

Cleaning systems Overview

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Ultrasonic cleaning units



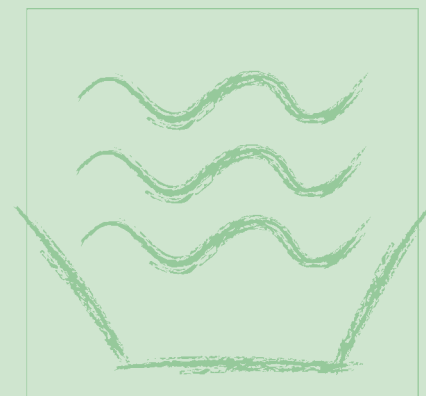
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Cleaning products for ultrasonic
cleaners



Cleaning systems Overview

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Cleaning systems

Cleaning systems

A clean affair

▶ The term “ultrasound” means vibrations, which are beyond the range of frequencies audible to the human ear (above 20 kHz). In liquids, these vibrations create very small vacuum bubbles, which form and break within a fraction of a second. This breaking (imploding) results in extremely fast liquid movements, and these remove any contaminations from the components.

What are the advantages?

▶ Unlimited cleaning power

The fast movement of the cleaning liquid reaches any spot on the workpiece, where liquid can go. Even tight grooves, bore holes or blind holes, which can barely be reached with other methods, are thoroughly cleaned.

▶ Touch-free cleaning

Cleaning is exclusively effected by liquid movement, which means the workpiece is only in contact with the liquid and nothing else - so the cleaned component is not worn or damaged, as it would be with other cleaning methods (for example brushing) even if great care is taken. Ultrasound is a very gentle and convenient alternative to almost all conventional cleaning methods.

▶ Effortless cleaning

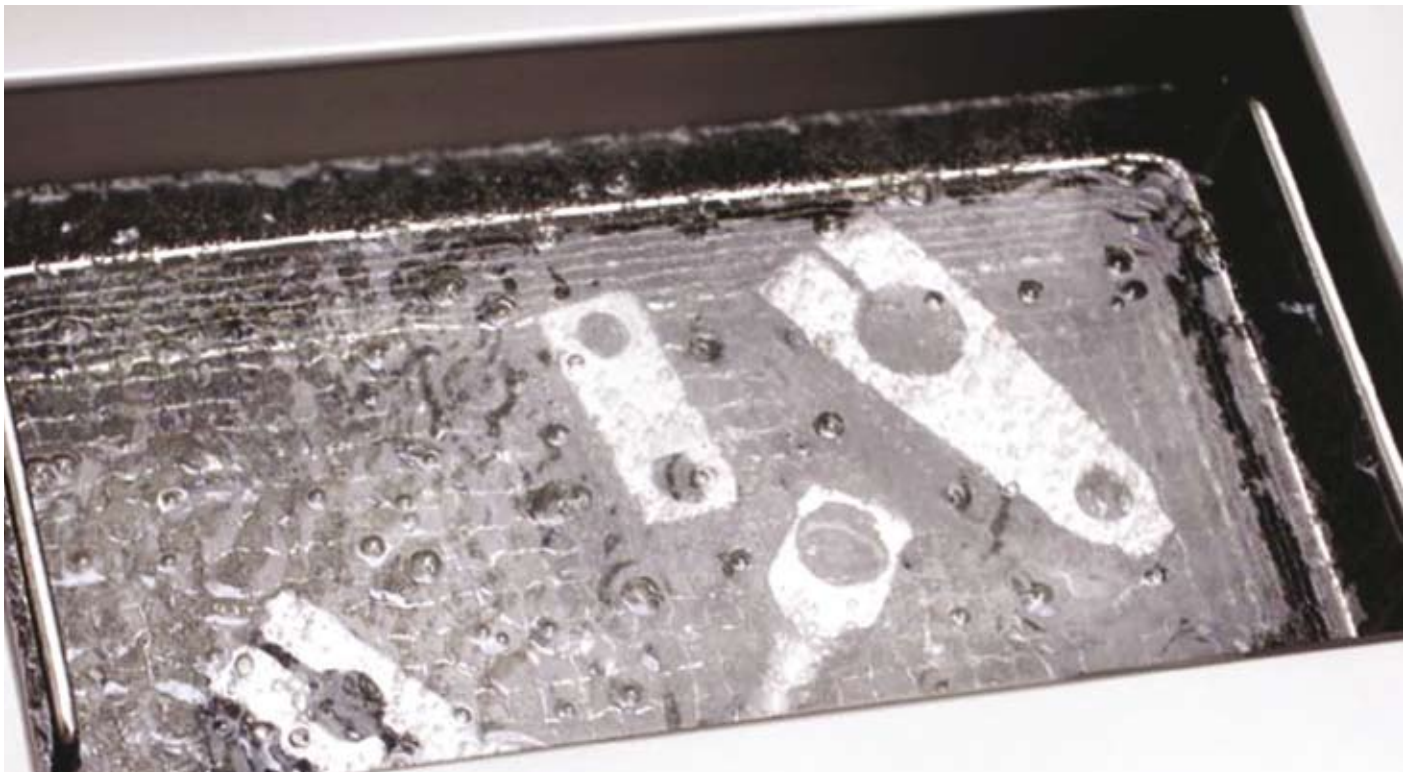
All you need to do is place the dirty parts in the cleaning bath and take them out again after a preset time – and all your workpieces will be thoroughly clean. This is achieved without any manual effort, just through the power of ultrasound. There is another side-effect working in your favour: Because the cleaning process runs automatically, you have plenty of time for other activities.

▶ Ultrasound in all business sectors

So ultrasound is an efficient, gentle and labour-saving cleaning method with applications in many different business sectors. It was originally used in the field of science and medicine, but is now, due to larger and more powerful units, increasingly applied in the industrial sector, too.

▶ You will find:

Ultrasonic cleaners
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Cleaning products for ultrasonic cleaners
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Ultrasonic cleaners Overview



Basic-Clean - single-frequency units

Volumes between 0.8 and 90 l, all units with heating system (optionally available without), Sweep and DeGas functions as standard, cleaning frequency 37 kHz



Eco-Clean - single-frequency units

Volumes between 3 and 14 l, all units feature heating system, Sweep and DeGas functions as standard, cleaning frequency 35 kHz, two power settings.



Multi-Clean - multi-frequency units

Volumes between 4.7 and 150 l, all units feature heating system, Sweep and DeGas functions as standard, cleaning frequency 25 kHz and 45 kHz.



▶ Single-frequency standard

Basic-Clean – high standard

Our standard model offers fully developed technology and extremely useful features for effective and low-price cleaning. Stainless steel troughs, a run dry-safe heating system and optimum sound distribution with the Sweep function are just some of the highlights of this new JOKE® cleaning standard.

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▶ Single-frequency Profi

Eco-Clean - the economic solution

For everyone, who needs that little extra, this unit offers two power settings (Powerclean and Softclean) for high flexibility as well as the Sweep function. The tougher trough walls make these units suitable for continuous use.

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▶ Multi-frequency Profi

Multi-Clean – no compromise

The champions league of ultrasonic cleaning units. Experience the benefits of two frequencies for absolutely perfect cleaning results. You can choose between 25 kHz and 45 kHz ultrasonic frequency: Just switch between the two settings for the perfect frequency for every application. At 25 kHz, the ultrasonic cleaner removes rough impurities, whilst it cleans deeply down to the smallest openings and grooves at 45 kHz.

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▶ Modular system

Flex-Clean – special units

These units allow you to set up your own customised cleaning system. This modular system lets you combine cleaning units with an oscillating product carrier (basket), rinse systems and dryer. From a single unit to a three-piece module with dryer - anything is possible.

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JOKE® Basic-Clean ultrasonic cleaners

NEW!



▶ JOKE® Basic-Clean ultrasonic cleaners

The new standard range of JOKE® ultrasonic cleaning units offers fully developed technology, practice-orientated equipment and operator convenience at an unbeatable price. All units feature cleaning troughs made from cavitation-proof stainless steel and a dry run-safe and electronically controllable heating system as well as drying time. The auto-start option allows the user to preset a temperature at which the cleaning process should start automatically. With the Sweep and DeGas functions, these models ensure perfect and effective cleaning (further information on page 433!).

Further useful characteristics: All units (with the exception of 80 H and 175 H) feature a rapid drain system. The optional cover can also be used as a drip tray – just turn it over. The collected liquid can be reused in the cleaning trough.

Whether you are using ultrasound for the odd application or on a regular basis: The new Basic-Clean units offer modern design, efficiency and quality “Made in Germany”.



JOKE® Basic-Clean ultrasound cleaning units	Basic-Clean 80 H	Basic-Clean 175 H	Basic-Clean 275 H	Basic-Clean 425 H	Basic-Clean 575 H
Rec. useful volume	0.70 l	1.20 l	1.90 l	3.20 l	4.30 l
Total volume	0.80 l	1.75 l	2.75 l	4.25 l	5.75 l
Internal trough dimensions (W x T x H); mm	190 x 85 x 60	151 x 137 x 100	240 x 137 x 100	240 x 137 x 150	300 x 151 x 150
Device dimensions (W x T x H); mm	206 x 116 x 178	175 x 180 x 212	300 x 179 x 214	300 x 179 x 264	365 x 186 x 264
Ultrasonic frequency	37 kHz	37 kHz	37 kHz	37 kHz	37 kHz
Drain	-	-	3/8"	3/8"	3/8"
Heater	60 W	60 W	200 W	200 W	400 W
Supply voltage	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz
Power consumption	90 W	95 W	280 W	340 W	550 W
Weight	2.0 kg	2.1 kg	3.3 kg	4.0 kg	5.1 kg
Order No.	0 669 000	0 669 010	0 669 020	0 669 030	0 669 040
Price €					
Heater-free units					
Order No.	0 669 001	0 669 011	0 669 021	0 669 041	0 669 031
Price €					
Basket					
Basket dimensions (W x T x H); mm	177 x 73 x 35	112 x 103 x 55	198 x 106 x 55	190 x 105 x 80	255 x 115 x 80
Order No.	0 669 002	0 669 012	0 669 022	0 669 032	0 669 042
Price €					
Stainless steel cover					
Order No.	0 669 003	0 669 013	0 669 023	0 669 023	0 669 043
Price €					


NEW!

Ultrasonic cleaners JOKE® Basic-Clean



Basic-Clean 690 H	Basic-Clean 940 H	Basic-Clean 950 H	Basic-Clean 1275 H	Basic-Clean 1800 H	Basic-Clean 2800 H	Basic-Clean 4500 H	Basic-Clean 9000 H
5.20 l	7.30 l	7.50 l	9.00 l	12.90 l	20.60 l	35.00 l	75.00 l
6.90 l	9.40 l	9.50 l	12.75 l	18.00 l	28.00 l	45.00 l	90.00 l
505 x 137 x 100	505 x 137 x 150	300 x 240 x 150	300 x 240 x 200	327 x 300 x 200	505 x 300 x 200	500 x 300 x 300	600 x 500 x 300
568 x 179 x 214	568 x 179 x 264	365 x 278 x 264	365 x 278 x 321	390 x 340 x 321	568 x 340 x 321	615 x 370 x 467	715 x 570 x 467
37 kHz	37 kHz	37 kHz	37 kHz	37 kHz	37 kHz	37 kHz	37 kHz
3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"
600 W	600 W	400 W	800 W	800 W	1200 W	1600 W	2000 W
240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz	240 V, 50/60 Hz
750 W	750 W	550 W	1000 W	1000 W	1500 W	2000 W	2800 W
5.6 kg	6.4 kg	5.9 kg	7.5 kg	8.5 kg	11.0 kg	25.0 kg	38.0 kg
0 669 050	0 669 060	0 669 070	0 669 080	0 669 090	0 669 100	0 669 110	0 669 120
0 669 051	0 669 061	0 669 071	0 669 081	0 669 091	0 669 101	not available	not available
465 x 106 x 55	455 x 106 x 80	255 x 200 x 80	250 x 190 x 120	280 x 250 x 120	455 x 250 x 120	455 x 270 x 194	545 x 450 x 250
0 669 052	0 669 062	0 669 072	0 669 082	0 669 092	0 669 102	0 669 112	0 669 122
0 669 053	0 669 053	0 669 073	0 669 073	0 669 093	0 669 103	0 669 113	0 669 123

JOKE® Eco-Clean ultrasonic cleaners

▶ JOKE® Eco-Clean ultrasonic cleaners

The compromise between professional quality and an attractive price. The welded and reinforced troughs in cavitation-proof stainless steel make our Eco-Clean model particularly durable. The Sweep function ensures optimum sound distribution in the cleaning bath. A high-performance vibration system guarantees the best possible cleaning results. The heating is run dry-safe and its high performance allows very short heat-up times.

Thanks to the two cleaning settings "Powerclean" for intensive cleaning and "Softclean" for gentle cleaning of sensitive materials, the JOKE® Eco-Clean unit can cope with all applications. The cleaning frequency is 35 kHz. The drip-proof control panel, heat-resistant handle recesses and the rapid drain with welded piping make for convenience in daily work, further supported by an inlet connector for non-heating apparatus as serial equipment.





JOKE® Eco-Clean ultrasonic cleaners

JOKE® Eco-Clean ultrasonic cleaners	Eco-Clean 30 HA	Eco-Clean 50 HA	Eco-Clean 70 HA	Eco-Clean 140 HA
Rec. useful volume	2.0 l	3.5 l	5.0 l	10.0 l
Total volume	3.0 l	4.5 l	6.5 l	14.0 l
Internal trough dimensions (W x T x H); mm	240 x 130 x 100	240 x 130 x 150	300 x 150 x 150	300 x 240 x 200
Device dimensions (W x T x H); mm	360 x 205 x 250	360 x 205 x 300	360 x 225 x 300	425 x 315 x 350
Ultrasonic frequency	35 kHz	35 kHz	35 kHz	35 kHz
Drain	yes	yes	yes	yes
Heater (20 - 80° C adjustable)	400 W	400 W	400 W	800 W
Supply voltage	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz
Power consumption	520 W	560 W	580 W	1100 W
Weight	7.1 kg	8.3 kg	9.6 kg	13.2 kg
Order No.	0 668 000	0 668 010	0 668 020	0 668 030
Price €				
Basket				
Basket dimensions (W x T x H); mm	216 x 106 x 52	216 x 106 x 80	276 x 126 x 80	276 x 216 x 140
Order No.	0 668 003	0 668 013	0 668 023	0 668 033
Price €				
Stainless steel cover				
Order No.	0 668 001	0 668 001	0 668 021	0 668 031
Price €				





JOKE® Multi-Clean TI-H ultrasonic cleaners



▶ JOKE® Multi-Clean TI-H ultrasonic cleaners

The "champions league" of ultrasonic cleaning units. Designed without compromise in order to cope with the tough demands of professional cleaning. These cleaners are the non-plus-ultra in terms of quality, configuration and performance and ensure absolutely perfect cleaning results. Experience the benefits of two different frequency settings. A simple flick of the switch is all it needs: 25 kHz for high-performance intensive cleaning of rough impurities or 45 kHz for the gentle fine cleaning down to tiny grooves and openings.



JOKE® Multi-Clean TI-H ultrasonic cleaners	Multi-Clean TI-H 5	Multi-Clean TI-H 10	Multi-Clean TI-H 15	Multi-Clean TI-H 20	Multi-Clean TI-H 25
Rec. useful volume	3.5 l	8.6 l	12.2 l	16.8 l	19.8 l
Total volume	4.7 l	10.8 l	14.4 l	19.8 l	25.5 l
Internal trough dimensions (W x T x H); mm	240 x 130 x 150	300 x 240 x 150	300 x 240 x 200	330 x 300 x 200	330 x 300 x 230
Device dimensions (W x T x H); mm	340 x 300 x 370	400 x 415 x 370	400 x 415 x 420	430 x 470 x 420	615 x 690 x 570
Ultrasonic frequency	25/45 kHz	25/45 kHz	25/45 kHz	25/45 kHz	25/45 kHz
Drain	yes	yes	yes	yes	yes
Heater (30 - 80° C adjustable)	400 W	800 W	1000 W	1400 W	1000 W
Supply voltage	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz	230 V, 50/60 Hz
Power consumption	500 W	1000 W	1200 W	1650 W	1300 W
Weight	10.5 kg	14.8 kg	16.0 kg	20.0 kg	32.0 kg
Order No.	0 667 000	0 667 010	0 667 020	0 667 030	0 667 040
Price €					
Basket					
Basket dimensions (W x T x H); mm	200 x 100 x 90	260 x 210 x 90	260 x 210 x 135	290 x 270 x 135	290 x 270 x 145
Order No.	0 667 003	0 667 013	0 667 023	0 667 033	0 667 043
Price €					
Stainless steel cover					
Order No.	0 667 001	0 667 011	0 667 011	0 667 031	0 667 031
Price €					



JOKE® Multi-Clean TI-H ultrasonic cleaners



Multi-Clean TI-H 55	Multi-Clean TI-H 80	Multi-Clean TI-H 115	Multi-Clean TI-H 150
45.0 l	67.5 l	90.0 l	135.0 l
57.8 l	82.5 l	115.5 l	180.0 l
500 x 300 x 350	500 x 300 x 500	600 x 500 x 350	600 x 500 x 510
620 x 850 x 570	620 x 850 x 720	840 x 1000 x 570	840 x 1000 x 720
25/45 kHz	25/45 kHz	25/45 kHz	25/45 kHz
yes	yes	yes	yes
3000 W	4000 W	6000 W	6000 W
400 V, 50/60 Hz	400 V, 50/60 Hz	400 V, 50/60 Hz	400 V, 50/60 Hz
3600 W	4900 W	7400 W	7600 W
35.0 kg	60.0 kg	100.0 kg	140.0 kg
0 667 050	0 667 060	0 667 070	0 667 080
255 x 460 x 215	255 x 460 x 295	440 x 540 x 210	440 x 540 x 350
0 667 053	0 667 063	0 667 073	0 667 083
0 667 051	0 667 051	0 667 081	0 667 081

JOKE® Flex-Line modular ultrasonic cleaning system

NEW!



▶ JOKE® Flex-Line modular ultrasonic cleaning system

The modular composition of the Flex-Line product range allows you to set up a complete cleaning system, which is tailor-made to fulfil your very own requirements. This modular product range is based on ultrasonic cleaning with modern multi-frequency units with optional oscillating product carriers (baskets). As an addition to this basic unit, further modules for cleaning, rinsing and drying can be added according to your needs. The high flexibility of this system also allows for extensions or adaptations of the cleaning process at a future stage. The modular composition is continued with optional accessories: You can choose between oscillation equipment, baskets, bath care and water treatment systems to fine-tune the Flex-Line modules even more accurately to your application needs. Please contact us to discuss the right Flex-Line components for your requirements.



Sweep and DeGas functions

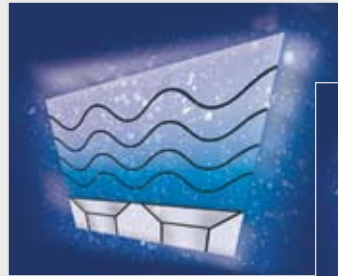


What is Sweep and DeGas?

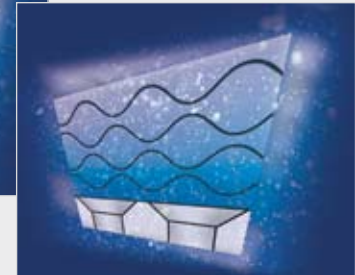
All our ultrasonic cleaners feature the Sweep and DeGas functions – what exactly does that mean?

Sweep

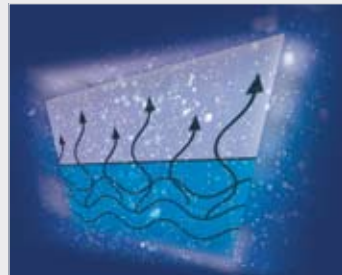
When the Sweep function is activated, the ultrasonic bath unlocks its full power. The Sweep function permanently shifts the frequencies so that the ultrasonic effect is distributed more uniformly in the vibrating trough.



Standard



With Sweep function



DeGas

DeGas

The DeGas function degases the cleaning liquid quickly and efficiently. This is necessary, because gas and air bubbles interfere with the cleaning process. This function is particularly useful each time the liquid is reused.



Ultrasonic cleaning advice

► Professional advice

Ultrasonic cleaning combines many factors, which in turn influence the achievable results. These results are influenced by the parts to be cleaned as well as the cleaning environment. We offer you the **chance of a free cleaning trial** at our premises. This trial should establish the perfect result for your application. Our dedicated questionnaire (available in PDF format or as a fax form) covers all relevant aspects for this test process. Please consult our **Product Manager Bernd Dörnen** to discuss all your ultrasonic cleaning needs:

Tel. +49 (0) 22 04 / 8 39-0
b.doernen@joke.de

Cleaning products for ultrasonic cleaners

Why cleaning products?

► Cleaning products for ultrasonic cleaners

The ultrasound plays an important role in the cleaning process. However, to obtain optimum results, cleaning chemicals cannot be entirely left out of the equation. The cleaning media must correspond to the kind of contamination and be compatible with the surface of the cleaning items. Also, not all media are suitable for ultrasonic cleaning.

The cleaned items must be rinsed with water after the ultrasonic cleaning process. To prevent water stains, de-ionised or distilled water (possibly with added corrosion protection) must be used. If such protection cannot be used, corrosion should be prevented by using a rinsing medium that vaporises without leaving residues (e.g. alcohol). Thus, the whole process consists of three stages: cleaning, rinsing, drying.

Cleaning of metals and corrosion

Unalloyed steels are very susceptible to corrosion, particularly after acid ultrasonic cleaning. They require a corrosion protection (at least temporarily) to be added to the cleaning bath and in particular to the aqueous rinsing baths, or a water-displacing rinsing medium (e.g. solvents with added oil). Another successful measure against corrosion is immediate blowing off after the final rinse.



Special solutions on request

Apart from the standard product range featured in this chapter, we also offer customised solutions to suit your particular cleaning needs. Please talk to **Bernd Dörnen** in order to find out more:

Tel. +49 (0) 22 04 / 8 39-0
b.doernen@joke.de



Cleaning products for ultrasonic cleaners

Cleaning products for ultrasonic cleaning		Content	Order No.	Price €
JOKE® Clean 110	 <p>Liquid alkaline cleaning concentrate for the elimination of stubborn soiling from metal, ceramic and plastic surfaces in ultrasonic immersion baths. Excellent suitability for the cleaning of: metal surfaces, many plastic surfaces, rubber surfaces and in particular quartz and silicon wafer cleaning following mechanical processing. Removes metal oxides, quartz deposits and stubborn organic soiling such as: oxidised and gummy oils and fats, waxes, lacquer and paint residues. Not suitable for light metals (Al, Mg and their alloys); plastics must be initially tested for resistance (not suitable for plastics susceptible to tension cracking).</p>	25 litres	0 666 102	
		5 litres	0 666 103	
JOKE® Clean 210	 <p>Liquid, weakly alkaline cleaning concentrate. Suitable for gentle cleaning of metal and plastic parts. JOKE® Clean 210 delivers excellent cleaning results on steel, non-ferrous heavy, noble and light metals, in addition to nickel, chrome, zinc and nickel-silver surfaces (including material combinations) and on plastics resistant to tension cracking. Mg-, MgZnAl ("electron") alloys and plastics must be tested for resistance before use. This cleaner has an emulsifying effect and eliminates the following substances: Aqueous cooling lubricant emulsions, fats and oils, abrasive and polishing pastes. A prior suitability check should be performed for polishing media containing animal fats.</p>	25 litres	0 666 112	
		5 litres	0 666 113	
JOKE® Clean 225	 <p>Liquid, mildly alkaline multipurpose cleaning concentrate for ultrasonic immersion baths. Suitable for metal, glass ceramic, plastic and rubber surfaces. Light metal alloys of AlSiMg type must be checked initially for resistance. For elimination of oils, fats, combustion residues, soot and other organic contamination and dust. Also suitable for overhaul cleaning (printed circuit boards, protection masks, copiers and printers).</p>	25 litres	0 666 122	
		5 litres	0 666 123	
JOKE® KS	 <p>Liquid temporary corrosion protection for addition to the cleaning or rinsing bath. For use in immersion baths with or without ultrasound. Corrosion-sensitive metal materials such as steel, grey cast iron and solid carbides are coated with a protective film providing temporary corrosion protection.</p>	5 litres	0 666 200	
		1 litres	0 666 201	