



# 130 BPM MOBILE TIER IV BLENDER



\*picture may not represent listed specification

## **GENERAL UNIT DESCRIPTION**

The Dragon Mobile Blender suitable for oil/gas fracturing operations, designed for continuous and homogeneous blending of frac fluids, which include base fluids, gels, proppant, dry and liquid chemical additives. The unit has a maximum discharge rate of 130 BPM.

- Heavy Duty Tri-Axle Trailer
- (1) Tier IV Diesel Engine CAT C18 (800HP)
  - CAT CX35 Transmission
- (1) Tier IV Diesel Engine - CAT C18 (755HP)
- Hydraulic System
- Mixing System
- Discharge Pumps
- Proppant Loading Augers
- Dragon Control Systems and Instrumentation
- (1) Dry Add Chemical System (Standard)
- (4) Liquid Add Chemical Systems
- 12" x 12" Suction Centrifugal Pump

## **TRAILER**

The support structure for the unit is a Dragon Manufactured, Heavy Duty, Tri-Axle Trailer with fifth wheel towing arrangement that includes the following features:

- Trailer: Heavy Duty Twin Beam Construction
- Length: 44' (13.41m)
- Height: 13'6" (4.1m)
- Width: 8'6" (2.6m)
- Air Ride Suspension/ABS Brakes
- Steel Wheels
- Two-Speed Landing Legs
- Air/Electric Tractor/Trailer Connections

## **DIESEL ENGINE FOR HYDRAULIC SYSTEM**

CAT C18 diesel engine rated for 755HP at 2100 RPM, equipped with the following:

- EPA Rating: Tier IV
- Air Kill Flapper for Emergency Engine Shutdown
- Oil Pan with Easy Access to the Drain Valve
- 24-VDC Alternator with Dedicated Battery System
- Shutdown System for Low Oil Pressure, High Water Temperature and Engine Over Speed
- Electric Start System

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## **DIESEL ENGINE FOR DISCHARGE PUMP**

CAT C18 diesel engine rated for 800HP at 2100 RPM, equipped with the following:

- EPA Rating: Tier IV
- CAT CX35 Automatic Transmission
- Heavy Duty Air Filter with Inlets Equipped with Rain Guards
- Cooling System with Thermostats
- Air Kill Flapper for Emergency Engine Shutdown
- 24-VDC Alternator with Dedicated Battery System
- Shutdown System for Low Oil Pressure, High Water Temperature and Engine Over Speed
- Electric Start System

## **HYDRAULIC SYSTEM**

Combination closed and open loop system. Hydraulic pumps and other components are from reputable manufacturers with world-wide availability. The system operates with the following equipment:

- (1) Hydraulically Driven Suction Centrifugal Pump (12"x12")
- (3) Sand Auger Drive Motors
- Blender Tub Agitator Motor
- Hydraulic Auger Positioning System Cylinder
- 160 Gallon Hydraulic Reservoir
  - Strainers/Return Filtration
  - Sight Glass for Oil Level
  - Hydraulic Oil Cooler
- Base System Designed for Additional Hydraulic Options

## **ADDITIVE SYSTEM**

- (1) Stainless Steel Dry Add Chemical System with a 2" Auger (*Standard*)
- (4) Liquid Add Chemical Systems

## **MIXING SYSTEM**

The mixing system consists of the following:

- Suction Pump and Manifold
- Discharge Pump and Manifold
- Blender Tub
- Sand Augers

## **SUCTION PUMP AND MANIFOLD**

The hydraulically driven centrifugal pump is capable of pumping base fluids in excess of 130 BPM from the supply tank to the blender tub. Mounted on the suction side of this pump, is a manifold that has connections that are set up to customer preference, and includes a 10" magnetic flow meter. A hydraulically operated valve is installed before the blender tub. A hydraulically operated valve is installed before the blender tub.

## **DISCHARGE PUMP AND MANIFOLD**

The variety of options of discharge pumps are capable of pumping from the blender tub proppant laden slurries at rates of 130 BPM. The suction side of this pump is connected to the blender tub, while the discharge side of the pump feeds the discharge manifold that has connections that are set up to customer preference that includes a 10" high-signal magnetic flow meter. An 18" removable blank is included for installing the customer supplied densitometer.

## **BLENDER TUB**

The 16 barrel capacity mix tub ensures complete and consistent blending of high density slurries. Tub is complete with the following:

- Agitator
- Tub Level Sensor
- Directional Nozzles
- Hydraulic Inlet Valve
- 4" Bottom Drain Valve

## **SAND AUGERS**

Three standard sand augers are installed at the rear of the unit from the hopper to the blender tub, and designed to be hydraulically raised and lowered. Each auger includes hydraulic slide gates at the hopper.

- (3) 12" Auger at 39lb/rev (*Full Flight*)

## **ADDITIONAL EQUIPMENT**

- Greaseable Points are Remote to a Common Rail
- Auger and Tub Paddle Attached to Auto Greaser

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## **DRAGON CONTROL SYSTEM**

The Dragon control system is accessible by ladder, with safety railing and grating. The control panel is marked with the following controls and gauges installed:

- 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
- Dry Chemical Feeder Speed Controls 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

## **DOCUMENTATION**

Each unit is provided complete with two (2) sets of data and equipment manuals for the purchased components, as available from and supplied by the component manufacturer. Documents will be supplied as manuals and (1) set in electronic form, where applicable.

## **PAINT**

Paint color specification to be supplied by customer, (2) color maximum. Additional colors are available for an additional charge.

## **OPTIONS**

- Cold Weather Package
- (1) additional Stainless Steel Dry Add Chemical System with a 2" Auger
- (4) Additional Liquid Add Chemical Systems