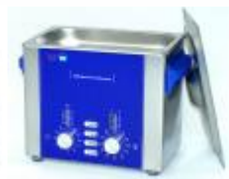
User Guide
Ultrasonic Cleaner

DR-MH30

DR-LQ30

DR-LD30


DR-DS30

DR-P30

SOME ILLUSTR ATIONS OF USAGES

- World-wide leading brand with outstanding high quality
- Stainless steel made PROFESSIONAL outlook
- Digital timer/temperature control for friendly operation
- Full range models and various accessories
- Quick degassing with Autodegas / degas
- Improved cleaning performance with sweep
- International patent and approval certificates

Derui®

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Optional special function with 110-220V voltage interchange-able switch at back side.

28kHz or other frequency transducers are available to make for above models.
** Larger than 26L models or fabricated tank models are available as tailor made. **

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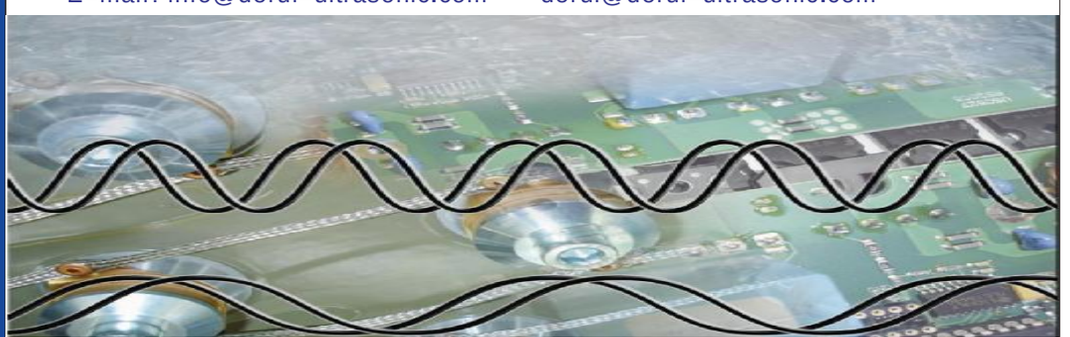
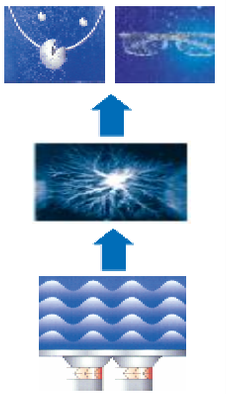


1. INTRODUCTION



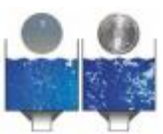
Ultrasonic cleaning is on based of Cavitation Effect caused by high frequency ultrasonic wave vibration signal in liquid. Millions of tiny bubbles are created when ultrasonic sound is passed through liquid. It is these tiny bubbles implode violently that cause Cavitation, which have great impact and provide intense scrubbing action on the surface of the cleaning object. Additionally, these bubbles are small enough to penetrate even microscopic crevices, cleaning them thoroughly and consistently.

2. UNPACKING AND IMPORTANT

Remove cleaner from its packaging and ensure it is correct for your local supply voltage. Never operate without, or remove the safety ground (earth) from the A.C. power cord / mains lead.

3. SAFETY INSTRUCTIONS

- ★ Do not attempt to remove any screws or panels. There are no user serviceable parts inside.
- ★ Do not operate this unit if the cord of plug is damaged. Please refer to a service centre or qualified electrician for examination and repair
- ★ To avoid electric stock, never touch the cord or socket with wet hands.
- ★ Keep the unit unplugged before filling.
  Always fills the units above the MIN marker line before use.
  Always unplug the unit immediately after use and before emptying.
- ★ Do not operate the unit next to heat sources such as radiators.
  Operate on a dry level surface.
- ★ To avoid electric shock do not immerse the unit unto water or other liquid.
  The unit should not be exposed to dripping or splashing and no objects filled with liquids should be placed on top of it.
- ★ Do not fill the tank with Abrasive or Corrosive Chemicals.
  Repeated cleaning cycles will enhance the cleaning effect.
- ★ The unit should never be left unattended when plugged in.



4. SUGGESTED APPLICATIONS

DOMESTIC

Jewellery: Necklaces, Rings, Bracelets, etc.

Watches and Glasses/Sunglasses: Waterproof wristwatches, Watch chains, Glasses, Sunglasses etc.

Toiletry Items: Electric toothbrush heads, Electric shaver heads, Razor blades, Combs, Toothbrushes, Dentures etc.

CDs, DVDs: Any CD, VCD, DVD, pre-recorded of CD-R/RW

Office Equipment: Printer heads, Fountain pen nibs, Wax or Rubber stamps etc.

Metal Items: Metal cutlery (knives/forks etc), old coins, Metal badges, Valves, Machine nozzles, small metal parts etc.

COMMERCIAL/INDUSTRIAL

Airbrushes/ Sprayguns
Automotive/ Aviation components
Calligraphic pens/ nibs
Computer plotter pens/ nibs
Dental & surgical instruments
Fuel injectors
Geological & metallurgical specimens
Hypodermic needles
Inkjet printer cartridges
Jewellery manufacturing
Laboratory glassware & apparatus
Lenses & other optical components
Metal / fibre filters
Metal / rubber seals
Microelectronic circuits & components
Moulding dies
Nozzles
Printed circuit board (PCBs)
Production line cleaning
Scientific & Industrial instruments
Spectacle frames & lenses
Watches & clockwork

⚠ Porous stones such as pearls etc should not be immersed.
Watches should be fully waterproof (30m or more).
Any unfirm or inlaid item may become loose.
Items that are easy to be discoloured are not recommended for ultrasonic cleaning.

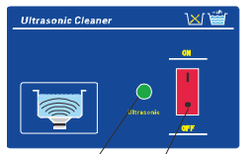
5. Ultrasonic Cleaner Basic

Model	DR-M07	DR-M13	DR-M20
Volume Size (L)	0.7	1.3	2
Tank Internal Dimension (mm)	152 x 87 x 65	150 x 137 x 65	150 x 137 x 100
Operation Frequency (kHz)	40	40	40
Ultrasonic Power (W)	60	60	60
Heating	NO	NO	NO
Drainage Valve	NO	NO	NO
Carrying Handle	NO	NO	NO
Cover	✓	✓	✓
Unit Weight (Kg)	1.8	2.5	2.7
Unit / Carton	12	8	8
Carton Size (cm)	48 x 47 x 43	48 x 48 x 58	48 x 48 x 58
Carton Weight (Kg)	23	20	22

✓: Included ○ : Optional NO : Not Available

DR-M Exterior:

Features Illustration:



2) LED indictor for Ultrasonic cleaning in process

1) POWER SWITCH

6. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. The power can be connected by sliding the boat-shaped switch upward, then the machine will enter into the operating state, green wok indicator will light and the ultrasonic will send out the working sound of “squeak”, then machine will start working.
4) After cleaning, please slide the boat-shaped switch downward; the machine will enter into the OFF state and the green work indicator lamp will go off, Then the machine will be off.
5) Emptying the tank--Remove waste liquids to empty the tank after no more need to use.

⚠ ! Excessive Heat or Prolonged cleaning time can cause damage of your cleaning items; such conditions are also not health for the machine and will result in shorter product life.

7. Ultrasonic Cleaner Mechanical (With Timer)

Model	DR-MS13	DR-MS20	DR-MS30
Volume Size (L)	1.3	2	3
Tank Internal Dimension (mm)	150 x 137 x 65	150 x 137 x 100	238 x 138 x 100
Operation Frequency (kHz)	40	40	40
Ultrasonic Power (W)	60	60	120
Heating	NO	NO	NO
Drainage Valve	NO	NO	○
Carrying Handle	NO	NO	NO
Cover	✓	✓	✓
Unit Weight (Kg)	2.5	2.7	3.8
Unit / Carton	8	8	6
Carton Size (cm)	48 x 48 x 58	48 x 48 x 58	72 x 34 x 59
Carton Weight (Kg)	20	22	24

✓: Included ○ : Optional NO : Not Available

DR-MS Exterior:

Features Illustration:

1) POWER SWITCH

2) LED indictor for Ultrasonic cleaning in process

8. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. add water to tank, suitable to completely immerse the items to be cleaned. using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. Once the switch is rotated clockwise, the machine will enter into the timed operating state. The timing time can be freely chosen according to the indication at the edge of rotary switch on the panel. The green work indicator lamp will be on and the ultrasonic will send out the working sound of “squeak”, then the machine will start working. The cleaning machine will enter into OFF state automatically when timing time is up.
Rotate switch anticlockwise to start long-term operating switch. The infinite mark ∞ is indicated on the panel. Green working indicator lamp is on and the ultrasonic sends out the working sound of “squeak” and starts working. ultrasonic will continue working. When cleaning is completed, in order to power off, please rotate the switch clockwise to the OFF state manually.
4) Emptying the tank--Remove waste liquids to empty the tank after no more need to use.

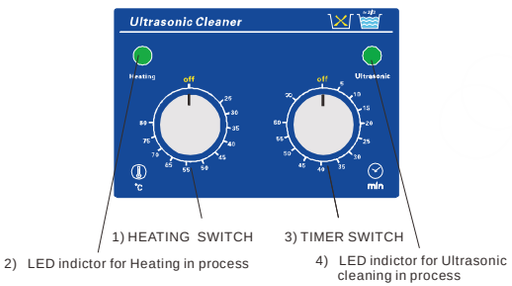
9. Ultrasonic Cleaner Mechanical (With Timer & Heated)

Model	DR-MH13	DR-MH20	DR-MH30	DR-MH40	DR-MH60	DR-MH100	DR-MH280
Volume Size (L)	1.3	2	3	4	6	10	28
Tank Internal Dimension (mm)	150 x 137 x 65	150 x 137 x 100	238 x 138 x 100	302 x 152 x 100	302 x 152 x 150	298 x 239 x 150	498 x 296 x 200
Operation Frequency (kHz)	40	40	40	40	40	40	40
Ultrasonic Power (W)	60	60	120	120	180	240	480
Heating	✓	✓	✓	✓	✓	✓	✓
Drainage Valve	NO	NO	○	○	○	✓	✓
Carrying Handle	NO	NO	NO	NO	✓	✓	✓
Cover	✓	✓	✓	✓	✓	✓	✓
Unit Weight (Kg)	2.5	2.7	3.8	5	5.5	9	19
Unit / Carton	8	8	6	4	4	1	1
Carton Size (cm)	48 x 48 x 58	48 x 48 x 58	72 x 34 x 59	56 x 42 x76	56 x 42 x76	46 x 36 x43	65 x 42 x 49
Carton Weight (Kg)	21	22	24	33	36	12	21

✓: Included ○ : Optional NO : Not Available

DR-MH Exterior:

Features Illustration:



10. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. Once the switch is rotated clockwise, the machine will enter into the timed operating state. The timing time can be freely chosen according to the indication at the edge of rotary switch on the panel. The green work indicator lamp will be on and the ultrasonic will send out the working sound of “squeak”, then the machine will start working. The cleaning machine will enter into OFF state automatically when timing time is up.
Rotate switch anticlockwise to start long-term operating switch. The infinite mark ∞ is indicated on the panel. Green working indicator lamp is on and the ultrasonic sends out the working sound of “squeak” and starts working. ultrasonic will continue working. When cleaning is completed, in order to power off, please rotate the switch clockwise to the OFF state manually.
4) In order to heat the cleaning fluid during cleaning, so long as the heating switch is rotated clockwise, then it will enter into the heating state. The heating temperature can be selected and set freely according to the indication at the edge of rotary switch on the panel. Once the green heating working indicator lamp is on, the heating band PTC will start working and heating the fluid. when the temperature reaches the set temperature, the green heating working indicator lamp will go off and the heating band PTC will stop working. when the fluid temperature is lower than the set temperature, the heating band PTC will also start working and heating the fluid. Then, the temperature of the fluid will be automatically controlled at the set temperature. To stop heating, please rotate heating switch back to the OFF position anticlockwise.
5) Emptying the tank--Remove waste liquids to empty the tank after no more need to use. Some models feature drain tap located on the side of the unit, using it can make the removal of the waste liquids effortless and safe. always ensure the drain tap is “Closed” when filling the tank with water.

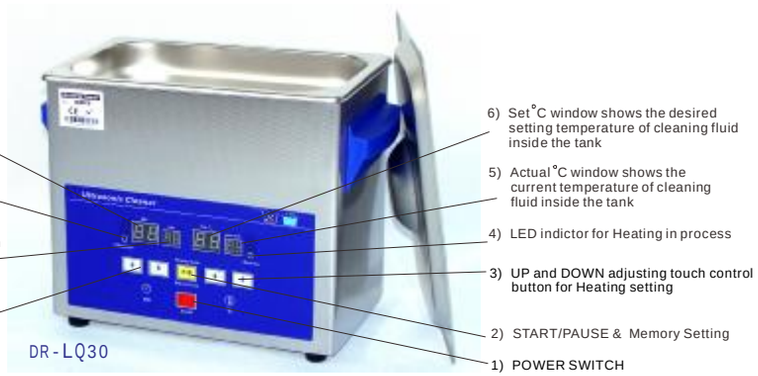
⚠ ! Excessive Heat or Prolonged cleaning time can cause damage of your cleaning items; such conditions are also not health for the machine and will result in shorter product life.

11. Ultrasonic Cleaner Memory Quick

Model	DR-LQ07	DR-LQ13	DR-LQ20	DR-LQ22	DR-LQ30	DR-LQ40	DR-LQ45	DR-LQ60	DR-LQ100	DR-LQ280
Volume Size (L)	0.7	1.3	2	2.2	3	4	4.5	6	10	28
Tank Internal Dimension (mm)	152 x 87 x 65	150 x 137 x 65	150 x 137 x 100	234 x 132 x 65	238 x 138 x 100	302 x 152 x 100	238 x 138 x 150	302 x 152 x 150	298 x 239 x 150	498 x 296 x 200
Operation Frequency (kHz)	40	40	40	40	40	40	40	40	40	40
Ultrasonic Power (W)	60	60	60	60	120	120	120	180	240	480
Heating	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drainage Valve	NO	NO	NO	○	○	○	○	○	✓	✓
Carrying Handle	NO	NO	NO	○	✓	✓	✓	✓	✓	✓
Cover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Unit Weight (Kg)	1.8	2.5	2.7	3	3.8	5	5	5.5	9	19
Unit / Carton	12	8	8	6	6	4	6	4	1	1
Carton Size (cm)	48 x 47 x 43	48 x 48 x 58	48 x 48 x 58	72 x 34 x 59	72 x 34 x 59	56 x 42 x76	72 x 34 x 67	56 x 42 x76	46 x 36 x43	65 x 42 x 49
Carton Weight (Kg)	23	21	22	22	24	33	33	36	12	21

✓: Included ○ : Optional NO : Not Available

Features Illustration:



12. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. All the buttons are touch-sensitive, just slightly touch with finger. Touch [⏻] button on the front panel to turn on the machine. You are now ready to set the timer and temperature.

4) Setting the Temperature– The actual temperature of the water in the tank is displayed in the "ACTUAL TEMPERATURE" window. The built-in heater can heat the water to a desired temperature by adjusting [▲] button to increase or [▼] button to decrease in the "Heating" side (RIGHT side) of the front panel. Once the set temperature is set higher than the figure shown in Actual Temperature, heating function starts immediately, RED "Heating" led will illuminate. When the set Temperature is reached, "Heating" led will turn off. Heating function can keep water at SET temperature for long time, not related to Ultrasonic timer setting. Auto-stop of heating function can prevent from excess Heating. To inactivate the heating function, input "00" in SET °C window, then Heater will be off.
5) Setting the timer--When power is connected, the timer window displays the figure of last time operation setting (both timer and side setting) before switch off. "Ultrasonic" timer setting is at the LEFT side of the front panel. Touch [▲] button to increase or [▼] button to decrease for setting the desired cleaning time. Touch [▶■] (Start/Pause) to start the ultrasonic function, RED "Ultrasonic" led will illuminate. When timer counts down to "00", Ultrasonic function will be stopped automatically and Figure in the "MIN" window will resume the figure of last time the green button being touched, this is a memory function.
6) Memory function and Pause Function [▶■] (= Start/Pause)--Every time the Green Button is touched; memory function will be activated to keep the "MIN" figure in memory (but not for "SEC"). When timer stops automatically, memorized MIN figure will be resumed. It is convenient for frequent users who repeat with same cleaning time cycle, no need to reset again and again. It is also a PAUSE function button to pause when ultrasonic timer is still running on, touch again [▶■] can release pause and continue the operation (need to RESET desired memorized setting figure again after Pause function is used).

! Excessive Heat or Prolonged cleaning time can cause damage of your cleaning items; such conditions are also not health for the machine and will result in shorter product life.

7) [⏻] button- It is power switch of the machine. When finish using, touch [⏻] to make sure all the displays turn off. Disconnecting the unit from the mains supply and remove the power cable.
8) Emptying the tank--Remove waste liquids to empty the tank after no more need to use. Some models feature drain tap located on the side of the unit, using it can make the removal of the waste liquids effortless and safe. always ensure the drain tap is "Closed" when filling the tank with water.

13. Ultrasonic Cleaner LCD Degas

Model	DR-LD07	DR-LD13	DR-LD20	DR-LD22	DR-LD30	DR-LD40	DR-LD45	DR-LD60	DR-LD100	DR-LD280
Volume Size (L)	0.7	1.3	2	2.2	3	4	4.5	6	10	28
Tank Internal Dimension (mm)	152 x 87 x 65	150 x 137 x 65	150 x 137 x 100	234 x 132 x 65	238 x 138 x 100	302 x 152 x 100	238 x 138 x 150	302 x 152 x 150	298 x 239 x 150	498 x 296 x 200
Operation Frequency (kHz)	40	40	40	40	40	40	40	40	40	40
Ultrasonic Power (W)	60	60	60	60	120	120	120	180	240	480
Heating	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Degas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drainage Valve	NO	NO	NO	○	○	○	○	○	✓	✓
Carrying Handle	NO	NO	NO	○	✓	✓	✓	✓	✓	✓
Cover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Unit Weight (Kg)	1.8	2.5	2.7	3	3.8	5	5	5.5	9	19
Unit / Carton	12	8	8	6	6	4	6	4	1	1
Carton Size (cm)	48 x 47 x 43	48 x 48 x 58	48 x 48 x 58	72 x 34 x 59	72 x 34 x 59	56 x 42 x76	72 x 34 x 67	56 x 42 x76	46 x 36 x43	65 x 42 x 49
Carton Weight (Kg)	23	21	22	22	24	33	33	36	12	21

✓: Included ○ : Optional NO : Not Available

Features Illustration:

14. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. All the buttons are touch-sensitive, just slightly touch with finger. Touch button on the front panel to turn on the machine. You are now ready to set the timer and temperature.

4) Setting the Temperature-- When power is on, the LCD actual temperature display window comes up with ingroove temperature. The setting figure will flash once the option is pressed to set temperature. It indicates the temperature setting function starts. Then, press button for up-regulation or down-regulation to freely set the needed heating temperature. when the set temperature is higher than the actual temperature, the in-built heating band will initiate heating function promptly. The working states (OFF and ON) are visible through LCD display window. When heating up to the necessary temperature, the heating will stop automatically. When the temperature is lower than the set one, heating will also start automatically. In this case, the fluid will enter into the constant temperature state. heating function is not restricted by the ultrasonic cleaning timing but can work for a long time (however, it is necessary to make sure there is enough water inside the slot).To inactivate the heating function, input “00” in preset temperature, then Heater will be off.
5) Setting the timer–When power is on, the timing setting figure will flash once the option setting button is pressed. It indicates the operation of timing setting function. At this time, you can press button for up-regulation or down-regulation to set the needed cleaning time (Min) freely. the ultrasonic's cleaning function will instantly start once button is pressed. LCD display window displays “U” which represents the ultrasonic is working. Cleaning will stop automatically when the cleaning time (sec) and (min) is counted down until “00” at both sides. The figure will resume the original setting automatically. This is the so-called “memory function”.
6) Memory function and Pause Function (= Start/Pause)--Every time the Green Button is touched; memory function will be activated to keep the “MIN” figure in memory (but not for “SEC”). When timer stops automatically, memorized MIN figure will be resumed. It is convenient for frequent users who repeat with same cleaning time cycle, no need to reset again and again. It is also a PAUSE function button to pause when ultrasonic timer is still running on, touch again can release pause and continue the operation (need to RESET desired memorized setting figure again after Pause function is used).
7) Use of degasing function: at the normal working state, the machine will start degassing function once the button is pressed. Then, LCD displays “D”. Degassing function will exit once button is pressed again. Then, LCD displays “U”.
8) button- It is power switch of the machine. When finish using, Touch to make sure all the displays turn off. Disconnecting the unit from the mains supply and remove the power cable.

15. Ultrasonic Cleaner Degas Sweep

Model	DR-DS07	DR-DS13	DR-DS20	DR-DS22	DR-DS30	DR-DS40	DR-DS45	DR-DS60	DR-DS100	DR-DS280
Volume Size (L)	0.7	1.3	2	2.2	3	4	4.5	6	10	28
Tank Internal Dimension (mm)	152 x 87 x 65	150 x 137 x 65	150 x 137 x 100	234 x 132 x 65	238 x 138 x 100	302 x 152 x 100	238 x 138 x 150	302 x 152 x 150	298 x 239 x 150	498 x 296 x 200
Operation Frequency (kHz)	37	37	37	37	37	37	37	37	37	37
Ultrasonic Power (W)	60	60	80	80	160	160	160	240	320	640
Heating	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Degas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sweep	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drainage Valve	NO	NO	NO	○	○	○	○	○	✓	✓
Carrying Handle	NO	NO	NO	○	✓	✓	✓	✓	✓	✓
Cover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Unit Weight (Kg)	1.8	2.5	2.7	3	3.8	5	5	5.5	9	19
Unit / Carton	12	8	8	6	6	4	6	4	1	1
Carton Size (cm)	48 x 47 x 43	48 x 48 x 58	48 x 48 x 58	72 x 34 x 59	72 x 34 x 59	56 x 42 x76	72 x 34 x 67	56 x 42 x76	46 x 36 x43	65 x 42 x 49
Carton Weight (Kg)	23	21	22	22	24	33	33	36	12	21

✓: Included ○ : Optional NO : Not Available

Features Illustration:

16. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. All the buttons are touch-sensitive, just slightly touch with finger. touch button on the front panel to turn on the machine. you are now ready to set the timer and temperature.
4) Setting the Temperature-- When power is on, LED actual fluid temperature display window lamp flashes and displays fluid's actual temperature. To set related gears, rotate heating knob.In order to heat the cleaning fluid during cleaning, so long as the heating switch is rotated clockwise, then it will enter into the heating state. The heating temperature can be selected and set freely according to the indication at the edge of rotary switch on the panel. Once the green heating working indicator lamp is on, the heating band PTC will start working and heating the fluid. When the temperature reaches the set temperature, the green heating working indicator lamp will go off and the heating band PTC will stop working. When the fluid temperature is lower than the set temperature, the heating band PTC will also start working and heating the fluid. Then, the temperature of the fluid will be automatically controlled at the set temperature. To stop heating, please rotate heating switch back to the OFF position anticlockwise. Heating function is not restricted by the ultrasonic cleaning timing but can work for a long time (however, it is necessary to make sure there is enough water inside the slot).
5) Setting the timer–When power is on, rotate timing knob to set relevant gears. At this time, once button is pressed, the ultrasonic cleaning function will start imediatley. Then the LED window lamp flashes and displays the remaining time. When cleaning time is due, ultrasonic will stop and LED remaining time display window flashes and resumes to flash in the position before setting. At this time, as long as button is pressed, cleaning will start again. This is the so-called “memory function”. It is convenient to use.
6) PAUSE function: after pressing button each time, the machine will Initiate PAUSE function and the ultrasonic will stop outputting. Press the button again to operate continuously after observing the cleaning effect.
7) Use of degasing function: at the normal working state, once button is pressed, the machine will start degasing function and degas button indicator lamp will be on. Once button is pressed again, degassing function will stop and degasing button indcatorl lamp will be off.
8) Use of sweep function: at the normal work state, sweep function will start and sweep button indicator lamp will be on once button is pressed. If button is pressed again, the machin will stop sweep function and sweep button Indicator lamp will be off.
9) Emptying the tank--Remove waste liquids to empty the tank after no more need to use. Some models feature drain tap located on the side of the unit, using it can make the removal of the waste liquids effortless and safe. Always ensure the drain tap is “Closed” when filling the tank with water.

17. Ultrasonic Cleaner Multi–function

Model	DR–P30	DR–P40	DR–P45	DR–P60	DR–P100	DR–P130	DR–P280
Volume Size (L)	3	4	4.5	6	10	13	28
Tank Internal Dimension (mm)	238 x 138 x 100	302 x 152 x 100	238 x 138 x 150	302 x 152 x 150	298 x 239 x 150	302 x 240 x 200	498 x 296 x 200
Operation Frequency (kHz)	37	37	37	37	37	37	37
Ultrasonic Power(W)	160	160	160	240	320	400	640
Heating	✓	✓	✓	✓	✓	✓	✓
Degas	✓	✓	✓	✓	✓	✓	✓
Sweep	✓	✓	✓	✓	✓	✓	✓
Pulse	✓	✓	✓	✓	✓	✓	✓
Power set	✓	✓	✓	✓	✓	✓	✓
Drainage Valve	○	○	○	○	✓	✓	✓
Carrying Handle	✓	✓	✓	✓	✓	✓	✓
Cover	✓	✓	✓	✓	✓	✓	✓
Unit Weight (Kg)	3.8	5	5	5.5	9	12	19
Unit / Carton	6	4	6	4	1	1	1
Carton Size (cm)	67 x 35 x 59	72 x 34 x 59	72 x 34 x 67	56 x 42 x 76	46 x 36 x 43	46 x 36 x 50	65 x 42 x 49
Carton Weight (Kg)	24	33	33	36	12	14	21

✓: Included ○ : Optional NO : Not Available

Features Illustration:

18. OPERATION INSTRUCTIONS:

1) Check the specification table for the correct operating requirements (located on the rear of the unit).
2) Before connecting power, put the unit on a stable and flat working surface. Add water to tank, suitable to completely immerse the items to be cleaned. Using stainless steel basket is highly recommended.

! Never operate the unit without water in the cleaning tank. Always fill the unit above 2/3 marker line indicated on the inside of the tank. Failing to do so, DAMAGE MAY OCCUR.

3) Connect the power cable on the rear of the unit and ensure the wall supply is switched ON. All the buttons are touch-sensitive, just slightly touch with finger. touch on/off button on the front panel to turn on the machine. you are now ready to set the timer and temperature.
4) Setting the Temperature-- When power is on,When power is on, LCD display module displays the fluid's actual temperature. Rotate heating knob to the related gears. To freely set the needed heating temperature. When the set temperature is higher than the actual temperature, the in-built heating band will initiate heating function promptly. The working states (OFF and ON) are visible through LCD display window. When heating up to the necessary temperature, the heating will stop automatically. When the temperature is lower than the set one, heating will also start automatically. In this case, the fluid will enter into the constant temperature state.Heating function is not restricted by the ultrasonic cleaning timing but can work for a long time (however, it is necessary to make sure there is enough water inside the slot).
5) Setting the timer–When power is on , rotate the timing knob to set related gears , and then LCD display module shows related settings. At this time, ultrasonic cleaning function will start promptly if ▶■ button is pressed. Then, LCD display module displays remaining time. When cleaning time is due, the ultrasonic stops and LCD display module shows that remaining time resumes the position before setting. At this time, so long as ▶■ button is pressed, cleaning will Start again. This is “memory function”. It is convenient to use.
6) PAUSE function: after pressing ▶■ button each time, the machine will Initiate PAUSE function and the ultrasonic will stop outputting. Press the button again to operate continuously after observing the cleaning effect.
7) Use of degasing function: at the normal working state, once degas button is pressed, the machine will start degasing function and degas button indicator lamp will be on. Once degas button is pressed again, degassing function will stop and degasing button indcatorl lamp will be off.
8) Use of sweep function: at the normal work state, sweep function will start and sweep button indicator lamp will be on once sweep button is pressed. If sweep Button is pressed again, the machin will stop sweep function and sweep button Indicator lamp will be off.
9) Use of pulse function: at the normal working state, once Pulse button is pressed, the machine power will be increased to 120% and pulse button indicator lamp will be on. If Pulse button is pressed again, the pulse function will stop, the pulse Button indicator lamp will be off and the power will resume the normal value.
10) Use of power regulating function: the power is 40% when the power is on normally. The power range changes from 40% to 70% and 100%, which can be chosen freely by pressing the Power function button. Then, the set value will be Displayed in LCD display module.

19. DIFFERENT WAYS OF CLEANING

1) GENERAL CLEAING — use only plain water. Use warm temperature about 50℃.

2) ENHANCED CLEANING — add few drops of standard washing up liquid, liquid soap, or detergent into water, other non-acidic based cleaning agents can be also used.

3) EXTENSIVE CLEANING — Removing Tarnish, Carbon & Rust from non-plated metals, it is recommended to use specialist cleaning solution in associated using ultrasonic cleaner.

! Warning: Strong acid or alkaline cleaning solution will cause corrosion, rust and even puncture of tank or machine body. To overcome this problem, dilute to mild pH solution or request for tank made of specific grade of stainless steel like SUS316.

20. Optional Accessory for Ultrasonic cleaner

Standard basket

Small mesh basket

Rack

Optional special function with 110-220V voltage interchange-able switch at back side.
28kHz or other frequency transducers are available to make for above models.
** Larger than 26L models or fabricated tank models are available as tailor made. **

Useful information for Guaranty or Repair Purpose

Model Number			
Date of Purchase			
Invoice/Receipt Number			
Supplier Name, address and contact information			
Serial Number			
Remarks			

End-user is advised to note for different After-Sales-Services condition provided by Local retailer/dealer. Internet Technical Support is always available from manufacturer.

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