

MicroStep[®]
spol. s r.o.

NEWS

MC Compact

Plug & cut with excellent quality

PipeCut

Focused on pipes and profiles

ABP

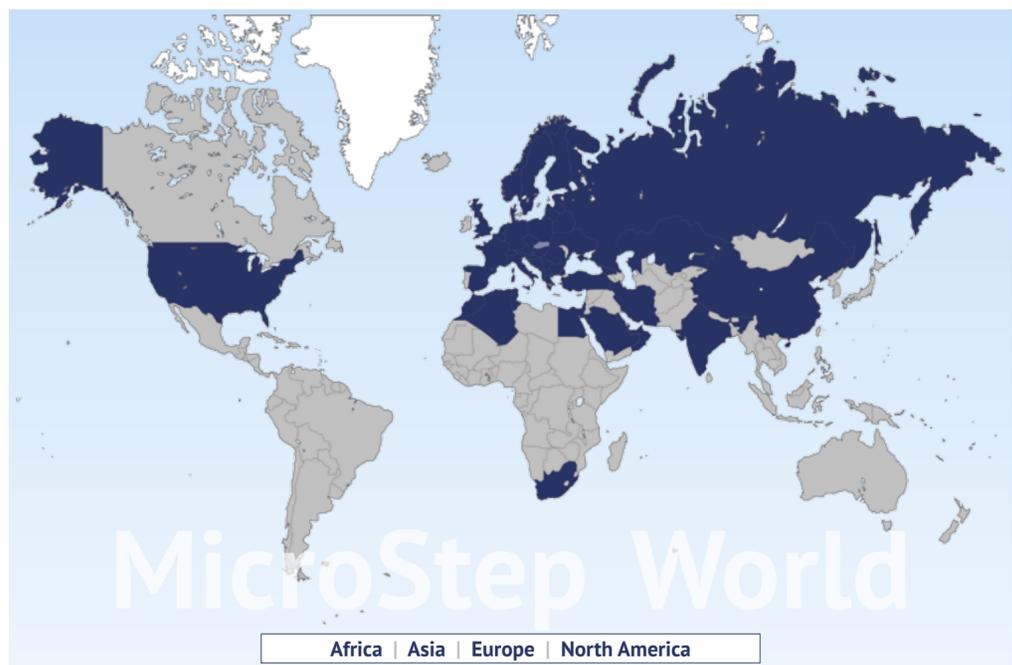
Weld edge preparation
on pre-cut parts





Dealers

MicroStep, spol. s r.o. as a manufacturer based in Slovakia maintains a policy of selling to foreign countries exclusively via dealers or local subsidiaries. It has several advantages – a local company has knowledge of the local market which implies good understanding of customer's situation, it is closer to its customers in distance which ensures good reaction times, it can serve its customers in local language – to name a few. Contact the MicroStep dealer in your area to discover the variety of MicroStep products and features!



We accept challenges / Introduction



Ing. Alexander Varga, PhD.
General manager

For more than 20 years now, the company MicroStep, spol. s r.o. designs and manufactures CNC cutting machines, control systems and CAM software. Over the years we have become one of the leading suppliers of cutting equipment and have supplied more than 1,600 machines worldwide with strong channel partners spread in over 45 countries. More than 30% of company's products are complex machines which require continuous development and search for new, innovative technical solutions. Thanks to accepting the needs of our customers, MicroStep is today able to offer the full range of contemporary cutting technologies along with a great variety of addi-

tional equipment and software such as drilling, tapping & countersinking, marking, process synchronization and material handling. In addition to our own R&D base we are working closely with departments of the Slovak Technical University in Bratislava and the Institute of Materials & Machine Mechanics of the Slovak Academy of Sciences on utilization of latest achievements in design and control of machinery.

The continual development of MicroStep's bevel cutting tool stations (for plasma, oxyfuel and waterjet) has been always top priority and an integral part of company's R&D. In this field MicroStep is bringing new products and technologies to the market on regular basis with the aim to establish automated CNC bevel cutting as a common and highly efficient production technology for preparation of weld edges on different types of materials with convincing quality and precision and yet simple way of operation. Now we are introducing another brand new technology for addi-

tional beveling of already cut parts – ABP.

Another topic is integration of our machines to existing workshop workflows and, moreover, supplying of complete solutions which cover the whole production process in customer's workshop from the material and order entries up to printing of the final order certificates. As we learned in business discussions, major producers in the metalworking industry nowadays look for an increased level of automation including central management of stock and orders, interconnection of CAM software with machine's CNC control systems, communication of the machines with onsite ERP systems as well as a good deal of flexibility for solving special requests and delivering of tailored, unique solutions. Expectations of our customers for advanced production equipment naturally focus on increasing of efficiency of the manufacturing process: from designing of cutting plans, directed flow of semi-products along with

smooth distribution of cutting tasks to particular machines up to transparent reporting and job records – the whole system should be fast, smart, foolproof and easily manageable within the company network. We have successfully adopted these requirements – our complex software solution of production management MPM (MicroStep Production Management) has already found its application along with our machines in several large enterprises in Europe and Asia.



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ABP: Weld edge preparation on pre-cut parts

Since the introduction of our plasma rotator MicroStep has been making continuous development in the field of bevel cutting technology – improvements of mechanics and motion control went hand in hand with the development of plasma sources and implementation of latest cutting technologies which resulted in the unique features of the current version:

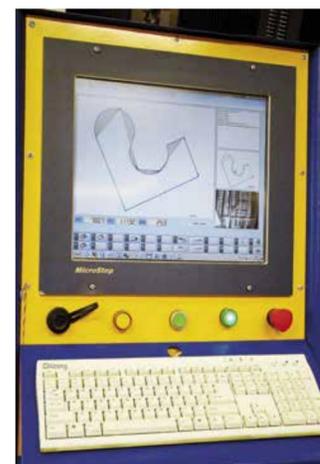
- Endless tool rotation with a fixed tool center point
- Arc voltage height control during cutting (ATHC)
- ITH torch holder with a slip-back

function and an advanced sensor system for material position detection

- Self-teaching auto-calibration system of tool geometry (ACTG) which significantly improves long-term accuracy and reduces maintenance time
- Initial height sensing via electric contact in the plasma torch
- Adaptive bevel compensation (ABC)

Now we introduce our latest innovation – the Additional beveling process (ABP) that enables the creation of bevels on vertically pre-cut parts.

After loading an original 2D part drawing into AsperWin®, the user simply defines the desired bevels and the system will generate a cutting plan for ABP. To find the exact location and position of the straight-cut part on the cutting table, the machine uses a laser line ABP scanner. During scanning it compares the ideal shape (drawing) and real contour of the part and after verification of the starting point it will cut the additional bevels. To ensure the accuracy of the system in long-term use, ACTG station is used for scanner calibration as well.





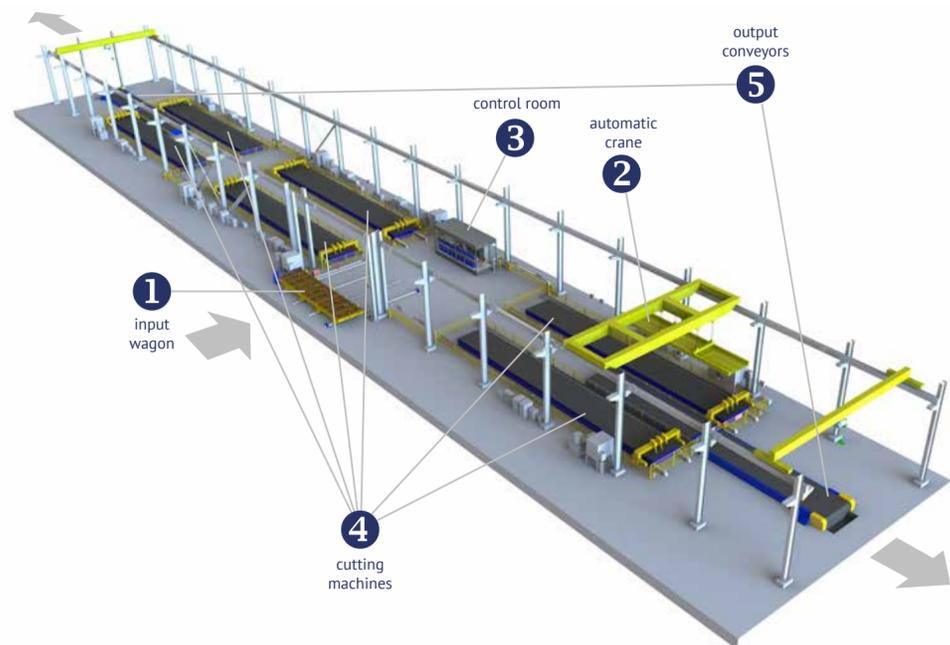
Automatic cutting line

Efficiency boost for high-volume manufacturing

China's leading coal mining equipment producer Zhengzhou Coal Mining Machinery invested recently into a unique fully automatic CNC cutting line built as a cooperation project of MicroStep, MicroStep-Puris and Terex Material Handling with its Demag brand. The line consists of 8 CombiCut machines with cutting area 28 x 3 m (each equipped with 2 HD plasma sources and an inkjet marker), 1 automated overhead travelling crane (9 t x 16.5 m) for automatic plate handling, 1 input

wagon with load capacity of 15 t and 2 output conveyors for collecting of cut parts and removing of waste material. The entire line is operated in a fully automatic mode by MicroStep's production management software MPM with integrated Demag software for crane management and material handling. The line replaced the standard oxyfuel cutting production process. As a result of use of a modern HD plasma technology and first of all thanks to automation of pro-

duction preparation, cutting plan distribution and material handling not only the cut quality could be enhanced significantly, but also the efficiency of part manufacturing could be increased by up to 75 % with one production cycle taking 1 - 2 hours instead of previous 4 - 8 hours. Furthermore the line increased the production volume of the factory by 40 % to 28,000 tons per month while the line itself is designed for processing 8,000 - 12,000 tons of mild steel per month in a three-shift operation.



MPM

Production preparation

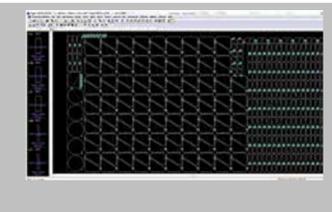
- ▼ Automatic import of part drawings
- ▼ Automatic order generation in MPM
- ▼ Plate evidence
- ▼ Connection to ERP



AsperWin®

Generation of cutting plans

- ▼ Selection of plates from stock
- ▼ Automatic selection of parts according to production requirement
- ▼ Automatic selection of nesting parameters according to chosen material
- ▼ Automatic nesting generation and export to cutting plan database



PSL

Material handling 1 2 5

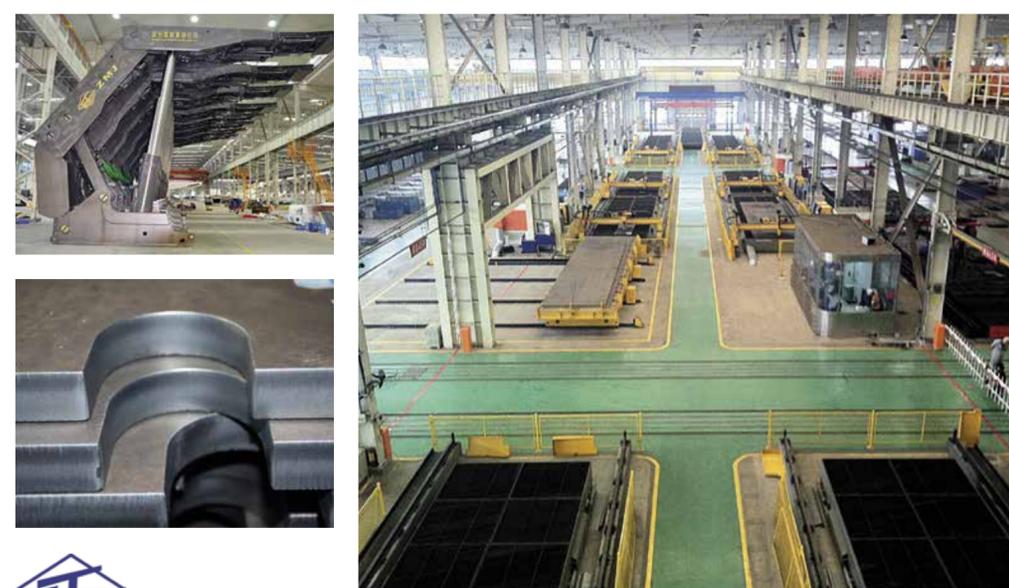
- ▼ Loading of plates to input wagon
- ▼ Transfer of plate information to crane management system
- ▼ Handling of plates in working area (between input wagon, storage areas, cutting machines, output conveyors)

Plates loaded on wagon			
Position	Material	Thickness [mm]	Dimension X,Y [mm]
Top	Mild steel	10	4000 x 2000
	Mild steel	10	4000 x 2000
	Mild steel	10	4000 x 2000
	Mild steel	10	4000 x 2000
Bottom	Stainless steel	6	4000 x 2000
	Stainless steel	6	4000 x 2000

iMSNC

Cutting 3 4

- ▼ Automatic loading of cutting plan
- ▼ Auto-configuration of machine parameters for particular loaded plate
- ▼ Automatic plate localization and cutting start
- ▼ Automatic update of stock and order status after cutting



4 x CombiCut 28001.30 PPI | 2 x CombiCut 28001.30 PPI + 1.30 PPI
www.zzmj.com

Zhengzhou Coal Mining Machinery (Group) Co.,Ltd. / China

The 1958 established state-owned company ZMJ is China's leading manufacturer of coal mining and excavating equipment with a domestic market share of over 45%. As one of the few manufacturers in PRC the company is able to produce three of the four components that comprise a complete integrated coal mining and excavating system for underground coal mining: hydraulic roof supports, armored-face conveyors and road-headers. ZMJ's client base includes the biggest names among Chinese coal mining companies as well as foreign companies from Russia, Turkey, India etc.



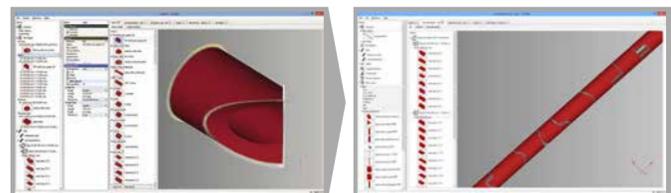
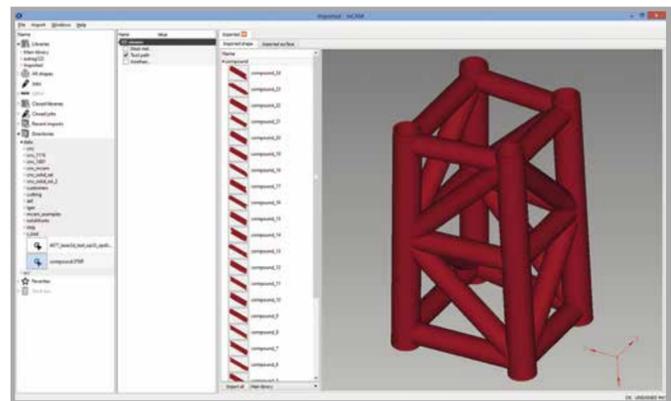
mCAM was developed within the project "Research of technology nodes on CNC machines for cutting of materials by energy-beam technologies" supported by the Ministry of Education, Science, Research and Sport of the Slovak Republic within incentives for research and development provided from the state budget under the Act no. 185/2009 Coll. on incentives for research and development.

mCAM: Structural jobs with ease

CAM solution for creation of cutting plans for 3D shapes

The massive expansion of 3D CAD systems over the last years has substantially influenced construction and preparation of production in mechanical engineering companies. Naturally there followed the need of CNC machines programming based on 3D modeling of components. To address these needs MicroStep took benefit from its 10+ years experience in 3D cutting and launched mCAM – a powerful in-house developed tool for automated 3D manufacturing of structures from planar and 3D shapes commonly used in steel constructions – circular pipes,

rectangular or IPE profiles, sphere segments or domes. The software allows to import 3D solid models in the commonly used STEP or IGES formats, automatically sort all their elements according to the type of semi-product, automatically nest them to achieve high utilisation of material and create cutting plans including all cutting parameters. Supported are also: cylindrical folding of flat patterns from 2D DXF, creation of unfolded cutting plans for cutting from plate metals, micro-joints on long cutting paths, connection to ERP systems and many more.



mCAM report				
		Created: 06.08.2013 15:14:54		
		Name: compound_6 + 10		
		File: W:\compound_6 + 10.cnc		
Stock: Round pipe: L: 12000.000 mm				
Stock: D: 193.700 mm T: 5.000 mm				
Chuck location: at X min				
	Starts	Length		
Cutting	22		18 m 316.861 mm	
Total	22		18 m 316.861 mm	
Preview	Info	Part name		
	Starts	Length	compound_10	
	Cutting	2		1 m 315.317 mm
	Total	2		1 m 315.317 mm
Value				
kerf		2.000 mm		
size		L: 779.800 mm		
	Starts	Length	compound_14	
	Cutting	2		1 m 453.901 mm
	Total	2		1 m 453.901 mm
Value				
kerf		2.000 mm		
size		L: 779.800 mm		
	Starts	Length	compound_12	
	Cutting	2		1 m 453.901 mm
	Total	2		1 m 453.901 mm
Value				
kerf		2.000 mm		
size		L: 779.800 mm		

3D CAM software

Your partner for Cutting and Automation



mCAM: Utilise your production with MPM

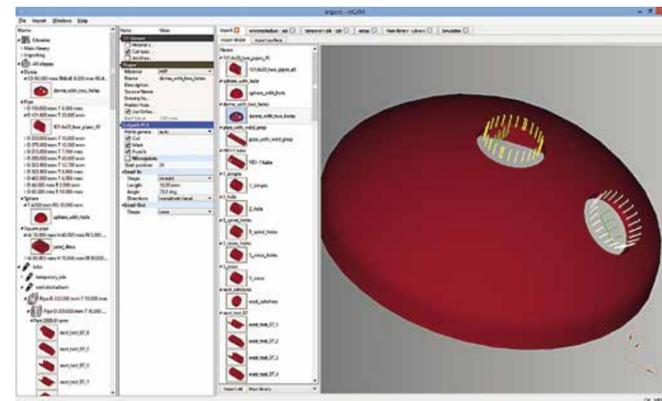
Integration of mCAM into MicroStep's production management system MPM gives the users control over the whole production process and consequently provides tools for maximum utilization of customer's production equipment. In this setup mCAM will work directly with MPM's SQL databases rather than individual job inputs which will significantly speed up the process of creating nesting jobs – MPM will create cutting tasks for mCAM centrally, based on all incoming orders. mCAM will then create cutting plans for the required types of semi-products – sheet metals, pipes, profiles or domes – and load them to MPM's database of cutting plans (MCP) together with all necessary parameters and a list of all containing parts. MPM can thus automatically assign the generated plans to corresponding cut-



ting machines and after uploading automatically set the cutting parameters of each machine – this considerably minimizes the risk of operator errors. After completion of a cutting

program, MPM immediately updates the information about each cut part in the database so that the users can monitor the status of completion of individual orders in real time. After all parts of an

order are cut, the system will print out a completion certificate while stock records, orders and parts can be shared with customer's ERP system.



V.D.S. Staal- en Machinebouw B.V. / The Netherlands

Whether it's a bridge of over 200m, a ship-section or a complex steel structure, VDS makes it happen. The steel and machine building company is located directly on the Westhof harbour's self-loading and unloading dock with direct access to open water, railway and highway. Along with their extensive machine tools and large warehouse and workshop areas this makes VDS the perfect company for any type of steel work.



MG 24001.35 PrG + CH1200P
www.vdsstaalbouw.nl

Accessories of MicroStep machines



Plasma / Tilting



Plasma tool station incl. anti-collision protection, laser pointer, arc-voltage THC and full support of plasma marking. Tilting tool station enables automatic setting of torch slope $\pm 90^\circ$ for bevel cutting in longitudinal direction.



Plasma rotator



5-axis plasma head with endless rotation enables bevel cutting of sheets, pipes and profiles up to 50° . The innovative ITH torch holder includes sensors for torch displacement detection, IHS and auto-calibration.



Plasma rotator 90°



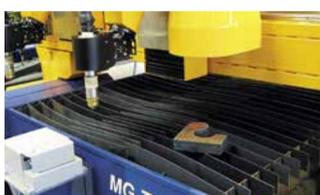
6-axis bevel head with tilt range up to 90° enables bevel cutting and trimming of domes and pipes. A variable bevel cutting feature provides accurate weld edge preparation for manual or robot welding.



ACTG



ACTG station provides auto-calibration of tool geometry for automatic compensation of mechanical inaccuracy of the cutting tool as well as calibration of ABP scanner and automatic measurement of drilling tools.



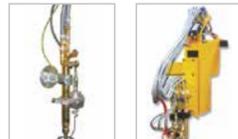
ABP scanner



Laser scanner for scanning of contour of straight pre-cut part enables localization of part position in ABP feature – additional cutting of bevel for weld edge preparation.



Oxyfuel / G-Multi



Oxyfuel tool station with manual tilting possibility up to $\pm 45^\circ$. Fully automatic gas console with preset parameters ensures stable quality of cuts and best efficiency. Multi-tool version enables stripe cutting with stripe width ≥ 70 mm.



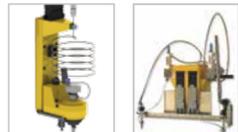
Oxy triple torch



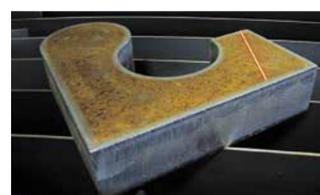
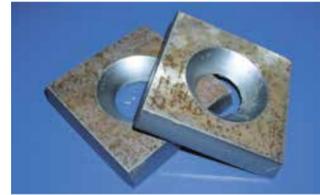
Oxyfuel triple torch with fully automatic gas console enables bevel cutting of V-, Y- and K-cuts with 3 oxy torches within bevel range $20^\circ - 50^\circ$. Tilting angle and span of torches can be set manually or automatically.



Waterjet / W-Comp / W-Multi



Waterjet tool station for cutting of all types of materials. Optional execution enables ABC compensation of the unwanted cutting edge slope. Multi-tool version can carry up to 4 water jets on a single Z lifter.



Waterjet rotator



5-axis rotation head for waterjet cutting enables fully automatic bevel cutting of all types of materials with bevel up to 50° . ABC compensation of straight cuts and PHS THC are included by default.



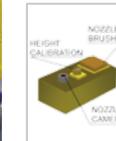
Laser / Laser rotator



Laser tool station for CO2 or fiber laser cutting of various types of materials. Bevel tool station enables bevel cutting up to 45° .



Nozzle calibration



A combined station provides automatic calibration of capacitive height sensor in the laser head, brush cleaning of laser nozzle from possible spatters after fast piercing and camera check of the status of nozzle orifice.



Automatic plate alignment



Laser sensor is scanning plate edges for automatic alignment of the plate with coordinate system. Supported is 3- or 5-point detection whereby 5-point detection also verifies the plate size.



CCD camera



CCD camera can be used for:
a) scanning of the shape of template or rest plate for conversion into DXF
b) scanning of holes on plate for positioning



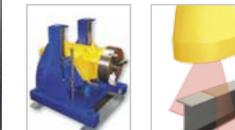
Drilling & tapping



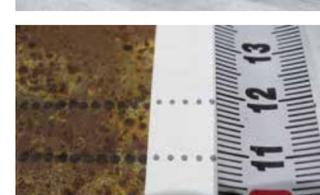
MicroStep offers a variety of drilling and tapping tool stations for several machine types reaching from small drilling heads for soft sandwich materials to big drilling and tapping units with internal cooling of tool and a possibility of automatic tool change.



Pipe & profile cutting



Pipe cutting device is dedicated for clamping and turning of pipes and profiles. Together with a straight or bevel tool station and dedicated CAM software it offers the full range of pipe based applications.



Inkjet



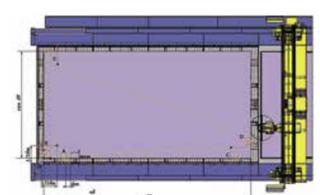
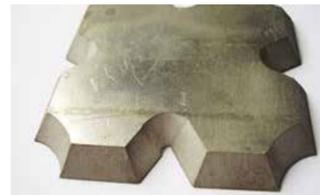
1, 7, 16 or 32-nozzles inkjet writer provides multi-purpose waterproof marking in industrial environment. It can write lines, characters, barcodes or 2D matrix. The marking speed reaches a notable 20m/min.



MicroPunch



MicroPunch marking unit is designed for fast marking of several types of materials – sheets, pipes, profiles - with differently machined surfaces. The material can range from plastics to hardened steel.



MG CNC plasma & oxyfuel cutting machine



The MG series is MicroStep's top class CNC cutting machine suitable for long-term industrial use and meeting highest requirements on precision, performance and easy operation. MG machines provide a wide variety of applications: bevel cutting with

plasma and oxyfuel, pipe, profile, dome or elbow cutting, drilling with automatic tool exchange, plate positioning with laser sensor or a CCD camera, inkjet or Micro-Punch marking. A special heightened version of the gantry allows oxyfuel cutting up to 250 mm.



STX Finland Oy / Finland

STX Finland Oy has three shipyards in Finland. The Turku Shipyard is an experienced builder of cruise ships and other technically demanding specialized ships and offshore units. The Rauma Shipyard is known for ferries, research vessels, naval ships and multipurpose vessels. The Arctech shipyard in Helsinki is specialized in ice-breaking and ice-going offshore and arctic vessels. STX Finland Oy belongs to the STX Europe Group, an international shipbuilding company.



stx Finland

DRM 50001.80 IPrk
www.stxeurope.com



Structural steelwork for the future

conferdo
ONE VOICE ONE FACE ONE SPIRIT

MG 12001.30 PrkPMf + CH1200P
www.conferdo.de

Conferdo GmbH & Co. KG / Germany

The company is certified in the field of specialty steel work, equipment manufacture and production and construction of technically intensive components, as well as lattice towers to support wind power, radar, mobile radio and all other technical applications. Mounting, maintenance, service and repairs are the functions of their field service teams. With projects around the globe, they provide the required know-how for optimal development of any project.

ZAO Konecranes / Ukraine

ZAO Konecranes is a leading producer of cranes and crane equipment in Eastern Europe and the CIS countries. The company specializes in manufacturing of bridge-, gantry- and special purpose cranes as well as manufacturing of lifting and handling equipment, production of metal constructions and wholesale industrial equipment. The enterprise is a part of the Konecranes world-leading group of Lifting Businesses.



KONECRANES
Lifting Businesses™

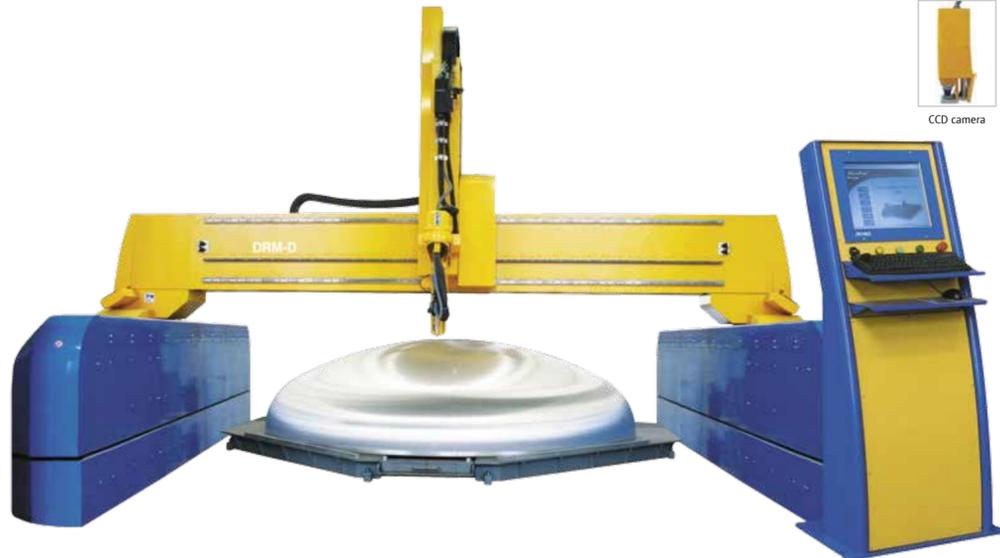
MG 24001.35 Prk
www.konecranes.ua

DRM-D CNC sheet & dome cutting machine



DRM-D is a heavy-duty CNC cutting machine designed for a wide range of dome, sheet and pipe applications. Its robust gantry allows a vibration-free operation of heavy equipment like automatic oxyfuel triple torches or the special 90°/ pantographic plasma rotator with a 1200 mm

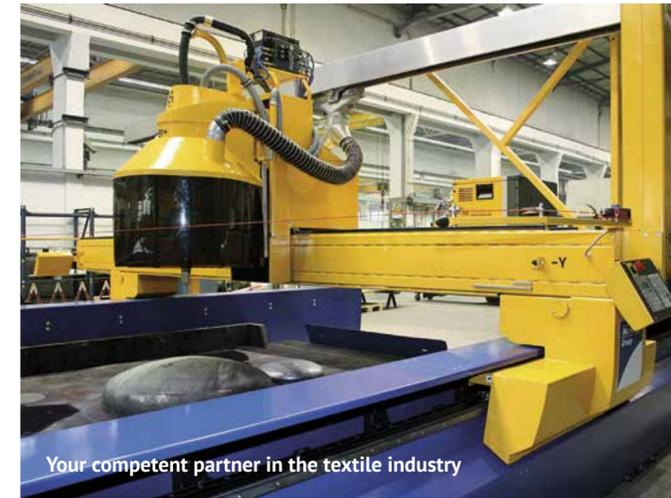
stroke of the Z-axis. Along with the full range of sheet and pipe cutting possibilities, DRM-D offers special applications on domes like trimming, separation cuts, cutting of diverse openings, welding seam preparation and cutting of domes placed upside down.



MG 50001.30 PrkPrk + 1.30 PrkPrk
www.spfchilo.com

S.P.F Chilò S.p.a. / Italy

The business was founded in 1965 from an initiative of the Chilò brothers. It rapidly gained a foremost role in the sheet metal sector, specializing in the production of semi-processed heavy gauge material of large dimensions. In 1995 it became one of the first Italian realities in its industrial sector to obtain ISO 9002 certification, as proof of its constant commitment towards achieving high standards in quality.



MG 13001.20 Prk + CH550P
www.thiestextilmaschinen.de

Thies GmbH & Co. KG / Germany

Founded by Bernhard Thies in 1892, Thies still remains a family owned- and operated company. The internationally active enterprise with a strenght of more than 400 employees in its home base of Coesfeld offers a broad range of textile equipment – dyeing machines, jiggers, pressure dryers, tumblers, heat recovery units up to fully automated plants and centralised overhead systems. The company was one of the first DIN EN ISO 9001 certified enterprises.

Your competent partner in the textile industry



MG 9001.20 Pr + CH800P
www.kasag.ch

Kasag Langnau AG / Switzerland

KASAG was founded in 1929 as a coppersmith and aluminum welding works. At the outset, mainly copper and aluminum were processed into containers and apparatuses. Today, stainless steel and aluminum alloys are processed to manufacture high quality tanks, pressure vessels, heat exchangers, columns or modules for the chemical and pharmaceutical industries as well as for organic food and environmental engineering. With a production area of 2.500 m² the company is highly competitive also in realization of large projects.

Pulse of progress

DRM-B CNC drilling machine



The DRM-B machine is dedicated to heavy-duty CNC drilling of construction sheets, tube sheets for heat exchangers and other demanding drilling jobs. The machine is equipped with a special drilling table with drill-protective flats

and a rotary tool magazine for 16 tools. Optionally plate marking by inkjet or MicroPunch is possible. The machine finds its application in bridge or building construction companies.



MG 9001.30 PrkGB
www.sttim.si

STTIM d.o.o., / Slovenia

The company STT was established in 1945 in the city of Trbovlje at the times of only blacksmith's and locksmith's workshops supplying mining operations in the area. Over the years the company grew to a major supplier to the whole former Yugoslavian market. Thanks to its high quality production and know-how, the company managed to withstand the unfavorable economic situation at the beginning of 1990's. Since 1995 the enterprise uses the name STTIM.



DRM 28001.36 BI
www.kurganstalmost.ru

Kurganstalmost CJSC / Russian Federation

Kurganstalmost CJSC is Russia's leading enterprise in manufacturing of bridge steel constructions. With an annual production output of 65,000 tons the company covers 25 % of Russia's bridge construction market. The basic competitive advantage of the company is manufacturing of complex steel constructions for individual projects. Bridges manufactured at the plant in Kurgan can be found in cities from the Far East to Europe: Germany, Turkey, Afghanistan, Laos, China, Kazakhstan, Belorussia as well as many Russian cities and towns.



MG 13501.30 PrB
www.tegmul.co.za

Tegmul Engineering (Pty) Ltd / South Africa

Tegmul Engineering (Pty) Ltd specializes in fabrication, general engineering & on-site erection services for leading South African companies in power generation, petrochemicals, mining and mineral beneficiation, oil and gas, water treatment and transport infrastructure. Since 1993 Tegmul Engineering has established a reputation for quality and service in the manufacturing industry - and has an extensive track record on infrastructure projects throughout southern Africa.

CombiCut CNC plasma & oxyfuel cutting machine



This robust and high-precision CNC machine is designed especially for multiple-shift high-performance plasma and oxyfuel cutting. It allows cutting of steel up to 300mm, bevel cutting

with a pair of rotary oxyfuel triple torches or plasma rotators, simultaneous cutting with more than 10 torches, drilling up to Ø 40 mm, inkjet or MicroPunch marking, pipe and dome processing.



Huber Kontech AG / Switzerland

The company develops integrated and sustainable approaches in the areas of housing equipment and metal construction for customers in Switzerland and neighboring countries. Employees' expertise and latest technology guarantee innovative and visionary solutions for demanding clients. Being a powerful team the company provides top performance in its field.



More than metal and construction



MG 6001.15 PrkB + CH800P
www.huber-kontech.ch



PMU AD – Bourgas / Bulgaria

PMU AD - Bourgas was founded in 1998. As a legal successor of Montazhi EAD - Sofia, Bourgas Branch they inherited 40-years of experience and highly qualified human resources. The company performs all types of assembly works at building sites as well as repair, reconstruction, expansion and modernization of existing equipment in the field of chemical-, concrete-, wood-processing- and food industries, machinery construction, metalurgy and power engineering.



CombiCut 9001.25 PrKG + 1200P
www.pmu-bs.com



We make your business work

MCE Nyíregyháza Kft. / Hungary

Bilfinger MCE Nyíregyháza Kft. is a specialist in processing of medium sized to thick steel plates with a personal commitment to meeting the demands, requirements and expectations of its customers. Bilfinger MCE Nyíregyháza holds all the permits and certificates required by the federal departments responsible for railways and highways in Central Europe.

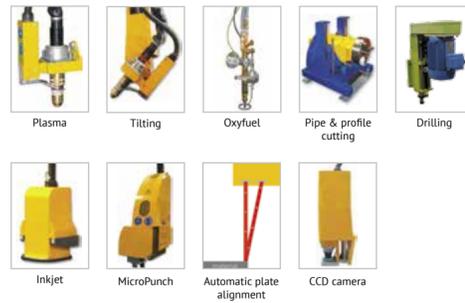


CombiCut 30001.20 PrP + CH1200P
www.mce.bilfinger.com

PLS CNC plasma cutting machine



PLS is a high-precision CNC cutting machine with outstanding dynamic properties and modern design, developed especially for high precision plasma cutting. The excellent dynamics is achieved thanks to a double-side driven gantry, high-precision linear guidelines and a drive system with helical racks and pre-stressed pinions in all axes. Besides standard accessories (plasma, oxyfuel, marking) the machine can be also equipped with a pipe cutting device.



More than half a century of construction legacy

MG 16501.35 PGrGGG + CH1200P | MG 16501.30 PMeGGGG | OxyCut 10501.30 G5
www.al-aali.com

Ahmed Mansoor Al-Aali Co. BSC (AMA) / Bahrain

The Ahmed Mansoor Al Aali Group of Companies (AMA Group) is the largest contracting and construction group in the Kingdom of Bahrain. The company provides engineering services in the fields of civil construction, structural and mechanical fabrication and installation, shutdowns and industrial maintenance works etc. The Group has today an annual turnover exceeding US\$ 300 million, over 20 divisions, subsidiaries and joint ventures, employing more than 5,000 people, serving the needs of clients in both the public and private sectors.



Making sustainable progress possible

CATERPILLAR®

PLS 28501.25 PPI
www.caterpillar.com

Caterpillar Inc. / Russia

Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. The company also is a leading services provider through Caterpillar Financial Services, Caterpillar Remanufacturing Services and Progress Rail Services. For more than 85 years, the company has been making sustainable progress possible and driving positive change on every continent.



WACKER NEUSON

MG 6001.25 BGPrk + CH500P
www.wackerneuson.eu

Wacker Neuson Kragujevac d.o.o. / Serbia

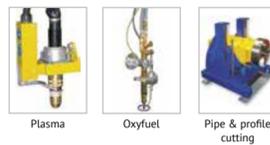
Wacker Neuson is one of the leading manufacturers of light and compact construction equipment, with more than 40 subsidiaries, 140 sales and service stations and over 12,000 sales and service partners worldwide. The enterprise is the partner of choice for professional users in construction, gardening, landscaping and agriculture, as well as among municipal bodies and companies in industries such as recycling and energy.

MasterCut Compact CNC plasma & oxyfuel cutting machine



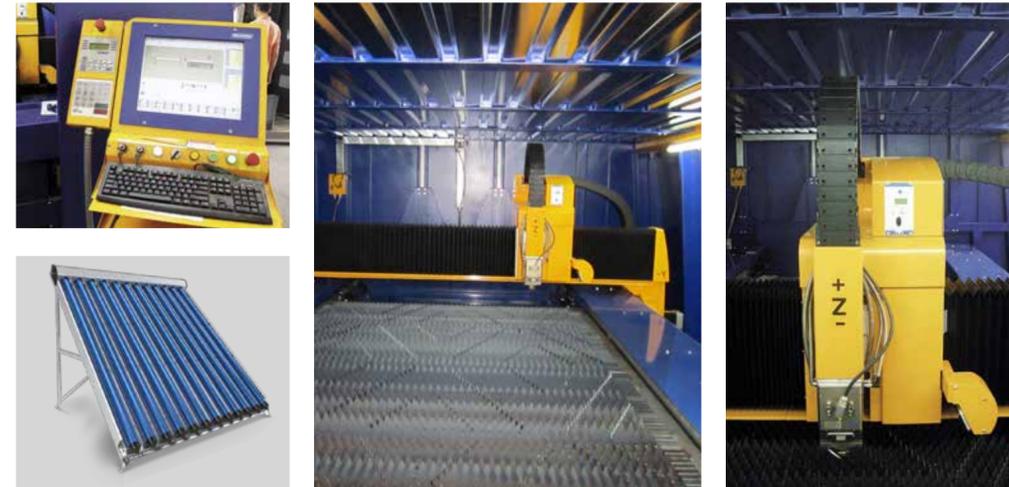
MasterCut Compact is a dynamic, high precision CNC cutting machine suitable for a variety of plasma and oxyfuel cutting jobs. Thanks to its sophisticated design and high quality of components it smoothly provides latest features of plasma technology for a decent price – true contours, small holes, sharp corners

and efficient operation. As a fully compact machine it is moveable within workshop while the pre-assembled delivery significantly shortens the start-up time. Possible sizes of working area reach from 1.5 x 1.5 m to 6 x 2 m.



ELDOMINVEST OOD / Bulgaria

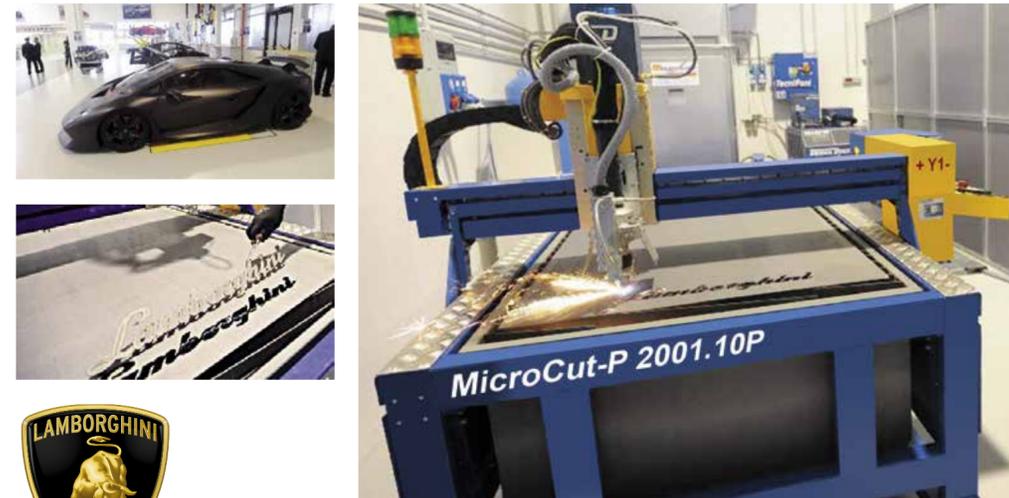
ELDOMINVEST was established in 1987. Since then, the company has won recognition as one of the most successful enterprises in Bulgaria, having become the national leader in the electrical household and gas appliances, with a market share of over 70 %. The machines and assembly lines owned by ELDOMINVEST comprise part of state-of-the-art production equipment complying with contemporary technology requirements.



ELDOM INVEST MSF 3001.15 L
www.eldominvest.com

Automobili Lamborghini S. p. A. / Italy

Founded in 1963, Automobili Lamborghini is headquartered in Sant'Agata Bolognese in North-eastern Italy. The company ranks among world's top class super sports cars manufacturers. With more than 120 dealers worldwide, Automobili Lamborghini is building on a succession of its dynamic and elegant super sports cars.



MicroCut-P 2001.10 P
www.lamborghini.com



GAF s. r. o. / Czech Republic

GAF is a manufacturer with long-term experience in the metal production as well as processing of steel and stainless-steel materials. The company has gained its reputation in supplying of building-, operational and technological components and supplements mostly for food-processing businesses as well as service of technologies of reputable producers (e.g. BOSCH, ALPMA, FUJI) in the area of Czech Republic, Slovakia and Poland.



GAF s.r.o. MSF 3001.15 LL | MicroLas 3001.15 L
www.gaf.cz

MasterCut CNC plasma & oxyfuel cutting machine

Mastercut is a versatile CNC cutting machine which can be applied throughout the industry reaching from small workshops to big factories. The application range of the entry version with rails in the X direction dedicated to fully automated oxyfuel cutting or cutting with conventional plasma cutting applications including pipe, profile or elbow cutting and marking.



Packaging solutions made to measure

AquaCut 3001.25 WrWr | AquaCut 3001.20 W
www.ppcz.com

PPO GROUP CZ, s. r. o. / Czech Republic

PPO is a modern and innovative company engaged in development and production of transport packaging and packaging solutions. Their philosophy is excellence and focus on customer needs. With the latest technologies, rich experience and expertise in the fields of development and production of packages the company offers a wide range of products such as custom packaging, plastic containers, plastic pallets, carts and bigboxes.



The indisputable leader in steel structures



PipeCut 6001.07 Prk
www.herkal-bg.com

Herkal EOOD / Bulgaria

The Herkal EOOD company is an assignee of "Central Repair Base" Peshtera, an association established in 1956 with main scope of activity – production of metal constructions and repair of heavy road building and tunnel equipments. In 1999 the enterprise was denationalized and the new owner further developed the main production activities while specializing exclusively in design work, production and erection of metal constructions.



CPCut 12001.1500 PrA | CombiCut 6001.20 P | EasyCut 6001.20 P/G
www.finow.de

FINOW Rohrssysteme GmbH / Germany

FINOW Rohrssysteme GmbH has a long tradition as a steel-processing business. The company formerly known as Franz Seiffert AG produces high quality components for construction of power plants as well as chemical and industrial plants. Core expertise of the company is inductive bending and welding of piping elements.

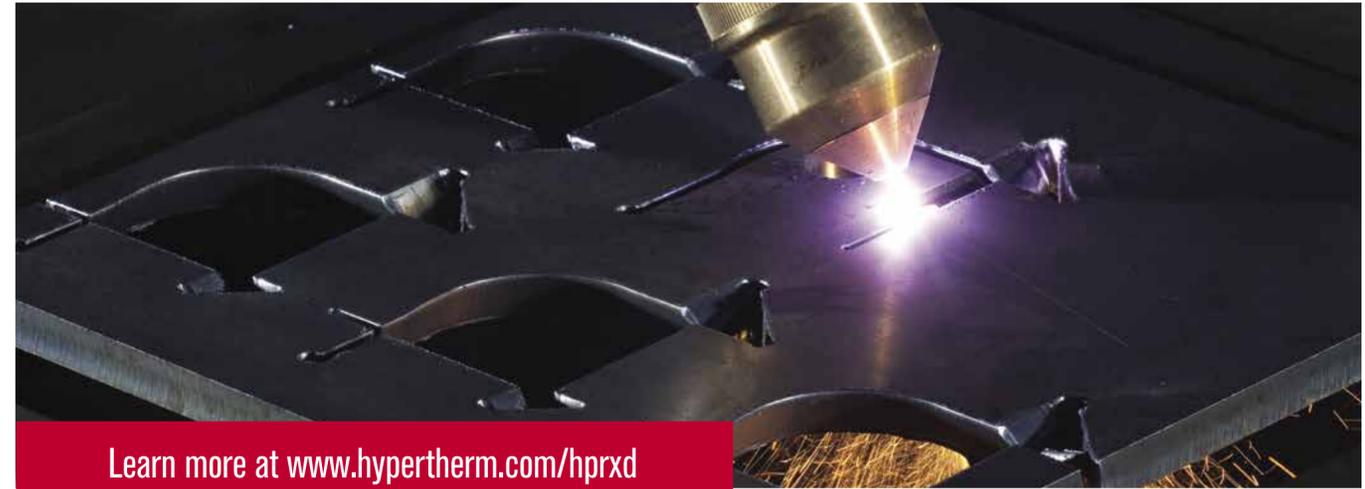
PipeCut CNC pipe and profile cutting machine



PipeCut machine offers a wide range of pipe and profile cutting possibilities for various industrial applications in offshore, lifting and agricultural equipment, pipelines, power plant and steel constructions or shipbuilding. Modular design of this machine allows to meet unique pipe fabrication needs and thus become a valid part of client's production facility.



True Bevel™ technology for HyPerformance® Plasma



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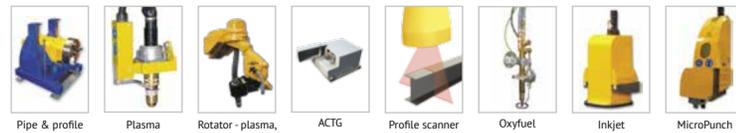
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PLASMA | LASER | WATER JET | AUTOMATION | SOFTWARE | CONSUMABLES

CPCut CNC pipe and profile cutting machine



CPCut is a pipe and profile cutting line designed for processing of a great range of pipe diameters and lengths. The machine's modular design and variable execution enables a wide range of pipe based applications including trimming, cutting of various openings for multiple pipe and profile intersections or connections, weld edge preparation as well as pipe marking. The application field is in tank, pipeline and power plant constructions.



contour cut SPEED

Precision in Detail

Precise plasma cutting of contours with Contour Cut and at equal quality up to 50 % faster with Contour Cut Speed. Due to the shorter processing time the costs per cutting metre are reduced.

- Excellent repeatability and dimension accuracy
- High productivity at low costs
- High cut quality regarding contour accuracy, angularity and surface quality



HiFocus neo – Efficient Plasma Cutting on the Highest Level

HiFocus neo stands for high cutting speed and quality at low costs due to new copper cathodes for cutting mild steel as well as optimised consumable life. The plasma cutting systems offer high productivity and efficiency in the cutting range from 0.5 mm up to 160 mm material thickness. Apart from standard 2D and bevel application up to 50 degree HiFocus neo offers furthermore marking and punching with the same consumables. The plasma cutting systems can be integrated in all common CNC-controlled guiding- and robot systems. Moreover, the HiFocus 280i, 360i and 440i neo are suitable for cutting under water. Contour Cut technology for fast and precise cutting of mild steel is standard in all HiFocus neo systems.

HiFocus 130 neo · HiFocus 161i neo · HiFocus 280i neo · HiFocus 360i neo · HiFocus 440i neo · HiFocus 600i neo

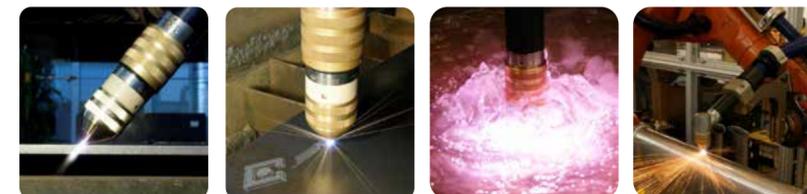


neo
new – efficient – original

FineFocus – Reliable even under Extreme Conditions

The robust plasma cutting systems of the FineFocus series provide high reliability and cutting quality in the cutting range from 3 up to 160 mm material thickness. At the same time they achieve high efficiency due to the low gas consumption. FineFocus is ideal for all metal processing branches like fabrication, construction, shipyards or cutting centres. Apart from technical gases FineFocus is also designed for the use of compressed air. The Plasma cutting systems FineFocus 800 and FineFocus 1600 can furthermore be used for underwater cutting.

FineFocus 450 · FineFocus 600 · FineFocus 800 · FineFocus 1600



OxyCut / PlasmaCut CNC plasma & oxyfuel cutting machine



OxyCut is a high-performance and reliable CNC cutting machine designed for fully automatic oxyfuel cutting or a combination of oxyfuel and plasma cutting. The machine is equipped with an advanced gas control system with automatic setting of

cutting parameters. Optional version of the machine – PlasmaCut – is equipped with high precision linear guidelines to enable HD plasma cutting. Both versions can be equipped with a pipe positioner for cutting pipes up to Ø 1000 mm.



VICTOR
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ULTRA-CUT XT NEXT GENERATION INTELLIGENT HIGH PRECISION PLASMA

Ultra-Cut XT High Precision plasma systems offer outstanding performance on all metals

It grows with your business - 100A upgrade modules are available if more power is required in the future.

HeavyCut™ Technology provides the best cut quality, precision and parts life with XTremeLife™ Consumables on thicker mild steel up to 50mm.

Diameter PRO™ Technology integrates with the intelligent iCNC XT to deliver outstanding hole quality on mild steel and aluminium.

Water Mist Secondary (WMS™) optimizes non-ferrous cutting WMS delivers excellent non-ferrous cut quality and low cost of operation by using nitrogen as the plasma gas and ordinary tap water as the secondary gas. The fastest process for cutting non-ferrous metals with significantly higher cut speeds than H35 cutting.

We Bring Intelligence to the Table.™



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DS Automated sheet processing line



DS is designed for high-efficiency drilling and cutting with the possibility of automatic plate feeding and automatic part sorting on output. The sheet processing line is dedicated to heavy-duty structural steel applications such as high-precision fittings, gussets and

endplates. The machine is designed for a high level of automation within the factory workflow as a time- and cost-effective production solution for certain types of flanged parts.



More effective Dust Collection for thermal Cutting Applications

When it comes to the use of dust collectors for thermal cutting applications, the DFRPO Cyclopeel range sets a standard that is considerably higher in efficiency and performance. The high performance at low operating costs is a result of the innovative filter media Ultra-Web® in oval, high-performance filter cartridges. The Ultra-Web®-FR* filter media with its flame resistant attributes meets the BIA classification M. Integrated preseparation systems provide additional safety against flying sparks. The DFRPO collectors are certified in compliance with ATEX. The range is available for extraction volume flows of 2.000 to 16.000 m³/h.

*FR = Flame Retardant



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Fax +32 (0) 16 40 00 77
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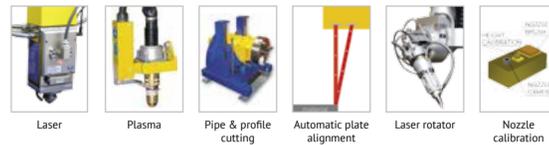
- modular load-handling concepts
- task-specific modifications for cost-effective applications
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- accurate delivery of material to machining centres, machine tools and press lines
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- economical warehouse management systems, including remote servicing
- high handling rates
- smooth, gentle material transport



MSF Fiber laser cutting system



MSF machine is a powerful laser cutting system for cutting of materials with a fiber laser, or a combination of fiber laser and plasma. The machine is designed for production of highly accurate parts at high cutting speeds, with surprisingly low maintenance and operational costs. The outstanding dynamics of MSF is achieved by a low-seated gantry, digital AC drives and precise planetary gears. The machine is by default equipped with an automatic shuttle table.



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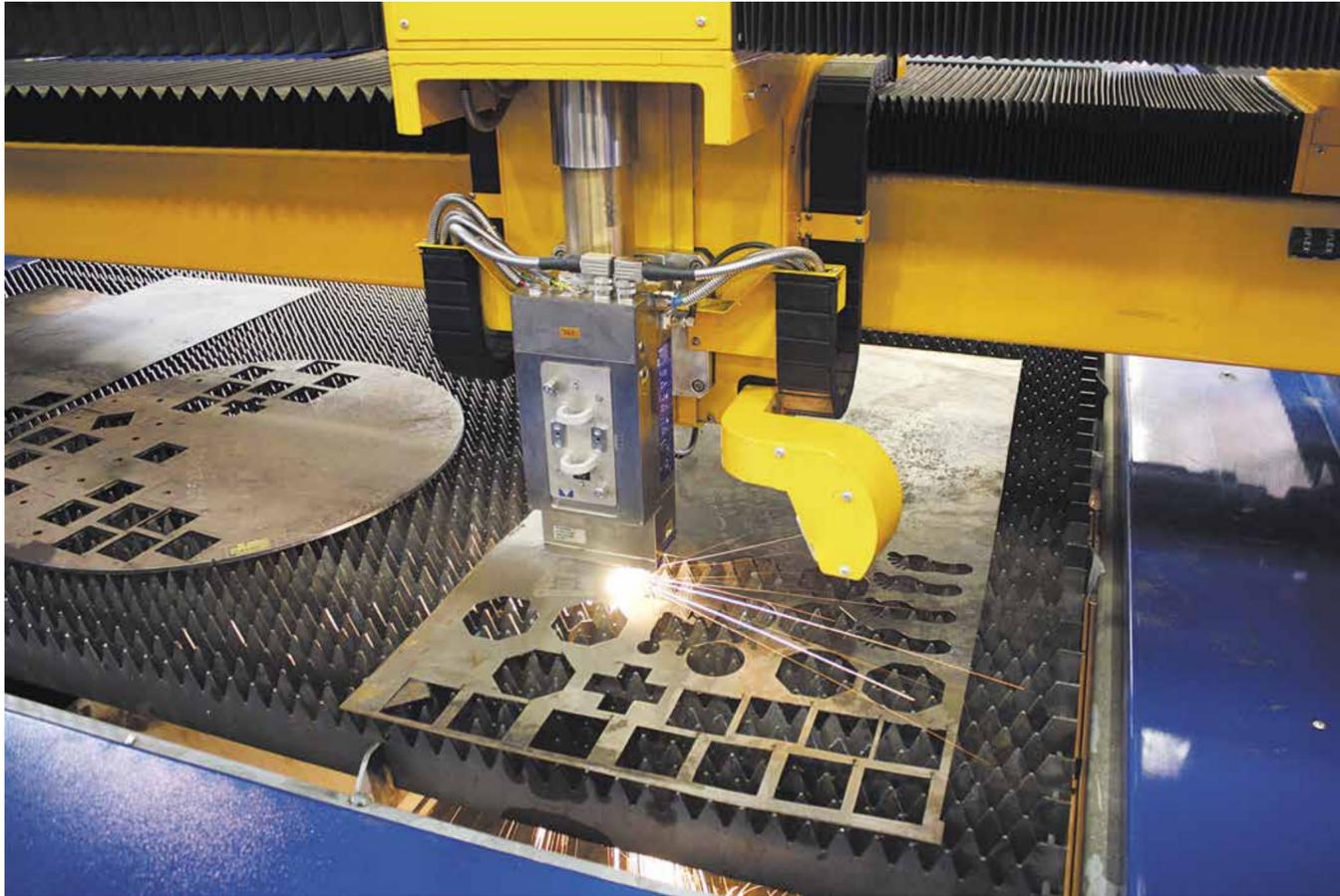
FOR MANY SYSTEM PLACES

Maximum SAFETY

Spark Pre-Separator

POWER SPRAY-SYSTEM

MicroLas CO₂ laser cutting machine



The CO₂ laser cutting machine MicroLas is designed for applications with highest demands on accuracy and cutting speed in order to achieve minimum production costs for big series of parts. The sturdy machine frame together with linear guidelines and AC drives provide excellent dynamic properties. The machine is by default equipped with an automatic shuttle table.



Laser Pipe & profile cutting Automatic plate alignment



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 Industriepark de Bruwaan 35 C - 9700 OUDENAARDE - Belgium
 Phone 0032/55 30 31 96 - Fax 0032/55 30 94 96
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FEATURES

All lasers are equipped with "oil free" Turbo compressors and Solid State High Voltage power supplies, "virtually" needing no maintenance. The excellent power and mode stability, the different pulse mode capabilities, in combination with the "high speed interface" guarantee perfect performance with the highest production throughput! The GL, PLS and CH series lasers, movable in both axes, offer very flexible and large size cutting and welding machine design!

Lowest Fast-Flow CO₂-Laser gas consumption in the world.

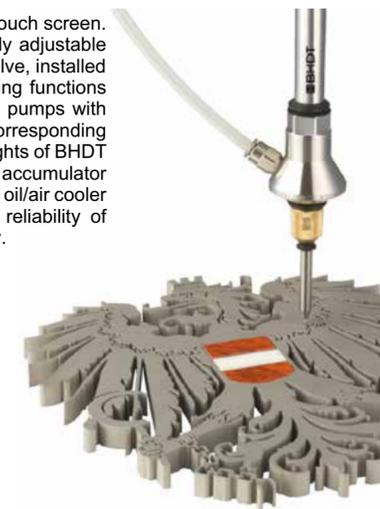
High Pressure Technology up to 12,000 bar

Highest international standards, premium quality and reliability are a matter of course for BHDT.

BHDT GmbH is the largest European manufacturer of high pressure pumps for operating pressures between 2,000 and 12,000 bar. The range of products includes pumps and components for waterjet cutting, peroxide dosing pumps for LDPE plants, pressure test units and autofrettage equipment.

High pressure pumps of SERVOTRON®, HYTRON® and ECOTRON® series are particularly suited for waterjet applications, designed as a turn-key unit. All components required for an efficient operation within a MicroStep waterjet cutting machine are fully integrated into a sound insulated housing.

The high pressure pumps come with touch screen. The pressure set value is continuously adjustable up to 4,000 bar via the proportional valve, installed as standard. All warning and monitoring functions are shown in plain text. Available are pumps with flow rates from 0.8 to 7.6 l/min and corresponding power rating from 7.5 to 75 kW. Highlights of BHDT high pressure pumps are large volume accumulator for low pressure fluctuation, integrated oil/air cooler as well as easy maintainance, high reliability of components and high energy efficiency.



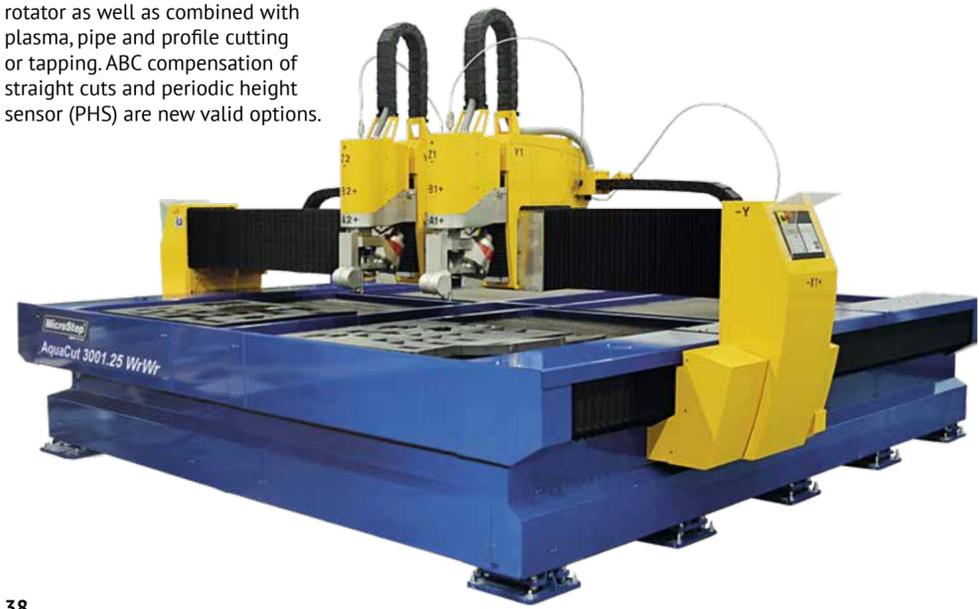
BHDT GmbH, Industriepark 24
 A-8682 Hoenigsberg, Austria
 Phone: +43-3862-303-300
 Fax: +43-3862-303-304
 info@bhdt.at, www.bhdt.at



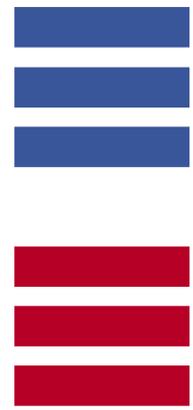
AquaCut CNC waterjet cutting machine



AquaCut is a high-precision CNC cutting machine designed for processing of a wide variety of materials including those that cannot be subject to thermal or mechanical stresses. Pure water or abrasive cutting can be applied to metal, stone, marble, armoured glass, ceramics, plastics, wood, corrugated cardboard, foamed material as well as sandwich materials. The machine can be equipped with a 5-axis waterjet rotator as well as combined with plasma, pipe and profile cutting or tapping. ABC compensation of straight cuts and periodic height sensor (PHS) are new valid options.



Waterjet Cutting • Speed up Your Productivity



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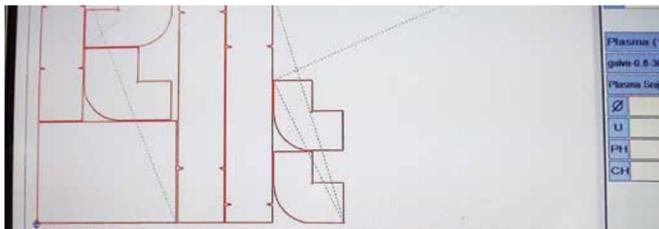
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AirCut CNC plasma cutting machine



AirCut is a compact machine designed for cutting of ducting and sheet metals for the HVAC and food industries. Its light construction with an integrated fume extraction system fully reflects the requirements of cutting thin sheet materials. Since the machine can be equipped with both

arc voltage height control and a plate rider, it guarantees highly efficient operation from 0,5 mm to 15 mm thickness in mild steel, stainless steel or aluminium.



Plasma



Special solutions

As a producer of machinery, control systems and CAM software MicroStep offers not only standard cutting machines but also delivery of special tailored solutions and machines for custom applications, solutions combining

different non-standard technologies on a single machine or production line, solutions for effective material handling as well as solutions respecting limited space conditions in customer's premises. Special designs include various shuttle tables, fork feeders, hydraulic lifting tables, cutting tables with built-in roller conveyors, chain conveyors, machines which combine plasma, waterjet and drilling technologies, plate processors, working cells for handling of workpieces by robot positioners and special-purpose welding machines.



DS Molin Stålkonstruktioner A/S / Denmark

DSMS was founded in 1966 as a small one-man business under the name Karl Molin Steel Constructions. It became part of DS Gruppen in January 2013. The company deals with designing, production and assembly of all kinds of steel constructions within industry and agriculture. Every year, they erect app. 8,500 tons of steel, mainly in countries like Sweden, Norway, Germany and Finland.

MicroCut CNC plasma & oxyfuel cutting machine



MicroCut is designed to satisfy the demands for a machine with advanced plasma technology with respect to limited budgets and/or size requirements of workshops, small

enterprises and schools. With the minimum working area of 1 x 1 m and the maximum of 3 x 1.5 m, MicroCut can be equipped with a single plasma or a single oxyfuel tool station. Maximum thickness

of oxyfuel cutting is 60 mm. A pipe positioner for cutting pipes up to Ø 100 mm can be included as option.



Plasma



Oxyfuel



Pipe & profile cutting



Robot applications



working cells – different types of part positioners, gantry-type and cross-beam travel systems, safety fences and, standardized modular welding cells are available. Several recent projects include design and delivery of various turnkey applications – welding of frames of tower cranes, ATV and snowmobiles, welding of high voltage capacitors, transformer tanks, conveyor rollers as well as milling of plastics, luting, relocation of aluminium casting molds or a test cell for partial simulation of a whole working line.



MicroStep's continuous activity in the area of robot applications resulted over the years in a comprehensive product line of components for robotic

Application possibilities for robots are endless. Also in your company.



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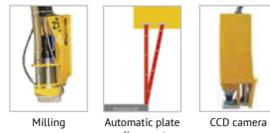
www.abb.com

MicroMill CNC routing machine



MicroMill machines are designed for 3D CNC milling of mild metals, plastics and wood by means of high-revolution spindles. Mechanical construction makes the machines suitable for shape machining of flat parts including parts with bigger dimensions. Utilising MicroMill's rugged frame, double-side driven gantry

and linear guideline system, the machine proves its excellent dynamic properties in various shaping jobs. The material can be fixed on the table with mechanical clamps, or conveniently locked in position on a MDF pad through a vacuum clamping system.



Milling

Automatic plate alignment

CCD camera

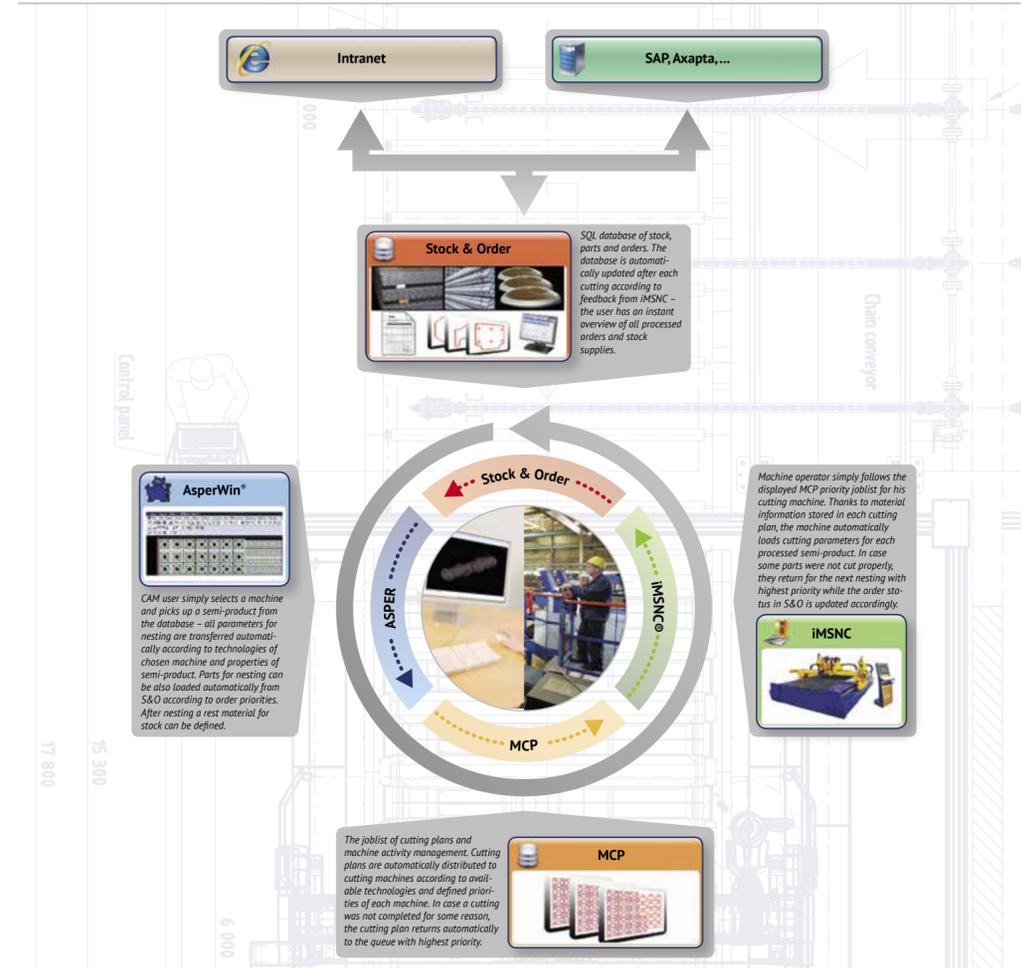


MPM: MicroStep Production Management

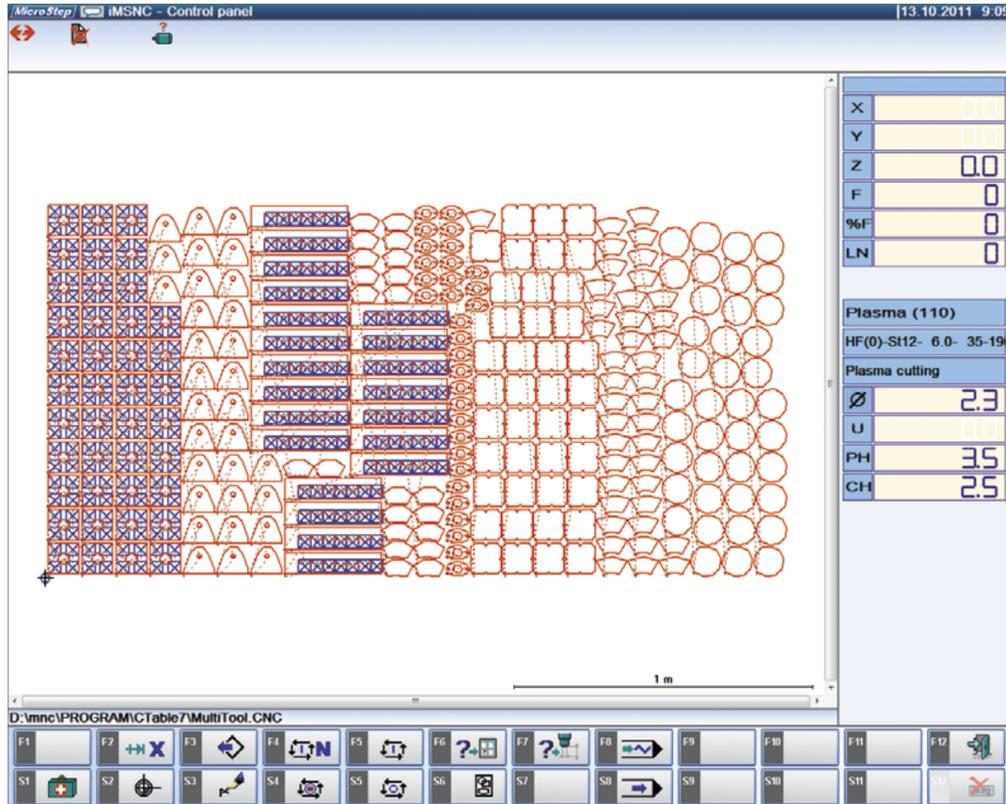
MicroStep Production Management (MPM) provides computer-aided process planning (CAPP) features for automation of the workflow on CNC machine(s) or production lines. It is an integrated system of order processing, nesting, stock management, machine operation planning and evaluation which interconnects pre-production data, control systems of CNC machines and MicroStep's automatic nesting software AsperWin®. It helps to reduce work-in-progress, to save material, and to eliminate operator errors. Although designed for MicroStep machines with AsperWin® CAM and iMSNC®, MPM also offers possibilities of cooperation with third party machines. Naturally, the production data can be shared with customer's ERP system (e.g. SAP, AXAPTA). For effective production planning, the system provides weight analysis of particular orders along with weight reports of actual stock resources.



MPM – Production cycle



iMSNC®



MicroStep iMSNC® is one of the most advanced control systems in CNC cutting machinery. The system provides easy, user friendly and thus reliable operation of cutting machines via modern user interfaces: a standalone operator console with TFT touch screen and one or two con-

trol panels with LCD displays on the sides of the gantry. To achieve maximum utilization and flexibility of machine operation, a standalone operator console allows to prepare and edit cutting plans simultaneously with the cutting process. Since the machine, the control system iMSNC® and the CAM

software AsperWin® are from one producer – MicroStep – it allows to implement non-standard requests and develop custom solutions as well.

Integrated parameter databases for different technologies ensure high efficiency and stable quality of

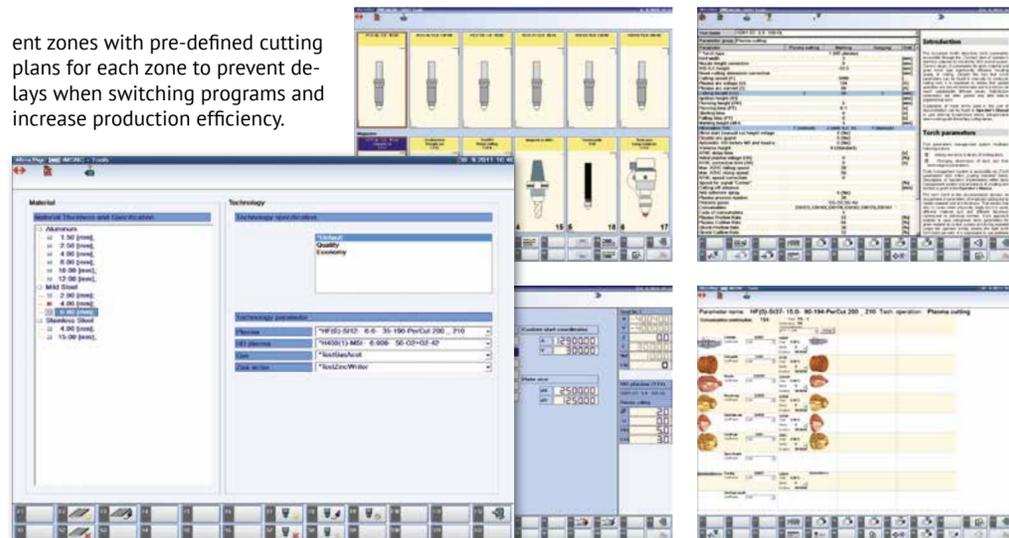
cutting. The operation is quick and easy through a touch screen with interactive elements with pop-up help. Advanced Remote diagnostics tools enable direct remote control of the machine, control system and installed software and thus ensure fast and cost-saving maintenance via internet. Intranet applications enable comfortable integration into the production workflow and provide access to each machine via SQL databases and web services.



Features

Besides standard features (automatic setting of cutting parameters, torch height control of plasma via arc voltage, test run, mirroring, scaling, rotation of cutting plans...) iMSNC® incorporates advanced functions: preparation of cutting plans during machine operation, jog mode, reverse motion, global marking, parametrical dynamic piercing, kerf compensation, automatic plate alignment with a laser sensor or CCD camera, restart of cutting from point of interruption after voltage breakdown, virtual tool magazine – customized database of parameters for all technologies. Zone management (batch cutting) feature allows to divide the cutting table into independ-

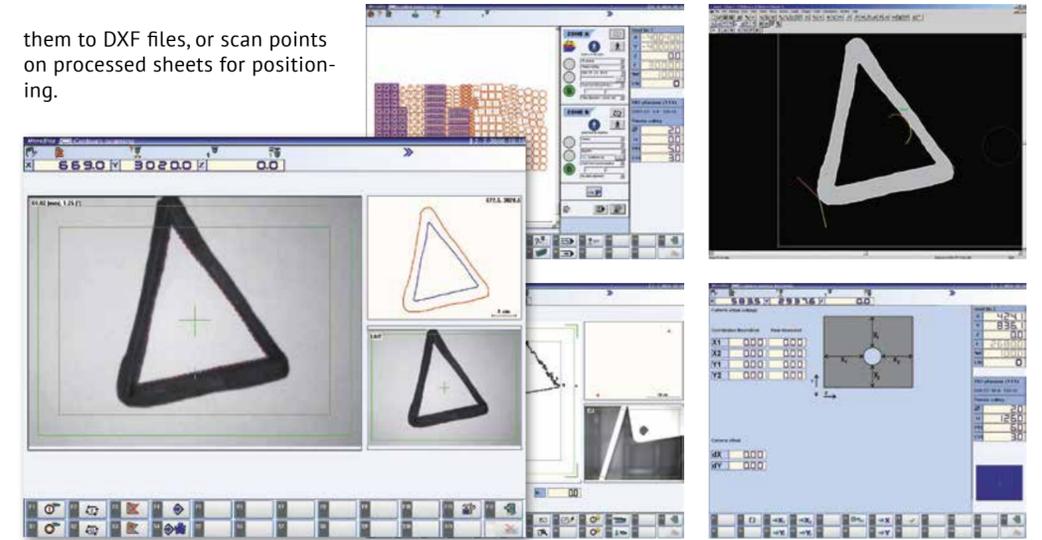
ent zones with pre-defined cutting plans for each zone to prevent delays when switching programs and increase production efficiency.



Enhanced functions

Complex and yet unified structure of iMSNC® allows to control a variety of technologies in a very similar manner from the same user interface and also to automatically switch technologies within a single cutting plan (multi-tool operation). Besides controlling the machine's own devices (plasma, laser, oxy-fuel, water-jet, 3D mill, drill, camera, marking/writing with plasma, inkjet, zinc, water, micropunch) it can be equipped with an interface to control various external devices (cranes, exchange tables) in customer's premises. With a CCD camera the system provides a capability to scan non-trivial shapes of templates and convert

them to DXF files, or scan points on processed sheets for positioning.



Intranet applications

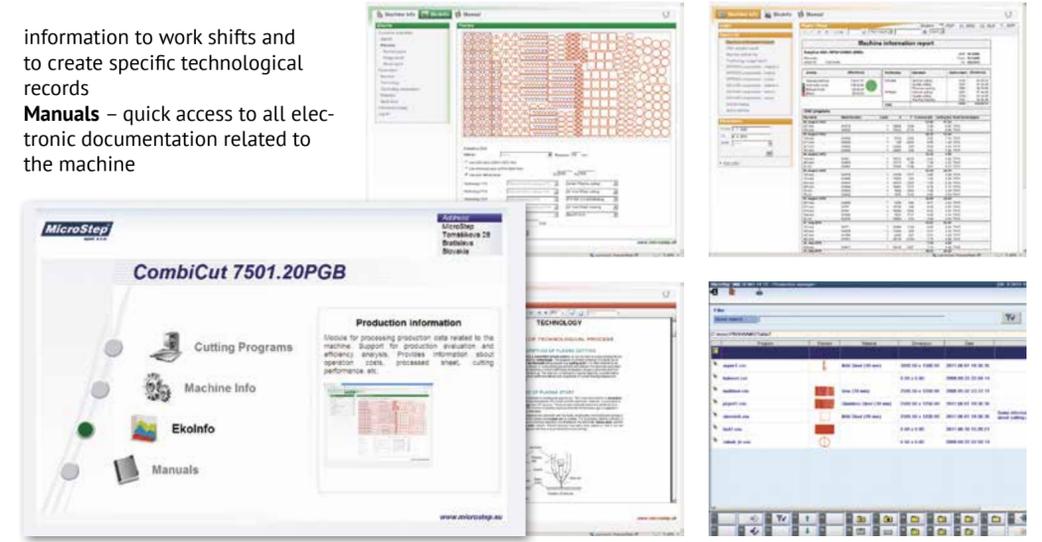
iMSNC® includes a novel web-based interface for accessing each machine from the company intranet via a web browser. Each machine has its own home page which serves as a gateway for intranet applications.

Management of Cutting Programs (MCP) – remote management of cutting programs allows to define priorities and relations between cutting programs and materials, and to distribute the cutting tasks to several machines

Ekoinfo – evaluation of machine operation costs for a particular cutting program

Machine Info – monitoring of machine and operator activities that enables to assign performance

information to work shifts and to create specific technological records
Manuals – quick access to all electronic documentation related to the machine



Service applications

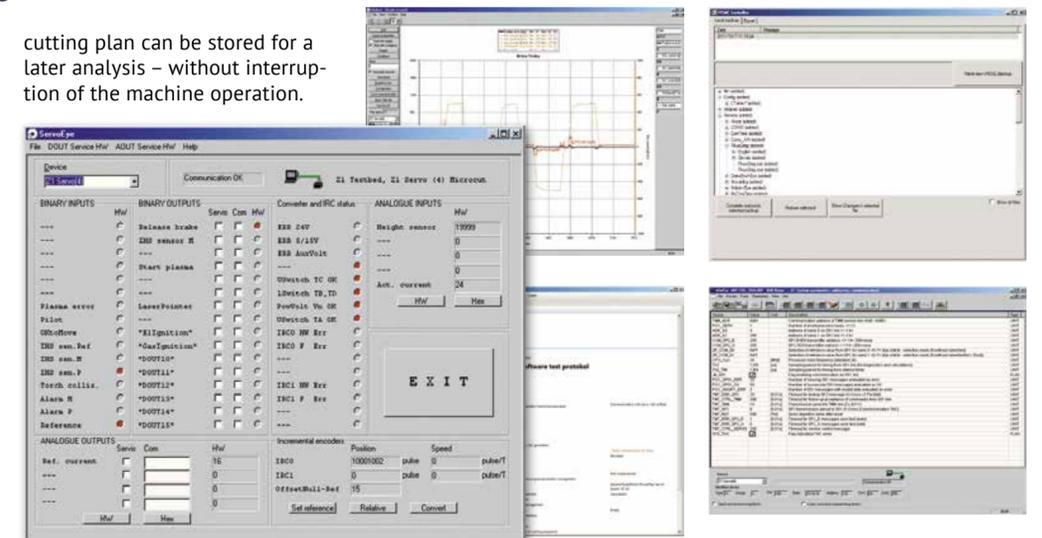
Advanced backup options:

Local backup - stored on machine's HDD preserves the history of changes. It can be used for evaluation of changes between the actual state and a history point or between any history points.

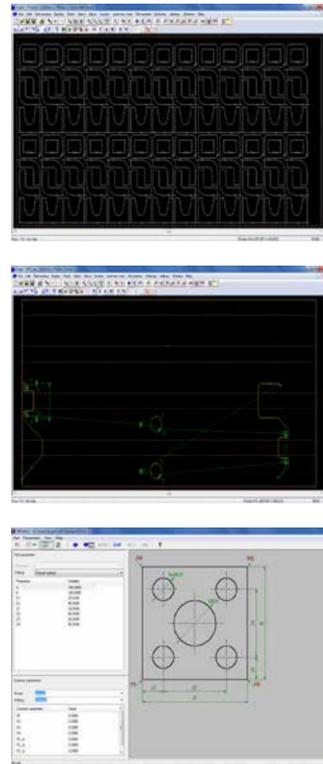
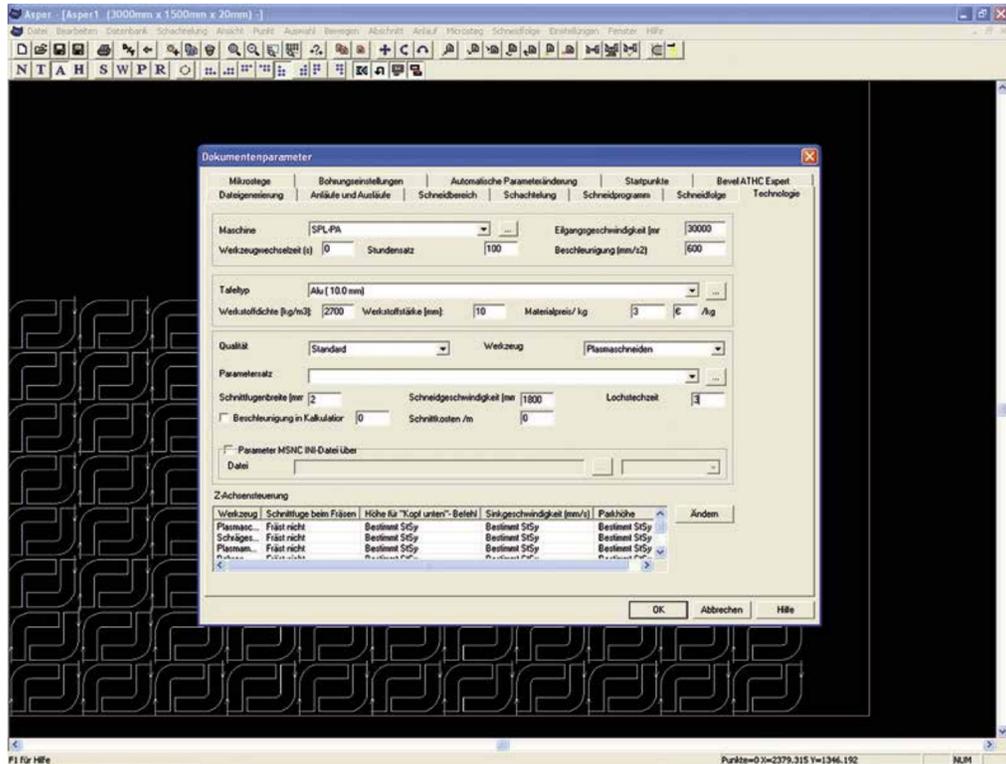
Export backup - particular configuration files, local backup point or the complete iMSNC® installation can be exported to an external medium and used for a later system restore – including all settings and parameter adjustments made by the operator

Snapshot – immediate saving of the actual machine state – all parameters including the executed

cutting plan can be stored for a later analysis – without interruption of the machine operation.



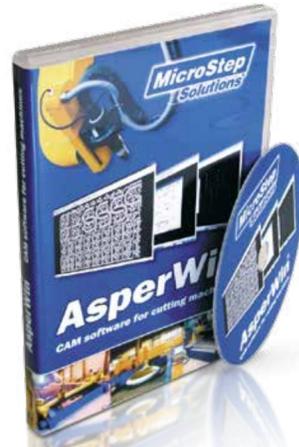
AsperWin® 4.0 Integrated with MPM



MicroStep CAM software AsperWin is the result of 15+ years of intense development and continuous customer driven improvement in the area of software applications for CNC machinery. It unifies the practical programming experience with long-term user know-how and an intuitive, transparent way of operation.

AsperWin provides tools for easy and fast creation of NC programs for different cutting technologies. Basic pack dedicated to straight cutting can be extended by a variety of specialized modules designed for particular cutting applications (e.g. bevel cutting, pipe cutting, multi-torch cutting) and eventually fitted to special customer requests. With its transparent menu struc-

ture and enhanced functions AsperWin represents a modern and powerful tool for NC programming. A network version allows to install AsperWin on a network drive with enabled access from several workstations. License is herewith not limited to just one user or computer while cost is significantly reduced.



AsperWin® Basic

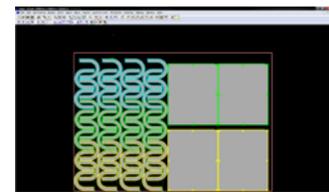
AsperWin Basic is the essential CAM module of MicroStep machines. It imports drawings of parts in DXF and other formats and provides interactive function and automatic generation of NC code.

AsperWin® Basic Net

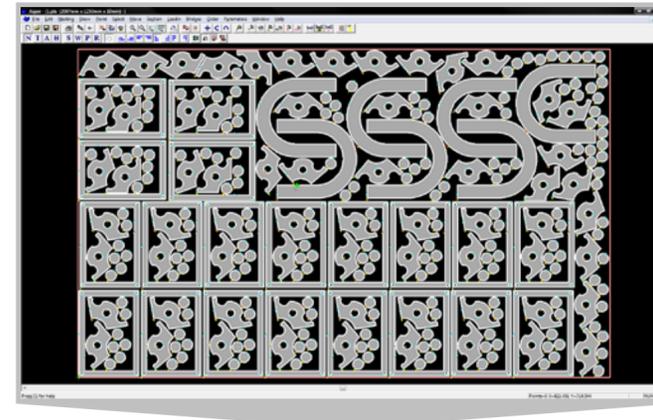
AsperWin Network license allows to install AsperWin on network drive with enabled access from several workstations. License is herewith not limited to just one user or computer while cost is significantly reduced.

Multi-torch cutting

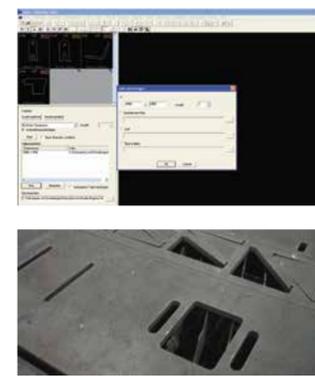
Multi-torch cutting module allows to perform simultaneous cuts with several torches with possibilities of parallel, tapered as well as non-parallel tapered cutting (in case of long trapeziums).



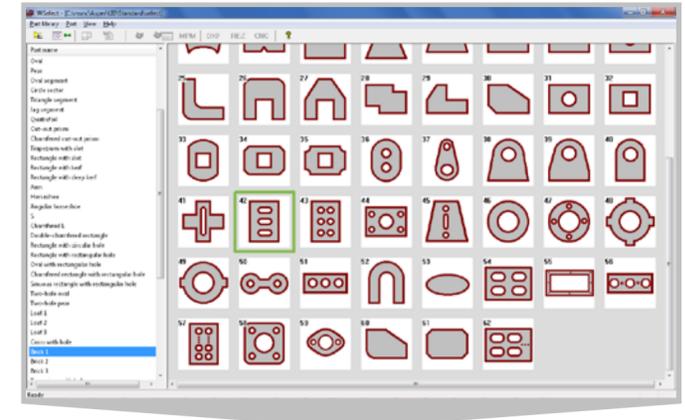
Automatic nesting



AsperWin - Automatic nesting module enables effective creation of nests with a big number of different cut parts to achieve best possible utilization of material with minimum waste. The module uses several geometrical nesting methods and has the ability to process separate part groups on defined areas of plate as well as whole sheets while respecting defined criteria like material properties or information from database system.



WSelect

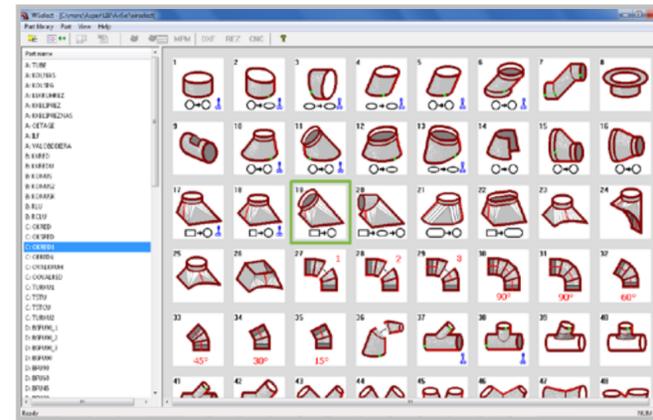


AsperWin macro library WSelect contains an extensive collection of macros of adjustable standard shapes which can be exported to DXF or loaded directly into Asper for processing. WSelect offers most of commonly used components from simple geometrical shapes to complicated flanges, tags a. o. Each macro can be saved in as many configurations as required for later quick import into CAM, without the necessity of using a CAD program. Furthermore, MicroStep as a pro-

ducer of the control system and all related software is able to supply customer specific macros on demand.



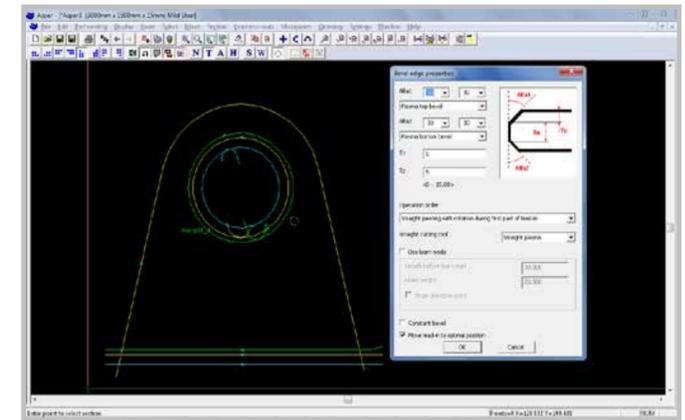
AirSelect



Software module AirSelect for ductwork manufacturers enables fast and comfortable design of HVAC components. The extensive library contains adjustable shapes of a variety of commonly used parts in the HVAC industry. Besides basic shapes of rectangular and round fittings the library also contains pipe elbows, symmetric and asymmetric toes, offsets etc. Rectangular sectional parts are compliant with DIN 18379.



Bevel cutting

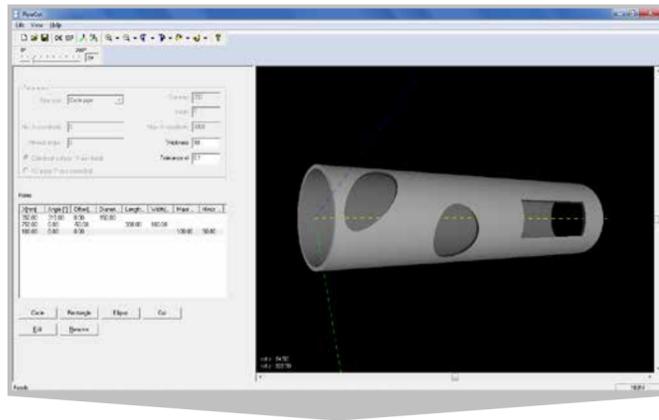


AsperWin - Bevel cutting module is dedicated for machines equipped with a beveling tool station which enables movement in 5 axes: X, Y, Z, A (endless rotation) and B (tilting of the torch up to 50°). The module supports 3 methods of starting of the beveled cut: piercing at an angle, tilting of the torch after piercing at a piercing point and tilting of the torch during the initial part of the lead-in. By means of a „Bevel ATHC Expert“ the module can select and parameterize appropriate

torch height control methods for individual parts or a group of parts according to their size and shape. Besides simple beveled edges also Y-cuts and variable bevels are supported.



Pipe cutting

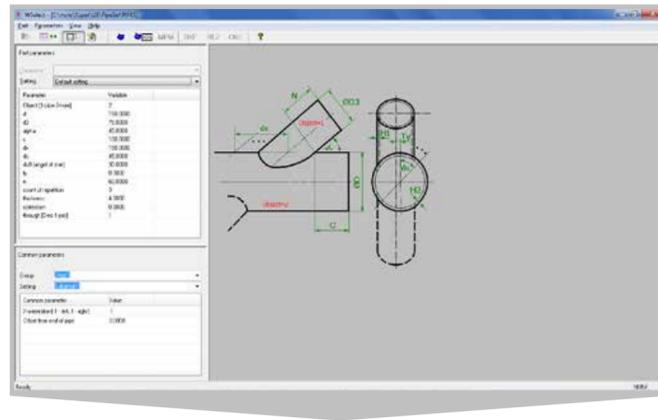


AsperWin – Pipe cutting module was designed for machines equipped with a straight tool station and a rotary pipe positioner (RSV). The module provides instruments for convenient dividing of pipes and profiles and easy creation of circular or rectangular holes in 2-axis or 3-axis modes (X-, Y- axes and the rotation of the pipe by RSV). The user simply defines positions and sizes of holes while cutting plans are generated automatically. For a better optical representation of the process,

a comfortable step-by-step 3D simulation is available.



PipeSel

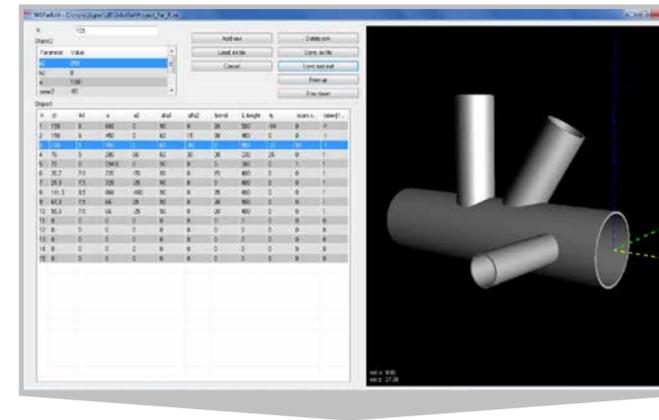


PipeSel is a library based application for fast programming of pipe cuts, pipe intersections and transitions developed for machines with straight head and a rotary pipe positioner (RSV). Through a user friendly interface which allows easy input and adjustment of the parameters for defined types of tube connections, it is possible to create repeated intersections of circular pipes or circular pipes and oval pipes, rectangular profiles, spheres and pipe crossings whereby also programs for branches of several pipes are created automatically. Axis

of the intersecting object can be as well shifted against the axis of the main pipe.



SolidSel

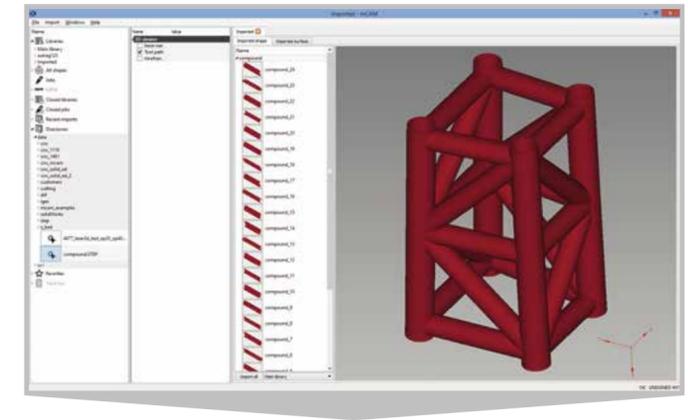


The bevel pipe cutting library SolidSel is an advanced application which provides the full range of pipe based solutions on machines equipped with a pipe cutting device (RSV) and a plasma rotator. The extensive library with a user friendly interface allows the creation of precise multiple intersections of pipes, or pipes and domes, creation of non-rotary conical shapes, pipe cross beams as well as marking of synchronization lines and theoretical outlines when a bevel cut above 45° (50°) is required. The program enables the creation of constant bev-

els for V welds and constant welding volume for welding machines as well as cutting of pipes and pipe intersections from plane sheets for later bending.



mCAM

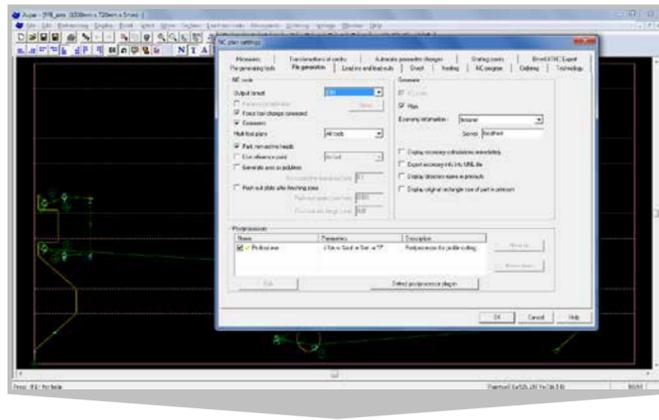


mCAM software package is dedicated for advanced automated 3D manufacturing of parts and assemblies from 3D shapes (pipes, profiles, domes, elbows...) as well as flat sheets. Cutting plans for single elements are created directly from 3D solid models which are imported in the commonly used STEP or IGES formats. The program also supports cylindrical folding of flat patterns from 2D DXF and micro-joints on long cutting paths. Automatic nesting on pipes and profiles ensures high utilisation of material.

Along with its independent version, mCAM is also developed for integration into MPM system and/or direct interfacing with onsite ERP systems.



Profile cutting module

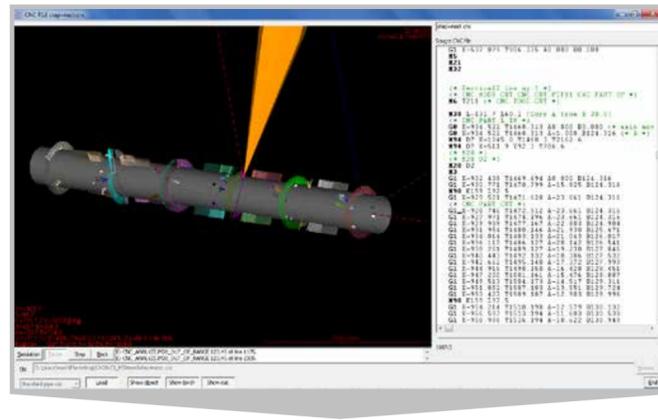


AsperWin – Profile cutting module is dedicated to cutting of polygonal profiles. The basic version generates programs for cutting of various shaped openings into the profile walls. The advanced version supports also division of profiles and cutting of openings over the edge of profiles by means of a tilting tool station (profile is static) or a rotator in combination with rotation of profile by the pipe cutting device. For certain profiles, MicroStep pipe cutting device is able to achieve necessary dynamics so that a rectan-

gle profile can be cut over the edge also by using a straight head.

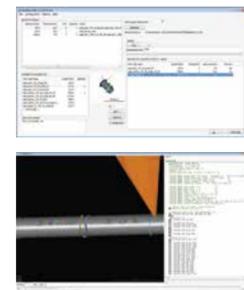


PipeNest

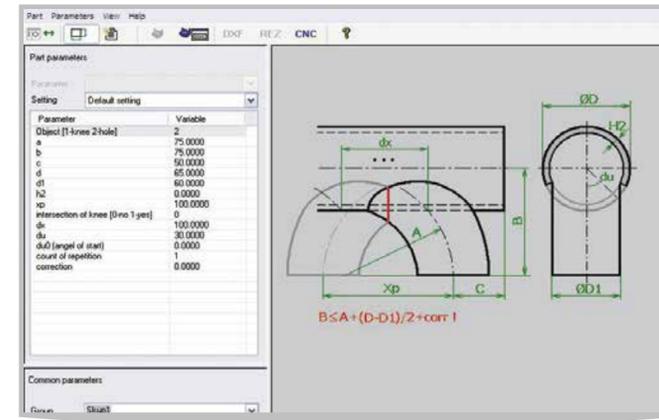


Automatic pipe nesting module PipeNest is a fast and user friendly tool for nesting of imported pipe cutting programs on selected (fundamental) pipes. The nesting process involves rotation, rearrangement and mirroring of parts whereby machine configuration is taken into account (location of pipe positioner – front or rear of the machine, straight or bevel tool station etc.). Cutting tasks can be prepared for several pipes at once. The module supports creation of microjoints to prevent unwanted movement of cut

piece during cutting. The convenient 3D visualization serves for a better demonstration of the nesting process.



ElbowSel

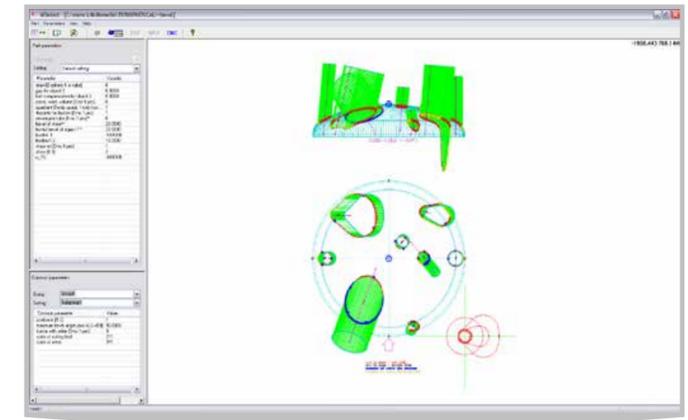


ElbowSel is a library based application for creation of cutting programs for connections of elbows and pipes in pipeline constructions. The cutting is achieved thanks to MicroStep's unique elbow clamping adapter which enables clamping of the elbow in a rotary pipe cutting device and rotation of the elbow around the device axis. Thanks to this smart construction, the elbow end can be precisely cut also by using a straight tool station. A connection

of 2 elbows with a pipe in 1 spot is also supported.



DomeSel



DomeSel provides extended possibilities for processing of domes on machines equipped with a plasma or oxyfuel rotator and a dome cutting zone. It offers convenient creation of precise multiple intersections of domes with pipes, creation of beveled welding volumes in domes, creation of diverse cutouts as well as complete dividing of domes. The library contains several modules with fully adjustable macros for easy and fast preparation of cut-

ting plans in compliance with DIN 28011 and DIN 28013.



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