MAT CLEANSING IN MINUTES

AUTOMATED MAT CLEANING WITH WASH WATER RECYCLING
CLEANER MATS, FASTER RESULTS.
FOR OVER 40 YEARS WE HAVE BEEN SERVING NORTHWEST INDIANA, SOUTHWESTERN MICHIGAN AS INDUSTRIAL CLEANING AND SERVICE CONTRACTORS.
WHEN EXPERIENCE MATTERS

cleaner mats, faster results.

For over 40 years we have been serving Northwest Indiana, Southwestern Michigan as industrial cleaning and service contractors. Since our inception our business has expanded to include custom mobile cleaning and recycling products which are in operation in the US, Canada, Mexico, Europe, Australia and Japan. Today, we still have an industrial cleaning operation located in South Bend, Indiana. Doing so keeps us grounded to our roots and enables us to use the products we create in real world situations.

We build an exceptional mat cleaning and recycling system built to handle your largest dirt load. Everything is built to your specification. Shortcuts in quality and dependable equipment are unacceptable. We treat the equipment we build and sell as if we are going to use it ourselves. Thank you for the opportunity to demonstrate why our 4 minute mat cleaning and recycling technology is changing the mat industry!

George Podell
President
Hot And Mighty | The Rig Mat Washer
A Division Of T. George Podell & Co Inc
Air Knife
Initial Stage Filtration
Wash Station
Flush Bar
Air Knife
THE RIG MAT WASHER

cleaner mats, faster results.
360º CLEANING TECHNOLOGY

cleaner mats, faster results.

THE RIG MAT WASHER PROVIDES MORE CLEANING UNITS IN 4 MINUTES THAN A SINGLE WASH OPERATOR IN 45 MINUTES.**

OVER 819,000 CLEANING UNITS IN 4 MINUTES

Patent Pending 360º Cleaning Technology

The Rig Mat Washer utilizes a patent pending cleaning technology to quickly and effectively clean an entire mat as it moves through a wash station built on top of an automated, variable speed conveyor line. The high pressure pumps push 40 GPM at 4,000 PSI to 10 rotating arms containing 20 separate cleaning nozzles to encompass the mat in high pressure cleaning power. The top, bottom and sides of the mat are completely cleaned reaching down deep into each mat’s grooves presenting a mat that looks as clean as new.

The Rig Mat Washer will accept all types of matting. Our standard system accommodates up to 20 foot mats but added entry and exit tables are available to allow for 40 foot mats to be cleaned fast and effectively. The wash station is also height adjustable allowing matting up to 12 inches thick.

The Rig Mat Washer consists of (2) 20 gallon per minute high pressure pumps and a single 64 gallon a minute flush pump that operates at 700 PSI to pre-soak and clean the mats before they enter the high pressure side of the wash station. The flusher bar stretches across the entirety of the conveyor platform and soaks the top, bottom and sides of the mat.

The high-pressure side has thermostat adjustable on-demand hot water. The two, one million BTU heaters will provide up to a 135 temperature rise to the 40 GPM pumps. The Rig Mat Washer comes with automatic flue dampeners that open and close when the heating system is running.

** Single wash operator is calculated using a 6 GPM @ 3,000 PSI Washer. 
(6 x 3,000) x 45 Minutes = 810,000 cleaning units
- **Fast, Efficient Cleaning Times For All Sized Mats**
- **Adjustable Height** - Accommodates Mat Thickness Up To 12”
- **360° Single Pass Cleaning** - 20 Cleaning Nozzles On 10 Rotating Arms
- **Adjustable Arm Angle Etching Technology**
- **Designated Side Cleaning Arms**

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**HIGH FLOW**

64 GPM pre-soak flusher bar softens caked-in dirt

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**HIGH PRESSURE**

Two 20 GPM At 4,000 PSI Water Blasters provide 360° cleaning power to the wash head.

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**HOT WATER**

On-demand heat provided by two, 1,000,000 BTU burners

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**CHLORINATION**

Pellet fed chlorination system provides dilution controlled chlorine application when required.
Closed Loop Recycling

cleaner mats, faster results.

The Rig Mat Washer is built on a rugged and versatile filtration platform. With filtration down to 20 micron for wash water reuse in the high-pressure pumps the Rig Mat Washer uses filtration strategies, and technologies combined with collective real world experience to build a recycling process that will stand up to the toughest dirt load your mats can offer.

Our filtration process starts outside our custom built clarifier tanks. Our unique initial stage separation prohibits large rocks, wood and other contaminants from entering the clarifying tank. The flocculation system encourages particle coagulation which decrease settling times. We set up weirs and baffles as barriers to stop contaminants from progressing in the clarifier tank.

The filtration equipment is auto backwash-able. Media filters and coalescing grid packs are removable, cleanable and reusable. The filtration package is easy to manage and ready to handle a large dirt load.

Initial Stage Solids

The Rig Mat Washer utilizes a unique method to remove initial stage contaminants from the dirt / wash cycle. Initial stage solids are removed from the operators dirty mat and fall into the Rig Mat dirt slide where contaminants are collected in custom fabricated trash hoppers. From there, wash water is separated and transferred into the clarifier tank for settling. The trash left behind remains contained for later disposal.

- Early Stage Dirt Removal
- Custom Built Trash Hoppers

Custom Built Clarifier

Multi-stage filtration

20 Micron
Extended Settling, Flocculation

The Rig Mat Washer custom built clarifier tank allows for extended settling times. Incorporated flocculation allow to keep your wash water crystal clear.

Clarifier tank features custom designed baffle and weir system.

- Extended Settling Times
- Flocculation
- Weir And Baffle System

Oil, Water, Solids Separation

The Rig Mat Washer filtration platform uses a variety of proprietary methods for better filtration. The coalescing oil attracting grid pack media is removable, washable and reusable. This allows for fast and easy clean-up.

- 4-Phase Oil, Water Solids System
- Removable / Cleanable Grid Packs

Multi-Stage Filtration

The multi-stage finer filtration consists of large industrial multi-media filters, finer cartridge or bag filters and other proprietary techniques for wash water filtration beyond 20 micron.

- 20 Micron Or Finer Filtration

Auto Backwash-able

The large multi-media filters are auto backwash-able. They can be set to backwash based on time or pressure differential making for an easy system to maintain.

Bag and cartridge filters can be removed, cleaned and reused.

- Assignable Backwash Settings
- Reusable Cartridge or Bag Filters

RUGGED AND VERSATILE
AUTOMATED AND VARIABLE SPEED

cleaner mats, faster results.

TYPICAL MAT CLEANING IS PERFORMED AT 4 TO 5 LINEAR FEET PER MINUTE. A 16 FOOT MAT IS TYPICALLY CLEANED IN 4 MINUTES.

4 MINUTE MAT CLEANING

Variable speed conveyor system allows for extensive cleaning options. The 5 HP Servo Motor and control drive can operate at up to 20 linear feet per minute. Typical mat cleaning is performed at 4 or 5 linear feet per minute.

The Rig Mat Washer conveyor system is built for your toughest work environment. Our 6” inch rollers are built with 2” inch shafts that are spaced at 4’ on center.

The Rig Mat Washer comes with bearing protection and conveyor safety triggers. We support our rollers with heavy object drop protection shoring up the base of the conveyor roller with a custom designed support system. Also provided is remote conveyor shut-offs.
CONVEYOR

variable speed

CONVEYOR

up to 20 linear LFPM

SPEED

6” rollers w/ 2” shafts

HEAVY DUTY

4’ On Center Roller Spacing

Rough Neck Rollers -
6” Rollers With 2” Shafts

5 HP Servo Motor -
Up To 20 LFPM, Variable Speed

Bearing Protection

Remote Conveyor Shut-Offs
The Rig Mat Washer is built for stationary or mobile operation. A full Rig Mat Washer can be disassembled in less than 2 hours and broken down into three separate segments; the equipment room, the clarifier tank, accessories.

The equipment room is built into a forty foot, high-cube container. We stud, spray foam and panel the walls and ceiling. The floor gets a high-quality truck bed liner. We also spray foam the under side of the container for maximum insulation.

The conveyor, wash head and blow off system are built on top of the custom built clarifier system. Conveyor extensions are bolted on to the entrance and exit sides of the conveyor line to accommodate longer mats. Standard system accommodates mats up to 20’ in length. Longer extensions are available to allow 40’ mats to run through the wash system.

The clarifier tank and equipment room are built onto roll-off base plates. Accessories consist of initial stage hoppers and genset needed to power the system.
EQUIPMENT ROOM

Equipment room feature two man doors, operation window, electrical step downs and variable frequency drives for larger electrical motors. The room is insulated with approximately 2 - 2.5” spray insulation foam, studded and paneled. Cold weather packages include two 7,000 BTU diesel fired burners.

CLARIFIER TANK

The clarifier tank 44’ x 11’ 6” featuring 4 separate chambers. When full the system is estimated to hold 12,000 gallons of water. Specialty built adjustable weirs allow for even water flow for maximum settling times.

ACCESSORIES

Our standard 6’ conveyor extension tables provide adequate room for cleaning 20’ mats. Longer extension tables are available to accommodate 40’ mats.

Each unit comes with 2 custom designed and built initial stage trash hoppers. The hoppers collect initial dirt load and trash separating the dirt and initial wash water. Hoppers are easily removed from the wash system to clean out the hopper bucket for little down times while operating.

Equipment Room - Studded, Insulated, Paneled
Cold Weather Packages - Insulation And Compartment Heaters
Two Man Doors, Double Door, Operation Window

Standard System Accommodates 20’ Mats
Longer Conveyor Extensions Options Available
2 Hour Disassemble / Assembly Time
Each Rig Mat Washer is custom built to order. Washer variations, conveyor length, heating options and paint colors are all customizable per your request and can be discussed when you request a quote.

Auxiliary Uses

**Manual Wash Operation**
Your Rig Mat Washer system can be used as a stand alone wash and recycling work station. The (2) 20 GPM at 4,000 PSI water blasters can be separated from the wash head assembly and used in manual operation by up to 8 wash operators.

That wash water, if recovered and be transferred back into the Rig Mat Washer clarifier tank for filtration and reuse.

**Gamma Jet® Ready**
The 64 GPM at 700 PSI flusher pump can be disconnected from the wash head assembly and used in conjunction with a Gamma Jet® nozzle for interior tank cleaning. That wash water if reclaimed can be filtered for reuse through the Rig Mat Washer filtration platform.

**Additional Conveyor Length**
The standard Rig Mat Washer includes an additional 6’ non drive entrance and exit side conveyor tables. This extra room accommodates mats up to 20’ in length. For 40’ matting additional non-drive conveyor tables can be provided.

**Air Knife Blower System**
The dual air knife system decreases mat dry time by removing standing water after the wash process. By removing the standing water right after the wash head the Rig Mat System is reclaiming more wash water keeping the work surface around the washer dry.
Custom Paint Colors / Decaling

We can match your corporate branding colors to create a unique piece of equipment that is a visual advertisement as you transport it down your local or remote highways.

Logo decaling is also available. Our team can discuss available spacing and design requirements.

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**YOUR RIG MAT WASHER SYSTEM CAN BE USED AS A STAND ALONE WASH AND RECYCLING WORK STATION.**

**MANUAL OPERATION BY UP TO 8 WASH OPERATORS**

- Manual operation
- 8 Operators
- Interior tank cleaning
- Gamma Jet®
- Color and branding
- Paint options
**HIGHLIGHTS**

cleaner mats, faster results.

**Cleaning Equipment**
(2) 50 HP Electric Water Blasters
- 20 GPM @ 4,000 PSI Each
64 GPM @ 700 PSI Flusher Pump
- 25 HP Electric
(2) 1,000,000 BTU Burners
- On Demand Heat
- 110˚ F Temp Rise

**Filtration Equipment**
- Propriety Technologies
- Flocculation
- Centrifugal Separation
- Oil Water Solids Separation
- Finer Multi-Media Filtration Platform

**Equipment Room**
- 40’ HC Equipment Room
- Studded, Insulated, Paneled
- Two Man Doors, Rear Double Doors
- Operation Window
- Rolled On Truck Bed Floor Liner
- Lighting, Electrical Build-Out

**Clarifier Tank**
- 48’ x 11’ 6” x 44’ Clarifier Tank
- Custom Weir And Baffle System
- Flocculation
- 4-Stage Oil, Water Solids Separation
- Multi-Stage OWS Grid Pack Usage
- Railings, Cat Walk

**Conveyor System**
- 5 HP Servo Motor
- 6” Roller, 2” Shafts, 4’ On Center
- Adjustable Speed Controller
- Conveyor Supports And Extensions
- Safety Shut Offs

**Wash Station**
- Adjustable Height
- 20 Nozzles On 10 Rotating Arms
- Designated Side Cleaners
- Flusher Bar
- Initial Filter Stage Slide
- Wash Station Water Containment Hood

**Accessories**
- Air Knife Blow Off System
- Chlorination
- Custom Initial Stage Trash Hoppers
- Guns And Wands For Manual Operation
- Heating Options

**Power Requirements Needed**
- VFDs Are Included For Large Motors
- 480 / 3 Ph - 130 KW Genset Required

**DEFINE: CLEANING UNITS (CU)**
MEASUREMENT OF CLEANING FORCE AND FLOW OVER TIME. - (PSI X GPM) / TIME

**Rig Mat Washer:**
(64 GPM x 700 PSI) + (40 GPM x 4,000 PSI) = 204,800 CU / minute
4 Minute mat clean time (204,000 x 4) = 819,000 CU

**Manual Wash Operator:**
6 GPM x 3000 PSI x 45 Minutes = 810,000 CU
THE CASE IS CLEAR

cleaner mats, faster results.

CASE STUDIES FROM OUR CLIENTS.

CLEANING COSTS AND LABOR REDUCTIONS

At a location in Alberta Canada a client previously had 14 operators using 5 GPM @ 3000 PSI wash units cleaning in 12 hour shifts. This client was paying his cleaning contractor on average $175 per cleaned mat. That rate was priced at cost for the cleaning plus the water hauling and disposal fees. The service contractor used over 45,000 gallons of water a day. The water was hauled in, vacuumed up and disposed of every day.

The Rig Mat Washer eliminated water hauling and disposal costs. Reduced labor cost from 14 manual operators to 2 Rig Mat Washer operators.

On average the Rig Mat Washer is cleaning a 16 FT mat in under 4 minutes and cleaning 15 + mats an hour depending on dirt load. This equates to 180 + mats cleaned in a 12 hour shift.

HUGE TRANSPORTATION SAVINGS

A client in Calgary has found a significant reduction in his mat transportation costs. Normally this client would transport their dirty mats, 36 mats per load, back to their rental yard. After acquisition of a Rig Mat Washer the newly cleaned mats weigh less and thus transport 50 cleaned mats per load. Every 4th load is a transported load saved...

WATER HAULING AND DISPOSAL ELIMINATION

The wash water recycling capabilities of the Rig Mat Washer will save thousands of gallons of water a day. By reclaiming, filtering and re-using your wash water you eliminate expensive water hauling fees along with the need to vac up your wash water and pay for its disposal.
7 REASONS FOR 4 MINUTE MAT CLEANING

1. 12X FASTER THAN MANUAL WASH OPERATIONS*
2. ELIMINATE EPA, DOT AND OTHER CONCERNS
3. EXTEND MAT USAGE AND LIFE SPAN
4. HUGE LABOR AND FUEL REDUCTIONS
5. ELIMINATE WATER HAULING AND DISPOSAL**
6. CORPORATE ENVIRONMENTAL STEWARDSHIP
7. YOUR CUSTOMERS DEMAND CLEAN MATS

* 4 minute wash time based on typical mat cleaning speed of 4’ a minute on a 16’ mat.
** Does not include fresh water supply needed for initial system set up and water make-up.
OTHER CLEANING PRODUCTS

we know cleaning
we live it

INDUSTRIAL MOBILE CLEANING SYSTEMS

- TRAILER MOUNTED PRESSURE WASHERS
- WASH WATER RECOVERY AND RECYCLING SYSTEMS
- OILFIELD AND COLD WEATHER PACKAGES AVAILABLE

At Hot And Mighty we take pride in what we sell. That pride shows through in our superior equipment design and workability. Our equipment is heavy duty and built to last even when it is used and abused. Use our forty years experience as an industrial cleaning equipment contractor and supplier to grow your business regardless of its current size. We will tell you how to clean almost anything. More importantly we will teach you how to price your jobs so you can stay in business.

Big Savings | Factory Direct Trailer Pricing
At Hot And Mighty we purchase our custom trailers directly from a trusted manufacturer at dealer prices. We then pass these savings on to you. What this means is what we pay, you pay, no markups or adders saving you thousands of dollars under retail pricing. We have chosen to pass these savings directly to our customers in an effort to provide the best mobile cleaning solutions at the best possible prices.
We put ideas into action, solving real problems we find in the field. We are industry leaders in quality and dependable cleaning and recycling products. With over 40 years of industrial cleaning solutions and services...

**WE KNOW CLEANING.**
**WE LIVE IT.**

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