



## Mix-Clean-Recover Unit Model MINI MAC-950E

*Surface to Surface Inc.*



Unit shown with a M2-E922 mixer

### Features and Benefits: MINI MAC-950E

The MINI MAC-950E was designed to mix drilling fluid, clean and recycle used drill fluid, and maintains proper drilling fluid in an active tank for the drilling rig. MINI MAC-950E is built as one unit that includes 3 tanks, a manifold assembly of hydro-cyclones, a STS M2 mixer and all the valves and piping to needed to create a smooth and effortless system needed to satisfy the customer's needs.

The unit is designed to be operated on ground level with a tank height of 61 inches, so the operator can over-see the process, and visually inspect inside of the tanks without ever having to climb up or down causing a safety issue. The unit is to be levelled using the removable jacks which are stored at the front of the unit. The jacks can be fitted into the front or rear jack pockets depending on where the tank needs to be levelled.

The mixer located at the rear of the unit is designed around the time proven M series mixers of STS. The MINI MAC-950E is powered by a 10HP Teco/Westinghouse electric motor, driving a 2" centrifugal pump, making effective use of the patented 4 point mixing system. With the proper valve selection, this one motor and pump will do all of the functions required to operate the unit effectively and efficiently, thus reducing mechanical and maintenance issues.

With a hopper height of only 38 1/2" from the ground, operator fatigue from loading bags into the hopper is reduced. The mixer blends and shears the new drilling fluid in the rear 250 us. gallon tank. A set of 5-1 injector nozzles in combination with a rolled bottom tank design keeps the fluid agitated and consistent. When the operator has the proper drill fluid made, simply rotate a valve on the mixing unit and route the fluid to the front active tank. The active tank will hold 500 us. gallons of drilling fluid for the drilling rig to draw from. This tank is also designed with a rolled bottom and a set of 5-1 injector nozzles to keep the fluid agitated and consistent.

The tank in the center of the unit has a capacity of 200 us. gallons for storing "dirty, spent" drill fluid from the drill hole. This tank is filled by a customer supplied pit pump usually of the 2" size. When the "dirty" tank is full, the pump on the mixer is used to draw "dirty" fluid from the center tank and route it to the side mounted hydro-cyclones. While routing fluid to the hydro-cyclones the pump also uses the "dirty" tank's rolled bottom and set of 5-1 injector nozzles to keep the dirty fluid agitated and consistent. The hydro-cyclones are 2 1/2" with a capacity of 16 us.gpm each and a D-cut of 5 micron. As the fluid is processed with the hydro-cyclones, the over-flow (clean) fluid is routed into the active tank for reuse. The underflow (solids) are routed out and away for customer disposal or optional secondary treatment.

Each tank is open top and has side clean out access. The tanks are equipped with the required inlet-outlet connections on both sides of the tank to allow for better external hose routing and to eliminate hoses over the top and tied. The frame has many securing and tie-down points located in key spots.

**This unit was designed for operator safety, site safety, ease of use, portability, small footprint and maximizing drilling fluid handling efficiency.**



**Mix-Clean-Recover Unit  
Model MINI MAC-950E**

**Surface to Surface Inc.**

**Specifications**

Dimensions (Working)  
Weight w/o Mixer Includes  
jacks and optional lift head  
Weight including Mixer  
Hopper Height & Size  
Hydro-cyclones  
Piping  
Flow Valves  
Quick coupling connectors  
Tanks  
Tank nozzles (4 per tank)  
Threaded inlet & outlet ports  
Leveling Jacks  
Mixing System

**Mini MAC- 950E Unit**

62 3/4" W x 138" L x 82" H  
2420 lbs.  
2920 lbs. (M2-E922)  
38 1/2" High Holds 1/2 of a bag  
2 @ 2 1/2" 16 gpm  
2" sched. 40 Pipe  
Brass and Steel construction  
2" cam loc  
1 @250, 1 @200, 1 @500 gal us  
Eductor Nozzles (5-1 fluid output)  
2" NPT  
2 HD screw jacks  
2" Patented StS Mixing System

**Benefits**

Small foot print operate from ground level  
Light weight for easy transportation.  
  
Low hopper height reduces back strain.  
D-cut of 5 micron  
Built tough for the construction trade.  
Withstand the abuse of daily operations  
Ease of connections and draining  
Rolled bottom with clean out  
Fast and effective rolling and mixing action.  
Safe Proper connections, no hoses over the top  
Allows for leveling of unit  
Fast & efficient with high shearing ability.

**Optional Fluid Recovery from the Hydro-cyclone discharge is available.**

**Specifications**

Dimensions  
Weight  
Hopper Height & Size  
Mixing System  
Flow Valves  
Skid Frame  
Motor  
Pump  
Pump / Motor Connection  
Pipe Couplers  
Pressure Wand  
Mechanical Seal  
Replaceable Wear Plate  
3-way Valves

**M2-E922 Mixer**

33" W x 52" L x 26 1/2" H  
500 lbs. (227 Kg)  
26 1/2" High Holds 1/2 of a bag  
2" Patented StS Mixing System  
Brass and Steel construction  
1" steel tube with lifting bale  
10 HP Teco 230V/460V 60Hz  
2" Cast iron centrifugal trash pump  
Bearing Block to Lovejoy® Coupler  
Bolt & Snap-groove type  
Hopper maintenance wand  
Self-Pressurizing Grease Seal  
Hardened plate ahead of Impeller  
2 1/2" NPT Port, 2 position

**Benefits**

Small space saving footprint.  
Light weight for easy transportation.  
Low hopper height reduces back strain.  
Fast & efficient with high shearing ability.  
Withstand the abuse of daily operations  
Built tough for the construction trade.  
Industrial rated for longer service life  
Gorman-Rupp 80 series  
Large bearings & oversized coupler (service life)  
Fast cold weather draining of system.  
Removal of build-up caused by additive.  
Greaseable seal for more rugged working conditions  
Less wear on internal pump parts and is replaceable.  
Designed for heavy duty slurry use. Large handles.

**With a 40 second viscosity, the M2 model produces 90 gpm @ 36psi through the mix nozzle and 52 gpm @ 36psi to the tank nozzles (5-1 mixing equals 260 gpm of mixing / rolling action in tank) and a discharge rate of 80 gpm @ 36psi**

**Also available in Hydraulic (MINI MAC-950H) or Diesel (MINI MAC-950D) models.**

\*\*\* All Specifications Subject to Change Without Notice \*\*\*

*Check our website for the latest products and specifications*  
**www.stsmixers.com**

**Surface to Surface Inc.**

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