



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 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 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 4 point proprietary 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

96" W x 187" L x 73" H
96" W x 212" L x 86" H
2500 lbs.
3000 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
Eductor 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" renowned 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" Proprietary 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

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03/12/19