



solvent : solvent/aqueous : aqueous : bioremediation : ultrasonic : accessories : custom systems

### Graymills.com 1.888.472.9645

### Selecting the right parts washer

Both your Graymills<sup>™</sup> distributor and our factory staff are prepared to offer any assistance in selecting your parts cleaner. The more of the following information you furnish, the quicker—and more precisely—the appropriate parts washer can be selected.

- O Soils to be removed.
- O Current cleaning method used.
- O Material(s) from which your parts are manufactured.
- O Size, weight, configuration and quantity of the parts to be cleaned per day.
- O Operations immediately before and after cleaning. (e.g., "machine before/paint after.")
- O Preferred method of handling: manual or automatic.
- O Single or multi-step cleaning required.
- O Type of cleaning fluid: solvent or water-based.

### Choosing your cleaning action

HUNTOWOD CHANGE

Units designated with the "FB" symbol are designed to reduce VOC emissions by meeting environmental regulations requiring a Freeboard ratio of 0.75. Consult your local environmental agency for specific requirements in your area.

Many of our products have been ETL certified to meet applicable U/L and CSA standards. Look for this symbol by the units.

A	B	0	0
SOAK	BRUSH	DIRECTED STREAM	HIGH PRESSURE SPRAY
Soaking is the simplest, least aggressive cleaning action. It is more effective with longer immersion time. This cleaning action is applicable where soils are easily removed and where low equipment cost is important.	Manual brushing is used as a supplement to other cleaning actions. This method is helpful in remov- ing stubborn soils in hard to reach places. An assortment of parts cleaning brushes is available in the ACCESSORIES section. See accesssories page 28-29.	A flexible hose is used to direct a flushing stream of low pressure cleaning fluid directly at the soiled part. This cleaning action is particularly effective for flushing parts when brushing. For maximum results, the directed stream action can be used in combination with other cleaning actions. Some models feature a second hose with a pistol grip nozzle, which provides an adjustable flushing spray.	Quick and effective cleaning is accomplished by a powerful spray of heated, water-based cleaning solution. The high pressure spray blasts away the toughest deposits without damaging precision parts.
•	F	G	0
TURBO FLUID Agitation	LIFT PLATFORM Agitation	HEATED	ULTRASONICS
This cleaning action is a result of the constant movement of the solution through and around the	A "scrubbing" action is achieved by continually moving the parts vertically through the cleaning fluid.	(Water based solution only.) The effectiveness of water based cleaning solutions increases dramatically as the	Ultrasonic systems work by inducing controlled cavitation in the cleaning fluid. Cavitation bubbles

movement of the solution through and around the soiled parts. It provides faster cleaning than manual applications. A variety of pump and air circulated systems are available for fluid agitation.

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achieved by continually moving the parts vertically through the cleaning fluid. The motion is accomplished by a pneumatically operated platform in the tank. The system is automatic. The cleaning action is intensified when used in combination with Turbo fluid agitation (see page 13). It is ideally suited for a wide range of cleaning tasks. (Water based solution only.) The effectiveness of water based cleaning solutions increases dramatically as the temperature increases. The optimum recommended temperature is governed by the equipment and the particular detergent used. Ultrasonic systems work by inducing controlled cavitation in the cleaning fluid. Cavitation bubbles form and collapse suddenly, releasing tremendous energy against the surfaces of objects immersed in the tank. This action "scrubs" hard to remove soils from the parts.

### Catalog Contents / Selection Guide

PAGE NO.	AVAILABLE Cleaning action	-> SOAK	BRUSH	DIRECTED STREAM	HIGH Pressure Spray	IN-TANK Fluid Agitation	LIFT Platform Agitation	Heated (Aqueous Only)	ULTRA- Sonics
5	SOLVENT								
	HK150 / H42RN F	B *		*					
5	DM232/236 FI			*					
6 7	PL36/PL36FB <b>F</b>			*					
7	PL422	B ×		*					
8	Clean-O-Matics <sup>™</sup> <b>F</b>			*		*			
0			-	^		^			
10	SOLVENT / AQUEOUS								
11	Turbo-Series T24/36	*							
11	Turbo-Series							_	
	T4330-thru T8430	*				*			
14	TR-Series Liftkleen™	*				_	*	_	
	TR2420-TR3626	*					*		
15	L-Series Liftkleen™								
	L36 thru L84	*					*		
16	TL-Series Liftkleen™								
	TL17 ( <b>FB</b> ), TLHS18	*	*	*			*		
17	Oil Separators /								
	Turbo Boost								
18	AQUEOUS								
18	DH226			*				*	
	PH822	*	*	*				*	
19	DH436R		*	*				*	
	DH536R		*	*				*	
20	Tempest <sup>™</sup> 10/20				*			*	
	1011/2000								
21	ULTRASONIC / AQUEOU	s							
21	Benchtop BTV and BTU	J <b>*</b>	-					*	*
22	SonicMax Console		_						
	CTU2012-CTU4723	*						*	*
23	Sonic Liftkleen™								
	TUSR24/36	*	-				*	*	*
24	Super Sonic Liftkleen™							_	
	TUS3725SL	*	-				*	*	*
26	BIOREMEDIATION/AQUEO								
26	BI0822	*	*	*				*	
27	BI0436R/536R		*	*				*	
28	ACCESSORIES								
	ACCESSORIES								
30	FLUIDS								
50	1 20100								

OPTIONAL

FB FREEBOARD

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### Why Graymills?

There are plenty of companies that will sell you a parts washer. So why should you choose Graymills? We could talk about our stateof-the-art manufacturing facility in Chicago, but what you really care about is how we can make you - and your company - more productive. That's a three step process.



Picking the best parts washer for your needs can be a confusing process. There are hundreds of options available. With its unmatched selection of products, Graymills offers you a "Total Cleaning Perspective" that others can't rival. Unlike companies with limited selection, who will simply steer you toward what they have to offer, we can actually help you select the proper equipment. And with our decades of experience in the industry, we speak your language and understand your needs.

No Confusion



Would you buy a car without a test drive or at least kicking the tires a bit? If not, then why would you invest a large sum of money in equipment based on promises in a catalog? With Graymills, there is no need to risk it. With our complementary cleaning tests, you can try before you buy. Why risk something unproven when you can be sure that what you ordered will work as you hope?



"No Confusion" and "No Risk" means that you can relax. By working together and talking through your needs, wants, and budget, you've picked the right equipment. And we'll stand behind it with a generous warranty. Our products are built to last, and we're proud of that fact. Now you can get back to what you do best.

At Graymills, we love talking to our customers. If you have guestions, call us at 888-472-9645 or 773-248-6825. Get what you need. Call Graymills.

Craig Shields, President

### We will customize a standard model or build you a Special. Just tell us about your cleaning application.

Look through our catalog and notice the wide range of standard models, from the 2<sup>1</sup>/<sub>2</sub> gallon freestanding unit to the 600 gallon Liftkleen<sup>™</sup>. Also notice the number of options available, which include stainless steel tanks and pumps, air powered motors, turbo pump agitation, lift platform agitation, and ultrasonics. Chances are one of these models and its options will meet your cleaning applications.

But maybe your cleaning needs run to the unusual. Does your system require portability, batch cleaning, or multiple-stage processing? Or do you desire a single or multi-tank system? We'll design and build a system for you whether it means simply altering a standard model or creating a one-of-a-kind special. Just contact your Graymills distributor or phone or fax our factory.

F	or more information 1-773-24	48-6825 FAX: 1-773-477-86	73	
	Parts Washers Designed	and Built by Graymills for:		
Automotive/Fleet Industry	Aerospace Industry	Electronic Tool Repair & Refurbishment	Medical Industry	
Clean engine, transmission and various other mechanical components for service/repair/rebuild.	Multi-stage, multi-process wash system including ultrasonics for sophisticated valve assemblies.	Cleaning power tool components before servicing.	Ultrasonic wash system for machinery maintenance.	
Petrochemical Industry	Printing & Paper	Environmental Alternatives	General Industrial	
Oil field equipment service/repair/rebuild.	Processing Industry Press parts & anilox roll maintenance.	Equipment specifically designed for use with soy-based solvents.	Manufacturing or Repair/Service	

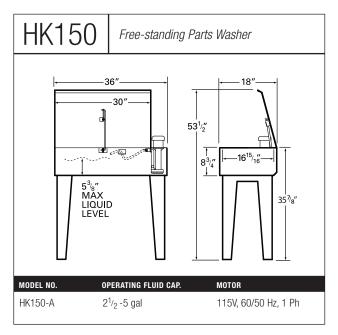
### Econo-Models

Full-sized free-standing units offer professional features in an economical package. Ideal for general maintenance and repair in industrial, automotive, marine or farm applications.



### Product features : HK150

- Abrasive-resistant pump; motor is not exposed to the cleaning solution - eliminates need for pump seals.
- 400 GPH flow rate
- Flexible Stay-Put metal flush hose for directable hands-free flushing action
- Filtration system includes sludge collection basket with dual foam filter to keep solution cleaner longer
- Removable internal work shelf or basket for easy manual cleaning and parts visibility
- Bottom drain for easy fluid change-outs
- Fusible safety link closes lid in event of fire
- 16 gauge steel tank with powder-coat finish for durability and long-life
- Removable legs for conversion into bench-top unit
- Optional external drain shelf to drain cleaned parts (see Accessories page 28-29)



H42RN (shown) 2R (without pumping system)

### Product features : H42RN/2R

- Abrasive-resistant pump; motor is not exposed to the cleaning solution - eliminates need for pump seals.
- 720 GPH flow rate
- Flexible Stay-Put metal flush hose for directable hands-free flushing action
- Removable internal work shelf for easy manual cleaning and parts visibility
- Bottom drain for easy fluid change-outs
- Fusible safety link closes lid in event of fire
- 16 gauge steel tank with powder-coat finish for durability and long-life
- Freeboard compliant
- Optional external drain shelf to drain cleaned parts (see Accessories page 28-29)



# Drum Mount



Standard features : DM232/236 :

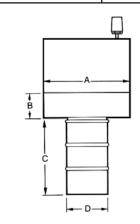
- Abrasive resistant 170 GPH pump
- Reusable nylon filter system removes large particles of dirt and grime to keep fluid clean longer
- Flexible Stay-Put metal flush hose for directable hands-free flushing action
- Metal drain strainer keeps small parts from falling into cleaning solution tank
- 16 gauge steel tank with powder-coat finish for durability and long-life
- Lift-off sink for easy setup and maintenance; fast cleanup and fluid changes
- Built two inches taller than competition to eliminate bending/stooping—strain-free use!
- Available in 16 & 30 gallon drum sizes
- Fusible safety link closes lid in event of fire
- Freeboard compliant

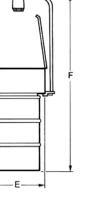
#### DMD deluxe models :

- Deluxe models have a patented retractable pump to avoid back strain when removing tank from drum because tank needs to be lifted only a few inches from drum. With pump inside mounting ring, tank sits flat on bench or floor, saving pump from abusive shocks or accidental mishandling
- Worklight is designed so it cannot be pulled down to obstruct the cover from closing
- cETLus certified



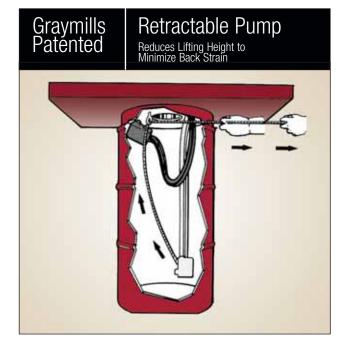
Spacious recirculating parts washer can be placed at jobsite for on-the-spot cleaning.





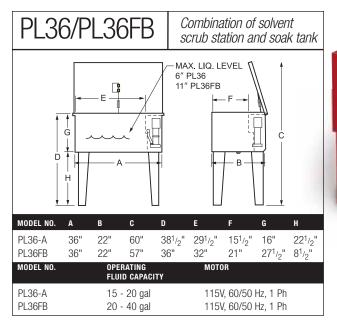
MODEL NO.	A	В	C	D	E	F
DMD/DMS 232	32"	8 <sup>3</sup> /4"	28 <sup>1</sup> / <sub>2</sub> "	14 <sup>1</sup> / <sub>2</sub> "	18"	65"
DMD/DMS 236	36"	8 <sup>3</sup> / <sub>4</sub> "	30 <sup>3</sup> / <sub>4</sub> "	19 <sup>1</sup> / <sub>4</sub> "	20"	67 <sup>1</sup> /8"

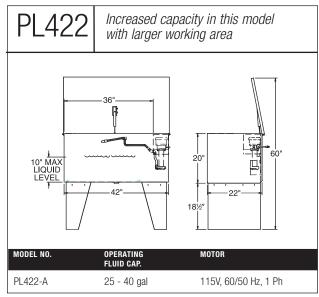
DESCRIPTION	DM 232 MODELS	DM 236 MODELS
Operating Fluid Capacity	5-10 gal	10-20 gal
Drum Capacity	16 gal	30 gal
Motor	115V, 60 Hz, 1 Ph	115V, 60 Hz, 1 Ph



### Versatile units optimize flush hose (hand-held brush cleaning optional), sloped work shelf for draining

cleaning optional), sloped work shelf for draining, small parts basket and optional external drain shelf. Tank has bottom drain for easy maintenance.





Optional : PL36, PL36FB and PL422 :

- External drain shelf will drain solution back to tank and reduces drying time.
  - Optional : PL422 :
- Optional removable soak/sludge trays keep soaking parts off bottom—makes sludge removal easier

See Accessories page 28-29



Standard features : both models :

- Filter and sludge collector basket with dual-element foam filter keeps fluid cleaner longer for fewer change-outs. (Not available on PL36-FB.)
- Flexible Stay-Put metal flush hose for directable hands-free flushing action
- 16/18 gauge steel tank with durable powder-coat finish for durability and long-life
- Bottom drain convenient for fluid change-outs
- Small parts basket
- Fusible safety link closes lid in event of fire
- CETLUS certified

Additional features : PL36 :

- ♦ 400 GPH Graymills Superflo<sup>™</sup> pump
- Removable work shelf for parts cleaning above fluid or soaking in solvent tank

Additional features : PL36FB :

- Freeboard Compliant design incorporates deeper tank
- Abrasive resistant 170 GPH pump

Additional features : PL422 :

A00 GPH Graymills Superflo<sup>™</sup> pump

Two-piece sliding, solid metal work shelf extends over the entire tank to provide a 341/2" x 203/16" work surface as well as to reduce solvent loss due to evaporation. Sliding the right shelf over the left creates an 18" x 211/2" soak tank with an equal size work area. Or store both shelves in the side slot for a fully-open soak tank

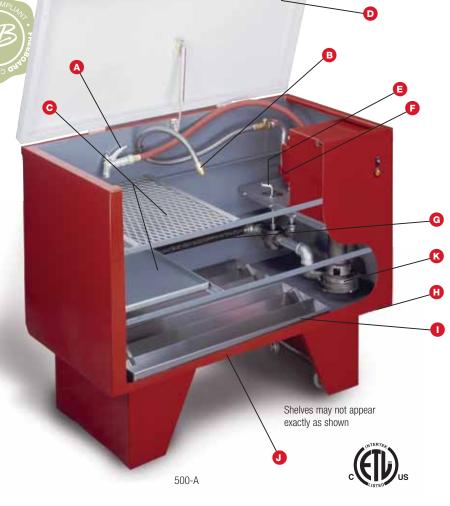
# CLEAN-O-MATIC<sup>TM</sup>

### Clean-O-Matic:<sup>™</sup> The Industry Standard for more than 50 years

Ruggedly constructed for years of trouble-free solvent cleaning service. These feature-packed models offer a variety of design elements to make your cleaning tasks quicker and more efficient while remaining flexible enough to suit most cleaning challenges. All Clean-O-Matics are certified cETLus.

The 5 Clean-O-Matic<sup>™</sup> models progress in size and power from the 300-A, with a 1/8 horsepower pump and 42-gallon capacity, to the 902-A, with two 1/3 horsepower pumps and 117 gallon capacity.

All models feature three way cleaning pump for in-tank agitation that loosens dirt/grime on soaking parts; pistol grip nozzle for flushing away contaminants; and Flexible Stay-Put flush hose in conjunction with a hand-held brush.

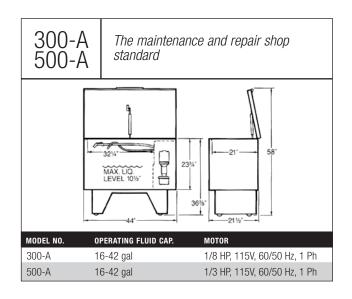


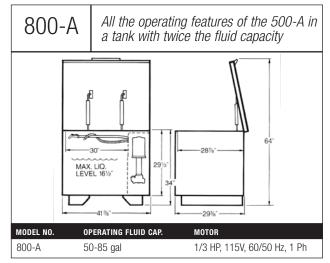
- Pistol grip spray nozzle is adjustable for light spray or solid stream—direct where cleaning and rinsing of parts is needed
- Extra long Stay-Put flexible metal flush hose for directable hands-free flushing action
- C Adjustable bi-level work shelves
- Safety lid shuts automatically in case of fire—or close to reduce fluid evaporation
- Three-way cleaning action selector valve permits using pump, pistol grip spray nozzle or flush hose cleaning actions individually or in combination

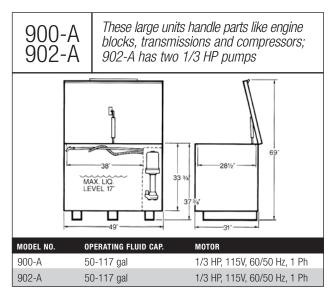
- Washable 40 mesh screen solvent filter
- G Hydro-Jet Manifold in-tank agitation loosens dirt and grime as parts soak
- Drain plug
- Optional removable soak/sludge trays keep soaking parts off bottom—makes sludge removal easier
- Rugged 16 gauge powder-coated steel construction
- Graymills abrasive-resistant pump has no bearings/seals immersed in fluid—extends pump life

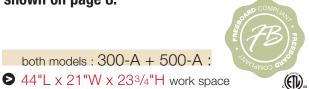
(Optional Accessories, see pages 28-29)

### All models include features shown on page 8.









- 16-42 gallon capacity
- Casters allow unit to be easily moved

both models : 300-A + 500-A :

### 300-A :

- ▶ 1/8 HP Graymills Superflo<sup>™</sup> pump, 1000 GPH
- Pump provides in-tank fluid agitation

### 500-A :

- I/3 HP, Graymills Superflo<sup>™</sup> pump 2400 GPH
- Pump with Hydro-Jet Manifold provides active in-tank fluid agitation



### 800-A :

- 41<sup>3</sup>/<sub>8</sub>"L x 28<sup>7</sup>/<sub>8</sub>"W x 29<sup>1</sup>/<sub>2</sub>"H work space
- Solve 50-85 gallon capacity
- ≥ 1/3 HP, Graymills Superflo<sup>™</sup> pump 2400 GPH
- Pump with Hydro-Jet Manifold provides active in-tank fluid agitation



- both models : 900-A + 902-A :
- ≥ 38"L x 28<sup>1</sup>/2"W x 33<sup>3</sup>/8"H work space
- 50-117 gallon capacity
- Pump with Hydro-Jet Manifold provides active in-tank fluid agitation

### 900-A ·

▶ 1/3 HP, Graymills Superflo<sup>™</sup> pump 2400 GPH

### 902-A:

Two 1/3 HP, Graymills Superflo<sup>™</sup> pumps 2400 GPH each, provide aggressive in-tank fluid agitation through dual Hydro-Jet Manifoldsoperate independently or together

### TURBO ACTION



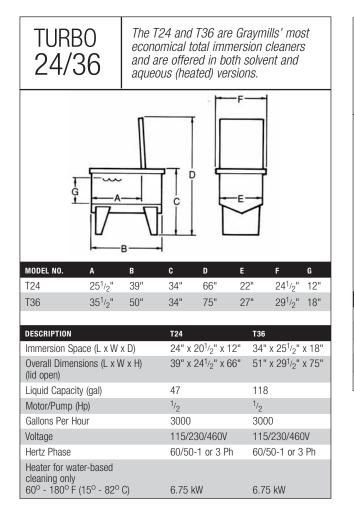
The Turbo-Action Series from Graymills is the perfect solution for hands-off, immersion cleaning required for challenging parts cleaning applications. Turbo-Action total immersion parts cleaners convert the jet stream from Graymills Superflo<sup>™</sup> pumps into powerful, hands-off fluid action that gets parts cleaner, faster without manual handling or scrubbing. Unlike spray cabinet type cleaners that employ spray nozzles, total immersion cleaners bring cleaning action to every external and internal surface-even blind holes. Turbo-Action units scour and flush parts clean and are offered in both solvent and heated aqueous versions, with pumps that provide up to 10,000 GPH. The heated aqueous units come standard with energy-saving insulation and corrosion-resistant, insulated stainless steel-lined lids.

A variety of tank sizes and options, including stainless steel tanks, filtration systems and baskets, ensures the Turbo-Action Series can handle your largest cleaning task, including cylinder heads, transmission housings, heavy castings, and complex parts.

- Total parts immersion provides hands-off cleaning without operator involvement
- Grid platform (T24/T36 only) or Sludge Trays (T4330-T8430) support parts above bottom allows for all sides of parts to be exposed to cleaning solution
- S Two-inch drain for easy fluid change-out
- S Multiple tank sizes up to 262 gallon capacity
- Solvent or aqueous models available; some models can be field-retrofit and converted to aqueous versions if cleaning method changes.
- Suble safety link closes lid in event of a fire
- Variety of options available to handle almost any application: filtration systems, stainless steel tanks, baskets (See Accessories pages 28-29)

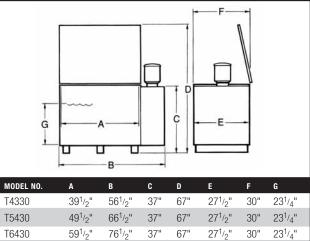
### **Turbo Units**

The efficiency of immersion cleaning allows more time for the cleaning solution to do the work, provides penetration into blind holes, nested or layered parts, maximizes soak time to loosen contamination, and the Turbo Action of the pump adds to the speed and efficiency of the cleaning process.



TURBO 4330-8430 8430

With five tank sizes and liquid capacities up to 262 gallons, the largest "Turbo Series" is also available in solvent or aqueous versions. 10,000 gallon per hour flow ensures effective scouring and cleaning of parts.



37"

37"

67"

67<sup>1</sup>/<sub>2</sub>"

271/2"

27<sup>1</sup>/2"

30"

30"

231/4"

23<sup>1</sup>/<sub>4</sub>"

DESCRIPTION	T4330	T5430	T6430	T7430	T8430
Immersion Space (L x W x D)	39 <sup>1</sup> / <sub>2</sub> " x 27 <sup>1</sup> / <sub>2</sub> " x 23 <sup>1</sup> / <sub>4</sub> "	49 <sup>1</sup> / <sub>2</sub> " x 27 <sup>1</sup> / <sub>2</sub> " x 23 <sup>1</sup> / <sub>4</sub> "	59 <sup>1</sup> / <sub>2</sub> " x 27 <sup>1</sup> / <sub>2</sub> " x 23 <sup>1</sup> / <sub>4</sub> "	' 69 <sup>1</sup> / <sub>2</sub> " x 27 <sup>1</sup> / <sub>2</sub> " x 23 <sup>1</sup> / <sub>4</sub> "	83" x 27 <sup>1</sup> / <sub>2</sub> " x 23 <sup>1</sup> / <sub>4</sub> "
Overall Dimensions (L x W x H) (Lid Open)	56 <sup>1</sup> / <sub>2</sub> " x 30" x 67"	66 <sup>1</sup> / <sub>2</sub> " x 30" x 67"	76 <sup>1</sup> / <sub>2</sub> " x 30" x 67"	86 <sup>1</sup> / <sub>2</sub> " x 30" x 67"	96 <sup>1</sup> / <sub>2</sub> " x 30" x 67 <sup>1</sup> / <sub>2</sub> "
Liquid Capacity (gal)	142	169	200	231	262
Pump(s) 1 <sup>1</sup> / <sub>2</sub> hp	1	1	1	1	2
Gallons Per Hour	10,000	10,000	10,000	10,000	20,000
Voltage	230/460	230/460	230/460	230/460	230/460
Hertz Phase	60/50-1 or 3 Ph	60/50-1 or 3 Ph			
Heater for water-based cleaning only $60^{\circ}$ - $180^{\circ}$ F (15^{\circ} - $82^{\circ}$ C)	4.5 kW	4.5 kW	4.5 kW	4.5 kW	4.5 kW

T7430

T8430

69<sup>1</sup>/<sub>2</sub>"

83"

861/2"

96<sup>1</sup>/2"



Unlike standard spray cabinet washers, immersion cleaning exposes all surfaces of the part, including blind holes and small crevices, to the cleaning solution. By combining hands-off, total immersion cleaning, easy part load/unload, vertical lift platform agitation and optional Graymills Superflo<sup>™</sup> pump

### L and TR-Series Options Include:

- ► High power Graymills Superflo<sup>™</sup> pump for in-tank fluid agitation adds more turbulence to washing tank
- Drop-in Heaters and insulation for aqueous units
- Available Cycle Timer for repeatable control of wash sequence
- Lift roller platform aids in loading and unloading parts
- Stainless steel tanks, lifting mechanisms, and racks to ensure long life of unit
- Oil Separator to remove oil from aqueous cleaning solution during the cleaning process
- Turbo-boost filtration system filters and extends life of cleaning solution (see page 17)

### Why Immersion Cleaning is Preferred

jet action, the Liftkleen<sup>™</sup> offers the most intensive, efficient immersion cleaning system available. Complex parts, stacked or nested parts are no problem.

The TR and L Series Liftkleens<sup>™</sup> offer a variety of sizes and options, including pump, agitation, ultrasonics, and automatic control

### **L-Series Options:**

- Touch-Screen PLC Control for fully automated and one-touch cleaning control and efficiency offering 24/7 heater control, automatic lid and cycle timer
- Push-Button PLC control for a modern, yet economical control
- Extra lift capacity accommodates parts up to 1850 pounds
- Anti-tie down device incorporates a two-handed, controller device to start cleaning process
- 7-day heater timer (Aqueous only) controls time you want heater to come on to preheat solution or stay off to save energy
- Adjustable Stroke Length to allow fine tuning of cleaning process
- Oil Skimmer (aqueous only) for continuous oil removal

of cleaning cycles, that make it the easiestto-use, large size cleaner on the market. One touch control of the pneumatic air system and electronic controls turns multi-function operation into a simple step.

### **TR-Series Options:**

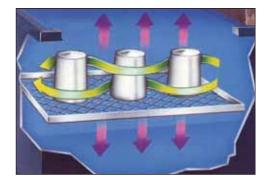
- Rotating small parts basket (see Accessories page 28)
- Bridge roller connectors
- Load/unload tables
- Small foot print is ideal for cellular manufacturing and can be combined with other units (rinse tanks, dryers) to complete the cleaning process





### Standard Features for TR-Series and L-Series Liftkleen™ Models

- Both Solvent or Aqueous versions
- Air-operated lift platform
- Fiberglass grate, mild steel or stainless steel optional
- Hands-off, full immersion cleaning; from simple soaking to lift platform agitation
- Fully adjustable lift platform agitation—speed and stroke length
- Lift mechanism is entirely outside of tank for long service life
- Stainless steel lined lids on L and heated TR-Series units
- S Auto-lid opens at end of cycle or upon machine reset



### Dual Action Cleaning Option – Shortens Cleaning Cycle up to 40%

- Optional Superflo<sup>™</sup> Pump circulates up to 10,000 GPH
- The Dual Action cleaning cycle combines vertical platform agitation with a Graymills Superflo<sup>™</sup> centrifugal pump jet stream for faster cleaning including crevices, blind holes and recesses
- Dual Action cleaning is effective in both cold solvent and heated aqueous applications

### Hands-Off Automatic Operation with Liftkleen™



Parts are easily loaded on platform at tank top level

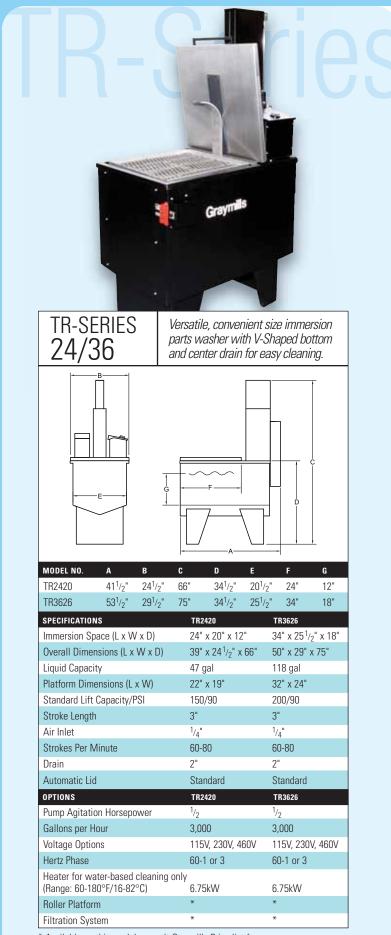


Start cycle lowers parts into solution

Fully immersed parts may be soaked and/or agitated with programmable cleaning



 Auto-lid opens at end of cycle
 Platform raises for draining and easy parts removal



\* Available on this model, consult Graymills Price list for specs

### Liftkleen<sup>™</sup> Series

The Liftkleen<sup>™</sup> L-Series has been proven by years of tough field use in industrial, maintenance, heavy duty truck and automotive repair facilities. These automatic, agitating, immersion cleaning machines are solidly built for long service life. They are available for both heated aqueous and solvent cleaning applications.

Two Series—"L" and "TR" serve unique needs. The "TR" Series has a smaller footprint, liquid capacity and lift capability. They are widely used for job site "cell" cleaning in manufacturing, automotive and maintenance shops. With most of the same features as the "L" Series, they offer quick, thorough cleaning for smaller parts.

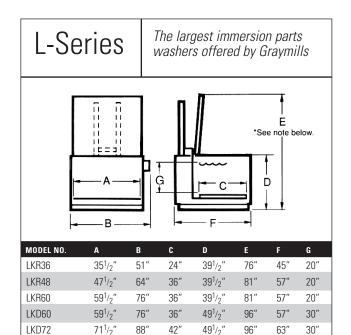
Graymills "L" Series picks up where the "TR" Series leaves off. Choose from 5 tank sizes designed for larger parts, and heavier components (up to 1,850 pounds). All lift platform components are outside the tank, eliminating the most common reason for failure in many other machines. "L" Series Liftkleens™ are the workhorse of today's manufacturing, maintenance and repair operations. Air filter/regulator/lubricator (FRL) comes standard with all TR & L Series Liftkleen<sup>™</sup> units.

The TR-Series' small foot print is ideal for cellular manufacturing and can be combined with other units (rinse tanks, dryers) to complete the cleaning process.

#### Special Options offered:

- Electric heat (Aqueous Only) increases the cleaning capability of your aqueous solution with optional heaters available for up to 180° F (82° C)
- Roller platform aids in loading and unloading of parts
- High power Graymills Superflo<sup>™</sup> pump adds in-tank fluid agitation for faster cleaning
- Turbo-boost filtration system increases turbulence in wash tank and cleans sediment from wash tank while filtering the cleaning solution (see page 17)
- Extra lift capacity accommodates parts up to 1850 pounds (L Series only)
- Anti-tie down device incorporates a two-handed, controller device to start cleaning process (L Series only)
- 7-day heater timer (Aqueous only) controls time you want heater to come on to preheat solution or stay off to save energy (L Series only)
- Available Cycle Timer for repeatable control of wash sequence
- Adjustable Stroke Length to allow fine tuning of cleaning process (L-Series Only)
- Oil Skimmer (aqueous only) for continuous oil removal

# -Series





\* Maximum height for Model LKR36 is to top of mast. All other L-Series Liftkleen<sup>\*\*</sup> use open lid as maximum height.

36″

49<sup>1</sup>/<sub>2</sub>"

96″

57″

30″

100"

83<sup>1</sup>/<sub>2</sub>"

LKD84

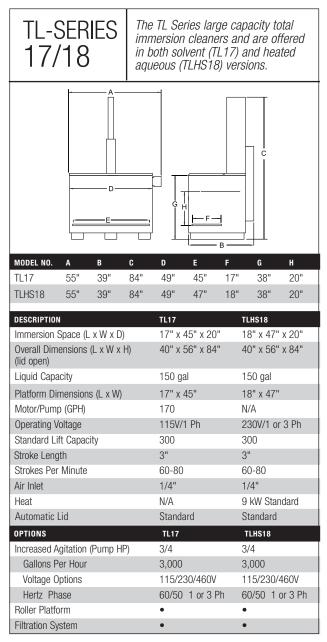
Touch-screen PLC controls for wash cycle, heater, lift platform agitation and lid.

SPECIFICATIONS	LKR36	LKR48	LKR60	LKD60	LKD72	LKD84
Immersion Space (WxDxH)	39" x 28" x 20"	52" x 39" x 20"	64" x 39" x 20"	64" x 39" x 30"	76" x 45" x 30"	88" x 39" x 30"
Overall Dimension (WxDxH)	51" x 45" x 76"	64" x 57" x 81"	76" x 66" x 81"	76" x 66" x 96"	88" x 72" x 96"	100" x 66" x 96"
Liquid Capacity	170	290	355	491	667	670
Platform Dimensions (WxD)	35½" x 24"	47 <sup>1</sup> / <sub>2</sub> " x 36"	59 <sup>1</sup> / <sub>2</sub> " x 36"	59 <sup>1</sup> / <sub>2</sub> " x 36"	71 <sup>1</sup> / <sub>2</sub> " x 42"	84" x 36"
Standard Lift Capacity / PSI	550 / 100	450 / 100	700 / 100	700 / 100	700 / 100	700 / 100
Stroke Length	5	5	5	5	5	5
Strokes per Minute	25-40	25-40	25-40	25-40	25-40	25-40
Air Inlet	3/8"	3/8"	3/8"	1/4"	1/4"	1/4"
Water Inlet	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Overflow Outlet	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Drain	2"	2"	2"	2"	2"	2"
OPTIONS	LKR36	LKR48	LKR60	LKD60	LKD72	LKD84
Extra Heavy Duty Lift Capacity (Maximum Ibs @ 100 psi)	1,000	900	1,850	1,850	1,750	1,750
Pump Agitation (Horsepower)	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>
Gallons per Hour	10,000	10,000	10,000	10,000	2 Pumps/20,000	2 Pumps/20,000
Voltage Options	230V, 460V Hard Wire	230V, 460V Hard Wire	230V, 460V Hard Wire	230V, 460V Hard Wire	230V, 460V Hard Wire	230V, 460V Hard Wire
Hertz / Phase	60 / 1 or 3	60 / 1 or 3	60 / 1 or 3	60 / 1 or 3	60 / 1 or 3	60 / 1 or 3
Heating System (Electric Heat) (Range: 60-180F/16-82C)	9kW/Htr*	9kW/Htr*	9kW/Htr*	14kW/Htr*	14kW/Htr*	14kW/Htr*

\* Up to two Heaters per unit available, consult factory for other heater options

### **TL Series Liftkleen™**

Our newest addition to the Liftkleen line is based on the Clean-O-Matic, one of our most popular washers, with a wide platform for accessibility to the entire workload and rugged construction for a long life. Included is a flow-thru work brush for detail work. The TL Series has a high load capacity and automatic lid and front panel controls for ease of handling tough jobs.



Available on this model, consult Graymills Price List for specs



Standard Features for all models:

- Large capacity air-operated lift platform handles up to 300 pounds.
- Automatic lid opens and closes in conjunction with platform.
- Flow-thru brush and pump allow for detail cleaning (TL17 only)
- MIG welded steel construction, dye tested for 24 hours to ensure no leaks
- Durable Epoxy/Polyester powder coated exterior finish provides an attractive appearance for years
- Section. GFCI and Fusible Fire Link safety protection.

Additional features for heated models :

- Stainless steel construction for corrosion resistance
- Adjustable, thermostatically controlled heater to maintain optimum cleaning temperatures up to 180°F (82°C)
- Fully insulated tank and lid to prevent heat loss and provide faster heat up to save money

Available Options and Accessories :

- S Agitation Pump for additional in-tank cleaning action
- Filtration Package to maintain fluid cleanliness
- Available Cycle Timer for repeatable control of wash sequence
- Oil Skimmer (TLHS18 only) for continuous oil removal
- Parts Basket matched to platform

# solvent/aqueous

### Oil Separator Turbo-Boost



MODELS	DIMENSIONS	CAPACITY	FLOW RATE
OSEP-5/OSEP-5S	30" x 21 <sup>1</sup> / <sub>2</sub> " x 59 <sup>1</sup> / <sub>2</sub> "	120 gal	5 GPM

Graymills Oil Separator (OSEP) removes tramp oil from aqueous cleaning solutions. Easily connected to Graymills Turbo-Action and Liftkleen<sup>™</sup> parts washers, as well as other manufacturers' immersion tanks.

- Standard features : OSEP :
- Extends cleaning solution life
- Oil separation improves parts cleaner operation
- Continuous oil removal during the cleaning process; no shutdown required as with skimmers; oil is not redeposited on clean parts
- Returns virtually oil-free solution to parts washer
- Automatically draws off collected oil for reuse or reclamation
- Sturdy construction of heavy grade steel, requires little maintenance. Also available in stainless steel
- Economical operation with no moving parts or outside power source
- 1 Inlet valve controls flow at 5 GPM to assure sufficient separation time.
- 2 Oily cleaning solution enters larger separator chamber.
- 3 Tramp oil adheres to polypropylene spheres which are non-wearing and require no replacement.
- 4 Formed droplets separate and rise to the surface to form an oil layer.
- 5 Oil layer gravity feeds to external container for proper disposal, reuse or reclamation. (container not included)
- 6 Separated fluid passes under baffle to second chamber.
- 7 Virtually oil-free detergent solution flows back to parts cleaner.
- 8 Bottom drain facilitates clean-out when required.

#### The Turbo-Boost System draws contaminated aqueous or non-flammable solvent parts cleaning solution through a strainer basket that eliminates large particulate. Remaining contaminants are collected in a replaceable, disposable filter bag. Clean, dual-filtered detergent is pumped back to the parts washer through Turbo-Boost eductor nozzles. Entire fluid volume is continuously filtered every few minutes.

The Turbo-Boost System for Liftkleen<sup>™</sup> models enhances performance in five ways:

Standard features : TBF :

- Continuous filtration keeps contaminants from re-settling on already clean parts
- Clean, filtered fluid is returned to parts washer through eductor venturi nozzles increasing cleaning power four times through additional fluid agitation
- Increased Turbo Agitation speeds cleaning cycle by increasing in-tank agitation four times
- Eductor action sweeps tank bottom to eliminate sludge build-up
- Life of the cleaning solution is greatly extended

Available Optional:

Service Beacon (shown)



The oil separator is intended for water-based cleaning solutions and will not function with solvent-based cleaning fluids. Systems that do not have a recirculation pump require the separator to be equipped with its own pump. Consult customer service for details at 773-248-6825.

Graymills heated drum-mount aqueous model with stainless steel sink and lid offers features and durability that will keep it functioning for years to come.

With a filtered stream of up to 120°F (48°C) aqueous cleaning solution, the DH226 flushes away loosened soil as parts are brushed clean. With easy setup and minimal maintenance, this unit offers a long, user-friendly service life.



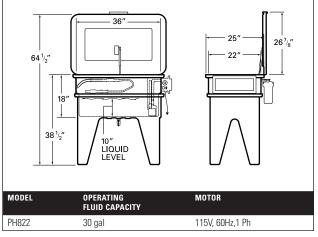
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Graymills

### Standard features : DH226A :

- Thermostatically controlled 1.4kW heater delivers heated solution up to 120°F (48°C)
- 300 GPH pump and 12 gallon fluid capacity
- Flexible Stay-Put flush hose for directable hands-free flushing action
- Lift-off stainless steel sink mounted on drum for easy job site cleaning and maintenance
- GFCI shuts entire unit down in event of electrical short
- Fusible safety link closes lid in the event of a fire
- Optional Drum Liners make for easy cleanup of solution reservoir and helps prevent corrosion in drum



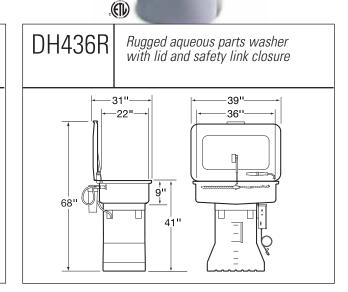


### Standard features : PH822 :

- Thermostatically controlled 1.4kW heater delivers heated solution up to 120°F (48°C)
- Rugged thermoplastic corrosion-resistant construction is backed by five-year warranty
- Flow-Thru brush, flexible Stay-Put nozzle brush or flush away soil with 300 GPH pump
- Low liquid level shuts off heater in event liquid level drops below a setpoint
- GFCI shuts entire unit down in event of electrical short
- Triple Action Filtration is achieved by a pump pre-filter, stainless steel strainer and polypropylene cartridge.
- 10" soak depth tank; molded bottom ridges allow soaking parts with detergent circulation while parts sit above sludge
- Removable stainless steel work shelf
- CETL certified



DH536R Rugged aqueous parts washer features stainless steel backsplash (no lid)



### Standard features : DH436R / DH536R :

- Heated aqueous 110°F (43°C) fluid circulates at 300 GPH
- Rugged thermoplastic non-corrosive construction and is backed by five-year warranty
- Flow-Thru brush, flexible Stay-Put nozzle to brush or flush away soil
- Low liquid level shuts off heater in event liquid level drops below a setpoint
- Section 2012 Shots entire unit down in event of electrical short
- Triple Action Filtration is achieved by a pump pre-filter, stainless steel strainer and polypropylene cartridge
- Removable sink and power module for simple setup, maintenance and service
- Indicator lights for Power On, Heater On, Low Water Shut Down
- Flared base provides increased stability and generous 30 gallon fluid capacity for less frequent change-outs

SPECIFICATIONS	PH822	DH536R	DH436R
Overall Dimensions (L x W x H)	43" x 31" x 40" (65" H Open Lid)	39" x 31" x 43"	39" x 31" x 43" (68" H Open Lid)
Working Space (L x W x D)	31" x 22" x 17"	36" x 22" x 9"	36" x 22" x 9"
Parts Load (max.)	300 lbs	300 lbs	300 lbs
Soaking Depth	10"	N/A	N/A
Operating Fluid Capacity	30 gal	20-30 gal	20-30 gal
Pump	Submersible	Submersible	Submersible
GPH	300	300	300
Horsepower	1/40	1/40	1/40
Heater	1.4 kW	1.4 kW	1.4 kW
Operating Temperature	Up to 120° F (48°C)	110°F (43°C)	110° F (43° C)
Electric Configuration	115V, 60 Hz, 1Ph	115V, 60 Hz, 1Ph	115V, 60 Hz, 1Ph
Shipping Weight	150 lbs	150 lbs	150 lbs

The Tempest<sup>™</sup> Series of aqueous cabinet parts washers uses 600 psi of high-pressure aqueous cleaning solution power to scrub parts clean—no abrasives to damage precision machined parts.

The ultimate in operator comfort, the Tempest<sup>™</sup> 10/20S keeps the operator's hands clean and out of cleaning solution. Operator simply slips hands into gloves and directs up to 600 psi fluid stream of heated cleaning detergent at parts.

Fast heat-up, illuminated cabinet and window-clearing blower are standard on both units. Flexible neoprene gloves, safe and convenient air-actuated on/off foot pedal switch, and ergonomic working height maximize user comfort and result in increased efficiency. Adjustable hand-held spray nozzle can be set to a wide fan or pinpoint stream to direct cleaning power where needed. 150 mesh filter traps chips and solids and continuously filters fluid.

#### Standard Features : both models :

- Up to 600 PSI and 180 GPH, 1 HP pump delivers cleaning power directly onto parts
- I,000 watt heater (Tempest<sup>™</sup> 10) / 1,500 watt heater (Tempest<sup>™</sup> 20S) provide heated (up to 120-° F) aqueous fluid that cleans without grit
- Enhanced window blow-off utilizing air-knife technology for viewing cleaning process
- Hinged front opening door allows full access to entire cleaning chamber
- Variable output nozzle can be set from a wide fan to a pinpoint stream to allow operator to adjust cleaning force as needed

### Standard Features : Tempest<sup>™</sup> 10 :

- S 34"W x 22½"D x 24"H work chamber
- 10 gallon solution reservoir; easy-to-change internal pail fits neatly below spray cabinet
- Available in mild or stainless steel cabinet

Optional Features : Tempest<sup>™</sup> 10 :

Air blow-off nozzle for parts drying

#### Standard Features : Tempest<sup>™</sup> 20S :

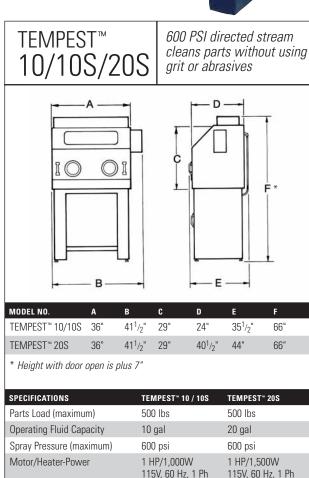
- 34"W x 39"D x 24"H large capacity work chamber
- Stainless steel cabinet
- 20 gallon rollout stainless steel reservoir makes fluid changes easy

Optional Features : Tempest<sup>™</sup> 20S :

- S Air blow-off nozzle for parts drying
- Oil skimmer
- Workload turntable
- Elevated drain shelf



Tempest<sup>™</sup> spray nozzle allows you to direct the high pressure detergent stream where needed.



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### Ultrasonic

BTV Series			Economical but powerful ultrasonic cleaning system			
	A D				B	
MODEL NO.	А	В	C	D	E	F
BTV-020	7"	6 <sup>1</sup> /2"	9 <sup>1</sup> / <sub>4</sub> "	5 <sup>7</sup> /8"	5 <sup>1</sup> /4"	3 <sup>7</sup> /8"
BTV-032	10 <sup>1</sup> /2"	6 <sup>1</sup> /2"	9 <sup>1</sup> /4"	9 <sup>3</sup> /8"	5 <sup>1</sup> /4"	3 <sup>7</sup> /8"
BTV-065	13"	7"	12"	11 <sup>7</sup> /8"	5 <sup>7</sup> /8"	5 <sup>7</sup> /8"
BTV-150	14"	13"	13"	13"	11 <sup>7</sup> /8"	5 <sup>7</sup> /8"
BTV-300	21"	13"	15 <sup>1</sup> /2"	19 <sup>3</sup> / <sub>4</sub> "	11 <sup>7</sup> /8"	7 <sup>7</sup> /8"
MODEL	TANK Capacii	ſΥ	ULTRASON POWER (40		HEAT	
BTV-020	0.5 ga		70W/140	W Peak	50W	
BTV-032	0.8 ga		120W/24	OW Peak	100V	V
BTV-065	1.7 ga		180W/36	OW Peak	200V	V
BTV-150	4.0 ga		360W/72	OW Peak	300V	V
BTV-300	7.9 ga	l	600W/12	00W Peak	500V	V
BASKET MODEL	NO.	LENGTH	w	IDTH	DEPTH	
BTV-020-BSKT		3 <sup>3</sup> /4"	37	/8"	3 <sup>1</sup> /2" *	
BTV-032-BSKT		8"	37	/8"	2"	
BTV-065-BSKT		9 <sup>7</sup> /8"	37	/8"	3 <sup>5</sup> /8"	
BTV-150-BSKT		9 <sup>1</sup> /2"	9"		5 <sup>1</sup> /4"	
BTV-300-BSKT		16"	83	/4"	5 <sup>1</sup> /4"	

Graymills offers two series of 40kHz Benchtop Ultrasonic Cleaners. Their small footprints make these units ideal for job site "cell" cleaning applications or places where space is critical. All models feature self-enclosed design with stainless steel, corrosion-resistant tanks and lift-off covers. Units operate at standard 120V single phase power. Optional stainless steel parts baskets to prevent loss of small parts are available for all models.

### BTV features :

- Digital LCD controls for ultrasonic and heater functions control cycle times and temperature settings up to 175°F (80°C)
- 304 Stainless steel tank and lid
- Economically priced for light duty cleaning applications
- Larger units (BTV-150, -300) have drain with valve
- Parts baskets sold separately



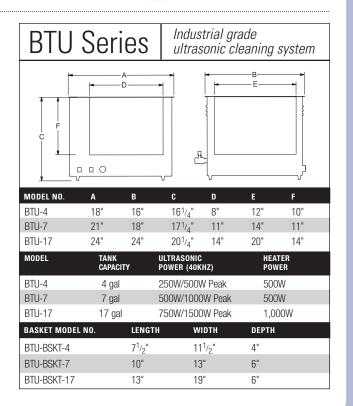
Drain on BTV-150 and BTV-300 only

\* No handles and legs

### BTU features :

- 316 Stainless steel tank and lid
- Heavy gauge construction for greater load capacities
- Bonding of transducers is guaranteed for 10 years
- Adjustable thermostat optimizes tank temperature of individual parts up to 160°F (71°C)
- Low liquid level shuts off heater in event liquid level drops below a setpoint
- Sound-deadening insulation package
- Illuminated controls for ultrasonics and heater function
- $\bullet$  All units have  $\frac{1}{2}$  drain fitting with value
- Parts baskets sold separately





### Sonic Max Console



CTU Se	eries		rtable a fe ultra:			tally system
MODEL NO.	А	В	C	D	E	F
CTU2012	20"	12"	8"	28"	37"	38"
CTU2814	28"	14"	12"	33"	40"	46"
CTU2825	28"	25"	15"	33"	40"	46"
CTU3516	35"	16"	15"	37"	42"	52"
CTU3523	35"	23"	17"	37"	42"	52"
CTU4718	47"	18"	19"	37"	45"	64"
CTU4723	47"	23"	20"	37"	45"	64"
MODEL	FLUID Capaci	ТҮ	ULTRA POWE	ASONIC R		ATER WER
CTU2012	7 gal		750 V	V	15	00 W
CTU2814	18 gal		1500	W	30	W 00
CTU2825	42 gal		3000	W	60	00 W 00
CTU3516	33 gal		2000	W	40	W 00
CTU3523	54 gal		3500	W	60	00 W 00
CTU4718	65 gal		4000	W	60	00 W 00
CTU4723	87 gal		5000	W	10	000 W

Graymills SonicMax cleaning consoles use powerful ultrasonics and safe, environmentally-friendly water-based cleaning fluids to thouroughly wash the most stubborn soils from parts and assemblies.



Included recirculating pump and filter system removes insoluble particles.

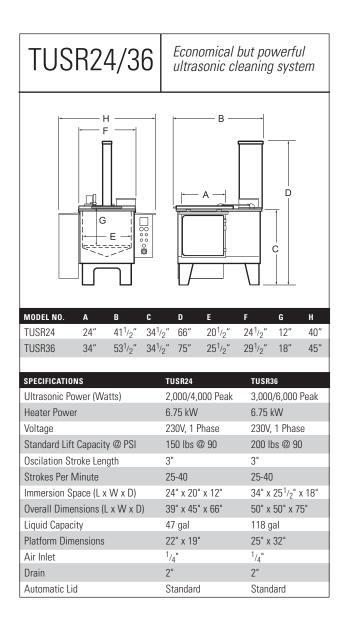


Optional Belt-Type Oil Skimmer can remove oil, effectively increasing solution life.

- 316 Stainless steel tank handles large loads with ease to provide true industrial capacity
- High watts per gallon ratio provides cleaning power to handle even the most stubborn soils
- Flanged tank lip for spill control with stainless steel lift-off cover
- Overflow weir and cascading circulation system traps debris away from work
- Standard Filtration Package features 3 GPM pump and 50 micron filter maintain cleanliness levels
- Thermostatic temperature control from ambient to 170°F (77°C)
- Source timer for ultrasonics can be set from 0-30 minutes
- Durable powder coated support cart with casters offers portability and ease of movement
- Stainless steel mesh basket included to facilitate parts handling

# Sonic Liftkleen™

Graymills unique "V-focused" tank design increases ultrasonic cleaning power and speed for intricate parts as well as large industrial pieces.





- Bonding of transducers is guaranteed for 10 years
- Air operated lift platform handles loads with ease; Up and down agitation while submerged enhances the cleaning process
- Lift platform raises to the top of the immersion tank, for easy access to load and unload parts
- Adjustable, thermostatically controlled tank heaters maintain optimum cleaning solution temperature up to 160°F (71°C)
- Deep "V-shaped" tank bottom focuses the ultrasonic power on the work load
- Digital cycle timer controls cleaning cycle start and stop times
- Oil skimmer removes oil from cleaning solution
- Corrosion-resistant MIG welded stainless steel construction on all wetted parts is designed for longevity
- Double walled insulated tank and lid reduces heat loss and evaporation
- Small foot print is ideal for cellular manufacturing and can be combined with other units (rinse tanks, dryers) to complete the cleaning process

parts washers : ultrasonic/aqueous : SONIC LIFTKLEEN™

1.888.472.9645 Graymills.com 23



The Super Sonic Liftkleen<sup>™</sup> parts washer features full immersion cleaning coupled with powerful ultrasonics to thoroughly wash the most difficult to clean parts.

- Full PLC Control with Touch Screen Interface provides programmable cycles for ultrasonics, platform oscillation, soak, sparger, filtration and heater functions up to 180°F (82°C)
- Ultrasonic frequency sweep continuously changes sound patterns to provide greater cleaning penetration while minimizing risk of damage
- Heavy duty immersible sealed transducers evenly distribute the ultrasonic sound waves and eliminate cleaning blind spots
- Pneumatic lift platform allows easy loading/ unloading of parts up to 300 pounds and offers agitation capabilities for thorough parts cleaning
- Automated lid open/close via pneumatic cylinder allows for hands-free operation

- Built in weir and surface sparger system removes floating oil and debris from the top of cleaning solution so parts are not dragged through the floating contaminant at the end of the cleaning cycle
- Oil skimmer removes oil from weir chamber
- Filtration system constantly filters the cleaning solution to extend bath life for more consistent cleaning
- Double walled, fully insulated stainless steel tank and lid prevents heat loss, evaporation and reduces noise
- Bottom drain and valve for easy change out of cleaning solution
- Optional Parts Basket available

Units available without Ultrasonics under part number TS3725SL-J. The TS3725SL-J includes all of the other great features noted above for applications that don't require Ultrasonics. Consult Factory for details.

# kleen

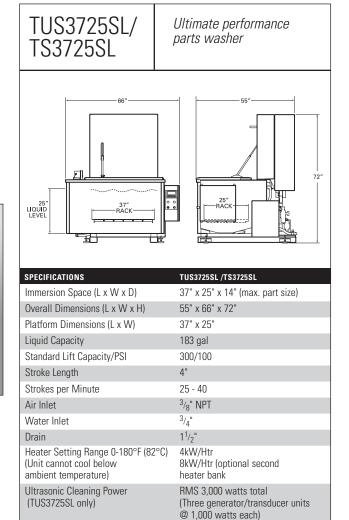
The TUS3725SL-model comes equipped with features to achieve ultimate parts cleaning levels. It is built to withstand rugged use in applications like engine rebuilding, performance racing, maintenance and manufacturing, but gentle enough to be used in the most delicate of cleaning applications.



PLC controls cycle times, wash time, time for surface sparger spray to come on after the timed ultrasonic cleaning cycle and the operation of the lift platform.



The TUS3725SL unit has three ultrasonic generators to deliver 6,000 watts of peak power.





Heavy duty immersible drop-in sealed transducer packs.



Surface sparger system pushes floating oil and debris from top of cleaning solution into the built-in weir so parts are not dragged through the contaminant at the end of the cleaning cycle.



Built-in weir traps the oil and debris so that those contaminates are isolated from the cleaning chamber and where the standard filtration system can remove any solids while ...



Peak 6,000 watts total

... the standard Belt-Type Oil Skimmer can remove oils, effectively increasing solution life.

### BIOREMEDIATION

Super Biotene<sup>®</sup> Cleaning Fluid Microbial Bio-Pack Biomatic<sup>™</sup> Parts Washer

### Total = Environmentally Cleaned Parts

Hydrocarbon-busting microbes first gained recognition when they were used to safely assist the cleanup of the Exxon Valdez spill in 1989. The microbes used in the Biomatic<sup>™</sup> System are very similar to their now-famous cousins!

The simplest explanation of how the Biomatic<sup>™</sup> parts washer works is: the Super Biotene<sup>®</sup> cleaning solution cleans the parts while the active microbial action cleans the fluid. This bioremediation process takes place within the parts washer solution reservoir. The microbes work by actually breaking down the hydrocarbon contaminants into their component parts—water (H<sub>2</sub>O) and carbon dioxide (CO<sup>2</sup>) leaving the Biotene cleaning solution free of oily, greasy contamination that can affect clean parts.

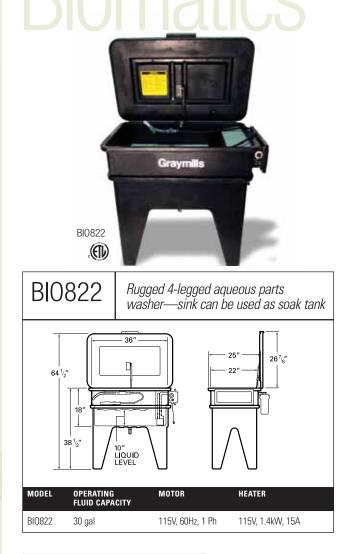
When parts are placed in the parts cleaner, the heated Super Biotene<sup>®</sup> lifts the grease and grime from the part. A Flexible Stay-Put nozzle and Flow-Thru brush aid the solution in the removal of especially stubborn oil, grease, and other contaminants.

Solution contaminated during this parts washing process flows through a triple filtration system; entering the cleaning solution reservoir first through a pre-filter/vapor barrier, then through a wire mesh stainless steel filter eliminating solid particulate as small as 50 microns. The microbes in the system go to work converting the grease and oil in the reservoir fluid into carbon dioxide and water. The remediated solution then passes through a polyester final filter before being reused in the parts washing process.

Comparable microbes have been successfully used in petrochemical and chemical plants, refineries, food processing plants, restaurants, marine barge bilges, machine shop parts washers, truck washers, wood treating plants, ground water remediation and septic tanks.

### The Biomatic<sup>™</sup> System:

- Bioremediation process turns grease/oil and organic substances into water and carbon dioxide, eliminating most fluid changes caused by increased saturation of organic contaminants
- Degrades oil, grease and a wide variety of hydrocarbons
- Microbes that degrade hydrocarbons into harmless byproducts
- Self-sustaining, colony of harmless microbes
- Solves waste disposal problems right in the parts washer
- PH neutral Biotene cleaning solution has USDA and SCAQMD approval



### Standard features : BIO822 :

- In-tank aeration system increases microbe effectiveness for faster, better bioremediation
- 3-way control valve, Flow-Thru brush and flexible Stay-Put hose for brush and flush cleaning
- Rugged thermoplastic construction provides long service life; backed by five-year warranty
- Low liquid level warning and Ground Fault Circuit Interrupter shuts off power to heat in event liquid level drops below a certain point; GFCI shuts entire unit down in event of electrical short or malfunction
- S Triple Action filtration removes non-organic impurities
- Power module with indicator lights for Power On, Heater On, Low Water shutoff
- Includes BIOFL1 filter with Microbial BioPack for initial set-up
- 10" soak depth tank; molded bottom ridges allow soaking parts with detergent circulation while parts sit above sludge
- Removable stainless steel work shelf

### Rinmatics

These heated parts cleaners use hydrocarbon converting microbes to reduce solid waste and virtually eliminate fluid disposal. The hydro-carbon converting microbes are added to the cleaning solution and break down oils, grease and other organic impurities into water and carbon dioxide. The advantage for users is that the cleaning fluid almost never needs replacing.

The bioremediation process is greatly helped by a built-in tank solution aeration system that increases the effectiveness of the microbes. This self-sustaining system reduces your dependence on cleaning solution changes and recycling companies.

Constructed of the same thermoplastic as our DH 436/536 Series, the BIO Series uses the same cleaning processes of Flow-Thru brush or flexible Stay-Put nozzle, shares a flow control valve, plus similar three piece (base, sink and power module) construction and 300 lb. capacity. The cleaning solution is held at a constant 102° F (39° C) for optimum cleaning effectiveness and system maintenance.



Our special pH neutral Biotene cleaning fluid and microbe system ensures an extended life for cleaning fluids without costs to change or dispose of fluid. The warm detergent is mild and pleasant to work in, and replacement filters and microbe packages are available to re-invigorate fluids.

	environmentally friendly way to clean parts	<ul> <li>Standard features : BIO436R/536R :</li> <li>3-way control valve, Flow-Thru brush and flexible Stay-Put hose for brush and flush cleaning</li> </ul>			
· · · · ·	39" 	Rugged thermoplastic construction provides long service life; backed by five-year warranty			
		pH neutral Biotene cleaning solution has USDA and SCAQMD approval			
		Low liquid level warning and Ground Fault Circuit Interrupter shuts off power to heat in event liquid level drops below a certain point; GFCI shuts entire unit down in event of electrical short or malfunction			
43" (BIOS36) 41"		Nine-inch deep sink, 300 pound capacity and 30-gallon reservoir			
		S Triple Action filtration removes non-organic impurities			
<u> </u>		Power module with indicator lights for Power On, Heater On, Low Water shutoff			
	BI0436R/536R 300  bs	Includes BIOFL1 filter with Microbial BioPack			
1 2	36" x 22" x 9"	for initial set-up			
1 1 1	300 GPH	In-tank aeration system increases microbe			
Fluid Capacity 3	30 gal	effectiveness for faster, better bioremediation			
Operation Temperature	102°F (39°C)	S cETL certified			

# ACCESSORIES

### General Purpose Parts Baskets



L-3 Permits flushing of small parts while keeping them organized. 6" H  $\,$  x 10" diameter

L-7 Hooks over edge of tank or stands on legs. 8" L x 6" W x 4" H

L-8 Expanded metal on sides and bottom.

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13" L x 12" W x 5" H

5B-1 sized and bracket for use with standard five gallon pail

### Roto Basket



Roto-Basket accessory for "T" Series Parts Washers effectively cleans small parts by creating a gentle, tumbling action to expose all surfaces to the cleaning solution. It is a hands-free cleaning process that reduces labor and saves time.

Stainless steel expanded metal drum/basket assembly, rotary mechanism and frame assembly. Attaches to the platform of any Graymills "T" Series Liftkleen<sup>™</sup> and holds up to 35 lbs. of parts.

The lift mechanism in the parts washer lowers the basket into the cleaning solution. As the lift platform agitates up and down, the rotating basket turns on a  $60^{\circ}$  index for every down stroke, thoroughly cleaning the smallest and most fragile parts.

PART NUMBER	DESCRIPTION	WEIGHT	DIMENSIONS
TRB-1	Roto-Basket (includes mechanical drive)	26 lbs	20 <sup>1</sup> / <sub>2</sub> "L x 11"H x 13"W
RB-1	Addl. Basket (without mechanical drive)	13 lbs	20 <sup>1</sup> / <sub>2</sub> "L x 11"H x 13"W
Roto-STA	Load/Unload Station	18 lbs	18 <sup>5</sup> / <sub>8</sub> "L x 15"H x 14 <sup>3</sup> / <sub>8</sub> "W

Roto-Basket is 100% mechanically driven the pawl and ratchet mechanism uses the up and down motion of the lift platform to turn the drum, no electric motors or drives are needed

- Optional Station makes Load/Unload easy separate from the Roto-Basket drive mechanism, the Load/Unload station allows for easy, convenient loading and unloading of baskets
- System is a drop-in retrofit—requires only a few minutes to install

Clean-O-Matic<sup>™</sup> Baskets Custom Baskets Available L-22, LS-22 L-27, LS-27

L-9 Clean-O-Matic<sup>™</sup> 900 and 902-perforated metal sides and bottom with 15 gauge frame for heavy-duty use; can be supported above liquid level for draining by special pull-out supports, 32"L x 17"W x 5"H

L-9L Same as L-9 except with sturdy lifter bar to permit use with chain hoist for heavy-duty work

L-10 Same as L-9 in larger size for Turbo-Action parts cleaners, 34"L x 21"W x 5"H

L-10L Same as L-10 with lifter bar

### T-Series Liftkleen<sup>™</sup> Baskets

Perforated metal sides, bottom and iron frame. Removable dividers accommodate a variety of parts sizes.

L-22 and LS-22 (stainless) 22"L x 18"W x 6"H

L-27 and LS-27 (stainless) 311/4"L x 231/4"W x 6"H

Actual basket material may differ from photo

### L-Series Liftkleen<sup>™</sup> Baskets

LKB36 and LKBSS36 (stainless) Parts Basket for LKR36 32"L x 19"W x 15"H

LKB48 and LKBSS48 (stainless) Parts Basket for LKR48 44"L x 31"W x 15"H

LKB60 and LKBSS60 (stainless) Parts Basket for LKR60, LKD60 55"L x 31"W x 15"H

LKB72 and LKBSS72 (stainless) Parts Basket for LKD72 67"L x 37"W x 15"H

LKB84 and LKBSS84 (stainless) Parts Basket for LKB84 80"L x 32"W x 15"H

### Work Light



Constructed with 360° rotation and a 28" gooseneck to allow for additional lighting of entire work area. Solid support so light cannot be pulled down to obstruct cover closing in case of fire. For HK-150, all Handi-Kleens,<sup>™</sup> and all Clean-O-Matics.<sup>™</sup> Mounts to back or side of tank.



Shelves shown here are supplied as standard with the purchase of one of the listed parts cleaners. Ideal for additional work space or replacement of worn shelves.

L-4 Identical to L-5 but sized for use with Clean-O-Matic  $^{\scriptscriptstyle \rm M}$  Model 800

L-4S Identical to L5S but sized for use with Clean-O-Matic<sup>™</sup> Model 800

L-5 Sheet steel metal Flo-Thru shelf constructed with solid metal frame; for use with Clean-O-Matic<sup>™</sup> Models 300 and 500

L-5S 16 gauge steel shelf for use with Clean-O-Matic^ ${}^{\scriptscriptstyle \rm M}$  Models 300 and 500

Actual shelf material may differ from photo

### Sludge Trays

Removable soak trays keep soaking parts off the bottom of the tank yet capture any sludge to make removal easier.

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432-36376 - For use with PL422 and Clean-O-Matic<sup>™</sup> 300 and 500 Series (2 required) or 800 Series (3 required) 432-36664 - For use with 900 Series (2 required)



allows cleaned parts to drain while directing run-off into tank. Shelves mount externally to maintain critical workspace.

L-6 16 gauge steel shelf attaches to side of Clean-O-Matic<sup>™</sup> Models 300, 500 and 800. 16"L x 18"W

L-61 16 gauge steel shelf mounts to side of Flo-Bac,<sup>™</sup> HK-150, and all Handi-Kleen<sup>™</sup> models. 15"L x 18"W



- 3B-G Standard brush with 21/2" polypropylene bristles
- 5D Double brush, with  $1^{1}/_{2}$ " and  $2^{1}/_{2}$ " nylon bristles

6A Flow-Thru brush flushes part as it cleans. Solvent flows through core of handle; 2' Connecting hose, 21/2" nylon bristles, and a rubber connector that slips over nozzle of flexible metal hose of parts cleaner

7A Flat Angular Flow-Thru cleaning brush (polyester bristles) can attach to pump nozzle with rubber hose (included)

8A Round Angular handle cleaning brush (polyester bristles) can attach to pump nozzle with rubber hose (included)

### Filters

Filtration systems are available for all Liftkleen<sup>™</sup> Models. Filters for T-series models available in 10, 50 and 100 micron. For L-series models in 150 and 590 micron. See GM price list.

For Use With T-Series Liftkleens<sup>™</sup>

C-31626 Mild Steel C-31626-41 Brass

C-31626-88 Stainless Steel

For Use With L-Series Liftkleens<sup>™</sup> LKF/LKFT100 – Single Canister System LKF/LKFT200 – Dual Canister System

### **Replacement Filter Bags**

Replacement filter bags for Drum Mount Parts Cleaners. C-27360 washable nylon mesh filter bag extends solvent life, 12 per package



Poly bag liners simplify cleanup and disposal of solid waste. Available in dozens. C-27452 Fits 16 gallon drums C-27484 Fits 30 gallon drums C-27835 Fits Tempest<sup>™</sup> 10





### **CLEANING FLUIDS**

Graymills fluids are specially formulated to provide optimum cleaning in our parts washers. They are intended to be used for a variety of cleaning needs, and specific formulations are available for cleaning ferrous and non-ferrous metals, rubber and elastomers, parts to be painted, and for removal of many varieties of grease, motor oil, cutting fluids, carbon deposits, inks and gummy residues.

### General Purpose Solvents



Super Agitene<sup>™</sup> M5005 (5 gal) M8400 (50 gal) Ideal for cleaning of metal, plastics and painted surfaces. Grease, motor oil, cutting oil and water soluble oils are removed with ease. Gummy deposits unaffected by ordinary mineral spirits are readily softened or removed. Contains Hand Ease<sup>®</sup> a cosmetic-grade lanolin formulation, which replenishes some of the skin's natural oils removed by solvents. It helps to reduce the chance of irritation and chapping, leaves a protective coating on parts to help retard corrosion, and is a low-odor solvent with a 105°F flashpoint (40°C). It should not be used on parts going into a plating or painting process. (See regular Agitene.<sup>™</sup>) Available in 5 gallon pails and 50 gallon drums.

### Regular Agitene<sup>™</sup> M2062 (5 gal) M1700 (50 gal)

Same high quality cleaning action and flash point as Super Agitene,<sup>™</sup> but leaves no film, thus making it ideal for cleaning parts to be painted. It will not attack varnish, allowing it to be used on varnish-insulated electrical components. Available in 5 gallon pails and 50 gallon drums.

### Super Agitene<sup>™</sup> 141 M5005-141 (5 gal) M8400-141 (50 gal) Regular Agitene<sup>™</sup> 141 M2062-141 (5 gal) M1700-141 (50 gal)

### Contains no ingredients listed as hazardous by the EPA's RCRA

### Meets OTC VOC regulations

Has the same attributes as low-flash counterparts but a higher flash point of 141°F (60°C), which meets local regulations where use of High Flash Point Solvent is required. Available in 5 gallon pails and 50 gallon drums.

### Solvent Filtration



### Solvent Saver Filters

Extend the life of solvent cleaning solutions by filtering out the oil and grease that accumulates in the solvent cleaning solution.

- Fits all drum-mount and free-standing solvent parts washers
- Easy installation rubber hose with universal adapter fits over end of flexible Stay-Put nozzle
- Replace on an "as-needed" basis
- Maintains cleaning solution at a consistent level of performance

### Solvent Saver I

Oil and Grease Removal (Packed two/carton) SS-11 7" diameter x 11" long–includes one connecting hose SS-18 7" diameter x 18" long–includes one connecting hose

### Solvent Saver II

Oil and Grease Plus Particulate Removal (Packed two/carton) In addition to special absorbent materials, it contains a 5 micron filter cartridge that filters particulate from the solvent prior to oil and grease absorbing stage. SSC-11 7" diameter x 11" long–includes one connecting hose SSC-18 7" diameter x 18" long-includes one connecting hose

### For Solvent Saver I and II

Solvent Saver Hanging Bracket-Stainless Steel bracket holds filter out of way on inside of parts washer. SS-BRAC 12" long x 9" deep X 8" high

### Biodegradeable Alkaline Aqueous Cleaners

Graymills versatile line of aqueous cleaners can be used for removing virtually any organic or inorganic soil, including greases, oils, soft carbons, epoxies, hard water residue, corrosion, oxides, paints, plating salts, rust and smut. Aquatene water-based cleaners work most effectively when heated and require only a water rinse.

### Aquatene 330

### GM330C5 (5 gal), GM330C55 (55 gal)

A general purpose concentrated detergent in liquid form. Works best when heated up to 140°F (60°C). Ideal for use in free-standing manual systems and immersion type part washers. Removes soft carbon deposits, light coatings, grease, gummy residue, oils, latex paint, light varnishes, rust preventatives. A five gallon pail makes 25-50 gallons; a 55 gallon drum makes 275-500 gallons, depending on concentration.

### Super Aquatene 360

### GM360C5 (5 gal), GM360C55 (55 gal)

A general purpose concentrated cleaner in liquid form can be used up to 180° F for faster cleaning. Ideal for use in free-standing manual systems and immersion type part washers. Removes all items listed for GM 330 but also effectively cuts buffing and lapping compounds, hard to remove coatings, water-based inks, oxidized oils and heavy or burned-on varnishes. A five gallon pail makes 25-50 gallons of cleaner; a 55 gallon drum makes 275-500 gallons of cleaner, depending on concentration.

### Super Aquatene 390

### GM390C5 (5 gal), GM390C55 (55 gal)

A heavy-duty, low-foam concentrate perfect for use in spray cabinet washers. Ideal for steel, cast iron, and other ferrous metals (not for use on non-ferrous metals). Removes most greases, light oils, water soluble inks, hardened composites and loose metal chips. Contains a rust inhibitor. A five gallon pail makes 30-40 gallons, a 55-gallon drum makes 300-450 gallons, depending on concentration. Heat to maximum of 150°F (65.5°C).

### Aquatene 571

#### GM571-25 (25 lbs), GM571-100 (100 lbs)

Specially formulated for cleaning aluminum and non-ferrous metals. The powdered compound mixes @ 3 to 8 ounces per gallon of water. Available in 25 lb cartons or 100 lb. fiber drums. Use heated to 180°F (82°C).



### Biotene, Super Biotene, and Turbo Biotene

Ph neutral, aqueous based solutions blended with specific emulsifiers and surfactants for use with our Bioremediation parts washers to help the microbial process work faster and more effectively while still delivering excellent cleaning performance.

### Super Biotene 550, Super Biotene 660

GM550-QT (1 qt), GM550-1 (1 gal) Concentrate GM660-5 (5 gal) Pre-Mixed

A general purpose cleaner that provides a high level of cleaning ability to address a wider range of applications. Concentrates mix with regular tap water at a ratio of 19:1; our pre-blended formulas are ready to use right from the pail. USDA and SCAQMD approvals.

### Turbo Biotene 880

### GM880-5 (Concentrate)

Our most aggressive formulation capable of cleaning and remediating the toughest jobs. This concentrate mixes with regular tap water at a ratio of 7:1. Green Seal and NSF Certified.

Recharge your system BIOFL1 microbial impregnated cartridge filter and BIO-POUCH blister pack of two microbial pouches.

### Aqueous Solution Treatment System

System enables users to treat water-based aqueous solutions for sewer disposal.

Oil absorbent pads OAP25-4 pick up floating oil. 19" by 15" oil pads absorb up to 25 times their own weight in oil. 4 packages of 25 (100 total).

#### Neutralizer powder DN10-4

To treat used solution to meet Federal and local disposal regulations. Neutralizer powder changes color of solution when sufficient powder has been added. Four 7-lb containers.

Detergent Neutralizer System DDK

25 pads and one 7-lb container of powder in a kit.

Filter out any remaining solids prior to disposal.

NOTE: For first-time use, laboratory-analyzed sample of neutralized solution should be submitted to your local authority to assure that your processed fluid waste meets their standards.

### **Cleaning Fluid Reference Chart**

Cleaning Problem	Super Agitene™	Regular Agitene <sup>™</sup>	Aquatene 330	Super Aquatene 360	Super Aquatene 390	Aquatene 571	Biotenes®
Buffing and Lapping	*	*		*	*		
Carbon Deposits, Soft			*	*	*	*	*
Coatings, Light	*	*	*	*	*	*	*
Grease	*	*	*	*	*	*	*
Gummy Residues	*	*	*	*	*	*	*
Inks, water based				*			
Oils	*	*	*	*	*	*	*
Oils, oxidized				*	*	*	
Paint, Latex			*	*	*		*
Paint, Oil based	*	*			*		
Rust Preventatives	*	*	*	*	*	*	*
Varnishes, Light	*	*	*	*	*	*	*
Varnishes, Heavy				*	*	*	
Varnishes, Burned-On				*	*	*	
Waxes			*	*	*	*	*
For Use in:	Super Agitene <sup>™</sup>	Regular Agitene <sup>™</sup>	Aquatene 330	Super Aquatene 360	Super Aquatene 390	Aquatene 571	<b>Biotenes</b> ®
Clean-O-Matic™	*	*					
Handi-Kleen <sup>™</sup> (cold)	*	*					
DH/PH (hot)			*	*		*	
Turbo Parts Cleaner (cold)	*	*					
Turbo Parts Cleaner (hot)			*	*	*	*	
Liftkleen™ (cold)	*	*					
Liftkleen™ (hot)			*	*	*	*	
Spray Washing Cabinet					*	*	
Tempest™					*	*	
Drum Mount (cold)	*	*					
Drum Mount (hot)			*	*		*	
Ultrasonic			*	*	*		
Biomatic™							*



### Graymills manufactures pumps

for most industrial applications in the global marketplace specializing in machine tools. Visit the website or call customer service for literature on Graymills centrifugal, gear, diaphragm, high pressure multi-stage pumps and tank systems for OEM and MRO applications.



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