

FR GANTRY SERIES

UPPER GANTRY TYPE
5-AXIS SIMULTANEOUS CNC MILLING MACHINES



WORKING
VIDEO
SCAN, WATCH!



IGREK MAKINA RELIABLE PARTNER FOUNDRY

IGREK MAKINA, founded by A. Osman İğrek in 1946, is a family-owned and managed industrial company in Bursa, TÜRKİYE. Aiming to be a leader of the sector through its product variety, capacity, technology and made up of three main divisions:

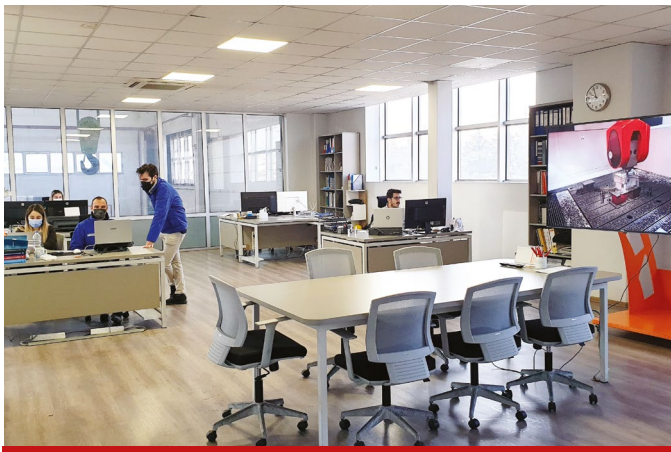
PATTERN PRODUCTION, world wide, a top performer of its class in production of polystyrol patterns for full mould casting method. This department allowed the company to produce any complicated and big part in short amount of time and make casting process possible.

FOUNDRY, more than 80 years of experience in production of gray iron, nodular iron and steel castings (GG-GGG-GS) especially for machine tools.

MACHINING, milling – turning and grinding services for big and heavy duty casting parts with high precision and good lead times.

The facility upgraded both in volume and lay-out and reached to 40.000 m² of area today. Integrating its production centre with 150 employees including 30 engineers and 30 qualified technicians leading production, quality, administration and planning.

İğrek Makine is now constructing a new giant factory in 140.000m² area offering flexible and diverse abilities in supplying heavy industry demands with good timing, cost and high quality.





IGREK MACHINE TOOLS

The experience of the company increased by supplying machine tool parts for global market and working with a highly equipped **internal machining department**. This department includes:

- Fermat Horizontal Boring & Milling Machine with rotary table: 12000 x 4000 x 2000 mm
- 10 Bridge Type Milling Machines with various functions, sizes up to 10000 mm in x Axis.
- 3 Vertical Lathe Machines with CNC and C-Axis, diameters up to 5000 mm.
- ROBBI Cylindrical Grinding Machine Diameter 1000 mm - Length 3000 mm.
- KITAMURA High Precision Horizontal Machining Center for machining Head and Spindle parts

All this **KNOW HOW** and **MACHINERY** finally led to constitution of the new machine tool production department.

IGREK MACHINE TOOLS production began with 2 different machines and they are both active in the premises: **IGREK PORTAL HSM5000** and **IGREK ÖNCÜ SERIES**.

THE MACHINE TOOL DESIGN, Assembly and Service Team is now preparing the new **4 machine types**. The aim of the company is to build:

- **High technology & quality machines in good price level**
- **Cast Iron machine structure for best rigidity & dynamic stability**
- **Specialized designs for special customer demands**



WALDRICH COBURG GRINDING MACHINE 6000 x 2000 x 1500 mm



IGREK ÖNCÜ SERIES

**LIGHT WEIGHT,
HIGH SPEED MILLING MACHINE**

**6000 x 4000 x 1500 mm
SIEMENS 828 CNC**



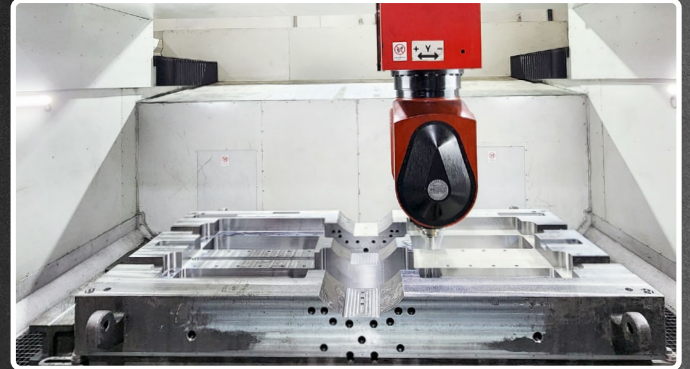
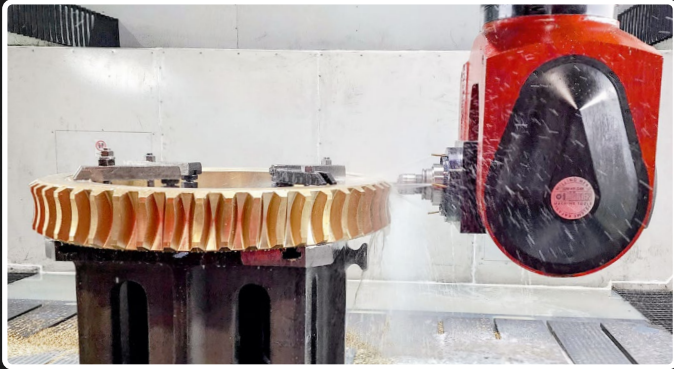
IGREK PORTAL HSM5000

**5-AXIS GANTRY TYPE MILLING MACHINE 10000 x 5000 x 2000 mm
5000 rpm CONTINUOUS HEAD SIEMENS 840D CNC**

FR 3500 Compact

5-AXIS GANTRY TYPE MILLING MACHINE

THE FR 3500 COMPACT IS DESIGNED FOR **MAXIMUM PERFORMANCE** WITHIN A **MINIMAL FOOTPRINT**. WITH AN X-AXIS TRAVEL OF **2,500 mm**, IT OFFERS **IMPRESSIVE PRECISION** AND PRODUCTIVITY IN **LIMITED WORKSHOP SPACES**. ITS **RIGID CAST-IRON STRUCTURE** ENSURES STABILITY DURING **HEAVY-DUTY MACHINING**, WHILE THE **COMPACT LAYOUT** PROVIDES **HIGH EFFICIENCY** AND **EASY ACCESS** FOR OPERATORS. IDEAL FOR **TOOL AND DIE MANUFACTURERS** SEEKING **FLEXIBILITY** WITHOUT **COMPROMISING ACCURACY**.

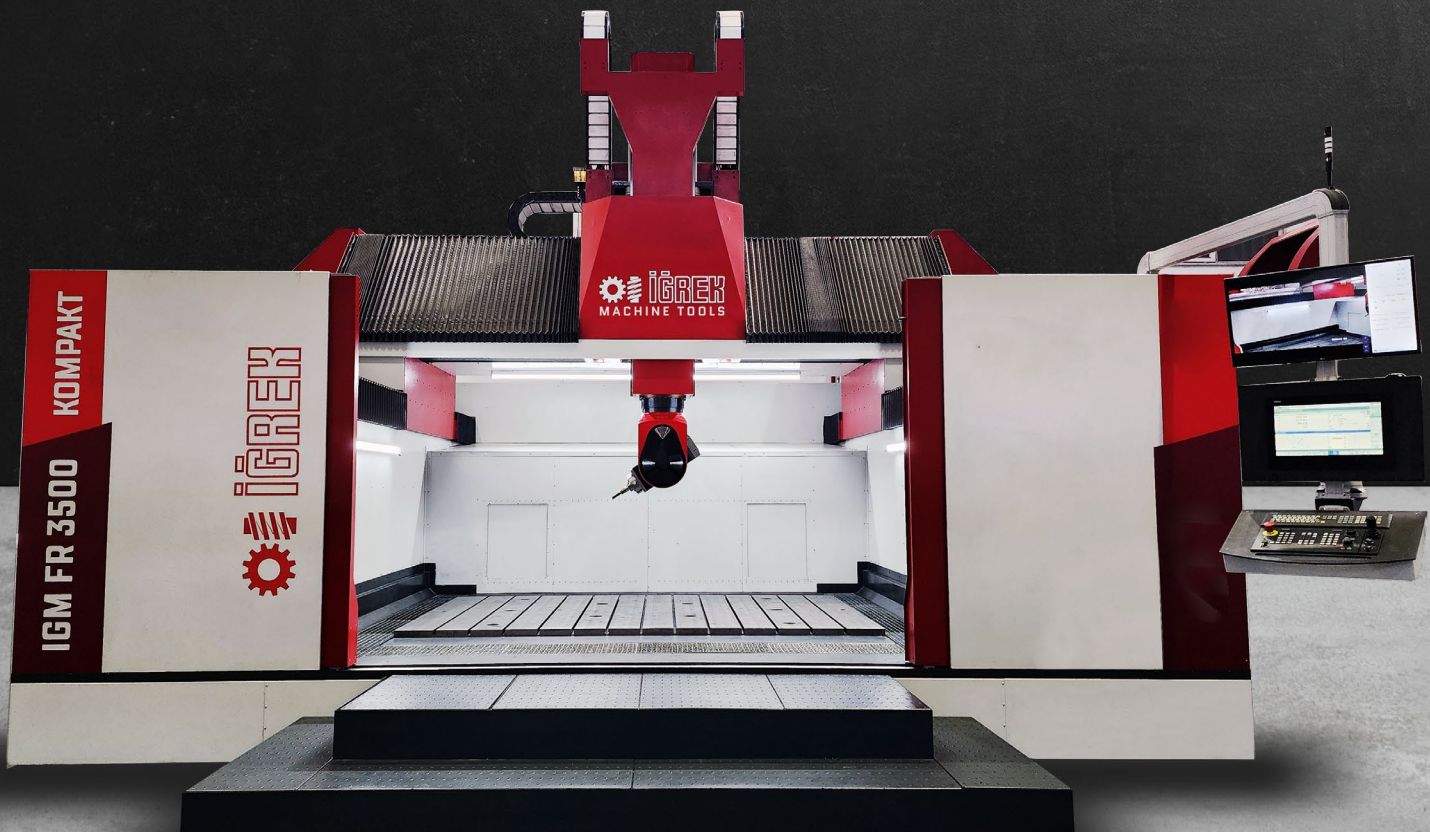


12500 rpm / **200** Nm
FORK TYPE
MACHINING HEAD

MILLING CAPACITY
X x Y x Z = **2500** x **3500** x **1400** mm

2290 x **3580** mm
TABLE SIZE

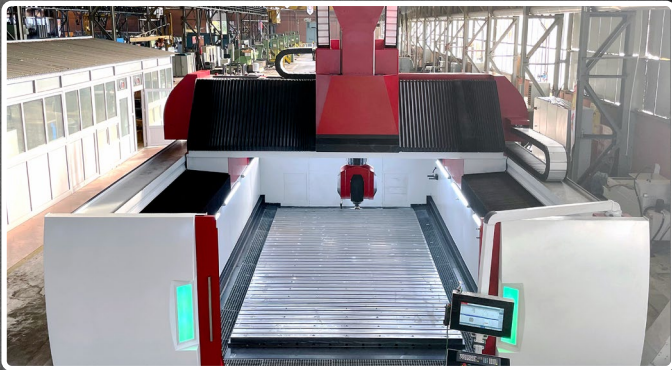
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FR 3500 XL

5-AXIS GANTRY TYPE MILLING MACHINE

THE FR 3500 XL EXTENDS THE CAPABILITIES OF THE SERIES WITH A **LONG X-AXIS OF 6,500 mm**, MAKING IT PERFECT FOR **MACHINING LARGE-SCALE COMPONENTS** THAT DEMAND **SUPERIOR ACCURACY** AND **SURFACE QUALITY**. MAINTAINING THE SAME **DYNAMIC GANTRY DESIGN** AND **POWERFUL ELECTROSPINDLE HEAD**, THE XL MODEL DELIVERS **EXCEPTIONAL RIGIDITY** AND **REPEATABILITY** ACROSS ITS **EXTENDED WORKING RANGE** – IDEAL FOR THE **AUTOMOTIVE, AEROSPACE, AND ENERGY INDUSTRIES**.



6490 x 3580 mm
TABLE SIZE

MILLING CAPACITY
X x Y x Z = **6500 x 3500 x 1400** mm

12500 rpm / **200** Nm
FORK TYPE
MACHINING HEAD



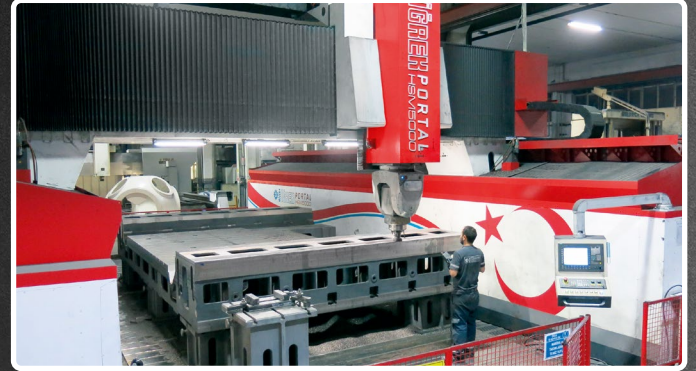
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FR 5000 PORTAL

5-AXIS GANTRY TYPE MILLING MACHINE

A TRUE PRODUCTION POWERHOUSE ENGINEERED FOR LARGE WORKPIECES WITH MASSIVE CAST-IRON STRUCTURE, ROBUST UPPER GANTRY CONSTRUCTION AND 5-AXIS HEAD EQUIPPED WITH A HIGH-TORQUE ELECTROSPINDLE IT ENSURES OUTSTANDING PERFORMANCE AND PRECISION. ITS WIDE MACHINING ENVELOPE AND SUPERIOR RIGIDITY MAKE IT IDEAL FOR DEMANDING APPLICATIONS THAT REQUIRE CONSISTENT ACCURACY IN EVERY CYCLE.



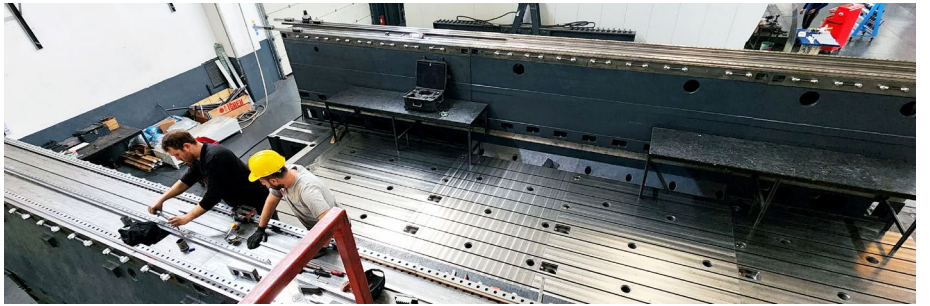
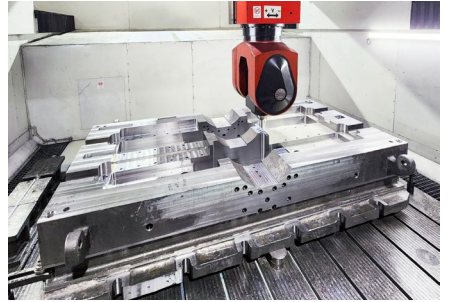
15000 rpm / **300** Nm
FORK TYPE
MACHINING HEAD

MILLING CAPACITY
 $X \times Y \times Z = \mathbf{10000} \times \mathbf{5000} \times \mathbf{2000}$ mm

10000 x **5000** mm
TABLE SIZE

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TECHNICAL DETAILS			FR 3500 COMPACT	FR 3500 XL	FR 5000 PORTAL
General Features					
		X	2500	6500	10500
Stroke	mm	Y	3500	3500	3500
		Z	1400	1400	2350
A-Axis Rotation	°		± 115		
C-Axis Rotation	°		± 360		
		X	30		
Rapid Feed Rate	m/min	Y	30		
		Z	30		
Positioning Accuracy	mm		<0,012		
Repeatability Accuracy	mm		<0,010		
Table Load	kg/m²		4000		
Physical Characteristics					
Length		X	7800	11500	16000
Width	mm	Y	7370	7400	7400
Height		Z	6600	6600	8500
Weight	kg		70000	120000	180000
Options					
SIEMENS, FANUC OR HEIDENHAIN CNC Controllers					
Optional 24-48-96 Tool Capacity ATC					
Chip Conveyor					
RENISHAW, BLUM or HEIDENHAIN Laser Touch Probe and Laser Tool Measuring Device					
Coolant Through the Spindle, Auto Lubrication and Cooling Unit					
Air Conditioned Electrical Cabinet					
Active Dome Camera					
WAVE SKY Motorised Bellows for the Protection of the Roof					
Rapid, Efficient Service Support					
Oil Mist Vapor Suction Systems					
CE Norm Safety Standards					



IGREK FTH-202



12500 rpm 200 Nm / 24000 rpm 80 Nm

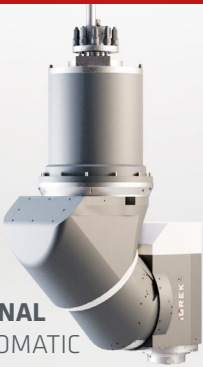
MAIN BODY OF THE **CONTINUOUS FORK TYPE MILLING HEAD** IS MADE OF **CAST IRON**. THE SPINDLE IS EQUIPPED WITH **SPECIAL CERAMIC BEARINGS**, **PULVERIZED LUBRICATION SYSTEM**, **INTERNAL AND EXTERNAL COOLING AVAILABILITY**. THE **HIGH-TECH A-AXIS AND C-AXIS** ARE EQUIPPED WITH **DIRECT DRIVE TORQUE MOTORS**, **BRAKE SYSTEMS** AND **ENCODERS**. FOR ANY SPECIAL REQUESTS ON SPINDLE AND MILLING HEADS, PLEASE DO NOT HESITATE TO CONTACT US.

IGREK FTH-270



15000 rpm 300 Nm / 12000 rpm 500 Nm

IGREK OTH-ASC



ORTHOGONAL
FULL AUTOMATIC

SPINDLE CHANGING HEAD

UNDER DEVELOPMENT
AVAILABLE SOON



LASER PROBE AND TOOL SETTER

IGREK MTH-HiTorq



4000 rpm 1400 Nm

MILLING HEADS AND SPINDLES

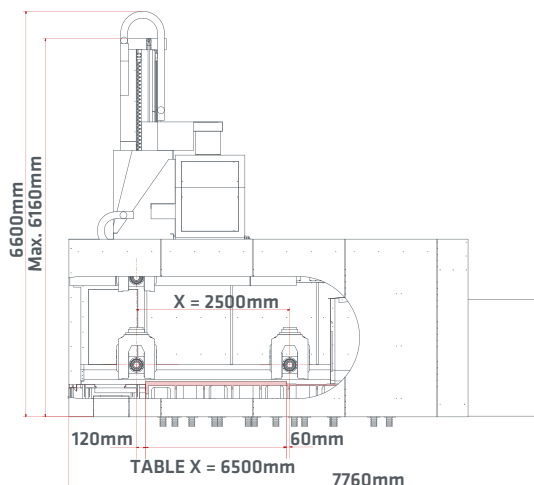
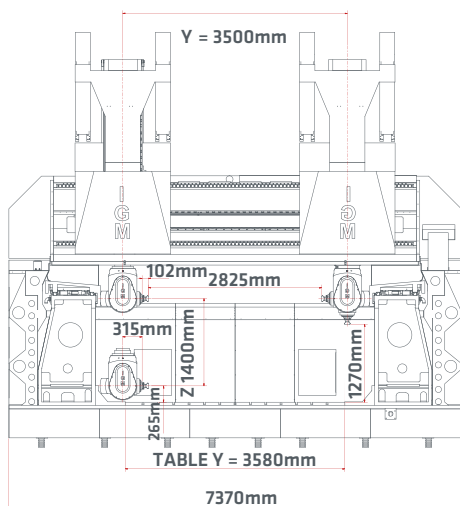
Milling Head		FTH-202	FTH-270	OTH-AS	MTH-HiTorq
C-Axis Rotation	°	± 360	± 360	± 360	± 400
C-Axis Power	kW	22	26	22	-
C-Axis Torque S1 - S6	Nm	1200 - 1700	2500 / 5700	1200 - 1700	2400
C-Axis Speed	rpm	50 - 120	100	100	-
C-Axis Braking Torque	Nm	4000	6000	4000	5000
A-Axis Rotation	°	± 115	± 115	± 360	+30 / -120
A-Axis Power	kW	6 x 2 = 12	8,5 x 2 = 17	10	-
A-Axis Torque S1 - S6	Nm	500 / 700 x 2 = 1000 / 1400	1100 / 2200 x 2 = 2200 / 4400	1510 / 3020	3000
A-Axis Speed	rpm	50 - 120	100	100	-
A-Axis Braking Torque	Nm	4000	6000	6000	5000
Head Dimensions	mm	625 x 420 x 700	750 x 500 x 800	575 x 575 x 935	690 x 600 x 808



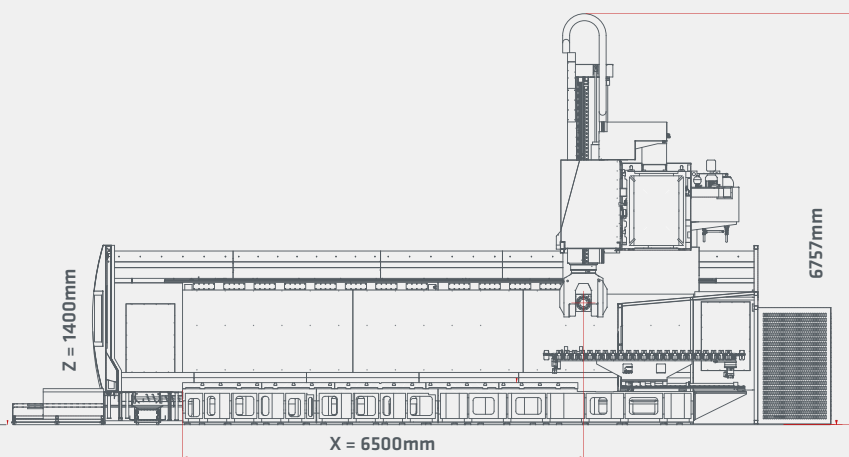
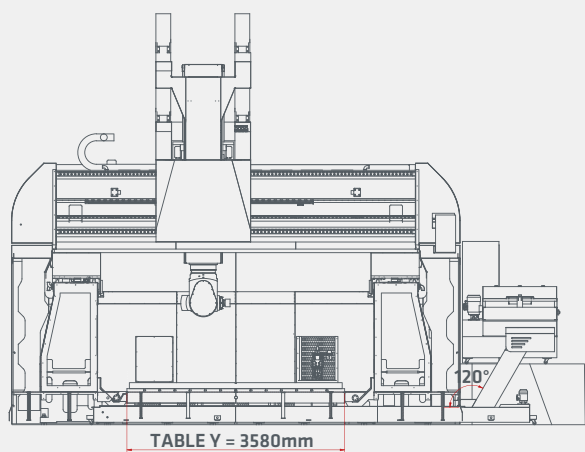
OUR **EXPERTS** ARE **QUALIFIED** IN **PRODUCTION**, **ASSEMBLY**, **MAINTENANCE** AND **TESTING** OF OUR **MILLING HEADS** AND **SPINDLES**. **SPARE PARTS** AND **UNITS** ARE KEPT SAFELY IN OUR **STORAGES** FOR **YOUR SECURITY** IN **PRODUCTION SUSTAINABILITY**.



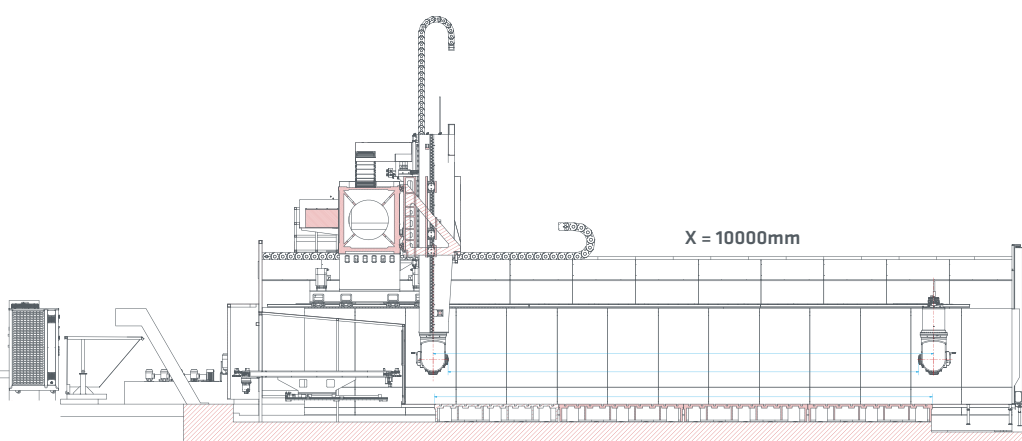
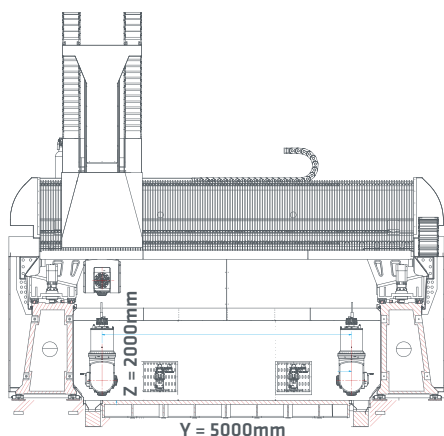
FR 3500 COMPACT

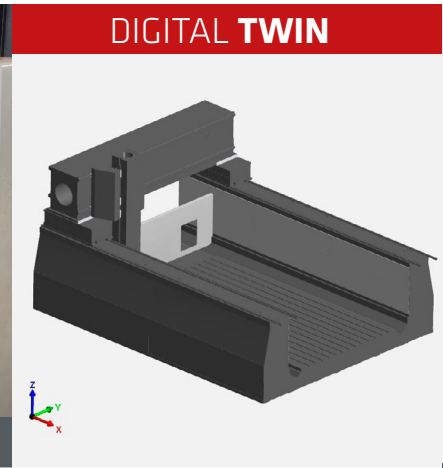


FR 3500 XL

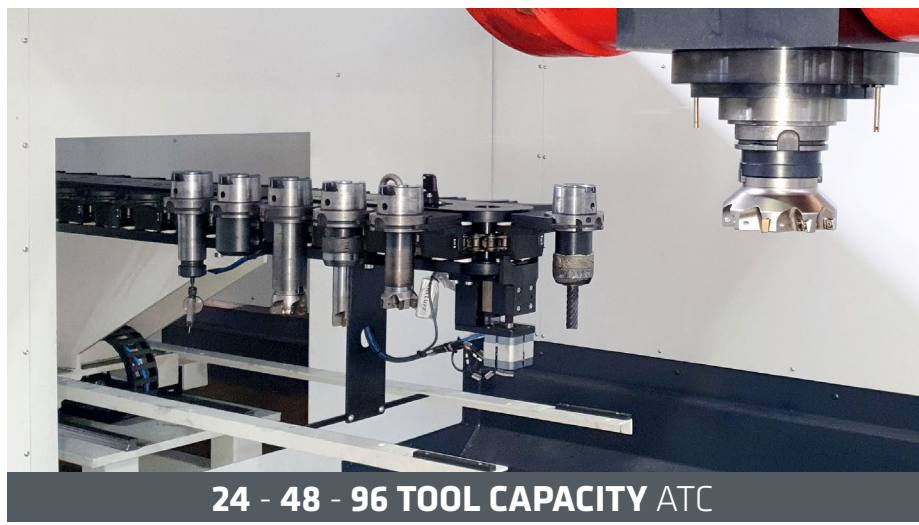
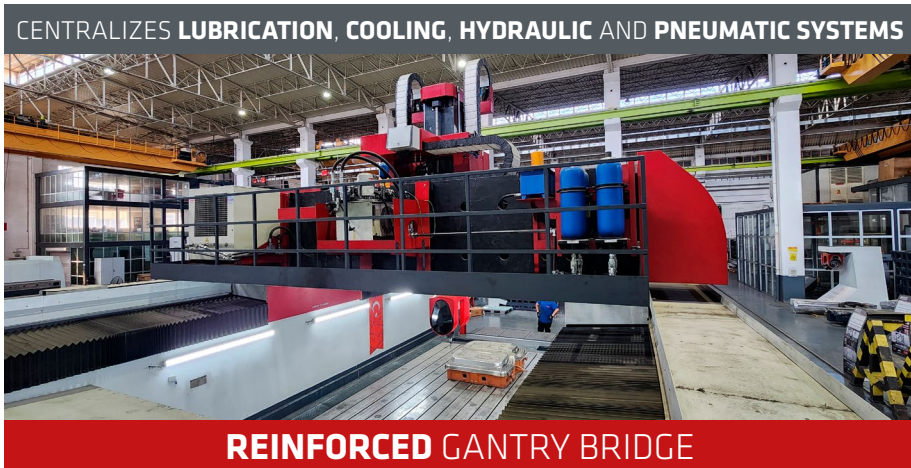


FR 5000 PORTAL





INDUSTRY 4.0 SERVICES



WAVE SKY BELLOWS FOR ROOFS AND OIL VAPOR EXTRACTION SYSTEMS

HIGH SPEED,
HIGH TECHNOLOGY,
HIGH PRECISION,
MACHINE TOOLS,
“MADE IN **TÜRKİYE**”

FOLLOW ON
YOUTUBE

SCAN, WATCH!



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