

March/April 2024

Volume 33 No.2

SPHOORTI

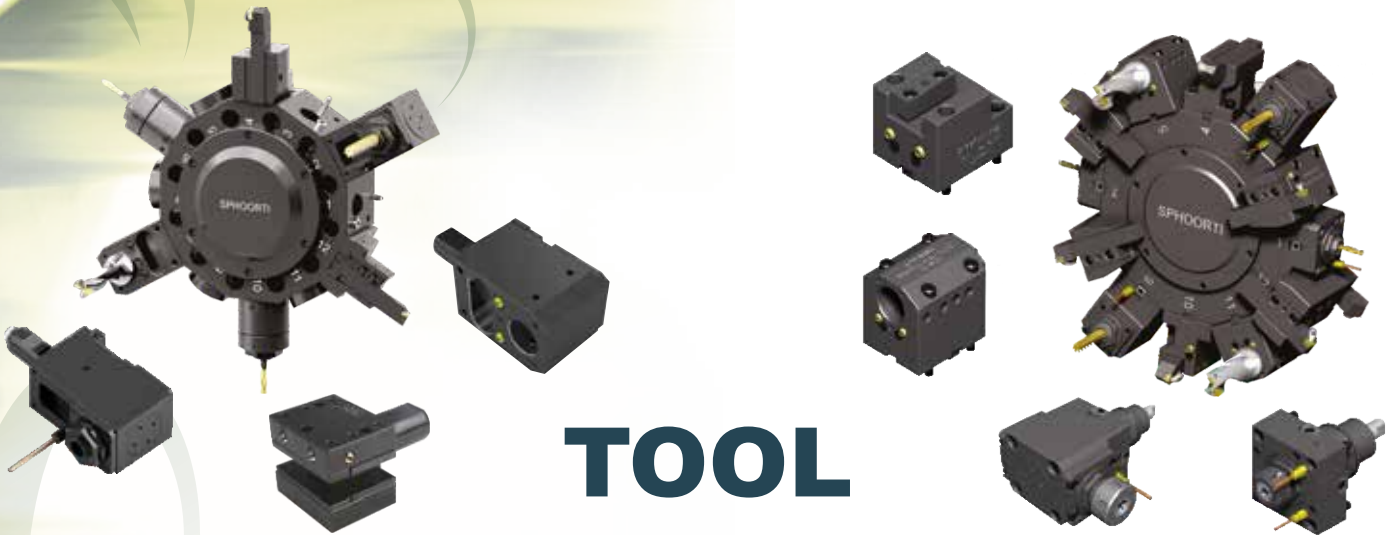
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HGLASER SERIES

Closed type laser cutting machine
for ultra-high laser power



MACHINETOOLS
AFRICA 2024
HALL 6 • STAND D3

Specification	HGLASER 3015	HGLASER 4015	HGLASER 4020	HGLASER 6020	HGLASER 6025
Effective cutting size (mm)	3000 x 1500	4000 x 1500	4000 x 2000	6000 x 2000	6000 x 2500
Laser power range	1.5KW / 2KW / 3KW / 4KW / 6KW / 12KW / 20KW / 30KW optional				
Maximum speed	150m/min				
Maximum acceleration	1.5G				
Repeat positioning accuracy	±0.03mm				



HGLW - 1500E/2000E/3000E

Hand-held fiber laser welding & cutting & cleaning machine

Specification	HGLW 1500E	HGLW 2000E	HGLW 3000E
Operating mode	Welding / Cutting / Cleaning (3-in-1)		
Welding/Cutting/Cleaning torch	HUGONG wobblelaser welding head (with wirefeeding part)		
Suitable wire reel specifications	5kg/10kg/25kg		
Compatible wire diameter	0.8 ~ 1.6mm (2.0/2.5 optional)		
Cooling method	Water cooling		
Welding torch body weight	0.8kg		
Cable length	10m		
Available gas	Ar / N ₂ / CO ₂		
Maximum power consumption	7kW	11kW	15kW
Applicable sheet thickness (mm)	SS / MS:1-5 AL:1-4	SS / MS:1-6 AL:1-5	SS / MS:1-8 AL:1-6



EB3612

All-electric Servo CNC Press Brake



EP700B CNC control

Specification	EB3612	EB6325
Nominal force (kN)	360	630
Bending length (mm)	1250	2500
Frame distance (mm)	1000	2060
Ram stroke (mm)	180	180
Max. open height (mm)	430	520
Throat gap (mm)	210	410
Worktable width (mm)	50	100
Approach speed (mm/s)	200	200
Bending speed (mm/s)	50	50
Return speed (mm/s)	200	200
Backgauge stroke (mm)	440	600
Machine dimensions:		
Length (mm)	1700	2950
Width (mm)	1650	1650
Height (mm)	2700	2700



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See website for details.



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Unicam's best-selling machine. This nesting workhorse makes short work of plywood, hard-wood, vesconite, HDPE, composites, aluminium and other non-ferrous metals. Manufactured in different size ranges (fourth axis is optional).

See website for details.

Stone Master

Stainless Steel T-Slot | 1200x2400 mm
Stone Machining Centre
Through-the-Tool Cooling| Wet Bed | Automatic Tool Changer



Made for cutting / carving / engraving Stone (marble/granite). This CNC unit cuts kitchen tops, bathroom counters, furniture, headstones; or simply creating beautiful things out of stone. We use a special Hiteco spindle that feeds water through the cutter (which keeps the cutter cool for longer tool life).

This unit can be a 3 or 4 axis machine, the fourth axis can be used to rotate an aggregate head so that the operator can use a saw-blade to cut at any angle.

See website for details.



Umkhovu (Zulu for Rhino)

Profile Machining Centre
6000mm x 200mm x 200mm | Automatic Tool Changer

This unit is ideal for machining aluminium profiles, pvc and even mild steel (with the correct cutters).

Efficient motion system uses minimal power.
Vertical automatic safety door (black & yellow) provides protection for the operator during operation.

Optional automatic clamp positioning

Uses standard G-Code generated from major cam software.

Easy restart from last position if power is lost while cutting.

Can work with profiles up to 6300x200x200mm and comes with a multitude of options, including rigid tapping.

See website for details.

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all production environments

EGB SERIES PRESS BRAKE

Electric bending from small to
large work pieces



MACHINETOOLS
AFRICA 2024
HALL 6 • STAND A17



DMC-845 Mill Center

Travel:

X Axis Travel: 800 mm | Y Axis Travel: 400 mm | Z Axis Travel: 500 mm

VKT-3T | VKT-4T Knee-Bed Milling Machine

Axes:

XYZ Travel: 700 x 310 x 150 mm (350mm Knee Travel)

KM-80 to KM-300 (Open and Enclosed Milling Machines)

Travels:

X-Axis Travel: 800 mm - 3000 mm

Y-Axis Travel: 400 mm - 900 mm

Z-Axis Travel: 450 mm - 750 mm

MJH Durban:

Unit 2 Greenview Park, 30 Nipper Road, New Germany, Durban

MJH Port Elizabeth:

Unit 14F Ralbern Centre, Deal Party, Gqerherha

Akira-Seiki SR3 (XP) Machining Center

Travel:

X Axis Travel: 762 mm | Y Axis Travel: 430 mm | Z Axis Travel: 460 mm

GFIR TT3520 Slant Bed Lathe

Max. Turning Diameter: Φ 255 mm

Max. Turning Length: 230 mm

Spindle Speed: 5000 rpm

Spindle Bore Diameter: Φ 48 mm

HXF 130J5 (Servo) to HXF3300J5 (Servo) Moulders



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Ricky: 079 510 4144 | ricky@mjhsa.co.za

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www.mjhmachinetools.com



MACHINE TOOLS AFRICA 2024

Machine Tools Africa for everything that twists, turns, rotates, cuts, forms, bends or shapes

Africa's biggest machine tools exhibition is taking place from 21-24 May 2024 at the Johannesburg Expo Centre in Nasrec and will be showcasing cutting-edge developments across the machine tool- and related industries and the very latest global machine tool technology. Machine Tools Africa 2024 will also highlight the significance of local suppliers and their international manufacturing partners.

The exhibition is seen as an important and relevant platform where buyers and sellers can meet face-to-face in a relaxed informal environment. Eighty-seven percent of visitors attending the previous show went there in search of new products plus solutions and to learn about the latest technologies and trends.



Image from Machine Tools Africa 2017.

At this year's show, visitors can expect to see a wide range of products from machinery and tooling, to control systems, robotics, design, accessories and everything that twists, turns, rotates, cuts, forms, bends or shapes. Senior purchasing decision makers will have the opportunity to find what they need to take their manufacturing processes to the next level.

Machine Tool industry outlook

Speaking at the recent Machine Tool Merchants Association AGM, the MTMA Chairperson Joanne Canossa described the past year as a high-speed rollercoaster for the industry. It is recognised that Machine Tools is a key driver in various sectors, such as manufacturing, fabrication, engineering and construction, while playing a major part in the country's economic growth. MTMA members have made significant strides focussing on being industry leaders in supplying quality machines and technology to the local market, however, last year wasn't without its challenges.

Canossa explained that, whereas the industry had enjoyed a growth of 20.7% during 2023 up until Q3 compared to the previous year, there was a weakening demand for machinery and equipment during the latter part of the year due, in part, to reduced manufacturing production in South Africa. The decline was largely a consequence of the country suffering the worst load shedding on record during September.

"We are faced with local as well as global challenges and, as key players in

the industry, we need to understand the magnitude of this impact and how we can mitigate any risks for the future," advises Canossa.

Machine Tools Africa exhibition and its support to industry

Canossa believes Machine Tools Africa will be a great step towards the recovery and upgrading of local manufacturing businesses in South Africa, with advanced technology, software, automation and industry 5.0 making more of an appearance at the show.

"Industry players have an opportunity to highlight technological advancements and also how technological infrastructure for human-machine collaboration can streamline processes and improve high level decision making," says Canossa. "It will be very exciting to see how our members as well as other companies utilise this platform to target and entice the manufacturing sector."

Education and skills development remain central to South Africa's steel industry. Training and development of competent skilled staff has become a concern to the growth of the sector. World Skills South Africa will be participating at Machine Tools Africa to highlight their work in this area and to promote the much lacking vocational training in our country.

Visitors will also have the opportunity to listen to industry experts speaking at the free-to-attend seminars, sharing their knowledge and experience across a wide range of important and current industry topics.

Collaborative partnership

Machine Tools Africa is an event owned by the Machine Tool Merchants' Association of South Africa (MTMA) in partnership with Specialised Exhibitions, organisers of the event.

"We are delighted to again be in partnership with the Machine Tool Merchants Association for this year's edition of Machine Tools Africa," says Charlene Hefer, Portfolio Director at Specialised Exhibitions. "The collaboration is significant as our combined expertise and industry insights will bring immense value to our exhibitors and attendees alike."



Image from Machine Tools Africa 2017.

Specialised Exhibitions is a division of Montgomery Group.

For more information, visit the Machine Tools Africa website

www.machinetoolsafrica.co.za

or contact Dee Miloa, Marketing Manager,

Tel: +27 (0) 11 835 1565

Email: dee.miloe@montgomerygroup.com



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AFRICA 2024

21-24 MAY

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services to the market

BUILD

new + existing
customer relationships

INCREASE

your product +
brand awareness

FORM

new business
partnerships



#MTA2024
www.machinetoolsafrica.co.za

TO BOOK YOUR STAND CONTACT:

Sonja Van Rooyen, Exhibition Manager

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LOOKING FORWARD TO MACHINE TOOLS AFRICA 2024 WITH GREAT EXPECTATIONS

A message from the Machine Tools Merchants Association – MTMA



2023 has been a high-speed rollercoaster for our industry. Machine tools are a key driver in various sectors such as manufacturing, fabrication, engineering and construction, and we know plus value our part in this country's economic growth. While our members have made significant strides focusing on being industry leaders in supplying quality machines and technology to the local market, it has come with various challenges experienced this year.

Our member stats indicate a growth of 20.27% during 2023 up until Q3 compared to the previous year. There is a clear decrease in our member Q3 stats, which coincides with Stats SA's report, that the weakening demand for machinery and equipment contributed to an 8,6% decline in the country's equipment imports for Q3 in this year. Additionally, there are reported decreases in the imports of base metals, which have largely impacted the steel manufacturing and processing industries.

Manufacturing production in South Africa decreased by 4.3% in September of 2023 compared to the previous year. It was the largest decline seen in industrial activity since last December, which came after considerable growth in Q1 and Q2 of this year. This decline being a consequence of the country suffering the worst loadshedding on record during September.

In October 2023, South Africa's annual inflation rate increased for the third month in a row to 5.9%, the highest in five months and above market estimates of 5.5%. We have heard of how inflation, power cuts and logistical crisis have crippled one of the county's largest steel producers ArcelorMittal and the many job losses that are imminent in the future.

Overloaded capacity in the steel sector is increasing worldwide, which has negatively impacted the industry and its ability to allow for economic growth. The consequences for the foreseeable future being, increased steel prices, steel producers and processors decreased profitability, green-steel roll out being prolonged and creating trade tensions globally. We as key players in the industry need to understand the magnitude of this impact and how we can mitigate any risks for the future.

Education and skills development remain central to South Africa's steel industry. Training and development of competent and skilled staff has become a concern to the growth of the sector. It is why we have taken a hard stance in showcasing and supporting skills development. World Skills will be joining us at Machine Tool Africa 2024 to highlight their progress and hopefully promote the much lacking vocational training in our country.

Specialised Montgomery has been working tirelessly, to attract high quality exhibitors and visitors to the Machine Tool Africa 2024 trade show. The show will be a great step towards the recovery and upgrading of local manufacturing businesses in South Africa, with advanced technology, software, automation, and industry 5.0 making more of an appearance. It will be very exciting to see how our members utilise this platform and take advantage of the opportunity to target the manufacturing sector.



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MEMBERS LIST**





MACHINE TOOL MERCHANTS ASSOCIATION



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- Email Broadcasts
- Members Directory Online
- Cross Promotional Online Marketing



NETWORKING & INFO

- Industry Forecasts
- Member Meetings
- AGM Networking Dinner



REPRESENTATION & SKILLS

- Representing Industry to Government
- Skills Development Sponsorships
- Skills Workshops



MACHINE TOOLS AFRICA

- Africa's Biggest Machine Tool Event
- Preferential Rates for Members
- Meet Key Decision Makers and Buyers



MACHINETOOLS
AFRICA 2024

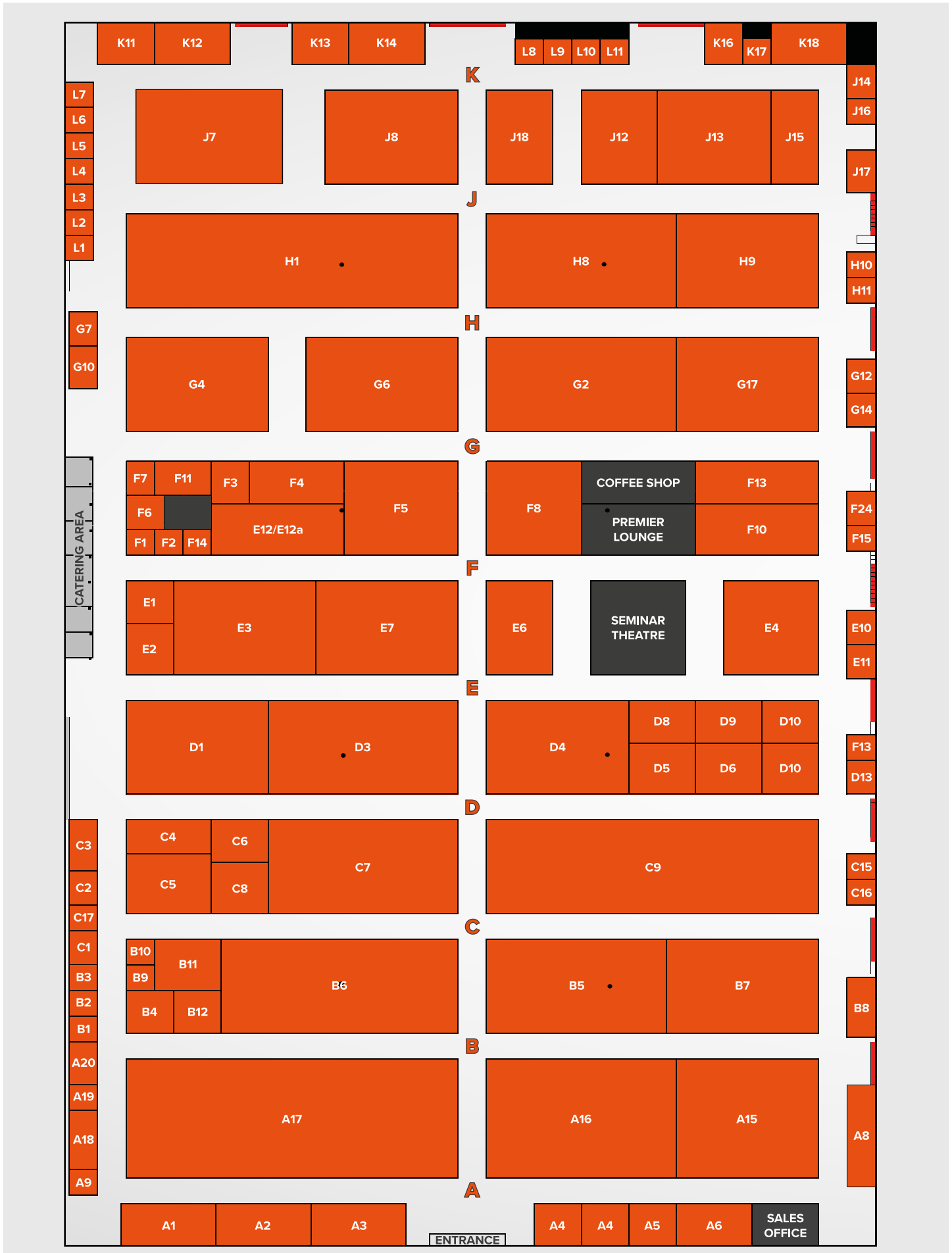


MTMA SA



MTMA SA

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HALL 6



SCAN TO DOWNLOAD
FLOORPLAN

EXHIBITOR	STAND
Adams Metalworking Products	H11
Amada	A17
B&R/Stillam	E6
Baypac	C1
Bearing Man Group	F10
Cadmes	A20
Caldeaz Manufacturing Technologies	F1
Chemical Solutions & Innovations	C4
CML Machine Tools	D1
CNC Professional Machine & Engineering	F5
CNC Warehouse	J17
DNE Laser	D4
Durmaziar (PTY) Ltd	B6
Durmazlar (Pty) Ltd	A16
EZCAM/ALIBRE	C2
Fan-Tech Machinery (Pty) Ltd	E12a
FANUC	G4
FENES S.A.	B3
Fiber Laser Cutting Machining/Mactech	B7
Filtermist	H10
Flexilube	OS1
Flexilube (Pty) Ltd	K14
French Engineering Works	K13
Garsin Steel Tube and Pipe	B2
Gencsi Machine Tools (Pty) Ltd	D13
Guhring Cutting Tools	C5
Hermle/Top-Tool	A1
Hi-Tech Macine Tools	B5
HMR High Tech Machine Tools	G14
Ikusasa	F2
Itouch	A5
Lead Machine Tools	H9
LEEASA	L8
Magnum Machine Tools	C7
Mecad Systems (Pty) Ltd	A8
Metal Chip Machinery Inc.	J8
Multitrade 3D Systems	F13

EXHIBITOR	STAND
Multitrade Distributors (PTY) Ltd	E10
Multitrade Distributors (PTY) Ltd	E11
Nitralife SA PTY Ltd	C3
NSK	B4
PBS Machine Tools	E7
Perfect Laser Technologies	B8
Pferd South Africa	F24
Pinnacle	A2
Protea Machine Tools	C15
Puma Machine Tools	G2
Rapid 3D JV (Pty) Ltd	G12
Renishaw	K16
Retecon (Pty) Ltd	H1
Retecon (Pty) Ltd	G10
Retecon (Pty) Ltd	G7
Retecon (Pty) Ltd	H8
RGC Engineering	G6
SACEEC	F3
SAIMechE	L2
Sasfin Bank Limited	A18
SIMTEQ Engineering (Pty) Ltd	F15
Sol-Tech	F17
Somta Tools	F4
SPHOORTI	C17
Supply Network Africa (PTY)Ltd	L6
Tekenso Ltd	C16
TH Machine Tools	F8
TRM Supplies	D3
Trotec South Africa	A9
WD Hearn Machine Tools	J12, J13, J15
WD Hearn Machine Tools	J14, J16
WD Hearn Machine Tools	K17/H9
World Skills	J7
WR Agencies Pty Ltd	A19
YOMI SUPPLY CHAIN	A15
YOMI SUPPLY CHAIN	A6
600SA Machine Tools (Pty) Ltd	A3



ADAMS METALWORKING PRODUCTS

Hall 6 • Stand H11



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Web: www.adamsmetalworking.com

PERSONNEL AT STAND:

Tobie Enslin – Applications Specialist, Pieter du Toit – Sales Representative, Jason Adams – MD, Jaques Wilkins – Technical/Sales Assistant, David Thompson – Technical Specialist, Mark Green – Sales Representative

PRODUCTS EXHIBITED:

Large range of KENNAMETAL products, showcasing the latest in innovation and “new ways of machining”. KENNAMETAL 3D metal printing powders. Tool Vending System (ToolBoss) – for anyone interested in stock control and reporting of their cutting tool.

PRINCIPALS

Adams

COUNTRIES OF ORIGIN

South Africa

AMADA (UK) JOHANNESBURG

Hall 6 • Stand A17



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Tel: (011) 453-5459
e-mail: rickferreira@amadajhb.co.za
Web: www.amadajhb.co.za

PERSONNEL AT STAND:

Sales and service personnel.

PRODUCTS EXHIBITED:

Fiber Laser with Automation, NCT Punching, Fiber Welding, Electric Bending Machinery, Sawing/Cutting Equipment.

PRINCIPALS

Amada Company Limited

COUNTRIES OF ORIGIN

Japan

B&R 3D SOLUTIONS

Hall 6 • Stand E6



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e-mail: info@brmetrology.co.za
Web: www.brmetrology.co.za

PERSONNEL AT STAND:

Ryan Scott – Director, Bryn Labuschagne – Director, Ruben Page – Support Technician

PRODUCTS EXHIBITED:

3D Printers, Handheld 3D Scanners, Coordinate Measuring Machine, Portable Inspection Arms

PRINCIPALS

Scantech
Tomelleri
Volumic
VShaper

COUNTRIES OF ORIGIN

China
Italy
France
Poland

BAYPAC SOLUTIONS

Hall 6 • Stand C1



Baypac Solutions (Pty)

PO Box 2380, North End, Gqeberha 6056
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PE Office: 36 Slater St, North End, Gqeberha
Tel: (041) 484-2261
e-mail: damian@baypac.co.za
aaron@baypac.co.za
sales@baypac.co.za
Web: www.baypac.co.za

PERSONNEL AT STAND:

Damian Oron, Aaron Raven, Hugo Alberto Monroy

PRODUCTS EXHIBITED:

AVIA Lubricants, Grease, Coolant – Fleet Off & On Highway, Passenger Vehicle, Yellow Machines, AVIA industrial Lubricants – Cutting Fluids, Rust Preventatives, Pressing, Rolling, Molding, Zerust Excor – VCI Centerfold Sheeting, Bags, Paper, Film, Stretch Film, Vapor Capsules, Stretchlock Nanotech- Hand rolls 6,8,10 mic, Machine Rolls 10,12,15,17, 23 mic

PRINCIPALS

AVIA Lubricants –
Industrial & Automotive
Excor Zerust
Stretchlock Nanotech

COUNTRIES OF ORIGIN

Germany
Germany
Asian Countries

BMG (PTY) LTD

Hall 6 • Stand F10



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e-mail: reshmap@bmgworld.net
Web: www.bmgworld.net

PERSONNEL AT STAND:

Reshma Pitamber, Andrew Johns, Len Jacobs, Stephen Allport, Wayne Holton

PRODUCTS EXHIBITED:

Vertical Machining centre, Conventional lathe, Milling machine, Pedestal drill, Bandsaw machine, Indexable drills and carbide inserts, Indexable threading tool holders and carbide inserts, ER collet range, Cobalt drill series, Indexing units, X axis Y axis and Z axis power feeds, Deburring tools, Full carbide cutters, Die springs, Hydraulic machine vices, Machining accessories, Drill sleeves, Drill chucks, arbors, Precision horizontal levels, Granite grade 0 blocks, Toggle clamps, Clamping system tools, Magnetic drill units, annular cutters, grinding stone wheel dressers, coolant hose sets, machine mounts, bandsaw blading, drill bushes, ejector pins, keyway broaches.

PRINCIPALS

Curvomark
J Hassey Savage
J Tools
Loc-Line
Maxpower
Mitutoyo
Porta
Primero machines
Rong Fu
Rotabroach
TA
TA Turnmaster
Yes Tools

COUNTRIES OF ORIGIN

USA
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Korea
USA
Various
Japan
Portugal
Taiwan
Taiwan
UK
China
Korea

CADMES

Hall 6 • Stand A20



PO Box 8295, Centurion 0046
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Tel: (012) 880-3159
e-mail: info-ZA@cadmes.co.za
Web: www.cadmes.co.za

PERSONNEL AT STAND:

Xander Ramos, Nigel de Bruin

PRODUCTS EXHIBITED:

SOLIDWORKS: 3D parametric design software, CAMWorks: CAM software fully embedded in the SOLIDWORKS interface

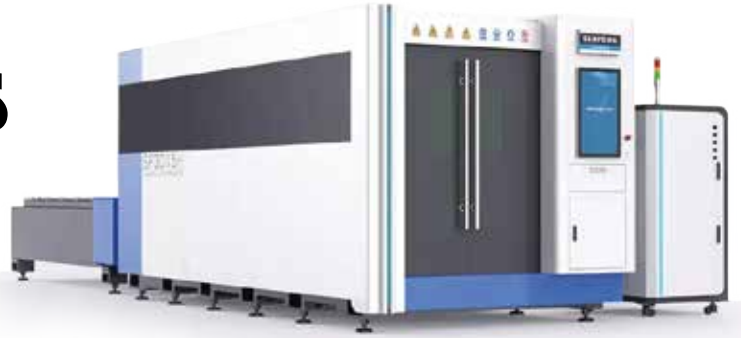
PRINCIPALS

CAMWorks: HCL Technologies Limited
SOLIDWORKS: Dassault Systèmes

COUNTRIES OF ORIGIN

USA
France

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- Laser power: 1.5kw to 6kw



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SF1000HWM

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Tel: (021) 510-4546
Fax: (021) 510-4556
e-mail: duncan@cgragencies.com
Web: www.cgragencies.com

PERSONNEL AT STAND:

Dave Cresswell, Duncan Rawkins, Johan Janse van Rensburg, Marek Wnuk, Anna Abramek-Jastrzebska

PRODUCTS EXHIBITED:

Bandsaw machines for metal cutting, bi-metal bandsaw blades, annular cutters, rotary burrs and countersinks, end mills and drill bits.

PRINCIPALS

Fenes SA Cantoni Group

COUNTRIES OF ORIGIN

Poland

CHEMICAL SOLUTIONS & INNOVATIONS (PTY) LTD

Hall 6 • Stand C4



PO Box 12540, Centrehill, Gqeberha 6000
35 Kurland Rd, Perseverance, Eastern Cape
Tel: (041) 585-5578
e-mail: grant@csi-africa.co.za
Web: www.csi-africa.co.za

PERSONNEL AT STAND:

George Swart, Andrew Laurens, Peter McErtean, Ndumiso Myeza, Armand Nell, Danel Swart, Adelle Muller

PRODUCTS EXHIBITED:

Quaker Houghton metalworking fluids, Potenza Oil range

PRINCIPALS

Potenza Oil
Quaker Houghton

COUNTRIES OF ORIGIN

South Africa
USA



DNE.

A MEMBER OF BYSTRONIC

Hall 6 • Stand D4



13 Berne Avenue, Aeroport, Spartan, Kempton Park 1620

Tel: (011) 410-0200
e-mail: info.za@bystronic.com
Web: www.dne.co.za

PERSONNEL AT STAND:

Andre Jansen van Vuuren, Robyn van Rensburg, Hannes Pretorius, Quinton Jansen van Rensburg, Melvin Howard, Neil de Beer

PRODUCTS EXHIBITED:

DNE Fiber Laser, DNE Fiber Laser Welder and Software.

PRINCIPALS

Bystronic Sales AG
DNE. A member of Bystronic

COUNTRIES OF ORIGIN

Switzerland
China

FANUC SOUTH AFRICA (PTY) LTD

Hall 6 • Stand G4



PO Box 219 Isando 1600
17 Loper Ave, Aeroport Industrial Estate, Spartan
Tel: (011) 392-3610
Fax: (011) 392-3615
e-mail: sales@fanuc.co.zaa
Web: fanuc.co.za

PERSONNEL AT STAND:

Marc Mahl, Willem van der Merwe, Danie du Plessis, Bernhardt de Kock, Demas Oosthuizen, Stephan le Roux

PRODUCTS EXHIBITED:

FANUC Robodrill Machining Centre, FANUC Robocut Wire EDM, FANUC Roboshot Plastic Injection Molding Machine, FANUC CRX Collaborative Robot Series, FANUC Industrial Handling and Arc Welding, Robots, FANUC Zero Down Time IoT Software, FANUC MT Link i IoT Factory Monitoring software.

PRINCIPALS

FANUC Corporation

COUNTRIES OF ORIGIN

Japan

FRENCH ENGINEERING WORKS (PTY) LTD

Hall 6 • Stand K13



73, 10th Road, Kew 2018
Tel: 082-441-5924
e-mail: dcameron@few.co.za
Web: www.few.co.za

PERSONNEL AT STAND:

Jenny Thobois, David Cameron, Natasha Williams, Devin Dean, Jessica Fletcher, Mdu Thembani, Patricia Phakathi, Baleseng Ranamane, Ashleigh Levin

PRODUCTS EXHIBITED:

Taps, Dies, Tap wrenches and die stocks, Allied lines, Drills, counterbores and countersinks reamers, Milling cutters, Toolbits, Recoil, Broaches, Gauges, Solid carbide cutters and drills

PRINCIPALS

Dave Cameron
Jenny Thobois

COUNTRIES OF ORIGIN

India
South Africa

FILTERMIST

Hall 6 • Stand H10



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e-mail: jonathan@wtsolutions.co.za
Web: www.wtsolutions.co.za

PERSONNEL AT STAND:

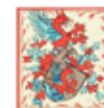
Jonathan Vermaak, Filtermist representative

PRODUCTS EXHIBITED:

Filtermist UK – the industry-proven solution for eliminating oil mist from manufacturing environments, trusted by world-leading manufacturers since 1969.

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PERSONNEL AT STAND:

Attila Gencsi, Balint Jozsa

PRODUCTS EXHIBITED:

Manual lathe machine, Manual milling machine, Feed motor, Oil lubrication pump, Digital Readout system

PRINCIPALS

Attila Gencsi

COUNTRIES OF ORIGIN

South Africa

GUHRING

Hall 6 • Stand C5

GUHRING

Unit 2, 30 Golden Dr, Morehill, Benoni 1501
Tel: 087-015-0200
e-mail: info@guhiring.co.za
Web: www.guhiring.com/za

PERSONNEL AT STAND:

Technical, Sales, Marketing, Director

PRODUCTS EXHIBITED:

Mould & Die solutions, Drilling, Milling, Threading, Reaming, Grooving & Parting, Special tooling and reconditioning service, Guhring Tool Management Systems TM326 and TM-Minibox, Gundrills, PCD Tools, Tool holders & Claming devices, Countersinks

PRINCIPALS

Guhring

COUNTRIES OF ORIGIN

Germany

HI-TECH MACHINE TOOLS (PTY) LTD

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PO Box 931, Bedfordview 2007
16 Nguni Dr, Longmeadow West, Modderfontein
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Web: www.hitech.co.za

PERSONNEL AT STAND:

Come and meet the Hi-Tech staff as well as our partners from Mazak, Hofmann & Vratny, Albrecht, hyperMill and Blaser Swisslube

PRODUCTS EXHIBITED:

Hi-Tech will be showcasing three Mazak CNC Machines: the Mazak Variaxis C600 5-Axis Vertical Machining Centre, the Mazak HCN 6800 Neo 2 Pallet Changer Horizontal Machining Centre and the Mazak VCN 600 Vertical Machining Centre. Hi-Tech will also have our various metalworking

products on the Mazak CNC Machines. Hofmann & Vratny carbide cutting tools held by Albrecht Precision Chucks. 5th Axis workholding to hold the various parts. Blaser Swisslube coolant for tool lubrication and cooling. hyperMILL CAM software for the best programming solution and our Freddy Products vacuum for coolant cleaning.

PRINCIPALS

5th Axis Workholding
Albrecht Precision Chucks
Blaser Swisslube
Freddy Products
Hofmann & Vratny
hyperMill CAM Software
Mazak CNC Machines

COUNTRIES OF ORIGIN

USA
Germany
Switzerland
UK
Germany
Germany
Japan

IKUSASA CNC TRAINING CENTRE

Hall 6 • Stand F2



11 Sunrock Close, Sunnyrock, Germiston 1401
Tel: (011) 663-2600
e-mail: info@ikusasatraining.co.za
Web: www.ikusasatraining.co.za

PERSONNEL AT STAND:

Holly Potterton – Training Coordinator, Zicci Prins – Trainer

PRODUCTS EXHIBITED:

G-Code Training, Machine Setting Training, EDGE CAM Training, Mastercam Training, ALPHACAM Training, RADAN Training, Microsoft Excel Training, Microsoft Word Training, Microsoft PowerPoint Training, Microsoft and PC Training

LEAD MACHINE TOOLS

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Web: www.leadmachinetools.co.za

PERSONNEL AT STAND:

Mark Burn, Athol Murray, Math Robson, Mathew Noah

PRODUCTS EXHIBITED:

Microdynamics – Tera 50V, Hwacheon – Cutex 180 BL SYNC, SINO SP 1020 bridge machine, SINO SHL 60P-500

MAGNUM MACHINE TOOLS

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59 Goodwood Rd, Pinetown 3610
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Web: www.magnumtools.co.za

PERSONNEL AT STAND:

Cyril, Sean, Dave, Glen, Edward, Rowena (Weida), Ni (Weida), David Hamberger, Mech-Tech staff

PRODUCTS EXHIBITED:

Double column machine centre, VMC1160 with 4th axis, Smart Machine NL3000BL, Smart Machine NL4000L, SL 10 Lathe, Bendicrop, Plate Rolls, 160 Ton CNC press brake, Fiber Laser machine

PRINCIPALS

160 Ton CNC press brake
Bendicrop
Double column machine centre
Fiber Laser machine
Plate Rolls
Smart Machines
SL 10 Lathe
VMC1160 with 4th axis

COUNTRIES OF ORIGIN

China
Spain
China
China
China
South Korea
China
China

MECAD

Hall 6 • Stand A8



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e-mail: marketing@mecad.co.za
Web: www.mecadmf.com

PERSONNEL AT STAND:

Justin Theunissen – Product Manager SigmaNEST, Mats Booysen – Product Manager Mastercam, Robert Milne – Business Development Engineer Mastercam and Robotmaster, Emile de Jager – Business Development Executive SigmaNEST, Hanlie van Tonder – Marketing Manager

PRODUCTS EXHIBITED:

SigmaNEST: Shopfloor, business automation and sheet metal nesting software
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PRINCIPALS

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Robotmaster: Hypertherm Associates
SigmaNEST: Cambrio

COUNTRIES OF ORIGIN

USA
USA
USA

METAL CHIP MACHINERY

Hall 6 • Stand J8



174 Galjoen Rd, Wadeville, Johannesburg
Tel: (011) 476-7506
e-mail: malcolm@metalchipmachinery.co.za
Web: www.metalchipmachinery.co.za

PERSONNEL AT STAND:

Metalchip staff

PRODUCTS EXHIBITED:

HSG 12kV Laser, MVD Pressbrake, Coastone C9 Pressbrake

PRINCIPALS

Coastone
HSG
MVD

COUNTRIES OF ORIGIN

Finland
China
Turkey

MULTITRADE 3D SYSTEMS

Hall 6 • Stand F13



Unit 8, Firgrove Industrial Estate, 4 Blend Crescent, Somerset West, Cape Town 7130
Tel: 084-810-9281
e-mail: info@multitrade3d.com
Web: www.multitrade3d.com

PERSONNEL AT STAND:

Management & engineers

PRODUCTS EXHIBITED:

Metal Additive Manufacturing and supplies the best metal 3D Printing solutions, Meltio M450 3D Printer, Components

PRINCIPALS

AMAZEMET
GE Additive
Meltio

COUNTRIES OF ORIGIN

Poland
Spain
Germany



MULTITRADE DISTRIBUTORS

Hall 6 • Stand E10& E11



2 Peter Road, Illiondale, Edenvale 1609
Tel: (011) 453-8034
e-mail: info@multicarb.com
Web: www.multitradedistributors.co.za

PERSONNEL AT STAND:

Management, Sales and Marketing team

PRODUCTS EXHIBITED:

Tungsten Carbide cutting tools and tool holders from DIAEDGE, Moldino, D'Andrea, Union Materials, ARNO Werkzeuge & NT TOOLS

PRINCIPALS

Arno
D'Andrea
DIAEDGE (by Mitsubishi Materials)
NT TOOLS
Moldino
Union Materials

COUNTRIES OF ORIGIN

Germany
Italy
Japan
Korea
Germany
Italy

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e-mail: sales@pbsmt.co.za
Web: www.pbsmt.co.za

PERSONNEL AT STAND:

Paul Savides, Alroy Savides, Cheryl Cocking, Stephen Phipps, Madeline Mothiba, Paul Green

PRODUCTS EXHIBITED:

CNC Lathe, CNC Mill, OEE and Management software, Machine accessories

PRINCIPALS

Tong-Tai
Honor Seiki
APEC CNC
PCI
Anger Machining
PoLy Gim
CMS Industries
Top-Turn
XYZ Machine Tools
Ercolina

COUNTRIES OF ORIGIN

Taiwan
Taiwan
France
France
Austria
Taiwan
Italy
Taiwan
UK
Italy

Pedrazzoli
Exact Machinery
Piranha Clamp

Italy
Taiwan
Switzerland

PFERD - SOUTH AFRICA

Hall 6 • Stand F24



PO Box 588, Kempton Park 1620
32 Derrick Rd, Spartan, Kempton Park
Tel: (011) 230-4000
e-mail: info@pferd.co.za
Web: www.pferd.co.za

PERSONNEL AT STAND:

Roelof Strydom, Conrad Young

PRODUCTS EXHIBITED:

Industrial abrasives, including files, TC burrs, bonded abrasives – including stones, grinding discs and cutting discs. Coated abrasives, including sand paper and fibre discs

PRINCIPALS

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COUNTRIES OF ORIGIN

South Africa
Germany

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Web: www.pumamachinetools.co.za

PERSONNEL AT STAND:

Mike Lee, Gábor Veress, Brad Thomson

PRODUCTS EXHIBITED:

JFY Laser Machine BFC & 3015, JFY Press Brake TPR8 150 x 3100, JFY Press Brake TPE8 50 x 1500, Cosen Saws G300, IMECA Barfeeder Advantage 66, DN Solutions DVF 5000, DN Solutions Lynx 2100 LSYB, DN Solutions DNM 5700, DN Solutions GT 4100 LC, DN Solutions DNT 2100 MB

PRINCIPALS

Cosen Saws
DN Solutions
JFY International

COUNTRIES OF ORIGIN

Taiwan
South Korea
China

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Web: www.rapid3d.co.za

PERSONNEL AT STAND:

David Bullock, Pauline Bullock, Nik Ivanovic

PRODUCTS EXHIBITED:

3D Printers, Additive Manufacturing Solutions, 3D Scanning Hardware, Reverse Engineering Software

PRINCIPALS

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EOS
Geomagic
Markforgeds
Materialise

COUNTRIES OF ORIGIN

EU
EU
USA
USA
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Web: www.retecon.co.za

PERSONNEL AT STAND:

Christopher Kroeger, Hans-Peter Neth, Remando Strydom, Bradley Crafford, Graham Rome, Neels Engelbrecht, Mark Hoffman, Maritz Herrmann, Jacob Makgai, Hendrik Ras, Hannes Botha

PRODUCTS EXHIBITED:

TRUMPF TruBend 5320, TRUMPF TruBend 1150, TRUMPF TruBend 1225, TruLaser 100 6kW, Alpha Laser AL FLAK, Alpha Laser ALM 300, DMG MORI M1, Hexagon CMM Global Lite, Hexagon Tracker, Hexagon 2x Absolute Arms, ViciVision Prima, Tube Inspect V8, MSS Nitrocube

PRINCIPALS

Alpha Laser
DMG-MORI
Hexagon M1
MSS Nitrogen Inc
Trumpf
ViciVision

COUNTRIES OF ORIGIN

Germany
Germany
Switzerland
UK & USA
Germany
Italy

THE SOUTH AFRICAN CAPITAL EQUIPMENT EXPORT COUNCIL

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SA CAPITAL EQUIPMENT EXPORT COUNCIL

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Web: www.saceec.com

PERSONNEL AT STAND:

Sharon Wakeling – Business Administrator

PRODUCTS EXHIBITED:

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e-mail: info@simteq.co.za
Web: www.simteq.co.za

PERSONNEL AT STAND:

Paul Naude – Managing Director, Gerrit Visser – Technical Director, Zak Fourie – Senior Engineer, Benja van der Walt – Senior Engineer, Wian Smith – Engineering Intern

PRODUCTS EXHIBITED:

Engineering Simulation Software and CAE technology of Hexagon | MSC Software, Moldex 3D and ESI. Engineering services, training and knowledge transfer.

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Web: www.spectra-sa.co.za

PERSONNEL AT STAND:

P. Sekar (Sphoorti), Dave Goodman (Spectra), Dalton Van Niekerk (Spectra)

PRODUCTS EXHIBITED:

BOT (Bolt on Turret) Holders for boring bar holding & 'U' Drill holding in slotted type tool disc mainly with single spindle machines. BMT (Base Mount Turret) Holders with static & driven/live holders for turning & turn mill machines with single spindle/double spindle machines. VDI (European standard holders as per DIN 69880) Holders for turning & turn mill machines with single spindle/double spindle machines. Sphoorti Tool Holders are suitable for any make/any model of any CNC Lathe/Any CNC Turning center & CNC Turn mill centers with any type of turret with BOT/VDI/BMT/VTP. VDI & BMT Driven/Live Holders of Drill & Mill Head – Radial/Right Angle/"90"degree and Drill & Mill Head – Axial/Straight/"0"degree.

PRINCIPALS

Spectra Carbide Tooling Technology
Sphoorti for Sphoorti Products

COUNTRIES OF ORIGIN

South Africa
India

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Web: www.spectrumafrica.co.za

PERSONNEL AT STAND:

Vaughn Hanwith-Horden, Johann Nel, Ray Wilson, Jaun Petzer, Jenny O'Connor, Charnell Petzer, Benjamin Nel

PRODUCTS EXHIBITED:

Hyundai-Wia – KF5600II Vertical Machining Center & SE2200LSY CNC Lathe with robot. Durmazlar –AD-S 30135 4 Axis Press Brake. BODOR – T230 Tube Laser 6kW & P4 4000 x 2000mm 30kW Flat Bed Laser. Dangbu Shukong – 200MSY CNC Lathe.



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PRINCIPALS

BODOR
Dangbu Shukong
Durmazlar
Hyundai-Wia

COUNTRIES OF ORIGIN

China
China
Turkey
South Korea

STILLAM CNC PROGRAMMING SOLUTIONS

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Web: www.stillam.com

PERSONNEL AT STAND:

Ryan Scott – Director, Bryn Labuschagne – General Manager, Shaid Booyesen – Support Technician, Clever Mbava – Support Technician, Lynn Clark – Manager, Jamie Morrillion – Admin, Annelize Henning – Admin, Peter Labuschagne – Sales

PRODUCTS EXHIBITED:

EDGE CAM Software, ALPHACAM software, DESIGNER Software, RADAN Software

PRINCIPALS

Hexagon

COUNTRIES OF ORIGIN

United Kingdom

TH MACHINE TOOLS CC

Hall 6 • Stand F8



102 Chopin St, Hartbeespoort 0216
Tel: (012) 259-1375
e-mail: sales@thmachinetools.co.za
Web: www.thmachinetools.co.za

PERSONNEL AT STAND:

Management and Sales Staff

PRODUCTS EXHIBITED:

CNC Machining Centres, CNC Turning Centres, Band saws, Conventional Lathes, Section Benders, Conventional Milling Machines.

PRINCIPALS

Bekamak
DWK
Hugong
Hurco
Sahinler
SYIL

COUNTRIES OF ORIGIN

Turkey
China
China
USA
Turkey
China

THMT
Yangli

Taiwan/China
China

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PERSONNEL AT STAND:

Thys, Pierre, Guenter, Serena, Matt, Birgit, Divan, Grant, Judith, Thomas, Riaan

PRODUCTS EXHIBITED:

Fiber Laser HGLaser and consumables, Laser welder, Pipe bender, Intelaser, Plasma cutter and consumables, Press brake

PRINCIPALS

Hugong
Hypetherm
Kaisen
Olymtech
Yangli

COUNTRIES OF ORIGIN

China
Netherlands & USA
China
China
China

RUBBER STAMP AND ENGRAVING T/A TROTEC LASER SOUTH AFRICA

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e-mail: info@troteclaser.co.za
Web: www.troteclaser.com

PERSONNEL AT STAND:

Martin Swart, Francoise de Roubaix, Pieter Kleynhans

PRODUCTS EXHIBITED:

Fiber laser, CO₂ flatbed laser, Laser consumables

PRINCIPALS

Trotec

COUNTRIES OF ORIGIN

Austria

WD HEARN MACHINE TOOLS (PTY) LTD

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Web: www.wdhearn.co.za

PERSONNEL AT STAND:

Ray Cooper, Graeme Cooper, Johan Neveling, Mark Burn, Marius Conradie, Peet Buitendag, Math Robson, Athol Murray, Eric de Keuker, Myles Crusthwaite, Simon Griffiths

PRODUCTS EXHIBITED:

Kitamura 4G, Nakamura Tome SC-100 x2, Mitsubishi WEDM, Leadwell V-30, V-42, V-50L & T-8XL (four models), MAHR equipment, Glory Star Laser GS 3015 CE 6kW.

PRINCIPALS

Glory Star
Kitamura
Leadwell
LK Metrology
MAHR
Nakamura Tome
Renishaw

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Tel: 072-157-6003 / 061-525-3060
e-mail: info@mt600sa.co.za
Web: www.mt600sa.co.za

PERSONNEL AT STAND:

Richard Poalses, Johnny Pierdica

PRODUCTS EXHIBITED:

Takisawa EX-108II CNC lathe, LNS-Fedek DH-65L bar feed, Pratt Burnerd chucks.

PRINCIPALS

Bridgeport
Colchester
Gleason
Hardinge
Jesco
LNS-Fedek
Maple Technology
Pratt Burnerd chucks
Proth
Quaser
Takisawa
Takumi
TJR Rotary Tables
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EFFORTLESS CHATTER ELIMINATION IN MACHINING FROM NAKAMURA-TOME

When you come across chatter, how do you get rid of it?

Chattering in machining is the unwanted harmonic vibration of a workpiece and a cutting tool caused by several reasons. Chatter ruins machining precision and reduces productivity. Even though your machine has high rigidity, it happens. Here are a few things that you can do to mitigate chatter:

- Fix work holding
- Shorten up your tool holder
- Shorten the stick out of your tool
- Change the programming
- Modify the cutting speed and feed rate
- Add fixturing and support for the part

However, it is hard to find out the specific reason for the vibration. Even if you could eliminate chatter, another problem would occur. For example, when you change the cutting speed, it often affects your cycle time.

Therefore, as machinists, chatter is our common enemy. We want to mitigate it as soon as possible and do not want to ruin our day. This is why Nakamura-Tome's Chatter Canceller is a wonderful feature; it is a handy, effortless and a quick solution against chatter.

Why Chatter Canceller?

The Chatter Canceller suppresses chatter by accelerating and decelerating the speed of spindle rotation periodically. When chatter occurs during machining, you may usually adjust the spindle override to avoid vibration. However, you need to be there in front of the machine to operate the control panel. This function automates such operations.

The Chatter Canceller stands out with its easy programming. It can be executed by inserting two lines of M code between a machining command.

STREAMLINE GEAR CUTTING PROCESSES AND ENHANCE PROCESS INTEGRATION OF MANUFACTURING

Gears are essential components for transmitting power in machinery. Machining gear parts demands high precision, and there are several dedicated machines specially designed for this purpose, such as hobbing machines. These machines are commonly utilized across various industries, including automotive and construction machinery.

However, factory managers and workers often face issues with many setups and jigs due to process division or a shortage of skilled workers. Additionally, there is a need for sufficient floor space to accommodate multiple dedicated machines, but space is limited.

A multitasking machine can change this situation because it performs turning, milling and gear cutting in a single process. Integrating these processes significantly reduces setup changes, contributing to more efficient production. Moreover, machining quality remains at the same level as that achieved with dedicated machines.

Cont. on page 28



Of course, no matter how good the machine or the program is, if the work holding is not good, vibration will be generated physically. Therefore, the work holding is fundamentally important. In addition, chatter can be solved by changing the cutting condition of OD and ID turning or adjusting the length of the stick out of the tool, but if you use the Chatter Canceller, you can easily eliminate the vibration and reduce the impact on the cycle time and tools. So, we strongly recommend you use this function.

The Chatter Canceller is standard equipment on models except the TW-8, SC-200, SC-200L, SC-250, SC-450 and SC-450L. In addition, this function has been equipped with machines since May 2021.

*For more information,
please contact WD Hearn – Tel: 021 534 5351.*

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automation system **as option.**

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- 6000rpm Left & right Spindles

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Cont. from page 26

Gear Hobbing

- ▶ High-volume parts
- ▶ Outer gears

Turret Hob *Tool Spindle Hob*

Gear Skiving

- ▶ Low to high-volume parts
- ▶ Outer/Inner gears
- ▶ Wall on gear end

O.D. Skiving *I.D. Skiving*

Hobbing or Skiving

Both processes are gear-cutting methods, each with its advantages. Hobbing is suitable for manufacturing high-volume parts and external gears, while skiving is used for producing parts ranging from low to high volume, for both outer and inner gears and when machining closer to the walls on the gear end.

Hobbing, skiving, and other cutting methods enable multitasking machines to produce various types of gears, such as Spur Gears and Helical Gears.

The following section will introduce software that supports programming for these gear-cutting processes.

Enhance Programming Support by “Smart Support”

The software solution, “Smart Support,” simplifies the creation of specialized machining programs developed by Nakamura-Tome through a conversational programming interface.



The latest update to the software introduced a gear hobbing function and users can now effortlessly create dedicated programs by inputting variables according to the provided guidelines. To enhance user-friendliness, the software incorporates graphical images.

Moreover, the software boasts a hob shift function similar to those found in specialized hobbing machines. This feature allows users to shift the contact face of the hob cutter, thereby extending the tool’s lifespan significantly.

There is a new video showcasing JX-250 and the gear machining capabilities, which provides a clearer understanding of the software’s capabilities in action.

Click to watch video

At last, this software includes other cycles that enable users to create specialized programs quickly and easily.

Measurement Cycle

- ▶ C-axis Work Navi (1 point)
- ▶ C-axis Work Navi (2 points)
- ▶ Z-axis Work Navi (1-4 points)

Cutting Cycle

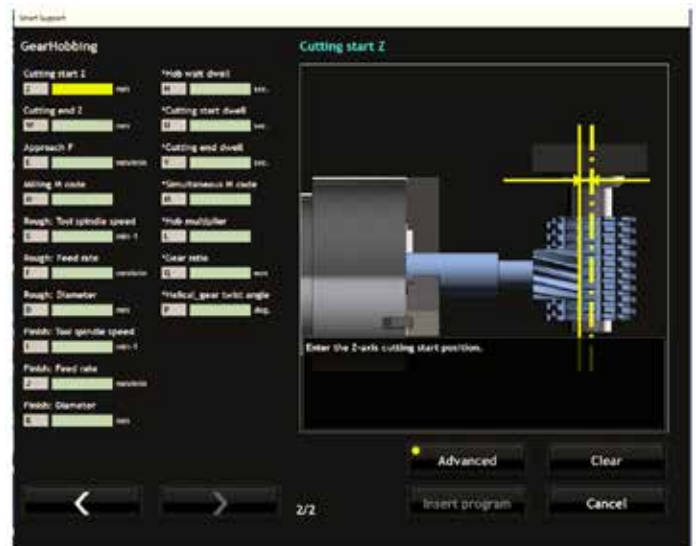
- ▶ Long-drill Hole
- ▶ Gear Hobbing
- ▶ Cross-hole Chamfering

Cutting Support Cycle

- ▶ Spindle Tailstock
- ▶ Turret Steady Rest
- ▶ Turret Tailstock



Gear hobbing setting screen.



Hob shift setting screen.

For more information, please contact WD Hearn – Tel: 021 534 5351.



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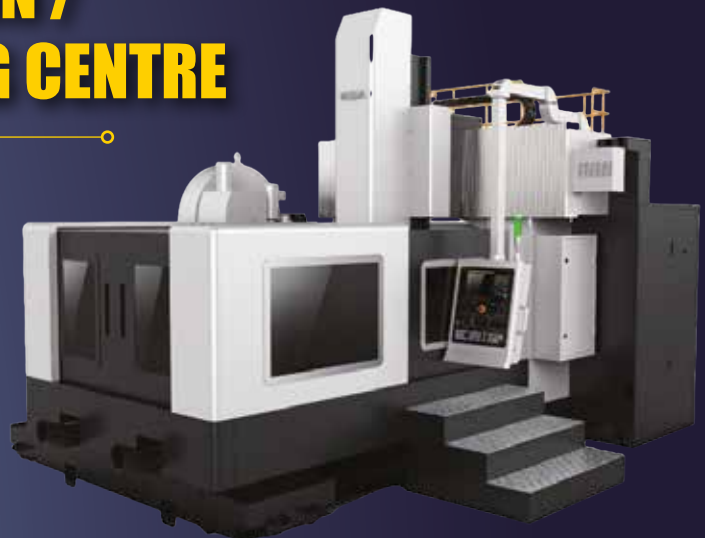
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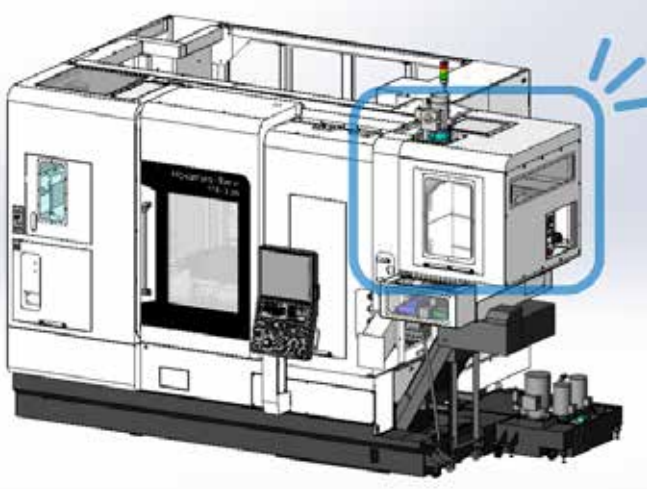
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UPGRADED AUTOMATION SYSTEM MAKES MX-100 FASTER AND MORE ACCURATE

In today's manufacturing industry, there is a growing need for high-precision production within tight deadlines. However, there are problems, such as the challenge to find highly skilled and experienced operators. Additionally, for the installation of automation equipment, such as a gantry loader or robot, extra floor space is required.

To solve these problems, Nakamura-Tome introduced the 'Compact Loader servo' as a gantry replacement, offering a built-in automation solution for the MX-100 machines.



WHAT IS COMPACT LOADER SERVO?

The Compact Loader servo is a built-in automation system that is mounted on the MX-100 and performs loading and unloading.

The following points have been extended from the conventional Compact Loader:

- Servo motors on all axes
- Enhanced positioning accuracy
- Increased number of the teaching point setting
- Faster travel speed

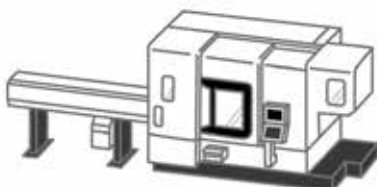
Workpiece Size	
Diameter	Ø20~130mm
Length	20~110mm
Weight	3.0kg x 2

The Compact Loader servo has two grippers, and the maximum transport weight for each hand is 3.0 kg in case of 2-piece operation. Workpiece size ranges from 20 mm to 130 mm in diameter and 20 mm to 110 mm in length.

BENEFITS OF COMPACT LOADER SERVO:

Compact layout with minimum ceiling height limitation

As its name suggests, the Compact Loader servo is specially designed to save space. This means that even after being mounted on the MX-100, the height of the machine remains the same, allowing for easy installation even in factories with limited ceiling heights. Unmanned operation is achievable by using the Compact Loader servo and additional automation equipment as described below.



• Example 1: Compact Loader servo + Bar Feeder

The Compact Loader servo and a bar feeder can be used together. The bar feeder supplies a blank

bar material, while the Compact Loader servo unloads bar remnants or finished parts, serving as a parts catcher.

• Example 2: Compact Loader servo + Work Stocker



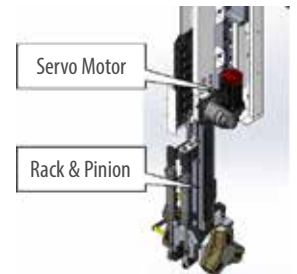
By operating the Compact Loader servo and a work stocker such as HAKO-BEI together, finished parts can be stored even during night-time operation without an operator.

Incorporating the Compact Loader servo with other automation equipment can extend automated operations further while minimizing the additional space required.

Enhanced positioning accuracy with servo motors on all axes

The newly developed Compact Loader servo is incorporated with servo motors on all axes, including the vertical axis handle, ensuring a higher positioning accuracy of ± 0.1 mm.

Installing servo motors on all axes allows users to specify teaching points. Up to 40 teaching points can be set for a workpiece. Moreover, teaching points for up to 500 pieces can be stored as fixed form.



UP and DOWN axis	
Positioning	± 0.1 mm
Repeatability	± 0.1 mm

Reduce cycle time with faster loading and unloading

The servo motors on all axes enable the quick loading of blank materials and unloading of finished parts while maintaining precise positioning, achieving a 23% speed boost in loading/unloading.

Travel speed is **23% faster!**

	Compact Loader	Compact Loader servo
Loading	6.8 seconds	5.2 seconds
Unloading	6.8 seconds	5.2 seconds

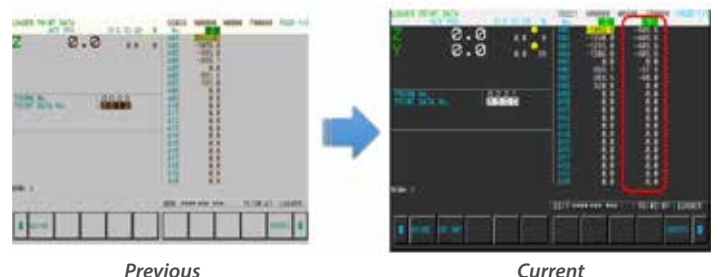
Easy and fast operation for anyone

You can operate the Compact Loader servo with the NT SmartX. Simply switch the Y-axis setting of the Compact Loader servo from "Parameter setting" to "Point setting." No need to install new software or input complicated programs.

Finally, the Compact Loader servo offers valuable insights for customers considering automated operations with the MX-100. Movements and features can be observed in the following video.

[Click to watch video](#)

Change from "Parameter setting" to "Point setting" Compact Loader Y-axis



For more information, please contact WD Hearn – Tel: 021 534 5351.

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E-BRAKE 50-130T ULTRA

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- More than 30% higher productivity
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- No harmful hydraulic oil
- Noiseless operation
- Full working length backgauge
- User friendly touch screen control

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H-BRAKE HYBRID 110-170T ULTRA

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- High dynamic Y-axis control
- More than 30% higher productivity
- Quiet operation
- Up to 50% energy saving
- Deep throat as standard for maximum bending capacity (510mm)



H-BRAKE HYBRID 110T-1600 PREMIUM

- Very high tonnage density
- Hybrid drive system
- Low oil volume (18 litre)
- Noiseless press brake machine
- More than 30% higher productivity
- Backgauge over full working length
- High dynamic Y-axis control
- Up to 50% energy saving



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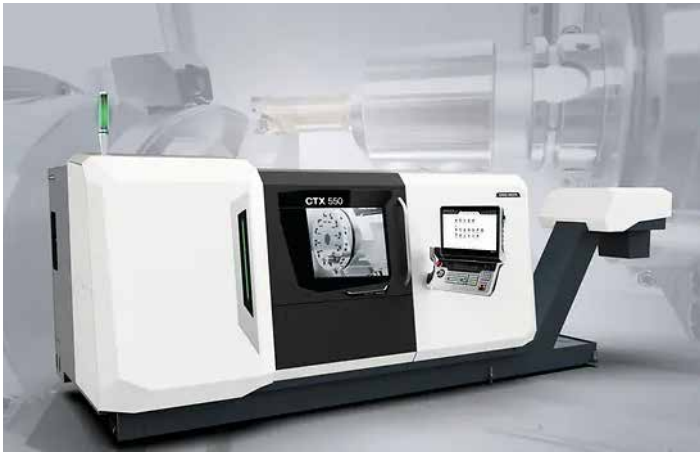
- Complete touch screen convenience
- Run on a PC under Microsoft Windows[®]
- Another step towards a paperless working environment



PERFORMANCE, PRECISION AND FLEXIBILITY IN THE PREMIUM SEGMENT

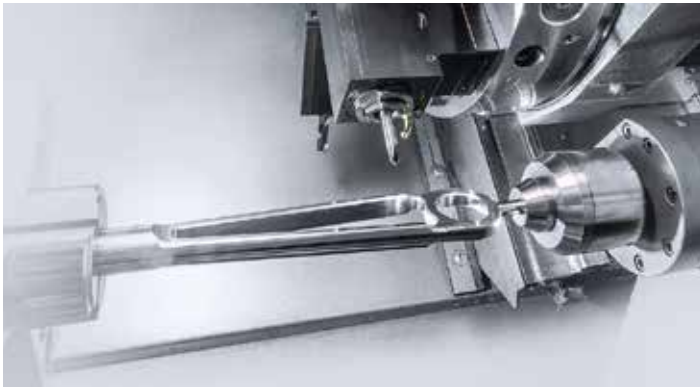
The powerful universal turning machines CTX 450 and CTX 550 from DMG MORI offer maximum machining versatility on the way to the manufacturing of the future.

With the CTX 450 and CTX 550, DMG MORI presented at EMO 2023 the two larger sister models of the CTX 350 introduced at Open House Pfronten during the same year. The CTX brand stands for powerful and flexible universal turning machines with a high level of equipment diversity in an attractive price segment. For example, the CTX 450 and CTX 550 feature a main and counter spindle as well as a Y-axis with 130 mm travel. This enables complete 6-sided machining of complex workpieces. A turning diameter of \varnothing 480 mm and a turning length of 800 mm or 1,225 mm for the CTX 550 offer maximum flexibility for components.



The CTX 450 and CTX 550 combine productive manufacturing processes, future-proof automation options, app-based control and energy-efficient machine operation.

In the premium segment of universal turning the CTX 450 and CTX 550 are perfect companions for 6-sided complete machining of demanding workpieces which makes them important tools with a view to the Machining Transformation (MX), with which DMG MORI is shaping the future of manufacturing. Its four pillars of Process Integration, Automation, Digital Transformation (DX) and Green Transformation (GX) are reflected in the CTX 450 and CTX 550. The efficient 6-sided complete machining can be automated in various ways – for example with the Robo2Go or



The CTX 450 and CTX 550 have a main and counter spindle as well as a Y-axis with 130 mm travel. This enables the 6-sided complete machining of complex workpieces.

the MATRIS. The universal turning machines can be easily integrated into company networks with the highest safety standards.

The app-based control with a 24" multi-touch screen simplifies digitization on the shop floor. Energy-efficient operation is ensured by modern drives such as the synchronous spindle motors.

High technological standards for performance and accuracy

The CTX 450 already has a main spindle with 4,000 rpm and 360 Nm. The main spindle of the larger model achieves 770 Nm at a speed of 3,250 rpm. The counter spindle has a speed of 5,500 rpm and a torque of 192 Nm (CTX 550: 4,000 rpm and 360 Nm). The turnMASTER spindle concept with three (ISM80) or four bearings (ISM102) ensures the high precision of the two universal turning machines and a large bar capacity (80 mm or 102 mm). The positioning accuracy in the C axis is 0.001°. The X and Y axes are equipped in standard with a direct measuring system by MAGNETH, while air/oil cooling for turret gears minimizes temperature deviations. As top performance option a direct drive turret with a speed of up to 10,000 rpm and a torque of 42 Nm allow demanding cutting operations and high-speed milling.

*For further information,
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BMT: Built-in Motor Turret



BMT
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- + Reduced energy loss
- + Displacement amount:
Previous model (5,000 min⁻¹) 3.05 μm → NLX 2500 (10,000 min⁻¹) 0.43 μm
- + Turret temperature increases: Compared with conventional machine 1/10 or less
- + Vibration amplitude: Compared with conventional machine 1/3 or less



PUMA DNT SERIES GLOBAL STANDARD TURNING CENTER

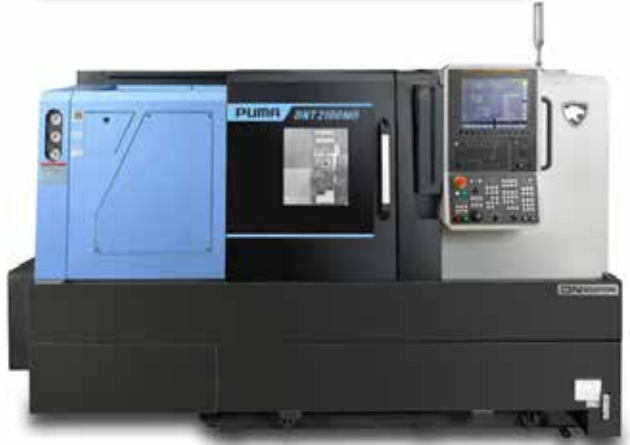
If you need a heavy-duty standard turning center, the newly designed PUMA DNT machines with their high performance spindles and large work areas, give you a best-in-class, high-productivity turning solution.

Improved user-friendly features include no chip accumulation in the internal machine space, an inverter type chip conveyor, a user-friendly operation panel and a steady rest installation that is easy to retrofit.



Highlights include a redesigned box guideway and impressive spindle power, while the PUMA DNT brings stability to its impressive cutting capabilities.

More diversity and outstanding productivity is promoted with 10ST, 12ST and 24ST turret options, high torque spindle option, various tailstock types and a servo auto door for automation option.



For further information, please contact PUMA MACHINE TOOLS – Tel: 011 976 8600.



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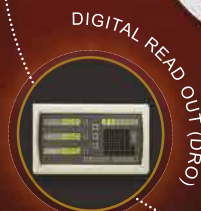
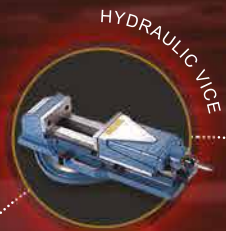
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- Induction hardened and ground bed
- Precision hardened and ground gears in headstock



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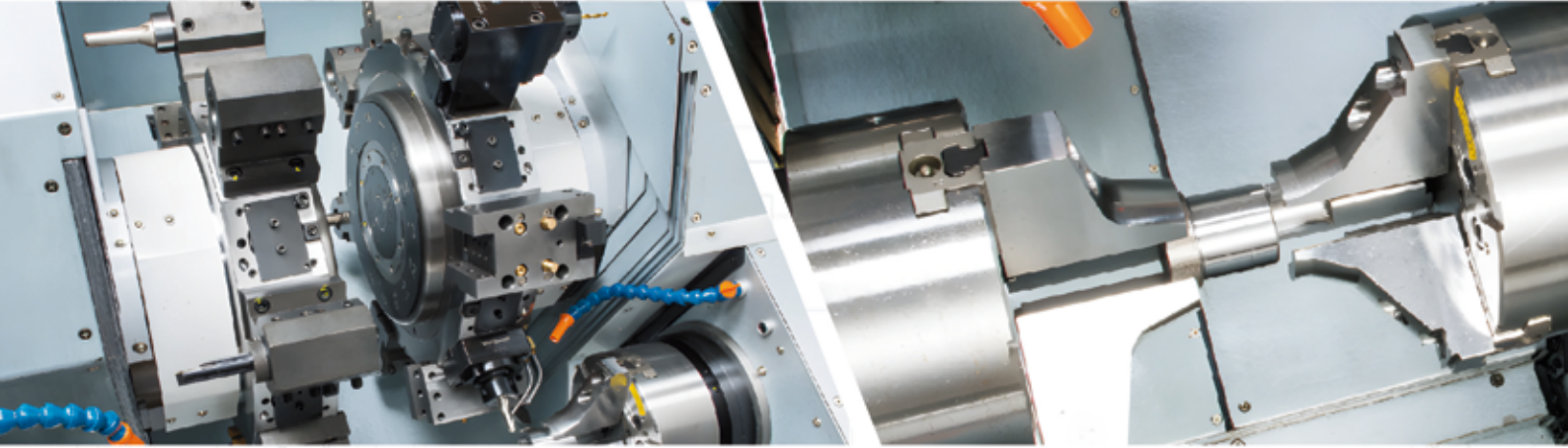
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LATEST HURCO CNC TURNING CENTRES FROM TH MACHINE TOOLS

TH Machine Tools, South African Agent for Hurco, has some of the latest Hurco turning centres, featuring the newest controls in its showroom. While TH was appointed official agent in 2019, the company has already been working with Hurco going back to 2015. Over the years TH personnel have received extensive training at Hurco in the UK and thus are perfectly equipped to support and assist customers in South Africa with any problem they might encounter. TH is looking forward to presenting the latest Hurco technology to existing and new customers alike.

Hurco has helped TH Machine Tools to continue working with existing clients across the country and establish new connections. This continued connection has helped multiple clients to purchase more machines and to add new equipment to continually grow their capabilities.

TH Machine Tools has an extensive range of machines available from Hurco, not just focusing on large manufacturing plants. Smaller machine shops may be interested to know that herculean centres like the TMX12Mi have many smaller brothers to choose from, like the TM6i, which has a turning length of 340mm.

This range of options allows clients to easily find a machine that not only fits their budget but can perfectly fit within their available space. Add to this the unique and intuitive WinMax interface that allows for quick and easy operation.



For more information, please contact
TH Machine Tools – Tel: 012 259 1375.



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TMXMYSi 4-Axis (X/Z/C/Y) + Live Tooling
+ Sub Spindle



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2/3/4/5 – AXIS CNC TURNING CENTRES

HURCO

TMX10MYSi Y-axis + Sub Spindle

Max turning length:	824.5 mm
Max turning ϕ :	375 mm
Spindle through hole:	78 mm
Travels X/Z/Y/W:	305/670/ \pm 55/740 mm
Rapid traverse rate X, Z, Y, W:	24/30/12/30 m/minute
Turret stations:	12
Spindle speed:	3,500 / 6,000
Spindle motor:	37.6HP (28 kW) / 23HP (15 kW)



	TM10i 2-Axis	TM8Mi Live Tool
Max turning length:	735 mm	597 mm
Max turning ϕ :	450 mm	256 mm
Spindle through hole:	81 mm	64.5 mm
Travels X/Z:	250/790 mm	198/550 mm
Rapid traverse rate X, Z:	30/30 (m/min)	30/30 (m/min)
Turret stations:	12	12
Spindle speed:	3,000	4,000
Spindle motor:	29.5HP (22 kW)	30.3HP (22.6 kW)

TM6i | TM8i, TM8Mi, TMX8i, TMX8MYi, TMX8MYSi
TM10i, TM10Mi, TMX10i, TMX10MYi, TMX10MYSi | TM12i, TM12Mi

SYIL



	L2 2-Axis	L3 Live Tool
Max turning length:	300 mm	500 mm
Max turning ϕ :	380 mm	380 mm
Spindle through hole:	66 mm	63 mm
Travels X/Z:	190/360 mm	190+10mm/550 mm
Rapid traverse rate X, Z:	30/30 (m/min)	30/30 (m/min)
Turret stations:	8	12
Spindle speed:	4,000	4,000

Options: Y-axis, Sub Spindle



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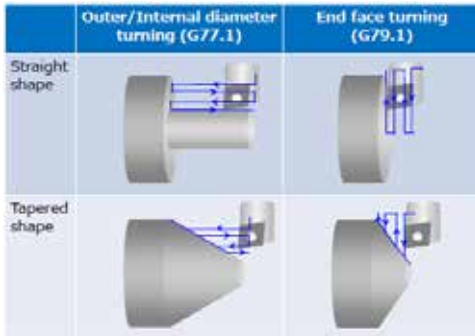
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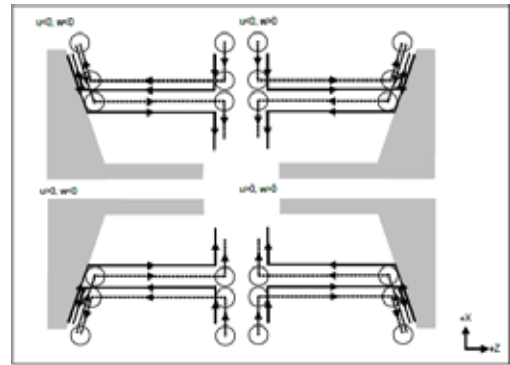
FANUC – NEW FUNCTIONS FOR CYCLE TIME REDUCTION IN TURNING

Low cycle time has become increasingly important in recent years. As such, several tool manufacturers have introduced turning tools that support bi-directional cutting. Bi-directional cutting has been used for years using custom machine tool builder or end-user macro programs, to reduce program run time, and then in turn increasing the machine's output efficiency. FANUC has added new bi-directional canned cycles, to make the use of this new turning method easier and more efficient, without the need for complicated custom programs.



FANUC has introduced two new G-codes specifically to enable the end-user to take advantage of bi-directional tools. Both outer – and internal diameter turning, along with end face turning is supported with G77.1 and G79.1, respectively. These G-codes allow users to execute bi-directional canned cycles using a single block, this fact also shortens programs significantly, which in turn uses less part program storage space.

Tool nose radius compensation is also supported during bi-directional canned cycles with the offset direction changing, depending on the direction of tool movement, without any additional programming. This again enables the machine to operate more efficiently, with the added benefit of becoming easier to program.



For more information, please contact FANUC South Africa – Tel: 011 392 3610.

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USED MACHINES

CNC MACHINES

- SHOPABRE CNC ROUTER WITH TOOL CHANGER, 3500MM X 2300MM WORKING AREA P.O.A.
- CNC PLASMA BED MACHINE, 3000MM X 1500MM P.O.A.
- EFAMATIC CNC CUT OFF & ROLL CLOSE MACHINE, MODEL: C-RM25 P.O.A.

COMPRESSORS

- INDUSTRIAL PISTON TYPE COMPRESSOR, 3 HEAD, 22KW P.O.A.
- PISTON TYPE COMPRESSOR, TANK: 500LT, MOTOR: 11KW P.O.A.
- ATLAS PISTON COMPRESSOR, MOTOR: 5.5KW, TANK: 400LT P.O.A.
- ABC COMPRESSOR, MODEL: 4HA-6LT, BAR-42 P.O.A.
- TEVA COOLING TOWER, MODEL: RMA-130 D ABC P.O.A.
- SULZER COOLING TOWER, TYPE: EWK144/09/30/6 P.O.A.

DRILLING MACHINES

- MEDDINGS BENCH DRILL, 13MM R2 500.00
- MAS RADIAL ARM DRILL, 800MM X 32MM P.O.A.
- MITCO HEAVY DUTY BELT DRIVEN DRILLS, 16MM P.O.A.
- OPTIMUM DRILL PRESS, DH32GS, CAPACITY: 32MM P.O.A.

GENERATORS

- DEUTZ DIESEL GENERATOR, KW: 56 P.O.A.
- CUMMINS DIESEL GENERATOR, KVA: 110, KW: 88, HOURS: 1576 P.O.A.

GRINDING MACHINES

- BRIERLEY DRILL SHARPENER, CAPACITY IUP TO 25MM P.O.A.
- USED OKUMA CYLINDRICAL GRINDER, MODEL: GU 33 900 P.O.A.
- LODI SURFACE GRINDER, TABLE SIZE: 1000MM X 600MM P.O.A.
- MICROSTATIC RATATING GRINDER, TABLE SIZE: 800MM P.O.A.
- SPRINGFIELD VERTICAL INTERNAL GRINDER, TABLE SIZE: 630MM P.O.A.
- PEAR AUP LIP FINDER, MODEL SE1-8728 P.O.A.
- TOS/INEX GRINDER, MODEL BU28, 700MM X 280MM SWING P.O.A.

GUILLOTINES

- HYDRAULIC GUILLOTINE, 4MM X 2500MM P.O.A.
- LVD HYDRAULIC GUILLOTINE, 16MM X 3100MM P.O.A.
- MVD CNC HYDRAULIC GUILLOTINE, 6MM X 4000MM P.O.A.
- EDWARDS MECHANICAL GUILLOTINE, 6MM X 2500MM P.O.A.
- HELI HYDRAULIC GUILLOTINE 10MM X2500MM P.O.A.

IRON WORKERS

- GEKA 55 TON HYDRAULIC IRON WORKER, PUNCH, SHEAR, NOTCHING P.O.A.
- EDWARDS HYDRAULIC PUNCH P.O.A.

LATHES

- TOS CENTER LATHE, 1500MM X 400MM SWING, SPINDLE BORE 55MM P.O.A.
- LAGUN CENTRE LATHE, 1250MM B/C, 56MM SPINDLE, 2 AXIS DRO P.O.A.
- GIANA CENTRE LATHE, 1500MM B/C, 150MM SPINDLE, 800MM SWING OVER THE BED P.O.A.

MILLING MACHINES

- STANDARD TURRET MILLING MACHINE, ISO40 SPINDLE, 5HP P.O.A.

ZALGIRIS UNIVERSAL MILLING MACHINE, BED SIZE:

- 260MM X 1280MM | HORIZONTAL SPINDLE: ISO40 P.O.A.
- KONDIA POWER MILL, BED SIZE: 1100MM X 230MM, R8 SPINDLE, DRO P.O.A.
- STANDARD TURRET MILL, BED SIZE: 1270MM X 300MM, SPINDLE: ISO40, DRO P.O.A.
- ARBOGA MINI DRILL/MILL P.O.A.

PIPE THREADING MACHINE

- MAC-AFRIC, 4" THREADING MACHINE P.O.A.

PRESSES – ECCENTRIC/FLY MACHINES

- MULLER ECCENTRIC PRESS, 60 TON, BED SIZE: 750MM X 520MM P.O.A.
- SAXON ECCENTRIC PRESS, 63 TON, BED SIZE: 700MM X 460MM P.O.A.
- EBS ECCENTRIC PRESS, 60 TON P.O.A.

SAW MACHINES

- RONG FU METAL BAND SAW, MODEL: RF-712DR P.O.A.

SHEET METAL MACHINES

- AMADA CORNER SHEAR, MODEL: CSB220 P.O.A.
- MVD CNC HYDRAULIC GUILLOTINE, 4000MM X 4MM P.O.A.
- USED HACO NC HYDRAULIC PRESS BRAKE, MODEL: ERMS 30-135 P.O.A.
- EDWARDS MECHANICAL GUILLOTINE, 6MM X 2500MM P.O.A.
- SMAC HYDRAULIC GUILLOTINE, 6MM X 3200MM P.O.A.
- USED EXACTILITY HYDRAULIC PRESS BRAKE, 60 TON 3000MM P.O.A.
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- FRAGRAM 14" WOOD CUTTING BANDSAW, MODEL: WA-14 P.O.A.
- SCHIEPPACH SPINDLE WITH FEEDER, MODEL: HF3000 P.O.A.
- BIESSE SINGLE SIDE EDGE BANDER, MODEL: AKRON 1110J P.O.A.
- USED AUSTRALIAN HORIZONTAL MACHINE P.O.A.

MISCELLANEOUS

- TUBE MARKING MACHINES P.O.A.
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INTELLIGENT MANUFACTURING WITH PBS

Bankers are lucky, through interest they can make money even while they sleep. Yet, manufacturing challenges are increasing on a daily basis, so what about your engineering operation?

There are three methods to improve your efficiency:

- **Production Automation:** Wages and salary increases without improvements in efficiency and the decline in young people wanting to work in a difficult work environment that is our industry.

Therefore, production automation reduces labour costs, while increasing value gained through predictable quality and reduced operational errors.

- **Information Automation:** Constant working hours allows for errors due to fatigue and the loss of data when job/ shift handover from one employee to another.

Therefore, information automation will provide transparent information and production status datalization with on time delivery and monitoring of product line from anywhere.

- **Management Automation:** Information misinterpretation across shift changes and too much time spent on data capturing and report writing.

Therefore, data collection by the system reduces human error and digitization management builds up product traceability.

Depending on the variety of products you are manufacturing, it is sometimes difficult finding the right, suitable automation solution.

Mass production of a single product workpiece can be achieved through pairing an individual machine with a robot.

Increased production and quality rates can be achieved by integrating more than two machines that share the process, fixtures and tools.

High-Mix Medium-Volume production can be economically achieved by using a multiple pallet pool or flexible manufacturing systems that enable high frequency exchange of the production line through high accuracy fixture transfer.

High-Mix Low-Volume production means enabling production lines requiring high variety of products to be restructured with high frequency, making it a highly flexible manufacturing system.

The problems when implementing the various levels of required automation are mostly discovered after implementation and can include:

1. Production rates that are lower than expected due to poor utilization rates including robotic idle time.
2. Automation process errors requiring constant stopping, modification and testing due to unattainable targets.
3. Complex data exchange and communication errors when connecting to other systems make integration difficult.
4. Problems with monitoring and management of automation lines that suddenly stop due to equipment or system failures.
5. Lack of quality management that ensures no defective parts are processed and eliminated from the system in time.

The above is where the Tongtai Group of Companies comes into play by using Analysis and Evaluation, Hardware and Software Integration and Datalization Management to assist users to predict and solve potential issues.

The simplest manufacturing can be achieved through using Multi-Tasking machines where you can integrate different processes into a single machine which reduces labour, thus saving money, saving floor space, while increasing production space utilization and reducing the number of operations required. Stability and accuracy is maximized and productivity improved.



What we have learnt working with our customers

In mass production environments change-overs occur least often, if at all. Whereas in jobbing environments change-overs are far more frequent and can cause loss of entire shifts.

One of the biggest losses of time during milling operations occurs during change-over. Changing over from one job to the next involves tooling, fixture, programs and operations. Having a 5-axis milling machine for example with multiple pallets can eliminate this loss of time completely.

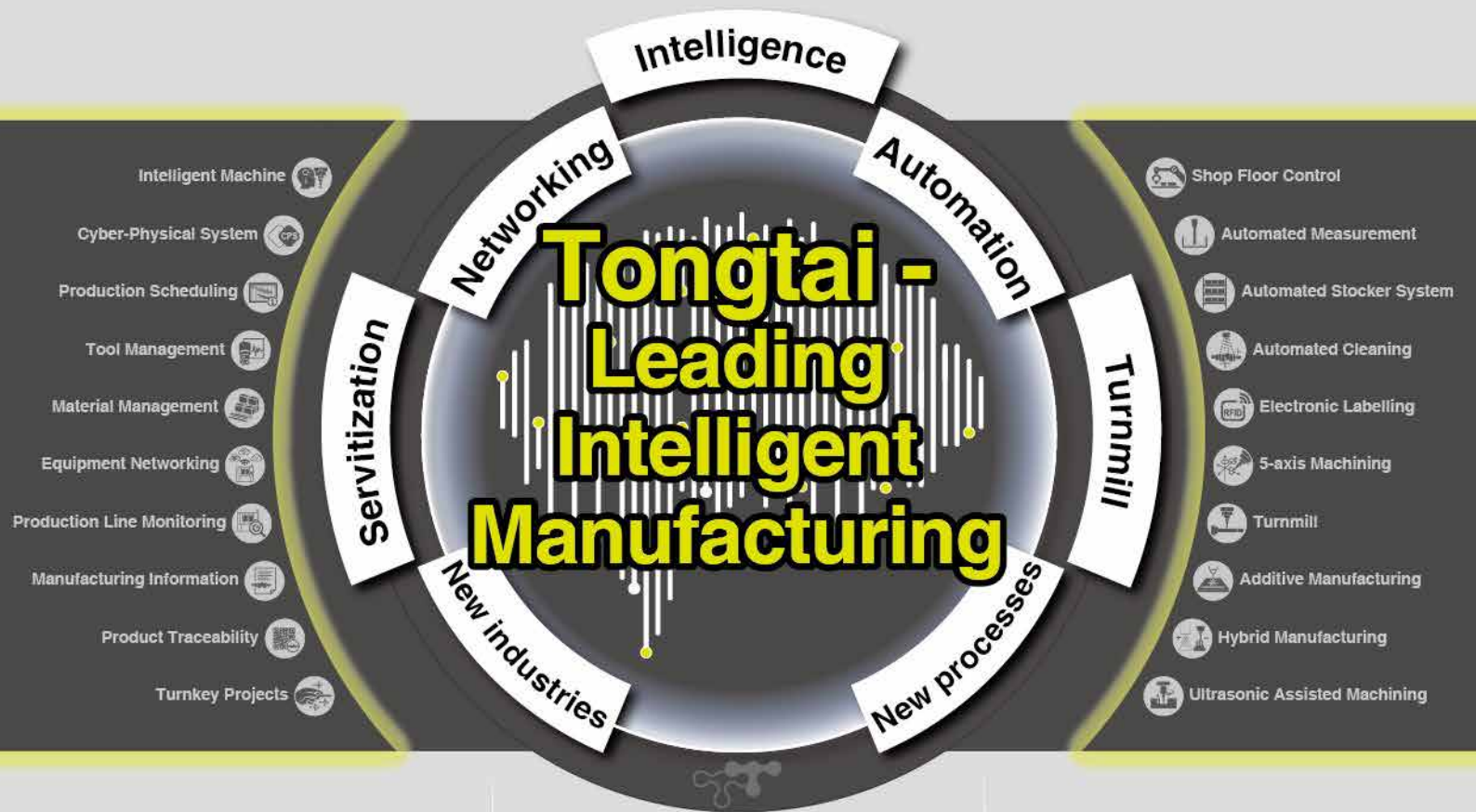
APEC CNC, a member of the Tongtai group recently introduced their new high-speed, heavy-duty model HS-700 Horizontal 5 axis machining centre with multi pallet system at Timtos in Taiwan. This type of machinery can be used as a full 5 axis machine that is capable of machining 5 sides of a workpiece in one set up with an X-axis of 710mm, Y-Axis 910mm and Z-axis 810mm complete with 32, 60 or 120 tools ATC that provides flexibility and variety. In this case a good choice is to fill the ATC with pre-set tooling that can be used in a variety of different jobs and set up multiple pallets that can accomplish increased productivity and allow the machine to work unattended.

We are just a phone call away for a free consultation to discuss your application – and production needs.

[Click to watch video](#)



For more information please contact PBS Machine Tools – Tel: 011 914 3360.

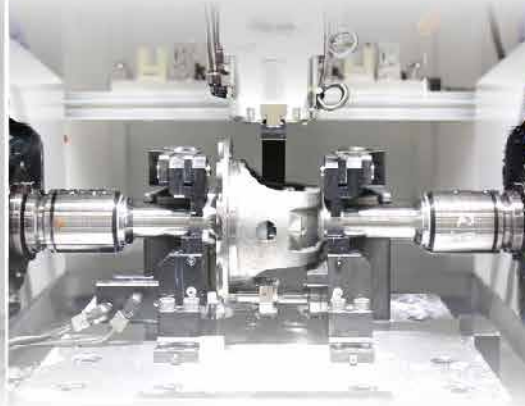


S Standard Machines



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- Horizontal machining center
- 5-axis machining center
- Drilling and tapping center
- Horizontal CNC lathe
- Vertical CNC lathe
- Ultrasonic assisted machining center
- Additive manufacturing equipment

O Options



- Special Purpose Machine (S.P.M.)
- Industry specific machines
- Product customization
- Various functional modules

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I Intelligent Integration



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- Intelligent/Automated solutions for production lines
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MAZAK VARIAXIS C-600 COMPACT 5-AXIS VMC

Yamazaki Mazak's high-accuracy simultaneous 5-axis vertical machining centre, the VARIAXIS C-600, is suitable for a wide range of sectors, including the aerospace and automotive markets.

The VARIAXIS C-600 is characterised by its highly agile performance, with no compromise on rigidity. The compact machine, capable of machining workpieces up to Ø730 mm x H450 mm and 500 kg in weight, has been designed with a large machining envelope and a high-rigidity structure featuring a Ø600 mm fully supported trunnion table with roller gear cam on the B- and C-axes. Exceptional high-speed performance is delivered with 42 m/min rapid traverse rates in the X-, Y- and Z-axes and a chip-to-chip time of just 4.5 seconds to reduce non-cutting time for faster cycle times.

Most importantly, the VARIAXIS comes with a class-leading range of specification options, enabling machine users to configure the C-600 to match their specific application.

The machine's high-rigidity spindle can perform heavy-duty cutting of steel, as well as the high-speed machining of other non-ferrous materials such as aluminium, as it can be configured with four different spindle options. These range from a 12,000 rpm standard spindle, up to 15,000 rpm high-torque option, or 18,000 rpm high-speed and 20,000 rpm high-power spindles. In addition, the VARIAXIS features a 30-tool magazine as standard, complete with double arm automatic tool changer which can drastically reduce chip-to-chip times. Alongside this standard specification, 60, 90 and 120 tool magazine options also available.

The C-600 also employs Mazak's SmoothAi Spindle function, featuring AI adaptive control that suppresses milling spindle chatter by intelligently adjusting cutting technology based on feedback from sensors built into the machine.

The modularity of the C-600 also extends to the variety of coolant packages that are available for different applications up to 70 bar pressure. Dedicated cast iron, aluminium and composite, as well as casting machining packages are also available as options.

While offering excellent operator access and ergonomics, the VARIAXIS C-600 has been designed to integrate easily with a range of automation solutions, such as MPP and PALLETECH. Optional extras such as a side loading door and preparation for hydraulic and pneumatic fixture interfaces are also available to support bespoke automation projects with articulated robots. Integration of automation is further enhanced with the



new Smooth RCC (Robot Cell Controller) adding advanced capabilities, such as tool and fixture capability check, tool set-up and fixture set-up, while the Robot Setup Assist enables efficient programming of the robot in the same co-ordinate system as the machine.

The VARIAXIS is equipped with SmoothAi, Mazak's artificial intelligence control, which has in-built learning capability to continually improve machine performance. SMOOTH MACHINING CONFIGURATION PLUS allows operators to easily adjust features including cycle time, finished surface and machined shape on the CNC display according to material requirements. This is especially effective for complex workpieces with contours defined in small program increments. Specific settings can be saved and stored to allow them to be easily used for future cycles.

The Smooth Project Manager also allows for easy management of data required to execute machining programs such as tool data, fixtures, coordinates, parameters and workpiece 3D models. Further machining accuracy is guaranteed by the new Ai Thermal Shield function, which uses algorithms to automatically determine the volume of compensation needed according to changes in temperature.

MAZAK INTEGREGX J-200

The INTEGREGX j-series multi-tasking machines designed to provide you the maximum value.

The INTEGREGX j-200 is a compact machine designed for large workpieces with maximum machining size of 500 mm diameter and maximum machining length is 500 mm. The orthogonal Y-axis machine construction is the same as INTEGREGX i-150 and INTEGREGX e-series and allows face milling, end milling, and drilling to be performed in the large machining area without C-axis indexing thanks to long Y-axis stroke: 200 mm.

INTEGREGX j-series is designed to meet the requirements of customers who are using CNC turning centres and machining centres while being interested in multi-tasking machines, but feel they are too complicated to operate and expensive. These machines are also ideal for users who need multi-tasking machines with a long Y-axis stroke that are easy to operate and offer high performance in order to quickly produce high



value-added components. Last but not least these machines are for customers who need multi-tasking machines, but without the full range of features found in the other INTEGREGX machines.

For more information, please contact Hi-TECH Machine Tools – Tel: 011 608 0088.



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ADVERTORIAL

MJH MACHINE TOOLS AND VICTOR FORTUNE ASSIST PROSPECT METAL INTERNATIONAL

During the 2022 devastating floods MJH Machine Tools and Victor Fortune collaborated to get Durban based company Prospect Metal International up and running as quickly as possible again. While MJH installed a BML600L Yida CNC Lathe at the company, Victor Fortune supplied a V26 and S26 Lathe.

The BML600L Yida CNC Lathe supplied by MJH features a swing over bed of 600mm and a swing over saddle of 450mm. The distance between centre is 1 394mm and maximum machining diameter 420Ø. The machine which comes at a weight of 5 700kg has a maximum machining length of 1 260mm and height of 1 844mm. L x W is 3175 x 2003mm.



V26 and S26 Lathes supplied by Victor Fortune .



The BML600L Yida CNC Lathe installed by MJH Machine Tools.

Prospect Metal International's strategy is to meet the needs of the ever-demanding global customer base. Therefore continuous investment in latest technology and manufacturing processes is an absolute necessity.

The company supplies TIS standard products and steel bush, collar, tube, ring, yoke, cold drawn steel pipe (seamless) and ERW steel pipe for auto parts. The products are widely used in auto parts and precision industry, such as suspension system parts, shock absorbers, air bags, air compressors, brake parts, engine parts, piston pins, axel parts, frame body and motorcycle parts, headrests etc.

ADVERTORIAL

PULUTE CNC LATHE AT SHUMAR ENGINEERING

MJH Machine Tools recently installed a new PULUTE CNC lathe MODEL CK61100E*6000MM with a FAGOR 8055 control at Shumar Engineering.



The machine comes with a bed width of 755mm, while featuring a maximum swing over bed of Ø1 000mm and maximum swing over cross slide of Ø610 mm. Other features include a maximum work piece length of 6 000mm, maximum work piece weight of 6 000kg and maximum processing length of 5700mm.

Shumar Engineering based in Hattingspruit just outside Dundee and founded in 1957, is a leading manufacturer of coal crushing equipment in South Africa. With a large customer base, Shumar Engineering has been supporting the Sub-Saharan market since its inception. Ever since its first export order in 1996, Shumar's customer base has expanded to include Australia, China and Indonesia. Having designed and patented

the first Double Roll Crusher for the coal market in 1964, the company's policy of continuous improvement allows it to remain a market leader while adapting to ever changing market needs. Using the latest design software and manufacturing processes available, Shumar in recent times has embarked on the development of crushing solutions for both soft minerals and shredders for the recycling industry.

Shumar's unique Double Roll crushing principle and segment design has resulted in improved plant efficiencies as well as increased profitability for its clients by reducing the amount of fines generated through the crushing process. Shumar Engineering's revolutionary Odeca scalping screens were first developed and marketed in 1986.

Shumar Engineering (Pty) Ltd acknowledges the importance of ensuring fair and equitable treatment of all applicants for employment and existing Company employees, by removing discriminatory barriers and introducing positive affirmative action policies and practises. The Company is committed to promoting employment equity and affirmative action. The employment equity policy is implemented in accordance with the Employment Equity Act.



For further information, please contact MJH Machine Tools – Tel: 031 705 7514.

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TAKISAWA MX-800 SERIES

Equipped with twin turrets and twin spindles this is a multi-tasking fully intelligent turning-milling CNC lathe for complex machining.

Opposed left and right spindles and turrets allow independent machining by each spindle/turret system with interchange between the systems to reduce cycle times for highly complex machining, while the compact working area with twin machining stations is designed for flexibility and fast component transfer for highly cost effective machining. Full roller guideways allow higher speeds that shorten cycle times to enhance capability for mass production. Increased distance between linear guideways on each axis improves rigidity and stability for highly accurate machining, while the gantry loading option allows high speed mass production with minimal operator intervention.



Specifications

Maximum Turning length:	250 mm
Maximum Turning diameter:	310 mm
Maximum Bar work capacity:	52 (65) mm
Bearing diameter:	100 (110) mm
Spindle speed:	4000 (3500) rpm
Spindle drive motor:	11/15 (15/18.5) kW
Maximum Spindle torque:	188.2 (242) Nm

An option to equip the MX-800 with a gantry loading system and parts conveyor radically shortens component handling times and coupled with the design of the twin turret/twin spindle system for the highest machining speeds, it provides the perfect solution for high-speed mass production.

For more information, contact 600 SA Machine Tools – Cell: 072 157 6003.

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COST-EFFECTIVE AND STABLE

With the W1011-P, Walter is bringing a copy turning system to the market which will maximise process reliability and cost-efficiency compared to conventional systems. This is primarily thanks to its much greater stability when copy turning with relief grooves of up to 50°. Unlike VCMT and DCMT inserts, the system's new three-edged WL25 indexable inserts are precisely secured in the toolholder by a prism in the insert seat and on the insert itself.

This ensures that the insert cannot move in the toolholder. In addition to high process reliability and precision thanks to highly accurate indexing, both when turning the inserts to the next cutting edge and when replacing them, this provides over 50% greater accuracy when compared to ISO inserts. Moreover, the system increases tool life thanks to the option to machine in both directions of movement, meaning that the two cutting edges can be used.



The copy turning system also uses WL25 indexable inserts, which further increases its cost-efficiency. Three cutting edges, rather than two cutting edges on VCMT inserts, with wear-resistant cutting tool materials in addition to precision cooling improve tool life.

The same applies to the universal usability of the W1011-P system. Its four insert types (neutral, left-hand, right-hand and full-radius versions) for different profiling angles and applications fit into the same toolholder and mean that it can be used for all ISO materials (P, M, S and K).



Potential areas of application include copy turning, e.g. for drive shafts, ball bearings and valves, etc. and dynamic turning, particularly for operations which use a different or alternating machining direction. This allows users to increase cost-efficiency by up to 75% in finishing up to medium machining operations.

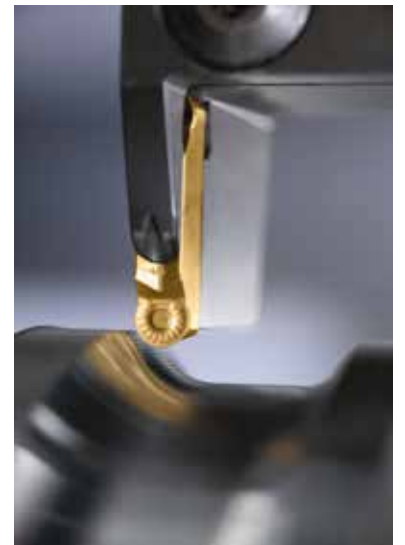
EXTREMELY HARD IN ORDER TO PROTECT AGAINST WEAR

The new Walter Tiger-tec® Gold WSM33G grooving grade.

Walter is one of the world's leading suppliers of precision tools for metal machining. The company is proving this once again with the patent-pending Tiger-tec® Gold WSM33G grade. The WSM33G is Walter's first PVD grade to be specifically developed for the high loads which occur during grooving.

The cutting tool material combines third-generation TiAlN with TiSiN to form a multi-layer coating with exceptional hardness and increased toughness. A special post-treatment reduces friction and ensures a smooth surface, thereby optimising chip removal and process reliability. What's more, the gold top layer makes it easier for users to detect wear. Walter uses the new PVD coating on single-edged SX cutting inserts with positive engagement and a self-clamping system, as well as on indexable inserts from the double-edged DX18 system, where a second prism ensures stability in the insert seat.

For users, the fact that this grade can be used with both systems means maximum versatility because all insert widths between 1.0 and 10 mm are covered. Another advantage of the Tiger-tec® Gold WSM33G grade is its adaptability, even in challenging conditions. The universal grade can be used for 75% of all applications: Grooving and parting off, groove turning and copy turning or slot milling, whether in steel (ISO P30), stainless steels (ISO M30) or materials with difficult cutting properties (ISO S30). The universal application, long tool life and high resistance of the multi-layer coating against plastic deformation and flank face wear make the WSM33G grooving inserts an incredibly productive and reliable choice.



For more information, please contact Spectra Carbide Tooling Technology – Tel: 021 555 4144.



AT THE PARTING OF THE WAYS

Back in the seventies, ISCAR introduced SELF-GRIP, the brand name of the original blockbuster parting tool design concept. According to the design concept of the SELF-GRIP tool, a pressed carbide insert was clamped into a tool blade using the blade's elastic forces without the need for mechanical securing elements. At that time, other manufacturers also attempted to clamp inserts into a parting tool using the same principle. However, it was ISCAR that invented a reliable, truly workable concept that set the benchmark for parting applications.



SELF-GRIP tool.

The SELF-GRIP tool proved to be a game changer in parting. Shortly after its inauguration, similar designs by other producers appeared in the metal cutting market. ISCAR had already established its name as the authority in parting applications and quickly became the unrivalled leader in the industry. Today, there is no question why ISCAR's ongoing inventions of new parting tools attract great interest and deserve such close attention.

In parting, the rigidity of insert clamping is a key factor. The desire to achieve sensible and economical use of workpiece material dictates the ultimate reduction in cutting width. An increase in the diameter of the workpiece leads to the increase of the tool's overhang. The narrow width of the insert and the blade can degrade the tool's dynamic behaviour and ultimately affects machining performance. Improving clamping rigidity and increasing the tool strength to assure effective cutting under unfavourable cutting conditions are key factors when designing a parting tool.

ISCAR's SELF-GRIP tool concept was a breakthrough, which inspires its prolific R&D engineers to continue improving the concept today. The "classical" SELF-GRIP tool line has been upgraded and considerably expanded with new geometries and remarkable approaches to parting metal productively. The evolution of ISCAR's parting tools exemplifies a logical progression of development by use of highly

engineered solutions throughout several generations of R&D engineers.

Pinpointed high pressure coolant (HPC) provides competitive advantages for better parting performance by decreasing temperatures at the cutting zone and by assuring excellent chip breaking, which substantially improves surface finish and prolongs tool life. In machining difficult-to-cut heat-resistant super alloys and austenitic stainless steel, HPC reduces or even eliminates the built-up edge phenomenon. High pressure coolant is highly advantageous in parting operations.

The production of effective inner coolant channels in thin tool blades is a difficult engineering task. ISCAR has provided robust solutions to contend with this problem. One of these solutions is offered through DO-GRIP parting tools, developed several years after the successful launch of the SELF-GRIP tool line. A DO-GRIP tool carries an insert with two cutting edges situated at opposite ends. The edges are twisted relative to each other; thus, the non-working edge does not limit the cutting depth of the tool.



DO-GRIP parting blade with inner high pressure coolant channels.

The PENTACUT family of tools that mount star-shaped carbide inserts were originally designed for parting small-in-diameter workpieces, tubes and thin-wall parts. These cost-efficient inserts provide five indexable cutting edges and a highly economical utilization of tungsten carbide. The inserts are clamped in the insert pocket by a screw that passes through the insert's central hole. The evolutionary stages of the 5 cornered insert proved to be difficult when utilizing PENTACUT inserts for large diameter workpieces. To successfully contend with this task, the insert needed to grow in size which made the task technically problematic and economically impractical.

The solution was found in the PENTA-IQ-GRIP – a family of parting tools that also mounts indexable inserts with five cutting edges. The family enables parting workpieces in diameters of up to 40 mm (1.5"). Due to an innovative dovetail securing principle, the tools utilize relatively small-sized inserts and provide highly rigid clamping which significantly increases tool



PENTA-IQ-GRIP tool with dovetail clamping mechanism provides high pressure coolant supply in two directions.

life, improved part straightness and surface finish in parting applications. In addition, there are PENTA-IQ-GRIP tools with an HPC option.

The SELF-GRIP clamping concept utilized the elastic behaviour of a parting blade. This attribute paved the road for a new and improved parting system which took clamping stiffness to a new level. TANG-GRIP functions on the principle of supreme support for the insert to counteract cutting forces applied on the tool during the operation. The orientation of the slot that functions as an insert pocket was changed compared to the SELF-GRIP tool design, and therefore support is achieved by the long and rigid rear wall of the pocket. TANG-GRIP has a solid stopper, unlike the friction retaining force that characterizes most parting systems that feature a self-clamping insert. This mechanical design feature eliminates insert pull out during retraction. Significantly improved rigidity results in noticeably increased tool and pocket life. Together, with a robust insert design and a reinforced cutting edge, TANG-GRIP enables parting at exceptionally high feed rates, consequently increasing productivity to new extremes.



TANG-GRIP parting tools realize high-rigidity insert clamping.

Cont. on page 54



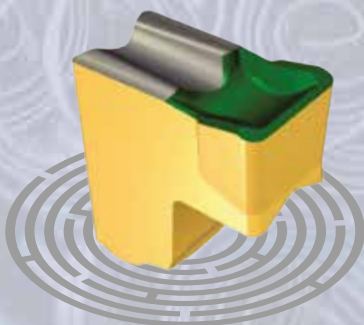
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Cont. from page 52

Notwithstanding, there appears to be another side of the 'parting' coin. Increasing the feed rate causes an increase of cutting force components. The situation worsens when the diameter of a bar and depth of penetration become larger. This results in blade deflection, which can become a significant factor in affecting the application. The method of utilizing Y-axis parting is a way to overcome the problem. The blade is loaded in a manner which is preferable. Y-axis parting is common on multitasking machines with a Y-axis drive assuring appropriate feed motion, yet these machine types are not popular.

Compared to traditional parting along the X-axis, Y-axis parting substantially improves the blade's dynamic behaviour by use of a tangential cutting force. When parting in the direction of radial forces, blade rigidity is reduced. Once again ISCAR's prolific R&D engineers invented a formidable winning solution by introducing LOGIQ-F-GRIP, a new tool family characterized by a square adapter with four inserts mounted on each of its cutting tips. The adapter combines both blade orientations (in X- and Y-directions) which provides a balanced-rigid design. The adapter has 4 insert pockets and substantially prolongs tool life. If one of the pockets is damaged, the adapter can be indexed in a simple manner. The adapter is available with or without an internal HPC option and mounted in a robust

block with reinforced ribs that assure a highly durable parting tool assembly. The impressive rigidity of the system results in highly stable efficient parting at narrow widths of cut, even when used for parting large-in-diameter bars while guaranteeing savings in raw material. The system is suitable for all types of lathes, regardless of whether they have a Y-axis drive.

When searching for the right parting tool, all manufacturers stand at the parting of the ways. ISCAR's milestones in creating revolutionary parting systems prove once again its commitment to advanced solutions to meet customer demands.



LOGIQ-F-GRIP tools open new horizons for parting operations.

NEW TOP-GRIP INSERTS FOR MACHINING CAST IRON



ISCAR introduces new TOP-GRIP TGMA inserts with T-land in the width range of 3-6 mm, suitable for machining cast iron. These new inserts are made from IC5010 SUMO TEC CVD grade.

The frontal and side T-land provide a very strong edge that extends tool life in cast iron applications when compared to the existing TGMF insert.

The combination of the optimized edge geometry and dedicated grade for cast iron, together with the economical advantages of the TOP-GRIP line, provides a winning solution when it comes to performance and price for cast iron grooving applications.

For more information, please contact ISCAR South Africa (PTY) LTD – Tel: 011 997 2700.



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VIBRATION FREE HUSH-BORE – SO QUIET IT’S BORING

TaeguTec’s HUSH-BORE is a head-exchangeable, vibration-free boring bar line for deep internal turning with a damping system in the shank that can achieve deep internal machining by more than 5XBD (bar diameter). This remarkable damping performance allows the workpiece to have very good surface roughness, which prolongs tool life and promotes stable machining. It also means increased feed and cutting speeds, making it a more productive option.



While the depth of machining in internal turning varies based on the type of shank material used, carbide boring bars are suitable up to 5XBD and steel boring bars up to 3XBD. Yet, even with carbide boring bars, deep internal turning is still a very challenging task.

Since its launch, the anti-vibration HUSH-BORE line for deep internal machining has received very positive comments from numerous customers. In response, TaeguTec has added 12xD and 14xD shanks to its line-up of already available 7xD and 10xD shanks, providing even deeper internal turning solutions to the HUSH-BORE’s damping technology.

Shanks for the HUSH-BORE line are available as standard items in seven different diameters (Ø16, 20, 25, 32, 40, 50, and 60 mm) and in four lengths (7XBD, 10XBD, 12XBD and 14XBD). The various exchangeable heads can be securely fastened with serrated couplings located in the boring bars.

While TaeguTec has introduced its top-tier WIN-SFEED technology to the HUSH-BORE boring bar family of highly efficient cutting tools, the launch of a new Ø80 mm shank and a dedicated head has expanded TaeguTec’s reach in the deep internal machining market.

Available in two types, a modular head with standard inserts for machining various materials and an adapter that can machine while fastened to a standard square holder, allowing for relatively large-diameter internal machining.



Additionally, TaeguTec provides specialized sleeves that improve the set-up time of the HUSH-BORE boring bars, making it quick and simple. These specific sleeves with a one-sided slit maintain a robust clamping force and high precision because of their wide contact area when combined

with the new HUSH-BORE shank.

To further diversify the HUSH-BORE family’s range, TaeguTec offers modular threading heads for both 16 IR/L... and 22 IR/L... inserts. The new modular heads are compatible with both HUSH-BORE shanks and C-ADAPTERS with HUSH-BORE head connections.

For internal grooving of deep holes, TaeguTec’s HUSH-BORE uses the highly effective and productive T-CLAMP line of inserts, thereby achieving ranges between 2-6 mm. They can be mounted on the existing HUSH-BORE shanks as well as head-exchangeable C-ADAPTERS.



Although internal grooving negatively impacts surface finish due to vibrations caused by long overhangs, using HUSH-BORE grooving products achieve good surface roughness, even in deep internal grooving of 5xD or higher and offers improved tool life and excellent machining performance.

For more information, please contact TaeguTec – Tel: 011 362 1500.

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THE STATE OF SA'S INDUSTRIAL MANUFACTURING INDUSTRY

With its industrial manufacturing sector contributing significantly to economic growth and the country's GDP, South Africa is a prime manufacturing hub on the African continent.

This is according to PwC's report "Building Avenues for Tomorrow's Industrial Manufacturing Workforce, Today" which also states that around 1.5 million people ply their trade in industrial manufacturing and are witnessing progression at a rapid pace within the sector.

According to Dennis Phillips, National Sales Manager at abrasive manufacturer, PFERD-South Africa, "The fact that global automaker, Stellantis, well-known for brands such as Fiat, Peugeot, Citroën, Opel, Chrysler and Jeep, will start construction of its automotive manufacturing plant in Gqeberha, Eastern Cape in May of this year, affirms that SA is indeed a popular manufacturing destination".

That said, the manufacturing industry is ever-evolving which includes its factories and the employees who operate them. Top-of-mind topics include Sustainability, Digital Transformation, Automation, Additive Manufacturing and Employee Reskilling.

Sustainability

Phillips explains that sustainability in business has evolved from being a mere buzzword to a fundamental strategic imperative. The industry must embrace sustainable business practices to benefit the company and its broader community. Companies need to integrate sustainable practices into their operations to address environmental and social challenges while driving long-term profitability.

"We need to consider all aspects of business to enable a more sustainable future by re-evaluating how we operate. By producing less waste, recycling the waste we do produce and utilising resources more efficiently, we can all commit to limiting our impact on the environment. Embracing sustainability not only enhances brand reputation and stakeholder trust but also mitigates risks associated with resource scarcity. It accelerates innovation, prompting businesses to develop eco-friendly products and services that meet the needs of a conscious consumer base," says Phillips.

PFERD products prioritise sustainability through PFERDVALUE, a dual strategy aimed at promoting worker well-being and resource efficiency. PFERDERGONOMICS focuses on improving operator health by reducing the amount of noise, vibration and dust by the abrasive consumable, ultimately enhancing comfort and safety. Meanwhile, PFERDEFFICIENCY ensures their products use less energy, save time and minimise waste while maintaining optimal performance.



The Industrial IoT

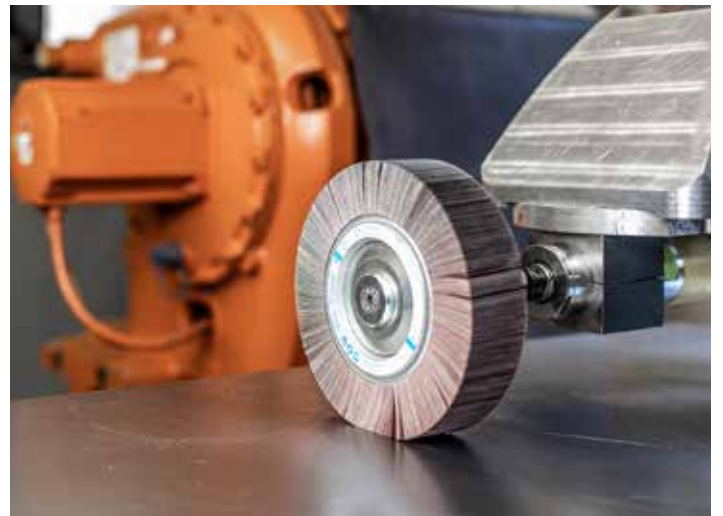
As part of a broader digital transformation strategy, companies have the opportunity to reimagine their utilisation of technology, personnel and procedures to propel their business into new realms.

The Industrial Internet of Things (IIoT) involves the integration of smart sensors, actuators and RFID tags (among other technologies) to enhance manufacturing and industrial processes. These interconnected devices enable the collection, exchange and analysis of data, thereby optimising operations and improving overall efficiency.

In various industries, companies leverage industrial robots and automation to produce goods. By integrating IIoT solutions, they can proactively maintain their systems and identify issues before they disrupt the manufacturing process.

Robotics and Automation

Robotics and automation have revolutionised the manufacturing industry, driving efficiency, precision and productivity. Through the deployment of robotic systems and automated technologies, manufacturers can streamline production processes, optimise workflows and enhance overall operational performance.



These technologies enable tasks ranging from repetitive assembly tasks to complex machining as well as dangerous tasks to be executed with accuracy and speed while increasing output consistency. Additionally, robotics and automation facilitate the integration of data analytics and artificial intelligence, enabling predictive maintenance and real-time decision-making for improved resource allocation and cost management.

As a result, companies can stay competitive in a rapidly evolving global market, meeting customer demands for quality, customisation and speed while driving innovation and sustainable growth within the industrial manufacturing sector.

Phillips notes that although Robotics and Automation are nothing new, the adoption rates of this cutting-edge technology are rising. "At PFERD we've experienced a significant increase in Robotic System Integrators requesting application-based solutions where their customers are deploying Industrial Robot cells within their manufacturing facilities". Globally, PFERD's expertise and experienced Application Specialists have successfully optimised numerous robotic applications that subsequently made significant improvements to their customers' operational efficiency.



Additive Manufacturing - Exciting Opportunities

The utilisation of additive layer manufacturing, commonly known as 3D printing, presents a significant opportunity for manufacturers in South Africa. This technology offers numerous advantages for large-scale production, including rapid prototyping, cost efficiency, customisation of components and shortened lead times.

According to Phillips, there are currently multiple ongoing 3D printing initiatives, such as a proof-of-concept project aimed at constructing affordable housing. "In the metalworking sector, customers utilise 3D printing to produce medical implants and aviation parts, where after they use our abrasives to achieve the correct surface finish and geometries—a critical requirement given the final product's intended use." Furthermore, manufacturers are leveraging 3D printers to fabricate parts for the automotive and power generation industries, showcasing the versatility and potential of this innovative manufacturing technique.

Employee Reskilling for Work of the Future

Employee turnover is a big concern for companies because it's time-consuming and expensive; even more so in the context of smart factories—facilities where 4IR technology is deployed—because of the time it takes the new employee to reach the same level of productivity as the person they replaced.

Therefore, companies, as stated in The World Economic Forum's World of Work Report, are prioritising training their employees to use AI, big data as well as developing their analytical and creative thinking skills.

A study by the Manufacturing Institute's Center for Manufacturing Research looked at the factors that affect retention and a key finding among employees under the age of 30 was that they stay with their

current employer due to the company's training and reskilling programme that allows them to further their careers.

At PFERD, we've come up with various ways to continually train and upskill our staff. Furthermore, we also on-board innovative ways, through our Training Academy, to continue assisting our customers in training and upskilling their staff regarding new ways of using abrasives effectively within their processes.

To remain globally competitive, it's critically important that South Africa upskill its workforce to ensure competitiveness and to help the country continue to attract foreign direct investment", explains Phillips.

About PFERD-South Africa

Dennis says that there are four main manufacturing processes, namely shearing and forming, joining, casting and moulding, and machining. As a leader in the development, production, support and distribution of premium tool solutions for work on surfaces, including cutting, grinding, milling, polishing, cleaning and finishing, PFERD can help manufacturers optimise their processes to ultimately improve operational efficiency.

PFERD has a team of Application Specialists and Technical Sales Advisors who are readily available to evaluate a company's needs and applications. Through proper testing and analyses, they provide expert guidance on the most cost-effective solution to meet each customer's specific requirements.

The PFERD Academy provides operators of abrasive products with the necessary training and skills to improve their knowledge and subsequent performance. By equipping the manufacturing industry's workforce with the necessary skills and knowledge regarding product selection and application suitability, businesses can make the most of their available resources.

For more information contact Pferd Tel: 011 230 4000 or E-Mail: sales@pferd.co.za.

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VOLKSWAGEN GROUP SOUTH AFRICA ON THE ROAD TO BEING CARBON NEUTRAL

VWSA has reduced its environmental impact by 57% since 2010



Aligning with the priorities of the Volkswagen brand worldwide, Volkswagen Group South Africa (VWSA) has set its sights on an ambitious goal for its Kariega plant to become a carbon neutral production plant by 2030.

VWSA is already well on their way to achieving this, putting environmental sustainability first through a range of projects being implemented at its Kariega plant, as well as its sites in Sandton and Centurion.

Under the umbrella of their Zero Impact Factory programme, VWSA has placed its focus on biodiversity, clean energy, efficient resource management and waste reduction, to name a few.

Notably, VWSA has installed solar photovoltaic panels at its sites capable of generating 4 488 MWh of electricity annually, with R34 million invested to date. Additionally, solar panels installed at the employee car park for the Kariega plant will be added to this from September 2024, accounting for an additional investment of R55 million and a further 4 500 MWh in

generation capacity.

Meanwhile, the company’s waste reduction initiatives have delivered impressive results, with a 5% reduction in landfill waste in 2023. VWSA has reduced its cardboard box waste by 17 tonnes and its plastic waste by 46 tonnes in 2022 and 2023. The company also continues its efforts to promote biodiversity through projects such as spekboom planting and the removal of invasive alien plant species at its Kariega sites.

Through all these and other projects, VWSA has already reduced its environmental impact by 57% compared to the baseline measured in 2010. This includes reductions of:

- 56% in energy usage
- 53% in CO₂ emissions
- 73% in use of freshwater
- 76% in waste

VWSA’s long term goal

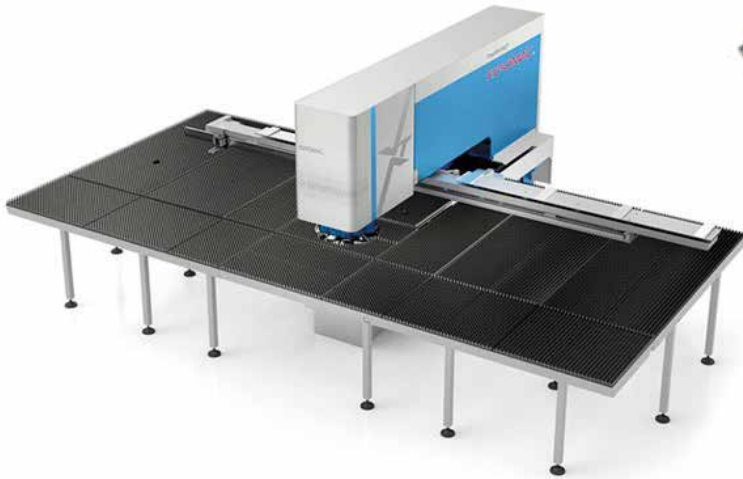
The company was also recognised for its environmental sustainability efforts in 2023, garnering the international Lean & Green Management Award, as well as the SJM Flex Environmental Award at the local Exporter of the Year awards.

“With these results, VWSA is synonymous with environmental sustainability,” said Ulrich Schwabe, VWSA Production Director. “We remain committed to minimising our environmental impact on all possible aspects of our operations, and the results speak for themselves. I am grateful to every employee who has contributed to these achievements. As VWSA we will continue building on the good work that has already been done by our teams, and pave the way to our carbon neutral future.”



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HUSHBORE

ANTI VIBRATION BAR

HUSHBORE line introduces Ø80 head exchangeable anti- vibration boring bars

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 - Good surface roughness and improved tool life
- ◆ Stainless steel shank prevents corrosion
- ◆ Shank diameter: Ø80, length : 7xD,
10xD(available as standard items in 2 types)
- ◆ Available in various dedicated head types
- ◆ Dedicated Adapter use a 20x20 standard square holder
- ◆ Internal coolant type

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