Waterjet cutting with an eye for detail
Caribbean Waterjet Service does it with water

Caribbean Waterjet Service is a division of C&W Snijtechniek BV in the Netherlands. C&W Snijtechniek has been a household name in the water jet cutting field since 2003. It has five waterjet cutting installations, which makes it the biggest cutting contractor in the Netherlands.

C&W Snijtechniek BV has been active in the Curacao market as Caribbean Waterjet Service since 2016. The Dutch and Curacao operations are now cooperating closely.

Caribbean Waterjet Service can cut any shape desired from any material. The company is the specialist in the field of waterjet cutting. The company has years of experience and a great deal of technical knowledge of the equipment, the technology of waterjet cutting and all possible materials.

The entire company is focused on producing high-quality products, from design to smart packaging, and always with short delivery times in mind. The company is also no-nonsense and highly solution oriented. Caribbean Waterjet Service helps the customer convert a request into a product as efficiently as possible.

www.caribbeanwaterjetservice.com
Waterjet cutting is the ideal method for cutting any conceivable shape from just about any material.

Waterjet cutting involves forcing water under high pressure through a small orifice (nozzle), which creates a cutting action. There are two different options: cutting with pure water for softer materials, and cutting with an abrasive for harder materials.

Waterjet cutting can be done with the most diverse materials, such as metals, plastics, composites, natural stone, glass, wood and rubber. Further on in this brochure you will find specific information concerning cutting the different materials.

The advantages of waterjet cutting include great freedom in choosing shapes compared to other cutting methods, there is no heat input into the material and no follow-up processing is required.

The advantages offered by waterjet cutting over the more traditional cutting techniques include:

- No heat input, so the structure of the material is not damaged
- Up to 200 mm thick
- Scarcely any burrs are created
- High accuracy up to ± 0.1 mm
- Product does not require follow-up processing
- Great deal of design freedom
- Barely any cutting loss
- No dust or toxic vapour created
- Environmentally friendly

Caribbean Waterjet Service is unique in its short lines, short delivery times and its advisory, cooperative role.
Caribbean Waterjet Service’s work method

A design of a component to be cut can be sent to Caribbean Waterjet Service by email or on paper. If desired, Caribbean Waterjet Service can also draw or measure an object for you.

All information received at Caribbean Waterjet Service is processed in the system digitally. A quotation is made quickly because the system can calculate the cutting time, the material required and the handling costs very rapidly. Digital drawings can be provided in nearly all formats including dxf, dwg, ai and eps.

Orders are passed on to work preparation as soon as a quotation is accepted. The components are arranged in the plate as advantageously as possible using the most modern software, which limits loss of material to a minimum. Smart scheduling in the completely automated system enables short delivery periods.

The materials are cut entirely computer-controlled. No expensive follow-up processing is required after cutting. Quality always comes first. The highly trained staff continuously check the quality. From random samples to 100 percent control, if so desired.

The products are packaged clean and dry and if necessary pass through a completely automated washing facility.

Our regular transporter or a courier delivers the order to the customer, depending on the quantity and the urgency of the delivery.
Follow-up processing

If any follow-up processing is required, Caribbean Waterjet Service can take care of that for you as well. Follow-up processing we can carry out includes:

- Bending
- Welding
- Drilling
- Bevelling
- Threading
- Anodising
- Powder coating
- Sanding
- Galvanising
- Coating
- Assembly / installation
- Tumbling

Simple follow-up processing is done at Caribbean Waterjet Service premises. We contract out our other follow-up processing. We have local partners for all follow-up processing who are customers as well as suppliers. That way we strengthen each other.

The machine list

Caribbean Waterjet Service has a large 6x3 meter very well maintained machine at its disposal.

Resato RCT 63  3000 x 6500 mm  2 cutting heads

At the premises is the Netherlands we use 5 machines:

Resato ACM 3060  3000 x 6000 mm  2 cutting head [one of which 2.5 D]
Resato RCT 33  3000 x 3200 mm  2 cutting heads
Resato RCT 33  3000 x 3200 mm  2 cutting heads
Resato RCT 33  3000 x 3000 mm  1 cutting head
Resato RCT 22  2000 x 2000 mm  2 pure water cutting heads for softer materials. [With vacuum table so the material does not get wet]
Metals are often cut by laser, plasma or oxi-fuel. Waterjet cutting nevertheless offers many advantages compared to these techniques. Waterjet cutting is the only cutting technique that does not contribute any heat to the metal. Thus the cutting edges do not burn and, even more importantly, the structure of the material remains intact.

The components are cut stress free and do not become hard on the sides, making expensive follow-up processing unnecessary. It is even possible to cut tempered materials without affecting the tempering.

Caribbean Waterjet Service can cut all metals by waterjet, including:

- Aluminium
- Stainless steel
- Titanium
- Copper
- Brass
- Mild steel
- Duplex materials

Examples of components to be cut are:

- Machine parts
- Gears
- Mounting plates
- Brackets
- Casings
- Advertisement signs
- Blades (tempered)
- Flanges

If so desired, Caribbean Waterjet Service can supply the metals with certification. Metals can be supplied with certificate 3.1 or 3.2 as well as with hallmark and certificate from Lloyds, DNV or TÜV, among others.

Our own material supply

Caribbean Waterjet Service keeps a large stock of its own materials in order to guarantee short delivery times. We keep most materials in stock at thicknesses from 1 to 30 mm.

**Steel:**
- Staal St37
- Staal St52
- Grade A
- Cortensteel

**Stainless steel:**
- 304L
- 316L
- 316Ti
- Duplex materials

**Aluminium:**
- EN AW 1050
- EN AW 2024
- EN AW 5005
- EN AW 5754

**Steel:**
- EN AW 5083
- EN AW 6082
- EN AW 7020
- EN AW 7075
One of the materials people tend to think is less suitable for waterjet cutting is wood. Nevertheless, this material is eminently suitable for this cutting technique.

The advantage of cutting wood with water is that it is cheaper than milling, for example. In addition, the freedom to choose a shape is very great. Cutting a perpendicular angle is impossible in the milling process, but is feasible when cutting with waterjet.

There is very little loss by cutting using the waterjet cutting process. Moreover, the programming and handling costs are very low. Contrary to what one would expect, the wood hardly gets wet since the product is in the machine for a very short time. If so desired, the sheets can be pre-treated so the wood does not stain.

In principle, all types of wood can be cut with a waterjet, but the best results are obtained with wood varieties that have a homogeneous structure. For example:

- Multiplex
- Water-resistant MDF
- Chipboard
- Concrete plywood
- Ocoume
- Veneered wood varieties

Examples of components to be cut are:

- Components for ship interiors and ship decks
- Inverted moulds for pouring polyester hulls
- Art objects
- Form work for the concrete industry
- Components for interior construction
- Components for furniture manufacturers
- Table tops with logos
- Seats for chairs
- Floor panels for vans
Composite materials

A composite is a material made from various materials. This often refers to fibre-reinforced plastics. The fibres provide rigidity, the plastics keep the fibres together.

Familiar fibres that can be cut with a waterjet cutting machine are:

- Fibreglass
- Aramid fibre [Twaron and Kevlar]
- Carbon fibre [carbon]

Another example of a composite is Glare, which is used in aircraft construction. Glare is laminated composite consisting of aluminium and fibreglass.

All composites are very suitable for processing with our waterjet cutting machines. Cutting these materials requires a great deal of knowledge of materials. Special techniques are required to prevent splintering and delamination, which Caribbean Waterjet Service masters completely in order to deliver the highest quality.

Examples of components to be cut are:

- Aircraft parts
- Machine parts

Plastics

A very extensive diversity of plastics are also suitable for processing using waterjet cutting installation. For example:

- PVC
- HMPE, LDPE
- POM
- ABS
- Polystyrene
- Foam materials
- Laminated plastics [dibond, alubond]
- Trespa
- Acrylate and polycarbonate
- Floor covering

Examples of components to be cut:

- Facade lettering
- Logos and illustrations in floor covering
- Machine parts
- Suitcase interiors
- Advertisement signs
**Natural stone**

Waterjet cutting is the ideal method for processing natural stone. It is possible to use the cutting machine to cut out components very precisely in various color natural stone, which subsequently fit together seamlessly. Combining glass and metal with natural stone is another option.

Examples of components to be cut are:

- Bathrooms
- Floors (logos and illustrations)
- Headstones
- Furniture (tables, wall furniture, etc.)
- Artwork

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**Glass**

Glass can only be processed in a few ways. Waterjet cutting is the method to process glass with great freedom of choosing shapes. Nearly every shape is possible.

The following types of glass can be cut:

- Float glass
- Poured glass
- Wire glass (reinforced)
- Mirror glass
- Laminated glass (bullet-proof)
- Fire-resistant glass

Combining glass and metal with natural stone is another option. Examples of components to be cut are:

- Bathrooms
- Furniture (tables, wall furniture, etc.)
- Artwork
- Gravestones
- Ornaments
- Windows in special shapes
Rubber

Rubber is a material that can be subdivided in two groups: synthetic rubber and natural rubber.

Caribbean Waterjet Service can cut all types of rubber with waterjet:

- Natural rubber
- Neoprene rubber
- Cellular rubber
- Para rubber
- Silicone rubber

Cutting reinforced rubber types with inlay is possible as well, for example steel wire-reinforced or fibre-reinforced rubber types. Cutting rubber with an adhesive layer on one side or both sides is also an option.

Examples of components to be cut are:

- Gaskets
- Shock absorbers

Various materials

In addition to the materials listed, the waterjet technique is also suitable for cutting many other materials, such as:

- Textile and leather
- Mineral wool
- Paper and cardboard

Caribbean Waterjet Service has experience with the most diverse materials. If you have a specific question regarding a material not mentioned in this brochure, please contact us.

The Caribbean Waterjet Service specialists are always ready to advise you and carry out a cutting test for you, if necessary.

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www.caribbeanwaterjetservice.com
Examples

CARIBBEAN WATERJET SERVICE
Cutting Edge Technology

telephone: +5999 846 1234

website: www.caribbeanwaterjetservice.com

eMail: info@caribbeanwaterjetservice.com

facebook.com/cwscuracao | twitter.com/cwscuracao

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