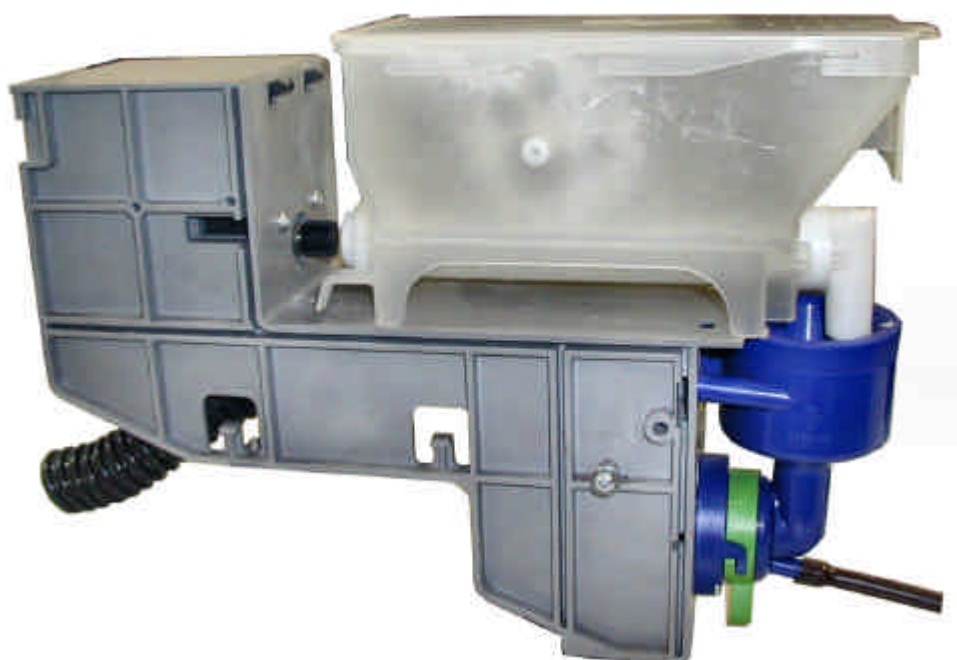


AFTER-SALES SERVICE



SERVICE MANUAL

Functional Units “MOTORIZED DOSER DEVICE UNIT FOR THE “KORO”

N&W GLOBAL VENDING SPA – SERVICE MANUAL – FUNCTIONAL UNITS H&C

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MOTORIZED DOSER DEVICE UNITS

INTRODUCTION

THE MOTORIZED DOSER DEVICE UNITS are functional units used for dispensing into the mixers a certain amount of lyophilised powder that must be mixed with hot water.

The most important features of a doser device are:

- 1) Accuracy in dispensing the powder amount.
- 2) Eliminating the packing defect (a characteristic due to the hygroscopic nature of lyophilised powder).
- 3) Ease of loading, food-safe materials.
- 4) Ease of removal and cleaning for the hygiene of components in order to comply with the provisions of the **HACCP** directive.
- 5) Passive safety, both electrical and against overheating.

CONSTRUCTION DESCRIPTION

Basically they are composed of a container made of food-safe material and of a 230 V 50 Hz synchronous induction ratiomotor (but in some countries the voltage and frequency may be different). The ratiomotor is connected to an auger (worm screw, FIG 9) made of plastic material; its rotation pushes the powder located in the worm screw out of the outlet port and into the mixers (FIG 8).

There are augers with different pitch for dispensing special types of product. The amount of dispensed powder is determined by the rotation time of the motor, in tenths of a second, according to the software setting.

To prevent packing of powder because of humidity, there are "whipping" or "breaking" systems (FIG 9 - 10 - 11).



FIG. 1

INSTANT POWDER CONTAINER COMPARTMENT



FIG. 2

REMOVABLE LID OF CONTAINER COMPARTMENT



FIG. 3

MOTORIZED DOSER DEVICE MODULE REMOVED FROM ITS PLACE

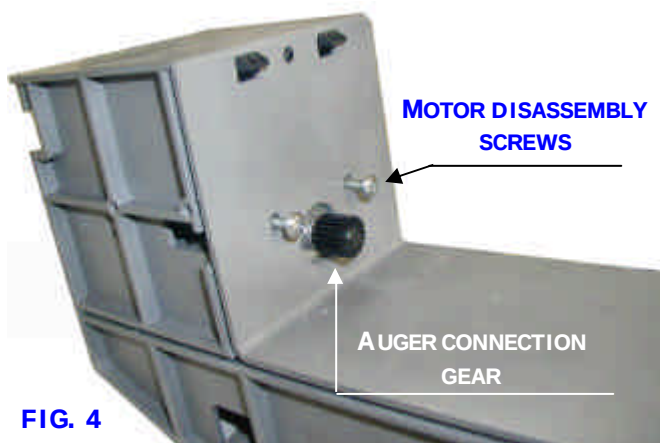


FIG. 4

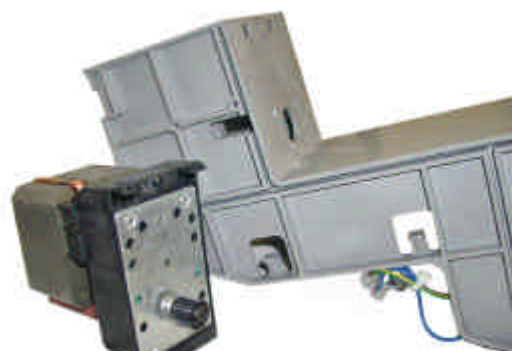


FIG. 5

RATIOMOTOR REMOVED FROM THE COMPARTMENT

During its rotation, the auger causes the rotation of a cogged wheel fitted with special blades (FIG 9) which move the instant powder, thus preventing any packing. Special “whipping” systems with the shape of a stainless steel cage (FIG 10 - 11) have been designed for special powders or ground coffee (fresh brewer versions).

ELECTRICAL SAFETY

All motors and ratiomotors used in NECTA's applications are fitted with passive safety systems, meaning that they are triggered and activated even if the electronic board is faulty. More specifically, the ratiomotor is protected by a klixon wound around the winding and connected to the power supply unit in series; in the event of mechanical failure, or malfunction to the actuation relay or software error, when the winding reaches a critical temperature but lower to the safety temperature for which the motor was designed, the klixon opens and disconnects the power supply to the motor, thus preventing it from burning and causing any damage to the equipment. The klixon is of the self-reset type; obviously if the malfunction or failure persists it is triggered again and the cause of the problem must be found before restarting the system. The ratiomotors are designed with such operation intermittence (ON/OFF) that the klixon cannot in any way be triggered during normal operation.

LOADING

The canisters can be filled directly in the machine after easily opening or removing the machine upper half-lid (FIG 1 – 2) and after opening the half-lid of the canisters, locked by a snap-on system (FIG 8 - 10).



FIG. 6

CONTAINER REMOVED FROM THE COMPARTMENT

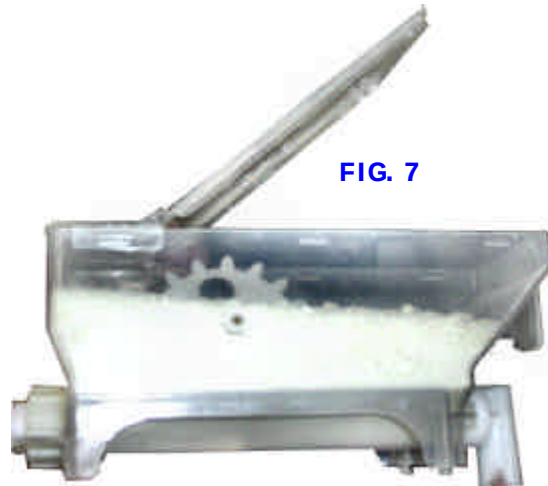


FIG. 7

OPENING LID FOR LOADING



FIG. 8

POWDER DISPENSING PORT



FIG. 9

DETAIL OF AUGER WITH MESHED COGGED WHEEL



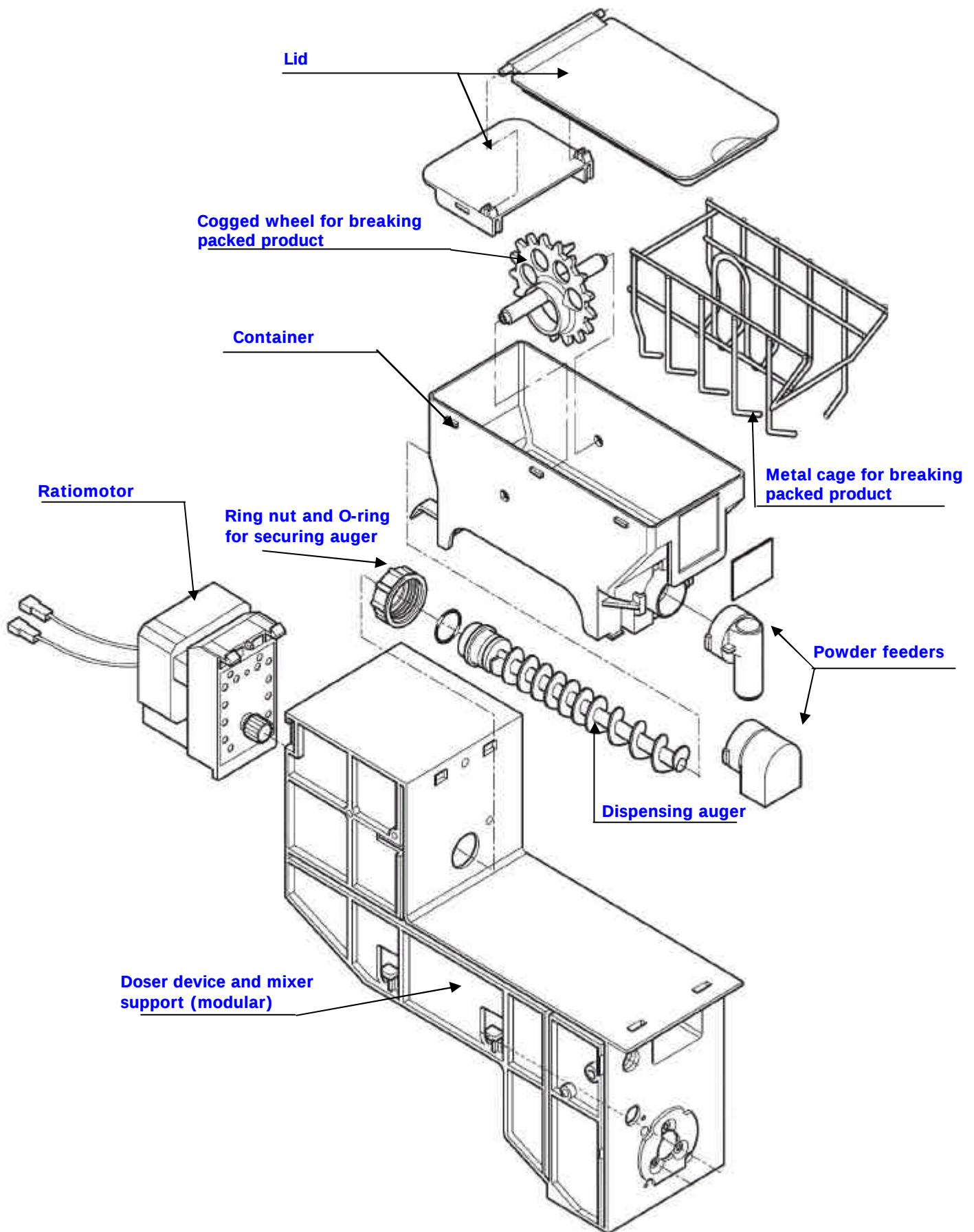
FIG. 10

GROUND COFFEE CANISTER –
DETAIL OF CAGE



FIG. 11

EXPLODED VIEW OF MOTORIZED DOSER DEVICE UNIT



DISASSEMBLY PROCEDURE FOR PERIODIC MAINTENANCE



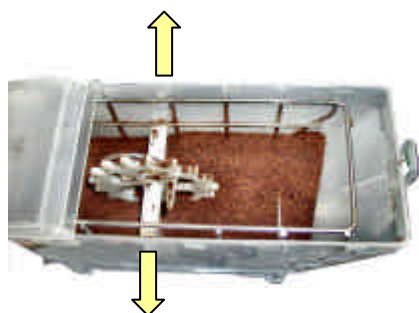
Open the upper lid of the machine to access the powder containers.



Remove the doser device module by undoing the two lower screws and disconnecting the electrical and hydraulic connections to the mixers.



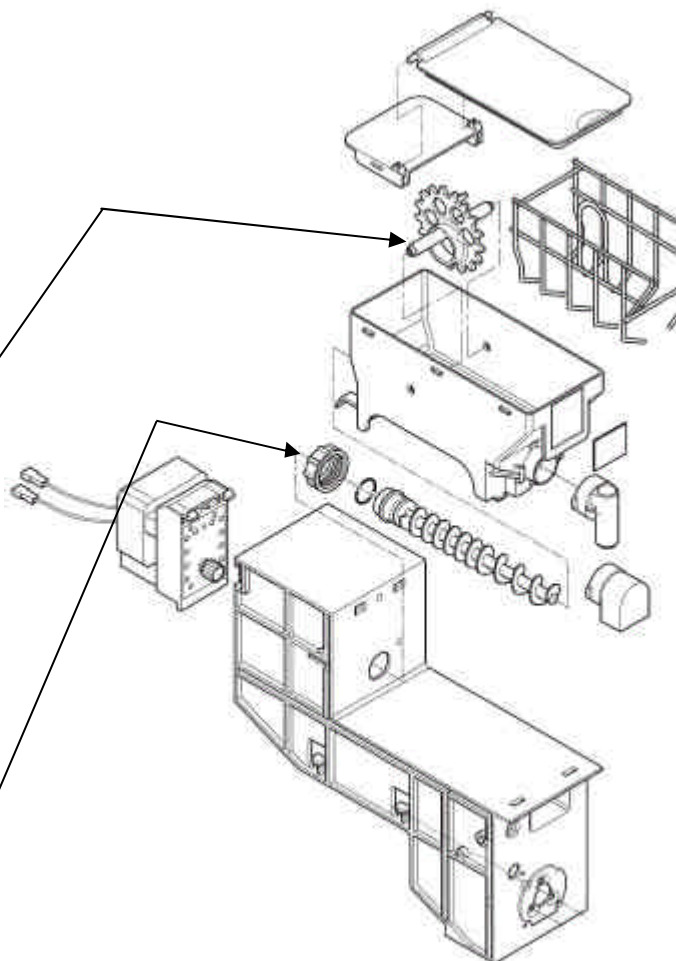
Undo the two screws that secure the motor and remove it.



To remove the cogged wheel, force by lightly push apart the wall of the canisters; if the cage is fitted, this will be removed together with the cogged wheel.



Undo the rear ring nut and slide out the auger until removing it completely; during reassembly check that the O-ring is intact, otherwise replace with a new one.



**FOR REASSEMBLY, PERFORM THE PROCEDURES OPERATIONS IN THE REVERSE ORDER.
FOR THE PERIODICAL HYGIENE AND MAINTENANCE OPERATIONS REFER TO THE KORO SERVICE MANUAL.**