

Grouting Unit VS 110-1-D/FS



Application: grouting of anchors and micro piles incl. post grouting, flushing pump at drill works,
Manual operation, cement dosing by proportioning auger



Proportioning auger

Type FS-DKB 160 H
for silo cement, big bag and cement bags

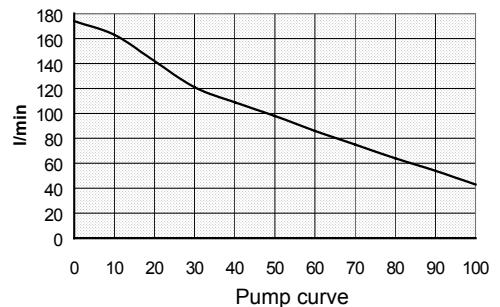
Technical data:

Drive		: Diesel-hydraulic : 29,0 kW / 2.900 rpm
Connections	- Water feed - Conveying pump pressure - Conveying pump circulation - Hydraulic drive to the proportioning auger (4 kW)	: R 2" : G 1" : G 1" : 2 x hydraulic-quick coupling
Dimensions (L, W, H) Weight		: 2150 x 1650 x 2100 (mm) : approx. 2200 kg

Performance

Mixer		
with cement bags	: max. 4.2 m ³ /h (1111.11 gal/h)	
with proportioning auger	: max. 5.7 m ³ /h (1507.93 gal/h)	

Grouting pump		
Pressure	: max. 100 bar ¹⁾ (1.422 psi)	
Quantity	: max. 170 l/min ¹⁾ (44.97 gal/h)	



¹⁾ infinitely variable pump performance, stated with water

1 bar = 1 x 10⁵ N/ m²

Technical data: May 2004 Subject to change

VS 110-1-D/FS Assembly groups /machine technology

Frame:

- skid mounted steel frame
- completely encased
- 3 sides can be reached by fork lift
- central lifting eye
- fixing points for transport tension belt and transport ram protection

Water dosage:

- water dosage and storage tank, V = 180 l (47,52 gal) tank of stainless steel
- water dosage semi automatic, inlet valve electric
- outlet valve manual

Solid agent dosage:

- cement bags in feed hopper
- proportioning auger,³⁾ with hydraulic drive type FS-DKB 160 H, 16 to/h with connector for proportioning auger

Mixer:

- tank of stainless steel, working capacity approx. 200 l (52,8 gal)
- tank cover can be removed completely
- hopper with bag ripper
- 2 mixing tools:
- wings on the shaft
- mixing pump at a vertical shaft with elastic fastening on the top
- mixing pump without any sealing no problem running without fluid
- rpm infinitely variable
- top cover for mixer (ADS 220)³⁾
- valves for mixing and pump off function manually operated

Holding tank:

- stainless steel, working capacity approx. 550 l (145.5 gal)
- tank cover can be removed completely
- inlet sieve basket of stainless steel
- low speed rotation tool with infinitely variable rotation speed

Grouting and flushing pump:

- pump with ball valves
- upright double plunger pump Ø 100 mm
- good availability of the pump valves easy handling for cleaning and maintenance all parts of the pump in contact of grout and pressure with tempered surface
- pump parts are surface treated and can be simply cleaned
- flushing connection (SA 14-50)³⁾ to grouting pump manual operation, for selection: grout (from holding tank) or water (from 2" water connection)
- the valve is fixed as drain and flushing valve at the bottom of the holding tank
- circulation valve (SC 14/25/2) in pressure line manual operation. Valve 1 = close/open in the line to grouting point valve 2 = close/open of circulation line to storage tank

Hydraulic:

- oil tank capacity approx. 140 l (37.03 gal)
- oil tank of stainless steel, therefore suitable for bio oil
- connector for hydraulic hoses to proportioning auger
- sep. hydraulic drive for auger (4 kW)
- Bio-oil filling (B 10)³⁾

Electrics:

- Motor electric 12 V DC
- power supply 12 / 24 CV DC for circuit control and remote control with transformer

High pressure washer: (HDRH)³⁾

- in frame of drive unit
- 3-plunger pump –13 l/min. (3.43 gal) / 120 bar (1706.4 psi), with hydraulic drive

Diesel drive:

- 4-cylinder Turbo-Diesel motor, cooled by liquid material satisfies exhaust emission standard: Europe = tier II and USA: tier 2 the motor is certificated for usage in USA
- sound absorption
- fuel tank capacity 30 l (7.93 gal)
- starter battery 12 V, 70 Ah

Operation and indication elements:

- digital indication of grouting pressure¹⁾
- grouting pressure rough adjustment:
- knob for max. hydraulic pressure
- adjustment of the pump speed (SD20) electro proportional
- control unit Watch B (SD 31)³⁾
- fine adjustment of grouting pressure, electronic
- high pressure button, increase of adjusted pressure until max. P
- indication of flow rate: l / min (gal/min)
- volume preselection: l in total (gal in total) indication of remaining volume automatic stop of pump if volume is reached
- indication of total volume with and without reset
- counter working hours
- memory function, indication of total volume at last 20 grouting points on request
- connector for remote control (SD9)
- **operation panel of proportioning auger**³⁾ volume preselection, start/stop
- **remote control**⁴⁾
- cable remote control RC-2
- radio remote control RC-WL-2

Accessories:

Special tools for operation and maintenance, operation manual and spare parts list spare parts package (mini, standard, overseas)

1) pressure measurement either directly at grouting unit or by separate pressure sensor type MAP at grouting site

2) quantity by stroke counting at grouting pump

3) optional