

MIXING CENTRE FOR DELIVERY OF CELLULAR CONCRETE

Type: MS 1000M

Data Sheet No. 011.1

A machine for making and delivery of lightweight concrete (LC) filled with technical foam — foam concrete (PBG) or with polystyrene beads — polystyrene concrete (PsB).

Individual parts of the machine represent a single compact unit on a common frame placed on a braked chassis or anchored to the floor.

Dosing of all components and a mixing process are controlled by a computer control unit. An optimal assembly consists of MS 1000 together with 1 or 2 conveyors for dry components re-dosing. The control - automatic switching on and off - of silos and conveyors and their vibrators is provided through their power connection to the switchboard (sockets) of MS 1000 Control Centre (CC).

The production process has two phases. In the first phase, raw materials are successively automatically fed into the mixer and are thoroughly mixed: first, mixing water with chemical admixture (if required) together with cement, followed by sand (if required) and the preformed foam. Fibre and polystyrene beads (if required) are dosed manually.

In the second phase, the uniformly mixed LC mortar is pumped by a built-in or external screw pump using hoses to the place of installation at a speed that can be regulated.



Use: The machine is designed for LC production directly on site or in a factory and can operate:

- In automatic mode in cooperation with a transport or stationary dry mixture silo.
- In automatic mode in cooperation with a truck agitator dispensing grout.
- In automatic or semi-automatic mode with manual loading of (packed) dry components that can be fed into the unit feed hopper by means of conveyors.

Main parts: Base Frame, Control Centre, Mixer, LC Delivery Pump, Water Tank, Water Pump(s), Foam Generator and Chassis. The Control Centre (CC) consists of a computer control unit, a frequency converter, calibrated scale under the mixer, water and admixture meters, and a central box with fusing and protection of electric drives of connected equipment.

- Contains:**
- System of accurate re-dosing of all input raw materials, i.e. dry and liquid ones including technical foam
 - Mixing process control system – eliminating impact of operators on a mixing process
 - Liquid admixture automatic dosing system
 - Integrated electronic calibrated scales for weighing dry components or grout
 - Foam making concentrate automatic dosing system
 - System of automatic switching the LC delivery pump and blender off after pumping the fresh LC out
 - System signals not allowed decrease of power supply voltage
 - System signals faulty phases order of electric power supply
 - Automatic blender cleaning system
 - System of protection of connected equipment electric drives

Specification:

Installed power:	from 17 kVA; protection class IP 44 (sprayed water)
Production capacity (Production cycle time):	up to 15* m ³ of PBG / hour (from 4* min per 1 m ³ of PBG)
Input component dosing accuracy:	± 3 %
Mixer volume (effective) / Mixer drive:	1170 (1000) l / 5,5 or 7,5 kW
Built-in pump capacity – GB 800M / 1200M, 7,5kW (Pmax):	up to 15 / 24 m ³ of PBG per hour (8 / 5 bar)
Delivery head** of GB 800M Pump – PBG / PsB:	up to 70+m / 24 m
Length of delivery hoses Js 50 mm:	250+m without vertical difference
External pump–GB800L/p, 11kW, 12 bar (Delivery head**):	up to 15 LC per hour (up to 100+m PBG / 70+m PsB)
Aggregates:	up to 4 mm
Foam generator capacity (concentration range):	7 / 10 / 13 l/sec at a foam density of 60 g/l (from 1 to 5 %)
Water tank volume:	270 l
Weight (without chassis):	from 1 435 kg (from 1 100 kg)
Dimensions — l x w x h (without chassis):	4 465 x 1 940 x 1 980 mm (3 040 x 1 500 x 1 450 mm)
Feeding hopper ground clearance (without chassis):	1 930 mm (1 450 mm)

* Mainly depends on the dosing speed of dry components and the type of the installed pump (GB 800M or 1200M)

** Delivery head depends on the LC density, consistency, the length of hoses and the type of the installed pump

Transport: Behind a passenger car with towing capacity min 1 500 kg (braked). Accessories are carried in a towing vehicle.

Operation:

Operating ambient temperature: 0—40 °C

Power supply: 400 V/50 Hz, 5 pin connection (CEE-coupling), fusing (C) min. 32 A

Water supply: min. 3/4" with capacity min. 1.0 l/sec

Access road for: a van with a trailer, in the mode of cooperation with a transport silo, it is defined by the silo supplier about 5 x 3 m for MS 1000 without area for a silo

Required hardened surface:

Safety: The equipment MS 1000 is accredited by EU safety rules and standards and is marked with CE: EC-TYPE EXAMINATION CERTIFICATE according to Directive 98/37/EC(98/79/EC No. 00013/103/2/2007
Electric installation is in a five-pin version with a current protective switch.

Validity from 01.01.2015

MIXING CENTRE FOR DELIVERY OF LIGHTWEIGHT CONCRETE

Type: MS 1000S

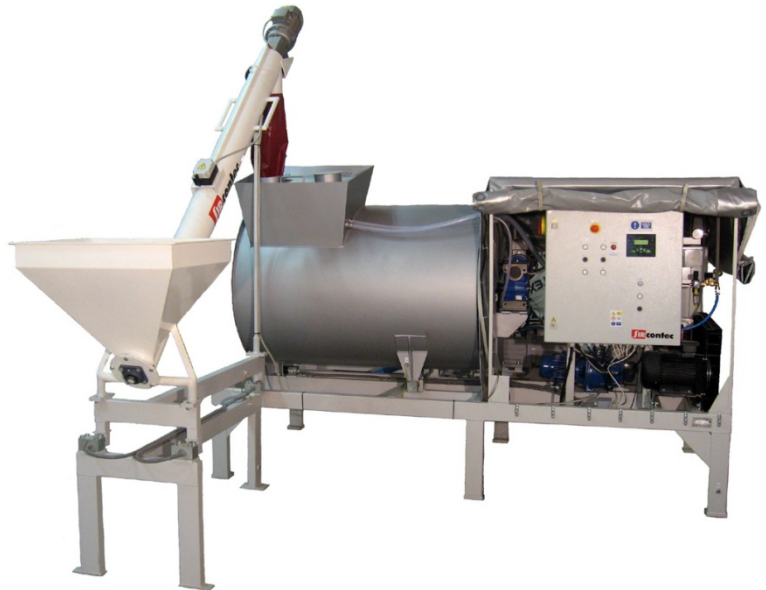
Data Sheet No. 011.2

A machine for making and delivery of lightweight concrete (LC) filled with technical foam — **foam concrete (PBG)** or with polystyrene beads — **polystyrene concrete (PsB)**.

It is mainly designed for manufacturing prefabricated components. Separate parts of the equipment compose a compact unit with minimized demands on occupied area. Dosing of all components and a mixing process are controlled by a computer control unit.

An optimal assembly consists of MS 1000S together with three conveyors for dry components re-dosing and an external electronic scale. The control - automatic switching on and off - of silos and conveyors and their vibrators is provided through their power connection to the switchboard (sockets) of MS 1000 Control Centre.

The production process has two phases. In order to speed up the feeding of raw materials, the dosing of all dry components occurs simultaneously together with mixing water and chemical admixture (if required). In the second phase, the uniformly mixed LC mortar is pumped by a built-in or external screw pump using hoses to the place of installation at a speed that can be regulated.



Use: The MS 1000S is designed for operation in automatic mode while it can simultaneously control three conveyors for accurate re-dosing of two dry components as a minimum.

Main parts: Base Frame, Control Centre, Mixer, LC Delivery Pump, Water Tank, Water Pump(s), Foam Generator (and Chassis)

The Control Centre (CC) consists of a computer control unit, a frequency converter, an integrated combined electronic calibrated scales: internal ones weighing the mixer and external scales (if required) weighing the hopper of one conveyor, water and admixture meters, and a central box with fusing and protection of electric drives of connected equipment.

Contains:

- System of accurate re-dosing of all input raw materials, i.e. dry and liquid ones including technical foam
- Mixing process control system – eliminating impact of operators on a mixing process
- Liquid additive automatic dosing system
- Weighing calibrated system for parallel (simultaneous) dosing of two dry components
- Foam making concentrate automatic dosing system
- System of automatic switching the LC delivery pump and the mixer off after pumping the fresh LC out
- System signalises not allowed decrease of power supply voltage
- System signalises faulty phases order of electric power supply
- Automatic blender cleaning system
- System of protection of connected equipment electric drives

Specification:

Installed power:	from 20 kVA; protection class IP 44 (sprayed water)
Production capacity (Production cycle time):	up to 15* m ³ of PBG / hour (from 4* min per 1 m³ of PBG)
Input component dosing accuracy:	± 3 %
Mixer volume (effective) / Mixer drive:	1170 (1000) l / 5.5 or 7.5 kW
Built-in pump capacity – GB 800M / 1200M, 7.5kW (Pmax):	up to 15 / 24 m ³ of PBG per hour (8 / 5 bar)
Delivery head** of GB 800M Pump – PBG / PsB:	up to 70+m / 24 m
Length of delivery hoses Js 50 mm:	250+m without vertical difference
External pump–GB 800L/p,11kW,12 bar (Delivery head**):	up to 15 LC per hour (up to 100+m PBG / 70+m PsB)
Aggregates:	up to 4 mm
Foam generator capacity (concentration range):	7 / 10 / 13 l/sec at a foam density of 60 g/l (from 1 to 5 %)
Water tank volume:	270 l
Weight without external scales (without chassis):	from 1 460 kg (from 1 140 kg)
Dimensions — l x w x h: (without chassis):	4 465 x 1 940 x 1 980 mm (3 140 x 1 500 x 1 750 mm)
Dimensions of the weighing frame-l x w x h / Weight:	1400 x 830 x 830 mm / from 45 kg
Feeding hopper ground clearance (without chassis):	1 930 mm (1 700 mm)

The MS 1000S equipment is designed to be anchored to the floor or mounted on the chassis for casting in-situ.

* Mainly depends on the dosing speed of dry components and the type of the installed pump (GB 800M or 1200M)

** Delivery head depends on the LC density, consistency, the length of hoses and the type of the installed pump

Transport: By truck or behind a passenger car with towing capacity min 1 500 kg (braked). Accessories are carried in a towing vehicle.

Operation:

Operating ambient temperature:	0—40 °C
Power supply:	400 V/50 Hz, 5 pin connection (CEE-coupling), fusing (C) min. 32 A
Water supply:	min. 3/4"with capacity min. 1.0 l/sec
Required hardened surface:	about 5 x 4 m incl. drainage

Safety: The equipment MS 1000 is accredited by EU safety rules and standards and is marked with **CE**: **EC-TYPE EXAMINATION CERTIFICATE** according to Directive 98/37/EC(98/79/EC No. 00013/103/2/2007
Electric installation is in a five-pin version with a current protective switch.

Validity from 01.01.2015

MIXING CENTRE FOR CONTINUOUS DELIVERY OF CELLULAR CONCRETE

Type: MSX 1000

Data Sheet No. 011.3

A machine for continuous making and delivery of lightweight concrete (LC) filled with technical foam – **foam concrete (PBG)** and/or with polystyrene beads — **polystyrene concrete (PsB)**.

It is designed mainly for casting walls and roofs/ceilings in-situ and for manufacturing prefabricated products, e.g. panels, blocks, etc..

Individual parts of the equipment compose a compact unit with minimized demands on space.

A manufacturing assembly consists of MSX1000 with at least two conveyors for dry components, e.g. cement and sand. The control - automatic switching on and off - of silos and conveyors and their vibrators is provided through their power connection to the switchboard (sockets) of MSX1000 Control Centre (CC).

Batching of all components and a mixing process are controlled by a computer control unit.

The horizontal shaft positive-action blender with a special agitator is designed for dry mixing of dry components. Once uniformly mixed, the LC is discharged through a discharge gate actuated pneumatically into the hopper of a built-in screw pump located beneath the mixer. While LC mortar is pumped through a hose into moulds, another batch of LC is dosed and mixed in the blender.

Use:

The machine is designed for LC production directly on site or in a factory and can operate:

- In automatic mode in cooperation with conveyors and silos and bunkers
- In automatic or semi-automatic mode with manual loading of dry components that are fed into the unit feed hopper by means of screw and belt conveyors



Main parts: Base Frame, Control Centre, Mixer, LC Delivery Pump, Water Tank, Water Pump, Foam Generator FGX (built-in or standalone), and Chassis.

The Control Centre consists of a computer control unit, an electronic calibrated scale under the mixer, water meter, and a central box with fusing and protection of electric drives of connected equipment.

- Contains:**
- System of accurate re-dosing of all input raw materials, i.e. dry and liquid ones including technical foam
 - Mixing process control system – eliminating impact of operators on a mixing process
 - Weighing calibrated system for dry components
 - Foam making concentrate automatic dosing system
 - System of protection of connected equipment electric drives

Specification:

Installed power:	from 40 kVA (up to 55 kVA incl. conveyors); prot. class IP 65 (water)
Production capacity (Production cycle time):	up to 19* m ³ of PBG / hour (from 3.2* min per 1 m ³ of PBG)
Input component dosing accuracy:	± 1 %
Mixer volume (effective) / Mixer drive:	1100 (1000) l / 15 kW
Worm Pump capacity - 2L8, 11kW / Pmax:	up to 19 m ³ of PBG hour / 6-8 bar
Pump hopper volume:	1100 l
Aggregates:	up to 8 mm
Foam generator capacity (concentration range):	13/10 l/s at foam densities of 60/80 g/l (from 1 to 5 %)
Water tank volume:	200 l
Length of delivery hoses Js 50 mm:	up to 60 m without vertical difference
Weight (with Foam Generator FGX):	from 2 950 (from 3 250) kg
Weight of Foam Generator FGX:	from 300 kg
Main dimensions - l x w x h - without FGX:	4 820 x 1 520 x 2 400 mm
Main dimensions of FGX – l x w x h (with wheels):	1210 x 1160 x 1380 (1670) mm
Level of charging hopper above ground::	2 400 mm

The MSX1000 equipment is designed to be firmly anchored to the floor, or assembled on a rigid axle with tyres.

* mainly depends on dosing speed of dry components and on kind of the installed pump drive; the maximum accessible output equals to pumping capacity of the built-in pump

Transport: By truck or behind a vehicle with towing capacity min. 3000 kg.
Accessories for MSX1000 and FGX are carried in a towing vehicle.

Operation: Operating ambient temperature: 0 - 40 °C
Power supply: 400 V/50 Hz, 5 pin connection (CEE-coupling), fusing (C) min. 64 A
Water supply: min. 3/4" with capacity min. 1.5 l/sec
Required hardened surface: about 6 x 10 m incl. drainage

Safety: The equipment MSX 1000 is accredited by EU safety rules and standards.
Electric installation is in a five-pin version with a current protective switch.

Validity from 01.11.2014

FOAM GENERATOR FGX

Type: FGX

Data Sheet No. 012.1

A device for continuous production of technical foam and its accurate dosing with Start-Stop system.
The preset technical foam parameters are not influenced by fluctuation of input water pressure or by temporary electric power outage.

FGX illustration:

Utilization: This device is determined for production of technical foam for incorporation into cement matrix.
FGX is designed to operate in automatic mode while the foam parameters can be adjusted in a wide range.

Parts: Continuous foam generator, compressor, water tank, pump, and switchboard with control panel and protection of electric drives. The parts are fixed on a frame with legs or wheels.

It includes:

- System of automatic foam concentrate dosing with preset concentration
- Automatic monitoring system for the minimum volume / level of the foaming agent in the storage tank
- Compressed air supply system
- Source of pressurized water system including a water tank with monitoring of the minimum water volume
- System of protection of the water pump against idle run
- Central switchboard with control buttons
- Control unit for accurate foam dosing with memory for the case of electric power outage
- Remote control
- Hose for water, foaming agent and for foam
- Electric power supply cable



Technical data:

FGX can be controlled by switchboard buttons or by the remote control in the place of mixing with cement or sand-cement slurry.

Supply voltage:	400 V / 50 Hz; protection class IP 44 (sprayed water)
Installed power input:	from 10* kW
Compressor capacity:	up to 950** lit/min, min 6 bar (0.6 MPa)
Technical foam density range:	from 40 to 200 g/l
Production capacity continuous (discontinuous):	from 7*** l/s at foam densities of 40-100 g/l (up to 16 l/s)
Capacity for foam density 40/60/80 g/l:	up to 14/13/10 l/s continuous
Technical foam concentration range:	from 1 to 5 %
Adjustable foam dispensing time:	from 1 to 9999 sec
Outer dimensions – l x w x h (with wheels):	1210 x 1160 x 1380 mm (1670 mm)
Weight itself with accessories:	to 300 kg
Water supply:	min. 3/4" with capacity min. 2 l/sec

* depends on the type of the built-in compressor

** depends on the size of the installed air accumulators and the power output of the compressor

*** depends mainly on the density of the produced technical foam

Transport: On a suitable means of transport.

Operation: 1. Putting the device into operation:

Before starting the work, place FGX on a flat surface and connect it to the water and electric supply. After connecting the foam concentrate can/drum, FGX is prepared for production of the technical foam.

2. Operation of the device:

To start each production cycle, FGX operator sets the time on the control unit and gives instructions using controls on the control panel or by the remote control. The operation can be anytime interrupted and resumed from the point of interruption. The device can operate at temperatures above 0°C.

3. Finishing operation of the device:

When the operation is finished, disconnect FGX from technical foam supply, rinse with water and then disconnect it from electricity and water supply.

Before transportation release the pressure air and discharge water from the storage tank.

If it is possible that the surrounding temperature might fall below zero, it is necessary to thoroughly dewater the whole device.

4. Operation requirements:

Electric supply: 400 V / 50 Hz, 5-pin, 32 A

Area necessary: see Technical data, section "Dimensions"

Safety: Design of the device complies with applicable safety regulations and standards valid in the EU.

Electric installation is made for 5-pin connection with separate protection of installed electric motors.

Validity from 01.08.2014

FOAM GENERATOR FGX M

Type: FGX M

Data Sheet No. 012.2

A device for continuous production of technical foam and its accurate dosing with Start-Stop system.

The preset technical foam parameters are not influenced by fluctuation of input water pressure or by temporary electric power outage.

FGX M illustration:



Utilization: This device is determined for production of technical foam for incorporation into cement matrix.

FGX M is designed to operate in automatic mode while the foam parameters can be adjusted in a wide range.

Parts: Continuous foam generator, compressor, water tank, pump, and switchboard with control panel and protection of electric drives. The parts are fixed on the chassis (trailer).

- It includes:**
- System of automatic foam concentrate dosing with preset concentration
 - Automatic monitoring system for the minimum volume / level of the foaming agent in the storage tank
 - Compressed air supply system
 - Source of pressurized water system including a water tank with monitoring of the minimum water volume
 - System of protection of the water pump against idle run
 - Central switchboard with control buttons
 - Control unit for accurate foam dosing with memory for the case of electric power outage
 - Remote control
 - Hose for water, foaming agent and for foam
 - Electric power supply cable

Technical data:

FGX M can be controlled by switchboard buttons or by the remote control in the place of mixing with cement or sand-cement slurry.

Supply voltage:

400 V / 50 Hz; protection class IP 44 (sprayed water)

Installed power input:

from 10* kW

Compressor capacity:

up to 950** lit/min, min 6 bar (0.6 MPa)

Technical foam density range:

from 40 to 200 g/l

Production capacity continuous (discontinuous):

from 7*** l/s at foam densities of 40-100 g/l (up to 16 l/s)

Capacity for foam density of 40/60/80 g/l:

up to 14/13/10 l/s continuous

Technical foam concentration range:

from 1 to 5 %

Adjustable foam dispensing time:

from 1 to 9999 sec

Outer dimensions – l x w x h:

2800 x 1650 x 1700 mm

Weight itself with accessories:

from 420 kg

Pay load of chassis with FGX M

200 kg

Water supply:

min. 3/4" with capacity min. 2 l/sec

* depends on the type of the built-in compressor

** depends on the size of the installed air accumulators and the power output of the compressor

*** depends mainly on the density of the produced technical foam

Transport: Towed by suitable means of transport, trailer is not braked, category up to 750 kg.

Operation: 1. Putting the device into operation:

Before starting the work, place FGX M on a flat surface and connect it to the water and electric supply. After connecting the foam concentrate can/drum, FGX M is prepared for production of the technical foam.

2. Operation of the device:

To start each production cycle, FGX operator sets the time on the control unit and gives instructions using controls on the control panel or by the remote control. The operation can be anytime interrupted and resumed from the point of interruption. The device can operate at temperatures above 0°C.

3. Finishing operation of the device:

When the operation is finished, disconnect FGX M from technical foam supply, rinse with water and then disconnect it from electricity and water supply.

Before transportation release the pressure air and discharge water from the storage tank.

If it is possible that the surrounding temperature might fall below zero, it is necessary to thoroughly dewater the whole device.

4. Operation requirements:

Electric supply: 400 V / 50 Hz, 5-pin, 32 A

Area necessary: see Technical data, section "Dimensions"

Safety: Design of the device complies with applicable safety regulations and standards valid in the EU.

Electric installation is made for 5-pin connection with separate protection of installed electric motors.

Validity from 01.08.2014

FOAM GENERATOR FGB

Type: FGB

Data Sheet No. 012.3

A portable device for continuous production of technical foam and its accurate dosing with Start-Stop system.

The preset technical foam parameters are not influenced by fluctuation of input water pressure or by temporary electric power outage.

FGB illustration:

Utilization: This device is determined for production of technical foam for incorporation into cement matrix.

FGB is designed to operate in automatic mode while the foam parameters can be adjusted in a wide range.

Parts: Continuous foam generator, water tank, pump, and switchboard with control panel, fuses and protection of electric drives.

- It includes:**
- System of automatic foam concentrate dosing with preset concentration
 - Automatic monitoring system for the minimum volume / level of the foaming agent in the storage tank
 - Source of pressurized water system including a water tank with monitoring of the minimum water volume
 - System of protection of the water pump against idle run
 - Central switchboard with control buttons
 - Control unit for accurate foam dosing with memory for the case of electric power outage
 - Remote control
 - Hose for water, foaming agent and for foam
 - Electric power supply cable



Technical data:

FGB can be controlled by switchboard buttons or by the remote control in the place of mixing with cement or sand-cement slurry.

Supply voltage:	400 V / 50 Hz; protection class IP 44 (sprayed water)
Installed power input:	from 2.5 kW
Technical foam density range:	from 40 to 200 g/l
Production capacity (foam density 60/80 g/l):	from 7* l/s (up to 10/8 l/s with compressor AKB)
Technical foam concentration range:	from 1 to 5 %
Adjustable foam dispensing time:	from 1 to 9999 sec
Dimensions l x w x h:	830 x 770 x 660 mm
Weight of the clean device itself:	93 kg
Water supply:	min. 3/4" with capacity min. 2 l/sec
Compressed air supply:	min. 3/8" with capacity min. 600 lit/min at min. press. of 6 bar
* depends mainly on the compressed air supply and the density of the produced technical foam	

Transport: By suitable means of transport, e.g. a passenger car.

Operation: 1. Putting the device into operation:

Before starting the work, place FGB on a flat surface (compacted surface) and connect it to the water and electric supply, also to the compressed air supply (compressor). After connecting the foam concentrate can/drum, FGB is prepared for production (of the technical foam).

2. Operation of the device:

To start each production cycle, FGB operator sets the time on the control unit and gives instructions using controls on the control panel or by the remote control. The operation can be anytime interrupted and resumed from the point of interruption. The device can operate at temperatures above 0°C.

3. Finishing operation of the device:

When the operation is finished, disconnect the foam generator from air and technical foam, rinse with water, disconnect it from electricity and water supply and discharge the remaining water.

If it is possible that the surrounding temperature might fall below zero, it is necessary to thoroughly dewater the whole device.

4. Operation requirements:

Electric supply: 400 V / 50 Hz, 5-pin, 16 A
Area necessary: 1 x 1 m

Safety: Design of the device complies with applicable safety regulations and standards valid in the EU. Electric installation is made for 5-pin connection with separate protection of installed electric motors.

Validity from 01.08.2014

COMPRESSOR AKB

Type: AKB

Data Sheet No. 012.4

Portable device for continuous production of compressed air.

AKB illustration:



Utilization: This device is determined for generating compressed air necessary for technical foam production; it is optimized for cooperation with FGB foam generator or for utilization anywhere, where compressed air is needed.
AKB is designed to operate in automatic mode while the compressed air parameters can be adjusted in a wide range.

Parts: Compressor, air accumulators, air hose for connecting to FGB and electric cable for connecting to the power supply / FGB, built-in compressor electric drive's protection, automatic control of working pressure (minimum and maximum operating pressure)

Technical data:

Supply voltage:	400 V / 50 Hz; protection class IP 44 (sprayed water)
Installed power input:	up to 5.5 kW
Production capacity:	max 800* lit/min, min 6 bar (0.6 MPa)
Dimensions l x w x h:	985 x 710 x 650 mm
Weight of the clean device itself:	103 kg

* Depends on the size of the installed air accumulators and the power output of the compressor

Transport: By suitable means of transport, e.g. a passenger car.

Operation: **1. Putting the device into operation:**

Before starting the work, place AKB on a flat surface (compacted surface) and connect it to the electric supply / FGB and interconnect it with FGB using an air hose.

2. Operation of the device:

Start the operation of the compressor using a switch on the pressure switch. After it is automatically switched off, AKB is prepared for operation.

The device can operate at temperatures above 0°C.

CAUTION

Protective grille over the pulleys of the compressor's drive must be permanently uncovered to allow admission of the cooling air.

3. Finishing operation of the device:

When the operation is finished, disconnect AKB from electric supply and from FGB; before transportation it is always necessary to release the compressed air and discharge mud from the device through a drain valve.

Release the pressure air before transportation.

4. Operation requirements:

Electric supply:	400 V / 50 Hz, 16 A
Area necessary:	see Technical data, section "Dimensions"

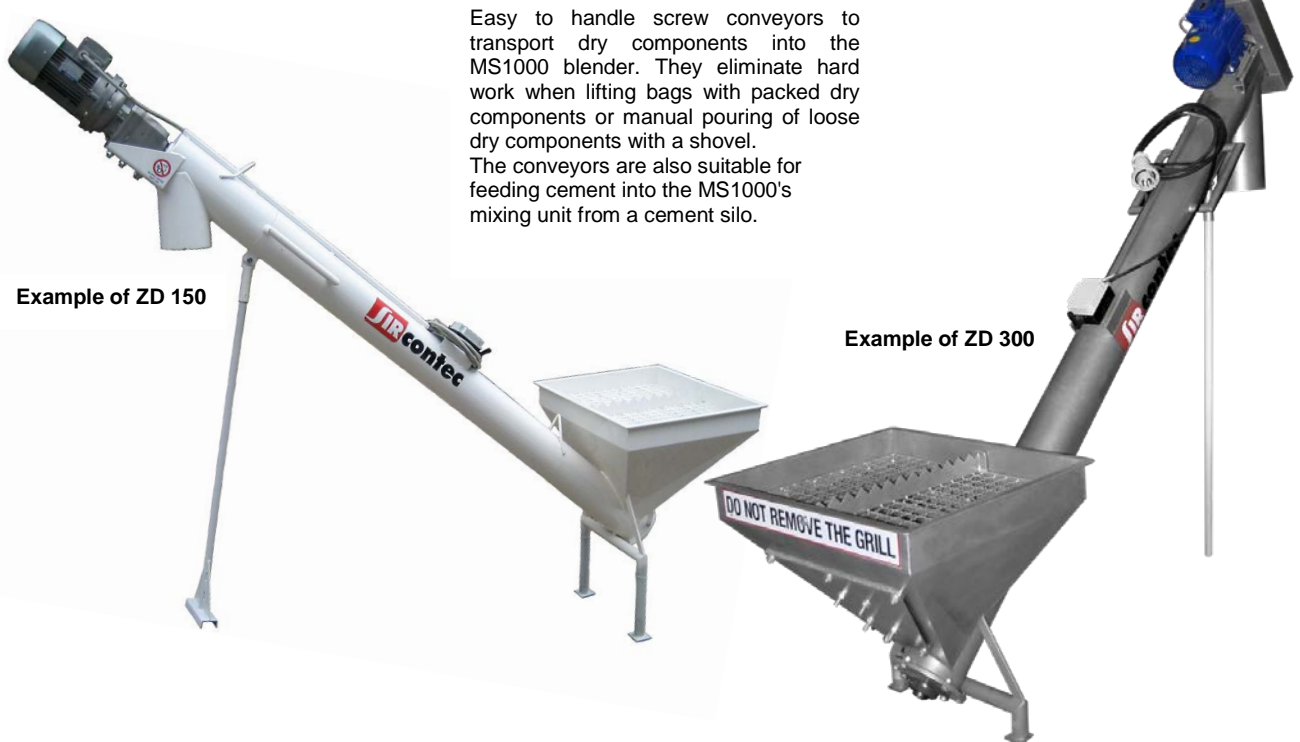
Safety: Design of the device complies with applicable safety regulations and standards valid in the EU.
Electric installation is made for 5-pin connection with separate protection of installed electric motor.

Validity from 01.08.2014

SCREW CONVEYORS

Type: ZD 150, 300

Data Sheet No. 013.1



Easy to handle screw conveyors to transport dry components into the MS1000 blender. They eliminate hard work when lifting bags with packed dry components or manual pouring of loose dry components with a shovel. The conveyors are also suitable for feeding cement into the MS1000's mixing unit from a cement silo.

Example of ZD 150

Example of ZD 300

Use: It is used to transport dry components into a mixer. The dry components can be loaded into the hopper of the conveyor manually or may fall (are loaded) into the conveyor hopper from a silo and then are conveyed into the mixer. The conveyor is optional for MS 1000 or M 1000.

Parts: Body, screw, drive, hopper with a bag tearing device, supporting legs and upon request – vibrator.

Specification:

The conveyors **ZD** can be controlled either manually or through the MS1000 control unit where the control (automatic switching on and off) of the **ZD**, its vibrator and a vibrator of the silo (if used) is automatically provided through their power connection to the switchboard (sockets) of MS1000 Control Centre.

Type of conveyor	ZD 150	ZD 300
Installed power:	2.25 kW	2.25 kW
Delivery capacity with vibrator:	up to 4.5 kg/sec	up to 9 kg/sec
Dimensions l x w x h:	2 450 x 800 x 770 mm	2 250 x 800 x 770 mm
Weight:	125 kg	120 kg

Transport: Fitted to a suitable vehicle.

Operation: 1. **Start up:**

Before the start of work, the conveyor is placed onto a reinforced surface and connected to the MS 1000 blender hopper and to the switchboard of MS1000 Control Centre.

2. **Operation:**

At the beginning of individual production cycles in selected modes, an operator of MS 1000 with **ZD** connected to it enters commands via a control panel.

The conveyor can operate at temperature above 0°C.

It is recommended to protect the conveyor from precipitation humidity during its operation.

3. **End of operation:**

After disconnecting the conveyor from a power supply, remove residual dry components from it and after its disconnection from the MS 1000 blender, it is ready for transport.

4. **Site conditions:**

Power supply: 400 V/50 Hz, 5 pin connection (CEE-coupling), fusing (C) min. 16 A

Access: access road must be suitable for a light vehicle and permanently accessible

Required area: 2 x 2 m in addition to the area for MS 1000

Safety: The equipment complies with EU safety regulations and standards.

Electric installation is in a five-pin version with a separate fusing or with fusing in the MS 1000 electric box.

Validity from 01.11.2014

LIGHTWEIGHT CONCRETE DELIVERY PUMPS

Type: GB 550, 800, 1200

Data Sheet No. 014.1

A GB series screw pump is designed for delivery of lightweight concrete (LC) with technical foam based (PBG) or recycled polystyrene filler (PsB) and for delivery of liquid or pasty mixtures not containing abrasive additives.

The pump is installed on a separate handling chassis — see the photo or as a part of the MS 1000 system.

Use:

The LC pump in the GB 800M version is a standard part of the MS 1000 system.

If higher requirements for pumping parameters are to be met, a more powerful pump on a separate chassis can also be connected to MS 1000 — see the photo.

The pump on the separate chassis is controlled manually and it also has its own power supply with a separate fusing.



Parts: Body, suction chamber, stator part with rotor and electric drive with transmission and chassis – type “p”.
The electric motor can be equipped with a brake.

Specification:

Type of GB 550 pump	GB 550 M/p
Installed power:	5.5 kW
Delivery capacity:	up to 5 m ³ /hr
Delivery head – PBG / PsB*:	up to 55 m / up to 50* m
Maximum output pressure:	14 bar
Dimensions l x w x h:	1 900 x 900 x 950 mm
Weight from:	220 kg

Types of GB 800 pumps	GB 800 M/p	GB 800 L/p
Installed power:	7.5 kW	11 kW
Delivery capacity:	up to 15 m ³ /hr	up to 15 m ³ /hr
Delivery head – PBG / PsB*:	up to 75+** m / up to 23* m	up to 100+** m / up to 70* m
Maximum output pressure:	8 bar	12-15 bar / 300-200 rpm
Dimensions l x w x h:	2 200 x 850 x 1 150 mm	2 200 x 850 x 1 150 mm
Weight from:	240 kg	270 kg

Type of GB 1200 pump	GB 1200 M/p
Installed power:	7.5-11 kW
Delivery capacity:	up to 28 m ³ /hr
Delivery head – PBG / PsB*:	up to 40 m / up to 14* m
Maximum output pressure:	4-8 bar
Dimensions l x w x h:	1 650 x 850 x 1 150 mm
Weight from:	290 kg

* the delivery head depends on the consistency and the length of hoses

** please advise the requirements on delivery heads exceeding 60 meters in order to specify pumps properly

Transport: Integrated in MS 1000 on a homologised chassis or on a vehicle.
Separate on a suitable vehicle.

Operation:

- 1. Start up:**
Follow the Operation and Maintenance Manual.
- 2. Operation:**
Pumps can be operated separately or automatically via the MS 1000 control unit. They can operate at temperature above 0°C. The pump must be protected against dry run – which results in a shorter service life of a stator.
- 3. End of operation:**
After the end of work, the pump is cleaned from grout residues according to instructions in the Operation and Maintenance Manual.

Site conditions:

Power supply: 3 x 400 V/ 50 Hz, fusing depending on the electric drive type
Access: access road must be suitable for light vehicles and permanently accessible
Required area: about 2 x 2 m, without an area for a silo and MS 1000

Safety: The equipment complies with current EU regulations and standards.
Electric installation is in a five-pin version with a current protective switch.

Validity from 01.11.2014

MACHINE FOR DELIVERY OF POLYSTYRENE CONCRETE - PsB

Type: M 1000 with GB xxx/p

Data Sheet No. 015.1

Equipment for production and delivery of lightweight concrete (LC) filled with recycled or virgin polystyrene beads — **polystyrene concrete (PsB)**.
With cooperation with a SIRCONTEC foam generators FGB or FGX it can also be used for foam concrete (PBG) production.

Individual parts of the machine can be handled separately on travelling wheels.

Dosing of all components and mixing process is carried out by an operator.



Use: The machine is designed for production of PsB right in the construction site or in the production plant. It is designed for production of PsB with a fresh density of up to 800 kg/m³. Higher densities can be produced when decreasing the volume of the batch.

The dosing of components and the control of the mixing cycle is carried out manually.
For dosing of binding agent it is recommended to use a screw conveyor.

Main parts: Mixer M 1000, lightweight concrete pump GB xxx - optional, delivery hoses, accessories.

It includes: 7.5 kW mixer M 1000 and pump GB xxxp:

- Water tank with measuring of the batch water volume
- Central switchboard with control buttons, frequency converter and electric drive protection
- Automatic system for adjusting phase sequence in relation to the power supply mains
- System of smooth start-up of the mixer's electric drive and gradual start-up of the pump (without jerks)
- Charging hopper with bag tearing device
- Protection system for electric drives of connected devices

Technical description:

Machine parameters	Pump type			
	GB 550 M/p	GB 800 M/p	GB 800 L/p	GB 1200 M/p
Installed power input, protection IP 44 [kVA]	12	15	20	20
Effective mixer's volume [l]	1000	1000	1000	1000
Production cycle period (1 m ³ PsB) [min] from	12	9	9	7.5
Production capacity [m ³ /h] approx.	5	6.5	6.5	8
Delivery head for polystyrene concrete [m]	50	24	70	15
Weight of the M 1000 [kg]	350	350	350	350
Weight of the configuration without hoses [kg]	570	590	620	640
Mixer's dimensions (l x w x h) [mm]	1980x1280x1650	1980x1280x1650	1980x1280x1650	1980x1280x1650
Pump's dimensions (l x w x h) [mm]	1700x900x950	1700x850x1150	2200x850x1150	1650 x 850 x 1150
Height of mixer's hopper above ground [mm]	from 1180	from 1180	from 1180	from 1180

Note:

Blending time is affected substantially by a delivery capacity of a screw conveyor delivering dry components to a blender or by a capacity of operators to dose those components to a blender manually.

Transport: In the loading space of a vehicle incl. all accessories. Handling wheels of the main parts serve only for setting in the working position.

Operation: Ambient temperature: -5 – +40 °C
Electric supply : 400 V/50 Hz, 5-pin connection, protection (A) min. 2 x 32 A
Water supply: min. 3/4", capacity min. 0.7 l/sec
Access road for: vehicle with trailer, light truck
Necessary compacted area: approx. 5 x 3 m

Safety: The design of M 1000 equipment complies with applicable safety regulations and standards valid in the EU.

Validity from 01.11.2014