

# U-SERIES

READY FOR ANY CHALLENGE

5-axis high-speed machining centers

# U-SERIES

## PRECISION COMES STANDARD

High accuracy, thermal stability and maximum rigidity:

The U-series models offer large, easily accessible working areas for small footprint.

### THE PERFECTIONISTS

#### U 400 / U 600

#### FAST MACHINE AVAILABILITY!



#### U 400

X / Y / Z-axis travel (mm)	550 x 950 x 500
Rotary table (mm)	Ø 400
Max. table load (kg)	250

- Optimized for machining small workpieces
- High level of rigidity thanks to a portal design
- Thermal stability for long program runtimes
- Easy loading of machine thanks to machine doors that open wide



#### U 600

X / Y / Z-axis travel (mm)	660 x 1,020 x 500
Rotary table (mm)	Ø 600
Max. table load (kg)	500

- Optimized for machining medium-sized workpieces
- High level of rigidity thanks to a portal design
- Thermal stability for long program runtimes
- Easy loading of machine thanks to machine doors that open wide

# THE GRANDMASTER

## U 800

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The expert contact person for your questions and requests:

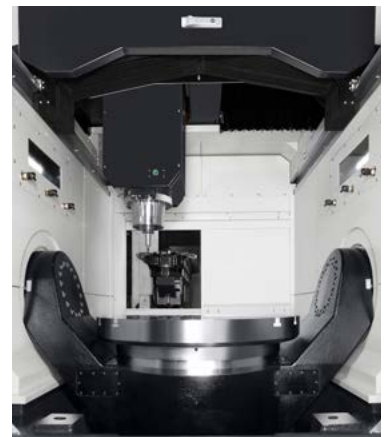
Sebastian Herr

Takumi Product Manager

Phone +49 (89) 905094 - 99

[www.takumicnc.eu](http://www.takumicnc.eu)

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Takumi U 800: Kessler swivel bridges with three torque drives

### U 800

X / Y / Z-axis travel (mm)	800 x 1,150 x 750
X / Y / Z-axis high-speed (m/min)	48
Max. table load (kg)	1,000

- Optimized for large and heavy workpieces
- High level of rigidity and small footprint thanks to a compact gantry design
- A-axis with torque drive on both sides, C-axis with torque drive
- Almost no backlash, exceptional axis thrust and clamping torque, low-maintenance



Takumi U 800: Hermetic chip enclosure

# TECHNICAL SPECIFICATIONS AT A GLANCE

DESIGNATION	U 400	U 600	U 800
<b>TRAVEL</b>			
X-axis (mm)	550	600	800
Y-axis (mm)	950	1,020	1,150
Z-axis (mm)	500	500	750
A-axis (°)	+30 / -110	+30 / -110	+/- 120
C-axis (°)	360	360	360
<b>MACHINE CAPACITIES</b>			
Spindle nose table (mm)	90 – 590	160 – 660	125 – 875
Distance between columns (mm)	585	630	980
Table size L x W (mm)	∅ 398	∅ 600	∅ 800
Table load (uniform) (kg)	250	500	1,000
T-slots (DIN 650)	6 x 14 mm – 60°	5 x 14 mm x 100 mm	7 x 14 mm x 100 mm
<b>SPINDLE</b>			
Spindle taper	SK 40 <sup>BigPlus</sup> / HSK 63 A	SK 40 <sup>BigPlus</sup> / HSK 63 A	HSK 63 A
Drive type	In-Line	In-Line	Direct
Max. spindle speed (rpm)	15,000	15,000	15,000
S1/S6 spindle power (kW)	10 / 14	10 / 14	10 / 12.5
S1/S6 spindle torque (Nm)	64 / 89.4	64 / 89.4	64 / 79
<b>FEED</b>			
X/Y/Z-axis high-speed (m/min)	36	36	48
X/Y/Z-axis machining feed (m/min)	20	20	24
A/B/C-axis high-speed (rpm)	25 / - / 25	25 / - / 33	80 / - / 100
A/B/C-axis machining feed (rpm)	25 / - / 25	25 / - / 33	80 / - / 100
<b>TOOL CHANGER</b>			
Tool changer type	Drum	Chain	Chain
Stations	30	40	32
Max. tool diameter (mm)	75	75	90
With Adjacent Sides Empty (mm)	150	150	125
Max. tool length (mm)	300	300	300
Max. tool weight (kg)	7	7	7
<b>OTHER DATA</b>			
Air requirements (bar)	6	6	6
Voltage required (kVA / A)	60 / 160	80 / 160	80 / 160
Shipping weight (kg)	9,100	14,000	22,000
Operating dimensions (mm)	4,608 x 3,000 x 2,910	4,564 x 3,855 x 3,518	5,780 x 5,210 x 3,980
<b>OPTIONAL</b>			

- Automatic compensation for thermal spindle expansion
- DCM (dynamic collision monitor)
- Loading / unloading of the workpiece can be transferred directly from the crane to the table, which substantially increases work efficiency
- Heidenhain TS 740 for automatic precision measurement and compensation in rotary axes
- Self-test in TCP precision and automatic compensation after series production
- Cooling air through the spindle

# HEIDENHAIN CONTROL

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  $\mu\text{m}$  or 0.0001°
- 2 x gigabit Ethernet adapter
- 4 x USB ports
- RS-232-C and RJ-45 interface
- 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 CNC high-speed portal machining centers with a clear focus on mold and die. Our customers' needs are at the heart of what we do. Many years of close collaboration with users give us detailed insight into customers' requirements and into each of our product developments based on comprehensive market analyses. We always want to offer our customers a complete product line that is perfectly in line with their varied needs.

We produce high-quality, highly efficient machines made only from components from premium brand manufacturers and specialist suppliers that have often cemented long-term partnerships with us. 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 technology leader in CNC control systems and machines that enjoys success around the globe. The US-based parent company with headquarter in Indianapolis, Indiana has production facilities in Taiwan, Italy and China and serves customers in Europe, Asia and North America.

Our customers benefit from this collaboration. HURCO GmbH Deutschland, which was founded in 1988 and is located in Pliening near Munich, has approximately 100 high qualified employees, making it a hub of expertise that manages sales and customer support throughout Europe.

## The industrial areas

- Aerospace
- Automotive
- Energy
- Mechanical and plant engineering
- Mold and die
- Medical technology
- Optics
- Science and research

### **Takumi**

A brand of HURCO Werkzeugmaschinen GmbH

Gewerbestraße 5a / 85652 Pliening / Germany

P +49 (89) 905094 - 99 / F +49 (89) 905094 - 90

info@takumicnc.de

www.takumicnc.eu