

# Kemet

## CLEANING SYSTEMS



[WWW.KEMET.CO.UK](http://WWW.KEMET.CO.UK)

## The Kemet range of Ultrasonic Systems for cleaning precision parts

**Kemet Ultrasonic Cleaning Tanks are constructed from stainless steel, and are designed for heavy duty operation.**

- Powerful ultrasonics for good cleaning.
- Thermostatically controlled indirect heating (heating panels in side walls).
- Floor sloping to drain valve.
- Built-in ultrasonic generator.
- Electronic controls with digital time/temperature display.
- Level guard which cuts off heating and ultrasonics if there is insufficient liquid in the tank.
- Double lid with thermal and acoustic insulation.
- Overflow weir for oil skimming.



**Modular, flexible & affordable**

See separate leaflet for details of heavy duty MC Range

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# KEMET L3B, L3, L8 & L20

## ULTRASONIC CLEANERS FOR PRECISION CLEANING

For precision cleaning in laboratories, optics, dental and health care, printing industry, watchmaking, jewellery and all kinds of precision mechanics.



### Specification

The tank and lid are made from stainless steel.  
The temperature and cleaning time are easily adjusted with the electronic control panel.

Typical cleaning times vary from 30 seconds to 5 minutes. The treatment time can be stored in the control panel and restarted. The L3B is a quality budget model with a mechanical timer.

Models L3 and L3B have the option of a stainless steel beaker tray.

This allows a smaller amount of detergent to be used compared with filling the tank.

Description	Code
Stainless Steel Beaker Tray	360919
400ml glass Beaker & Positioning "O" Ring	360918

### Technical Data

Model	L3B	L3	L8	L20
Tank volume / litres	2.7	2.7	7.5	19.5
External dimensions / mm	270L x 165W x 225H	270L x 165W x 225H	330L x 270W x 290H	530L x 330W x 335H
Tank dimensions / mm	240L x 135W x 100H	240L x 135W x 100H	300L x 240W x 150H	500L x 300W x 150H
Basket dimensions / mm	200L x 110W x 75H	200L x 110W x 75H	250L x 195W x 135H	475L x 260W x 125H
Ultrasonic power / W Nom/Peak	100/200	100/200	200/400	300/600
Ultrasonic frequency / kHz	40	40	40	30
Heating power / W	-	150	600	900
Electrical Connection V/Hz/W	230/50/100	230/50/250	230/50/800	230/50/1200
Drain valve	-	-	1/4"	1/2"
Weight / kg	4	4.5	8	14

Dimensions and data are subject to change without further notice

## KEMET SI (SEMI-INDUSTRIAL) RANGE

Kemet Si Ultrasonic Cleaners are completely modular with accessories to tailor build a system for each individual process. Matching accessories include:

- Heated Rinse Tanks.
- Air bubble agitation.
- Pumped Spray under immersion agitation.
- Hot Air re-circulation Dryers.
- Dewatering Tanks.
- Floor standing platforms.
- Drip tray connectors between units.
- Closed Loop Filtration.
- Replacement cartridge type for particle filtration.
- Replacement bag filters for large capacity or, combination particle/oil filtration.
- Combinations of oil surface skimming, particle and extra capacity storage tanks.
- Deionised production and accessories.
- PT assisted easy Lift systems.  
(For automation see the 'Versa+' systems).



2 fixed ultrasonic frequencies are available as standard. **Multi-Wave frequency technology** is available on certain models.



Storage tank with oil separation unit.



Si-80 wash stage with 10" filter and two stage cascade rinse with P2S size closed loop filtration, active carbon filter and deioniser.

Kemet Replacement Filters		
Consumables	Description	Kemet Code
Cartridge Filter Double Ended	250mm (10") Cartridge, 5 micron filtration	360441
	250mm (10") Cartridge, 10 micron filtration	360440
	250mm (10") Cartridge, 20 micron filtration	360694
	250mm (10") Cartridge, 50 micron filtration	360443
	250mm (10") Cartridge, 100 micron filtration	360442
	500mm (20") Cartridge, 1 micron filtration	360769
	500mm (20") Cartridge, 5 micron filtration	360870
	500mm (20") Cartridge, 10 micron filtration	360841
	500mm (20") Cartridge, 20 micron filtration	360840
	500mm (20") Cartridge, 50 micron filtration	360444
	500mm (20") Cartridge, 100 micron filtration	360445
	500mm (20") Cartridge, 150 micron filtration	360772
Bag Filter	P2S Filter Bag, 25 micron filtration	360844
	P2S Filter Bag, 50 micron filtration	360843
	P2S Filter Bag, 100 micron filtration	360843
	P2S Filter Bag, 25 micron filtration + oil absorb	360842

Dimensions and data are subject to change without further notice



- Closed loop filtration systems:



## KEMET SI (SEMI-INDUSTRIAL) RANGE

### Kemet SI Ultrasonic Cleaners

Kemet Ultrasonic Cleaning Tanks are constructed from stainless steel, and are designed for heavy duty operation.



VO3 Control Panel

Si Units have the new VO3 control panel.

Features:

- Degassing Programme.
- 7 day timer to pre-set heating of fluid.
- Thermostatic heat control.
- Temperature limit set.
- Temperature interlock.
- Built in clock/calendar.
- 3 memories.
- Service menu accessible by password.
- External control facility.
- Ultrasonic booster feature on Si80/120 and 160



Si-80, Si-160 semi-industrial units.

### Dimensions & Technical Data

Model	Si-25	Si-40	Si-80	Si-120	Si-160, 12	Si-160, 24
Tank volume / litres	25	40	80	120	160	160
External dimensions / mm	540L x 400W x 500H	640L x 390W x 540H	740L x 460W x 720H	740L x 580W x 745H	1340L x 460W x 770H	1340L x 460W x 770H
Tank dimensions / mm	385L x 280W x 250H	475L x 265W x 300H	585L x 330W x 400H	585L x 450W x 450H	1180L x 330W x 400H	1180L x 330W x 400H
Basket dimensions / mm	345L x 240W x 195H	420L x 225W x 225H	540L x 290W x 340H	540L x 400W x 390H	1110L x 280W x 300H	1110L x 280W x 300H
Basket Load / kg	5	5 or 10	20 or 25	35	40	40
Ultrasonic frequency / kHz*	30	30	30	30	30	30
Ultrasonic power/W Nom/Peak	300/600	600/1200	1200/2400	1200/2400	1200/2400	2400/4800
Heating power / W	1000	1500	2000	4000	6000	6000
Voltage frequency / V / Hz	230/50	230/50	230/50	400/50	400/50	400/50
Connected load / W	1300	2100	3200	5200	7200	8400

\*40kHz also available

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## Precision Parts Cleaning in a Small Footprint Machine

Achieve the required cleanliness with a Kemet Versa+ single or multi-stage cleaning system, available in both manual and automatic configurations.



- Manage your cleaning processes with compact Kemet Versa+ systems.
- The Versa+ is engineered to meet the requirements of a demanding production environment, and maintenance cleaning.
- Systems are configured for ultrasonic, jet turbulence, agitation options, drying and fluid handling.
- Ergonomic working environment: optimised working height and direction.
- Cost effective solution for multi-stage processes.
- Safety is our priority in engineering parts manipulation. The Kemet PT Easylift is engineered to lift loads up to 40 kg by manual horizontal movement and air-assisted lifting movement. Automatic basket transporters TD10/TD20 are available for 10 and 20 kg loads.



40 litre Encapsulated Kemet Versa+

## Kemet Versa+ Ultrasonic Cleaning Systems

### Wash

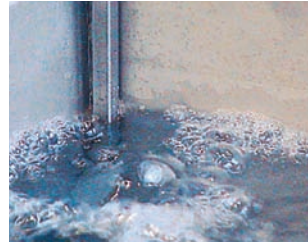
Kemet's success in providing precision cleaning is based on powerful ultrasonics. For products not suitable for ultrasonic cleaning, Kemet offers a jet turbulence technique with spray under immersion. A full width overflow weir, cut-off valve and surface skimming are standard features.



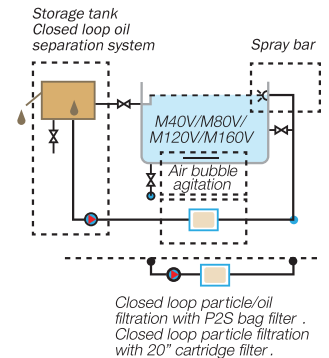
1. Full width overflow weir is a standard feature



2. Spray bar for surface skimming



3. Air bubble agitation for effective rinsing



### Rinse

Detergent residues are removed from the components surface by rinsing. More effective rinsing can be provided by adding (optional) air bubble agitation. Best rinsing results are achieved with demineralised water. For non-heated dewatering fluids, optional Kemet dewatering units are recommended.

### Dry

High quality drying systems are available for different applications.

### Fluid Handling

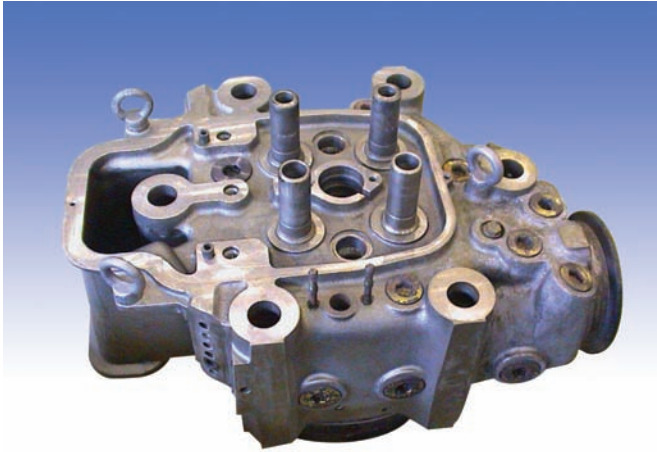
Kemet fluid handling options assist in achieving the required cleanliness level and reduction in operating costs. Closed loop filtration and oil removal options increase the life of wash and rinse liquids whilst providing a more consistent clean result. Free oil can be removed from the wash liquid by surface skimming and by using a storage tank with an oil separation system.

Technical information	M40V	M80V	M120V	M160V	M160VW
Volume Litres	40	80	120	160	160
External dimensions mm	400L x 800W x 900H	470L x 930W x 900H	590L x 920W x 900H	470L x 1340W x 900H	470L x 1340W x 900H
Tank dimensions mm	265L x 460W x 300H	330L x 585W x 400H	330L x 585W x 460H	330L x 1180W x 400H	330L x 1180W x 400H
Wash basket dimensions mm	225L x 420W x 225H	290L x 540W x 340H	400L x 540W x 390H	280L x 1110W x 300H	280L x 1110W x 300H
Ultrasonic power W nom./peak	600/1200	1200/2400	1200/2400	1200/2400	2400/4800
Ultrasonic frequency kHz*	30	30	30	30	30
Heating power W	1500	2000	4000	6000	6000
Voltage V/Hz	230/50	230/50	(230)/400/50	(230)/400/50	(230)/400/50
Filling valve	R 1/4	R 1/4	R 1/4	R 1/4	R 1/4
Drain valve	R 3/4	R 3/4	R 3/4	R 3/4	R 3/4
Overflow weir valve	R 3/4	R 3/4	R 3/4	R 3/4	R 3/4
Connecting load W	2100	3200	5200	7200	8400

\*40kHz also available

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## Perfect Clean Parts in a Production Situation



- Fully enclosed single wash chamber machine operating completely under vacuum eliminating harmful effects to the environment while achieving excellent parts cleaning result.
- Touchscreen control with network capability. Optional Teleservice link available for remote monitoring.
- Single cleaning chamber allows for multifunction cleaning stages.
- Continuous vacuum operation eliminates air pockets to provide deeper cleaning in recesses, blind holes and better removal of swarfs, chips, emulsions, oil and other solids.
- Automated basket transport systems with basket identification to reduce or eliminate manual handling, allows continuous machine operation.
- Systems are available to run with chlorinated solvents, PCE, hydrocarbon solvents or modified alcohols.





# KEMET KP SOLVENT VACUUM CLEANING SYSTEMS

## Vacuum Technology

The Kemet Optisol KP is a continuous vacuum parts cleaning system utilizing Chlorinated Hydrocarbon or Modified Alcohol Solvents. These fully enclosed systems provide an excellent cleaning solution for industrial precision parts, while imposing no harmful effects on the environment. Part integrity is maintained by the low operating temperature under vacuum.

## Wash

The single cleaning chamber can accept up to 3 baskets of contaminated parts for all stages of the cleaning cycle. Various wash stages available in Optisol KP include spray, immersion and ultrasonic cleaning. Washing efficiency and full solvent drainage is achieved by fully programmable basket movement including any combination of static, tilting or rotation. Operation under continuous vacuum ensures no air pockets thereby further enhancing washing efficiency.

## Rinse/Dry

A programmable rinsing cycle after the wash is made by creating vapour. Solvent is heated in the main boiler which then permits vapour to move to the cleaning chamber to condensate and rinse the parts. A programmable drying cycle is under higher vacuum to bring the boiling point of the solvent to a lower temperature. Complete evaporation of any solvent inside even the most complex detail of the part is then achieved. Complete part and chamber drying provides safety for environment and operator.

## Rust Inhibitor

For application of oil based rust inhibitor to parts, a rust inhibitor can be added to the Optisol KP system.

## Solvent Handling

Maintenance of the solvent integrity is accomplished by distillation of the solvent by means of continuous vapour boiler in the distillation loop. Electrical heaters, temperature and level sensors in the boiler assure appropriate safe temperature throughout the cycle.

## Automation

A variety of automation options exist for basket transport and identification. Basket lift, conveyor system, as well as multi-basket automation connectivity is available.

Overall dimensions (mm)	KP 50 H/MA	KP 100 H/MA	KP 150 H/MA	KP 50 S	KP 100 S	KP 150 S
	Hydrocarbons in VbF class A3 Modified alcohols (alkoxy-propanols)			Chlorinated solvents PCE		
Width	1750	1900	1900	1750	1900	1900
Depth	1750	2150	2150	1500	2150	2150
Height	2600	2600	2600	2600	2600	2600
Basket capacity						
Length (mm)	450	600	900	450	600	900
Width (mm)	300	450	450	300	450	450
Height (mm)	200	200	200	200	200	200
Weight (kg)	50	100	150	50	100	150
Cycles/Hour						
Depending on cleaning process and treatment times	up to 8	up to 8	up to 8	up to 5	up to 5	up to 5
Empty Weight of machine (kg)	2000	2700	3000	1400	1800	2400

Dimensions and data are subject to change without further notice

## KEMET BT- RANGE CUSTOM / AQUEOUS

The Kemet BT - Range enables customisation of the ultrasonic tank to your specific dimensions. This versatile range makes such systems flexible and affordable with shorter delivery times.

### Your dimensions, our solutions

The tank sizes can be fitted to your requirement: volumes up to 650 litres. The reliable Kemet ultrasonic power modules remove contamination effectively and cut time spent on cleaning.

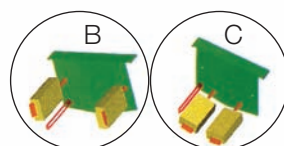


### Features

- All stainless steel construction
- Standard power modules for ultrasonics and heating
- Power Booster for increased ultrasonic power
- Sweep for uniform cleaning effect
- Heat insulated tank
- Drain valve
- Plugged water inlet
- Level guard based on conductivity
- Overflow weir
- Guide rails Bottom grid
- Electric cabinet for wall mounting with 5m cable

### Options:

- Inlet valve
- Weir valve
- Lid (Lift off or hinged)
- Rinse tank
- Air agitation to rinse tank
- Wash basket
- Closed loop filtration
- 7-day timer



Positions of Transducer boxes

Consult Kemet with any BT enquiry to ensure power and tank sizes are compatible

Size	BT-120B	BT-120C	BT-240B1	BT-240B2	BT-240C	BT-360B	BT-480B
Ultrasonic W (nom/peak) power	1200/2400	1200/2400	2400/4800	2400/4800	2400/4800	3600/7200	4800/9600
Ultrasonic frequency - kHz	28	28	28	28	28	28	28
Transducer boxes - W	2x600	2x600	2x600	4x600	2x1200	2x600 + 2x1200	4x1200
Transducer box lengths - mm	4500 or 800	450 or 800	800 or 1150	450 or 800	800 or 1150	800	800 or 1150
Recommended effective liquid volume - litres	120	120	250	250	250	450	600
Maximum effective liquid volume - litres	200	200	400	400	400	600	650
Tank effective dimensions							
Length / min / max (mm)	400/700	600/800	400/700	400 /700	600/800	400/700	400/700
Width / min / max (mm)	600/1300	60/1300	950/1300	600/1300	950/1300	950/1300	950/1300
Depth / min / max (mm)	310/700	300/600	310/700	550/700	300/600	550/700	550/700
Electrical connection	400V 3-phase / 50Hz	400V 3-phase / 50Hz	400V 3-phase / 50Hz	400V 3-phase / 50Hz	400V 3-phase / 50Hz	400V 3-phase / 50Hz	400V 3-phase / 50Hz
Connected load - kw	4.2	4.2	7.4	7.4	7.4	8.6	13.8

Separate electric box

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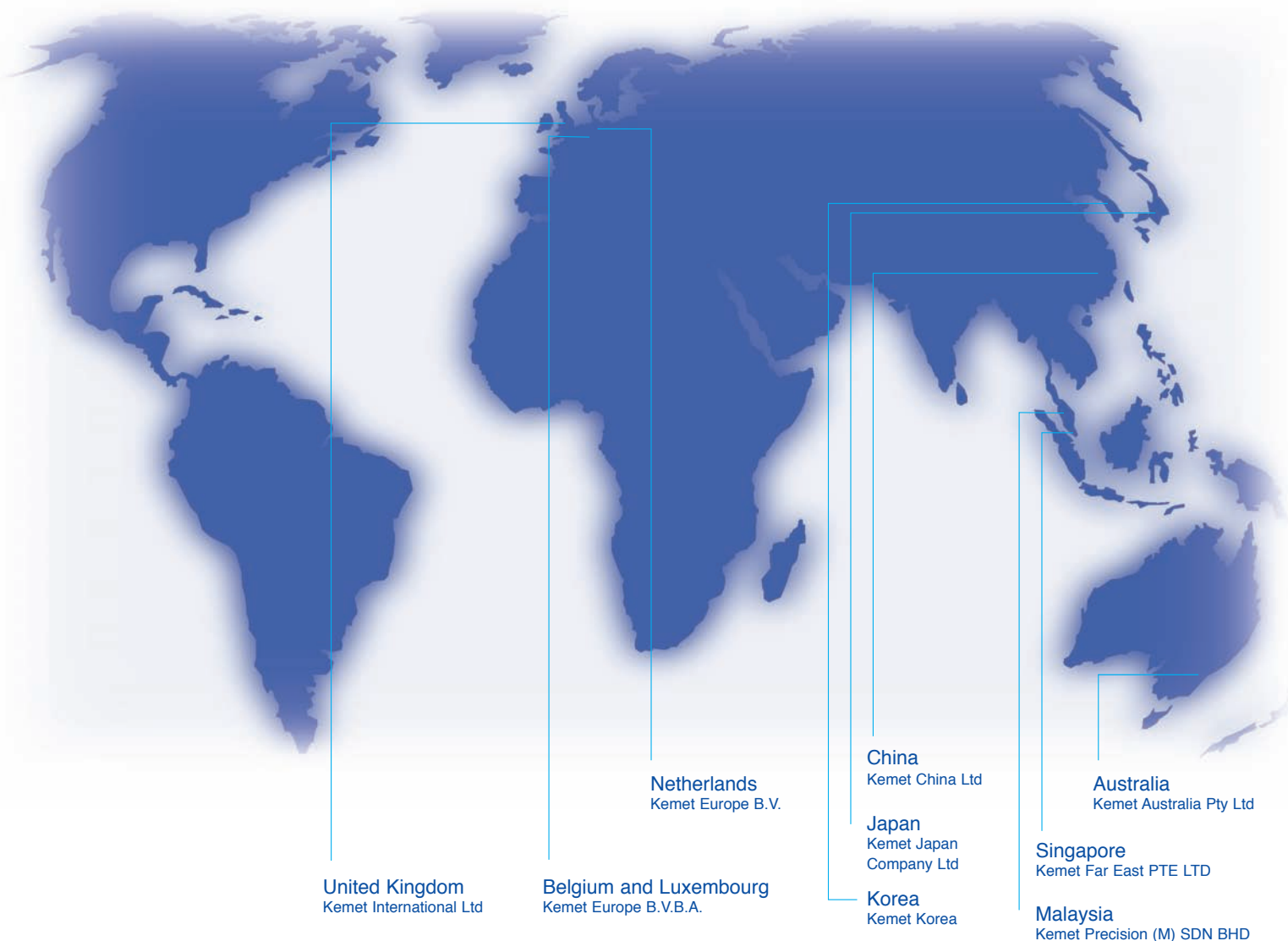
# KEMET CLEANING CHEMICALS

Kemet Cleaning Chemicals are specially formulated concentrates and are available in Neutral, Alkaline and Acid types. Special Solvent formulations are also available

Kemet Aqueous Cleaning Fluid Data									
Kemet UK Type	Package Size	Product Code	Alkaline or Acid	PH approx	Dilution % Suggested	Temp. C° Suggested	Inhibitor	Suggested Use	Comments
A9	5kg 20kg 210kg	360477 360478 360479	Light Alkaline	9.5	3-15% suggest 10%	40-60°	Yes, short duration @ 1-3%	Nearly neutral to suit all materials	Temperatures above 40° can change the colour of non-ferrous materials.
A	1 litre 5 litre 25 litre	360401 360402 360403	Alkaline	13	15%	40-65°	-	General Purpose and all steels.	Can lightly etch non-ferrous
O2	5kg 20kg 210kg	360920 360921 360911	Alkaline	13	5-25% suggest 10%	40-75°	-	General Purpose and all Steels (suitable for spray wash 1% to 5% dilution)	Low Foam Detergent. Might lightly etch some non-ferrous.
H14	5kg 20kg 210kg	360474 360475 360476	Strong Alkaline	14	3-30% suggest 15%	60-85° 85° optimum	-	Mould cleaning, carbon removal, Steels, Ceramics/glass.	Powerful Detergent. Will etch or attack non-ferrous materials. Steel dis-colour at high temp.
N	1 litre 5 litre 30 litre	360404 360955 360405	Neutral	7	15%	40-60°	-	Neutral to suit all materials including plastics.	Temperatures above 40° can change the colour of materials, water marks possible
I	5kg 20kg 210kg	360480 360481 360482	Acid	1	5-10% start 5%	25-60° start 25°	-	Rust and Oxide Removal on all materials. Restore White Ceramics	Will etch all materials and brighten some non-ferrous. Cold rinse, dry immediately. Protect ferrous.
Kemet Solvent Fluids									
M99	20kg	360486	-	-	100%	(flash pt 97°) <75°	Yes	Dewatering. Removes water moisture, provides corrosion protection.	Dewatering Fluid for Moulds/parts going into storage. Immerse/drain over tank.
C100	20kg	360923	-	-	100%	(flash pt 108°) 25-70°	-	Removing/softening Polyurethane residues Glue and paint.	Soak and/or ultrasonic. Consider for Aluminium moulds.
C160	25 Litre	E05615	-	-	100%	(flash pt 158°) <120°	-	Removing waxes, grease, polishes, lap compounds.	High temp solvent . Use Heated dip tanks, Ultrasonics Can be rinsed with Aqueous.
C0-42	450ml 5 litre 25 litre 200 litre	302103 302102 302101 302105	-	-	100%	(flash pt 23°) Do not heat	-	Removing waxes, grease, polishes, lap compounds.	Manual cleaning agent, use trigger spray, dip, wipe. Do not use in Ultrasonic.
C70	500ml aerosol. Box 12	302114 302115	-	-	100%	(flash pt -10°) High flammability	-	Removing waxes, grease, polishes, lap compounds.	Manual Aerosol cleaning agent, with tube for inaccessible areas. Fast evaporation rate.

Information for Guidance only.  
Subject to change.

## Kemet International Ltd. Subsidiary Companies



**Kemet Products are available through a Worldwide Network of Authorised Distributors in**

**Europe  
Asia**

**Africa  
U.S.A.**

**Middle East  
Australasia**

**Kemet**

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