

CMZ ITALY, 30 YEARS OF MOTION CONTROL FOR PACKAGING

CMZ is an Italy-based company specialized in industrial motion control since 1976, with 30 years of experience in the packaging industry by developing powerful custom libraries IEC 61131-3 for flowpacks



EtherCAT®

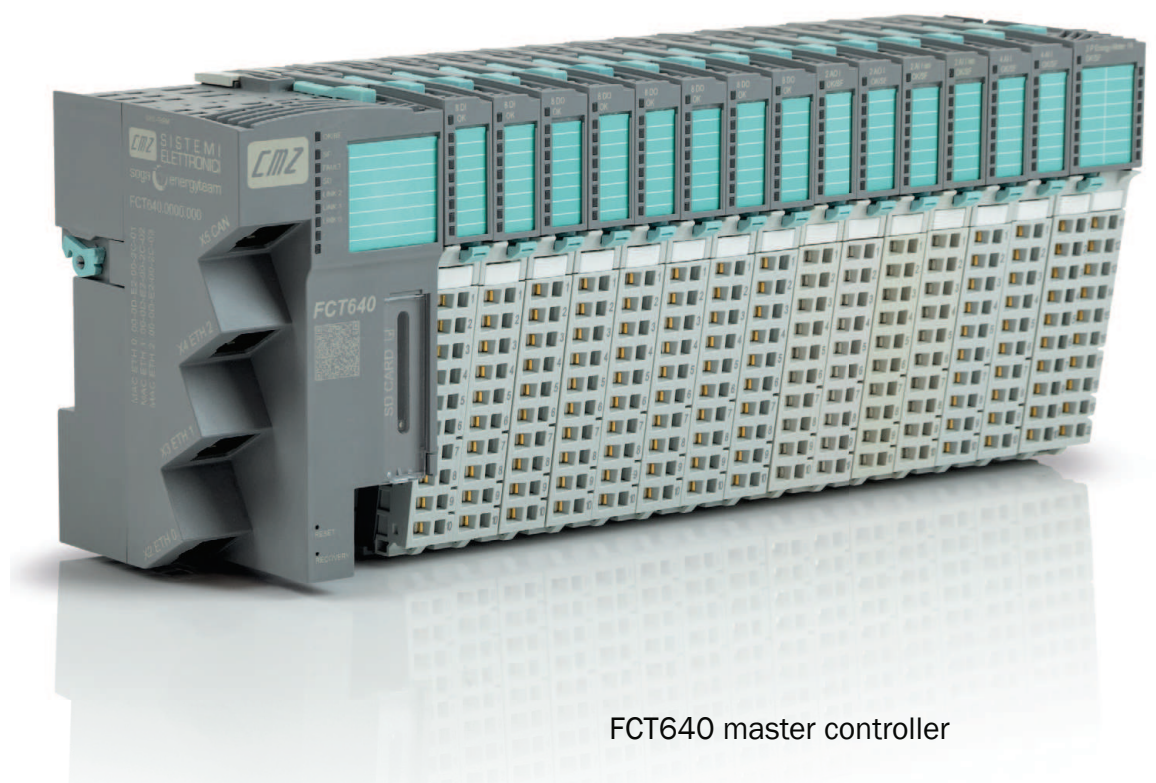
CANopen

FLOWPACK represents an excellence in terms of CMZ know-how for the software experience and also for hardware technologies, very scalable according to the needs of the customer to satisfy both the dynamics of the machine and cost savings.

By using the newest controller FCT640 with Codesys v3.5 and CMZ motion libraries, every machine can be ready to pack any format depending on the mechanical tool that the manufacturer decides to install on his project.

The hardware span from the Steppless technologies, to the standard Brushless, ending up to the integrated solutions where drive & motor are built in the same compact case.

FlowPack can be designed either Horizontal or Vertical, including the weighing and dosing of the product before sealing and cutting the pack.



FCT640 master controller

CMZ portfolio of solutions is splitted in 3 FlowPack versions:

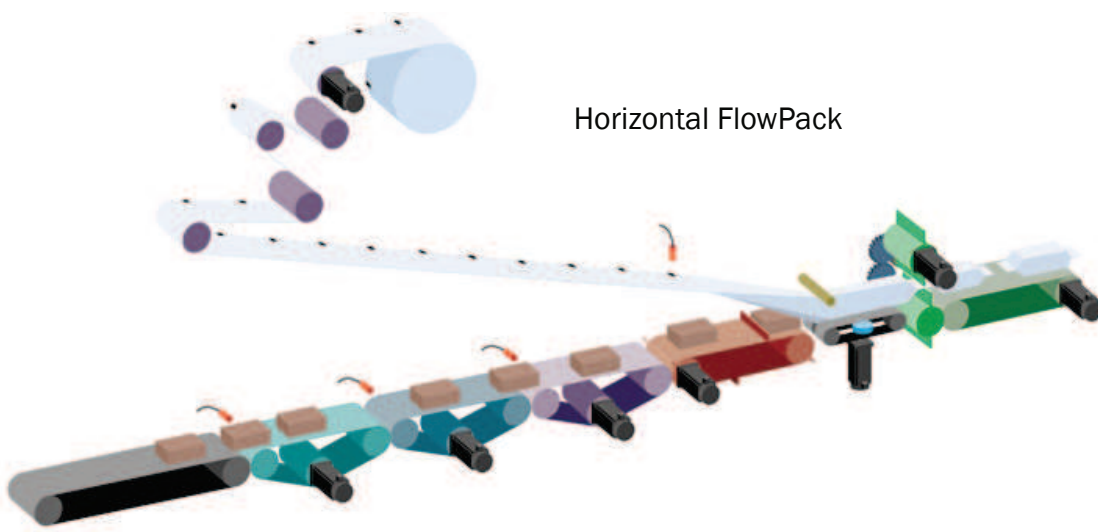
BASIC | SPEED PRODUCTION:

350 bpm

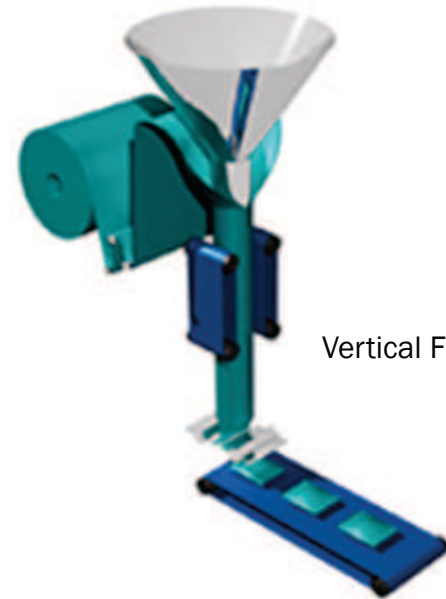
The application provides the functionalities of all the different zones of the machine:

- Inlet: signals control line, stack

belts, sync belt (total max 5 axis)
 - Load: mat or paddle belt, vibrant loader (up to 4), aligner device of the items, item presence control, item dimension product, reject items on belt, brush, 3 general electric cams
 - Creation of the pack: welding wheel and film trail, unwinding film coil, No-product No-bag,



Horizontal FlowPack



Vertical FlowPack

thermoregulation
(external or integrated)

- Sealing and Cutting of the pack: programmed-cut, No-product No-bag, bellows, output rush
- Unload: outlet belts and control signals toward other zone
- Industry 4.0

PLUS | SPEED PRODUCTION: 350 bpm

- Basic version functionalities (3 axis more)
- Sync belts with double motors
- Reel for introducing items

HIGH DYNAMIC | SPEED PRODUCTION: 900 bpm

- Basic and Plus version functionalities

- Advanced movements path profile, simulation and PC monitoring

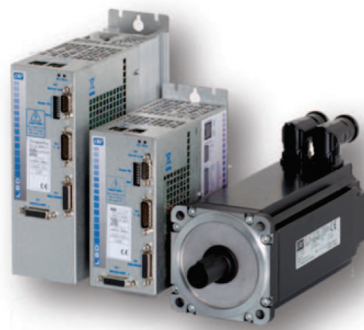
BOX-MOTION | **Optional, for horizontal packaging machines**
With this optional device, the

Brushless
High dynamic

Stepless
Low cost

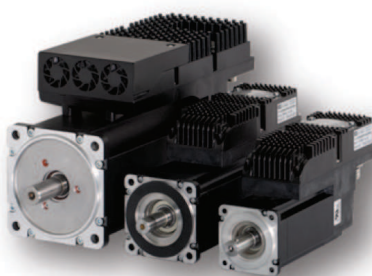
Separated version

- drive inside protected zone: IP degree and temperature
- drive easily accessible for maintenance



Integrated version

- reduced cable length
- reduced space needed inside cabinet



transversal welding and cutting takes place with a motorized translating device that moves the welding grippers following the moving forward of the film. The closing of the grippers can be motorized or pneumatic.

This solution allows to increase the welding time as well as to work particularly high products, with a productivity normally lower than HFFS with a rotary crimper.

INDUSTRY 4.0

For Industry 4.0, complete documentation is provided regarding the compliance of the application with international Standards requirements.

The following features are available:

- Management of the MODBUS-TCP protocol reserved for interconnection to IT systems Configuration:
 - monitor is provided
 - supply of a list of variables in MODICOM format
 - FTP server for exporting or

importing files with recipe data and statistical data.

- UDP protocol with Client and Server functionality for automated integration:
 - Configuration and monitor are provided.

With a PC tool "CMZ_DataConnection" which interfaces with the machine, it is possible to:


- read the data from the machines at a configurable time interval
- save the data from the machines on a MySQL file with a configurable time interval
- load the recipe file into the machine and remove it
- take the statistical data file from the machine.

SOFTWARE FEATURES

- Multilanguage interface
- Unique configurable software for all size solutions (no need to upgrade)
- Dynamic mapping of HW directly on the HMI

- Setting all parameter according to the access privilege
- 100 recipes on SD card removable
- Full diagnostic
- Updating software easily by SD card.

4 hardware solutions are identified from the cheapest one to the most compact and dynamic in terms of Motion:

- Stepless standard: SVM drive with Motor Encoder Box
- Stepless Integrated: ISD (Integrated Stepless Drive)
- Brushless standard: LBD drive with Brushless motor
- Brushless Integrated: IBD (Integrated Brushless Drive). 

More details at
www.cmz.it | cmz@cmz.it



Brushless and Stepless servo drives & motors with integrated electronics.

ITALIAN ART IN MOTION CONTROL



IBD 1.2 to 30 Nm



ISD 4.6 to 12 Nm