MTM®
Machine Tool Market
SOUTHERN AFRICA
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CTEK
AKIRA - SEIKI
MJH
Machine Tools cc
Durban - 031 705 7514
Ricky - 079 510 4144
ricky@mjhsa.co.za
Brandon - 066 234 1702
sales@mjhsa.co.za
www.mjhmachinetools.com

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Fairland 2195
PO Box 2434, Northcliff, 2115, South Africa
Tel: (011) 476-3211/3 or 476-3240
Fax: (011) 476-3216

E-mail: indpub@icon.co.za

www.machinetoolmarket.co.za

Publishing Editor
Gerd Müller

Production Director
Monica Müller

Production- and General Manager
Andries van Huyssteen

Advertising
Jason Rohrs

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CONTENTS

CNC Professional Machine
And Engineering PTY LTD

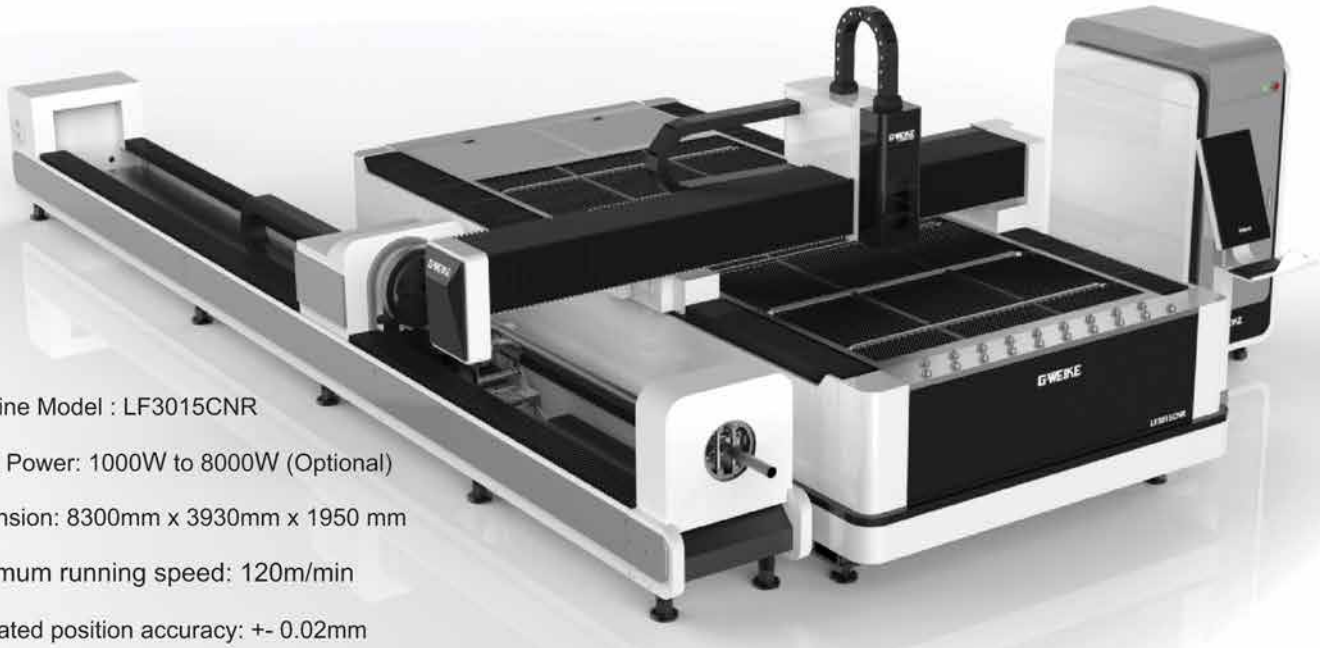
G·WEIKE® LASER金威刻

16 Years of Excellence in Laser and Plasma Cutting

WHOLE COVER FIBER LASER CUTTING MACHINE

- Machine Model LF3015GA
- Laser Power: 500W to 25 000W (Optional)
- Working area: 3000mm x 1500mm
- Maximum running speed: 120m/min
- Maximum acceleration : 1.5G

OPEN TYPE TUBE AND TUBE INTEGRATED FIBER LASER CUTTING MACHINE



- Machine Model : LF3015CNR
- Laser Power: 1000W to 8000W (Optional)
- Dimension: 8300mm x 3930mm x 1950 mm
- Maximum running speed: 120m/min
- Repeated position accuracy: +- 0.02mm
- Specified voltage and frequence: 380V / 50Hz / 60Hz

Unit 6, 25 Ingwe Road, Sebenza, Edenvale, South Africa Tel : 011 609 9508

DUAL DRIVER GEAR RACK FIBER LASER CUTTING MACHINE

- Machine Model : LF3015LN
- Laser Power: 500W to 15000W (Optional)
- Dimension: 4600mm x 2450mm x 1860mm
- Working area: 3000mm x 1500mm
- Repeated position accuracy: +- 0.02mm
- Maximum running speed: 80m/min

AUTOMATIC TUBE FIBER LASER CUTTING MACHINE

- Machine Model : LF60M
- Laser Power: 500W to 15000W (Optional)
- Dimension: 11900mm x 1580 mm x 2260 mm
- Maching range : Hold Diameter: 20 - 220mm
- Repeated position accuracy: +- 0.03mm
- Specified voltage and frequence: 380V / 50Hz / 60Hz

011 609 0653 Email: cnc-pme-co.za@outook.com www.cnc-pme.co.za

Global Leadership with high-tech Solutions

LCG 3015 AJ

Fiber Laser

The perfect balance of low energy usage and high speed productivity

VPSS
Virtual Prototype Simulation System

EN 3015 AJ

Fiber Laser

The ENSIS range provides high speed processing of thin to thick materials in 3, 6 & 9kW derivatives

AMADA®

Gauteng:	Tel: (011) 453-5459	Fax: (011) 453-5442
	Cell: 082 465 5924 (Rick)	e-mail: barry@amadajhb.co.za
Cape Town:	Tel: (021) 706-0502	Fax: (021) 706-0503
Durban:	(031) 700-5070	Fax: (031) 700-5077

VPSS
Virtual Prototype Simulation System

VPSS
Virtual Prototype Simulation System

Further evolution of a best seller punching machine with drastic set-up time reduction and process integration

Amada's totally integrated approach to sheetmetal fabrication allows you to take part concept and design all the way through to finished production in a single seamless manufacturing environment.

Hybrid Drive System

HG Series Press Brake

The new AE-NT servo drive turret punch press offers high performance and reduced operating cost in one package

HS Series Press Brake

For a wide range of products from small to large work pieces

High speed and Accuracy for all production environments

The Amada Product Portfolio includes:
CNC TURRET PUNCH PRESSES, CNC LASER CUTTERS, CNC PRESSBRAKES, NC HYDRAULIC/MECHANICAL SHEARS, SOFTWARE, BANDSAWS, BANDSAW BLADES, SALES & SERVICE.

MTM®

AMADA LATEST SHEET METAL TECHNOLOGY

By Barry Page, Amada

Machinery is becoming more eco-friendly, thanks to the reduction or in some cases elimination of oils in their drive systems. Some of the latest technological advances allow more machinery and bigger machinery to be operated with less power consumption and a smaller carbon footprint, while ensuring higher throughput. These advantages are seen through the new A.C. servo drive systems used on punching, bending and stamping machines, as well as through the newer fiber technology on lasers.

As a market leader in the design, production, supply and support of sheet metal machinery, AMADA has taken the efficiency challenge one step further, by ensuring that machine manufacturing facilities and processes are also as efficient and eco-friendly as possible. Amada has been able to incorporate many unique features in their manufacturing plants around the world which all contribute towards environmental wellbeing.

Today's technology in the fiber laser field is something that not many people saw coming. The efficiency of fiber systems is greatly attributed to the eradication of costly internal components such as tubes, internal optics, turbo blowers, vacuum pumps etc, as well as the elimination of laser gas being used to generate the laser beam. The latest generation 3 fiber laser systems is even more compact and efficient than the 1st and 2nd generation units.

Amada has incorporated features that subsequently contribute towards reducing costs, such as automatic nozzle changing, automatic nozzle cleaning and automatic nozzle recalibration. An added advantage is a scheduler function, which can be used, while full production planning and scheduling is executed in the planning office.

HG1003 ATC – With Automated tool loading unloading.

Automatic material handling systems can be supplied with machines or retro-fitted at a later stage. These systems are capable of storing materials, while automatically feeding them to the machine as required.

Amada offers automated material storage and manipulation systems for full blanking and bending operations. The "entry level" manipulation systems referred to as "MPL's" consist of two material pallets and are capable of holding up to 2000kg raw material each. There is a third pallet for offloading of finished sheets with parts either held in by micro-joints or not.

The MPL uses an array of vacuum suction cups to lift and separate the sheets from sticking together, while loading the cutting or punching table. Checking of material thickness according to the part or nesting program is accomplished by the sheet thickness detector.

While the sheet is being processed, the MPL will then prepare and lift the next sheet and get ready for changeover. Priority is given to unloading the cut sheet and reloading a new sheet before the stacking of the processed sheet happens. This ensures speedy changeover and minimal machine idle time. The same principle applies to the Amada ASF series of sheet storage and manipulation systems.

These systems have various shelves for raw materials with each shelf holding up to 2 tons of different thickness and types of materials. The advantage of these systems is that longer, uninterrupted production runs are possible.

Both these systems, MPL & ASF, can be enhanced with the addition of a "TKL" automatic parts removal system which can be retro- fitted. The TKL also uses an array of different sized suction cups to pick desired components out of the skeleton and sorting them into desired piles depending on the next process required. This is especially advantageous when cutting nestings of different jobs. Parts are automatically sorted from the skeleton before the operator intervenes. Up to 3 different packing stations are available for part-sorting.

A higher level of automation can be achieved with the Amada MARS system, which is designed according to customers' requirements. Accessible from either side, each shelf can hold up to 2 tons of different materials. Machinery is then connected to the MARS system via intermediate MPL systems. Material is fetched, checked for thickness and loaded automatically. Once sheets are processed, the full sheet can be removed or the TKL can be used before the skeleton is taken away for storage. Parts are then returned to the MARS system for storage until they are needed for the next process. By utilizing this latest technology, 24 hour production is possible without the need for staff to be present.

HG1003 ATC – Automated tool loading, unloading and robotics for automated bending.

Semi-automatic or fully automatic bending available from Amada, offers the latest technology, namely the HG – ATC press brake series. Available in either a 100 ton x 3 meter or 220 ton x 4 meter configuration, these ATC machines are ideal for the reduction of tool change down-time, especially in today's production environment of small batch runs, requiring quick change over times.

All programming, sequencing and tool fitting is done in the production office before reaching the shop floor. The programs are sent via network to the machine, where the operator can see a full 3D view of the component, both blank and bent. The machine automatically loads the required tooling into position from the onboard tooling magazine. Once the bending process is completed, the machine will automatically change tooling again. A full 3 meter tool change can now be done in just over 3 minutes, while a similar manual tool change would take 15 to 45 minutes.

Tool life is substantially extended and incorrect tool usage and tool damage are eliminated. Programming software identifies tool capabilities such as maximum permitted tonnages etc. thanks to each tools' unique identification code.

For longer production runs together with total operator elimination, Amada offers the "AR series" of robotic benders. These benders incorporate robotics which pick the parts, bend the parts and stack or place as required. These, too, are available for different tonnages

Added to these advantages is the fact that Amada has a fully trained service department, fully capable of backing up all equipment through their local offices.

EG 6013 – With light weight robotics for bending automation.

For more information, please contact Amada – Tel: 011 453-5442.

DURMA FIBER LASER FOR INNOVATIVE SOLUTIONS

The Durma HDF/HDFL 3015 fiber laser machine features a rigid stress-relieved welded steel frame construction with a stiff gantry axis system moving the cutting head. Highly accurate parts even when cutting with fastest speeds and under highest accelerations are guaranteed.

Durma HDF/HDFL 3015 Fiber Laser.

An integrated shuttle table maximizes productivity and minimizes material handling times. The shuttle table and pallet change system allows convenient loading of new sheets or unloading of finished parts, while the machine is cutting another sheet inside the working area. The available shuttle table is fully electric and maintenance free; there are no hydraulic oils to handle and table changes are fast, smooth and energy-efficient.

An optional lateral automatic scrap conveyor allows the removal of scrap pieces from the working area without the need to interrupt the cutting process. The sideways operation of the short conveyors allow for easy maintenance and trouble-free running.

The Durma HDF/HDFL 3015 fiber machine achieves highest dynamics and fastest laser processing cycle times thanks to the combination of rigid mechanics and a state-of-the-art numerical control and drive system. Programmes can be loaded easily into the machine with a USB stick or over a fast Ethernet connection with the company network.

In the high-pressure auto-focus cutting head for the fiber laser the cutting lens is shielded from the laser process by an exchangeable low-cost protection window. The 1µm wavelength light is very sensitive to dust or other contamination produced in the cutting or piercing process, therefore the cutting head is being well protected in an additional cover to ensure that all critical parts remain as clean as possible.

The integrated capacitive distance sensor is capable of having the head follow height differences in the sheet even at the extreme high cutting speeds that can be achieved with the fiber laser technology, while state-of-the-art linear motors promote accuracy and increase productivity.

The CAD/CAM software provided has all the tools to import or draw parts, prepare and optimize automatically different geometries for the laser cutting process and make efficient nests.

The all-solid-state fiber laser technology reduces maintenance requirements, and offers the lowest possible running cost with a wall-plug efficiency of 30% and without the need of any laser gas. When the application requires a broader spectrum of material types to be cut and the maximum thickness range is limited, the fiber laser is the ideal solution and it will cut faster at lower cost than any CO^2 laser at the same laser power.

For more information, please contact Spectrum Machine Tools – Tel: 011 865-4090.

RAPID PANEL BENDING WITH THE TRUBEND CENTER 7030

The latest generation of the TruBend Center 7030 bends parts up to 30 percent faster than its predecessor. This boost in speed stems from its new drives and other features.

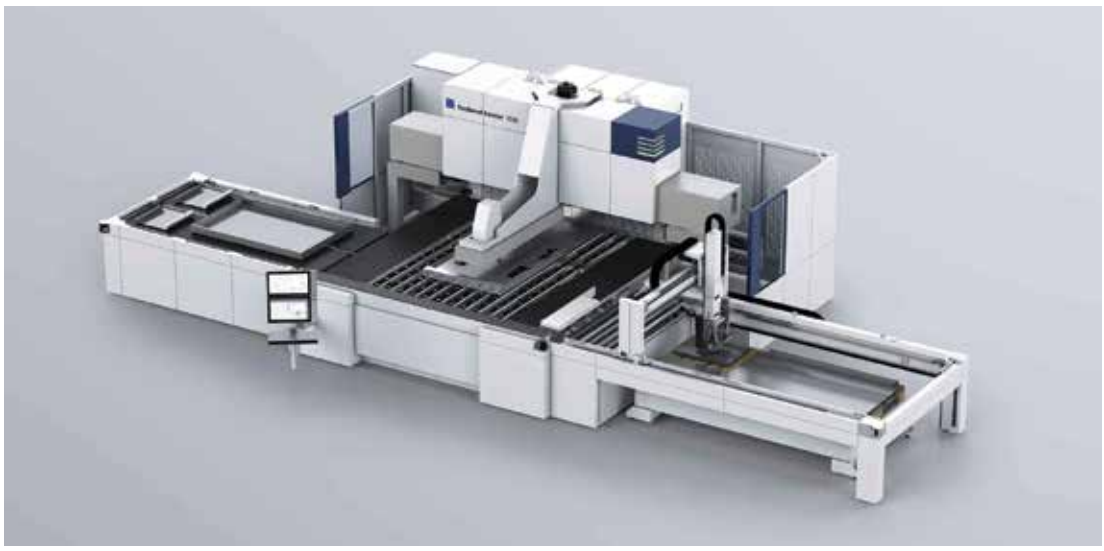
The new TruBend Center 7030 bends parts up to 30 percent faster than its predecessor – and its tool change cycles are up to 70 percent quicker. TRUMPF has included the option of equipping the panel bender with a loading and unloading station. Panel bending machines such as the TruBend Center 7030 are particularly adept at fabricating complex parts with radius bends, short side lengths, and narrow profiles.

When it comes to producing parts with these kinds of specifications, this alternative bending technology is quicker than die bending machines. TRUMPF has focused on making the TruBend Center 7030 faster than ever. The engineers achieved this by splitting the machine's drive unit into two parts. Instead of equipping the machine with just one central hydraulic cylinder, the new design features one cylinder on the left, and one on the right. That increases axis velocity, and boosts the machine's productivity. The on-demand servo drive saves energy by only running the motor when the machine actually needs it.

Automated loading and unloading

The operator can stack various piles of metal blanks on the right-hand side of the machine. A suction cup initiates the automated loading process by picking up a sheet whilst simultaneously checking that it has not taken two by mistake. This gripper device deposits the blank on a brush table, with a positioning bar ensuring it is aligned correctly. A loading carriage then moves the blank into the machining area, simultaneously removing the most recently bent part from the machining area, and transporting it to a conveyor belt. During this loading and unloading process, the TruBend Center 7030 continues to operate.

Change tools faster – program parts within a matter of seconds



The new TruBend Center 7030 can optionally be equipped with an automated loading and unloading station.

The task of changing bending tools is handled by the ToolMaster. As well as increasing its axis speed, the TRUMPF engineers have also added a feature that allows it to change multiple small tools at the same time. These improvements reduce machine setup time by up to 70 percent. The TruBend Center 7030 features the offline TecZone Fold programming solution that enables operators to program many parts in just a few clicks of the mouse. TecZone Fold takes a matter of seconds to generate the bending program and 3D simulation of the parts, including collision monitoring.

For more information, please contact Retecon – Tel: 011 976-8600.

TruLaser 5000 Series:

The Productive Machine

TRUMPF

Productive
Dynamic
Efficient

.NEW

Technical Specifications

TruLaser 5030 / 5040 / 5060	
Laser data	**TruDisk 10001**
Max. output	10000 W
Max. sheet thickness	
Mild steel	30 mm
Stainless steel	40 mm
Aluminum	25 mm
Copper	16 mm
Brass	13 mm

Sole agents for TRUMPF in South Africa for over 35 years.

Contact: Graham Rome
Tel: 011 976 8600 • Fax: 011 394 2471
machines@retecon.co.za • www.retecon.co.za
Cape Town: 021 555 2270/1 • Port Elizabeth: 041 453 2720 • Durban: 031 701 8149

RETECON (PTY) LTD
Your Partner in Metal Working

BYSTRONIC XPERT PRO PRESS BRAKE

With Industry 4.0 being a major trend in modern fabrication and manufacturing, it is more essential than ever that all equipment items in the production line have balanced capacities, and are able to operate in a coordinated network.

Bending is an essential function in many engineering and industrial processes and the necessary equipment has to match customer requirements precisely. The new Bystronic Xpert Pro range provides manufacturers with precise bending solutions which offer consistently high bending quality.

A new press brake is a substantial investment and for this reason versatility is key. The Xpert Pro *ticks this box*, as it is able to carry out extended production runs and then easily switch to the production of an individual component.

Contemporary bending requirements are furthermore complex and for this reason Bystronic offers customers an extensive selection of bending tools. However, Bystronic also reduces complexity through simple machine programming and state-of-the-art CAD/CAM software.

The latest Xpert Pro is available in the Classic, Performance and Dynamic editions, which allow customers to select a press brake suited to both their requirements and their budgets. The specifications are as follows – **classic edition**: maximum speed, 7.8in/sec. Maximum working speed, 0.393in/sec, **performance edition**: maximum speed, 8.8in/sec. Maximum working speed, 0.787in/sec. and **dynamic edition**: maximum speed, 9.8in/sec. Maximum working speed, 0.984in/sec. It is available in a range of bending pressures from 100 tons to 1000 tons, with bending length starting at 3.1m to a generous 10.2m length.

Bystronic's Xpert Pro press brakes continue to offer unmatched precision. The dynamic crowning with patented pressure reference technology allows for the system to adjust the curvature of the lower beam automatically during bending. This state-of-the-art technology effects corrections in real-time, making use of cutting-edge sensors which provide all required information to the press brake controller, so that automatic corrections can be made without disrupting production.

Xpert Pro ByVision Controller.

For fast, error-free bending, Bystronic's ByVision Bending user interface offers intuitive ease of operation. A touchscreen allows for the fast processing of both individual orders and extensive order lists. What is more, it is possible to programme off-line and then import the data into ByVision Bending without disrupting current production.

Bystronic has enhanced the Xpert Pro press brake to create the fully automated Bending Cell. The Bending Cell enables users to handle both short and long production runs – and changing order levels – efficiently and without errors and now enables automation of jobs that previously had to be performed manually. This includes automated tool changes and the transition between jobs which now enables the Bending Cell to operate autonomously 24/7.

Xpert Pro dynamic crowning.

For more information, please contact Bystronic – Tel: 083 288 1111.

ERMAKSAN HEAVY DUTY HYDRAULIC PRESS BRAKE

Ermaksan heavy duty press brakes meet the needs of all sectors engaged in the production of heavy machinery such as transportation, wind turbines, power plants and the defence industry.

Benefits of this remarkable machine include a 17" 3D, LCD touch screen controller, perfect configuration for heavy tonnage bends, while offering an absolute solution for deep and full-sized bends. Continuous precision with a dynamic motorized crowning system, a 6 axis servo motor backgauge system and AP3 / AP4 front sheet support system compliment each other. This machine is a durable choice for precise cutting works and special top and bottom tools with 610mm throat depth.

The Ermaksan heavy duty press brake allows for work at maximum capacity putting an end to time consuming manufacturing processes.

ECO-BEND EXPERT CNC HYDRAULIC PRESS BRAKE

The Eco-Bend Expert CNC hydraulic press brake offers a wide variety of options on top of its standard features. The machine is user-friendly and provides a cost effective production solution.

A high resolution controller comes standard with all Eco-Bend press brakes, while the 2D screen and high programming capacity are the two major features enjoyed by users.

Available at a low investment cost the machine offers high efficiency, ergonomic and compact design, minimum space requirement, high resolution 2D graphic screen and a 1 axis (X) motorized backgauge. While the Ecobend Expert CNC hydraulic pressbrake is a durable choice for precise cutting, the machine is easily installed.

Specifications include a bending force of 80 ton to 200 ton, bending length of 2600mm to 4100mm, 3 axis – Y1, Y2, X as standard and optional manual crowning.

POWER-BEND PRO

While redesigned, based on users' preferences, this machine is unique offering individual electronic and mechanical features for increased productivity. With its user friendly CNC controller costs are kept at a minimum and equally, economical hydraulic maintenance is another highlight.

Power-Bend Pro is ideal for production where complicated, sensitive, single or multiple high speed bends are required.

Featuring optimal configuration and economic solutions for precise bending works, a perfect result for deep and full-sized bends is guaranteed. Add to this a high resolution 2D graphic screen, permanent precision with optimal crowning equipment and a CNC controlled X axis backgauge.

Specifications include a bending force of 40 to 600 ton, bending length of 1270 to 6100mm, 3 axis – Y1, Y2, X as standard and manual crowning of 220 ton and above.

For more information, please contact
Machine Tool Promotions – Tel: 082 900 3538.

DURMA HDF/HDFL 3015

An integrated shuttle table maximizes productivity and minimizes material handling times. The shuttle table and pallet change system allows convenient loading of new sheets or unloading of finished parts, while the machine is cutting another sheet inside the working area. The available shuttle table is fully electric and maintenance free; there are no hydraulic oils to handle and table changes are fast, smooth and energy-efficient.

Durma HDF/HDFL 3015 Fiber Laser.

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HD-TC PROFILE-PIPE CUTTING LASER MORE STABLE WITH ADDED LASER SENSORS

DURMA shortened process time by improving centering with the newly added laser sensor centering option added to the HDTC machines. It is possible to control the size and irregular structure of the profile during cutting or before cutting with the help of sensors to ensure that the internal contours to be cut are at the right point.

In existing HD-TC machines, the centering measurement is achieved by scanning the profile surface through capacitive sensors. The advantage of the laser sensor system is that it gives more precise results in a shorter time. The user can take measurements at the distance determined by the user, and precise results are obtained in a shorter period of time as the process of measuring by the sensor is shortened for parts requiring precise measurement with internal contours.

The advantage being fast set-up time, less problems during cutting, best solution in a short time and measurement frequency is dependant on operator request.

For more information, please contact Spectrum Machine Tools – Tel: 011 865-4090.

DURMA HD-FO 3015

A LASER TO SUIT YOUR BUDGET

DURMA

THE WINNING FORCE

Yesterday

Today

Tomorrow

- **Laser source IPG**
- **Dust filter**
- **Chiller**
- **Auto focus cutting head**

Up to 2000 W laser available

CUTTING AXES

X axis	3080 mm
Y axis	1530 mm
Z axis	125 mm
Max sheet size	3.048 x 1.524 mm
Max sheet weight	575 kg

CONTROL UNIT

CNC	SINUMERIK 840D SL
Screen	19″ touch panel

TECHNICAL SPECIFICATIONS

Max sheet size	3.048 x 1.524 mm
Max sheet weight	200 kg/m^2
Z axis stroke	125 mm
Max synchronous speed (X-Y)	141 m/min
Max accelaration (X-Y)	14 m/s^2
Positional accuracy	±0.05 mm
Repeatability	±0.05 mm

SPECTRUM MACHINE TOOLS

www.spectrumafrica.co.za

Vaughn Hanwith Horden – 082 448 4991 – vaughn@spectrumafrica.co.za
Johann Nel – 064 396 1273 – johann@spectrumafrica.co.za
Emergency, Service & WhatsApp number – 072 397 9956
Office number – 011 865 4090

MTMA

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TRULASER SERIES 1000

The TruLaser Series 1000 handles many cutting-related processes autonomously to drive down part costs. Equipped with a robust laser and proven functions such as collision protection, these machines cut sheet metal in a process-reliable way. And the intuitive operating concept reduces training time. Beyond that, TRUMPF added features such as protective glass monitoring and BrightLine fiber. Previously available only in higher 2D laser classes, they serve to optimize processes and boost machine efficiency.

The series consists of two types of machine, the TruLaser 1030 fiber and the TruLaser 1040 fiber with work areas three and four meters long, respectively. The TruDisk solid-state laser operates at constant power and is insensitive to reflections off copper, brass and other materials that reflect when cut. TRUMPF ships these machines out with data for cutting many commonplace materials and thicknesses of sheet metal. It enhances their process reliability – they can even cut copper with nitrogen. Machines with a four-kilowatt laser are equipped with BrightLine fiber. With this function, they can cut thick mild steel in a process-reliable way. In the event of a collision with tilted parts, a special protective mechanism deflects the cutting head to prevent damage. The TruLaser Series 1000 deposits slag and small parts in five pull-out drawers below the machine's frame.

This re-engineered line of TRUMPF machines is far more dynamic than its predecessor. Positioning speed is up from 85 to 140 meters per minute. This speed is down to the design of the machine's body, which combines a rigid machine frame with a lightweight motion unit and powerful drives. The machine cuts all materials and sheet thicknesses with the same cutting head. It changes nozzles automatically thanks to the optional nozzle changer. Sensors monitor the optics' protective glass and let the operator know when it is time for a replacement. Visual inspections are a thing of the past. All this reduces the machine's set-up time. The TruLaser Series 1000 also saves time during the cutting process. The PierceLine feature reduces piercing time by up to 80 percent and protects the machine and material. These machines operate very energy-efficiently with an average power consumption of 13 kilowatts for the 3-kilowatt laser and 14 kilowatts for the 4-kilowatt laser. They also come with more energy- conserving features, as do their periphery modules.

The TruLaser Series 1000 features a 18.5-inch multi-touch control panel. It displays the most frequently used menu items at the top level. If the operator interrupts an operation, the control unit enables processing

The TruLaser Series 1000 looks like the higher classes of TRUMPF 2D lasers. TRUMPF equipped this line with many features that were once exclusive to TruLaser Series 3000 and 5000 models.

to resume at the same point. The monitoring capability is not limited to the protective glass: Other sensors track the condition of components that impact the machine's cutting performance. A traffic-light readout on the control panel called the *Condition Guide* indicates the status. It also offers guidance when the operator needs to take action. Flow charts make it easier to forecast actionable events and provides a more efficient way of scheduling maintenance work.

A semi-automatic pallet changer is a standard feature. The operator can prepare new sheets, while the machines are operating and sort or unload cut sheets parallel to the cutting process. Users may opt to equip the TruLaser Series 1000 with automated LiftMaster components. They load raw sheets and remove the cut sheets. TruLaser Series 1000 machines may be connected to the compact TruStore storage system or to a large Stopa storage system.

The MobileControl app serves to operate the TruLaser Series 1000 using a touchpad situated near the machine. TruTops Monitor software tracks the machine's status continuously and notifies the operator in the event of a malfunction. The TruLaser Series 1000 affords users the opportunity to access the machine's digital enhancement. It contains five apps that assess machine data and deliver the results to users. AXOOM, a TRUMPF subsidiary, provides the cloud platform for processing these data. The apps provide an insight into tool and material usage and display the current machine status to users on the go.

The TruLaser Series 1000 automatically changes nozzles to the correct type.

The cutting head deflects if it collides with a tilted part.

For more information, please contact Retecon – Tel: 976-8600.

AMADA ENSIS FIBER LASER CUTTING MACHINE

ENSIS-3015AJ 9kW/6kWis designed for high-speed stable cutting over the entire range of machining, from thin to thick sheet metals, which has been made possible by the evolution of AMADA's original beam control technology (ENSIS technology) and the expansion of oscillator output from the conventional 3kW to 9kW/6kW. High quality cutting over the thick material range is achieved by overcoming problems related to fiber lasers through reduced dross and bevel and improved surface roughness.

NC equipment is provided with the AMNC 3i, which can be operated easily like a smartphone. It is adapted to AMADA IoT V-factory and visualizes machine operating results including power consumption and processing costs, contributing to performance. Furthermore, it enables smart manufacturing through maintenance and support to maximize machine capacity, as well as proposals to improve production efficiency.

AMADA's high-output oscillator provides for maximum output of 9kW/6kW to enable high-speed and high-quality cutting over the entire processing range (thin, medium thickness and thick sheet metals), based on energy saving and high-quality beams.

ENSIS technology allows the laser beam to be controlled freely into the optimum beam form according to material quality and thickness. Additionally, the auto collimation mechanism is provided as a new feature. The variable range of the condensing diameter has been expanded greatly to achieve excellent stable cutting over the entire thickness range. Furthermore, combined with a high-output oscillator, the technology enables high-speed stable cutting of thick sheet metals, cutting with reduced dross and bevel and improved surface roughness.

The fiber laser cutting machine employs Clean Fast Cut (CFC) technology and Easy Fast Cut (EZFC) technology to dramatically reduce the consumption of assist gas during nitrogen cutting, which is used mainly to cut stainless steel. It applies an original non-contact nozzle developed by AMADA that supplies assist gas at a low pressure to reduce processing costs, while maintaining cutting quality.

For more information, please contact Amada – Tel: 011 453-5459.

LASER MARKING INNOVATION

LASIT MICROMARK G3

The MicroMark G3 is an extremely compact laser marking system which integrates all the components inside the machine. In this way there is no risk of dust intrusion which ensures the optimal environment for both, electrical components and laser source itself. In addition, having all the components integrated allows a well-organized workstation and eases the relocation of the machine whenever required.

The use of the motorized Z axis is extremely simplified by the use of the joystick which is an essential tool if combined with the SmartFocus system. In particular, it allows the operator to easily determine the correct position of the scanning head for optimal marking, both on flat and complex surfaces with curves and edges.

The door of the MicroMark G3 has a vertical opening on the three sides of the machine to allow easy and comfortable access to the marking chamber. In addition, working with the door open wearing the safety goggles, it is possible to mark even bigger parts that would not normally fit in the machine.

Upon request the MicroMark G3 can be equipped with a motorized three sides door which allows for speeding up of the loading/unloading process. In fact, once the part is inside the marking cabinet and the operator pushes the starting cycle button, the door closes automatically and once the marking is completed it opens up again.

The 20mm thick work table measures 530 x 410mm. It is made of surface ground aluminium with a 30µm hard-anodized coating. The standard hole pattern is 50mm center to center. Each hole is ø8H7 at the top with M6 threads at the bottom. This makes it easy to affix guides, jigs or accessories with either pins or screws.

The exhaust system is fundamental for the operator's health and the cleanliness of the machine. The pump with lateral channels, which has a die-cast aluminium structure, ensures a high air speed flow. The 3-stages filter has both HEPA H14 and activated carbon elements which remove potential smells, odors and micro-particles.

In order to simplify machine programming, it is possible to use the reader to scan production orders. LASIT software, using the key read by the scanner, can access a database and collect the variable fields as well as select the drawing that needs to be marked.

The Smart Focus provides for fast and accurate focus. By controlling the Z axis with the joystick, users can immediately and precisely focus the laser by intersecting the dot of the red lighted diode laser with the red lighted line of the scanning head. The red lighted line is electronically produced and it can be moved to obtain a marking that is *out of focus* when required.

The exclusive Lasit capability of projecting on the part to be marked virtually every pattern with the safe red light makes the centering of complex parts quick and easy for everyone.

For more information, please contact Elcomp – Tel: 011 238-7996/7.

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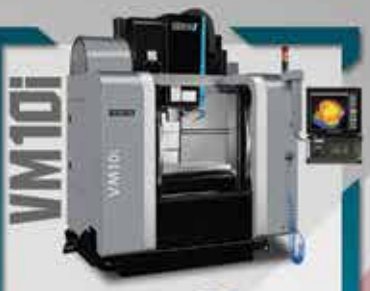
TM6i

TM8i

The small footprint, large work cube, chip management system, and affordable price tag of our slant-bed CNC lathes in the TM Series make small batch manufacturing profitable.



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ECONOMICAL 14 CUTTING EDGES – CHASE2HEPTA 6mm INSERT

M Geometry

MM Geometry

ML Geometry

As the need for machining smaller volume work pieces made from cast iron and steel has grown, so has the need for smaller size tools that can enhance productivity and reduce operating cost. Therefore TaeguTec offers a smaller size insert for its highly popular Chase2Hepta milling line.

The Chase2Hepta 6mm inserts and cutters are available to meet the challenges posed by technical trends in forging and casting technologies which is demanding higher productivity and economical tools that can handle lower depth of cut conditions.

The Chase2Hepta line is renowned for offering 14 corners on one insert. The double-sided and highly effective 45 degrees entry angle is the ideal solution for high performance on cast iron and steel machining, while its positive cutting edge geometry lowers cutting loads during rough machining making it an efficient and smooth set of tools. Covering a wider range of machining applications, the dual usage TaeguTec Chase2Hepta 6mm inserts are screw type.

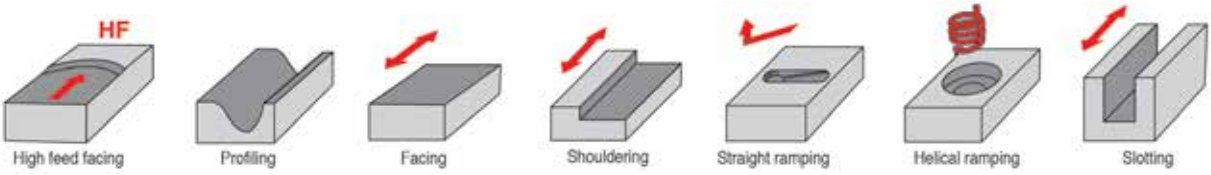
The line of mini cutters comes in three geometries – the **M, MM** and **ML**.

The **M** geometry 6mm Chase2Hepta line is used for roughing applications of steel and cast iron work pieces and its smooth machining with good tool life is due to its reinforced, positive rake angle.

For general cast iron machining applications, the optimized cutting edges of TaeguTec's **MM** geometry chip breakers on the Chase2Hepta 6mm line means low cutting forces in cast iron machining.

The **ML** geometry for the 6mm line is ideal for cast iron light machining and difficult to cut materials such as stainless steel and heat resistant alloys. Its sharp, positive cutting edge was designed for minimal cutting force.

VERSATILE HIGH FEED MILL WITH STRONG 4 CUTTING EDGE INSERT



To meet market demand, TaeguTec has released an expansion to the CHASE-4-FEED family – BLMP 04, 11 inserts and cutters. They are, smaller double-sided four corner BLMP 04 inserts for small and high feed machining applications.

The smaller size inserts mean more inserts can be mounted to the same diameter cutters, which will greatly improve productivity over the existing BLMP 06 type under similar conditions. Available in Ø8(1z) and Ø10(2z) sizes, these are an alternative to solid end mills for roughing operations.

While both the **BLMP 11** and BLMP 13 cover a similar machining range, the BLMP 11 inserts give an advantage as they make it a finer pitch same diameter cutter for better productivity.

The cutters come in all types, including face mill, end mill and modular types.

While, as part of the new campaign, the design for the new **CHASE-4-FEED** line highlights TaeguTec's new direction, the new **CHASE-4-FEED** logo will be applied to the BLMP 06, 09 inserts and cutters as well.

For further information, please contact TaeguTec -Tel: 011 362 1500.

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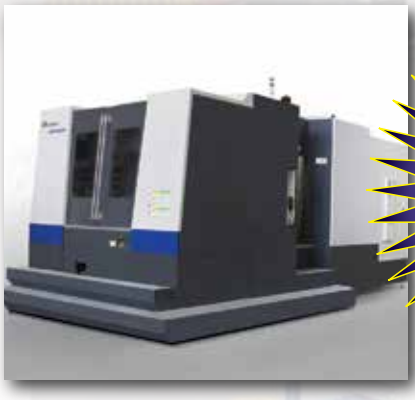

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