## Ultrasonic cleaning equipment





### Your expert in Ultrasonic cleaning equipment

### We know something about ultrasonic cleaning

With more than 25 years' experience, Anmasi is one of the leading experts in the field of industrial cleaning equipment in Denmark. We have developed cleaning solutions for hundreds of companies, with many diverse applications.

### We design and manufacture

It is important for us to know our products inside and out; that's why we have our own research, development and manufacturing facilities in addition to our own dedicated subcontractors.

These facilities enable us to completely understand the technology and its possibilities, so that we can propose the optimum solution to meet our customers' individual requirements; including custom made solutions when necessary.

#### We always get the job done

We aim to meet the demands of our customers, not just deliver a machine. Our task is only complete, when our customers' requirements are met and we have delivered the optimum solution.

### We can handle most cleaning requirements

With a wide range of different equipment, optional extras and cleaning solutions, we can deal effectively with almost all enquiries; from simple to the most complex requirements.

#### What is ultrasonic cleaning?

Ultrasonic is one of the most effective and gentle cleaning methods. It can be used to remove many different types of contaminants; e.g. oil, grease, bacteria, ink. Components to be cleaned are immersed in a bath, which is filled with cleaning solution and flooded with high frequency sound waves. These waves cause a gentle scrubbing action on the component, which removes the contaminant.



### Product overview







#### CL-series

Page 1 Standard benchtop model ranges from 4,0 - 25,0 litres, which is mainly used for smaller components, like gearmotors, nozzles, bearings etc.

### <u>V-series</u>

### Combiline

based on customer needs, for example with wash, rinsing, passivation and drying . The machine



#### Maxi-series

Our series of ultrasonic cleaners developed especially for industry, standard sizes ranges from



### Maximatic



#### Maxiline

Fully automatic cleaning solution developed for continuous cleaning in a production line, this in-line ultrasonic cleaner with agitation is produced to fit specific customer needs, and is available with many optional extras.



### Cleaning chemicals and optional extras

<u>Page 11</u>

chemicals and a lot more.

### Page 9

### Page 4

Page 3

Page 7

Page 5

### **CL**-series

**CL-series** are benchtop models, with high performance heating elements and transducers. The series ranges from 4,0 - 25,0 litres and is mainly used in electronic workshops, maintenance, clinics and laboratories.





Analogue display Setting of time 0-60 min. Setting of temperature 0-80°C Standardfrequency 40 khz



**Digital multifunction display** Setting of time and temperature Powerfunction - setting of frequency and watt-usage Multifrequency, Choose betweem 21,5 or 40 khz





**Discharge valve** All models from 5,7 - 25,0 litres include a discharge valve for easy emptying of tank.



**Cooling fan** Built-in cooling fan for generators to extend the life-time. Only for 16,0 - 25,0 litres



### Good to know:

All our machines are thorougly tested before delivery to the customer - Which guarantees the

### Optional extras • Baskets

- Fixtures in stainless steel
- Safety timer
- Instrument holder
- Reagent glass holder
- Filtration for fluids
- Sound cabinets



Model	CL100	CL150	CLD300*	CLD600*
Volume L		5,7	16	25
Tank size	235x135x140	300x140x140	325x300x190	500x300x190
Frequency kHz	21,5/40	21,5/40	21,5/40	21,5/40
Ultrasonic effect	160 W	240 W	320 W	640 W
Basket size	180x90x120	230x100x120	245x220x150	420x225x150
Powerfunction(watt)	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Multifrequency	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Discharge valve		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Handles	<b>v</b>	V	✓	✓
Lid included	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>Image: A set of the set of the</li></ul>
Basket included	<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li></li> </ul>
Heating element	✓	✓	✓	<ul> <li>Image: A set of the set of the</li></ul>
• • • • • • • • • • • • • • • • • • • •				

Both with a digital and analogue display

## V-series

### Technical details

- Floor model
- Choose between analogue or digital display
- Placed on adjustable machine feet, or wheels
- Constructed in 100% stainless steel
- Danish design and construction
- Standard and custom made options
- Double insulated with welded tank
- Produced in accordance to the CE-directive

### Examples on optional extras

- Filtration
- Automatic chemical dosing and water filling
- Agitation
- Fixtures in stainless steel
- Oilskimmer
- Overflow rinsing of oils to skimmer tank
- Venturi nozzles for water circulation in tank







Model V	V28	V50	V80	V125
Volume L	28	50	80	125
Tank size	400x260x270	350x450x350	400x500x400	700x450x400
Basket size	380x240x250	330x430x350	380x480x380	680x430x350
Frequency Khz	21,5 or 40	21,5 or 40	21,5 or 40	21,5 or 40
Ultrasonic effect	360 W	560 W	1000 W	1500 W
Temperature °C	0 - 80	0 - 80	0 - 80	0 - 80
Heating effect	1600 W	2000 W	2000 W	2300 W
Discharge valve	✓	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Insulated tank	<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Basket included	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Analogue display	<ul> <li>✓</li> </ul>	V	V	<ul> <li>✓</li> </ul>

\* Both with a digital and analogue display

## Combiline



The Combiline in-line ultrasonic cleaning system is built in sections and designed to meet customers' individual requirements and can be produced with both automatic and manual basket handling system

000 💽 🚺 000 💽

### Advantages with Combiline

- Compact machine
- Minimal maintenance
- Robust and reliable machine
- Constructed for continuous cleaning
- Danish design and construction

Contact us and hear more about Combiline!



## Maxi-series

Bo

**Maxi** ultrasonic cleaner constructed for industry, for continuous cleaning of components around-the-clock. The machine has a low energy consumption, long life-time of cleaning fluid and minimal maintenance requirements.

### Technical details

- Double insulated lid with gas struts
- Double insulated tank
- 100% Heavy duty stainless steel fabrication
- Danish design
- Standard and custom made options
- Choose between analogue or digital display
- Prepared for filtration and extraction fan
- Placed on adjustable machine feet, or wheels
- Transducers raised 100mm above tank bottom
- Overflow rinsing of oils to skimmer tank
- Produced in accordance with the CE-directive
- ISO9001: 2008

Model Maxi	A144	B175	C250	D300	E500
Volume L	144	175	250	304	508
Basket size	480x620x450	520x700x450	520x860x500	520x1060x500	520x1760x500
Frequency Khz	21,5 or 40				
Ultrasonic effect	1,5 kW	2,0 kW	2,5 kW	3,0 kW	5,0 kW
Temperature °C	0 - 85	0 - 85	0 - 85	0 - 85	0 - 85
Heating effect	2,3 kW	3,0 kW	5,0 kW	6,5 kW	8,0 kW
Overflow rinsing	V	<b>v</b>	V	<b>v</b>	<ul> <li>✓</li> </ul>
Insulated tank	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Liquid level sensor	V	V	V	<b>v</b>	✓
Basket included	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Skimmer tank	<i>v</i>	V	V	V	✓

\* Technical data for Maxi



Overflow rinsing with skimmer tank - used for separation of oil and other impurities coming to the surface.



Transducers raised 100mm above tank bottom - extends the life-time of cleaning fluids by allowing layers of dirt to settle in the bottom.

### Examples of optional extras

- Filtration
- Automatic chemical dosing and water filling
- Fixtures in stainless steel
- Oilskimmer
- Venturi nozzles for water circulation in tank
- PLC control with 7" color-touchscreen



ANMASI ANALOGUE DISPLAY - Easy setting of temperature and washing time





## Maximatic

**Maximatic** is our multifunction ultrasonic cleaner, which combines ultrasonic cleaning technologies with agitation. This machine is constructed for cleaning complex components to a high standard.

### Technical details

- Double insulated lid with gas spring
- Double insulated tank
- 100% Heavy duty stainless steel fabrication
- Danish design and construction
- Standard and custom made options
- Choose between analogue or PLC controls
- Prepared for filtration and extraction fan
- Placed on adjustable machine feet, or wheels
- Transducers raised 100mm above tank bottom
- Overflow rinsing of oils to skimmer tank
- Agitation
- Produced in accordance with the CE-directive
- ISO9001: 2008

Model Maximatic	A144	B175	C250	D300	E500
Volume L	200	230	330	390	600
Basket size	480x620x450	520x700x450	520x860x500	520x1060x500	520x1760x500
Frequency Khz	21,5 or 40				
Ultrasonic effect	1,5 kW	2,0 kW	2,5 kW	3,0 kW	5,0 kW
Temperature °C	0 - 85	0 - 85	0 - 85	0 - 85	0 - 85
Heating effect	2,3 kW	3,0 kW	5,0 kW	6,5 kW	8,0 kW
Overflow rinsing	<ul> <li>✓</li> </ul>				
Insulated tank	<ul> <li></li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Liquid level sensor	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	V	<ul> <li>✓</li> </ul>	✓
Basket included	<ul> <li></li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	✓
Skimmer tank	<ul> <li></li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li></li> </ul>

a si si di de de de

\* Technical data for Maximatic



Agitation of components in tank

"Design, knowhow and many years of experience with industrial cleaning solutions is a core of our machines" - Jan Hedeby Sørensen, Manufacturer



Transducers raised above bottom of tank





Overflow rinsing of oils to skimmer tank



Send your components to us and we will carry out cleaning tests, so that we can propose the best solution





## Maxiline

**Maxiline** is our fully automatic in-line ultrasonic cleaner tailored for customer needs. The machine with its simple construction gives the customer a solution with minimum maintenance, which works around-the-clock.

### Technical specifications

- Double insulated machine
- 100% Heavy duty stainless steel fabrication
- Danish design and construction
- Siemens PLC control panel
- Prepared for filtration and extraction fan
- Transducers raised above tank bottom
- Overflow rinsing of oils to skimmer tank
- Accordance with CE-machine directive

ANMASI

ISO9001: 2008



Prepared for filtration and extraction, with bottom valves in both main tank and skimmertank for fast emptying of tanks.

### Examples of extra euipment

- Filtration
- Automatic chemical dosing and water filling
- Fixtures in stainless steel
- Oilskimmer
- Venturi nozzles for water circulation in tank
- External buffer tank
- Automatic loading system



### ""Simple and efficient"

15

Wash

Rinse

Passivation or Phosphation

Drying

Model Maxiline	ML1100	ML1150	ML1180
Length	4000 mm	4400 mm	4800 mm
Width	1750 mm	1750 mm	1750 mm
Height	2000 mm	2000 mm	2000 mm
Volume L	100 L	150 L	180 L
Basket size	520x320x200	550x550x400	670x400x300
Ultrasonic effect	1,2 kW	1,5 kW	2,0 kW
Heating effect	3,9 kW	3,9 kW	3,9 kW
Insulated tank	<ul> <li>✓</li> </ul>	✓	<ul> <li>✓</li> </ul>
Liquid level sensor	<ul> <li>✓</li> </ul>	✓	<ul> <li>✓</li> </ul>
Basket included	✓	✓	✓
Skimmer tank	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Overflow rinsing	<ul> <li>✓</li> </ul>	✓	<ul> <li>✓</li> </ul>
PLC panel	v	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
Agitation	<ul> <li>Image: A set of the set of the</li></ul>	✓	✓

10

\* Technical data for Maxiline

### Cleaning chemicals "To achieve the best cleaning results,

"To achieve the best cleaning results, the selection of the correct chemical is of paramount importance"



ANMASI A/S always has a large stock of our own custom made cleaning chemicals

### Wide range of cleaning chemicals for ultrasonic cleaners and spray washers

We have build up a lot of experience over the years with cleaning of components, and have a wide range of products for removing:

- Oil and fat
- Refrigiants
- Paint and lacquer
- Soot and resin
- Rust

Below you find some of our most commonly used products today!





Cleaning chemicals	Usage	Description	Mix %
SP339	All metals	Newly produced components with rust- protection	4-6
SP7000	All metals	Newly produced componenets, good for aluminium, copper and brass	1-2
TA278	Steel	Effective for very dirty components	2-5
TA279	Steel, iron, aluminium, cob- ber	Effective for very dirty components with rust protection	2-5
TN6221	All metals	Mild alkaline chemical for ultrasonic cleaning	4-6
TN420	lron, steel	Suffactant product	0,1-0,5
TN247	All metals	Preparation of metal surfaces	2-5
NE160	All metals	Neutral low temperature chemical with rust protection	2-5
ES460	All metals	Effective defoamer	0,1-0,5
TS766	All metals	Rust remover	5-25
Additiv EL		Paint stripper	5-25

# **Optional extras** We have a wide-range of optional extras for all of our machines, and can today offer almost every

kind of option.

Extra equipment	Description
Oil skimmer	Oil skimmer with steelband for separation of oils
Extraction fan	Steam extraction system
Automatic water filling	Automatic regulates the fluid level in tank
Automatic water filling and chemical dosing	Automatic regulates the fluid level and chemistry mix in tank
Surface skimming	Skimming of surface oils to a skimmer tank
Weekly timer	Automatic start/stop of machine
Pump for emptying tank	Fast emptying of tank witha pump
Transport trolley	Trolley for loading- and unloading of components
PLC control panel	Siemens PLC with 7" touchscreen

Filtration	Description
20" Big blue filter	Plastic filter
20" Big blue triple filter	Plastic filter
Stainless steel filter type 1	Stainless steel filter
Stainless steel filter type 2	Stainless steel filter
Filters (Big blue)	20-50-100-150 my
Filterbags (Stainless steel types)	5-25-100 my (type1), 50-100-200 my (type2)
Magnet filter	Separation of heavy metals
Active coal filter	Fine filtration of fluid

Description(LxBxH)
371x221x200 mm
408x308x200 mm
471x321x108 mm
471x321x200 mm
471x321x300 mm -
521x321x200 mm
608x408x300 mm
651x471x300 mm
600x400x288 mm

Mini baskets	Description (LxBxH)
CL16	245x220x150 mm
CL16LÅG	245x220x150 mm including lid
CL25	420x225x190 mm
CL25LÅG	420x225x190 mm including lid



 $\geq$ 



-

NMAS

13.17

888 🗐 🔒 🖢

#### ANMASI A/S

Thorsvej 106 7200, Grindsted Denmark

Tel.: +45 76 50 02 32 Mail.: info@anmasi.dk Web.: www.anmasi.dk

Find us:



Subject to changes and errors in the brochure.