

Hardness value			20	30	40	45	50	55	60	62/63	65	
42365...	HRC	Testing method HRC	Ident. No.	320	322	324	326	328	330	332	334	336
				●	●	●	●	●	●	●	●	●

Prod. Gr. 424



## Ultrasonic cleaning devices

### Fundamentals:

Ultrasonic cleaning is one of the most modern cleaning methods available. It achieves maximum cleanliness of the treated parts, even in hard-to-reach areas, yet is extremely gentle to the material being cleaned.

### Optimum ultrasonic cleaning depends essentially on four factors:

- Cleaning device
- Cleaning chemicals
- Temperature
- Time

### Applications:

- Suitable for removing grease, oils, fluxes, grinding and polishing abrasives, paint residue, oxide layers, scales etc.
- Can be used for ferrous and non-ferrous materials, plastics, glass etc. (mechanical, electronic, optical and medical components)

### Ultrasonic cleaning terms

- **Ultrasonic vibrating systems:** high-frequency (HF) energy is produced by an ultrasonic generator, converted into mechanical energy by piezoelectric vibrating systems and added to the bath fluid. This creates millions of microscopic vacuum bubbles that implode as a result of pressure fluctuations. Highly

effective fluid flows (jets) are generated that remove dirt particles from the surfaces of immersed items.

- **Sweep function:** this function produces homogeneous sound field distribution by continuously shifting of the sound field maxima. The result is an optimal distribution of cleaning performance in the cleaning bath.
- **Degas and auto-degas function:** fresh cleaning fluid is saturated with air. The bath fluid is degassed to optimise the effect of ultrasound.
- **Pulse function:** can be switched on to increase electronic performance. Compared to the sweep function, approx. 20% more vacuum bubbles (model series xtra ST, XL and X-tra line).
- **Dynamic function:** interplay between sweep and pulse function. The ultrasonic output increases temporarily by up to 20%. Ideal for stubborn dirt. (Model series xtra TT, xtra ST).

### Selecting a suitable cleaning tub:

The useful dimensions of the cleaning tub, eventually also of the cleaning basket, depend on the dimensions of the parts to be cleaned and their positioning in the cleaning tub!

Can be used to lean individual parts, multiple parts at the same time or bulk materials. Either a cleaning basket or a handling device with an appropriate fixture for attaching the items to be cleaned can be used in the bath.



## ORION® Ultrasonic cleaning device EASYcleaning SF

Single frequency devices with heating system

### Application:

Ultrasonic cleaning devices from the EASYcleaning model series with heating system are designed as single-frequency devices to gently clean parts. Ideal for removing greases, oils, swarf, flux, paint residue, soot, scale, dust, etc.

### Execution:

- Cleaning tub made of stainless steel, deep-drawn
- Front side features mounted control elements with simple LED status display
- Set temperature 30°C to 80°C in 5° steps with static LED limit temperature display
- Rotary switch on/off, pre-select cleaning time: Short clean (1 to 30 minutes)

- From model 60H with expiry on the back of the device

### Advantage:

- Permanent sweep function facilitates homogeneous sound distribution in the cleaning bath and improves cleaning performance
- Pulse function increases ultrasonic peak performance and is extremely effective on hard, encrusted dirt

### Delivery:

Ultrasonic cleaning device incl. insert basket and standard lid



Model	Easy SF 10H	Easy SF 20H	Easy SF 30H	Easy SF 40H	Easy SF 60H	Easy SF 100H	Easy SF 120H	Easy SF 180H	Easy SF 300H	
Max. tray contents (l)	0.8	1.75	2.75	4.25	5.75	9.5	12.75	18	28	
Tray width (inner) (mm)	190	151	240	240	300	300	300	327	505	
Tray depth (inner) (mm)	85	137	137	137	151	240	240	300	300	
Tray height (inner) (mm)	60	100	100	150	150	150	200	200	200	
Basket width (inner) (mm)	177	112	198	190	255	255	250	280	455	
Basket depth (inner) (mm)	73	103	106	105	115	200	190	250	250	
Basket height (inner) (mm)	30	50	50	75	75	75	115	115	115	
Effective ultrasonic capacity (W)	30	35	80	140	150	150	200	200	300	
Max. ultrasound peak capacity (W)	240	280	320	560	600	600	800	800	1200	
Heating power (W)	60	120	200	200	400	400	800	800	1200	
Max. power drain (W)	90	155	280	340	550	550	1000	1000	1500	
Single frequency (kHz)	37	37	37	37	37	37	37	37	37	
Min./max. nominal voltage	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	220 / 240 V/AC	
43691...	Ident. No.	100	110	120	130	140	150	160	170	180
		●	●	●	●	●	●	●	●	●

Prod. Gr. 486

# ATORN® Ultrasonic cleaning device ProfessionalCLEAN SF

Single frequency table devices with heating system for professional cleaning work

### Application:

The ultrasonic cleaning devices in the Pro SF model series with heating system H are designed as single-frequency table devices. They are used primarily in the metalworking industry for gentle but intensive cleaning of parts made from steel, light metal, non-ferrous base metal, plastic and glass. The temperature-controlled heating system helps dissolve stubborn dirt, thereby improving cleaning times and cleaning results. Ideal for removing greases, oils, swarf, flux, paint residue, soot, scale, dust etc. **The Pro SF model series has a robust, welded stainless steel tub and an optional dynamic mode to boost the cleaning performance.**

### Execution:

- Single-frequency devices 37 kHz
- Table-mounted device with controls on front
- Welded ultrasonic bath made from special, highly cavitation-proof stainless steel
- Cleaning time and temperature pre-selection can be set via separate rotary dials
- Temperature dial for setting range from 30°C to 80°C in 5° increments
- Limit temperature can be set, with a warning signal if this is exceeded

- Heating with dry run protection
- Drain ball valve for draining dirty cleaning fluids
- base-mounted transducers
- including standard cover

### Advantage:

- Sweep function facilitates homogeneous sound distribution in cleaning bath and improves cleaning performance
- Additional dynamic function to improve ultrasonic cleaning performance
- temperature-controlled ultrasound activation at pre-heated temperature
- Integrated fill level marking
- 3-year warranty if used correctly in single-shift operation

### Delivery:

xtra TT ultrasonic cleaning device incl. standard cover

### Technical data:

- Single frequency: 37 kHz
- Nominal voltage: 240 V/AC
- Outlet connection: 3/8



Ident. No. 206

Model	Pro SF 30H	Pro SF 60H	Pro SF 120H	Pro SF 200H	
Max. tray contents (l)	3	6.5	14	18	
Effective tank volume (l)	2	5	10	13	
Tray interior dimensions (W x D x H)	240 x 130 x 100 mm	300 x 150 x 150 mm	300 x 240 x 200 mm	320 x 280 x 200 mm	
Effective ultrasonic capacity (W)	140	150	200	300	
Effective ultrasonic capacity (Dynamic Mode) (W)	560	600	800	1200	
Heating power (W)	400	400	800	1200	
Weight (kg)	6	10	11	13	
<b>Ultrasonic cleaning device ProfessionalCLEAN SF</b>	<b>43695...</b>	Ident. No. <b>202</b> Price/unit, € (920.00)	Ident. No. <b>204</b> (1230.00)	Ident. No. <b>206</b> (1845.00)	Ident. No. <b>208</b> (2155.00)
Basket for ultrasonic cleaning device	<b>43695...</b>	Ident. No. <b>212</b> ○	Ident. No. <b>214</b> ○	Ident. No. <b>216</b> ○	Ident. No. <b>218</b> ○

Prod. Gr. 4BA

## ATORN® Stainless steel insert basket

For ultrasonic cleaning devices ATORN professionalCLEAN SF

	196	257	263	280
Basket width (inner) (mm)	196	257	263	280
Basket depth (inner) (mm)	112	132	223	250
Basket height (inner) (mm)	48	73	114	114
Wire Ø (mm)	1	1	1	1
Cage mesh size (mm)	6	6	6	6
Max. cage load (kg)	1	3	7	8
<b>43695...</b>	Ident. No. <b>212</b> ○	Ident. No. <b>214</b> ○	Ident. No. <b>216</b> ○	Ident. No. <b>218</b> ○

Prod. Gr. 4BA



**ATORN® Ultrasonic cleaning devices pro MF**  
Multi-frequency upright units with heating system for professional cleaning work

**Application:**

For cleaning stubborn dirt such as grease, oil, lapping and polishing compounds, swarf, flux, paint residue, soot, scale dust, etc. and for parts with delicate surfaces. The ultrasonic cleaning devices in the Pro MF model series are designed as multi-frequency devices. They are used primarily in the metalworking industry for gentle but intensive cleaning of parts made from steel, light metal, non-ferrous base metal, plastic and glass. These devices are also suitable for cleaning spindle-side tool fixtures and for preliminary cleaning of parts for subsequent surface treatment. **The switchable dynamic, pulse and sweep function improves cleaning performance for removing particularly stubborn dirt. The result is maximum cleanliness even in hard-to-reach spots. 25 kHz ultrasonic frequency for coarse and preliminary cleaning, 45 kHz for fine cleaning.**

**Execution:**

- multi-frequency devices with 25 and 45 kHz operation for coarse, preliminary and fine cleaning
- heating system with temperature regulation from 30°C to 80°C, short heat-up times
- automatic safety shutdown after 12 hours of operation or at a bath temperature of 90°C

- free-standing device on rollers with controls on front
- ultrasonic bath made from special, highly cavitation-proof stainless steel
- inclined bath floor for improved drainage
- suspension device for cleaning and draining positions
- dynamic mode: automatic alternation between sweep and pulse function
- Base-mounted transducers



Ident. No. 732

**Advantage:**

- sweep function for homogeneous sound distribution in the cleaning bath
- switchable dynamic and pulse function to improve ultrasonic cleaning performance
- all devices are equipped with multi-frequency operation (25/45 kHz), base-mounted transducers and heating
- temperature-controlled ultrasound activation at pre-heated temperature
- 3-year warranty if used correctly in single-shift operation

**Delivery:**

Ultrasonic cleaning device without insert basket, without lid

Model	Pro MF 300H	Pro MF 500H	Pro MF 600H	Pro MF 800H	Pro MF 1400H	Pro MF 1600H	Pro MF 2500H
Multi frequency	25 kHz/45 kHz	25 kHz/45 kHz	25 kHz/45 kHz	25 kHz/45 kHz	25 kHz/45 kHz	25 kHz/45 kHz	25 kHz/45 kHz
Max. tray contents (l)	30	50	58	83	126	162	255
Effective tank volume (l)	22	42	45	70	97	133	215
Tray interior dimensions (W x D x H)	300 x 300 x 300 mm	300 x 300 x 500 mm	500 x 330 x 350 mm	500 x 330 x 500 mm	600 x 600 x 350 mm	600 x 600 x 450 mm	750 x 650 x 520 mm
Effective ultrasonic capacity (W)	480	480	900	1000	1400	1800	1800
Effective ultrasonic capacity (Dynamic Mode) (W)	600	600	1000	1000	1800	2000	2000
Heating power (W)	1400	1400	1400	4200	5000	7500	7500
Weight (kg)	50	54	61	66	87	95	109
Nominal voltage (V/AC)	220	220	400	400	400	400	400
<b>Ultrasonic cleaning devices pro MF</b>	<b>43695...</b>						
		Ident. No. <b>722</b>	Ident. No. <b>724</b>	Ident. No. <b>726</b>	Ident. No. <b>728</b>	Ident. No. <b>730</b>	Ident. No. <b>732</b>
		Price/unit, € <b>(3075.00)*</b>	Price/unit, € <b>(3485.00)*</b>	Price/unit, € <b>(3895.00)*</b>	Price/unit, € <b>(4720.00)*</b>	Price/unit, € <b>(5745.00)*</b>	Price/unit, € <b>(7290.00)*</b>
Cover for ultrasonic cleaning device	<b>43695...</b>	Ident. No. <b>762</b>	Ident. No. <b>762</b>	Ident. No. <b>764</b>	Ident. No. <b>764</b>	Ident. No. <b>766</b>	Ident. No. <b>770</b>
		Price/unit, € <b>(67.00)</b>	Price/unit, € <b>(67.00)</b>	Price/unit, € <b>(77.00)</b>	Price/unit, € <b>(77.00)</b>	Price/unit, € <b>(160.00)</b>	Price/unit, € <b>(180.00)</b>
Basket for ultrasonic cleaning device	<b>43695...</b>	Ident. No. <b>772</b>	Ident. No. <b>772</b>	Ident. No. <b>774</b>	Ident. No. <b>774</b>	Ident. No. <b>776</b>	Ident. No. <b>778</b>
		Price/unit, € <b>(305.00)</b>	Price/unit, € <b>(305.00)</b>	Price/unit, € <b>(325.00)</b>	Price/unit, € <b>(325.00)</b>	Price/unit, € <b>(435.00)</b>	Price/unit, € <b>(480.00)</b>
	<b>43695...</b>	Ident. No. <b>782</b>	Ident. No. <b>784</b>	Ident. No. <b>786</b>	Ident. No. <b>788</b>	Ident. No. <b>790</b>	Ident. No. <b>792</b>
		Price/unit, € <b>0</b>	Price/unit, € <b>0</b>	Price/unit, € <b>0</b>	Price/unit, € <b>0</b>	Price/unit, € <b>0</b>	Price/unit, € <b>0</b>

Prod. Gr. 4BB

**ATORN® Stainless steel insert basket**  
for ultrasonic cleaning devices ATORN pro MF

Basket width (inner) (mm)	Basket depth (inner) (mm)	Basket height (inner) (mm)	Wire Ø (mm)	Cage mesh size (mm)	Max. cage load (kg)	Stainless steel insert basket
255	230	170	1.6	10	12	<b>43695...</b>
255	230	370	1.6	10	12	Ident. No. <b>782</b>
400	255	220	1.6	10	25	<b>784</b>
400	255	370	1.6	10	40	<b>786</b>
490	525	210	1.6	10	50	<b>788</b>
480	525	300	1.6	10	50	<b>790</b>
360	560	240	1.5	12	40	<b>792</b>
630	575	370	1.6	10	50	<b>794</b>
						<b>796</b>

Prod. Gr. 4BB

**ATORN® ProfessionalCLEAN S 1900 ultrasonic cleaning device**  
 Multi-frequency upright unit with heating system and side transducers

**Application:**

Side-mounted transducers – ideal for cleaning filters, long components and components with complex surfaces. Removes stubborn dirt such as grease, oil, lapping and polishing compounds, swarf, flux, paint residue, soot, scale, dust etc. **The switchable dynamic, pulse and sweep function improves cleaning performance for removing particularly stubborn dirt. The result is maximum cleanliness even in hard-to-reach spots. 25 kHz ultrasonic frequency for coarse and preliminary cleaning, 45 kHz for fine cleaning.**

**Execution:**

- Multi-frequency device with 25 and 45 kHz operation for coarse, preliminary and fine cleaning
- **side-mounted transducers on two opposite sides**
- heating system with temperature regulation from 30°C to 80°C, short heat-up times
- automatic safety shutdown after 12 hours of operation or at a bath temperature of 90°C

- free-standing device on rollers with controls on front
- ultrasonic bath made from special, highly cavitation-proof stainless steel
- Inclined bath floor for improved drainage

**Advantage:**

- switchable dynamic and pulse function to improve ultrasonic cleaning performance
- sweep function for homogeneous sound distribution in the cleaning bath
- temperature-controlled ultrasound activation at pre-heated temperature
- 3-year warranty if used correctly in single-shift operation

**Delivery:**

Ultrasonic cleaning device without insert basket, without lid

**Notes:**

No noise protection cover is provided for this model!



Model	Pro MF 1900S		
Multi frequency	25 kHz/45 kHz		
Max. tray contents (l)	187		
Effectibe tank volume (l)	134		
Tray interior dimensions (W x D x H)	410 x 650 x 720 mm		
Effective ultrasonic capacity (W)	1000		
Heating power (W)	2300		
Weight (kg)	75		
Nominal voltage (V/AC)	220		
<b>Professional-CLEAN S 1900 ultrasonic cleaning device</b>	<b>43695...</b>		Ident. No. <b>734</b> (○)
Basket for ultrasonic cleaning device	<b>43695...</b>	Stainless steel insert basket	Ident. No. <b>794</b> ○

Prod. Gr. 4BB