



The industry standard www.takumicnc.eu

G-SERIES

THE GRAPHITE ARTISTS

Immense particulate resistance – optimal for graphite processing. Premium performance for high-speed applications.

Triple-axis machining center G 700

FAST MACHINE AVAILABILITY!



G 700

| X / Y / Z-axis travel paths (mm) | 750 x 700 x 500 |
|--|-----------------|
| X / Y / Z-axis high-speed mode (m/min) | 30 |
| Max. table load (kg) | 500 |

- Completely enclosed working area including vacuumextraction for state-of-the-art graphite processing
- High level of geometrical and dimensional accuracy thanks to compact portal design
- Comprehensively equipped base version contributes an unexcelled price/performance ratio
- Stable and rigid portal design featuring reliable resistance to high temperatures

- · Absolute direct measuring systems
- Thermal compensation system counteracts spindle expansion
- Cooling system for the recirculating ball-screw assembly
- · 25,000 rpm, HSK-E50, motor spindle
- Graphite extraction system

Triple-axis machining center G 1000

The expert contact person for your questions and requests:

Sebastian Herr Takumi Product Manager Phone +49 (89) 905094 - 99 www.takumicnc.eu



G 1000

| X / Y / Z-axis travel paths (mm) | 1,020 x 700 x 500 |
|--|-------------------|
| X / Y / Z-axis high-speed mode (m/min) | 30 |
| Max. table load (kg) | 800 |

- Completely enclosed working area including vacuumextraction for state-of-the-art graphite processing
- High level of geometrical and dimensional accuracy thanks to compact portal design
- Comprehensively equipped base version contributes an unexcelled price/performance ratio
- Stable and rigid portal design featuring reliable resistance to high temperatures

- Absolute direct measuring systems
- Thermal compensation system counteracts spindle expansion
- Cooling system for the recirculating ball-screw assembly
- · 25,000 rpm, HSK-E50, motor spindle
- \cdot Graphite extraction system

TECHNICAL SPECIFICATIONS AT A GLANCE

| Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | |
|--|---------------|
| Vaxis (mm) 700 Pasis (mm) 500 OPERATING RANGE Spindle nose table (mm) 150 - 650 Distance between columns (mm) 850 Table clanding surface 1x W (mm) 810 x 620 Table load (uniform) (kg) 500 Tours (DIN 650) MAIN SPINDLE Spindle taper Max, spindle speed (U/min) 650 S1/56 spindle power (kW) 20 / 26 S1/56 spindle power (kW) 20 / 26 S1/56 spindle torque (Nm) 10 / 4 / 13.5 FEED XYYY- axis high-speed mode (m/min) 30 / 30 / 30 XYYY- axis machining feed (m/min) 30 / 30 / 30 XYYY- axis machining feed (m/min) 30 / 30 / 30 XYYY- axis machining feed (m/min) 30 / 30 / 30 XYYY- axis machining feed (m/min) 30 / 30 / 30 Axiv axis machining feed (m/min) 30 / 30 / 30 Magaine capacity 4 Max. tool diameter (mm) 30 30 / 30 30 / 30 30 / 30 | |
| E-axis (mm) 500 OPERATING RANGE Spindle nose table (mm) 150 - 650 Distance between columns (mm) 850 Table clamping surface Lx W (mm) 810 x 620 Table load (uniform) (kg) 500 T-slots (DIN 650) 5 x 18 x 125 MAIN SPINDLE Spindle taper HSK 50 E Drive type Motor Max. spindle speed (U/min) 25,000 51/56 spindle power (kW) 20 / 26 ST/V2-axis high-speed mode (m/min) 30 / 30 / 30 X/V2-axis high-speed mode (m/min) 30 / 30 / 30 X/V2-axis machinnig (sed (m/min) 30 / 30 / 30 X/V2-axis machinnig (sed (m/min) 30 / 30 / 30 X/V2-axis machinnig (sed (m/min) 30 / 30 / 30 X/V2-axis machinnig (sed (m/min) 30 / 30 / 30 Magazine capa (ity 4 Max. tool diameter (mm) 7 6 Max. tool liength (mm) 30 30 / 30 Max. tool liength (mm) 30 30 / 30< | 1,020 |
| OPERATING RANGE Spindle nose table (mm) 150-650 Distance between columns (mm) 850 Table clanging surface L W (mm) 810 x 620 Table load (uniform) (kg) 500 T-siots (DIN 650) 5 x 18 x 125 MAIN SPINDLE Spindle taper Drive type Motor Max. spindle speed (U/min) 25,000 51/56 spindle power (kW) 20 / 26 51/56 spindle forque (km) 30 / 30 / 30 XY/Y2-axis high-speed mode (m/min) 30 / 30 / 30 XY/Y2-axis machining feed (m/min) 30 / 30 / 30 XY/Y2-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper E Max. tool diameter (mm) 75 Max. tool diameter (mm) 300 Max. tool diameter (mm) 300 Max. tool diameter (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kWA/A)< | 700 |
| Spindle nose table (mm) 150 - 650 Distance between columns (mm) 850 Table clamping surface Lx W (mm) 810 x 620 Table load (uniform) (kg) 500 T-slots (DIN 650) MAIN SPINDLE Spindle taper Max. spindle speed (U/min) 150 x 70 Max. spindle speed (U/min) 25000 Slots spindle speed (U/min) 25000 Slots spindle speed (U/min) 30 / 30 / 30 Slots spindle torque (Nm) 30 / 30 / 30 TOOL CHANGER TYP2 - axis machining feed (m/min) 30 / 30 / 30 TOOL CHANGER Type tool changer Double gripper E Magazine capacity 2 E Max. tool diameter (mm) 30 30 30 30 4 | 500 |
| Distance between columns (mm) 850 Table clamping surface LxW (mm) 810 x 620 Table load (uniform) (kg) 500 T-slots (DIN 650) 5 x 18 x 125 MAIN SPINDLE Spindle taper HSK 50 E Drive type Motor Max. spindle speed (U/min) 25,000 51/56 spindle torque (Nm) 20 / 26 51/56 spindle torque (Nm) 104,113.5 FEED X/Y/Z-axis high-speed mode (m/min) 30/30/30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper E Magazine capacity 2 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool diameter (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bAY/A) 50/125 Shipping weight (kg) 50/125 | |
| Table clamping surface LxW (mm) 810 x 620 Table load (uniform) (kg) 500 T-slots (DIN 650) \$x18x125 MAIN SPINDLE Spindle taper Drive type Motor Max. spindle speed (U/min) 25,000 51/56 spindle torque (Nm) 20 / 26 51/55 spindle torque (Nm) 10.4 / 13.5 FEED X/Y/Z-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/Z-axis machining feed (m/min) 30 / 30 / 30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper 10 Magazine capacity 4 10 Max. tool diameter (mm) 75 10 With uncocupied adjacent stations (mm) 120 10 Max. tool weight (kg) 7 10 OTHER DATA Corrected-air supply (bar) 6 10 Electrical power supply (NA/A) 50 / 125 5 Shipping weight (kg) 7,000 10 </td <td>180 - 680</td> | 180 - 680 |
| Table load (uniform) (kg) 500 T-slots (DIN 650) \$x18x125 MAIN SPINDLE Spridle taper HSK50E Drive type Motor Max. spindle speed (U/min) 55,000 \$1/56 spindle power (kW) 20 / 26 \$1/56 spindle torque (Nm) 10,4713.5 FEED X/Y/2-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/2-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/2-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper 0 Magazine capacity 4 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 10 Max. tool length (mm) 30 Max. tool length (kg) 7 OTHER DATA Corrected-air supply (bAY/A) 6 Electrical power supply (kWA/A) 50 / 125 Shipping weight (kg) 7,000 | 1.080 |
| T-slots (DIN 650) 5 x 18 x 125 | 1,050 x 700 |
| MAIN SPINDLE Spindle taper HSK50 E Drive type Motor Max. spindle speed (U/min) 25,000 S1756 spindle power (kW) 20 / 26 S1756 spindle torque (Nm) 10.4 / 13.5 FEED X/Y/Z-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper D Magazine capacity 4 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | 800 |
| Spindle taper HSK 50 E Drive type Motor Max. spindle speed (U/min) 25,000 51/56 spindle power (kW) 20 / 26 51/56 spindle torque (Nm) 10.4 / 13.5 FEED X/Y/Z-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper 10 Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kW/A) 50 / 125 Shipping weight (kg) 7,000 | 6 x 18 x 125 |
| Drive type Motor Max. spindle speed (U/min) 25,000 S1/56 spindle power (kW) 20 / 26 S1/56 spindle torque (Nm) 10,4/13.5 FEED X/Y/2-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/2-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper E Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kWA/A) 50 / 125 Shipping weight (kg) 7,000 | |
| Max. spindle speed (U/min) 25,000 S1/56 spindle power (kW) 20 / 26 S1/56 spindle torque (Nm) 10.4/13.5 FEED X/Y/2-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/2-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper E Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (kVA/A) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | HSK 50 E |
| 51/56 spindle power (kW) 20/26 51/56 spindle torque (Nm) 10.4 / 13.5 FEED X/Y/Z-axis high-speed mode (m/min) 30/30/30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper E Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | Motor |
| FEED TOUL CHANGER Type tool changer Double gripper E Max. tool diameter (mm) 75 E With unoccupied adjacent stations (mm) 300 E Max. tool length (mm) 75 E With unoccupied adjacent stations (mm) 120 E Max. tool weight (kg) 70 E OTHER DATA 50 50 50 Electrical power supply (kVA/A) 50 / 125 50 6 50 / 125 50 6 | 25,000 |
| FEED X/Y/Z-axis high-speed mode (m/min) X/Y/Z-axis machining feed (m/min) TOOL CHANGER Type tool changer Magazine capacity Max. tool diameter (mm) Max. tool diameter (mm) Max. tool length (mm) Max. tool length (kg) TOHER DATA Compressed-air supply (bVA/A) Shipping weight (kg) TOOL CHANGER Type tool changer Double gripper Double grip | 20 / 26 |
| X/Y/Z-axis high-speed mode (m/min) 30 / 30 / 30 X/Y/Z-axis machining feed (m/min) 20 TOOL CHANGER Type tool changer Double gripper Double g | 10.4 / 13.5 |
| X/Y/Z-axis machining feed (m/min) TOOL CHANGER Type tool changer Magazine capacity Max. tool diameter (mm) Mith unoccupied adjacent stations (mm) Max. tool length (mm) Max. tool weight (kg) THER DATA Compressed-air supply (kVA/A) Electrical power supply (kVA/A) Shipping weight (kg) TOOL CHANGER Double gripper Double gripper 2 4 Compressed-air supply (mm) Analogous | |
| Type tool changer Magazine capacity Max. tool diameter (mm) Max. tool length (mm) Max. tool weight (kg) OTHER DATA Electrical power supply (kVA/A) Shipping weight (kg) Type tool changer Double gripper 24 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 OTHER DATA Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | 30 / 30 / 30 |
| Type tool changer Double gripper D Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | 20 |
| Magazine capacity 24 Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | |
| Max. tool diameter (mm) 75 With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | ouble gripper |
| With unoccupied adjacent stations (mm) 120 Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | 30 |
| Max. tool length (mm) 300 Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | 75 |
| Max. tool weight (kg) 7 OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | 120 |
| OTHER DATA Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | 300 |
| Compressed-air supply (bar) 6 Electrical power supply (kVA/A) 50 / 125 Shipping weight (kg) 7,000 | 7 |
| Electrical power supply (kVA/A) 50/125 Shipping weight (kg) 7,000 | |
| Shipping weight (kg) 7,000 | 6 |
| | 50 / 125 |
| Required floor space (mm) 2.890 x 4.510 x 2.870 3.950 x | 9,100 |
| 1 1 1 7 | 4,600 x 2,950 |
| STANDARD | |
| Heidenhain TNC 640 control system | |
| • 25,000 ^{rpm} , HSK 50 E, motor spindle | |
| Compensation of thermal spindle expansion | |
| OPTIONAL | |
| Touch probe system for tool measurement | |
| Touch probe system for workpiece measurement | |

• Cooling system for the recirculating ball screw

HEIDENHAIN-CONTROL SYSTEM

The latest control system for state-of-the-art production tasks

Heidenhain TNC 640

STANDARD:

- Dialog programming
- ISO NC programming
- FK free contour programming
- · Expanded milling and boring cycles
- Touch probe system cycles
- · Programming in parallel mode
- · Integrated help system
- · Simulation graphics
- Block scan of up to 1,024 blocks
- Block processing time of 0.5 ms
- ≥ 21 GB data memory capacity
- ≥ 2 GB RAM
- 15.1 inch LCD-display
- Smallest input increment of 0.01 µm or 0.0001°
- · 2 x gigabit Ethernet adapter
- 4 x USB ports
- RS-232-C and RJ-45 interfaces
- · Expanded data interface for remote access
- Dynamic collision monitoring (DCM)

OPTIONAL:

- DXF converter
- CAD viewer
- Adaptive feed control (AFC)
- Heidenhain DNC
- · Remote Desktop Manager
- · Expanded tool management



Image source: HEIDENHAIN

WE ARE TAKUMI AND ARE HERE TO HELP

Takumi is a technology leader in the development, production and technical application of high-speed machining centers. Customers and partners in Europe, America, Taiwan and China have been putting their trust in us for over 30 years.

The company

Takumi develops and produces high-speed CNC portal machining centers marked by a consistent focus on tool-making and mold-making. Our customers' needs define the consistent focus of what we do: Many years of close collaboration with users have furnished us with detailed insights into customer requirements, while extensive market analysis furnishes the foundation for every one of our product development projects. As our consistent objective is to offer customers a comprehensive product range providing the perfect reflection of their variegated requirements.

We produce high-quality, highly efficient machines. Our production processes rely exclusively on components from original equipment manufacturers and specialist suppliers providing premium products, frequently furnished by firms with whom we can look back on many years of close mutual cooperation. Our production practices conform to demanding quality specifications and our quality management is certified in accordance with ISO 900: 2008.

Takumi has been part of HURCO since July 2015. HURCO is a globally successful standard-bearer in CNC control system and machine technology. The US-based parent company with its headquarter in Indianapolis, Indiana relies on its production facilities in Taiwan, Italy and China to serve customers throughout Europe, Asia and North America.

The industrial areas

- Astronautics
- Aviation
- Automotive
- Energy
- · Machines and systems
- · Tool-making and mold-making
- · Medical technology
- Optics
- Science and research

Takumi

www.takumicnc.eu

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