

# OBERMANN

systems



## Catalogue

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# Grout pumps

## Grout pumps and dosing systems

- for grouting with 2 components

Type

LP 20-20/3

LP 20-20/PA

Electric drive 220 V/ 50 Hz – lighting current	Option	
Electric drive 400 V/ 50 Hz – three-phase current	•	
Pneumatic drive		•
Max. delivery volume	2 x 2.8 = 5.6 l/min	2 x 3.5 = 7 l/min
Max. delivery pressure	170/ 200 bar	200 bar
2 x 2-plunger pump	•	•
Automatic suction and pressure valves, force controlled suction valves	•	
- Flushing with component -A- or -B- is possible by valve control	•	
Automatic and pressure valves		•
Integrated flushing pump:		
- Max. delivery volume		3 l/min
- Max. delivery pressure		240 bar
<b>Application areas:</b>		
• Dosing/ mixing/ grouting with 2-component synthetic resins	•	
• Dosing/ mixing/ grouting with 2-component-Acrylate-materials	•	•



LP 20/20-3

# Grout pumps

Delivery rate up to 18 l/min and 150 bar – oscillating pumps  
 Electric drive

Type	DP 36-2-...	DP 36-2-Z	LP 36
Electric drive 400V/ 50 Hz	4.0/ 5.5 kW	4.0/ 7.5 kW	2.2 kW
Max. delivery volume	13/ 18 l/min	11.5/ 18 l/min	14 l/min
Max. delivery pressure	100 bar	150 bar	60/ 120 bar
2 plunger pump	●	●	●
Automatic suction and pressure valves	DP 36-2-A		●
Suction and pressure valves as well as circulation and pressure release valves hydraulically operated	DP 36-2-B	●	
<b>Application areas:</b>			
• Grouting with:			
- Micro cement suspensions	●	●	●
- Cement suspensions	●	●	●
- Liquid silicate mixtures	●	●	●
- One component synthetic resins	●	●	●

Delivery rate up to 42 l/min and 60 bar – rotating pumps  
 - Only as built-in pumps

Type	SIP 14x15	SIP 20x40	SIP 42x60
Electric drive 400 V/ 50 Hz	2.2 kW	7.5 kW	11.0 kW
Max. delivery volume	14 l/min	20 l/min	42 l/min
Max. delivery pressure	15 bar	40 bar	60 bar
Rotating displacement pump	●	●	●



DP 36

# Grout pumps

Delivery rate up to 35 l/min and 100 bar – oscillating pumps  
 Electric drive

Type	DP 50-4-...	LP 50
Electric drive 400 V/ 50 Hz	7.5 kW	2.2 kW
Max. delivery volume	34 l/min	34 l/min
Max. delivery pressure	100 bar	60 bar
2-plunger pump, double acting	•	•
Automatic suction and pressure valves	DP 50-4-F	•
Suction and pressure valves as well as circulation and pressure release valves hydraulically operated	DP 50-4-G	
<b>Application area:</b>		
• Grouting with:		
- Cement suspension	•	•
- Liquid silicate mixtures	•	•
- Especially suitable for viscous suspensions and/ or low pump speeds		•



DP 50



# Grout pumps

Delivery rate up to 75 l/min and 150 bar  
 Electric drive

Type	DP 63-...	DP 63-...	DP 63-Z
Electric drive 400 V/ 50 Hz	7.5 kW	7.5/ 11.9 kW	7.5/ 11.0 kW
Max. delivery volume	53 l/min	63/ 75 l/min	63 l/min
Max. delivery pressure	64 bar	100 bar	150 bar
2-plunger pump, double acting	•	•	•

Automatic suction and pressure valves

DP 63-F

DP 63-H

Suction and pressure valves as well as circulation and pressure release valves hydraulically operated

DP 63-G

DP 63-J

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## Application areas:

- Grouting
- Filling, flush drilling
- Grout anchor works with small drilling diameter
- Bentonite-lubrication at pipe jacking
- Especially suitable for viscous suspensions and/ or low pump speeds

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DP 63

# Grouting and flushing pumps

## Grouting and flushing pumps

Delivery rate up to 175 l/min and 100 bar

Electric drive, diesel drive

Type	KP 90	KP 90-D	KP 121
Electric drive 400 V/ 50 Hz	7.5 kW		15.0 kW
Diesel drive		7.5 kW	
Max. delivery volume	100 l/min	100 l/min	175 l/min
Max. delivery pressure	90 bar	80 bar	100 bar
Piston pump, double acting	•	•	•
Automatic suction and pressure valves	•	•	•
<b>Application areas:</b>			
• Grouting	•	•	•
• Filling	•	•	•
• Flushing pumps for drilling works	•	•	•
• Grouting works	•	•	•



KP 90



KP 121

# Grouting and flushing pumps

Delivery rate up to 220 l/min and 200 bar

Electric drive

Type	DP 101-B	DP 101...	DP 101-H	DP 70-H
Electric drive 400 V/ 50 Hz	15 kW	22 kW	30/ 37 kW	30/37 kW
Max. delivery volume	170 l/min	170/ 220 l/min	170/ 220 l/min	85/ 110 l/min
Max. delivery pressure	100 bar	100 bar	100 bar	200 bar
2-plunger pump	•	•	•	•
Automatic suction and pressure valves	•	DP 101-F		
Suction and pressure valves as well as circulation and pressure release valves hydraulically operated		DP 101-G	•	•
<b>Application areas:</b>				
• Grouting	•	•	•	•
• Filling	•		•	
• Flushing pump for drilling and piling works			•	
• Grout anchor works	•		•	
• Bentonite lubrication at pipe jacking		•		•
• Especially suitable for viscous suspensions and/ or low pump speeds	•	•	•	•



DP 101



# Grouting and flushing pumps

Delivery rate up to 600 l/min and 140 bar

Electric drive, diesel drive

Type	DP 115-E	DP 130-E	DP 160-E
Electric drive 400 V/ 50 Hz	30/ 55 kW	55 kW	55 kW
Max. delivery volume	320 l/min	345 l/min	500 l/min
Max. delivery pressure	140 bar	100 bar	80 bar
2-plunger pump	•	•	•
Automatic suction and pressure valves	•	•	•

Type	DP 115-D	DP 130-D	DP 160-D
Diesel drive	74/ 120 kW	74 kW	74/ 120 kW
Max. delivery volume	320 l/min	345/ 400 l/min	500/ 600 l/min
Max. delivery pressure	140 bar	100 bar	80 bar
2-plunger pump	•	•	•
Automatic suction and pressure valves	•	•	•

## Application areas:

• Filling	•	•	•
• Flushing pump for drilling works and pile driving	•	•	•
• Grout anchor works with large diameter	•	•	•
• Soil mixing works	•	•	•
• Jet-grouting in loose-bedding soils	•	•	•



DP 130



DP 160

# High-pressure pumps

## High-pressure pumps

Delivery rate up to 640 l/min and 600 bar

Electric drive, diesel drive

Type	HD 100/1	HD 110	HD 115/1	HD 115/2	HD 130
Electric drive 400 V/ 50 Hz	110-250 kW	55-132 kW			55-132 kW
Diesel drive	180-290 kW	74-120 kW	230-420 kW	420-800 kW	74-120 kW
Max. delivery volume	180/ 220 l/min	245/ 290 l/min	270/ 320 l/min	2 x 320 l/min	345 l/min
Max. delivery pressure	550/ 600 bar	220 bar	520 bar	520 bar	150 bar
2-plunger pump	•	•	•	2 pc.	•
<b>Application areas:</b>					
• Flushing pump for severe pile driving	•	•	•	•	•
• Jet-grouting	•	•	•	•	



HD 115



HD 110

# Batch mixers

## Without integrated storage tank

## Batch mixers

Separate storage tank is recommended acc. to application  
 Manual and semi-automatic units up to 13 m³/h

Type	M 170/2	MP 100-3	MP 200-3	MP 500-3	MPB 1000
Performance at 10 cycles/h <sup>1)</sup>					10.0 m³/h
Performance at 20 cycles/h <sup>1)</sup>	2 x 1.5 m³/h	2.0 m³/h	4.0 m³/h	10.0 m³/h	20.0 m³/h
Performance at 26 cycles/h <sup>2)</sup>		2.6 m³/h	5.2 m³/h	13.0 m³/h	
Mixer tank working capacity	2 x 170 l	100 l	200 l	500 l	1000 l
Water dosage tank working capacity	2 x 160 l	80 l	160 l	500 l	
Mixer with pumping-off function		•	•	•	
2 pc. mixer tanks for two-way mixer and agitator function by rotation speed adjustment	•				
Electric drive 400 V/ 50 Hz	2 x 4 kW	5.5 kW	7.5 kW	11.0 kW	11.0 kW
<b>Application areas:</b>					
• Mixing	•	•	•	•	•
• Truck mixing/ storing					•
• Grouting		•	•	•	
• Grout anchors	•	•	•	•	
• Filling works			•	•	
• Soil mixing				•	
• Cement-suspensions			•	•	
• Bentonite-suspensions			•	•	•



**MP 500-3**

1) = Charging with bag cement

2) = Cement charging with FS-DK 160-2.6

# Batch mixers

Fully automatic units, mixer performance up to 41.6 m³/h

Type	MP 500-4	MP 1000	MPR 800	MPR 2/800
Performance at 20 cycles/h	10.0 m³/h	20.0 m³/h	16.0 m³/h	32.0 m³/h
Performance at 26 cycles/h	13.0 m³/h	26.0 m³/h	20.8 m³/h	41.6 m³/h
Performance at 30 cycles/h		30.0 m³/h		
Mixer tank working capacity	500 l	1000 l	800 l	2 x 800 l
Water dosage tank working capacity	500 l	1000 l	800 l	2 x 800 l
High-speed mixer drive	•	•	•	•
Counter-rotating double mixer drive			•	•
Electric drive 400 V/ 50 Hz	13 kW	25 kW	17 kW	29 kW
Plus controlled electric connection for charging auger/ silo vibrator	•			
<b>Application areas:</b>				
• Grouting	•			
• Grout anchors	•			
• High-pressure grouting	•	•	•	•
• Slurry-, seal- and narrow walls		•	•	•
• Filling works	•	•	•	•
• Soil mixing	•	•	•	•
• Cement-suspensions	•	•	•	•
• Bentonite-suspensions	•	•	•	•



MP 1000



# Continuous batch mixers

Continuous batch mixing system

## Continuous batch mixers

Continuous batch mixing system

Fully automatic units, mixing performance up to 48 m³/h

No separate storage tank needed

Type

OM 300/2-21

OM 600/2-36

OM 1000/2-48

Performance at 24 double cycles/h			48.0 m³/h
Performance at 32 double cycles/h		36.0 m³/h	
Performance at 35 double cycles/h	21.0 m³/h		
Mixer tank working capacity	2 x 300 l	2 x 600 l	2 x 1000 l
Water dosage tank working capacity	approx. 400 l	approx. 700 l	approx. 1100 l
Electric drive 400 V/ 50 Hz incl. charging augers	30 kW	54 kW	88 kW

### Application areas:

- Grouting
- Jet-grouting
- Slurry-, seal- and narrow walls
- Filling works
- Soil mixing
- Cement-suspensions
- Bentonite-suspensions

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Mixing plant OM 1000/2-48  
with hydraulically driven  
charging augers



# Storage tanks

## Storage tanks

### Working capacity 200 – 1000 l

With integrated agitator

Type	R 200	R 400	R 550	R 850	R 1000
Working capacity	200 l	400 l	500 l	850 l	1000 l
Agitator drive	•	•	•	•	•
Electric drive 400 V/ 50 Hz	1.1 kW	1.1 kW	1.1 kW	1.1 kW	1.1 kW

#### Application areas:

• Grouting	•	•	•	•	•
• Grout anchors	•	•	•	•	•
• Flush drilling	•	•	•	•	•

### Working capacity 1500 – 6000 l

With integrated agitator

Type	R 1500	R 2000	R 3000	R 4500	R 6000
Working capacity	1500 l	2000 l	3000 l	4500 l	6000 l
Agitator drive	•	•	•	•	•
Integrated feed pump optionally					
Electric drive 400 V/ 50 Hz	2.2 kW	2.2 kW	2.2 kW	4.0 kW	4.0 kW

#### Application areas:

• High-pressure grouting	•	•	•	•	•
• Filling works	•	•	•	•	•
• Soil mixing	•	•	•	•	•

### – with truck mixer function

Working capacity 1000 l

For truck mixing/ mixing and storing/ agitating of solid agent suspensions  
 Colloidal mixer tools with circulation function, reversible from „mixing“ to „agitating“

Type	RPN 1000
Working capacity	1000 l
Electric drive 400 V/ 50 Hz	7.5 kW
Mixer performance:	
Manual charging up to	4.0 m³/h at 20 cycles
Charging with charging auger	5.2 m³/h at 26 cycles

# Mixing plants

incl. storage tanks

## Batch mixing plants

**Semi-automatic units up to 13 m³/h**

Consisting of mixer, water dosage tank (option) and storage tank with agitator

Type

OM 100

OM 200

OM 500-3

Performance at 20 cycles/h <sup>1)</sup>	2.0 m³/h	4.0 m³/h	10.0 m³/h
Performance at 26 cycles/h <sup>2)</sup>	2.6 m³/h	5.2 m³/h	13.0 m³/h
Mixer tank working capacity	100 l	200 l	500 l
Water dosage tank working capacity	100 l	200 l	500 l
Storage tank working capacity approx.	200 l	400 l	1000 l
Electric drive 400 V/ 50 Hz	6.7 kW	8.7 kW	12.4 kW

### Application areas:

- Grouting
- Grout anchors
- Filling works
- Cement-suspensions
- Bentonite-suspensions

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OM 100



OM 200

1) = Charging with bag cement

2) = Cement charging with FS-DK 160-2.6

# Batch mixing plants

**Fully automatic units, mixing performance up to 26 m³/h**

Consisting of mixer, water dosage tank and storage tank with agitator

Type	OM 200-W	OM 500-5	OMP 800	OMP 1000
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Performance at 20 cycles/h	4.0 m³/h	10.0 m³/h	16.0 m³/h	20.0 m³/h
Performance at 26 cycles/h	5.2 m³/h	13.0 m³/h	20.8 m³/h	26.0 m³/h
Performance at 36 cycles/h	7.2 m³/h	18.0 m³/h	28.8 m³/h	36.0 m³/h

Mixer tank working capacity	200 l	500 l	800 l	1000 l
Water dosage tank working capacity	180 l	400 l	800 l	1000 l
Storage tank working capacity	500 l	1500/ 2000 l	1600 l	2000 l

Feed pump		Option	Standard	Option
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Electric drive 400 V/ 50 Hz	13.0 kW	19.0 kW	29.0 kW	32.6 kW
Plus controlled electric connection for charging augers/ silo vibrator				

## Application areas:

• Grouting	•	•		
• Grout anchors	•	•		
• Jet-grouting			•	•
• Filling works		•	•	•
• Soil mixing		•	•	•
• Cement-suspensions	•	•	•	•
• Bentonite-suspensions	•	•	•	•



**OMP 1000**



**OM 500-5**

# Batch mixing plants

Mixing performance up to 5.2 m³/h

– especially suitable for micro cement

Consisting of mixer, water dosage tank (option) and storage tank with truck mixer and recirculation function

Type	OMN 100	OMN 200
Performance at 12 cycles/h <sup>1)</sup>	1.2 m³/h	2.4 m³/h
Performance at 20 cycles/h <sup>1)</sup>	2.0 m³/h	4.0 m³/h
Performance at 26 cycles/h <sup>2)</sup>	2.6 m³/h	5.2 m³/h
Mixer tank working capacity	100 l	200 l
Water dosage tank working capacity	100 l	200 l
Truck mixing and storage tank working capacity	200 l	300 l
Inlet flow connection	•	•
Return flow connection	•	•
Outlet connection at suspension distributor	4 pc.	4-6 pc.
Electric drive 400 V/ 50 Hz	11.2 kW	15.2 kW
<b>Application areas:</b>		
• Grouting with micro cement	•	•
• Grout anchors	•	•
• Cement-suspensions	•	•
• Bentonite-suspensions	•	•



OMN 100



OMN 200

1) = Charging with bag cement

2) = Cement charging with FS-DK 160-2.6

# Silicate mixing plants

## Grouting with silicate hardener mixtures

Grouting material: water, liquid silicate, liquid hardener, emulsifier

Type	FL-DMR 3	FL-DMR 4
<b>Tank as storage tank, for:</b>		
- Water	•	•
- Liquid silicate	•	•
- Liquid hardener	•	•
- Emulsifier		•
<b>Dosage pump – adjustable, for:</b>		
- Water	•	•
- Liquid silicate	•	•
- Liquid hardener	•	•
- Emulsifier		•
<b>Flow sensor, for:</b>		
- Water	•	•
- Liquid silicate	•	•
- Liquid hardener	•	•
- Emulsifier		•



FL-DMR 3/60 integrated in container housing



Soil grouting with silicate hardener mixture



# Grouting containers

## Grouting containers

Type	IC C ...	IC ....
Grout pump	acc. to application	acc. to application
Data recording	LOG-System	LOG-System
Grouting point identification	possible	possible
Internet-communication	possible	possible
Max. number of pumps and -type	6 x DP 36/ DP 50	22 x SIP 14x15 22 x SIP 20x40 8 x DP 36/ DP 50 8 x DP 63 4 x DP 70 H/ DP 101
Integrated power-pack, with bulkhead	•	•
Integrated operator room, with bulkhead		possible
Integrated air-condition		possible
Integrated storage tank		possible
Integrated silicate mixing plant		possible
Thermal insulated housing	•	•
Container edges (8 pc.)		20' x 8' x 8'6"h
Container dimensions approx.	4000 x 2000 x 2450 h	6090 x 2440 x 2590 h 7600 x 2440 x 2950 h
Weight – depending on equipment	4-5 to	7-10 to
<b>Application areas:</b>		
General grouting works	•	•

Grout pumps for integration into the container					
SIP-pumps			Plunger pumps		
Pump type	Qmax	Pmax	Pump type	Qmax	Pmax
SIP 14x15	14 l/min	15 bar	DP 36	13/ 18 l/min	100/ 150 bar
SIP 20x40	20 l/min	40 bar	DP 50	34 l/min	100 bar
			DP 63	53/ 63/ 78 l/min	64/ 100/ 150 bar
			DP 70 H	85/ 110 l/min	200 bar
			DP 101	170/ 220 l/min	100 bar

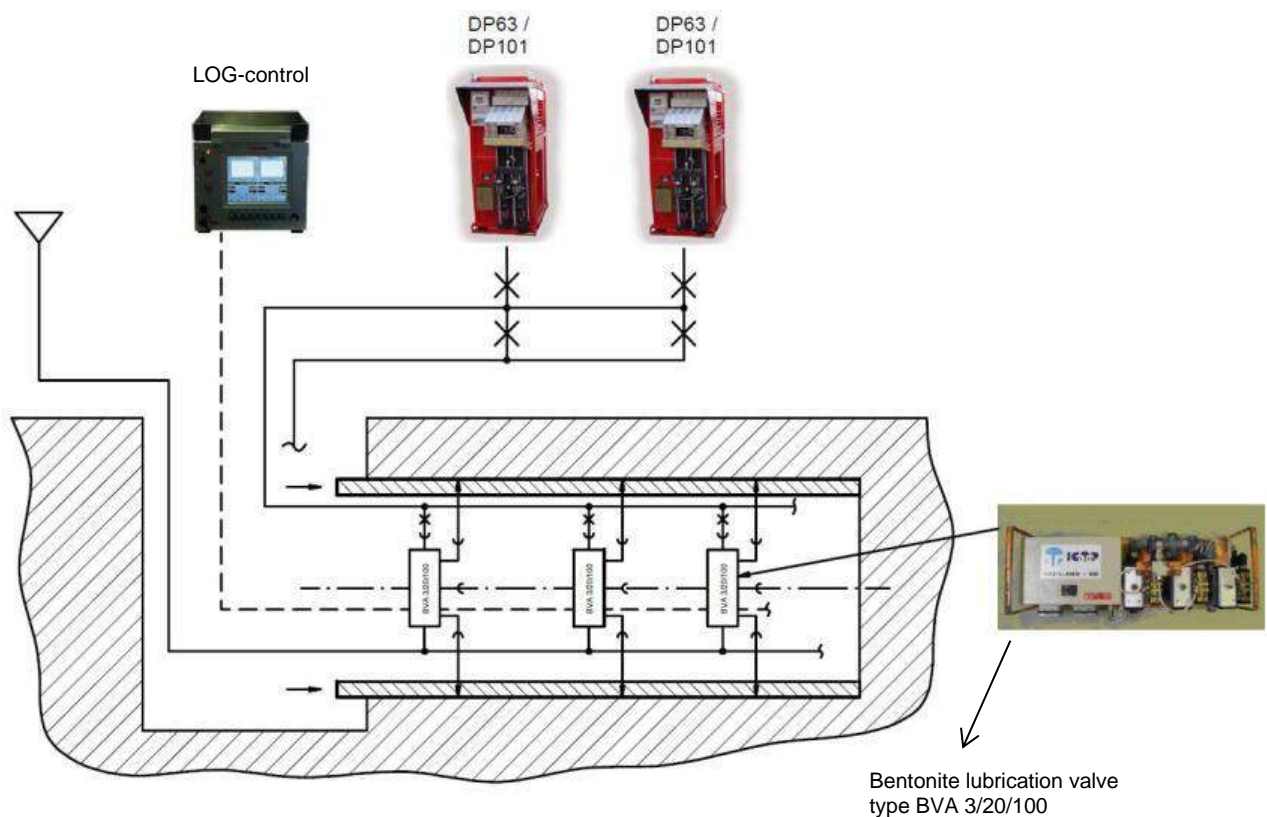


**Compact-grouting container  
type IC C 6-50-G**

# Mixing- and grouting containers



**Mixing- and grouting container type MIC**  
**Application: Bentonite lubrication for pipe jacking**



**System sketch bentonite lubrication for pipe jacking**

# Mixing and grouting containers

Type	MC ...	MIC ...
Mixing system	integrated	integrated
Grout pumps		acc. to application
Mixing plant control type Mix-Control 4	standard	standard
Data recording	LOG-System	LOG-System
Grouting points-identification	possible	possible
Internet-communication	possible	possible
Cement silo or big-bag is necessary	●	●
Charging auger is necessary	FS 160/ FS 220	FS 160/ FS 220
Integrated colloidal mixer	MP 200/ MP 500	MP 200/ MP 500
Integrated suspension storage tank	V = 400 – 1500 l	V = 400 – 1500 l
Integrated delivery pump, for pumping-off from the integrated storage tank to a separate storage tank	possible	
Integrated grout pump		●
Max. number and type		6 x DP 36/ DP 50 6 x DP 63 4 x DP 70 H/ DP 101
Integrated power-pack, with bulkhead		possible
Integrated operator room, with bulkhead	possible	possible
Integrated air-condition	possible	possible
Thermal insulated housing	●	●
Container edges (8 pc.)	20' x 8' x 8'6" h	20' x 8' x 8'6" h
Container dimensions	6090 x 2440 x 2590 h 7600 x 2440 x 2590 h	6090 x 2440 x 2590 h 7600 x 2440 x 2590 h
Weight – depending on equipment	5-8 to	5-10 to
<b>Application areas:</b>		
General grouting works	●	●
Bentonite lubrication for pipe jacking	●	●

Grout pumps for integration into the container		
Plunger pumps		
Pump type	Q <sub>max</sub>	P <sub>max</sub>
DP 36	13/ 18 l/min	100/ 150 bar
DP 50	34 l/min	100 bar
DP 63	53/ 63/ 78 l/min	64/ 100/ 150 bar
DP 70 H	85/ 110 l/min	200 bar
DP 101	170/ 220 l/min	100 bar

## Multi-grouting units



**MGU-M as platform**



**MGU-M installed on truck**

# Multi-grouting units

## Type

## MGU-M...

## MGU -...

Mixing system	integrated	separate
Grout pumps	acc. to application	acc. to application
Mixing plant control type Mix-Control 4	standard	standard
Data recording	LOG-System	LOG-System
Grouting points-identification	possible	possible
Internet-communication	possible	possible
Colloidal mixer, with charging auger and cement silo	integrated	separate
Cement silo	2 x 2,5 m³	variable
Charging auger	2 x FS 160	FS 160/ FS 220/ FS 270
Colloidal mixer	MP 200/ MP 500	MP 200/ MP 500 MP 1000/ MPR 800
Suspension storage tank – positioned at the mixer	V = 400 – 1000 l – max. 2 Stck.	V = 400 – 2000 l
Pump for delivery of the cement suspension – up to max. 5000 m		DP 101/ DP 115/ HD 110/ HD 130
Additional suspension storage tank, positioned at the grout pumps		V = 400 – 1500 l
Max. number of pumps and -type	6 x KP 90 4 x KP 121 8 x DP 36/ DP 50 8 x DP 63 4 x DP 70 H/ DP 101	6 x KP 90 4 x KP 121 8 x DP 36/ DP 50 8 x DP 63 4 x DP 70 H/ DP 101
Dimensions/ weights	depending on equipment	depending on equipment

### Application areas:

Grouting at tunnel driving work

Grout pumps as integration type					
Piston pumps			Plunger pumps		
Pump type	Qmax	Pmax	Pump type	Qmax	Pmax
KP 90	100 l/min	90 bar	DP 36	13/ 18 l/min	100/ 150 bar
KP 121	175 l/min	100 bar	DP 50	34 l/min	100 bar
			DP 63	53/ 63/ 78 l/min	64/ 100/ 150 bar
			DP 70 H	85/ 110 l/min	200 bar
			DP 101	170/ 220 l/min	100 bar

### Liquid additive pumps as integration types

Plunger pumps		
Pump type	Qmax	Pmax
LP 25-PAZ	6 l/min	130 bar
DP 36	13 l/min	100 bar
LP 36	13 l/min	130 bar



# Grouting units

## Grouting units

**Delivery rate up to 41 l/min and 60 bar**

**– mixer plus storage tank**

Electric drive

Type	VS S 29-E	VS S 30-E	VS S 41-E
Electric drive 400 V/ 50 Hz	7.7 kW	11 kW	11 kW
Mixer working capacity	100 l	130 l	130 l
Water dosage tank working capacity		100 l	100 l
Storage tank working capacity	120 l	260 l	260 l
Agitator tools in storage tank:			
- Rotation speed same as pump rotation speed			•
- Rotation speed is independent of the pump rotation speed		•	
Grout pump:			
Max. delivery volume	30 l/min	30 l/min	41 l/min
Max. delivery pressure	15 bar	15 bar	60 bar
Rotating displacement pump	•	•	•
<b>Application areas:</b>			
• Filling with cement suspension	•	•	•
• Filling of prestressing steel channels	•	•	•
• Filling and grouting of geothermal drillings			•



**VS S 30**

# Grouting units

**Delivery rate up to 34 l/min and 60 bar**  
**– 2 pc. combined mixer-/ storage tanks**

Electric motor and gas engine

Type

VS L 50

VS L 50-D

Electric drive 400 V/ 50 Hz	7.5 kW	
Gas engine		7.6 kW
Mixer/ storage tank working capacity	2 x 75 l	2 x 75 l
Grout pump:		
Max. delivery volume	34 l/min	34 l/min
Max. delivery pressure	60 bar	60 bar
2-plunger pump	●	●

## Application areas

- Grouting/ filling with:
- Cement suspension
- Soil nails and anchors

●

●



VS L 50

# Grouting units

**Delivery rate up to 34 l/min and 100 bar**  
**– 1 pc. combined mixer and storage tank**

Electric motor

**Type**

**VS 50-10.../E**

**VS 63-10.../E**

Electric drive 400 V/ 50 Hz

11 kW

11 kW

Mixer/ storage tank working capacity

170 l

170 l

Water dosage tank working capacity

160 l

160 l

Grout pump:

Max. delivery volume

34 l/min

34 l/min

Max. delivery pressure

100 bar

80 bar

2-plunger pump

Automatic suction and pressure valves

**VS 50-10 F/E**

**VS 63-10 F/E**

Suction and pressure valves as well as  
circulation/ pressure release valves hydraulically  
operated

**VS 50-10 G/E**

**VS 63-10 G/E**

## Application areas:

Grouting/ filling with:

- Cement suspensions
- Anchor and small bored piles



**VS 50-10 F/E**

# Grouting units

**Delivery rate up to 100 l/min and 100 bar**  
**– 2 pc. combined mixer and storage tanks**

Electric motor and diesel motor

Type	VS-50-20.../E	VS-63-20.../E	VS-63-20/D
Electric drive 400 V/ 50 Hz	11 kW	11 kW	
Diesel motor			18 kW
Mixer/ storage tank working capacity	2 x 170 l	2 x 170 l	2 x 170 l
Water dosage tank working capacity	2 x 160 l	2 x 160 l	2 x 160 l
Grout pump:			
Max. delivery volume	34 l/min	54 l/min	75 l/min
Max. delivery pressure	100 bar	80 bar	100 bar
2-plunger pump	•	•	•
Piston pump double acting			
Automatic suction and pressure valves	VS 50-20 F/E	VS 63-20 F/G	•
Suction and pressure valves as well as circulation/ pressure release valves hydraulically operated	VS 50-20 G/E	VS 63-20 G/E	

## Application areas:

• Soil nails and self-drilling anchors	•	•	•
• Flushing-/ small bored piles	•	•	•



**VS 63-20-F/E**

# Grouting units

**Delivery rate up to 220 l/min and 100 bar**

Electric- and diesel drive

Type

VS 110-E

VS 110-D

VS 110-D/FS

VS 121-E

Electric drive 400 V/ 50 Hz	23.6/ 30.6 kW			23.6 kW
Diesel motor		24.0 kW	29.0 kW	
Mixer working capacity	200 l	200 l	200 l	200 l
Water dosage tank working capacity	180 l	180 l	180 l	180 l
Storage tank working capacity	400 l	500 l	500 l	400 l

Grout pump:				
Max. delivery volume	170 l/min/ 220 l/min	170 l/min/ 220 l/min	170 l/min/ 220 l/min	175 l/min
Max. delivery pressure	100 bar	100 bar	100 bar	100 bar
2-plunger pump	•	•	•	
Piston pump, double acting				•
Integrated hydraulic drive for separate			•	
Cement charging auger				

## Application areas:

- Filling with cement suspension
- Using as flushing pump at drilling works
- Especially suitable for grout anchor works

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**VS 110**



# Grouting units

– fully automatic units

Delivery rate up to 320 l/min and 140 bar

Electric drive

Type	AVS 63-E/W	AVS 110-E/W	AVS 111-E/W	AVS 550-E/W
For fully automatic operation a cement charging auger is necessary	•	•	•	•
Controlled electric connection for cement charging auger	•	•	•	•
Mixer working capacity	120 l	200 l	200 l	500 l
Mixing performance	4.0 m³/h	5.7-8 m³/h	5.8-8 m³/h	18 m³/h
Mixing plant control type Mix-Control 4	•	•	•	•
Data recording – LOG-System	possible	possible	possible	possible
Grouting points-identification	possible	possible	possible	possible
Internet-communication	possible	possible	possible	possible
Water dosage tank working capacity	500 l	180 l	180 l	400 l
Storage tank working capacity	170 l	500 l	500 l	1500 l
- Max. delivery volume	63 l/min	170 l/min	250 l/min	320 l/min
- Max. delivery pressure	80 bar	100 bar	100 bar	140 bar
- 2-plunger pump	•	•	•	•
Electric drive 400 V/ 50 Hz	18.1 kW	24.0 kW	32.0 kW	55.0 kW
Drive performance plus:				
- controlled charging auger	max. 4.0 kW	max. 4.0 kW	max. 7.5 kW	max. 7.5 kW
- controlled silo vibrator	max. 1.0 kW	max. 0.5 kW	max. 0.5 kW	max. 0.5 kW
Recommended charging auger	FS 160	FS 160	FS 160/ FS 220	FS 220

## Application areas:

• Filling with cement suspension	•	•	•	•
• Using as flushing pump at drilling works	•	•	•	•
• Especially suitable for grout anchor works		•	•	•
• Especially suitable for soil mixing works			•	•
• Especially suitable for flush-grouting of small bore piles	•			
• Especially suitable for ram/ vibrated grout piles				•



AVS 63

# Grouting units

– fully automatic units

**Delivery rate up to 320 l/min and 140 bar**

Diesel drive

Type

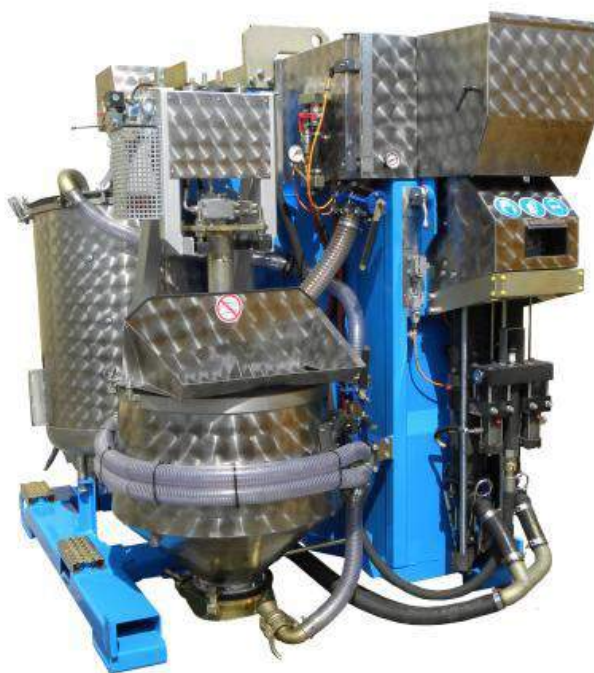
AVS 110-D/W

AVS 550-D/W

For fully automatic operation a cement charging auger is necessary	•	•
Integrated hydraulic drive for cement charging auger	•	•
Mixer working capacity	200 l	500 l
Mixer performance	5.7-8 m³/h	18 m³/h
Mixing plant control type Mix-Control 4	•	•
Data recording – LOG-System	possible	possible
Grouting points-identification	possible	possible
Internet-communication	possible	possible
Water dosage tank working capacity	180 l	400 l
Storage tank working capacity	500 l	1500 l
Grout pump:		
- Max. delivery volume	170 l/min/ 220 l/min	320 l/min
- Max. delivery pressure	100 bar	140 bar
- 2-plunger pump	•	•
Diesel drive	29.0 kW	54.0 kW
Recommended charging auger	FS 160H	FS 220H

## Application areas:

• Filling with cement suspension	•	•
• Using as flushing pumps at drilling works	•	•
• Especially suitable for grout anchor works	•	•
• Especially suitable for soil mixing works		•
• Especially suitable for ram/ vibrated grout piles		•



AVS 110

# Silo-Plants



**OBERMANN-plant for production of flushing suspension  
for a 120 m deep slurry wall**

**SILO-PLANTS**  
**- as vertical or horizontal type-**  
**design acc. to customer's request/ technical clarification**

# Charging augers/ Proportioning augers

## Charging augers/ Proportioning augers

Electric drive and hydraulic drive

Type	FS 160 ...	FS 220 ...	FS 270 ...	FS- DKB 160
Delivery volume: - At cement-bulk density 1.2	16 t/h	32 t/h	64 t/h	16 t/h
Charging auger	•	•	•	•
Proportioning auger				•
Compensation tank, content:				
Storage and compensation tank, content:				approx. 250 l
Electric drive 400 V/ 50 Hz	4.0 kW	7.5 kW	11.0 kW	4.0 kW
Hydraulic drive by external hydraulic system	FS 160-H	FS 220-H	FS 270-H	FS-DKB 160-H
Length of charging augers	as required	as required	as required	standard = 2.6 m



**FS-DKB 160**

# Measuring-, registration- and control systems

## Registration- and control systems

For grouting and filling works

Type	Print-SG	LOG-SG1-S3	LOG-SG2-S3	PC-LOG-SG ..
Field unit:	•	•	•	Industry-PC as built-in unit
Measuring value:				
1 x pressure	•	•		max. 22 x pressure
1 x volume	•	•		max. 22 x volume
2 x pressure			•	
2 x volume:			•	
Sensors –				
Separate, for selection	•	•	•	•
Sensors –				
Integrated in unit		•	•	
Measuring value:				
- Indication	•	•	•	•
- Registration	•	•	•	•
Thermal paper	•			
USB		•	•	•
Pump operation:				
- for one pump	•	•		max. 22 pumps
- for two pumps			•	max. 22 pumps
Pump switching off:				
- automatical	•	•	•	•
Pump control:				
- automatical		•	•	•
Grout points-identification		possible	possible	possible
Internet-Communication		possible	possible	possible
Evaluation software for data manipulation		•	•	•



Print - SG



LOG – SG2-SG3

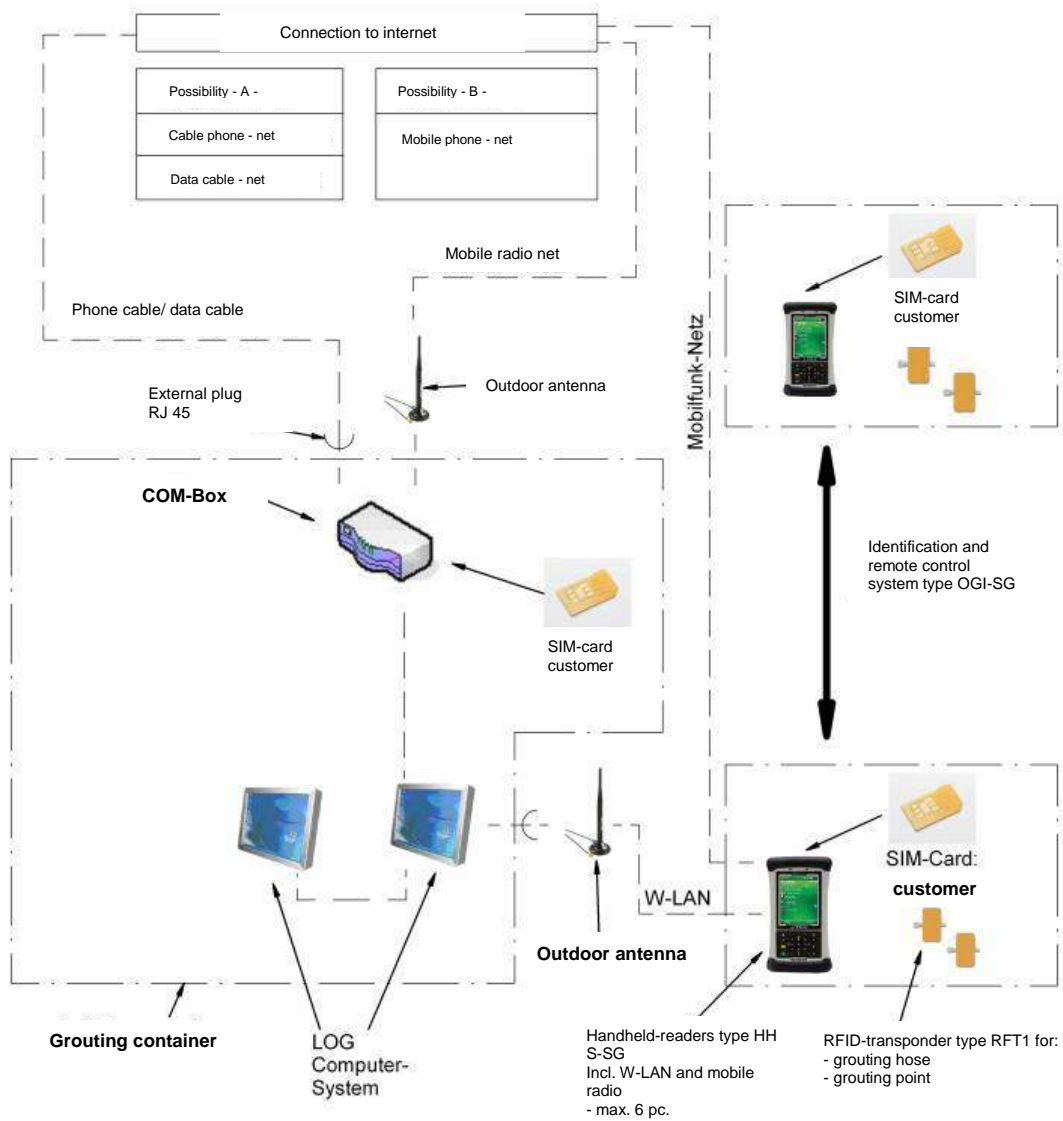


PC-LOG-SG6



# LOG-System

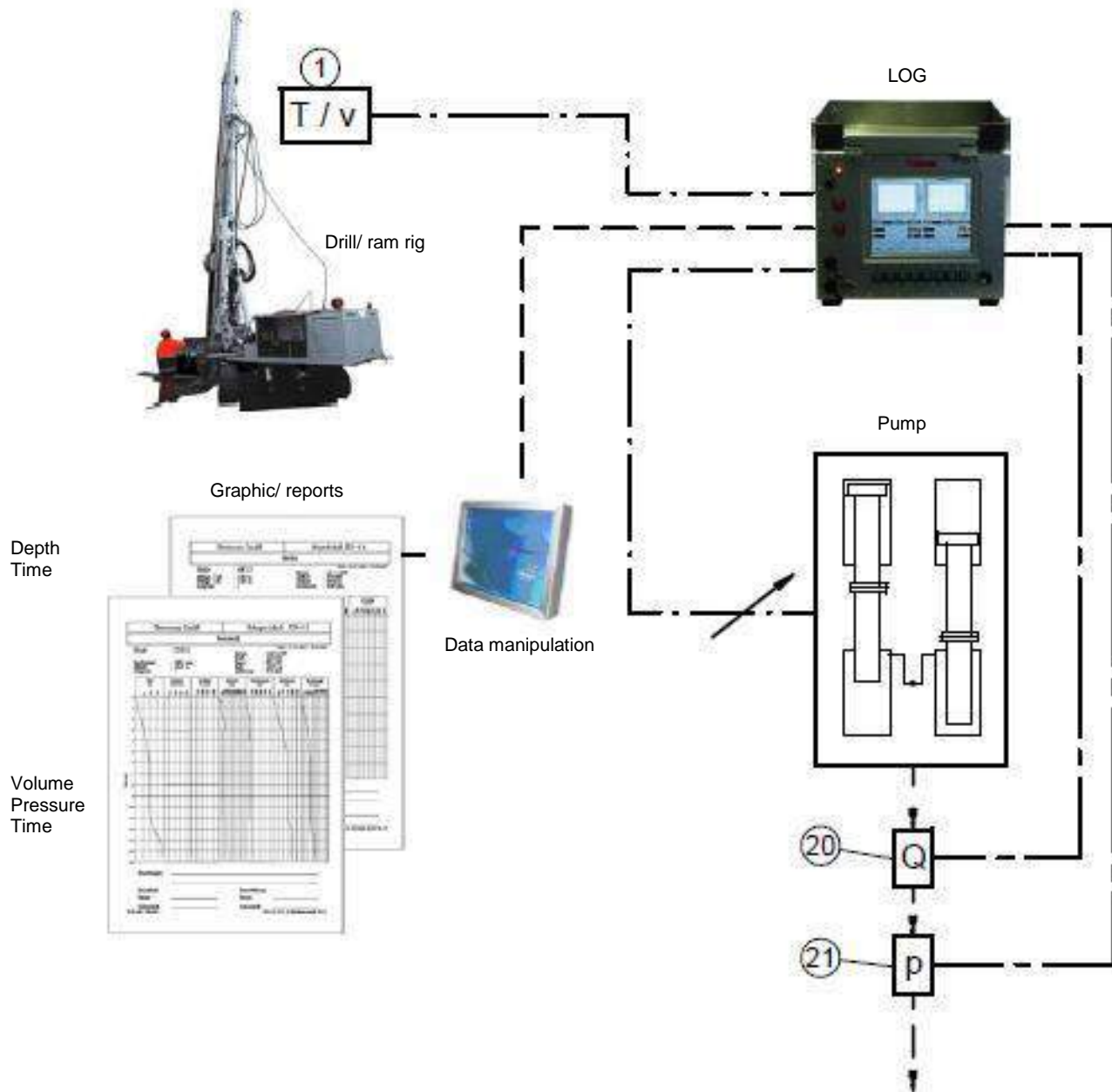
Identification- and remote control system for grouting



# LOG-System

Automatic control of the pump speed  
Depending on the command variable: forward speed

- Different values can be set as well for feed as for retreat



- ① = Depth- and feed sensor
- ②① = Flow sensor
- ②① = Pressure sensor

# Sensors for pressure, flow and density

- For the connection to OBERMANN-LOG- or Print-units

Type	MIP ...	MAP ...	MAQ ...	MAQ-..K
For suspensions	•	•	•	•
For synthetic resins	•			•
For electrically non-conductive liquids	•	possible		possible
Pressure sensor – without indication	•			
Pressure sensor – with indication		•		
Flow sensor – with indication			•	•
Flow and density sensor – with inclination				
For one component	•	•	•	MAQ-1 K

For two components				MAQ-2 K
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Type	MAPQ	MAPQ-..K	MAPD
For suspensions	•		•
For synthetic resins		•	possible
For electrically non-conductive liquids		possible	•
Integrated pressure sensor – with indication	•	•	•
Integrated flow sensor – with indication	•	•	
Integrated flow and density sensor – with indication			•
For one component	•	MAPQ-1 K	•

For two components		MAPQ-2 K	
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MAP 4-14



MAPQ

# Measuring and registration systems

## Measuring- and registration systems

for jet-grouting-production

• incl. sensors

Type	LOG-JG1	LOG-JG2	LOG-JG3
Unit type:			
Additional operator panel display			
Measuring, indicating and registration:			
• Jet pressure	•	•	•
• Air pressure		•	•
• Filling pressure			•
• Jet volume	•	•	•
- Measurement value transfer to LOG-System:			
cable/ option data radio:			
• Air volume		Option	Option
• Filling volume			•
• Jet depth	•	•	•
• Feed-/ retreat speed	•	•	•
• Drill head rotation speed	•	•	•
• Feed and retraction force	Option	Option	Option
• Drill head torque	Option	Option	Option
• Drilling/ direction position	Option	Option	Option
• Jet points-identification	possible	possible	possible
• Internet-communication	possible	possible	possible
• Evaluation-software for data manipulation	•	•	•
Corresponding sensors are necessary for each measuring value			
Application areas:			
Jet-grouting Simplex	•		
Jet-grouting Duplex		•	
Jet-grouting Triplex			•

### Sensor types – for fitting/ adaption to the drill rig:

Measuring value	Sensor-type
Jet pressure	MIP .../ MAP ...
Jet volume	MAQ ...
Air pressure	MIP ...
Air volume	MIQ-SC ...
Filling pressure	MIP.../ MAP ...
Filling volume	MAQ ...
Jet-/ depth incl. feed-/ retreat force	MIL-...
Drill head rotation speed	MIN ...
Feed/ retreat force	2 x MIP ...
Drill head torque	2 x MIP ...

### Sensor for drilling-/ direction position:

Sensor – without sensor drum	IM 500 ...
Sensor – with sensor drum	IMT 500 ...
Measurement value transfer to LOG-System	Cable/ option data radio



LOG-JG

# Measuring- and registration system

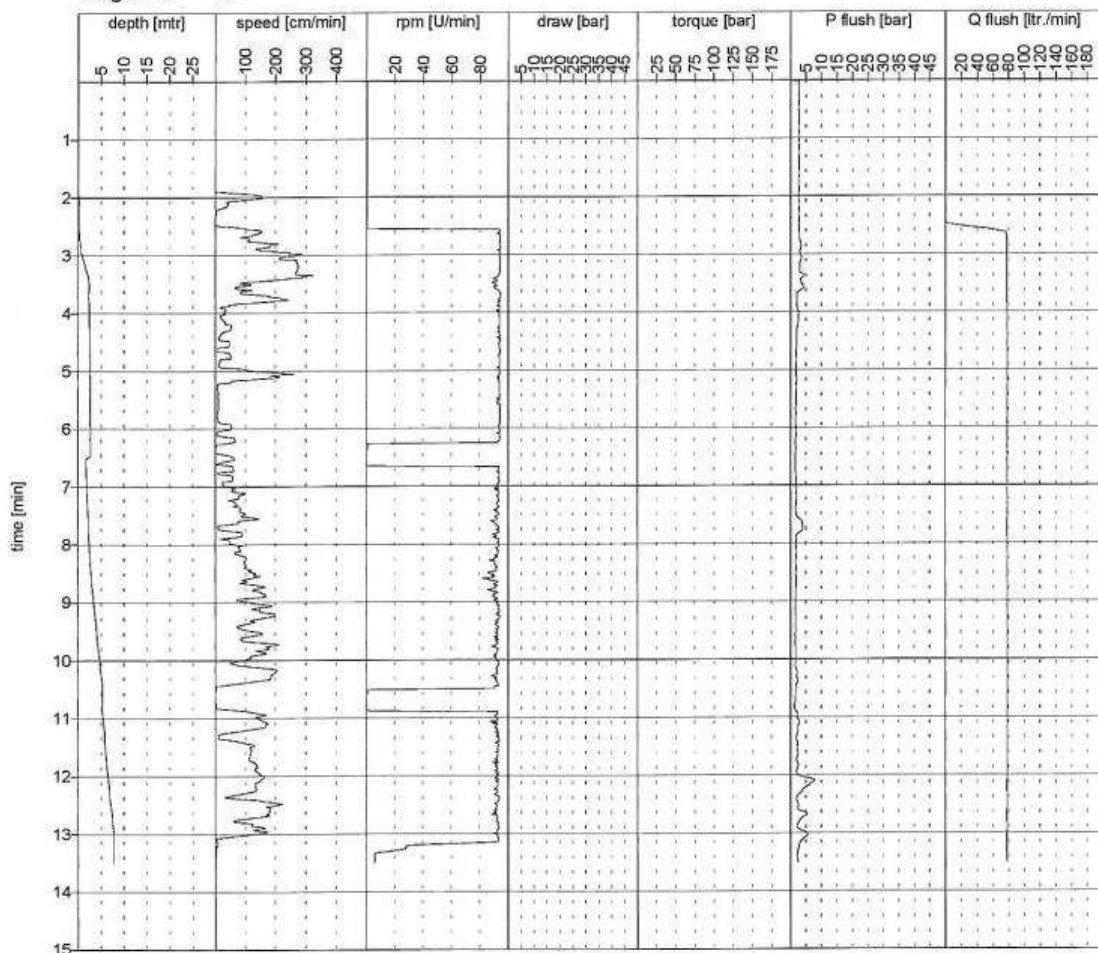
Jet-Report JG3

Report  
Site  
Foremen  
Shift

**OBERMANN**  
systems

start 27.04.2005 11:56:09  
end 27.04.2005 12:09:40  
duration 00:13:31  
angle - X 0°  
angle - Y 0°

fluh volume 857,71 ltr.  
diameter 150,00 mm  
depth (req.) 14,50 mtr.  
depth (tot.) 7,86 mtr.



notes :

Contractor

Orderer

Control

date

date

date

signature

signature

signature

19.10.2005 / 15:16:53

1 / 1

v 2.01 © Obermann KG



# Measuring- and registration systems

for general drilling works/ filling of geothermal drillings

• incl. sensors

Type

LOG-DD

Unit type:	Field unit/ attachment
Integrated display	•
Additional operator panel display	Option
Measuring and indicating	•
Registration:	•
- Drilling depth	•
- Feed-/ retreat speed	•
- Feed-/ retreat force	Option
- Drilling rotation speed – drilling drive no. 1	•
- Drilling torque – drilling drive no. 1	Option
- Drilling rotation speed – drilling drive no. 2	Option
- Drilling torque – drilling drive no. 2	Option
- Flushing pressure no. 1/ suspension pressure	Option
- Flushing volume no. 1/ suspension volume	Option
- Flushing pressure no. 2	Option
- Flushing volume no. 2	Option
- Drilling-no. (manual input)	•

## Application areas:

General drilling works, exploration drilling

## Sensor-types – for fitting/ adaption to the drill rig:

Measuring value	Measuring value
- Drilling depth, incl.	MIL-...
- Feed-/ retreat speed	MIN ...
- Drill head rotation speed	2 x MIP ...
- Feed-/ retreat force	2 x MIP ...
- Drill head torque	MIP
- Flushing pressure	MAQ ...
- Flushing volume – liquids	MIQ-SL ...
- Flushing volume – compressed air	MIL-...



LOG-DD on exploration drill rig

# Drilling measuring system

- for drilling
- for sleeve pipes
- For connection to OBERMANN-LOG-units

Type	IMT 500/30	IMT 500/60 E	IMT 500/100 E
Max. drilling depth/ -length	30 m	60 m	100 m
Distance of the measuring points	0.5 m	0.5 m	0.5 m
Bulkhead drive:			
- Manual drive	•		
- Electric drive 400 V/ 50 Hz	Option	0.75 kW	0.75 kW
- Pneumatic drive	Option	Option	Option
Measuring value transfer to LOG-System	Cable/ option data radio	Cable/ option data radio	Cable/ option data radio



IMT 500/100

# Hose reel with depth measuring

- for grouting with packers
- with integrated depth measuring
- For the connection to OBERMANN-LOG-units

Type	HR 16/60 E	HR 16/144 E
Suspension hose:	Option	Option
- Nominal width = 16 mm		
- Pmax. = 100 bar		
Technical clarification is necessary		
Compressed air hose:	Option	Option
- Nominal width = 6 mm		
- Pmax. = 100 bar		
Technical clarification is necessary		
Hose and steel rope reel – hose length	max. 60 m	max. 144 m
- Rope diameter 8 mm – rope length	max. 60 m	max. 144 m
- Max. force of the reel	900 kg	900 kg
- Max. speed – up/ down	0.6/ 1.0 m/sec.	0.6/ 1.0 m/sec.
Electric drive 400 V/ 50 Hz	7.5 kW	11.0 kW
Integrated depth measuring	Option	Option
Integrated pressure and flow measuring	Option	Option
Measuring value transfer to LOG-System (option)	Cable/ data radio	Cable/ data radio



HR 16/144 E

# Drill rigs

## Vertical drill rigs

Especially suitable: Jet-grouting

### Type

### CR 14 ...

Diesel drive for all functions		125 kW		
Electric drive 400 V/ 50 Hz for jet-function (option)		15 kW		
Drill mast type BMS25/6 – feed-/ retreat force		63/120 kN		
Drill mast-cylinder feed – effective length		6 m		
Drill mast longitudinal displacement		1 m		
Max. total depth <sup>1)</sup> – without drill mast extension:		6-7m		
● Slidable drill mast extension:				
- Type S7S – effective length = 7 m, max. total depth <sup>1)</sup>		13 – 14 m		
- Type S8S – effective length = 8 m, max. total depth <sup>1)</sup>		14 – 15 m		
- Type S9S – effective length = 9 m, max. total depth <sup>1)</sup>		15 – 16 m		
Drill mast longitudinal inclination: - 5° up to + 90° (transport)		●		
Rotary head with hollow chucks type DDB 114/75		●		
Max. rod diameter = 114 mm		●		
Machine support at front and rear side		●		
Upper carriage not slewable	machine type	CR 14 A		
Undercarriage/ chain chassis: fixed		B = 2,5 m		
Range adjustment				
Drill mast crosswise tilt – acc. to machine-/ rod type		max. ...		
● Drill mast extension – foldable – type X6 activated:		●		
- with extension type S7S = max. total depth <sup>1)</sup>		19 – 20 m		
- with extension type S8S = max. total depth <sup>1)</sup>		20 – 21 m		
- with extension type S9S = max. total depth <sup>1)</sup>		21 – 22 m		
Upper carriage 360° slewable	machine type	CR 14 A/R	CR 14 B/R	CR 14 L/R
Undercarriage/ chain chassis:		B = 2,5 m	B = 2,4 – 3,4 m	B = 2,4 – 3,4 m
		fixed	telescopic	telescopic
Range adjustment				0,6 m
Drill mast crosswise tilt – acc. to machine-/ rod type		max. ...	max. ...	max. ...
● Drill mast extension, foldable – type X6 – not possible			●	●
- with extension type S7S = max. total depth <sup>1)</sup>		13 – 14 m	19 – 20 m	19 – 20 m
- with extension type S8S = max. total depth <sup>1)</sup>		14 – 15 m	20 – 21 m	20 – 21 m
- with extension type S9S = max. total depth <sup>1)</sup>		15 – 16 m	21 – 22 m	21 – 22 m

### Typ

### CR 30 - RC ...

### CR 30 - TRC

Weight category	30 t	35 t
Swivel head 360°	•	•
Chain chassis:		
- telescopic		•
Width - exterior	3000 mm	3000 - 4000 mm
Motor capacity: diesel	125 kW / 188 kW <sup>1)</sup>	125 kW / 188 kW <sup>1)</sup>
Motor capacity: electric motor	15 kW / 30 kW <sup>1)</sup>	15 kW / 30 kW <sup>1)</sup>
• Drill mast:		
- pressure/retreat	200 / 200 kN	200 / 200 kN

1) = attainable maximum total depth in „Single Pass“, i.e. without rod dismantling for the total drilling/ jetting process





**CR 14**



**CR 30**



# Drilling tools

## Jet-grouting

Rotary - Simplex  
Ø 51 – 88.9 mm

Rotary - Duplex  
Ø 76.1 – 133.1 mm

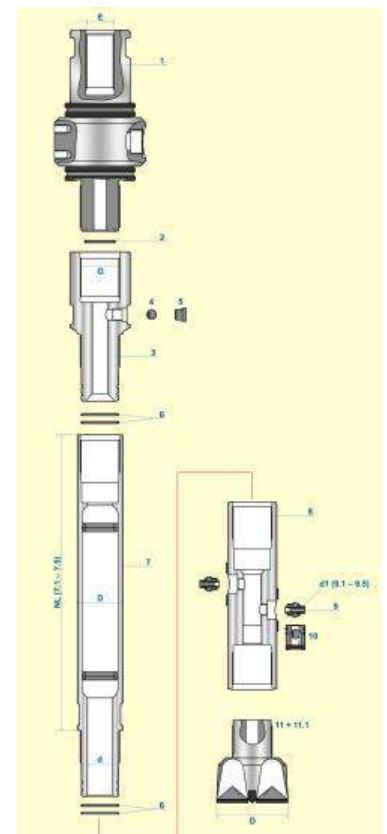
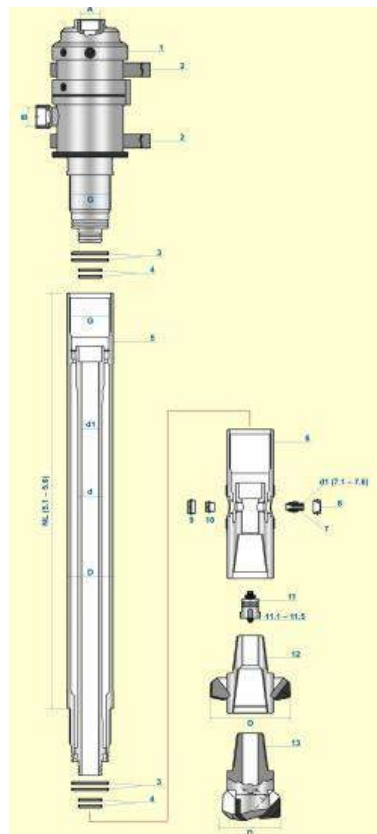
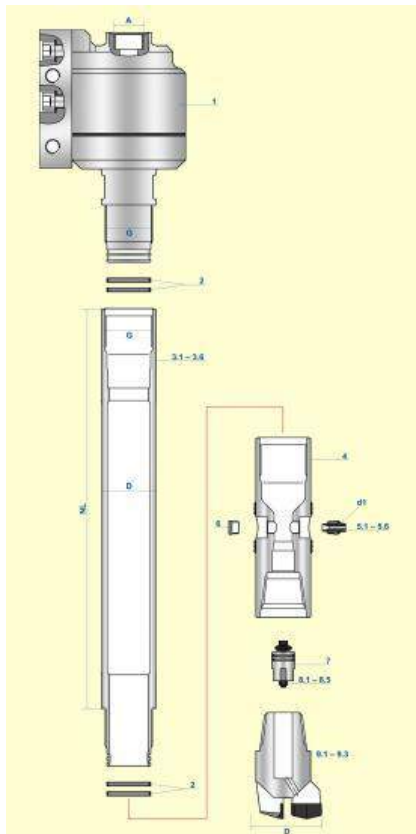
Percussion- Simplex  
Ø 88.9 mm

Rotary - Triplex  
Ø 114.3 – 133.1 mm

Rotary drill head with hollow chucks  
Rotary drill head (only for short drillings)

Rotary drill head with hollow chucks

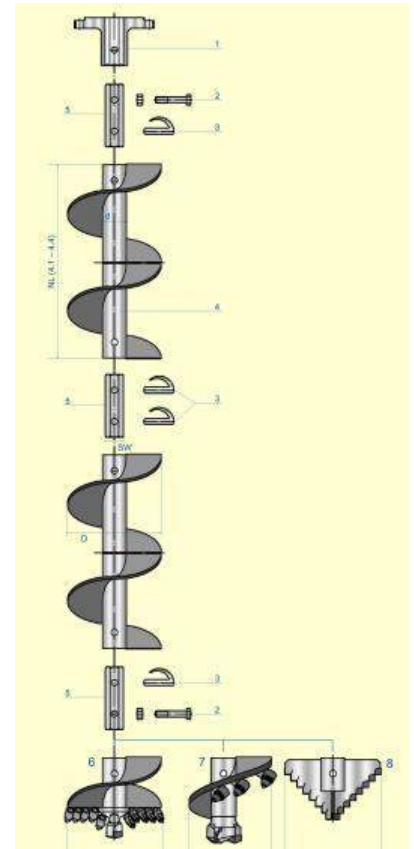
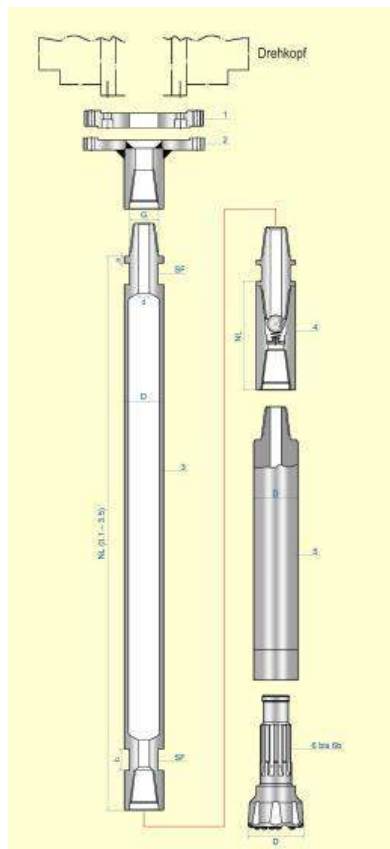
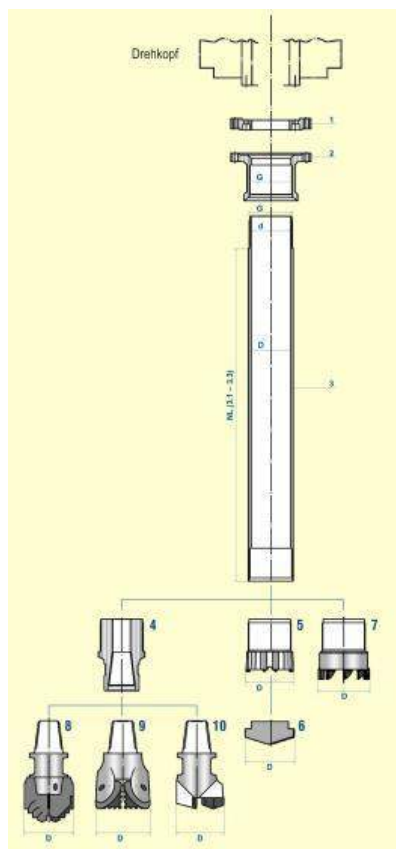
Hydraulic drifter



# Drilling tools

## General drillings

Drilling method	Rotary Rotary drill head	Percussion Rotary drill head Down the hole hammer	Rotary/ drilling auger Rotary drill head
Typical Ø:			
- Rod	88.9 – 152.4 mm	76.1 – 114.3 mm	
- Drilling auger			115 – 200 mm



# Drilling rotary heads

Type	DD.../ 7,5	DD.../ 13	DD.../ 24	DD.../ 36	DD.../ V60
Max. torque:	7,5 kNm	13 kNm	24 kNm	36 kNm	58,5 kNm
Flange connection	DDA 118/ 75	DDA 118/ 13	DDA 175/ 24	DDA 160/ 36	DDA 220/V60
• Hollow shaft: - Inner diameter	118 mm	118 mm	175 mm	160 mm	220 mm
Flange connection	DDF 120/ 24				
• Hollow shaft with longitudinal Displacement: - Inner diameter	100 mm 120 mm				
Hollow chucks with clamping jaws	DDB 114/ 7,5	DDB 114/ 13	DDB 133/ 24	DDB 133/ 36	
Max. inner diameter	114 mm	114 mm	133 mm	133 mm	
• Hollow chucks with hexagonal jaws: - Inner diameter					DDA 220/V60 220 mm



DDF 120/24



DDB 114 on drill rig CR 14

## General accessories

Suction and delivery pump for drill flushing return flow  
 Max. delivery volume = 50 m<sup>3</sup>/h  
 Max. delivery height = 23 m at 4 m<sup>3</sup>/h  
 Max. density of the delivery medium = 1.5  
 Max. solid agent pass in the pump = 65 mm

Electric drive  
 400 V/ 50 Hz – 7.5 kW

**MUPU 65-E**

Hydraulic drive

**MUPU 65-H**



Hose lines and accessories for:  
 - Grouting  
 - Jet-grouting



Hose lines



Fittings/ connections

## Special products

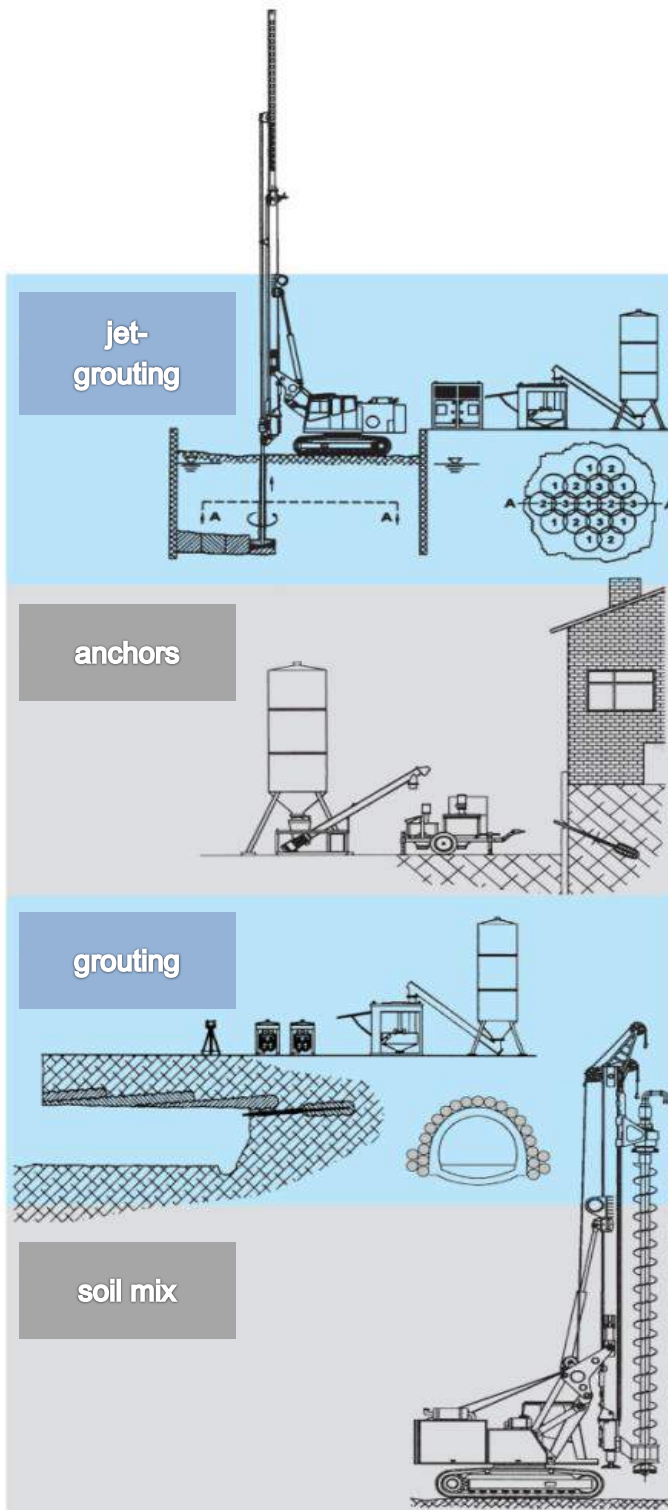
Special constructions and special manufacturing



Habitat – for subaqueous works



Turnkey mixing plant as requested by customers



**Sales  
Renting  
Service  
Consultancy**

**Equipments  
and Know How**

- Dosing systems for all grouts
- Grout 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