Mixer
Storage tanks
Mixing plants
## Contents

<table>
<thead>
<tr>
<th>Product</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixer M 170/2</td>
<td>4-5</td>
</tr>
<tr>
<td>Mixer MP 100-3</td>
<td>6-7</td>
</tr>
<tr>
<td>Mixer MP 200-3</td>
<td>8-9</td>
</tr>
<tr>
<td>Mixer MP 500-3</td>
<td>10-11</td>
</tr>
<tr>
<td>Mixer MP 500-4</td>
<td>12-13</td>
</tr>
<tr>
<td>Mixer MP 1000</td>
<td>14-15</td>
</tr>
<tr>
<td>Mixer MPR 800</td>
<td>16-17</td>
</tr>
<tr>
<td>Mixer MPR 2/800</td>
<td>18-19</td>
</tr>
<tr>
<td>Bentonite mixer MPB 1000</td>
<td>20-21</td>
</tr>
<tr>
<td>Storage tanks R 200, R 400, R 1000</td>
<td>22</td>
</tr>
<tr>
<td>Storage tanks R 2000-B, R 3000, R 4500, R 6000</td>
<td>23</td>
</tr>
<tr>
<td>Storage tank RP 2000-C</td>
<td>24-25</td>
</tr>
<tr>
<td>Storage tank R 4500</td>
<td>26-27</td>
</tr>
<tr>
<td>Mixing plant OM 100</td>
<td>28-29</td>
</tr>
<tr>
<td>Mixing plant OM 200</td>
<td>30-31</td>
</tr>
<tr>
<td>Mixing plant OM 500-3-3A-ST</td>
<td>32-33</td>
</tr>
<tr>
<td>Mixing plant OM 500-5/</td>
<td>34-35</td>
</tr>
<tr>
<td>Mixing plant OM 600/36-jet</td>
<td>36-37</td>
</tr>
<tr>
<td>Mixing plant OM 1000/2-48</td>
<td>38-39</td>
</tr>
<tr>
<td>Mixing plant OMP 800</td>
<td>40-41</td>
</tr>
<tr>
<td>Mixing plant OMP 1000</td>
<td>42-43</td>
</tr>
<tr>
<td>Mixing plant OMN 100</td>
<td>44-45</td>
</tr>
<tr>
<td>Mixing plant OMN 200</td>
<td>46-47</td>
</tr>
<tr>
<td>Silicate mixing plant FL-DMR 3/60</td>
<td>48-49</td>
</tr>
</tbody>
</table>
Technical Data Sheet No. 65-2-A /E
Mixer M 170/2

Application : structural rehabilitation, post-grouting, grout anchors
Mixing material : solid agent suspensions
Mixing implement without pumping-off function

Technical data

Drive : electric
Mixer drive power : 2 x 4.0 kW
Total required power : max. 7.5 kW

Connections
- electric : CEE 16 A/ 400 V, 50 Hz
- grout outlet : 2 x DN 32
- options SW 3 : 1 x DN 32 with selector switch
  suspension/ flushing water

Dimensions (L, W, H) : approx. 1570 x 850 x 210 mm
Weight : approx. 450 kg

Performance

Mixer:
Manual charging up to: 2 x 1.5 m³/h at 20 cycles

Rotation speed 1: (agitating) approx. 400 rpm (adjustable)
Rotation speed 2: (mixing) approx. 1500 rpm (adjustable)

State: 02/09, subject to change

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M 170/2  Assembly groups/ machine technology

Frame:
- Machine with steel skid frame
- Lifting eye
- Paint RAL 3000 (red)

Operation elements:
- 2 pc. combined switch for the functions:
  - Rotation speed 1
  - Rotation speed 2
  - OFF

Electrics:
- Electric motor 400 V, 50 Hz, IP 54
- Frequency converter for infinitely rotation speed adjustment

Mixing tank:
- Round steel tank, bottom inclined to outlet
- Tank capacity: 230 litres (61 US gal.)
- Working capacity: 170 litres (45 US gal.)
- Cleaning hatch mounted at the bottom
- Feed hopper with bag ripper for addition of solid agents

Water dosage:
- Water distributor
- Water storage and dosage tank, V = 2 x 160 l (42.5 US gal.)

Implements in the mixing tank:
- High-speed mixing- and agitator implement
- Without pump-off function
- Vertical drive without stuffing box, therefore no problems when running dry

Special equipment:
(SF7)  Plug
(SF8)  Drive voltage and frequency
(SA 7/2)  2 pc. water dosage, semi-automatic
(SW 3)  suction connection
(PRM ½)  connection for pump return flow

Optional accessories:
(ZWF1)  Spare parts package (standard)
  operation manual
  spare parts list
Technical data sheet  No. 73-3-3A/ E
Mixer MP 100-3

Application : grouting, anchoring, flush drilling
Mixing material : solid agent suspensions
Mixing implement with pump-off function
Illustration with special equipment water dosage

Technical data

Drive
Mixer drive power : electric
Total required power : 5.5 kW

Total required power : 5.6 kW

Connections
- electric
- water
- suspension outlet

Connections : CEE 16 A/ 400 V, 50 Hz
Connections : C-coupling and R 1”/ GEKA-coupling
Connections : flange PN 16 – DIA. 50/ R2”

Dimensions (L, W, H)
Weight

Dimensions : 1000 x 900 x 1850 (mm)
Weight : approx. 200 kg

Performance

Mixer
Manual charging up to: 2.0 m³/h at 20 cycles
Charging with FS-DK up to: 2.6 m³/h at 26 cycles
MP 100-3  Assembly groups / machine technology

Frame:
- Machine with steel skid frame
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- ON / OFF switch for mixer motor
- Circulation and pump-off valve manually operated
- Manually operated valves for the mixer functions
- Circulation / pump-off

Electrics:
- Electric motor 5.5 kW, 400 V, 50 Hz, IP 54
- Motor protection switch

Mixing tank:
- Round steel tank, conical bottom
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 130 litres (35 gal.), working capacity: 100 litres (27 gal.)
- Hopper with bag ripper

Implements in the mixing tank:
- Two high-speed mixing implements on the same shaft with pump-off function
- Drive bearings above the mixer
- Vertical drive without stuffing box, therefore no problems when running dry

Special equipment:
(SA6-100) Water dosage tank
(SA7) Water dosing
(SB1) Dust extraction filter
(SF7) Plug
(SF8) Drive voltage and frequency

Optional accessories:
(ZWB2-160) Proportioning charging screw type FS-DK 160-2.6
(ZWB7-100) Filler connection for FS-DK 160
(ZWF1) Spare parts package (standard)
(ZWG-M50) Quick coupling M-part
(ZWG-V50) Quick coupling V-part
Technical Data Sheet No. 75-3-3A /E
Mixer MP 200-3

Application: grouting, anchoring, flush drilling
Mixing material: solid agent suspensions
Mixing implement with pump-off function
Illustration with water dosage

Technical data

Drive
Mixer - drive power: electric
Total required power: 7.5 kW

Connections
- electric: CEE 16 A / 400 V, 50 Hz
- water: C-coupling and R 1” GEKA-coupling
- suspension outlet: Flange PN 16 – DIA. 50/ R 2"

Dimensions (L, W, H)
Weight: approx. 250 kg

400 x 1100 x 2200 (mm)

Performance

Mixer
Manual charging up to: 4.0 m³/h at 20 cycles
Charging with FS-DK 160-2.6 up to: 5.2 m³/h at 26 cycles

Date: 02/01 – subject to change
MP 200-3 Assembly groups/ machine technology

Frame:
- Machine with steel skid frame
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- ON/ OFF switch for the mixer motor
- Circulation and pump-off valve manually operated

Electrics:
- Electric motor 7.5 kW, 400 V, 50 Hz, IP 54
- Motor protection switch

Mixing tank:
- Round tank of stainless steel, conical bottom
- Tank capacity: 240 litres (63.5 gal.), working capacity: 200 litres (53 gal.)
- Hopper with bag ripper

Implements in the mixing tank:
- Two high-speed mixing implements on the same shaft with pump-off function
- Drive bearings above the mixer
- Vertical drive without stuffing box, therefore no problems when running dry

Special equipment:
(SA6…) Water dosage tank
(SA7) Water dosing semi-automatic
(SB1) Dust extraction filter

Optional accessories:
(ZWB7…) Filling connection for proportioning charging screw
(ZWF1) Spare parts package (standard)
Technical Data Sheet No. 78-3-3A /E
Mixer MP 500-3

Application: grouting, anchoring, flush drilling
Mixing material: solid agent suspensions
Mixing implement with pump-off function
Illustration with special equipment water dosing

Technical data

Drive
Mixer - drive power: electric
Total required power: 11.0 kW

Total required power: 11.1 kW plus special equipment

Connections
- electric: CEE 32 A/ 400 V, 50 Hz
- water (special equipment): C-coupling and R 1 "/ GEKA-coupling
- suspension outlet: flange PN 16 – DIA. 80/ R 3"

Dimensions (L, W, H)
Weight: 1600 x 1260 x 2360 (mm)
Approx. 650 kg

Performance

Mixer
Manual charging up to: 10 m³/h at 20 cycles
Charging with FS-DK 160-2.6 up to: 13 m³/h at 26 cycles

Date: 02/01 – subject to change
MP 500-3  Assembly groups/ machine technology

Frame:
- Machine with steel skid frame
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- ON/ OFF switch for the mixer motor
- Circulation and pump-off valve manually operated

Electrics:
- Electric motor 11 kW, 400 V, 50 Hz, IP 54
- Motor protection switch

Mixing tank:
- Round steel tank, conical bottom
- Cleaning hatch mounted at the bottom
- Tank capacity: 650 litres (172 gal.), working capacity: 500 litres (132 gal.)
- Hopper with bag ripper

Implement in the mixing tank:
- Two high-speed mixing implements on the same shaft with pump-off function
- Drive bearings above the mixer
- Vertical drive without stuffing box, therefore no problems when running dry

Special equipment:
(SA6-…) Water dosage tank
(SA7) Water dosing semi-automatic
(SB1) Dust extraction filter for addition of screws

Optional accessories:
(ZWB7-…) Filing connection for proportioning charging screw
(ZWF1) Spare parts package (standard)
          Operating manual
          Spare parts list
Technical Data Sheet No. 78-4-3/A /E
Mixer MP 500-4

Application: grouting, jet-grouting, flush drilling, slurry walls.
Fully automatic machine, with menu control, mixing implement with pump-off function
Mixing material: solid agent suspensions

Technical data

<table>
<thead>
<tr>
<th>Drive</th>
<th>Mixer drive power</th>
<th>Total required power</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>electric</td>
<td>12.7 kW plus charging conveyor plus special equipment</td>
</tr>
<tr>
<td></td>
<td>11.0 kW</td>
<td></td>
</tr>
</tbody>
</table>

Connections
- electric
- water
- solid agents
- suspension outlet
- solenoid valve silo airing (special equipment)
- charging screw
- inlet dosing (special equipment)
- silo vibrator
- 1 x CEE 63 A/ 400 V, 50 Hz
- C-coupling/ R 2"
- 2 x DIA. 200 (8") for sliding pieces
- flange PN 16 – DIA. 80/ R 3"
- max. 2 x socket type AF01A, 24 VDC (1 piece standard)
- max. 2 x CEE 32 A/ 400 V, 7 poles (1 piece standard)
- max. 1 x CEE 32 A/ 400 V, 5 poles (1 piece standard)
- max. 2 x CEE 16 A/ 400 V, 5 poles (1 piece standard)

Dimensions (L, W, H)
- 1500 x 1750 x 2530 (mm)

Weight
- approx. 1800 kg

Performance

Mixer:
- 10 m³/h at 20 cycles
- 13 m³/h at 26 cycles

Requirement: addition of solid agents with enough dimensioned charging screw

1) Switched via machine control

Date: 02/01 - subject to change
MP 500-4  Assembly groups / machine technology

Frame:
- Steel pipe frame, lifting eyes, forklift slots
- Paint RAL 3000 (rot)

Operation elements:
- Fully automatic menu control
- Additional operation elements for manual operation

Mixing tank:
- Round steel tank
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 650 litres (172 gal.), working capacity: 500 litres (132 gal.)

Compressed air supply:
- Electric motor 1.2 kW, 400 V, 50 Hz, IP 54, 150 l/min conveyor volume, max. operating pressure 10 bar,

Electrics:
- Electric motor for mixer drive in mixing tank 11 kW, 400 V, 50 Hz,
- Main switch, motor protection switch
- Automatic phase correction
- No mains neutral required

Water dosage:
- Water storage- and dosage tank v = 500 litres (132 gal.)

Implements in the mixing tank:
- Primary mixing implements:
  two high-speed implements,
  on the same shaft with pump-off function
- Drive bearings above the mixer
- Vertical drive without stuffing box, therefore no problems by running dry

Optional accessories:
(ZWB3-160) Charging screw type FS 160-4.3
(ZWB3-220) Charging screw type FS 220-4.3
(ZWB3-270) Charging screw type FS 270-4.3
(ZWB4) Y-collecting piece
(ZWB5-250) Silo outlet hose
(ZWB6) Hopper with sack ripper
(ZWB8) Sliding piece DIA. 200 (8")
(ZWD1-S) Level sensor (float switch)
  - SD7 is necessary -
(ZWD1-U) Level sensor (ultra-sonic sensor)
  - SD7 is necessary -
(ZWD3) Remote switching ON/OFF
  - SD9 is necessary -
(ZWF3) Tube fastening tool
(ZWG-M80) Quick coupling M-part
(ZWG-V80) Quick coupling V-part
(ZWL1A) Memory card drive
(ZWL1B) Evaluation software for mixing data

Spare parts list
Technical Data Sheet No. 84 /E
Mixer MP 1000

Fully automatic machine with menu control and registration of mixing data, mixing tools with pump-off function

Application area: jet-grouting, flush drilling, slurry trench and seal walls, cavity filling
Mixing material: solid agent suspensions of bentonite and cement, post mixing of suspensions / re-flushing

Performance

Mixer: 30 m³/h (39.24 cu. yd.) at 30 cycles
with 1 solid agent component
20 m³/h (31.39 cu. yd.) at 20 cycles
with 2 solid agent components

Suspension density: max. δ = 1.60 kg/l

Technical data

Drive
Mixer- and agitator drives

<table>
<thead>
<tr>
<th>Drive</th>
<th>Mixer- and agitator drives</th>
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</thead>
<tbody>
<tr>
<td>drive power</td>
<td>: electric</td>
</tr>
<tr>
<td>total required power</td>
<td>: 22.0 kW</td>
</tr>
<tr>
<td></td>
<td>: 24.9 kW</td>
</tr>
<tr>
<td></td>
<td>: plus charging screws</td>
</tr>
<tr>
<td></td>
<td>: plus special equipment</td>
</tr>
</tbody>
</table>

Connections

- electric supply
- water supply
- solid agents
- suspension outlet
- charging screw
- feeding pump for liquid bentonite inlet
- feeding pump for liquid additives
- silo vibrator
- silo airing signal
- air connection
- free socket
- free socket lighting current

| Connections | : 2 pc. CEE 63 A / 400 V, 50 Hz, 5 pol. |
|            | : 2 pc. CEE 32 A / 400 V, 5 poles ² ³ |
|            | : 4 pc. inlets for DIA. 200 (8") sliding connector ¹ ² |
|            | : for connection of charging screws |
|            | : 4 pc. socket type AF01A/ 24 V DC ² ³ |
|            | : max. 1 pc. CEE 32 A / 400 V, 5 poles ⁴ |
|            | : max. 1 pc. CEE 16 A / 400 V, 5 poles ⁴ |
|            | : max. 4 pc. CEE 16 A / 400 V, 5 poles ² ³ |
|            | : max. 4 pc. CEE 16 A / 400 V, 5 poles ² ³ |
|            | : max. 4 pc. CEE 16 A / 400 V, 5 poles ² ³ |
|            | : max. 4 pc. quick coupling DIA. 8 (0.3") ² ³ |
|            | : 1 pc. Schuko – max. 16 A / 220 V ⁴ |

Dimensions (L, W, H)

<table>
<thead>
<tr>
<th>Dimensions (L, W, H)</th>
<th>: 2990 x 2350 x 2560 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>: approx. 5000 kg</td>
</tr>
</tbody>
</table>

Requirement:
- Sufficient performance for transfer equipment
- especially of the solid agent charging screws und the water supply
- Max. pump performance of the mixer, e.g. by too small main cross-section and/or too long pump-off pipes respectively to strong back pressure at high storage tanks pump performance will be reduced

¹ ¹ pc. sliding connector DIA. 200 for solid agent inlet is standard
² ² pc. is standard
³ Switched by menu control / machine control
⁴ special equipment

Date: 08/2001, subject to change
MP 1000  Assembly groups/ machine technology

Frame:
- Steel pipe frame, partly panelled
- Four lifting eyes, fork lift slot
- Interior paint RAL 7035 (light-grey)
- Exterior paint RAL 3000 (red)

Operating elements:
- Fully automatic menu control
- Additional operating elements for manual operation

Electrics:
- 2 pc. electric motor for mixer drives, 11 kW, 400 V, 50 Hz, IP 54
- Main switch, motor protection switch
- Automatic phase correction

Water dosage:
- Water storage- and dosing tank v = 1000 litres (265 gal.)
- Level sensor

Solid agent dosage:
- Weighing of mixing tank by weighing cell
- Additive weighing up to 5 components via programmable menu control

Mixing tank:
- Steel tank with round edges, bottom conical
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 1300 litres (344 gal.)
- Working capacity: 1000 litres (265 gal.)

Implements in the mixing tank:
- (2 set): two high speed mixing implements on the same shaft with pump-off function
- For function "agitator" the rotation speed will be reduced (special equipment SD12)
- Drive bearing above the mixer
- Vertical drive without stuffing box, therefore no problems by running dry

Compressed air supply:
- Electric motor 2.4 kW, 400 V, 50 Hz
- Compressed air tank 40 litres (11 gal.) approx. 300 litres (79 gal.) delivery scale
- Max. operating pressure 10 bar (145 psi)

Accessories:
- Operating instructions and spare parts list
- 1 pc. sliding connector DN 200 for solid agent supply

Special equipment:
SA2-... Liquid dosage inclusive flow measuring unit
- DIA. 10 (0.4") - DIA. 50
SA11-... Liquid dosage by weighing
- DIA. 50 (2") - DIA. 150 (6")
- for bentonite suspension -
SC1-
2 x 100 Additional mixing outlet connection
2 x DIA. 100
SD5 Impulse sender for silo airing, max. 4 pc.
SD6 Electric connection for silo vibrator 1)
SD7 Connection for external level sensor 1)
SD8 Data registration of menu control
SD12/3 Programmable mixing rotation speed
SD21-32 Electric connection for charging screw max. 4 pc. 1)
SE2 Rain protection canopy, fold-back
SE4 Tarpaulins as weather protection
SF3-80 Compressed air accumulator 80 l for silo airing
SF4-2 Automatic lubrication bearing mixing drive
SF5/6 Machine lighting and switch cabinet heating
SF9 Electric heating 2 kW in mixer compartment
SF11 Free socket CEE 16 A, 5 pol.
SF12/3 High pressure cleaner 3 kW, 10 litres (2.2) gal/min., 120 bar
SF 8 drive voltage and frequency according desire

Optional accessories:
ZWB3-160 Charging screw type FS 160-4.3, performance 16 t/h
ZWB3-220 Charging screw type FS 220-4.3, performance 32 t/h
ZWB3-270 Charging screw type FS 270-4.3, performance 64 t/h
ZWB5-250 Silo hose DIA. 250 (10")
ZWB8 Connecting part for charging screws DIA. 200 (8") 1)
ZWD1-S Level sensor (float switch) for external storage tank
- SD7 is necessary -
ZWD1-U Level sensor (ultra-sonic sensor) for external storage tank
- SD 7 necessary -
ZWF1 Spare parts package
ZWF3 Tube fastening tool
ZWL1A Memory card drive for registration on PC
ZWL1B Evaluation software or registration on PC
ZWF8 Air hose for silo airing
Valve with control cable for silo airing

Tools for supplementing:
Storage tank, grouting and flushing pumps, jet-grouting pumps, LOG-registration system, drilling unit
Technical Data Sheet No. 81 /E

Mixer MPR 800

Application: grouting, high pressure grouting, flush drilling, slurry-trench-walls

Fully automatic machine with menu control, mixing implement with pump-off function and separate agitator drive

Mixing material: solid agent grouting material

Technical data

<table>
<thead>
<tr>
<th>Drive</th>
<th>Drive power</th>
<th>15.0 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixer- and agitator drives</td>
<td>total required power</td>
<td>16.7 kW plus charging screws plus special equipment</td>
</tr>
<tr>
<td>Connections</td>
<td>- electric main connection</td>
<td>2 x CEE 63 A/380 V, 50 Hz</td>
</tr>
<tr>
<td></td>
<td>- water</td>
<td>C-coupling / R 2“</td>
</tr>
<tr>
<td></td>
<td>- solid agents</td>
<td>max. 3 x DIA. 200 (8“) for charging screws</td>
</tr>
<tr>
<td></td>
<td>- suspension outlet</td>
<td>max. 2 x flange PN 16 – DIA. 80 (3“) R 3“</td>
</tr>
<tr>
<td></td>
<td>- charging screw</td>
<td>max. 3 x CEE 32 A/400 V, 7 poles</td>
</tr>
<tr>
<td></td>
<td>- feeding pump for bentonite inlet</td>
<td>max. 1 x CEE 32 A/400 V, 5 poles</td>
</tr>
<tr>
<td></td>
<td>- feeding pump for additives</td>
<td>max. 1 x CEE 16 A/400 V, 5 poles</td>
</tr>
<tr>
<td></td>
<td>- silo vibrator</td>
<td>max. 3 x CEE 32 A/400 V, 5 poles</td>
</tr>
<tr>
<td></td>
<td>- silo airing signal air</td>
<td>max. 3 x socket type AF01A/24 VDC</td>
</tr>
<tr>
<td></td>
<td>- air</td>
<td>max. 3 x DIA. 8 (0.3“)</td>
</tr>
</tbody>
</table>

Dimensions (L, W, H): 2650 x 2300 x 2530 (mm)

Weight: approx. 3800 kg

Performance

Mixer: 16.0 m³/h (20.93 cu. yd./h) at 20 cycles

with 2 solid agent components

20.8 m³/h (27.20 cu. yd./h) at 26 cycles

with 1 solid agent component

Suspension density: max. $\delta = 1.65$ kg/litre

Requirement: sufficient performance of charging screws

Date: Nov. 2000, subject to change
MPR 800  Assembly groups/ machine technology

Frame:
- Steel pipe frame, partly panelled, 4 lifting eyes
- Interior paint RAL 7035 (light-grey)
- Exterior paint RAL 3000 (red)

Operation elements:
- Fully automatic menu control
- Additional operating elements for manual operation

Electrics:
- Electric motor mixer drive 11 kW, 400 V, 50 Hz, IP 54
- Main switch, motor protection switch
- Automatic phase correction, no mains neutral required

Hydraulics:
- Electric motor 4 kW, 400 V, 50 Hz, IP 54
- Oil tank capacity: 100 litres (27 gal.)
- Control for oil filter soiling

Water dosage:
- Water storage- and dosing tank \( v = 800 \text{ litres (212 gal.)} \)

Solid agent dosage:
- Steel construction for suspension of mixing tanks with weighing cell
- Additive weighing of the components via programmable menu control

Mixing tank:
- Round steel tank, bottom conical
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 1100 litres (291 gal.)
- Working capacity: 800 litres (212 gal.)

Implements in the mixing tanks:
Primary mixing implements:
- Two high-speed mixing implements on the same shaft with pump-off function.
Secondary mixing- and agitator implements:
- Slowly turned, adjustable rotation speed
- Drive bearing above the mixer
- Vertical drive without stuffing box, therefore no problems by running dry

Compressed air supply:
- Electric motor 1.2 kW, 400 V, 50 Hz
- Compressed air tank 40 litres (11 gal.)
- 150 litres (40 gal.) delivery scale
- Max. operating pressure 10 bar (145 psi)

Special equipment:
SA1  Water distributor 2)
SA2-...  Liquid dosage inclusive flow measuring unit DIA. 10 (0.4") - DIA. 15 (0.6")
- for chemical additives -
SA11-...  Liquid dosage by weighing DIA. 50 (2") - DIA. 150 (6")
- for bentonite suspension -
SB1/2  Dust extraction filter 2)
SC1-80  Additional suspension outlet
SC2A  Flushing connection, DIA. 50 (2") for outlet line 2)
SC5-80  Flow measuring unit in outlet
SD5  Impulse sender for silo airing, max. 3 pieces
SD6  Electric connection for silo vibrator 2)
SD7  Connection for external level sensor 2)
SD8  Data registration of menu control
SD12  Programmable mixing rotation speed
SD14  Density determination in mixing tank
- SA11 is necessary -
SD21-32  Electric connection for charging screw 2)
SE2  Rain protection sheet, fold-back 2)
SE4  Tarpaulins as weather protection
SF3-80  Compressed air accumulator for silo airing
SF4-4  Automatic bearing lubrication
SF5/6  Machine lighting and switch cabinet heating
SF9  Electric heating in mixer compartment
SF11  Free socket CEE 16A
SF12  High pressure cleaner 5 kW,
- 10 litres (2.2 gal.)/min., 250 bar (3625 psi)

Optional accessories:
ZWB3-160  Charging screw type FS 160-4.3,
- performance 16 t/h
ZWB3-220  Charging screw type FS 220-4.3,
- performance 32 t/h
ZWB3-270  Charging screw type FS 270-4.3,
- performance 64 t/h
ZWB5-250  Silo hose DIA. 250 (10")
ZWB8  Connecting part for charging screw DIA. 200 (8") 2)
ZWD1-S  Level sensor (float switch)
- for external storage tank
- SD7 is necessary -
ZWD1-U  Level sensor (ultra-sonic sensor)
- for external storage tank
- SD7 is necessary -
ZWF1  Spare parts package
ZWF3  Tube fastening tool
ZWL1A  Memory card drive
ZWL1B  Evaluation software
Memory card 1 MB
Air hose for silo airing
Valve with control cable for silo airing
Bottom tub
Operating manual and spare parts list
Technical Data Sheet No. 82 /E
Mixer MPR 2/800

Application: slurry-trench-walls and seal walls
Fully automatic machine with menu control, mixing implement with pump-off function and separate agitator drive
Mixing material: solid agent suspensions

Technical data

<table>
<thead>
<tr>
<th>Drive</th>
<th>electric, electro-hydraulic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixer- and agitator drives drive power</td>
<td>26.0 kW</td>
</tr>
<tr>
<td>Total drive power total required power</td>
<td>28.9 kW plus charging screws plus special equipment</td>
</tr>
</tbody>
</table>

Connections
- electric main connection : 2 x CEE 125 A/ 400 V, 50 Hz
- water : 2 x C-coupling / R 2"
- solid agents : max. 2 x 3 DIA. 200 (8") for charging screws
- suspension outlet : max. 2 x flange PN 16 / DIA. 80 (3") / R 3"
- charging screw : max. 6 x CEE 32 A/ 400V, 7 poles
- feeding pump for bentonite inlet : max. 6 x CEE 32 A/ 400V, 5 poles
- silo vibrator : max. 6 x CEE 16 A/ 400V, 5 poles
- silo airing signal : max. 6 x socket type AF01A/ 24 VDC
- air : max. 6 x DIA. 8 (0.3")

Dimensions (L, W, H) : 4900 x 2300 x 2530 (mm)
Weight : approx. 6200 kg

Performance

Mixer : 32.0 m³/h at 20 cycles
with 2 solid agent components
41.6 m³/h at 26 cycles
with 1 solid agent component

Suspension density : max. $\delta = 1.65$ kg/litre

1) switched via menu control
2) 2 pc. standard
3) special equipment

Date: Nov. 2000 - subject to change
MPR 2/800 Assembly groups/ machine technology

Frame:
- Steel pipe frame, partly panelled, four lifting eyes
- Interior paint RAL 7035 (light-grey)
- Exterior paint RAL 3000 (red)

Operation elements:
- Fully automatic menu control
- Additional operation elements for manual operation

Electrics:
- Each mixer drive 1 electric motor 11 kW, 400 V, 50 Hz, IP 54
- Main switch, motor protection switch
- Control voltage for valves and remote switching 24 VDC
- Automatic phase correction, no mains neutral required

Hydraulics:
- Electric motor 4 kW, 400 V, 50 Hz, IP 54
- Oil tank capacity: 100 litres (22 gal.)
- Control for oil filter soiling

Water dosage:
- Water storage- and dosing tank v = 2 x 800 litres (2 x 212 gal.)

Solid agent dosage:
- Steel construction for suspension of mixing tanks with weighing cell
- Additive weighing of the components via programmable menu control

Mixing tank:
- Round steel tank, bottom conical
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 1100 litres (291 gal.)
- Working capacity: 800 litres (212 gal.)

Optional accessories:
- ZWB3-160 Charging screw type FS 160-4.3, performance 16 t/h
- ZWB3-220 Charging screw type FS 220-4.3, performance 32 t/h
- ZWB3-270 Charging screw type FS 270-4.3, performance 64 t/h
- ZWB5-250 Silo hose DIA: 250 (10")
- ZWB8 Connecting part for charging screw DIA. 200 (8")
- ZWD1-S Level sensor (float switch) for external storage tank - SD7 is necessary
- ZWD1-U Level sensor (ultra-sonic sensor) for external storage tank - SD7 is necessary
- ZWF1 Spare parts package
- ZWF3 Tube fastening tool
- ZWL1A Memory card drive
- ZWL1B Evaluation software Memory card 1 MB
- Air hose for silo airing
- Valve with control cable for silo airing
- Bottom tub
- Operating manual and spare parts list

www.obermann.com
Technical Data Sheet No. 85/ E
Bentonite Mixer MPB 1000

Application: Producing of water-bentonite-suspensions
For post-mixing/mixing and storing of solid agent suspensions
Colloidal mixer tool with circulation function, reversible from „mixing“ to „agitating“

Technical data

Standard design = storage/mixer tank made of steel plate, painted
VA design = storage/mixer tank made of stainless steel

Drive
Drive power: 11 kW

Connections
- electric: CEE 16 A/ 400 V, 50 Hz
- water – water distributor: input 1 ½ „ / C-coupling
- suspension outlet (pressure connection): DN 80

Dimensions (L x W x H):
- Transport: 1735 x 1760 x 2330 mm
- Weight: approx. 700 kg

Performance:
As mixer:
- Manual feeding up to: 4.0 m³/h at cycles
- Feeding by charging auger: 5.2 m³/h at 26 cycles

Technical data: April 2011 – subject to change
MPB 1000  Assembly group/machine technology

Frame:
- Steel skid frame
- Lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Water dosage:
- Water distributor
- Water delivery meter
- Pneumatically controlled water inlet valve
  • External compressed air supply is necessary!

Operating elements:
- ON/OFF-switch for the mixer motor
- Selector switch for mixer motor
  Switch 1 = mixing
  Switch 2 = agitating

Special equipment:
(VA) Storage/mixer tank of stainless steel
(SA6-..) Water dosage tank
(SA7) Water dosage semi-automatically

Electrics:
- Electric motor 7.5 kW, 400 V, 50 Hz, IP 54
- Frequency converter

Accessories:
(ZWB7-..) Filler connection for charging auger
(ZWF1) Spare parts package (standard)

Mixer tank:
- Tank of steel plate, painted, round
- Working capacity 1000 l
- Feed hopper with bag ripper
- Protective grid as tank cover
- The wash plates inside the tank can be used as level control
  1st level = 250 l
  2nd level = 500 l
  3rd level = 750 l

Tools in storage/mixer tank:
- Colloidal mixer tool, with circulation function
- Drive bearing above the mixer level
- Vertical drive without stuffing box, therefore no problems by running dry
## Storage tanks

**Working capacity 200 – 1000 l (52.91 – 264.55 US gal)**

*with integrated agitator*

<table>
<thead>
<tr>
<th>Type</th>
<th>R 200</th>
<th>R 400</th>
<th>R 1000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Feature</th>
<th>R 200</th>
<th>R 400</th>
<th>R 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working capacity</td>
<td>200 l (52.91 US gal)</td>
<td>400 l (105.82 US gal)</td>
<td>1000 l (264.55 US gal)</td>
</tr>
<tr>
<td>Agitator rotation speed (constant)</td>
<td>41 rpm</td>
<td>41 rpm</td>
<td>41 rpm</td>
</tr>
<tr>
<td>Outlet connections</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 1, open flange PN 16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 2-4 prepared for PN 16 and covered, DN 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total power requirement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 kW, 400 V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Applications**

- Grouting
- Grout anchors

---

*Image of a storage tank labeled R 400*
## Storage tanks

**Working capacity 2000 – 6000 l (529.10 – 1587.30 US gal)**

with integrated agitator

<table>
<thead>
<tr>
<th>Type</th>
<th>Technical data sheet No.</th>
<th>R 2000-B</th>
<th>R 3000-B</th>
<th>R 4500-B/D</th>
<th>R 6000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>111-B/E</td>
<td>112-B/E</td>
<td>113-B/E</td>
<td>9-2/E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working capacity</th>
<th>2000 l (529.10 US gal)</th>
<th>3000 l (793.65 US gal)</th>
<th>4500 l (1190.47 US gal)</th>
<th>6000 l (1587.30 US gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agitator rotation speed constant</td>
<td>approx. 25 rpm</td>
<td>approx. 25 rpm</td>
<td>approx. 15 rpm</td>
<td>approx. 15 rpm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outlet connection</th>
<th>No. 1, open, flange PN 16</th>
<th>No. 2-4 prepared for PN 16 and covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN 80</td>
<td>DN 50</td>
<td>DN 80</td>
</tr>
<tr>
<td>DN 80</td>
<td>DN 50</td>
<td>DN 80</td>
</tr>
<tr>
<td>DN 100</td>
<td>DN 80</td>
<td>DN 100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total power requirement</th>
<th>2.2 kW</th>
<th>2.2 kW</th>
<th>4.0 kW</th>
<th>4.0 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 V</td>
<td>400 V</td>
<td>400 V</td>
<td>400 V</td>
<td></td>
</tr>
</tbody>
</table>

### Applications

- **Jet-grouting**
- **Cave filling**
- **Soil mixing**

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R 2000
Technical Data Sheet No. 111-PB /E
Storage Tank RP 2000-C

Application area: jet-grouting, flush drilling
Mixing material: solid agent suspensions
Agitator with adjustable rotation speed

Performance
Agitator rotation speed: 1 - 20 rpm
ininitely variable

Specification
Drive: electro-hydraulic
Agitator drive power: 2.2 kW
Total required power: 8.5, special equipment included

Connections
- electric
- suspension inlet
- water inlet
  (flushing function)
- suspension outlet
  at pump-off equipment

Connections: CEE 32 / 400 V, 50 Hz, 5plg.
- SK coupling DIA. 100, male-piece

Connections: G2" / “C”-coupling (option) SP 10-80
  SP 11-80
  SP 12-80

Connections: 1 pc. SK coupling, size VI, DIA. 80,
  male-piece
  2 pc. SK coupling, size VI, DIA. 80,
  (option SP 12-80)

Dimensions (L, W, H): 2500 x 2000 x 2420 (mm)
Weight: approx. 2000 kg

Required power without helical conveyors

technical data as of Jan. 2000, subject to change
RP 2000-C  Assembly groups / machine technology

Frame:
- Steel frame with skids
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- Rotary button for adjustment of agitator rotation speed
- ON / OFF switch for electric motor

Electrics:
- Electric motor 2.2 kW, 400 V, 50 Hz, IP 54
- Electric motor 5.5 kW, 400 V, 50 Hz, IP 54
- Motor protection switch

Special equipment:
SA10-...  Inlet connection with inlet sieve
          mesh width 10 mm
SA10-50  Connection DIA. 50/R2”
SA10-80  Connection DIA. 80/R3”
SA10-150 Connection DIA. 150/PN 16
SA9-...  Inlet sieve fineness 2 mm
SA9-50  For inlet DIA. 50
SA9-80  For inlet DIA. 80
SA9-100  For inlet DIA. 100
SA9-150  For inlet DIA. 150
SC7-...  Outlet valve storage tank, manually operated
         flap valve
SC7-50  DIA. 50
SP10-80 Manually operated circulation-, pump-off-
         and flushing function 1 x DIA. 80
SP11-80 Pneumatically operated circulation-, pump-off-
         and flushing function 1 x DIA. 80
SP12-80 Pneumatically operated circulation-, pump-off-
         and flushing function 2 x DIA. 80
SF2  Compressor, 0.75 kW, with tank V = 10 l,
     pressure switch, pressure reducer and
     maintenance unit
SA8-... Reverse motion arc with reverse motion
        connection
SA8-25  DIA. 25 x R 1” l
SA8-50  DIA. 50 x R 2” l
SP20-80 1 pc. filter, fineness 2 mm, in the outlet pipeline of
         the power pump
SAD1U  Level sensor for the storage tank
        level adjustable
SF7  Inlet coupling according desire
SF8  Power drive and frequency according desire

Storage tank:
- Round tank, material stainless steel
- Tank capacity: 2150 l, working capacity: 2000 l
- Cleaning hatch mounted at the bottom
- Cover with sight flap

Implements in the storage tank:
- Slow speed agitator implement
- Rotation speed infinitely variable

Electricity:
- Oil tank capacity approx. 5 l
- Oil tank and ventilation filter

Pipeline system:
- Isolating valve to power pump manually operated
- Direct outlet from power pump to consumer

Circulation and power pump:
- Hardened pump wheel
- Vertical drive with adjustable stuffing box
- Electric drive 5.5 kW

Accessories:
- Operating manual and spare parts list

Optional extras:
ZWG-V... Quick coupling, male-piece, type SKV
ZWG-V80  DIA. 80/ R3”A
ZWG-V100 DIA. 100/ PN 16
ZWG-V150 DIA. 150/ PN 16
ZWG-M... Quick coupling, male-piece, type SKM
ZWG-M80  DIA. 80/ R3”A
ZWG-M100 DIA. 100/ PN 16
ZWG-M150 DIA. 150/ PN 16
ZWR...  Thread nipple for pump reverse motion
ZWR32  RD32 x DIA. 20 – R1” A
ZWR38  RD38 x DIA. 25 – R1” A
ZWG-STVI-75 Quick coupling size VI, male-piece
        with socket DIA. 75
ZWG-STVI-63 Quick coupling size VI, male-piece
        with socket DIA. 63

Complementary equipment:
Mixer, grouting pumps, pressure- and volume recorder
Technical data sheet  NO. 113-B/ EE
Storage tank R 4500-B

Application area : groutings, anchors, flush drilling, jet-grouting
Mixing material : solid agent suspensions

Agitator with adjustable rotation speed

**Specification**

Drive : electro-hydraulic
Agitator drive power : 4.0 kW
Total required power : 4.0 kW

Drives
- electric : CEE 16 A/ 400 V, 50 Hz
- suspension outlet : No. 1, open, flange DIA. 100/ PN 16
- No. 2, blind cover DIA. 80/ PN 16
- inlet connection : on request, see special equipment optional accessories

Dimensions (L, W, H)
Weight : 2600 x 2200 x 2300 (mm)
: approx. 1800 kg

**Performance**

Agitator rotation speed, infinitely variable : max. approx. 15 rpm

Date: August 2009 - subject to change
R 4500-B  Assembly groups / machine technology

Frame:
- Steel tube frame with skids
- Central lifting eye
- Fork lift slots
- Paint RAL 3000 (red)

Storage tank:
- Round tank, bottom conical
- Tank capacity: approx. 5000 l, working capacity: 4500 l
- Cleaning hatch mounted at the bottom
- Cover with sight flap

Operation elements:
- Rotary button for adjustment of agitator rotation speed
- ON /OFF switch for electric motor

Implements in the storage tank:
- Slowly turned agitator implement

Electrics:
- Electric motor 4.0 kW, 400 V, 50 Hz, IP 54
- Motor protection switch

Hydraulics:
- Oil tank capacity approx. 10 l
- Oil filling and ventilation filter

Special equipment:
SA10-...Inlet connection with hangable inlet sieve
SA10-50 Connection DIA. 50/ R 2”
SA10-80 Connection DIA. 80/ R 3”
SA10-100 Connection DIA. 100/ PN 16
SA10-150 Connection DIA. 150/ PN 16
SC4-80 Bottom let off- and flushing valve DN 80,
  Compressed air operated - separate
  compressed air supply is necessary -
SC7-... Outlet valve storage tank, manually operated,
  flap valve
SC7-80 DIA. 80
SC7-100 DIA. 100
SA8-... Reverse motion arc with reverse motion
  connection
SA8-50 DIA. 50 x R 2” l
SF7 Choice of power supply socket
SF8 Choice of drive voltage and frequency

Accessories:
- Operating manual and spare parts list

Optional extras:
ZWD1-U Level sensor for storage tank

Complementary equipment:
Mixer, jet-grouting pumps
Technical Data Sheet  No. 192-3-3A/E
Mixing Plant OM 100

Application area: structural rehabilitation, soil grouting
Mixing material: solid agent suspensions
Storage tank without pump-off function

Specification

Drive:
Mixer- and agitator drives: electro-hydraulic
Total drive power: 7.5 kW
Total required power: 7.9 kW

Connections:
- electric: CEE 32 A/ 380 V, 50 Hz
- water: R 1”
- suspension outlet: four ID 50 with Flange, three of them with blind cover

Dimensions (L, W, H): 2160 x 1000 x 2100 (mm)
Weight: ca. 650 kg

Performance

Mixer:
Manual production rate up to: 2.0 m³/h at 20 cycles
Production rate with FS-DK up to: 2.6 m³/h at 26 cycles

Required power without helical conveyors

Technical data as of Jan. 2000, subject to change
OM 100  Assembly groups/ machine technology

Frame:
- Skid mounted tubular steel,
- Central lifting eye,
- Forklift slots,
- Paint RAL 3000 (red)

Mixing tank:
- Round tank, conical bottom,
- Tank capacity: 130 l, working capacity: 100 l
- Hopper with bag ripper

Storage tank:
- Round tank, bottom conical to top,
- Cleaning hatch mounted in the bottom,
- Tank capacity: 230 l, working capacity: 200 l

Operation elements:
- ON/ OFF switch for the hydraulic drive motor,
- Control knob for adjusting mixer rotation speed,
- Valves for switching off/ adjusting the
- Agitator rotation speeds in the mixing- and storage tank,
- ON/ OFF switch for semi-automatic
- Water dosage (special equipment)

Water dosage:
- Water distributor,
- Water supply- and dosing tank V = 80 l
- Adjustable overflow,
- Hand-operated water-outlet valve,

Implements in the mixing tank:
- Primary mixing implements:
- Two high-speed mixing implements
- On the same shaft with pump-off function.
- Secondary mixing- and agitator implements:
- Slow speed spiral configuration, adjustable rotation Speed,
- Drive bearings above the mixer,
- No packing-seals, therefore no problems by running dry

Implements in the storage tank:
- Slow speed agitator implement in spiral configuration RPM = 41-h

Electrics:
- Electric motor 7.5 kW, 400 V, 50 Hz, and IP 54
- Motor protection switch,
- Control voltage for valves 24 VDC

Accessories:
- Special tools for operation and servicing,
- Operation manual and list of spare parts

Special equipment:
- Water distributor with °C”-connection,
- Semi-automatic water dosage with:
  - Level switch, magnet valve for water supply,
  - Additional tank flats with hand valve
  - Choice of power supply socket,
  - Choice of power supply (V. and Hz.)

Optional extras:
- Special tools for repair,
- Sets of spare parts,
- Filling connection for addition of solid agents with FS-DK,
  Suction hoses,
  Waste pan,
  Water supply station

Complementary equipment:
Grouting pumps, pressure- and volume recorder, dosing conveyor FS-DK.
Technical Data Sheet No. 194-4-4A /E
Mixing Plant OM 200

Application area: grouting, anchors, flush-drilling
Mixing material: solid agent suspensions
Storage tank without pump-off function
Mixer valves manually operated

Specification

Drive : electro
Mixer- and agitator drives
Total drive power : 8.6 kW
Total required power : 8.9 kW

Connections - electric : CEE 32 A/ 380 V, 50 Hz
- water : R 1” GEKA
- suspension outlet : ID 50

Dimensions (L, W, H) : 2090 x 1140 x 2030 (mm)
Weight : ca. 740 kg

Performance

Mixer
Manual production rate up to: 4.0 m³/h at 20 cycles
Production rate with FS-DK up to: 5.2 m³/h at 26 cycles
OM 200 Assembly groups/ machine technology

**Frame:**
- Skid mounted tubular steel,
- Central lifting eye,
- Forklift slots,
- Paint RAL 3000 (red)

**Water dosage:**
- Water distributor with flushing connection,
- Water supply- and dosing tank V = 200 l (53 gal.)
  - Adjustable overflow,
  - Hand-operated water-outlet valve

**Mixing tank:**
- Round tank of stainless steel, conical bottom,
- Tank capacity: 240 l (64 US gal),
- Working capacity: 200 l (53 US gal)

**Implements in the mixing tank:**
- Two high-speed mixing implements
- On the same shaft with pump-off function.
- No packing-seals, therefore no problems by running dry

**Storage tank:**
- Round tank, bottom conical to top,
- Cleaning hatch mounted in the bottom,
- Working capacity: approx. 400 l (106 US gal)

**Implements in the storage tank:**
- Slow speed agitator implement in spiral configuration

**Operation elements:**
- ON/ OFF switch for the mixer motor,
- ON/ OFF switch for the agitator motor on the Storage tank,
- ON/ OFF switch for semi-automatic
- Water dosage (special equipment)

**Electrics:**
- Electric motor for the mixer drive
  - 5.5 kW, 380 V, 50 Hz, IP 54
- Electric motor for the agitator drive
  - 1.1 kW, 380 V, 50 Hz, IP 54
- Motor protection switch

**Accessories:**
- Special tools for operation and servicing,
- Operation manual and list of spare parts

**Optional extras:**
- Special tools for repair,
- Spare parts,
- Top cover for mixer with connector for dosing conveyor

**Special equipment:**
- Semi-automatic water dosage with:
  - Level switch, magnet valve for water supply,
  - Additional outlets on storage tank with flushing connection
  - Dust exhaust filter
  - Adjustable mixing speed
  - Inlet sieve in storage tank
  - Connectors for circulation hoses

**Complementary equipment:**
Grout pumps, pressure- and volume recorder, dosing conveyor, suction hoses, waste pan, and water supply station
Technical Data Sheet No. 195-3-3A-ST /E
Mixing Plant OM 500-3-3A-ST

Application area: grouting, anchors, flush-drilling
Mixing material: solid agent suspensions
Storage tank without pump-off function
Mixer valves manually operated
Steel tank

Technical data

Drive
Mixer and agitator drives
Total drive power
Total required power

Connections  
- electric
- water
- suspension outlet
- controlled plug

Dimensions (L, W, H)
Weight

Performance

Mixer
Manually charging up to
Charging with FS-DK up to

Required power without helical conveyors

technical data as of Nov. 1999, subject to change

Picture shows type made of steel plate, also available in stainless steel
OM 500-3-3A-ST  Assembly groups/machine technology

Frame:
- Tubular steel,
- Central lifting eye,
- Forklift slots,
- Tip-up step,
- Exterior paint RAL 3000 (red)

Operating elements:
- ON/OFF switch for mixer motor,
- ON/OFF switch for the agitator motor at the storage tank,
- ON/OFF button for the semi-automatic water dosage,
- Manually operated valves for the mixer functions
- Circulation/ pumping off

Electrics:
- Electric motor for mixer drive in the mixing tank
  11 kW, 380 V, 50 Hz, IP 54,
- Electric motor for agitator drive
  1.1 kW, 380 V, 50 Hz, IP 54,
- Main switch, motor protection switch,
- Autom. phase correction, ground wire not necessary

Water dosage:
- Water distributor
- Water storage and dosing tank V = 500 l,
- Adjustable overflow,
- Manually operated water outlet valve,
- Magnetic valve for water inlet

Mixing tank:
- Round steel tank, conical bottom,
- Cleaning hatch at the bottom,
- Tank capacity: 650 l, working capacity: 500 l
- Hopper with sack ripper

Storage tank:
- Round steel tank, bottom upwards conical,
- Cleaning hatch at the bottom,
- Tank capacity: 1150 l, working capacity: 1000 l

Special equipment:
SA Liquid inlet:
SA1  Water distributor with flushing connection ID 50/R 2"
SB  Solid agent adding:
SB1  Dust-removing filter
SC Liquid outlet:
SC4  Controlled, compressed air operated outlet and flushing valves
SD  Unit control / Data registration:
SD1  Fully automatic control incl. ultrasound filling level switch in the storage tank, for volumetric solid agent dosage with FS-DK (no menu control)
SF  Others:
SF1  Compressed air operated valves for circulation/ pumping off and water outlet incl. pre-control
SF2  Compressor LK01, 0.75 kW, with compressed air tank V = 10 l, pressure switch, pressure reducer and maintenance kit
SF7  Choice of power supply socket
SF8  Choice of drive voltage and frequency

Optional extras:
ZWB  Solid agent adding:
ZWB2  Charging augers FS-DK...
ZWB5  Silo outlet hose
ZWB6  Hopper with sack ripper
ZWD  Unit control / Data registration:
ZWD2  Controlled switch cabinets ES-15/ ES-30
ZWF  Others:
ZWF1  Spare part sets
ZWF2  Special tool set
ZWF3  Hose-binding tool

Complementary equipment:
Grouting containers, grouting pumps, pressure and volume recorders, charging augers, water supply stations
Technical Data Sheet No. 195-5/...
Mixing Plant OM 500-5/...

Fully automatic unit with menu control
Application area: jet-grouting, soil mixing, grouting, flush drilling
Mixing material: solid agent suspensions
Storage tank plus feed pump for pumping-off function plus double-suspension filter

Technical data

Drive
Mixer and agitator drives: 12.1 kW
Feed pump type CP 80: 5.5 kW
Total power required: 19.0 kW plus charging auger

Connections
- electric: 1 x CEE 63 A / 400 V / 50 Hz
- water: C-coupling / R 2"
- solid agents: mixer tank cover with connection for 1 pc. inlet hose Ø 200 mm
- suspension outlet: 1 x DN 80 for charging auger
- controlled plug: 1 x CEE 16 A / 400 V / 50 Hz – max. 5.5 kW for silo vibrator
- controlled plug: 1 x CEE 16 A / 400 V / 50 Hz – max. 1.0 kW

Performance
Mixer:
- 10 m³ at 20 cycles/h
- 13 m³ at 26 cycles/h
- 18 m³ at 36 cycles/h

Storage tank – working capacity
Dimensions: 3050 x 2050 x 2540 mm H
Weight – depending on equipment
Types:
- Water tank, mixer tank, storage tank made steel plate, painted
- Water tank, mixer tank, storage tank made of stainless steel

OM 500-5/1.0.. | OM 500-5/1.5..
--- | ---
1500 l | 2000 l
3.200 kg | 3.400 kg

OM 500-5/1.5-ST | OM 500-5/2.0-ST
--- | ---
OM 500-5/1.5-VA | OM 500-5/2.0-VA

Date: July 2010 – subject to change
OM 500-5/… Assembly group/machine technology

Frame:
- Tubular steel frame,
- Lifting eyes
- Forklift slots
- Paint RAL 3000 (red)

Operating elements:
- Fully automatic menu control with selector switch for four pre-programmable mixtures
- Additional operating elements for manual operation

Mixer tank:
- Working capacity 500 l
- Completely removable tank covers

Storage tank:
- Working capacity 1500 l = OM 500-5/1.5—...
- Working capacity 2000 l = OM 500-5/2.0—...

Water storage- and dosage tank:
- Working capacity 400 l

Electrics:
- E-motor mixer drive 11 kW / 400 V / 50 Hz / IP 54
- E-motor agitator drive 1.1 kW / 400 V / 50 Hz / IP 54
- E-motor feed pump CP 80 5.5 kW / 400 V / 50 Hz / IP54
- Main switch, motor protection switch
- Phase control
- Neutral contactor at network is not necessary

Compressed air supply:
- Electric compressor 400 V / 50 Hz / IP 54
- Maintenance unit

Tank material for water tank, mixer tank and storage tank:
- Steel plate painted, for:
  - OM 500-5/1.5-ST
  - OM 500-5/2.0-ST
- Stainless steel for:
  - OM 500-5/1.5-VA
  - OM 500-5/2.0-VA

Feed pump CP 80:
- plus suspension filter size 3/DN 80,
  for feeding of a jet-grouting pump
- with double slide ring seal and pressure oil collecting main

Machine control:
- Menu control for one liquid component (water) and max. 2 solid agent components, Type Mix Control 2
- Weighing of the additives
- Compressed air operation of the machine valves for water dosage, mixing and selector switching: suspension/flushing water

Implements in mixer tank:
- High-speed mixer tools in mixer tank plus one mixer tools with pumping-off function on mixer tank outlet
- Drive bearing without stuffing box above the liquid level, therefore no problems when running dry

Implements in storage tank:
- Slow-speed agitator tools with adjustable rotation speed
- Drive bearing above the liquid level, therefore no problems when running dry

Accessories:
- Special tools for operation and maintenance
- Operating manuals and spare parts list

Special equipment – optional:
- High-pressure cleaner (HDR)
- Electric connection for additional charging auger - max. 5.5 kW and for silo vibrator (SD60)
- Machine lighting and switch cabinet heating (SF5+SF6)
- Dust extraction filter (SB1)
- Inlet for fluid bentonite into the mixer
- Small quantity dosage for fluid-additives
- Additional out connection on storage tank
- Flow meter in outlet line
- Connection for level sensor on external storage tank
- Registration of the mixing date and consumption material, incl. evaluation software for customer's PC

Accessories – optional:
- Working with one solid agent component (A) and operation with one solid agent silo for „A“
  • Charging auger type FS 220-2.7-E – 1 pc.
- Working with one solid agent component (A) and operation with two solid agent silos for „A“/or working with two solid agent components (A)+(B) and one silo each for (A) and (B)
  • Charging auger type FS 220-2.7-E – 2 pc.
- Option SD60 necessary: = E-connection for additional charging augers – max. 5.5 kW and E-connection for silo vibrator – max. 1 kW
- Feed shaft with bag ripper (ZWB6)
- Remote control
- Spare parts sets
- Hose binding tools (ZWF3)
- Silo outlet hose (ZWB5)
Technical Data Sheet No. 196-36 /E
Mixing Plant OM 600-36-jet

Fully automatic unit, with menu control
Application area: jet-grouting, soil mix, flush drilling, slurry-trench walls
Mixing material: solid agent suspensions
Integrated feed pump
Tank made of stainless steel

Technical data

Drive: electrical
Mixer drive: 30 + 15 kW
Feed pump: 7.5 kW
Total required power: 54 kW

Connections:
- Electric equipment with 54 kW total required power: 2 x CEE 63 A/ 400 V, 50 Hz
- Water inlet: 1 x flange DN 100/ PN 16
- Solid agents inlet: 1 x DN 200 quick coupling – m-part
- Suspension outlet: 1 x DN 100
- 24 V DC for magnetic valve for silo loosening up: 1-3 x sockets AF01A (option SD50)
- 24 V AC agitator connection for silo: 1-3 x CEE 16 A (option SD6)
- Potential free switch contact for auger on site: 1-3 x sockets AF10A (option SD21)
- Remote control – wire or wireless: 1 x socket AF11A (SD9)

Dimensions (L, W, H): 2900 x 2120 x 2650 mm H
Weight: approx. 4300 kg

Performance

Mixer: 36 m³/h at 33 double cycles, w/c 0.8

Required power with charging augers

technical data as of May 2007, subject to change
OM 600-36-jet  Assembly groups/machine technology

Frame:
- Tubular steel with roof cover
- Forklift slots
- Four lifting eyes
- Dust extraction filter
- Foldable rain protection roof
- Tarpaulins as weather protection (SE4)  
- Paint RAL 3000 (red)
- Paint according to customer's request (SL-RAL)  

Water dosage:
- Water tank of stainless steel, working capacity approx. 720 l
- Weighing of water quantity in mixer tank

Solid agent dosage for max. 2 solid agents:
- Solid agent addition with charging auger
- Weighing of the solid agent quantity in mixer tank

One solid agent component – A –
Operation with one solid agent silo for – A – (FZ1/270)  
- Spacer ZS1/270 – 1 pc.
- Charging auger type FS 270-3.4 H – 1 pc.
- Hydraulic connection for one charging auger

One solid agent component – A –
Operation with two solid agent silo for – A – (FZ2/270)  

or

Two solid agent components (A) + (B)
Operation with one solid agent silo for – A – and one solid agent silo for – B – (FZ2/270)  
- Inlet distributor type 2/1
- Charging auger type FS 270-3.4 H – 2 pc.
- Reversible hydraulic connection for 2 charging augers

Two solid agent components (A) + (B)
Operation with two solid agent silos for – A – as well as with one solid agent silo for – B – (FZ3/270/220)  
- Inlet distributor type 3/1
- Charging auger type FS 270-3.4 H – 2 pc.
- Charging auger type FS 220-3.4 H – 1 pc.
- Reversible hydraulic connection for three charging augers

Combined mixer and storage tank:
- 2 pc. tanks of stainless steel, working capacity 550/600 l
- Tank covers completely removable
- Cleanout opening at the bottom of the tank
- Three high-speed mixer tools on an electrically geared vertical drive shaft without stuffing box
- Rotation speed will be reverted by the tool control from mixer operation to agitator operation
- Dry running of the mixer tools without problems
- Controlled bottom outlet valve

Feed pump CP 100:
- Drive performance 7.5 kW, 400 V, 50 Hz
- Double slide ring seal with pressure oil admission

Double suspension filter size 4 – DN 100:
- Reversible filter 1/ filter 2
- Filter size 4 mm
- Water flushing valve in filter inlet

Hydraulic:
- Oil tank working capacity approx. 150 l
- Oil tank of stainless steel, suitable for bio oil
- Bio oil filling (Bio) 

Electrics:
- Electric motor for mixer and charging auger drive
  30 + 15 kW, 400 V, 50 Hz, IP 54
- Phase differences indication
- Control voltage for valves and remote control 24 V DC
- Suitable for power supply with 60 Hz (Freq – 60)  

High pressure cleaner: (HDR)  
- Integrated in machine
- 3-plunger pump – 3 kW, 13 l/min, 120 bar (1740 psi)

Operating and indication elements:
- Tester / plug for mixer control as full automatic menu control with additional operating tools for manual emergency operation

Remote control:  
- Cable remote control RC2
- Radio remote control RC4-WL
- Radio remote control RC …

Mixing plant control:  
- Mix Control 2
  - Graphic and text indication on black/white LCD 128 x 84
  - Data storage not possible
- Mix Control 3 (Mix 3)  
  - Graphic and text indication on colour LCD 800 x 600
  - Storage of mixture data

Special equipment:
- Liquid dosage (SA2…)  
  incl. flow rate measurement unit DN 15 – DN 40 for input of additives or fluid bentonite
- Flow rate measurement unit DN 80 (SC5/80)  
- Machine lighting (SF5) 
- Switch cabinet heating (SF6)  
- 2 kW electric heating in mixer room (SF9/2)  
- Connection for level sensor (SD7)  

3 ) optional – extra charge
Technical Data Sheet No. 197_2-48 /E
Mixing Plant OM 1000/2-48

Fully automatic unit, with menu control
Application area: soil mixing, flush drilling, slurry-trench walls
Mixing material: solid agent suspensions
Integrated feed pump
Tank made of stainless steel

Technical data

Drive: electrical, 400 V/ 50 Hz
Mixer drive
Charging auger drive (for 2 augers synchronously) : 2 x 37.0 kW
Feed pump : 7.5 kW
Compressor : 1.2 kW
Total required power for unit : 88.0 kW

External electrical consumers

For silo vibrators : 4 x 1 kW, 3 ph /400 V : 4.0 kW
For bentonite pump (option) : 1 x 15 kW, 3 ph /400 V : 15.0 kW (cannot be used synchronously)
For fluid additive pump (option) : 1 x 2 kW, 3 ph /400 V : 2.0 kW
Free socket : 1 x 4 kW, 3 ph /400 V : 4.0 kW

Total power consumption for external consumers : 15.0 kW

Total power consumption : 98.0 kW

Connections - Electrical : as required by customer
- Water inlet : DN 80, flange resp. as required (P-max 10 bar/ 145 psi)
- Solid agents inlet
- Suspension outlet : 4 x Ø 200 fitting to charging augers : DN 100 / quick coupling

Dimensions (L, W, H)
transport : 5740 x 2400 x 2560 mm H
incl. 4 charging augers
site : 5600 x 1700 x 3760 mm H

Weight : approx. 6-7 t

Performance

Mixer: 48 m³/h at 24 double cycles / w/c 0.9

Technical data as of Jan. 2009, subject to change
OM 1000/2-48  Assembly groups/machine technology

Frame:
- Tubular steel with roof cover
- Forklift slots
- Four lifting eyes
- Dust extraction filter
- Foldable rain protection roof
- Tarpaulins as weather protection (SE4)
- Paint RAL 3000 (red)
- Paint according to customer’s request (SL-RAL)

Water dosage:
- Water tank of stainless steel, working capacity 2 x approx. 1400 l
- Weighing of water quantity in mixer tank
- Water flushing valve in filter inlet
- Compressed air supply:
  - Electric motor 1.2 kW / 450 V / 60 Hz / IP 54
  - Volume 150 l/min, max. operating pressure 10 bar (145 psi)

Solid agent dosage for max. 4 solid agents:
- Solid agent addition with charging auger
- Weighing of the solid agent quantity in mixer tank
- Important: not sufficient to achieve max. performance of the mixing plant!

- One solid agent component – A –
  - (cement)
  - Operation with one solid agent silo for – A –
  - Charging auger type FS 270-3.5 H – 1 pc.
  - Important: not sufficient to achieve max. performance
  - of the mixing plant!

- One solid agent component – A –
  - (cement)
  - Operation with two solid agent silos for – A –
  - Charging auger type FS 270-3.5 H – 2 pc.
  - Important: take note of the floor plan of the charging augers!

- Two solid agent components (A+B)
  - (cement, fly ash/rock powder)
  - Operation with two solid agent silos for – A –
  - and one solid agent silo for – B –
  - Charging auger type FS 270-3.5 H – 2 pc. – for – A –
  - Charging auger type FS 270-3.5 H – 1 pc. – for – B –
  - Important: take note of the floor plan of the charging augers!

- Three solid agent components
  - (A+B+C)
  - (cement, fly ash/rock powder, bentonite)
  - Operation with two solid agent silos for – A –
  - one solid agent silo for – B –
  - and one solid agent silo for – C –
  - Charging auger type FS 270-3.5 H – 2 pc. – for – A –
  - Charging auger type FS 270-3.5 H – 1 pc. – for – B –
  - Charging auger type FS 160-3.5 H – 1 pc. – for – C –
  - Important: take note of the floor plan of the charging augers!

Combined mixer and storage tank:
- 2 pc. tanks of stainless steel, working capacity 1000 l
- Tank covers completely removable
- Cleannout opening at the bottom of the tank
- Three high-speed mixer tools on an elastically geared vertical drive shaft without stuffing box
- Rotation speed will be reverted by the tool control from mixer operation to agitator operation
- Dry running of the mixer tools without problems
- Controlled bottom outlet valve

Feed pump CP 100:
- Drive performance 11 kW, 450 V, +0 Hz
- Double slide ring seal with pressure oil admission

Double suspension filter size 6 – DN 100:
- Reversible filter 1 / filter 2
- Filter size 4 mm
- Water flushing valve in filter inlet

Hydraulic:
- Oil tank working capacity approx. 200 l
- Oil tank of stainless steel, suitable for bio oil
- Bio oil filling (Bio)

Electrics:
- Electric motor for mixer and charging auger drive
  45 + 22 kW, 450 V, 60 Hz, IP 54
- Phase differences indication
- Control voltage for valves and remote control 24 V DC
- Suitable for power supply with 60 Hz (Freq – 60)

High pressure cleaner: (HDR)
- Integrated in machine
- 3 plunger pump – 3 kW, 13 l/min, 120 bar (1740 psi)

Operating and indication elements:
- Tester / plug for mixer control as full automatic menu control with additional operating tools for manual emergency operation
- Remote control:
  - Cable remote control RC2
  - Radio remote control RC4-WL
  - Radio remote control RC …

Mixing plant control:
- Mix Control 1
  - graphic and text indication on colour LCD 320 x 240
  - storage of mixture data

Liquid dosage:
- Liquid bentonite addition, for feeding by an external pump.
  dosage by weighing
  - Inlet connection DN 80/PN10, with controlled shut-off valve
  - Controlled electric connection for external pump
    450 V / 60 Hz – max. 15 kW (SA2/80/2)
- Liquid additive addition, for feeding by an external pump.
  - dosage by magnetic-inductive flow meter (IDM)
    DN 25/PN 10 (SA 2/25/2)

Measurement of the outlet line:
- Flow measuring device DN 80, with indication display in switch cabinet
  - Outlet-plug connection for cable or radio data transmission (SC 5/80/Z)

Special equipment:
- Liquid dosage (SA2…)
  incl. flow rate measurement unit DN 15 – DN 40
  for input of additives or fluid bentonite
  - Machine lighting (SF5)
  - Switch cabinet heating (SF6)
  - 2 kW electric heating in mixer room (SF9/2)
  - Connection for level sensor (SD7)

3) optional – extra charge

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Technical Data Sheet No. 20 /E
Mixing Plan OMP 800

Fully automatic unit
Application area: grouting, jet-grouting, flush drilling, slurry-trench-walls
Mixing material: solid agent suspensions
Storage tank with mixing tools and pump-off function

Specification

Drive
Mixer- and agitator drives
Total drive power
Total required power

Connections
- electric
- water
- solid agents
- suspension outlet
- pipe charging auger
- pipe charging auger
- induct. flow meter dosage (spec. equipment)
- silo vibrator
- magnetic valve for silo loosening up

Dimensions (L, W, H)
Weight

Performance

Mixer: 16.0 m³/h at 20 cycles
19.2 m³/h at 24 cycles

Required power without helical conveyors

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OMP 800  Assembly groups/ machine technology

Frame:
- Tubular steel, partially encased, four lifting eyes,
- Protection cover over the switch cabinet,
- Interior paint RAL 7035 (light-grey)
- Exterior paint RAL 3000 (red)

Operating elements:
- Mixer control buttons switches, fully automatic control, additional operating elements for manual operation

Water dosage:
- Water storage and dosing tank V = 800 l

Storage tank:
- Round tank, conical bottom, cleaning hatch at the bottom, tank capacity 2000 l, working capacity 1600 l

Tools in the storage tank:
- Primary mixing tools:
  - one high-speed mixing tool with pump-off function;
  - secondary mixing and agitator tools:
    - slow rotation, spiral configuration, adjustable rotation speed;
    - drive bearings above the mixer level;
    - no package-seals, therefore no problems when running dry

Mixing tank:
- Round tank, conical bottom, cleaning hatch at the bottom,
- Tank capacity 1100 l, working capacity 800 l,
- Adding weighing system for up to 5 components

Tools in the mixing tank:
- Primary mixing tools:
  - two high-speed mixing tools on the same shaft with pump-off function;
  - secondary mixing and agitator tools:
    - slow rotation, spiral configuration, adjustable rotation speed;
    - drive bearings above the mixer level;
    - no package-seals, therefore no problems when running dry

Optional extras:
- ZWB3 Charging augers FS…..
- ZWB4 Y-Collector for solid agent inflow
- ZWB5 Silo outlet hose
- ZWD3 Remote control
- ZWF1 Spare part packages
- ZWF3 Hose-binding tool
  - Hose for silo airing
  - Memory cards
  - Evaluation software for mixing data

Electrics:
- Electric motor for mixer drive in the mixing tank
  - 11 kW, 380 V, 50 Hz, IP 54,
- Electric motor for mixer drive in the storage tank
  - 7.5 kW, 380 V, 50 Hz, IP 54,
- Main switch, motor protection switch
- Autom. phase correction, ground wire not necessary
- 5 controlled sockets CEE 32 A,
- 3 controlled sockets for silo vibrator CEE 16 A

Hydraulics:
- E.-Motor 4 kW, 380 V, 50 Hz, IP 54, oil tank capacity 100 l

Compressed air supply:
- Electric motor 1.2 kW, 380 V, 50 Hz, IP 54,
- 150 l/min delivery rate, operation pressure 10 bar max.

High-pressure cleaner:
- E.-Motor 5 kW, 380 V, 50 Hz, IP 54, 10 l/min, max. 250 bar

Accessories:
- Special tools for operation and maintenance
- Operation manual and spare part list
- 3 sliding connectors ID 200 for solid agent inflow

Special equipment:
- SA2 Dosing system with flow meter ID 10 – 50 for liquid components
- SA11 Dosing system ID 80 for liquid bentonite in the mixer
- SB1 Dust-removing filter
- SC1 Additional outlet connection with 2 controlled valves and selector switch
- SC2 Flushing water connection ID 50 for one outlet
- SC3 Flushing water connection ID 50 for additional outlets
- SC5 Flow meter on outlet of storage tank ID 50 – 80
- SD5 Impulse sender for silo airing
- SD8 Recording systems for consumables and mixing data
- SD9 Remote control connection
- SD12 Programmable rotation speed of the mixer
- SD14 Measurement of density in the mixer
- SD15 Hour meter
- SE4 Tarpaulins as weather protection
- SE6 Waste pan
- SF3 Compressed air accumulator for silo airing
- SF4 Automatic bearing greasing
- SF5 Unit lighting
- SF6 Switch cabinet heating
- SF9 Electric heating in mixer compartment
- SF11 Additional electric connector 16A
- SF12 High-pressure cleaner
Technical Data Sheet No. 205 /E
Mixing Plant OMP 1000

Fully automatic machine
Application area: grouting, jet-grouting, flush drilling, slurry-trench-walls
Mixing material: solid agent suspensions
storage tank with mixing implements and pump-off function

Technical data

Drive
Mixer- and agitator drives: drive power
: electric, electro-hydraulic
: 29.7 kW
: 36.0 kW plus charging augers
: total required power
: plus special equipment

Connections
- electric main connection
: 2 x CEE 63 A/ 380 V, 50 Hz
- water
: 2 x C-coupling/ R 2"
- solid agents
: max. 4 x DIA. 200 (8") for charging augers
- suspension outlet at storage tank
: max. 2 x flange PN 16/ DIA. 80 (3")/ R 3"
- charging auger
: max. 2 x CEE 32 A/ 400 V, 7 poles
: max. 2 x CEE 16 A/ 400 V, 5 poles
- charging auger
: max. 4 x CEE 16 A/ 400 V, 5 poles
- feeding pump for bentonite inlet
: max. 1 x CEE 32 A/ 400 V, 5 poles
- feeding pump for additives
: max. 1 x CEE 16 A/ 400 V, 5 poles
- silo vibrator
: max. 4 x CEE 16 A/ 400 V, 5 poles
- silo airing
: max. 4 x socket AF01A/ 24 VDC
- signal
: max. 4 x DIA. 8 (0.3")
- air
: 1) 2) 3)
- charging auger
: 1) 2) 3)
- feeding pump for additives
: 1) 3)
- silo vibrator
: 1) 2)
- silo airing
: 1) 2)
- feeding pump for bentonite inlet
: 1) 2)
- solid agents
: max. 4 x DIA. (8"

Dimensions (L, W, H)
: 6000 x 2350 x 2520 (mm)
Weight
: approx. 6000 kg

Performance
Mixer
: 30 m³/h (39.24 cu.yd.) at 30 cycles
: with 1 solid agent component
24 m³/h (31.39 cu.yd.) at 24 cycles
: with 2 solid agent components
Suspension density
: max. δ 1.30 kg/l
Requirement
: sufficient performance of charging augers

- switched via menu control
- 1 pc. standard
- special equipment

Date: Nov. 2000, subject to change

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OMP 1000  Assembly groups/ machine technology

Frame:
- Steel pipe frame, partly panelled
- Four lifting eyes
- Cover flap above switch cabinet
- Interior paint RAL 7035 (light-grey)
- Exterior paint RAL 3000 (red)

Operating elements:
- Button / switch for menu control
- Fully automatic control
- Additional operating elements for manual operation

Electrics:
- Electric motor for mixer drive in mixing tank, 2 x 11 kW, 380 V, 50 Hz, IP 54
- Electric motor for agitator drive in storage tank, 2.2 kW, 380 V, 50 Hz, IP 54
- Electric motor for pump-off drive, 5.5 kW, 380 V, 50 Hz, IP 54
- Main switch, motor protection switch
- Automatic phase correction, no mains neutral required
- Max. 2 pc. sockets for charging screws CEE 32A
- Max. 2 pc. sockets for charging screws CEE 16A
- Max. 4 pc. sockets for silo vibrator CEE 16A

Water dosage:
- Water storage and dosing tank v = 1000 litres (265 gal.)

Solid agent dosage:
- Steel construction for suspension of mixing tanks with weighing cell
- Additive weighing of up to 5 components via programmable menu control

Mixing tank:
- Steel tank with round edges, bottom conical
- Cleaning hatch mounted at the bottom
- Tank capacity: approx. 1300 litres (344 gal.)
- Working capacity: 1000 litres (265 gal.)

Implements in the mixing tank:
- 2 vertical mixer drives with each 2 high speed mixing implements on each mixer shaft
- Without stuffing boxes and seals, i. e. no problems when running dry

Storage tank:
- Round steel-sheet tank, bottom sloping
- Tank capacity: 2400 litres (635 gal.)
- Working capacity: 2000 litres (529 gal.)
- Cleaning hatch mounted at the bottom

Implements in the storage tank:
- Slowly turned agitator implement with adjustable rotation speed
- Centrifugal pump with pump-off and circulate function

Compressed air supply:
- Electric motor 1.2 kW, 380 V, 50 Hz, IP 54
- 150 litres (40 gal.)/min. delivery scale
- Max. operating pressure 10 bar (145 psi)

High-pressure cleaner:
- Electric motor 5 kW, 380 V, 50 Hz, IP 54
- 10 litres (2.7 gal.)/min., max. 250 bar (3625 psi)

Special equipment:
- SA1  Water distributor
- SA2...  Liquid dosage inclusive flow measuring unit DIA. 10 (0.4") – DIA. 15 (0.6")
- for chemical additives –
- SA11...  Liquid dosage by weighing DIA. 50 (2") – DIA. 150 (6")
- for bentonite suspension –
- SB1/2  Dust extraction filter
- SC1  Additional outlet line for suspension at storage tank
- SC2  Water flushing connection DIA. 50 (2") to the outlet line
- SC5  Flow measuring unit at the outlet of the storage tank, DIA. 50 (2") – DIA. 80 (3")
- SD5  Impulse sender for silo airing
- SD8  Data registration of menu control
- SD9  Remote switch connection
- SD12 Programmable mixing rotation speed
- SD14  Density determination in mixing tank
- SD11 is necessary –
- SE4  Tarpaulins as weather protection
- SF3-80 Compressed air accumulator for silo airing
- SF4-4 Automatic bearing lubrication
- SF5/6 Machine lighting and switch cabinet heating
- SF9  Electric heating in mixer compartment
- SF11  Free socket CEE 16A
- SF12  High-pressure cleaner

Accessories:
- ZWB3-160 Charging auger type FS 160-4.3, performance 16 t/h
- ZWB3-220 Charging auger type FS 220-4.3, performance 32 t/h
- ZWB3-270 Charging auger type FS 270-4.3, performance 64 t/h
- ZWB5  Silo hose
- ZWD3  Remote control ON/OFF for suspension and flushing
- ZWF1  Spare parts package
- ZWF3  Tube fastening tool
- ZWL1A  Memory card drive
- ZWL1B  Evaluation software
- Memory card 1 MB
- Air hose for silo airing
- Valve with control cable for silo airing
- Bottom tub
- Operating manual and spare parts list
Technical Data Sheet No. 192-2b-e
Mixing Plant OMN 100

Application area: fine binding agent injections
Mixing material: solid agent suspensions
Storage tank with post mixing- and circulate function
Valves at the mixer manually operated

### Specification

**Drive**
- Mixer- and circulation drives
- Total drive power: 1 x 7.5 kW, 1 x 4 kW
- Total required power: 12 kW

**Connections**
- Electric: CEE 32 A/380 V, 50 Hz
- Water: R 1” GEKA
- Suspension outlet: R 1” – GEKA
- Suspension circulate: R 1” – GEKA
- Suspension reverse motion from grouting pumps: 4 pieces R ½”
- Cooling: 2 pieces R ½”

**Dimensions (L, W, H)**
- : approx. 1710 x 1000 x 2000 (mm)

**Weight**
- : approx. 750 kg

**Performance**

**Mixer**
- Charging manual up to: 0.6 m³/h at 6 cycles/h
- : 2.0 m³/h at 20 cycles/h

Date: July 2005 - subject to change
OMN 100  Assembly groups / machine technology

Frame:
- Steel pipe frame with skids
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- ON / OFF switch for hydraulic drive motor
- ON / OFF switch for mixer motor
- Regulating valve for post mixing- and circulate rotation speed
- ON / OFF switch for semi-automatic
- Water dosage (special equipment),
- Manually operated valves for mixer functions
- Circulate/pump-off as well as water spouts
- Manually operated isolating valve for circulation

Indication instruments:
- Circulate rotation speed
- Circulate pressure – in front of filter
- Inlet pressure – in front of filter
- Suspension temperature – storage tank
- Stay of charges in the storage tank

Mixing tank:
- Round tank, bottom conical
- Tank capacity: 120 l, working capacity: 100 l

Storage tank:
- Round tank, conical bottom
- Tank capacity: 120 l, working capacity: 100 l,
- Double wall as cooling

Filter system:
- Filter “A” type SFR-50… in inlet to storage tank
- Filter “B” type SFR-50… in circulate system of the storage tank – in front of grouting pump connections
- Filter fineness (nominal) choice of 60, 80, 100, 130 or 200 µ

Special equipment:
SA  Liquid inlet:
SA5  Water distributor with “C”-connection
SA7  Semi-automatic water dosage with level sensor and magnet valve for water inlet
SF Others:
SF7  Choice of power supply socket
SF8  Choice of drive voltage and frequency

Water dosage:
- Water distributor
- Water storage- and dosage tank V = 80 l,
- Adjustable overflow
- Manually operated water spout valve

Implements in the mixing tank
- Two high-speed mixing implements
  on the same shaft with pump-off function – constant rotation speed
- Drive bearing above the mixer
- Without stuffing box, therefore no problems when running dry

Implements in the storage tank:
- High speed post mixing- and circulate implement – adjustable rotation speed

Electrics:
- Electric-motor for hydraulic drive 7.5 kW, 380 V,
  50 Hz, IP 54
- Electric-motor for mixer drive 7.5 kW, 380 V,
  50 Hz, IP 54
- Motor protection switch

Accessories:
- Special implement for operation and maintenance
- Distributor 1” with grouting pump connections 4 x ½”
- Operating manual and spare parts list

Optional extras:
ZWB  Addition of solid agents:
ZWB7  Filling connection for charging screw
ZWE  Machine frame / machine cleaning:
ZWE1  Separate bottom tub
ZWF  Others:
ZWF1  Spare parts package
ZWZ  Suspension filtering:
ZWZ1  Replace filter type SFR-50 E…
ZWZ2  Filter element type E… SFR 50
ZWZ3  Hose Dia. 1” x ____ lg, to distributor

Complementary equipment:
Grouting pumps, LOG-registration systems, proportioning auger FS-DK, water supply unit
Technical Data Sheet No. 194-2B /E
Mixing Plant OMN 200

Application area: Grouting with micro cement
Mixing material: Micro cement and water
Storage tank with post mixing- and circulate function
Valves at post mixer as well water outlet manually operated

Specification

Drive: electric
Mixer- and post mixer drives: 2 x 7.5 kW
Total required power: 15.2 kW

Connections
- electric: CEE 32 A/ 380 V, 50 Hz
- water: R 1" GEKA
- suspension outlet: connecting system size III / DN 40
- suspension circulate respectively suspension reverse motion from grouting pumps: connecting system size II / DN 32

Dimensions (L, W, H): 2200 x 1000 x 2080 (mm)
Weight: approx. 800 kg

Performance

Mixer
Charging manual up to: 2.4 m³/h at 12 cycles/h
: 4.0 m³/h at 20 cycles/h (with normal cement)
OMN 200  Assembly groups / machine technology

Frame:
- Steel pipe frame with skids
- Central lifting eye
- Forklift slots
- Paint RAL 3000 (red)

Operation elements:
- ON / OFF switch for post mixer motor
- ON / OFF switch for mixer
- Selector switch for post mixer rotation speed high or low
  - both rotation speed are adjustable –
- ON / OFF switch for semi-automatic water dosage (special equipment)
- Manually operated valves for mixer functions
- Circulate/pump-off as well as water spout
- Manually operated valves for post mixer
- Adjustment for mixing time signal
- Adjustment for post mixing time signal

Indication instruments:
- Post mixing rotation speed
- Pressure – in front of filter – A –
- Pressure – in front of filter – B –
- Suspension temperature – post mixer
- Stay of charges in post mixer

Mixing tank:
- Round tank, bottom conical
- Tank capacity: 240 l, working capacity: 200 l

Post mixer tank:
Round tank, bottom conical
Tank capacity: 350 l, working capacity: 300 l

Filter system:
- Filter "A" type SFR-50... in inlet to storage tank
- Filter "B" type SFR-50... in circulate system of the post mixer
  in front of grouting pump connections
- Filter fineness (nominal) choice of 200, 500 or 1000 µ

Special equipment:
SA  Liquid inlet:
SA5  Water distributor with "C"-connection
SA7  Semi-automatic water dosage with level sensor and magnet valve for water inlet
SF Others:
SF7  Choice of power supply socket
SF8  Choice of drive voltage and frequency

Water dosage:
- Water distributor
- Water storage- and dosage tank V = 170 l,
- Adjustable overflow
- Manually operated water spout valve

Implements in the mixing tank:
- Two high-speed mixing implements
  on the same shaft with pump-off function – constant rotation speed
- Drive bearing above the mixer
- Without stuffing box, therefore no problems by dry running

Implements in the post mixer tank:
- High speed post mixing- and circulate implement –
  - adjustable rotation speed
- Drive bearing above the mixer level
- No stuffing box therefore, dry running without problems

Electrics:
- Electric motor for mixer drive 7.5 kW, 380 V,
  50 Hz, IP 54
- Electric motor for post mixer drive 7.5 kW, 380 V,
  50 Hz, IP 54
- Motor protection switch, frequency converter for post mixer

Accessories:
- Special implement for operation and maintenance
- Distributor 1/2" with grouting pump connections 4 x 1/2",
- Operating manual and spare parts list

Optional extras:
ZWB  Addition of solid agent
ZWE  Frame / cleaning
ZWE1  Separate bottom tub
ZWF  Others:
ZWF1  Spare parts package
ZWZ  Suspension filtering:
ZWZ1  Replace filter type SFR-50 E...
ZWZ2  Filter element type E... SFR 50
ZWZ3  Hose DIA. 40 x ____ lg, to distributor
ZWZ3.1 Hose DIA.32 x ... lg, as return flow from distributor

Complementary equipment:
Grouting pumps, LOG-registration systems, proportioning charging screw FS-DK, water supply unit
Technical Data Sheet No. 150 /D
Silicate Mixing Plant FL-DMR 3/60

Application: grouting with silicate-hardener mixtures
Grouting material: water, fluid silicate, and fluid hardener

Picture FL-DMR 3/60 built-in in 10’-container

<table>
<thead>
<tr>
<th></th>
<th>Water</th>
<th>Fluid silicate</th>
<th>Fluid hardener</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank as preliminary container, with level control and switching signal for external charging pump</td>
<td>70 l</td>
<td>70 l</td>
<td>70 l</td>
</tr>
<tr>
<td>Tank contents:</td>
<td>70 l</td>
<td>70 l</td>
<td>70 l</td>
</tr>
<tr>
<td>Dosage pump, with infinitely volume adjustment by frequency converter</td>
<td>12-50 l/min</td>
<td>25.7-70 l/min</td>
<td>3.6-12 l/min</td>
</tr>
<tr>
<td>Dosage volume-adjustment range</td>
<td>50 l/min</td>
<td>70 l/min</td>
<td>12 l/min</td>
</tr>
<tr>
<td>Flow rate-sensor – max. measuring range</td>
<td></td>
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</tr>
</tbody>
</table>

1 pc. Static-mixer as preliminary mixer
1 pc. Mixer V = 170 l, drive power 4 kW for use as mixer and storage tank
Mixer rotation speed with frequency diverter infinitely variable
Level control by weighing of the mixer

! Please note:
For machines with frequency converter (FU) an earth leakage circuit breaker type „B“ (AC/DC sensitive) is necessary in the feed line (assembly for construction site)!

Date: September 2009 – subject to change
FL-DMR 3/60 - Machine technology

Preliminary tank:
- Tank of stainless steel, Working capacity 70 l
- 1 pc. each for water, fluid silicate and fluid hardener

Static-mixer:
- A static will be used for preliminary mixing

Mixer:
- Ready mixing will be done in the mixer
- The mixer is also used as storage tank
- Mixer rotation speed is infinitely variable

Flow rate measuring:
- All three fluid components will be controlled and registered by magnetic inductive flow rate sensors

Electrics:
- Electric motor mixer = 4 kW/400 V/50 Hz/IP 54
  Rotation speed adjustment with frequency converter
- Electric motor dosage pump for water
  = 1.5 kW/400 V/50 Hz/IP 54
  Rotation speed adjustment with frequency converter
- Electric motor dosage pump for fluid silicate
  = 1.5 kW/400 V/50 Hz/IP 54
  Rotation speed adjustment with frequency converter
- Electric motor dosage pump for fluid hardener
  = 0.75 kW/400 V/50 Hz/IP 54
  Rotation speed adjustment with frequency converter

Dosage pumps:
- The dosage pumps for fluid silicate and fluid hardener are rotating, valveless displacement pumps with adjustable rotation speed / adjustable conveying quantity.
- The dosage pump for water is centrifugal pump with adjustable rotation speed / adjustable conveying quantity

Control:
- Mixing plant control type Mix Control 1 with data recording
OM 500/2-2.0-VA
Our complete product range:

<table>
<thead>
<tr>
<th>Products</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Grouting pumps</td>
<td>- Grouting work</td>
</tr>
<tr>
<td>- Grouting packers</td>
<td>- Grouting anchors</td>
</tr>
<tr>
<td>- Grouting and flushing pumps</td>
<td>- Micro piles</td>
</tr>
<tr>
<td>- High pressure grout pumps</td>
<td>- Jet-grouting</td>
</tr>
<tr>
<td>- Mixer</td>
<td>- Cave filling</td>
</tr>
<tr>
<td>- Storage tanks</td>
<td>- Soil mixing</td>
</tr>
<tr>
<td>- Mixing plants</td>
<td>- Slurry walls</td>
</tr>
<tr>
<td>- Grouting container</td>
<td>- Trenchless technology</td>
</tr>
<tr>
<td>- Grouting units</td>
<td>- Structural rehabilitation</td>
</tr>
<tr>
<td>- Proportional augers</td>
<td>- Pre-stressed concrete</td>
</tr>
<tr>
<td>- Registration units</td>
<td></td>
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<tr>
<td>- Sensors</td>
<td></td>
</tr>
<tr>
<td>- Drill rig</td>
<td></td>
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<tr>
<td>- Rotary heads</td>
<td></td>
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<tr>
<td>- Drill rods</td>
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</tbody>
</table>
Sales
Renting
Service
Consultancy

Equipments
and Know How

- Dosing systems for all grouts
- Grouting pumps
- Jet-grouting pumps
- Mixer/mixing plants
- Registration units
- Drill rigs and drill tools
- Accessories and material
- Slurry walls
- Cave and mine backfilling
- Horizontal drilling
- Micro piles
- Water wells
- Prestressed concrete
- Trenchless technology
- Structural rehabilitation
- Repair work