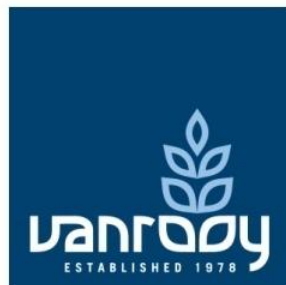


ESCHER

m i x e r s



MR Professional – Removable Bowl Range: The Industrial Mixer for all Bakeries



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ESCHER MIXERS – MR-Professional line

Main Features

Transmission of the tool	With belts with Premium drive system.
Transmission of the bowl motion	Patented conic group for bowl locking and motion. Transmission to the conic group with Poli-V belt (suitable to industrial use).
Machine frame <i>New concept and design of the frame</i>	<ul style="list-style-type: none"> • Steel painted with epoxy powder paint. • Machine can be built partially or entirely with stainless steel inox AISI 304 (or other types on demand). • Possibility to coat the mixer with stainless steel plates. • Frame with a spacious interior. • Four adjustable feet with a clearance of 7.5 cm from the ground.
Bowl	<ul style="list-style-type: none"> • Stainless steel bowl in AISI 304. • One speed with 14 RPM – two speeds or varying on request. • Option available for a Frequency Inverter (VARIO_DRIVE System) to vary the bowl and tool revolutions (RPM) during working cycle.
Mixing tools	<ul style="list-style-type: none"> • Spiral in AISI 431 two speeds (<i>Standard</i>). • Breaker bar in AISI 431 (<i>Standard</i>). • 8-shaped spiral in AISI 431 (<i>Option</i>). • Beater for pastry in AISI 304 (<i>Option</i>). • Two speeds for about 110/220 RPM. • Option available for a Frequency Inverter (VARIO_DRIVE System) to vary the tools and bowl revolutions (RPM) during working cycle. • Different ratios of RPM available thanks to the Premium Drive system. • Scraper available as an option in AISI 431 and nylon. • Quick Change system for changing the mixing tools.
Controls	<ul style="list-style-type: none"> • Control panel easily programmable and accessible positioned at the side of the mixer. • Manual controls with two electronic timers with digit read-out and manual regulation (1st 0-10 min 2nd 0-20 min). • Automatic cycle. • Touch screen with PLC for recipes control (<i>Option</i>). • Sensors on the bowl lid stop the machine when head is lowering or if opened during working cycle. • IP65 electrical box positioned at the side of the mixer. • Hydraulic part is situated inside the machine. • Oil tank with level indicator is external.

Special Features

Bowl locking and motion (Patented)	Unique and compact solution for locking and turning the bowl through a conical system. System allowing the highest control of the bowl rotation increasing the dough quality. Lowest maintenance guaranteed since the bowl transmission has no wear –out. Constant RPM ratio between the Tool and the Bowl
Head lifting system	Designed to contrast any vertical movement of the head during the kneading process. This maintains a constant distance between the mixing tool and the bowl allowing a higher final dough quality and a constant lamination of the dough.

**** For Variable Control Drive System for spiral and bowl speeds see page 7**

Main Advantages – MR-Professional

- **Suitable to all type of doughs including stiff dough**
- **Less power consumption** – less energy cost
- **Maintenance reduced to a minimum** – less cost to run the mixer – higher ROI
- **Performance and maintenance** – The MR Professional mixers are designed without motor gears and friction wheels, therefore greatly reduce the wear and tear and regular maintenance required vs. other mixers of this type on the market. This reduces the maintenance and spare parts costs for the life of the mixer.
- **Easier / faster cleaning** compare to traditional mixers
- **Sanitation** – easy to clean due to the design. Also no oil above mixing area
- **Better water absorption** – *based on regularity of Bowl RPM*
- **No friction wheel** for the bowl transmission:
 - Movement is guaranteed by a mechanical system which allows constant kneading;
 - **No more bowl slips**, typical of the friction wheel;
 - **Constant RPM of the Bowl** even when fully loaded and the tool rotating in second speed;
 - Bowl drive and locking system are **maintenance-free**.
- **No Motor-Gear**
- Mixer is **well sealed**: no gaps significantly reducing dust or flour into the mixer.
- Suitable to humid ambience.
- **Heavy-duty** machine with powerful motor;
- The frame is made from 15mm thick steel plate for increased torsion rigidity;
- All components in contact with food are in stainless steel;
- Unique Premium drive system for the Tool transmission.

Premium Drive System

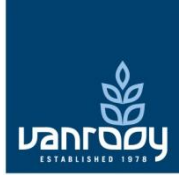
Principle of Escher Premium Drive System compared to standard drive system:

- A typical spiral drive system has the small diameter motor pulley delivering power to a large diameter spiral pulley. With the close proximity between the two pulleys the angle at which the V belts make contact with the motor pulley is very open and therefore only a small percentage of the motor pulley is in contact with the V belt, or around 5cm of belt length.
- The **Premium Drive System** uses a set of reduction pulleys to achieve similar overall gearing but all the pulleys are a lot larger diameter with reduced V belt angle and therefore the V belts have a large contact surface area, around 20cm of belt length.

Benefits of Escher Premium Drive System:

- The **Premium Drive System** has a dual belt drive mechanism whereby the drive is split between two sets of drive belts with all pulleys getting maximum surface area contact and resulting in **25% more power** being delivered to the spiral tool.
- The Premium Drive System is specifically engineered for **stiff dough's** and **intensive use**. **Bowl overloading** is easily handled: customers are used to overload the bowl in order to increase the production per hour; with Premium system the mixer can easily mix without compromising the quality of the dough and the machine itself. **Save the motor**: the two step transmission allows the motor to work homogenously without slowing down or shocks. Less RPM of the spiral (1st speed: 107 / 2nd speed: 215) and 14 RPM only for the bowl guarantee a **better and cooler dough** (RPM are also adjustable according to customer's dough needs).
- **No belts slipping** when mixer is under stress. Consequent of this is a longer life of the belts.





Technical Data

MODEL	DOUGH			BOWL			MACHINE				MOTOR		SPEED	
	MACHINE CAPACITY	MAX. FLOUR	WATER*	VOLUME	DIAMETER	HEIGHT FROM GROUND	LENGTH	WIDTH	HEIGHT	WEIGHT	SPIRAL I/II SPEED	BOWL	SPIRAL I/II SPEED	BOWL
	kg	kg	lt	lt	mm	mm	mm	mm	mm	daN	kw	kw	rpm	rpm
MR80 PROFESSIONAL	80	50	30	154	680	996	1775	904	1470	1100	3/6.25	1.1	94/185	13
MR120 PROFESSIONAL	120	75	45	181	750	996	1815	939	1470	1150	3/6.25	1.1	94/185	13
MR160 PROFESSIONAL	160	100	60	270	850	1046	2001	1027	1500	1250	7.5/12.5*	1.1	107/215	13
MR200 PROFESSIONAL	200	125	75	310	910	1046	2031	1060	1500	1390	7.5/12.5*	1.1	107/215	13
MR240 PROFESSIONAL	240	150	90	380	1000	1066	2053	1102	1500	1500	9/15.0	1.1	107/215	13
MR300 PROFESSIONAL	300	185	115	450	1055	1079	2111	1130	1509	1800	11/18.0	1.5	107/215	13
MR350 PROFESSIONAL	350	225	125	500	1100	1128	2411	1256	1774	2210	11/18.0	2.2	92/188	13
MR400 PROFESSIONAL	400	250	150	600	1200	1128	2461	1306	1774	2300	13/23	2.2	92/188	13
MR500 PROFESSIONAL	500	300	200	700	1300	1128	2561	1356	1774	2400	18.5/26	2.2	92/188	13

*Higher rating motor available 9/15Kw
 Figures indicated above are intended with 400V/50Hz/3ph



ESBL Bowl Lift



Options:

- Extra bowls available
- ESBL bowl lift – output on table
- ESBL bowl lift – output on standard divider 1.90m
- ESBL bowl lift – output on standard divider 1.90m to 3m



Variable Control Drive System for Spiral and Bowl Speeds

Continuous speed variation system for the Tool and Bowl (RPM bowl guaranteed – No Bowl Slips)

The tool and bowl speeds are variable and can be programmed separately. Optimum mixing time and mixing intensity enable maximum flexibility and maximum dough and product quality.

Ensures:

- Precise and accurate dough development for specific product types
- Complete control of mixing parameters throughout the duration of dough development
- Ideal for Artisans who require this control and flexibility

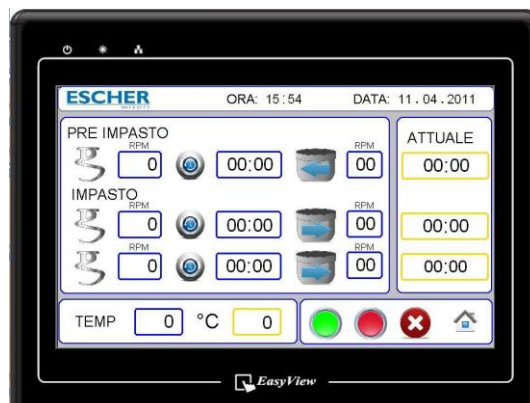
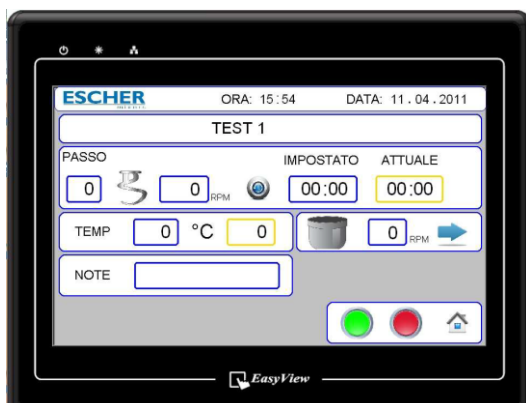
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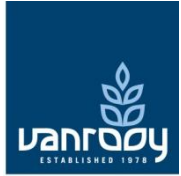
- Tool speed (RPM): min 60 – max 240 circa – for BAKERY Products
- Tool speed (RPM): min 60 – max 300 circa – for PASTRY Products
- Bowl speed (RPM): min 8 – max 18 circa
- Ratio Bowl/Tool (RATIO): min 1/3 – max 1/37.5 (one revolution of the bowl min 3 or max 37.5 revolutions of the tool).
- Tool motor frequency inverter: inverter tri-phases up to 26 kw for MR-500
- Bowl motor frequency inverter: inverter up to 2.2 kw for MR-500

Touch-Screen:

Touch screen with PLC available:

- Control recipes with pre-set speeds. Password protected system.
- The touch-screen is also equipped with a Maintenance Program for the mixer: all main parameters are checked and basic maintenance operations are reminded when required by a sequence of pictures.





Sanitation

The Patented Locking System can be executed in the "wash-down version" which allows direct jet-washing of the frontal part of the mixer. The mixer can also be supplied in full stainless steel version.

