TAKUMI
When Precision Matters

3-axis vertical

Compact design, mega performance

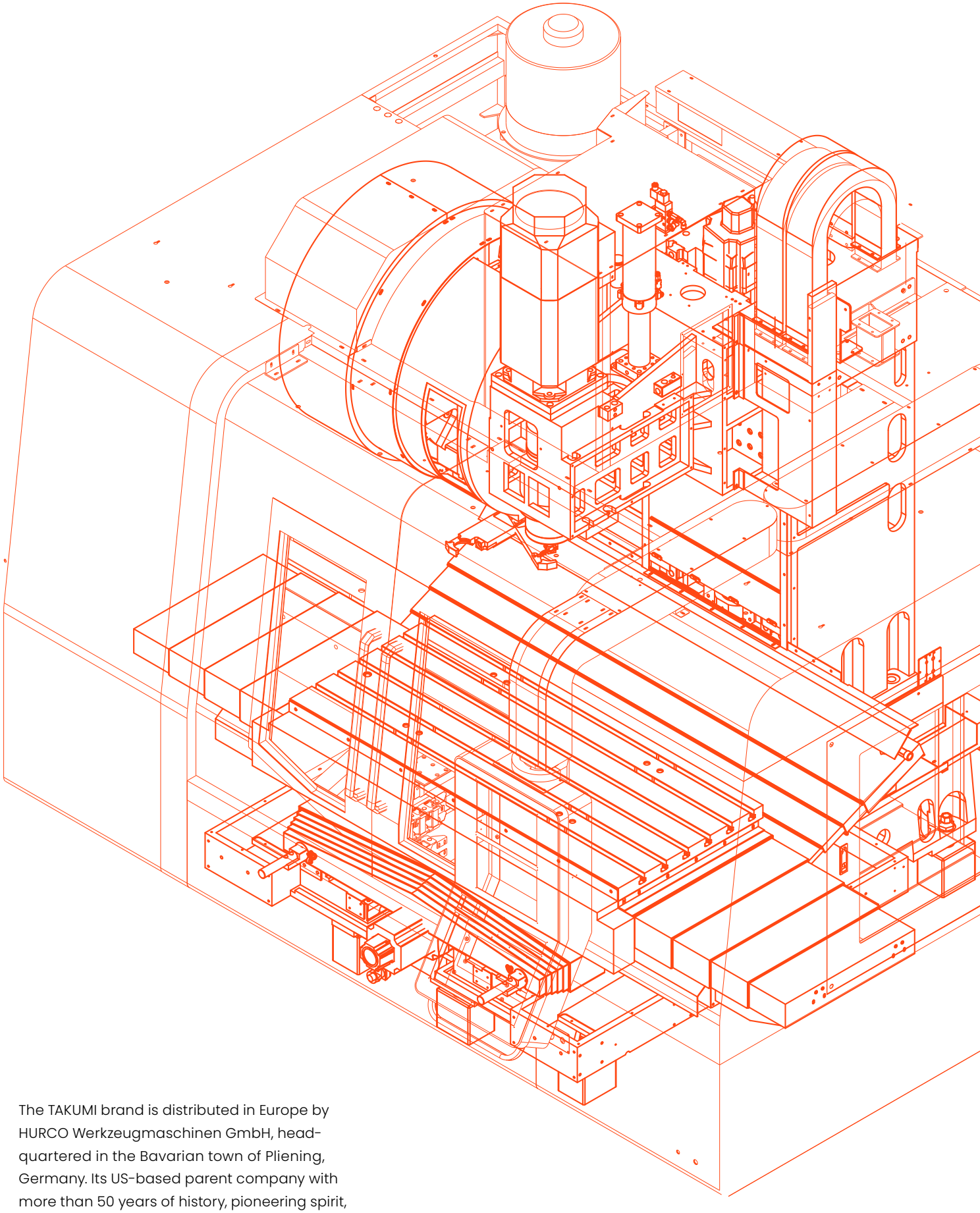
V- and VC-Series
CNC Machining Centers

Traditional japanese craftsmanship meets intelligent machine power.

Attention to detail and driven by precision

With an eye for detail and a deep understanding of our customers' needs, we develop unparalleled solutions that unite the values of two continents. TAKUMI is the epitome of reliable service and the custom quality craftsmanship for which Japan is renowned.


German
precision
ドイツの精密さ
日本の匠の技
ASSEMBLED
WITH
Japanese
craftsmanship



The TAKUMI brand is distributed in Europe by HURCO Werkzeugmaschinen GmbH, headquartered in the Bavarian town of Pliening, Germany. Its US-based parent company with more than 50 years of history, pioneering spirit, and industry experience is behind the brand.

Our quest for perfection and minimal-waste philosophy have characterized us for over 30 years.

We strive to make machining even more accessible every day – because your success is our drive.

TAKUMI stands for an unmatched level of quality consciousness and manually checked precision.

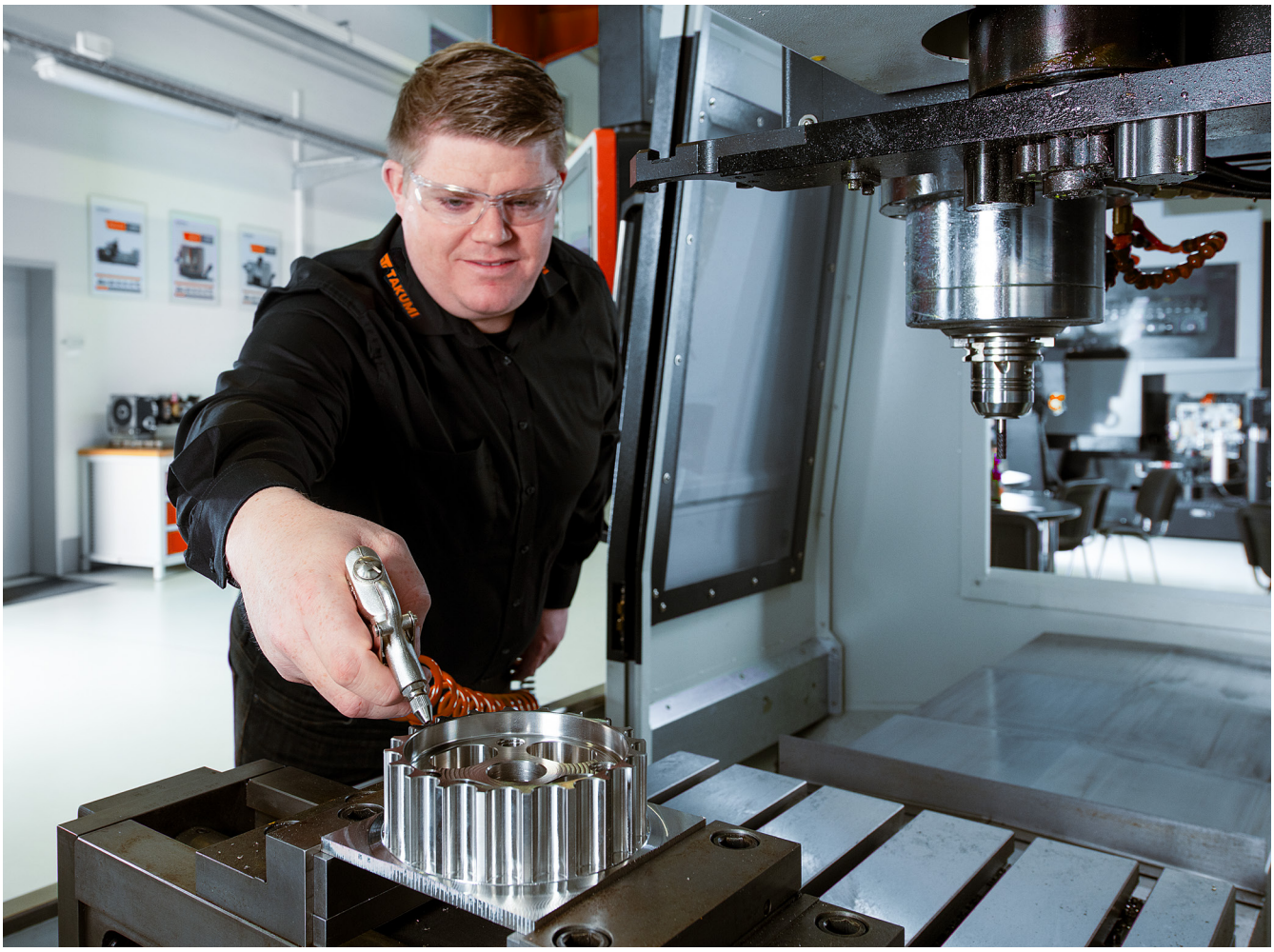
Designed for exceptional torsional rigidity and thermal stability

Typical TAKUMI: With their robust designs, manually checked production, and excellent thermal stability, our machines maintain maximum precision, even under fluctuations in temperature

These characteristics are how TAKUMI yields unmatched precision:

» Massive cast Meehanite structure guarantees exceptional torsional rigidity
» Supporting elements feature a rock-solid design for effective absorption of process vibrations and oscillations
» Design incorporates reinforcement bracing for moving components, thus achieving weight reduction alongside maximum inherent rigidity
» Optional pretensioned, core-cooled ballscrews and a cooled spindle for thermal stability
» Sensor systems for thermal compensation of spindle expansion
» Optional: Linear scales for optimal repeatability and positioning accuracy
» Highly dependable oil separator to prevent a decline in emulsion quality

The Japanese name "TAKUMI" stands for craftsmanship and a tradition of quality. These original values have served as our guidelines for building our CNC machining centers for operators across a broad range of industries since day one. Providing our customers with first-class quality machines is part of the TAKUMI DNA. This is why for making our machines, we rely on top components from the name-brand manufacturers and specialist suppliers with whom we have long-standing partnerships. Each TAKUMI machine is manufactured in accordance with the quality management standard ISO 9001:2015 – for verifiable top quality.



V-SER

Machines made with craftsmanship.
For workpieces with a wide variety of requirements.

Multifaceted cross table machining centers

The vertical 3-axis machining centers in the V Series are vertical high-performance machines that satisfy even the most demanding tasks with the maximum precision: for example, roughing solid steel shapes. With their robust design and solid construction, our machines in the V-Series are the ideal choice for high-performance parts machining in the areas of machine construction and mold and die applications – developed by visionaries and built for a multifaceted manufacturing requirements.

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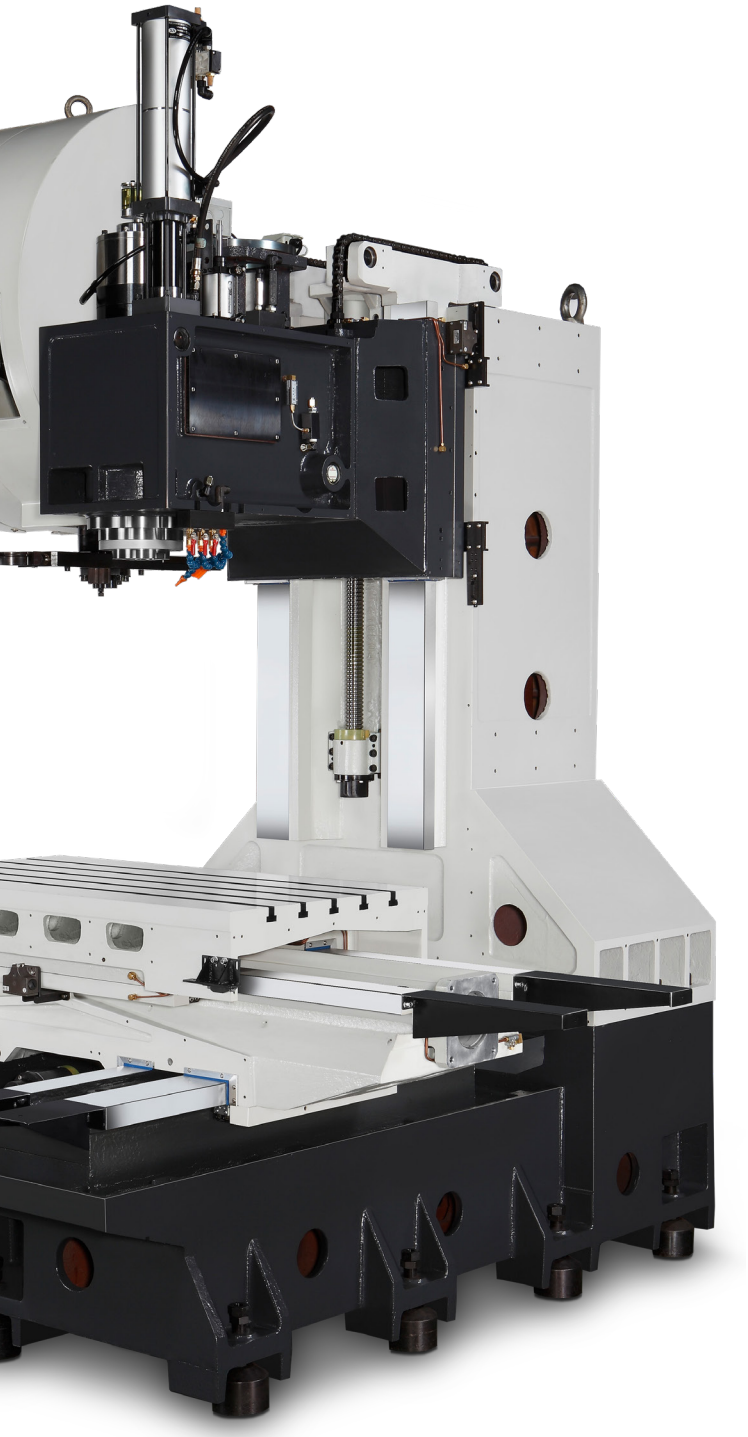


Your advantages at a glance

- Perfect balance between high-performance machining and maximum stability
- High-rigidity machine structure with cast components that are robust and precision-machined
- Machine bed in monolithic casting with a symmetric, box-shaped design
- Hand-scraped contact surfaces and flat guides for increased precision
- Pretensioned ballscrews for minimized thermal expansion
- Spindle cooling for optimal heat dissipation
- Synchronized direct drives for greater precision and lower structural tension
- Integrated chip flushing and discharge system
- Optional: Absolute direct measuring systems for fast machine startup
- Simple and ergonomic loading and unloading through wide-opening machine doors
- Control panel that swivels for optimized footprint and more operator comfort
- User-friendly Heidenhain TNC 620 control system
- Fast response times in service and high availability of spare parts

Compact high performers

V12/V15/V18

Space-saving machine performance for machining medium-sized components and for rough machining and preliminary work, e.g. in mold and die applications. With maximum rigidity thanks to linear movements on flat guides.

- Belt-driven spindle or gear-driven spindle up to 12,000 rpm
- Pretensioned ballscrews for all axes to prevent thermal deformation
- Spindle cooler
- User-friendly, ergonomic access for loading
- Optional: Gear-driven spindle torque up to 640 Nm (S1)

Designation	V12	V15	V18
Travel distances			
X-axis (mm)	1,200	1,524	1,800
Y-axis (mm)	660	762	850
Z-axis (mm)	610	720	750
Machine capacity			
Clamped table surface L x W (mm)	1,250 x 650	1,600 x 760	1,900 x 850
Table load (uniform) (kg)	1,200	1,500	2,000

Products may vary from catalog illustrations


TAKUMI
V18
V Series

Rugged stability anchor

V20/V22

The perfect V Series model for machining large components and for rough machining and preliminary work, e.g. in mold and die applications. For maximum rigidity, the linear movements are on flat guides.

» Pretensioned ballscrews for all axes to prevent thermal deformation
» Spindle cooler
» User-friendly, ergonomic access for loading

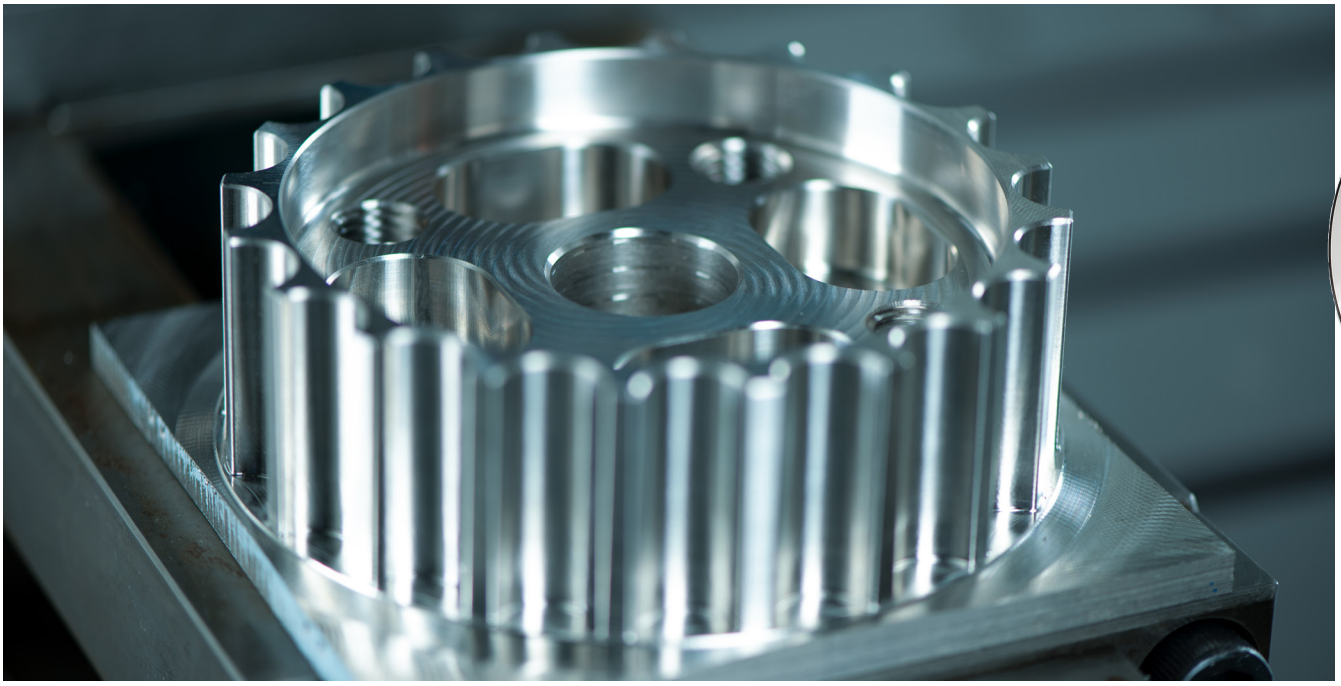
Designation	V20	V22
Travel distances		
X-axis (mm)	2,000	2,200
Y-axis (mm)	1,066	1,066
Z-axis (mm)	750	750
Machine capacity		
Clamped table surface L x W (mm)	2,200 x 1,025	2,200 x 1,025
Table load (uniform) (kg)	2,000	3,000

Products may vary from catalog illustrations


TAKUMI
V22
V Series

VC-S

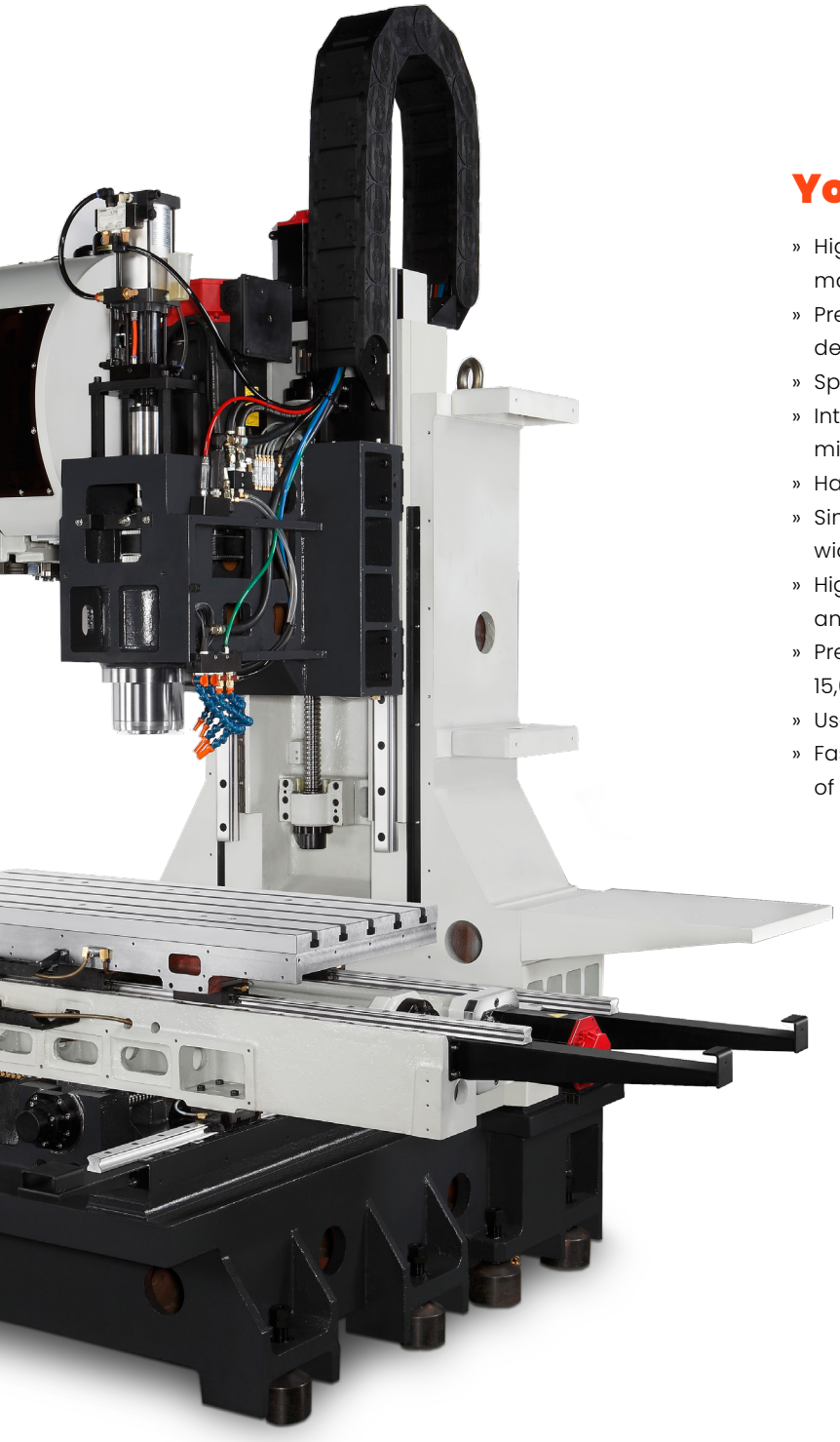
**Tradition of manually inspected craftsmanship.
For maximum-precision machining.**



Cross table machining centers with an eye for detail

The 3-axis machining centers of the VC-Series are ideal for manufacturing precision workpieces in contract manufacturing and in mold and die applications. Thanks to its stable and rigid cross table design, the VC-Series also offers maximum thermal stability – and it does this with a minimal footprint. Perfect milling results are provided by the high-precision linear guides and harmonious interaction between the machine and the user-friendly Heidenhain TNC 640 control system.

ERIES



Your advantages at a glance

- High-stability and high-rigidity cross table design for maximum thermal stability
- Pretensioned ballscrews for all axes to prevent thermal deformation
- Spindle cooling for optimal heat dissipation
- Integrated chip flushing system and chip conveyor for minimized heat input
- Hand-scraped contact surfaces for increased precision
- Simple and ergonomic loading and unloading through wide-opening machine doors
- High-precision linear guides for all axes for higher precision and efficiency
- Precision high-performance spindles with speeds of 15,000 rpm for any scope of requirements
- User-friendly Heidenhain TNC 640 control system
- Fast response times in service and high availability of spare parts

Space-saving multitalents

VC 0852/VC 1052

The compact and affordable models of the VC-Series are a cost-optimized investment for precision manufacturing of smaller components, e.g. in mold and die applications. Thanks to their small footprint, they are perfect for the diverse manufacturing needs of machine shop operations and are suitable for machine shop programming.

» Direct-drive spindle up to 15,000 rpm
» Spindle cooler
» User-friendly, ergonomic access for loading

Designation	VC 0852	VC 1052
Travel distances		
X-axis (mm)	860	1,060
Y-axis (mm)	520	520
Z-axis (mm)	610	610
Machine capacity		
Clamped table surface L x W (mm)	1,000 x 520	1,160 x 520
Table load (uniform) (kg)	500	650

Products may vary from catalog illustrations


TAKUMI

Stable multi-talents

VC1000/VC1200/VC1500

These machines have an unbeatable price/performance ratio and enable particularly precise manufacturing of small to medium-sized components, e.g. in mold and die applications. Thanks to their small footprint and universal application options, the machines are the optimum solution for machine shop operations and machine shop programming.

» Direct-drive spindle up to 15,000 rpm
» Spindle cooler
» User-friendly, ergonomic access for loading

Designation	VC1000	VC1200	VC1500
Travel distances			
X-axis (mm)	1,067	1,270	1,524
Y-axis (mm)	610	660	762
Z-axis (mm)	610	610	610
Machine capacity			
Clamped table surface L x W (mm)	1,270 x 610	1,500 x 660	1,680 x 762
Table load (uniform) (kg)	1,000	1,360	1,360

Products may vary from catalog illustrations

Overview of machines and sp

Designation	V12	V15	V18	V20	V22
Travel distances					
X-axis (mm)	1,200	1,524	1,800	2,000	2,200
Y-axis (mm)	660	762	850	1,066	1,066
Z-axis (mm)	610	720	750	750	750
Machine capacity					
Spindle nose to table (mm)	150 - 760	150 - 870	200 - 950	200 - 950	200 - 950
Clamped table surface L x W (mm)	1,250 x 650	1,600 x 760	1,900 x 850	2,200 x 1,025	2,200 x 1,025
Table load (uniform) (kg)	1,200	1,500	2,000	2,000	3,000
Feed					
X- / Y- / Z-axis rapid traverse (m / min)	24 / 24 / 20	18 / 18 / 16	16 / 16 / 14	14 / 14 / 12	14 / 14 / 12
X- / Y- / Z-axis cutting feed (m / min)	8	5	5	5	5
Tool changer					
Tool changer design	Arm	Arm	Arm	Arm	Arm
Magazine capacity	24	24	24	24	24
Max. tool diameter (mm)	75	105	105	105	105
Diameter with empty pockets (mm)	150	200	200	210	210
Max. tool length (mm)	300	300	300	300	300
Max. tool weight (kg)	7	15	15	15	15
Other data					
Air supply (bar)	6	6	6	6	6
Electrical power supply (kVA / A)	35	35	45	50	50
Machine weight (kg)	8,100	13,000	16,000	22,000	24,500
Required floor space (mm)	5,420 x 3,900 x 3,139	7,000 x 5,600 x 3,256	7,500 x 5,600 x 3,230	9,200 x 5,800 x 3,510	9,200 x 5,800 x 3,510

Spindle options	V12		V15		V18		V20	V22
Max. speed (rpm)	12,000	6,000	8,000	6,000	8,000	6,000	6,000	6,000
S1 / S6 power (kW)	10 / 14	10 / 14	15 / 25	15 / 25	15 / 25	15 / 25	24 / 38	24 / 38
S1 / S6 torque (Nm)	63.7 / 89	360 / 503	95.5 / 159	384 / 640	95.5 / 159	384 / 640	611 / 967.7	611 / 967.7
Interface	SK 40^{BigPlus}	SK 50	SK 50	SK 50	SK 50	SK 50	SK 50	SK 50
Standard / Optional	S	O	S	O	S	O	S	S

Configuration options

Standard

- Heidenhain control system: V-Series: TNC 620, VC-Series: TNC 640
- V12: 12,000 rpm, SK 40^{BigPlus}, belt-driven spindle | V15, V18: 8,000 rpm, SK 50, belt-driven spindle | V20, V22: 6,000 rpm, SK 50, gear-driven spindle VC-Series: 15,000 rpm, SK 40^{BigPlus}, direct-drive spindle
- V20 – V22: Ballscrew cooling system (only X- / Y-axis)
- Chip flushing
- Spindle cooler
- Complete workspace enclosure
- Oil skimmer
- VC-Series: Programmable external cooling air
- Rinsing and compressed air gun
- Chip conveyor and trolley
- Electronic handwheel
- Ethernet interface

pecifications

VC0852	VC1052	VC1000	VC1200	VC1500
860	1,060	1,067	1,270	1,524
520	520	610	660	762
610	610	610	610	610
115 - 725	115 - 752	141 - 751	150 - 760	120 - 730
1,000 x 520	1,160 x 520	1,270 x 610	1,500 x 660	1,680 x 762
500	650	1,000	1,360	1,360
36 / 36 / 24	36 / 36 / 24	36 / 36 / 24	36 / 36 / 24	36 / 36 / 24
12	12	12	12	12
Arm	Arm	Arm	Arm	Arm
30	30	40	30	30
75	75	75	80	80
150	150	150	125	125
300	300	300	300	300
7	7	7	7	7
6	6	6	6	6
30	30	30	35	35
5,500	5,800	6,750	9,000	9,000
4,630 x 3,750 x 3,100	4,630 x 3,750 x 3,100	4,900 x 3,365 x 2,932	5,280 x 3,550 x 3,100	

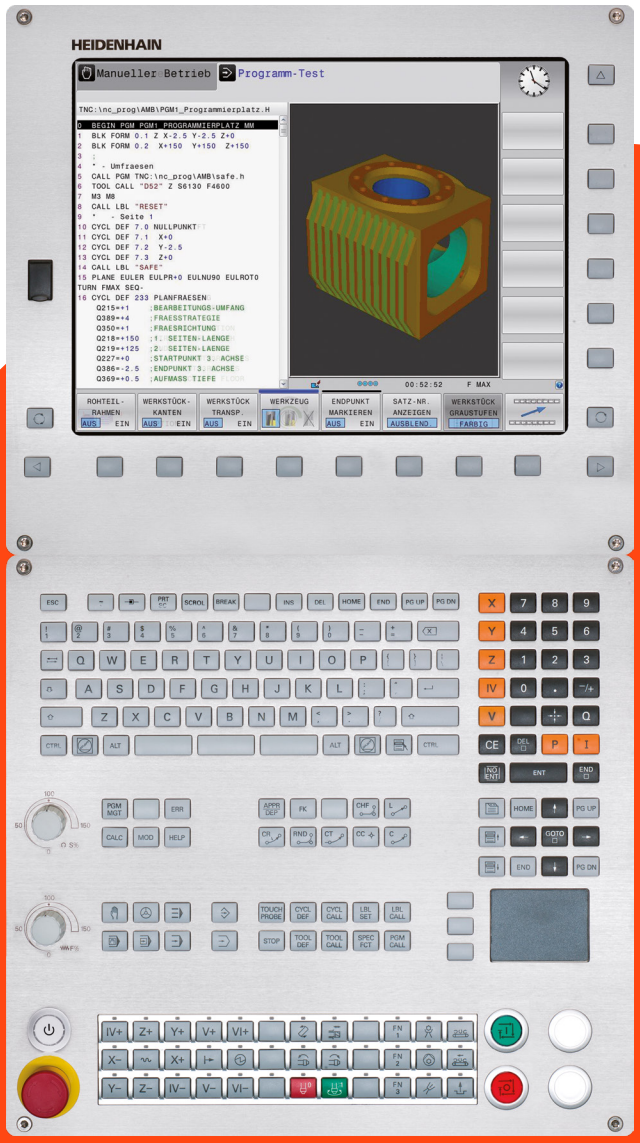
VC0852 - VC1500
15,000
10 / 14
63.7 / 89.4
SK 40[BigPlus]
S

Optional

- V12 – V18: 6,000 rpm, SK 50, gear-driven spindle
- Internal coolant supply through the spindle (30 bar ICF)
- V12 – V18: Ballscrew cooling system (only X- / Y-axis)
- Rotary table (4th / 5th axis)
- Touch probe system for workpiece measurement
- Tool and part probe
- Programmable cooling air through the spindle
- V-Series: Programmable external cooling air
- Programmable oil mist lubrication
- Oil mist separator
- Scraper-type conveyor instead of hinged-plate conveyor
- Production package
- Bypass filtration system
- Rotoclear

Performance meets precise programming

The latest version of the Heidenhain TNC control system for perfectly precise manufacturing



The latest version of the Heidenhain **TNC** control system is designed for the versatile, dynamic machining of complex free-form surfaces with large data sets – whether paired with a 5-axis machining center with swing table or a large machine with forked swivel head. With an easy-to-understand, user-friendly interface and intuitively programmable cycles, it's no surprise that this control system is the industry standard. The unique combination of simple operation, a modern interface, and a robust design ensures top machining speeds along with maximum precision.

Perfection down to the last detail

The Heidenhain **TNC 620 and TNC 640** control systems have a comprehensive package of standard equipment and numerous optional functions so they can be perfectly tailored to your manufacturing requirements.

Standard

» Dialog programming
» ISO NC programming
» FK free contour programming
» Expanded milling and drilling cycles
» Touch probe system cycles
» Heidenhain DNC 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 storage capacity
» ≥ 2 GB RAM
» 15.1-inch LCD display
» Smallest input increment of 0.01 µm or 0.0001°
» 2x gigabit Ethernet adapters
» 4x USB ports
» RS-232-C and RS-422 interfaces
» Expanded data interface for remote access

Optional

» DXF converter
» CAD import
» Adaptive feed control (AFC)
» Dynamic collision monitoring (DCM)
» 4th and 5th axis
» Heidenhain DNC
» Remote Desktop Manager
» Expanded tool management
» Dynamic precision
» Dynamic efficiency

All TAKUMI machining centers in the VC-Series are equipped with the latest version of the Heidenhain **TNC 640** control system, while the V-Series machines are equipped with the **TNC 620.**

Diverse functionality for any set of needs

» Versatile path control with as many as five controlled axes and a regulated spindle
» Programming supported by graphics and optimized for shop-floor use
» Multiple cycles reflecting real-world conditions
» User-friendly operating concept

Perfect coordination between our machining centers, Heidenhain drives, and the Heidenhain control system guarantees perfect synergy between user and machine. Plus, our specialists receive continuing education on the control system so they can be prepared to help you with any question you have about programming your TAKUMI machine or navigating its control system. That's how we make sure that you get the maximum performance out of our machines and you can count on TAKUMI to bring you long-term success in CNC machining.

Service, just like you need it

Perfectly precise support for your needs

Close to our customers in terms of our team, technology, and geographical location—or just a click away for remote support: That's TAKUMI. Our promise is to make sure you get every bit of productivity and quality you require out of our machining centers. Our expert CNC specialists participate in an ongoing training regimen for this reason, that includes training sessions conducted by our control system partner Heidenhain at regular intervals.

Your long-term success with TAKUMI is our motivation. This is why we keep your needs at the center of every consultation or service call, which drives the development of quick, flexible, and sustainable solutions for your specific requirements. After all, reliability and tangible quality are strong pillars of our corporate philosophy.

» **Personal contacts for your region**

Our regional contact persons are at your service to provide advice and assistance — from custom configuration to long-term support of your TAKUMI machine fleet.

Phone	+49 89 90 50 94 – 99	Email	info@takumicnc.de
Mon – Fri	7:30 a.m. – 4:00 p.m.		

» **Spare parts warehouse & next-day delivery**

To keep your daily operations running smoothly and prevent long downtime periods, we guarantee constant availability and next-day delivery capability of nearly 40,000 spare parts for our machines — from the high-performance spindle to the tool changer.

Phone	+49 89 90 50 94 – 55	Email	ersatzteile@takumicnc.de
Mon – Thu	8:00 a.m. – 5:00 p.m.	Fri	8:00 a.m. – 4:00 p.m.

» **Application consulting & service**

Our experienced application engineers and service technicians provide both on-site and remote support — just let us know what works best for you.

Application engineering

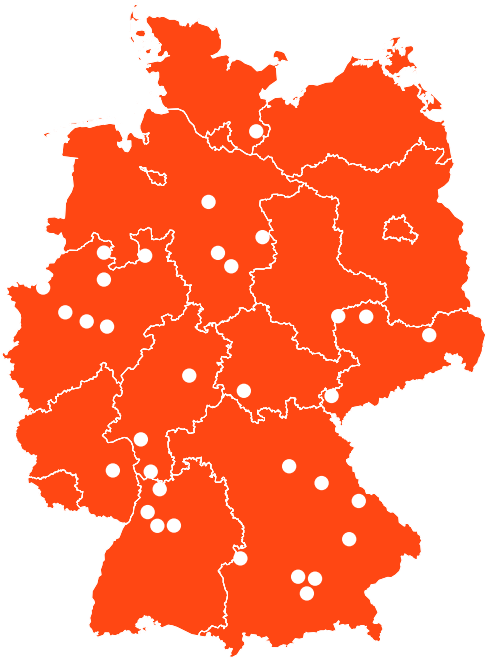
Phone	+49 89 90 50 94 – 66	Email	awt@takumicnc.de
Mon – Fri	8:00 a.m. – 4:00 p.m.		

Service

Phone	+49 89 90 50 94 - 55	Email	service@takumicnc.de
Mon – Thu	7:00 a.m. – 5:00 p.m.	Fri	7:00 a.m. – 4:00 p.m.

» **TAKUMI Refurbished**

We always have real bargains for you with demo and used machines — and under conditions you'll love, including a manufacturer's warranty.



Driven, knowledgeable, and quality-conscious – that's TAKUMI service.

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Version: 06.2023