

USA

Dust Guard



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Slurry Press Machines

Clean Water Reclamation

! Water / Solid Separation

! Water Recycling

Three (3) Sizes – Set-Up Information



Slurry Press Machines - Portable Wastewater Treatment Plant on Wheels

Operation:

- Vacuum slurry from any size container: 55-gallon drum, even a lake
- Slurry is filtered through collection chambers where solids & liquids are separated
- Filtered, clear liquid (water, oils, etc.) is automatically discharged – available immediately for re-use as the filter chambers continue to fill with solids
- Solid-filled chambers are dropped as “caked plates” in a wheel barrel and recycled or composed.



Mudhen #MH2

Air Powered, Filter Press Technology -

Environmental, Cost & Operational Benefits:

- Portable, Compact, Mobile — Goes Anywhere - Operates Fast
- HD, Durable, Reliable, USA Made - from easily accessible, interchangeable replacement parts
- Self-Operating / Self Sufficient - **Used without disrupting operations**
- **Complies to Environmental Regulations ! Helps our Water Supply Shortage**
Solids are available to Recycle or Compose ! Eliminates Disposal Costs

Air Powered: All [3] Mudhens operate from portable, 120 volt air compressors such as the 15-Amp, 15-gallon Dewalt #D55168:

- > with 1/4" x 50' Air Hose & Fittings
- > Ideal Mudhen Setting: 50-80 PSI



Mudhens (3) – Specs, Capacities, Price

Mudhen, Model MH1 Identical to Mudhen #MH2 (shown above), but with 7 Filter Chambers. Fits through a 36" doorway. Easily outpaces most teams of concrete professionals using saws and grinders. Specs: 52"(l) x 32"(w) x 48"(h), 620 lbs., 6" rubber casters, 7-Filter Chambers which easily processes 240 gallons of slurry / hour (creates one (1) cubic foot of solids when the 7-chambers are full. Ships on 1 pallet **Price: \$15,800.00**

Mudhen, Model MH2 (shown above) Twice the collection capacity of #MH1 with 13 Filter Chambers. Specs: 64"(l) x 32"(l) x 48"(h), 730 lbs., 6" rubber casters. The 13-Filter Chambers easily processes 480 gallons of slurry / hour and compresses two (2) cubic feet of solids when chambers are full. Ships on a 1.5 pallet **Price: \$18,900.00**

Mudhen Max, Model MH4 Identical to Mudhen #MH2 but with 24 Filter Chambers. Twice the capacity and processing speed of the MH2. Fits through a 36" doorway. Specs: 90"(l) x 32" (w) x 48" (h), 720 lbs., 6" rubber casters, 24-Filter Chambers: easily processes 840 gallons of slurry / hour, compresses 3.8 cubic feet of solids when chambers are full. Ships on a 1.5 pallet **Price: \$27,400.00**

Set-Up Information / Filtration Efficiency

Power Requirements

- The Mudhen will operate from any compressor. Ideal compressor & setting: 15 or 30-gallon set at: 8 SCFM @ 50 - 80 PSI
- Once properly adjusted to your filtration requirements and processing times, the Mudhen may be left to operate unattended.
- For crystal clear water output, efficiency of operation, and fast processing times, reference the following compressor settings:
 - > 50 - 80 psi: Fast processing times, produces beautiful, dry, solid cakes, crystal clear water
 - > 40 psi: Medium processing times, produces sloppy cakes, crystal clear water

Which Mudhen to Purchase? How many gallons of slurry do you need to process per day?

- Using a 55 gallon drum of slurry as an example with 50% solids — Mudhen Mini with 3 filter chambers.
- Because of the high volume of solids in our 55 gallon drum and the limit of 3 filter chambers, you will have 6 cleaning cycles per drum. A cleaning cycle is the number of times you have to stop slurry separation to empty and clean the filter chambers.
- The more filter chambers (or the less solids in your slurry), the longer the slurry processing times before stopping to empty and clean the chambers.
- Benchmark: If you accumulate < 200 gallons of slurry per day, the Mudhen Mini is good for you.

Start-Up Operation: Pre-Coat Step.

- Each filter chambers includes 2-filter media cloths, secured in place with a gasket. Expected filter cloth life is years.
- **Filter Cloth Filtration Efficiency Rating: 5 microns (.005 millimeters). Pre-coated Filter Cloth Efficiency: 1 to .6 microns.**
- Pre-coating the filter cloth should be your 1st step to ensure the purity of the liquid being discharge.

TWO (2) METHODS ARE USED TO PRE-COAT THE FILTER CLOTHS:

- 1) Loading Method - Using your own sediment. The Mudhen should be started at the slowest speed possible (1 - 10 psi). Depending on the particle size and volume of sediment in your slurry, pre-coating times will vary (2 to 40 minutes)
2. Mix Method - Mix 20 lbs. of diatomaceous earth (DE) with 10 gallons of water.
Pump this milkshake mixture through the filter chambers to instantly pre-coat the filter cloths. You may immediate being normal operation of the Mudhen using its optimal operating speed of 50 - 80 psi.

Once the filter cloths are properly coated (determined by the purity of the water being discharged), you can increase the psi into the press but never exceeding 80-PSI. Note: If the water being discharge ever begins to look unacceptable (cloudy), simply reduce the psi to the pump. This will slow down the intake of slurry going into the Mudhen while it continues to pre-coat the filter cloths. Additionally, if speed isn't too important you can leave the machine operating slowly at 50-PSI.

The Pre-Coat Step of "Going slow and long enough" is only for the first filling of the chambers. After the release of your first cakes, you'll still start the Mudhen slowly (10 psi), but only for a few minutes as the filter cloths are already coated. As you observe the clarity of the water being discharged, the psi *may be* gradually increased to the optimal operating setting of 50 - 80 PSI.

Filling the Filter Chambers - Emptying the Filter Chambers - Dropping the Caked Plates.

The powerful 3/4" diaphragm pump (completely adjustable, from 0 to 30 GPM or 0 to 100 PSI of air) will push and compact the solids in the filter chambers. The filter chambers — held in place within the heavy framework of the Mudhen, and pressed together with 5000 lbs. of force from the hydraulic hand pump. As the filter chambers fill, pressure gradually increases. Additionally, as the solids fill in the chambers the purity of the liquid being discharged also improves (i.e. as the solids increase the chamber's filter efficiency rating also improves.)

ONCE FULL - THE LIQUID BEING DISCHARGED WILL CEASE TO FLOW - OPERATOR INTERVENTION IS REQUIRED:

- Reduce the air pressure from the compressor from 80 to 20 PSI
- Open the Air Blow Down valve on the Mudhen, to distribute the 20 PSI of air over and through the filter chambers
This feature will dry any excess water that may still be in the filter chambers, helping to ensure that the discharged cakes are solid. This is an optional step . . . typically lasts between 2 to 5 minutes
- Reduce the air pressure from the compressor to zero (0)
- Open the bleed value on the hydraulic hand pump to relieve its pressure on the iron compression plate, tilt the pump backwards
- Re-tract the compression plate (it is on wheels) and use the side handles on the filter chambers to pull them apart.
- As each filter chamber is separated, the caked plates are released and dropped into collection trays or a wheel barrel.
- Any sludge is scraped from the filter cloth that did not fall into the collection trays (plastic scraper is provided)
- Close the Mudhen by sliding the filter chambers together towards the pump
- Re-positioning the compression plate and the cylinder and hand pump the hydraulic ram to 5000 PSI
- Turn-on the air pressure to 10 psi to start the process . . . gradually increasing to 50 - 80 PSI.

HANDLING the DISCHARGE of CLEAN WATER.

You can choose to reuse the water being discharged by collecting it in a container and reusing it for your process. The water is not potable and cannot be consumed by humans. Or, you may choose to discharge the water to a drain. Note: It is the user's responsibility to ensure that the water being drained meets all requirements to send to drain. This typically involves using a pH Test Kit.

END of DAY CLEANING.

At the end of each day of use it is important to flush out any slurry from the system. This includes flushing the air pump and the filtration plates as well as any hoses. This can be done by directing the clean water discharge hose from the system and running its clean water right through the Mudhen.

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