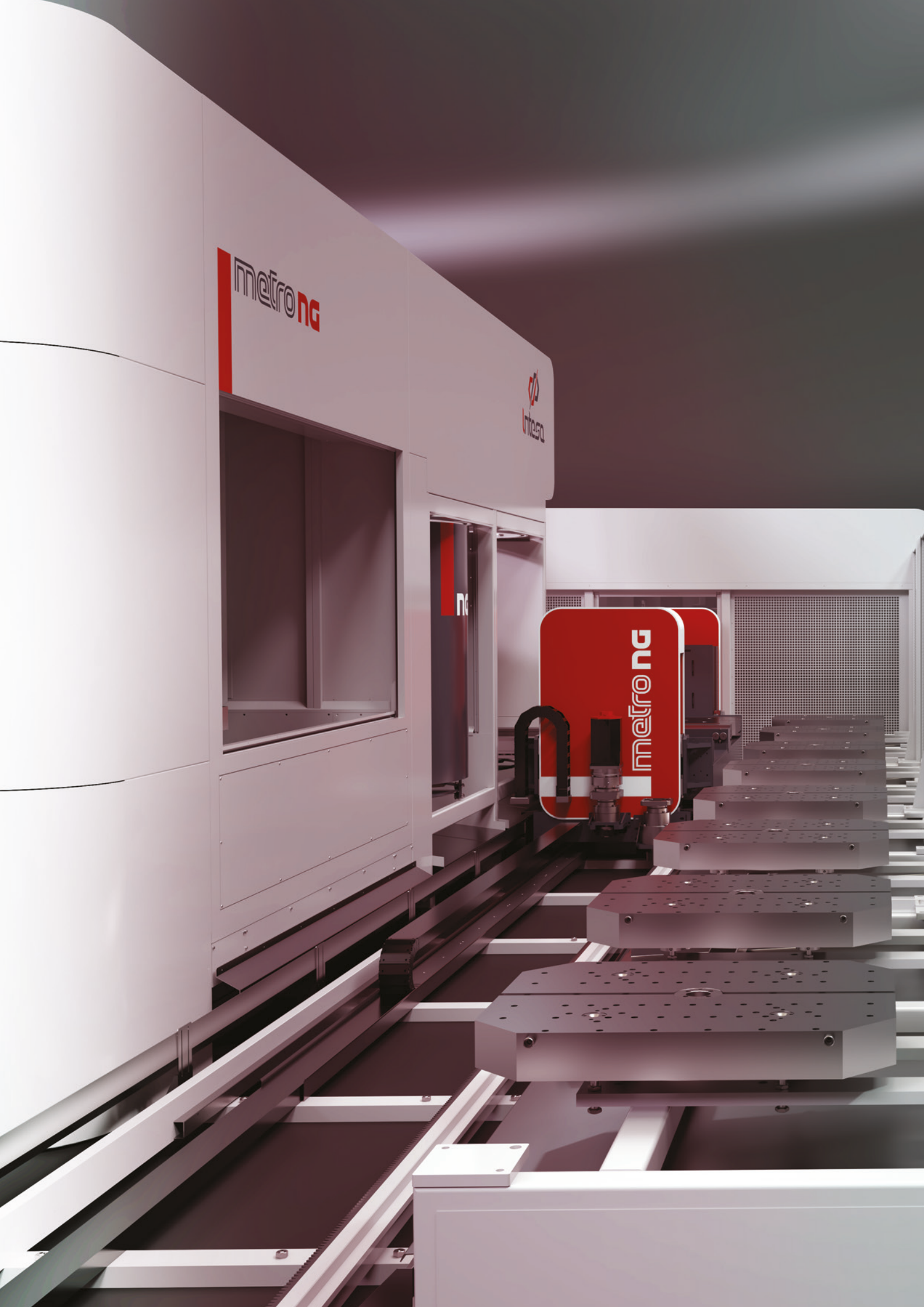




# metro NG





D I S C O V E R

metro **ng**



FRAME THE QR CODE



# ng

MODULAR MAGAZINE EXTENDABLE  
TO THE DESIRED NUMBER OF TOOL  
PLACES. INTEGRATED TOOL  
MANAGEMENT SOFTWARE



MODULARITY IN EVERY CONSTRUCTION  
ASPECT, EACH PART OF METRO NG IS EASILY  
EXTENDABLE EVEN AFTER INSTALLATION

NEW ELECTROWELDED BASE  
AND COLUMN, WITH HIGH  
STABILITY AND STIFFNESS

NEW ERGONOMIC LOADING/UNLOADING  
BENCHES. ONLY 85CM HEIGHT FOR HIGHER  
TOOLING SPEED AND SAFETY

The Intesa logo is located on the upper right side of the machine's front panel. It consists of a stylized red and black symbol above the word "Intesa" in a bold, black, sans-serif font.The "ng" logo is positioned on a black vertical panel inside the machine's enclosure. The letters "ng" are white and bold.

PRODUCTION MANAGEMENT  
SOFTWARE FOR AUTOMATION OF  
ALL INTESA MACHINING CELLS

## NEW METRO NG



### ALL THE ADVANTAGES OF METRO NG

The **Metro NG** Machining Centre is designed to optimize performance and reliability while maintaining a reduced footprint area and the possibility of **extending modularly the machine during configuration, or even after installation**. Metro NG can operate with extreme precision pieces up to a maximum size of 1200 mm in diameter with a high level of efficiency and autonomy, adapting perfectly to every production needed, **also thanks to the software supervision and tool management** developed by Intesa.



#### + MODULARITY

Metro NG applies the concept of modularity in every aspect of construction: the one- or two-level machine is equipped with a pallet magazine and a loading/unloading unit for modular parts that is **easy to expand even after installation**.



#### + ACCURACY

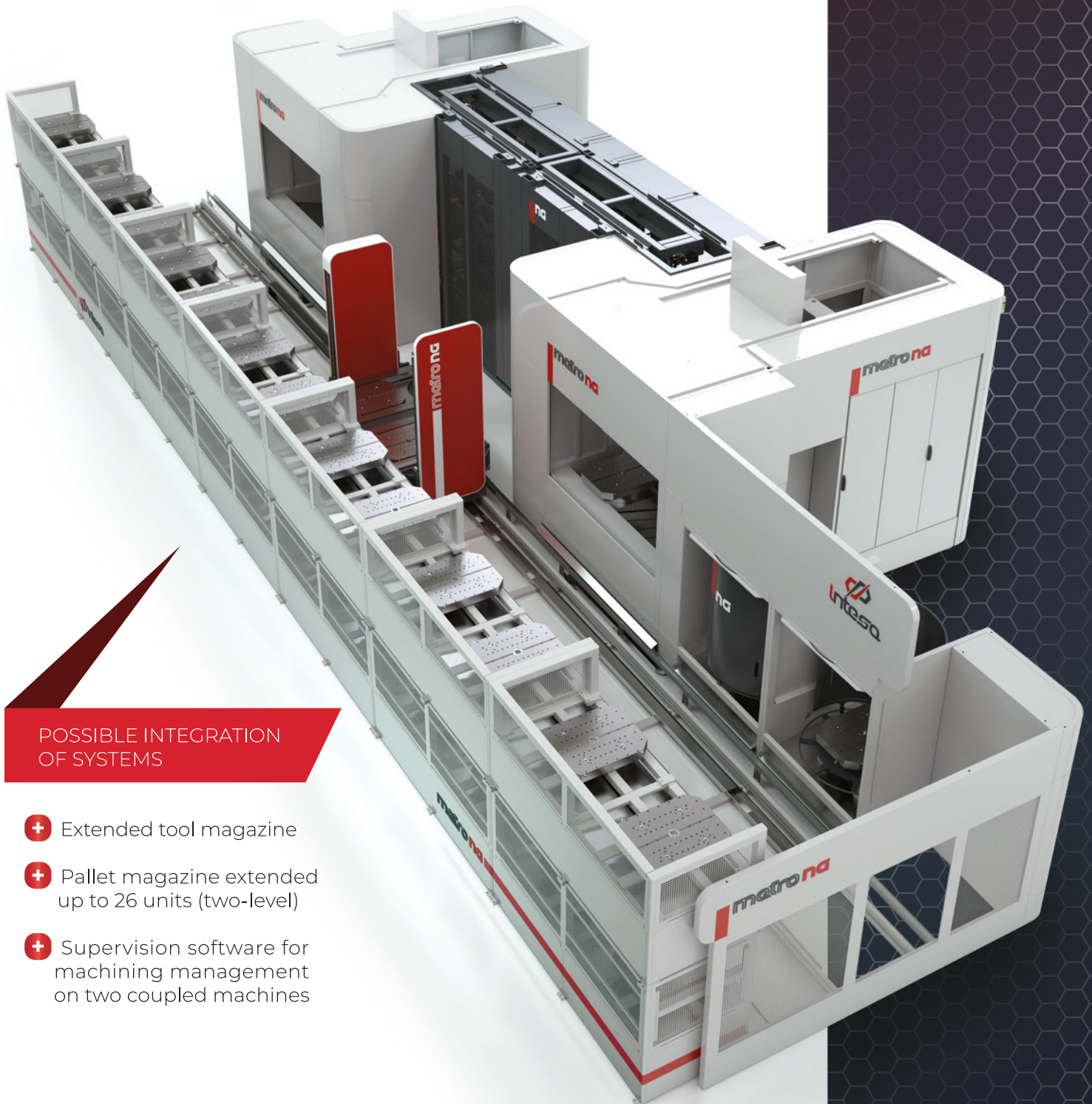
**During all stages of exchange, the pallet is never rotated.** This allows an absolute guarantee that the initial calibrations are maintained, even with unbalanced loads.

## + SPEED

The loading/unloading unit for two operators are ergonomic in working height and easy to access. This enables when preparing the plant for the unattended shift, a **significant reduction in time for loading rough pieces**.

## + FLEXIBILITY

Thanks to the centralised controls, the operator always works in one area for both loading/unloading pieces and operating the CNC. **Supporting systems such as:** automatic screwers, vacuum cleaners, wash guns, roller conveyors for the arrival and departure of pieces etc., can be easily provided.



### POSSIBLE INTEGRATION OF SYSTEMS

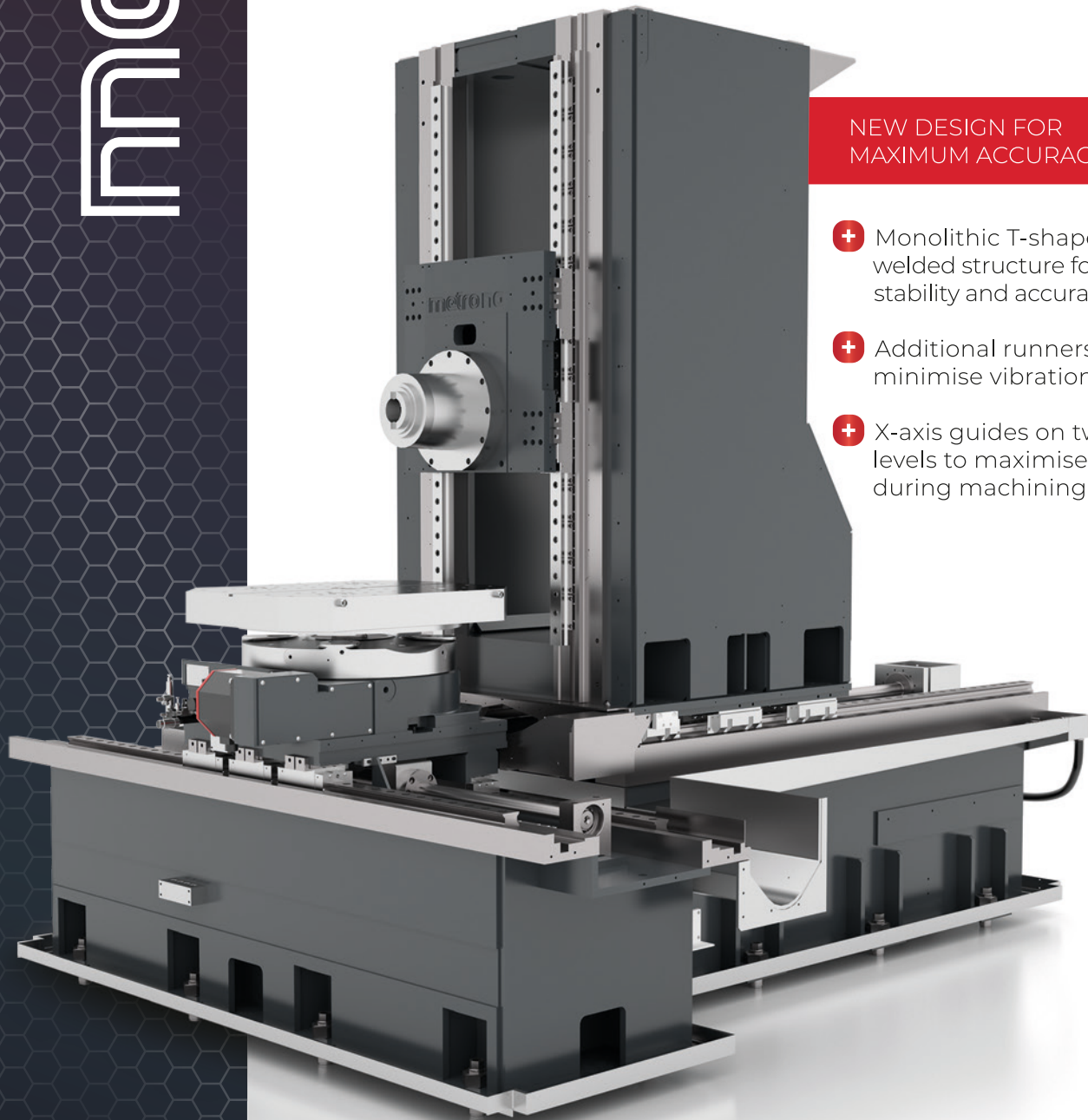
- + Extended tool magazine
- + Pallet magazine extended up to 26 units (two-level)
- + Supervision software for machining management on two coupled machines

## BASE

The base is made of electrowelded steel with a rigid system of differentiated internal lattice ribs **that ensures stability and rigidity.**

Accurate stabilisation steps ensure the absence of the internal stresses. **Its T-shape makes it possible to have all the machine movements on the same base,** making it unnecessary, except in special cases, the realization of expensive and complex foundation bases.

The monolithic structure of the base ensures the **maintenance that the initial geometries are maintained over time,** and its shape makes it possible to distribute stresses to specific points, transmitting them directly to the ground. The entire system is designed to ensure the total fluid recovery in order to ensure a **perfect seal of the machine.**



NEW DESIGN FOR  
MAXIMUM ACCURACY

- + Monolithic T-shaped electro welded structure for maximum stability and accuracy over time
- + Additional runners to minimise vibrations
- + X-axis guides on two different levels to maximise rigidity during machining

# NG

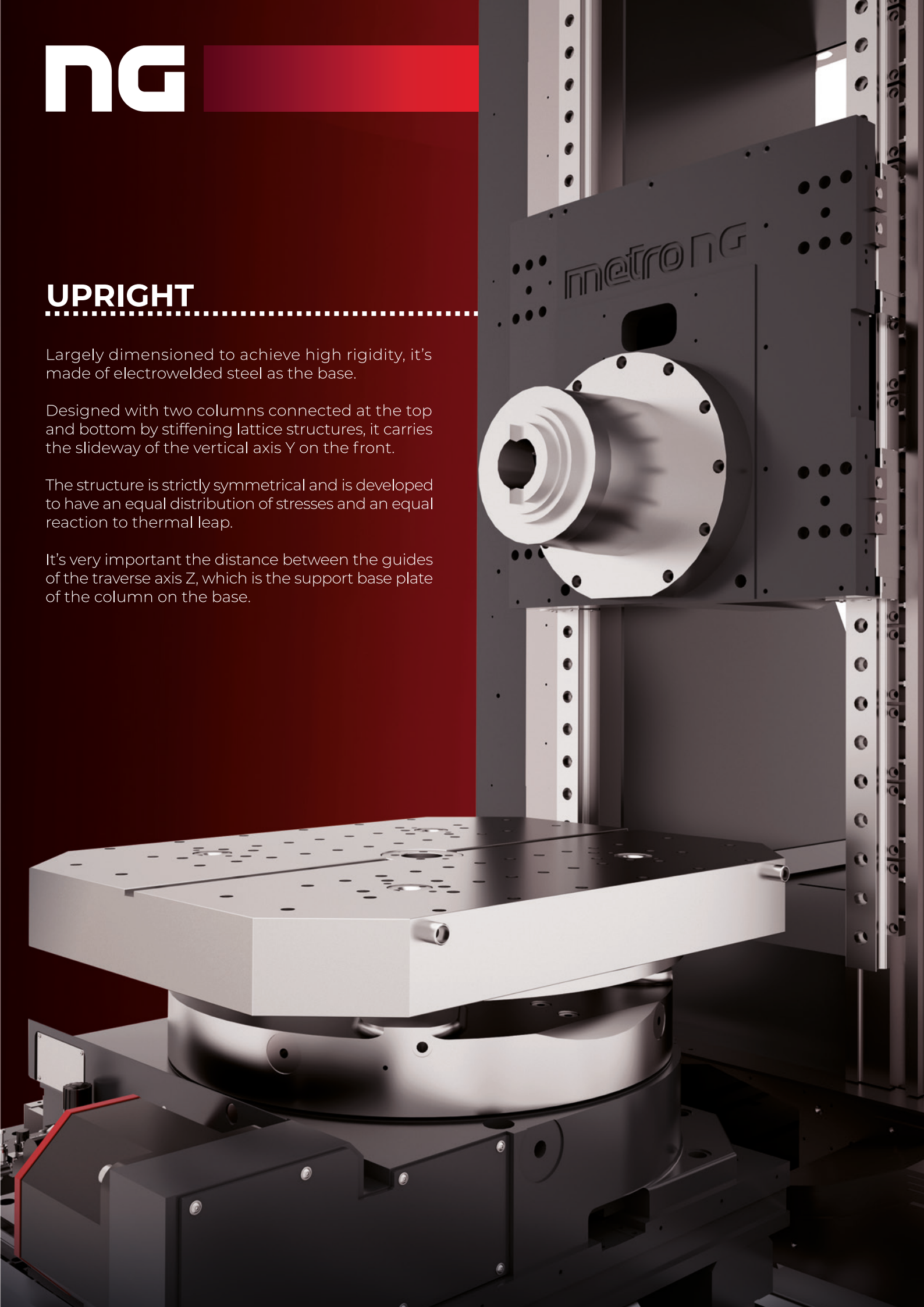
## UPRIGHT

Largely dimensioned to achieve high rigidity, it's made of electrowelded steel as the base.

Designed with two columns connected at the top and bottom by stiffening lattice structures, it carries the slideway of the vertical axis Y on the front.

The structure is strictly symmetrical and is developed to have an equal distribution of stresses and an equal reaction to thermal leap.

It's very important the distance between the guides of the traverse axis Z, which is the support base plate of the column on the base.



## RACK TOOL MAGAZINE

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The tool magazine is an independent assembly anchored to the machine and floor. The ISO 50 tool holder forks inside is made of steel and fixed in order to ensure **total fixing stability for heavy tools weighing up to 28kg**.

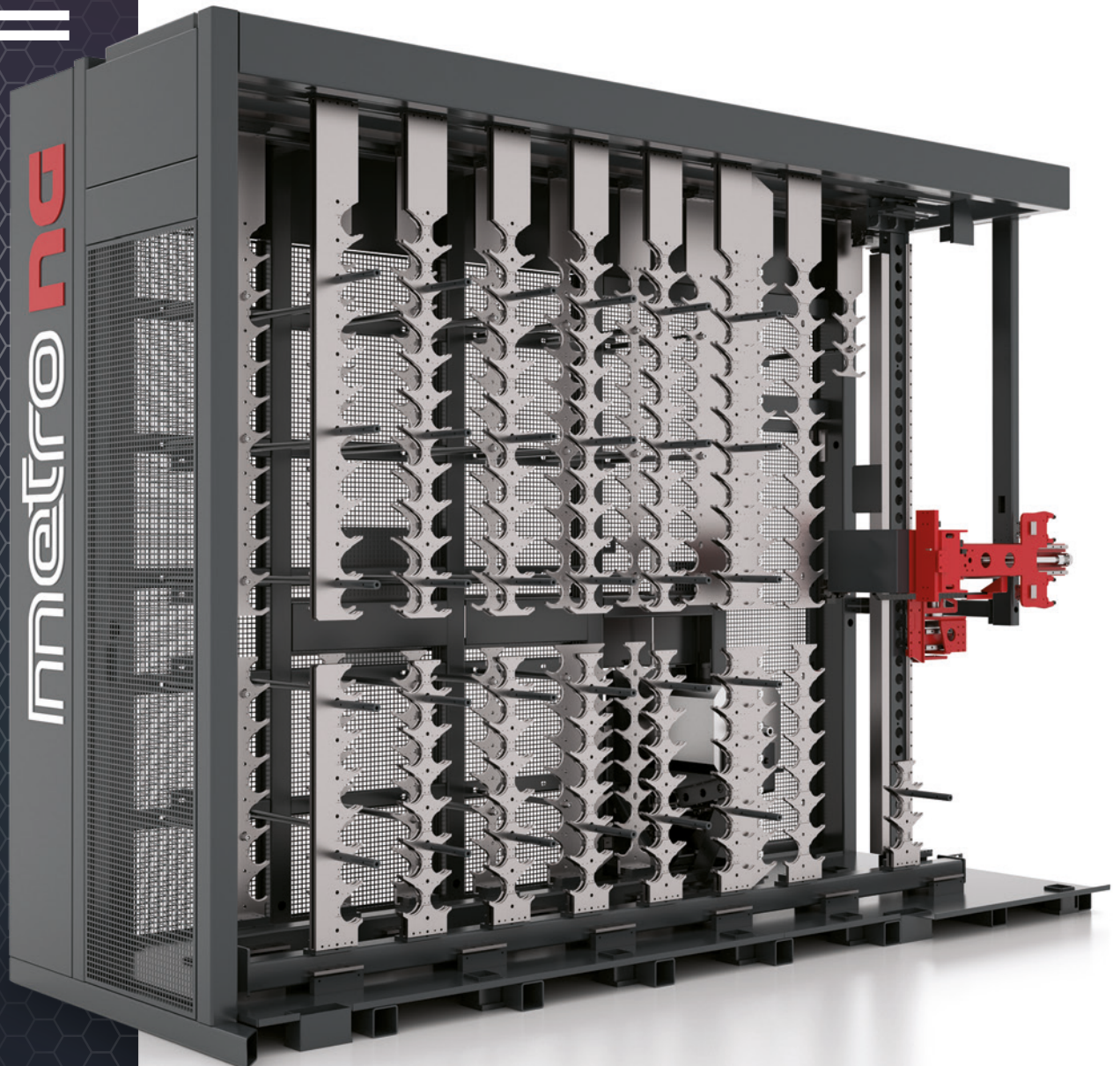
Due to the modularity of all the elements, the magazine **is easily extendable during machine definition**, so that it can be adapted in a wide variety of possible configurations. All tools are arranged horizontally so that any dirt residue on the front of the tool falls on the ground, where they are recovered without soiling the tapers.

**+ MODULARITY** - High number of tool places in the standard configuration easily extended during machine configuration.

**+ SPEED** - tool carriage travel speed **m/min. 90** tool change time (tool-to-tool) **sec. 5**

**+ TOOL DIMENSION** - High dimensional characteristics of tools:

- max. tool diameter "small" **mm. 110**
- max. tool diameter "large" **mm. 400**
- max. length **mm. 550**
- max. weight **kg. 28**



## + EASY MAINTENANCE

Easy maintenance of tool taper cleaning due to the arrangement of the tool tapers horizontally and the separation of the protection in the magazine. In addition, the tool is never “tipped” during the exchange phase, thus avoiding calibrations that are difficult to maintain when changing a heavy tool with a light one.

## + QUALITY

Great reliability thanks to the realisation of all the movements with electric motors and management with FANUC.

## + FLEXIBILITY

Opening to tool handling systems integrated with multiple machines due to static of storage.

## TOOL MANAGEMENT

The tool Management system is a software package designed for tool management of Intesa machining cells.

The program, installed on a PC with Windows operating system located at a console near the operator's work area, manages the tool handling according to the requests from work programs and manual operations of the operators.

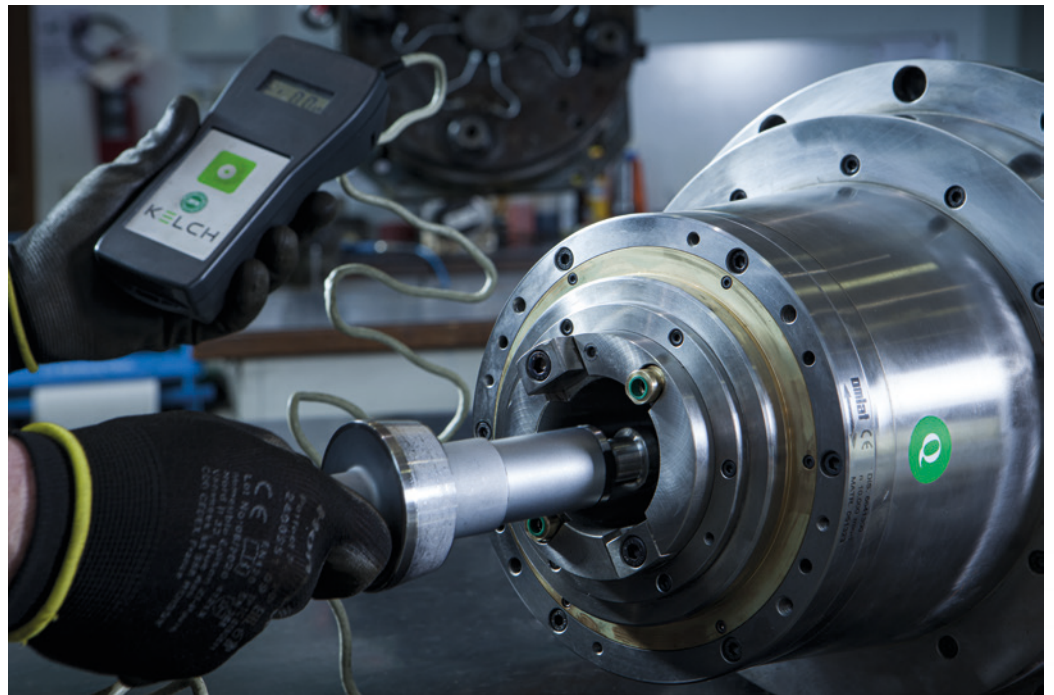
- + Detailed tools data display and status of all components
- + Tool existence management with pre-alarm threshold
- + Automatic discharge of worn/broken tools to drawer
- + Management of up to 10 correctors for each tool

## PREVENTATIVE MAINTENANCE

Intesa offers a wide range of services, organised to meet the specific needs of each production reality. Since 1996, we deal with **installation and after-sales services** regarding Linea Machining Centres and provides assistance on any type of machine centre, whether it is a sudden machine downtime, repair or replacement of parts.

We can intervene promptly remotely or at the customer's premises with a team of specialized technicians able to identify the problem in the least possible time, **minimizing the loss of production time.**

In addition, all the machines we produce are equipped with **new supervision and tool management software**, which were specifically designed to ensure that all our plants are restored to efficient conditions in short time.



All maintenance intervention involves a mechanical or electronic technician on the client's premises for a period ranging from a minimum of 1 day to a maximum of 4 working days depending on the type of machine and the type of maintenance required. **The types of maintenance are:**



**MECHANICAL PREVENTIAL INSPECTIVE MAINTENANCE**  
time required 2 working days



**ELECTRICAL PREVENTIVE INSPECTIVE MAINTENANCE**  
time required 1 working day



**ADVANCED PREVENTIVE MAINTENANCE 1st AND 2nd LEVEL**  
time required 3 (1st level) / 4 (2nd level) working days



**GEOMETRIC PREVENTION MAINTENANCE**  
time required 2 working days

Our services department is always available to best define the type of intervention and its estimated downtime.

# ng

## PRODUCTION MANAGEMENT

The production Management system is a software package designed for the management and automation of Intesa machining cells.

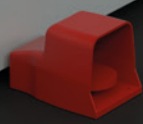
The software is installed and used on a PC with Windows operating system, located in a console near the work area provided for the operator, who can have all the

information and utilities needed to perform his tasks. The Management system takes care of the pallet handling and the DNC part-program integrated to the cell, providing the execution of the planned work, through the use and the coordination of available resources, respecting the priorities established in the setting by the user.



The "ng" logo is displayed on a dark grey vertical panel of the machine. It consists of the letters "ng" in a white, bold, sans-serif font, with a red vertical bar to its left.

The "ng" logo is visible on the top section of the control panel. It is a small, red "ng" logo on a black background.



## INTESA PLUS DIGITAL SUITE FOR INNOVATION

Metro NG is at the core of developing a new modular software platform: **Intesa Plus**. This digital suite aims to provide a **comprehensive solution for IoT and Industry 4.0**, enhancing operational efficiency and optimizing business decision-making processes.

Once implemented, Intesa Plus **will communicate in real-time with machines**, enabling comprehensive data collection and providing an intuitive interface through dedicated dashboards.

The platform's structure comprises several independent functional modules, each focused on specific areas of interest, such as **intelligent maintenance, energy-saving solutions, IoT applications, digital assistance, and quality management**.

Each module leverages specific enabling technologies, **including artificial intelligence, advanced sensors, augmented reality, wearable devices, and more**.

Intesa Plus is designed to ensure remote accessibility at any time, allowing users to monitor and efficiently manage business activities.



# Intesa PLUS

# MODELS CONFIGURATION

## LINEAR AXES

	METRO NG	METRO NG lite
X Axis	mm 1200	mm 950
Y Axis	mm 1000	mm 800
Z Axis	mm 1000	mm 900
Measuring system	direct - pressurised millesimal optics	direct - pressurised millesimal optics
Rapid feeds	m/min 60	m/min 60
Acceleration	m/sec <sup>2</sup> 5	m/sec <sup>2</sup> 5
Accuracy A – Norma ISO 230/2	u 10	u 10
Repeatability R - Norma ISO 230/2	u 6	u 6
Reversal error B - Norma ISO 230/2	u 2	u 2
Table centre - spindle nose distance	mm 175	mm 175
Table surface - spindle centre distance	mm 25	mm 25

## PALLET TABLE

	METRO NG	METRO NG lite
Workpiece diameter	mm 1200	mm 950
Workpiece height	mm 1000	mm 900
Max. workpiece weight that can be handled	kg 1200	kg 1000
Pallet dimension	mm 630 x 800	mm 500 x 630
Rapid feeds on B Axis	rpm 17	rpm 17
Direct measuring system	Encoder optics RON 785	Encoder optics RON 785
Precisione A - Norma ISO 230/2	ranks 10"	ranks 10"
Repeatability R - Norma ISO 230/2	ranks 6"	ranks 6"
Loading surface height	mm 850	mm 850
Rotary table	n° 360.000 position [standard] - n° 360 [optional]	n° 360.000 position [standard] - n° 360 [optional]

## HORIZONTAL MACHINING HEAD

	METRO NG and NG lite		
	electrospindle 6000	electrospindle 10000	electrospindle 15000
Speed	6000 rpm	10000 rpm	15000 rpm
Constant power	55 KW (S1)	37.5 KW (S1)	50 KW (S1)
Transient power	65 KW (S6)	42 KW (S6)	55 KW (S6)
Taper	ISO 50/HSK 100	ISO 50/HSK 100	ISO 50/HSK 100

## TOOL MAGAZINE

	METRO NG	METRO NG lite
Rack	N°200 - 400 tools	N°200 - 400 tools

## TOOL

	METRO NG	METRO NG lite
Maximum length	mm 550	mm 550
Maximum diameter (adjacent occupied places)	mm 110	mm 110
Maximum diameter (adjacent free places)	mm 400	mm 400
Max. bar diameter	mm 500	mm 500
Maximum weight	kg 28	kg 25

## CNC

	METRO NG	METRO NG lite
Builder	FANUC 31i B5	FANUC 31i B5

## MULTIPALLET

	METRO NG	METRO NG lite
Positions	N°7 and 11 (one-level) -N°19 (two-level)	N°7 and 11 (one-level) -N°19 (two-level)
Operator place	2	2



## INFINITAMENTE REALIZZABILE

**Intesa manufactures Machining Centres**, and constantly develops new implementations and new models, with the same approach to the quality on which the company was founded since the first prototype. Along with construction and installation, Intesa provides overhaul and assistance not only on machines it produces, but also on all **LINEA Machining Centres**, for which it is the only reference company. Our team of specialized technicians are ready to intervene promptly on any mechanical, electrical or software problem.



Intesa is part of #GruppoProvide, along with #ProvideSolution #Labormak and #BirdTech

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