
The vertical concrete plant

High output on a small area

LIEBHERR

Betomat



Compact and flexible

Betomat tower mixers have been used successfully throughout the world for many years, both to produce premixed concrete and in precast element and concrete product manufacturing.





Highlights

The batching plant's vertical layout

The vertical batching plant layout guarantees high production rates and ample storage volume on even a limited site area. The modular-element principle permits numerous design variations and output ratings to be supplied. To suit customers' requirements, numerous alternative versions are available, with one or two mixers and various loading systems: bucket elevator, S-pattern conveyor or inclined belt. Compact and self-contained, the vertical layout minimizes dust and noise, is therefore extremely pro-environmental and also has advantages in winter operation.

Many options and additional equipment

The selection and positioning of the high-quality components has been planned to the last detail, so that a perfect overall equipment complex results. The purpose-made options and additional equipment satisfy the same high standards.

The Betomat for pre-mixed concrete

Since it is made up of modular elements, the Betomat is not only suitable for use as a permanently installed facility but can often be employed temporarily on large-scale construction sites such as dams or tunnels. From the plant concept to its control system, everything is geared to smooth filling of the truck mixers. The twin-track option is of particular value when delivering premixed concrete.

The Betomat in the precast and prefabricated concrete products industry

The generous materials storage capacity, with up to twelve silo compartments, is a genuine advantage for this industry. The plant itself, its control system, skip loader track and requirement indicating points, together form a convincing overall concept.

The Betomat for pre-mixed concrete



Pre-mixed concrete plant

Adaptation to customer requirements

It would be difficult to imagine the pre-mixed concrete industry without the Betomat. Plant size and version can be precisely matched to the customer's needs, and an on-site building incorporated into the layout if required.

Modular concept

Pre-assembled modular units make the plant extremely easy to assemble and keep erection times to a minimum. Because of this, even temporary operation on a construction site is a viable proposition.

Modern control system

Modern control systems and software make the Betomat extremely easy to use and can include a large number of additional procedures, for example invoicing, vehicle movement control or a concrete-laboratory program.

Efficient mixers

For top-quality concrete or for maximum output, Liebherr can supply the most suitable mixing system: ring-pan mixers with or without agitators, or its twin-shaft mixer.



Concrete recycling

Liebherr can supply two types of concrete recycling plant (trough and screw patterns) with capacities between 10 and 22 cu. m/h. Sand and gravel are washed out and the residual water containing cement trapped as a suspension in an agitator tank.



Fully integrated into concrete product manufacturing

Betomat batching plants from Liebherr produces high-quality concrete for a vast number of manufacturing applications throughout the world. For example: paving stones, concrete slabs, curbstones, drainage systems, bridge-building elements, cross-beams, house walls, prefabricated garages or tower segments for wind-powered generators.



Precast element and prefabricated product industries

High storage capacity

The Betomat's generous storage capacity, with up to twelve compartments, is a major advantage for these industries.

Efficient mixers

The mixing platform is of ample size to accommodate either one or two intensive mixers, or three in special circumstances. A second mixer is often invaluable for pre-mixing when producing concrete products. Liebherr supplies intensive mixers that are ideal for the most varied tasks. Even the smallest 0.5 cu. m RIM-M ring-pan mixer is available with an agitator system for excellent mixing results.

Fully integrated into concrete product manufacturing

Liebherr is the single-source supplier for the entire concept, from aggregate loading to delivery of the freshly mixed concrete to the production areas. Many years of experience in this field are a guarantee of success in the production of precast and prefabricated concrete articles.

The requirement indicating point

The grade and quantity of concrete needed can be called up with the aid of the precisely where delivery is to take place.

"Just-in-time" concrete production

When all systems are perfectly coordinated, reliable production and delivery of concrete precisely where and when it is needed presents no problems: loading aggregates, calling for deliveries, concrete mixing, movement of the concrete to the production area, cleaning the batching plant and skip lader tracks, transferring residual concrete and cleaning water to the recycling unit, recycling residual concrete and re-use of the raw materials thus obtained.



**Powerful with
many options**



The Betomat in detail

The ideal mixer for every task

Based on the successful ring-pan mixer type R, there are now two further versions with additional agitators for higher quality grades of concrete. The Type RIM is supplied with either one or two mechanically-driven agitators (RIM-M / RIM-D). The Type RIV with independent, variable speeds for various mixing tools meets the highest requirements in the production of high-performance concretes. Liebherr's twin-shaft mixers DW are of extremely robust construction and intended for high output rates.

Litronic MPS microprocessor control

Litronic MPS is an open-system concept using industrial standards on a broad basis. This ensures that new hard- and software developments can be incorporated into the system without difficulty. Every step in the process is clearly visualized on the computer screen. Interfaces are provided for links to existing data processing systems.

Litronic FMS moisture measurement

For precise determination of the moisture content of aggregates, Liebherr uses intelligent, capacitive-action sensors developed in-house.

Litronic TMS temperature measurement

Liebherr supplies its Litronic TMS system for contactless measurement of the temperature of the material in the mixer.

Two discharge tracks

The version with two discharge tracks is available with either one or two intensive mixers. It permits one truck mixer to be filled and another driven into position ready for filling. Two gates are always provided on each intensive-action mixer, so that both mixers can supply either truck filling point.

The machinery platform

Ample space is provided on the machinery platform for access to the mixer inlets and other components, so that cleaning is an easy matter.

Rotary distributor

The individual aggregate silo compartments are filled from a rotary distributor or, on larger installations, a rotary distributor belt.

Weighing systems

The cement, water, aggregate and admixture weighers all supply precise measured values to the control system. All weigher systems are suitable for calibration.

Environmental protection

To avoid contamination of the air in the vicinity of the batching plant with dust, Betomat plants have positive mixer dust extraction and the cement silos are fitted with air outlet filters.

Winter operation

Thanks to a precisely coordinated heating system for the plant and the additive storage facilities, together with heat-retaining paneling, operation in the winter season can proceed.

Dewatering system

As an option, a dewatering system can be installed under the batching gates. Water from the aggregates is trapped and conducted away downwards by a channel system.



Liebherr mixing systems

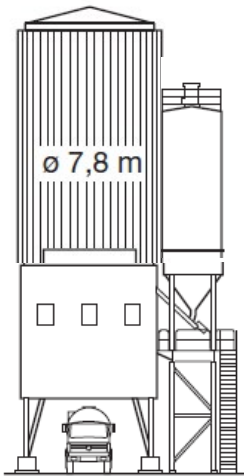


Litronic MPS microprocessor control

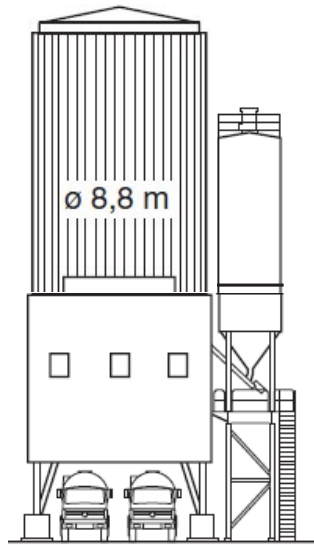


Two discharge tracks

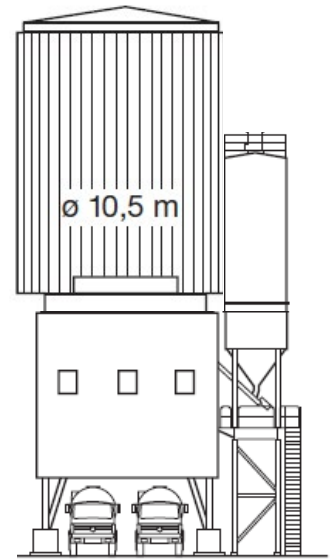
Vertical batching plant - Construction of a Betomat tower



Betomat 3



Betomat 4



Betomat 5

Technical data

Type	Height m (appr.)	Aggregate volume m ³	Compartments max.
Betomat 3	21.0	220	10
	22.5	290	10
	24.0	350	10
	25.5	420	10
	27.0	490	10
Betomat 4	24.5	345	10
	26.0	430	10
	27.5	515	10
	29.0	600	10
	30.5	685	10
Betomat 5	24.5	470	12
	26.0	600	12
	27.5	730	12
	29.0	860	12
	30.5	990	12

Bucket elevator or
belt conveyor

Multi compartment
aggregate silo

Batching devices

Additive weigher

Aggregate weigher

Water weigher

Mixer system as twin shaft
or ring pan

Discharge hopper and truck
lane

Rotary distributor
for aggregate storage
in silo compartments

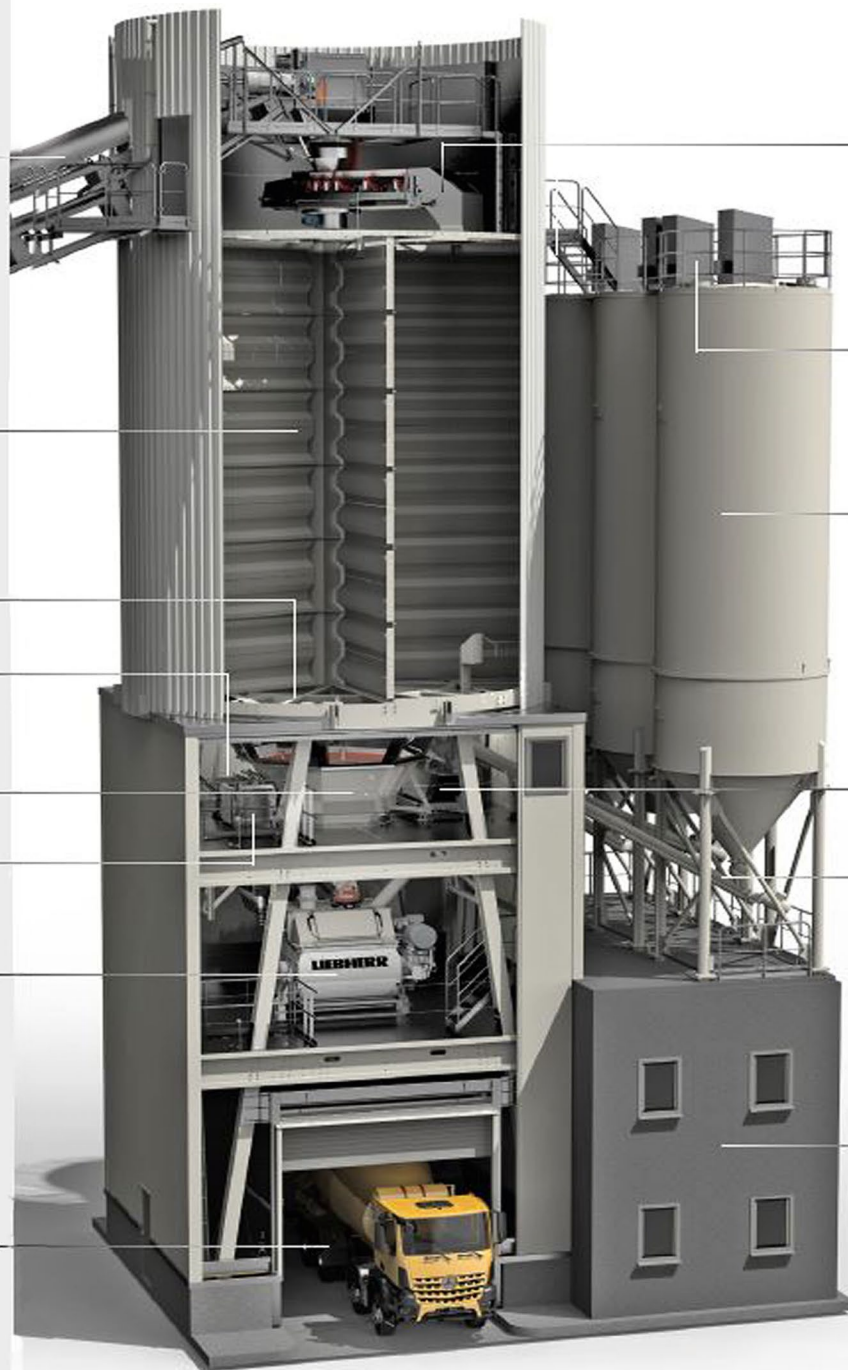
Exhaust air filters for
cement silos

Cement silos

Cement weigher

Cement screw

Control room



We are here for you!

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Concrete pumps



Mixing plants



Truck mixer



Conveyor belts



Measuring technology



Mixing systems



Concrete recycling system

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