

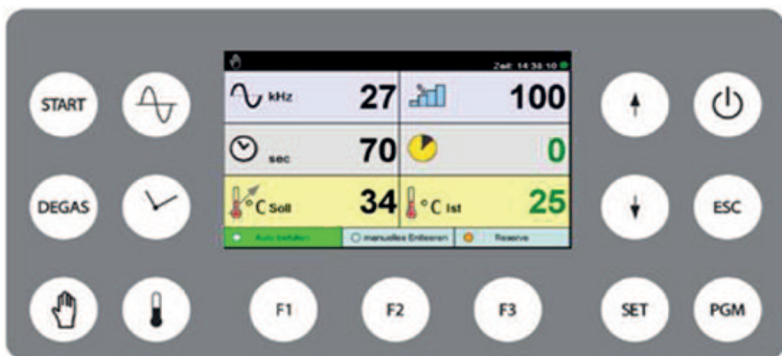
LCT ultrasound and rinsing tanks of the USW and SPW series Expert Line



Description

The **ultrasound and rinsing tanks of the USW and SPW series** are robust and reliable devices for **industrial cleaning**. They are characterised by their wide **application range** as well as their high and **consistent output**. This device series is the guarantee of **outstanding cleaning results and a high degree of flexibility**.

- Made entirely from stainless steel
- Tub insert made from cavitation-resistant stainless steel 1.4462
- Chamfered tub bottom for better cleaning liquid drainage
- Devices for depositing the cleaning basket
- Liquid outlet at the rear of the device made from V2A stainless steel
- Housing made from V2A (EN 1.4301, ASTM/AISI304) stainless steel
- Heater attached to the outside of the tub with temperature control (30°C - 90°C)
- Integrated safety functions:
 - Level monitoring with visual display as boil-dry protection for the heater and the ultrasound elements
- Open-top cover or optional flap cover with hinges

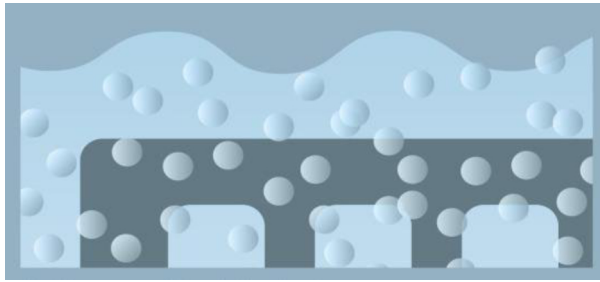


- Simple, intuitive operation using the LCT control panel
- Displays the set values as well as the target and actual values via the LC display
- The ultrasound frequency can be switched automatically or manually
- Manual and program automatic mode
- Weekly timer for energy-efficient control of the heater

Ultrasound

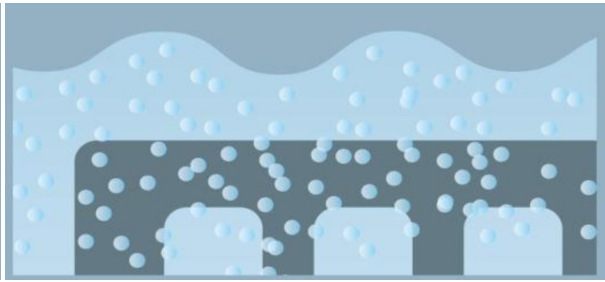
- Preliminary cleaning:** low US frequency, from 27 kHz
- Fine cleaning:** high US frequency, from 40 kHz and higher
- Ultra-fine cleaning:** very high US frequency, from 80 kHz and higher

LCT systems	Frequencies [kHz]						Comments
SINGLE frequency	27	30	40	60	80	100	Device operates at one frequency
DUAL frequency	27 or 80						Frequency can be selected; either/or
		30 or 60					
			40 or 100				



Low frequencies

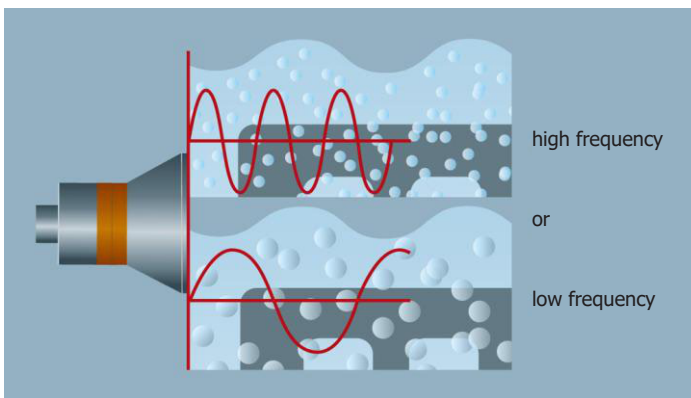
Generate bigger but few cavitation bubbles.
The bubbles develop very high implosion forces.



High frequencies

Produce small but many cavitation bubbles.
The bubbles develop lower implosion forces and therefore protect the part surface.

Due to the sequential sonication with two harmonic frequencies such as 27 kHz and 80 kHz, excellent cleaning results can be achieved within relatively short process times.



All LCT ultrasound systems can be equipped with SINGLE and DUAL frequency technology (in accordance with your wishes and requirements):

- SINGLE: 27/30/40/60/80/100 kHz
- DUAL: 27& 80 kHz / 30 & 60 kHz / 40 & 100 kHz

Configuration variants

The following type keys show the numerous configuration variants of the H-series:

	SPW	-	H100	-	MU	1200	40100	-	D	/	K.EP.
Usage:											
USW:											
SPW:											
Volumes:											
H15:											
H40:											
H60:											
H80:											
H100:											
Tub design:											
Empty:											
MU:											
Ultrasound power:											
300:											
750:											
1000:											
1200:											
Ultrasound frequencies:											
<i>SINGLE:</i>											
27:											
30:											
60:											
80:											
40:											
100:											
<i>DUAL:</i>											
2780:											
3060:											
40100:											
Operation and control											
Empty:											
D:											
Options:											
F:											
K:											
U:											
EP:											
WB:											

¹ With overflow

² Consists of a controlled solenoid valve and a manual needle valve. Only in SPW

Technical data

Basic data	H15	H40	H60	H80	H100
Fill volume [L]	15	40	60	80	100
Inner dimensions W/D/H [mm]	340/240/240	500/300/300	560/360/320	630/400/350	700/400/400
External dimensions W/D/H [mm]	460/360/490	620/420/550	680/480/570	750/520/650	820/520/650
Basket inner dimensions W/D/H [mm]	300/200/140	460/280/200	520/340/220	590/380/250	660/380/300
Basket load max. [kg]	5	20	20	20	20
Ball valve Empty ["]	Rp 3/4	Rp 3/4	Rp 1	Rp 1	Rp 1
Type	USW-H15	USW-H40	USW-H60	USW-H80	USW-H100
Mains connection	230VAC+PE 50/60 Hz		3 x 400 VAC+N+PE		
Ultrasound frequency [kHz]	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz
Power consumption [W]	1600	2250	3500	4200	5200
Ultrasound output [W]	300	750	1000	1200	1200
Sound density [W/L]	20	18.75	16.7	15	12
Heat output [W]	1300	1500	2500	3000	4000
Heating time $\Delta T 30^\circ \text{C}$ [min]	30	70	65	70	65
Weight [kg]	31	45	55	65	75
Sound level Lp [dB(A)]	< 80				
Type	SPW-H15	SPW-H40	SPW-H60	SPW-H80	SPW-H100
Mains connection	230 VAC+PE 50/60 Hz		3x400 VAC+N+PE		
Power consumption [W]	1600	2000	3000	4500	4500
Heat output [W]	1600	2000	3000	4500	4500
Heating time approx. $\Delta T 30^\circ \text{C}$ [min]	25	55	55	50	60
Weight [kg]	29	42	51	60	70
Sound level Lp [dB(A)]	-				

Technical data

Type	SPW-H15-MU	SPW-H40-MU	SPW-H60-MU	SPW-H80-MU	SPW-H100-MU
Mains connection	230VAC+PE 50/60 Hz		3 x 400 VAC+N+PE		
Power consumption [W]	2100	2300	4000	6000	6000
Heat output [W]	2100	2300	4000	6000	6000
Heating time approx. $\Delta T 30^{\circ} \text{C}$ [min]	20	45	40	35	45
Feed ["]	R 1/4	R 3/8	R 3/8	R 3/8	R 3/8
Overflow ["]	R 1	R 1	R 1 1/4	R 1 1/4	R 1 1/4
Weight [kg]	32	47	55	62	73
Sound level Lp [dB(A)]			< 80		

Type	SPW-H15-MU-US	SPW-H40-MU-US	SPW-H60-MU-US	SPW-H80-MU-US	SPW-H100-MU-US
Mains connection	230VAC+PE 50/60 Hz		3 x 400 VAC+N+PE		
Ultrasound frequency [kHz]	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz	<i>SINGLE:</i> 27 kHz 30 kHz 40 kHz 60 kHz 80 kHz 100 kHz <i>DUAL:</i> 27/80 kHz 30/60 kHz 40/100 kHz
Power consumption [W]	1900	2250	4000	5200	5200
Ultrasound output [W]	300	750	1000	1200	1200
Sound density [W/L]	20	18.75	16.7	15	12
Heat output [W]	1600	1500	3000	4000	4000
Heating time $\Delta T 30^{\circ} \text{C}$ [min]	25	70	50	55	65
Feed ["]	R 1/4	R 3/8	R 3/8	R 3/8	R 3/8
Overflow ["]	R 1	R 1	R 1 1/4	R 1 1/4	R 1 1/4
Weight [kg]	34	50	59	70	82
Sound level Lp [dB(A)]			< 80		

Technical data

Type	T-H15	T-H40
Fill volume [L]	15	40
Inner dimensions W/D/H [mm]	240/340/250	300/500/300
External dimensions W/D/H [mm]	360/920/500	420/1140/590
Load max. [kg]	20	
Mains connection	400 NAC+PE 50/60 Hz	
Power consumption [W]	approx. 4700	
Sound level [dB(A)]	68	
Heat output [W]	4500	
Heating time [min] $\Delta 100^{\circ}\text{C}$	4	
Weight [kg]	65	80

Accessory

Standard accessories

The standard versions of the ultrasound and rinsing tanks of the USW and SPW series are equipped with an open-top cover and a well-organised control panel.



Optional accessories

Traditional controls



The ultrasound and rinsing tanks can also be equipped with traditional controls, if desired.



Goods baskets



Standard goods baskets		
Type	Mesh width (mm)	Dimension (mm)
H-15	3x3	300x200x140
	5x5	
H-40	1x1	460 x 280 x 200
	2x2	
	5x5	
	10x10	
H-60	2x2	520x340x220
	5x5	
	10x10	
H-80	2x2	590x380x250
	10x10	
H-100	2x2	660x380x300
	10 x 10	

Halar coating:

Halar ECTFE has outstanding resistance to numerous chemicals, including strong acids and alkalis. In terms of abrasion resistance, ECTFE is one of the best fluoropolymers. The pore-free and smooth surface has a high degree of electrical insulation.

Halar has a layer thickness of 0.5 to 1.5mm and very good chemical resistance within the temperature range up to 150°C.

Areas of application: chemical, electroplating, food, mechanical engineering and wire products

Rilsan coating:

The excellent abrasion and chemical resistance are particularly noteworthy, as is the insensitivity to oil. Rilsan has excellent thermal and electrical insulation, corrosion and weather resistance.

Areas of application: automotive, food, electrical, electroplating and mechanical engineering industry, and also wire products

Base frames

H-15	
Number of tubs	Base frame
1	mobile
	fixed
2	mobile
	fixed
3	mobile
	fixed
4	mobile
	fixed

H-40	
Number of tubs	Base frame
1	mobile
	fixed
2	mobile
	fixed
3	mobile
	fixed
4	on request
	on request

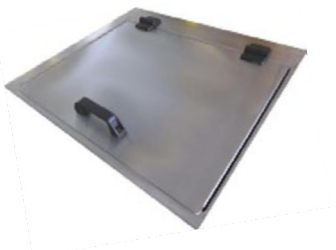
H-60	
Number of tubs	Base frame
1	mobile
	fixed
2	mobile
	fixed
3	on request
	on request
4	on request
	on request

H-80	
Number of tubs	Base frame
1	mobile
	fixed
2	mobile
	fixed
3	mobile
	fixed
4	on request
	on request

H-100	
Number of tubs	Base frame
1	mobile
	fixed
2	mobile
	fixed
3	on request
	on request
4	on request
	on request



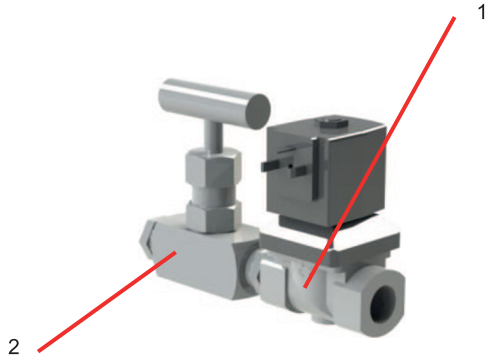
Flap cover



Model
all models

Base frames

In the event of long delays and greater demands made of the rinsing water quality, flow rinsing sets ensure that a timed exchange of the rinsing water takes place³. The sets consist of a solenoid valve [1] and a needle valve [2].



Flow rinsing set

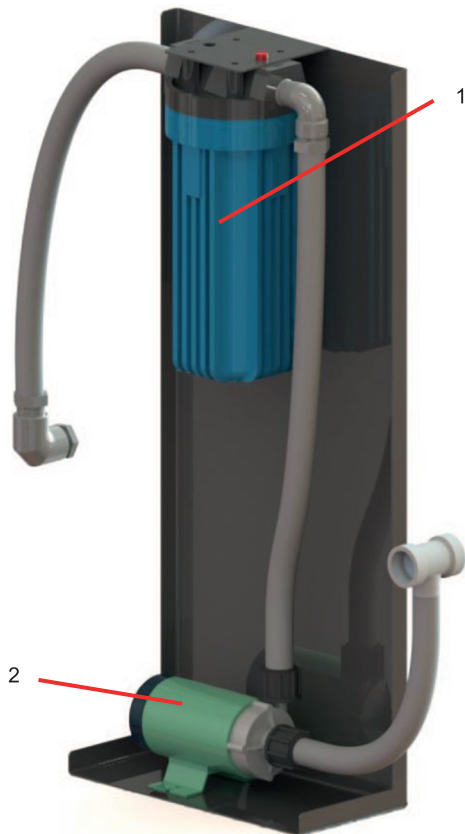
SPW with display

SPW with traditional controls

Base frames

For continuous treatment of the cleaning medium. The filter circuit is adapted to the respective requirements.

The filter circuit consists of a cartridge filter [1] and a circulation pump [2]



Filter circuit

SPW with display

SPW with traditional controls

³ Only in SPW

Drain cock extension

For easier access to the drain cock in the event of frequent dip changes. The extension makes it possible to operate the drain cock from the front.

Model
H15-H40
H60-H100



Drain cock extension

The ultrasound and rinsing tanks can be equipped with a display with oscillating goods movement if required.

The goods movement is activated via an F-button on the display, and can be continuously adjusted using a rotary knob (0-37 strokes/min).

Of course, all display tubs that have already been delivered can be retrofitted in our factory.



Model	Permitted load
H15	10 kg
H40	10 kg
H60	on request
H80	on request
HI 00	on request

⁴ The goods movement is not available for tubs with traditional controls

⁵ Price upon request

Apron plate

The standard versions of the ultrasound and rinsing tanks...

Apron plate

H15-H100

Additional drain at the back

Additional drain

H15-H40

H60-H100

Start/stop button on front at top left

Start/stop button

H15-H100

Preparation of the F-key for special function (display)

Including 1 cable leadthrough at the rear

Preparation of the F-key

H15-H100