

Hoch-Pressure-Pump-Container

HDPC 400-D-300

with diesel engine Scania 294kW (EU 3b / Tier 4i)



Technical Data

Drive Diesel-hydraulic
Adjustment infinitely variable over hydrostatic gear and diesel engine speed

Drive Power Diesel engine Scania DC13-77A, 294 kW at 2.100 rpm, 6-cylinder in-line, turbocharger, intercooling and water cooling, displacement 12,7 l, electrical adjustment

Exhaust Emission EU Step 3b / U.S. EPA Tier 4 interim
SCR-catalytic converter, carbamide injection (AdBlue)

Fuel Consumption +/- 37,0 l Diesel/h
Fuel Tank made of Steel, volume approx. 500 l [132 gal U.S.]

Connections
Suction line G 3 BSPP IG DN 80 - RD 105
Pressure line SAE 3000 G 1 1/2 BSPP IG DN 40 - 30 S

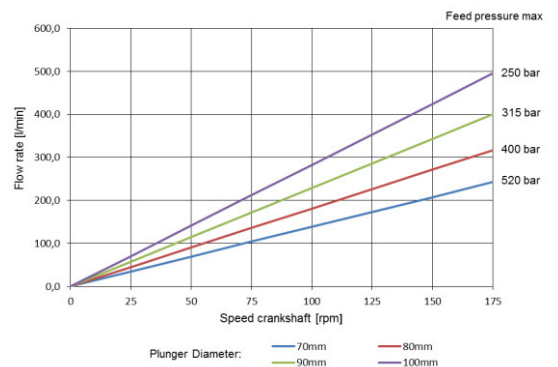
Dimensions (L x W x H) 4.000 x 2.450 x 2.600 (mm)
Weight approx. 11.500 kg

Model versions as a separate High-Pressure-Pump or in a batch plant container

Application Pumping of abrasive cement-suspensions at jet-grouting, flushings, groutings, undercutted small-bored piles and vertical shorings

Performance Delivery Pump

Pressure max. 520 bar¹⁾ [max. 7.542 psi]
Flow max. 700 l/min.¹⁾ [max. 185 gal U.S.]



¹⁾infinitely variable. Both max. performances are not simultaneously possible. 1 bar = 1 x 10⁵ N/m²
(Status April 2016 / Technical changes reserved)

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Standard Features

Framework

container with skid steel frame, partially enclosed and with partition panel, floor and oil pan, 4 towing devices, machine room sound proofed, lockable doors, inside finishing 2K-paint RAL 7035 (light grey) and outside finishing 2K-paint RAL 5005 (signal blue) or on customer desire

Diesel Drive

Scania DC 13 77 A, 6-cylinder-in-line diesel engine with turbo charger and intercooler, displacement: 12,7 l, 294 kW at 2.100 rpm, exhaust emission EU Step 3b / Tier 4 interim, control voltage 24 V DC for valves and remote control

Fuel Tank

aluminium tank, volume 500 l [132 gal U.S.]

Exhaust System

SCR-catalytic converter with integrated exhaust silencer (thermo insulated, inside installed, very quiet) and thermo insulated exhaust pipe, AdBlue injection to minimize the NOx-values, inside installed AdBlue tank, volume 60 l [16 gal U.S.]

Hydraulic

oil tank volume 600 l [159 gal U.S.], hydraulic pump with toothed wheel pumps, oil cooler, oil filter, oil filling and ventilation filter, electrical and optical oil filter pollution control, oil level and temperature indicator, manometer for hydraulic and control oil pressure, pressure and flow rate adjustment infinitely variable

Hydraulic Motor

bent-axis axial piston motor: volume 500 ccm, continuous max. torque is also available in lower engine speed!

Hydraulic Pump

diagonal-slice axial piston pump: volume 250 ccm, pressure and flow rate adjustment infinitely variable, hydraulic operating pressure: max. 310 bar [4.496 psi]

Delivery Pump

HDP 400 Triplex-Plunger-Pump in vertical construction

Crank Drive:

„System Hammelmann“ with integrated gear, without clutch coupling and gear, high speed range, integrated gear reduction, crank drive according to the „Finite-Elements-Method“ calculated and built for long durability and operating safety

Gear:

2 helical geared drive wheels, forged crank, exchangeable cylinder liners, hydrostatic gear with continuous motor and adjustable diagonal-slice-pump (configured for 450 bar [6.527 psi] permanent operating pressure

Specific Characteristics:

Plunger, cylinder head with suction and pressure valves „System STS“, three separate circular oil pressure greasing lines for the plunger sealings, vertical plunger, low pulsation, no liability and additional abrasion of the cross clamp, plungers and sealings by their own weight, low noise emission

The achievable max. pressure and max. flow rate depend on plunger diameter, medium and the installed drive power.

Pump Type:

triplex-plunger-pump, vertical construction
number of plungers: 3 pc., plunger stroke: 120 mm

Performance Data:

Performance max. 400 kW (continuous power), drive speed max. 300 rpm as a flushing pump, max. 175 rpm as a High-Pressure-Pump, drive speed min. 25 rpm (continuous operation)

Delivery Pressure Measurement

manometer 0-600 bar [8.702 psi] Ø 100 mm completely with stainless steel membrane, electronic pressure sensor 0-600 bar [8.702 psi] 4-20 mA G ½ BSPP AG

Operating Devices

rotary knob for infinitely variable adjustment of max. pressure bar [psi], rotary knob for infinitely variable adjustment of max. flow rate l/min [gal U.S./min.], display for Liters [gal U.S.], pre-select switch to adjust the flow rate l/total. [gal U.S./total.], flow rate counter with zero-setting, socket for 230 V - max. 16 A, ON/OFF switch for delivery pump, touch screen-panel for diesel motor, EMERGENCY STOP push-button

Accessories (included)

operating manual and spare part list, special tools for operation and maintenance, operating hour meter, display for l/min. [gal U.S./min.], socket for remote control 14-pole, cable remote control 15 m and cable reel 100 m, suction hose 6 m, fuel pump 24 V, hydraulic oil filling-pump with water absorber and fine filtration

Accessories (optional)

spare part kits, grouting hoses, suction hoses, fittings

Supplementary Devices

mixing and storing units for solid suspensions, dosing devices, screw-conveyors, radio remote control, control devices, electronic data acquisition and recording, regulating and measuring systems RMS with computer evaluation per USB and injection journal, flow meter with delivery pressure measuring, electronic delivery pressure devices (pressure transmitter) at injection place, devices for radio data transmission

Further devices, special equipments and accessories on request!