LCT
Laue cleaning technology

LCT ultrasonic and rinsing tanks of the series USW and SPW

-Expert Line-

Contents

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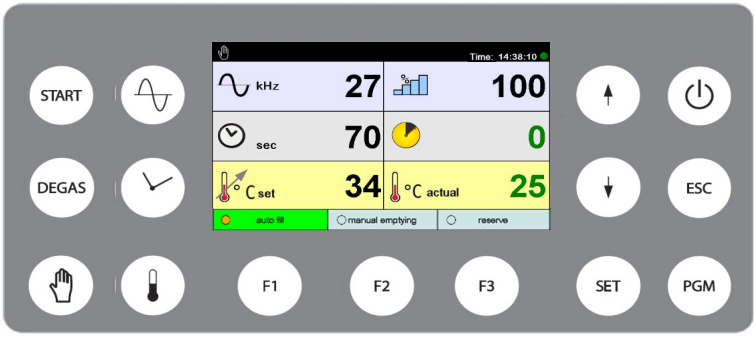
Description / Product characteristics

The ultrasonic and rinsing tanks in the USW and SPW series are robust and reliable devices for industrial cleaning. They are characterised by their wide range of applications and their high and constant power output. This series of devices guarantees excellent cleaning results and high flexibility in industrial cleaning.

From the multitude of different devices, a cleaning line that is individually adapted to your needs can be put together. Since each unit has its own control system, if the process is changed at a later date, the cleaning line can be adapted to the new process.

Product characteristics

- Made entirely from stainless steel
- Ultrasonic tank insert made of cavitation-resistant stainless steel 1.4462 (X2CrNiMoN22-5-2, 318 LN, Duplex)
- Tank base slopes to improve drainage of the cleaning fluid
- Equipment for setting down the cleaning basket
- Liquid drain at the back of the device made of stainless steel 1.4301 (X5CrNI18-10, 304, V2A)
- Stainless steel housing 1.4301 (X5CrNI18-10, 304, V2A)
- Heating element fixed to the outside of the tank with temperature control (30 °C – 90 °C)
- Integrated safety functions:
  - Level monitoring as dry-running protection for the heating system
  - Level monitoring as dry-running protection for the ultrasonic system
  - Plain text message on the display
- Special sizes available on request



- Simple, intuitive operation using the LCT control panel
  - Set values as well as target and actual values shown on the LC display
  - Ultrasonic frequency can be switched automatically or manually
  - Manual mode with timer function (minutes or seconds)
  - Automatic programme mode with 10 programmable process sequences
  - Weekly timer for energy-efficient control of the heating
  - Freely programmable button lock for each button so that defined process data cannot be changed
  - Display language can be selected from German, English, Chinese, French, Italian, Spanish, Turkish, Dutch, Portuguese, Russian

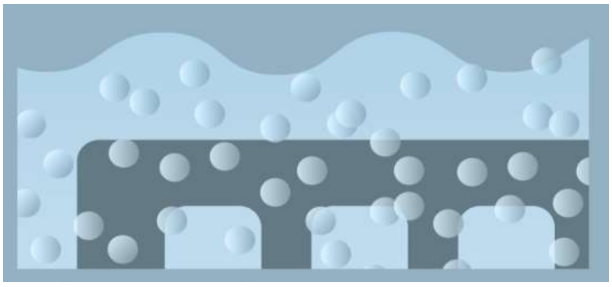
Ultrasound

Coarse cleaning: low US frequency, from 27 kHz

Fine cleaning: high US frequency, from 40 kHz upwards

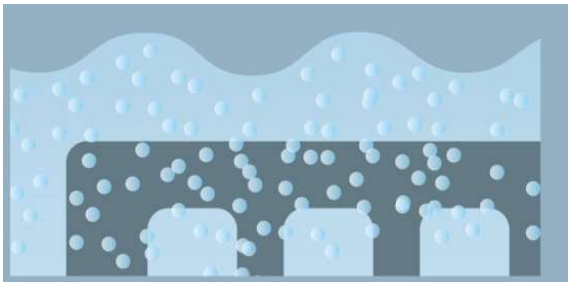
Ultra-fine cleaning: very high US frequency, from 80 kHz upwards

<table>
<tr><th>LCT systems</th><th colspan="6">Frequencies [kHz]</th><th>Remarks</th></tr>
<tr><td>SINGLE frequency</td><td>27</td><td>30</td><td>40</td><td>60</td><td>-</td><td>-</td><td>Device operates at one frequency</td></tr>
<tr><td rowspan="3">DUAL frequency</td><td colspan="4">27 or 80</td><td></td><td rowspan="3">Frequency can be selected;
either / or</td></tr>
<tr><td></td><td colspan="3">30 or 60</td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td colspan="3">40 or 100</td></tr>
</table>



Low frequencies

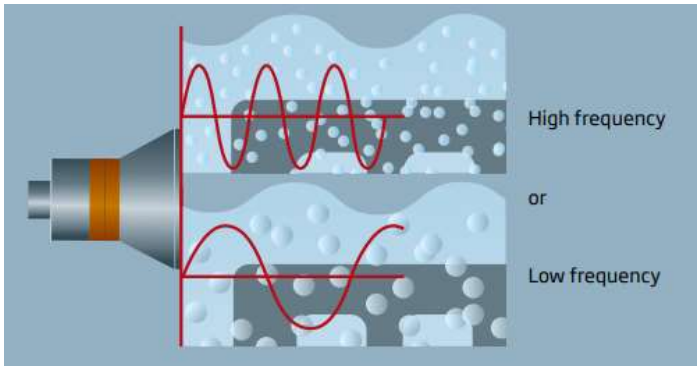
Generate larger, but fewer cavitation bubbles.
The bubbles develop very high implosion forces.



High frequencies

Generate small, but many cavitation bubbles.
The bubbles develop lower implosion forces, thereby protecting the part's surface.

Using sequential ultrasound treatment at two harmonious frequencies, such as 27 kHz and 80 kHz, extraordinary cleaning results can be achieved in relatively short processing times.



All LCT ultrasonic systems can be equipped with SINGLE and DUAL frequency technology, depending on your wishes and requirements:

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

Cleaning processes

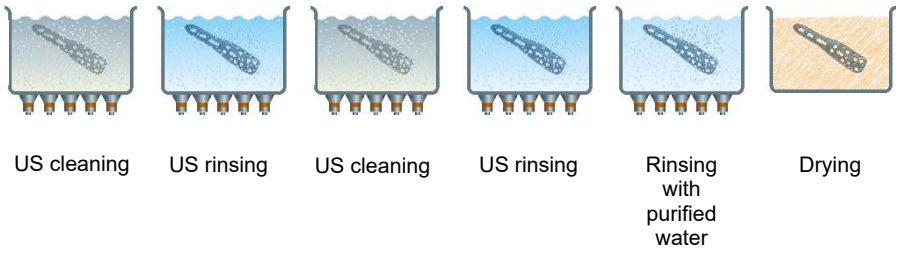
Coarse cleaning

Very dirty parts can be easily and efficiently freed from oil, grease or particulate contamination. Depending on the requirements, the parts are "only" cleaned, partly rinsed with water or additionally blown off with compressed air.

Intermediate cleaning

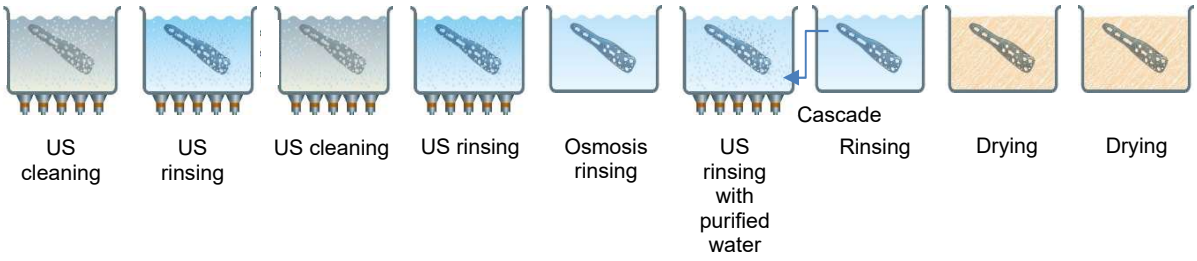
Depending on the application (e.g. after sandblasting), the rinsing tank can additionally be equipped with a filter circuit to increase the bath service life.

Fine cleaning



The cleaning process is determined and defined by tests, depending on the contamination and purity requirements. Based on the cleaning process, the cleaning line is assembled with the necessary tanks. The drying time usually defines the basket output per time unit.

Ultra-fine cleaning



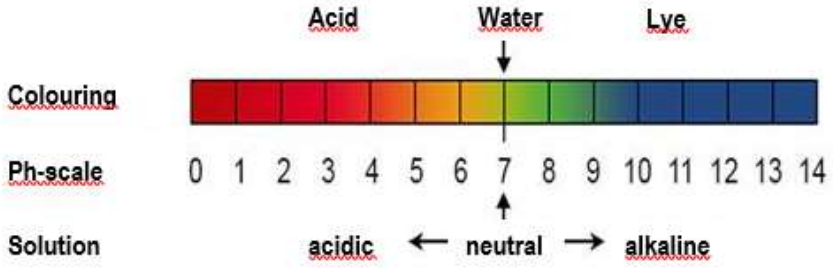
The cleaning process is determined and defined by tests, depending on the contamination and purity requirements. Based on the cleaning process, the cleaning line is assembled with the necessary tanks. The drying process generally takes the most time. If the number of dryers is increased, the basket output per time unit increases accordingly. A cascade between two rinsing tanks minimises water consumption.

Cleaning agents - effect and use

Important cleaning factors and parameters:

- Material / surface
- Contamination / dirt
- Cleaner
- Ultrasound (SINGLE, DUAL, MIX, frequency, power, configuration, etc.)
- Water quality
- Temperature
- Time

A number of factors have to be considered if ultrasonic cleaning is to be really effective. For instance, the material of the parts to be cleaned and the nature of the contamination determine which type of cleaner to use. The extent of the contamination and the type of cleaner dictate the temperature that is set and the duration of the cleaning process, while the stubbornness of the contamination and the sensitivity of the material determine which ultrasonic parameters to use. Finally, rinsing of the parts with water of varying quality is extremely important to ensure that the cleaning agents and all the dirt they have picked up are completely removed from the surface of the part in question. The use of demineralised water in the final stage of the process guarantees a spotless finish when the parts have dried.



Configuration variants

The following type code shows the numerous configuration variants of the H series:

SPW - H100 - MU 1200 40100 - D

Use:
USW: Cleaning
SPW: Rinsing
T: Drying

Volumes:
H15: 15 litres
H40: 40 litres
H60: 60 litres
H80: 80 litres
H100: 100 litres

Tank version:
Empty[1]: without overflow compartment, without flow rinsing, without spray pipe
MU[2]: with overflow compartment, with flow rinsing, with spray pipe

Ultrasonic power:
300: 300 W
750: 750 W
1000: 1000 W
1200: 1200 W

Ultrasonic frequencies:
SINGLE:
27: 27 kHz
30: 30 kHz
40: 40 kHz
60: 60 kHz

DUAL:
2780: 27 kHz / 80 kHz
3060: 30 kHz / 60 kHz
40100: 40 kHz / 100 kHz

Operation and control
D: with LCT universal display

[1] SPW: Immersion rinsing function without overflow
[2] SPW-MU: Flow rinsing function with overflow. The flow rinsing kit consists of a controlled solenoid valve and a manual needle valve. Only possible in SPW-MU.

Baskets

Basket to hold parts. Depending on the application, different maximum loads are permissible:

- Without basket oscillation: H15: 5 kg / H40: 10 kg / H60, H80 and H100: 20 kg
- Light basket oscillation: 5 kg
- Heavy basket oscillation: 10 kg

Standard baskets & coatings

Type	Mesh size [mm]	External dimensions [mm]	Effective dimensions [mm]	Item no. Stainless steel, electropolished	Item no. with Halar coating	Item no. with Rilsan coating
H15	3 x 3	300 x 200 x 140	289 x 189 x 200	4404-9	4404-9c	4404-9e
	5 x 5			4404-9a	4404-9d	4404-9f
H40	1 x 1	460 x 280 x 200	446 x 266 x 220	4405-11	4405-11d	4405-11h
	2 x 2			4405-11a	4405-11e	4405-11i
	5 x 5			4405-11fb	4405-11f	4405-11j
	10 x 10			4405-11c	4405-11g	4405-11k
H60	2 x 2	520 x 340 x 220	506 x 326 x 250	4406-12	4406-12c	4406-12f
	5 x 5			4406-12a	4406-12d	4406-12g
	10 x 10			4406-12b	4406-12e	4406-12h
H80	2 x 2	590 x 380 x 250	576 x 366 x 280	4407-11	4407-11b	4407-11d
	10 x 10			4407-11a	4407-11c	4407-11e
H100	2 x 2	660 x 380 x 300	646 x 366 x 325	4408-11	4408-11b	4408-11e
	10 x 10			4408-11a	4408-11d	4408-11f
P100	10 x 10	520 x 360 x 250	508 x 348 x 410	555-7-c	*	*

* on request

Figure: Basket H15

Figure: Baskets H40 to H100

Plastic coating on baskets:

As the baskets are made of stainless steel and the ultrasound makes the parts move easily, sensitive parts that rest on the stainless steel can be scratched in rare cases. This is particularly the case with soft materials like aluminium. By coating the baskets, the parts are protected and do not scratch.

Halar coating

Halar ECTFE has very good resistance to numerous chemicals, including strong acids and alkalis. In terms of abrasion resistance, ECTFE is one of the best fluoropolymers. The non-porous and smooth surface has a high level of electrical insulation.

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

Areas of application: The chemicals industry, electroplating, food, mechanical engineering and wire goods

Rilsan coating

Particularly noteworthy are the excellent abrasion resistance and chemical resistance, as well as an insensitivity to oil. Rilsan has excellent thermal and electrical insulation, corrosion and weather resistance.

Areas of application: Electroplating, food, automotive industry, electrical, mechanical engineering and wire goods

Technical data - H15 / H40

Cleaning tanks 230 VAC (with ultrasound)				
Technical data / type	USW H15/300		USW H40/750	
Filling volume [L]	15		40	
Internal dim. W/D/H [mm]	340/240/240		500/300/300	
External dim. W/D/H [mm]	460/360/490		620/420/550	
Basket effective dim. W/D/H [mm]	289/189/200		446/266/220	
Electrical data	230 VAC, 7 A, 50 / 60 Hz		230 VAC, 9.8 A, 50 / 60 Hz	
Power input [W]	1600		2250	
Ultrasonic frequency [kHz] Item number	SINGLE: 27 30 40 60 DUAL: 27/80 30/60 40/100	Item no. 4404 4404-111 4404-1 4404-1111 Item no. 4404-2 4404-33 4404-3	SINGLE: 27 30 40 60 DUAL: 27/80 30/60 40/100	Item no. 4405 4405-111 4405-1 4405-2 Item no. 4405-4 4405-3 4405-5
Ultrasonic power [W]	300		750	
Sound density [W/L]	20		18.75	
Heat output [W]	1300		1500	
Heating-up time Δ30 °C [min.]	30		70	
Ball valve drain[3]	Internal thread Rp 3/4"		Internal thread Rp 3/4"	
Weight [kg]	31		45	
IP protection	32		32	

[3] R: indicates a conical external thread, followed by the size in inches in line with DIN 2999
Rp: indicates a cylindrical internal thread, followed by the size in inches in line with DIN 2999

Rinsing tanks with overflow 230 VAC (with ultrasound)		
Technical data / type	SPW H15/300 with overflow	SPW H40/750 with overflow
Filling volume	15	40
Internal dim. W/D/H [mm]	340/240/240	500/300/300
External dim. W/D/H [mm]	460/360/490	620/420/550
Basket effective dim. W/D/H [mm]	289/189/200	446/266/220
Electrical data	230 VAC, 8.3 A, 50 / 60 Hz	230 VAC, 9.8 A, 50 / 60 Hz
Power input [W]	1900	2250
Ultrasonic frequency [kHz] Item number	SINGLE: 27 30 40 60 DUAL: 27/80 30/60 40/100 Item no. 4409-44 4409-444 4409-5 4409-6 Item no. 4409-7 4409-8 4409-9	SINGLE: 27 30 40 60 DUAL: 27/80 30/60 40/100 Item no. 4410-44 4410-5 4410-6 4410-7 Item no. 4410-8 4410-9 4410-10
Ultrasonic power [W]	300	750
Sound density [W/L]	20	18.75
Heat output [W]	1600	1500
Heating-up time Δ30 °C [min.]	25	70
Ball valve drain[3]	Internal thread Rp 3/4"	Internal thread Rp 3/4"
Supply[3]	External thread R 1/4"	External thread R 3/8"
Overflow[3]	External thread R 1"	External thread R 1"
Weight [kg]	34	50
IP protection	32	32

Rinsing tanks with overflow 230 VAC (without ultrasound)		
Technical data / type	SPW H15 with overflow, without ultrasound	SPW H40 with overflow, without ultrasound
Filling volume	15	40
Internal dim. W/D/H [mm]	340/240/240	500/300/300
External dim. W/D/H [mm]	460/360/490	620/420/550
Basket effective dim. W/D/H [mm]	289/189/200	446/266/220
Electrical data	230 VAC, 9.1 A, 50 / 60 Hz	230 VAC, 10 A, 50 / 60 Hz
Power input [W]	2100	2300
Item number	4404-4	4405-6
Heat output [W]	2100	2300
Heating-up time Δ30 °C [min.]	20	45
Ball valve drain[3]	Internal thread Rp 3/4"	Internal thread Rp 3/4"
Supply[3]	External thread R 1/4"	External thread R 3/8"
Overflow[3]	External thread R 1"	External thread R 1"
Weight [kg]	32	47
IP protection	32	32

[3] R: indicates a conical external thread, followed by the size in inches in line with DIN 2999
Rp: indicates a cylindrical internal thread, followed by the size in inches in line with DIN 2999

Standing rinsing tanks / conservation tanks without overflow 230 VAC (without ultrasound)		
Technical data / type	SPW H15 without overflow, without ultrasound	SPW H40 without overflow, without ultrasound
Filling volume	15	40
Internal dim. W/D/H [mm]	340/240/240	500/300/300
External dim. W/D/H [mm]	460/360/490	620/420/550
Basket effective dim. W/D/H [mm]	289/189/200	446/266/220
Electrical data	230 VAC, 7 A, 50 / 60 Hz	230 VAC, 8.7 A, 50 / 60 Hz
Power input [W]	1600	2000
Item number	4414-44	4415-44
Heat output [W]	1600	2000
Heating-up time Δ30 °C [min.]	25	55
Ball valve drain[3]	Internal thread Rp 3/4"	Internal thread Rp 3/4"
Weight [kg]	29	42
IP protection	32	32

Technical data - Dryer H15 / H40 / P100

Dryer 400 VAC			
Technical data / type	T-H15	T-H40	T-P100
Filling volume	15	40	100
Internal dim. W/D/H [mm]	240/340/250	300/500/300	550/390/435
External dim. W/D/H [mm]	360/920/500	420/1140/590	810/550/850
Basket effective dim. W/D/H [mm]	289/189/200	446/266/220	508/348/410
Electrical data Mains Output Max. phase load	3 x 400 VAC +N, 50 / 60 Hz 4.7 kW 6.9 A	3 x 400 VAC +N, 50 / 60 Hz 4.7 kW 6.9 A	3 x 400 VAC +N, 50 / 60 Hz 6.2 kW 9.2 A
Item number	555-8	555-9	555-7
Heat output [W]	4500	4500	6000
Weight [kg]	65	80	105
IP protection	32	32	32

Figure: Dryer H15, H40

Figure: Dryer T-P100

Technical data – H60 / H80 / H100

Cleaning tanks 400 VAC (with ultrasound)			
Basic data / type	USW H60/1000	USW H80/1200	USW H100/1200
Filling volume [L]	60	80	100
Internal dim. W/D/H [mm]	560/360/320	630/400/350	700/400/400
External dim. W/D/H [mm]	680/480/570	750/520/650	820/520/650
Basket effective dim. W/D/H [mm]	506/326/250	576/366/280	646/366/325
Electrical data Mains Output Max. phase load	3 x 400 VAC +N, 50 / 60 Hz 3.5 kW 6.5 A	3 x 400 VAC +N, 50 / 60 Hz 4.2 kW 6.5 A	3 x 400 VAC +N, 50 / 60 Hz 5.2 kW 8.7 A
Ultrasonic frequency [kHz] Item number	SINGLE: Item no. 27 4406 30 4406-4 40 4406-1 60 4406-3 DUAL: Item no. 27/80 4406-5 30/60 4406-55 40/100 4406-6	SINGLE: Item no. 27 4407 30 4407-3 40 4407-1 60 4407-2 DUAL: Item no. 27/80 4407-4 30/60 4407-44 40/100 4407-5	SINGLE: Item no. 27 4408 30 4408-3 40 4408-1 60 4408-2 DUAL: Item no. 27/80 4408-4 30/60 4408-44 40/100 4408-5
Ultrasonic power [W]	1000	1200	1200
Sound density [W/L]	16.7	15	12
Heat output [W]	2500	3000	4000
Heating-uptimeΔ30°C[min.]	65	70	65
Ball valve drain[3]	Internal thread Rp 1"	Internal thread Rp 1"	Internal thread Rp 1"
Weight [kg]	55	65	75
IPprotection	32	32	32

[3] R: indicates a conical external thread, followed by the size in inches in line with DIN 2999
Rp: indicates a cylindrical internal thread, followed by the size in inches in line with DIN 2999

Rinsing tanks with overflow 400 VAC (with ultrasound)			
Technical data / type	SPW H60/1000 with overflow	SPW H80/1200 with overflow	SPW H100/1200 with overflow
Filling volume [L]	60	80	100
Internal dim. W/D/H [mm]	560/360/320	630/400/350	700/400/400
External dim. W/D/H [mm]	680/480/570	750/520/650	820/520/650
Basket effective dim. W/D/H [mm]	506/326/250	576/366/280	646/366/325
Electrical data Mains Output Max. phase load	3 x 400 VAC +N, 50 / 60 Hz 4 kW 6.5 A	3 x 400 VAC +N, 50 / 60 Hz 5.2 kW 8.7 A	3 x 400 VAC +N, 50 / 60 Hz 5.2 kW 8.7 A
Ultrasonic frequency [kHz] Item number	SINGLE: Item no. 27 4411-44 30 4411-444 40 4411-55 60 4411-66 DUAL: Item no. 27/80 4411-77 30/60 4411-88 40/100 4411-99	SINGLE: Item no. 27 4412-44 30 4412-55 40 4412-66 60 4412-77 DUAL: Item no. 27/80 4412-88 30/60 4412-99 40/100 4412-999	SINGLE: Item no. 27 4413-44 30 4413-55 40 4413-66 60 4413-77 DUAL: Item no. 27/80 4413-88 30/60 4413-99 40/100 4413-999
Ultrasonic power [W]	1000	1200	1200
Sound density [W/L]	16.7	15	12
Heat output [W]	3000	4000	4000
Heating-up time Δ30 °C [min.]	50	55	65
Ball valve drain[3]	Internal thread Rp 1"	Internal thread Rp 1"	Internal thread Rp 1"
Supply[3]	External thread R 3/8"	External thread R 3/8"	External thread R 3/8"
Overflow[3]	External thread R 1 1/4"	External thread R 1 1/4"	External thread R 1 1/4"
Weight [kg]	59	70	82
IP protection	32	32	32

Rinsing tanks with overflow 400 VAC (without ultrasound)			
Technical data / type	SPW H60 with overflow	SPW H80 with overflow	SPW H100 with overflow
Filling volume [L]	60	80	100
Internal dim. W/D/H [mm]	560/360/320	630/400/350	700/400/400
External dim. W/D/H [mm]	680/480/570	750/520/650	820/520/650
Basket effective dim. W/D/H [mm]	506/326/250	576/366/280	646/366/325
Electrical data Mains Output Max. phase load	3 x 400 VAC +N, 50 / 60 Hz 4 kW 6.5 A	3 x 400 VAC +N, 50 / 60 Hz 6 kW 8.7 A	3 x 400 VAC +N, 50 / 60 Hz 6 kW 8.7 A
Item number	4406-7	4407-6	4408-6
Heat output [W]	4000	6000	6000
Heating-up time Δ30 °C [min.]	40	35	45
Ball valve drain[3]	Internal thread Rp 1"	Internal thread Rp 1"	Internal thread Rp 1"
Supply[3]	External thread R 3/8"	External thread R 3/8"	External thread R 3/8"
Overflow[3]	External thread R 1 1/4"	External thread R 1 1/4"	External thread R 1 1/4"
Weight [kg]	51	60	70
IP protection	32	32	32

[3] R: indicates a conical external thread, followed by the size in inches in line with DIN 2999
Rp: indicates a cylindrical internal thread, followed by the size in inches in line with DIN 2999

Standing rinsing tanks / conservation tanks without overflow 400 VAC (without ultrasound)			
Technical data / type	SPW H60	SPW H80	SPW H100
Filling volume [L]	60	80	100
Internal dim. W/D/H [mm]	560/360/320	630/400/350	700/400/400
External dim. W/D/H [mm]	680/480/570	750/520/650	820/520/650
Basket effective dim. W/D/H [mm]	506/326/250	576/366/280	646/366/325
Electrical data Mains Output Max. phase load	3 x 400 VAC +N, 50 / 60 Hz 3 kW 4.35 A	3 x 400 VAC +N, 50 / 60 Hz 4.5 kW 6.52 A	3 x 400 VAC +N, 50 / 60 Hz 4.5 kW 6.52 A
Item number	4416-44	4417-44	4418-44
Heat output [W]	3000	4500	4500
Heating-up time Δ30 °C [min.]	55	50	60
Ball valve drain[3]	Internal thread Rp 1"	Internal thread Rp 1"	Internal thread Rp 1"
Weight [kg]	51	60	70
IP protection	32	32	32

[3] R: indicates a conical external thread, followed by the size in inches in line with DIN 2999
Rp: indicates a cylindrical internal thread, followed by the size in inches in line with DIN 2999

Special solutions

In addition to our standard applications, we also offer special solutions:

Type and description	Special model
Tanks with controls on the narrow side	
H25: - Base H40 - With basket oscillation, exhaust duct and active cooling	

Type and description	Special model
H1 round: - With round cleaning tank	
H70: - Sound at the side - Available as cleaning or rinsing tank - Internal dimensions: 400 x 400 x 500 mm	
H140: - Extra-wide tank	

We would be happy to advise you personally, please do not hesitate to contact us!

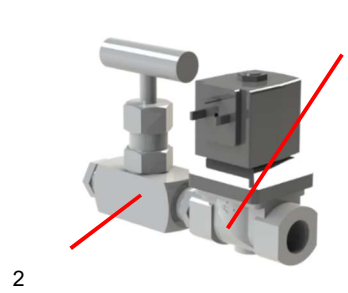
Accessories / options

Hinged cover

Model	Item no.
All models (not possible in combination with basket oscillation)	H15 - 4404-8 H40 - 4405-10 H60 - 4406-11 H80 - 4407-10 H100 - 4408-10

Flow rinsing kit

In the case of greater carry-over and higher demands on the rinsing quality, flow rinsing kits ensure the rinsing water is replaced at specified times[4]. The kit consists of a solenoid valve [1] and a needle valve [2].

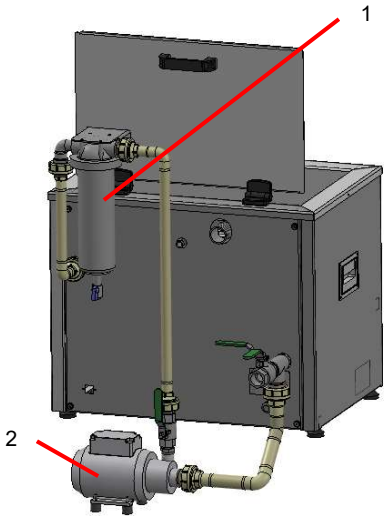


Flow rinsing kit	Item no.
SPW with display	H15 - 4404-6a H40 - 4405-8a H60 - 4406-9a H80 - 4407-8a H100 - 4408-8a

Filter circuit

For continuous preparation of the cleaning medium. The filter circuit is adapted to the relevant requirements.

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



Filter circuit	Item no.
standard ▪ Max. 80°C ▪ 1 cartridge in plastic housing ▪ Pump with 10l/min	4409-0
strong ▪ + 80°C ▪ cartridge in stainless steel housing ▪ several cartridge (e.g. mixed bed + particle filtring) ▪ Pump with 40l/min	H15 - 4404-7a H40 - 4405-9a H60 - 4406-10a H80 - 4407-9a H100 - 4408-9a

Filter cartridges	Item no.
1 µm	4409-111
5 µm	4409-12
10 µm	4409-13
25 µm	4409-14
50 µm	4409-15

[4] Only in SPW

Bases

The moveable bases are equipped with 2 fixed and 2 lockable swivel castors.

H15		
Number of tanks	Base	Item no.
1	Moveable	4404-11
	Fixed	4404-10
2	Moveable	4404-13
	Fixed	4404-12
3	Moveable	4404-14
	Fixed	4404-15
4	Moveable	4404-16
	Fixed	4404-17

H40		
Number of tanks	Base	Item no.
1	Moveable	4405-13
	Fixed	4405-12
2	Moveable	4405-15
	Fixed	4405-14
3	Moveable	4405-155
	Fixed	4405-1555
4	Moveable	4405-16
	Fixed	4405-166

H60		
Number of tanks	Base	Item no.
1	Moveable	4406-14
	Fixed	4406-13
2	Moveable	4406-16
	Fixed	4406-15
3	Moveable	4406-166
	Fixed	4406-1666

H80		
Number of tanks	Base	Item no.
1	Moveable	4407-13
	Fixed	4407-12
2	Moveable	4407-15
	Fixed	4407-14
3	Moveable	4407-155
	Fixed	4407-1555

H100		
Number of tanks	Base	Item no.
1	Moveable	4408-13
	Fixed	4408-12
2	Moveable	4408-15
	Fixed	4408-14
3	Moveable	4408-1555
	Fixed	4408-155

* on request

Drain valve extension

For easier access to the drain valve when changing baths
frequently. The extension allows the drain valve to be operated from the front.

Model	Item no.
H15 - H40	4404-a
H60 - H100	4404-b

Basket oscillation

On request, ultrasonic and rinsing tanks with displays can be equipped with vertically oscillating basket oscillation.[5]

The basket oscillation is started by pressing an F key on the display.

Model	Permissible load	Item no.	Basket size
H15	5 kg	4405-100	H15
H40	5 kg	4405-101	H40
H60	10 kg	4405-102	H40
H80	10 kg	4405-103	H60
H100	10 kg	4405-104	H80
H120	10 kg		H100

[5] - For tanks with traditional control elements, basket oscillation is not available.
- Basket oscillation is not possible in combination with hinged covers.

Apron plate

The apron plate [1] prevents liquid from running down between the tanks.

Model	Item no.
All models	555-7-b

Start/stop button on front, top left

Ergonomically arranged pushbutton [1] for process start.

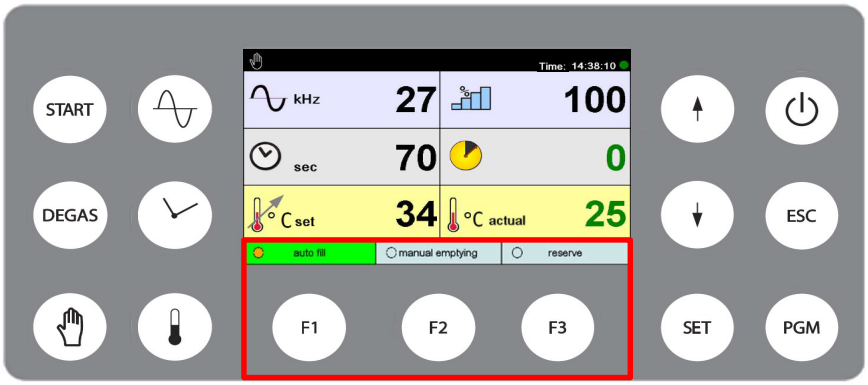
Model	Item no.
All models	44100-1

Preparation of the F key for special functions (display)

Customer-specific function[6] such as lifting pump, rotating basket

Including 1 cable bushing at the rear

Model	Item no.
All models	44101-1



[6] if not occupied by other options

External display

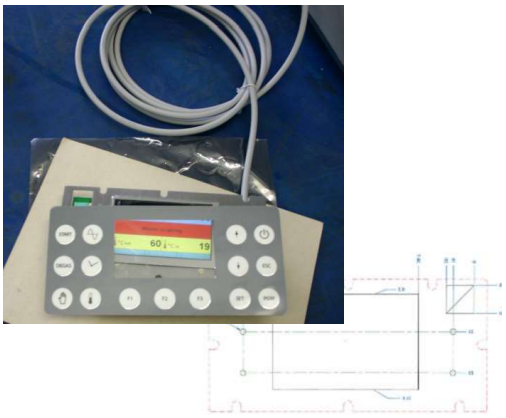
The display can be used remotely, whether in a separate housing [1] or installed in a switch cabinet [2].

Model	Design	Item no.
All models	Housing made entirely from stainless steel	44102-1

Includes 3-metre cable

Model	Design	Item no.
All models	Remote operation	44102-2

Includes drilling plan for wall installation



Exhaust

Exhaust duct including hinged cover[7] for the extraction of the cleaning vapours (supplied without fan)

Model	Item no.
H15	44106-1
H40	44106-2
H60	44106-3
H80	44106-4
H100	44106-5

Sound insulation box

Sound insulation box made of coated MDF panels.
Reduces the sound level by up to 15dB (A).

Works also with heated tanks when the lid is closed because of the integrated fan.

Available with or without additional sound insulation

Model
all

[7] not available in combination with basket oscillation

Conductance measurement

Consisting of conductance sensor including transmitter (Easy Sense) and signal column for the display
Sensor mounted directly in the tank or in the overflow piping

Model	Item no.
All models	44107-1

Water treatment

Mixed-bed or activated charcoal for rinsing water treatment

New content	Item no.
LCT-6000 Activated charcoal 46 l	44108-1
LCT-6000 Mixed-bed resin 46 l	44108-2
LCT-4000 Activated charcoal 30 l	44108-3
LCT-4000 Mixed-bed resin 30 l	44108-4

Cartridge with content	Item no.
LCT-6000 Activated charcoal 46 l	44108-5
LCT-6000 Mixed-bed resin 46 l	44108-6
LCT-4000 Activated charcoal 30 l	44108-7
LCT-4000 Mixed-bed resin 30 l	44108-8

Signal lamp / horn

Display for process end, conductance alarm or similar

Model	Item no.
All models	44103-1

Material certificates

Material certificates for parts in contact with the medium

- Tank sheet metal
- Drains
- Riser
- Ball valve
- Spray pipe

Model	Item no.
All models	44104-1

Operating instructions / declaration of conformity

Operating instructions are available in German, English, French, Italian, Spanish and Chinese.

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