

# MATERIA MR

HIGH-PERFORMANCE MULTI-PURPOSE  
5-AXIS PROCESSING CENTRE



 **BIESSE**

 **50 YEARS**  
 **BIESSE GROUP**

# ABSOLUTE PRECISION WHEN MACHINING LARGE VOLUMES



## THE MARKET REQUESTS

a change in manufacturing processes that enables companies to accept **the largest possible number of orders**. This is coupled with the need to maintain high quality standards whilst offering product customisation with quick and defined delivery times.

## BIESSE RESPONDS

with innovative technological solutions for processing technological materials.

The **Materia MR** is the 5-axis machining centre with mobile gantry. Extremely versatile and precise, it has been designed for high-speed machining of light materials: large panels of resins, composites and aluminium. Materia MR was created to meet the most varied machining requirements in the automotive, aerospace and nautical sectors.



## **MATERIA** MR

- ✓ OPTIMUM RELIABILITY THANKS TO A ROBUST STRUCTURE
- ✓ MAXIMUM PRECISION AND PERFECT FINISHING
- ✓ MAXIMUM EASE OF LOADING TOOLS
- ✓ CUSTOMISABLE IN ACCORDANCE WITH MULTIPLE PRODUCTION REQUIREMENTS

# MAXIMUM RELIABILITY AND ROBUSTNESS

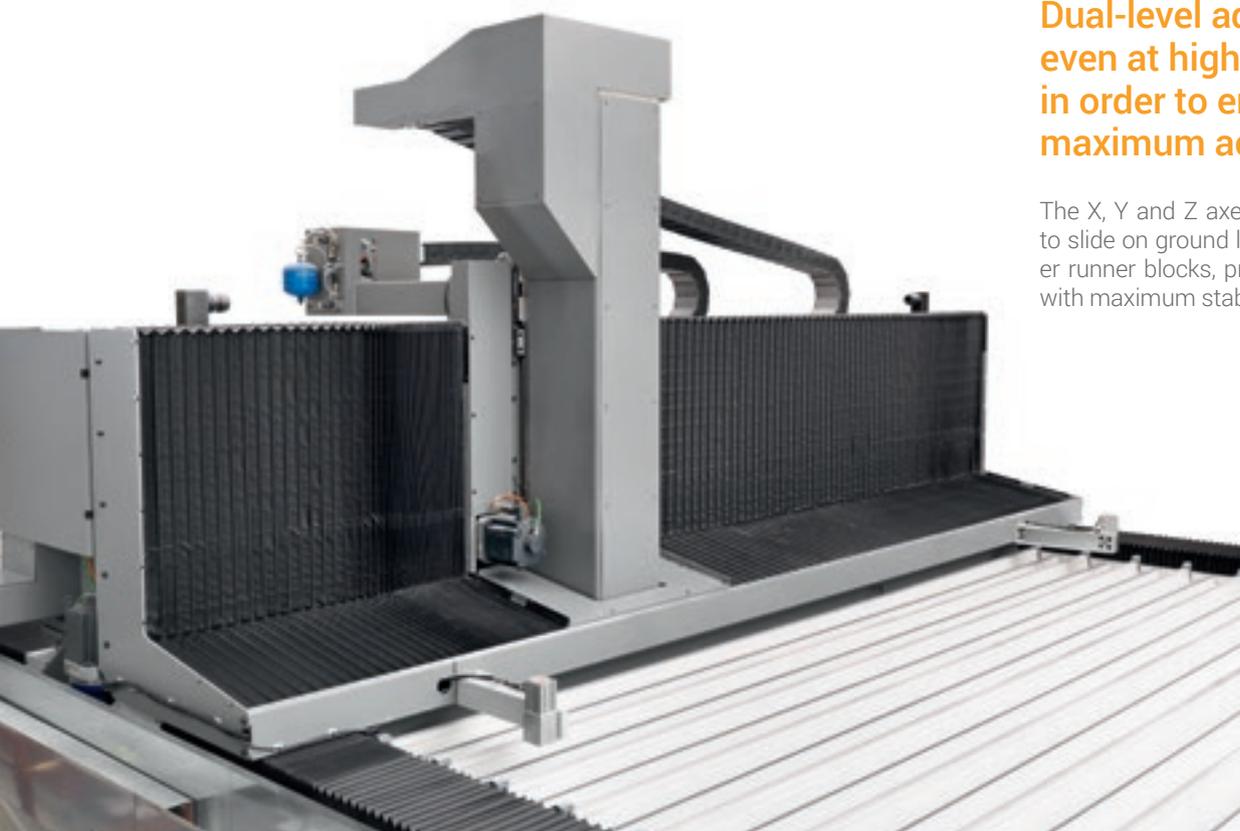


**THE SUPPORTING STRUCTURE OF THE MACHINE OFFERS A COMBINATION OF STRENGTH AND LIGHTNESS, AND IS SYNONYMOUS WITH RELIABILITY AND PRECISION.**

The use of linear guides and precision bearings, the direct coupling between the pinion and the rack and the Master/Slave solution enhance the stiffness of the structural elements of the machine, ensuring high finish quality and machining precision.

To ensure the accuracy of the machine geometries in the long term and to avoid any margin for error, the base of the machine is fixed onto a dedicated foundation by means of a series of high-precision adjustable fixing plates, designed on the basis of civil engineering studies.

# MAXIMUM PRECISION AND PERFECT FINISHING



**Dual-level adjustment  
even at higher levels,  
in order to ensure  
maximum accuracy**

The X, Y and Z axes are all constructed to slide on ground linear guides and roller runner blocks, providing the machine with maximum stability and precision.



Materia MR can be equipped with linear encoders to increase the accuracy of the machine, as well as with tool presetting systems and a radio frequency thickness tracer which can record the coordinates and the dimensions of the piece for an impeccable finished product.

# HIGH POWER

The high-performance electrospindles allow a host of different materials (plastic, resin, compound and aluminium) to be machined.

The head has a reduced size, offers structural rigidity and vibration damping, and can be equipped with various electrospindles



MAXIMUM POWER THANKS TO  
ORTHOGONAL LIQUID-COOLED  
ELECTROSPINDLES (22-24 KW)



# MAXIMUM EASE OF LOADING TOOLS



The machine can be fitted with several rotating tool magazines, each holding 24 tools.



Tools are easy to load thanks to the ability to fill the magazine via an external access door, ensuring maximum safety for the operator.

# ABSOLUTE PRECISION

## NO MARGIN FOR ERROR

Versatility, precision and impeccable finishing are the key strengths of the Materia MR range. A numerical control processing centre that can perform light machining operations on large components made from a wide range of composite materials, guaranteeing constant precision and reliability.

High quality, high precision electrospindles, a host of optional and standard systems which are available in accordance with the material to be machined, plus two HEIDENHAIN TNC 640 or Siemens SINUMERIK 840D sl numerical control systems - both particularly valued within the automotive sector, and always synonymous with reliability and cutting-edge technology.



# EXCELLENT CLEANING OF THE PRODUCT AND THE WORK AREA

**Materia MR can be equipped with a full upper cover that completely encloses the machine.**

**Air Jet system** for a thoroughly clean end product.

**OPTIMUM SAFETY GUARANTEED BY MANUAL DOORS OPENED FROM THE FRONT AND FITTED WITH LARGE INSPECTION WINDOWS.**



In its standard configuration, **Materia MR** is supplied with protective bellows that cover the Z axis guides. For even greater protection, bellows can also be fitted on the guides of the X and Y axes too.

The **ceiling-mounted bellows** guarantee a safe work environment for the operator, especially when machining materials that produce large amounts of dust. The automatic opening allows the piece to be loaded by means of a bridge crane

# USER FRIENDLY

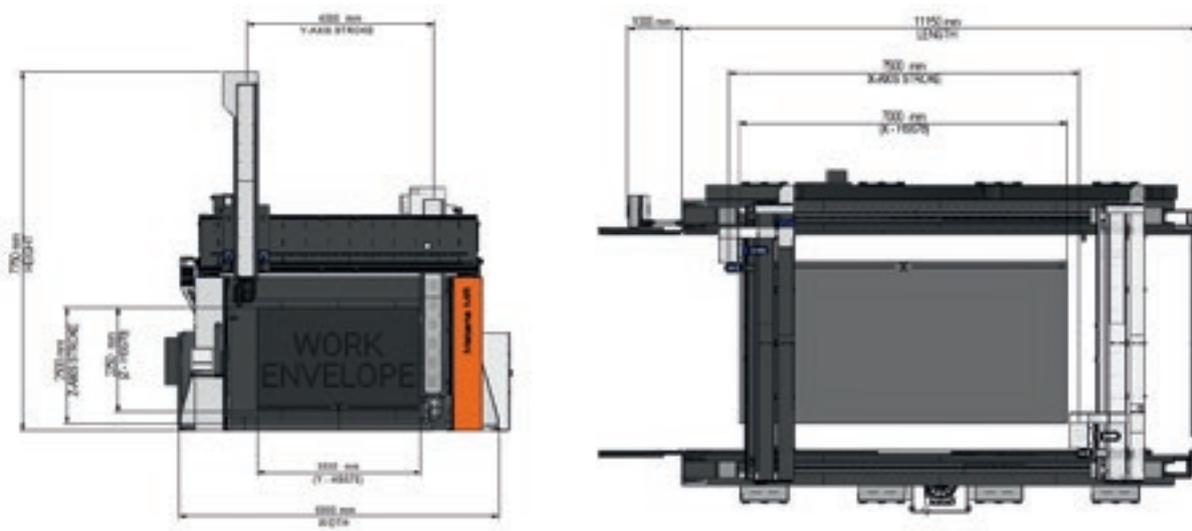
New console with touchscreen interface, fully integrated with the machine (no obstruction on the ground). Simple and intuitive.

MATERIA MR IS AVAILABLE WITH TWO DIFFERENT TYPES OF NUMERICAL CONTROL - HEIDENHAIN AND SIEMENS - TO MEET ALL THE NEEDS OF THE MARKET.



HT2 mobile terminal for optimum man/ machine integration.

# TECHNICAL DATA



## MATERIA MR 7540-25\*

LINEAR AXIS STROKE					
X-axis	mm	7500	inch	295	
Y-axis	mm	4000	inch	157	
Z-axis	mm	2500	inch	98	
FAST LINEAR AXIS SPEED					
X-axis	m/min	80	ft/min	262	
Y-axis	m/min	80	ft/min	262	
Z-axis	m/min	50	ft/min	164	
MACHINE DIMENSIONS (without accessories)					
Width	mm	6900	inch	272	
Length	mm	11150	inch	439	
Height	mm	7750	mm	305	
WORK VOLUME (spindle nose)					
Distance from spindle nose to work table	mm	2600	inch	102	
Pivot	mm	250	inch	10	
Work volume	X	mm	7000	inch	275
	Y	mm	3500	inch	134
	Z	mm	2250	inch	88

\* available in different sizes on request.

The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

A-weighted sound pressure level (LpA) when working in the operator position on machine without vacuum pumps LpA = 86 dB (A), LWA = 92 dB (A).

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

# MADE WITH BIESSÉ

## UPM MODENA: FROM THE CONCEPT TO THE FINISHED PRODUCT

Matthew Gualdi is the commercial director of Upm, the Modena-based company that has been operating for over seventy years in the visual communications and illuminated sign sector, as well as more recently in the general contractor industry. "We are able," states Gualdi "to offer turnkey solutions, from concept to

finished product, tailored to the needs of our customers. We manage all design, technical, bureaucratic and logistics aspects with a winning combination of highly-qualified technical and graphics staff, who work with advanced tools, cutting-edge technologies and innovative materials." Biesse has played a de-

cisive role in transforming Upm's commitment to innovation into a reality: "We had always used machines that could be defined as slightly 'niche'. Then, we decided to equip ourselves with a more technologically-advanced and powerful machine: and we found the perfect solution with Biesse Group".



# MADE IN BIESSE

Biesse's cutting-edge technology meets the needs of operators who process plastic and composite materials with a full range of machining centres, beamsaws, water-jet cutting systems and sanders for machining operations of advanced materials.

## CNC - PLAST



ROVER PLAST J FT



ROVER PLAST A SMART FT



ROVER PLAST A FT



ROVER PLAST B FT

## CNC - MATERIA



MATERIA MR



MATERIA XC

## VERTICAL MACHINING CENTRE



BREMA PLAST EKO 2.1

## THERMOFORMING



TERMA

## PANEL SAWS



SELCO PLAST WN 6



SELCO PLAST WN7



VIET PLAST S211-S1-S2



VIET PLAST OPERA 5 - OPERA 7 - OPERA R

## CNC - MATERIA



ROVER PLAST M5



MATERIA CL



MATERIA LD



MATERIA FC

## WATER JET CUTTING SYSTEMS



PRIMUS PLAST 184



PRIMUS PLAST 202-322-324-326-402



SELCO PLAST SK4

## ENDING



VIET PLAST NARROW



VIET PLAST VALERIA

## HANDLING



WINSTORE

# SERV ICE & PARTS

Direct, seamless co-ordination of service requests between Service and Parts. Support for key customers from specific Biesse personnel, in-house and/or at the customer's site.

## BIESSE SERVICE

- ▣ Installation and start-up of machines and systems.
- ▣ Training centre for Biesse Field technicians, branch and dealer personnel, and training directly at customer's site.
- ▣ Overhaul, upgrade, repair and maintenance.
- ▣ Remote diagnostics and troubleshooting.
- ▣ Software upgrade.

**500**

Biesse Field engineers in Italy and worldwide.

**50**

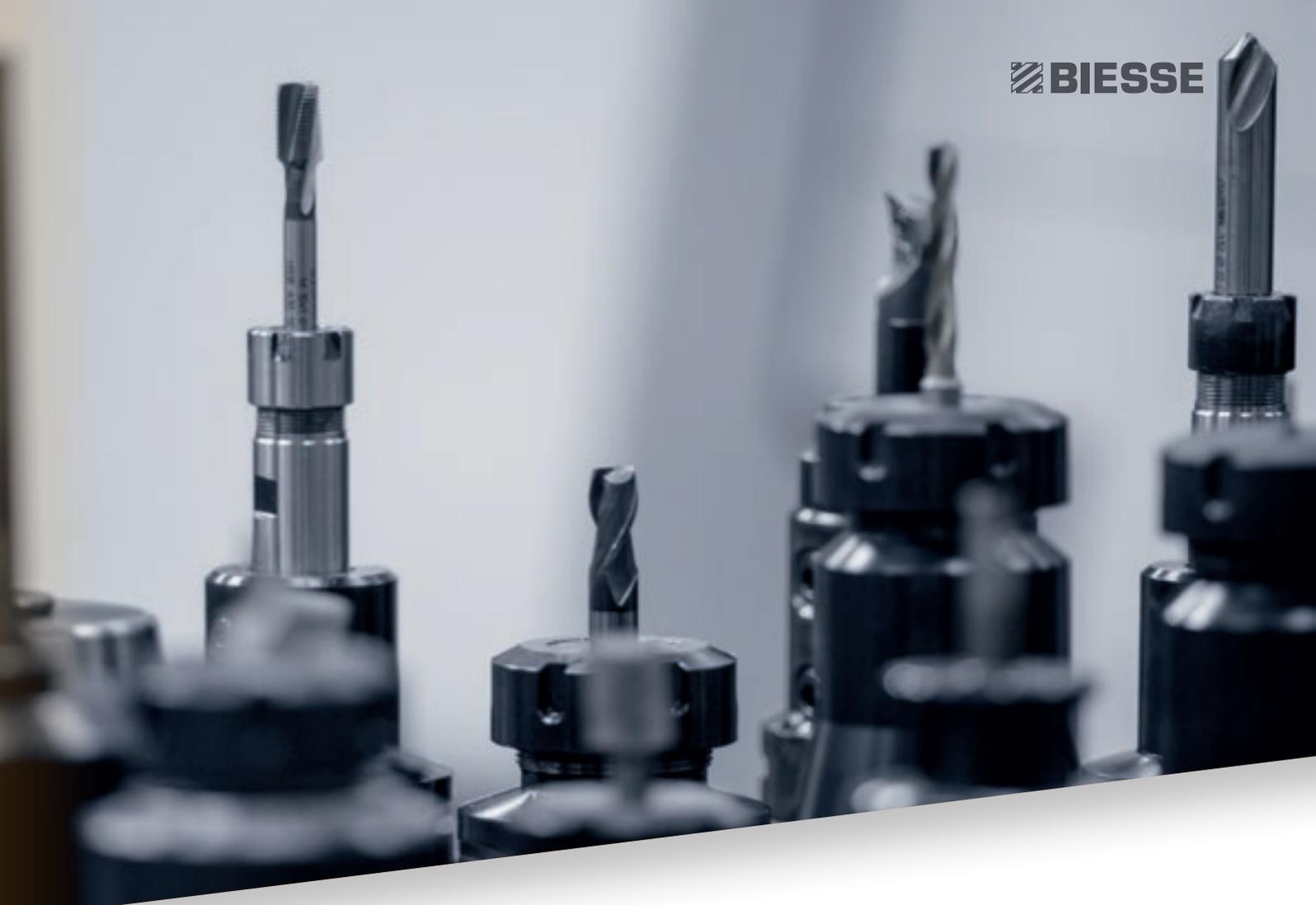
Biesse engineers manning a Teleservice Centre.

**550**

certified Dealer engineers.

**120**

training courses in a variety of languages every year.

A close-up photograph of several metal drill bits and tool components, arranged in a row. The focus is on the sharp, metallic tips of the bits, with some blurred in the background. The lighting is dramatic, highlighting the textures and metallic sheen of the tools.

The Biesse Group promotes, nurtures and develops close and constructive relationships with customers in order to better understand their needs and improve products and after-sales service through two dedicated areas: Biesse Service and Biesse Parts. With its global network and highly specialised team, the company offers technical service and machine/component spares anywhere in the world on-site and 24/7 on-line.

## BIESSE PARTS

- Original Biesse spare parts and spare kits tailored to each machine model.
- Spare part identification support.
- Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- Order fulfillment times optimised thanks to a global distribution network with delocalised, automated warehouses.

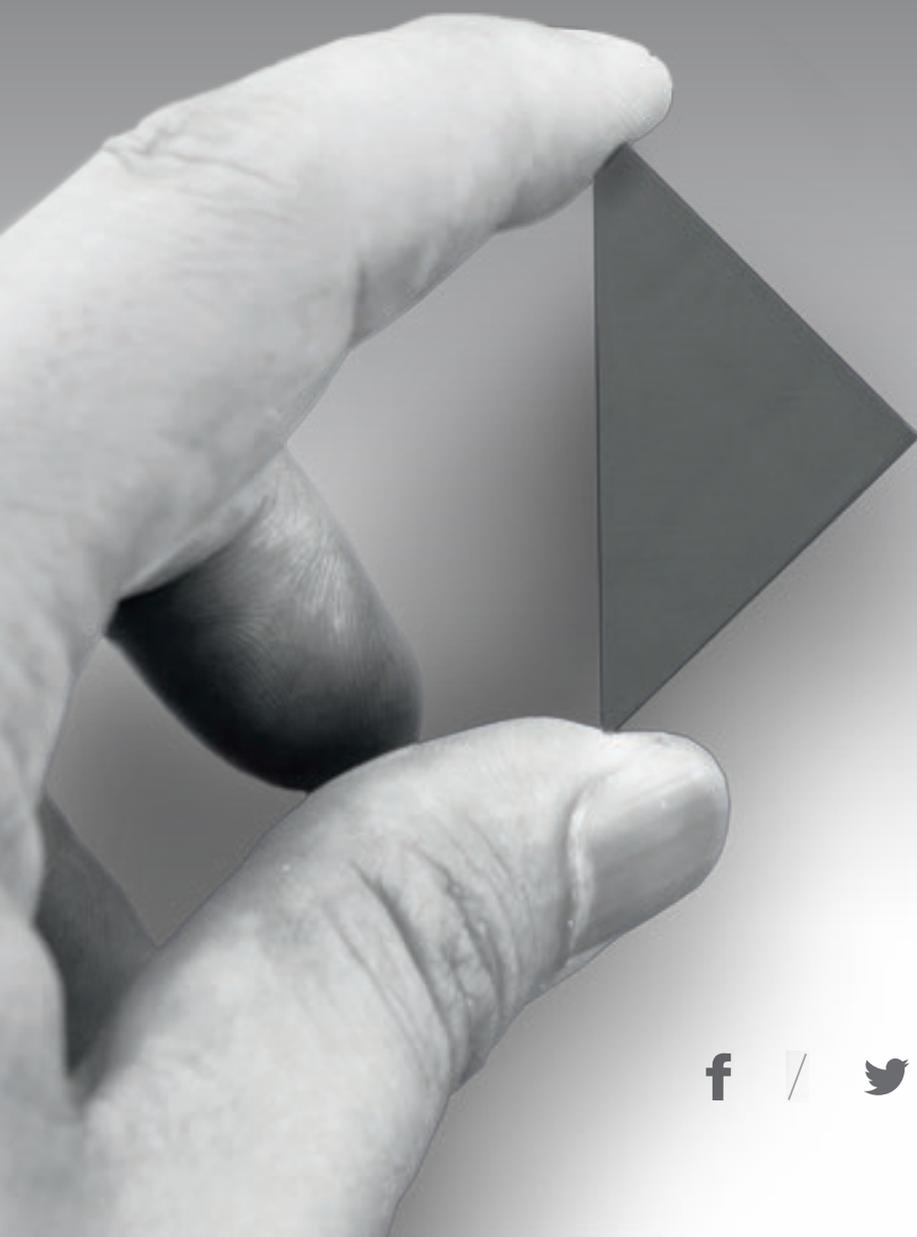
**92%**  
of downtime machine orders fulfilled within 24 hours.

**96%**  
of orders delivered in full on time.

**100**  
spare part staff in Italy and worldwide.

**500**  
orders processed every day.

# LIVE THE EXPERIENC



BIESSEGROUP.COM

E



Interconnected technologies and advanced services that maximise efficiency and productivity, generating new skills to serve better our customer.

**LIVE THE BIESSE GROUP EXPERIENCE AT OUR CAMPUSES ACROSS THE WORLD.**

 **BIESSEGROUP**

