

SIMEM

TOWER BETON - VERTICAL BATCHING AND MIXING PLANTS

CONCRETE BATCHING PLANTS

SIMEM

TOWER BETON



Meeting the demands of customers needs and applying the most modern technology is what SIMEM focused on while designing and constructing the TOWER BETON range of batching plants.

As a result of our Research & Development Department partnering with our customers, we were able to optimize their needs with the SIMEM TOWER BETON series, which is extremely versatile both in terms of overall dimensions, as well as storage capacity and output.





ENVIRONMENTAL PROTECTION

In order to utilize the resources maximum potential, it is important to pay close attention to production factors like raw materials, manpower and facilities. It is equally important to take into consideration the environmental factors, which significantly depend on the production process. Making a plan and investing correctly from day one, can improve the environmental impact given that a good ecological solution often equals a more efficient production.
There are three main ecological improvements that can enhance the production process of concrete:

- **noise reduction**: noise reduction is achieved by enclosing the plant with insulated panels;
- **dust elimination**: dust filters installed on the weighing hoppers and the mixer allow for a full recovery of the dust in the mixing cycle;
- **recycling of waste water and washing of vehicles**: SIMEM BETONWASH is the solution for reclamation of excess concrete and slurry water from cleaning of trucks, pumps, mixer, buckets, etc; SIMEM WATERWASH is an integrated system of clarification and neutralization of recycled water; the small amount of sludge extracted by sedimentation may possibly be used again to correct the grading curve of the aggregates.





INNOVATION

The SIMEM TOWER BETON series of vertical batching and mixing plants represent the state of the art technology for industrialized concrete production. The design of the Beton Tower's square frame is innovative and includes many improvements from the traditional cylindrical frame like:

- hot dip galvanization of all support structures and aggregate bins, reducing maintenance costs and increasing lifetime of the plant;
- optimal positioning of dosing gates under aggregate bins, reducing wear considerably compared to a cylindrical tower;
- a flat surface on the outside allows for a wide selection of claddings to protect against climate, as well as important requirements from authorities to meet architectural and environmental guidelines.



SPACE OPTIMIZATION

The SIMEM TOWER BETON series' structure of the vertical batching and mixing plant is dimensioned to support the aggregate storage bins and can be optimized in terms of space for:

- storage of clean water and additives tanks;
- electrical panels;
- concrete laboratory;
- a warehouse for spare parts and equipment storage for efficient management the plant.



MODULARITY

Like all SIMEM batching and mixing plants, SIMEM TOWER BETON plant has a modular design, which gives it great flexibility so that the plant meets the clients specific needs, ready-mix or precast concrete.
The structure of TOWER BETON is made up of 3 floors connected by an external staircase:

TOP LEVEL

Aggregate loading system: having the necessary space, it can be provided with belt conveyor or vertical elevators in order to minimize the plant footprint.
The aggregate storage capacity can range from 130 and up to 600 m^3, with a subdivision from 4 to 8 fractions, adaptable in proportion to mix design in order to exploit the entire volume of storage.

MIDDLE PLAN

Dosing equipment: aggregate, cement and powders, water and additives. This system may adopt different devices depending on the aggregate type and on the requested precision: pneumatic operated gates, dosing belts or vibrating feeders can be combined with each other to maximize speed and accuracy of the dosing. This is in particular useful in precast plants.

LOWER FLOOR

Mixing platform: can be equipped with one or two mixers, planetary or twin shaft mixers, depending on the type of concrete and on the required production capacity; it is also possible to use multiple weighing systems working in parallel with two mixers to reduce the cycle time.



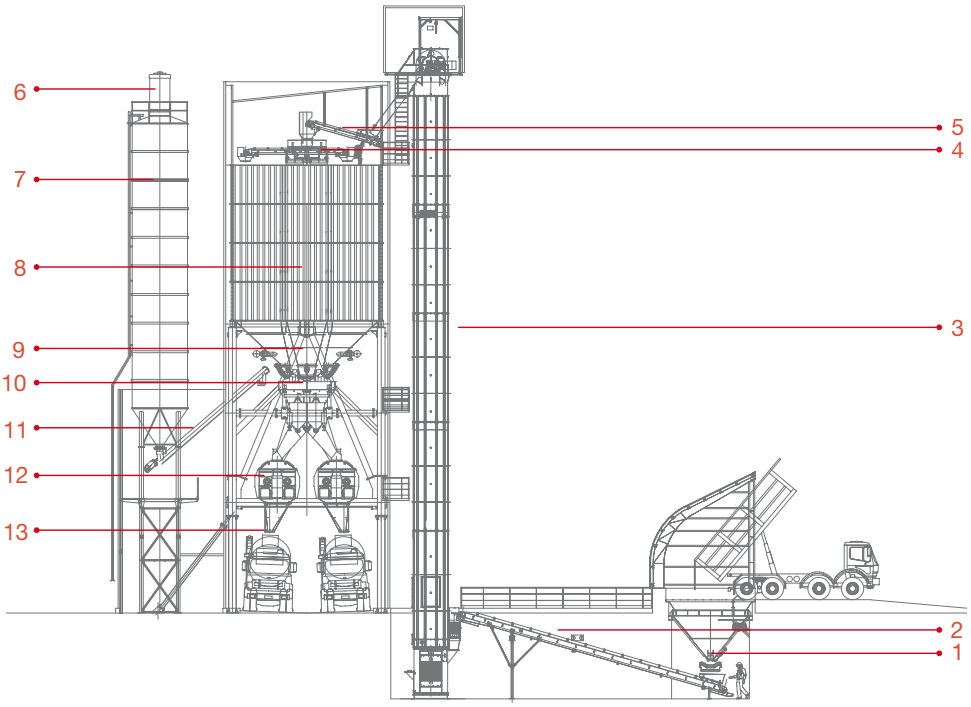
TECHNICAL FEATURES

MODEL TOWER BETON	T75-4	T75-6	T88-6	T88-8
Dimensions (LxL) m.	7x5	7x5	8x8	8x8
One mixers configurations (up to)	1 x MSO 6000	1 x MSO 6000	1 x MSO 14000	1 x MSO 14000
Two mixers configurations (up to)	XENTRIX X750 + XENTRIX 2000	XENTRIX X750 + XENTRIX 2000	2 x MSO 6000	2 x MSO 6000
Aggregates storage (m^3)	130÷350	130÷350	430÷550	430÷550
Aggregates compartments (nr)	4	6 (proportional)	6 (proportional)	8 (proportional)
Cement types (nr)	1÷4	1÷4	1÷6	1÷6
Voltage	400V ÷ 50Hz (or alternative)			

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CONSTRUCTION PLAN

1. Aggregates receiving hoppers
2. Vertical elevator or conveyor belt
3. Access stair to aggregates distributor floor
4. Aggregates distributor belt
5. Cement silo dust filter
6. Aggregates bins
7. Cement silos
8. Aggregates dosing devices
9. Cement weighing hopper
10. Cement screw conveyors
11. Concrete conveyor chute



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