

MAINTENANCE OF INDUSTRIAL BLENDER - MIXER



Experimental capabilities

- **Functional and structural Analysis**
- **3D Modeling**
- **Settings the concentricity of the shaft of the mixer with respect to the tank**
- **Setting of the clearance between the blades and the tank**
- **Setting of the guide geometry of the hatch**
- **Diagnostics and replacement of failing components (motor contactor, glands packing , pneumatic distributor of hatch opening)**
- **Format change: replacing the ribbon shaft with bladed shaft, repackaging separator screener**
- **Ameliorative maintenance: change of motor technology, integration of new functionality (integration of action chain to ensure the automatic drainage of the system)**
- **Heavy handling (tank flanges, shafts, gear motor) requiring 2 or 3 slings**

MMR300



Operating principle

This machine is used in the industry to prepare the mixtures of powders, granulates, or pastes in order to homogenize the texture, the temperature

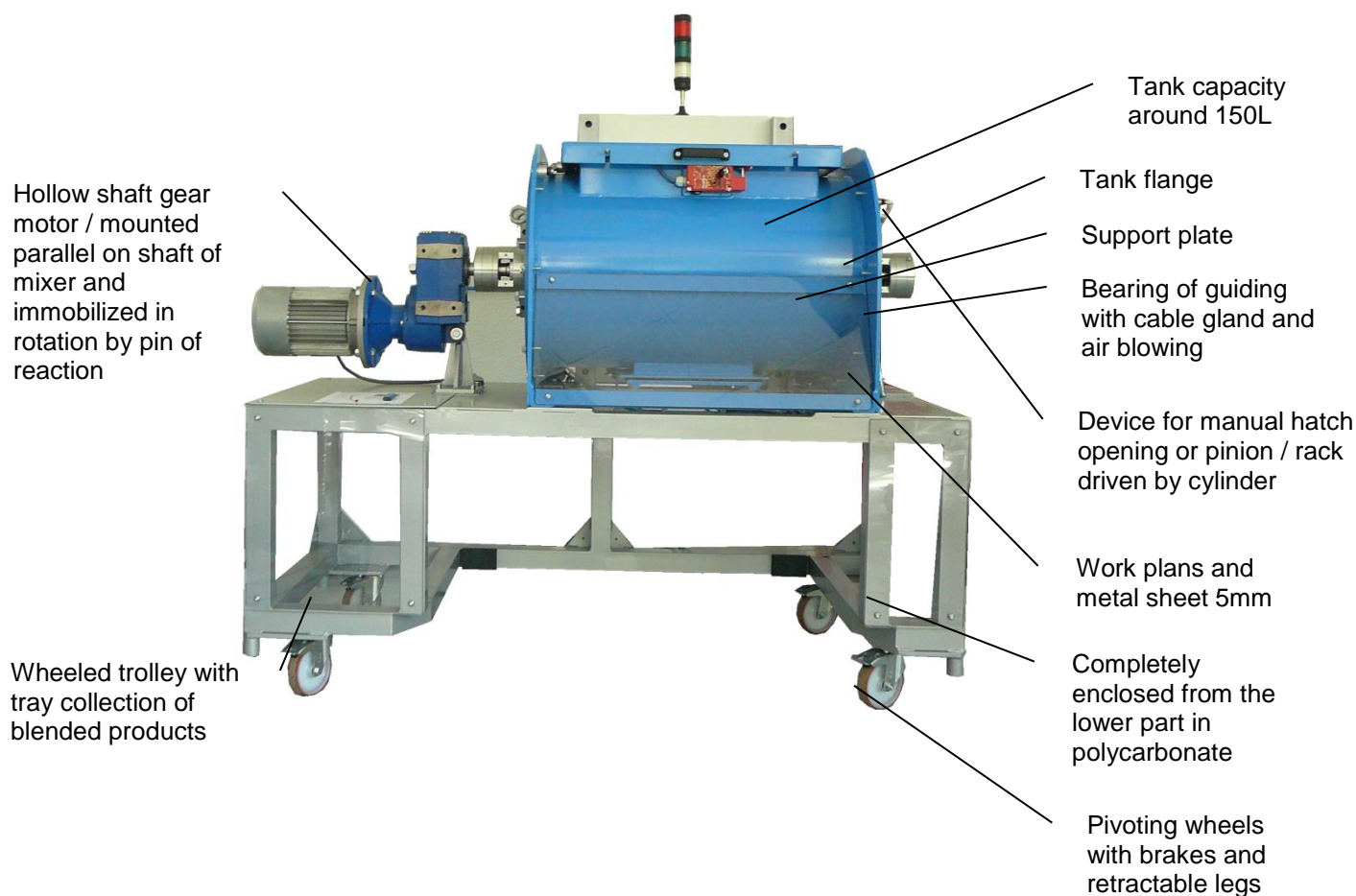
The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises.

The manufacture of this equipment complies with the European standard for machinery manufacturing.

This equipment can be used alone or with other compatible equipment from our range (see last section of this document).

Illustrations Technical details



MMR300



Technical description of the basic system (included / ref MMR 300)

- **A mechanically welded structure** on swiveling braked wheels and **legs M12**
- **A capacity tank 150L in sheet metal** (5mm thickness except plate tank support sheet metal thickness 10mm)
- **Bearings** including:
 - **Double-row angular contact ball bearings**, mounted on expandable sleeve
 - **Cable gland**
 - **Ring for air blowing** to prevent the introductions of particles in sealing tresses
 - **Lateral ports** for controlling the pressure on the packing rings
- **Draining hatch** in the lower part set in motion by the torsion bar and guided by self-aligning bearings.
- **Gear motor with hollow shaft** and parallel shafts of **2.2kW to 60tr/ min** for motorization of the rotor
- **1 shaft with double ribbon** approximately 600m diameter
- **4 actuators screw nuts** modules on each tank flange + 1 kit with {gauge + comparator} for adjusting the concentricity of the rotor and the tank.
- **1 main electrical cabinet** also acting as **control panel**. Includes industrial connectors harting type allowing to perform the system control by deported cabinet (available as an option). The main turntable can also receive different turntables of motor control (See below)

The opening mechanism of the drainage hatch

- **1 pneumatic cylinder diameter around 100mm stroke**
- 1 Rack
- 1 kit of pressure rollers
- 1 pinion



MMR300



kits and mechanical sub-systems:

Hatch screener (ref MMR 311):

- Perforated hatch screeners hatch mountable ref MMR 300 ensuring the function of screener
- Establishment of this hatch on the machine allows the realization activities of equipment reconversion (reversible transformation)
- mixer <-> screeners)



Kit rotor with blades (ref MMR 312)

Enhances the efficiency of mixing . This kit consists of:
A rotor equipped with 6 adjustable blades
Fits in place of the ribbon rotor.

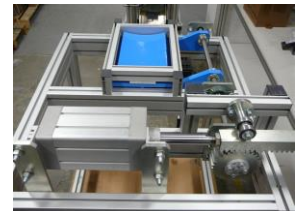
Kit motor change (ref MMR 313)

Subsets to integrate to the system and consists of:

- 1 hydraulic unit
- 1 hydraulic motor
- 1 hose kit

Subsystem hatch opening (ref MMR 314)

- 1chassis aluminium support
- 1 complete mechanism with hatch opening with cylinder, shaft, bearings, pinion, rack, hatch
- 3D solidworks files



Subset / reducer (ref MMR 315)

- 1 identical reducer to that of the reducer geared motor
- fichiers solidworks 3D



Subset / bearing (ref MMR 316)

- 1 complete bearing on bracket
- 3D solidworks files

Kit reducer without constraint ** (ref MMR 317)

Composed of:

- 1 reducer identical reducer to that of the geared motor (delivered in compartmentalized box)
- 3D solidworks files

** All documents originally mounted in forces are assembled with set)

Kit side bearing without constraint ** (ref MMR 318)

Composed of:

- 1 complete side bearing (delivered in parts in compartmentalized box)
- 3D solidworks files

** All documents originally mounted in forces are assembled with set)

Kit spare parts (ref MMR 319)

- 2 ball bearing motor side with conical sleeve washer and nut
- 3 complete kits of gaskets for 2 bearings (tresses, lip seals ...)
- 1 kit screws and bolts M12
- 2 frets ribbon rotor shaft
- 3 nuts KM + 3 washers for side bearing opposite to the geared motor
- 3 nuts KM + 3 washers for side bearing geared motor
- 3 washers onduflex

MMR300



Sreeners (ref MMR 320):

- Vibrating module for the separation of blended products (depending on products supplied).
- Power supply 400V Three-phase 50Hz
- Pushbuttons On / Off
- Circuit breaker protection
- Aluminum support frame on feet
- 2 trays of 75L for retrieving material

Pre equipped lift table (ref MMR 321):

- Hydraulic lift table.
- Aluminum chassis designed to receive the drain hatch during removal / installation

Electrical sub-systems and kits:

Armoire déportée (ref MMR 330)

- **Remote cabinet** wheeled chassis
- **Industrial connectors type harting** for connection to the base system.
- Same as the main cabinet except of the safety disconnecter, circuit breakers, differential ... including push control
- Embeds any of the modernization turntables of control
- Ready for the realization of the wiring operations

Electric turntables

Available in 5 versions

- Switch version 1 direction direct start (**included in MMR 300 / ref MMR**)
- Version direct start **reversing contactor (ref MMR 332)**
- Version **soft starter inverter (ref MMR 333)**
- Variator version (**ref MMR 334**)
- Version PLC (**ref MMR 335**)



Services required

- Electrical supply : 400Vac – 50 Hz
- Compressed air supply: 6-8 bars (dry air)
- Dimensions: (LxWxH mm): 1730 x 836 x 1795
- weight (Kg): 500

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE