highly mobile – mounted on wheels
- Very low capital and running costs
- Easy to use
- Closed loop on board water treatment system saves money
- Environmentally friendly
- Greatly reduces water and disposal costs
- Legislation compliant





Blanket Wash Module Cleaning Systems

Specifically developed with assistance from major press manufacturers.

Most offset printers are very well aware of the problems created by having blanket wash modules that are blocked or simply too dirty. Stripes in the print and other such defects can be a real nightmare and trying to clean these modules by hand, is undeniably a thankless and laborious task that at best, can only ever offer a temporary fix.

To overcome this problem, Alphasonics have developed 2 systems. Our BWM range will effectively clean blanket wash modules, bottom cylinder wash units and ink tray systems from Heidelberg and MAN Roland presses to name but two, whilst our BWM "Combi" devices will clean the same items as well as the coating anilox.

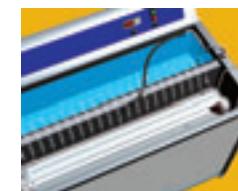
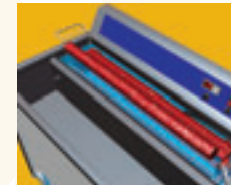
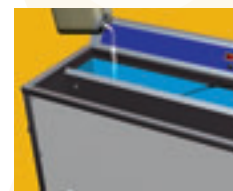
BWM Series Blanket Wash Module Cleaning Units

These systems offer 100% cleaning both inside and out giving the printer an "as new" module.

Alphasonic's BWM series Blanket Wash Module cleaning systems come in three standard lengths – 1300mm, 1500mm and 2000mm and offer the following features and benefits.

Features/Benefits

- 1300mm, 1500mm and 2000mm tank lengths
- Non-standard lengths available
- 100% cleaning to every part of the module, inside and out
- Greatly extends life of the nylon brush
- Inside of spray pipes are thoroughly cleaned
- Water or air rinse/clean off facility enhances cleaning
- Lightly soiled modules cleaned in 15 minutes
- Minimum time and effort needed by operator
- PLC control



BWM "Combi" Series Blanket Wash Module/Coating Anilox Cleaning Devices

A unique piece of equipment that's a must for print shops with presses incorporating ceramic coating rolls and modules.

Alphasonic's BWM "Combi" series Blanket Wash Module/Anilox cleaning systems come in three standard lengths – 1300mm, 1500mm and 2000mm. This unique 3 tank system enables the blanket wash module to be cleaned at the same time as the anilox and offer the following features and benefits.



Features/Benefits

- 1300mm, 1500mm and 2000mm tank lengths
- Non-standard lengths available
- 100% cleaning to every part of the module, inside and out
- Greatly extends life of the nylon brush
- Inside of spray pipes are thoroughly cleaned
- Water or air rinse/clean off facility enhances cleaning
- Lightly soiled modules cleaned in 15 minutes
- Minimum effort needed by operator
- Anilox coating roll cleaned with the power and safety of Alphasound
- PLC control



Testimonials

Press Manufacturers:

"Anilox rolls are a fundamental part of flexographic printing. Keeping them clean is imperative to top quality flexo print jobs. Edale would recommend an Alphasonic cleaning unit to all our customers in order to efficiently keep anilox rolls in top condition."

Edale (UK): James Boughton

"Alphasonic and Heidelberg UK have worked closely together on the development of an ultrasonic cleaning system. This system effectively cleans ink contaminated blanket wash modules, bottom cylinder units, ink trays and other parts and equipment. During development, Heidelberg UK invited Alphasonic to demonstrate the system at our open house at Tamworth, cleaning many modules for several of our customers here in the UK. The results were exceptional."

**Heidelberg (UK): Steve Cavey, Marketing Manager
Sheetfed 50 x 70 & 70 x 100**

"Whether UV or water based inks, cleaning the anilox with the Alphasonic anilox cleaner has become an important and successful element in our entire showroom activity. The unit works very reliably, it is operator-friendly and the cleaning result is just perfect. The system has also been used as an after-sales-service instrument for our customers. Customers come here with their anilox rolls and get them cleaned - an Alphasonic cleaner thus is an absolute must."

**Mark Andy AG (Switzerland): Dieter Huck,
Managing Director**

"Owning high quality printing machines and using dirty aniloxes does not equate well with good return on investment. Therefore we recommend Alphasonic power cleaners to our customers."

Nilpeter A/S (Denmark): Jakob Landberg, Sales and Marketing Director

"In the development programme for our new T-Flex press, we have tested water based and UV inks (both free radical and cationic) from several suppliers often using the same set of anilox rolls. Avoiding cross contamination is essential and this places a very high demand on roller cleaning. We have been most impressed by the results obtained with the Dual Frequency Alphasound and we will be recommending it to our customers."

Timsons (UK): John Miles, Marketing Director

Anilox Roll Manufacturers:

"Anilox suppliers are regularly asked by converters to recommend the most efficient cleaning method, which does not cause damage at the same time even to finest cell walls. We believe that Alphasound DF represents one of the best and most versatile anilox cleaning methods, with the scope to develop along with future anilox technology."

Harper Graphics Europe: Korhan Koese, Director Sales & Marketing

"High screen aniloxes are here to stay and as such, both large and small printers alike are having to look even more closely at how their rolls are being cleaned. Alphasound DF is without doubt the most efficient and versatile cleaning method on the market and greatly assists in improving and maintaining print quality. We have no hesitation in recommending its use to all our customers."

Techcell (UK): Danny Goodwin, Managing Director

Roll Cleaning (anilox rolls /gravure cylinders):

"After evaluating several methods, Alcan has chosen an Alphasonic Dual Frequency Alphasound system. Careful management of our anilox inventory using Alphasonic means that we are confident that our rollers give the optimum result."

Alcan Packaging Wide Web Flexo: Marcus Reid, Technical Manager

"We have found the cleaning of cylinders is much more effective by using the Alphasound system. Cleaning time is only half the time of manual cleaning. By cleaning with the system we save a lot of money by not having to dechrome and rechrome cylinders that are only dirty."

Amcor Flexibles Europe, Helio-Folien: Frank Neumann

"We bought our first Alphasonic system in 1994 and have recently taken delivery of our fourth unit in 2007. At Labelsco, we are committed to achieving a tight control of the condition of our aniloxes as we know that 70% of all print quality problems stem from the condition of the anilox and without doubt, the use of Alphasound to clean our rolls over the past 13 years has been a major factor in reaching and maintaining this control and in helping us to win so many print quality awards over this period."

Labelsco Ltd: Paul Larkin, Production and Technical Director

Blanket wash module cleaning:

"Since the installation of the Alphasonic system the cleaning of the blanket wash units has been greatly enhanced. As we have 32 units, the system is used on a daily basis and saves on the old manual scrubbing and cleaning of the units."

Eclipse Colour Print: Mike Day