With welding being your highest cost factor, you need ways to reduce it. HGG offers this with their wide range of profile cutting machines and robot profile cutting lines, through:

- reducing fitting time with a perfect cutting fit (0.5 mm per cut);
- reducing welding material by optimal weld preps (flexible transition zones from heel to toe);
- reducing throughput time of your products (an average of 30% on the whole process).

HGG allows you to do your job by:

- supplying a machine to you
- profile cutting for you in one of the subcontracting companies
- profile cutting for you by bringing a machine to your building site

**Years of experience**

Founded in 1984, HGG is the absolute specialist in the field of steel profile cutting, being the only company fully devoted to this specific technology. The machines which are developed and produced by HGG, combine plasma cutting with oxyfuel cutting and are supplied to companies worldwide.

Machines have been developed for round pipes (CHS), square pipes (RHS, SHS), bulbs, I-beams, H-beams, equal angles and unequal angles. With the wide product range of HGG all industries are being served; offshore, shipbuilding, steel construction, process piping and crane building.
Machine systems are designed in house and completely modular. This includes customised software programs; post processors, CAD/CAM connections, nesting programs and macro shapes with free transition zone programming.

Several patents are granted to HGG’s products.

**Our expertise**

HGG’s reliable machines are the state of the art available on the market. With all HGG machines installed worldwide, thousands of tonnes of steel are being processed every hour. With the every day use of 7 CNC profiling machines in HGG’s own subcontracting companies, an enormous amount of practical experience has been gained.

**Synergy**

There is a permanent exchange of experience and knowledge between HGG’s subcontracting companies and HGG’s machine building company. This synergy allows HGG to provide industry specific advice based on experience whether we supply machines or do the profile cutting for you.
HGG has made its name by being the first to develop a special high-precision mobile CNC pipe cutting machine. Since 1984, HGG has developed into a leading company in the market of pipe cutting.

**Product range**
HGG produces and develops a broad range of stationary machines able to process pipes ranging in diameter from 25 mm up to a maximum of 6,000 mm for pipe weights from several kilos till more then 150 tonnes.

HGG makes sure that when you invest, it pays off. HGG’s machines are build to last and offer reliability, ease of operation, highest cutting accuracy and best quality of cuts.

All profiles are cut with a bevelled edge for subsequent welding and can, if desired, be produced with angled connections between the pipes and offset centre lines for eccentric connections.

**Components**
First class materials in the machine ensure a high accuracy with high speeds. Combining ease of operation and quick processing of data, HGG’s machines increase productivity by an average of 30%. With an optional logistic pipe-handling system this productivity can even be further increased.
Every HGG pipe cutting machine is supplied with a patented biaxial controlled cutting head. With this cutting head the elevation angle of the cutting can vary from plus 70º to minus 70º allowing optimal welding preparation with flexible transition zones from heel to toe. An oxyfuel cutting torch can be fit on the cutting head in combination with the plasma torch. The distance of the torch to the material is automatically kept constant whereby an electronical height sensor compensates the out of round of the pipes.

With the special centre line based software of HGG, all possible profiles can be cut in accordance with the client’s wishes. A wide range of special profiles is available or can be tailored on demand.

Office programming of the machine is done by HGG’s in house developed:
- manual data input system;
- unique CADCAM connection for structures with multiple saddle connections;
- fully automatic post processors.
Shipbuilders expertise joined with HGG’s cutting and machine building expertise has resulted in a revolutionary product; the PCL600. Developed together with Odense Steel Shipyard and Hyundai Heavy Industries.

To compete on the world market of shipbuilding industry, today’s challenge is to increase the productivity of shipbuilding operations and especially optimization of efficiency in steel processing, since it represents approximately 75 percent of the costs of building a ship.

The PCL is to cut and mark bulbs, T-bars, I-beams, H-beams, equal angles and unequal angles.

The PCL is the answer to the ever higher demands for efficiency and accuracy as the standards for the shipbuilding industry and the need for more productivity (less manhours per ton) increase.

**Productivity**

With the PCL600 a shipyard can realise at least 30% faster profile processing compared to other robot profile cutting lines. This has resulted in some shipyards needing to invest in only one profile cutting line instead of the two lines originally planned.

Measuring the profile before every new cut in the traditional machines was time consuming. The new machine concept continuously measures the profile allowing commencement of a new cut within seconds.
Functionality
Further improvement has been found in providing user free macro programming, automatic outfeed of processed positions down to 300 mm, software compensations on plasma cutting (improving cutting accuracy and reducing wear-out of plasma consumable), integration of bendline marking, downflow fume exhaustion and longitudinal movement realisation by simultaneous control of robot and gripper.

Software
All controls and software is developed inhouse by HGG. Structure is modular and open allowing full customising to individual shipyards and their production flow and product range.

All macro shapes are parameter based whereas new macro shapes are programmed directly by the shipyard in C++ programming software. Factory testing of new macro shapes is not required with HGG’s direct robot controller since the robot is automatically programmed with any new macro shape without risk of singularity of axes.

HGG’s post processors are available for e.g. Nupas, Aveva/Tribon, Shipconstructor.
In HGG’s subcontracting companies the full run of preparing constructions is executed for the customer. From detail-engineering, through material optimization and traceability up to the delivery of a complete prefab package. The high accuracy of HGG’s prefabrication can save you 20% in fabricating and welding of the pipe construction. Because of the extensive machinery, the subcontracting divisions can handle a large range of material types and dimensions.

With worldwide experience in many different lines of industries, HGG has different ways of doing the job:
- you bring your raw material to HGG and all items will be processed for you
- HGG brings a machine to your workshop or project site, and trains your staff in order to enable you to process the various items yourself
- HGG brings a machine and operator to your workshop or project site for the duration of your project
- HGG will only do the data file generation for your project and you will do the cutting yourself on your own machine.

Either way, data files are generated in HGG’s offices and send to machines anywhere on the world through the internet.
Synergy

A permanent exchange of experience and knowledge between HGG’s subcontracting companies and HGG’s machine building company is very important. Combining this experience and power contributes to a very strong market position.

With the every day use of 7 CNC profiling machines in HGG’s subcontracting companies, an enormous amount of practical experience has been gained. HGG provides industry specific advice based on this experience. No matter what your requirements are, we offer our specialised services.

Markets

For the moment there are three subcontracting companies within the HGG Group BV; HGG Profiling Contractors BV (NL), Rohr Profil Technik GmbH (DE) and PP ProTube Ltd (UK).

Development of subcontracting divisions in other countries are in full progress. Please contact HGG if you are interested yourselves to discuss possibilities in your country.
HGG’s products and services play a critical part in your production process. Professional installation and a 24/7 service is therefore essential.

HGG’s service programmes will give you the high degree of reliability and security you are looking for.

Since 1984 HGG supplied more than 100 machines worldwide, spread over 6 continents. Clients satisfaction is of crucial importance for HGG’s success. This success has been achieved by HGG’s Remote Service Program.

**Remote Service Program**

All machines supplied by HGG can be linked to the internet. On customer’s demand, HGG can access the machine, enabling HGG to make a full functional analysis;

- checking the real-time status of the machine and components;
- running test programmes
- checking historical machine operations stored on the machine’s hard disc.

Depending on the outcome of the full functional analysis, HGG offers service & maintenance ranging from telephonic support to a service visit.

Additionally HGG offers tailor made solutions for machine modifications, ranging from refurbishment of old equipment to full upgrades of existing installations.
HGG worldwide
You will find HGG’s companies and authorised representatives in over 30 countries.

HGG’s knows your world. With over 20 years of experience, HGG knows that together we can take up any challenge in profiling technology.

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