mariani
INNOVATIVE PACKAGING AND PALLETISING SYSTEMS

MARIANI TRAINING BOOK

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TRAINING BOOK

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MARIANI GENERAL TRAINING

Welcome to the Mariani S.r.l. catalogue of training courses available in 2020.
We are pleased with the response we have received and with the interest shown thus far, and we are certain that the quality of the courses we offer will fully satisfy your needs, providing your operators with the adequate preparation required.
These courses will give the operators the necessary skills related to each specific Mariani machine, allowing them to become familiar with our packaging systems, more specifically, with our cartoning machines, sleeve wrappers, shrink wrappers, palletizers, crate and tray fillers.
The training is held by Mariani's authorized and qualified technicians, who have many years of experience in the field.
The courses take place at our headquarters in Carré (VI), or, if you prefer, these can be held right at your production facility.
All the training options available in this document include learning assessment, using a combination of theoretical questions as well as practical tests that are carried out on the packaging systems.
Once the final test has been passed successfully, the participants will be awarded a course attendance certificate, which will qualify them to operate the related Mariani machines with full knowledge.
The preparation and material that are necessary to be eligible for a course are indicated in the course outline. In order to fulfil these basic requirements, the company is responsible for selecting the personnel who will participate.
Our commitment is to constantly improve, so as to be able to provide you with a service that not only meets your demands but that is always more efficient. For this reason, we always welcome your feedback, which allows us to make using our packaging systems simpler and more efficient.

The Mariani Service Manager

Ugo Dalla Riva

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AVAILABLE TRAINING COURSES

1. **OT** (operator training)



2. **TT** (technicals training)
   - Basic (TTb)
   - Advanced (TTa)



3. **AT** (automation training – experts)



4. **CT** (customized training)



MARIANI MACHINE GROUPS

IMW = cartoning machine
BM = sleeve wrapper
TRM = shrink-wrapper
PMT = palletizer (infeed from above)
NPM = palletizer (infeed from below)
MRC = crate filler
MRV = tray filler

Macchine	OT	TTb	TTa	AT	CT
IMW	☑	☑	☑	☑	☑
BM	☑	☑	☑	☑	☑
TRM	☑	☑	☒	☑	☑
PMT	☑	☑	☒	☑	☑
NPM	☑	☑	☒	☑	☑
MRC	☑	☑	☒	☑	☑
MRV	☑	☑	☒	☑	☑

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OPERATORS TRAINING

(IMW-BM-TRM-MRC-MRV)



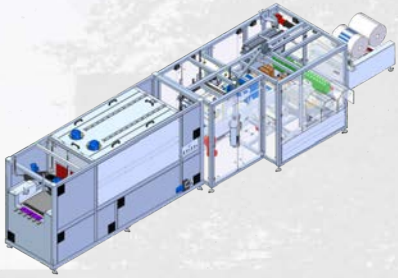
IMW-335



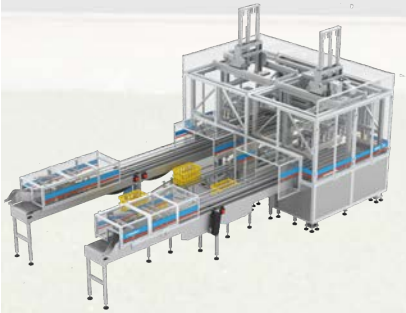
IMW-332



BM-363



TRM-700 LF



MRC



MRV

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): no specific preparation is required

Aims/skills that will be acquired by the end of the course:

- Switching on the machine and getting it ready for production
- Operating the machine and loading the consumables correctly
- Setting the machine for different formats
- Basic troubleshooting related to boxes or packs
- Emptying the machine at the end of the production cycle
- Cleaning the machine

Topics covered:

- Safety instructions for using the machine correctly
- Description of the machine cycle
- Procedures for switching on the machine and starting it up
- HMI
- Procedure for filling up the machine (if required)
- Procedure for emptying the machine
- Format changes
- Switching on and setting the gluer
- Troubleshooting
- Cleaning operations

Teaching method (practical/theoretical): 20% theoretical 80% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 3 days

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OPERATORS TRAINING

(PMT-NPM)



PMT



NPM

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): no specific preparation is required

Aims/skills that will be acquired by the end of the course:

- Switching on the machine and getting it ready for production
- Operating the machine and loading consumables and pallets correctly
- Setting the machine for different formats
- Basic troubleshooting related to boxes or pallets
- Emptying the machine at the end of the production cycle
- Cleaning the machine

Topics covered:

- Safety instructions for using the machine correctly
- Description of the machine cycle
- Procedures for switching on the machine and starting it up
- HMI
- Procedure for emptying the machine
- Format changes
- Troubleshooting
- Cleaning operations

Teaching method (practical/theoretical): 20% theoretical 80% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 1 day

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BASIC TECHNICAL TRAINING

(IMW-BM-TRM-MRC-MRV)



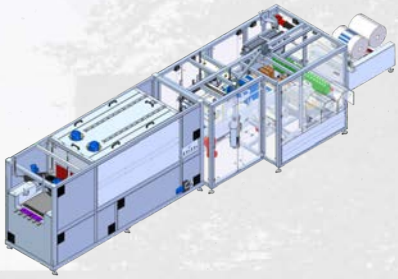
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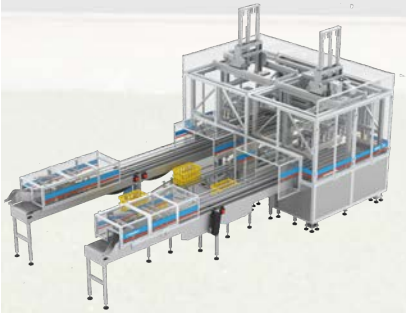
IMW-332



BM-363



TRM-700 LF



MRC



MRV

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): participants must be in possession of the attendance certificate for the OT course, and must also have a basic knowledge of mechanics and electrical engineering principles

Aims/skills that will be acquired by the end of the course:

- Correctly consulting the documentation supplied with the machine
- Procedure for ordering spare parts
- In-depth knowledge of the machine cycle
- Aligning and setting the mechanical components
- Carrying out format changes
- Setting up the machine
- Troubleshooting
- Cleaning operations

Topics covered:

- Safety instructions for using the machine correctly
- Description of the machine cycle
- Procedures for switching on the machine and starting it up
- HMI
- Procedure for filling and emptying the machine
- Format changes
- Troubleshooting
- Maintenance
- Cleaning operations

Teaching method (practical/theoretical): 20% theoretical 80% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 3 days

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BASIC TECHNICAL TRAINING

(PMT-NPM)



PMT



NPM

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): participants must be in possession of the attendance certificate for the OT course, and must also have a basic knowledge of mechanics and electrical engineering principles

Aims/skills that will be acquired by the end of the course:

- Correctly consulting the documentation supplied with the machine
- Procedure for ordering spare parts
- In-depth knowledge of the machine cycle
- Aligning and setting the mechanical components
- Carrying out format changes
- Setting up the machine
- Troubleshooting
- Cleaning operations

Topics covered:

- Safety instructions for using the machine correctly
- Description of the machine cycle
- Procedures for switching on the machine and starting it up
- Timing/setting encoders
- HMI
- Procedure for emptying and resetting the machine
- Format changes
- Troubleshooting
- Maintenance
- Cleaning operations

Teaching method (practical/theoretical): 20% theoretical 80% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 3 days

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ADVANCED TECHNICAL TRAINING

(IMW-BM-TRM-MRC-MRV)



IMW-335



IMW-332



BM-363

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): participants must be in possession of the attendance certificate for the TTb course, and must also have in-depth knowledge of mechanics and electrical engineering principles

Aims/skills that will be acquired by the end of the course:

- Removing and reassembling complex parts
- Setting up the machine

Topics covered:

- Safety instructions for using the machine correctly
- Practice in part removal and assembly operations

Teaching method (practical/theoretical): 100% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 4 days

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AUTOMATION TRAINING

(IMW-BM-TRM-MRC-MRV-PMT-NPM)



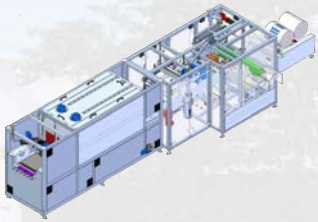
IMW-335



IMW-332



BM-363



TRM-700 LF



MRC



MRV



PMT



NPM

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COURSE OVERVIEW

No. of participants: max. 6

Target group (previous preparation needed): basic programming knowledge

IT tools needed: laptop computer

Aims/skills that will be acquired by the end of the course:

- Replacing and programming inverters
- Replacing and programming encoders
- Replacing and programming axis cards for Brushless motors
- Replacing and programming safety devices
- Replacing and programming motors for automatic format changes

Topics covered:

- Overview of the programs to be used
- Description of the programming devices
- Storing device parameters
- Using backup data

Teaching method (practical/theoretical): 50% theoretical 50% practical

Learning material: Operator, technical and spare parts manual (see page 18)

Duration: 4 hours

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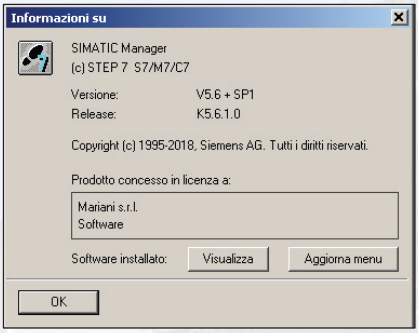
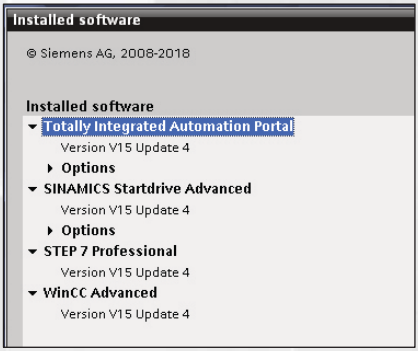
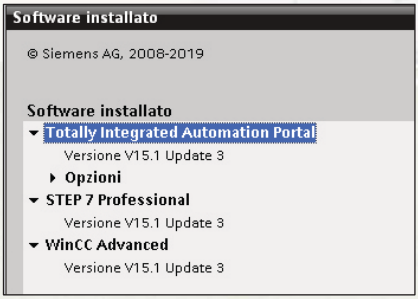
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LEARNING MATERIAL

(AUTOMATION TRAINING)

DEVICE SUPPLIER	SOFTWARE VERSION
Siemens PLC	
Siemens HMI Machine with S7	
Siemens PLC + HMI TiaPortalV15.1: HMI + PLC 1.500	

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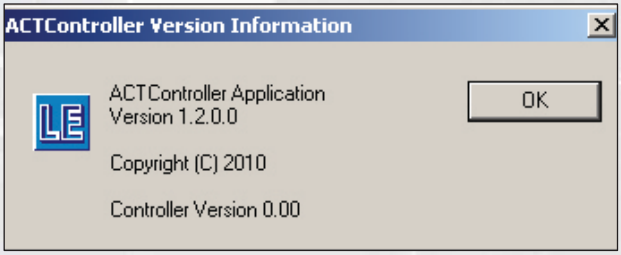
(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
VMSiemens	Closed	Ethernet cable 
VMSiemens	Closed	Ethernet cable 
VMSiemens	Closed	Ethernet cable 

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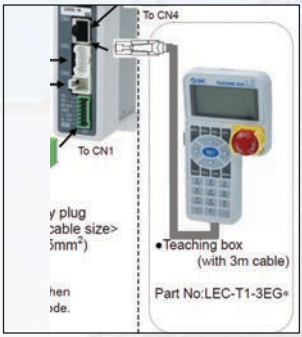
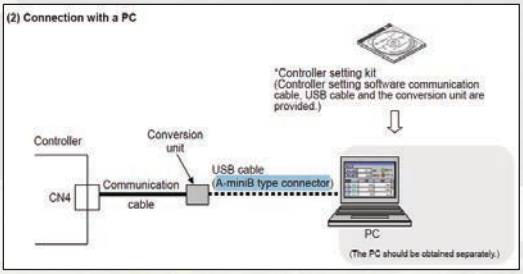
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DEVICE SUPPLIER	SOFTWARE VERSION
SMC Pack-turning device	

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LEARNING MATERIAL

(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
VMVario	Closed	1. Supplied by Mariani In the main electrical panel of the machine  2. Programmable using a PC (Not supplied by Mariani)  - Programming interface 1. Mariani Code: 0332105100 2. Supplier Code: LEC-W2 - Connection cable: 1. Mariani Code: 0322102021 2. Supplier Code: LEC-W2 RJ45-M12 P5062

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LEARNING MATERIAL

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DEVICE SUPPLIER	SOFTWARE VERSION
Lenze 1. Inverter 8.400 2. Servomotor 9.400	
Lenze 1. Inverter 1.500	Available soon

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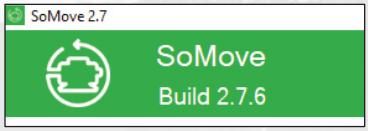
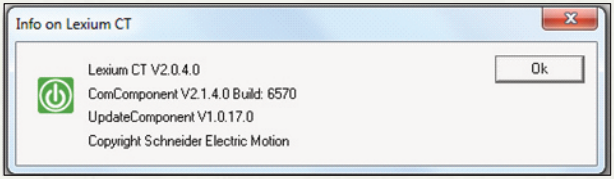
(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
VMVario	Closed	1. Supplied by Mariani In the main electrical panel of the machine  2. Programmable using a PC (Not supplied by Mariani)  Connection kit: USB DIAGNOSTIC ADAPTER Mariani code: 0360502015 Supplier code: E94AZCUS
VMVario	Closed	

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LEARNING MATERIAL

(AUTOMATION TRAINING)

DEVICE SUPPLIER	SOFTWARE VERSION
Schneider Electric V4.31 PLC	
Schneider Electric INVERTER	 DTM Library V1.3.2
Schneider Electric Format Change Motor ILE2	

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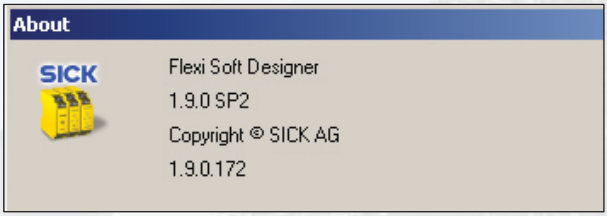
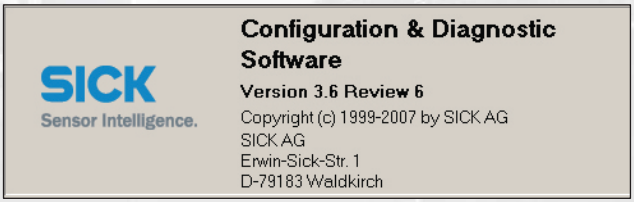
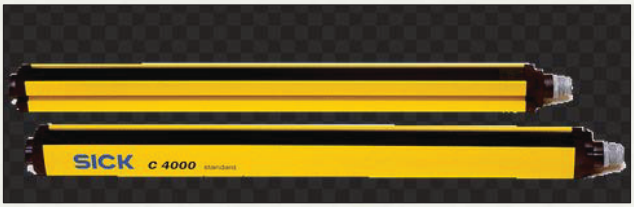
(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
VMSchneider	Closed	Programmable using a PC and an ethernet cable (Both not supplied by Mariani) 
Host	Open	Programmable using a PC (Not supplied by Mariani)  Connection cable: USB/RJ45 Mariani code: 0510200325 Supplier code: TCSMCNAM3M002P
VMSchneider	Open	Ethernet cable connected to a specific switch in the electrical panel of the machine 

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LEARNING MATERIAL

(AUTOMATION TRAINING)

DEVICE SUPPLIER	SOFTWARE VERSION
Safety Sick PLC !!!ATTENTION!!! Mariani will not supply any code unless the client takes on full responsibility	
Safety barrier !!!ATTENTION!!! Mariani will not supply any code unless the client takes on full responsibility	 

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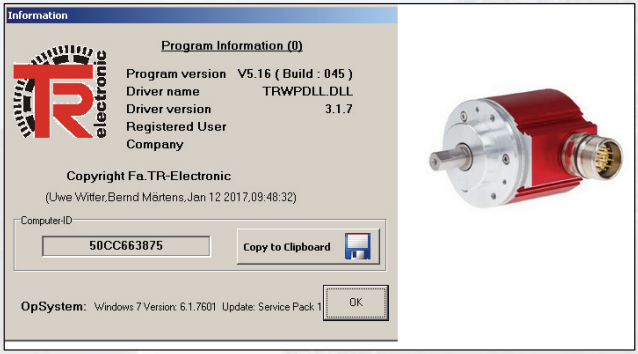
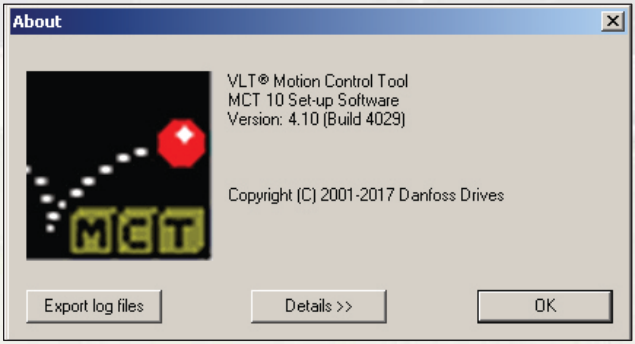
(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
VMVario	Closed	Programmable using a PC (Not supplied by Mariani)  Mariani usually programs the device before shipping the spare parts
VMVario	Closed	Programmable using a PC (Not supplied by Mariani)  Mariani usually programs the device before shipping the spare parts

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LEARNING MATERIAL

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DEVICE SUPPLIER	SOFTWARE VERSION
Encoder Telestar Device: encoder	
Danfoss Inverter	

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LEARNING MATERIAL

(AUTOMATION TRAINING)

CONTENTS	LICENSE	PROGRAMMING TOOLS
Host	Open	Programmable using a PC (Not supplied by Mariani) Special equipment needed (Serial <---> USB) Mariani usually programs the device before shipping the spare parts  ADAPTOR: TELESTAR USB/RS485 Mariani code: 0343800081 Supplier code: 40418120
VM	Open	Programmable using a PC (Not supplied by Mariani) Connection cable: USB/USB type B2.0

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MARIANI TRAINING ROOM



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PRODUCTION DEPARTMENT



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AUTOMATIC WAREHOUSE



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VERTICAL MODULAR WAREHOUSE



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