



Products Overview Catalog

Ultrasonic Cleaning Equipment

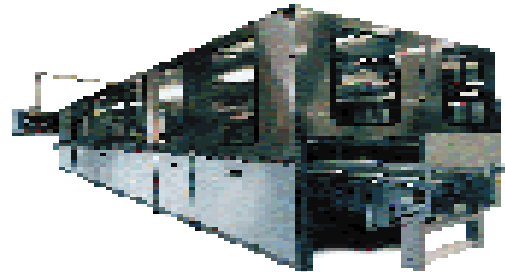
- ◆ General Parts Cleaning
- ◆ Manufacturing
- ◆ Maintenance, Repair and Overhaul Applications



Meeting the Cleaning Needs of Demanding Users

- ◆ Automotive
- ◆ Aerospace
- ◆ Filter Cleaning
- ◆ Injection Molding
- ◆ Print Shops
- ◆ Electronics
- ◆ Metal Finishing
- ◆ Plating
- ◆ QC and Lab
- ◆ Semiconductor, Optics, Disk Drive
- ◆ and More!

Aqueous Ultrasonic Cleaning Tanks Immersible Transducers and Systems



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Web site: www.blackstone-ney.com

A COMPLETE RANGE OF SOLVENT-FREE, ULTRASONIC PARTS CLEANING SYSTEMS

The most extensive and well-proven line of standard equipment in the industry!

IM-Series
Immersible
Ultrasonic
Transducers



Immersible Ultrasonic Transducers and Ultrasonic Cleaning Tanks, Dryers

For use in
General Parts Cleaning
and
Surface Finishing
Applications

HT-Series
Benchtop
Ultrasonic Cleaning
Tanks



CH/CD-Series
Console
Ultrasonic Cleaning
Tanks and Hot Air
Dryers



AT-Series
Large Capacity
Ultrasonic Cleaning
Tanks



GMC-1818
Ultrasonic Cleaning Tank

Ultrasonic and Agitating Parts Washers

*Specifically
designed for
Maintenance,
Repair and
Overhaul
Cleaning
Applications*



GMC-3523
Ultrasonic Cleaning Tank



GMP-3122
Ultrasonics and
Agitation

Custom products, options and features available throughout our product line to meet your specific cleaning requirements.

Why Ultrasonics?

The beauty of ultrasonics is that it will clean anywhere that the cleaning solution and the ultrasound will reach, including complex shapes, internal passages and blind holes. In addition, it will provide cleaning to a significantly higher standard (down to about 2 microns at 40 kHz) than alternative cleaning methods.

Eliminate Solvents!

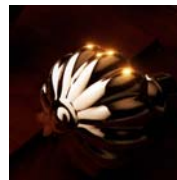
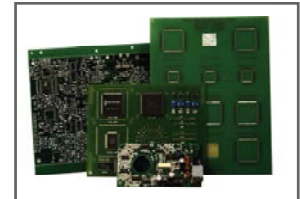
The nature of ultrasonics means that it can be combined with a wide range of aqueous (similar to dishwasher detergents) and semi-aqueous solutions to provide efficient cleaning without solvents. Compared with solvent cleaning, this generally provides higher quality and lower operating costs with greatly reduced safety or environmental concerns, and simpler waste disposal.

Typical Applications

Ink pad cleaning
Electronic boards and components
Plating line rinse tanks
Machined metal parts
Quality control and laboratory
Repair / Overhaul (Automotive, Aerospace, Printing, etc.)
Maintenance (Automotive, Aerospace, Printing, etc.)
Filter cleaning/refurbishing
Semiconductor, optics, disk drive
Other

Recommended Equipment

HT-1206
CH Series
IM or AT Series
HT, CH/CD or AT Series
HT Series
Grease Monkey GMC and GMP Series
Grease Monkey GMC and GMP Series
Grease Monkey GMC Series
Call us!
Call us!



We recommend that, you take advantage of our technical support team to ensure that the equipment you choose is correctly configured for your application, and for support in selecting the appropriate cleaning chemistry. We are always pleased to be of assistance. Call 800 766-6606 or 716 665-2340, or e-mail to cleanparts@blackstone-ney.com

Blackstone~NEY Ultrasonics also makes custom-engineered products, and we will be happy to provide support and advice in developing appropriate product specifications.

- ♦ The information contained in this catalog is correct to the best of our knowledge. However, we do not assume any liability for accurateness or completeness of the information contained herein.
- ♦ All product specifications are subject to change without notice.

shieldSONIK™

*The Environmentally Friendly
Damage-Free Parts Cleaning System*



Blackstone~NEY Ultrasonics introduces the industry's first **multiple frequency generator** with random sweep rates and random amplitude modulation frequencies.

The **shieldSONIK™** is an advanced digital generator that provides the ability to **select single or multiple frequencies** for a **single process tank**. Your cleaning results are optimized when your process includes **lower frequencies** for removing larger particles, and **higher frequencies** for removing sub-micron particles. This can now all be achieved in just one tank while providing safe random wave-forms that cannot excite a part in resonance!

**Blackstone~NEY Ultrasonics
Pushes the Technological Envelope
AGAIN!**

Shielding your:

- Parts from resonance damage
- Parts from erosion damage
- Employees from harsh chemicals

Technology of the Future Today!
One tank, one generator



Technology of the Past
Multiple tanks each driven by its own generator





Immersible Ultrasonic Transducers Ultrasonic Cleaning Tanks and Parts Dryers

For use in General Parts Cleaning Applications

IM-Series
Immersible
Ultrasonic
Transducers



- The IM-Series of immersible ultrasonic transducers complete the product line. These can be used to easily convert an existing plating or cleaning tank into an ultrasonic tank at minimum cost.

HT-Series
Benchtop
Ultrasonic
Cleaning Tanks



- The HT-Series is designed to mount on or drop into your benchtop for use with small parts in shop or lab.

CH/CD-Series
Console
Ultrasonic Cleaning
Tanks and Hot Air
Dryers



- The CH-Series is a line of free-standing units configured to support a wider variety of options. They can be combined with the CD-Series of dryers to create integrated cleaning systems.

AT-Series
Large Capacity
Ultrasonic Cleaning
Tanks



- The AT-Series of large capacity tanks (from 200 to 600 gallons) is available for those who need to clean large parts, or large batches of small parts.

IM-Series Immersible Ultrasonic Transducers

Blackstone~NEY Ultrasonics' Immersible Ultrasonic Transducers are available for operation at output frequencies of 25, 40, 72 and 104kHz. Lower frequencies are typically utilized in industrial applications where very aggressive cleaning action is required. Higher frequencies provide better cleaning results in many specialized, precision cleaning processes. In yet other applications, a combination of frequencies (processing at first one frequency and then another) provides superior results. In addition to frequency options, all standard models can also be readily customized to meet specific size and ultrasonic watt density requirements.

Specifications

IM-Series: (40, kHz and higher frequencies available) IM-Series: 25 kHz

| Model/Radiating Surface Dimensions W" X L" (X 2.75" deep) | Ultrasonic Power Watts (RMS) | Model/Radiating Surface Dimensions W" X L" (X 3.37" deep) | Ultrasonic Power Watts (RMS) |
|--|---------------------------------|--|---------------------------------|
| IM-5.75 X 16 | 600 | IM-6.5 X 18 | 600 |
| IM-8.25 X 11 | 600 | IM-10 X 14 | 600 |
| IM-5.75 X 21.25 | 800 | IM-6.5 X 23.75 | 800 |
| IM-11 X 11 | 800 | IM-12.25 X 12.25 | 800 |
| IM-5.75 X 31.5 | 1,000 | IM-12.5 X 18 | 1,000 |
| IM-8.25 X 21.25 | 1,000 | IM-10 X 24 | 1,000 |
| IM-11 X 16 | 1,000 | IM-6.5 X 35.5 | 1,000 |
| IM-6.5 X 32.5 | 1,200 | IM-8 X 39.5 | 1,200 |
| IM-9.5 X 23.625 | 1,200 | IM-10 X 28 | 1,200 |
| IM-11 X 18.5 | 1,200 | IM-12.5 X 21.375 | 1,200 |
| IM-6.5 X 41.5 | 1,500 | IM-6.5 X 48 | 1,500 |
| IM-9.5 X 26.5 | 1,500 | IM-10 X 35 | 1,500 |
| IM-11 X 22.5 | 1,500 | IM-12.5 X 24 | 1,500 |

Immersible transducers can also be custom-sized to meet your specific requirements.

Standard Features

316L Stainless Steel with Hard Chrome Plating
Flexible hose lead-out

Options

Rigid Pipe and Bulkhead Fitting
Mounting Tabs
Hanging Bracket
Ultrasonic Timer
UL Certified
High Endurance Sonalloy™ Construction



Convert an Existing Tank to an Ultrasonic Cleaning Tank

Our IM-Series of ultrasonic immersible transducers can often be added to your existing process tanks. Applications include enhanced rinsing on plating lines and upgrades to soak or agitating cleaning tanks.

Complete tank and immersible transducer systems are also available in a wide range of sizes.

HT-Series Benchtop Ultrasonic Cleaning Tanks

| MODEL | HT-1212 | HT-1812 | HT-2412 | HT-3612 | HT-2016 | HT-2020 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tank LRxFBxH | 12"x12"x11" | 18"x12"x14" | 24"x12"x11" | 36"x12"x11" | 20"x16"x14" | 20"x20"x16" |
| Cabinet LRxFBxH | 17"x17"x15" | 23"x17"x18" | 29"x17"x15" | 41"x17"x15" | 25"x21"x18" | 25"x25"x20" |
| Capacity (gals) w/ 2" freeboard | 6 | 11 | 11 | 17 | 17 | 24 |
| Heat | 1,200 W | 2,000 W | 2,000 W | 3,000 W | 3,000 W | 4,000 W |
| Ultrasonics (40 kHz) | 600 W | 1,000 W | 1,000 W | 1,800 W | 1,000 W | 2,000 W |
| Power Requirement | 120V, 1Ø | 120V, 1Ø | 120V, 1Ø | 120V, 1Ø | 120V, 1Ø | 120V, 1Ø |

| MODEL | HT-1206 * | HT-2406 | HT-3606 | HT-6006 | HT-2424 | HT-3624 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tank LRxFBxH | 12"x6"x8" | 24"x6"x8" | 36"x6"x8" | 60"x6"x8" | 24"x24"x16" | 36"x24"x16" |
| Cabinet LRxFBxH | 17"x11"x12" | 29"x11"x12" | 41"x11"x12" | 65"x11"x12" | 29"x29"x20" | 41"x29"x20" |
| Capacity (gals) w/ 2" freeboard | 2 | 4 | 6 | 9 | 35 | 52 |
| Heat | 600 W | 1,200 W | 2,000 W | 3,000 W | 5,000 W | 7,000 W |
| Ultrasonics (40 kHz) | 300 W | 600 W | 1,000 W | 1,600 W | 3,000 W | 4,000 W |
| Power Requirement | 120V, 1Ø | 120V, 1Ø | 120V, 1Ø | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø |

Options and Accessories: HT-Series

Ultrasonic Options

- No Ultrasonics
- 25 kHz Ultrasonics
- Digital Timer
- Ultrasonic Power Control
- Multi-frequency

Tank Options

- No Heat
- Removable Lift-Off Lid
- Parts Basket
- Pump and Filter
- UL Listed

Power Options (if different than Base)

- 120V, 1Ø
- 208V, 1Ø
- 240V, 1Ø



HT-1812 shown with optional removeable lid and timer. Every HT-Series tank is equipped with a rugged, reliable Neptune™ Ultrasonic Generator.

Stainless steel construction is standard throughout our complete line of cleaning tanks.

* HT-1206 is an all-in-one unit in which the generator is housed inside the tank chassis.

CH-Series Console Ultrasonic Cleaning Tanks

| MODEL | CH-1410 | CH-1812 | CH-2016 | CH-2418 | CH-2720 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Tank LRxFBxH | 14"x10"x12" | 18"x12"x16" | 20"x16"x18" | 24"x18"x18" | 27"x20"x22" |
| Cabinet LRxFBxH | 27"x22"x36" | 31"x28"x36" | 33"x32"x36" | 36"x34"x36" | 39"x36"x36" |
| Capacity (gals) w/ 2" freeboard | 6 | 13 | 22 | 30 | 47 |
| Heat | 1,200 W | 2,000 W | 4,000 W | 6,000 W | 6,000 W |
| Ultrasonics (40 kHz) | 600 W | 1,000 W | 1,000 W | 2,000 W | 3,000 W |
| Power Requirement | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø |

CD-Series Hot Air Recirculating Parts Dryers

| MODEL | CD-1410 | CD-1812 | CD-2016 | CD-2418 | CD-2720 |
|-------------------|-------------|-------------|-------------|-------------|-------------|
| Chamber LRxFBxH | 14"x10"x12" | 18"x12"x16" | 20"x16"x18" | 24"x18"x18" | 27"x20"x22" |
| Cabinet LRxFBxH | 27"x22"x36" | 31"x28"x36" | 33"x32"x36" | 36"x34"x36" | 39"x36"x36" |
| Heat | 800 W | 800 W | 1,000 W | 1,000 W | 1,200 W |
| Blower | 300 cfm | 1,000 cfm | 1,000 cfm | 1,000 cfm | 1,000 cfm |
| Power Requirement | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø | 240V, 1Ø |

Options and Accessories: CH-Series Cleaning Tanks

Ultrasonic Options

- No Ultrasonics
- 25 kHz Ultrasonics
- Digital Timer
- Ultrasonic Power Control

Optional Controls

- 7 Day Heater Timer
- Digital Temperature Control
- Low liquid level protection

Tank Options

- No Heat
- Removable Lift-Off Lid
- Hinged Lid
- Parts Basket
- Casters
- Pump and Filter(s)
- Pressure Gauge, Visual
- Y Strainer
- AN-6 Return Flush Fitting and Valve
- Mag Drive Pump, Polypropylene Head
- Oil Removing Weir and Sparger
- Needle Valve and Flow Meter
- Automatic Liquid Level Control
- Metered Chemical Feed

Power Option

- 480V, 3Ø

Options: CD-Series Parts Dryers

- Timer
- Removable Lift-Off Lid
- Hinged Lid



CH-1812 shown with temperature control, timer, low liquid level indicator and filtration. Neptune™ Ultrasonic Generator(s) are housed inside the cabinet.

AT-Series Large Capacity Ultrasonic Cleaning Tanks

| MODEL | AT-3636 | AT-4836 | AT-4848 | AT-6048 |
|--|-------------|-------------|-------------|-------------|
| Working Tank LRxFBxH | 36"x36"x36" | 48"x36"x36" | 48"x48"x48" | 60"x48"x48" |
| Capacity (gals) | 200 | 267 | 480 | 600 |
| Heat | 15,000 W | 20,000 W | 30,000 W | 38,000 W |
| Ultrasonics: 25 kHz Immersible Transducers | 4,000 W | 5,000 W | 6,000 W | 7,000 W |
| Power Requirement | 480V, 3Ø | 480V, 3Ø | 480V, 3Ø | 480V, 3Ø |

Options: AT-Series Cleaning Tanks

Ultrasonic Options

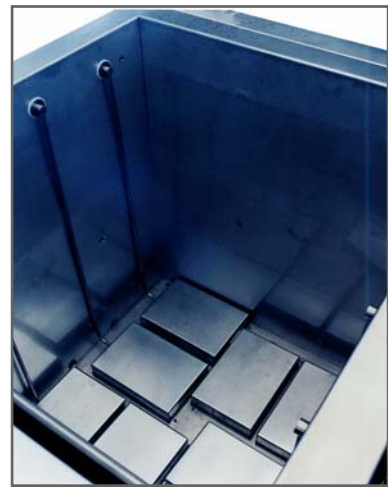
- No Ultrasonics
- 40 kHz Ultrasonics
- Ultrasonic Timer
- Ultrasonic Power Control
- Side-mounted Immersible Transducers

Tank Options

- 7 Day Heater Timer
- Exhaust Plenum
- Exhaust or Pusher Blower
- Liquid Turbulation
- Pump and Filter(s)
- Pressure Gauge
- Y Strainer
- Chip Catcher
- AN-6 Return Flush Fitting and Valve
- Mag Drive Pump, Polypropylene Head
- Oil Removing Weir and Sparger
- Oil Coalescor
- Needle Valve and Flow Meter
- Automatic Fill
- Liquid Level Control
- Metered Chemical Feed

Other Options

- Parts Basket, 300 lb.
- Load/Unload Station
- Sectional Lift-off Lid
- Pump-to-Drain Module
- Electrical Enclosure: Air Conditioned NEMA 13



An AT-Series Large Capacity Cleaning Tank with bottom-mounted 25kHz immersible ultrasonic transducers.



Optional side-mounting of immersible transducers.



Maintenance, Repair and General Parts Cleaning

The Grease Monkey line of cleaning systems has been especially designed to quickly and efficiently **remove oil, dirt and carbon from machine parts without solvents or manual scrubbing!** Featuring the versatile Classic Series, these products offer unmatched value for the money.

Grease Monkey Classic Series

| | GMC-1818 | GMC-1818 DLX | GMC-3523 |
|--------------------------|----------------------|-----------------------|----------------------|
| Capacity (Gallons) | 25 | 25 | 40 |
| Ultrasonics (40 kHz) | 2,000 W | 2,000 W | 2,000 W |
| Heat - Immersion type | 1,800 W | 4,000 W | 4,000 W |
| Dimensions LR X FB X D/H | | | |
| Working Tank | 18" X 18" X 20" | 18" X 18" X 20" | 35" X 23" X 10.375" |
| Overall Cabinet | 24.5" X 34.5" X 48.5 | 24.5" X 34.5" X 48.5" | 41.5" X 32.25" X 42" |
| Working Liquid Depth | 18" | 18" | 10.375" |
| Power Requirement | 115 V 20 amp | 230 V 30 amp | 230 V 30 amp |
| Shipping Weight | 450 lbs. | 450 lbs. | 550 lbs. |

Every Grease Monkey Classic Features

- Digital keypad for temp and ultrasonic cycle time, switches for manual operation of pump
- 7 Day Programmable Timer
- Low Liquid Level Protection
- Dual Filter System
- High Temp Filter Elements 125 and 50 micron
- Sound Reduction Package
- Locking, Leveling, Adjustable Casters
- 316L Stainless Steel Construction
- Pallet Jack Pick-up

GMC-1818:

- Hinged Lid Converts to Drain Tray
- Parts Basket Standard

GMC-1818



GMC-3523:

- Optional Task Light
- Optional Drain Tray
- Optional Parts Baskets
- Optional Heavy-Duty Parts Rack
- Oil Skimmer

GMC-3523



The WashMaster/Plus Series of Parts Cleaning Tanks incorporate heated, **aqueous ultrasonic cleaning** with the **extra soil-removing power** of vertical **agitation** and large capacity convenience.



WashMaster/Plus Series

| | WM III/GMP-3122 | WM IV/GMP-3527 | WM V/GMP-4436 | |
|---|--|-----------------|--|----------|
| <p>Immersible transducers</p> <p>Top view</p> <p>Weir</p> | Capacity (Gallons) | 92 | 123 | 202 |
| | Ultrasonics (40 kHz) | 3,000 W | 4,000 W | 5,000 W |
| | Heat | 6,000 W | 9,000 W | 12,000 W |
| | Power Requirement | 208 V 3Ø | 208 V 3Ø | 208 V 3Ø |
| | Amperage | 25 FLA | 41 FLA | 47 FLA |
| | Max. Parts Load lbs. | 125 | 150 | 500 |
| | Total Liquid Depth | 24" | 24" | 25" |
| | Working Agitation Depth | 17" | 17" | |
| | Agitation Stroke | 2" - 6" | 2" - 6" | 2" - 6" |
| | Shop Air Required | 80 psi | 80 psi | 80 psi |
| Working Tank | | | | |
| LR X FB | 31" X 22" | 35" X 27" | 44" X 36" | |
| Overall Unit | | | | |
| LR X FB X H | 38" X 51" X 68" | 42" X 56" X 68" | 56" X 78" X 79" | |
| Parts Basket Standard | | | | |
| LR X FB X D | 26" X 18" X 8" | 30" X 23" X 8" | 40" X 30" X 8" | |
| Features | Touchscreen PLC Liquid Level Control Filtration | | 7 Day Programmable Timer Oil Skimmer 316L Stainless Steel Construction | |
| Options | 25kHz Ultrasonics & multi-frequency Roller Conveyor Load / Unload Station Roller Conveyor between tanks Rollers on Basket Platform 240 or 480 Volt Power Supplies Additional or Custom Parts Basket | | | |

Ultrasonic Cleaning At a Glance

Ultrasonics is the science of sound waves above the frequency normally considered audible by humans (above 18 Kilohertz).



When vibrations at these high frequencies are introduced into liquids, areas of extremely high pressure are generated alternately at any given point in the liquid as the sound waves pass.



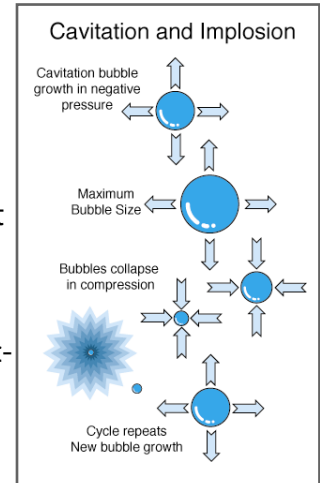
Ultrasonic transducers

Under the influence of vacuum, the liquid is literally torn apart to create what is called a cavitation bubble. As positive pressure replaces the vacuum which formed the cavitation bubble, it implodes, resulting in high pressure waves which do the work we ascribe to ultrasonics.

To produce this effect, electrical energy at the ultrasonic frequency is supplied to ultrasonic transducers by an ultrasonic generator. This electrical energy is applied to piezoelectric elements in the transducer which vibrate. These vibrations are amplified by the transducer's resonant masses and are introduced into the liquid through a radiating surface (most often, the bottom of the cleaning tank is the radiating surface).



The result: Energetic disturbances generated by the implosion of countless cavitation bubbles. These perform the cleaning task by providing micro-agitation through the liquid which safely and effectively "scrubs" the parts being cleaned.



Ultrasonic generator

Why Choose Blackstone~NEY Ultrasonics?

As the pioneer in ultrasonic cleaning technology, we continue to design, engineer and manufacture our own core components and finished equipment. With more than fifty years' experience in the industry, we have the solution to your most demanding cleaning challenge to safely, effectively, repeatably and economically meet your cleanliness standard.

Contact us for an evaluation of your cleaning requirement and we will provide expert analysis and recommendations for equipment, process and chemistry selection.

For more information on our complete product line or to learn more about ultrasonic cleaning technology, contact or visit us at:



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