

# METALWORKING NEWS

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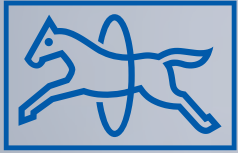
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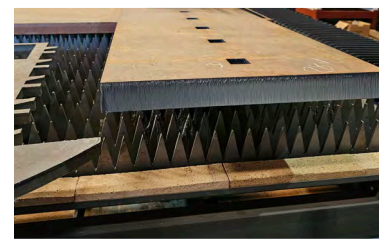
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## This time for (South) Africa

The cliché of reindustrialising the South African economy might be becoming a bit long in the tooth for some, but if you stop trying and stop believing it's possible, then those will be the laurels on which you will rest.

Localised manufacturing will always be a core contributor to a healthy GDP and manufacturing investment requires investor and business confidence to create meaningful economic transformation.

The announcement that South Africa's ferrochrome industry has received a reprieve following the conclusion of new negotiated pricing agreements (NPAs) between Eskom, Glencore Merafe Chrome Venture and Samancor Chrome is to be lauded.

The agreements, built around a reduced electricity tariff of 62c/kWh, provide a three-year pricing framework for the Glencore Merafe Chrome Venture and a five-year agreement for Samancor Chrome. Together, they represent one of the most significant interventions aimed at restoring the competitiveness of a sector that has been under pressure from rising electricity costs for more than a decade.

For ferrochrome producers, electricity is the single largest operating cost. Since 2008, Eskom tariff increases have steadily eroded South Africa's position as a producer of value-added ferrochrome. While the country holds an estimated 80% of the world's known chrome reserves, much of that ore has increasingly been exported in raw form to countries such as China, where it is converted into ferrochrome using lower-cost electricity. The result has been the closure or suspension of many domestic smelters and the loss of beneficiation capacity.

The new pricing framework is intended to reverse that trend. The conclusion of the NPAs enables Glencore Merafe Chrome Venture to restart its Boshhoek and Wonderkop smelters – though this won't be overnight – while providing the business with greater certainty over future operating costs. The company has described the agreement as a critical step towards rebuilding its smelting operations and supporting the long-term sustainability of the sector.

For Samancor Chrome, the longer five-year agreement offers similar certainty, allowing longer-term production planning and investment decisions. Eskom has indicated that although the agreement periods differ, the pricing mechanisms and commercial conditions remain consistent across both companies.

The implications extend beyond the ferrochrome industry. Because ferrochrome is the principal alloying element used in the production of stainless steel, a stronger domestic ferrochrome industry secures local supply chains while supporting downstream manufacturers involved in stainless steel fabrication, mining equipment, construction products, automotive components and industrial plant machinery and wear parts. Stable ferrochrome production also reduces reliance on imported material and strengthens South Africa's manufacturing base.

The agreements also support government's long-standing objective of mineral beneficiation. Exporting chrome ore creates mining jobs, but converting that ore into ferrochrome generates additional employment in smelting, engineering, maintenance, transport and logistics. Every tonne processed locally retains more value within the South African economy than exporting raw ore alone.

There are also benefits for Eskom. The utility retains large industrial customers with predictable electricity demand, improving utilisation of generating capacity and providing stable long-term revenue without placing the full burden on other electricity consumers. Eskom has argued that the agreements balance industrial sustainability with the utility's own financial position while supporting broader reindustrialisation objectives.

The new tariff structure is not a complete solution. South African producers continue to compete against countries with lower energy costs, while global ferrochrome prices remain cyclical. Investment in plant efficiency, technology and reliable electricity supply will remain necessary if the industry is to regain market share.

Nevertheless, the negotiated pricing agreements mark an important shift. Rather than allowing South Africa's chrome reserves to support beneficiation elsewhere, the framework creates an opportunity to rebuild domestic smelting capacity, preserve skilled industrial employment and strengthen the country's position in global stainless steel supply chains. For an industry that has spent years losing ground, these agreements provide a manifesto from which growth can begin once again.

Hopefully the South African Government will consider extending such agreements to other electricity-intensive industries.

## METALWORKING NEWS

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# Does the sender really think we are that stupid?

A recent post on the social media platform LinkedIn was pertinent to most of us as we have to endure many similar emails that flood our inbox every day, besides all the fraud scams that are sent via the Internet or to our cell phone. It is a constant battle that we are all fighting and we have to be fully alert every time we use our computer or cell phone.

When a subject line is Action Required immediately or Incoming Mails have been put on hold on the mailbox or INVITATION TO BID or Project Funding, they immediately present a red flag. Or there are those from the South African Revenue Services with a notice of assessment attached, including a reference number.

We know that many are as a result of your address or number ending up on a list that is sold to the sender who is banking on just one response maybe. I have no clue what is expected for the 'return'. After all the sender has paid money for the list and would be expecting some return on his 'investment'. This is what Iliia Levchenko wrote.

Iliia Levchenko is CEO of Aeris Stream Copper Manufacturing LLC, a copper wire rod manufacturing company based in Ras Al Khaimah, United Arab Emirates (UAE). Ras Al Khaimah (RAK) is the northernmost emirate in the UAE, famous for its dramatic Hajar Mountains, pristine beaches, and rich history. Located about a 45-minute drive from Dubai, it offers a laid-back alternative to its bustling neighbours, blending luxury resorts with world-class adventure tourism.

"I receive more than 200 messages offering copper scrap or copper cathodes. And honestly, it raises a question:

- When did having material become optional?
- Someone sends AI-generated photos.
- Someone offers scrap from a country where scrap exports are prohibited.
- Someone claims to have 5 000MT available, yet has never seen the material with their own eyes."

"And then there are my favourites:  
 "Curious to know if you are..."  
 or

"We have a serious seller with large volumes..."  
 "Three messages later, it turns out they don't know the seller, they don't know the owner, they don't know the location, and don't know whether the material even exists."  
 "The most interesting part? 95% of these messages look exactly the same, have the same structure, have the same promises and the same ChatGPT-generated introduction."  
 "Colleagues, let's make business a little more professional."

- Before offering material, ask yourself:
- Do I know exactly where the material is?
  - Can I verify the quantity?
  - Have I actually seen it?
  - Am I connected to the decision-maker?
  - Can I support a real transaction from start to finish?

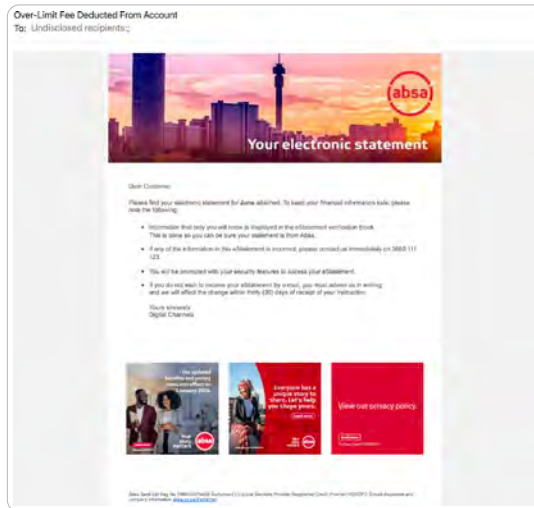
"Because manufacturers don't buy stories. They buy material."

In this case it seems as though Levchenko was not even considering the scam and he was even brave enough to interact with the sender, something I would never do. Maybe he is not as suspicious about these types of interactions and does not have the constant bombardment of someone trying to commit fraud by getting your personal details or banking passwords, as we do in South Africa.

The ones I really 'love' are those that have researched your company and products and would like you to supply product that has nothing to do with your company. Just because the title of the magazine is Castings SA we are not going to pour castings or die cast brackets.

In the case of publishing, we get the PR companies that send press releases out on behalf of their client/s hoping to get blanket coverage but the content of the press release is not even remotely connected to the subject matter of the magazine.

Do they really think we are going to click the links in unsolicited emails or text messages, even if they appear urgent?



**But I don't bank with Absa**



**I have never dealt with you or the Department of Labour**

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cover story

# Under pressure: TaeguTec's solutions for cutting costs in South African machining

**A**cross South Africa's manufacturing sector, the pressure to produce more for less has never been greater. Rising electricity costs, volatile exchange rates, and increasing global competition are forcing machine shops to focus on what truly drives profitability: Efficiency at every level of production.

In this reality, success is no longer defined by output alone, but by how quickly and consistently that output is achieved. Every second of cycle time, every insert edge, and every machine stop has a cost attached to it.

TaeguTec's turning and grooving portfolio – RHINO-TURN, RHINO-M-TURN, RHINO-X-TURN, CUT-SPEED, RHINO-GROOVE and WIN-CUT – is designed precisely for this environment. The objective is simple: Measurable gains in performance that deliver tangible cost savings.

## Where performance meets profit

On the shop floor, two metrics define operational success: Cycle time and tool life. Reduce the first, extend the second, and cost per component drops almost immediately.

TaeguTec's solutions consistently push both in the right direction. Faster machining reduces energy consumption per part – an increasingly important factor locally, while longer tool life cuts down on insert spending



**CUT-SPEED is a stronger, more stable parting solution, featuring a robust clamping structure and a higher-rigidity insert for parting and deep grooving**

and machine interruptions. The result is not incremental improvement, but a meaningful shift in productivity.

## Built for demanding conditions

Heavy-duty applications remain central to South African industry, particularly in mining and energy. RHINO-TURN thrives in these conditions, offering the strength and stability required for aggressive cutting, while delivering excellent dimensional accuracy in a highly cost-effective solution. By enabling higher feed rates without sacrificing reliability, it shortens machining cycles while extending tool life, two gains that directly reduce operating costs.

For workshops managing mixed materials, RHINO-M-TURN simplifies operations. Its versatility eliminates the need for constant tooling changes, keeping production flowing and reducing inefficiencies that quietly erode margins. With double the cutting edges for internal machining, it delivers stable performance and extended tool life.

When speed becomes the priority, RHINO-X-TURN delivers. Designed for high-speed applications, it allows manufacturers to increase output without compromising surface finish or stability. Its innovative 2-in-1 design combines roughing (CNMG) and finishing (DNMG) in a single insert, reducing machining time through high-feed machining. In an environment where energy costs continue to rise, faster cycles translate directly into lower cost per part. ▶



**RHINO-GROOVE** enhances consistency in grooving applications



For workshops managing mixed materials, **RHINO-M-TURN** simplifies operations. Its versatility eliminates the need for constant tooling changes, keeping production flowing and reducing inefficiencies that quietly erode margins



By enabling higher feed rates without sacrificing reliability **RHINO-TURN** offers the strength and stability required for aggressive cutting, while delivering excellent dimensional accuracy in a highly cost-effective solution



**WIN-CUT** provides a practical balance, offering reliable performance at a competitive cost. Featuring reinforced triangular blades, it ensures stable parting and deep grooving with low vibration while maximising productivity through high-feed machining

**Eliminating weak points in the process**

Parting and grooving are often where productivity is lost. Instability, tool breakage, and scrap can disrupt even the most efficient operations.

CUT-SFEED addresses this with a stronger, more stable parting solution, featuring a robust clamping structure and a higher-rigidity insert for parting and deep grooving. This enables deeper cuts and smoother chip evacuation, resulting in a more reliable process with fewer interruptions and significantly improved tool life.

Similarly, RHINO-GROOVE enhances consistency in grooving applications. Its stability reduces vibration and ensures precise results, limiting rework and protecting valuable material, an essential advantage when raw material costs are high.

**Efficiency without excess cost**

Not every job requires premium tooling, but every job demands efficiency. WIN-CUT provides a practical balance, offering reliable performance at a competitive cost. Featuring reinforced triangular blades, it ensures stable parting and deep grooving with low vibration while maximising productivity through high-feed machining. For general turning applications, it delivers steady improvements in both cycle time and tool life, helping manufacturers stay cost-competitive without over-investing.

**A practical approach to cost reduction**

What makes these solutions particularly relevant is how directly they respond to local challenges. Less machining time means reduced strain from

high electricity tariffs. Longer tool life lowers exposure to exchange rate fluctuations. Increased throughput improves competitiveness in both domestic and export markets.

Individually, each improvement is valuable. Together, they create a clear and measurable reduction in cost per component.

**Your partner in cost reduction**

In today's manufacturing environment, efficiency is not an advantage, it is a requirement. TaeguTec's turning solutions provide a focused, performance-driven approach to achieving it. Faster cycles. Longer tool life. Lower costs. Not as promises, but as measurable outcomes on the shop floor.

Contact TaeguTec SA on TEL: 011 362 1500 or visit [www.taegutec.com](http://www.taegutec.com) for more information. ■



**With double the cutting edges for internal machining, RHINO-M-TURN delivers stable performance and extended tool life**

# Hi-Tech Machine Tools' Mini Expo debuts official launch of the Mazak VC-Ez vertical machining center range



**Hi-Tech Machine Tools used the in-house exhibition to officially showcase and launch one of Mazak's latest market offerings – the Mazak VC-Ez range of vertical machining centers. Pictured is the Mazak VC-Ez 510 IP. It has a table size of 1250mm x 492mm and can handle a maximum workpiece size of 1250mm x 492mm x 570mm. The machine comes standard with a 24 tool automatic tool changer and has XYZ travels of 1050mm x 510mm x 635mm**

**H**i-Tech Machine Tools, a staple in the South African machine tool and related equipment supply chain recently held an in-house exhibition at its Modderfontein showroom and offices.

The event was held over two days from 12 – 13 May 2026 and invited new and existing customers to the Hi-Tech Machine Tools showroom to experience and interact with machine tools and their various peripheral components such as tooling solutions, workholding solutions, fluid solutions, recycling solutions and software solutions.

Hi-Tech Machine Tools' technicians and engineers were on hand to answer any questions and provide relevant technical information about Hi-Tech Machine Tools' extensive product range.

## **Official launch of the Mazak VC-Ez vertical machining center range**

Hi-Tech Machine Tools used the in-house exhibition to officially showcase and launch one of Mazak's latest market offerings – the Mazak VC-Ez range of vertical machining centers. Hi-Tech Machine Tools are the sole distributors for Mazak in South Africa.

The range includes three models, namely the Mazak VC-Ez 410 IP, VC-Ez 510 IP, and VC-Ez 610 IP models, and they are highly versatile, heavy-duty 3-axis vertical machining centers designed for high-precision, multi-material part production. Equipped with a 12 000rpm spindle and a BT40

tool shank, the machines have found demand in industries like aerospace, medical, automotive, mould and die, heavy industry as well as the semiconductor industry.

The Mazak VC-Ez range of vertical machining centers are built for high productivity, precision, and ease of use with the Mazatrol SmoothEz control touchscreen, suitable for powerful cutting of steel materials and machining that use small-diameter materials such as aluminium workpieces.

Positioned as entry level machines for Mazak users that still expect the precision manufacturing qualities Mazak machine tools have built their reputation on for more than a century, the Mazak VC-Ez range is manufactured in India by Yamazaki Mazak India Private Ltd., located in Pune district, Maharashtra, India.

Anil Bhardwaj, Managing Director, Yamazaki Mazak India Private Ltd., recently announced that the company has produced more than 1 000 Mazak VC-Ez machines in India since it started its production in 2023.

“Mazak is a global brand and being a Japanese company, we have very strict parameters when it comes to manufacturing machines. We have more than 300 inspection points throughout the manufacturing process of the machines. So the manufacturing process is very strict – our Production Director and our Quality Director are Japanese and they do not allow for deviation of even one micron when it comes to the manufacturing and quality inspection process.” ▶

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**Chris Killian, Sales Director, Hi-Tech Machine Tools, Corinne Killian, Peter Killian, owner and Managing Director of Hi-Tech Machine Tools and Yamazaki Mazak India Private Ltd.'s Deputy Managing Director Makoto Hasuo**

In South Africa for the launch of the Mazak VC-Ez range was Yamazaki Mazak India Private Ltd.'s Deputy Managing Director Makoto Hasuo.

All VC-Ez Series machines have C-frame designs with X and Y axis motion via moving the table and saddle. For rigidity and repeatable part precision, guideway systems use Mazak's Hybrid MX linear roller guide systems, and dual lagged pre-tensioned ball screws ensure precise axis movement. Ball screw core cooling is optional and allows for temperature-controlled cooling oil to circulate through the ball screw cores to ensure stable machining accuracy over extended periods of high-speed operation.

The spindle is equipped with a ceramic ball bearing,

which is lightweight and has low thermal expansion, so high-precision machining with low heat generation is possible.

Hi-Tech Machine Tools showcased the VC-Ez 510 IP during the in-house exhibition. The VC-Ez 510 IP has a table size of 1250mm x 492mm and can handle a maximum workpiece size of 1 250mm x 492mm x 570mm. The machine comes standard with a 24 tool automatic tool changer and has XYZ travels of 1 050mm x 510mm x 635mm.

For increased maintenance free operation, the auger-type chip removal systems provide an economical solution.

Mazak supplies all its Ez Series machines with its Mazak Mazatrol SmoothEz CNC for ease of use and programming. Equipped with "Quick Mazatrol", an improved version of



**Hi-Tech Machine Tools' Quinton Grobler, Chris Killian and Peter Killian with Schunk's Global Distributor Management head, Victor Vashpanov**

Mazatrol programming, programmes can be made intuitively with the 15" touch screen while checking the workpiece shape and work process. If combined with the SmoothCAM Ai software (separately sold), machines on your shop floor can be replicated on your office PC, allowing digital setup of your machine to improve operational efficiency.

The VC-Ez range is compatible with Mazak's Ez Loader and other standard and customised automation solutions designed to enhance employee skills. The Ez Loader is a stand-alone, plug-and-play cobot that uses a pallet, programmable logic controller and all necessary equipment for machine integration.

"On 12 and 13 May 2026 we invited our Mazak users to the launch of the new Mazak VC-Ez 510 IP vertical machining center range. Many good friends and customers arrived at our showroom and were very happy to see the normal high performance metal removal rate of these machines," said Peter Killian, owner and Managing Director of Hi-Tech Machine Tools.

"We had many good comments about the specification of these machines, which included chip conveyor and bucket and through-spindle coolant with 15bar pressure, making this feature idea for u-drilling large diameters, as well as high volume chip removal caused by heavy milling."

"Other features that caught the viewers' attention was the Auto Tool Length Measure and Break Detection, Handheld Coolant Gun, Renishaw Optical Probe OMP-60, as well as the Kitagawa MR200R NC Table," continued Killian.

"We specially machined a large steel billet so that heavy duty metal removal could be witnessed and appreciated by all."

"Another great feature that drew a lot of attention was the Smooth Synchronised Tapping function which allows tapping to be done without a "floating holder", meaning that a normal endmill holder can be used to tap while also allowing the tap to thread right down a blind hole to its bottom."

"In addition, the Tap Retract Function was ready to ensure that taps did not get stuck, and if they did get stuck, the Retract Function could easily do the job."

"Apart from the high-performance metal removal display, our visitors had plenty of time to chat with Mr Makoto Hasuo who visited us from the Mazak India Factory. He spent time with customers who had specific questions about the Mazak VC-Ez 510 IP VMC and Mazatrol features on these machines which are available in the new Mazatrol Smooth EZ CNC, and we received many compliments from existing Mazak users regarding these new machines."

"Many customers also emphasised the fact that the Mazatrol controls accept either Mazatrol programmes or EIA/ISO CAD/CAM programmes or a part programme that contains Mazatrol and EIA/ISO data," concluded Killian.

#### Turnkey shop floor solutions

Correspondingly on display at the event were all of Hi-Tech Machine tools' other turnkey shop floor solutions including hyperMILL CAM software, Schunk's precision work- and toolholding solutions, Albrecht's toolholder solutions, Hofmann & Vratny's cutting tool solutions, Freddy coolant recycling solutions, 5th Axis's workholding systems and Blaser Swisslube's high-performance metalworking fluids.

Also in attendance and available to interact with customers was Schunk's Global Distributor Management head, Victor Vashpanov.

Founded in 1990 by Peter Killian, Hi-Tech Machine Tools hold sole distributor and exclusive agency agreements for some of the most prestigious machine tool and related equipment brands in the world including Mazak, Schunk, Freddy, 5th Axis, Albrecht, Blaser Swisslube, hyperMILL and Hofmann & Vratny.

For further details contact Hi-Tech Machine Tools on TEL: 011 608 0088 or visit [www.hitech.co.za](http://www.hitech.co.za)

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# Somta Tools opens training academy at its Johannesburg sales and distribution facility

Pietermaritzburg, KwaZulu-Natal based Somta Tools, an OSG Group company and the largest cutting tool manufacturer in Africa, specialising in the manufacture and distribution of drills, cutters, reamers, threading tools and toolbits, in both solid carbide and high speed steel, has opened a training academy that will be known as the Somta Academy.

“The focus of the academy is unique, and is what we believe is an important initiative for the industry, in that the Academy will cater for educating and training candidates to become future cutting tool sales and technical experts,” said Warrick Lowther, Somta Tools’ Global Sales Manager.

“In today’s manufacturing environment, standing still is not an option,” continued Lowther.

“Machine shops are under relentless pressure to increase productivity, reduce costs, improve quality, and deliver faster than ever before. Cutting tools have become more sophisticated, machining strategies more complex, and customer expectations significantly higher. Yet across much of the industry, one challenge continues to persist: A widening gap between technical expertise and sales capability.”

“We have recognised this challenge, and more importantly the opportunity it presents. The Somta Academy is far more than a modern training facility. It represents a bold investment in people, knowledge, and the future of manufacturing throughout Southern Africa.”

“At its core lies a powerful belief: When knowledge increases, confidence increases; when confidence increases, performance follows.”

“For decades many tooling sales representatives have entered the industry with limited technical training, often relying heavily on catalogues, product codes, and supplier support. While effective to a point, this traditional approach no longer meets the demands of modern manufacturing. The Somta Academy has been specifically designed to change that,” explained Lowther.

“One of the Academy’s most exciting aspects is its practical, application-driven curriculum. Rather than focusing solely on product specifications, the programme equips delegates with a deep understanding of machining principles, cutting tool performance, and process optimisation.”

“Our training courses will cover fundamental cutting tool technologies and ISO material classifications, advanced tool coatings and substrate technologies, drilling, milling, and tapping applications, speeds, feeds, and machining strategies, tool failure diagnosis and corrective actions, productivity improvement methodologies and real-world manufacturing problem solving.”

“The result will be a fundamental shift in customer engagement. Instead of asking: ‘What tool do you need?’ an academy-trained representative will learn to ask: ‘What manufacturing challenge are you trying to overcome?’”

“That single change transforms the conversation from product supply to process improvement and ultimately creates significantly greater value for customers.”

## Teaching the economics of productivity

“Perhaps the Academy’s most valuable contribution is its focus on helping industry professionals understand the true



**Warrick Lowther, Somta Tools’ Global Sales Manager**

economics of machining. Far too often purchasing decisions are driven solely by tool price. Yet experienced manufacturers know that tooling costs represent only a small fraction of the overall production process. Machine time, labour, spindle utilisation, setup costs, scrap rates, and throughput all have a far greater impact on profitability.”

“The Somta Academy teaches delegates how to quantify these factors and demonstrate how the right tooling strategy can dramatically reduce total production costs. The objective is simple: Stop selling cutting tools. Start improving manufacturing performance.”

## Where theory meets reality

“What truly sets the Somta Academy apart is its commitment to hands-on learning. Knowledge gained in the classroom is immediately reinforced through live machining demonstrations and real-world application testing. Delegates will gather around a high-performance CNC vertical machining center where machining strategies will be demonstrated under actual cutting conditions.”

“Here they can witness tool performance in real time, the impact of cutting parameters on productivity, chip formation and evacuation, surface finish optimisation, tool wear patterns and failure mechanisms and process improvements that directly influence profitability.”

“This practical environment creates an interactive learning experience unlike anything traditionally available within the tooling industry. Distributors, sales teams, customers and technical specialists work together to analyse challenges, explore solutions, and unlock productivity improvements that can be immediately applied on the shop floor.”

#### Building the next generation of industry experts

“The launch of the Somta Academy signals more than the opening of a new facility – it marks the beginning of a new chapter for technical education in the manufacturing sector. Backed by the combined strength of Somta’s proud local manufacturing heritage and the global engineering expertise of OSG Corporation, the Academy creates a platform where international technology meets local industry needs.”

“At a time when manufacturing competitiveness is increasingly dependent on knowledge, skills, and innovation, initiatives such as the Somta Academy become critical drivers of future growth.”



**Somta Tools, an OSG Group company and the largest cutting tool manufacturer in Africa, specialising in the manufacture and distribution of drills, cutters, reamers, threading tools and toolbits, in both solid carbide and high speed steel, has opened a training academy that will be known as the Somta Academy**

“The message is clear. The future belongs to those who understand not only the tool, but the process. With the official opening of the Somta Academy, Somta Tools has issued a challenge to the industry and an invitation. A challenge to raise technical standards. An invitation to learn, collaborate, and innovate. And a commitment to ensuring that manufacturers across the region continue to machine faster, cut smarter, and compete more effectively than ever before.”

Contact Somta Tools on TEL: 011 390 8700 or visit [www.somta.co.za](http://www.somta.co.za) for further details.

## Navigating policy and pricing pressures in South Africa’s ferrous scrap market

Insights into South Africa’s ferrous scrap market have recently been shared on a global platform, with Quintin Starkey, Committee Member of the Metal Recyclers of South Africa (MRA), and Board Member of the Bureau of International Recycling (BIR), contributing to BIR’s Ferrous World Mirror report.

The update highlights how the local recycled steel market continues to operate under challenging conditions, with policy uncertainty and regulatory constraints shaping both

pricing and investment confidence.

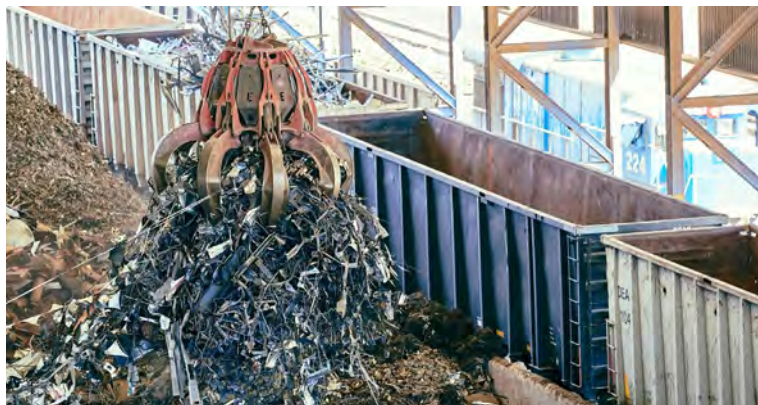
South Africa’s scrap market remains structurally discounted compared to global benchmarks, largely due to interventions such as the Price Preference System (PPS) and export restrictions.

While some amendments to the PPS including a reduced discount have been introduced, the absence of a finalised long-term framework continues to create uncertainty across the value chain.

The report also points to broader industry developments, including uncertainty around domestic steel production, which may impact future demand for recycled steel. “This environment continues to place pressure on recyclers, with regulation often outweighing global market fundamentals,” says Starkey.

His contribution to the BIR report reinforces the importance of South Africa’s recycling sector within the global market, while highlighting the need for greater policy certainty to support long-term growth and sustainability.

Read the full BIR Ferrous World Mirror report: <https://www.bir.org/members-area/world-mirrors/mirrors-ferrous/1000042657-south-africa-5>



# PTD welcomes Trojan Manufacturing, Forging and Automotive into group



**PTD Metalworking Professionals acquired Trojan Manufacturing, Forging and Automotive in December 2025. The company has historical links with African Hoe and AH Forgings**

Like many other CNC machining shops, PTD Metalworking Professionals (PTD) has seen lead times for their forging requirements creep out to a point where they became concerning. Three years ago, the Anderbolt, Boksburg-based company had a staff compliment of 52. This has now grown to over 150 as the company has seen a commendable period of growth. With this growth comes pressure not only from clients but also on suppliers, delivery times, organisational structures and many other aspects of running a successful business that has an emphasis on CNC machining.

“Our diversified range of clients have grown exponentially and we have also acquired new clients. To accommodate their requirements, we have invested heavily in new CNC equipment, mainly lathes, and expanded our shop floor space,” explained Jessé Bohn, a director and grandson of one of the original owners that established the company in 1974.

“We have been very careful to look at all aspects of the business and pay attention and add to areas that will add value and assist during this growth period. From the machines to the shop floor flow, the company culture and work ethic – all areas that we can be in control of. Our suppliers have also been great and assisted wherever possible.”

“Being a young management team, we have also been hungry to diversify, expand and raise the bar wherever we can. We like to turn pressures into strengths, using technology, culture and strategy to compete.”

“So when we heard that a forging business was for sale we quickly investigated the possibility of acquiring it. Forgings do make up a mentionable amount of our material supplies. We know that forgings can yield better machine

performance and part quality, depending on the component.”

“Casting and forging are popular metal forming processes used to create parts and components for a variety of industries. However, these processes are very different from each other, and yield products with varying characteristics. The difference between forged and cast metal comes down to manufacturing. Casting pours molten metal into a mould, while forging hammers solid metal into shape. Forging creates superior strength and durability, whereas casting excels at complex shapes and lower costs.”

“Forging uses dies, pressure, and temperature to shape a solid piece of round metal bar into a shape. There are three ways forging can be classified: 1) temperature (hot, warm, or cold forging), 2) type of process (open or closed die forging), or 3) material used (steel forging, aluminium forging, brass forging, or bronze forging).”

“To summarise, castings are melted, poured, and solidified, while forgings are physically forced into a shape while remaining in a solid state. When deciding which process is best suited to your project, it’s important to narrow down your priorities. Is it a complex shape? Is it large in size? Does it require high levels of strength? There are a number of common considerations to keep in mind when choosing between casting and forging.”

“Forged parts are highly resistant to stress and fatigue because the forging process aligns the metal’s grain structure. Cast parts have a random grain flow, which can leave them vulnerable to microscopic voids or cracks under heavy loads.”

“Casting is ideal for highly complex, intricate shapes (or parts with internal cavities). Forging is better for simpler, ▶

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robust shapes but typically requires more machining to achieve final tolerances. Casting is usually much cheaper and faster for mass production.”

#### **Trojan Manufacturing, Forging and Automotive**

“We acquired Trojan Manufacturing, Forging and Automotive in December 2025. The company has historical links with African Hoe and AH Forgings.”

“The previous owners had been struggling to turn the business around. The shareholders just didn’t have the backing and competitive edge that PTD has due to this forging business being a complimentary breakaway from our group.”

“Besides wanting to diversify, the strategy behind acquiring Trojan Manufacturing, Forging and Automotive was also to secure a supply of our forging requirements in the bracket up to 25kgs.”

“We were also very aware of clients wanting to deal with one supplier – from raw material to final machined component. This is not a new trend but it makes sense in this climate where dealing with various suppliers for one component type adds costs.”

“With our machining capabilities we are now very attractive as a one-stop shop offer. We also now have the opportunity to get involved in converting clients to using forgings more often for the advantages that they offer.”

“At PTD we have also advanced our design and development department to include reverse engineering. This is a critical factor in the synergy between the two companies but also to counteract the threat of the flood of Chinese products in South Africa.”

“We have also spent over R7 million on our quality inspection department and have recently added a Magnaflux stationary magnetic particle inspection bench, crack detection equipment and ultrasonic testing equipment.”

“Trojan Manufacturing, Forging and Automotive is a relatively small forging company (24 staff) that has recently had an automotive bias. Aftermarket tow-balls have been one of the main products it has been manufacturing. Solid forged hand tools and products such as pinch bars, marlin spikes and solid handrailing are others it has been manufacturing.”

“The existing industries that it supplies into include mining, locomotive, automotive, construction and general engineering. Oil and gas, aerospace and renewable energy



**Trojan Manufacturing, Forging and Automotive has recently had an automotive bias with aftermarket tow-balls being one of the main products it has been manufacturing**

are potential industries we can target.”

“Forging is best for components requiring maximum strength under extreme stress, such as engine pistons, automotive suspension parts, heavy-duty truck wheels, and premium golf club irons.”

“Trojan Manufacturing, Forging and Automotive is equipped with 8 mechanical H-frame presses that includes a 1 000 ton, two 600 ton, one 350 ton, one 300 ton closed die press and three 200 ton clipping/trimming/punching presses. The weight range of a component is 0.5kg up to 10kg.”

“Friction screw presses comprise a 900 and a 600 ton closed die press capable of forging components from 5 to 25kg and we have two header/upset horizontal press lines capable of handling parts ranging from 300mm up to 1 500mm (50mmOD).”

“Besides machining we also offer heat treatment, quality inspection, material cutting, hardness testing and shotblasting.”

“We are going to continue manufacturing the tow-balls because it has a niche position in the local market and is SABS approved. With heavy competition coming from China there are not many of those OEM manufacturers in South Africa anymore. Moreover, we are concentrating on the aftermarket segment.”

“Our business PTD has undergone a significant transformation recently, as has Trojan Manufacturing, Forging and Automotive and we do not want to rely on one industry, hence our diversification.”

For further details contact Trojan Manufacturing, Forging and Automotive on TEL: 010 500 1087 or visit [www.tmfa.co.za](http://www.tmfa.co.za)



**The existing industries that Trojan Manufacturing, Forging and Automotive supplies into include mining, locomotive, automotive, construction and general engineering. Oil and gas, aerospace and renewable energy are potential industries that the company will target in future**

# AMT 3D Advanced Manufacturing Workshops explore the adoption of additive manufacturing technologies in South Africa



**Dr Devon Hagedorn-Hansen, Managing Director of AMT 3D, led the workshop's proceedings along with AMT 3D's additive manufacturing experts as they delved into use-case specific additive manufacturing solutions for small and large component production**

On June 18 and 19, AMT 3D, an additive manufacturing specialist service provider offering a variety of manufacturing machines and technologies for multiple applications and industries, held workshop experiences for clients and industry peers at its Firgrove, Somerset West factory.

The workshops gave attendees the opportunity to view live machine demonstrations that included metal powder and metal wire printing, as well as offered attendees the opportunity to listen to AMT 3D's additive manufacturing experts delve into use-case specific additive manufacturing solutions for small and large component production.

Discussions also aimed to dispel myths surrounding the technologies such as that the parts produced are weak or porous, materials are limited and that the technology is purely for prototyping and too expensive to implement at scale.

"You need to closely examine the process and technology used when deciding whether to adopt additive manufacturing on your shop floor or not. You need to ask yourself what additive manufacturing technique is the most suitable for your needs," explained Dr Devon Hagedorn-Hansen, Managing Director of AMT 3D.

Hagedorn-Hansen holds a PhD in Industrial Engineering

which he obtained from Stellenbosch University completing a thesis focussed on Laser Powder Bed Fusion of Tungsten Carbide Cobalt Cutting Tools, and has been involved in the additive manufacturing and 3D printing industry for over a decade.

The workshops were designed to approach a range of practical industry topics including advanced manufacturing in Africa: Challenges, opportunities and what's next; the truth about additive manufacturing: Myths vs reality; design principles for advanced manufacturing and accelerating the innovation cycle.

Other topics included Design for Manufacturing (DfM) and why it extends beyond any single technology; automation principles and practical implementation in an ever-changing manufacturing environment; and what really matters when selecting an industrial additive manufacturing system.

Clear distinctions were explained between the different methods of additive manufacturing including Laser Powder Bed Fusion (LPBF) and Directed Energy Deposition (DED).

Both are metal additive manufacturing processes but function in vastly different ways and scales. LPBF is a highly precise, low-volume process that is best suited for complex geometries and DED uses a blown-powder or wire nozzle to build or repair large, tough components at much faster rates. ▶



**AMT 3D's Meltio M450 is a compact, plug-and-play metal 3D printer that uses DED-wire technology. It fabricates fully dense, industrial-grade metal parts directly from standard welding wires. It's compatible with a wide range of commercially available wires including stainless steels, mild steels, carbon steels, titanium alloys and nickel alloys**

LPF applies a layer of fine metal powder that is spread across a build platform. A laser selectively melts the powder to form the cross-section of the part. The platform then lowers, and the process is repeated layer by layer in a sealed, controlled chamber. It's a much slower process than that of DED, but can often be the solution for much more complex and intricate components.

DED on the other hand uses material (powder or wire) that is continuously blown or fed through a nozzle directly into a laser's focal point. The laser melts the material instantly, and it is deposited layer by layer in free space to build the component. The process is more suited to larger, less complex components and the time needed to manufacture a component is also reduced when compared to LPBF.

One of the key takeaways for additive manufacturing technologies though, and one where both LPBF and DED technology make sense, is that both processes result in the absolute minimum of material wastage when compared to traditional subtractive metalworking technologies such as milling or turning.

Supply chains have been placed under huge pressure in recent years and this is another area where additive manufacturing is coming into its own. For example, instead of waiting weeks or even months for wear components to arrive from a supplier, they could now be 3D printed. Another example is with the associated costs of sourcing materials to manufacture moulds and dies or tools traditionally. With additive manufacturing processes such as DED-wire technology, quicker, and often cheaper material solutions may be obtainable to manufacture these components.



**AMT 3D's Concept Laser Mlab 200R is a compact LPBF metal 3D printer. It can produce intricate, high-precision parts in a range of materials like stainless steels, titanium and titanium alloys, aluminium and copper alloys, nickel and cobalt alloys as well as precious metals**

The medical industry is fully embracing the technology, particularly in arrears such as custom titanium implant manufacturing that offer patient-specific solutions with high biocompatibility.

While the average machine shop is likely not going to be adopting a shop floor full of additive manufacturing machines any time soon, there are a few exceptions already out there such as the titanium Apple Watch Series 11 cases that are now being 3D printed with 100 per cent recycled aerospace-grade titanium powder.

The workshops were not about desktop hobby machines – which definitely have their place and are used by engineering companies on an ever-increasing basis for many reasons including rapid prototyping – but to dispel the myth of the technology being just that, something that you only have in your office on a desk for prototyping a mould or printing your child a toy.

They're now real, matured technologies that have evolved to be used at industrial scales.

Attendees also had the opportunity to engage directly with AMT 3D's team of metallurgists, aeronautical and industrial engineers.

"You almost need to be a metallurgist – you need to be good at the science of understanding materials to be able to best select what method will be best for manufacturing your component. We are constantly researching and testing material properties," says Hagedorn-Hansen. "This is not about replacing conventional manufacturing. It is about understanding where advanced manufacturing creates value and using it strategically."

From aerospace and tooling to repair and advanced engineering and manufacturing applications, the workshops were designed to help designers and businesses understand where additive manufacturing delivers measurable value in modern production environments.

“We are comfortable saying no when a solution isn’t right. Not to slow progress, but to protect it. Because every misaligned implementation doesn’t just affect a single project, it impacts confidence in additive manufacturing as a whole.”

“Integrity remains a core value we stand by at AMT 3D. It shapes how we assess technologies, how we engage with our clients, and how we approach every recommendation. We believe that long-term success in advanced manufacturing depends on decisions grounded in reality, not urgency.”

“Our role goes beyond supplying equipment. We support the development of fully functional additive manufacturing facilities, ensuring that what is implemented works, not just in theory, but in practice, over time,” concluded Hagedorn-Hansen.

AMT 3D have commissioned fully functional manufacturing facilities across the African continent from modern industrial plants to custom designed solutions engineered for remote and infrastructure-limited environments.

The company serves a broad range of industries including aerospace, automotive, oil and gas, mining, academia



**Various components additively manufactured by AMT 3D**

and research, general engineering, medical and defence, and work with both additive and subtractive machining technologies, both metal and polymer based. AMT 3D represent leading advanced manufacturing brands such as AMAZEMET, Bright Laser Technologies (BLT), Meltio, SWICE, Ready Metrology, and MX3D in South Africa.

Contact AMT 3D on TEL: +27 67 597 0025 or visit <https://amt3d.com> for more information. ■



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# Local manufacturing showcased at Electra Mining Africa

Electra Mining Africa will take place at Nasrec, Johannesburg 7 to 11 September 2026.

The South African manufacturing sector currently produces below installed capacity levels, resulting in manufacturing firms not benefiting from economies of scale and competitive advantages that they would enjoy if they were operating at manufacturing capacity. Low demand, stagnant domestic growth, competition from imports and high input costs are all contributing to the strain on the manufacturing sectors growth prospects.

Despite these challenges, local manufacturers possess world-class technical and problem-solving capabilities. The extensive and well-developed human resources and know-how within the industry make it an invaluable key economic enabler of growth and job creation in the country as it supports broad employment and skills development goals. Also, local manufacturing can ramp up capacity whenever strategic opportunities arise, leading to fast turnaround times and market flexibility.

Local manufacturers will be on the look-out for new business opportunities and strategic industry partnerships at this year's Electra Mining Africa and co-located Local Southern African Manufacturing Expo taking place later this year. The exhibition provides an ideal opportunity for local manufacturing companies to build relationships and source new clients as they look for ways to ramp up manufacturing capacity and increase competitiveness. "Local manufacturing firms will take advantage of the marketing opportunity to generate business leads and develop industry partnerships, which have been shown to boost sales for the 12-18 months following the event," says Charlene Hefer, Portfolio Director at Montgomery Group Africa, organisers of the show.

Local manufacturers represented at the show include suppliers from across the mining, industrial, electrical, power, automation and transportation sectors, including the latest in mine ventilation monitoring solutions and noise reduction technology suppliers. Locally produced consumables and critical spares suppliers showing how local manufacturers can partner with local companies to solve problems and keep production plants running smoothly and efficiently. Local manufacturers delivering practical, performance-driven engineering for metallurgical applications, including slurry control dart valves, high-pressure enclosed pinch valves, dosing systems, distribution boxes and process samplers tailored to metallurgical applications. Together with local water storage solutions suppliers for mining applications that boost productivity and ensure a steady water supply.

Exhibitors will be showcasing all the latest innovations, advances in technology and breakthrough solutions, including the latest local solutions for retrofitting Tier 2 and 3 engines

with Diesel Particulate Filter systems which can enable mines to comply with new mine health and safety regulations relating to diesel particulate matter. The locally developed solution helps to improve air quality in worker health, without requiring mines to replace their entire fleet of old engines.

Many South African manufacturers have been able to overcome growth constraints by growing their businesses beyond the country's borders. While the local demand for manufactured goods has been stunted, demand in the rest of Africa for locally manufactured goods has been growing, which is one way that local manufacturers are able to grow their operations. Visitors to Electra Mining Africa 2026 will be able to see many of these locally produced components that are exported all over Africa and the world, including industrial agitator sand gearboxes built for the harsh operating

conditions of the local mining industry which are now exported to the UK, Malaysia, Australia, New Zealand, the US and Chile.

Visitors will also be able to see innovative pumps specifically designed for the agricultural and construction sectors to provide solutions that don't rely on electricity, while reducing cost of ownership to the client.

The exhibition is an opportunity to showcase the excellence and innovation of locally designed and



manufactured parts and components for the local and international market. Locally designed and manufactured Neutral Earthing Compensator Resister Transformers (NECRTs) that provide reliable earthfault management for transformers will be on show. These and other locally made components strengthen South African manufacturing capability and ensure critical protection equipment is produced, supported and maintained locally. Also on show will be locally assembled new industrial gear units designed to improve availability, reduce lead times and support high-torque applications in Africa. The new design will improve serviceability and reduce downtime, expanding the options available to engineers and plant operators seeking robust solutions for conveyors, crushers, mixers and other heavy-duty systems.

"Beyond the exhibition floor, as part of its commitment to delivering high-value, free-to-attend content, the Southern African Institute of Mining and Metallurgy (SAIMM) will host the Seminar Theatre at Electra Mining Africa," says Hefer. "In addition, the Society for Automation Instrumentation Mechatronics and Computer Engineering (SAIMC) will present valuable industry workshops on the second day of the show."

Electra Mining Africa will take place at Nasrec, Johannesburg between 7-11 September 2026. Visitors can register at [www.electramining.co.za](http://www.electramining.co.za)

# A new era for Quaker Houghton South Africa

Following Quaker Houghton's expansion into South Africa in February 2025, the focus was not simply to establish a presence. The intent was to build something manufacturers in the region could rely on, with a local team on the ground, in-country product availability, and technical expertise grounded in the realities of South African metalworking environments.

"The formation of Quaker Houghton South Africa (QHSA) represents nearly two decades of regional presence and support, and it arrives at a time when manufacturing demands local resources more than ever," said a Quaker Houghton statement.

## Metalworking that meets modern demands

"Metalworking companies are facing more challenges today than ever before: Tightening environmental rules, growing scrutiny of worker health, and the relentless pressure to keep output steady while trimming costs. These aren't abstract challenges. They show up on the production floor, in the fluid sump, and in the compliance reports that land on a plant manager's desk," continued the statement.

"One area where this pressure is particularly sharp is metalworking fluids. Boron-based additives were standard for years, but priorities are changing. Greater awareness of the health and environmental impact of certain fluid chemistries is leading many manufacturers to reassess what is in their coolants. QHSA now brings a boron-free metalworking fluid range directly to South African operations. Products already proven in tough environments worldwide are now available locally, without the long lead times and logistics that once came with them.

## Tube and pipe: Supporting every stage of a sector on the rise

Quaker Houghton's metalworking solutions support South Africa's growing tube and pipe industry, which is expanding due to new infrastructure, energy projects, and industrial growth. As the market evolves, manufacturers need a partner who understands the entire production process and supports them at every step.

QHSA's approach is to treat the full production process as a system rather than a series of separate purchasing decisions. Forming lubricants, thread compounds, and protective coatings are selected and managed together, which tends to improve surface quality, reduce fluid consumption, and bring down rejection rates. For manufacturers running high capital equipment with tight margins, that kind of consistency matters more than any single product swap.

Global grease capabilities

delivered locally.

Across South Africa's industrial base, lubricants and process fluids must meet a wide range of demanding requirements. Choosing the right product for each application is critical, as the wrong fit can lead to increased wear, shorter tool life, and costly unplanned downtime. What QHSA offers here isn't a catalogue to browse, but a technical conversation. Plant-level engineers work through the specific application, load conditions, temperature ranges, and service intervals before recommending a grease chemistry.

Quaker Houghton's 'Front-to-Back' framework for tube and pipe manufacturing reflects this same thinking, covering process fluids at the front end through to corrosion preventives and protective coatings at the back end. The result is a more complete picture of where efficiency is being lost and where it can be recovered.

## A local investment, not a remote operation

There's a meaningful difference between a global supplier that ships into a market and one that's embedded in it. QHSA is built around the latter model, focused on local personnel, in-country inventory, and technical support that doesn't require time zone calculations to access. This investment strengthens supply chain footprint and resilience while creating a platform for future competitive growth. It positions QHSA not only to expand in South Africa, but also to explore emerging opportunities across the continent.

That structure supports more than just faster delivery. It helps strengthen technical capability within South Africa, reinforces long-term partnerships, and ties QHSA's growth directly to the health and success of the manufacturers it supports. In an environment where economic pressure is real and operational demands keep rising, that kind of alignment between supplier and customer is worth something, reflecting Quaker Houghton's end-to-end expertise and ability to partner beyond a single product or process.

To learn more, visit [home.quakerhoughton.com](http://home.quakerhoughton.com) ■



**"The formation of Quaker Houghton South Africa (QHSA) represents nearly two decades of regional presence and support, and it arrives at a time when manufacturing demands local resources more than ever," said a Quaker Houghton statement**

# Mesh Gear celebrates 50 years of turnkey gear manufacturing

South Africa's manufacturing sector has seen many engineering businesses come and go over the years. Few, however, have remained focused on a specialised discipline while continuing to expand their capabilities and customer base. One such company is Mesh Gear, which this year is celebrating 50 years in business.

Established in Durban, KwaZulu-Natal in May 1976 by Michael Clayton and his wife Heather, Mesh Gear began as a small operation with three machines and two operators. What started as a modest gear-cutting business has developed into one of South Africa's few dedicated gear manufacturing and precision machining facilities, supplying customers in industries that include mining, construction, agriculture, rail and industrial power transmission.

Today, the company operates from a 4 500m<sup>2</sup> facility where the complete manufacturing process is controlled under one roof. This approach has become one of the defining characteristics of the business.

Rather than relying extensively on subcontracted operations, Mesh Gear has invested in the equipment, facilities and skills required to manage production from raw material preparation through machining, heat treatment, metallurgical verification and final gear grinding.

The company manufactures a broad range of products including spur gears, helical gears, straight and spiral bevel gears, worm gears, sprockets, spline shafts, drive shafts, couplings, yokes and specialised components used in drilling, crushing and screening equipment. Its customer base includes both OEM manufacturers and aftermarket users requiring components for heavy-duty applications.

One of the factors that has distinguished Mesh Gear



**Mesh Gear manufactures a broad range of products including spur gears, helical gears, straight and spiral bevel gears, worm gears, sprockets, spline shafts, drive shafts, torque shafts, couplings, yokes and specialised components used in drilling, crushing and screening equipment. Image courtesy of Mesh Gear**

throughout its history has been its focus on production gear manufacturing. While many machine shops manufacture gears as part of a wider engineering offering, Mesh Gear has concentrated on developing dedicated gear manufacturing expertise and equipment. Its capabilities include external and internal gear cutting, spline manufacturing, thread and worm milling, bevel gear production and high-precision gear grinding.

The company can manufacture gears of up to 1 000mm in diameter, serving both low-volume specialised projects as well as larger production requirements.

Over the years, investment in technology has remained a priority. The company has regularly expanded its CNC turning and machining capabilities with advanced 5-axis machining technology to improve efficiency and accuracy in the manufacture of complex gear components.

The addition of 5-axis machining has been particularly important in the production of spiral and straight bevel gears, where machining accuracy directly influences gear performance and interchangeability.

"We now have four DMG Mori 5-axis DMU monoBLOCK machining centers. These universal machining centers with a swivel rotary table are ideal for small-to-medium production runs," says Steven Clayton, director at Mesh Gear.

Gear grinding is also a key area of focus for Mesh Gear. As customer requirements have evolved and tolerances have become more demanding, Mesh Gear has invested in CNC gear grinding technology capable of producing gears for applications where precision and reliability are critical.

"We have also invested in two KAPP NILES CNC gear grinders. These are a ZE 800 – a high-precision, CNC-controlled gear profile grinding machine. It is primarily designed for ▶



**Mesh Gear have put in place new heat treatment laboratory equipment that allows them to be able to view the microstructure of the gears more accurately via a computerised system. This allows for better metallurgical analysis after heat treatment, and better data storage of gear batches. Image courtesy of Mesh Gear**

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the precise gear grinding of both internal and external gears and enables us to be able to grind larger gears,” continued Clayton.

“The second one is a KAPP NILES ZE 400. Both of these gear grinders are able to measure the gear tooth profile on the machine.”

“We have also put in place a brand new KAPP NILES KNM 5X gear testing machine, many customers prefer us to measure the gear profile and pitching errors off the gear grinding machines.”

“Currently we are waiting on the arrival of a retrofitted CNC gear shaper from the US that is on the water at the moment. It’s a Fellows 10-6 four-axis CNC gear shaper with a Fanuc Oi-MF plus control that’s got a larger horse power spindle motor and 7” throated riser. It has a 6” stroke.”

### In-house heat treatment

Heat treatment represents another area where Mesh Gear has adopted a different approach from many manufacturers. Recognising the influence of heat treatment on gear performance, the company established comprehensive in-house facilities that include gas carburising, gas nitriding, induction hardening, normalising, conditioning and associated metallurgical testing. “We have upgraded our heat treatment controls, so that multistage load cycles can be set in advance. The heat treatment controls are also able to be viewed and manipulated remotely.”

Maintaining control over these processes allows tighter management of distortion, hardness and material properties, factors that directly affect gear life and performance.

“There are only two gear manufacturing companies in South Africa that have their own heat treatment facilities and this is a big plus for our business and it also provides peace of mind for our customers,” explains Clayton.

Supporting these operations is an in-house metallurgical laboratory where material properties and heat treatment results can be verified before components are released to customers.

“We have put in place new heat treatment laboratory equipment that allows us to be able to view the microstructure of the gears more accurately via a computerised system. This allows for better metallurgical analysis after heat treatment, and better data storage of gear batches.”

“This additional laboratory equipment includes a Time Micro Vickers tester for analysing the case depth, core hardness and case hardness. As well as a Nikon Eclipse MA100N microscope for analysing the microstructure under 500x magnification, ensuring there is no presence of unwanted defects from the heat treatment process such as carbides, retained austenite or granular oxidation. The microstructure and potential defects are then measured using related software and the images



**Mesh Gear have invested in a new KAPP NILES KNM 5X gear testing machine, as a lot of customers prefer to measure the gear profile and pitching errors of the gear grinding machines. Image courtesy of Mesh Gear**

stored electronically and supplied to the customer if requested.”

“Additionally, we have invested in an induction hardening machine for the hardening of drive shafts, yokes, flanges and pins. This induction hardening machine is CNC controlled, is low frequency and can achieve case depths from 1mm to 12mm. The machine can handle shafts / pins of up to 2 metres long and 200mm in diameter, as well as smaller items such as yokes and flanges.”

This integrated manufacturing model aligns with the company’s long-standing emphasis on quality assurance and process control. Mesh Gear also maintains an ISO 9001 quality management system that has been in place for more than two decades.

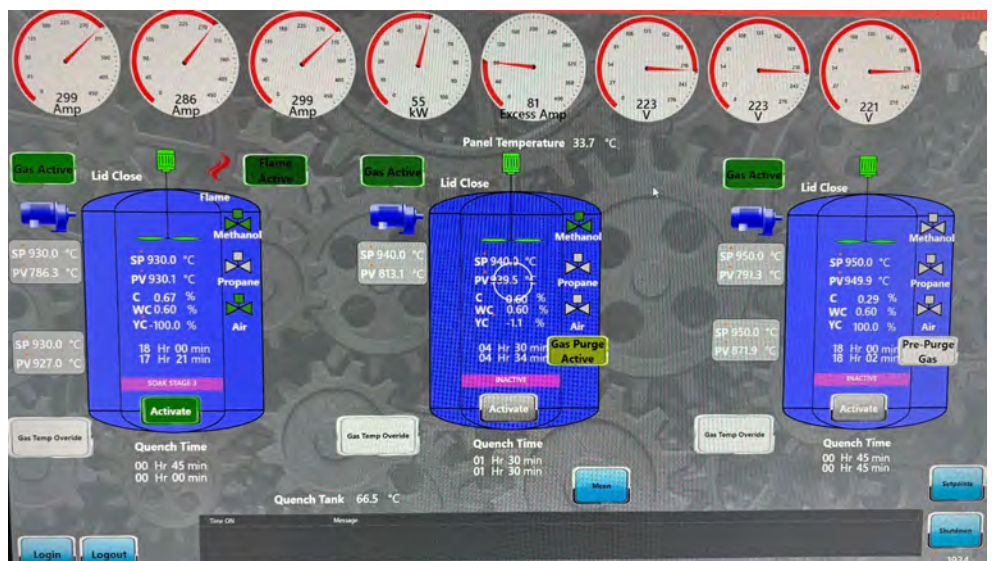
The company’s growth has been accompanied by continuity in leadership and today, Mesh Gear is managed by Michael Clayton’s sons, Steven and Trevor Clayton, representing the second generation of family ownership.

Having grown up within the business, both have played a role in expanding the company’s technical capabilities while maintaining the manufacturing principles established by their father. The result is a business that combines long-term industry knowledge with continued investment in modern manufacturing technologies.

Their experience has provided a foundation in gear design, metallurgy, machining and quality control that has shaped the direction of Mesh Gear. For the company, the anniversary reflects not only longevity but also a sustained commitment to technical capability, process control and investment in production technology that will provide continuity into the coming decades producing gears and transmission components capable of meeting the demands of heavy industry.

Mesh Gear now employs 100 staff and runs its operations over two shifts, with over 100 machines across the shop floor.

Contact Mesh Gear on TEL: +27 31 461 1121 or Trevor Clayton on Cell: +27 82 304 5781 or email: [trevor@meshgear.co.za](mailto:trevor@meshgear.co.za) or visit <https://www.meshgear.co.za> for more information. ■



**An image of Mesh Gear’s furnace control system. Image courtesy of Mesh Gear**

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# Catworth (Pty) Ltd – a Hardox®

## Wearparts Centre – commissions 40kW fiber laser with 14m x 2.5m bed



**Catworth have recently imported and commissioned a 40kW fiber laser**



**Catworth optioned their new 40kW fiber laser with 14m x 2.5m bed**

Catworth (Pty) Ltd has evolved into a South African industrial engineering and value-add manufacturing company specialising in wear solutions and precision thick plate processing for the mining and heavy industrial sectors. The commissioning of its new 40kW fiber laser represents another major investment in the Group's manufacturing capability.

Cutting thin gauges of sheet metal is meant to be precise and clean, especially given the wide availability of fiber laser technology in today's modern job shop sheet metal processing environments. Cutting thick gauges of plate, however, is never going to be a pretty job. But with the right experience, superior cuts of thick material can be achieved as the technology improves.

Traditionally, cutting thick gauges of plate has been reserved for technologies like oxy-fuel and plasma cutting. However, understanding newer technologies and knowing how and when to use them has enabled Catworth, a certified Hardox® Wearparts Centre based in Anderbolt, Boksburg, to create itself a niche.

Hardox® is a premium wear-resistant steel designed for the toughest applications. As an authorised Hardox® Wearparts Centre certified by SSAB, Catworth delivers high-quality, engineered wear solutions that maximise service life, improve productivity, and reduce maintenance costs.

"Catworth is a company that specialises in fabricating mill lining inserts, with a focus on quenched and tempered (Q&T) wear-resistant steels," says Eugene Van der Walt, Catworth's General Manager.

"These components are consumable parts, so the longer the life the customer is able to get out of them, the better. Our core focus is on how we process the material," continued Van der Walt.

"We have the ability to process Q&T material underwater using an oxy-fuel machine and I am sure we are one of the only companies in the world that knows how to do this."



**The component pictured is a reversible bolt-on cutting edge for a loader bucket. It was cut from Hardox® 450 50mm plate and was cut at half of the 40kW fiber laser's power (20kW)**

"Because of the effects on the heat-affected zone when processing material, cutting the material underwater actually reduces changes to the material in the heat-affected zone because there is less heat transfer while cutting it submerged. We have had all of this laboratory tested and the results speak for themselves."

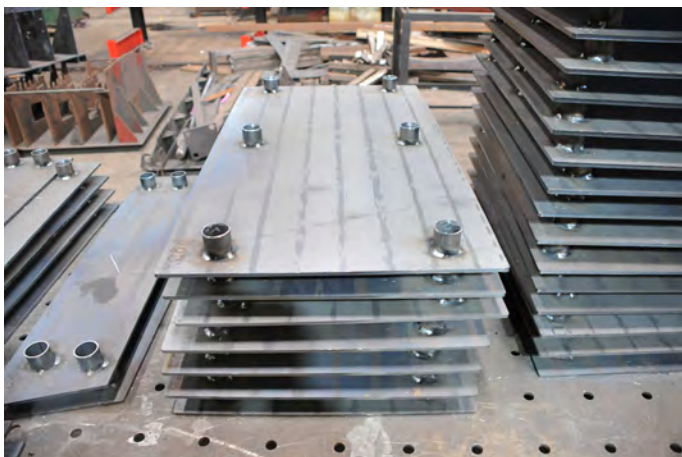
"While we make use of oxy-fuel technology for cutting some of our material, we also use fiber laser technology where it offers the greatest advantage. We import all our machinery ourselves. Our first investment was a 4kW fiber laser, which gave us valuable experience in understanding the technology and its capabilities." ▶

“Based on that experience, we increased our throughput with a second 6kW laser before making the decision to invest in our new flagship 40kW fiber laser with a 14m x 2.5m bed. At the same time, we upgraded our original 4kW laser to a 6kW source, significantly increasing the capability of our laser department.”

The investment was about far more than simply purchasing a larger machine. It forms part of Catworth’s long-term strategy to improve throughput, cut quality and



**“We have the ability to process Q&T material under water using an oxy-fuel machine and I am sure we are one of the only companies in the world that knows how to do this.”**



**Catworth is a specialist wear plate fabricator**



**Catworth has a focus on processing Q&T wear resistant steels**

manufacturing efficiency while expanding its capability to process large-format wear-resistant plate.

**40kW fiber laser with 14m x 2.5m bed**

“With the changes in technology, there is going to come a point where technologies like oxy-fuel will fall away and fiber laser technology will simply take over. Another advantage of using fiber laser technology is that there will be less impact on the heat-affected zone when cutting material as opposed to the high heat generation from oxy-fuel technology, and it should give you much better results.”

“At the end of the day it’s all about numbers and quantities, and the Chinese have been very good at developing this technology, especially when it comes to the duty cycle. The thicknesses of material we are generally processing are in the ranges of 50mm, 75mm and 100mm thick. With the new 40kW machine we are able to smoothly and comfortably cut 50mm thick material and, throughout the year, this is the thickness of material that we will process the most.”

“The 14m x 2.5m bed size might sound big, but the reason we have taken this route is because the plate we receive from one of our suppliers, SSAB, comes in dimensions of 12m x 2.5m, making it ideal for processing full-length heavy plate efficiently.”

“We had our first experience with importing a fiber laser during Covid. Of course, during that time it was next to impossible to get an engineer out to help commission the machine. So we had a decision to make: Do we wait until we can get an engineer out here or do we put our overalls on and commission it ourselves? And that’s what we did. Catworth’s owner, Grant Scott-Robertson, and myself got involved and, with the availability of technology like WeChat where we could communicate directly with the supplier, in about six weeks everything was up and running. Besides being a draughtsman, I used to work as a plasma cutting operator, so it did help having some kind of a background.”

“We rely on the support of Mecad Systems for our software and will predominantly do our CAD/CAM work using SolidWorks and SigmaNEST.”

“I joined Catworth in 2015 as a draughtsman. Over the years I have learned a tremendous amount from Grant. He has always encouraged innovation, technical excellence and continuous investment in new technology. I wanted to follow that example and have worked my way up through the business into my current role. Today I try to instil those same values into our own team because investing in people is just as important as investing in machinery.”

“We deliberately focus on building long-term partnerships with a select group of customers. That approach allows us to work closely with them, understand their operations and continually improve component life and manufacturing efficiency. Although we source and supply material, we are equally happy to work with customer-supplied material and develop the best manufacturing solution for each application,” concluded Van der Walt.

Catworth (Pty) Ltd forms part of the Catworth Group of companies, specialising in wear solutions, precision thick plate processing, laser cutting, equipment refurbishment and advanced overlay technologies for the mining, power generation and heavy industrial sectors. Through its specialised divisions, including Catworth Laser and Catworth Overlay Systems, the Group processes approximately 1 200 tonnes of steel annually from its 1 700m<sup>2</sup> manufacturing facility and continues to invest in technologies that improve quality, efficiency and customer value.

For further information contact Catworth Laser on TEL: +27 10 894 6624 or visit <https://catworth.co.za/>

# ITAC issues preliminary determination on alleged dumping of tubes and pipes from Mozambique

Imposes provisional duties of 28.86% on imports.

ITAC has made a preliminary determination in the investigation into the alleged dumping of tubes and pipes imported from the Republic of Mozambique. The investigation was initiated following an application by Hall Longmore Holdings Proprietary (Pty) Ltd. The subject product is commonly used for medium and low-pressure pipelines, such as water and gas pipelines, and in structural applications.

The Commission considered that the Applicant submitted prima facie information indicating that the subject product was being imported at dumped prices and causing material injury and a threat of material injury to the Southern African Customs Union (SACU) industry.

After reviewing the evidence, the Commission made a preliminary finding that the subject product originating in or imported from Mozambique is being dumped onto the SACU market causing material injury and a threat of material injury to the SACU industry.

As a result, the Commission has requested the Commissioner of the South African Revenue Service (SARS) to impose provisional duties of 28,86% on imports of the subject product for a period of 6 months. These provisional measures were implemented by SARS on 19 June 2026. ITAC is now inviting public comments on its preliminary findings. Interested parties can submit written comments within 14 days of the release of the preliminary report.

Hall Longmore Holdings submitted an application to ITAC to investigate the alleged dumping in the SACU of tubes and pipes commonly referred to as Electric Resistance Welded Pipes (ERW) and Spiral Welded Pipes (Submerged Arc Welded Pipes or SAW), excluding longitudinally submerged ACR welded and longitudinally welded pipes originating in or imported from

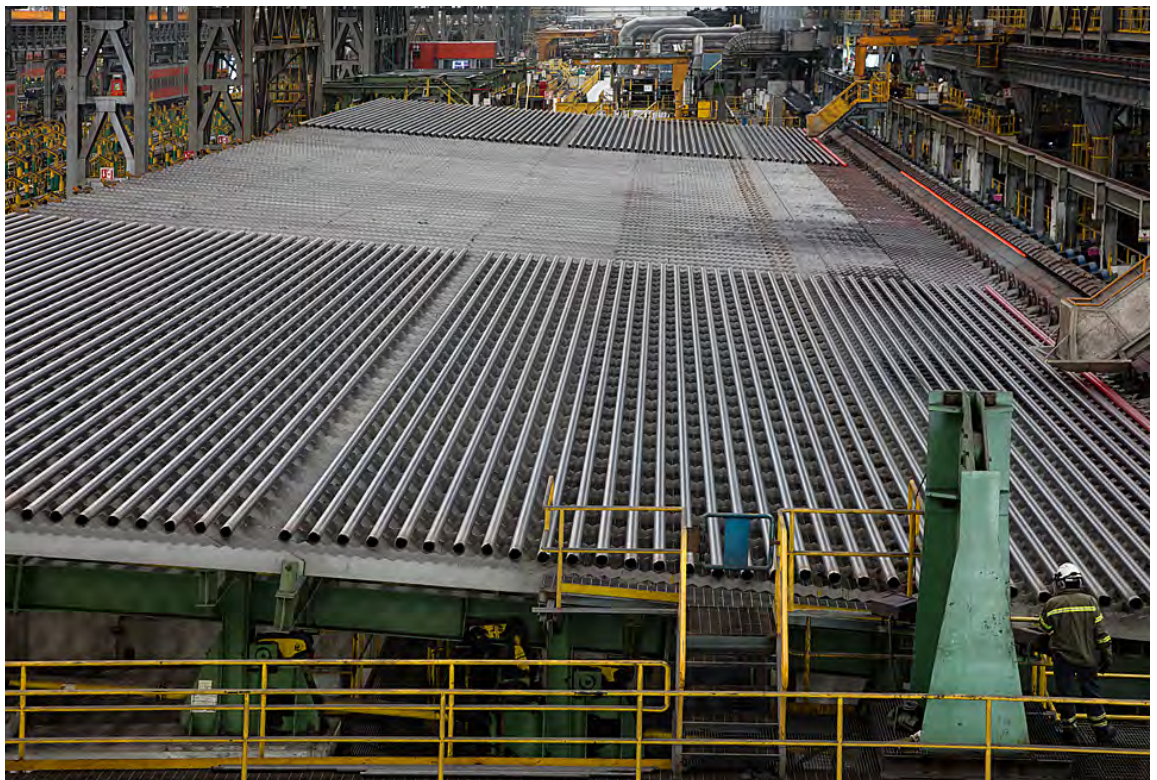
Mozambique. The investigation was initiated through Notice No. 3568, published in Government Gazette No. 53574 on 24 October 2025.

The investigation was initiated after the Commission considered that the Applicant submitted prima facie information to indicate that the subject product was being imported at dumped prices and causing material injury and a threat of material injury to the SACU industry.

Upon initiation of the investigation, the known producers/exporters of the subject product in Mozambique were sent foreign manufacturers/exporters questionnaires to complete. Importers of the subject product were also sent questionnaires to complete.

The Commission took all comments received from interested parties into account in making its preliminary determination. All non-confidential submissions made by interested parties are contained in the Commission's public file for this investigation and are available for perusal. It should be noted that this report does not purport to deal with each and every comment received and considered by the Commission. However, some of the salient comments received from interested parties and the Commission's consideration of these comments are specifically included in this report.

Full details of the report can be found at <https://itac.org.za/wp-content/uploads/Report-779.pdf>



Picture illustration World Steel Organisation, Veracruz, Mexico

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# Flexo Line – delivering the perfect grind, every time

Have you ever thought about the complexities that make up your spice grinder and its perfect distribution of whatever condiment you decide to enhance the flavours of your meal with? Neil Allies, a toolmaker by trade and Chief Technical Officer / Designer at Flexo Line Products has. In fact, Allies and his colleagues have spent countless



Image courtesy of Flexo Line



Image courtesy of Flexo Line



Image courtesy of Flexo Line

hours perfecting the designs behind the gears that form part of the makeup of your spice closure so that you can experience the perfect grind, every time.

Flexo Line, a specialist plastic injection moulding business based in Atlantis in the Western Cape, operates a plastics manufacturing facility built around injection moulding, supported by in-house tooling and increasing levels of automation. The company has developed its plant to manage both high-volume production and product development within a single site operating approximately 80 injection moulding machines.

These form the core production capabilities of Flexo Line's operations, manufacturing components ranging from small spice closures to larger household and industrial products. The machine mix covers a range of clamping forces, allowing the company to process both high-cavity tooling for lightweight parts and larger moulds for bulkier items. Materials processed include common thermoplastics and materials such as PMMA, PC, PCTG, POM, ABS, PP & HDPE, as well as engineering polymers where required. All materials used by Flexo Line are FDA and EU approved.

Production is geared towards repeatability and throughput with high-volume items such as spice closures being produced on multi-cavity moulds, where cycle time and consistency are key factors. The plant configuration has a focus on continuous operation, with machines set up for extended production runs.

Automation has been introduced to the shop floor too supporting these requirements. In-house developed robotic systems are used for part removal, reducing cycle times and limiting manual handling. Conveyors and downstream handling equipment move components through to packing or secondary processes. In applications where products consist of multiple parts, automated or semi-automated assembly is used along with manual assembly.

Material handling is also centralised. Resin is supplied to machines via vacuum loading systems, with drying and blending equipment ensuring consistent input conditions. This is particularly relevant when processing materials sensitive to moisture content or when colour and additive consistency must be maintained.

## In-house toolroom

Fundamental to Flexo Line's continuous operations is an in-house toolroom. This facility includes CNC machining centers, EDM equipment and conventional machines used in the manufacture and maintenance of injection moulds and tooling. By retaining tooling capability internally, the company can manage lead times more closely and carry out modifications or repairs without relying on external suppliers.

"Our toolroom is key to our business," says Allies. "In the last few years, we have added a number of CNC machines, these include a mill-turn machine and two vertical milling machines – with 4th axis rotary tables. We manufacture and maintain moulds in-house, so having an efficient and experienced toolroom gives us the ability to do this." Toolmaking supports both new product development and ongoing production, explains Allies. The ability to service these moulds and tools on site contributes to Flexo Line's machine uptime and the toolroom also enables design changes to be implemented with limited disruption to production schedules.

"A section of our toolroom focusses on R&D. There is a ▶



**Flexo Line, a specialist plastic injection moulding business based in Atlantis in the Western Cape, operates a plastics manufacturing facility built around injection moulding, supported by in-house tooling and increasing levels of automation**

fair amount of R&D needed to deliver the required output per revolution of whatever that might be from pepper to mixed spices. Our customers' requirements might vary from, course, medium to fine. There are adjustable grinders that allow for both fine and a course grind or the perfect mix in between. Various gears are designed to meet customer requirements.

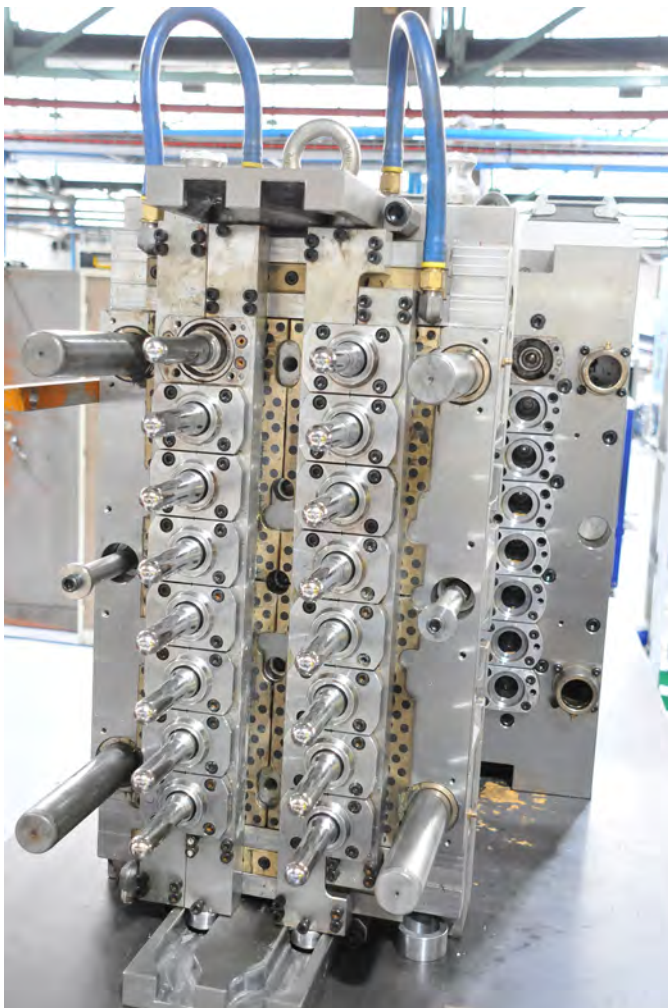


**Flexo Line is geared toward high-volume production and product development within a single site operating approximately 80 injection moulding machines**

Recycling has also come into play in recent years, so choice of material and design considerations must allow for this requirement.”

“Unfortunately we started looking outside of South Africa to manufacture certain moulds due to toolroom capacity and skills shortage. We are trying to avoid this where we can, however we will continue to upskill our toolroom’s capabilities.”

Products are designed in-house and 3D printed, presented to customers for design approval before pilot tools are made, ▶



**Fundamental to Flexo Line’s continuous operations is an in-house toolroom. This facility includes CNC machining centers, EDM equipment and conventional machines used in the manufacture and maintenance of injection moulds and tooling**



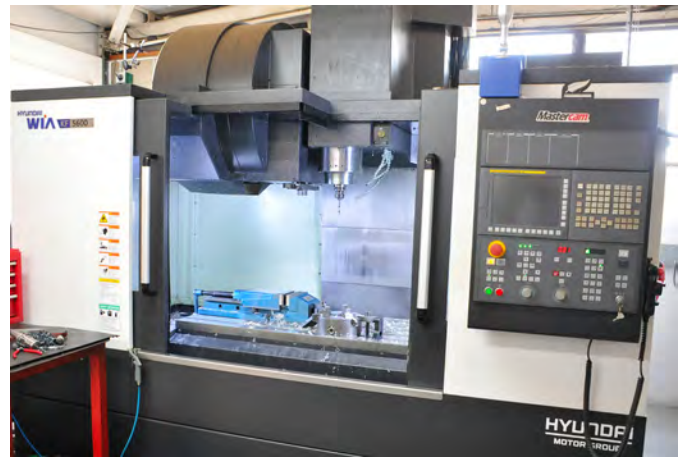
**Flexo Line has developed robotic systems used for part removal, reducing cycle times and limiting manual handling**



**Automation has been introduced to the shop floor with the introduction of cobots and other robotic systems**



**Flexo Line's Hyundai WIA L-230LMSA is a high-performance, slant-bed CNC turning center**



**Flexo Line's Hyundai WIA KF5600 vertical milling machine with 4th axis rotary table**

samples from pilot tools will undergo vigorous testing to meet customer needs before manufacturing of production tooling.

Components from the production tooling will undergo strict quality control processes and the use of both manual and automated testing techniques are utilised before it goes to market.

“Different shapes and different designs contribute to a different grind and feel,” says Allie. “We manufacture more than 200 different types of grinders and flip top lids and more than 40 different PET bottle shapes. Flexo Line manufactures more than 500 000 components in a day, of which a large portion is for export markets.

Upstream of production, the company incorporates design and prototyping functions as another core in-house aspect of

the business using SolidWorks and Mastercam. These CAD/CAM systems are also used to develop components and tooling, with prototype parts produced for testing before full-scale manufacturing begins, allowing products to be refined prior to committing to production tooling.

The overall structure of the plant reflects an integrated approach. Injection moulding, automation and toolmaking are combined, allowing Flexo Line to move from concept through to production without extensive outsourcing.

Other products manufactured by Flexo Line include buckets and storage products, furniture fittings, hair curlers, medical containers, wall plugs, educational toys, stationery and plumbing fittings.

Contact Flexo Line on TEL: +27 21 511 7578 or visit [www.flexoline.co.za](http://www.flexoline.co.za) for further information.



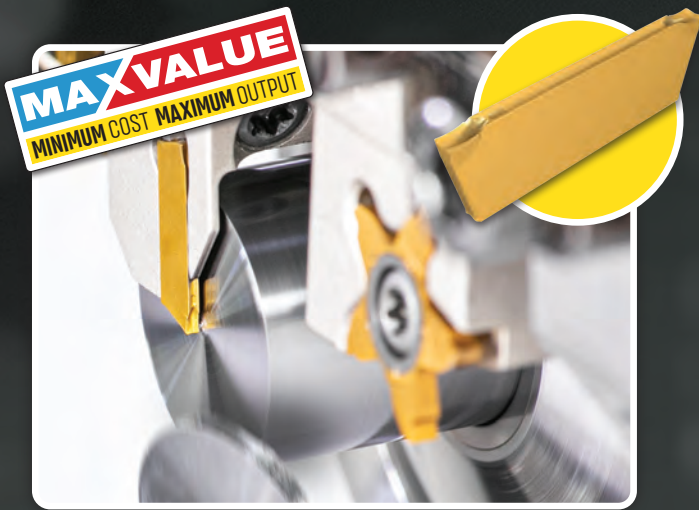
**Flexo Line also make use of a Leadwell V-40 vertical machining center and a Maximart BMC-5A 5-axis vertical machining center**

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# ITAC imposes final safeguard measures on imports of corrosion resistant steel coil – thin gauge

ITAC has concluded its investigation into increased imports of corrosion resistant steel coil, and made a recommendation to the Minister of Trade, Industry and Competition. The investigation, examined imports of certain flat-rolled steel products, commonly referred to as corrosion resistant steel coil.

#### The Commission made a final determination that:

- There were unforeseen developments, as contemplated

under the General Agreement on Tariffs and Trade (GATT) 1994;

- The effects of obligations incurred under GATT 1994 contributed to a significant increase in imports of corrosion resistant steel coil; and
- The surge in imports has caused serious injury to the Southern African Customs Union (SACU) industry.



Picture illustration World Steel Organisation, Usiminas, Brazil

Considering these findings, the Commission recommended the imposition of safeguard measures on imports of the affected products for a period of three years as follows: that duties of 52.34% be imposed for the first year, 37.34% for the second year and 22.34% during the third year, effective June 12.

The Commission further recommended the extension of rebate item 460.15/7210.61/01.06 to include the rebating of safeguard duties on specific products that are not manufactured domestically. This measure is intended to ensure that industries reliant on these inputs are not adversely affected where local supply is unavailable.

To safeguard the interests of downstream industries, the Commission determined that the pricing behaviour of the Applicant will be closely monitored following the imposition of the safeguard measures. This step is aimed at preventing any unwarranted price increases that could negatively impact downstream users.

The safeguard measures apply to imports from all countries, with the exception of developing countries where imports from each country do not exceed 3% of total imports, or collectively, such imports do not account for more than 9% of total imports.

The implementation of the definitive safeguard duty seeks to provide temporary relief to the SACU industry, enabling it to adjust to increased import competition, while maintaining a balanced approach that considers the needs of downstream industries and international trade obligations.

Full details of the final determinations and recommendations can be found in Report 768 <https://itac.org.za/wp-content/uploads/Report-779.pdf>



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# Chery gets approval for acquisition of Nissan's Rosslyn manufacturing plant's assets

South Africa's Competition Commission has recommended Chery's planned acquisition of Nissan's Rosslyn manufacturing plant takes place, paving the way for a potential expansion of local vehicle production and manufacturing investment.

The deal involves the acquisition by Chery International (Chery SA) of the assets related to Nissan South Africa's manufacturing operations at the Rosslyn plant, subject to conditions relating to employment and local procurement.

The recommendation comes after the Commission concluded that the transaction is unlikely to substantially lessen or prevent competition in any market.

Chery SA is controlled by Chery Overseas Industrial Investment Co., Ltd, which is in turn controlled by Chery Automobile Co., Ltd. Collectively, the Chery group is a major global automotive manufacturer specialising in the development, production and export of passenger and commercial vehicles, including sport utility vehicles (SUVs), sedans and new-energy vehicles.

The company currently operates in more than 80 countries and has established a growing presence in South Africa through the import and distribution of Chery-branded vehicles. However, it does not currently manufacture vehicles locally and relies entirely on imported products to serve the domestic market.

The acquisition of the Rosslyn facility represents a strategic shift for the automaker as it seeks to establish a manufacturing footprint in South Africa.

Earlier this year, Charlie Zhang, vice president of Chery Auto and executive vice president of Chery International, emphasised the investment as a "vote of confidence" in South Africa, acknowledging the robust support from customers and the dealer network that has fuelled the company's growth.

The new plant will be located in Rosslyn, Pretoria, where it will be re-commissioned and retrofitted over the next 12 to 18 months. The objective is to commence local vehicle production by mid-2027.



According to the Commission, Chery intends to use the facility to produce selected SUV models locally, potentially strengthening South Africa's automotive manufacturing sector and supporting localisation efforts within the industry.

The target asset, Nissan South Africa's Rosslyn manufacturing plant, has been a key component of the country's automotive industry for at least 60 years. The facility was most recently used to manufacture Nissan Navara pickup trucks.

However, Nissan South Africa announced in January this year that it would cease vehicle manufacturing operations in the country, citing external factors that had negatively affected plant utilisation levels and undermined the facility's long-term viability.

The planned exit raised concerns about the future of the plant and the potential impact on jobs and the broader automotive value chain.

The proposed acquisition by Chery is expected to provide a new lease on life for the facility and preserve manufacturing capacity in one of South Africa's most important automotive hubs.

The Competition Commission said its assessment found no significant competition concerns arising from the transaction. ■

## Steel at a crossroads: Policy will decide South Africa's future

In its May 2026 issue of Steel Matters the South African Iron and Steel Institute (SAISI) says South Africa's steel industry continues to operate under sustained pressure, with weak demand, high input costs, and ongoing competitiveness challenges, particularly electricity pricing and supply reliability. These conditions remain central to the sector's performance and investment outlook.

SAISI also reported that recent Leadership Group for Industry Transition (LeadIT) engagements in South Africa, including a site visit to Scaw Metals Group and a technical workshop on steel decarbonisation, highlighted both the operational realities facing producers and the longer-term transition agenda for the industry.

In its March 2026 issue the institute said South Africa's

steel industry is no longer in a cyclical slump; it is at a structural turning point. February 2026 crude steel output fell 17.2% year-on-year to 312 900 tons, reflecting not only weak demand but also lost capacity, rising import penetration, and policy misalignment. While remaining producers have lifted utilisation, the gap left by mill closures remains unfilled a stark reminder that once capacity is lost, it is rarely recovered quickly.

### January to April 2026

SAISI says domestic crude steel production contracted (-14.4%) sharply year-on-year, confirming a broader structural slowdown across the manufacturing landscape. This is in comparison to primary steel imports increasing sharply by +23% year-on-year in April 2026 (excluding stainless steel, wire, and rail). ▶

Primary steel exports fell -21% year-on-year in April 2026, led primarily by steep declines in semi-finished products and rebar. Value-added imports edged higher driven by strong inflows of tubes, pipes, and structural steel, while value-added exports recorded their fourth consecutive monthly decline.

**Global production trends**

April 2026 crude steel output fell 1.9% year-on-year globally. China moderated significantly, while India and the US posted steady gains. Notably Africa (+11.5%) completely bucked the global slowdown trend.

**Steel Matters March 2026: Imports are displacing, not supplementing**

In the March 2026 issue of Steel Matters SAISI said the old narrative that imports “supplement” domestic supply no longer holds. SARS data shows January 2026 primary steel imports surged 21% year-on-year to 154 681 tons. Semi-finished products rose 55%, long products 151%, and hot-rolled coil 74%, with nearly 80% of coil imports originating from South Korea, exploiting exemptions to bypass safeguard duties. These inflows are not filling gaps; they are eroding local production, undermining pricing, and threatening industrial viability.

**Trade measures must be decisive**

Recent anti-dumping actions by the International Trade Administration Commission are welcome, but partial or delayed interventions risk accelerating structural decline. Trade remedies must be comprehensive, timely, and rigorously enforced. Without decisive action, circumvention and diversion will continue to hollow out domestic capability.

**Passive deindustrialisation is a strategic risk**

Steel is not just another commodity it underpins infrastructure, energy, and manufacturing. Allowing the sector to erode is a policy choice with profound consequences. Import-dependent construction of transmission lines, renewable energy projects, or industrial corridors exposes South Africa to cost volatility, supply insecurity, and strategic vulnerability.

**Aligning policy with opportunity**

The infrastructure pipeline represents demand opportunity. But without firm localisation requirements, infrastructure expansion risks deepening import dependence instead of rebuilding domestic capacity. The window is narrow. Policy alignment is urgent.

**Priority actions include:**

- Strengthening and broadening trade measures to protect domestic producers across the value chain
- Embedding localisation in infrastructure programmes, particularly energy and transmission projects
- Supporting competitive production through energy and logistics reforms
- Positioning the sector for a low-carbon future to ensure global relevance

**Conclusion: The choice is stark**

South Africa’s steel sector will not recover through market forces alone. It requires deliberate, coordinated policy. The choice is clear: Bold intervention can restore resilience, while inaction guarantees gradual erosion. The real question is not whether South Africa can afford to support steel, but whether it can afford not to. ■



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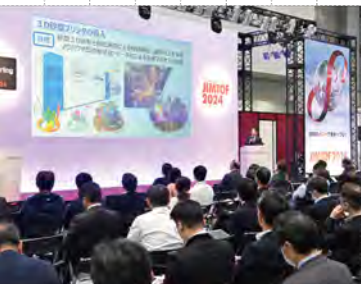
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### ■ Name of Exhibition

JIMTOF 2026

The 33rd JAPAN INTERNATIONAL MACHINE TOOL FAIR

### ■ Organizers

Japan Machine Tool Builders' Association  
Tokyo Big Sight Inc.

### ■ Date

Oct.26 (Mon.) - Oct.31 (Sat.), 2026 (6 days)

### ■ Venue

Tokyo Big Sight (Tokyo International Exhibition Center)

### ■ Exhibits

Machine tools (Metal cutting, Metal forming) /  
Machine tool accessories / Tools for machines (Cutting  
tool & wear-resistant tool) / Diamond, CBN tools /  
Grinding wheels and abrasives / Gears and Gear Devices /  
Oil hydraulic, water hydraulic and pneumatic machinery /  
Precision measuring machines and instruments /  
Optical measuring instruments / Testing machinery /  
Controller and related software (CAD/CAM etc.) /  
Other associated machinery and equipment,  
raw materials, technologies and publications



The guidance to exhibit for JIMTOF 2026 will be released on this summer.

## JIMTOF 2024 Data

■ Booths	5,744 booths	■ Number of Exhibitors	1,268 Exhibitors (including co-exhibitors)
■ Indoor Exhibition Space	118,540m <sup>2</sup>	■ Visitors	162,670 (total visitors)
■ Participating Countries/Regions	19 Countries and Regions		129,018 (repeaters counted as one)

## Contact Information

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 **JIMTOF**  
Official Website  
[www.jimtof.org](http://www.jimtof.org)





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## JIMTOF 2026 The 33rd JAPAN INTERNATIONAL MACHINE TOOL FAIR

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The Japan Machine Tool Builders' Association (JMTBA) and Tokyo Big Sight Inc. has announced the number of exhibitors that are participating at this year's exhibition and released the site map of the exhibition. The upcoming event will be held at the Tokyo Big Sight from 26 to 31 October 2026.06.26

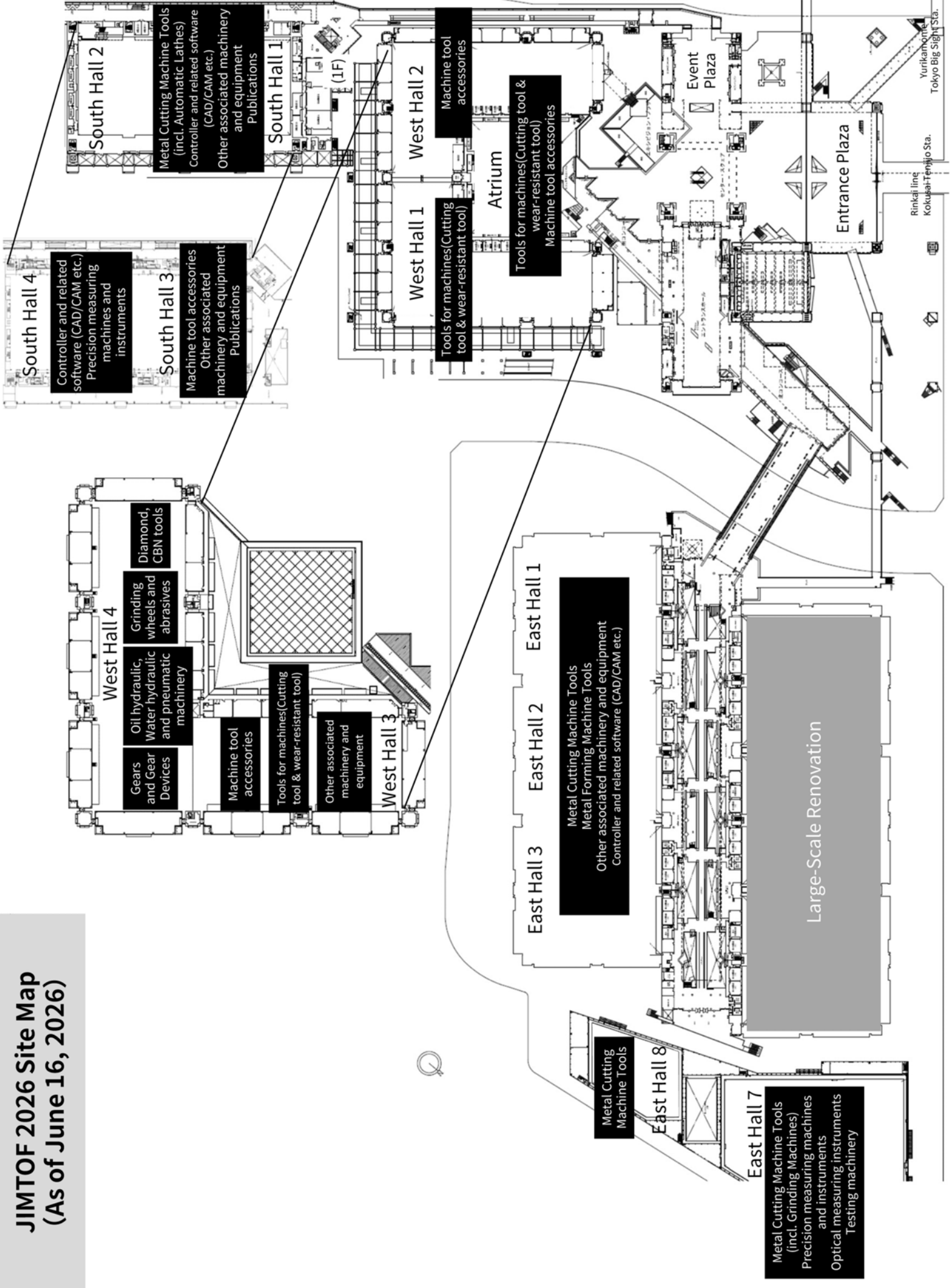
944 exhibitors and 4 423 booths will be occupied at JIMTOF 2026. The number of domestic exhibitors totals 725 occupying 3 998 booths and the number of international exhibitors is 219 occupying 425 booths.

A full list of the exhibitors can be found [here](#). On display will be the latest technology and equipment from Amada, DMG MORI, Okuma, Fanuc Corporation, Kanzaki Kokyukoki, Nakamura-Tome, Hamai, Mitsui Seiki Kogyo, Yamazaki Mazak, Yasda Precision Tools KK, JTek Corporation, Makino Milling, Citizen, Mitutoyo, Mitsubishi, Kawasaki, Kitagawa, Matsuura, Nikon, Sodick, Kitamura, Brother, Enshu, Fuji Machines, Howa, Ikegai, Murata and Tsugami – all machine manufacturers that are Japanese owned.

JIMTOF, one of the world's largest international technology shows, brings together cutting-edge technologies and products. The fair serves as a comprehensive showcase of products from across the manufacturing spectrum, ranging from machine tools to accessories and equipment of all kinds used in the metal-working industry.

JIMTOF has been held biennially for over 50 years since 1962. Products of a variety of industries including metal cutting machine tools, metal forming machine tools, machine tool accessories, tools for machines (cutting tools and wear-resistant tools), diamond and CBN tools, grinding wheels and abrasives, gears and gear devices, oil hydraulic, pneumatic and water hydraulic machinery, precision measuring machines and instruments, optical measuring instruments, testing machinery and CAD/CAM, among others, will be exhibited, and the latest information of products and technologies will be shown to the visitors.

# JIMTOF 2026 Site Map (As of June 16, 2026)



# Unilam Pressings: A specialist OEM electrical lamination, anti-split plate and metal pressing manufacturer

“Unilam Pressings was established in 1986, and still to this day is a family-run business with a number of family members involved and we try to make everyone here feel like they are part of the family,” explains Devlin Conway, Unilam’s managing director.

One of the biggest plusses Conway says of running a business in this manner is that key decisions can be made quickly without the need for tedious board approval processes. “Our chairman who recently celebrated his 85th birthday, Ron Wiggill, is still very much involved with the business today.”

“Unilam’s operations, generally speaking, consist of three main divisions. These are divided into our roof truss division, the unigrip or anti-split plate range division that includes polygon pole anti-split plates and rectangular and square anti-split plates, and the electrical lamination division. We are however also able to offer customers a wide variety of general metal pressings,” continued Conway.

“The roof truss division is quite distinctive. We have acquired licensed software, which we provide to our customers for them to produce trusses legally. The software provides you with a bill of quantities needed to produce the

trusses, which are purchased from us. These products are connector plates, brackets and strapping.”

**“We do have an added service where we have in-house designers assisting customers when needed.”**

“To sum it up though, we stamp and punch steel. The gauges we punch generally start at 0.5mm, sometimes a 0.4mm, and up to 1.2mm. We also laser cut material ranging from 0.5mm to 5mm depending on the designs of the components needed. The majority of the steel we work with is galvanised.”

“Our unigrip or anti-split plate range gets supplied to saw mills, treated timber plants, and gum pole timber manufacturers.”

“The lamination division is where this company actually originates and draws its roots from and we mainly used to supply small transformer laminations. We used to

manufacture thousands of these small little laminations but that industry for local manufacturing has not been sustainable.”

“The company then made the decision to move in the direction of manufacturing larger laminations particularly for the stator and rotor lamination industries.”

“These laminations are manufactured as thin, specialised sheets of electrical steel called NGO (Non-Grain Oriented) electrical steel (also known as silicon steel because of its silicon coating) and are a soft magnetic material with uniform magnetic properties in all directions. This steel is a specialised steel that we import directly ourselves as there are no local manufacturers of it in the country.”

After punching – Unilam is also able to laser cut its laminations – the laminations are stacked together to form the core of an electrical motor or transformer’s stationary ▶



**Unilam’s laminations are manufactured as thin, specialised sheets of electrical steel called NGO (Non-Grain Oriented) electrical steel (also known as silicon steel because of its silicon coating) and are a soft magnetic material with uniform magnetic properties in all directions. This steel is a specialised steel that Unilam import directly as there are no local manufacturers of it in the country**



**Unilam have around 20 presses on the shop floor. The biggest press is a 250 ton press with the smallest being a 40 ton press. They all perform a variety of different operations. The smaller presses notch at very high speeds and the higher tonnage presses are slower stamping presses**



**Unilam is a specialist roof truss connector plate manufacturer. These plates are flat, galvanized steel plates with integral (pressed) teeth or punched holes. They are pressed directly into both sides of timber joints**

component. By using multiple insulated layers instead of a solid piece of metal, they significantly reduce energy losses, prevent overheating, and increase overall electrical efficiency.

### 3kW Amada Orsus 3015 AJe fiber laser

Unilam's latest CNC addition to its operational efficiencies has been the investment in a 3kW Amada Orsus 3015 AJe fiber laser.

"We had always outsourced our laser cutting – it had just been what we had done for years – and last year our chairman made the call that we needed to invest internally in the company," explained Conway.

"We now use the new Amada laser for pretty much all of our products, apart from those that are punched out with our tooling."

Packed with the latest fiber laser technology, Amada's Orsus features Automatic Mode Converter that seamlessly switches the laser beam from a highly focused beam, used for piercing and cutting thin material, to a wide and stable beam for thicker material processing.

Automation-ready (including easy integration with Amada's modular pallet changers and towers, as well as manipulators), the Orsus is equipped with a bed size of 3 070mm x 1 550mm and can process a range of materials including various steels, aluminium, brass and copper.

"Because we now use the laser across the board for so many of our products, it really was beneficial for us to bring these processes in-house, especially when it comes to having to adapt our operations based off of demand changes.

You have to optimise how you control your expenses in any business and this has really increased our capabilities."

"We do still have to send out some of our laser work and we have maintained good relationships with our suppliers that have been very good to us over the years, but sometimes having to wait a week or two for those components to come back to us just doesn't make sense. We are now in a position where we can process six months' worth of supply in a few weeks."

"Over and above cutting our electrical laminations, we are even using the laser to process some of our brackets and end plates. When it comes to these end plates for the electrical motors, we work with a number of different designs. Some of these end plates are manufactured for legacy designs meaning that when we are refurbishing for the older designs, we still use end plates with thicker material, generally around the 5mm range and slightly thinner, though we've cut up to 20mm for some of the plates. The newer designs are manufactured using much thinner gauges of material and some can even be considered laminations themselves." ▶



**Unilam supply their products all over Africa, Germany and Australia**



**Amongst its product range, Unilam supply a multitude of metal pressings into the roof truss industry**



**Unilam have a number of presses on their shop floor suited to tailor-make specialised anti-split plates, timber roof truss metal products and electrical laminations**



**Unilam's latest CNC addition to its operational efficiencies has been the investment in a 3kW Amada Orsus 3015 Aje fiber laser. The Orsus is equipped with a bed size of 3 070mm x 1 550mm and can process a range of materials including various steels, aluminium, brass and copper**



**As part of Unilam's toolroom, they make use of three wire cutters for the tool steel used for their tooling including a Mitsubishi Electric MV12005 WEDM that was supplied by WD Hearn Machine Tools**

Unilam will process between 40 and 50 tons a month of galvanised steel and up to 60 tons a month including other materials that are processed. "When we are really busy, just on the roof truss side of the business, we can move about 30 tons of steel through the shop floor. If you were to include some of the sub-components, we could do close to 50 tons in a month."

"Because some of our clients are very specific about the type of steel that they require for their products we have sourced particular mills that we purchase from. As these steels are not available locally, we import it directly ourselves. The material arrives in coils and we have the machinery to decoil on site here. We also have all the equipment to deslit our material where needed and depending on the design of the specific laminations. Sometimes these shipments that we import will be in the range of 100 to 140 tons of material, depending on demand and orders."

"We have recently started introducing steel with a Magnelis-type coating. It's a coating formed from a continuous hot-dip galvanising process where the material is coated with a make-up of magnesium, aluminium and zinc. It offers far better corrosive protection than that of standard galvanised steel and it's becoming more of an industry standard across certain applications like roofing."

"We have around 20 presses on our shop floor and our biggest press is a 250 ton press with the smallest being a 40 ton press. They all perform a variety of different operations. The smaller presses notch at very high speeds and the higher tonnage presses are slower stamping presses. You can imagine that with some of the older presses, spares aren't as readily available anymore so our toolroom and team are extremely capable."

"We have been fortunate to employ some phenomenal toolmakers over the years and we have built a lot of our own existing tooling, and we still build a lot of our own tooling to this day."

"When a customer approaches us with a lamination that they want manufactured, we will generally start the process by first laser cutting the profile before we get into the process of manufacturing tooling for them to run the high numbers of components that they will need. Sometimes this also involves developing multiple tooling and this can be a process too depending on what is going to be required of the tooling – is it a single operation, is the tool going to be performing multiple operations done-in-one?"

"The introduction of the laser has also allowed us to experiment and explore from a design point of view when it comes to brackets and plates for things like exposed roof trusses. We are seeing customers approach us more regularly with different designs in that they're not seeking large production runs but rather smaller production runs of more bespoke brackets. We make use of Inventor for our in-house design process that our engineering team will use when working alongside clients to bring these designs to life."

As part of the toolroom, Unilam make use of three wire cutters for the tool steel used for their ▶

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**Unilam have all the necessary equipment to deslit their raw material where needed**



**Unilam also make use of a DMG DMC 1035 V eco (part of the Ecoline series) 3-axis vertical machining center, along with conventional machines**

tooling including a Mitsubishi Electric MV1200S WEDM that was supplied by WD Hearn Machine Tools. Unilam also make use of a DMG DMC 1035 V eco (part of the Ecoline series) 3-axis vertical machining center, along with conventional machines.

Unilam employs approximately 40 people and you can find their products all over Africa, Germany and Australia.

Unilam is a member of The Institute for Timber Construction SA – ITC-SA – and maintain ISO 9001:2015 certification.

Unilam Pressings is part of a group of companies under the name of Steelcor Holdings. The group consists of three companies that include Unilam Pressings, Steelcor and Steelcor Power.

For more information contact Unilam Pressings on TEL: +27 11 032 7030. Or visit <https://unilam.co.za/>



**Unilam will process between 40 and 50 tons a month of galvanized steel and up to 60 tons a month including other materials that are processed**



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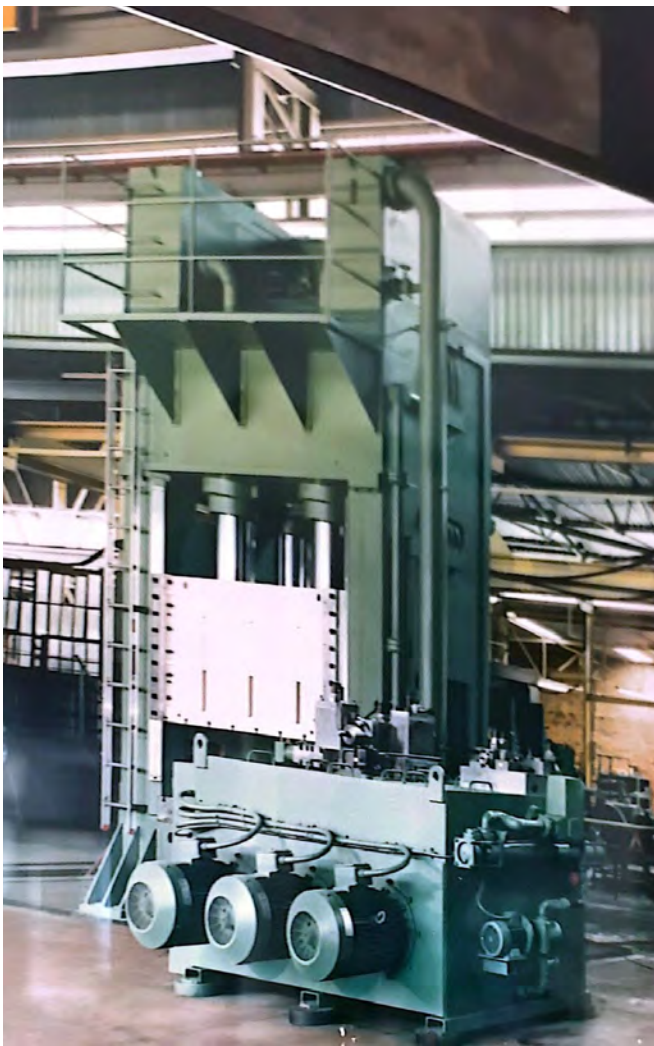
# Walch Engineering:

## Three generations and six decades of industrial press building in South Africa

Industrial presses are fundamentally important to modern manufacturing. They provide the immense, controlled force needed to cut, bend, forge, stamp and mould raw materials like steel, aluminium and plastics into precise, high-volume parts. Without them, mass production in industries like automotive, electronic components, appliances, rubber and aerospace would be impossible.

In any metal forming and heavy engineering sector, hydraulic and mechanical presses remain central to production as they have done for decades. From forging and forming to straightening, punching and general assembly operations, presses can be among the most critical assets on a factory floor.

Even conventional presses like an arbor press allow small machine shops or hobbyists to shape metal in to the form that they need.



**Industrial presses are fundamentally important to modern manufacturing. They provide the immense, controlled force needed to cut, bend, forge, stamp and mould raw materials like steel, aluminium and plastics into precise, high-volume parts**



**Walch Engineering traces its roots back to 1964 when the company was founded by Gerhard Walch as a machine design and manufacturing business specialising in hydraulic and mechanical presses**

For more than six decades, Walch Engineering has been involved in the design, manufacture, refurbishment and servicing of these machines, building a reputation as one of Southern Africa's largest and most established press manufacturers.

Based in Witfield, Boksburg, Walch Engineering traces its roots back to 1964 when the company was founded by Gerhard Walch as a machine design and manufacturing business specialising in hydraulic and mechanical presses. Over the years, the company has expanded its capabilities and today manufactures hydraulic, mechanical and custom-built presses for a range of industrial sectors.

During the 1970s, Mr Walch acquired Bencor – a specialist in importing hydraulic equipment and associated products and manufacturer of heavy-duty hydraulic equipment, workshop presses and press brakes.

Walch Engineering then assumed responsibility for the production of hydraulic presses from Bencor and Walch's presses have earned and maintained a strong and respected name over the years due to their reputation for being well-built, reliable and a mainstay across shop floors. Bencor is now involved in the design and manufacture of hydraulic and electrical systems, including hydraulic power packs, specialising in the high-pressure ranges.

There are more than 5 000 of these presses spread out across South Africa. Hydraulic Designer, Sean Wilson, says: "Back in the day I think they used to over engineer everything – you just look at how long some of our presses have been around. These days they just don't manufacture machinery the way that they did back then."

"Walch Engineering serves industries that include mining, manufacturing, construction, energy and infrastructure development. Our focus has remained on supplying locally manufactured equipment while also supporting customers throughout the operational life of their machines through servicing, repairs and refurbishment programmes. With regard to our presses, we manufacture everything from scratch here – including the cylinders and we will even retrofit PLC systems," continued Wilson.

A significant aspect of Walch Engineering's operation is its ability to manufacture presses across a wide capacity range. The company can build hydraulic presses from 25 tons up to 5 500 tons, placing it among the few South African manufacturers capable of producing large-scale press systems for demanding industrial applications.

Its hydraulic press portfolio includes C-frame, H-frame and four-column designs. Each configuration is suited to different production requirements. C-frame presses are often selected where floor space is limited and access to the work area is important. H-frame presses are commonly used in applications requiring higher force capacities and structural rigidity, while four-column presses are employed where stability and load distribution are critical factors.

Mechanical presses form another important part of the company's manufacturing offering. Walch Engineering builds C-frame and H-frame mechanical presses as well as transfer presses for higher-volume production environments. The company boasts build capabilities ranging from 100 tons to 800 tons for its mechanical press range. These machines are designed for applications where speed, repeatability and production throughput are key considerations.

Beyond standard machine designs, Walch Engineering has developed a niche in custom-built press systems. In many production environments, standard equipment cannot always accommodate specialised tooling, unusual workpieces or unique manufacturing processes, but Walch Engineering has developed the ability to do this.

"The company's custom press division focuses on developing machines tailored to customer specifications, incorporating hydraulic, mechanical and control systems configured for specific operational and industry-specific requirements. This includes the design and manufacture of dies and any other specialised tooling that a customer might require. When it comes to designing these dies, we work from existing drawings and we also make use of software like Fusion."

The local tool and die manufacturing industry has been scrutinised recently, but Walch Engineering certainly makes a point for showcasing that South African tool and die making is definitely still up there with the world's best. Many OEMs and suppliers to OEMs make use of both presses and tooling supplied by Walch Engineering.

Walch Engineering's wealth of history also reflects a broader involvement in machine building and the company has manufactured hydraulic guillotines, press brakes and other specialised machinery in addition to its press portfolio. This experience in machine design and manufacturing has contributed to its ability to undertake bespoke engineering projects.

#### Reindustrialisation of Walch Engineering

Christopher Walch, grandson of Gerhard Walch, is now the third generation Walch to run Walch Engineering. Growing ►



**For more than six decades, Walch Engineering has been involved in the design, manufacture, refurbishment and servicing of presses, building a reputation as one of Southern Africa's largest and most established press manufacturers**



**While new machine construction remains a core activity, aftermarket support has become an equally important part of Walch Engineering's service offering. This includes in-house tool and die design and manufacturing**



**Walch Engineering serves industries that include mining, manufacturing, construction, energy and infrastructure development. Focus has remained on supplying locally manufactured equipment while also supporting customers throughout the operational life of their machines through servicing, repairs and refurbishment programmes**

up, the youngest Walch had always spent time on the press floor learning from his grandfather and father, Marc Walch.

“After my grandfather passed away, my father took over the running of Walch Engineering, and when my own father passed away in 2020, I took over the business,” says Walch.

The youngest Walch’s passion for engineering has helped steer the new energy and ultimately the reindustrialisation of Walch Engineering.

“I am always searching the Internet, finding and buying back many of my grandfather’s old presses. We of course still manufacture presses from scratch and sell them but there is also a market for second-hand presses and we have



**Walch Engineering have purchased a GMC3028L five-axis gantry CNC milling machine**



**The GMC3028L is a double-column gantry machining center that has a distance between columns of 2 800mm, X-axis travel of 3 000mm, Y-axis travel of 3 600mm and Z-axis travel of 1 250mm. The spindle nose to table distance is 400mm – 1 650mm with a table width of 2 600mm and it can support a table load of 30 ton**

found another way to penetrate the market in that way,” continued Walch.

“10 to 15 years ago we were struggling to compete with the imported press market but slowly we have worked our way back into the market on both sides – new and refurbished presses. With our service offering and backup support we are able to offer with our products we are able to cover all areas of the press building industry.”

“I don’t have a degree or anything, I was just thrown into the deep end here. I swept the floors, operated the crane, worked the lathes, worked the grinders and gradually learned how it all works and comes together. It’s been 17 years now ▶



**Walch Engineering also have a dual-head gantry-type CNC plasma cutter on the shop floor with a 10m long bed that assists with the cutting of thick plate and sheet for the presses – with Walch Engineering recently cutting a workpiece 150mm in thickness**



**On the shop floor is a TOS Čelákovice SUA 125. A heavy-duty, high-precision universal center lathe, designed for precision machining of large, heavy shaft and flange components. The distance between centres is 6m**

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**Walch Engineering's recently purchased DN Solutions DNM 6700 vertical machining center. Known for its large workspace, heavy-duty cutting capacity and reliability, it features a large table, rapid feed rates and a direct-coupled spindle. It's well suited to Walch Engineering's heavy machining needs**



**Walch Engineering have a Mazak Quick Turn 15N CNC lathe – a simple, compact but rugged 2-axis work horse**



**Walch Engineering boasts an impressive in-house toolroom. It houses a number of state-of-the-art CNCs including lathes, milling centers and grinders focussed on manufacturing and refurbishing the precision components and tooling that make up presses**

and I just have a passion for it. When I was younger, after school I would go around to my grandmother's house and my father and grandfather would arrive later on and the conversation was always about work."

"Along with my team, we really know what we are doing here."

"We have built and worked on some interesting presses over the years. We actually have a 3 ton press that was commissioned for the railway industry. It can press out the side panels for your railway carriages including the window frames. Another that I can think of is a 2 000 ton press that does swaging of wire rope for draglines."

"Aside from those industries, our presses are found on many different shop floors from the pressing of pots and pans to munitions to automotive and even in the tiling industry."

#### **Toolroom and shop floor**

An increasingly important aspect of modern press manufacturing is the integration of advanced machining capabilities. Walch Engineering boasts one of the most impressive, well-equipped and modern toolrooms this journalist has seen lately.

The company has also recently added a GMC3028L five-axis gantry CNC milling machine to its production facility. The double-column gantry machining center has a distance between columns of 2 800mm, X-axis travel of 3 000mm, Y-axis travel of 3 600mm and Z-axis travel of 1 250mm. The spindle nose to table distance is 400mm – 1 650mm with a table width of 2 600mm and it can support a table load of 30 ton.

The addition expands the company's in-house machining capacity and provides greater control over the manufacture of large and complex components. Investments of this nature are becoming essential as customers demand tighter tolerances, improved machine performance and shorter lead times.

Additionally, the toolroom houses a number of state-of-the-art CNCs including lathes, milling centers and grinders focussed on manufacturing and refurbishing the precision components and tooling that make up presses. The mix includes a DN Solutions DNM 6700 VMC, a DN Solutions DNM 5700 VMC, a Mazak Quick Turn 15N CNC lathe, a DN Solutions 2100 L CNC lathe and a Mazak VTC-41 VMC.

There is also a dual-head gantry-type CNC plasma cutter on the shop floor with a 10m long bed that assists with the cutting of thick plate and sheet for the presses – with Walch Engineering recently cutting a workpiece 150mm in thickness.

#### **Aftermarket support**

While new machine construction remains a core activity, aftermarket support has become an equally important part of the business. Many manufacturers continue to operate presses that are decades old. Replacing these machines is often expensive and can require significant changes to production processes and shop floor downtime. Refurbishment therefore offers an alternative route for extending machine life and restoring performance.

Walch Engineering provides refurbishment services for hydraulic and mechanical presses, beginning with a detailed assessment of machine condition. Components such as cylinders, pumps, valves and seals can be replaced or retrofitted, while hydraulic and electrical systems may be upgraded to modern standards. Following reassembly, machines undergo testing and calibration before being returned to service.

The company also offers preventative maintenance and servicing programmes aimed at reducing unplanned ▶



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downtime. These services include hydraulic system diagnostics, fluid and filtration management, mechanical inspections, repairs and performance verification. Such support is particularly important in production environments where press failures can halt manufacturing operations and create significant production losses.

Hydraulics remain closely linked to the company's activities and through the Walch Group and its associated business Bencor, the company serves as the sole agent for HAWE Hydraulik in South Africa and Sub-Saharan Africa. This relationship provides access to hydraulic components and systems used across industries including mining, construction, renewable energy, materials handling and industrial manufacturing.

Today, Walch Engineering forms part of a broader engineering group that includes Bencor and Norcast, which supplies sheet metal processing equipment such as laser cutting machines, press brakes, punch presses and shearing systems. Though this equipment is no longer manufactured locally but imported, it is still serviced and maintained. Ultimately, these businesses provide complementary technologies that support metalworking and manufacturing

operations across Southern Africa.

Generally speaking, imported machinery often dominates discussions in the manufacturing and fabrication industry, but Walch Engineering represents a long-standing example of local machine building capability. With more than 60 years of experience, the company continues to manufacture hydraulic, mechanical and custom-built presses while supporting installed equipment through servicing, repairs and refurbishment programmes.

As South African manufacturers continue to focus on productivity, equipment reliability and lifecycle cost management, the ability to source locally built presses and technical support remains a valuable proposition. For Walch Engineering, that combination of machine design, manufacturing and aftermarket service has been the foundation of its business since the 1960s and continues to define its role in the country's engineering sector today.

With new blood flowing through the press floor in a passionate, hands-on, young and innovative engineering team, these are exciting times for local press building.

For further information contact Walch Engineering on TEL: +27 11 826 1411 or visit <https://www.walch.co.za>



**Walch Engineering's toolroom mix of CNCs includes a DN Solutions DNM 6700 VMC, a DN Solutions DNM 5700 VMC, a Mazak Quick Turn 15N CNC lathe, a DN Solutions 2100 L CNC lathe and a Mazak VTC-41 VMC**



**Walch Engineering's Sean Wilson and Christopher Walch. Christopher Walch, grandson of Gerhard Walch, is now the third generation Walch to run Walch Engineering succeeding his father Marc Walch, and grandfather Gerhard Walch**



**Walch Engineering have all the necessary equipment to manufacture from new and refurbish a range of presses and press components in-house and have been doing so for over six decades**

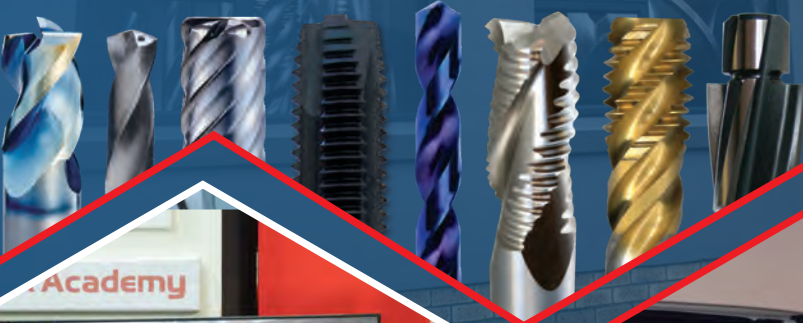
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# When silence says it all

Learn the story of Silent Tools™, the mass tuned damping solution from Sandvik Coromant.



**Silent Tools™ started life as the ambition of a university student. In 1964, when writing his thesis on tool vibrations, Hans Kristian Holmen created a concept for an anti-vibration boring bar**

What could a machine tool have in common with Taiwan's tallest building? Located in Taipei, the 508-metre-tall building could become victim to vibration if it wasn't for its clever mass damper system. In turning, milling, boring and drilling applications, manufacturers could face the same dilemma. That is, if it wasn't for Sandvik Coromant Silent Tools™. Here, Anders Digernes, R&D Manager at metal cutting tools and manufacturing solutions expert Sandvik Coromant, tells the story of the innovation in vibration damping.

"As one of the tallest structures in the world, located only 201 metres from a major fault line, earthquakes and

high winds are a serious threat to the Taipei 101 building. Fortunately, at 5.5 metres across, it is also home to the world's largest damper."

"The tuned mass damper can reduce up to 40% of the tower's movements, and has saved the building from disaster on multiple occasions."

While reducing vibrations in machine tools doesn't exactly work in the same way, the two applications share a common goal – to deliver greater stability and combat the risk of error. Silent Tools™ has been a unique part of the Sandvik Coromant product offering for several decades, but what makes the solution stand out above the rest? ▶

### A brief history lesson

Silent Tools™ started life as the ambition of a university student. In 1964, when writing his thesis on tool vibrations, Hans Kristian Holmen created a concept for an anti-vibration boring bar. His work almost remained no more than a university project, until its potential was spotted by a visitor, who saw the prototype in a lathe in the university workshop and knew Holmen was onto something.

Plans to manufacture the prototype later began, then supported by a spike and nail factory located in Trondheim, Norway, who began to produce the damped tools. Later, in the 1970s, that manufacturer partnered with Sandvik Coromant to support the sales and distribution to the global market. Silent Tools™ has sat with Sandvik Coromant ever since, with the product area continuing to grow today.

### Good vibrations

To understand why damped tool holders play an important role in machining operations, it's first worth looking at vibrations. While vibrations can at times be useful – you wouldn't get a very enjoyable sound from a speaker if it didn't vibrate – in machining, they are not desirable.

Vibrations can lead to inaccuracies in the machined part's dimensions. As the cutting tool vibrates or chatters against the workpiece, it may deviate from its intended path, resulting in dimensional inaccuracies and poor surface finish. They can also cause irregularities on the surface of the machined part, which is particularly problematic in applications where a smooth surface finish is critical, such as in precision machining or industries like aerospace and medical.

In addition, when the cutting tool vibrates excessively, it experiences higher levels of stress and fatigue, which

can shorten its lifespan and compromise the quality of machining. Vibrations may necessitate slower cutting speeds and shallower depths of cut to maintain acceptable quality standards, thereby increasing machining time and reducing overall throughput.

In short, vibration-prone operations pose a constant threat to productive and secure machining, especially when dealing with long overhangs or deep cavities. Reducing process parameters such as depth of cut, speed or feed is one aspect to consider, but it will most likely have a negative impact on productivity.

### A silent hero

Dampers work by absorbing, dissipating or redirecting the energy created by vibrations, thereby minimising their effects on the machining operation.

Silent Tools™ uses a specialist technique known as tuned mass damping – just like Taipei 101 – where a counterweight within the tool absorbs kinetic energy of vibrations and uses a compensating frequency to eliminate them mechanically, rather than converting them into noise and heat. With the smallest configuration of the tool just 10mm in diameter and the largest at a record-breaking 600mm, Silent Tools™ can support a variety of machining operations for turning, boring and milling.

For instance, machining deep holes is a particularly vibration-prone operation, especially when machining with long overhangs. Damped boring bars with overhangs from six to 14 times the diameter enable higher metal removal rates compared to non-damped boring bars. Helping ensure high-quality surface finish, as well as meeting the demanded tolerance, the higher cutting parameters that this machining

strategy allows for creates shorter chips, thereby improving chip evacuation at the same time. This is critical when machining with long overhangs.

Because Silent Tools™ allows for more aggressive cutting parameters while maintaining quality and productivity, users are able to reduce machining cycle times and therefore enhance overall efficiency in metal cutting operations. We find that, when using Silent Tools™ alongside Sandvik Coromant tools and adaptors for their chosen application, customers make productivity gains of at least 50% when shorter adaptor lengths are used, and up to 300% for longer adaptors.

### Maintaining our edge

For many years, Sandvik Coromant held a patent for Silent Tools™ that made the solution truly one-of-a-kind. Today, while concepts for mass tuned dampers are better understood by the wider market, there are many reasons why Silent Tools™ remains unique.

First, Silent Tools™ continues to evolve. That includes upgrades launched in 2024 designed to deliver a more consistent performance and even better surface finish.

The damper body, previously requiring manual fine-tuning, is now automatically assembled and each and every damper is calibrated by a machine. This automation results in a highly precise ▶



**For many years, Sandvik Coromant held a patent for Silent Tools™ that made the solution truly one-of-a-kind. Today, while concepts for mass tuned dampers are better understood by the wider market, there are many reasons why Silent Tools™ remains unique**

and predictable frequency area, perfectly matched to each adaptor's intended overhang and application. This means that Silent Tools™ turning adaptors are more efficient at countering vibration forces at long overhangs than ever before.

To further ensure accuracy in set-ups and optimal tool health, the upgraded turning adaptors are accompanied by the introduction of digital device Tool Status Checker.

Tool Status Checker is designed to help operators check tool health and support tool set up before machining begins. It is compatible with all versions of Sandvik Coromant turning adaptors. Users simply need to snap it onto the adaptor's serration lock interface using the built-in magnet, download the software, and it's ready to go.

With Tool Status Checker's centre height setting feature, a precise set-up is guaranteed every time, while the temperature monitoring feature ensures that the adaptor is always working within its specified temperature range.

This leads us to another benefit of using Silent Tools™. While an innovation in its own right, Silent Tools™ doesn't need to act alone – customers can learn more about their machining operations with Silent Tools™ Plus. Using a connected turning adaptor and sensors to monitor load, vibration, deflection, surface finish, temperature and in-cut

detection in turning applications, the product was brought to market to overcome the challenge of operator-blindness in internal turning. Because an operator has no visuals of the process in question, it was previously extremely difficult to identify potential problems until turning was complete.

By streaming data directly to a dashboard, Silent Tools™ Plus provides operators with a view of the cutting zone, allowing them to identify problems such as excessive deflection, vibration or set up issues before they escalate and manufacturers are forced to scrap expensive components. Also available as a machine-integrated version, with CoroPlus® Connected, data generated at the cutting zone can be automatically transformed into cutting actions, eliminating the need for operators to monitor the machine dashboard for the entire process.

Taipei 101 and machining at long overhangs share a common challenge – overcome by tuned mass damping. Silent Tools™ story may have started many decades ago, but continuous developments mean the solution offers manufacturers more than just a vibration eliminator. With Silent Tools™, customers have greater visibility of the machining process, and therefore yield better results.

Contact Sandvik Coromant on TEL: 010 500 2295 or visit [www.sandvik.coromant.com](http://www.sandvik.coromant.com) for further details. ■

## FANUC and Google advance Physical AI in industrial robotics

As part of the partnership, FANUC has developed a new Physical AI system for industrial robots that integrates the latest innovations from Google Cloud, including Gemini Enterprise – Google's secure, enterprise-grade generative AI platform.

Physical AI refers to the integration of cognitive intelligence with physical action, enabling robots to perceive their environment through sensors, make autonomous decisions and carry out tasks independently. FANUC robots support Robot Operating System (ROS) – the industry standard open platform for robot control – of which Google is a prominent contributor and maintainer through their Intrinsic robotics AI group.

FANUC's robotics portfolio is designed for broad compatibility with established technologies, including support for Python programming for AI development, high-speed communication interfaces for external robot control and seamless integration with PLCs for straightforward operation.

Since unveiling its Physical AI system at the International Robot Exhibition last December, FANUC has seen rapid uptake, with over 1 000 robots already deployed in Physical AI-related applications.

At its New Product Open House in May, the company showcased a next-generation Physical AI Robot System powered by Gemini. The system was shown to be capable of understanding natural language instructions, recognising objects and autonomously directing FANUC robots to perform assigned tasks.

This new AI-powered agent system enables both collaborative and traditional industrial robots to operate together within a single cell, responding to simple human commands and coordinating tasks with minimal programming input.

In parallel, FANUC is providing full support for robot control within Google Intrinsic's development environment, Flowstate.

The software is fully interoperable with ROS and enables rapid development of adaptable AI-driven automation solutions, leveraging FANUC's open platform architecture.

FANUC is also participating in Google DeepMind's Gemini Robotics Trusted Tester Program, contributing to the advancement of foundational AI models for robotics and helping to shape the future of intelligent automation.

Contact Fanuc South Africa on TEL: 011 392 3610 or visit [www.fanuc.co.za](http://www.fanuc.co.za) for further information. ■



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# Focusing on cost-effective cutting tools

“Price is what you pay. Value is what you get.” – Warren Buffett.

In the modern metalworking industry, tungsten carbide has become the most commonly used cutting material. With significantly greater hardness, abrasion resistance, and thermal strength compared to traditional high-speed steel (HSS), tungsten carbide allows for substantially higher cutting speeds, resulting in increased metal removal rates (MRR) and enhanced productivity.

Advances in coating technology, in which a thin layer of coating material with a microhardness exceeding that of tungsten carbide is applied, have transformed the natural relationship between hardness and toughness in cutting materials. When coated, tungsten carbide demonstrates higher wear resistance than uncoated carbide of the same toughness. This improvement has further contributed to productivity gains. Today, the majority of carbide tools, whether solid or featuring indexable inserts, use coated tungsten carbide as the primary material for cutting edges.

However, in recent years, the metalworking industry has faced a new problem: The significantly rising prices of tungsten-containing materials. There are a variety of reasons, often interrelated, for this increase, most of which are related to economic and political factors. China, for example, is the main supplier of tungsten, accounting for around 80% of global production. As a result, any changes in China's export policy or mineral resource regulations have a direct impact on pushing prices up. In addition, there is considerably higher demand for tungsten from other industrial sectors, mainly electronics as well as aerospace and defence. The current geopolitical situation and the logistics disruptions affecting the supply chain further contribute to the rising prices.

Understandably, this price increase impacts tooling investment and results in a higher proportion of cutting tool outlays within overall machining expenditures. Naturally, under these conditions, manufacturers are seeking ways to reduce tooling-related spending, more frequently considering alternative chip approaches. At the same time, it is important to bear in mind that cutting tools, despite their relatively small share in overall machining costs, can be a powerful means to boost productivity and thus lower the actual cost of production. Hence, the new challenge for cutting tool manufacturers is to provide cost-effective solutions that address the difficulties caused by the sharp rise in tungsten prices in the global market.

Ultimately, cost-effectiveness and achieving optimal value are key.

In such circumstances, the metalworking industry places greater emphasis on the affordability of cutting tools and seeks ways to enhance their value for money. On the one hand, this logically requires adopting advanced technologies, revising existing processes, introducing more effective machining strategies, and improving tool management at the machine shop. On the other hand, the industry looks to cutting tool manufacturers for an appropriate response, particularly regarding how they will address rising tungsten prices.

So, what do tool manufacturers have in their arsenal to meet this challenge? There are several possible responses.

## Alternative hard cutting materials

One approach is the expanded use of alternative hard cutting materials such as cermets and ceramics. These materials undoubtedly offer significant advantages over tungsten carbide, featuring higher hardness and greater heat resistance. However, their application is limited by several factors: They are more brittle, less tough, and more sensitive to unstable machining conditions.

Extra-hard materials like cubic boron nitride (CBN) and polycrystalline diamond (PCD) provide excellent wear resistance, but they are very expensive. Moreover, compared to tungsten carbide, their application range is not as broad: CBN is mainly used for machining hard steels, cast iron, and high-temperature superalloys (HTSA), while PCD is effective primarily for cutting non-ferrous materials such as aluminium, copper alloys, and composites. ▶



**Fig. 1 Iscar's MULTI-MASTER is a family of assembled tools with exchangeable carbide cutting heads that has been on the market since the beginning of the century**

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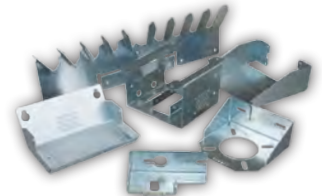


**TPM Series**  
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Features:

- Servo-driven hydraulic system
- Mechanical crowning



**G 320**  
Smart NC Programmable  
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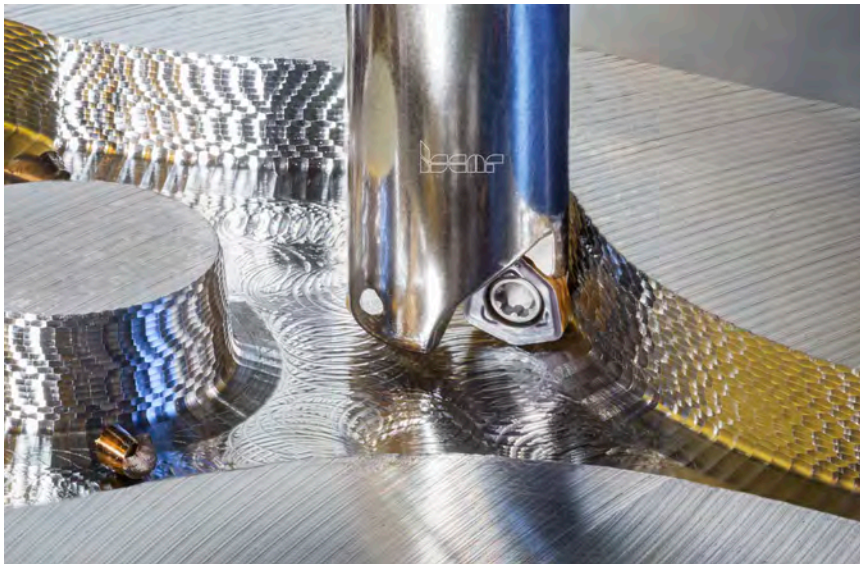
**LTP Series**  
Laser Tube Cutting Machine



Features:

- Professional cutting system and JFY auto-focus cutting head and fiber laser ensure the reliability of machine operation and high cutting quality of various tubes.





**Fig. 2** The company's portfolio includes families such as MICRO-3-FEED for efficient high-feed milling (HFM), and recent additions to the popular HELITANG and HELI-3-MILL lines, featuring portable cutters with mini inserts for square shoulder milling, among other solutions

#### Advanced coatings

A second strategy is the development of wear-resistant protective coatings. Innovations in this field have enabled newly engineered coated carbide grades to achieve increased tool life. In addition, the most advanced coatings can maintain the same tool life even in grades with reduced tungsten carbide content. Nevertheless, applying the latest coating technologies requires specialised equipment and processes, leading to additional production costs, which can, in turn, affect the final price of the tools.

#### Optimised tool design

Another solution to address the challenge involves optimising tool design. For example, adopting assembled tool concepts with replaceable tungsten carbide cutting parts allows for more rational use of carbide material and increases both flexibility and efficiency. Likewise, inserts featuring shapes that maximise the number of indexable cutting edges help extend tool life and material usage. In practice, inserts are often used at much shallower cutting depths than their

maximum capacity allows. In addition, modern workpiece fabrication methods, such as precision casting, forging, and injection moulding, make it possible to produce workpieces that closely match final part profile. This reduces the amount of material that needs to be removed during machining. As a result, tools fitted with smaller inserts are increasingly in demand. Miniaturising insert size presents a valuable opportunity to conserve tungsten material. And, of course, the nonstop development of optimised cutting and chip-forming geometries continues to improve machining efficiency, increase tool life, and thereby reduce tungsten consumption.

#### Iscar's innovations

In this context, the programme offered by Iscar, one of the leading tool manufacturers, speaks for itself and is of particular interest.

Iscar's MULTI-MASTER is a family of assembled tools with exchangeable carbide cutting heads (Fig. 1) that has been on the market since the beginning of the century. It provides an excellent example of cost-effectiveness and versatility. The family concept, where a single tool body (referred to as a shank in MULTI-MASTER terminology) can accommodate a variety of heads, and each head is compatible with multiple shanks, not only conserves tungsten carbide, but also allows for optimised tool configurations tailored to specific machining operations. This system simplifies customisation, reduces the need for special tools, and minimises tool stock requirements.

In hole making, the SUMOCHAM drill family and its derivatives employ a similar design principle: An assembled tool with a replaceable tungsten carbide cutting head. A head can be mounted on shanks with different overhangs, ensuring most suitable tool choice according to the required drilling depth. The use of replaceable heads reduces the demand for a large drill inventory. Further development of the SUMOCHAM family has led to the application of this principle to counterboring as well.

Both product ranges, MULTI-MASTER and SUMOCHAM, feature extremely rigid head clamping that brings the assembly's dynamic behaviour very close to, or even the same as, that of a solid tool. Moreover, the products address a common challenge in machining operations: The time-consuming process of changing worn tools. In these tool families, only the head needs replacement, which can be carried out swiftly and without extra setup procedures. Such a no-setup-time design concept allows for the head to be replaced without withdrawing the tool from the machine spindle, significantly reducing machine downtime and providing added value.

By applying the indexable design concept to miniature tools, as well as to tools intended for machining at shallow cutting depths, Iscar has developed a wide variety of products, particularly in its milling line. The company's portfolio includes families such as MICRO-3-FEED (Fig. 2) for efficient high-feed milling (HFM), ▶



**Fig. 3** In the turning line, the LOGIQ-4-TURN family has been expanded with tools featuring a smaller-sized (06) insert

and recent additions to the popular HELITANG and HELI-3-MILL lines, featuring portable cutters with mini inserts for square shoulder milling, among other solutions. Notably, many of these small-in-diameter cutters are designed as endmill heads, allowing them to be mounted on MULTI-MASTER shanks. This significantly expands the application range of both product types. In addition, some heads feature a threaded connection for clamping with Iscar's FLEXFIT multifunctional modular system, offering greater value.

In the turning line, the LOGIQ-4-TURN family has been expanded with tools featuring a smaller-sized (06) insert (Fig. 3). This double-sided insert not only makes efficient use of tungsten carbide by providing four indexable cutting edges but is also suitable for clamping with either a screw or a lever, depending on the tool design. Such a smart, cost-saving solution is especially advantageous for turning operations producing miniature parts on Swiss-type machines and compact lathes.

For ISO turning applications that require cuts significantly shallower than the maximum cutting depth of standardised ISO inserts, Iscar has developed the FLASH-TURN family of tools with smaller-sized inserts. This primary option for reducing tooling costs in ISO turning is engineered to maximise edge utilisation and lower the cost per part while maintaining performance.

In the parting and grooving segment, DO-GRIP products with thin, reversible inserts (Fig. 4) show considerable promise. The narrow inserts offer two indexable cutting edges and enable precise, small-width cuts ranging from 0.8 to 1.2mm. These material-saving features ensure economical use of both tungsten carbide and the workpiece material, specifically when parting/grooving tubes or thin-walled components.

The multi-edged insert design offers significant cost-effectiveness. As a well-established "classic" strategy for maximising the utilisation of cutting material, tool design engineers adopt this approach whenever possible. Among Iscar's latest innovations, a recent addition to the PENTACUT family – a range of parting and grooving tools with star-shaped inserts – is particularly noteworthy. The newcomer features mini inserts with a 17mm inscribed circle diameter and a cutting width ranging from 1.5 to 2.5mm. The mini PENTA products deliver clear cost-saving advantages: Five cutting edges and the ability to produce narrow cuts, which minimises material waste during parting of small-diameter workpieces and grooving, especially in next-to-shoulder applications.

Multifunctional tooling enables different machining operations to be performed with a single tool. Such "all-in-one" solutions are a substantial means of reducing metal-removal costs and increasing profitability. QUICK-D-MILL indexable tools, which combine milling and drilling capabilities, perfectly demonstrate the effectiveness of multifunctional design. Double-toothed, right-hand cutters equipped with two rectangular-shaped indexable carbide



**Fig. 4 In the parting and grooving segment, DO-GRIP products with thin, reversible inserts show considerable promise**

inserts form the core of the QUICK-D-MILL concept (Fig. 5). Each insert features four cutting edges and can be used for both central and peripheral cutting, thereby optimising utilisation, reducing the frequency of replacements, and lowering costs.

During drilling, the cutter operates with one effective tooth, while milling is accomplished with two effective teeth, offering a significant functional advantage. The new endmill designs are available in diameters ranging from 16 to 32mm, making them strong, cost-effective competitors to solid carbide tools. For added versatility, a MULTI-MASTER head configuration option is also available, featuring pinpointed internal high-pressure coolant (HPC) supply.

Rising tungsten prices are challenging the metalworking industry, pushing manufacturers to find more cost-effective cutting tool solutions while maintaining productivity. Innovative approaches, such as those offered by Iscar, are increasingly focused on maximising output and reducing tooling expenses in response to these demands.

Contact Iscar South Africa on TEL: 011 997 2700 or visit [www.iscar.com](http://www.iscar.com) for further details. ■



**Fig. 5 Double-toothed, right-hand cutters equipped with two rectangular-shaped indexable carbide inserts form the core of the QUICK-D-MILL concept**

# Innovation in sheet metal working technology can be viewed at EuroBLECH 2026

Industry's benchmark event taking place in Hannover, Germany from 20 to 23 October 2026, sparks positive outlook and optimism for the future.



**EuroBLECH: Industry's benchmark event will take place in Hannover, Germany from 20 to 23 October 2026 and occupy halls 11, 12, 13, 14, 15, 16, 17 and 27 at the world's largest exhibition grounds**

**A**t EuroBLECH, you will be able to meet manufacturers and suppliers and find an extensive range of products and services. The exhibition covers the entire sheet metal working technology chain and offers the industry sector a unique marketplace for knowledge transfer, individual manufacturing solutions and worldwide business contacts.

EuroBLECH occupies halls 11, 12, 13, 14, 15, 16, 17 and 27 at the world's largest exhibition grounds in Hannover, Germany.

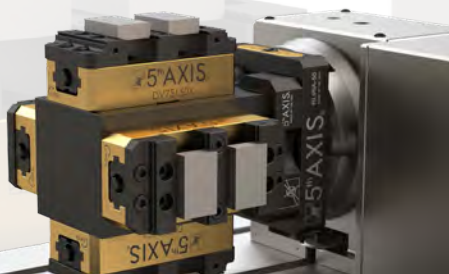
At EuroBLECH, manufacturers and suppliers of materials, machines, tools and systems meet with trade visitors whose requirements for innovative equipment are substantial. In order to align their production to the complex demands of smart manufacturing, visitors to EuroBLECH specifically look for flexible and cost-efficient solutions in order to operate successfully in the future.

EuroBLECH 2026 is set to take a significant step forward in showcasing the future of sheet metal working with the launch of the Innovation Zone | Advanced Manufacturing. Designed as a high-visibility feature at the heart of the exhibition, the new zone will bring together the technologies and solutions redefining modern manufacturing.

EuroBLECH, organised by RX, continues to evolve in line with rapid industry transformation. As manufacturers increasingly invest in automation, digitalisation and intelligent production systems, the Innovation Zone showcases the technologies driving efficiency, precision and competitiveness, alongside live machinery, new product launches and real-world demonstrations taking place across exhibitor stands.

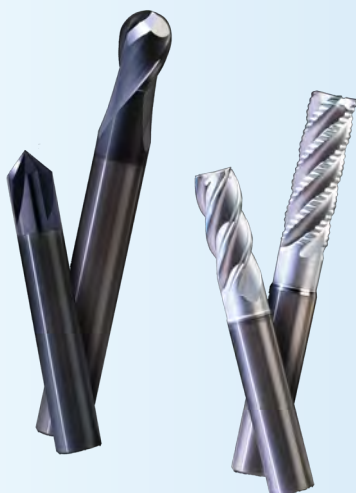
### **A central hub for next-generation technologies**

The zone's emphasis on advanced manufacturing reflects the industry's ongoing demand for greater efficiency, flexibility and resilience. Bringing together technologies such as automation, digital production systems and precision engineering, it provides a clear and ▶



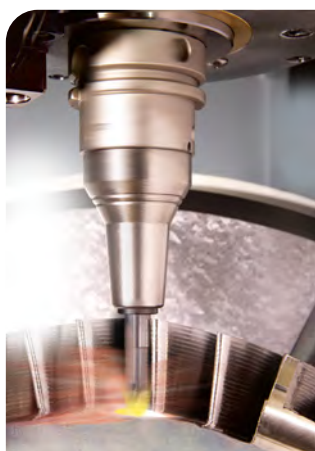
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focused view of the solutions driving sheet metal working today and in the years ahead.

“EuroBLECH has always been a platform where the



**At EuroBLECH, manufacturers and suppliers of materials, machines, tools and systems meet with trade visitors whose requirements for innovative equipment are substantial**

future of sheet metal working comes into focus. With the Innovation Zone, we are placing advanced manufacturing technologies firmly at the heart of the visitor experience. It is about making advanced manufacturing developments more accessible, more visible and more actionable for the global manufacturing community,” said Evelyn Warwick, Exhibition Director for EuroBLECH on behalf of RX.

To ensure a strong focus on the latest developments, only technologies launched between 1st November 2025 and 20th October 2026 will be featured. In doing so, the Innovation Zone reinforces EuroBLECH’s position as the leading global platform for sheet metal working, connecting manufacturers with the solutions enabling smarter and more sustainable manufacturing.

#### **Driving visibility, engagement and industry progress**

For exhibitors, the Innovation Zone offers a focused platform to highlight a single breakthrough technology within a high-traffic, curated environment. With two participation formats, Showcase Podiums and Discovery Panels, companies can present their solutions through physical displays or visual storytelling, depending on their application.

For further details visit [www.euroblech.com](http://www.euroblech.com)

## Steel industry sounds alarm sustainability with solar

**D**elays to green steel projects are growing and government support is far short of what is needed, jeopardising the industry’s drive to cut emissions, steel associations warned at an annual meeting in Singapore recently.

About half of the world’s planned green steel projects have already been delayed, while governments have committed just \$20-billion of the \$1.5-trillion needed to decarbonise the sector, according to the World Steel Association.

Industry executives said progress on cutting emissions has been slow and is likely to remain so without a major increase in State funding or customers willing to pay more for cleaner steel.

The gloomy assessment stands in contrast to renewed investor interest in renewable energy and clean technology following the Iran war, which has driven up oil and gas prices.

#### **Customers won’t pay a premium**

Green steel – generally steel produced with a lower carbon footprint – is critical because the industry accounts for about 7% to 9% of global emissions.

Yet the current global project pipeline would deliver only about 70 million metric tons of green steel a year by the end of the decade, a fraction of the roughly two billion tons of total steel production forecast, said Shaoliang Zhong, deputy secretary general of the World Steel Association.

Roughly half of that already modest pipeline has been delayed by financing constraints, weak demand or shortages of green hydrogen, which some producers hope could replace metallurgical coal in blast furnaces, Zhong told Reuters.

“Over the past 10 years, steel emission intensity remained almost flat despite commitment among steelmakers to reduce carbon emissions,” Zhong said, referring to emissions per ton of steel produced.



Traders and steelmakers told Reuters during the conference that many customers remain unwilling to pay a premium for cleaner steel.

Meanwhile, investment in conventional blast furnaces continues across India and Southeast Asia. Many of those facilities have lifespans of up to 40 years, locking in emissions for decades.

New blast furnace capacity planned in the two regions between 2024 and this year roughly matches the size of the entire global green steel pipeline outlined by Zhong, according to OECD forecasts.

“Producing green steel is good, but you need to survive first,” Yeoh Choon Kwee, deputy president at Malaysia Iron & Steel Industry Federation told delegates.

“The focus on green steel has always been on the supply side, but the demand reform is equally important. The government should also play a key role, they need to mandate the use of green steel in key infrastructure,” said Kwee.

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**Model** | Inductotherm, 110kW Acutrak 300kg aluminium furnace, 2022

**Condition** | Very good working condition

**Crucible** | Brand new, never been used, silicon carbide

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**Melting capacity** | +-250 kg/hr for aluminium ingots

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# New white paper released: The truth about kitchenware safety

Reveals hidden health risks in common kitchenware and establishes stainless steel as the modern benchmark for safe, healthy kitchens.

The hidden health risks of plastics, PTFE non-stick coatings, and ceramic glazes.

**A** ground breaking new white paper released recently exposes the overlooked health hazards associated with widely used kitchenware materials including plastics, PTFE-coated non-stick cookware, and ceramics and presents stainless steel as the definitive, science-backed solution for building safe, durable, and environmentally responsible kitchens. The release came just ahead of World Food Safety Day on 7 June 2026, underscoring the urgent need for greater consumer awareness and stronger industry standards, according to the worldstainless association.

Titled “Invisible Health Risks in the Kitchen: Why Has Stainless Steel Become the New Safety Standard?”,

the white paper provides the most comprehensive analysis to date of how everyday cookware materials behave under real cooking conditions and what they release into food.

#### Key findings

- The report highlights several critical risks:
- Plastic kitchenware begins releasing plasticisers, BPAs, and micro and nano-plastics at temperatures as low as 70°C, with low-grade products often containing toxic



***Stainless steel is a trusted material in both professional and home kitchens. Its inherent strength and corrosion resistance allow it to be utilised in a wide range of applications, including cookware, cutlery, sinks, food processing systems, and industrial equipment. The stability and durability of stainless steel establish it as a cornerstone of safe food preparation. It does not react with ingredients, withstands daily wear, and supports the high hygiene standards required across the food industry***

recycled materials.

- PTFE-coated non-stick cookware decomposes at 260°C, emitting hazardous fumes and PFAS – persistent “forever chemicals” linked to long-term health and environmental harm.
- Ceramic cookware, despite its aesthetic appeal, can leach lead and cadmium from glazes, contributing to chronic heavy-metal exposure.
- Market information asymmetry and selective marketing

practices obscure these risks, leaving consumers unaware of the long-term consequences.

- Stainless Steel as the Safe, Cost-Effective Alternative.

The white paper identifies stainless steel as the optimal material for modern healthy kitchens due to its unique combination of safety, durability, and sustainability. These include:

- A self-repairing passive film prevents harmful substance release and metal ion migration.
- High resistance to heat, wear, and corrosion ensures service lives of up to 120 years.
- A recycling rate exceeding 95% aligns with circular-economy principles.
- Common misconceptions – such as stainless steel “rusting,” reacting with acidic foods, or causing food to stick – are scientifically addressed and dispelled.

The report also demonstrates that stainless steel can fully replace plastics, PTFE coatings, and ceramics across all kitchen scenarios, from food storage and tableware to high-intensity professional cooking environments.

#### A call for industry-wide action

The white paper urges manufacturers, regulators, and industry associations to collaborate on strengthening standards for food-contact materials, improving supply-chain transparency, enhancing consumer education and supporting the transition toward safer, low-carbon kitchenware.

“Stainless steels are the essential material solution to build a safe and healthy kitchen ecosystem whilst safeguarding global dietary health,” the report concludes.

In summary, by choosing stainless

steel, one selects reliability, safety, and long-term performance, whether preparing dinner at home or designing equipment for large-scale production. Stainless steel does not react with food. Its passive chromium-oxide layer keeps it stable and non-reactive, which is why it’s used in food processing, medical equipment, and professional cookware. Even acidic dishes like tomato sauce are completely safe. Stainless steel isn’t just shiny- thanks to its natural durability and resistance to corrosion, it keeps your cooking safe, clean, and worry

The full white paper is available for download at <https://worldstainless.org/applications/home-office-and-leisure/kitchen-and-cooking/benefits-of-stainless-steel-in-the-modern-kitchen/>

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# First quarter sees increase in orders for German machine tool industry

Following three difficult years, the machine tool industry can breathe a first sigh of relief. Incoming orders increased by 15 per cent in the first quarter of 2026. Nevertheless, the situation remains challenging – production, exports and employment continue to fall, while the conflict in the Middle East is leading to greater uncertainty and higher costs, and dampening any spirits to invest.

“The situation appears to have bottomed out – however, we are nowhere near to reversing the trend. The coming months will show whether the recovery is more permanent,” says Bernhard Geis, Head of Economics and Statistics at VDW (German Machine Tool Builders’ Association), about the situation.

Foreign and domestic orders are almost equally contributing to the uptick in orders, with 14 and 18 per cent respectively. And yet these figures don’t really reflect

the full picture. The baseline for these calculations is weak, particularly at home. Furthermore, ad-hoc orders and project business are playing a key role, however without any discernible recovery of demand. The service and retrofit businesses continue to have a stabilising effect. At the same time, the dynamic varies widely depending on the sector: aviation, defence, medical technology, and electronics are showing positive development, while metal processing and mechanical engineering, as well as automotive and supplier industry in particular, remain weak.

The situation in the machine tool industry remains tense. Production dropped in the first quarter by 11 per cent to 2.8 billion Euro. Domestic sales dropped 13 per cent, performing worse than exports which fell by one tenth. Regionally, the situation is more diverse: the USA is driving growth (+8 per cent), while Europe lags considerably behind (-11 per cent).

Exports to Asia have fallen by 18 per cent – largely due to the collapse of exports to China (-32 per cent). In light of the very competitive pricing, “Local for Local” is becoming a key mantra for German manufacturers who have their own on-site production. India is experiencing dynamic growth and has climbed the ranks to become the third largest market.

With a decline of 8 per cent, imports in the first three months also reflected the weaknesses in the German market. They did, however, perform slightly better than domestic sales. Japanese manufacturers, in particular, were even able to increase their sales in Germany. Overall, domestic consumption fell by 10 per cent and confirmed the weakness of investment in Germany. ■



Picture VDW for illustration purposes

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# Mazak will invest in equipment to increase production of vertical machining centers in India factory

**M**azak plans to increase the production capacity of vertical machining centers at the factory from 40 units per month to 60 units per month.

Mazak will invest in equipment to increase production during 2026 at its production facility, Yamazaki Mazak Machine Tools Pvt., Ltd., located in Pune district, Maharashtra, India. The factory began operations in March 2023 and currently produces three models of vertical machining centers in the VC-Ez series: VC-Ez 410 IP, VC-Ez 510 IP and VC-Ez 660 IP.

Demand for machine tools in India remains strong and is expected to stay healthy as markets expand across a wide range of industries, including automobile, agricultural machinery, aerospace, and oil and gas. In particular, the VC-Ez series has been successful in gaining new customers, mainly job shops, and also expansion into overseas markets. Exports to Southeast Asia began in 2024, and sales in the European market began in 2025. Demonstrating a steady increase in export performance.

Against the backdrop of this expanding demand, Mazak plans to increase the production capacity of vertical

machining centers at the factory from 40 units per month to 60 units per month by the second half of 2026.

Mazak started their base in India in 1998. They continued local sales and service activities for many years and have 16 support bases across India, including a Technology Center in Pune and provide solutions for various industries.

With a population of more than 1.4 billion and further economic growth expected, India is expected to see continued demand for machine tools as the markets for the automotive, medical, aircraft, and semiconductor industries expand. Under these circumstances, by building a new factory in India, will strengthen Mazak's global production system and enable even more speedy provision of products in India.

The India plant will start operations in March 2023 and will gradually increase capacity thereafter. The production model is planned to be a new vertical machining centre that reflects local needs, and we plan to sell it throughout India. The investment for the factory construction is approximately Rs 240 crores.

For further details contact Hi-Tech Machine Tools on TEL: 011 608 0088 or visit [www.hitech.co.za](http://www.hitech.co.za)



*Mazak's manufacturing plant in Pune, India*



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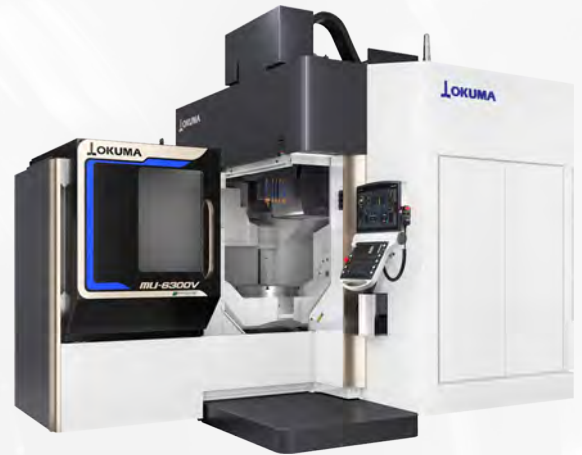
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# Latest edition of Open Mind hyperMILL released



**Thin-walled structural components place the highest demands on programming and machining, as well as requiring maximum precision in terms of dimensional accuracy and surface quality**

With version 2026 of hyperMILL, Open Mind Technologies is increasing both the speed at which NC programmes can be created and process reliability. For the first time, the software and its NC code-based simulation in hyperMILL Virtual Machining will support additional tool types and angle heads.

Version 2026, makes it possible to seamlessly integrate angle heads into hyperMILL CAM programming. The angle head is defined as part of the NC tool and configured via the hyperMILL Tool Builder. The virtual machine consistently accounts for angle heads during NC code generation, toolpath optimisation, simulation, and collision checking.

Even critical phases such as the angle head approach and retraction are completely and reliably simulated. The hyperMILL Virtual Machining Optimizer automatically optimises toolpaths for angle head machining. Approaching via a curve also enables safe access to hard-to-reach areas of the component. The function is initially available for Siemens (SINUMERIK 840D) and Heidenhain controls.

### 2D Hale machining

2D Hale machining, also known as contour planning, is another tooling option supported by both machining strategies and in the simulation. This enables impeccable, scratch-free surface finishes, as required for sealing surfaces in battery manufacturing, the semiconductor industry and the mould and die industry. As a trailing axis, the spindle axis ensures that the tool is continuously guided perpendicular to the contour.

**Rest material machining**  
Rest material machining has been further automated in version 2026 of hyperMILL. The calculation algorithms for the 'Z-level,' 'Parallel,' and 'Normal' machining strategies have been redesigned to make processing of rest material areas more reliable and efficient. As a result, rest material areas are detected more precisely and machined more reliably. Feed specifications are reliably considered, resulting in more uniform toolpaths.

Additionally, the system automatically integrates a smooth overlap in steep, flat and transitional areas during

entry and exit movements. This automation applies to both 3D and five-axis machining. In the latter case, users can use the new 'Minimum Clearance Angle' option to specify a minimum distance between the tool shank and the part, ensuring that machining is performed with a defined clearance angle.

### Turning and mill-turn

With 'CAM Plan Turning,' hyperMILL offers end-to-end programming support for turned and mill-turned parts. Often, turning programming only includes geometries without tolerances, fits, or manufacturing information. Until now, this data had to be added manually, a time-consuming and error-prone process. 'CAM Plan Turning' enables turning contours to be quickly and consistently enriched with all relevant manufacturing information. This significantly reduces programming time and provides greater process reliability for turned and mill-turned parts. The hyperMILL Turning Solutions have also been expanded to include new complex turret-type machine configurations for improved collision checking.

### Optimised control

Lastly, in the hyperMILL Electrode module, the control of eroding paths has been improved, for more flexible use of feed and rapid movements that optimise eroding paths and shorten machining times.

Contact Hi-Tech Machine Tools on TEL: 011 608 0088 or visit [www.hitech.co.za](http://www.hitech.co.za) for further details. ■



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# Mitutoyo's MiSTAR 575 shop floor CNC CMM

Next-level accuracy and performance for larger parts.

**M**itutoyo's MiSTAR 575 shop floor CNC CMM takes shop floor performance, accuracy, and measuring range to new heights, offering unparalleled capabilities for a wide range of applications.

Designed to measure small to medium-sized workpieces, the MiSTAR 575 delivers the same high standards of accuracy, repeatability, speed, and environmental resistance that Mitutoyo is known for. With its expanded measuring range, the MiSTAR 575 is optimised for larger parts while maintaining exceptional performance in demanding environments.

#### Advantages of MiSTAR 575 To MiSTAR 555

According to the company, advantages of MiSTAR 575 to the MiSTAR 555, but building on the success of the MiSTAR 555, include:

- **Expanded measuring range:** Supports a broader range of workpieces, ideal for larger parts and more complex applications.
- **Exceptional accuracy:** Delivers the precision and reliability Mitutoyo is renowned for.
- **Optimised for larger parts:** Perfect for applications requiring higher measurement capabilities.
- **Coolant/Environmental resistance:** The MiSTAR 575 maintains the same resistance to shop floor conditions, including coolant exposure.
- **Temperature compensation:** Ensures stable and accurate measurements, even with fluctuating temperatures.



With environment-resistant ABSOLUTE scale and revamped body structure, the MiSTAR Series is a contamination-resistant coordinate measuring machine. Highly reliable as a result of real-time temperature compensation technology that guarantees accuracy over a wide temperature range, it delivers a length measurement error of  $MPE\ 2.2 + 3L/1000\mu m$ . The MiSTAR Series can be installed and operated next to machine tools on production lines.

The MiSTAR 575 offers the perfect combination of extended range and high precision, making it an ideal solution for both the manufacturing floor and the quality inspection room. Whether looking to increase throughput or require a CMM with larger measurement capabilities, the MiSTAR 575 will help elevate the production inspection process.

Contact RGC Engineering on TEL: 011 887 0800 or alternatively visit [www.rgcengineering.co.za](http://www.rgcengineering.co.za) for further details. ■

# DN Solutions introduces the ultra-precision laser and waterjet solution – the FM 600/LW

**T**he FM 600/LW is a next-generation hybrid machining solution that combines the productivity of laser processing with the stability of waterjet, engineered to process the most demanding materials of the advanced industries, including semiconductor, aerospace, and next-generation mobility.

Hybrid machining combines the advantages of laser and waterjet processing. This results in a no heat-affected zone and no burrs the company said. The machine is also capable of parallel laser beam processing with no taper.

The FM 600/LW has a working area of 600mm x 600mm x 350mm and the material thickness range is from a few



1 $\mu m$  to several tens of mm according to the brochure. DN Solutions says repeatability is down to  $\pm 1\mu m$  and the machine is setup for cutting and micro-hole machining.

The range of materials that can be processed includes ceramics, SiC, metals/alloys, composites and diamonds.

By pairing the laser and waterjet, the system significantly reduces post-processing requirements, lowers total manufacturing costs, and completely eliminates common defects caused by traditional EDM or laser-only processes.

For further details contact Puma Machine Tools, a Retecon Group company, on TEL: 011 976 8600 or visit [www.pumamachinetools.co.za](http://www.pumamachinetools.co.za) ■



## The multipurpose powerhouse - productive and flexible

Tailored for demanding series production – highly flexible and economically efficient

The TruMatic 3000 fiber combines state-of-the-art punching and laser technology with a fully electric drive concept. The combination of DeltaDrive and TruFiber creates an extremely productive solution with low power input and a reduced installation area. Various automation options enable a smooth production flow in multi-shift operation - even for complex parts. The machine is available in two versions and can therefore be optimally adapted to the respective production requirements.

PUNCH LASER MACHINES

### TruMatic 3000



#### ■ Maximum flexibility

Punching, laser cutting, forming and tapping on one machine - without transforming, without compromises.

#### ■ Easy automation

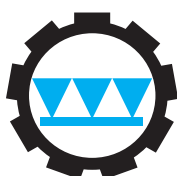
Integrated part removal flaps, sorting solutions and combinable automations such as SheetMaster or storage connection.

#### ■ Highest part quality suitable for series production

Descending die and precise brush table guarantee scratch-free processing even of delicate parts.

#### ■ Saving energy with a system

Fully electric punching drive and TruFiber laser reduce power input and CO<sub>2</sub> emissions sustainably.



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# Learning all about Mastercam CONNECT



In today's fast-paced manufacturing environment, staying ahead of the curve requires more than just software, it demands a comprehensive, connected approach. Mastercam CONNECT is your gateway to leading technology, expert support, and a wealth of resources designed to elevate your operations. By leveraging Mastercam CONNECT across your workflows, you unlock the critical solutions necessary to drive innovation, maximise productivity, and optimise performance in your mission-critical tasks.

At Mastercam, we are dedicated to supporting our users' continued success. With Mastercam CONNECT, you gain access to industry-leading advancements and a proactive partnership that ensures you remain at the forefront of technology. Experience how Mastercam CONNECT can unlock your full potential and elevate your manufacturing processes to new levels of excellence. Here are the top six benefits that will transform the way you work.

## What exactly is Mastercam CONNECT?

Mastercam CONNECT is Mastercam's maintenance and support programme. Anyone who signs up for a maintenance plan is automatically enrolled in the Mastercam CONNECT programme and can benefit from a wide range of free benefits and advantages.

## What are the benefits here?

First and foremost, Mastercam CONNECT ensures that the customer always has access to the latest technology. As soon as software updates are released, they are made

available to the customer free of charge. This way, they never miss out on new CAD/CAM software features.

In addition, as a Mastercam CONNECT customer, you receive direct, priority access to technical support from our certified Mastercam experts as well as exclusive resources such as access to free Mastercam University courses and the extensive Mastercam community. This should not be underestimated either.

## And is deburring free for all Mastercam CONNECT customers?

That's right! Mastercam Deburring is an add-on that can be used with Mastercam 2D and 3D Milling, Mastercam Router, or Mastercam Mill-Turn. Thanks to automated edge detection, a part can be fully deburred with just a single click, which naturally results in huge time savings. And, as you correctly noted, deburring is available to our CONNECT customers at no extra cost.

## What about beta programmes?

Mastercam CONNECT customers have the opportunity to test new features and provide feedback prior to the official release. This gives customers a significant competitive advantage.

Contact Mecad Manufacturing on TEL: 012 645 4300 or visit [www.mecadmfng.co.za](http://www.mecadmfng.co.za) for further details. ■

# Strong in steel, reliable in process: High-performance Gühring taps



Large components, special thread solutions and tight tolerances – the challenges in the

energy industry – place the highest demands on machining. With the Energy tap, Gühring has launched an industry specialist that produces demanding threads with maximum process reliability and cost-effectiveness.

The energy industry in particular uses large and expensive components that must be machined with process reliability. This presents threading tools with several challenges. The demanding manufacturing of large, load-bearing threads must be cost-effective. At the same time, the tools used in the final working step must be absolutely dependable and process-reliable.

In the worst case, long, jammed chips during thread production can damage the component surface. If the component is rendered unusable, this has expensive consequences.

## Perfect chip removal in steel and cast materials

A case for the Energy tap: The high-performance tap was developed specifically for the requirements of the energy industry and demonstrates its strengths in typical materials such as high-strength steels or cast materials.

The new flute profile ensures short chips and perfect thread surfaces, while the central internal cooling ensures process-reliable chip removal.

In addition, the stepped threaded part reduces friction and thus improves chip flow. Users do not have to worry about long chips that can jam, even with large threads.

## 20% longer tool life

In addition to high process reliability, the Energy tap also impresses with its cost-effectiveness: Thanks to HiPIMS coating, the tool offers high wear resistance.

Compared to the competition, the tool life can be increased by 20% with the Energy tap. For perfect thread quality and outstanding tool lives.

For more details contact Gühring South Africa on TEL: 041 372 2047/46/43/38 or visit [www.guhring.co.za](http://www.guhring.co.za) ■

# METALWORKING NEWS



## Why Extending Your Brand Online Matters

Online research is a key part of the industrial buying cycle, particularly during the consideration and selection stages. Metalworking News Online is where buyers search, research and learn about new product technology and new process innovations. Aligning your message with the areas where prospects are likely to look for technical solutions is the essence of contextual advertising and brand development.

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Extend your brand and put your message in context and receive the actionable results needed to grow sales while expanding your brand's digital presence. The Metalworking News website includes the latest issue in both digital and PDF format to download, industry events, international and local exhibitions and links,

news, employment opportunities and a showroom giving you details of supplier and metalworking engineering companies' activities.

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# Hypertherm introduces new flush cutting system for heavy industrial applications

Removes attachments up to 90% faster.

**H**ypertherm has announced the launch of its patented MAXPRO200® FlushCut™ consumables, a powerful new technology designed for demanding thick-metal removal applications, in industries such as shipbuilding, mining, structural steel, and heavy equipment fabrication.

MAXPRO200 FlushCut allows operators to remove attachments, including pad eyes, D-rings, lifting lugs, and alignment fixtures, up to 90 per cent faster than traditional oxyfuel methods, while reducing grinding by up to 40 per cent without damaging the base material.

Liquid-cooled consumables enable high cutting capacity up to 64mm thick mild steel with long consumable life.

“Early field trials of MAXPRO200 FlushCut consumables have generated strong enthusiasm. Customer after customer showed us real-world applications where this technology can improve safety and dramatically reduce job time, often completing jobs in minutes that once took hours,” said Andrew Mumford, Product Manager at Hypertherm Associates.

Hypertherm’s MAXPRO200 plasma cutters support handheld torches, mechanised carriages and tractors, X-Y cutting tables, and robotic cutting systems, delivering flexibility across a wide range of applications. The intuitive



FlushCut drag-cutting feature simplifies training and helps address skilled-labour challenges while maintaining consistent, high-quality results. The design also improves operator comfort, reduces noise, and lessens fume exposure compared to traditional cutting methods such as oxyfuel and carbon arc gouging.

With MAXPRO200 FlushCut consumables, Hypertherm Associates expands the company’s industry-leading FlushCut portfolio across MAXPRO200 and Powermax® plasma cutters to provide operators with trusted performance for thin-to-thick materials in demanding fabrication environments.

For further details visit [www.HyperthermAssociates.com](http://www.HyperthermAssociates.com) ■

## Kennametal’s KenTip FS HP insert for modular drilling for steel, cast iron and general machining



**K**ennametal has introduced the KenTip FS HP insert and the Widia -MU geometry turning insert, targeting improved tool life, chip control and shop-floor flexibility across a range of drilling and turning applications, both designed to improve productivity and versatility in metalworking operations.

The KenTip FS HP insert is the latest addition to Kennametal’s KenTip FS modular drilling family, which already includes the HPG and GTP inserts. The HP geometry is designed with the KCPK15A multilayer coating for wear resistance and improved tool life in steel and cast iron applications.

**Key features of the KenTip FS HP include:**

- HP geometry designed to enable high productivity.
- A clamping system that allows for quick insert changes to reduce machine downtime.
- Two-margin lands designed to promote tool stability, surface finish and hole straightness. ▶

The Widia -MU geometry is a universal turning insert engineered for finishing to semi-roughing applications. Its chipbreaker design is intended to promote high-process reliability through chip shape control and optimised edge stability. The inserts are said to be well-suited for streamlining inventory and increasing shop-floor productivity.

**The -MU geometry inserts are designed to:**

- Withstand higher cutting forces for deeper cuts and higher feed rates.
- Handle light depths of cut without sacrificing chip formation.

- Reduce cutting forces through a chip groove profile engineered for a smoother cut.
- Provide balanced edge strength and low cutting forces through a reinforced nose and open geometry for stable and efficient machining.

The inserts are available in CNMG, DNMG, TNMG, WNMG, VNMG and SNMG styles. Widia Victory grades include WP05CT, WP15CT, WP25CT, WM15CT, WM25CT, WK05CT, WK20CT, WU10PT and WU25PT.

For more information contact Kennametal South Africa on TEL: 011 748 9300 or visit [www.kennametal.com](http://www.kennametal.com)

## Studer S23: A compact universal cylindrical grinding machine

The Studer S23 universal cylindrical grinding machine offers high precision, great flexibility and modern grinding technology in a compact design at an attractive price-performance ratio.

“Due to its high-quality features, precision, and flexibility, the S23 complements our portfolio in the entry-level and premium segments. With its compact footprint, the CNC universal cylindrical grinding machine offers state-of-the-art, reliable grinding technology,” said Sandro Bottazzo, CEO of Fritz Studer AG.

Features include the modern C.O.R.E. hardware and software architecture, an automatic B-axis with 1° Hirth coupling for up to three grinding tools, frequency-controlled motor spindles or belt drives, and the machine base made of Granitan with its distinctive thermal and vibration characteristics.

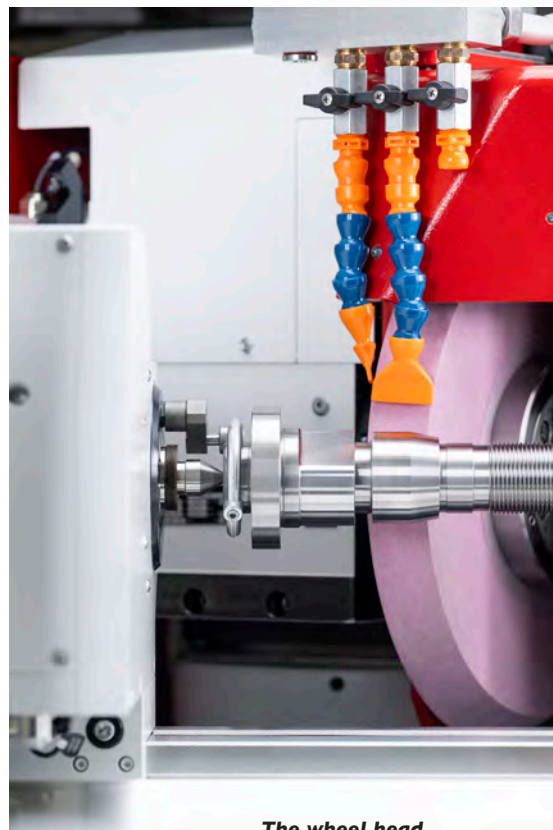
Customers also benefit from the innovative design that Studer has developed for the S23. The arrangement of the wheel head allows versatility for the grinding tools in a single clamping, increasing efficiency, especially with geometrically complex workpieces. Contact detection, semi-automatic balancing of the external grinding wheel, and the optional in-process measuring system offer high-quality results.

Its features make the S23 suited for a wide range of customers. With high accuracy and process reliability, it grinds small- to medium-sized workpieces, even with complex geometries, in single and series production.

“The S23 is ideal for production in the tool and die, automotive and supplier, aerospace, and in the medical technology industries,” explained Studer Sales Manager Rolf Grossenbacher.



**The Studer S23: A compact universal cylindrical grinding machine**



**The wheel head**

In addition, customers have numerous configuration options for adapting the machine to their individual production requirements. These include a C-axis for thread and out-of-round grinding and an optional swivelling table. Customer-specific adaptations are also possible.

With its digital technology and sensor technology, operation is simple and intuitive. After a short introduction, employees can achieve high-quality results using the C.O.R.E. touch panel and StuderWIN software. Set-up and changeover times are also minimal due to the practical QuickSet function.

Customers who want to automate their production can do so efficiently with the standardized loader interfaces for easyLoad and insertLoad.

For further details contact Retecon, part of the Retecon Group, on TEL: 011 976 8600 or visit [www.retecon.co.za](http://www.retecon.co.za)

# GOTAP precision electric tapping arm

The GOTAP is a precision electric tapping arm designed for vertical operations with programmable torque control, depth settings, and touchscreen interface. Ideal for CNC shops, fabrication teams, and industrial maintenance.

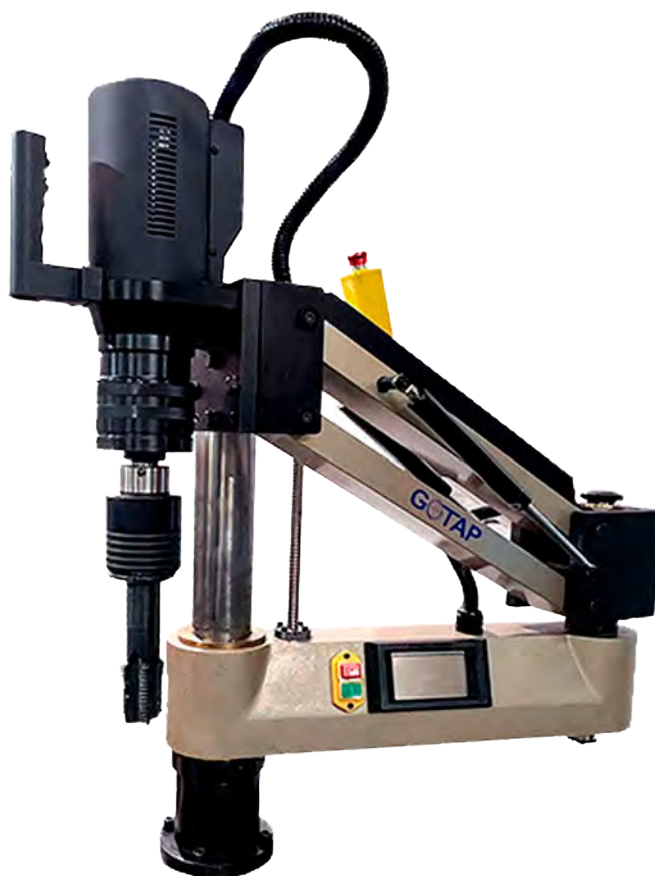
The GOTAP electric tapping machine (often referred to as an electric tapping arm) is a precision workshop tool designed to cut internal threads in metal, plastic, or wood. It operates via an articulating arm attached to a powerful servomotor, ensuring perfect 90-degree alignment and eliminating broken taps.

## Key features and capabilities

- Digital touchscreen: Models feature a programmable digital display to control thread depth, speed, torque limits, and cycle modes (manual or automatic).
- Safety and accuracy: The torque control prevents tap breakage by stopping the motor if it binds. Automatic chip-breaking cycles are standard on many models.
- Wide capacity: GOTAP manufactures multiple lines spanning small-scale (M2) to heavy-duty (M45) threading capacities.
- Versatile Work Area: The articulating arm allows for wide radial reach (often 1 045mm to 1 200mm) and includes adjustable height parameters.
- Servo-driven tapping machine for stable and high-efficiency threading.
- Wide tapping range: M3 to M48.
- Compatible with carbon steel, stainless steel, aluminium, brass, and more.

## Electrical Tapping Machine GOTAP

- Dedicated to the manufacture, sales and service of GOTAP electric threading machines to provide easy, economical and high-quality tapping solutions.
- Supports manual, automatic, and deep-hole tapping. Easy to switch depending on your job.



The tapping machine has an extendable, rotating arm, can be mounted on the workbench to drill and tap the workpiece.

Standard equipment includes digital touch screen that is programmable in English or other languages, manual or automatic tapping, tapping depth control, tapping counter, tapping for stages and torque control and memory for 20 programmes.

The tapping machine is servo-motor driven, the tapping head is vertical or rotational/orientable (quick change Ø19), it has a reinforced aluminium arm and table fixture column.

For further details contact Duncan Macdonald & Co on TEL: 011 444 4345 or visit [www.macduck.co.za](http://www.macduck.co.za) or visit <https://go-tap.es/en/producto/tiki-tap-2/>

## Hexagon adds contact probing to HYPERSCAN laser scanning system



Hexagon's Portable Metrology Division has announced a new wireless probe that adds contact measurement to its high-speed Hyperscan large-volume laser scanning system, improving productivity during alignment, inspection and reporting. Hyperscan is designed to eliminate the need for traditional reference targets, enabling users to start scanning immediately without extra preparation or repositioning. An intelligent optical tracker provides the scanner or probe with absolute position in real time, supporting uninterrupted measurement even on large or complex parts.

Darren Goh, product director for handheld scanners at Hexagon explained: "Users can now add Hyperprobe to Hyperscan when contact probing is needed – for example, to measure a hidden feature – while staying in the same inspection workflow. The system supports probing accuracy down to 0.05mm. The introduction of the Hyperprobe gives Hyperscan customers the ability to probe hidden points within a single, high-productivity inspection workflow. For example, checking bolt housings in a transmission casing, aligning a large composite mould or checking the alignment of fixtures before scanning."

The probe is particularly helpful when a component or jig must be aligned for manufacturing or inspection, and a precise measurement is required. Using the Bluetooth-connected Hyperprobe, the user gets immediate feedback while taking measurements via on-device controls. This saves time setting up jigs in automotive production or positioning composite moulds for airframe manufacture – benefits that carry through when the part is then scanned in the same coordinate frame.

Users can switch from scanning to probing to measure hidden features anywhere within the system's measurement

volume: up to 5.5m with Hyperscan Ultra and 7m with Hyperscan Super. If the object is moved or the user relocates, optical tracking supports continued dynamic tracking without manual realignment.

Like Hyperscan, Hyperprobe is designed for ergonomic handheld use and weighs only 0.72kg, with up to 4 hours of battery life with continuous probing. Thumb-operated controls make it easy to switch between probing modes such as circle or plane, supporting quick checks of hidden features before fabrication or assembly.

During inspection, users can scan and probe directly into the metrology software for immediate feedback as they switch between devices. Back at the laptop, processing and reporting are streamlined because the probe and scanner share the same coordinate system in the user's metrology software.

Hyperprobe is supported by Hexagon's HHscan and Geomagic Control X software, as well as select third-party metrology software. Hyperprobe is available now globally for new and existing Hyperscan customers.

For further details contact Retecon, part of the Retecon Group, on TEL: 011 976 8600 or visit [www.retecon.co.za](http://www.retecon.co.za) ■

## Victor Taichung's VTurn NP26

Introducing the NP26 Horizontal Turning Lathe, the newest and most advanced addition to the renowned NP series. Known for its compact design, the NP series has built a reputation around its small footprint, making it the perfect choice for machine shops where floor space is at a premium. The NP26 takes this efficiency further by offering an increased bar capacity, larger swing, and upgraded chuck size without compromising the space-saving design the series is known for.

This means you get the power and precision of a larger lathe in a compact form that fits seamlessly into any production environment. The NP26 delivers maximum productivity while maintaining the flexibility, efficiency, and reliability that define the NP series – proving that big performance can come in a small package.

The Victor Vturn-NP26 is a heavy-duty, compact CNC turning center built for high-volume component machining and automated production. Featuring a 10" chuck and an expanded turning length of 640 mm, it utilises a 45° one-piece moulded slant bed for superior rigidity and chip control.

The Victor Taichung NP26 delivers a reliable and stable



production experience in horizontal turning applications. Thanks to its balanced machine structure and stable machining characteristics, it enables consistent results across a wide range of workpiece types.

The NP26 is a CNC turning solution developed for manufacturers seeking flexibility, continuity, and predictable performance in their production processes. Its durable construction is designed for long operating hours and continuous production environments.

Contact Victor Fortune on TEL: 011 392 3800 or visit [www.victor.co.za](http://www.victor.co.za) for further details. ■

# LK Metrology to unveil multiple CMM solutions at IMTS 2026

The company will introduce four new coordinate measuring machines along with software and accessories.

LK Metrology, a global designer and manufacturer of coordinate measuring machines (CMMs), metrology software, and associated CMM accessory products, will be exhibiting a variety of new products in Booth No. 134338 in the East Building, Level Three at McCormick Place in Chicago, Illinois for the 2026 IMTS Show, September 14 to 19, 2026.

Four different CMMs will be displayed and demonstrated including: an ISF 04.04.04 shop floor CMM with a Renishaw MH20i probe head; ISF 07.06.05 shop floor CMM with a Renishaw MH20i probe head; an ALTERA M 10.10.8 with PH10MQ, TP20, SP25, LC15DX, and LC12DX and L100NX laser scanners (a multi-sensor setup); an ALTERA M 15.12.10 with SCANTec 5 equipped with a Renishaw REVO-2 5-axis scanning system.

LK will also be demonstrating their new PXR-CT ALPHA 320KV CT System as well as their 2026 well-known CAMIO measurement, programming simulation, analysis, and reporting software. In addition, the new Industry 4 Metrology Gate, LK's portal for remote inspection monitoring, will be showcased, as well as the advanced version of TouchDMIS CMM software and Focus Point Cloud Inspection Software.

For further details contact WD Hearn Machine Tools on TEL: 021 534 5351 or visit [www.wdhearn.co.za](http://www.wdhearn.co.za)



**The new ISF 04.04.04 shop floor CMM with a Renishaw MH20i probe head**



**The L100NX Blue Laser CMM Scanner**

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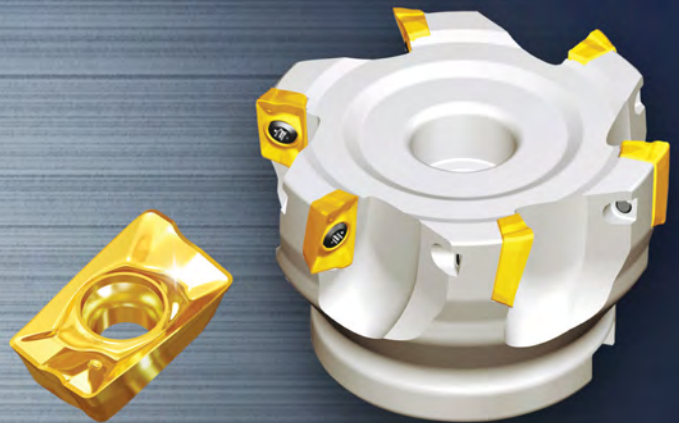
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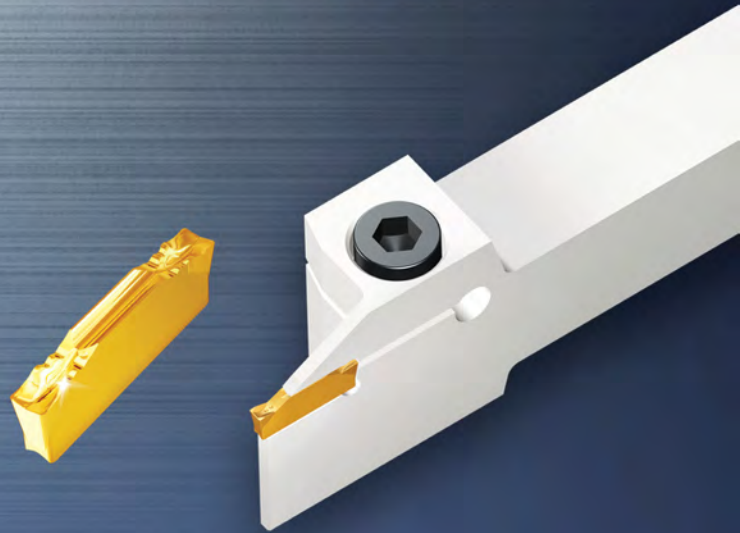
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