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Horizontal Z-arm dough mixers LASER ZM

Laser S.r.l. (Italy) · bowl 500–1050 l · dough for stamped and rotary biscuits



The bowl with the Z-shaped mixing tool and the control panel on board the machine — photo by the manufacturer Laser S.r.l.

Application

High-speed horizontal mixers for soft and stiff dough — above all dough for stamped and rotary biscuits. The machines are designed for industrial volumes and for work as part of a line: the lower frame lets the dough be discharged straight into the feeder of the next machine.

How it works

The ingredients are loaded into the bowl by hand or automatically from a dosing system. Mixing takes place inside a shaped stainless steel bowl in which a Z-shaped tool with a horizontal axis rotates. Mixing runs at two fixed speeds with an automatic change between them according to a programmed cycle. The finished dough is discharged by tipping the bowl about its horizontal axis.

The range

Model	Main data
ZM 500	bowl 500 l · dough up to 250 kg · 35/70 rpm · 4000 kg · 14–22 kW · bowl tipped hydraulically, angle 135°
ZM EVO1 500	bowl 500 l · dough up to 250 kg · 35/70 rpm · 4000 kg · 14–22 kW · bowl tipped by a geared motor, angle 135°
ZM 800	bowl 850 l · dough up to 350 kg · 30/60 rpm · 6000 kg · 40 kW · 2600 × 2450 × 1500 mm
ZM 1000	bowl 1050 l · dough up to 500 kg · 30/60 rpm · 7000 kg · 50 kW · 3000 × 2450 × 1600 mm

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ZM 500 and ZM EVO1 500



The ZM EVO1 500 — photo by the manufacturer Laser S.r.l.

Parameter	Value
Dough processed	for stamped and rotary biscuits
Dough output	up to 250 kg for stamped and up to 300 kg for rotary biscuits — depending on the properties of the dough
Bowl volume	about 500 l
Mixing tool speed	35 / 70 rpm, two speeds with automatic change
Dimensions (W × L × H)	1.2 × 1.28 × 2.1 m
Bowl discharge height	0.7 m
Bowl tipping angle	135° — quick discharge
Net weight	about 4000 kg
Installed power	about 22 kW

The difference between the versions

Both machines have the same 500 l bowl, the same mixing tool, the same power and the same 135° bowl tipping angle. The difference is in the discharge drive: on the ZM 500 the bowl is tipped by a hydraulic piston with an electric pump at a fixed speed, on the ZM EVO1 500 by a mechanism with a geared motor. For the EVO1 a reinforced 37 kW motor and inverter speed control are also available.

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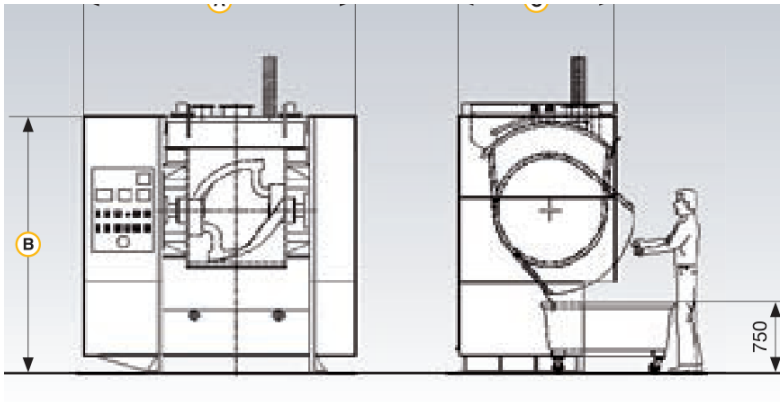
ZM 800 and ZM 1000

The larger models of the range, for big volumes. Thorough mixing is ensured by the particular shape of the cast mixing tool. The protective lids and casings, entirely of stainless steel, come off easily for daily cleaning and servicing. Loading is automatic from an ingredient dosing system or by hand. Discharge is by tipping the bowl through 135° by a mechanism with a geared motor.



The ZM 800 — photo by the manufacturer Laser S.r.l.

Parameter	Value
Bowl volume	ZM 800 — 850 l · ZM 1000 — 1050 l
Dough output	ZM 800 — up to 350 kg · ZM 1000 — up to 500 kg
Mixing tool speed	30 / 60 rpm, two speeds with automatic change
Dimensions A × B × C	ZM 800 — 2600 × 2450 × 1500 mm · ZM 1000 — 3000 × 2450 × 1600 mm
Bowl discharge height	750 mm
Bowl tipping angle	135° — quick discharge
Net weight	ZM 800 — 6000 kg · ZM 1000 — 7000 kg
Installed power	ZM 800 — 40 kW · ZM 1000 — 50 kW



Dimensional drawing of the ZM 800 / ZM 1000, dimensions in mm

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Materials and execution

Unit	Material
Frame	painted carbon steel RAL 9007
Mixing bowl	stainless steel
Mixing tool	stainless steel, Z-shaped, horizontal axis
Parts in contact with the dough	stainless steel / food-grade plastic
Lid	painted carbon steel RAL 9007
Lid gaskets	white food-grade plastic to FDA standard
Casings and guards	stainless steel
Doors	stainless steel

Drives

The mixing tool — a two-speed electric motor. Tipping of the bowl — hydraulics with an electric pump at a fixed speed (ZM 500) or a mechanism with a geared motor (ZM EVO1 500, ZM 800, ZM 1000).

Standard equipment

— supporting frame and bowl for mixing the dough;
— electrical cabinet on board the machine with timers setting the running time and automatic change to high or low speed;
— manual loading of the ingredients; the lid is prepared for automatic loading of dry and liquid ingredients;
— built in accordance with the hygiene and safety standards.

Options

— double-walled bowl for circulating cold water;
— electrical panel in IP65 execution;
— stainless steel casings;
— lowered frame for discharging the dough straight into a feeder;
— lid prepared for automatic loading of the ingredients;
— PLC for entering the mixing times and different recipes;
— speed control by an inverter;
— SEW EURODRIVE motor; for the ZM EVO1 500 — a reinforced 37 kW motor.

Supply and service

Delivery, installation and commissioning, staff training, warranty and post-warranty service, spare parts. Packing — a wooden crate. The model and the equipment are selected for the customer’s recipes and volumes.

The data are indicative; the manufacturer reserves the right to change them without notice. The exact configuration is agreed when ordering.