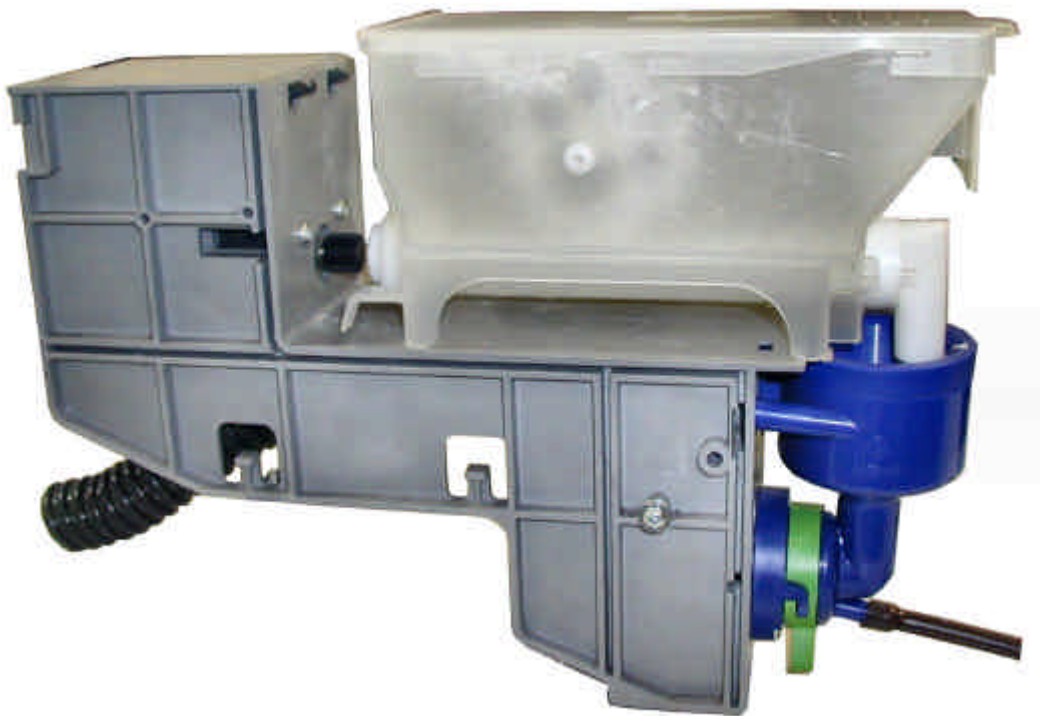


AFTER-SALES SERVICE



SERVICE MANUAL

FUNCTIONAL UNITS

" MIXER FOR THE KORO "

NEW GENERATION MIXER UNITS

INTRODUCTION

The mixers are functional units used for making instant drinks from lyophilised powder mixed with hot water.

Mixers must have two main features:

The first feature is the ease of disassembly for cleaning the components in order to comply with the provisions of the **HACCP** directive.

The second feature is the quality of the dispensed product, which must be as much as possible similar to the product served at the bar, therefore optimum mixing and adequate appearance.

The majority of existing mixers and used by the competition are of the axial fan type, rotating at a velocity of approximately **10000 RPM**; in addition, new trends see the use of mixing systems without the traditional mixers that are called "**Mixerless**".

Such systems are still far from a perfect mixing system, as the quality obtained with these systems is definitely insufficient and does not give a product with acceptable appearance; in addition, all solutions seen until now generate a lot more soiling and therefore are less hygienic than the best traditional mixers.

The new NW Global Vending mixers were designed for the specific application in the **KORO** vending machine and include all the features necessary for preparing an optimum product and making cleaning easier.

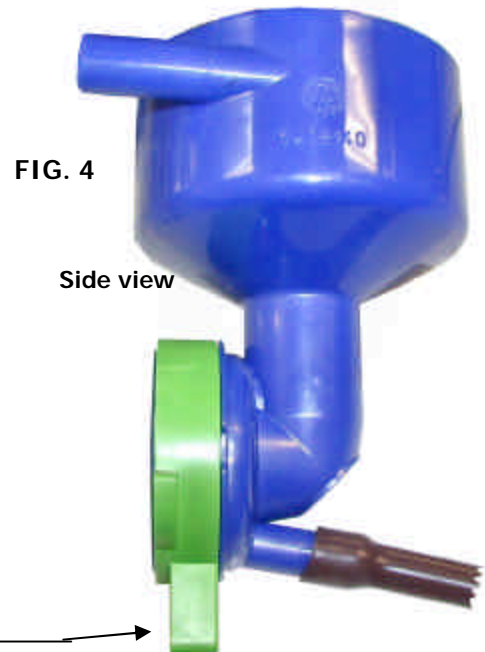
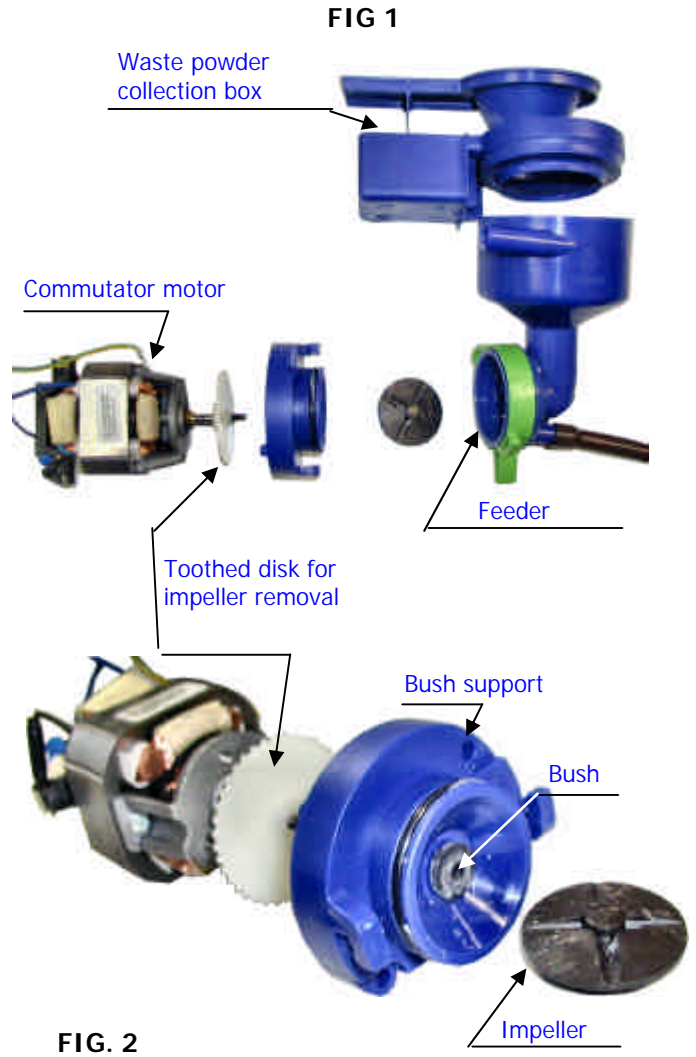
They are fitted with an impeller rotating at a velocity of **20,000 RPM** (FIG 1-2). They are composed of few elements, they are fitted with a trap box for exhausted powder that can be inspected quickly, and they are fitted with a lower lever for removal from the machine body in a few instant

(FIG. 3-4)

CONSTRUCTION DESCRIPTION

They are essentially composed of a **230 V AC** commutator motor with a rotation velocity of **20,000 RPM**.

The high velocity permits unbeatable quality, and to ensure water tightness on the rotation axis a special bush was used, made of innovative self-positioning material, capable of ensuring perfect tightness at high velocity for a long operating time and in the event of disassembly for cleaning or maintenance maintaining the correct initial position, thus ensuring the original water tightness.



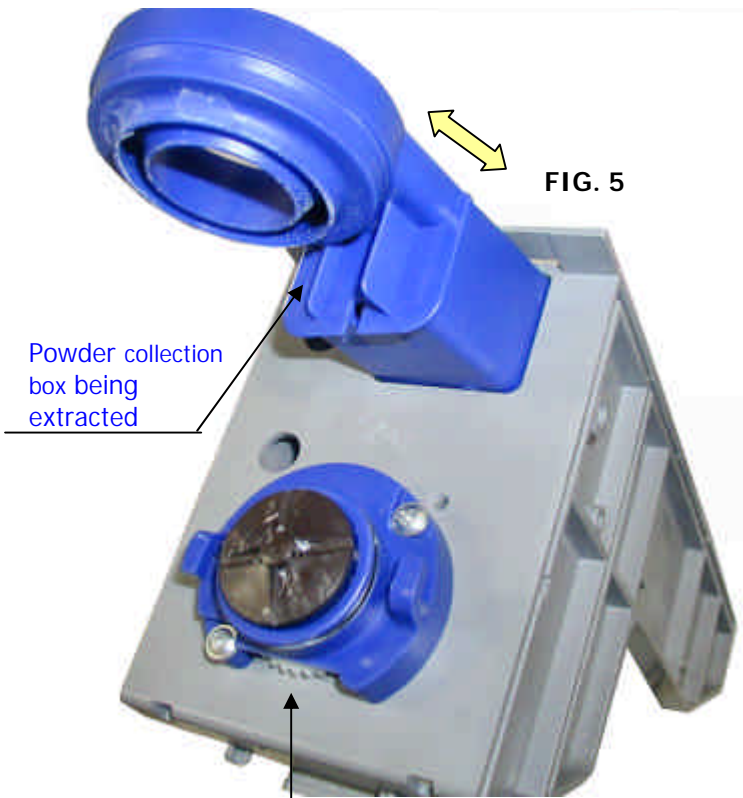


FIG. 5

Powder collection box being opened for cleaning

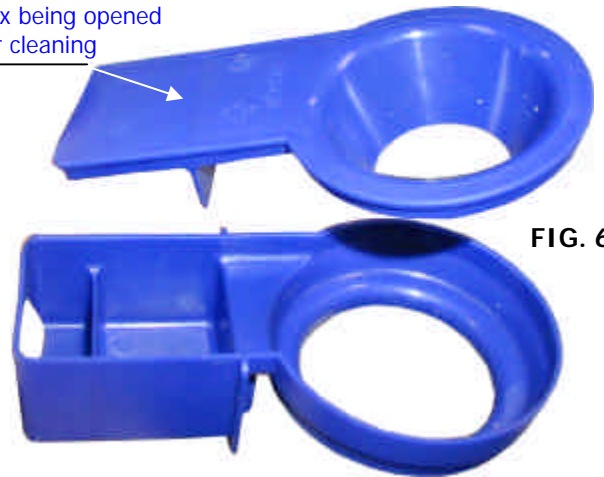


FIG. 6

To be noted how the powder collection box of the waste removal system is integrated into the powder funnel (FIG 5 – 6) with the considerable advantage that when removing the feeder for daily cleaning, also the powder trap box is removed at the same time, therefore making it necessary to wash also this element, to the advantage of hygiene and ensuring compliance with the **HACCP** directive, which does not happen in the "normal" mixers used by the competition.

Not having the technical basis of simplifying this operation, normally people forget to empty and clean such element, with serious consequences on the hygiene and correct operation of the functional units.

The electric mixer (FIG 7) is practically a commutator motor fitted with sliding brushes on the commutator.

The main features of this motor are as follows: Self-resetting overheating protection wound on the winding.

High rotation velocity at more than 20,000 RPM loadless.

The small size permits installation in small vending machines.

Considerable reliability and duration (in the laboratory tests over 100,000 mixing cycles were performed without any kind of malfunctions.

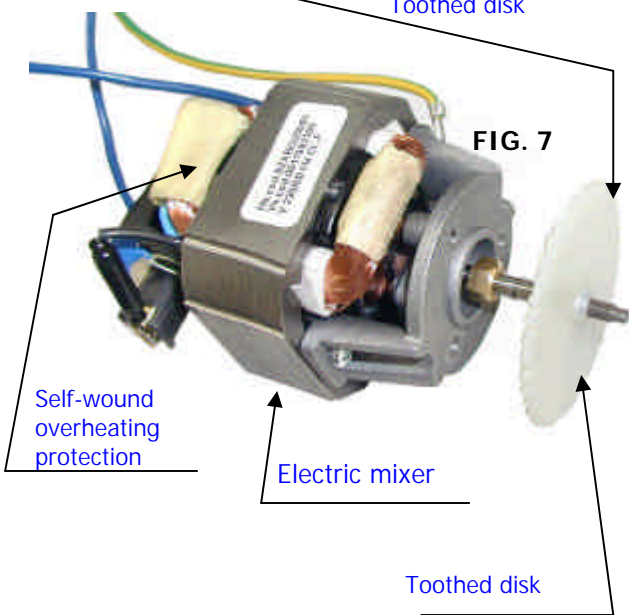


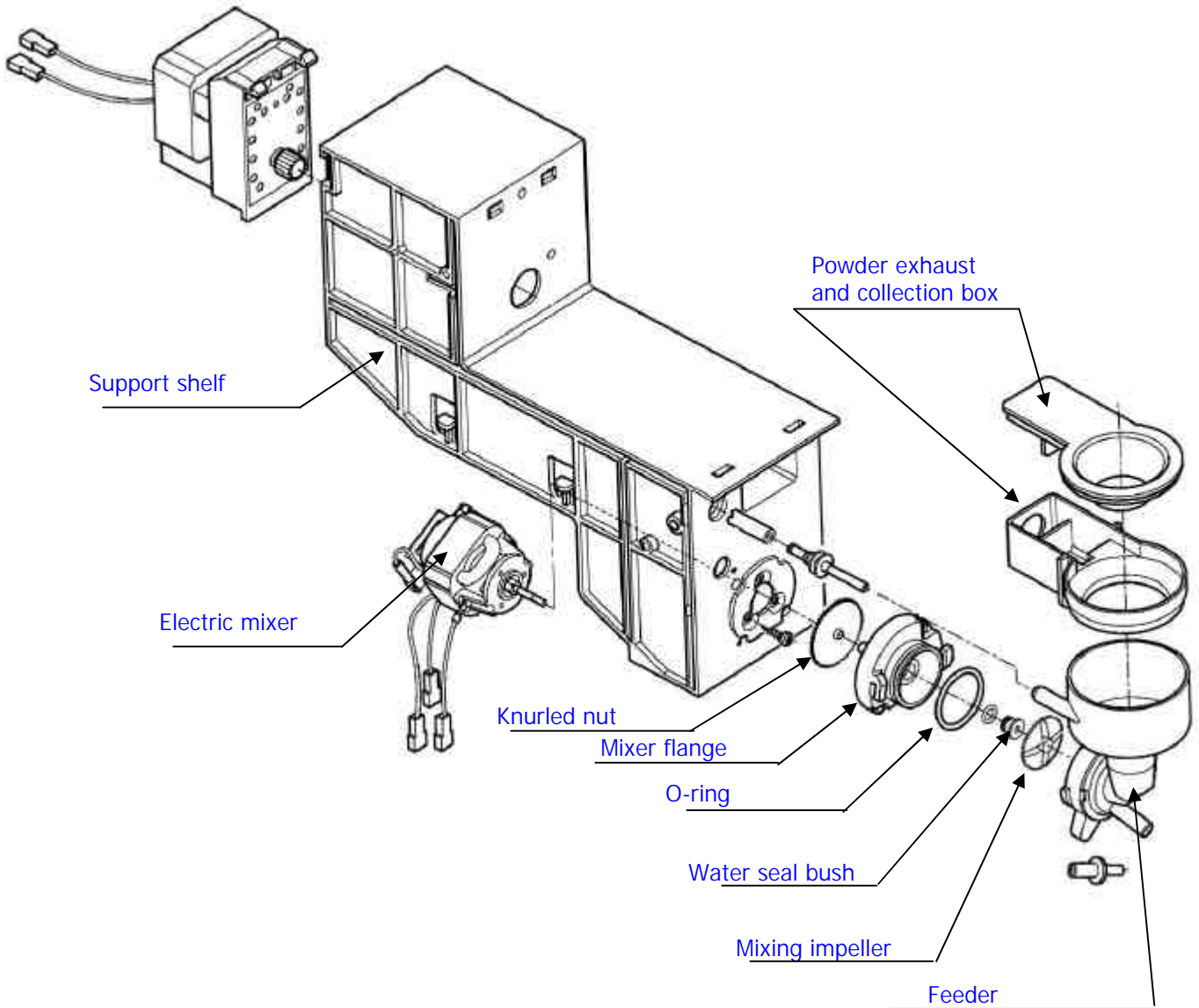
FIG. 7

Self-wound overheating protection

Electric mixer

Toothed disk

EXPLODED VIEW OF MIXER ASSEMBLY (KORO)



DISASSEMBLY PROCEDURE FOR PERIODIC MAINTENANCE



Rotate the yellow lever anticlockwise



Pull the external mixer in the direction of its axis until removing it completely



Remove the feeder from the box



Unscrew the impeller anticlockwise, holding the knurled nut with a finger



After removing the impeller, undo the two fastening screws of the flange and remove it in the direction of its axis



Mixer components completely disassembled



Undo the two fastening screws of the motor, and remove the electric mixer from the inside of the support



Motor completely removed from the support

For reassembly, follow the procedure in the reverse order, ensuring that when inserting the motor shaft into the bush it is not forced and damaged.

For the periodical hygiene and maintenance operations refer to the KORO Service Manual.