

#### We master **3D profiling**





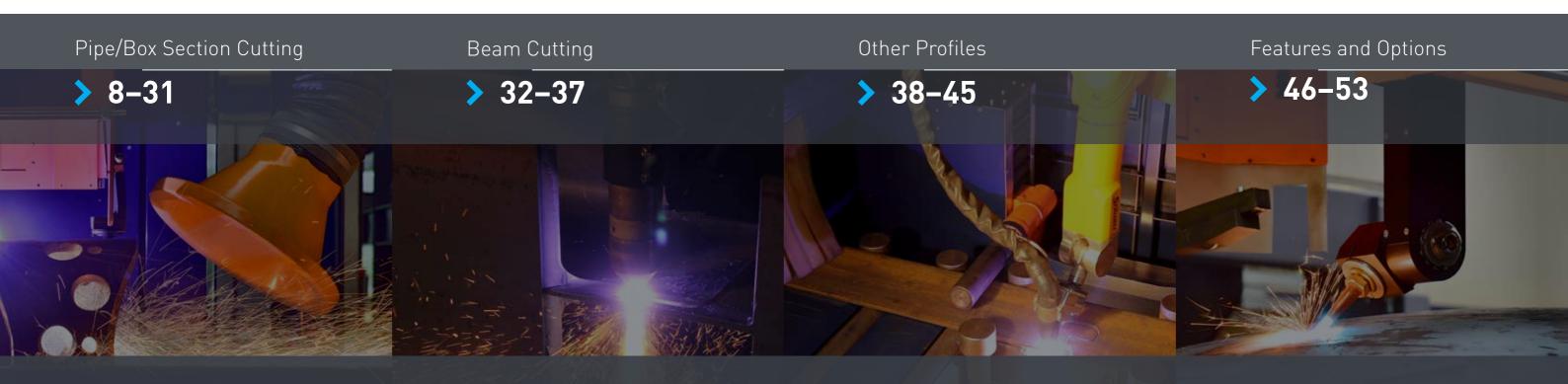
HGG is all about **freedom**. We readily share our knowledge and expertise, while forming strategic partnerships to grant even greater freedom to the customer. Ultimately, our mission is to continue our quest of automating craftsmanship, giving the world of steel the freedom to create!

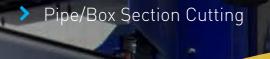


# Freedom to produce

2D profiling is restricted to cutting profiles with a cutting tool perpendicular to the material. 3D profiling is the accurate cutting of complex connections between 3D metal profiles such as tubes, bars and beams.

Not only does 3D profiling create a precise geometrical fit, it also facilitates beveling of the profile wall to form weld preparations ensuring strong, secure connections and giving you the freedom to produce!





### **Machines and Services**

#### PIPE AND BOX SECTION CUTTING SERVICES

With our pipe cutting machines and pipe cutting services you can cut any shape on a pipe or tube extremely accurately and with a bevel. Our tube and pipe cutting machines and services enable you to realize complex connections on a large range of profile sizes.

> You receive a ready-to-weld package, so you can focus on fast & easy fitting and welding. We provide a range of pipe cutting services to help you cut any shape on your steel tubulars with utmost accuracy and with a bevel and plate slots. The CNC machines for tubular profiling are developed and produced by us.



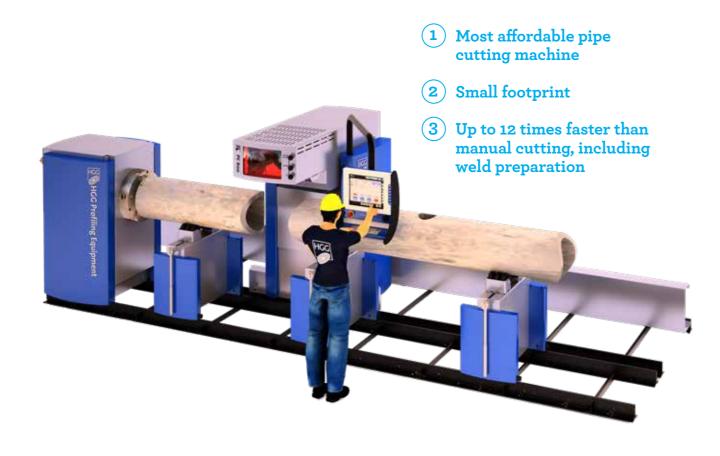
### PIPE AND BOX SECTION CUTTING SPECIFICATIONS



SPECIFICATIONS			
Size	42-8000mm [1%"-314"]	Track & trace	Permanent and non-permanent marking
Location	At HGG or on your site	CAD	AutoCAD, Tekla, SolidWorks, Inventor and many more
Material	Carbon steel, stainless steel and other alloys	Certifications	ISO 9001; Lloyds 3.1 & 3.2

# ProCutter CNC Pipe Cutting Within Reach

The ProCutter CNC pipe cutter incorporates all of HGG's advanced technology and expertise. Operational excellence is applied to keep costs low. Pipes up to 910 mm [36"] in diameter can be processed with a wide range of part lengths and profiling shapes. The ProCutter is available with oxy-fuel, plasma, marking and CAD-CAM interfaces.



SPECIFICATIONS	0	
<b>&gt;</b> PC 600	48-610mm [2"-24"]	3 t
<b>&gt;</b> PC 900	48-910 mm [2"-36"]	3 t







'Very soon into the Perm tower project we knew that this kind of complicated geometry with bevels is practically not possible to cut manually. That is why we purchased the HGG ProCutter 600!'

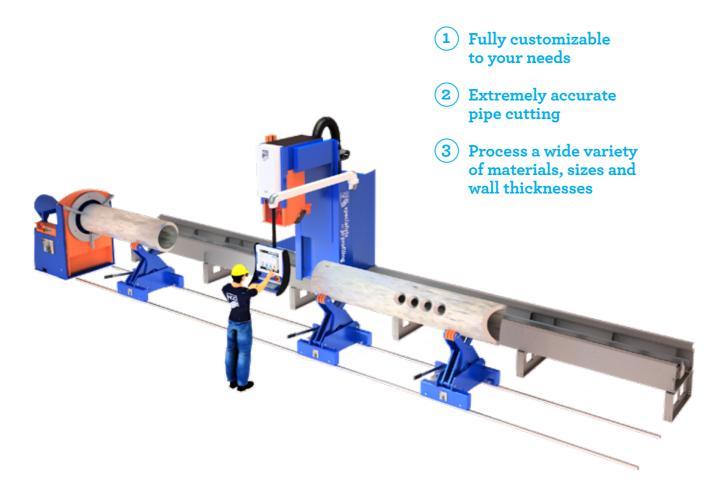
**Mr. Yuri Sorvanov** Managing Director Mastenergo

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# SPC 500-1200 PT Pipe Profiling; Versatile Accuracy

The SPC is a highly accurate pipe cutting machine, which processes a wide variety of materials, sizes and wall thicknesses, making it suitable for all applications. Available with many options, this machine can be customized to suit your needs and requirements.



SPECIFICATIONS	0	
> SPC 500 PT	48-510mm [2"-20"]	8 t
> SPC 600 PT	48-610mm [2"-24"]	8 t
> SPC 800 PT	48-815 mm [2"-32"]	8 t
> SPC 1000 PT	48-1020mm [2"-40"]	8 t / 12 t
> SPC 1200 PT	48-1225 mm [2"-48"]	8 t / 12 t







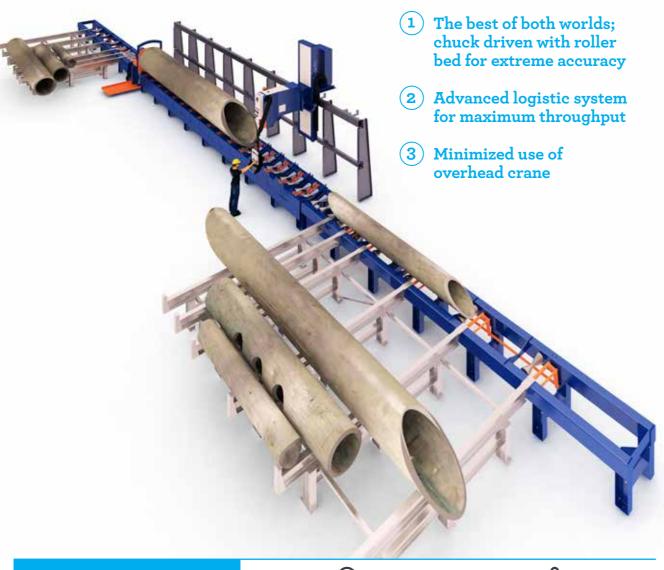
'Before purchasing the SPC 600 pipe profiling machine we were cutting up to 20 tons of steel per day. We are now capable of cutting over 40 tons a day!'

Mr. Adem Aladag
Technical Office Chief Engineer
SOLB26

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# SPC 660-1200 RB Combine the Best of Both Worlds

The SPC 660–1200 chuck-type pipe cutting line combines the roller bed principle for an uninterrupted material flow, while controlling the rotation of the material with a floating chuck registering linear displacement. Pipes up to 1225mm (48") in diameter can be processed with a wide range of part lengths and profiling shapes. With its adjustable characteristics, the SPC RB will be fully customized to fit your requirements.



SPECIFICATIONS	0	
> SPC 660 RB	48-660mm [2"-26"]	8 t
> SPC 1200 RB	75-1225mm [3"-48"]	12 t



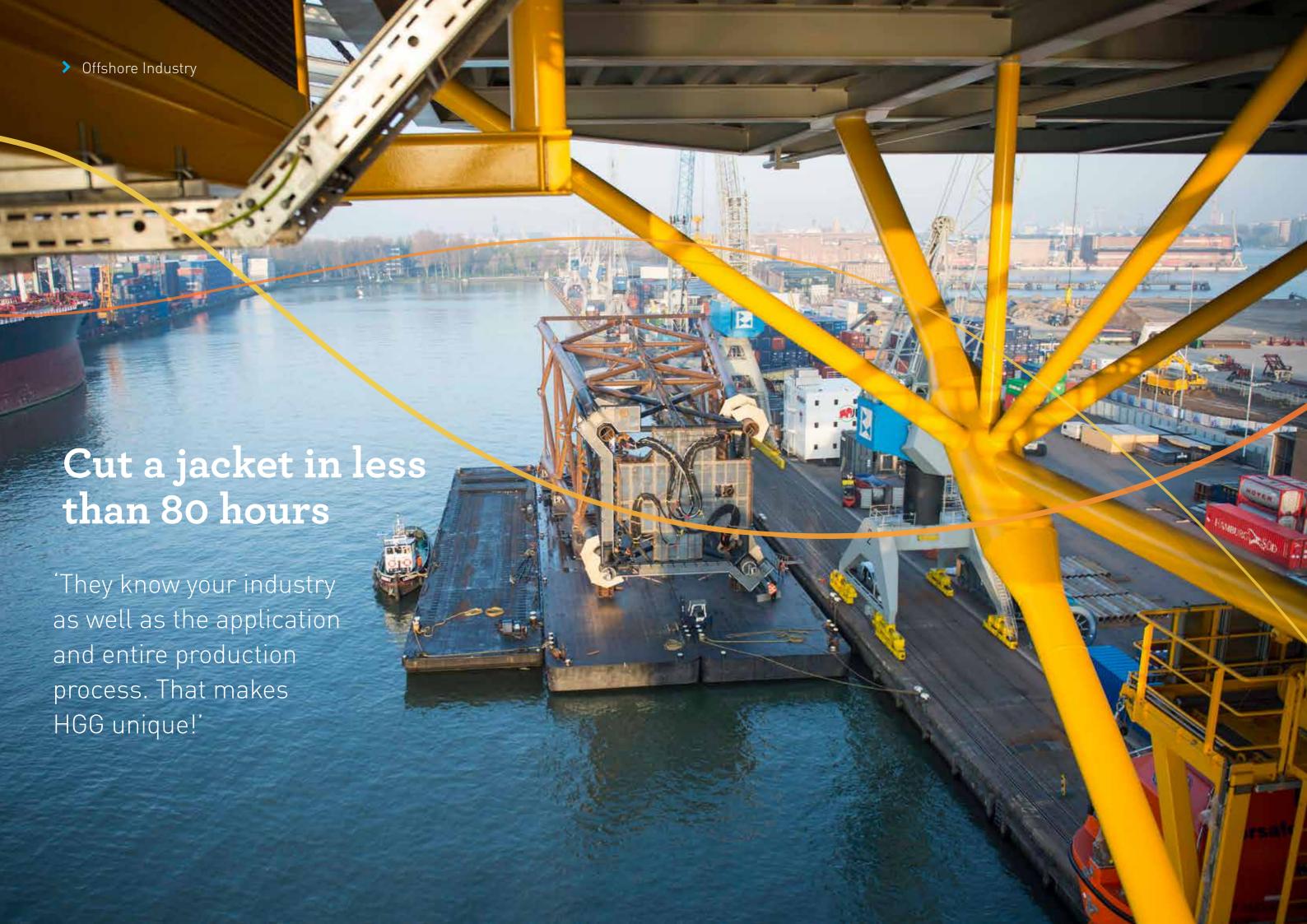




'We decided to purchase one pipe cutter with advanced logistics. This allowed us to replace two traditional pipe cutting machines'

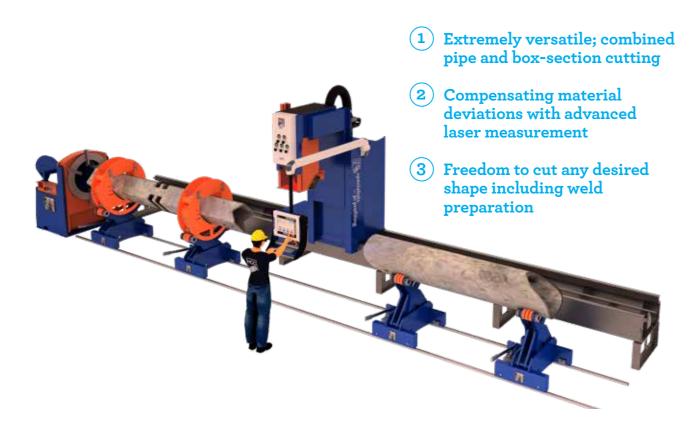
**Mr. Igor Stennikov**Chief of Welding
Kurganstalmost

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### MPC 450 | 500-1200 Combine 3 Machines in One

The Multiple Profile Cutting machine is capable of cutting a variety of profiles to high levels of accuracy. It can cut multiple profiles; pipe, flat-bar and box section. This makes the MPC more flexible in situations where production volume does not justify a dedicated machine for the profiling of pipes only. The MPC combines the cutting capability of three machines into one machine.



SPECIFICATIONS	0		I	
<b>&gt;</b> MPC 450   500	48-510mm [2"-20"]	60×60mm - 450×450mm [2%"×2%" - 18"×18"]	On request	8 t
> MPC 450   600	48-610mm [2"-24"]	60×60mm - 450×450mm [2%"×2%" - 18"×18"]	On request	8 t
<b>&gt;</b> MPC 450   800	48-815mm [2"-32"]	60×60mm - 450×450mm [2%"×2%" - 18"×18"]	On request	8 t
> MPC 450   1000	48-1020mm [2"-40"]	60×60mm - 450×450mm [2%"×2%" - 18"×18"]	On request	12 t
> MPC 450   1200	48-1225mm [2"-48"]	60×60mm - 450×450mm [2%"×2%" - 18"×18"]	On request	12 t







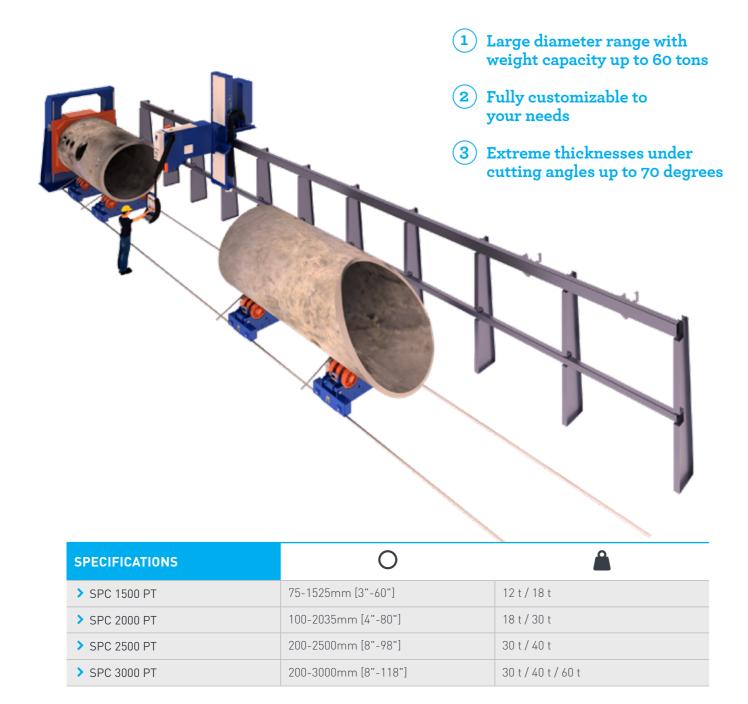
'Maintaining a tight tolerance was a constant issue in the past. We have had to disassemble an entire rig and scrap it because the quality was simply not there. Now we get accurate cuts for a perfect fit every time!'

# Mr. Ram Cortez Production Manager Orion Drilling

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# SPC 1500-3000 PT CNC Pipe Cutting Machine for Vessels and Offshore

The SPC 1500–3000 PT machine is a very robust machine built to handle large pipe diameters and heavy weights. Everything in the machine is designed with the purpose of guaranteeing extreme tolerances during cutting. Pipes up to 3000mm (118") in diameter can be processed with a wide range of part lengths and profiling shapes.









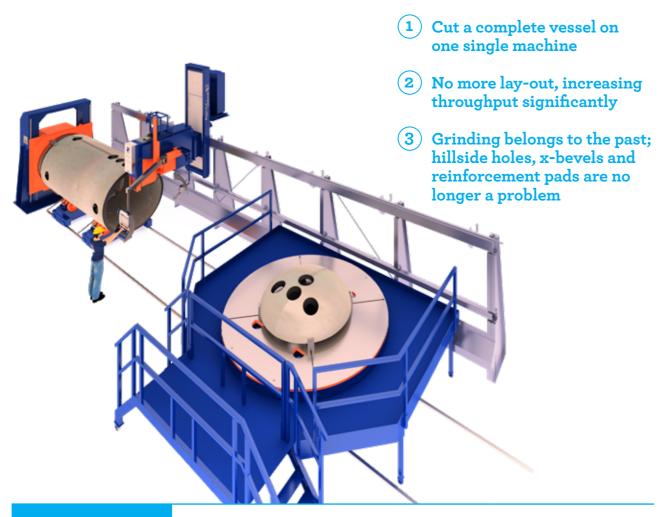
'A large vessel, cut as one piece, used to take us roughly 40 to 50 hours to cut by hand. Now, with the SPC 1500-3000 PT pipe cutting machine, we can cut it in less than 4 hours!'

**Mr. Kurt Schaerer**General Manager
Enerflex

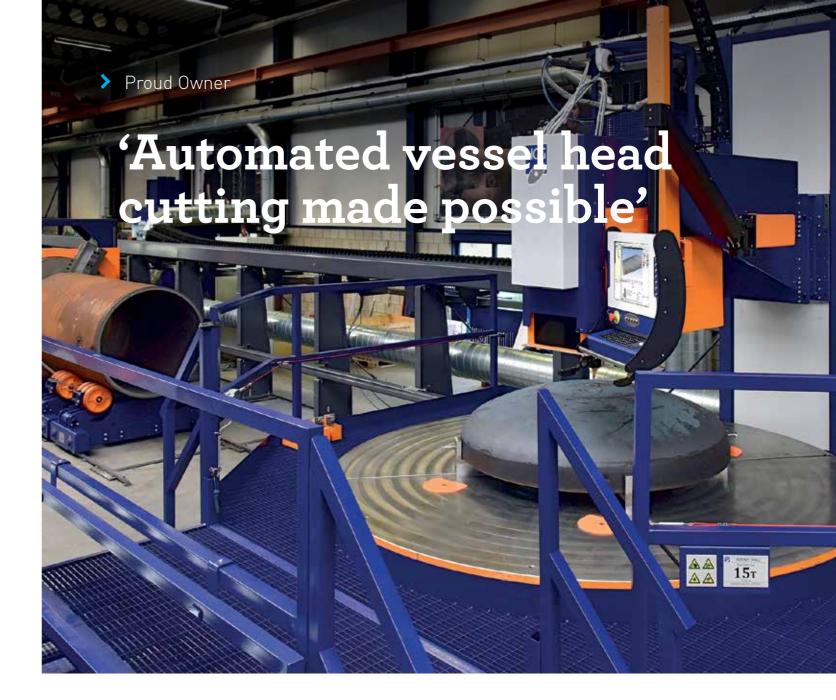
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# SPC 1500-3000 VHC Cut a Complete Vessel on One Machine

The SPC pipe and vessel cutting machine is the answer to pressure vessel manufacturers spending too much time on lay-outs. The SPC-VHC saves fabricators time on laying out, cutting, fitting and welding. The SPC 1500–3000 VHC is the ideal solution for vessel cutting, capable of cutting vessel heads, shells, nozzles, reinforcement pads and hillside holes, all with a bevel to create weld preparation and all on the same machine.



	Maximum vessel head weight = 15 t					
SPECIFICATIONS	0					
> SPC 1500 VHC	100-1525mm [4"-60"]	600-1500mm [24"-60"]	12 t / 18 t			
> SPC 2000 VHC	100-2035mm [4"-80"]	600-2000mm [24"-80"]	18 t / 30 t			
> SPC 2500 VHC	200-2500mm [8"-98"]	600-2500mm [24"-98"]	30 t / 40 t			
> SPC 3000 VHC	200-3000mm [8"-118"]	600-3000mm [24"-118"]	30 t / 40 t / 60 t			







'In the past, when cutting the vessel manually, you had to grind and clean before you could fit the nozzle in. Now, you give it a quick buff and just set it in'

**Mr. Shawn Johnson**Production Manager
Enerflex

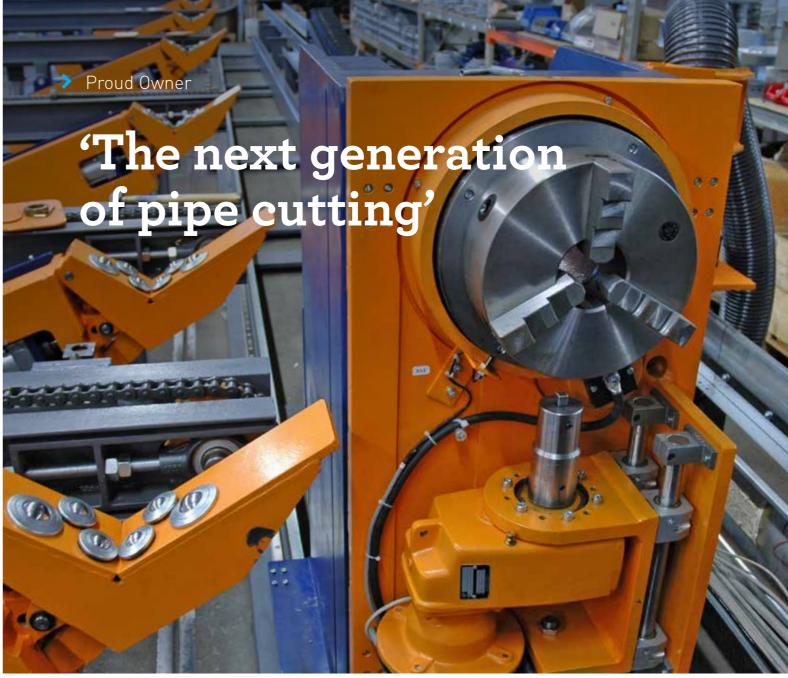
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# TCL 400 Tube Cutting 2.0

The TCL 400 tube cutting line is the next generation 3D cutting machine for pipe and tube. Both the machine's productivity and cutting precision are supreme in its diameter range. The highly productive TCL is the answer to automated but expensive tube laser cutting machines.









'The TCL 400 is the next generation tube cutting line and HGG's answer to highly automated but expensive pipe laser cutting machines.'

**Mr. Jos Wijnker**General Manager
HGG Profiling Contractors

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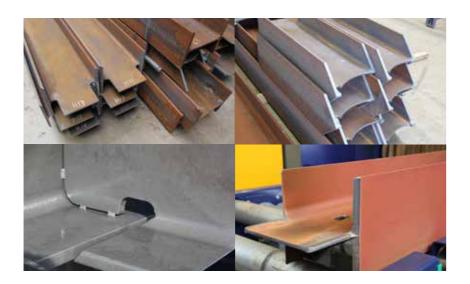


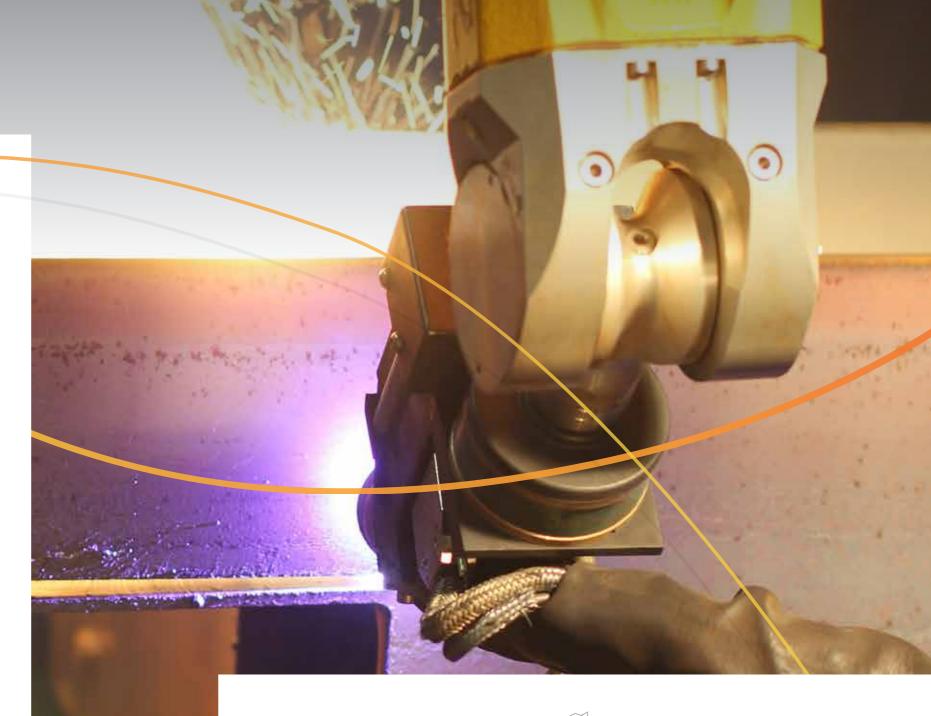
### **Machines and Services**

#### **BEAM CUTTING SERVICES**

With our beam cutting machines and services you can cut any shape on a beam extremely accurately and with a bevel. Our beam cutting products enable you to realize strong welded and bolted connections on beams with minimal fitting time. Beam deformations are handled by an advanced laser measurement system and sharp beam edges can be rounded by an edge rounding unit.

> You receive a ready-to-weld package, so you can focus on fast and easy fitting and welding. We provide a range of beam cutting services to help you cut any shape on your steel material with utmost accuracy and with a bevel and bolt holes. Our CNC machines for coping beams are developed and produced by us. Our edge rounding line creates perfectly rounded edges on flanges of beams, T-bars and flat-bars.





#### BEAM CUTTING SPECIFICATIONS



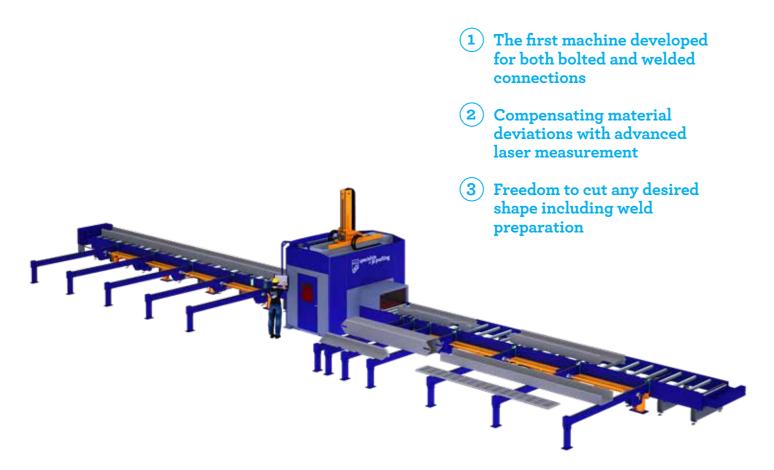
SPECIFICATIONS			
Size	IPE 100 - HEM 1200	Track and trace	Permanent and non-permanent marking
Location	At HGG or on your site	CAD	AutoCAD, Tekla, SolidWorks, Inventor and many more
Material	Carbon steel	Certifications	ISO 9001; Lloyds 3.1 & 3.2

#### > Beam Cutting

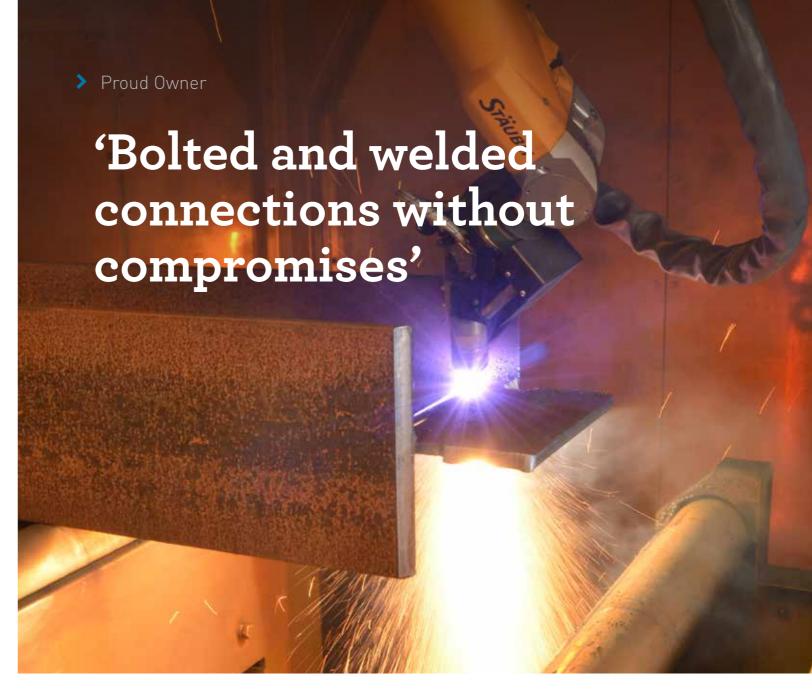
# RPC 1200 Beam Cutting 2.0

The RPC 1200 beam cutting machine is a high speed plasma cutting machine. It's the most advanced and productive one on the market today. The new RPC offers high speed plasma cutting of ready-to-fit parts prepared for any desired connection; both welded and bolted connections.

The RPC sets a new standard by offering an entire fabrication shop in one single machine.



SPECIFICATIONS	I		Г	L	L	Т	
> RPC 1200 in mm	100×50 – 1220×430mm	100×100 – 600×400mm	100×50 – 475×150mm	75×75 – 300×300mm	100×50 – 200×100mm	100×50 – 140×140mm	12 t
> RPC 1200 in inch	4"×2" – 48"×17"	4"×4" – 23"×16"	4"×2" – 18½"×6"	3" × 3" – 12"×12"	4"×2" – 8"×4"	4"×2" – 5½"×5½"	12 t







'I have been looking for a machine which could do every bolted and welded cut without compromises. The RPC does it all and fulfills our future needs!'

**Mr. Pasquale G. Tsingos** Technical Director Brafer

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## **Machines and Services**

#### **PROFILE CUTTING SERVICES**

With our profile cutting machines and services you can cut any shape on a profile extremely accurately and with a bevel. Our profile cutting machines and services enable you to realize all possible end and intermediate cuts with a bevel on a large variety of stiffeners for the shipbuilding industry, such as HP / bulb, flat-bar / strip, angle bar and T-bar.

> You receive a ready-to-weld package, so you can focus on fast and easy fitting and welding. We provide a range of profile cutting services to help you cut any shape on your steel material with utmost accuracy and with a bevel and intermediate cut-outs. Our CNC machines for cutting angle bars etc. are developed and produced by us.



#### PROFILE CUTTING SPECIFICATIONS



SPECIFICA	TIONS		
Size	75×75mm – 1220×430mm [3"×3" – 48"×17"]	Track and trace	Permanent and non-permanent marking
Location	At HGG or on your site	CAD	AutoCAD, Tekla, SolidWorks, Inventor and many more
Profiles	Angle bar (un)equal, T-bar, channel, flat-bar	Certifications	ISO 9001; Lloyds 3.1 & 3.2

#### > Other Profiles

# PCL 600 World's Most Productive Profile Cutting Line

The profile cutting line is a high performance plasma cutting line. Equipped with edge cleaning, marking and multiple CAD-CAM interfaces, the PCL is the most innovative and productive plasma cutting line. The PCL is capable of cutting all profiles commonly used in the ship building industry and, if special cuts are required, HGG can develop extra profiling shapes on request.



SPECIFICATIONS	L	L	I	L	Т	I	
> PCL 600 in mm	75x50 - 550×150mm	60×15 - 430×83mm	50×5 - 550×30mm	50×50 - 220×220mm	100×50 - 500×200mm	95×55 - 420×220mm	2.5 t
> PCL 600 in inch	3"×2"× - 215%"×57/8"	2 <sup>3</sup> / <sub>8</sub> "× <sup>3</sup> / <sub>4</sub> " - 16 <sup>7</sup> / <sub>8</sub> "×3 <sup>1</sup> / <sub>4</sub> "	2"׳/16" - 215/8"×11/8"	2"×2" - 85/8"×85/8"	4"×2" - 19 <sup>5</sup> / <sub>8</sub> "×7 <sup>7</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "×2 <sup>3</sup> / <sub>16</sub> " - 16 <sup>1</sup> / <sub>2</sub> "×8 <sup>5</sup> / <sub>8</sub> "	2.5 t





'Thanks to the HGG Profile Cutting Line, we've significantly increased our production speed by around 4 to 5 times. Having the PCL has also positively affected our production planning'

#### Mr. Ricardo Wagemaker

Process Improvement Manager ECOVIX - Engevix Construções

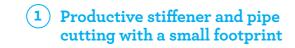
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#### Other Profiles

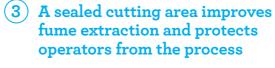
### Ship Profiler World's most affordable profile cutter

Ship Profiler is a profile cutting machine with a very small footprint. The machine is designed to cut stiffeners and can be upgraded to cut pipes. A 3D laser scan and biaxial cutting head allow the plasma cutting torch to cut accurately.

The sealed cutting area protects operators from the cutting process and has improved fume and particle extraction to surpass industry standards.









SPECIFICATIONS	L	L		L	0	
> Ship Profiler in mm	60×80×5mm - 150×200×30mm	80mm - 260mm	60×5mm - 450×30mm	60×5mm - 250×30mm	48mm - 450mm	125 kg/m
> Ship Profiler in inch	2 <sup>3</sup> / <sub>8</sub> "×3 <sup>1</sup> / <sub>8</sub> "× <sup>3</sup> / <sub>16</sub> " - 5 <sup>7</sup> / <sub>8</sub> "×7 <sup>7</sup> / <sub>8</sub> "×1 <sup>3</sup> / <sub>16</sub> "	31/8" - 101/4"	2 <sup>3</sup> / <sub>8</sub> "× <sup>3</sup> / <sub>16</sub> " - 17 <sup>11</sup> / <sub>16</sub> "×1 <sup>3</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>8</sub> "× <sup>3</sup> / <sub>16</sub> " - 9 <sup>13</sup> / <sub>16</sub> "×1 <sup>3</sup> / <sub>16</sub> "	2" - 1711/16"	84 lb/ft







'We were falling behind on throughput, which kick-started the development of Ship Profiler. In close conjunction with our machine building division we developed an affordable machine with the capacity of 6 manual cutters'

Mr. Jos Wijnker General manager **HGG Profiling Contractors** 

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#### Features and Options

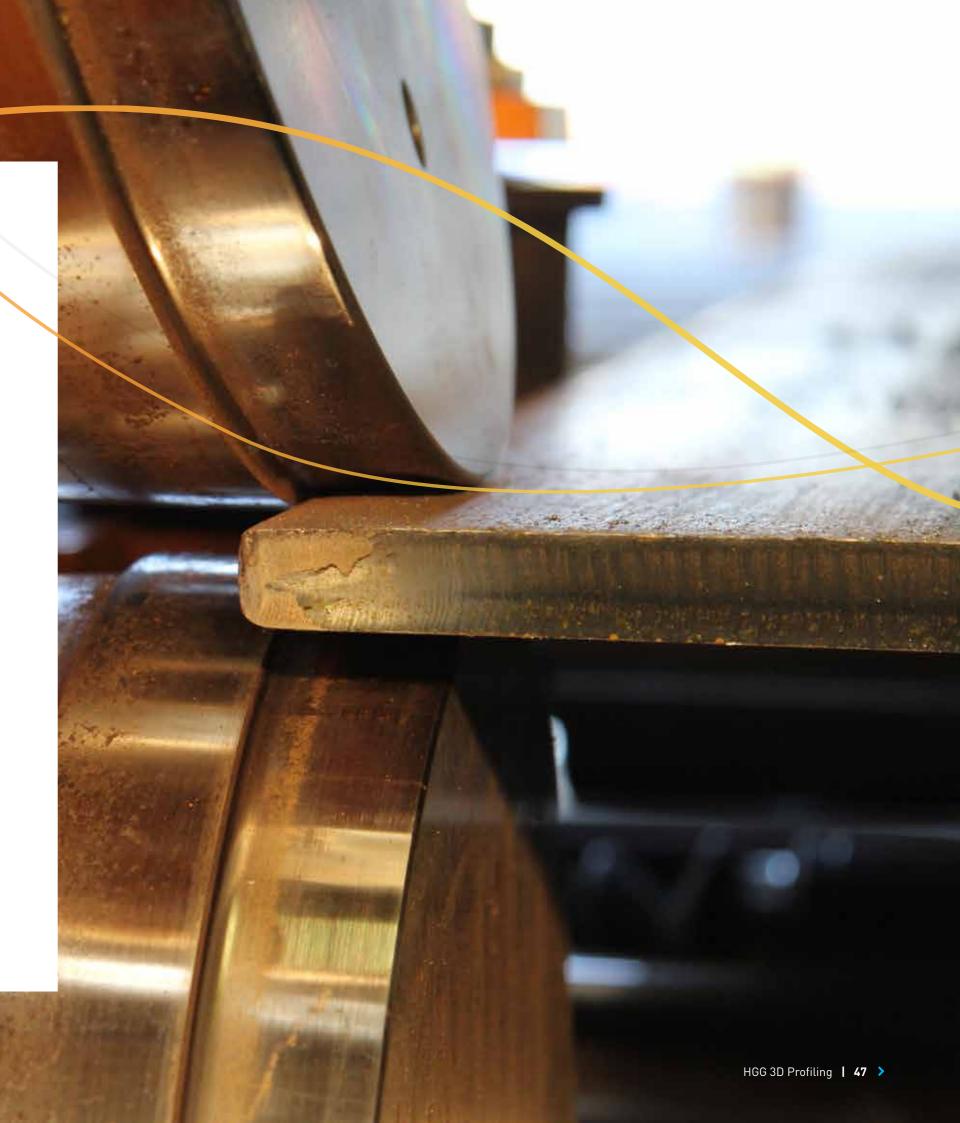
# Features and Options

#### **TOGETHER WE ACHIEVE MORE**

Automating craftsmanship, to give the world of steel the freedom to create. We don't just achieve that by offering 3D profiling machines and services, we develop our machines in such a way they are configurable.

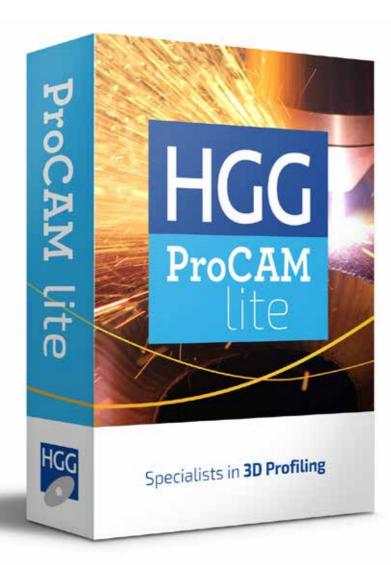
We deliver value to our customers by offering products that meet their requirements.





### **ProCAM Lite**

If you can imagine it, you can build it!

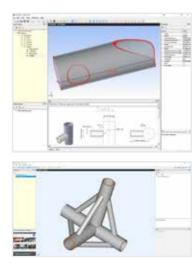


# Check production data before you send it to your machine to have it cut

You want to easily open and view XML or PCD files without CAD software? Use HGG's free ProCAM Lite! The software consists of two parts: a DSTV viewer and a pipe viewer. You can view your cutting files and perform a final production check with the interactive measurement tool. It's also possible to review any DSTV, NC, XML or PCD file, check all parameters and weld details, including root openings and markings.



- 1 Validate your own NC data before fabrication
- 2 Optimize your production process
- (3) Reduce error costs



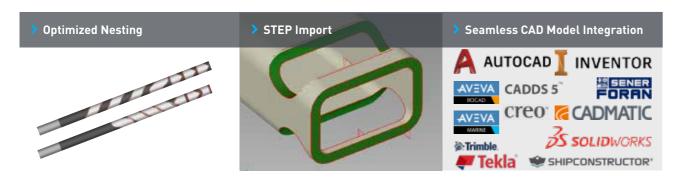
'HGG ProCAM Lite allows you to view any DSTV data or pipe cutting data, created in Tekla. Anyone involved in the project can now check the data in ProCAM Lite before it's being cut and manufactured'

# Michael Hodgson Technical Manager Tekla Software



#### Other solutions

# Software Solutions



#### Reduce scrap to a minimum!

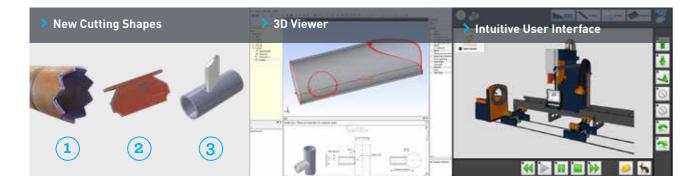
Ensure optimal, cost-efficient placement of parts in the available raw materials by reducing waste. Including many useful features for subdividing production processes.

#### Freedom to cut any shape!

Import STEP files from a solid model and let our software take care of the weld preparations.
STEP import gives you the freedom to create anything!

#### Import all cutting data directly!

We have a seamless integration with most CAD systems, allowing you to import all cutting data directly from your CAD model, saving 80% work preparation time!



#### Reduce costs with weld volume reduction macros!

Enter new markets with additional cutting shapes or reduce cutting time by intelligent cutting routines.

#### Improve your detailing software!

Experience the advantages of easy single part programming, 3D viewer and part measuring tool and manage your Key Performance Indicators.

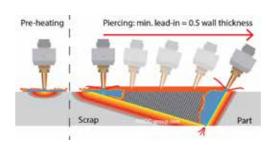
### Maximize machine up-time with machine diagnostics!

HGG's in-house developed UPC software is a self-explanatory interface, using icons to reduce operator training time.

# © Cutting Techniques

'HGG supports both Kjellberg and Hypertherm, two well experienced and industry leading choices'





#### > Oxy-fuel cutting

Oxy-fuel cutting is a reliable, accurate and competitive cutting technique used for the cutting of mild steel. Only metals whose oxides have a lower melting point than the base metal itself can be cut with this process.

#### Oxy-fuel allows:

- Cutting of thicker walled material up to 300mm
- Cutting of steeper angles up to 70° (as compared to 45° with plasma) because of the torch.



#### > Plasma cutting

Plasma cutting is a high speed cutting technology developed to cut electrically conductive materials. Plasma cutting can be used on any electrically conductive material. Materials such as stainless steel, can only be cut by plasma cutting because no oxidization occurs prohibiting the use of oxy-fuel cutting. In the wall thickness range up to 25mm, plasma cutting outperforms oxy-fuel cutting.

#### Plasma allows:

- High cutting speeds
- Cutting of exotic materials
- Cutting without need of pre-heating

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#### > Features and Options

# Marking Options

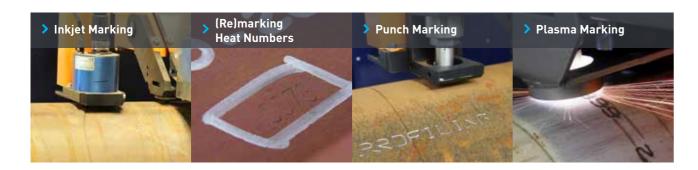
Marking is used to identify the parts, the distance and orientation between them and the interconnections. Our 3D profiling machines can be equipped with several marking options.



The unique ID name used in CAD drawings can be printed on the parts. If required, additional information can be added such as project title, job number etc.

These lines on the profile help orientate, position, measure or weld the different parts of a construction.

To ensure that profiles are bent correctly, you can choose to add inverted bend lines to the cut profiles. These lines are curved when printed and should be straight after bending.



Inkjet marking is a non-permanent marking technique and has no influence on the material characteristics of the profile. Ink is used to record plotted markings on the profile. These markings will not be visible after blasting or painting.

HGG is certified to do remarking of material heat numbers. After cutting your material, our operator duplicates the material heat number to every cut part by re-marking for efficient quality control.

A pneumatically operated low-stress needle 'punches' the marking into the material with a constant, pre-set pressure. As a result, the markings remain permanently on the material.

Semi-permanent marking option supplied through the plasma cutting torch. Anywhere you need to create temporary or permanent marks, ideal for layout and text markings.



Creating a barrier against corrosion is essential for extending the lifetime of steel structures. Edge breaking is therefore applied for improving the surfaces for coating coverage and ultimately corrosion protection.



With our Edge Rounding service we can automatically process a radius of 2-3 mm on a beam flange, T-bar or flat-bar by rolling the edges. Once the edges are rounded the beams can easily meet the corrosion protection requirements.

These machines have specifically been developed for the purpose of cleaning ship stiffeners and are not comparable to a flat plate or flat-bar cleaning machine. HGG integrates the edge cleaning system with all necessary software in an automatic cycle with the profile cutting positioned after the edge cleaning unit.

With an assembly of three rotating brushes, three faces of the material can be cleaned simultaneously. The assembly adapts to the whole range of different profiles. These wire brush cleaning machines are specifically developed for the purpose of cleaning ship stiffeners.



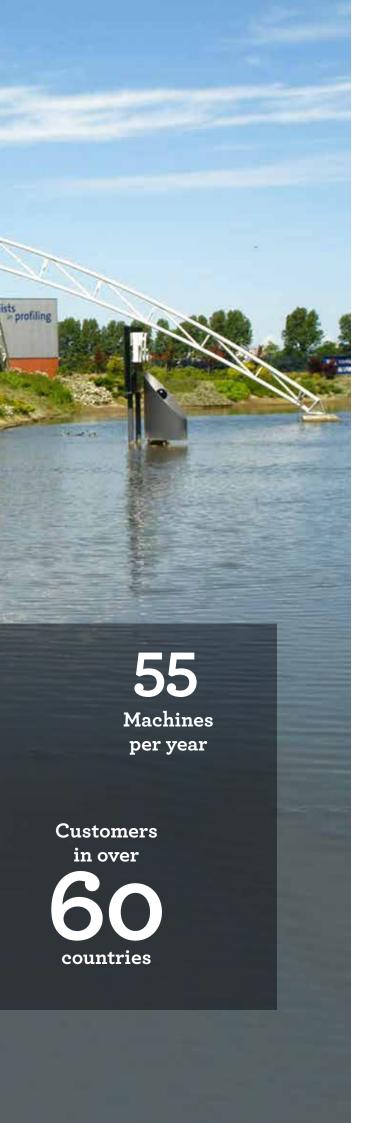


tons of steel each month

112

Employees worldwide

> 600 machines installed 3D profiling experience since



### **About HGG**

Back in 1984 a steel construction company based in a small town about 50 km north of Amsterdam, the Netherlands used to cut pipes by hand. They were facing the same challenges our current customers face using manual cutting.

The company decided to embrace an ambitious project; to develop the first pipe profiling machine. The goal was clear; to achieve fabrication freedom by automating their craftsmanship!

#### What keeps us inspired

We pioneered the field of 3D profiling more than 30 years ago and we continue to master it today while maintaining our initial focus; to continue our mission of automating craftsmanship while giving the world of steel the freedom to create!

