

Premium range

The **HSC-Premium range** is setting new benchmarks when it comes to flexibility, precision and efficiency. The Premium range machines have been especially designed for high-precision CNC tasks. The specially-produced granite substructures are used as a base for the highly dynamic linear drives. As a result, the **Premium machines** enable time-saving production with exceptional quality. The unique machine concept impresses in this range with economical perfection. Customers of the **Premium range** originate from graphite processing, medical engineering, microprocessing and precise mould construction.

And this is what our customers say about the Premium range:

2E mechatronic GmbH & Co. KG

"Since 2011, we have been using our PREMIUM 3020 in prototype construction. Thanks to the five-axis processing we are capable of producing three-dimensional MID modules without cost-intensive moulding tools. In this way our customers receive the first functioning parts in just a short time. Commissioning the machine was entirely uncomplicated. The competent training of the machine operators and the constant availability of **imes-icore** made sure of this. We have never regretted our purchase."

Andreas Fries, operations manager

DURA Automotive Body & Glass Systems GmbH

"Manufacturing for the automotive industry means delivering consistently excellent quality, quickly and reliably. This is the main reason why we opted for a custom solution from the Platinum range, made by **imes-icore GmbH**. DURA Automotive utilises two Platinum X3 with 3 axes and one PLATINUM X5 with 5 axes in parts production for the BMW i3. Thanks to the full-service concept from **imes-icore**, extremely high reliability and productivity are guaranteed by remote diagnostics and remote maintenance."

Manfred Miede, head of technical purchasing

The perfect
CAD/CAM software
simply integrated!



PREMIUM 3020

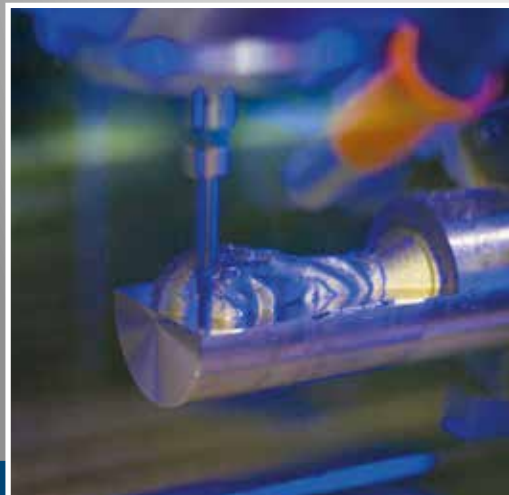
Compact design made of natural granite and steel, up to 5 axes for high precision!

Highlights

- Steel subframe with granite bed for maximum stability and precision
- Granite structure (polished) of the X/Y/Z axes
- Bellows cover in all axes
- HF spindle motor up to 2 kW / 80,000 rpm
- Modern control electronics for HSC processing with operating software (i-8000)
- AC servo technology with digital power end stages
- Real-time PC controller based on Windows®
- Modern operating terminal with 19" TFT, stainless steel keyboard and mouse
- 230 V power supply
- Hood swivels upwards for free and full access

Options

- Rotating and swivelling axes for 5-axis processing with high degree of freedom
- Hand-held operating unit
- Automatic tool changer
- Tool length measuring switch
- Various controllers from Heidenhain®
- Minimum quantity cooling lubrication system
- Suction unit
- isyCAM 3.6
- Measuring switch for measuring tasks in the machine



Application examples

- Electrode manufacture
- Small steel moulds
- Injection moulds
- Jewellery industry
- Engraving stamps and plates
- High-precision small parts processing
- Medical engineering
- Spectacles industry

Typical materials

- Copper
- Steel
- Aluminium
- Plastics
- Titanium
- Brass
- Gold
- Silver



The **PREMIUM 3020** is unique on the machine market because it impresses with its very small installation area, a highly precise granite structure and exceptional value for money. The fast CNC controller enables HSC milling (high-speed cutting). Due to its compact design, the **PREMIUM 3020** is predestined for 3, 4 or 5-axis processing of smaller parts, e.g. in the jewellery, watch and spectacles industry, or in medical engineering.



Technical data	PREMIUM 3020
Dimensions (W x D x H) in mm	1225 x 905 x 1750
Weight in kg	approx. 650
Travel ranges (X / Y / Z) in mm	350 / 200 / 150
Speed range in m/min	12
Clamping table area (X/Y) in mm	variable
Clamping weight in kg	25
Repetition accuracy	± 0.01
Measuring system resolution in mm	± 0.005
Drive motors	Servo motors
Drive elements (X / Y / Z)	Ball screw, zero backlash adjustable
Guides	Precision profile rail guides
Connection voltage	16 A / 230 V
Control	Integrated i-8000 controller
Operation	Operating terminal with 19" TFT monitor, stainless steel keyboard and trackball mouse
Software	i-8000 / isyCAM 2.8 (optional isyCAM 3.6)

Machine dimensions without additional accessories.

Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.)

PREMIUM 5030 μ

Granite, steel and linear motors
for top processing quality!

Up to
5 axes

Highlights

- Solid and stable machine construction on polished granite components
- Small installation space due to compact design
- High frequency spindle with up to 2 kW output and 50,000 rpm
- HSK-E 25 changer system
- HSC control technology with a set processing time of < 1 ms in real-time
- High rail precision due to digital length measuring system
- High-load linear guides
- Low-maintenance linear motors in X, Y, Z
- Control software on Windows® for i-8000
- Zero point clamping system in the granite table for rapid change from 3 to 5 axes

Options

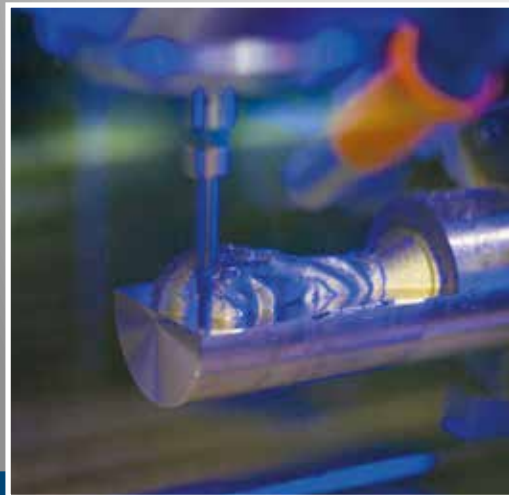
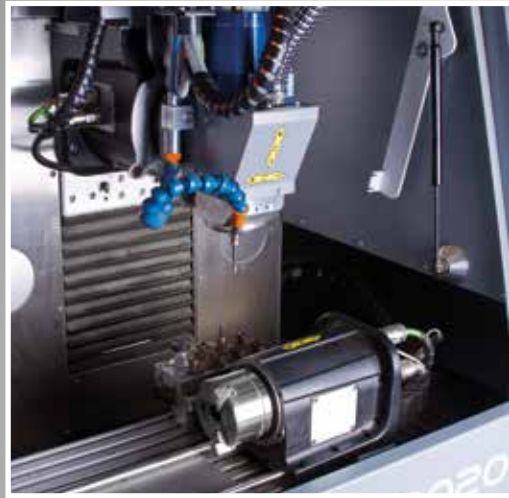
- 3D measuring switch for capturing the workpiece zero points or remeasuring workpieces
- Laser for contactless tool control
- High frequency spindles up to 100,000 rpm
- 4th/5th Axis as rotating/swivelling axis
- Minimum quantity cooling lubrication system
- Various controllers from Heidenhain®
- Hand-held operating unit
- Professional CAD/CAM solutions

Application examples

- Microprocessing
- Fine mechanical processing
- Medical engineering
- Electronic industry
- Watch industry/jewellery industry
- Automotive supplier industry
- Tool/mould construction
- Electrode manufacture

Typical materials

- Stainless steel
- Graphite
- Copper
- Steel
- Titanium
- Aluminium
- Brass
- Plastics
- Hardened steel
- Ceramic
- Special materials



The **PREMIUM 5030 μ** is a 3 to 5-axis HSC milling machine, that is specially designed for the requirements of high-precision processing of fine mechanical small parts, microprocessing and milling graphite/copper electrodes. In order to meet with this demand for accuracy, all essential points are integrated in the machine concept for reliable production. The solid machine base, consisting of a natural hard rock granite portal with de-coupled Y-axis, guarantees high stiffness and long-term stability. The individual granite elements are produced with an accuracy per DIN 876 / quality 00. The pioneering linear motor technology and the incremental measurement process guarantee maximum positioning accuracy with highly dynamic feed rates. Fastest control technologies (high-speed cutting) guarantee harmonic rail movements with maximum precision and simple user guidance on: Windows® for i-8000 controller.



Technical data	PREMIUM 5030
Dimensions (W x D x H) in mm	1560 x 1200 x 2050
Design	Steel-granite construction
Weight in kg	approx. 1000
Travel ranges (X / Y / Z) in mm	500 / 350 / 180
Speed range (X / Y / Z) in m/min	20
Clamping table area (W / T) in mm	450 x 350
Clamping weight in kg	200
Repetition accuracy in μ m	± 3
Positioning accuracy in μ m	± 5
Resolution in μ m	0.5
Drive motors	Linear motors
Main spindle drive	High frequency spindle: Up to 2 kW / 50,000 rpm (optionally up to 100,000 rpm)
Control	Heidenhain®
Operation	Operating terminal with 19" TFT monitor, stainless steel keyboard and trackball mouse
Software	Heidenhain® / isyCAM 2.8 (optional isyCAM 3.6)

Machine dimensions without operating panel or additional accessories.
Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.).

E
I
P

PREMIUM 5030 μ graphite

High-speed cutting for graphite!

Up to 5 axes



Highlights

- Protective enclosure against aggressive fine dusts
- Solid and stable machine construction
- High stability
- Minimal installation space
- High frequency spindle with up to 50,000 rpm
- High rail accuracy
- Linear guides and linear motors
- HSC control concept with rapid set processing times (up to 0.1 ms)
- Concentricity of up to 3 μ m using HSK-E 25
- Control software on Windows®
- Protected 16-times tool changer

Options

- Fine dust extraction system for graphite
- Minimum quantity cooling lubrication system (for copper electrodes)
- High frequency spindles with up to 100,000 rpm
- Rotating and rotating/swivelling axes for 4 or 5-axis processing
- Tool length measuring switch
- Laser for contactless tool control
- Hand-held operating unit
- Professional CAD/CAM solutions
- Tornado suction unit
- Zero point clamping system

Application examples

- Electrode manufacture
- Hard metal processing
- Microprocessing
- Ceramic processing
- Fine mechanical processing
- Medical engineering
- Electronic industry
- Automotive supplier industry
- Tool/mould construction
- Watch industry

Typical materials

- Graphite
- Hard metals
- Plastics
- Aluminium
- Copper
- Brass
- Ceramic



The **PREMIUM 5030 μ graphite** is the ideal machine concept for milling graphite and copper electrodes. Based on the **PREMIUM 5030 μ** , all essential points of high-speed cutting are combined in this CNC system, so that the performance of this machining process can be fully utilised. The high stability required for HSC milling is attained through the solid granite table with steel substructure. Granite is a natural stone that provides all characteristics that are required as the base for a precision machine: high damping, high thermal stability and high compressive strength. Linear guides and linear motors are installed outside the working area. An arrangement that additionally protects these components against chips and abrasive fine dusts. Furthermore, extraction of the fine dust generated during processing takes place particularly efficiently with Tornado power, due to the variable arrangement of the extraction cyclone. Another highlight: the **PREMIUM 5030 μ graphite** is compatible with all zero point clamping systems. The electrode retainers and changer systems of all renowned manufacturers (Hirschmann, EROWA, 3R, etc.) can be integrated upon request. The rapid control technology required for HSC processing is optionally provided by i-8000 or Heidenhain®.



Technical data	PREMIUM 5030 graphite
Dimensions (W x D x H) in mm	1560 x 1200 x 2050
Design	Steel-granite construction
Weight in kg	approx. 1000
Travel ranges (X / Y / Z) in mm	500 / 350 / 180
Speed range (X / Y / Z) in m/min	20
Clamping table area (W / T) in mm	450 x 350
Clamping weight in kg	200
Repetition accuracy in μ m	± 3
Positioning accuracy in μ m	± 5
Resolution in μ m	0.5
Drive motors	Linear motors
Main spindle drive	High frequency spindle: Up to 2 kW / 50,000 rpm (optionally up to 100,000 rpm)
Control	Heidenhain®
Operation	Operating terminal with 19" TFT monitor, stainless steel keyboard and trackball mouse
Software	Heidenhain® / isyCAM 2.8 (optional isyCAM 3.6)

Machine dimensions without additional accessories.
Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.).

E
I
P

PREMIUM micro 1010

High-precision 5-axis microprocessing with optional automation for almost every material!

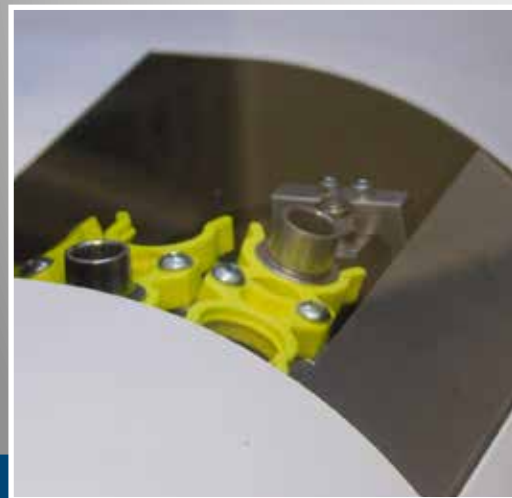


Highlights

- Torque drives in A/B axes Heidenhain® measuring systems
- Linear motors in X/Y/Z axes
- 5-axis operation
- Clear user guidance according to industry standard
- Simple interface adjustments for further automation guaranteed
- 32-times tool changer
- EROWA zero point clamping system
- Granite bearing

Options

- EROWA workpiece pallets
- Hand-held operating unit / joystick
- 3D measuring switch
- Automatic workpiece changer for series production with robot connection
- Zero point clamping system tool holders
- Flush cooling



Application examples

- Microprocessing
- Fine mechanical processing
- Medical engineering
- Electronic industry
- Watch industry
- Automotive supplier industry
- Tool/mould construction

Typical materials

- Stainless steel
- Graphite
- Copper
- Steel
- Titanium
- Aluminium
- Plastics
- Hardened steel
- Ceramic
- Special materials



E
I
P

The new **PREMIUM 1010 micro** precision machine is predestined for manufacturing small parts as individual or series parts. The 5-axis HSC milling system has the additional option of connecting automation systems such as handling systems or robots for unmanned production. Thanks to expanded control and communication possibilities, it is possible to integrate different automation units and to control these autonomously in the production process. In order to guarantee extreme stiffness and precision for the machine, the machine's base structure has also been constructed from steel and polished hard rock. The polished natural granite was manufactured according to DIN 876 / quality 00 and used as the bearing material for all linear axes. This enables precise long-term stability and extensive temperature independence.



Technical data	PREMIUM 1010 micro
Dimensions (W x D x H) in mm	785 x 1100 x 1940
Design	Steel/granite construction
Weight in kg	approx. 870
Travel ranges (X / Y / Z A / B) in mm	100 / 100 (285 up to WZW) / 150 / 360° / 120°
Repetition accuracy in µm	0,5
Positioning accuracy in µm	± 0,02
Resolution in µm	0,5
Drive motors	Linear motors (X / Y / Z) and torque motors (A / B)
Main spindle drive Pmax.	High frequency spindle with 3,2 kW / 50,000 rpm
Connection voltage	16 A / 400 V
Control	5-axis Logosol
Operation	CNC operating panel with 15" touchscreen monitor and operating keys
Software	WIN©-REMOTE / isyCAM 2.8 (optional isyCAM 3.6)

Machine dimensions without additional accessories.
Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.).

PLATINUM X3

Speed and precision

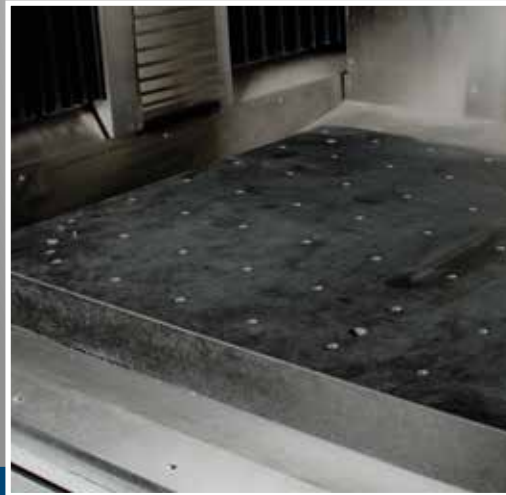
through innovative technology!

Highlights

- Machine table from polished granite
- Steel subframe
- Individual tool clamping systems on 150 mm hole matrix with M8 threaded bushes
- Chip collecting pan with drawer
- Bellows or lamella blades in all axes
- Milling spindles up to 3.8 kW / 24,000 rpm or high frequency spindles up to 80,000 rpm HSK-E 32 / HSK-E 25 / SK 20 / SK 30
- 20-times tool changer outside the working area / tool length sensor
- Modern HSC controller, B&R® or Heidenhain®
- Servo motors or linear motors
- Control panel with touchscreen, function keys, keyboard and hand-held operating unit or Heidenhain® control panel
- Control and power electronics fully integrated in the machine

Options

- Edge measuring switch
- Minimum quantity cooling lubrication system
- Suction unit
- Vacuum clamping technology
- 4th axis as rotating axis
- Professional CAD/CAM solutions



Application examples

- Panel processing
- Aluminium processing
- 3D-processing
- Model and mould construction
- Housing production
- Rapid prototyping

Typical materials

- Steel
- Various non-ferrous metals upon request
- Composites
- PCB material
- Plastics
- Aluminium
- Ureol
- Ceramic
- Graphite
- etc.



The **PLATINUM X3** HSC milling machine is a CNC processing centre on a steel and polished granite base, whereby a new type of sandwich material method is used for moving parts. High stiffness, weight savings and quiet running make this system a unique, precise and economical CNC milling system. As indicated by the supplement to its name **X3**, this is the 3-axis version of the **PLATINUM** model range and it is available in various sizes. During development, extensive value was placed on application possibilities in industrial areas. This system can therefore be individually aligned with customer wishes thanks to the variable configuration of its workpiece clamping systems. Milling spindles with various power and speed ranges can be used. Processing complex parts automatically is therefore possible in conjunction with the multi tool changer.

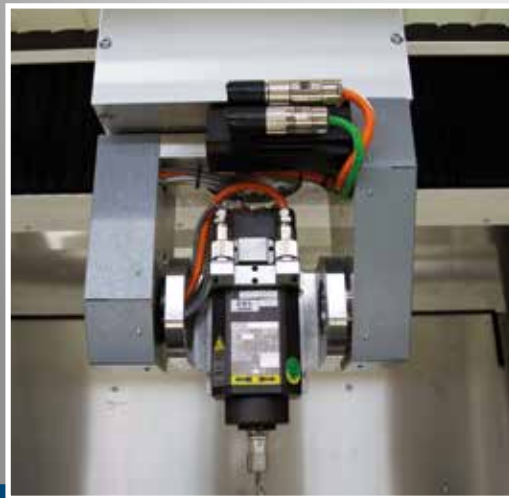
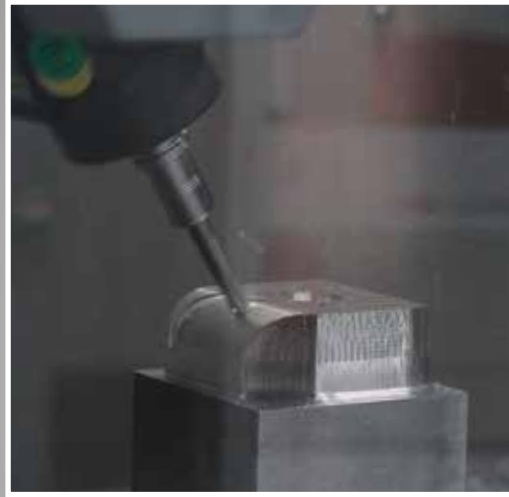


Technical data	PLATINUM X3 1010	PLATINUM X3 1510	PLATINUM X3 2010
Dimensions (W x D x H) in mm	2310 x 2035 x 2585	2815 x 2035 x 2585	3315 x 2035 x 2585
Weight in kg	approx. 2000 - 4000		
Travel ranges in mm	1000 / 1000 / 200 (optional 350)	1500 / 1000 / 200 (optional 350)	2000 / 1000 / 200 (optional 350)
Speed range (X / Y / Z) in m/min	8 (optionally up to 30)		
Z-clearance in mm	250 mm (optionally up to 400)		
Repetition accuracy in mm	± 0.02		
Measuring system resolution in mm	0.001		
Drive motors	Servo motors or linear motors		
Guides	Precision profile rail guides		
Connection voltage	16 A / 400 V		
Control	B&R® / Heidenhain®		
Operation	B&R® operating panel with hand-held operating unit / Heidenhain® operating panel		
Software	B&R® / Heidenhain® / isyCAM 2.8 (optional isyCAM 3.6)		

Machine dimensions without operating panel or additional accessories.
Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.).

PLATINUM X5

Speed and precision
in 5 axes through innovative technology!



Highlights

- Servo motors or linear motors
- Steel subframe
- Machine table from polished granite
- Individual tool clamping systems on 150 mm hole matrix with M8 threaded bushes
- Chip collecting pan with drawer
- Bellows or lamella blades in all axes
- Milling spindle 1.5 kW / 40,000 rpm or 2.0 kW / 50,000 rpm
- HSK-E 25 tool holder
- 20-times tool changer outside the working area / tool length sensor
- Modern HSC controller, B&R® or Heidenhain®
- Control panel with touchscreen, function keys, keyboard and hand-held operating unit
- Control and power electronics fully integrated in the machine
- 5-axis fork head with angle calculation from $\pm 200^\circ$ and $\pm 100^\circ$

Options

- Professional CAD/CAM solutions
- Edge measuring switch / 3D measuring switch
- Minimum quantity cooling lubrication system
- Suction unit
- Vacuum clamping technology
- Automation technology

The new **PLATINUM X5** HSC milling machine is a 5-axis processing centre on a steel and polished granite base, whereby a new type of sandwich material method is used for moving parts. High stiffness, large dynamics and high speed make this system a unique, precise and economical CNC milling system. The **PLATINUM X5** model range is available in various sizes. Different clamping systems can be used to clamp the workpiece in the solid granite table. The tool executes all 5-axis movements with RTCP (rotation tool centre point) and TLZ (tool length compensation). Operation takes place via an intuitive software interface and is supplemented by variable user interfaces such as touchscreen, special function keys, mouse, keyboard and hand-held control unit.



Application examples

- 5-axis processing
- Rapid prototyping
- Panel processing
- 3D-processing
- Model and mould construction
- Housing production
- Rapid prototyping

Typical materials

- Steel
- Wood
- Non-ferrous metals
- Aluminium
- Composites
- PCB material
- Plastics
- Ureol
- Ceramic
- Graphite
- etc.



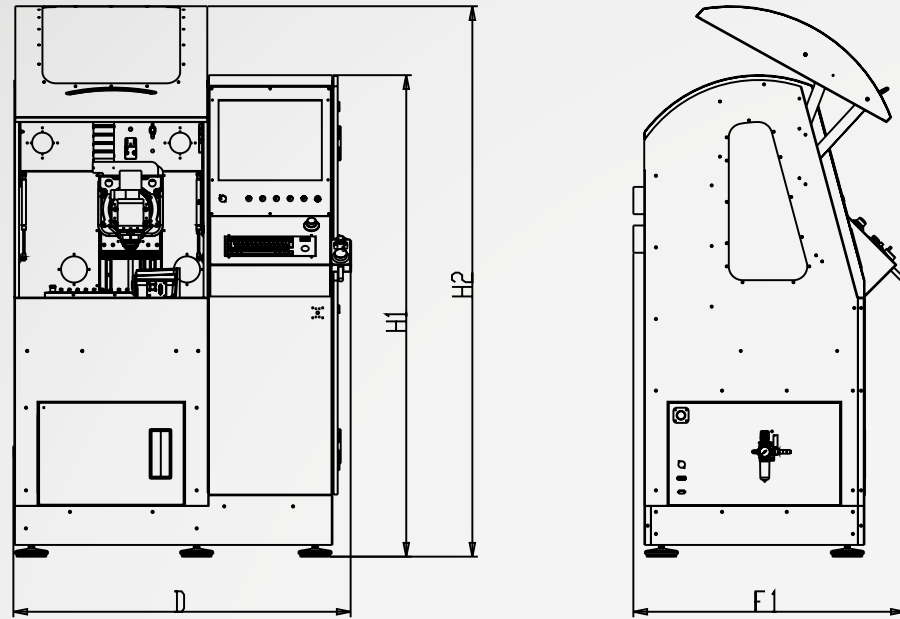
Technical data	PLATINUM X5 1010	PLATINUM X5 1510	PLATINUM X5 2010
Dimensions (W x D x H)	2310 x 2035 x 2585	2815 x 2035 x 2585	3315 x 2035 x 2585
Weight in kg	approx. 2000 - 4000		
Travel ranges (X / Y / Z / A / C) in mm	1000 / 1000 / 400 $\pm 100^\circ$ / $\pm 200^\circ$	1500 / 1000 / 400 $\pm 100^\circ$ / $\pm 200^\circ$	2000 / 1000 / 400 $\pm 100^\circ$ / $\pm 200^\circ$
Speed range in m/min	8 (optionally up to 30)		
Z-clearance in mm	450		
Repetition accuracy in mm	± 0.02 (3-axis)		
Measuring system resolution in mm	0,001		
Drive motors	Servo motors or linear motors		
Guides	Precision profile rail guides		
Connection voltage	16 A / 400 V		
Control	B&R® / Heidenhain®		
Operation	B&R® operating panel with hand-held operating unit / Heidenhain® operating panel		
Software	B&R® / Heidenhain® / isyCAM 2.8 (optional isyCAM 3.6)		

Machine dimensions without operating panel or additional accessories.
Travel ranges without processing unit and other attachments (tool changer, length measuring switch, etc.).

Premium range with detailed dimensions

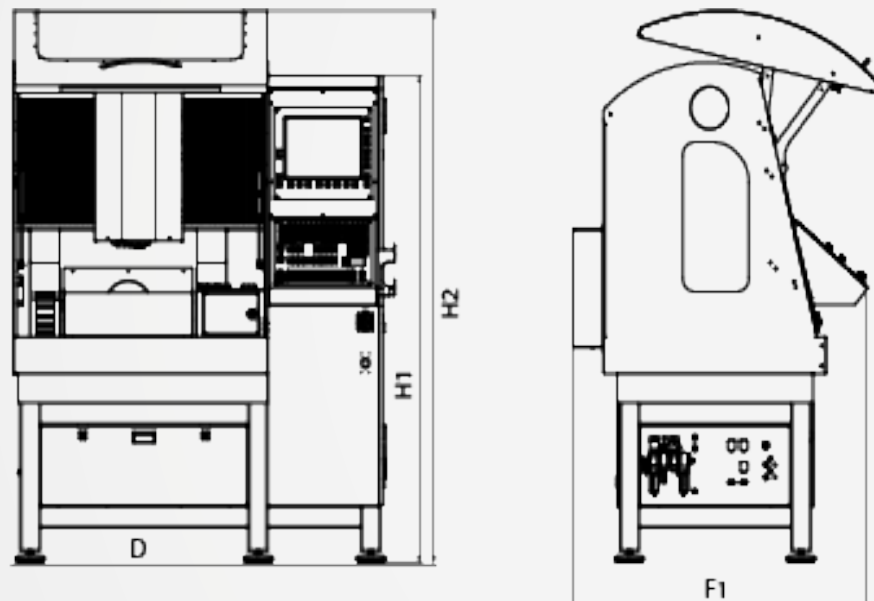
PREMIUM 3020

Dimensions in mm	Premium 3020
Width D	1225
Depth F1	905
Height H1	1750
Height H2	2000



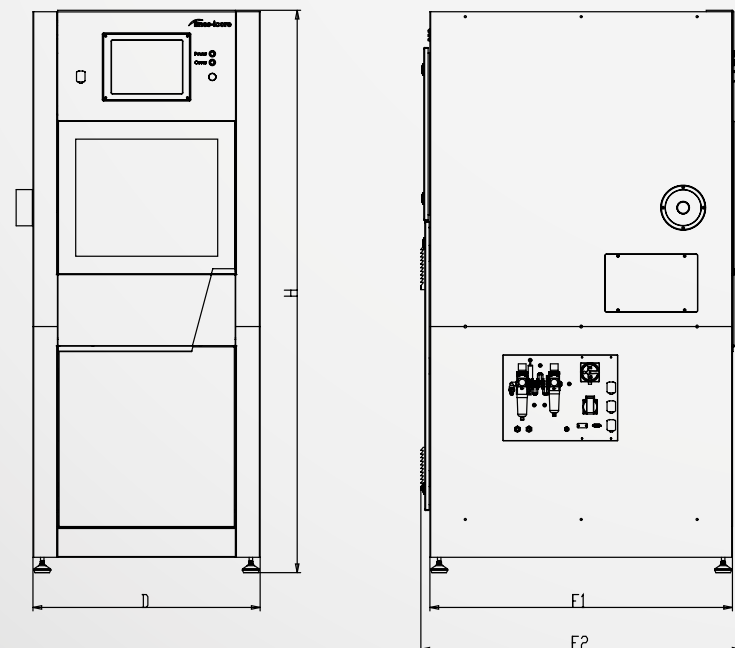
PREMIUM 5030μ

Dimensions in mm	Premium 5030μ
Width D	1560
Depth F1	1200
Height H1	1790
Height H2	2050

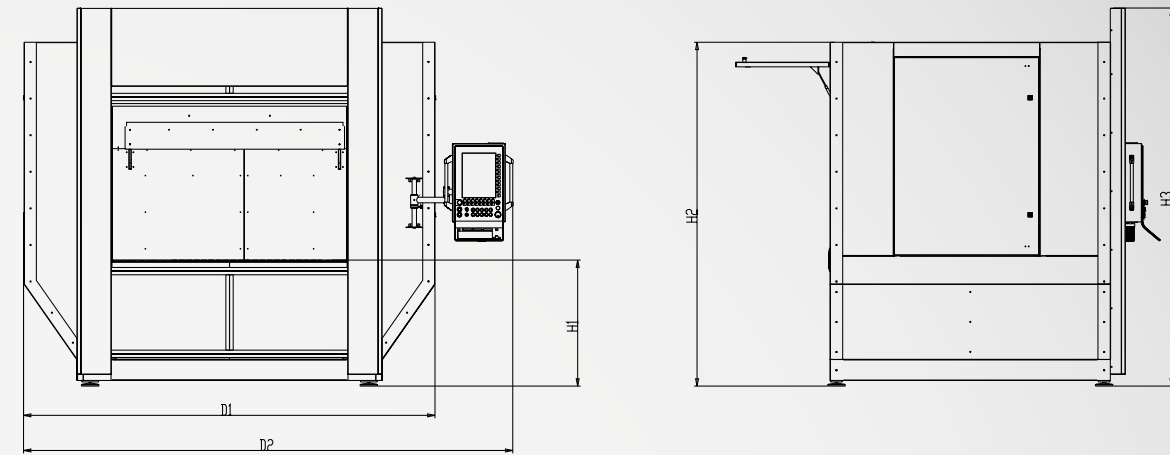


PREMIUM micro 1010

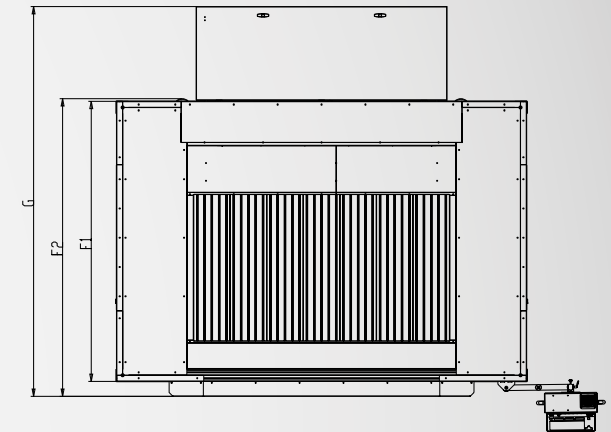
Dimensions in mm	PREMIUM micro 1010
Width D	758
Depth F1	1045
Depth F2	1105
Height H	1940



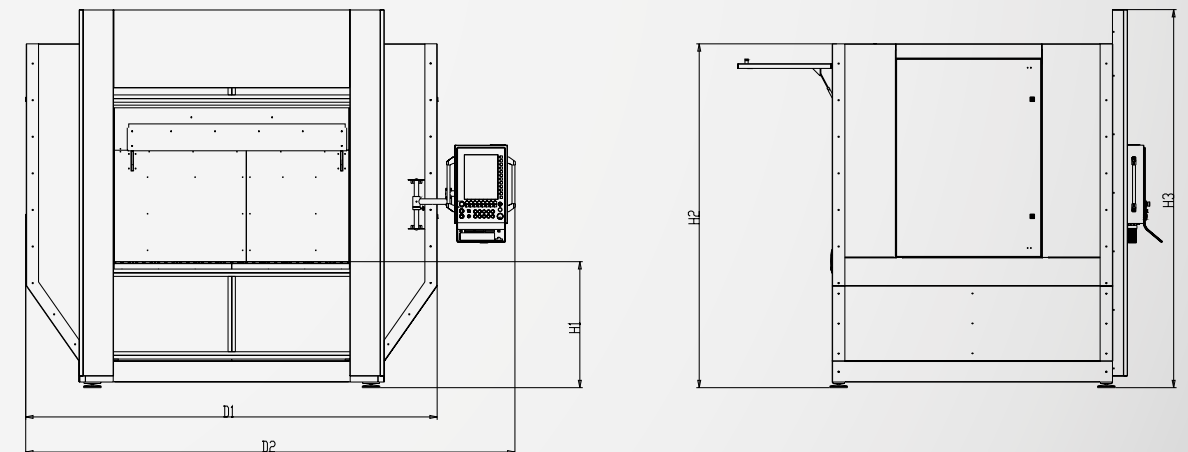
PLATINUM X3



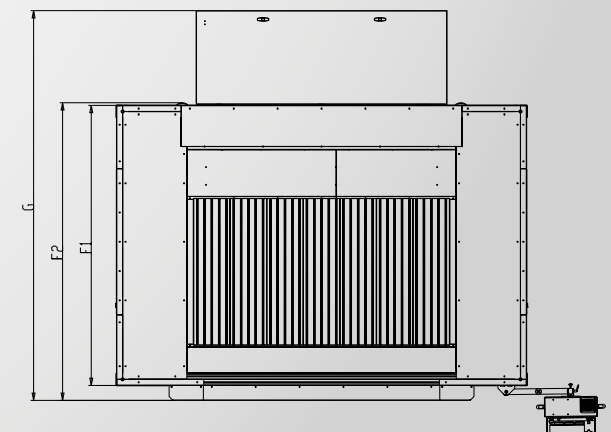
Dimensions in mm	Platinum X3 1010	Platinum X3 1510	Platinum X3 2010
Width D1	2310	2815	3315
Width D2	2850	3350	3850
Depth F1	1915	1915	1915
Depth F2	2035	2035	2035
Depth G	2550	2550	2550
Height H1	865	865	865
Height H2	2350	2350	2350
Height H3	2585	2585	2585



PLATINUM X5



Dimensions in mm	Platinum X5 1010	Platinum X5 1510	Platinum X5 2010
Width D1	2310	2815	3315
Width D2	2850	3350	3850
Depth F1	1915	1915	1915
Depth F2	2035	2035	2035
Depth G	2550	2550	2550
Height H1	865	865	865
Height H2	2350	2350	2350
Height H3	2585	2585	2585

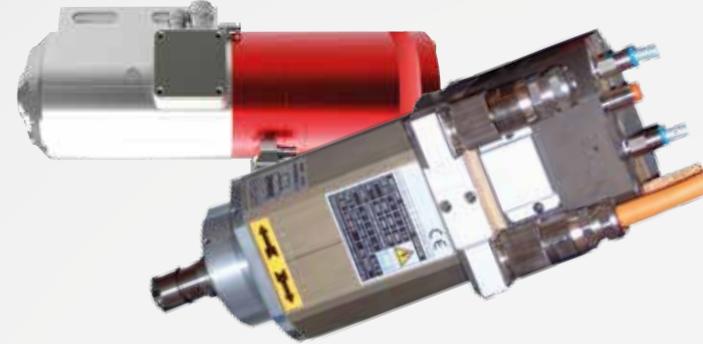


Accessories for Premium CNC machines

HF spindle motors

General features

- High-frequency spindle motors from 1.5 to 4.0 kW, also available with higher outputs upon request
- Speeds up to 100,000 rpm possible
- HSK-E 25 interface and others available upon request
- Water-cooled spindle motors



Contactless tool control

General features

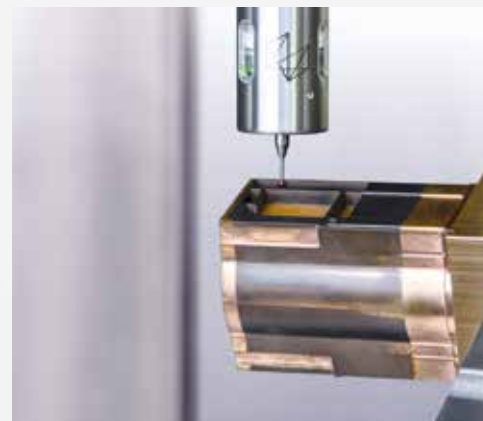
- Connection with i-8000, Heidenhain® and B&R® controller through separate electrical interface unit
- Tool break check
- Tool length measurement
- Tool diameter check
- Pneumatic lock to protect the laser unit
- Dimensions: 133.5 x 30 x 80 mm
- Repetition accuracy: 0.2 µm
- Smallest tool to be captured: 0.05 µm



m&h infrared measuring switch system

General features

- Ultra-small infrared measuring switch, d= 25 mm, h= 42.4 mm
- HDR technology (high data rate)
- Workpiece zero point detection
- Workpiece position detection
- Check measurement for workpieces
- Suitable for small and delicate workpieces



Minimum quantity cooling lubrication systems

Our minimum quantity cooling lubrication systems are available in different designs:

General features

- Economical systems according to the downdraught functional principle
- Closed pressure tanks for the coolant, pneumatically-actuated coaxial spray head



Tool change systems

General features

- HSK-E or SK change systems as linear or round changers with chip protection cover
- Sensor-monitored tool stations
- Management of the tools inside the machine controller
- Pneumatic rotating cylinder with end position check for chip protection cover and safe tool change



Direct changing system



HSK-E linear changer

Rotating/swivelling unit

General features

- Precision gearing
- Servomotor
- Maintenance-free
- Protection class IP 65
- Play-free and high torsional stiffness
- Gear reduction 1:51 or 1:101
- Rust-free finish
- Transmission accuracy: < 1.5 arcmin
- Repetition accuracy: <± 6 arcsec
- Swivelling range steplessly adjustable
- Highly durable and stiff output bearing



Extraction systems

Extraction technology is increasingly gaining in significance. When utilised correctly and perfectly designed for the respective application, it provides enormous advantages:

- Extraction system for special dusts
- Production interruptions (downtimes plus cleaning work), resulting from frequent cleaning work on the CNC system, are significantly reduced by automatic cleaning
- Premature wear and unnecessary defects in high-value components (axes, control, accessory components) are avoided.

The aspect of health should always be the priority. Fine dust is generated with many applications, visible as deposits on level surfaces. However, the fact that respirable fine dust in the intake area of the CNC system swirls invisibly in the air is often underestimated.



PROFI-120

STANDARD