CMZ

Company profile

SYSTEMS & SOLUTIONS FOR MOTION CONTROL

2023

SINCE 1976

soga energyteam

PRESENTATION INDEX

COMPANY

APPLICATIONS

PRODUCTS

WHERE WE ARE

CMZ engineers and produces in Italy electronic systems for industrial automation.

HARDWARE

- IEC61131 controllers
- Drives and Motors
- Planetary gearboxes
- Peripherals & I/OS
- HMIs

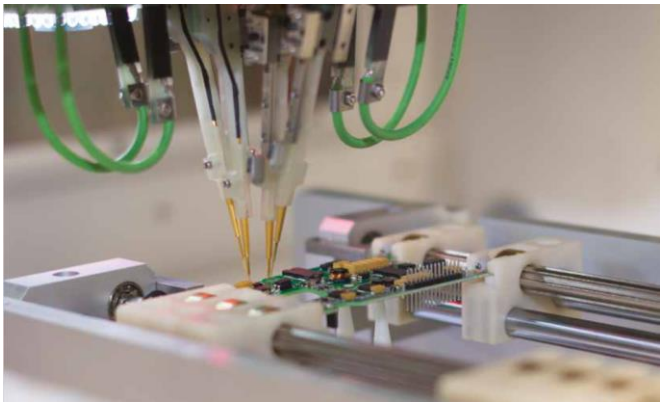
SOFTWARE

- Communication, motion and utility libraries
- Configurable dedicated Applications

SERVICE

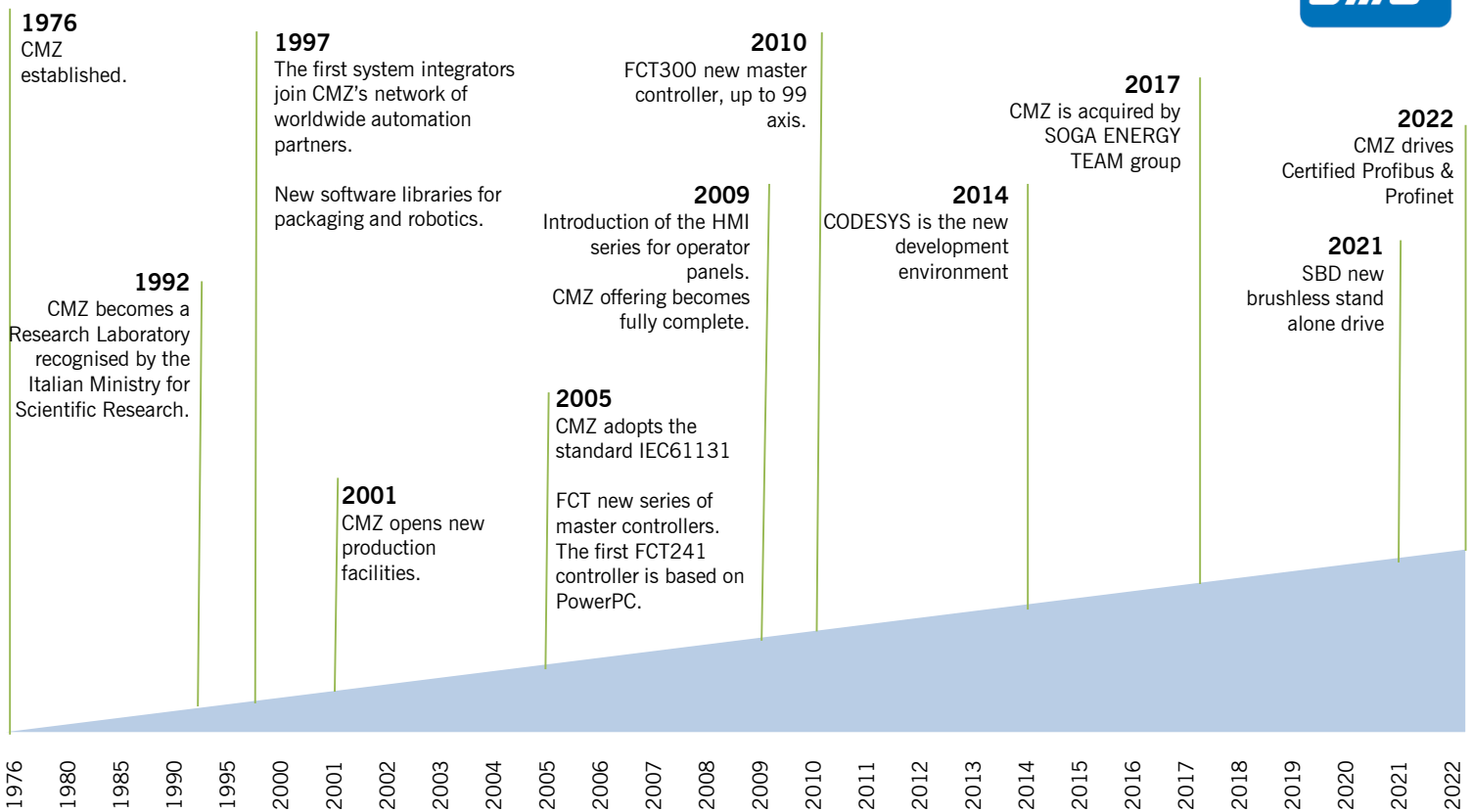
- Engineering & Co-Design
- Remote technical assistance
- Maintenance programs
- Revamping

CMZ MISSION is to be a recognized reliable Partner for **Original Equipment Manufacturers** and **system integrators** for the co-development of automatic machines and equipment with **customized** and specific configuration in **multi-axis motion**



CMZ is a **Research Laboratory** recognized by the Italian Ministry for Scientific Research

KEY MILESTONES



KEY FIGURES

Volume of Business 2022 (Order Intake, mln €)

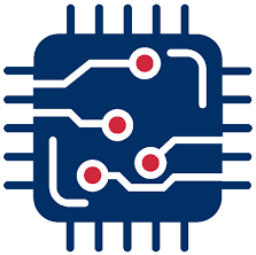
10,9

Headcount

73

Investment in R&D (OpEx & CAPEX; % of Revenue)

18,3%



# of R&D SW and HW engineers

28

CMZ

Company profile

A COMPANY OF **SOGA ENERGY TEAM GROUP**

2023

soga energyteam

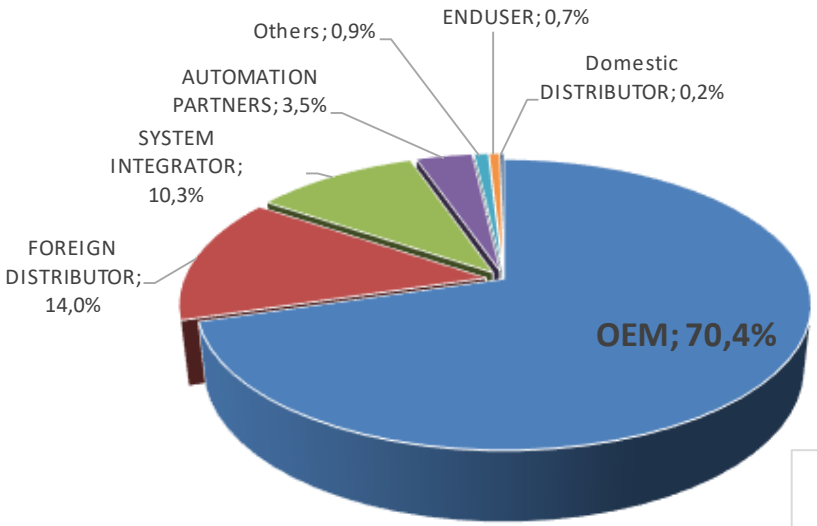
soga® sincro® AgroWatt sogaenergies CMZ

- 3 companies : SOGA SpA, CMZ Sistemi Elettronici Srl, Sincro doo
- 5 commercial brands, international presence in 85 countries
- Turnover yearly~ 55.000.000,00 € and ~ 350 employees
- Plants and offices for over 76.000 sq.m.

POWER GENERATION, MOTION & CONTROL

AGRICULTURE AUTOMOTIVE BEVERAGE
COGENERATION CONSTRUCTION INDUSTRIAL
LIGHTING MARINE OIL&GAS PACKAGING
RAILWAY RENEWABLES RESCUE RESIDENTIAL
TELECOM WELDING

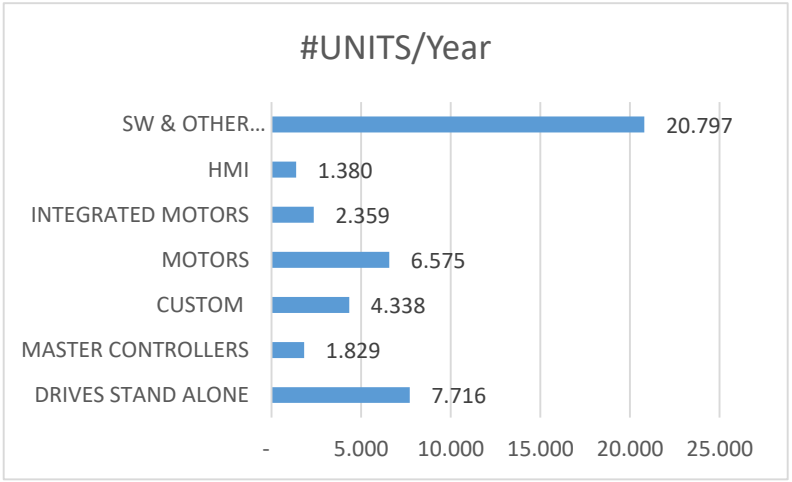
KEY MARKET SECTORS



With a team of 35 sw and hw engineers CMZ is the ideal partner to support the OEM's

CMZ provides a **full service** platform to a wide installed base:

- 510 Active Clients
- 250.000 Units



PRESENTATION INDEX

COMPANY

APPLICATIONS

PRODUCTS

WHERE WE ARE

KEY APPLICATION MARKETS

Packaging 24,3%

Dosing & Weighing 9,0 %

20,2 % Beverage

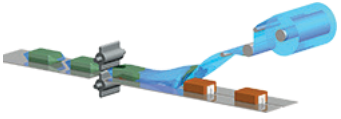
Converting 7,2 %

Special Machines 24,9%

14,4% Textile

APPLICATIONS

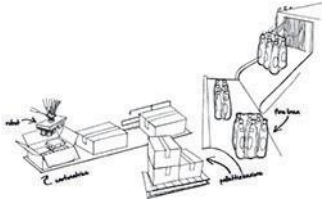
Packaging



HORIZONTAL PACKAGING MACHINE

VERTICAL PACKAGING MACHINE

LOADING SYSTEMS
SMART BELTS

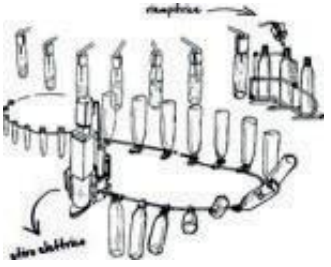


END LINE

APPLICATIONS

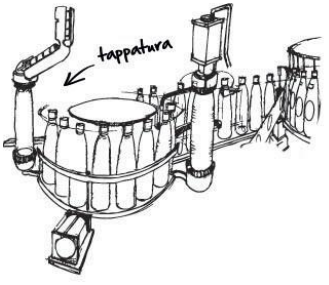
Food & Beverage

LABELLING MACHINES



FILLING MACHINES

BLOWING MACHINES



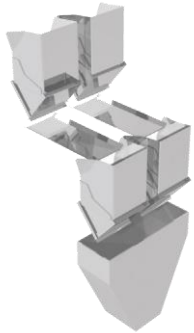
CAPPING MACHINES

APPLICATIONS

Dosing & Weighing

MULTIHEAD WEIGHERS

LINEAR WEIGHERS



VIBRATING FEEDERS

APPLICATIONS

Printing

SYNCHRONIZATION OF PRINTING CYLINDERS

REGISTRATION CONTROL OF PRINTING CYLINDERS

Paper converting

INTERFOLDERS

REWINDERS CUTTING LINE

FLEXO MACHINES

APPLICATIONS

Textile

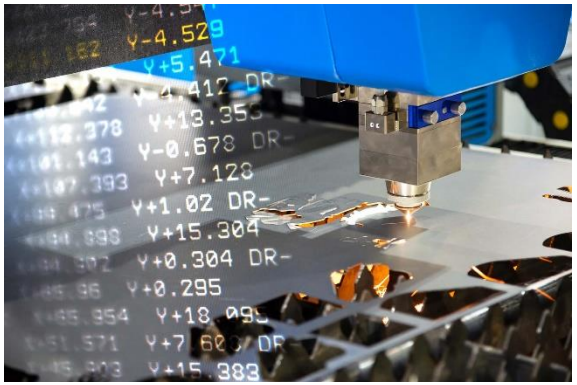
MACHINES FOR FIBERS TREATMENT
(SYNTHETIC AND NATURAL) SUCH AS:
COMBING MACHINES, DRAW FRAME MACHINES

CROCHET AND JACQUARD MACHINES

SEWING/EMBROIDERY MACHINES

SINGLE AND MULTI NEEDLE QUILTING MACHINES

ISO interpreter (G-code)



CNC MACHINES

APPLICATIONS

Glass

THREADING MACHINES

SEALING MACHINES EDGERS

MACHINES COATING

REMOVERS

GLASS CUTTING

Metal sheet

FLYING SHEAR

DEFORMATION

PRESENTATION INDEX

COMPANY

APPLICATIONS

PRODUCTS

WHERE WE ARE

PRODUCTS

External

EtherNet/IP

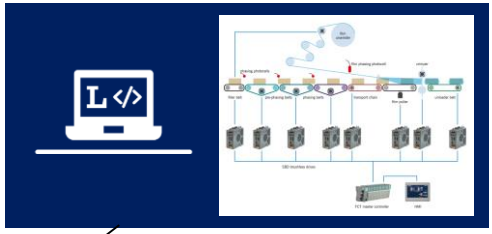
CMZ Data Connection

Modbus

RS 485
RS 232

CODESYS

INDUSTRY 4.0



Libraries & App

Master Controller

Interface HMI

CODESYS

EtherCAT

CANopen

PROFINET

Modbus

RS 485
RS 232

Drives

Integrated Motor and Drives

CODESYS

Field

FCT640: Master Controllers

Up to 99 axes

Processor:
CPU: RISC dual core 64bit, 1.0 GHz three level cache

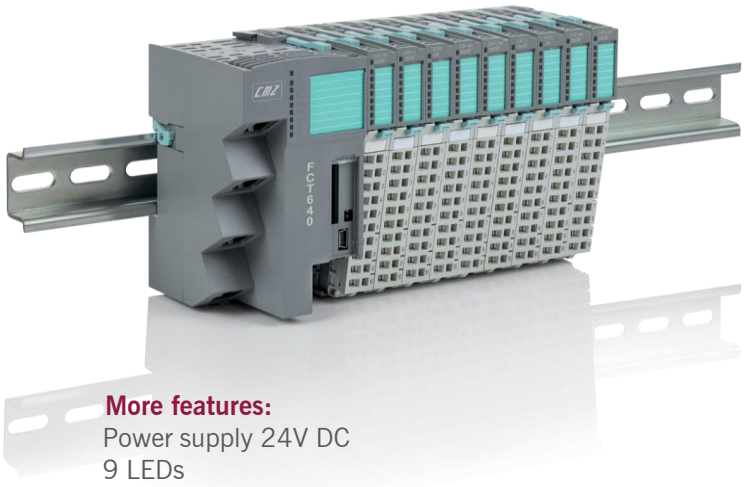
Memory capability:
1 GB Nand Flash for storage
512 MB DRAM high bandwidth 64 bit 1666 MT/s
32 KB Ferromagnetic RAM (non-volatile PLC data)
SD-Card

Communication ports:
1xRJ45 Ethernet 10/100 MBit TCP/IP (Debug)
2xRJ45 Ethernet 10/100 MBit (Fieldbus)
1xRJ45 CAN-Bus (CANopen Master)

Local I/O modules:
64 modules, each with a maximum of 16-bit IO (1024 digital) or 8 channels analog (512 analog) - Big variety of modules available.
Wide variety of modules available

Fieldbus:
EtherCAT Master, CANopen Master

Connectivity:
OPC-UA
Modbus TCP Master/Slave
Communications based on UDP-TCP
WEB server, PLCHandler



More features:
Power supply 24V DC
9 LEDs
RTC with CR2032 Battery
Reset-Button – Restore-Button
0° - 50°C ambient temp
Fanless

Modbus TCP/IP
EtherCAT
CODESYS
CANopen
EtherNet/IP

PRODUCTS – SERVO DRIVES

SBD: Servo Drives

Brushless drives with CANOpen, EtherCAT and Profinet interface

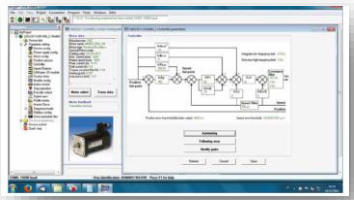
- From 5 to 20 A nominal
- 230 Vac and 400 Vac
- Bluetooth control*
- Feedback: Resolver or absolute/incremental encoder
- Encoder OUTPUT or second encoder INPUT
- STO

coming soon

NEW
Size -L

EtherCAT CANopen PROFINET

CMZ PROPRIETARY SOFTWARE ENVIRONMENT



RP64: I/O module

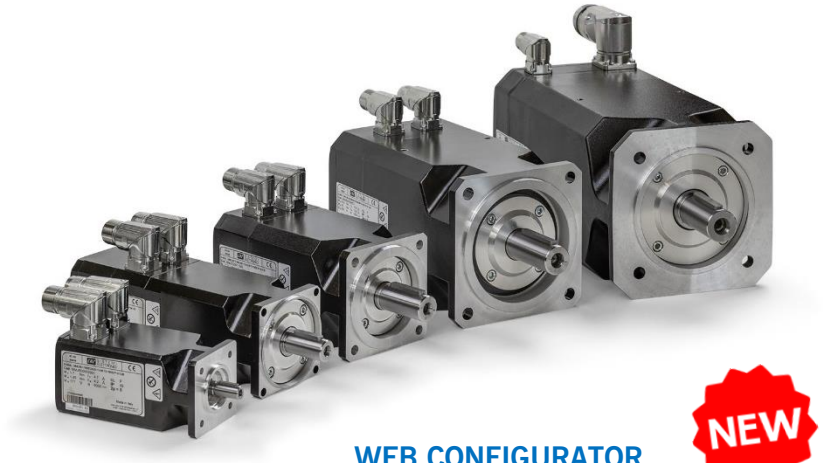
Can Open Coupler
32 Di + 32 Do + 2 Ai + 2 Ao

NEW

CANopen

MMD/B/S: Servo Motors

Brushless motors

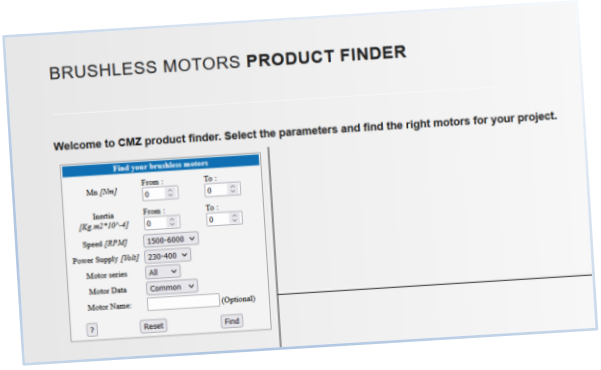


NEW

WEB CONFIGURATOR

TRY IT ON OUR WEBSITE!

www.cmz.it/en/brushless-motors-product-finder/



TORQUE RANGE
- From 0,5 to 120 Nm stall torque

POWER SUPPLY
- 230 Vac and 400 Vac

SPEED
- From 1500 to 6000 rpm

FLANGE
- From 70 to 240 mm

FEEDBACK
- Resolver / Incremental / Absolute – Hyperface / DSL

OPTIONS
- Brake / Flywheel / IP67

IP67 RATED

IP 65 RATED

PRODUCTS – PLANETARY GEARBOXES

PPG: Precision Planetary Gearboxes

NEW

TR series

MP series

TR/MP_G series

TR/MP_IS series

TR/MP_MB series

LC series

LCK series

SL series

KR series

TQ series

TQFEK series

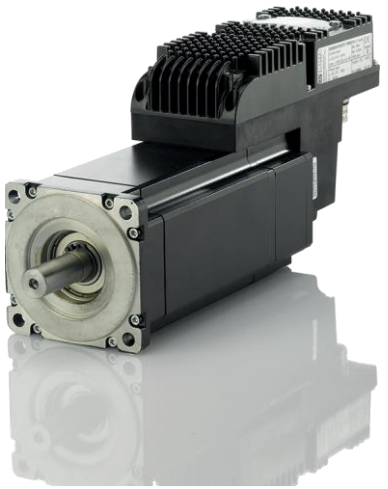
TQK series

TQF series

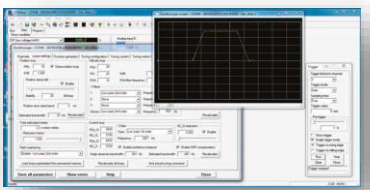
IBD: Integrated Brushless Drives

Power supply: 275 ÷ 730 Vdc (560 Vdc Nominal)
Logic supply: 24 Vdc
Torque range
Stall torque 1,3 - 2,8 – 4 - 5,6 – 6 - 15,4 - 30 Nm
Rated speed:
Vn=5000 rpm (for 1,3 Nm)
Vn=3000 rpm (for 2,8 – 4 - 5,6 – 6 - 15,4 - 30 Nm)
Feedback
HIPERFACE absolute encoder single or multiturn
On board I/O's
for size 1,3 Nm:
3 digital inputs PNP 24 V
2 digital outputs PNP 24 V
1 programmable input/output PNP 24 V
for sizes from 2,8 Nm to 30 Nm:
6 digital IN 24 Vdc general purpose, configurable as:
PSTOP, NSTOP, Enable, Home, Capture, Step/Direction
3 digital OUT 24 Vdc 250mA, general purpose
1 digital IN/OUT 24 Vdc with configurable function
3 differential I/O's configurable as master incremental encoder
1 Analogue IN +/-10 V

Interface:
EtherCAT, CANopen
PROFINET (IBD up to 6 Nm)
Safety:
-For size 1,3 Nm: SIL3 (pending)
-For sizes from 2,8 Nm to 30 Nm:
STO 2 channels (only CAN and ETC)
SIL3 (pending)
Protection:
IP65
Option:
Internal brake



SOFTWARE ENVIRONMENT
SD Setup



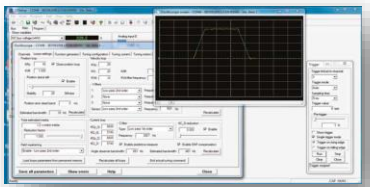
NBD: Nearby Servo Drives

Drive IP65 for linear and rotating brushless motors

Power supply: 275 ÷ 730Vdc (560Vdc Nominal).
Rated current: 8Arms
Peak motor current: 15Arms
Logic supply: 24Vdc
Protection: IP65
Security: STO 2 channels
Input/Output:
3 digital inputs PNP 24V
2 digital outputs PNP 24V
2 digital input/digital output bidirectional PNP
1 analog input +/- 10V
Encoder master input + 5V out

SOFTWARE ENVIRONMENT

SD Setup



PRODUCTS – STEPLESS SOLUTIONS

SVM: Stepless Servo Drives
MM: Stepless Motors

Interface: CANOpen, Profibus DP,
±10V, RS485 Modbus, pulse/direction
Profiles of speed, position and torque

Internal PLC programmable in IEC 61131
dedicated and general purpose IN/OUT's

Motors sizes available up to 21 Nm
on 5 sizes, DC power supply up to 160 Vdc

ISD: Integrated Stepless Drives

Up to 12 Nm, DC power supply up to 130 Vdc

Modbus over RS485

CANopen

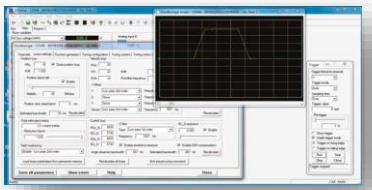
PROFIBUS

PROFINET® INDUSTRIAL ETHERNET *

Interface: CANOpen, Profibus DP, ±10V,
RS485 Modbus, pulse/direction

Profiles of speed, position and torque

Internal PLC programmable in IEC 61131
dedicated and general purpose IN/OUT's



SOFTWARE ENVIRONMENT

SD Setup

IP 65 RATED

* through external gateway

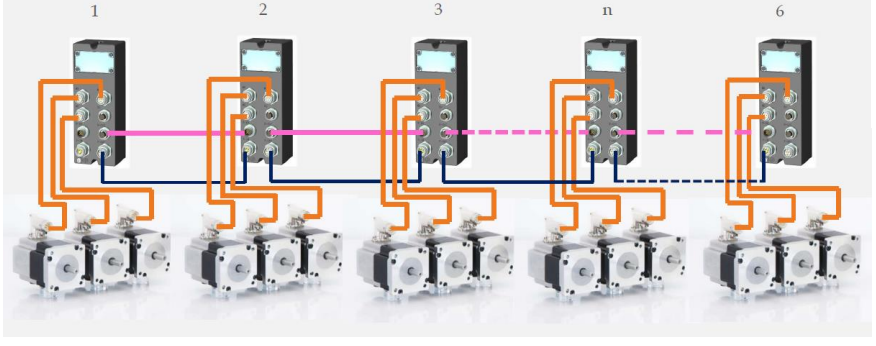
TSC: Nearby Servo Drives

Drive for 3 stepper motors

Power supply: 48 Vdc
Protection: IP65
Input: 1 analog input +/- 10V
Daisy chain connection: up to 3 devices

Stepper motors size 60 mm

Torque: 1,65 and 3,1 Nm
Feedback: Absolute single turn encoder



IP65 RATED

* through external gateway

PT2 Series: HMI

HMI panels

- Premium level panels suitable for Industry 4.0
- Embedded touch system
- Sizes from 4,3” to 15” LCD display
- TFT-LCD
- Max. colors16-bit
- LED
- CPU: RISC ARM9 32 bit
- Working Memory 64 MB
- USB
- IP66
- 5 years life battery

RS 485

RS 232

EtherNet/IP™

SOFTWARE ENVIRONMENT

Panel Master Designer

IP66 RATED

CUSTOM PRODUCTS

STEPPER MOTOR CONTROL
CPMSG0

VIBRATING FEEDERS CONTROL
CP6V16

POWER SUPPLY
FOR **ISD** AND **SVM** DRIVES
SDPOW1 - SDPOWR

LOAD CELLS ACQUISITION
SGACQA

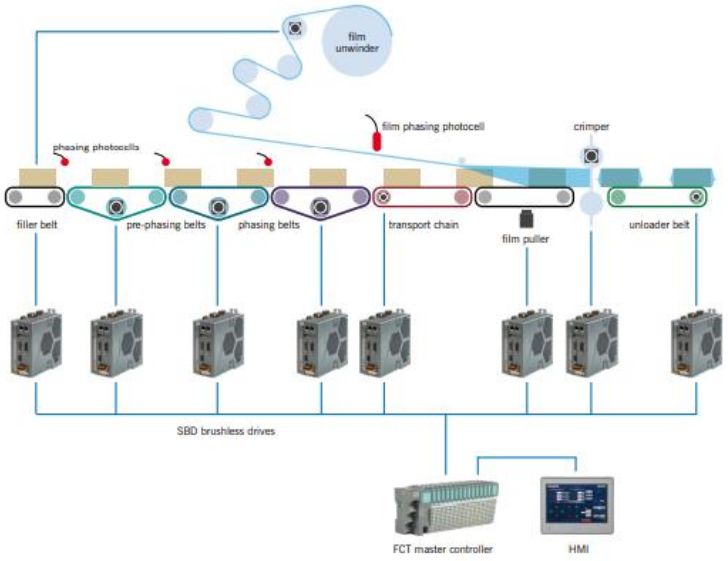
VIBRATING FEEDERS CONTROL
CP4PWM

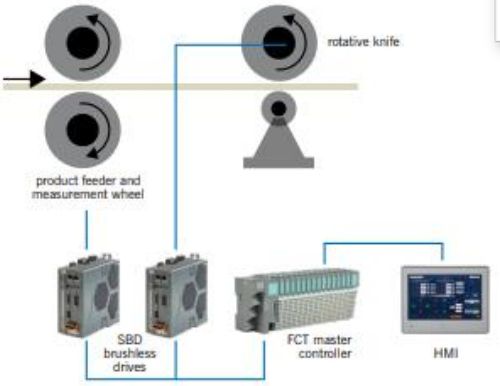
POWER SUPPLY
FOR **IBD** AND **NBD** DRIVES
BDPOW

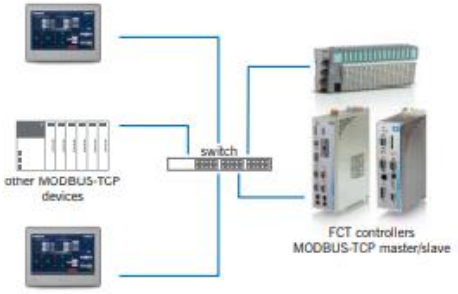
THERMOCOUPLES
CP6TS0

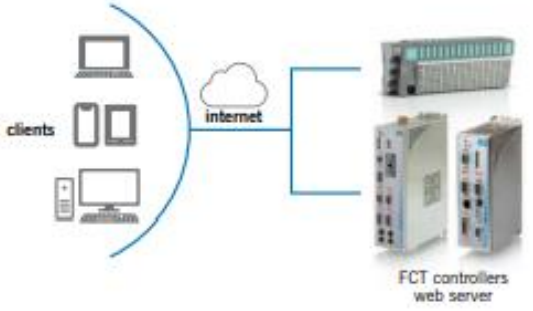
FCT300 & FCT200
I/O LOCAL MODULES

SOFTWARE: Codesys Solutions









PRESENTATION INDEX

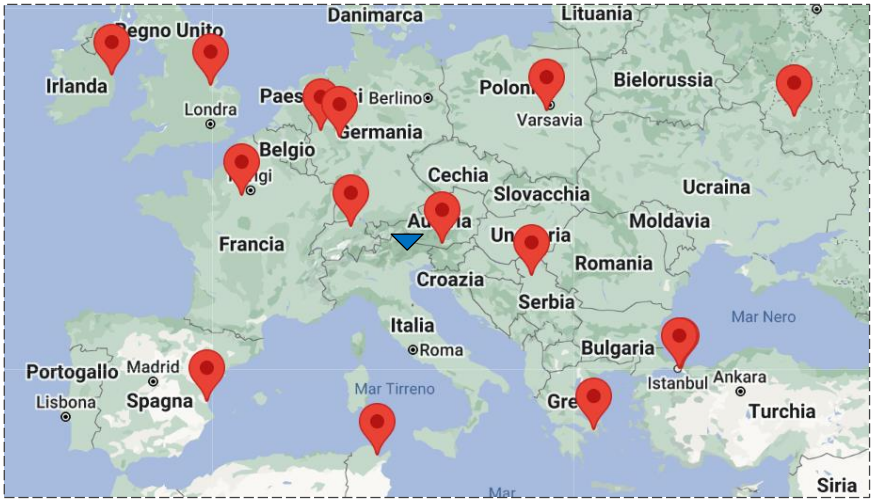
COMPANY

APPLICATIONS

PRODUCTS

WHERE WE ARE

AUTOMATION PARTNERS NETWORK – WORLDWIDE



CMZ HQ

AUTOMATION PARTNERS

cmz.it/en/automation-partners

YouTube cmz.it LinkedIn

CMZ

soga energyteam

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