

VWR® ULTRASOUND CLEANING MACHINES

Robust

Efficient

Reliable



Digital units with:

- Timer
- Timer and heater
- Timer, heater and power control

High frequency option (132 kHz)

Cleaning with ultrasound

For parts with complex geometry such as fins, undercuts, bore holes, pocket holes, etc, ultrasound is one of the most effective methods of removing contaminants. This is because the physical properties of imploding vacuum bubbles causes tiny air bubbles to form in the cleaning fluid, which generate up to 1000 bar and 5000 °C as the forces implode, penetrating even the tiniest cavities.

When matched with an appropriate cleaning product or chemical for removing specific residue types, ultrasound offers incomparable advantages over manual methods like brushing down, spraying and injection flooding and dipping. Even tough to remove residues like oil carbon, incrustations, grease, oils, oxidation, paints, dust, rust, lime, etc can be tackled quickly in a way that protects the part itself and without manual effort.

Ultrasound cleaning machines, USC

The VWR range of digital ultrasonic cleaners offers a choice of models, in capacities from 1 - 26 litres for different tasks. The baths have a heavy duty ultrasonic generator which ensures that the ultrasonic output remains constant, regardless of the bath temperature, fill level and cleaning material. This feature guarantees consistent and reproducible cleaning results.

- High performance PZT ultrasonic converter with ceramics technology
- Homogeneous distribution of ultrasound in the cleaning tank
- Low noise with higher frequency
- Stainless steel trough material and cladding
- Voltage: 230 V/50/60 Hz



USC T series

- Digital timer 1 - 99 min (in steps of 1 min) or continuous sonic (2-digit display)
- Double half-wave sound with sweep
- Ultrasonic frequency: 45 kHz

Model	USC 100 T	USC 200 T	USC 300 T	USC 500 T	USC 600 T	USC 900 T	USC 1200 T	USC 1700 T	USC 2100 T	USC 2600 T
Capacity (l)	0,8	1,8	2,8	4,2	5,4	9,2	12,3	16,8	19,6	26,1
Ultrasonic power eff. (W)	30	60	80	100	120	200	180	240	240	300
Internal WxDxH (mm)	190x85x60	145x135x100	240x135x100	240x135x150	300x150x150	500x135x150	300x240x200	325x300x200	500x300x150	500x300x200
External WxDxH (mm)	205x100x155	175x165x270	265x160x235	265x160x295	325x175x295	515x150x270	325x265x335	350x325x335	530 x 325 x 365	530x325x365
Cat. No.	142-6044	142-6046	142-0083	142-0087	142-0090	142-0098	142-0094	142-0101	142-0104	142-0108



USC TH series



- Digital timer 1 - 99 min (in steps of 1 min) or continuous sonic (2-digit display)
- Tank heater, infinitely variable from 20 to 80 °C
- Digital heater monitored by 2-digit display
- Robust heating with integrated run-dry protection
- 45 kHz frequency

Model	USC 100 TH*	USC 200 TH	USC 300 TH	USC 500 TH	USC 600 TH	USC 900 TH	USC 1200 TH	USC 1700 TH	USC 2100 TH	USC 2600 TH
Capacity (l)	0,8	1,8	2,8	4,2	5,4	9,2	12,3	16,8	19,6	26,1
Ultrasonic power eff. (W)	30	60	80	100	120	200	180	240	240	300
Heating power (W)	45	90	200	200	400	600	600	800	800	1000
Internal WxDxH (mm)	190x85x60	145x135x100	240x135x100	240x135x150	300x150x150	500x135x150	300x240x200	325x300x200	500x300x150	500x300x200
External WxDxH (mm)	205x100x155	175x165x270	265x160x235	265x160x295	325x175x295	515x150x270	325x265x335	350x325x335	530x325x365	530x325x365
Cat. No.	142-6045	142-6047	142-0084	142-0088	142-0091	142-0099	142-0095	142-0102	142-0105	142-0109

*Model USC100 TH heater 65C not regulated.

USC THD series



- Digital timer 1 - 99 min (in steps of 1 min) or continuous sonic (2-digit display)
- Tank heater, infinitely variable from 20 to 80 °C
- Digital heater monitored by 2-digit display
- Robust heating with integrated run-dry protection
- Ultrasound output adjustable over nine levels from 10 – 100%
- Stabilisation of the set output, independent of level and temperature
- Dual half-wave sound with sweep
- Degassing function to homogenise the tank fluid
- Ultrasonic frequency: 45 kHz

Model	USC 300 THD	USC 500 THD	USC 600 THD	USC 900 THD	USC 1200 THD	USC 1700 THD	USC 2100 THD	USC 2600 THD
Capacity (l)	2,8	4,2	5,4	9,2	12,3	16,8	19,6	26,6
Ultrasonic power eff. (W)	80	100	120	200	180	240	240	300
Heating power (W)	200	200	400	600	600	800	800	1000
Internal WxDxH (mm)	240x135x100	240x135x150	300x150x150	500x135x150	300x240x200	325x300x200	500x300x150	500x300x200
External WxDxH (mm)	265x160x235	265x160x295	325x175x295	515x150x270	325x265x335	350x325x335	530x325x365	530x 325x365
Cat. No.	142-0085	142-0089	142-0092	142-0100	142-0096	142-0103	142-0106	142-0110

USC THD/HF – high frequency series

Ideal for cleaning off particles sizes of <1 µm. These versions of the USC THD operate at 132 kHz frequency.

Model	USC 300 THD/HF	USC 600 THD/HF	USC 1200 THD/HF	USC 2100 THD/HF
Capacity (l)	2,8	5,4	12,3	19,6
Ultrasonic power eff. (W)	80	120	180	240
Heating power (W)	200	400	600	800
Internal WxDxH (mm)	240x135x100	300x150x150	300x240x200	500x300x150
External WxDxH (mm)	265x160x235	325x175x295	325x265x335	530x325x365
Cat. No.	142-0086	142-0093	142-0097	142-0107

Accessories for ultrasonic baths



It is essential to use the appropriate accessories for your application as nothing should be placed directly onto the bottom of the tank where changes in weight distribution cause differences in the ultrasonic transmission, and therefore variances in cleaning power. In the long-term this also prevents the bottom of the tank from becoming scratched and ensures continued top performance.

All accessories for the VWR ultrasonic baths are made of stainless steel and are rust-proof.

Accessory sets

These sets comprise of a lid and mesh goods basket.

The baskets have handles that rest on the edge of the tank, ensuring that there is a gap of approximately 10 - 20 mm between the bottom of the tank and the bottom of the basket. Once a run is completed, the baskets can be hung to drain over the tank to contain any excess drips. Mesh 8x8x1 mm.

The lid condenses rising steam preventing excess build-up in the room.



Accessory sets for ultrasonic baths including basket and cover	Cat. No.
USC 100	142-6048
USC 200	142-6049
USC 300	142-6020
USC 500	142-6021
USC 600	142-6022
USC 1200	142-6023
USC 900	142-6024
USC 1700	142-6025
USC 2100	142-6026
USC 2600	142-6027



Positioning lids and covers for beakers

Beakers are useful for cleaning small parts or when more aggressive cleaning solutions are used. They also increase the versatility of the bath by enabling several jobs to be done at once and reducing the overall chemical consumption. 250 ml or 600 ml beakers can be used in various combinations.

Beakers

Glass beakers designed for use with positioning lids. Supplied in packs of 2.

Volume (ml)	Cat. No.
250	142-6042
600	142-6043

Positioning lids			
250 ml	600 ml	Model	Cat. No.
No. beakers			
2	x	USC 200	142-1701
2	x	USC 600	142-1702
4	x	USC 900	142-1703
x	1	USC 200	142-1704
x	4	USC 900	142-1705
2	x	USC 300/USC 500	142-6028
4	x	USC 1200	142-6030
4	x	USC 1700	142-6032
8	x	USC 2100/USC 2600	142-6033
x	2	USC 300/USC 500	142-6035
Coverlids			
x	2	USC 600	142-6037
x	4	USC 1200	142-6038
x	4	USC 1700	142-6039
x	8	USC 2100/USC 2600	142-6040
2	x	USC 100	142-6050



Handy ancillary products



Measuring cylinders for measurement of detergents etc. Borosilicate glass 3.3, tall form, class A.

- Calibrated to contain (TC, In)
- Hexagonal glass base, with spout
- Blue graduations with ring marks at major graduations
- Certificate of conformity with batch number

DIN 12680

Capacity (ml)	Division (ml)	Tolerance (ml)	Pk	Cat. No.
5	0,1	0,05 ±	2	612-3832
10	0,2	0,1 ±	2	612-3833
25	0,5	0,25 ±	2	612-3834
50	1	0,5 ±	2	612-3835
100	1	0,5 ±	2	612-3836
250	2	1 ±	2	612-3837
500	5	2,5 ±	2	612-3838
1000	10	5 ±	1	612-3839
2000	20	10 ±	1	612-3840

PP, translucent, tall form, autoclavable, class B.
Non wetting properties mean no loss of liquid.
The measured liquid quantity is the same as the quantity dispensed.

- Ring moulded graduations, overprinted in blue
- Large hexagonal base for better stability
- Anti-drip lip
- Autoclavable at 121 °C for 20 min

DIN 12681, ISO 6706

Capacity (ml)	Division (ml)	Tolerance (ml)	Height (mm)	Ø (mm)	Pk	Cat. No.
25	0,5	0,5 ±	169	21	12	612-4401
50	1,0	1,0 ±	199	28	12	612-4402
100	1,0	1,0 ±	260	34	12	612-4403
250	2,0	2,0 ±	315	47	6	612-4404
500	5,0	5,0 ±	350	61	1	612-4405
1000	10,0	10,0 ±	440	76	1	612-4406
2000	20,0	20,0 ±	482	97	1	612-4407

Joseph papers – Grade 551



An absorbent paper suitable for cleaning and drying of glass containers, tubes, flasks, slides, bottles and more.

350x500 mm papers	Pk	Cat. No.
Plain	500	111-5005
Folded	500	111-5006



Aquaresist water bath protective agent



Prevents the growth of algae and bacteria in water baths and circulating thermostats.



- Effective for weeks, as displayed by a colour indicator
- Low consumption - only 1 ml solution per 1 l of water
- Supplied in 100 ml plastic bottle

Description	Cat. No.
Aquaresist water bath protective agent	462-7000

Detergents for manual washing

- Can be diluted with tap water or demineralised water for an increased cleaning effect
- Completely immerse items in solution for cleaning – ideally for about 2 hours
- Rinse first in tap water and finally in demineralised water
- For heavily soiled items, such as blood or oil, simply leave the items in the solution for longer
- Gentle heating increases cleaning potency



Description	Designation	Application	Ingredients	Temperature	Dosing	pH values (1%)	Density	Time (h)
Labwash® Premium Classic	Mildly alkaline cleaning, concentrate for laboratory glassware	Manual cleaning and disinfection	Active chorine (1 to 5%), caustic alkali (5 to 15%)	-	Normal cleaning 2%, heavy cleaning up to 10%	12,2	1,21	Up to 5
Labwash® Premium Extra	Concentrate for the pre-cleaning of laboratory glassware and precision components	Ideal for manual pre-cleaning. Alternative to chromosulphuric acid	Complexing agents (5 to 15%), caustic alkali (5 to 15%), phosphates (15 to 30%)	Warm and cold	Immersion or ultrasonic bath 0,4 to 4%	11,8	1,38	-
Labwash® Premium Neutral		Organic soils are reliably and effectively removed and emulsified	Anionic and non ionic surfactants (15 to 30%), fragrances	Cold up to 60 °C	Normal cleaning 0,2%, heavy cleaning up to 5%	7,4	1,03	Up to 24
Labwash® Premium Extra PF	Phosphate-free cleaning concentrate for laboratory glassware	Non foaming product efficient for glass surfaces	Caustic alkali (>30%), polycarboxylates (<5%)	Cold up to 70 °C	Normal cleaning 1%, heavy cleaning up to 3%	12,7	1,36	-
Associated products								
Aquaresist liquid	Dye, tenside, biguanide (for disinfection). Colour: Dark blue	Prevents the growth of algae and bacteria in baths and circulating thermostats, for optimal hygienic working conditions	-	-	Normal cleaning 1%	5,8 - 7,5	1	-
Sodium hydroxide 50% TECHNICAL	Highly alkaline	Efficient against surfactants or complexation agent residues	Caustic alkali (>50%)	Cold	Diluted or concentrated	14	1,53	-
Sodium hydroxide 35% GPR® RECTAPUR®	Highly alkaline		Caustic alkali (>30%)	Cold	Diluted or concentrated	14	1,38	-

Manual cleaning

Pk (l)	Labwash® Premium Classic	Labwash® Premium Extra	Labwash® Premium Neutral	Labwash® Premium Extra PF
1	84545.290	84546.290	84547.290	84554.290
5	84545.360	84546.360	84547.360	84554.360
10	84545.410	84546.410	84547.410	84554.410
20	84545.440	84546.440	84547.440	84554.440

Associated products

Pk (l)	Sodium hydroxide 50% TECHNICAL	Sodium hydroxide 35% GPR® RECTAPUR®
2,5	28265.322	28224.296
5	28265.366	28224.365
20	28265.446	28224.445



VWR TECHNICAL SERVICES

Installation . Compliance . Maintenance



VWR PIPE SERVICES™

The VWR service team offers a wide range of servicing options to support your equipment VWR and other brands too.

We can help with GMP/GLP and FDA regulation compliance as well as IQ/OQ/PQ validations.

Our specialities include air sampler calibration, centrifuge servicing and independent calibration and adjustment of thermometers and data loggers. VWR's multi-brand pipette calibration and maintenance is accurate and reliable to the highest ISO standards.

For full details of how our technical services team can help you, contact your local VWR sales office or email technical.services@eu.vwr.com





**The 2013/2015
VWR Collection Catalogue**

Full of products offering top performance and great value - whatever your application or budget!

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