

# Mix-Pump-Unit fully-automatic

## MPS 510-D-C-AUT

with diesel engine John Deere 55kW (EU 3b / Tier 4f)

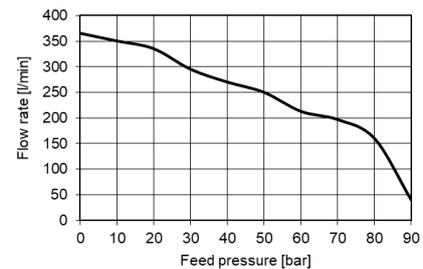


### Technical Data

Drive	Diesel-hydraulic	
Drive Power	Diesel engine John Deere 4045TFC03, 55 kW [75 HP] at 2.200 rpm, max. Torque 304 Nm at 1.600 rpm, speed limit at 1.800 rpm, 4-cylinder in-line with turbo charger, 4,5 l displacement, water and intercooled, electrical injection	
Exhaust emission	EU Step 3b / U.S. EPA Tier 4 final	
Fuel consumption	+/- 14 l Diesel/h. [3,7 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 quick couplings for external storing tank	
Water inlet	G 2 BSPP AG DN 50 - C-coupling G 1 BSPP IG DN 25 - GEKA	
Outlet		
Pressure line	G 1 ¼ BSPP IG DN 32 - 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. 5.100 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 with weighing system	Hand feed	up to 8,0 m³/h
	Feed per screw-conveyor	up to 13,0 m³/h

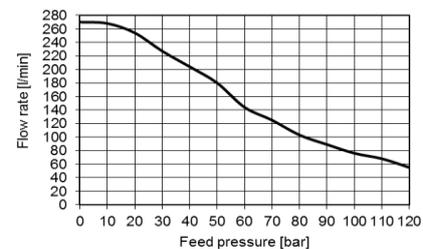
#### Delivery Pump (RA = Ring Area)

Pressure	max. 90 bar <sup>1)</sup>	[max. 1.305 psi] <sup>1)</sup>
Flow rate	max. 365 l/min. <sup>1)</sup>	[max. 96 gal U.S.] <sup>1)</sup>



#### Delivery Pump (PA = Piston Area)

Pressure	max. 120 bar <sup>1)</sup>	[max. 1.740 psi] <sup>1)</sup>
Flow rate	max. 270 l/min. <sup>1)</sup>	[max. 71 gal U.S.] <sup>1)</sup>



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### 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-paint RAL 5005 (signal blue) or on customer desire unicoloured

#### Diesel Drive

diesel engine John Deere 4045TFC03, 55,0 kW [75 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.], effective volume 400 l [106 gal U.S.], mixer drive hydraulic motor (rotation speed infinitely variable), two tank covers, each hinged and lockable with screw conveyor inlets and safety end switches, cover for screw conveyor inlet with inspection flap, hopper with bag ripper, circulation and pump down valves DN 80 pneumatically controlled, transport locking screws

#### Tools in Mixing Tank

3 fast turning mixing tools on one common drive shaft with pump down function, 2 mixing blades Ø 250 mm, 1 pumping wheel Ø 210 mm, drive shaft bearing above mixer fluid level (No stuffing box, so dry running possible w/o any problems!)

#### Storing Tank with Fluid Level Control

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

sidewise, 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 SCREW 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 conveyor, 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!*