Mix-Pump-Unit  fully-automatic

MPS 510-D-C-AUT
with diesel engine JCB 68kW (EU 4 / Tier 4f)

Technical Data

Drive
Diesel-hydraulic

Drive Power
Diesel engine JCB 444, 68.0 kW [92 HP] at 2,200 rpm, speed limit at 1.800 rpm, 4-cylinder in-line with turbo charger, 4.4 l displacement, water and intercooled, electrical injection, with AdBlue

Exhaust emission
EU Step 4 / U.S. EPA Tier 4 final

Fuel consumption
+/- 17 l Diesel/h. [4.5 gal U.S.]

Fuel tank
made of steel, approx. 150 l volume [40 gal U.S.]

Connections
Electrical 12 V / 24 V DC

Hydraulic quick couplings for two screw-conveyors

Water inlet G 2 BSPP AG DN 50 - C-coupling

Outlet Pressure line G 1 BSPP IG DN 25 - RD 55
Circulation line G 1 BSPP IG DN 25 - RD 32

Dimensions (L x W x H)
3.800 x 2.250 x 2.250 (mm)

Weight
approx. 5.200 kg

Application
Fully automatic mixing and pumping of cement-, micro-cement, fly ash and bentonite suspensions at fillings, flushings, groutings, piling and vibrating jobs, Soil-Mixing WSM and Cutter-Soil-Mixing CSM

Performance Mixer
Hand feed up to 8.0 m³/h

with weighing system
Feed per screw-conveyor up to 13.0 m³/h

Delivery Pump (RA = Ring Area)
Pressure max. 90 bar [max. 1.305 psi]
Flow rate max. 340 l/min. [max. 90 gal U.S.]

Delivery Pump (PA = Piston Area)
Pressure max. 120 bar [max. 1.740 psi]
Flow rate max. 270 l/min. [max. 71 gal U.S.]

1) Infinitely variable. Both max. performances are not simultaneously possible. 1 bar = 1 x 10⁵ N/m²

(Status April 2019 / Technical changes reserved)
Standard Features

Framework
skid steel frame, partially enclosed and with partition panel, floor and oil pan, central towing device, lashing points for truck load securing, fork lift guides crosswise, machine room sound proofed, lockable doors, finishing 2K-paintRAL 5005 (signal blue) or on customer desire unicoloured

Diesel Drive
Diesel engine JCB 444, 68,0 kW [92 HP] at 2,200 rpm, 4-cylinder in-line water cooled, speed limit at 1,800 rpm (infinitely variable speed adjustment), starter battery 12 V, exhaust silencer approx. 30 dB/A, control voltage 24 V DC (for valves and remote control), operating hour meter

Hydraulic
oil tank volume 170 l [45 gal U.S.], axial piston pump and gear pumps, oil cooler with thermostat, main and control oil filter, oil filling and ventilation filter, electrical oil filter pollution control, oil level and temperature indicator, manometer for hydraulic and control oil pressure, pressure and flow infinitely variable

Delivery Pump
vertical two-plunger pump Ø 110 mm, flow rate per double stroke V = 4.5 l [1.18 gal U.S.], pump valves (suction- and pressure line) self-acting (ball valves), circulation and pump-down valves manually actuated, flow rate adjustment electro-proportional, automatic grease system for plunger sealing sleeves and manually with plunger oil, protective grid with safety function

Delivery Pressure Measurement
manometer 0-100 bar [1,450 psi] Ø 100 mm completely with stainless steel membrane, electronic pressure sensor 0-100 bar [1,450 psi] 4-20 mA G ½ BSPP AG

Water tank with Water Dosage
made of stainless steel (brushed), water storing and dosing tank V = 380 l [100 gal U.S.], fixed overflow pipe, water connection C-coupling with flushing connection and butterfly valve DN 50 pneumatically controlled, water tank inlet valve DN 50 and water tank outlet valve DN 100 pneumatically controlled, fully-automatic water metering with fluid level indicator

Mixing Tank (Colloid Mixer) with Weighing
made of stainless steel (brushed), round tank with conical floor, volume 450 l [119 gal U.S.], fixed overflow pipe, water connection C-coupling with flushing connection and butterfly valve DN 50 pneumatically controlled, water tank inlet valve DN 50 and water tank outlet valve DN 100 pneumatically controlled, fully-automatic water metering with fluid level indicator

Mixing Tank (Colloid Mixer) with Weighing
made of stainless steel (brushed), round tank with straight floor, volume 1,500 l [396 gal U.S.], effective volume 1,400 l [369 gal U.S.], agitator drive hydraulic motor (rotation speed infinitely variable), foldable and lockable tank covers with safety end switches and inspection flap, suspension inlet DN 65 with inlet basket, suspension outlet DN 80 with pneumatically controlled valve and suction basket, cleaning cover sideways, slowly turning agitator with a floor scraper and stream screen, fluid level control per ultrasonic sensor, hydraulic connections for external storing tank, safety folding grate

Operating Elements
battery main switch, control lights CONTROL VOLTAGE and OIL COOLER OPERATION, button EMERGENCY-STOP, switch REMOTE CONTROL ON/OFF, buttons HIGH PRESSURE CLEANER ON and HIGH PRESSURE CLEANER OFF, switch DRAINING SUSP./WATER/ALL VALVES, switch LIGHT ON/OFF for inside rod lamp and switch LIGHT ON/OFF for outside working lamps, rotary knob for max. DELIVERY PRESSURE adjustment, valve for shutting/adjusting the mixer speed, valve for shutting/adjusting the agitator speed, Connection Options: socket REMOTE CONTROL 14-pin with EMERGENCY-STOP bridge plug, socket EXTENSION REMOTE CONTROL, socket 24 V SCREW CONVEYOR 1 and 2, sockets 12 V VIBRATOR 1 and 2, sockets ULTRASONIC SENSOR and MIXTURE MONITORING, socket CHARGER 12V, socket ETHERNET

Engine Panel
LCD 7” colour display with lateral function keys for displaying and querying all relevant engine information such as engine speed, fuel consumption, fuel tank display, water temperature, oil and boost pressure, battery voltage, operating hours, date/time etc., ignition lock, warning lamps for LOW COOLING WATER and AIR FILTER POLLUTION, switch for RPM SETTING 0-1-2

Control Panel with Touch-Screen
warning lights WARNING and FAULT, button ACCEPT, button EMERGENCY-STOP, buttons FILL WATER TANK and EMPTY WATER TANK, buttons MIXER CIRCULATION and EMPTY MIXER, buttons MIXER/AGITATOR ON/OFF and SCREEN CONVEYOR ON/OFF, button START MIXTURE, buttons PUMP OFF, SUSPENSION and WATER switches RECEPT +/- and COMPONENTS +/-, socket USB, potentiometers FLOW RATE and MIXING TIME, Optional: switches WATER INTERNAL/EXTERNAL or PUMPING/CIRCULATION

Touch-Screen for visualization of the operating parameters for the production of mixtures, as well as pumping of the suspension to the consumer. The following parameters are displayed and can be called up: Display of the current flow rate and the current delivery pressure, preselection counter flow rate target/actual, batch and preselection counter mixtures target/actual, current filling level of the mixing and storage tank, input of several recipes, display of error messages, display in different languages and much more.

Automatic Mode: production of the mixtures automatically or in manual mode, infinitely variable setting of the mixing time, automatic pumping in circulation and pump-off, automatic control of the screw conveyer, all shut-off flaps are pneumatically controlled

Accessories (included)
documentation, special tools for operation and maintenance, cable remote control 15 m and cable reel 100 m, radio remote control, circulation hose, high pressure cleaner 4,0 kW, 950 rpm, 200 bar [3,045 psi], industrial device, fixed installed) with water inlet filter, air compressor (industrial device, fixed installed), corded LED rod lamp inside, LED work lamps for mixing and storing tank outside

Further devices, special equipments and accessories on request!