



IMER International S.p.A.
Sede legale, Amm.va e Comm.le
Via Salceto, 53-55 – 53036 Poggibonsi (SI) – Italy
Ph.: +39 0577 97341 – Fax: +39 0577 983304
E-mail: info@imergroup.com – Web site: www.imergroup.com

Partita IVA IT 00678440520
Cap. Soc. €4.766.064,96 i.v. – CCIAA Siena 83711
Iscr. Trib. Di Siena 5931 vol. 7692 – Exp. M. SI 000919

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n° IT02/0429.01

Syntesi drum mixer with electric motor

Starting from the beginning Imer International always pays attention on new products thinking about how to improve operators' safety and products performance.

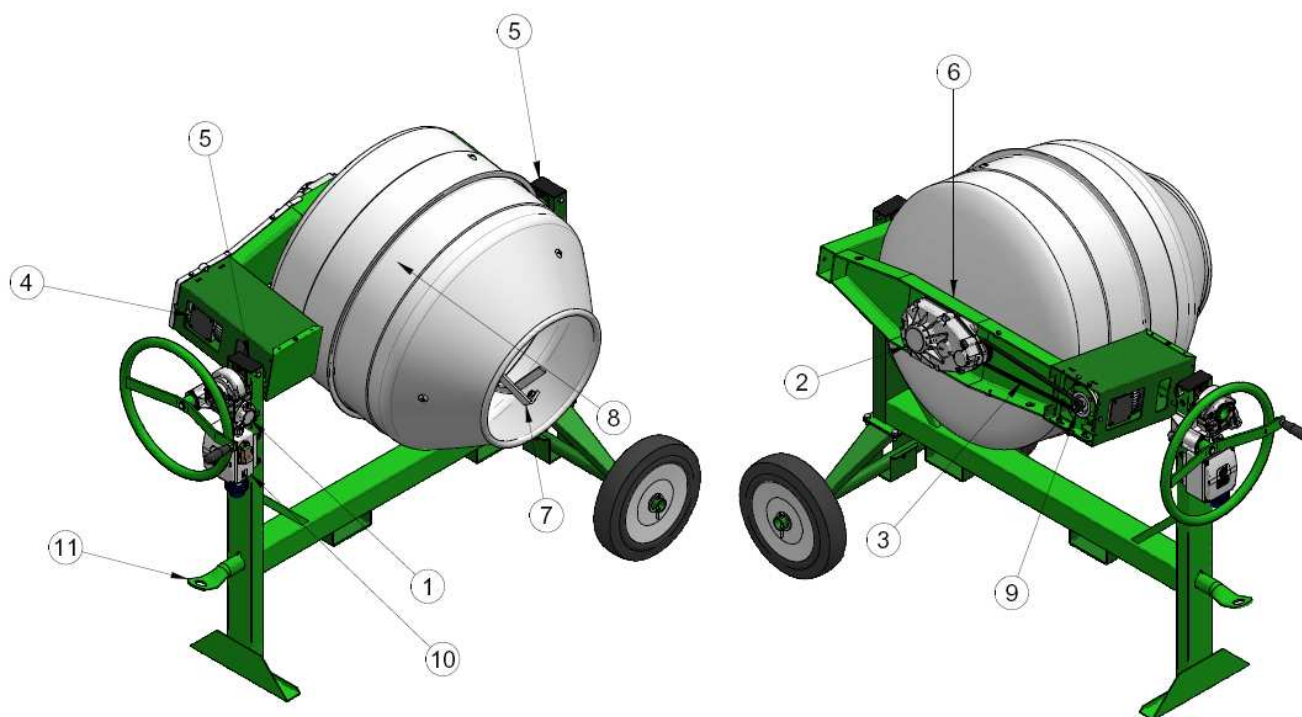
Since the 1962 Imer International is producing drum mixers and during this time the company realized many different models always paying attention to innovation and quality and safety improvements.

Thanks to this philosophy in the year 2000 Imer International realized and patented the model Syntesi, that is a summary of experience and know-how of over 50 years of activities.

The main strengths of this product are: compactness, noiseless, safety and low power consumption.

The Syntesi's Project has been realized in the factory located in Rapolano Terme, Siena-Italy and it is today one of the most important products range still in production in the Italian factory. The production line is fully automatized and assembly is made from qualified staff. Since the year 2000 We proudly produce over half million of units of Syntesi, which are mixing mortar and concrete all over the World.

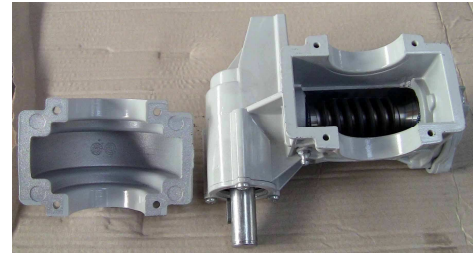
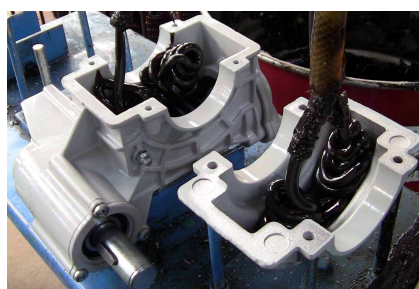
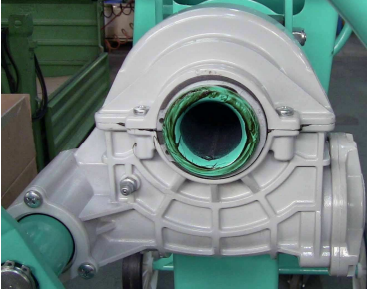
MAIN FEATURES



1 – Tilting Gearbox:

Thanks to the gearbox it is easy to tilt the drum, even if it is full of material by using only one hand . The gearbox allow to stop the drum in any position, avoiding any accidental overturning. So the gearbox increases the safety and eliminating all the possible risk typical of traditional machines. Inside the gearbox there is grease for the lubrication of gears and also to protect them against water or dust. It is possible to refill the grease through the grease-inlet located in front of the gearbox.

Note: the different inclination of the drum is important to archive a good mixing mixture for different type of materials: for standard concrete, the position should be approximately 45°; driest materials, like floor screed, inclination should be around 60° position; more liquid materials, like fine mortar, inclination should be around 0°(referring to the ground 0°).



2 – Drum Gearbox:

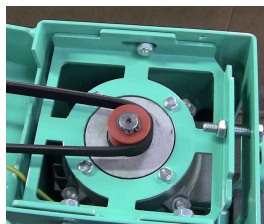
The drum Gearbox performs the rotation of the the drum: the connection between drum and gearbox is realised by by a conical fitting between the conical shaft of the gearbox and the conical housing in the drum. The gearbox is a for life sealed gerboth with helicoidal toothed gears in oil bath. The gearbox architecture used by Imer in several products in the last 30 years gives many advantages: low power required, noiseless, no maintenance that are key points on strength on the jobsite application.

The gearbox is fixed to the mixer frame by 4 sturdy screws,for easy mounting and dismounting. The Gearbox is linked to the electric motor through a drive belt.



3-Transmission Belt:

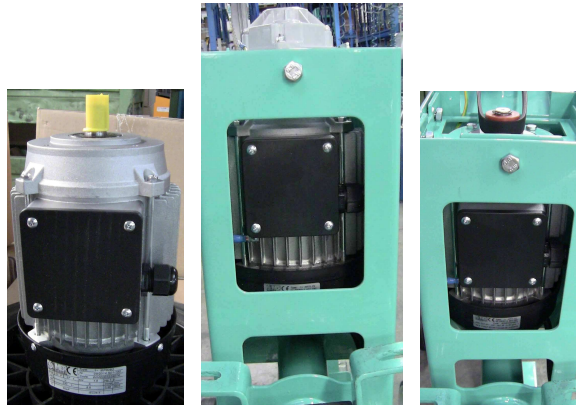
The transmission belt of the motor is poly-V belt type, this kind of belt commonly used on automotive applications has high strength and longer life compare with traditional belts. The belt is placed inside the drum frame and the housing is closed with a plastic cover to protect is from sand and dust.



4-Cooling openings for electric motor:

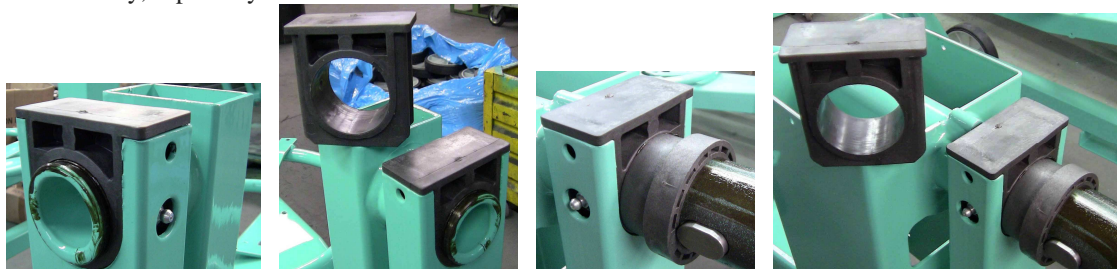
The electric motor is placed inside the drum frame to protect it from accidental impacts. The lateral openings are designed to perform a perfect motor cooling in any conditions.

The electric motor is equipped with an overheating sensor that stop the machine in case of motor overheating avoiding any damage of the motor itself.



5- Rotation Bushes:

The main drum frame let the tilting of the drum and are made of reinforced fiber glass polyamide with low friction additive. The square shape bushing are additionally equipped with a grease inlet. They are high resistance against abrasion, ensuring reliability and durability, especially in case of continuous use.



6-Conical connection between Drum and Gearbox:

The conical coupling between the gearbox and the drum ensures a strong connection between the gearbox and frame and make the drum assembly and disassembly an easy operation. The pin on the gearbox shaft is a reference for the correct assembly position, it has to be completely inside the drum keyhole housing.



7-Bolted Mixing Paddles:

The mixing paddles are bolted on the drum. This allows an easy replacement.

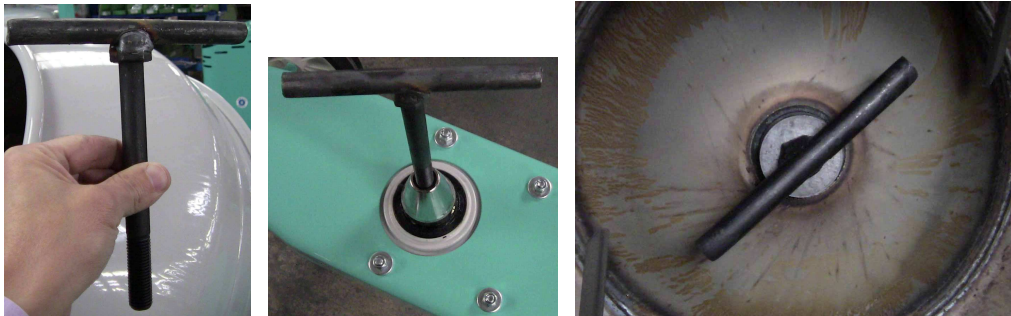
Furthermore the bolted paddles compare with the welded ones avoid drum crack due to the local hardening caused by the welding operation.

The shape & geometry of the paddles are specifically designed with the drum shape and rotational speed to allow a good mixing of each type of material.



8-Special T screw for Drum assembly:

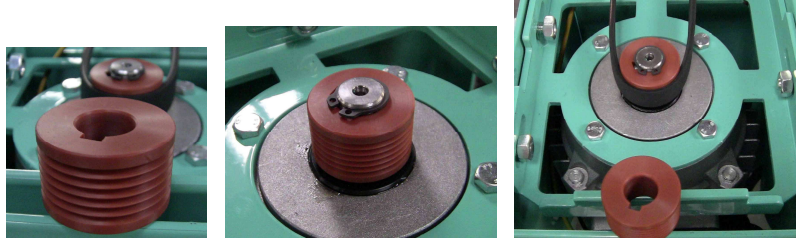
A simple T screw is the only fixing element to make the correct coupling between the gearbox and the drum. The T shape screw let the operator to disassembly the drum with just a hammer even in case of dried material around the coupling. By tightening the screw a perfect adhesion between the male cone of the gearbox and female cone is performed and the coupling assures the power transmission and perfect support at the heavy weight of the material inside the drum.



9-Insulating Pulley:

A special polymer made pulley is mounted on the electric motor shaft.

The pulley protects the belt from the heat generated from the electric motor and allows the mixer to work in the most extreme temperature conditions.



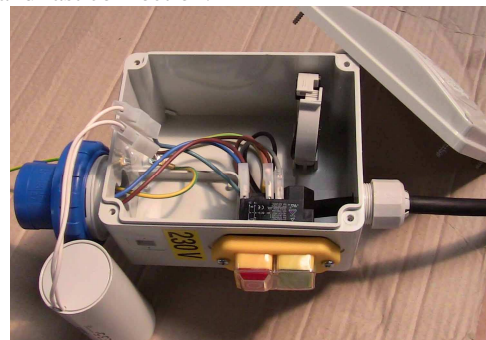
10-Electric Box:

The electric mixers are equipped with a water and dust proof electric box (IP55). All electrical components are fitted inside this box (capacitor, switch, connectors).

The electric box is positioned below the tilting gearbox in front of the operator for an easy operation and to increase the operators' safety. In case a sudden stop of the machine is required the operator is close to the main ON-OFF switch and the OFF red button stops the machine immediately.

The mixer is equipped also with a system that prevents the automatic restart of the machine in case of sudden power failure. If there is a power failure the machine shuts off and only the operator can switch it again by pushing the green ON button of the main switch.

The power connection plug is realized in the same electric box for an easy and fast connection.



11-Telescopic Drawbar:

Telescopic drawbar makes easy to handle the machine, or tow the machine on job site at low speed. If the bar is completely outside an excellent balance is obtained and the machine can be moved easily by one operator. Please note that the machine has to be moved empty.



12-Transportation of the machine:

To move the machine manually, extract the drawbar and use it as a lever for lifting (ref.A).

To carry the machine with a fork-lift truck, engage the forks in the 2 housings (ref.B).

For lifting the machine with a crane it is necessary to tilt the drum with the inlet drum opening down and lifting the machine by hooking it in the arm holes (ref.C).

