FRITSCH

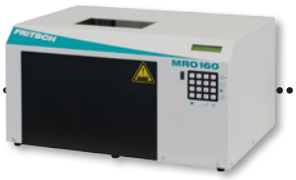
COMPLETE AND FLEXIBLE SMT SOLUTIONS

REFLOW
Soldersystems

Innovation and quality made in Germany

Contents

Batch Reflow Systems 4



Features 6

Options 7

Inline Reflow Systems 8

Features, options 10

Other machines 11

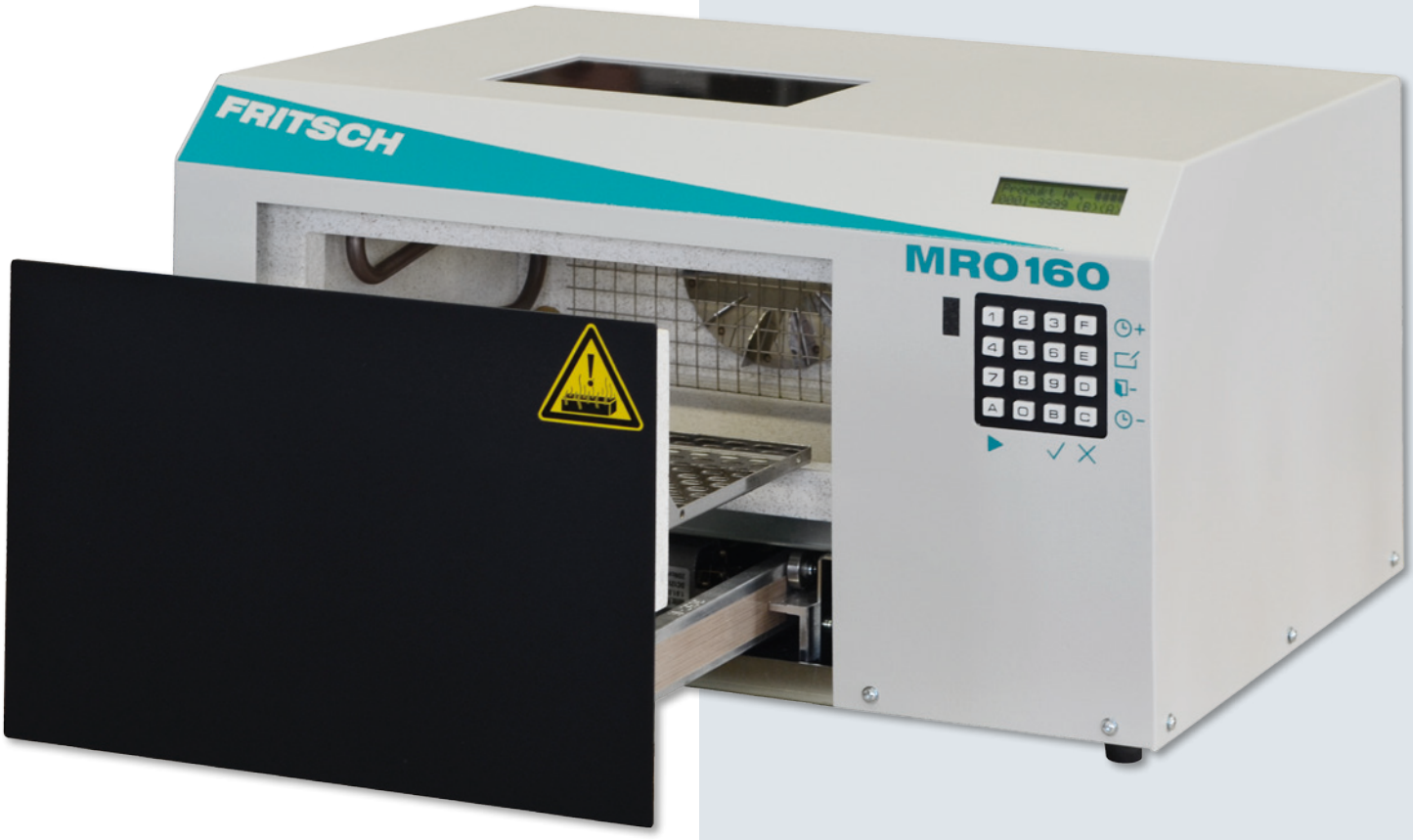
Batch Reflow Systems

Construction

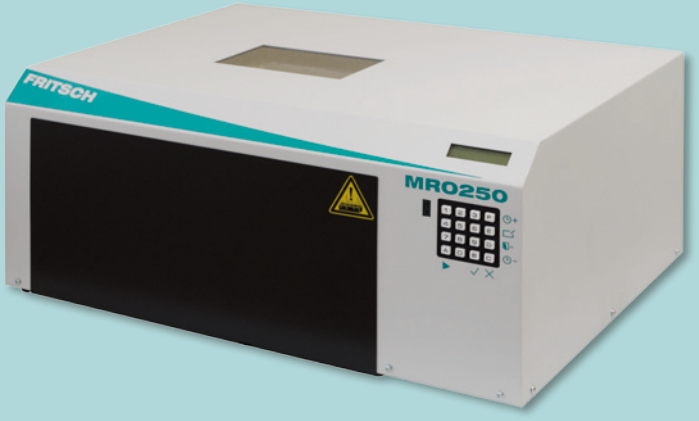
The Convection Reflow Solder System has a drawer unit for accepting Printed Circuit Boards on individually adjustable supports which are held in place by magnetic feet. The low mass and small contact area of the supports contribute to uniform heating of PCBs. The power transmission to the component is made by convection which guarantees a fast and equal heating and avoids temperature shadows and over-heating. A further advantage of convection heating are minimal temperature differences between small and large components.

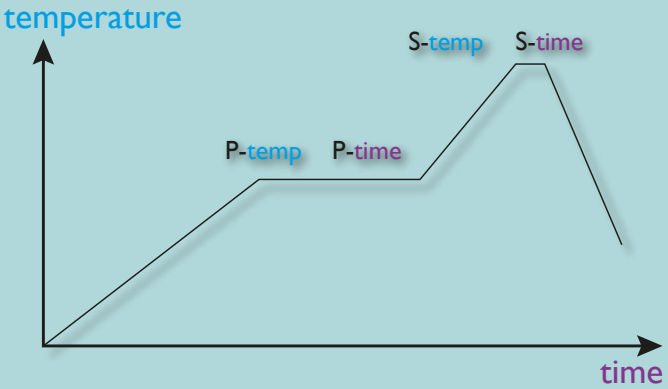
Easy operation

Programming and operating is made by a clearly arranged keyboard. All user inputs and for the process relevant operating data are shown on the two-line LCD-Display. The menu-driven user surface enables an easy and fast handling of the system. Each temperature profile has a four digit number allocated to it which is used for storage and retrieval. As soon as the four parameters (pre-heat temperature and time and reflow temperature and time) for a heating cycle are defined, the process can be started.



Batch Reflow Systems





Batch Reflow System 160

Convection Reflow Solder System.
Batch system with microprocessor control, for the laboratory and small series.

Technical details

Dimensions:	480 mm x 260 mm x 230 mm
Weight:	18 kg
Voltage:	230 V/50 Hz
Output power:	2,2 kW
Max. PCB size:	200 mm x 160 mm

Batch Reflow System 250

Convection Reflow Solder System.
Batch system with microprocessor control, for the laboratory and small series.

Technical details

Dimensions:	590 mm x 260 mm x 230 mm
Weight:	21 kg
Voltage:	230 V/50 Hz
Output power:	3,5 kW
Max. PCB size:	350 mm x 250 mm

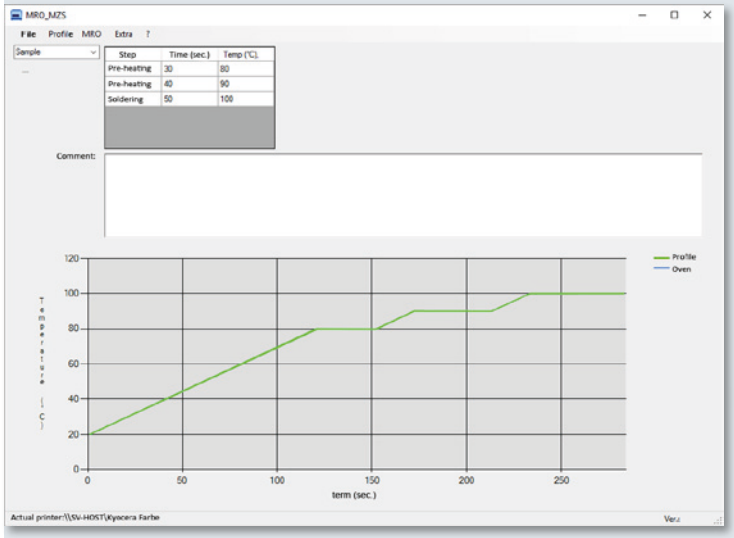
The following datas are for all types of Batch Reflow Systems.

Preheating-temperature/time:	50-240°C, 1-3600 s
Reflow-temperature/time:	75-300°C, 1-180 s
Longterm process	50-220°C, 1-1440 min
Temperature stabilisation:	5 min
Temperature rise:	ca. 0,9°C/s

Features

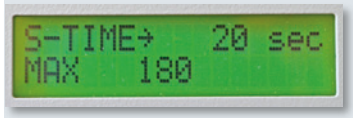
Software

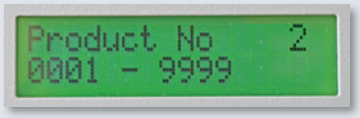
The optional user interface under Windows facilitates the remote control of the oven programme and, at the same time, the recording of the temperature profiles (an additional measuring channel is optionally available).
The temperature profile can easily be programmed on the screen. In doing so, any number of process steps with temperature and time can be displayed (heat zone simulation). A connection between the PC and the Reflow Soldering System is set up via the serial interface. The internal microcontroller takes over the entire control of the heating process and guarantees reliable and reproducible results. The programming and operation takes place with the help of the user interface. All user input and the operating data that is essential for the process is displayed. The temperature profile in the heating chamber is displayed as a diagram and can be stored and printed.
In order to record another temperature (e.g. on a component), an additional thermocouple (NiCrNi) is connected. This temperature profile is likewise displayed in the diagram.



Flexible

While a heating cycle is in progress the set heating time can be altered as required. Any new value will be stored automatically in the profile memory location.





Comfortable

At the end of the heating cycle the drawer opens automatically to allow the PCB to cool.

Economics

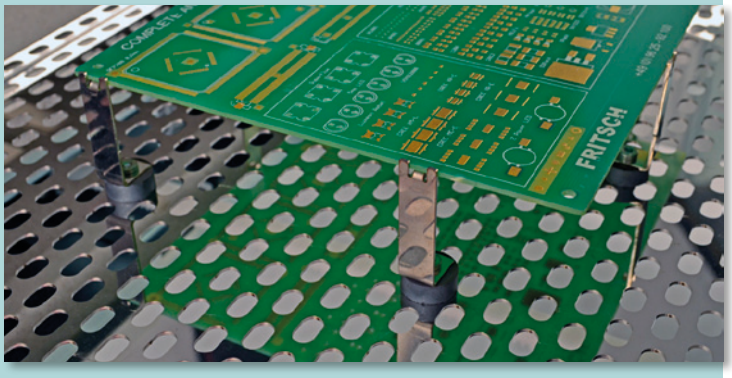
The Reflow Soldering of SMD assembled components as well as the hardening of glue by the Batch Oven is easy and economical.
The compact size and extremely good value are further advantages of these convection Reflow Solder Systems.

Options

Extension software

903.252 Control and protocol software for the 903.160 and 903.250 Soldering Systems (Windows 2000, XP, Vista, Windows 7)

Batch Reflow System 160	Batch Reflow System 250
✓	✓



PCB holder

903.255 PCB holder for Batch Reflow Solder Systems

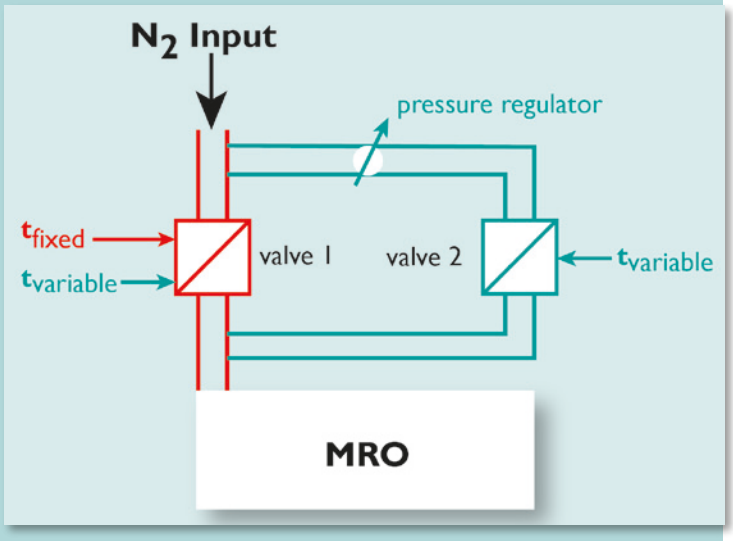
Batch Reflow System 160	Batch Reflow System 250
✓	✓

Extension measuring channel

Extension to the Reflow Soldering Systems 903.160 and 903.250 with 2nd measuring channel for recording the temperature directly on the PCB or on a component.

903.251 Extension 2nd measuring channel

Batch Reflow System 160	Batch Reflow System 250
✓	✓



Cover gas operation

903.253 Option cover gas N2 operation

Batch Reflow System 160	Batch Reflow System 250
✓	✓

903.254 Option azotic-controlling with bypass and door seal (only in combination with 903.253)

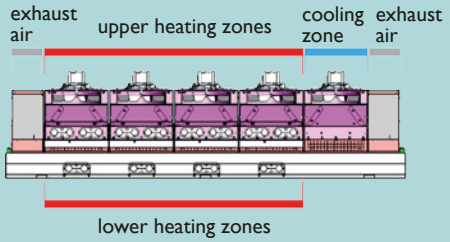
Batch Reflow System 160	Batch Reflow System 250
✓	✓

Inline Reflow Systems

Lead-free soldering

The reflow ovens guarantee an environment-friendly lead-free soldering of highest component diversity incl. QFP, BGA/ CSP etc. Small and medium series are the optimal application for the oven.
The basic machine disposes of a heating chamber with eight heating zones, in each case four on the top and bottom. The heating zones emit convective heat with the help of hot air blower. The upper part of the heating chamber includes additional a cooling zone and an exhaust air bonnet in the lead-in and lead-out-area. A grid belt transports the soldering manor. The soldering system is handled by a modern 7“ touch panel. An one-channel temperature sensor is integrated for controlling the contour of soldering on the PCB. An equal thermoelement sensor is in the scope of delivery.

Inline Reflow Systems



Reflow Soldering Oven 551.10

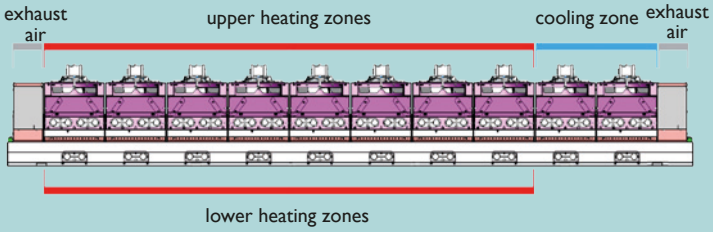
The Inline Soldering System has 8 heating zones - 4 up and 4 down, 2 cooling zones and 2 suction hoods.

Technical details

Dimensions:	2010 mm x 790 mm x 1440 mm, closed
Weight:	ca. 280 kg
Length of active chamber:	850 mm
Infeed height:	ca. 45 mm
Min. PCB size:	15 mm x 10 mm
Usable working width mesh belt:	405 mm
Usable working width pin chain:	395 mm
Speed of transport:	15 cm/min – 90 cm/min
Heating-up power:	max. 11 kW
Max. Reflow temperature:	ca. 280°C
Suction socket:	connection Ø 60 mm
Needed exhaust air volume:	270 m³/h
Connection value:	3 x 230/400 V 50 Hz with 16 A CEECON connector
Operation:	7“ Touchpannel

Reflow Soldering Oven 551.19

The Inline Soldering System has 16 heating zones - 8 up and 8 down, 2 cooling zones and 2 suction hoods.



Technische details

Dimensions:	3110 mm x 845 mm x 1440 mm, closed
Weight	ca. 450 kg
Length of active chamber:	1680 mm
Infeed height:	ca. 45 mm
Min. PCB size:	15 mm x 10 mm
Usable working width mesh belt:	405 mm
Usable working width pin chain:	395 mm
Speed of transport:	15 cm/min – 90 cm/min
Heating-up power:	max. 22 kW
Max. Reflow temperature:	ca. 280°C
Suction socket:	connection Ø 60 mm
Needed exhaust air volume:	270 m³/h
Connection value:	3 x 230/400 V 50 Hz with 32 A CEECON connector
Operation:	7“ Touchpannel

Features, Options

Base cabinet

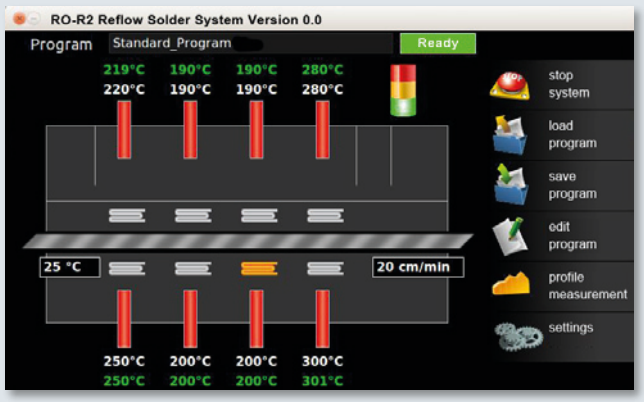
The included cabinet at the basic machine enables the safe placement of the Soldering System as stand-alone or inline variant of a production line. The base cabinet offers also a lot of storage space for the needed equipment.

Signal light

The system display informs about all values of the system. These are the operating status, error reports, the nominal and actual temperature of all heating areas, the actual temperature of the intern temperature profiler and the transport speed.

Power Save Package

As soon as the function Power Save Package is activated after a fixed period in no-load operation the system is stand-by. The system is automatically cooled down to a defined temperature.



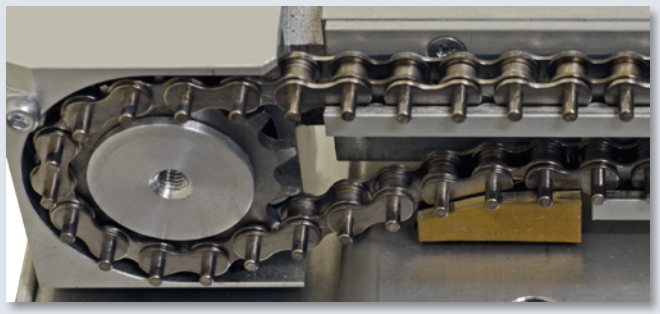
Communication Package

The Communication Package enables the connection of the Soldering system to network via WLAN and LAN. Therefore the actual status of machine can be controlled.

Pin Chain Transfer

The optional pin chain enables the handling of double sided assemled PCBs. With the integrated hand crank the wanted working width can be adjusted. PCBs with a width of up to 395 mm can be soldered without any problems.

Reflow Soldering Oven 551.10	Reflow Soldering Oven 551.19
✓	



Exhaust air box

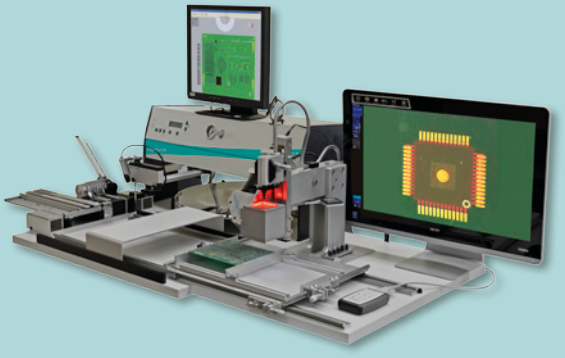
Glue and soldering fumes which result from operating are permanently unhealthy. To protect the room air for upheated and eventual with flux fume contaminated exhaust air a box can be installed at the backside of the soldering system.

Reflow Soldering Oven 551.10	Reflow Soldering Oven 551.19
✓	✓

Other machines

Automatic pick & place systems

The FRITSCH placeALL® is the standardized platform for flexible, high-precise and cost-effective Pick & Place of electronic components in prototyping and the production of small and medium series. All types of machines have he same software for setting, adjustment and production. The own high depth of production enables a fast customized implement.



Manual pick & place systems

For prototyping and for small series we have manual and semi-automatic manipulators in our product range. All steps in process like dispensing of welding pastes / glue up to the pick & place of components incl. Fine Pitch can be performed. Depending on application the machines may be equipped with feeders for tape rolls and sticks.

Stencil Printer

The increasing demands like finest structures and smallest components ask for new products. The solid construction of the FRITSCH stencil printers fullfill every requirement and the elaborate range enables the handling of structures up to 0,5 mm and oversizes PCBs.

Production line

To reach a higher pick & place performance and flexibility several machines can be linked. The positions are devided for the specific requirements.
Prototyping or a full-automatic productionline: depending on the customer request individual lines can be constructed.

pcb technologies

SISTEMI **www.pcbtech.it**
STRUMENTI **www.epcb.it**

Viale Beniamino Gigli, 15
60044 Fabriano AN

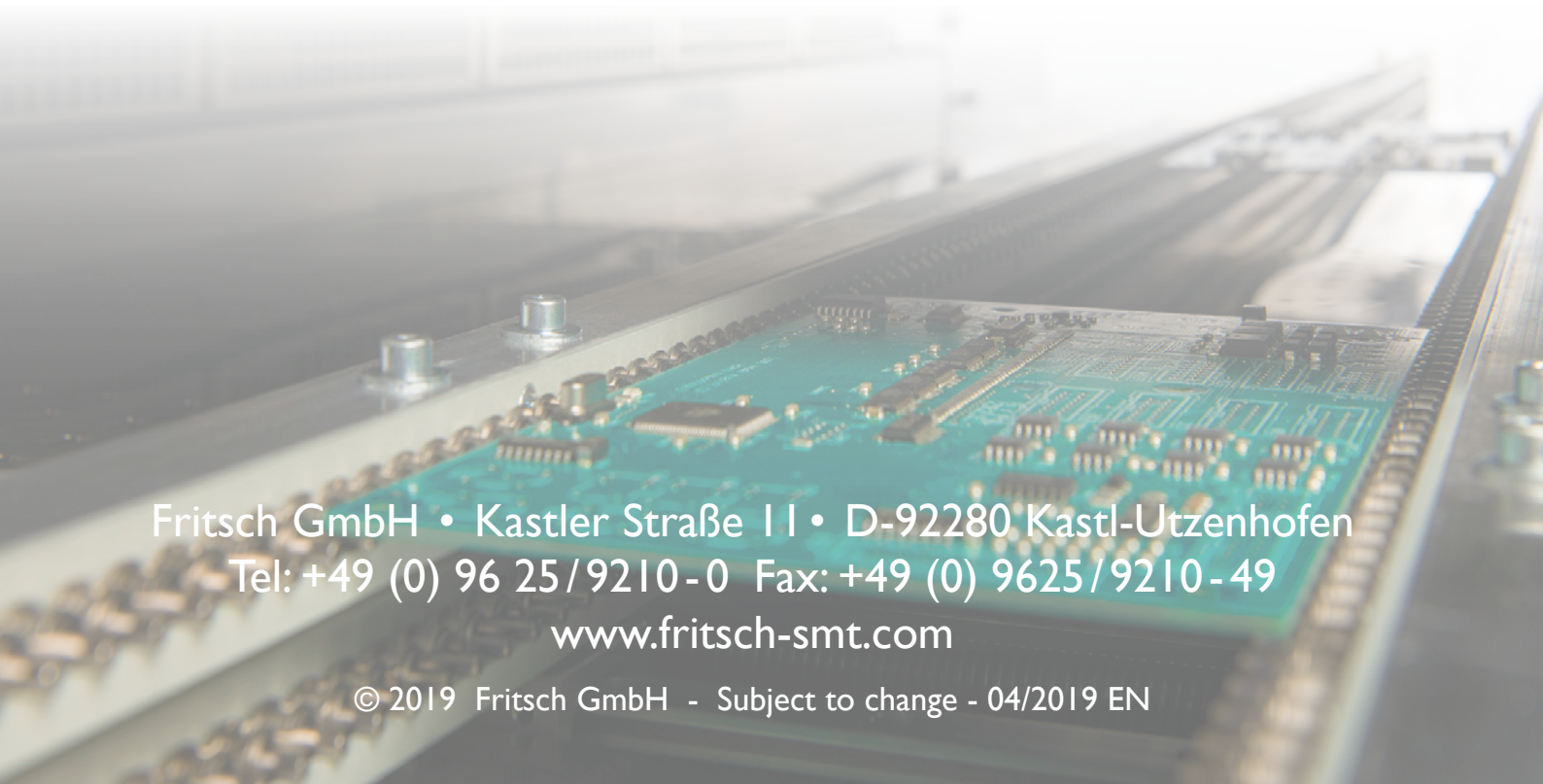
info@pcbtech.it

Tel. +39 0732 250458
Fax +39 0732 249253

C.F. / P.I. 01474230420

FRITSCH

COMPLETE AND FLEXIBLE SMT SOLUTIONS



Fritsch GmbH • Kastler Straße 11 • D-92280 Kastl-Utzenhofen
Tel: +49 (0) 96 25/9210-0 Fax: +49 (0) 9625/9210-49
www.fritsch-smt.com