

DNV SKID-MOUNTED CEMENT BATCH MIXER SKID

DESCRIPTION

Our range of 100-bbl, 140-bbl, 150-bbl, and 200-bbl Batch Mixers quickly and efficiently blend cement slurries / Acids and discharge to either downhole pumping equipment or a cement mixing skid for fine-tuning your cement slurry.

Our purpose-built manifold system is engineered to move water, acid, and dry bulk cement (or pre-mixed cement) to the batch mixer. It then blends the cement slurry/acid by recirculating the cement/acid through mixing tank(s) and then displaces the cement/acid to the cement/acid pumper.

150 BBL DNV SPECIFICATION

General

Engines

Type	Caterpillar® C9 Series [Brand New A – Rated] Diesel driven
Capability	300 - 335 bhp [225-250 kW] at 2,200 rpm, dry manifold
Safety Attachments	One Chewlyn Valve, One Spark Arrestor
Engine Emissions Compliance	UN R96 Stage IIIA emission standards.
Gearbox	Funk™ gearbox

Drive Mechanism

Hydraulic motors	Two Veljan Denison hydraulic vane motors
Hydraulic pumps	Two Veljan Denison hydraulic vane pumps
Centrifugal pumps	Two 6 x 5 x 14 Forum pumps or equivalent
Agitators	Two-level impeller mixer driven by Poclain Hydraulics® motors
Batch tanks	Two 75-bbl [11.92m ³] capacity
Safety	
Emergency Kill switch	1 Qty
Battery cutoff switch/plug	1 Qty

Certification

Crush Frame	DNV 2.7-1 Certified
Quality Management	ISO 9001 Certified
Certificate of Conformity [COC]	<ul style="list-style-type: none"> ✓ Complete unit ✓ Diesel Engine ✓ Centrifugal Pump ✓ Poclain Motor

Third-party Inspection

Zone II	<ul style="list-style-type: none"> ✓ Diesel Engine ✓ Explosion-proof lights
MPI	<ul style="list-style-type: none"> ✓ Complete weld joints

	<ul style="list-style-type: none"> ✓ Lifting Pad eyes
UT	<ul style="list-style-type: none"> ✓ Batch Tank 01 & 02 ✓ Diesel Tank ✓ Hydraulic Tank ✓ Air tank

Dimensions

Length	8.58 m [28 ft 1.8 in]
Width	2.78 m [9 ft 1.44 in]
Height	
Operational (railing up)	4.42 m [14 ft 6 in]
Transportation (railing down)	3.92 m [12 ft 10.3 in]
Weight (dry)	14,000 kg [30,864 lb]
Ambient rating	-5 to 60 degC [23 to 140 degF]

Painting

Sandblasting	Off-white metal standard SA 2 ½ or equivalent
Painting Exterior	
Base coat	Epoxy primer – 1 Coat
Intermediate Coat	As per client RAL – 1 Coat
Top Coat	As per client RAL – 2 Coat
Painting Interior	Epoxy Primer – 1 Coat
Components & Parts	As per client RAL

Skid Label

Nameplate	Unit Name plate [20cm x 20cm]
Company Logo	As per client requirements
Weight	Marked on two place lifting frame in English and metric
Dimension	Marked on two place side frames in English and metric
Unit number	Welded to the base of the structure

FEATURES

- Designed to meet all offshore requirements and equipped with a heavy-duty enveloping lift frame mounted on a skid base with lift eyes and tow bars on each end—optional certification to DNVGL or other offshore specifications. Also, optionally equipped with certified lifting slings.
- Mix tanks with bottom cones for more efficient mixing displacement and improved cleanout, and marked internal tank weirs provide easy visibility of tank volume 100,140, 150, and 200 bbl pump manifolds feature two 6 x 5 x 14 centrifugal pumps (or customer choice) for recirculation-mixing of slurry through either or both of the two mixing tanks, discharge of slurry to the pumper, slurry fill, and water fill
- A single 75-bbl mix tank features a standard 75-bbl manifold scheme with a compact design that allows one centrifugal pump for water fill, recirculation, and discharge

- Paddle-style agitators inside the batch mixer vessels provide more complete slurry blending
- Conical rehydration educators may be used for adding bulk material or chemical additives into the recirculation mixing flow line on the fly
- Panel-stand control console for remote control of valves, hydraulic drives, and engine. Manually operated control valves within reach of the operator.
- Support and bracing technique used for tanks and work platforms designed to minimize vibration
- Manifold system designed for easy cleanup and maintenance
- The mixing head is a dustless system that educts rotate and recirculates slurry, water, and dry bulk cement.
- The versatile mixing-displacement manifold is designed for efficient slurry mixing
- Explosion Proof (Ex rated) Zone II LED work lights for additional safety illuminate the top work platform and centrifugal pumps, manifold, and power unit area

APPLICATION

- Uniform cement slurry blending
- Cement slurry or fluids delivery to the pumping unit
- Cement slurry recirculation back to blending tanks
- Fluids transfer from remote sources

ADVANTAGES

- Easy transportations
- Enables individual tank mixing and cross mixing
- Enables pneumatic feeding of dry cement
- directly to the batch mixer

Includes

- ✓ Hydraulic power pack with electronic
- ✓ diesel engine compliant with UN R96 Stage IIIA emission standards.
- ✓ Two 75-bbl batch tanks
- ✓ Two centrifugal pumps
- ✓ Explosion Proof Lights
- ✓ Hopper and cutting table

BATCH MIXER COMPONENTS

POWER PACK (COMPLETELY SOUNDPROOF)

- **Caterpillar C9 Series 300 -335 HP**, Brand **new** engine "A -Rated" for safe Rig.
- Engine Includes Suitable Exhaust System with Chewlyn Valve and Spark arrestor.
- Engine Includes Heavy Duty Radiator with Blower Fan.
- Two Variable speed Hydraulic Pumps.
- 100-Gallon Reservoir Tank.
- Funk™ 1:1 Ratio Two Pump Drive Gear Box.

HYDRAULIC SYSTEM

- Denison Style Open Loop Type Driven By Funk™ gearbox.
- Two Double Stages Hydraulic Pumps.
- Two Motors, High Torque Low Speed to drive Agitator.
- Two Poclairn Hydraulics® Motor to Drive Centrifugal Pumps.
- Flow Control Valves, Relief Valves, Check Valves, Gauges, and Piping rated for 6000 P.S.I.

CENTRIFUGAL PUMP

- Two Centrifugal Pumps 6 X 5 X 14 with Forum USA / ABCO or equivalent

BATCH MIXING TANKS

- Capacity 2 X 75 BBL Tanks (2 x 11.92 CBM)
- Wave Breakers
- Measuring Scale
- Top Manholes with covers
- Ladder

PIPE LINE STRUCTURE

An arrangement of piping and valves designed to control, distribute and monitor the fluid flow. The manifold arrangement allows full mixing and recirculation of fluid along with the external feed.

- Four Inch Bulk Cement and Filling pipeline and manifold
- Five Inch Recirculating pipelines and manifold
- Four Inch Discharge pipelines and manifold
- Vent pipeline
- Sample Collection valve

All pipeline work is fabricated in such a way that is maintenance friendly with the use of Victaulic clamps for quick and easy removal of the pipework and centrifugal pumps.