



120 BPM BLENDER

SPECIFICATION: PS-FB120

The most technologically advanced blender in the market combines breakthrough controls, modular design and serviceability. It utilizes the PowerServe Vortex™ tub design to ensure a consistent homogeneous blend. The PowerServe Hydraulic Hopper™ - combined with three (3) modular sand screws - provides the simplest, maintenance-friendly system along with the most reliable and flexible sand delivery for a variety of job requirements. The FlowServe discharge pump reduces total lifecycle costs and improves productivity, profitability and pumping system reliability.

SPECIFICATIONS

MIXING + DELIVERY RATES

Fluid Rate	2.0 to 120 bpm at 55 psi minimum discharge pressure
Sand Delivery Rate	100 lb/min to 25,000 lb/min
Sand Concentration	2.0 ppg sand at 2.0 bpm 20.0 ppg sand at 55.0 bpm 5.0 ppg sand concentration at 120 bpm

Two (2) modular hydraulic power units will be used on the blender. Each will be powered by US EPA Tier compliant diesel engines. Customer option on engine make between:

ENGINE— OPTION 1

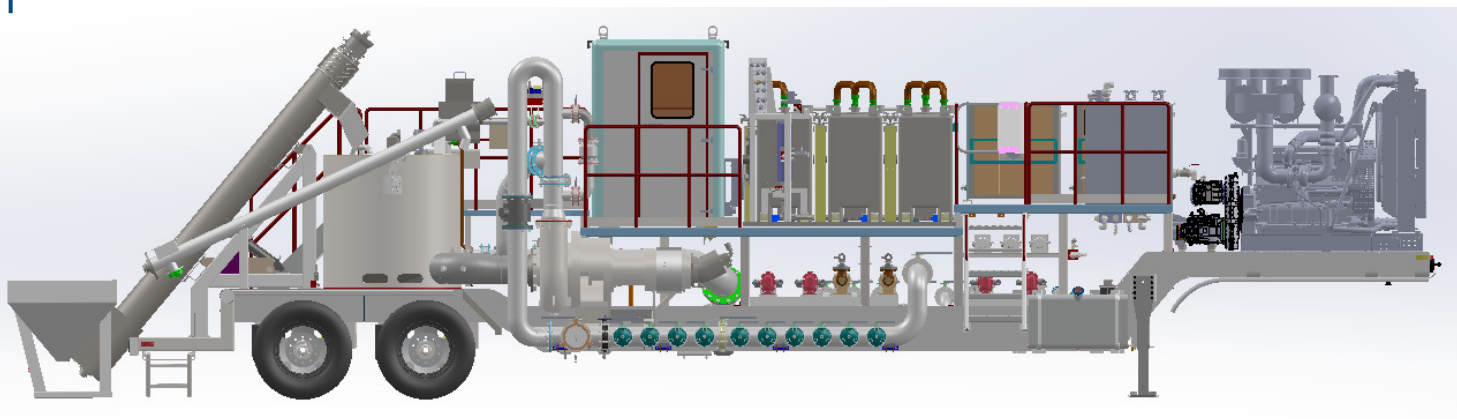
- Model:
- Cummins QSX15
- Rated Output Power:
- 600 BHP

ENGINE— OPTION 2

- Model:
- Caterpillar C15
- Rated Output Power:
- 580 BHP

ENGINE— OPTION 3

- Model:
- MTU Detroit Diesel Series 60
- Rated Output Power:
- 660 BHP



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GEARBOX

Durst 4PD11D

SUCTION PUMP

Gorman Rupp

- Model: 612L20-B/S2

DISCHARGE PUMP

Flowsolve Slurry Pump

- Model: 10M234

HOPPER AND SAND SCREWS

The sand screws are designed to be modular to allow quick removal and configuration. The design incorporates the following features:

- Common collection hopper for 3 screw assemblies
- Standard flight screws
- Top drive hydraulic motors (Eaton ME Series) for closed loop hydrostatic drive motor
- Magnetic pickup with 120 tooth sprocket for speed sensing
- Screws lowered/raised with hydraulic lift cylinders with mechanical storage latch
- Available Sizes & Rates:
 - 6" – 160 to 2,500 lb/min
 - 9" – 400 to 6400 lb/min
 - 12" – 740 to 12,000 lb/min

DRY ADDITIVE SYSTEM

Up to two (2) dry additive feeders can be mounted on the blender. The feeders discharge into a mixing eductor that discharges directly into the mixing tub.

LIQUID ADDITIVE SYSTEM

Liquid additive chemicals are metered into the slurry at different points in the process. Onboard tanks are used to store additives. Chemical transfer pumps are used to fill the onboard tanks for fluid sources external to the unit. The LA system is completely customized by the customer.

TANKS

- Quantity: Up to 5
- Capacity: 100 gallon
- Construction: 316 stainless steel

CHEMICAL TRANSFER PUMPS

- Quantity: Up to 5
- Rate: 15 gpm

LIQUID ADDITIVE PUMPS

- Quantity: Up to 8
- Mounting: Universal base for quick and easy pump swap out

POWERSERVE VORTEX™ MIXING TUB

PowerServe Vortex™ mixing tub has a unique proprietary design that utilizes the clean fluid entry flow to increase the mixing agitation in the tub.

- Clean Fluid Inlet: 8" Victaulic entry
- Discharge Outlet: 12" Victaulic bottom sump
- Mixing Nozzles: 3 rows, eight (8) 2" nozzles, staggered row spacing
- Tub Diameter: 60 inches OD
- Tub Volume: 12 bbl

PROCESS MANIFOLD

The blender is configured with the suction header on the road side of the unit and with the discharge header on the curb side of the unit. The suction and discharge headers are equipped with a crossover. Both headers are equipped with sectioning valves to isolate portions of each header.

- Discharge Connections:
 - One (1) 8" hose connection Fig. 206 female union (thread) with chained cap
 - Ten (10) 4 inch Fig. 206 female union (thread) with chained caps
- Suction Connections:
 - One (1) 8" hose connection Fig 206 female union (thread) with chained cap
 - Twelve (12) 4 inch Fig. 206 male union half (wing) with plugs

CONTROL CABIN

- Construction: Custom aluminum control cab
- Dimensions: 58" L x 58" W x 84" H
- Air Conditioner: Wall mounted
- Electrical components/systems only in control house (no hydraulics or pneumatics in cab)
- Kick-out emergency window

CONTROLS

The R-Blend™ control system provided by Raptor Oilfield Controls is standard. Other control systems may be supplied upon request.

- System: PC based automatic control system
- Type: Parker electrohydraulic valves
 - 4–20 mA signals for proportional controls
 - 24 VDC system

LIGHTING SYSTEM

System:

- Work lights are mounted at various locations on the unit to illuminate the unit work zones and surrounding area. Lighting is powered from the deck engine 24 volt system.