

BRIEF DESCRIPTION

Filling machine is a machine to fill toner cartridge hoppers or to load the exact weight of the toner to the bottles for the next step use.

Filling machine has a nominal set of four independency interchange containers calculated each to load standard 10 kgs or 20 lbs toner bags. The total number of the containers is unlimited.

On the bottom of the container is a horizontal spiral auger. In the back of the container is the auger axle sealed, taken out of the container and driven by the engine fixed on the machine frame over a mechanical coupling. On the front of the container is the spiral running in the tube finished by 90⁰ output pipe. Inside the vertical part of the output pipe is a rotation valve to close toner flow at the machine stop.

There is also toner dust collection system built on the machine. It is made as a circle slot around the toner output pipe connected to the vacuum source.

You can keep the same toner type permanently in its dedicated container which means to change toner type to fill simply and easy only by changing the container with another one in less than 1 minute without cleaning any part of the machine.

Filling machine is controled by its own specialy designed microcomputer. This gives an advantage to change properties of the machine by changing of the control software only.

Each container has an integrated electronic radio chip. In the chip's memory is saved container identification number and the information about the toner type and its actual weight in the container. This data are read, used and updated by a machine computer when the container is fixed on the machine.

In the machine microcomputer memory is kept a cartridge name list including all fill parameters for machine adjustment and control.

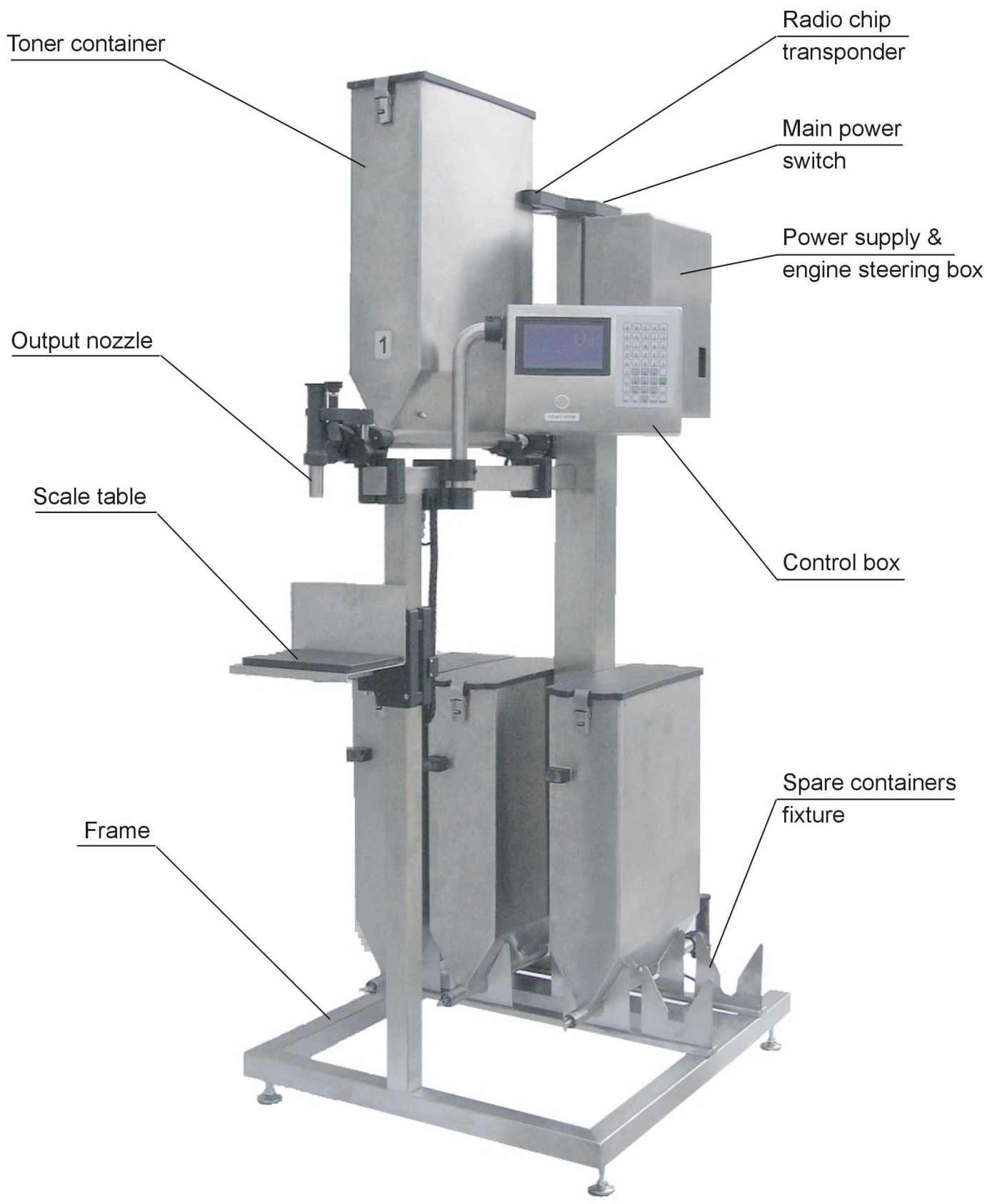
The data transfer between machine and any PC is possible by Micro Memory Card (MMC). It means you can take a statistic data file from filling machine and to process it at PC. Vice versa list of the cartridges can be edited not only from the machine keyboard but more comfortable using a PC. The software of filling machine can be updated directly from the file loaded to MMC too.

There is fixed on the machine frame:

- power supply & engine steering box
- main power switch
- scale cell
- weight value analog to digital converter
- radio chip transponder
- engine with torque limiter and coupling
- control box including display, keyboard, microcomputer and MMC card slot
- engine to drive valve in the output pipe
- working container fixture
- fixture for four small spare containers

Calculated filling speed of the machine is 500 grams per minute.

Operational cycle time to fill an average type of the cartridge is typically 30 seconds.



Toner container

Radio chip
transponder

Main power
switch

Power supply &
engine steering box

Output nozzle

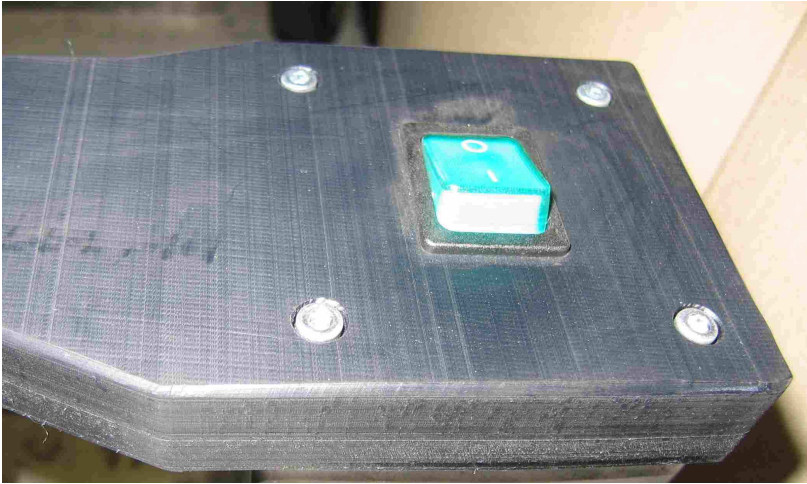
Scale table

Control box

Frame

Spare containers
fixture

MACHINE CONTROLS AND ADJUSTMENT



Power switch is located on the top of the machine.

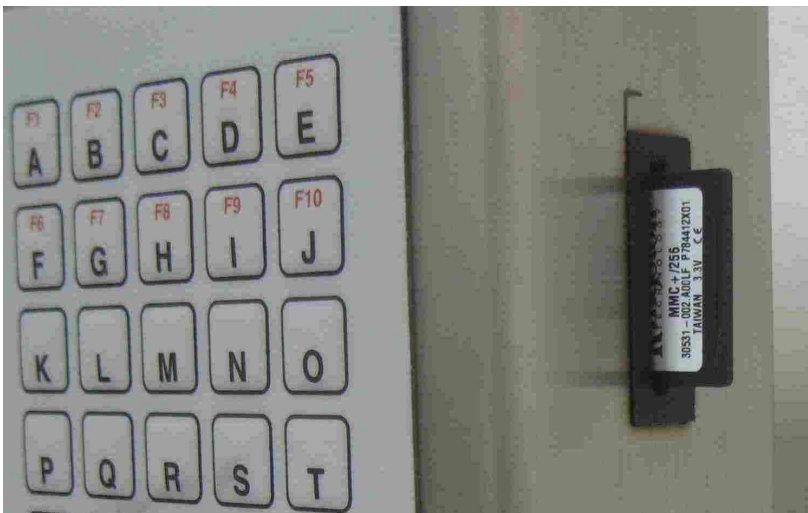


On the control box is placed a display, an alphanumeric keyboard and START / STOP button.

In the middle of the first screen line is the actual selected instruction name. In the right end of this line is pictured a time.

In the central display area is an instruction menu.

Three bottom lines are used for help and information.



On the right side of the control box is located a slot for MMC card.

