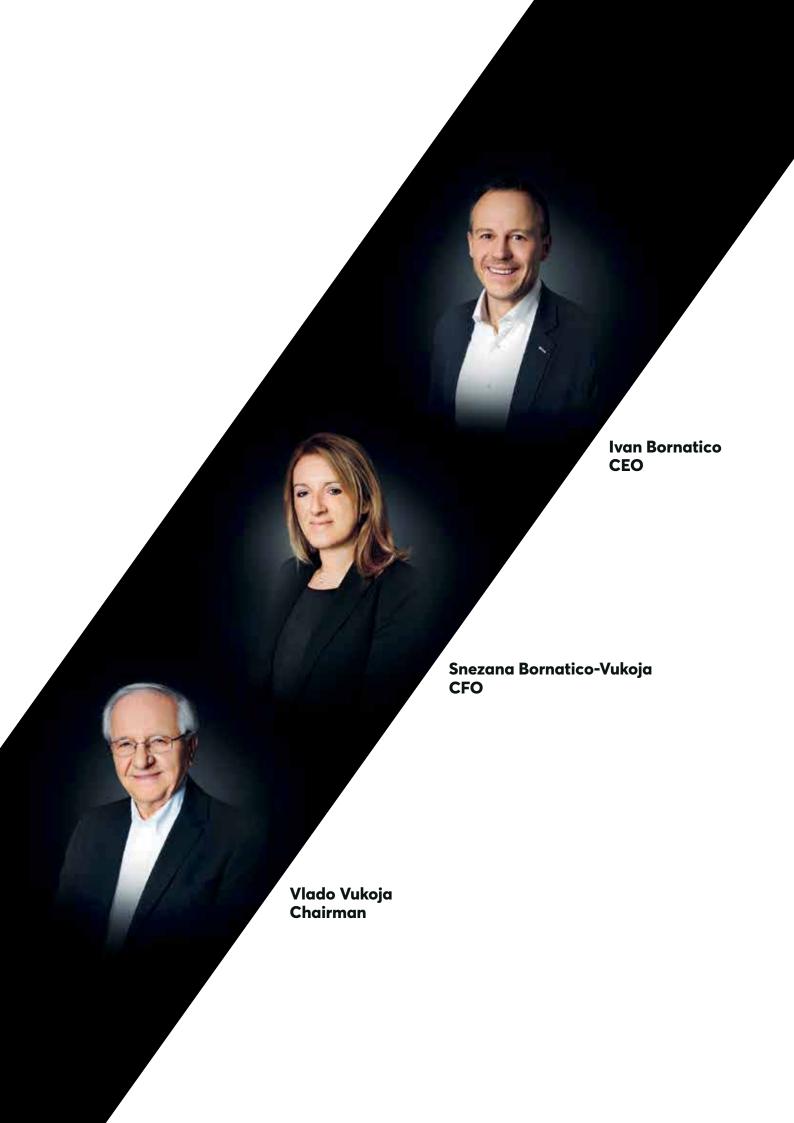




Teximp is an established family business supplying CNC machines and parts, as well as a comprehensive range of related services and solutions. We provide tailored support to customers in a range of sectors via our network of technology and service centres, staffed by highly trained personnel. For 42 years, the Vukoja-Bornatico family has combined specialist knowledge with visionary thinking, enabling us to build long-term relationships with customerswhile putting your needs at the heart of everything we do.



CONTENT





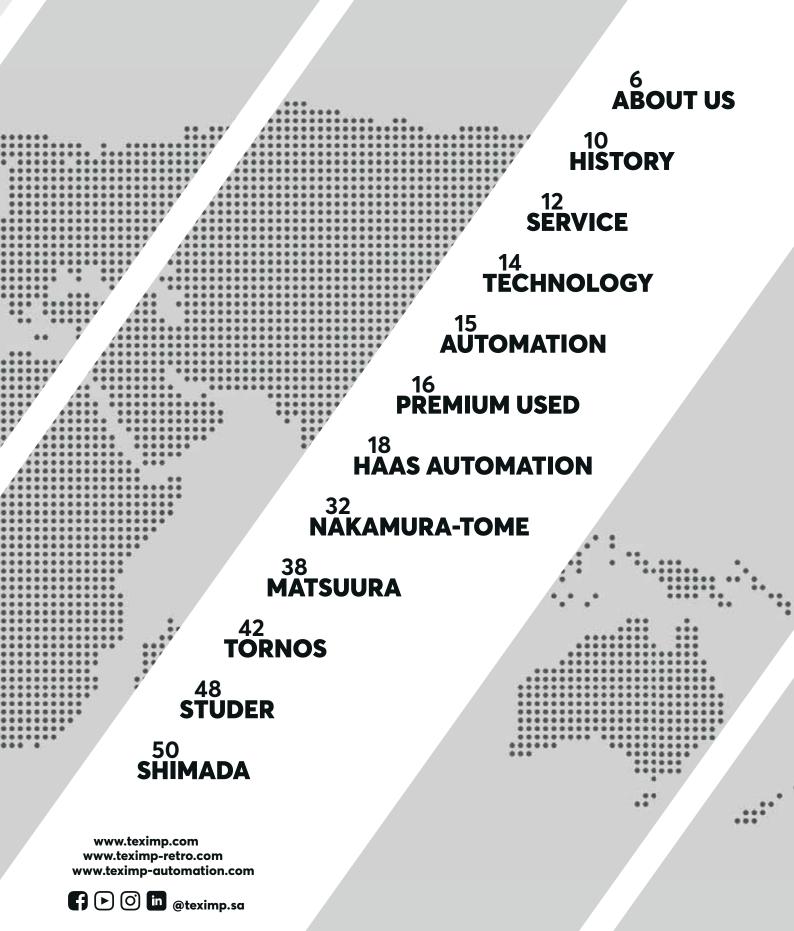


# TORNOS









# **ABOUT US**

Why Teximp? We're your partner of CNC Machine Tools (vertical/horizontal/5-axis machining centres, CNC lathes/multitasking machines), with an active presence in South-Eastern Europe since more than 42 years.

#### Close relationships, local support

We work closely with you to build an understanding of your unique requirements and deliver custom solutions via our network of technology and service centres in 8 countries.

#### **Superior customer service**

We focus on achieving the best results for you, from our initial proposal right through to final delivery of our products and services.

#### **Problem-solving**

We offer turnkey solutions that aim to solve your problems quickly and effectively.

#### Innovation

We continuously improve our customer-facing processes so that you get the results you need, as fast as possible.

#### **Creative offerings**

We get creative with our product and service packages – you get great value.

#### Recognised expertise

Need a solution? Speak to us – we're the experts.

#### Convenience

We work constantly to make sure that doing business with us is as smooth and convenient as possible.

# A unique business model that reflects vour values

Transparency is our watchword. We always tell our customers what we are doing, and why.

### **TEXIMP AT A GLANCE**

- 42 years of experience
- 14 wholly-owned subsidiaries in8 countries in South-Eastern Europe
- Installed base more than 10'000 machines in our sales portfolio
- 200+ employees
- 100+ certified service technicians
- 14 technology and service centres
- 60+ equipped service vans with professional tools
- Spare parts from local stocks
- In-house finance solutions

### **ABOUT US**



103 Certified Technicians 61 Service Vans Spare Parts Warehouse Renishaw Laser Systems



### SALES

CNC Vertical Mills CNC Horizontal Mills CNC 5-Axis Mills CNC Lathes CNC Grinding Machines



### FINANCING

Individual solutions Haas Financing 12 / 24 / 36 / 48 months



# **TECHNOLOGY**

Cycle Time Studies Turnkey Solutions Testcuts on demand Operator Training



# TeximpAutomation TeximpRetro



### **EDUCATION**

Education Centers Haas HTEC Support for Universities Support for Schools



Teximp Universal Robot Cell Powered by Fanuc Bar Feeders Auto Part Loaders Pallet Changers



# TECHNOLOGY & SERVICE CENTER

Show-Room Machine tools for Testcuts Training rooms Spare Parts Warehouse



# PREMIUM USED MACHINES

Overhauled Machines Quality Refurbishment Buy Back of Machines









Teximp's array of assets include state-ofthe-art technology and service centres (also known as Teximp Technology Centres, or TTCs). Our TTCs act as your primary point of contact, allowing you to communicate quickly and easily with us, and enabling you to test the functional suitability of our products before making any investment.

Teximp's highly trained specialists assist individual visitors and provide machine demonstrations, training in parts machining, and instruction for customer employees. A whole array of brands can be tested locally.

Prague

# Teximp, your trusted partner, offers the following:

- Highly trained specialists able to provide unrivalled local advice, tailored to the full spectrum of your needs.
- Products from the world's top manufacturers, such as Haas Automation,
   Nakamura-Tome, Matsuura, Tornos, Kiwa,
   Studer and Shimada all of which are available for testing.
- Machine demonstrations, parts machining, and training/instruction of your employees (guaranteed and available at any time).
- A permanent display with numerous exhibits, giving our customers an insight into the wide range of options available to meet their needs at any time.
- Technical seminars at Teximp's locations, guaranteed to provide our clients with up-to-date expertise and professional training.









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#### **Teximp lasi**

Teximp Cluj SRL Iasi Calea Chișinăului 26 RO-700182 Iasi Tel. +40 75 619 82 93 romania\_iasi@teximp.com

#### **Teximp Sofia**

Teximp I td 517A "Okolovrasten pat" Str. BG-1554 Chepintsi Tel. +359 886 156 243 bulgaria@teximp.com

# OUR PRODUCT RANGE

- Haas Automation
- Nakamura-Tome
- Matsuura
- Tornos
- Kiwa
- Studer
- Shimada

Automation (URC) **PREMIUM USED MACHINES** 

# TTCs 2019/2023

- New TTC in Zagreb (Croatia)
- New TTC in Sofia (Bulgaria)
- New TTC in Cluj (Romania)
- New TTC in Arad (Romania)
- New TTC in Brasov (Romania)
- New TTC Ljubljana (Slovenia)
- New TTC in Brno (Czech Republic)
- New TTC in Iasi (Romania)

AISTORY

1987

100% of shares acquired by Vlado Vukoja

New sales markets opened up in the former Czechoslovakia and Yugoslavia

1999

Sales figures increase to over 50 machines per year

1982

Joint Stock Company Teximp SA set up by 4 partners 1994

Sales and service organisation expanded

2001

More than 100 CNC machines sold

997

First Teximp Technology Centre (TTC) opened in Prague <u> 2002</u>

Teximp SA celebrates its 20<sup>th</sup> anniversary

<u> 2005</u>

More than 60 members of staff employed

Over 250 machines sold in one year

4 Teximp Technology Centres (TTCs)

2003

Workforce increases to over 40 employees

Over 180 new CNC machine tools sold

Consolidated turnover of CHF 30 million achieved

/200/

Opening of two new technology and service centres in Romania (Cluj-Napoca & Bucharest)

Teximp SA celebrates its 25<sup>th</sup> anniversary

Workforce increases to over 100 employees

2013

ISO 9001 certification obtained

2009

Opening of the Teximp Technology Centre (TTC) in Belusa (Slovakia) **2014** 

Workforce increases to over 110 employees

Sales figures increase to over 580 machines per year

Opening of the new Teximp Technology Centre (TTC) in Prague

Opening of the Teximp Technology Centre (TTC)
in Ljubljana (Slovenia)

Opening of the second Teximp Technology Centre (TTC) in Prague (Czech Republic)

004 /2011

Over 300 new CNC machines sold

Opening of two new Technology and Service Centres in Sofia (Bulgaria) & Belgrade (Serbia)

2015

Teximp SA celebrates its 33<sup>rd</sup> anniversary in Split (Croatia)

30th anniversary of Teximp

Over 360 new CNC machines sold

Opening of technology and service centre in Zagreb (Croatia))

8 Teximp Technology Centres (TTCs) in Czech Republic, Slovakia, Slovenia, Croatia, Serbia, Bosnia-Herzegovina, Romania and Bulgaria

More than 2,400 satisfied customers

More than 5,000 machines installed

Teximp starts to build its own automation systems (URC)

More than 150 members of staff employed

Sales figures increase to over 700 machines

Establishment of Teximp RETRO – your partner for premium used machines

(Teximp Retro buys and resells machine tools from Teximp's own customers)

New Teximp centres to be opened in Arad and Brasov (Romania)

New website

New brand identity

Teximp 40th anniversary

More than 190 members of staff employed

More than 9,000 machines installed

More than 3,800 satisfied customers

**New Teximp Technology** Centres (TTCs) in Zagreb (Croatia), Arad and Brasov (Romania) and Sofia (Bulgaria)

Project for new TTC centre in Ljubljana (Slovenia) released

**New Teximp Technology** Centres (TTC) in Brno (Czech Republic) and Iasi (Romania)

New partners: Studer and Desktop Metal

No layoffs during Covid-19

No.1 Nakamura Dealer in Europe More than 200 members of staff employed

More than 10,000 machines installed

More than 3,900 satisfied customers



Service is in our DNA: thanks to our network of Service Centres staffed by Certified Technicians, our Spare Parts storage facilities and our fleet of mobile service vans, we have what it takes to keep your Machine running.

# Comprehensive service facilities at all locations

We operate a local service department in each of our countries of operation. Spare parts are stored on site or carried in our mobile service vans, enabling us to get your machines back into service as quickly as possible. We continuously invest in training for our service staff, and in special equipment, such as precision measuring instruments, to keep our capabilities up to date.

#### Online service request

Go to www.teximp.com/service, click on your local service centre, and complete the online service request form. You will receive a response within a few hours.

#### 360° CNC service solutions

Teximp's commitment to service doesn't stop when we sell you our product. Our dedicated team of highly trained professionals has the full range of expertise needed to provide unmatched after-sales service for all our customers, ensuring that your expectations for top-quality service are met – at a fair price.

#### Why invest with Teximp?

- Peace of mind: you're in safe hands with Teximp, every step of the way!
- We have over 42 years experience in aftersales service.
- Our team of 100+ certified service technicians is equipped with the latest tools and measuring equipment (for example, Renishaw ballbar tester, IPS vibration analyser).
- Our corporate fleet of 60+ equipped service vans with professional tools carries spare parts to cater to your every need.
- Each of our 14 branches is fully equipped with all spare parts.
- Fair and transparent pricing for all services and spare parts.
- Customer guarantee of availability of all spare parts required due to wear and tear, for at least 10 years after the system has been commissioned.
- We use a Field Management System (FMS), with all information provided in real time.





#### Fast service response and completion times

Access to comprehensive real-time information is key to preparing service activities and coordinating service teams, so that machines can be repaired and returned to operation as quickly as possible.



**FMS** Field Management System

SPARE PARTS from local stock







# Teximp service organisation





























			#				H	***						
	Prague	Brno	Belusa	Ljubljana	Zagreb	Zagreb Retro	Belgrade	Zenica	Cluj-Napoca	Bucharest	Arad	Brasov	lasi	Sofia
105 Certified Service Technicians 12-hour response time Certified in-house technicians	25	9	9	7	11	5	6	3	2	2	14	2	2	8
Spare Parts from stock	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
<b>Tools</b> Renishaw, ballbar tester, IFM vibration analyser	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
62 Equipped Service Vans with Professional Tools Fully loaded with spare parts	9	3	6	7	6	2	4	2	2	2	8	2	2	7

# **TECHNOLOGY**

Thanks to our in-house Technology Expertise, we can train your operators, and provide comprehensive, customised support.

We know how it all works.

# Our team of 16 highly qualified technology specialists offers the following services:

- Support at every stage, from machine selection to process optimisation
- Training for your operators in machine programming and operation
- Ongoing support on an ad-hoc basis to suit your requirements







Teximp offers fully comprehensive, customised production cost calculations at any time, incorporating the following parameters:

- Programmes
- Tool lists
- Proposals for jigs/fittings
- Part production time from drawing or blanks
- Initial part trials
- Training

In addition to training, our technology specialists provide support for machine setup. Training can take place at one of our centres or at the customer's own premises.

We work with customers to develop and implement tailored process solutions.

### OUR TEAM IS WAITING TO HEAR FROM YOU

# AUTOMATION

As of late 2018, Teximp now offers an automation solution

for Mills & Lathes.

**Teximp**Automation





# This stand-alone Universal Robot Cell includes:

- Fanuc Industrial robot type M10iA (10 kg) or M20iA (20 kg)
- Fanuc A-Cabinet
- Fanuc iPendant touch
- DCS (Dual Check Safety) position check
- Soft Float Function
- Touch Skip Function
- Payload identification
- TRI-Haas CHC/NGC
- TGI-A
- Schunk Gripper 2x JGP 100-2/2x Set ABR-PGZN
- Autodoor
- Omron laser
- Omron light curtain
- Pallet table with 3 sizes of matrix plates (10x6/7x4/5x3)

CONTACT US FOR
A NON-BINDING PROPOSAL
AUTOMATION@TEXIMP.COM

FOR MORE
INFORMATION VISIT
WWW.TEXIMP-AUTOMATION.COM

# PREMIUM USED

We specialise in Premium Used Machines, opening up a world of possibilities for buyers and sellers.

**Teximp**Retro



#### Teximp Retro gives you access to a professional marketplace for Premium Used Machine Tools

All our reconditioned machines feature original parts, and are subject to stringent quality checks, enabling us to guarantee a fair price-to-performance ratio. Teximp-Retro buys and resells machine tools from our own customers and official European Haas dealers, acting as the link between buyers and sellers. A wide range of pre-owned machine tools is now available.

Teximp Retro provides up-to-date listings of quality reconditioned machine tools for sale in the countries of South-Eastern Europe. The newly established company Teximp Retro is wholly owned by Teximp SA. With more than 30 years' experience to our name, we understand the value of quality, professionalism and reliability.

FOR MORE
INFORMATION VISIT
WWW.TEXIMP-RETRO.COM



cleaned, and parts replaced

where necessary.









#### Component retrofits

We can retrofit components to make sure your reconditioned machine does its job.



# HAAS AUTOMATION CONSTANT IMPROVEMENT IS A WAY OF LIFE



Haas Automation Inc. is America's leading builder of CNC Machine Tools. Best in CNC Machine value. And high-quality Haas Machines are engineered for simple maintenance, easy setup and low-cost operation. Founded by Gene Haas in 1983, Haas Automation manufactures a complete line of vertical and horizontal machining centres, turning centres and rotary tables and indexers. All Haas products are built in the company's 102,000 m² manufacturing facility in Oxnard, California, and distributed through a worldwide network of Haas Factory Outlets that provide the industry's best sales, service and support, while offering unparalleled cost-to-performance value.

#### **CNCA financing from Haas**

From start-ups to large machine purchases, Haas is ready to help you find a financing programme.

More than 1,200 Teximp projects are financed through CNCA:

- Personalised service
- Fast credit decision
- Simple documentation

### THE PILLARS UNDER-PINNING HAAS VALUE

- Legendary service
- High-performance machines
- Distributor network
- The Haas Control
- Make It Your Own



Stay focused and keep building. We've produced and installed our 200,000<sup>th</sup> Haas CNC Machine, another major milestone in our history as one of the world's leading Machine Tool builders.



#### **About Haas F1 Team**

Haas F1 Team debuted in the FIA Formula One World Championship in 2016, becoming the first American-led Formula One team since 1986. Founded by industrialist Gene Haas, Haas F1 Team is based in the United States on the same Kannapolis, North Carolina, campus as his championship-winning NASCAR team, Stewart-Haas Racing.

# CNC VERTICAL MILLS

The industry-leading Haas VF Series Vertical Mills are the best-value highperformance Machine Tools available today, with a wide range of sizes and features to fit any shop's need.

#### What can a VF Series Vertical Mill handle?

With our wide range of available models, the VF Series can match nearly any size and productivity range. Regardless of your requirements, there's a VF just right to meet the demands of your machine shop.



# **CNC Vertical Mills (40 Taper)**

	VF-1	VF-2 (YT)	VF-3 (YT)	VF-4	VF-5 (XT)	VF-6	VF-7	VF-8	VF-9	VF-10	VF-11	VF-12
xyz (mm)	508 · 406 · 508	762 · 406 · 508	1016 · 508 · 635	1270 · 508 · 635	1270 - 660 - 635	1626 · 813 · 762	2134 · 813 · 762	1626 · 1016 · 762	2134 · 1016 · 762	3048 · 813 · 762	3048 · 1016 · 762	3810 · 813 · 762
xyz (mm) YT / XT		762 · 508 · 508	1016 • 660 • 635		1524-660-635							
rpm spindle	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline	8100 inline
rapids	25.4 m/min	25.4 m/min	25.4 m/min	25.4 m/min	18 m/min	15.2 m/min	15.2 m/min	15.2 m/min	15.2 m/min	15.2 m/min (yz) 9.1 m/min (x)	15.2 m/min (yz) 9.1 m/min (x)	15.2 m/min (yz) 9.1 m/min (x)
standard tool changer	20 station	20 station	20 station	20 station	20 station	30+1 side mount	24+1 side mount	30+1 side mount	24+1 side mount	24+1 side mount	24+1 side mount	24+1 side mount
optional tool changer	30+1 side mount	30+1 side mount	30+1 or 50+1 side mount	30+1 or 50+1 side mount	30+1 or 50+1 side mount	50+1 side mount	40+1 side mount	50+1 side mount	40+1 side mount	40+1 side mount	40+1 side mount	40+1 side mount

No responsibility is taken for the correctness of the technical information









### **KEY FEATURES**

- Inline direct-drive spindle
- Side-mount tool changer (option)
- Multi-fixturing table
- High-speed machining software (option)
- Made in the USA





# The industry-leading Haas VFs are the best value, high-performance Machine Tools available today

The Haas high-performance super-speed vertical machining centres provide the high spindle speeds, fast rapids and quick tool changes necessary for high-volume production and reduced cycle times. Each SS machine features a 12,000 rpm, inline direct-drive spindle, an ultra-fast side-mount tool changer and high-speed rapids on all axes.



# **Super Speed CNC Vertical Mills**

	VF-2SS	VF-2SSYT	VF-3SS	VF-3SSYT	VF-4SS	VF-5SS	VF-6SS
xyz (mm)	762 · 406 · 508	762 · 508 · 508	1016 · 508 · 635	1016 • 660 • 635	1270 · 508 · 635	1270 · 660 · 635	1626 · 813 · 762
rpm spindle	12000 inline	12000 inline	12000 inline	12000 inline	12000 inline	12000 inline	12000 inline
rapids	35.6 m/min	35.6 m/min	35.6 m/min	35.6 m/min	35.6 m/min	30.5 m/min	30.5 m/min
standard tool changer	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount
optional tool changer			50+1 side mount				







## **Mould Machines CNC Vertical Mills**

	VM-2	VM-3	VM-6
xyz (mm)	762 · 508 · 508	1016 • 660 • 635	1626 · 813 · 762
rpm spindle	12000 inline	12000 inline	12000 inline
rapids	18 m/min	18 m/min	15.2 m/min
standard tool changer	30+1 side mount	30+1 side mount	30+1 side mount
optional tool changer	50+1 side mount	50+1 side mount	50+1 side mount

No responsibility is taken for the correctness of the technical information



#### Accuracy, Rigidity, and Thermal Stability for the Mould Industry

The Haas VM Series machines are high-performance VMCs that provide the accuracy, rigidity and thermal stability required for mould making, tool and die work, and other high-precision industries.

# **Vertical Mills**

	VC-400	VC-400SS	VMT-750	VR-8	VR-9	VR-11	VR-14	HDC-3	HDC-3-5AX
xyz (mm)	559 · 406 · 508	559 · 406 · 508	635 · 330 · 787	1626 · 1016 · 1067	2134 · 1016 · 1067	3048 · 1016 · 1067	3810 · 1016 · 1067	3810 · 2692 · 1092	3810 · 2692 · 1092
rpm spindle	8100 inline	12000 inline	8100 inline	20000 inline	20000 inline	20000 inline	20000 inline	7500 inline	6000 inline
rapids	20.3 m/min	30.5 m/min	18.0 m/min	15.2 m/min	15.2 m/min	15.2 m/min	15.2 m/min		
standard tool changer	30+1 side mount	30+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount
optional tool changer	50+1 side mount	50+1 side mount							

No responsibility is taken for the correctness of the technical information

#### Haas 50-Taper provides Heavy Cutting Capacity

VF Series 50-taper machines are workhorses, well suited to high material removal rates, no matter what kind of cut you're taking. The standard 7500 rpm, 30 hp spindle delivers 450 ft-lb of torque.









# **CNC Vertical Mills (50 Taper)**

	VF-3YT/50	VF-5/50	VF-6/50	VF-7/50	VF-8/50	VF-9/50	VF-10/50	VF-11/50	VF-12/50
xyz (mm)	1016 • 660 • 635	1270 · 660 · 635	1626 · 813 · 762	2134 · 813 · 762	1626 · 1016 · 762	2134 · 1016 · 762	3048 · 813 · 762	3048 · 1016 · 762	3810 · 813 · 762
rpm spindle	7500	7500	7500	7500	7500	7500	7500	7500	7500
rapids	18 m/min	18 m/min	15.2 m/min	15.2 m/min	15.2 m/min	15.2 m/min	15.2 m/min (yz) 9.1 m/min (x)	15.2 m/min (yz) 9.1 m/min (x)	15.2 m/min (yz) 9.1 m/min (x)
standard tool changer	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount				

No responsibility is taken for the correctness of the technical information



#### Universal Machines – 5-Axis machining for everyone



5-axis machining is an effective means of reducing setups and increasing accuracy for multi-sided and complex parts. Haas UMC Series universal machining centres are cost-effective solutions for 3+2 machining and simultaneous 5-axis machining.



# 5-Axis Mills (40 Taper)

	UMC-500	UMC-500SS	UMC-1250	UMC-1250SS	UMC-1500-DUO	UMC-1500SS-DUO	UMC-1000-P	UMC-1000SS-P	UMC-1600-H
travel xyz	610 · 406 · 406	610 · 406 · 406	1270 · 762 · 711	1270 · 762 · 711	1524 · 508 · 508	1524 · 508 · 508	1016 • 635 • 635	1016 • 635 • 635	1626 · 1270 · 1016
B-axis	+120°, -35°	+120°, -35°	+120°, -35°	+120°, -35°	+120°, -35°	+120°, -35°	+45°, -45°	+45°, -45°	+120°, -120°
C-axis	360°	360°	360°	360°	360°	360°	360°	360°	360°
platter size (mm)	400	400	762	762	500	500	table (mm) 1016 · 381	table (mm) 1016 · 381	762
max weight on platter (kg)	226.8	226.8	454	454	300	300	159	159	680
rpm spindle	8100 inline	12 000 inline	8100 inline	12 000 inline	8100 inline	12000 inline	8100 inline	12 000 inline	7500 inline
rpm spindle optional	10 000 / 15 000	15 000	10 000 / 15 000	15 000	10 000 / 15000	15 000	10 000 / 15 000		10 000
rapids	22.9 m/min	30.5 m/min	22.9 m/min	30.5 m/min	22.9 m/min	30.5 m/min	22.9m/min	30.5 m/min	15.2 m/min
tool changer	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	30+1 side mount	50+1 side mount
tool changer optional			50+1 side mount						





The Haas ST Series high-performance Turning Centres were designed from the ground up to provide setup flexibility, extreme rigidity and high thermal stability. These Machines offer the best performance for the money – the best value – in their class.

#### Ideal for High-Volume, High-Production environments

Haas turning centres offer a wide range of capabilities, including toolroom lathes, bigbore versions, dual-spindle models, and live tooling with C and Y-axis capability.



## **CNC Lathe Series**

	ST-10	ST-10Y	ST-15	ST-20	ST-20Y	ST-25	ST-25Y	ST-28	ST-28Y	ST-30	ST-30Y
max. cutting length (mm)	406	406	406	572	533	533	533	572	572	660	584
max. cutting diameter (mm)	356	305	356	330	254	254	254	298	298	533	457
chuck size (mm)	165	165	210	210	210	254	254	305	305	254	254
bar capacity (mm)	44	44	64	64	64	76	76	102	102	76	76
swing diameter over front apron (mm)	419	419	419	533	533	533	533	533	533	806	806
swing diameter over cross slide (mm)	419	419	419	527	527	527	527			527	527
x-axis travel (mm)	200	200	200	213	236	236	236	239	239	318	318
z-axis travel (mm)	406	406	406	572	533	533	533	572	572	660	584
y-axis travel (mm)		± 51			± 51		± 51		± 51		± 51
rapids x	30.5 m/min	12.0 m/min	30.5 m/min	24 m/min	12 m/min	24 m/min	12 m/min	24.0 m/min	12.0 m/min	24 m/min	12 m/min
rapids z	30.5 m/min	30.5 m/min	30.5 m/min	24 m/min	24 m/min	24 m/min	24 m/min	24.0 m/min	24.0 m/min	24 m/min	24 m/min
rapids y		12.0 m/min					12 m/min		12.0 m/min		12 m/min
spindle rpm	6000	6000	4000	4000	4000	3400	3400	3200	3200	3400	3400
spindle bore (mm)	ø 58.7	ø 58.7	ø 88.9	ø 117.3	ø 117.3	ø 88.9	ø 88.9				
spindle nose	A2-5	A2-5	A2-6	A2-6	A2-6	A2-6	A2-6	A2-8	A2-8	A2-6	A2-6
turret / no. of tools	12 stations	12-station	12 stations	12 stations							



#### **High-Performance Turning Centres**

The Haas ST-55 is a heavy-duty, large-bore turning centre that provides heavy cutting ability, extreme rigidity, and high thermal stability. The twin-chuck capability, high-torque spindle, and large through-bore of this machine make it ideal for machining heavy pipes and fittings, large couplers, and long rollers. The large-capacity ST-55 offers the best combination of performance and value in its class, and is available with a wide selection of high-productivity options.







# **CNC Lathe Series**

	ST-35	ST-35Y	ST-40	ST-40L	ST-45	ST-45L	ST-50	ST-55
max. cutting length (mm)	660	584	1118	2032	1118	2032	2032	2032
max. cutting diameter (mm)	533	457	648	648	648	648	648	648
chuck size (mm)	305	305	381	381	457	457	no chuck	no chuck
bar capacity (mm)	102	102	102	102	165	165		
swing diameter over front apron (mm)	806	806	876	876	876	876	876	876
swing diameter over cross slide (mm)	527	527	648	648	648	648	648	648
x-axis travel (mm)	318	318	432	432	432	432	432	432
z-axis travel (mm)	660	584	1118	2032	1118	2032	2032	2032
y-axis travel (mm)		± 51						
rapids x	24 m/min	12 m/min	18 m/min					
rapids z	24 m/min	12 m/min	18 m/min	8.1 m/min	18 m/min	8.1 m/min	8.1 m/min	8.1 m/min
rapids y		24 m/min						
spindle rpm	3200	3200	2400	2400	1400	1400	1200	1000
spindle bore (mm)	117.3	ø 117.3	117.3	117.3	178	178	ø 216	ø 381
spindle nose	A2-8	A2-8	A2-8	A2-8	A2-11	A2-11	A2-15	A1-20
turret / no. of tools	12 stations							

# **ST Series Turning Centers**

	ST-10L	ST-10LY	ST-15L	ST-15LY	ST-20L	ST-20LY	ST-25L	ST-25LY	ST-28L	ST-28LY	ST-30L	ST-30LY	ST-35L	ST-35LY
max. cutting length (mm)	826	826	826	826	1080	1080	1080	1080	1080	1080	1588	1588	1588	1588
max. cutting diameter (mm)	305	305	305	305	330	330	330	298	330	298	381	349	381	349
chuck size (mm)	165	165	210	210	210	210	254	254	305	305	305	254	305	305
bar capacity (mm)	44	44	64	64	64	64	76	76	102	102	102	76	102	102
swing diameter over front apron (mm)	419	419	419	419	533	533	533	533	533	533	533	533	533	533
swing diameter over cross slide (mm)	305	305	305	305	298	298	298		298		349		349	
x-axis travel (mm)	200	200	200	200	213	213	213	213	239	239	239	239	239	239
z-axis travel (mm)	826	826	826	826	1080	1080	1080	1080	1080	1080	1588	1588	1588	1588
y-axis travel (mm)		± 51		± 51		± 51		± 51		± 51		± 51		± 51
rapids x	30.5 m/min	12.0 m/min	30.5 m/min	12.0 m/min	24.0 m/min	12.0 m/min								
rapids z	30.5 m/min	30.5 m/min	30.5 m/min	30.5 m/min	24.0 m/min									
rapids y		12.0 m/min												
spindle rpm	6000	6000	4000	4000	4000	4000	3400	3400	3200	3200	3200	3400	3200	3200
spindle bore (mm)	ø 58.7	ø 58.7	ø 88.9	ø 117.3	ø 117.3	ø 117.3	ø 88.9	ø 117.3	ø 117.3					
spindle nose	A2-5	A2-5	A2-6	A2-6	A2-6	A2-6	A2-6	A2-6	A2-8	A2-8	A2-8	A2-6	A2-8	A2-8
turret / no. of tools	12 stations													





# Dual-Spindle design for done-in-one operations, Y-Axis Milling, Drilling, Tapping

The DS-30Y Y-axis turning centre combines dual-spindle turning with Y-axis, C-axis, and live tooling to create a powerful "done-inone" machining solution for any shop.

Off-centre milling, drilling, and tapping operations are possible for increased machining capabilities.

#### ST-10/ST-15/ST-20 WITH OPTIONAL DUAL SPINDLE COMING SOON (Q2/2019)











# CNC Dual Spindle Lathe Series

	DS-30Y
max. cutting length (mm)	584
max. cutting diameter (mm)	457
chuck size (mm)	210
bar capacity (mm)	51
swing diameter over front apron (mm)	806
swing diameter over cross slide (mm)	527
x-axis travel (mm)	318
z-axis travel (mm)	584
y-axis travel (mm)	±50.8
rapids x	12 m/min
rapids z	24 m/min
rapids y	12 m/min
spindle rpm	4000
spindle bore (mm)	ø 88.9
spindle nose	A2-6
turret / no. of tools	12 stations

No responsibility is taken for the correctness of the technical information

# CNC HORIZONTAL MILLS

The highly popular Haas EC Series HMCs offer large work cubes and a maximum part capacity of 4535 kg, making them the perfect solution for your large-part machining requirements. Models are available with an integrated 4<sup>th</sup>-Axis rotary platter.



# The perfect Solution for production Machining

Built for high-volume production and unattended operation, the all-new EC-400 horizontal machining centre is faster, more compact, more rigid and more capable than ever before. It features a larger 22-inch x 25-inch x 22-inch work envelope, 1400-ipm rapids, and full 4<sup>th</sup>-axis pallet indexing.









# CNC Horizontal Mills (40 & 50 Taper)

	EC-400	EC-500	EC-630	EC-1600	EC-1600ZT	EC-1600ZT-5AX
travel xyz (mm)	559 · 635 · 559	813 · 635 · 711	1016 · 940 · 1016	1626 · 1270 · 813	1626 · 1270 · 1016	1626 · 1270 · 1016
rpm spindle	8100	8100	7500	7500	7500	7500
rpm spindle optional	10000 / 12000 / 15000	10000 / 12000 / 15000	10000	10000	10000	10000
taper	40	40	50	50	50	50
rapids (xyz)	35.6 m/min	35.6 m/min	18.0 m/min	15.2 m/min	15.2 m/min	
tool changer	30+1 side mount	30+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount	50+1 side mount
tool changer optional	50+1 / 100+1 side mount	50+1 / 100+1 side mount				

No responsibility is taken for the correctness of the technical information

Haas EC-1600 Series HMCs offer the high performance and large capacity you need to handle larger work.













# **CNC Gantry Routers**

	GR-510	GR-712	GM-2	GM-2 5AX
travel xyz	3073 · 1549 · 279	3683 · 2159 · 279	3683 · 2223 · 559	3683 · 2223 · 1000
rpm spindle	8100	8100	8100	20000 (HSK)
rpm spindle optional	10000 / 15000	10000 / 15000	10000 / 15000	
rapids (xyz)	20.3 m/min (x) · 53.3 m/min (y) · 27.9 m/min (z)	20.3 m/min (x) · 53.3 m/min (y) · 27.9 m/min (z)	20.3 m/min (x) · 53.3 m/min (y) · 27.9 m/min (z)	20.3 m/min (x) · 53.3 m/min (y) · 27.9 m/min (z)
standard tool changer	10+1 (20+1 option)	10+1 (20+1 option)	30+1	30+1

No responsibility is taken for the correctness of the technical information

# Large-platform CNC Routers for Big Jobs

Haas GR Series gantry routers have the power to cut aluminium and other metals, as well as the speed to cut plastics and other light materials. They easily handle large sheets, or can machine small parts by the thousand.



# DRILL/TAP/MILL SERIES

Built on proven Haas Designs and Technology, the Drill/Tap/Mill Series provides the perfect combination of Speed and Power to reduce cycle times.

# High-productivity Machining Centre with a Compact Footprint

The Drill/Tap/Mill series machines are highspeed, lean-style machining centres with compact footprints that make very efficient use of valuable shop floor space.



	DT-1	DT-2	DM-1	DM-2
travel xyz	508 · 406 · 394	711 · 406 · 394	508 · 406 · 394	711 · 406 · 394
rpm spindle	10000	10000	10000	10000
rpm spindle optional	12000 / 15000 / 20000	12000 / 15000 / 20000	12000 / 15000	12000 / 15000
rapids (xyz)	61.0 m/min	61.0 m/min	61.0 m/min	61.0 m/min
standard tool changer	20+1	20+1	18+1	18+1













#### Mini in Volume and Price only

Haas Mini Mills are the industry standard for compact machining centres. They are perfect for schools, start-up shops, or as a first step into CNC machining. Loaded with full-size features, they are valuable additions for shops that need a "second-op" machine, or an additional spindle where space is limited.

## **Small Mill Series**

	OFFICE MILL		MINI	MILLS			TOOLROOM MILLS					EDU
	CM-1	MM MM2 SMM SMM2				TM-0	TM-0P	TM-1	TM-1P	TM-2	TM-2P	MM-EDU
xyz (mm)	305 · 254 · 305	406 · 305 · 254	508 · 406 · 356	406 · 305 · 254	508 · 406 · 356	508 · 305 · 406	508 · 305 · 406	762 · 305 · 406	762 · 305 · 406	1016 · 406 · 406	1016 · 406 · 406	406 · 305 · 254
rpm spindle	30000	6000	6000	10000	10000	4000	6000	4000	6000	4000	6000	4000
rapids (xyz)	19.2 m/min	15.2 m/min	15.2 m/min	30.5 m/min	30.5 m/min	5.1 m/min	10.2 m/min	5.1 m/min	10.2 m/min	5.1 m/min	10.2 m/min	7.6 m/min
standard tool changer	20 stations	10 stations	20 stations	10 stations	20 stations	None	10 stations	None	10 stations	None	10 stations	None

No responsibility is taken for the correctness of the technical information

#### Large Travels, big Capabilities, Small Price

The Toolroom Mill series is the true definition of value, providing full CNC capabilities, including 4<sup>th</sup> and 5<sup>th</sup>-axis functionality, at affordable prices. Haas toolroom mills are found everywhere – from schools to high-end production shops. Their versatility results from a commitment to the use of common components across Haas machine tools. This results in all machines, including toolroom mills, benefiting from improvements in reliability and performance.





#### **Good things in Small Packages**

The innovative CL-1 is an ultra-compact CNC chucker lathe that comes with an eight-station automatic turret as standard, making it ideal for dedicated small-part production, second-op parts, or short runs and prototyping of small parts, such as those found in the communications, aerospace, medical and dental industries. The CL-1 can be moved easily with a pallet jack or equipment dolly, and is small enough to fit into most goods lifts.

# **Small Lathe Series**

	OFFICE LATHE	TOOLROC	M LATHES	EDU
	CL-1	TL-1	TL-2	TL-1-EDU
max. cutting length m)		762	1219	762
max. cutting diameter m)	126	406	406	406
chuck size (mm)		203	203	203
bar capacity (mm)	25			
cutting diameter over front apron (mm)	126	508	508	508
cutting diameter overcross slide (mm)	279	279	279	279
x-axis travel (mm)	305	203	203	203
z-axis travel (mm)	203	762	1219	762
rapids x	19.2 m/min	11,4 m/min	11,4 m/min	11,4 m/min
rapids z	19.2 m/min	11,4 m/min	11,4 m/min	11,4 m/min
spindle rpm	6000	1800	1800	1800
spindle bore (mm)	31,8	76,2	58	58
spindle nose	Threaded 5C Collet	A2-6	A2-5	

No responsibility is taken for the correctness of the technical information  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

#### Simplify the transition from manual to CNC

The TL-2 is very easy to learn and operate – even without knowing G-code. It's the perfect machine for start-up shops or as a first step into CNC machining.



# ROTARIES & INDEXERS



#### **Haas HA5C-Series Indexers**

The ideal choice for holding smaller parts. Higher productivity through automation. With more than three decades of refinement, Haas rotary indexers are the industry benchmark for quality, accuracy and dependability. Haas HA5C-series indexers are easy to programme, interface and set up. Our precision in-house manufacturing and machining processes ensure high quality and years of dependable operation.



# Examples of Rotary Tables & Indexers

	HRT-210	TRT-100	TRT-160	TR-200Y
platter size	210 mm	100 mm	160 mm	200 mm
max. speed	100°/sec	1000°/sec	104 °/sec	100°/sec
resolution	0.001°	0.001°	0.001°	0.001°
accuracy (±)	± 15 arc-sec	± 25 arc-sec	± 25 arc-sec	± 15 arc-sec
repeatability	10 arc-sec	30 arc-sec	10 arc-sec	10 arc-sec

No responsibility is taken for the correctness of the technical information





# HRT-series rotary tables: Perfect for medium to large parts

Haas HRT-series rotary tables are the perfect solution when you need to hold medium to large parts for multi-side machining or complex contouring. These rugged, heavy-duty rotary tables can be mounted vertically or horizontally, and feature precision T-slots and large through-holes for versatile fixturing.

FOR MORE INFORMATION VISIT WWW.HAASCNC.COM

# **NAKAMURA-TOME**

# LEADING THE WAY THROUGH CUTTING-EDGE TECHNOLOGY



Nakamura-Tome is firmly established as a world leader in the design and manufacture of single-process Multi-Tasking Mill-Turning Machines.

Nakamura-Tome opposed two-spindle, multiple turret construction with tool changers and high power driven tools provide flexibility and machining capability for the most complex mill-turned components in a single setup.

Nakamura-Tome aims to maintain its leadership position in factory automation by sensibly embracing change, fostering unique creativity, and staying at the cutting edge of technology.











# WT-/WY-Series CNC Multitasking Lathes

		WT-100	WY-100II	WY-150	WT-150II	WT-250II	WY-250	WY-250L	WT-300
	Max. turning diameter (mm)	190	175 (Ф42) 200 (Ф51, 65)	225	190	250	225	225	270
	Max. turning length (mm)	503	588 (Φ42) 570 (Φ51, 65)	565	515	555	580	910	780
Capacity	Distance between spindle nose (mm)	Max. 735 Min 210	Max. 820 Min. 200	Max. 850 Max. 200	Max. 800 Min. 200	Max. 885 (L65/R51) Max. 870 (L65/R65) Min. 265 (L65/R51) Min. 250 (L65/R65)	Max. 870 Min. 255	Max.1200 Min. 255	Max. 1100 Min. 250
	Bar capacity (mm)	L/R : 42	42 / op.51 / op.65	L/R 51 0p.L65/R51	L/R 51 Op.L65/R51	L65/R51 op. L65/R65	L:65, op.71,80 R:51, op.65,71	L:65, op.71,80 R:51, op.65,71	L:65, op.71,80,102 R:65, op. 102
	Chuck size (mm)	165 (6)	165 (6)	165 (6)	165 (6), 210 (8)	165 (6), 210 (8)	165 (6), 210 (8)	165 (6), 210 (8)	210 (8),254 (10)
	Slide travel X1/X2 (mm)	X1 : 135 X2 : 135	X1 : 150 X2 : 135 (Φ42) X2 : 141 (Φ51, 65)	X1 : 160.5 X2 : 160.5	X1:167.5 (Φ51) X1:152.5 (Φ65) X2:167.5	X1:195 X2:195	X1:160.5 X2:165	X1:160.5 X2:165	X1:195 X2:195
	Slide travel Z1/Z2 (mm)	Z1 : 503 Z2 : 503	Z1 : 588 Z2 : 578	Z1 : 565 Z2 : 565	Z1:515 Z2:515	Z1:600 Z2:600	Z1:580 Z2:580	Z1:910 Z2:910	Z1:780 Z2:780
Axis Travel	Slide travel Y upper turret (mm)	Y: ±31	Y1:±42	Y1:±45	Y:±35	Y:±41	Y1: ±50	Y1: ±50	Y:±60
	Slide travel Y lower turret (mm)		Y2:±32.5	Y2:±35			Y2:+20,-50	Y2:+20,-50	
	Slide travel B-axis (mm)	525	620	650	600	620	620	945	850
	Left Spindle speed (min-1)	L/R:6000	6000 (Ф42) 5000 (Ф51) 4500 (Ф65)	5000 (Φ51) 4500 (Φ65)	5000 (Φ51) 4500 (Φ65)	4500	4500 (ф65) 4500 4000 (Ф71) 3500 (ф80)		4500 (Ф65) 4500 (Ф71) 3500 (Ф80) 2500 (Ф102)
Left spindle	Left spindle motor	11/7.5kW	11/7.5 kW	15/11 kW	15/11 kW	15/11 kW 18.5/15 kW		18.5/11 kW	15/11 kW
right spindle	Right Spindle speed (min-1)	L/R : 6000	6000 (Φ42) 5000 (Φ51) 4500 (Φ65)	5000 (ф51)	5000 (ф51)	5000 (φ51) 4500 (φ65)	5000 (Ф51) 4500 (Ф65) 4000 (Ф71)	5000 (Ф51) 4500 (Ф65) 4000 (Ф71)	4500 (Φ65) 2500 (Φ102)
	Right spindle motor	11/7.5 kW	11/7.5kW	11/7.5kW	11/7.5 kW	11/7.5kW	15/11 kW	15/11 kW	15/11 kW
	Number of turrets	1	1	1	1	1	1	1	1
	Spindle speed (min-1)	6000	6000	6000	6000	6000	6000	6000	3600
Upper turret	Type of turret head/ Number of index positions	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24
	Driven motor power	7.1/2.2 kW	7.1/2.2 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW
	Number of driven-tool stations	12	12	12	12	12	12	12	12
	Number of turrets	1	1	1	1	1	1	1	1
	Spindle speed (min-1)	6000	6000	6000	6000	6000	6000	6000	3600
Lower turret	Type of turret head/ Number of index positions	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24
	Driven motor power	7.1/2.2 kW	7.1/2.2 kW	5.5/3/7 kW	5.5/3.7 kW	5.5/3/7 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW
	Number of driven-tool stations	12	12	12	12	12	12	12	12
	Control panel	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"		19"	Smart-X 19"
General	Floor space (L×W×H) mm	2300×1620×1940	3894×2257×1930	3814×2218×2200	3674×2264×1885.2	4059×2314×2225	4905 × 3331 × 2395	5035×2593×2395	4838×2487×2276
	Machine weight (kg)	5700	9000	10000	9000	8700	12000	13000	14000

No responsibility is taken for the correctness of the technical information

# **NAKAMURA-TOME**



#### New Nakamura Tome NTRX-300 – the Fusion of a Lathe and 5-Axis

The latest innovation from Nakamura-Tome is the NTRX-300, a heavy duty multi-tasking machining centre with full 5-axis capability to offer complete component machining in a single set up. The X and Y-axis travel on the machine ensure a machining range of 250 mm, further enhanced with the X-axis having a 125 mm travel below the spindle centre to extend the machining range to 250 mm<sup>2</sup>.











# **Super Multitasking Machines with ATC**

									NEW	
		NTRX-300	NTRX-300L	NTJ-100	NTY3-100	NTY3-150	NTY3-250	MX-100	JX-200	JX-250
	Max. turning diameter (mm)	640	640	175	175 (Ф42) 200 (Ф51, 65)	225	225	305	325, 255	320
	Max. turning length (mm)	1100	1600	678	588 (Φ42) 570 (Φ51, 65)	685	905,5	870	1058	1650
Capacity	Distance between spindle nose (mm)	Max. 1350 Min. 250	Max 1850 Min 350	Max. 910 Min. 200	Max. 820 Min. 200	Max. 970 Min. 200	Max. 1200 Min. 255	Max. 1000 Min. 230	Max. 1250mm Min. 240mm	Max. 1850 Min. 300
	Bar capacity (mm)	L/R65, Op.L/R71, L/R80, L90	L/R65, 0p.L/R71, L/R80, L90	L/R 51 op/ L/R65	42 / op.51 / op.65	L/R 51 Op.L65/R51	L:65/op.71/op.80 R:51/op.65/op.71	L/R51, L65	R 51/op. R65 L65/op. L80	65, op. 71, op. L80
	Chuck size (mm)	210 (8"), 254 (10")	210 (8"),254 (10")	165 (6")	165 (6")	165 (6")L/R	165 (6"), 210 (8")	L/R:165 (6"), 210 (8")	6",8"	254 (10")
	Slide travel X (mm)	Slide travel X (mm) 700		X1:330, X2:127.5	X1: 135 (042), X1:150 (051,65) X2: 150 (042), X2:150 (051,65) X3: 135 (042), X3:141 (051,65)	X1, X2, X3 : 160.5	X1:160.5 X2:160.5 X3:165	X1: 585 X2: 130.5	X1: 585 X2: 162.5	X1: 645 X2: 215
Axis travel	Slide travel Z (mm)	1150	1625	Z1:1040, Z2:678	Z1: 245 (ф42), Z1:227 (ゆ51,65) Z2: 245 (ф42), Z2:245 (ゆ51,65) Z3: 578 (ф42), Z3:560 (ゆ51,65)	Z1, Z2 : 235	Z1:355 Z2:355 Z3:910	Z1: 780 Z2: 713	Z1: 1050 Z2: 1005	Z1: ±825 Z2: 1490 op.Z2: 1095 / op. Z3: 745mm
	Slide travel Y upper turret (mm)	250 ±125	250 ±125	Y1:±40, Y2:±32.5	Y1:±42, Y2:±42, Y3±32.5	Y1, Y2 : ±45 Y3: ±35	Y1:-61,+51 Y2:-61,+51 Y3:-51,+61	Y1: ±105	Y1: 210 (+105/-105) Y2: 70 (+35/-35)	Y1: ±125 Y2: ±40 op. Y3: ±40
	Slide travel B (mm)	1100	1550	710	620	770	945	770	1010	1550
	Spindle speed (min-1)	4500 (ф65)	4500 (ф65)	5000 (Ф51) 4500 (Ф65)	6000 (Ф42) 5000 (Ф51) 4500 (Ф65)	5000 (Φ51) 4500 (Φ65)	5000 (\$\phi65,\$\phi71)\$ 4500 (\$\phi65,\$\phi71)\$ 3500 (\$\phi80)\$	6000 (Ф51) 4500 (Ф65)	6000 (ф51) 4500 (ф65) 3500 (ф80)	4500 (Φ65) 4500 (Φ71) 3500 (Φ80)
Left spindle	Left spindle motor	15/11 kW	15/11 kW	11/7.5 kW	11/7.5kW	15/11 kW	18.5/11 kW	11/7.5kW (Φ51) 15/11kW (Φ65)	15/11kW (Φ65) 18.5/15kW (Φ80)	15/11kW, 18.5/15kW(op.)
right spindle	Spindle speed (min-1)	4500 (ф65)	4500 (ф65)	5000 (Φ51) 4500 (Φ65)	6000 (Ф42) 5000 (Ф51) 4500 (Ф65)	5000 (ф51)	5000 (Ф51, Ф65, Ф71) 4500 (Ф65 ,Ф71)	6000 (ф51)	6000 (Ф51) 4500 (Ф65) 3500 (Ф80)	4500 (Φ65) 4500 (Φ71)
	Right spindle motor	15/11 kW	15/11 kW	11/7.5 kW	11/7.5 kW	11/7.5 kW	18.5/11 kW	11/7.5kW (Φ51)	11/7.5kW (Φ51) 15/11kW (Φ65)	15/11kW (Φ65)

# OPPOSED TWIN-SPINDLE TURRET

# WORLD'S FASTEST B-AXIS TOOL SPINDLE

### **NAKAMURA-TOME**



#### The super NTY3-150 is a high-productivity, Multi-Tasking Turning Centre that ist at the cutting edge of speed

Nakamura-Tome has introduced a unique three turret three Y-axis multi-tasking machine centre. Compact footprint, with an ergonomic 60° slant bed. The ultimate high precision, high-performance multi-tasking machine.

In addition to the advantages of simultaneous machining on the left and right-hand spindles, introducing the Y-axis on all three turrets contributes to increased productivity. By using Y-axis for simultaneous machining with the upper and lower turrets, machining process layout optimisation becomes a reality. Whether machining with multiple tools simultaneously on one side or on both the left and right-hand sides, the cycle time is dramatically reduced.











									NEW	
		NTRX-300	NTRX-300L	NTJ-100	NTY3-100	NTY3-150	NTY3-250	MX-100	JX-200	JX-250
	Tool spindle speed (min-1)	8000 (12000 op.)	8000 (12000 op.)					12 000 (op. 20 000)	12 000 (op. 18 000)	12 000 (op. 20 000)
Tool	Tool shank type	Capto C6 (HSK-A63 op.)	Capto C6 (HSK-A63 op.)					Capto C4 (op. HSK-T40)	CAPTO C6 (op. HSK-A63)	CAPTO C6 (op. HSK-A63)
Tool spindle	Number of tool stock	40 op. 60 / 80 / 120	40 op. 60 / 80 / 120					36 (op. 48, 72)	80 (op. 40,120)	80 (op. 40,120)
	Max tool diameter (mm)	90	90					55 (80)	90 (130)	90 (130)
	Max tool length (mm) / max tool weight (kg)	300/12	300/12					180/4	300/12	300/12
	Number of turrets			1	2	2	2			
	Spindle speed (min-1)			6000	6000	6000	6000			
Upper turret	Type of turret head/ Number of index positions			Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24			
	Driven motor power			7.1/2.2kW	7.1/2.2kW	5.5/3.7 kW	5.5/3.7 kW			
	Number of driven-tool stations			12	12	12	12			
	Number of turrets			1	1	1	1	1	1	1 (op. 2)
	Spindle speed (min-1)			6000	6000	6000	6000	8000	6000	6000
Lower turret	Type of turret head/ Number of index positions			Dodecagonal / 24	Dodecagonal / 24	Dodecagonal / 24				
	Driven motor power			7.1/2.2 kW	7.1/2.2 kW	5.5/3/7 kW	5.5/3.7 kW	7.1/2.2 kW	5.5/3.7 kW	5.5/3.7 kW
	Number of driven-tool stations			12	12	12	12	12	12	12
	Control panel	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"	Smart-X 19"
General	Floor space (L×W×H) (mm)	4917×2670×2615	5744x2670x2615	3799×2100×2565	3894×2240×1930	3814×2218×2200	5350×3350×2395	4350×2795×2650	5250x2987x2925	5580×3252.7×2942
	Machine weight (kg)			10 000	9500	10 500	14 425	17 000	20 000	25 000

# NAKAMURA-TOME



# Turret-Type Super Multitasking Machine SC-100

Nakamura-Tome unveils the new compact single-spindle models with a 6-inch chuck. The maximum machining diameter is  $\phi\,200$  mm, and the maximum machining length is 400 mm. The milling function and the Y-axis have been standardised to produce high value added components. NC tailstock and NC subspindles are also available. The setup is easy to operate on Nakamura-Tome's proprietary inter-face, NT-Nurse.





# AS & SC Series CNC Lathe

						NEW								
		AS-200	AS-200L	SC-100	SC-200	SC-200II	SC-200L	SC-100X <sup>2</sup>	SC-250	SC-300II	SC-300IIL	SC-450	SC-450L	SC-450LL
	Max. turning diameter	290	290	230	432 (without Y axis) 410 (with Y axis)	390/340	410	195	300	360	360	465	480	480
	Max. turning length (mm)	300	570	300 (tailstock) 400 (sub-spindle)	330	317	530	300	500	600 (tailstock) 635 (sub-spindle)	1100 (tailstock) 1135 (sub-spindle)	785	1520	2520
Capacity	Distance between spindle nose (mm)	427	800	430	509	510	800	Max. 600 Min. 200	780	910	1310	1050	1752	2752
	Bar capacity (mm)	65 (71 op.)	65 (71 op.)	51	65	65 (71 op.)	65	51 / 42	51 (65 op.)	71 (89 op.)	71 (89 op.)	80 (90 op.)	80 (90 op.)	81 (89, 165 op.)
	Chuck size (mm)	210 (8")	210 (8")	152 (6")	210 (8")	8"	210 (8")	152 (6")	215 (8")	250 (10") / 300 (12")	250 (10") / 300 (12")	300 (12")	300 (12")	305 (12")/381 (15")/455 (18")
	Slide travel X (mm)	202.5	202.5	150	261 (without Y axis) 277 (with Y axis)	242	277	150	177.5	232.5 (Ф71) 216 (Ф89)	232.5	315	322.5	322
Axis travel	Slide travel Z (mm)	320	585	400	365	375	580	400	550	635	1135	825	1610	2610
	Slide travel Y (mm)	±41	±41	±40	±41	±50	±41	±40	±41	±60	±60	±70	±75	±75
Left spindle	Spindle speed (min <sup>-1</sup> )	4500 (Ф65) 4500 (Ф71)	4500 (Ф65) 4500 (Ф71)	5000	4500	4500	4500	6000	5000 (Ф51) 4500 (Ф65)	3500	3500	2500	2500	2500 (\$81,89) 1200 (\$165)
	Spindle motor	15/11 kW	15/11 kW	11/7.5 kW	11/7.5 kW	15/11kW	11/7.5kW	11/7.5kW	15/11 kW	22/18.5 kW	22/18.5 kW	30/22 kW	30/22 kW	30/30 kW
	Number of turrets	1	1	1	1	1	1	1	1	1	1	1	1	1
	Spindle speed (min <sup>-1</sup> )	6000	6000	6000	6000	6000	6000	6000	3600	6000	6000	3600	3600	3600
Upper turret	Type of turret head/ Number of index positions	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12	Dodecagonal / 12
	Driven motor power	5.5/3.7 kW	5.5/3.7 kW	7.1/2.2kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW	7.1/2.2kW	5.5/3.7 kW	7.5/3.7 kW	7.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW	5.5/3.7 kW
	Number of driven-tool stations	12	12	12	12	12	12	12	12	12	12	12	12	12

# NAKAMURA-TOME





### The SC-300L is a rugged, High-Speed precision CNC Turning Centre offering maximum Versatility and Productivity

SC300L offers a high-torque, wide range, 30 horse power main spindle motor. Combined with its massive cast-iron 45 degree slant bed, this unit ensures full power is available under the heaviest cutting conditions with no vibration or chattering.









						NEW								
		AS-200	AS-200L	SC-100	SC-200	SC-200II	SC-200L	SC-100X <sup>2</sup>	SC-250	SC-300II	SC-300IIL	SC-450	SC-450L	SC-450LL
	Number of revolvers							1						
Lower turret	Type of turret							Star-shaped turret						
	Number of index positions							9						
	Tailstock diameter	70	80		80		80		80	90	90	120	120	2020 (stroke)
Tailstock	Tailstock stroke	80	80		80		80		80	100	100	100		
	Tailstock taper	MT-4	MT-4	MT-3	MT-4	MT-4	MT-3		MT-4	MT-5	MT-4	MT-4	MT-5	MT-5
	Sub-spindle Chuck size / Bar capacity (mm)		165 (6") / Ф42	165 (6") / 42	165 (6") / ф34		165 (6") / Ф42	127 (5") / 152 (6")	215 (8") / 51	165 (6"), 210 (8") / 51	165 (6"), 210 (8") / 51			
	Sub-spindle speed (min <sup>-1</sup> )		6000	60000	5000		6000	6000	5000	5000	5000			
Sub spindle	Sub-spindle motor		7,5 / 5,5 kW	7.5/5.5 kW	5.5/3.7 kW		7.5/5.5 kW	7.5/5.5kW	11/7.5 kW	15/11 kW	15/11 kW			
	Distance between spindle nose (max / min) mm		800	430	509		800	600	780	910	1310			
General	Floor space (L×W×H) mm	1655×1665 ×1852	3160×1805 ×1935	3294×1700 ×1780	2430×1825 ×1965	3195×1967 ×2125	2771×1884 ×1965	3072 x 1974 x 1799	2777×1725 ×2065	4480×2130 ×2300	5550×2130 ×2400	4709×2075 ×2575	4740×2165 ×2185	7137×2478 ×2213
uenerai	Machine weight (kg)	5000	6000	4500	4000	7500	5000	6500	4500	8000	10000	8000	9000	15000

No responsibility is taken for the correctness of the technical information  $% \left\{ 1,2,...,n\right\}$ 

FOR MORE INFORMATION VISIT
WWW.NAKAMURA-TOME.CO.JP

### **SC SERIES**

A versatile lineup, from small to largescale machines, for a wide range of machining needs.



# MATSUURA THE ULTIMATE IN PRODUCTIVITY & FLEXIBILITY



Matsuura has been making Machine Tools in Japan since 1935, and has played a pioneering role in the innovative design, development and manufacture of high-quality Machining Centres.

### **5-Axis Products**

Renowned the world over in a wide range of different industries for their performance, reliability and accuracy, Matsuura's 5-axis products have led the field for over 20 years.

### **Horizontal Machining**

All Matsuura H.Plus-series machines are available with a wide range of pallet, spindle and ATC configurations - tailored to your process and workload and with proven reliability and exceptional performance as standard.

### **Vertical Machining**

Matsuura's history and heritage as a pioneer in vertical machine tools are second to none among global manufacturers.

### **Hybrid Metal 3D Printer**

The Lumex Avance-25 is a single-machine platform integrating a fibre laser for state-of-the-art metal sintering and a machining centre for performing high-accuracy, high-speed milling. The ability to "grow" a metal component in layers with complex internal features, and mill those features as the layers are added to give a perfect surface finish, are what makes the Lumex Avance-25 such a distinctive and remarkable tool.

CONFIGURED BY MATSUURA MACHINERY

to maximise process efficiency for your specific workload.

# MATSUURA









# **5-Axis High-Speed Machining Centres**

		MX-330	MX-420	MX-520	MX-850	MAM72-35V	MAM72-52V	MAM72-70V	MAM72-100H
Max Work Size	(mm)	ø420x320	ø420×300	ø520×H350	ø760×H450	ø350×H315	ø520×H400	ø700×H500	ø1020×H770
	Travel x (mm)	435	435	630	900	550	1010	1200	1050
Travel	Travel y (mm)	465	465	560	780	440	540	720	920
	Travel z (mm)	560	560	510	650	580	610	710	960
	(mm)	ø250	ø130	ø300	ø500	ø130	ø400	500x500	630x630
Working surface	optional			ø500	ø700				
Travel	A/C (deg)	-125 ~ +10/360	-125 ~ +10/36	-125 ~ +10/360	-125 ~ +10/360	-125 ~ +65/360	+30 ~ -125/360	+30 ~ -125/360	-120 ~ +30/360
Loading capacity	(kg)	80	80	200	500	60	300	500	780
	Spindle speed (min-1)	15000	15000	12000 (BT40)	12000 (BT40)	12000 (BT40)	15000 (BT40)	15000 (BT40)	12000 (BT50)
Spindle	optional	20000	20000	20000 (BT40)	15000 (BT40) 20000 (BT40)	15000 (BT40) 20000 (BT40)	12000 (BT50) 50000 (BT40)	20000 (BT40)	10000 (BT50) 15000 (BT50)
	Rapid x (m/min)	40	40	40	40	60	60	60	60
Rapids	Rapid y (m/min)	40	40	40	40	60	60	60	60
	Rapid z (m/min)	40	40	40	40	60	60	60	50
	Number of tools	30	30	60: BT40	60: BT40	60: BT40	130: BT40	90: BT40	60: BT50
						120 / 160 / 200 240 / 280 / 320	170 / 210 / 250 / 290 / 330	130 / 170 / 210 250 / 290 / 330	
Tools	optional	60/90	30/60/90	90	90	360 / 400 / 440 480 /520	370 / 410 / 450 490 /530		120 / 150 / 180 /
						:BT40	340 / 410 / 450 / 490 / 530		210 / 245: BT50
D.11.1	Number of pallets		10			2	15	2	2
Pallets	optional	10		4	4	32 / 40		6/18	6
NC System	Matsuura	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i

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# MATSUURA



### The Matsuura H.Plus-300 largest working areas in its class

The Matsuura H.Plus-300 horizontal machining centre is the most compact HMC available and offers high-speed, high-precision and efficient production. Travels and part capacity are equal to typical 400 mm horizontals, while using only 70% of the space. These machines are known for their consistent high-accuracy in a variety of conditions with thermal compensation standard.



# CNC Horizontal Mills (40 & 50 Taper)

		H.Plus-300	H.Plus-405	H.Plus-504	H.Plus-500	H.Plus-630
Max Work Size	(mm)	ø530×H760	ø 700×H850	ø800×H1000	ø850×H1050	ø1050×H1115
	Travel x (mm)	500	660	730	800	1050
Travel	Travel y (mm)	560	660	730	800	920
	Travel z (mm)	500	660	800	800	990
Working surface	(mm)	300×300	500×500	500×500	500×500	630×630
Loading capacity	(kg)	250	400	750	750	1200
	Spindle speed (min-1)	15000 (BT40)	12000 (BT40)	12000 (BT40)	12000 (BT50)	12000 (BT50)
Spindle	optional	20000 (BT40), 30000 (BT40)	20000	15000 20000	15000	10000 (BT50) 15000 (BT50)
	Rapid x (m/min)	60	60	60	60	60
Rapids	Rapid y (m/min)	60	60	60	60	60
	Rapid z (m/min)	60	60	60	60	60
	Number of tools	60: BT40	60	60: BT40	60: BT50	60: BT50
Tools	optional	120 - 520	120 - 520	60 – 330	120: BT50, 150 / 180 / 210 240: BT50	120: BT50, 150 / 180 / 210 / 240: BT50
Dellata	Number of pallets	2	2	2	2	2
Pallets	optional	5/11/15/17	6 / 12	6	6	6
NC System	Matsuura	G-Tech 30i	G-Tech 30iB	G-Tech 31iB	G-Tech 31iB	G-Tech 31iB



### The Matsuura H.Plus-630 - high rigidity, high speed, compact all-rounder

The recently redesigned Matsuura H.Plus-630 horizontal machining centre is a rugged, high-speed precision horizontal machining centre offering maximum versatility and productivity. Delivering long periods of reliable, unmanned operation, high accuracy, and exceptionally efficient production, the H.Plus-630 horizontal machining centre offers high rigidity, high speed with a compact footprint.















# The Matsuura VX-660 – a truly, high speed, precision VMC

This versatile 3-axis vertical machining centre boasts high-speed, high-precision and high accuracy within a compact footprint. With a very large Y-axis of 550 mm, the VX-660 is equipped with: a high-performance and high-rigidity BT40/15K spindle; and 30 tools as standard with conveyor and 48/60 optional.

## **CNC Vertical Mills**

		VX-660	VX-1000	VX-1500	V.PLUS-500	V.PLUS-800
	Travel x (mm)	660	1020	1524	550	800
Travel	Travel y (mm)	550	610	700	410	550
	Travel z (mm)	560	610	610	560	500
Working surface	(mm)	940×550	1200×600	1700×700	860×400	1150 x 550
Loading capacity	(kg)	500	500	2000	400	500
	Spindle speed (min-1)	15000	15000	15000:BT40	15000	20000:BT40
Spindle	optional	20000	20000	15000:BT50	20000	20000:BT40, 30000:BT40
	Rapid x (m/min)	48	40	36	40	50
Rapids	Rapid y (m/min)	48	40	36	40	50
	Rapid z (m/min)	48	36	36	40	30
	Number of tools	30: BT40	30: BT40	48: BT40	30: BT40	30: BT40
Tools	optional	48: BT40, 60: BT40	48: BT40, 60: BT40	60: BT40 / 30: BT50	60: BT40, 90: BT40	40:BT40, 80:BT40
NC System	Matsuura	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i	G-Tech 31i





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# The Matsuura VX-1000 – a cost-effective Vertical Machining Centre providing

heavy-duty performance. Its high-tech spindle is reliable and accurate. Compact 30 station ATC as standard – 48/60 chain magazine optionally available.



FOR MORE INFORMATION VISIT WWW.MATSUURA.CO.JP



# TORNOS YOUR SWISS MACHINE-TOOL MANUFACTURER

# **TORNOS**

Tornos keeps you turning with a wide range of automatic Lathes, Bar Feeders and Software to meet your needs across a wide range of manufacturing applications.

Tornos uses a range of machining technologies with integrated swarf removal capabilities to produce parts requiring extreme precision and quality. Whether machining simple or highly complex parts, in small or large runs, Tornos machines can offer you a solution guaranteed to meet your needs. The company also has a worldwide sales and services network.

Tornos keeps you turning with the machines, software and services essential to your high-precision results. From micromechanics and medical and dental to automotive and electronics, our tailored solutions keep you successful in an increasingly competitive global manufacturing environment.

# KEY FEATURES OF THE TORNOS RANGE

- CNC single-spindle sliding headstock turning machines for parts less than 36 mm in diameter
- Multi-spindle machines with numerical or cam control for parts up to 32 mm in diameter
- Machining centres for complex parts 1 dm³ in volume requiring high precision



### **MultiSwiss Machines**

Tornos' comprehensive MultiSwiss range offers solutions for producing parts measuring 4 to 32 mm in diameter.

MultiSwiss bridges the gap between multi-spindle and single-spindle machines. MultiSwiss machines feature six mobile spindles that use torque motor technology for barrel indexing. It is very fast, and can deliver cycle times equal to those of cam-operated multi-spindle lathes.



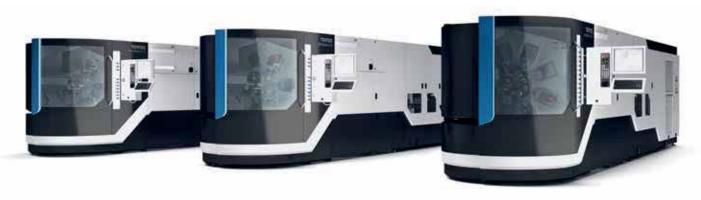
# **Multi-Spindle Lathes**

	MultiSwiss 6x16	MultiSwiss 8x26	MultiSwiss 6x32	
Bar capacity	4 - 16 mm	8 - 26 mm	8 - 32 mm	
Max. workpiece length	40 mm	65 mm	65 mm	
Max. remnant length	70 mm	140 mm	140 mm	
Number of linear axes	14	18	14	
Number of Y Axes (option)	1	3/6	3	
Number of rotating C axes	6+1	8+1	8+1	
Powered spindle max. speed	8000 rpm	8000 rpm	6000 rpm	
Powered spindle power	5.6 kW	11 kW	11 kW	
Powered spindle torque (Nm)	8.00 / 10.00	12.00 / 15.50	12.00 / 15.50	
Max number of tools	18	31	23	
Max number of tools back operation	2	4	4	
Dimension (L $\times$ W $\times$ H)	5920 × 1440 × 2120 mm	9000 × 2260 × 2160 mm	9000 × 2260 × 2160 mm	
Weight	7000 kg	15000 kg	14800 kg	





No responsibility is taken for the correctness of the technical information





# Swiss DT Lathes

# NEW

	Swiss DT-13S	Swiss DT-13HP	Swiss DT-26S	Swiss DT-26HP	Swiss DT-32HP	Swiss DT-38HP
Maximum diameter	13 mm	13 mm	25,4 mm	25,4 mm	32 mm	38 mm
Number of linear axes	5	5	5	5	5	5
Number of C axes	2	2	2	2	2	2
Spindle rotation speed	15000	15000	10000	10000	8000	7000
Total number of tool positions	5	5	5	5	5	5
Position for rotating tools	4	4	4	4	4	4
Floor space (L × W × H) (mm)	2230 x 1250 x1730	2230 x 1250 x1730	2230 x 1250 x 1730	2230 x 1250 x 1730	2560 x 1250 x 2080	2560 x 1250 x 2080
Weight (kg)	2400	2400	2400	2710	2710	2710

No responsibility is taken for the correctness of the technical information

### Swiss DT – The gateway to the Tornos world

The Swiss DT range, part of the Swiss-type lathe product line, is designed to meet requirements for typical long and short turned parts.









# **Swiss GT Lathes**

	Swiss GT 13	Swiss GT 26	Swiss GT 26 B	Swiss GT 32	Swiss GT 32 B
Maximum diameter	13 mm	25.4 mm	25.4 mm	32 mm	32 mm
Number of linear axes	6	6	6	6	6
Number of C axes	2	2	2	2	2
B-axis	-	-	Yes	-	Yes
Number of independant tool systems	2	2	2	2	2
Total number of tool positions	30	40	36	40	36
Position for rotating tools	12	14	16	14	16
Floor space (L×W×H)	2170×1140×1890 mm	2710×1270×1990 mm	2710×1270×1990 mm	2710×1270×1990 mm	2710×1270×1990 mm
Weightkg	2800	3550	3550	3550	3550

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### The versatile Swiss GT range

The simple, ergonomic Swiss GT range of automatic lathes, part of the Swiss-type product line, features a complete standard equipment package at a competitive price, offering easy access to all tool positions. The automatic lubrication unit, swarf tray, and high-volume removable oil pan help ensure easy operation and maintenance.





# **TORNOS**



# EvoDECO – The most productive and powerful Machines on the market

- Unique productivity thanks to 4 independent tool systems
- Powerful motor
- Flexibility to produce highly complex workpieces thanks to modular tool system
- B-axis (EvoDECO 16)







# **EvoDECO Lathes**

		EvoDEC	O 10/10	EvoDE	CO 10/8	EvoDECO 16/10		EvoDECO 20		EvoDECO 32	
		Main	Counter	Main	Counter	Main	Counter	Main	Counter	Main	Counter
	Max bar capacity (mm)	10	10	10	10	16	16	25.4	25.4	32	16
	Standard workpiece length with rotating guide bush (mm)	100	100	100	100	180	150	200	150	240	150
	Spindle speed of rotation (rpm)	14000	14000	14000	14000	12000	12000	10000	10000	8000	12000
Caindle	Spindle output (kW)	6.5 / 10.1	05.01.07	6.5 / 10.1	05.01.07	09.08.12	09.08.12	9.5 (12.8)	9.5 (12.8)	9.5 (12.8)	09.08.12
Spindle	Max constant torque (Nm)	4.8 / 6.5	3.4 / 4.8	4.8 / 6.5	3.4 / 4.8	12.1 / 15.8	12.1 / 15.8	15.1 (20.4)	15.1 (20.4)	15.1 (20.4)	12.1 / 15.8
	Spindle stoppage time (8000 to 0) (sec)	0.5	0.5	0.5	0.5	0.7	0.7	1	1	0.8	0.7
	Mild steel drilling capacity (mm)	6	6	6	6	10	10	14	14	14	10
	Mild steel tapping capacity	M6	M6	M6	M6	M10	M10	M12	M12	M12	M10
	Number of tool positions on guide bush	8/2×4		8/2×4		10/2×5		10 (5+5)		10 (5+5)	
Guide bush	Cross section of rotating tools	8:	×8	8×8		12×12 / 12.7×12.7		16×16		16×16	
holder	Positions for rotating tools		4	4		6/2×3		6 (4+2)		6 (4+2)	
	Rotating tools speed of rotation (rpm)	120	000	12000		8000		80	00	80	00
	Number of tool positions	:	3				4		4	4	1
End attachment	Positions for rotating tools	:	3			:	3	:	3	;	3
	Speed of rotation of rotating tools (rpm)	1200				8000		6000		6000	
General	Floor space (L×W×H) (mm)	1870×11	40×1850	1870×11	40×1850	2135×1250×2004		2289×2070×2300		2289×2070×2300	
information	Weight (kg)	15	600	16	650	27	700	35	00	3500	

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### SwissDECO Lathe

		SwissDECC	36	
		Main	Counter	
	Max bar capacity (mm)	32 (36)	36	
	Standard workpiece length with rotating guide bush (mm)	300 (200)		
	Spindle speed of rotation (rpm)	8000	8000	
Spindle	Spindle output (kW)	10	10	
	Max constant torque (Nm)	53	53	
	Drilling capacity (9SMnPb36) (mm)	16		
	Tapping capacity	M12		
	Number of tool positions in main operations	57		
	Positions for rotating tools	15		
	Deep drilling capacity (mm)	200		
Plattens	Rotating tools speed of rotation (rpm)	6000		
	Nominal power of rotating tools (kW)	2.4 (15 Nm)	1	
	Drilling capacity (9SMnPb36) (mm)	12		
	Tapping capacity (9SMnPb36) (mm)	M12×5mm / M10×10mm		
General information	Floor space (L $\times$ W $\times$ H) (mm)	3000×1600×2000		
uenerai illiorniation	Weight (kg)	5900		

No responsibility is taken for the correctness of the technical information  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

# SwissDECO – Taking Performance to new Heights

Tornos presents its vision for the future of bar turning with Swiss-DECO, part of the Swiss-type product line.

The SwissDECO range offers no fewer than three machines available in a choice of two diameters: 25.4 mm and 36 mm. All equipped with three independent tool systems, SwissDECO machines are designed to provide exceptional operating flexibility, while remaining extra-ordinarily user-friendly. The SwissDECO range distils more than 100 years of experience into a single machine. More than simply a range of machines, this is Tornos' vision of the future of bar turning.



# **TORNOS**







## SwissNano Lathes

		SwissNano 4	SwissNano 7	
	Max bar capacity (mm)	4	7	
	Standard workpiece length with fixed guide bush (mm)	28	50	
	Spindle power (nominal/max) (kW)	1.3 / 1.5	2.5 kW	
Maria Carinalla	Torque (nominal/max) (Nm)	0.8 / 1	0.8 / 1	
Main Spindle	Number of tools on guide bush	7 (8)	11	
	Turning tool section	8 x 8 (7 x 7)	8×8	
	Positions for radial rotating tools (option)	2 (3)	3	
	Rotating tool speed of rotation (RPM)	10000	8000	
	Number of tool positions	3×ø16	4×16 mm	
	Positions for rotating tools	2	3	
	Max bar capacity (mm)	4	7	
Guide Bush Holder	Insertion length of workpiece into counter spindle (mm)	26	40	
	Spindle rotation speed (RPM)	16000	16000	
	Spindle power (nominal/ max) (kW)	1.3/1.5	2.5	
General information	Floor space (L×W×H) (mm)	1800 x 650 x 1575	750×1850×1655	
uciiciai iiiiVIIIIaliUII	Weight (kg)	750		

No responsibility is taken for the correctness of the technical information

### **SwissNano**

The SwissNano range was designed to meet demand for small workpieces requiring a very high level of precision.

For example, its kinematics enable the machine to produce two thirds of watch movement components, from the simple to the most complex, including cutting, with excellent finishes. Its capability extends beyond horological applications to include any type of workpiece requiring extreme quality and precision. The kinematic structure was designed for exemplary balance, and thermal management enables the operating temperature to be achieved very rapidly.

FOR MORE INFORMATION VISIT WWW.TORNOS.COM



# SHIMADA THE MULTI-SPINDLE SPECIALIST



Multi-Spindle Lathes provide a highly productive and efficient alternative to Single-Spindle Machines, enabling streamlined operations and drastically reduced setup and idle times.

### **Leading the Way**

Shimada – the first company in the world to develop and produce a CNC 6-spindle automatic lathe – is Japan's leading manufacturer of camless CNC 6 and 8-spindle automatics and dual-spindle indexers, designed to maximise production output. Turning bar material can be space and time-consuming: Shimada's machines challenge this notion.

### **An Array of Options**

Shimada's automatics can be configured with various optional and custom features that can help further reduce cycle times for large-volume runs.

### "Load while machining" Capability

Shimada's dual-spindle CNC lathe allows loading with one spindle while machining is carried out with the other. This design, with the chucking position outside the machine, enables easy manual loading/unloading and chuck exchange.

# SHIMADA



# Dual-Spindle Lathe with Robotic Automation

		2SI-6	2SI-8	2\$	I-10	
Range	Max.turning diameter	180 mm (7.0")	210 mm (8.2")	310 mr	n (12.2")	
	Max.turning length	120	(4.7")	120 (4.7")		
	No. of spindles	:	2		2	
Spindle	Chuck size	6"	8"	10"	12"	
Spiriule	Spindle motor	7.5/5.5 kW	(10/7.5HP)	15/18.5 kW (20/25HP)		
	Spindle RPM	50 - 5000	35 - 3500	30 -	3000	
	No. of tool stations	8 or 12 or (	Chaser type	8 or 12 or	Chaser type	
Tool Turret	Max. no. of power tools	6 to	ools	6 tools		
	Tool spindle RPM	200 -	5000	200 - 5000		
	X-axis travel	120 mr	n (4.7")	170 mm (6.7")		
NC slide	Z-axis travel	170 mr	n (6.7")	205 m	m (8.0")	
	Rapid feed rate	15 m/min	(600"/min)	15 m/min	(600"/min)	
Weight and	Floor to spindle centre	960 mm	1 (37.8")	1100 mm (43.3")		
Weight and dimensions	Floor space	1900 (74.8")	× 1600 (63")	2450 (96.5") × 2200 (86.6")		
	Weight	3600 kg (8000 lb)	3800 kg (8400 lb)	5500 kg	(12200 lb)	

No responsibility is taken for the correctness of the technical information

### The shortest Idle time industry-wide

The 2SI models uniquely connect 2 spindles, one turret and a Fanuc controller into a highly productive machine tool package. This 2-spindle 1 NC lathe was developed from the architecture of "reducing idle time to the utmost limit".











### **4-spindle CNC Horizontal Lathe with Robot**

This is 4-spindle CNC rotary type horizontal with robotic loading. With such machine the production time lost is minimised and productionis maximised without skilled labour.



# CNC Vertical 4-Spindle Twin-Turret Lathe

			VT4-350
Range	Max.turning	length	ф375 (14.7")×270 mm (10.6")
	No. of spindl	es	4
	Chuck size		15"
0 : "	Spindle	(Standard)	18.5/22 kW (25/30HP) × 2
Spindle	Motor	(Option)	22/26 kW (30/35HP) × 2
	Spindle	(A)	23-2300 min-1
	RPM (B)		32-3200 min-1
	Turret		6 Tools × 2 (Option:8 Tools × 2)
Tool	X-axis travel		300 mm (11.8")
Turret	Z-axis travel		450 mm (17.7")
	Rapid feed ra	ate	20 m/min
Weight and	Floor space		3025 (119") × 2980 (117.3")
dimensions	Weight		12000 kg (26620 lb)

No responsibility is taken for the correctness of the technical information

# 4-Spindle Twin-Turret Lathe

		HS 4200	
Range	Max.turning diameter	ф200 mm (7.8")	
Spindle	No. of spindles	4	
	Chuck size	8"	
	Spindle motor	11/15 kW (15/20HP) × 2	
	Spindle RPM	45-4500 min-1	
Tool Turret	Tool turret	8 Tools or Gang type × 2	
	X-axis travel	160 mm (6.3")	
	Z-axis travel	250 mm (9.8")	
	Rapid feed rate	24 m/min	
Weight and dimensions	Floor space	2400 (94.5") × 3220 (127")	
	Weight	7500 kg (16600 lb) (with Loader)	

No responsibility is taken for the correctness of the technical information



# **VT4-350 Productive CNC 4-Spindle Vertical Lathe** Part loading/unloading time is ZERO:

- As a FM cell, the machine facilitates automation of a manufacturing line.
- Vertical design enables handling of heavy workpieces.
- Loading spindle is covered to protect from coolant and chips.
- Spindle offset function compensates for errors between spindles in the microns.
- Spindle speeds can be independently controlled for each spindle.





# 6-Spindle CNC Lathe – High-production CNC Lathe with High-Speed part loading

This 4-chuck (front) turning centre features an exclusive system for fast, automatic centring of two parts at a time in just 1.5 seconds. This enables parts to be changed in masked time, delivering a significant boost in productivity, especially in the case of parts with sufficiently short machining cycles.



# **CNC Multi-Spindle Lathe**

	_	CN 660				
Function	Item	No NC Slide	1 NC Slide	2 NC Slides	3NC Slides	
Turning Capability	Chucking diameter		ф60 (ф2.36") or 5 inch chuck			
	Max. turning length	200 mm (7.8")				
Spindle	No. of spindles	6				
	Max. spindle RPM	3000 min-1				
	Motor Select from 5.5 kW, 7.5 kW, or 11 kW					
End Tool Slide	Tool diameter	Ф55 mm (Ф2.16)				
	Drive system	Camless oil pressure (optional: NC drive)				
	Stroke	200 mm (7.8")				
NC Slide	Number of axes		Two axes	Four axes	Six axes	
	X-axis stroke		120 mm	120 mm/70 mm	120 mm/70 mm/50 mm	
	Z-axis stroke		120 mm	120 mm/60 mm	120 mm/60 mm/50 mm	
	X-axis rapid feed speed		15 m/min			
	Z-axis rapid feed speed		15 m/min			
Machine Size	Machine height		1800 mm (70.9")			
	Floor space	2300×2000 mm	2300×2300 mm			
	Machine weight	3500 kg (7800 lb)	3800 kg (8500 lb)	4300 kg (9500 lb)	4500 kg (10000 lb)	

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FOR MORE INFORMATION VISIT WWW.SMD.CO.JP



# STUDER THE ART OF GRINDING.



Fritz Studer AG, established in 1912, is one of the market and technology leaders in universal, external and internal cylindrical grinding as well as noncircular grinding. With around 24,000 delivered systems, STUDER has been synonymous with precision, quality and durability for decades.

The name STUDER stands for hardware, software, system integration and Swiss quality service. With a customized complete solution for each grinding task, the customer also receives our knowledge and know-how about the grinding process.

STUDER makes your company more successful – and has been doing so for over 100 years. The customers can rely on a global network of representatives and service support centers. Regional contact partners respond to your concerns quickly and simply – irrespective of which machine is involved. As technology leaders in universal, external and internal cylindrical grinding STUDER focus on sophisticated processes and is a reliable partner for your future investments.



The optimum solution for every grinding job thanks to the modular machine concept.





The favorit is a CNC universal cylindrical grinding machine for the individual and batch production of short to long-sized workpieces.

STUDER has machines from the entry level machine for the most important applications to the all-rounder for complex grinding tasks. Small to large workpieces for individual, small and large-scale production.



# CNC Universal external cylindrical grinding machines

	favorit	favoritCNC	S33	S31	S41
Max. Travel X	370 mm	285 mm	370 mm	370 mm	350 mm
Max. Travel Speed X	15'000 mm/min	10'000 mm/min	15'000 mm/min	15'000 mm/min	20'000 mm/min
Max. Travel Y					100 mm
Max. Travel Z	500 / 800 / 1150 / 1750 mm	800 / 1150 mm	500 / 800 / 1150 / 1750 mm	500 / 800 / 1150 / 1750 mm	1150 / 1750mm
Max. Travel Speed Z	20'000 mm/min	20'000 mm/min	20'000 mm/min	20'000 mm/min	20'000 mm/min
Max. Spindle Power	8 kW	9 kW	8 kW	8 kW	15 kW
Max. Number of Revolutions	3'200 /min	2'810 /min	3'200 /min	3'200 /min	4'500 /min
Max. Grinding Wheel Diameter	508 mm	508 mm	508 mm	508 mm	508 mm
Max. Grinding Wheel Width	80 mm	80 mm	80 mm	80 mm	100 mm
Max. Workpiece Lenght	400 / 650 / 1000 / 1600 mm	650 / 1000 mm	400 / 650 / 1000 / 1600 mm	400 / 650 / 1000 / 1600 mm	1000 / 1600 mm
Workpiece Diameter	0-349 mm	0-349 mm	0-349 mm	0-349 mm	0-549 mm
Max. Workpiece Weight	150 kg	80 kg	150 kg	150 kg	250 kg
Distance Between Centers	400 / 650 / 1000 / 1600 mm	650 / 1000 mm	400 / 650 / 1000 / 1600 mm	400 / 650 / 1000 / 1600 mm	1000 / 1600 mm
Center Height	175 mm	175 mm	175 mm	175 mm	275 mm

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