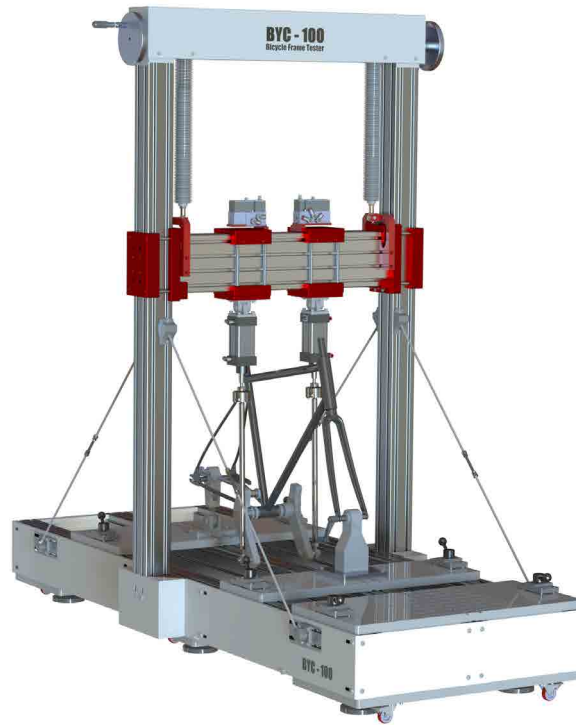


PNEUMATIC SYSTEMS

the most flexible and effective solution for running fatigue tests



Characteristics



CUSTOMIZABLE



MAXIMUM
FLEXIBILITY AND
CONFIGURABILITY

Pneumatic Components

The LiTeM pneumatic test systems include three main components:

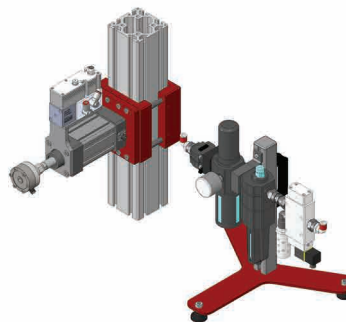
- Real Time Controller TX series
- K-PN pneumatic actuator
- PN-MF or BYC series modular frame

The systems can be configured as multi-axial or single-axis units and can be equipped with actuators featuring different performance characteristics. The actuators are fully interchangeable, and the test frames can also be manufactured in custom shapes and dimensions according to the user's requirements.

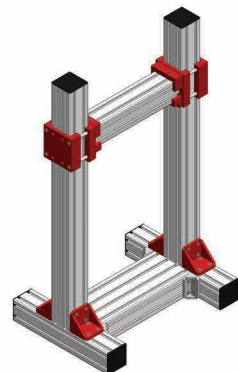
Thanks to their flexibility and modular design, these testing systems can be easily adapted to any testing need.



TX-Series Real Time Controller



K-PN Pneumatic actuator



PN-MF Modular Frame

Component description

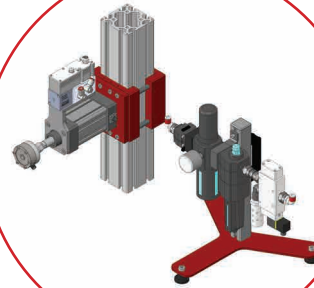


TX Real-Time Controller series: available in the single-axis (expandable) TX-1 version and in the non-expandable bi-axial TX-2 version.

Versatile and easy to operate, it is supplied complete with PC, monitor, and the SX software suite pre-installed.

It enables the execution of static, semi-static, dynamic, cyclic, block, and fatigue tests, with control modes including force and displacement.

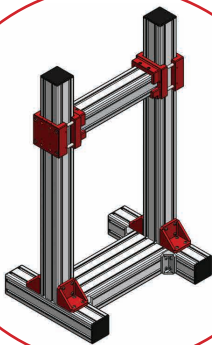
Compatible and integrable



The K-PN pneumatic actuator kit includes the pneumatic actuator, the proportional pneumatic servo-valve, the load cell, and the air-treatment unit.

The desired configuration can be selected by choosing the appropriate actuator and load cell according to the testing requirements.

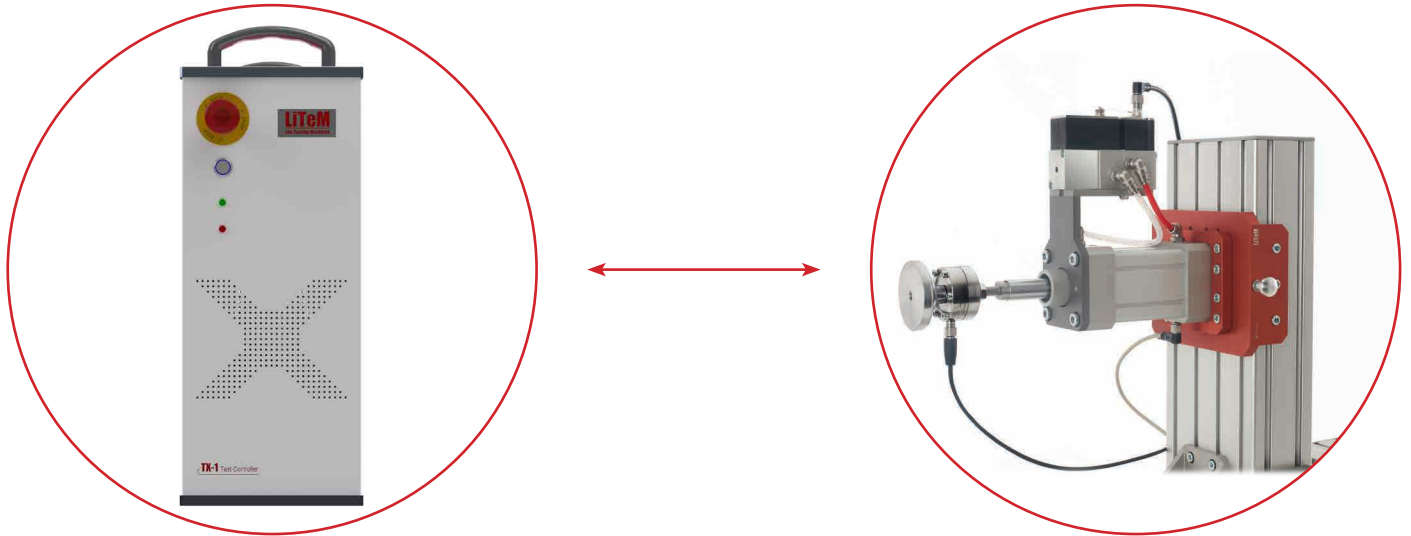
Mounting plates and accessories are available to accommodate any type of test configuration



The PN-MF modular frames, available in the VDC and BYC versions, are built using aluminum profiles and LiTeM-designed plates, allowing the test bench to be configured with maximum versatility.

In addition to the modular frames available in the catalogue, LiTeM designs and manufactures custom systems based on the customer's specifications

Example of configuration 1



EX 1:

Includes the TX-1 Real-Time Controller (single-axis) and the K-PN pneumatic actuator kit.

This is the base configuration and represents the most economical and versatile solution within the LiTeM pneumatic systems range.

It is ideal for testing individual components or assembled parts, making use of existing reaction structures available at the customer's facility.

The actuator kit configuration is fully customizable. Actuators and load cells are interchangeable and can also be replaced at a later stage without requiring any hardware modifications to the Controller.

Components included in the Kit

Code	Description
TX-1	Real Time Controller TX series: TX-1 controller, Dell Mini tower PC or similar, monitor 27", mouse, keyboard, connection cables and emergency button with 5 m cable
SX-1	SX Software Suite - Already installed
K-PN*	Pneumatic actuator Kit: Actuator provided with assembled contactless position transducer, force transducer, proportional servo-valve, air handling unit, load cell and servo-valve fixing plate and connection cables
*Note: see the data sheet of the K-PN actuator kit to select the model and specifications of the actuator and load cell (www.litem.info)	

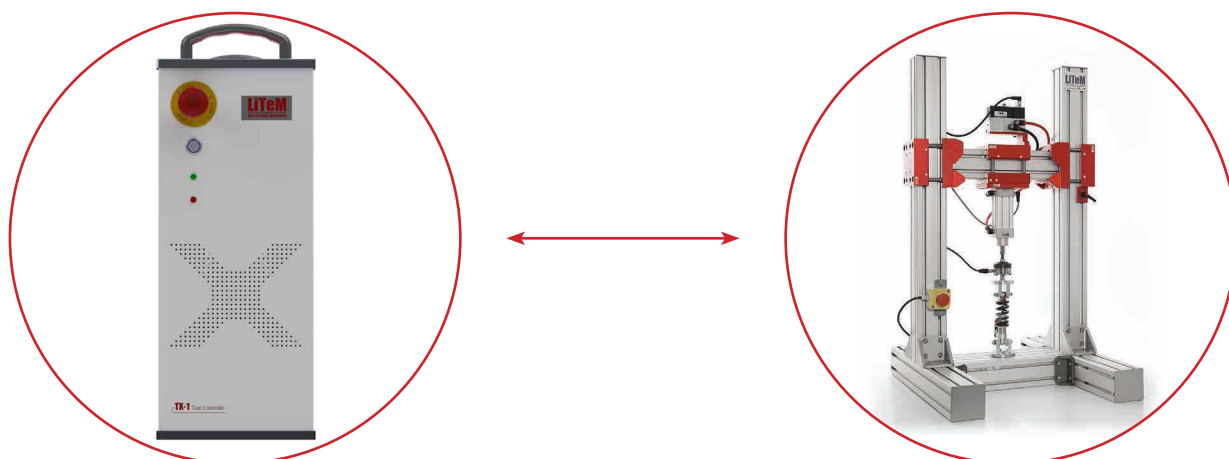
Order codes

How to order / Coding example:

- TX-1
- SX-1
- K-PN50-100-2.5 (see data sheet of the K-PN Kit)

The system includes the TX-1 controller with components included, the SX-1 software suite and the actuator kit with actuator bore 50 mm, stroke 100 mm - load cell 2.5 kN

Example of configuration 2



EX 2:

Includes the TX-1 Real-Time Controller (single-axis), the K-PN pneumatic actuator kit, and the PN-MF modular frame, VDC series.

This standard complete configuration provides the operator with everything needed to perform the tests. It is ideal for testing materials, individual components, or assembled parts.

The actuator kit configuration is fully customizable. Actuators and load cells are interchangeable and can also be replaced at a later stage without requiring any hardware modifications to the Controller.

The modular frame structure allows the actuator anchoring points to be adjusted, ensuring maximum flexibility

Components included in the Kit

Code	Description
TX-1	Real Time Controller TX series: TX-1 controller, Dell Mini tower PC or similar, monitor 27", mouse, keyboard, connection cables and emergency button with 5 m cable
SX-1	SX Software Suite - Already installed
K-PN*	Pneumatic actuator Kit: Actuator provided with assembled contactless position transducer, force transducer, proportional servo-valve, air handling unit, load cell and servo-valve fixing plate and connection cables
PN-MF*	PN-MF series modular test frame (available in the VDC and BYC versions)

*Note: see the data sheet of the actuator kit to select the model and specification of the actuator and load cell / see the data sheet of the PN-MF modular frames to set up the frame which best fits your test requirements (www.litem.info)

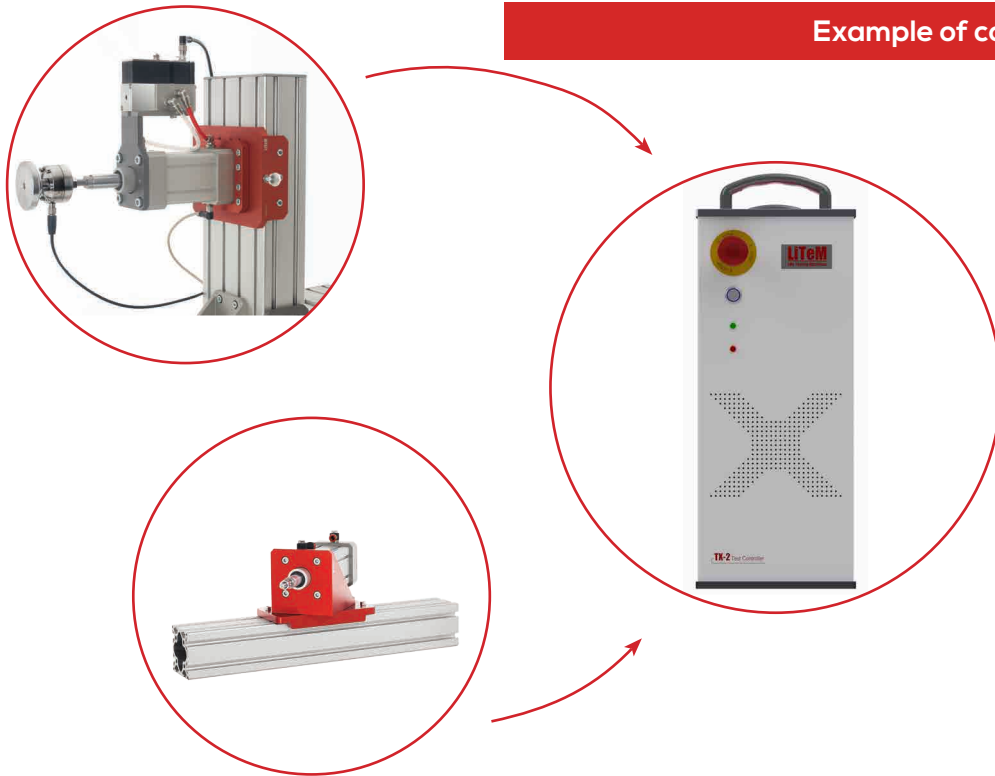
Order codes

How to order / Coding example

- TX-1
- SX-1
- K-PN50-100-2.5 (see data sheet of the K-PN Kit)

The system includes the TX-1 controller with components included, the SX-1 software suite and the actuator kit with actuator bore 50 mm, stroke 100 mm - load cell 2.5 kN and two-column VDC frame 2.5 kN

Example of configuration 3



EX 3:

Includes the TX-2 Real-Time Controller (bi-axial) and two K-PN pneumatic actuator kits.

This is the base and most versatile configuration for the LiTeM multi-axial pneumatic systems. These systems make use of existing reaction structures available at the customer's facility and can manage either fully independent tests or multi-axial tests on a single component.

The actuator kit configuration is fully customizable. Actuators and load cells are interchangeable and can also be replaced at a later stage without requiring any hardware modifications to the Controller

Components included in the Kit

Code	Description
TX-2	Real Time Controller TX series: TX-2 controller, Dell Mini tower PC or similar, monitor 27", mouse, keyboard, connection cables and emergency button with 5 m cable
SX-2	SX Software Suite - Already installed
K-PN*	Pneumatic actuator Kit (n°2): Actuator provided with assembled contactless position transducer, force transducer, proportional servo-valve, air handling unit, load cell and servo-valve fixing plate and connection cables
*Note: see the data sheet of the actuator kit to select the model and specifications of the actuator and load cell (www.litem.info)	

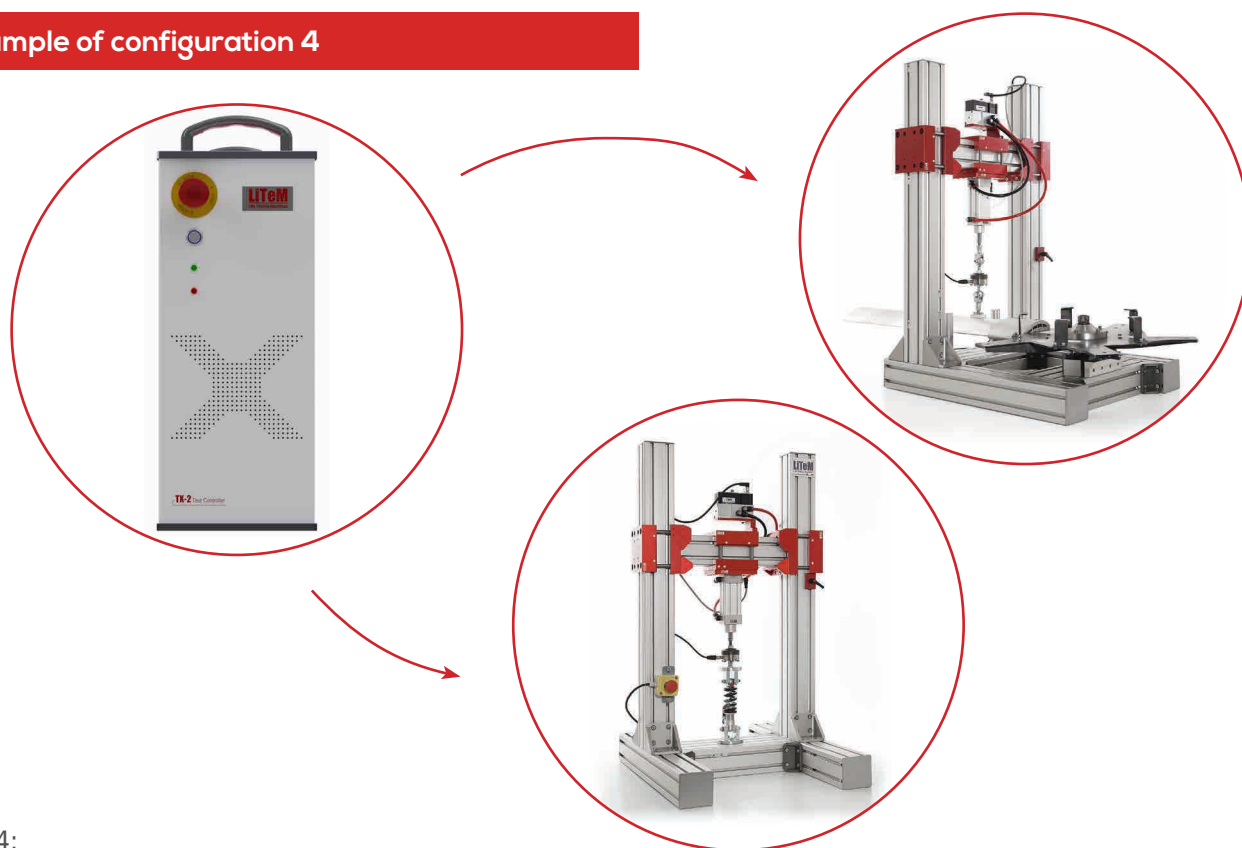
Order codes

How to order / Coding example:

- TX-2
- SX-2
- K-PN50-100-2.5 (see data sheet of the K-PN Kit) - quantity 2

The system includes the TX-2 controller with components included, the SX-2 software suite and 2 actuator kits with actuator bore 50 mm, stroke 100 mm - load cell 2.5 kN

Example of configuration 4



EX-04:

Includes the TX-2 Real-Time Controller (bi-axial), n° 2 K-PN pneumatic actuator kits and n°2 PN-MF modular frames, VDC series.

This standard complete configuration provides the operator with everything needed to perform two independent tests using two separate testing machines. It is ideal for testing materials, individual components, or assembled parts.

The actuator kit configuration is fully customizable. Actuators and load cells are interchangeable and can also be replaced at a later stage without requiring any hardware modifications to the Controller.

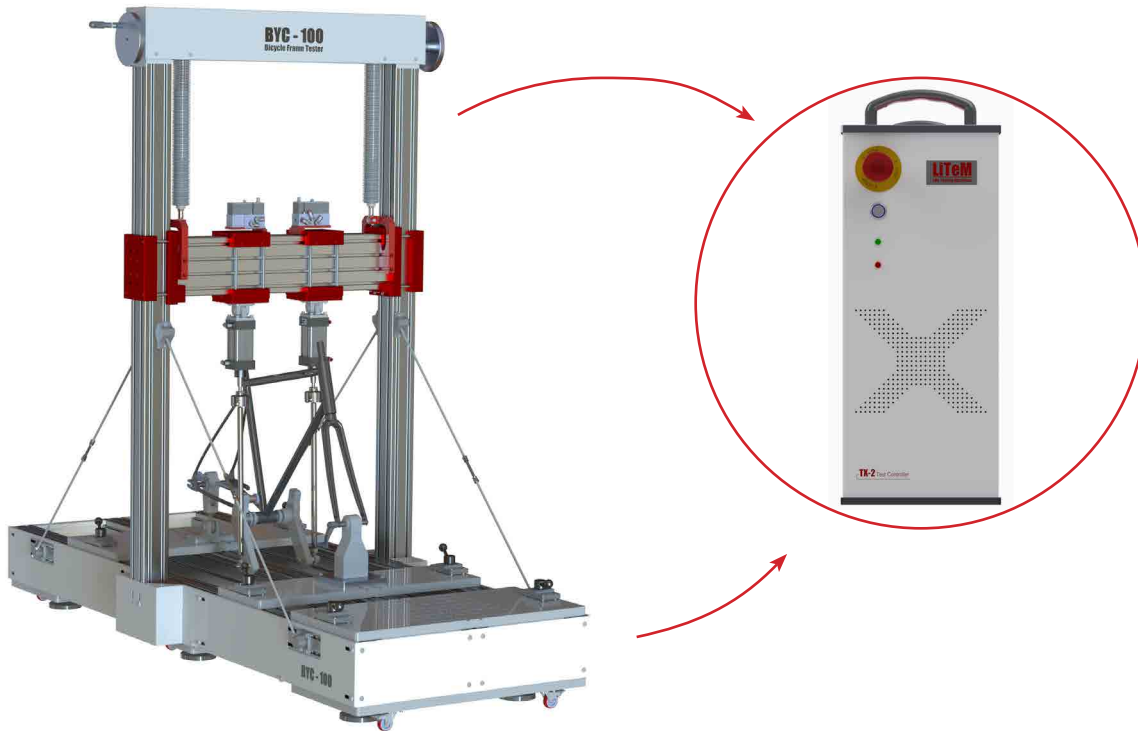
The modular frame structures allow the actuator anchoring points to be adjusted, ensuring maximum flexibility.

Components included in the Kit	
Code	Description
TX-2	Real Time Controller TX series: TX-2 controller, Dell Mini tower PC or similar, monitor 27", mouse, keyboard, connection cables and emergency button with 5 m cable
SX-2	SX Software Suite - Already installed
K-PN*	Pneumatic actuator Kit (n°2): Actuator provided with assembled contactless position transducer, force transducer, proportional servo-valve, air handling unit, load cell and servo-valve fixing plate and connection cables
PN-MF*	PN-MF series modular test frame (available in the VDC and BYC versions)
*Note: see the data sheet of the actuator kit to select the model and specification of the actuator and load cell / see the data sheet of the PN-MF modular frames to set up the frame which best fits your test requirements (www.litem.info)	

Order codes

How to order / Coding example:

- TX-2
 - SX-2
 - K-PN50-100-2.5 (see the datasheet for the K-PN Kit) - quantity 2
 - VDC-3-003 (see the datasheet for the PN-MF modular frame, VDC series) - quantity 2
- The system includes the TX-2 Controller with all standard components, the SX-2 software, two actuator kits equipped with a 50 mm bore - 100 mm stroke pneumatic actuator and a 2.5 kN load cell, and two VDC bi-column frames rated at 2.5 kN



EX-05:
Includes the TX-2 Real-Time Controller (bi-axial), two K-PN pneumatic actuator kits, and the BYC-series modular frame.

This configuration provides a complete multi-axial testing system. The BYC-100 test bench is designed for performing fatigue tests on bicycles and bicycle components in accordance with ISO 4210 and EN 15194.

The actuator kit configuration is fully customizable. Actuators and load cells are interchangeable and can also be replaced at a later stage without requiring any hardware modifications to the Controller. The modular structure of the BYC-100 allows the actuator anchoring points to be adjusted, ensuring maximum flexibility

Components included in the Kit	
Code	Description
TX-2	Real Time Controller TX series: TX-2 controller, Dell Mini tower PC or similar, monitor 27", mouse, keyboard, connection cables and emergency button with 5 m cable
SX-2	SX Software Suite - Already installed
K-PN*	Pneumatic actuator Kit (n°2): Actuator provided with assembled contactless position transducer, force transducer, proportional servo-valve, air handling unit, load cell and servo-valve fixing plate and connection cables
PBYC-100*	BYC-100 series modular test frame
*Note: see the data sheet of the actuator kit to select the model and specification of the actuator and load cell / see the data sheet of the BYC modular frames to set up the frame (www.litem.info)	

Order codes example

How to order / Coding example

- TX-2
 - SX-2
 - K-PN63-100-2.5 (see the datasheet for the K-PN Kit) - quantity 2
 - BYC-100 (see the datasheet for the PN-MF modular frame, BYC series)
- The system includes the TX-2 Controller with all standard components, the SX-2 software, two actuator kits equipped with a 63 mm bore - 100 mm stroke pneumatic actuator and a 2.5 kN load cell, BYC-100 test bench



TUTORIAL
VIDEO

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Al fine di migliorare le prestazioni tecniche del prodotto, la società si riserva di apportare variazioni senza preavviso.
In order to improve the technical performances of the product, the company reserves the right to make any change without notice.

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