



## Mix-Clean-Recover Unit Model MAC Junior 1200D

*Surface to Surface Inc.*



### Features and Benefits: **MAC Junior 1200D**

The MAC Junior 1200D was designed to mix drilling fluid, clean and recycle used drill fluid, and maintain proper drilling fluid in an active tank for the drilling rig. The MAC Junior 1200 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 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 52 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. When the unit is to be transported from location to location, the unit is jacked up with the 3 onboard jacks letting the wheels rotate down and into position, where they are secured and locked in place. This creates 12" of ground clearance for transporting over uneven terrain. Once on location, lower jacks and take the weight off of the wheels, release the locks and lower to ground level.

The mixer located at the rear of the unit is designed around the time proven M series mixers of STS. The MAC Junior 1200D is powered by a 9hp air cooled diesel engine, driving a 2" centrifugal pump, making effective use of the patented 4 point mixing system. With the proper valve selection, this one engine 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 36" 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 300 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 600 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 300us. 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 front 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.**



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### Specifications

Dimensions (Working)  
 Dimensions (Transporting)  
 Weight without Mixer  
 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  
 Tires  
 Retractable tongue  
 Large storage area  
 Mixing System

### MAC Junior 1200D Unit

94" W x 182" L x 73" H  
 94" W x 208" L x 86" H  
 1591 lbs.  
 1991 lbs. (M2-D922)  
 36" High Holds 1/2 of a bag  
 2 @ 2 1/2" 16 gpm  
 2" sched. 40 Pipe  
 Brass and Steel construction  
 2" cam loc  
 2 @ 300us gal, 1 @ 600us gal  
 Educator Nozzles (5-1 fluid output)  
 2" NPT  
 3 HD screw jacks  
 23 / 8.5 x 12 x 6 ply  
 Retracts 24" under unit  
 Caged with open top  
 2" Patented StS Mixing System

### Benefits

Small foot print operate from ground level  
 12" of ground clearance  
 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 3-point leveling of unit  
 Stand up to rugged terrain  
 Smaller working footprint. Avoids tripping hazard.  
 Keep hoses & accessories all in one place  
 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  
 Engine  
 Pump  
 Pump / Engine Connection  
 Pipe Couplers  
 Pressure Wand  
 Mechanical Seal  
 Replaceable Wear Plate  
 3-way Valves

### M2-D922 Mixer

33" W x 43" L x 26 1/2" H  
 400 lbs. (182 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  
 9.0 hp air-cooled, man/ elect start  
 2" Cast iron centrifugal trash pump  
 Direct coupled engine & pump  
 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  
 No expensive couplers or inserts to replace.  
 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 (MAC Junior 1200H), Electric (MAC Junior 1200E) and Gasoline (MAC Junior 1200G) 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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