

# LET'S CLOSE THE LOOP TOGETHER







bioresource solutions

## Colubris Cleantech Let's close the loop together

We are Colubris Cleantech, a Dutch family owned company with over 40 years' experience in separation and purifying technologies. We offer a complete range of products and processes for water, waste recycling and bioresource solutions.

#### Effectively reducing your burden on the environment

Our aim is to considerably decrease the costs associated with your waste issues. In this regard, we have been a reliable partner in the industrial sector for over 40 years. We are an exceptional organisation with solutions in three segments:

#### Water Solutions

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Solutions for reducing wastewater problems, reusing water and purifying water. Solutions to recover energy from wastewater.

#### **Waste Solutions**

Solutions that allow waste flows to be separated so they can be reused and upgraded.

#### **Bioresource Solutions**

Solutions for upgrading residual flows from the food and vegetable processing industry.

These solutions help us to offer answers to the complex issues encountered in today's world. No two waste flows are alike and standard solutions are often insufficient. That is why we develop, engineer and construct systems that meet your specific needs and challenges.







## What Colubris Cleantech stands for

Colubris Cleantech is a strong, solid and reliable partner, which supports its brands when investing in new technologies and sustainable solutions in the field of wastewater purification, waste recycling and bioresources.

Every day, we attempt to realise solutions that allow processes to flow more efficiently and effectively. We believe in sustainably using products that help to improve our living environment. We also believe in solutions that guarantee effective cost savings. Our organisation does not only see sustainability as a means to realise corporate social responsibility, but also sees it as a larger worldwide objective. By reusing water and waste flows by purifying water, recycling waste and creating a circular economy, we can make sure people in the future will also be able to enjoy a well-balanced environment featuring rich and sustainable resources!

#### Deeper insight into our vision

We want to inspire people that possess extensive knowledge of cleantech and game changing innovations, and call on them to join forces as a single community. Because collaboration is crucial for the challenges we face today, and for those we will face in the future. This approach will also allow us to achieve our objective of still having a healthy environment in 1000 years' time.

We want to achieve this by:

- Minimising components that produce industrial waste (water).
- Counteracting the depletion of natural resources.
- Reducing environmental pollution by preventing waste and harmful substances in the water.
- Avoiding unnecessary waste.
- Inspiring others to join our cause.



### **II** Mission statement

To accelerate the transition to a circular global economy by bundling unique knowledge to offer the best possible solutions in the field of water, waste recycling and bioresources.







We take full responsibility.



#### Why Colubris Cleantech

- To date, more than 4000 projects realised worldwide.
- Active in 70 countries.
- From idea to realisation.
- In-house knowledge and expertise of handling the most complex type of (waste) water, waste and plant-based proteins.
- One stop shop; engineering, manufacturing, construction and handover.
- Flexible partner, as technology provider or EPC Contractor.
- Worldwide service and sparepart supply.
- Robust installations with high-quality European equipment.
- Providing assistance and analysis services.
- Highly skilled and dedicated workforce.



## **Colubris Water Solutions**

Water is an essential commodity. Not only for humans, animals and nature, but often also for your production process. The discharge of wastewater has been subject to heavy regulation and strict inspections in recent years. The government now requires you to purify your wastewater in accordance with the latest norms. This can significantly reduce your margin because wastewater purification is often accompanied by high costs.

#### Smart and complete solutions for industrial wastewater

We think this can be done in a smarter and more effective manner. We will be pleased to assist you in realising a healthy margin. This is possible because we specialise in a wide range of separation techniques. Your sector, application and specific requirements for water discharge will be taken into account when implementing e.g. mechanical, physical, biological, or tertiary purification techniques for your industrial wastewater. Each individual product has been developed so maximum returns are realised, at the lowest possible operating costs.

#### **Our experience**

We possess a comprehensive team of experts capable of addressing the most complex issues in the field of water purification. We have been producing and installing wastewater purification installations since the late Eighties. Our installations are able to purify even the most heavily polluted wastewater, thus allowing clean water to return to its natural cycle. Our installations are suitable for primary, secondary (biological) and tertiary wastewater treatment.

#### Energy

Did you know that a lot of energy is released during the purification process of your wastewater? If you want to get the maximum return from your purification process, it is worth investigating together with us how much of this energy we can recover.

Our solutions can be implemented in two major industries. **Food production and Non food production.** Check out our website for a more comprehensive insight into the wide range of applications.

### Active worldwide

We have gained experience in a wide range of sectors where an important role is played by (waste) water treatment, waste recycling and separation of components from green raw materials. All across the globe. This is one of the reasons why we will always find the best possible solution for your specific situation. Your production process will continue to run at full speed and your wastewater will be purified efficiently at the lowest possible cost.







## **Colubris Waste Solutions**

Waste is a raw material. Of course, you already know this because our waste flows are packed with valuable materials. If these materials are reused, fewer raw materials are needed and less waste is sent to the incinerator. The more effectively these materials are sorted, the higher their reuse value and the higher your efficiency.

#### Tailor-made solutions for your waste flows

Since the mid-nineties, we have been developing, producing and installing complete sorting lines for a variety of waste flows. Our sorting lines distil these waste flows so materials are given a second life; such materials include various types of plastics, metal, wood, paper, sand and stone. We are able to develop and manufacture the smartest and most efficient sorting lines thanks to decades of experience. This eventually leads to an extremely high percentage of processed waste being reused. In some cases, this can exceed 95%!

Our specialised (sector) knowledge and experience means we have worked for a variety of clients over the years. For instance, our references come from diverse sectors.

#### Our solutions can be used for:

- Construction & Demolition Waste (C&D waste)
- Commercial & Industrial Waste (C&I waste)
- Municipal Solid Waste (MSW)



The more effectively these materials are sorted, the higher their reuse value and the higher your efficiency.



the Waste Architects



## **Colubris Bioresource Solutions**

There is a concealed value in the organic residue and in side-streams from fruit and vegetable processing. Essential nutrients can actually be recovered, for example protein and fibres. With Colubris Bioresource Solutions adding value to your side-streams is possible. This will improve your revenue, while actively contributing towards the circular economy.

#### **Tailor-made Biorefinery**

Thanks to our longstanding innovation and research, we can design and constructs a biorefinery for you, which allows you recover and valorise valuable organic waste or side streams. Keeping the high quality and original functionality, the recovered products can be used as ingredients for various food and beverage applications, adding taste, aroma, protein, colouring and texture. Whatever leafy, organic, vegetable or fruit leftovers or offcuts you have, we will tailor the design of the biorefinery process according to your specifications of the recovered product.

Our biorefinery process is clean, uses minimum amount of energy and water and produces zero waste. It is completely aligned with the core of sustainability and circular economy.

We design and build the complete biorefinery. And thanks to our commercial biorefinery in The Netherlands, in-house biochemists and food- and nutrition scientists, we are able to demonstrate the separation and purifying process and give advise how and where the recovered products can be used in the food- or feed chain. We can run your side stream(s) for performance testing, for product analysis and for tasting sessions. From feasibility study to pre-productions runs of your side stream(s), we are here to guide you through this process and maximise revenue at the lowest operational costs.



We would like to contribute to a biobased economy; an economy that no longer depends on fossil fuels, but uses renewable or green raw materials from crops.

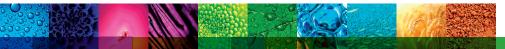








Passion for innovation
Continuity is an objective because we want to further improve our products and remain innovative.



# Development of new solutions and improvements

Research & Development is an important competitive advantage for us. Colubris Cleantech has a team with over 40 years of experience and knowledge in all aspects of water, waste and bioresource techniques. We are going beyond the knowledge of today. In order to continue to develop and improve strategically, we are also strengthening our R&D capacity through various partnerships for innovation in the development process. By combining knowledge and expertise from a large worldwide network of universities, start-ups and specialists, we know how to continuously guarantee our knowledge and development capacity.

#### Engineering

Almost all effective and efficient lines require a tailor-made approach. The first step involves thoroughly analysing water and waste flows, e.g. by inventorying volumes. Our engineers then do everything to find the best solution for your specific situation. The costs that accompany our effective solutions are always closely monitored during the design phase. They always look for the best possible solution. We possess a comprehensive team of experienced and highly qualified professionals. We can always guarantee the most effective solution thanks to our knowledge, experience and the latest equipment.

#### **Production and installation**

Your whole line or unit will be fully produced, assembled and tested in our own production facilities in Winterswijk. This is possible thanks to our extremely modern machinery and highly skilled employees. Our ISO certificate and the implemented LEAN principles make sure the highest quality norms are implemented when producing your unit. They also make sure costs always remain manageable.

#### Service

We believe service is an extremely important part of our organisation. Our Service back-office offers technical support via a helpdesk and coordinates the availability of well qualified maintenance engineers. Certain services can be acquired separately, including inspection and maintenance, spare parts and repairs, training and process monitoring. Customers can also opt for a service contract, which allows different activities to be combined and costs to be reduced. We offer a unique service concept that offers our clients the best possible service.





Process control reduces failure.

# A smooth process for a successful result

At Colubris Cleantech we have a professional team of Project Managers, dedicated to support in projects for wastewater treatment, waste recovery and bioresource. Our Project Managers have years of experience with realising successful projects, worldwide, and with a hands-on mentality.

Once a supply contract has been agreed, it is the Project Managers' responsibility to complete the project in time, according to the specifications, within budget and to the satisfaction of our customers. Regular progress reports can be provided, as well as internal or external test reports and inspection reports of the goods before shipment.

The Project Manager, the Project Team and the end-user together develop the Project Plan. For each project a Project Manager is appointed, who monitors, controls and executes the Project Plan. This one point contact ensures a smooth execution and communication, both internally and externally. When a project is successfully completed it is handed over to our After Sales & Service Department.

In the project schedule the following activities are managed by the Project Manager:

- Project Initiating
- Project Planning
- Basic Project Engineering
- Detailed Project Engineering
- Purchasing
- Manufacturing
- Transport
- Installation
- Testing/Commissioning
- Training
- Take-over
- Project Closure and Review



## The hummingbird Symbolic for our organisation

Colubris Cleantech focuses on sustainability. In our opinion, sustainable solutions can only be realised by working together, from the very start of the production process. Our organisation uses innovative technologies to improve the production and commercial performance of companies. These solutions can, for example, involve performing production processes more intelligently, making better use of energy from wastewater and using energy in a more efficient manner.

#### **Responsible entrepreneurship**

Corporate social responsibility is expressed via our commitment to employees, customers, suppliers and our surroundings. We also continuously invest in new technologies. And, when it comes to our employees, we are always investing in training and innovation.

Want to create smarter production processes, use residues from water and waste more efficiently and use energy more effectively?

Then please contact us via www.colubriscleantech.com or phone +31 (0)543 55 13 70.



#### The story of the hummingbird

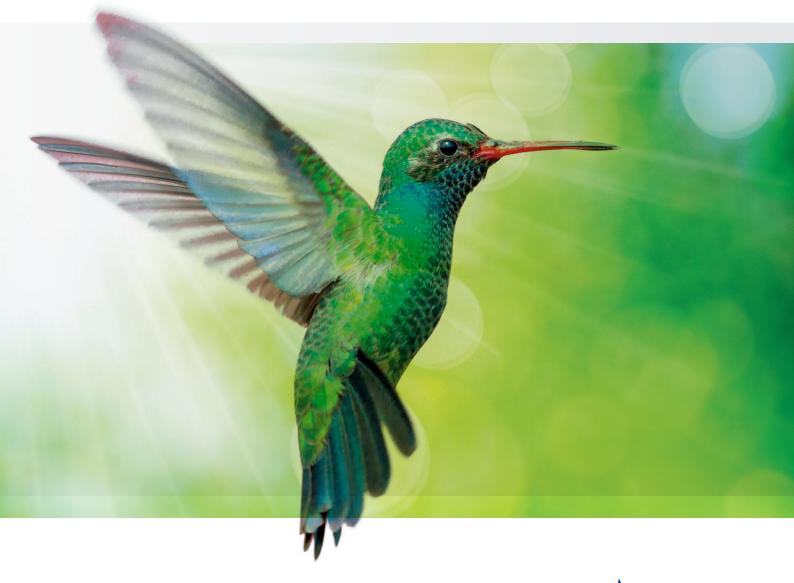
A huge forest is being consumed by a fire. All the animals in the forest come out and they are transfixed as they watch the forest burning and they feel very overwhelmed, very powerless, except this little hummingbird. It says, 'I'm going to do something about the fire!' So it flies to the nearest stream and takes a drop of water. It puts it on the fire, and goes up and down, up and down, up and down, as fast as it can.

In the meantime all the other animals, much bigger animals like the elephant with a big trunk that could bring much more water, they are standing there helpless. And they are saying to the hummingbird "What do you think you can do? You are too little. This fire is too big. Your wings are too little and your beak is so small that you can only bring a small drop of water at a time!"

But as they continue to discourage it, it turns to them without wasting any time and it tells them "I am doing the best I can".

That is what all of us should do. We should always be like a hummingbird. I may be insignificant, but I certainly don't want to be like the animals watching the planet go down the drain. I will be a hummingbird, I will do the best I can.

"Thou shall not be a bystander." Helen Sperling (1920 – 2015)







## LET'S CLOSE THE LOOP TOGETHER

Just like you, we want to pass on a healthy planet to the next generation. Not in the condition we found it, but hopefully a little bit better and cleaner. And this does not require additional revenues to be set aside; on the contrary. We do everything to use smart technology and processes when purifying waste and all kinds of wastewater, so they can be reused in the best possible manner.

This helps us to prevent wastage and completes the product life cycle.

Together we have created a lasting movement that is not only good for the environment, but also for your wallet. All our solutions have been developed with these principles in mind.

Shall we work together to create something wonderful?

### www.colubriscleantech.com