



# DRAGON

## Mobile 120BBL Blending Unit



Trailer mounted Blender suitable for oil/gas fracturing operations and designed for continuous and homogeneous blending of frac fluids including base fluids, gels, proppant, dry chemical additives and liquid chemical additives.

- Maximum working Fluid Rate: 120 BPM
- Maximum Proppant Rate: 30,000lbs/min
- Height: 13'-6" (4.1 m)
- Length: 44' (13.4 m)
- Width: 102" (2.6 m)

### THE FOLLOWING COMPONENTS INCLUDED IN THE BLENDER UNIT:

- Carrier — Heavy Duty Drop Deck Trailer
- Diesel Engine for Hydraulics — CAT C15 (595 Hp)
- Diesel Engine for Discharge Pump
  - CAT C18 (800 Hp) Engine
  - CX35 Transmission
- Hydraulic System
- Mixing System
- Suction & Discharge Pumps
- Proppant Loading Augers
- Dry Additive Systems
- Liquid Additive Systems
- Control Systems and Instrumentation
- Cabin for Operator with AC and Heat

### TRAILER:

- Heavy Duty Twin beam construction with cross members.
- Air Ride Suspension & ABS brakes, Air type with Indicator lights at the rear of the trailer.
- Rear Bumper with Tow Hook.
- A 350 gallon fuel capacity system.

### DIESEL ENGINE FOR HYDRAULIC SYSTEM :

- CAT C15 diesel engine rated for 595 HP at 2100 rpm
- Air kill flapper for emergency engine shutdown.
- 24-VDC alternator with dedicated battery system.
- Electric start system.

### DIESEL ENGINE DIRECT DRIVING THE DISCHARGE PUMP:

- CAT C18 rated at 800 HP at 2100 rpm
- CAT CX35 Automatic Transmission.
- Air kill flapper for emergency engine shutdown.
- 24-VDC alternator with dedicated battery system.
- Electric start system.
- Driveline - installed per engine and pump manufacturer requirements

### HYDRAULIC SYSTEM:

- One suction centrifugal pump (12 x 12) hydraulic drive motor.
- Three sand auger drive motors.
- Blender tub agitator.



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- (5) Liquid add chemical systems for 0.5-15 GPM variable speed pumps. (expandable to 8)
- (2) Dry-add chemical systems with 1" auger feed systems
- Hydraulic auger positioning system.
- 200 Gallon hydraulic reservoir

## MIXING SYSTEM:

The mixing system consists of a suction pump and manifold, discharge pump and manifold, blender tub; sand augers, dry add and liquid add components.

## SUCTION PUMP AND MANIFOLD:

12" x 12" centrifugal pump driven hydraulically which is capable of pumping base fluids in excess of 120 BPM from the supply tank to the blender tub. Mounted on the suction side of this pump, the suction manifold has twelve 4" Fig 206 winged input connections, with butterfly valves and an 8" input connections and includes a 10" magnetic flow meter. A hydraulically operated valve will be installed before the Blender Tub. Cross-over manifolds installed to use either suction side or discharge side for suction.

## DISCHARGE PUMP AND MANIFOLD:

Includes a 14" x 12" Mission centrifugal pump that is capable of pumping from the blender tub proppant laden slurries at rates of 120 Bbl/min. The suction side of this pump will be connected to the blender tub and the discharge side of the pump should go to the discharge manifold. The discharge manifold has twelve 4" Fig 206 winged input connections, with butterfly valves and an 8" discharge connection and includes a 10" magnetic flow meter. Piping will include a removable blank for installing the customer supplied densitometer.

## BLENDER TUB:

A large blender tub holds 16 Barrels with Agitator, directional nozzles, hydraulic valve, 4" bottom drain valve and emergency overflow protection.

## SAND AUGERS:

The auger assembly is designed to be hydraulically raised or lowered with mechanical locks.

- 12" augers at 39 lb/rev
- 6" auger at 22 lb/rev



## DRY CHEMICAL ADDITIVE:

The dry product systems (stainless steel), variable speed and hydraulically driven with 2" augers, equipped with speed sensor and cable for connection to the unit control system. Each holds 1 cu-ft of material.

## LIQUID CHEMICAL ADDITIVE SYSTEM:

Installed on the unit are (5) ½" liquid chemical additive systems. Each liquid additive system will be equipped with a hydraulic driven, variable speed hydraulic motor.

## CONTROL SYSTEM:

The control panel is located inside the operator cabin complete with air conditioning and heat. The operator has a clear view of the mixing tub, as well as, the operating environment from inside the cabin. The platform has access by stairs on left and right sides with safety railing and grating.

- Engine start, stop, throttle and display modules.
- Engine RPM, oil pressure and coolant temperature gauges
- Proppant auger speed controls with forward and reverse switches and flow/total displays.
- Liquid chemical pump speed controls with flow/total displays
- Two dry chemical feeder speed control with flow/total displays.
- Tub paddle speed control
- E-Stop and light switches
- Air and Hydraulic pressure gauges
- Discharge Bypass, Suction Bypass and Pneumatic Tub Drain switches.

