

CHRISTIAENS GROUP | THE POWER OF COMBINED EXPERIENCE |









# CHRISTIAENS GROUP

*Christiaens Group is a global leader in setting up turnkey solutions for mushroom farms and compost facilities.*

Christiaens Group is a technical, international operating company with the headquarter in The Netherlands. Working with Christiaens Group means working with a winner. We belong to the best manufacturing companies in the Netherlands and we have the ambition to continue our position in the top.

Our company has 2 production locations, located in Horst, The Netherlands and KunShan, China.

Christiaens Group is executing total projects since mid 90's and was the first company who had all disciplines within the company like construction, technical installation, controls and machines. This experience is a big benefit in the realisation of mushroom en compost projects.

## COMPANY PROFILE

*The company started with making machines for the mushroom industry in 1971 and expanded their expertise over the years in all areas related to mushroom cultivation and (waste) composting.*

Since 1995 we supply the world with turnkey solutions completely engineered and produced in house. The disciplines are:

- **Engineering:** setting up and engineering of complete projects in the mushroom and waste industry.
- **Construction:** everything related to the construction of mushroom farms and compost plants.
- **Technical installation:** air handling systems and technical installations for creating the right climate as well as odour management.
- **Controls:** control technology for all processes in mushroom growing and compost production.
- **Machines:** designer and builder of proven/good quality for compost production and mushroom cultivation.



# SUSTAINABILITY

*Christiaens Group considers it is important to contribute to a sustainable world. We do this by offering solutions that enable our customers to produce more efficiently in all aspects. We supply and install turnkey projects for the mushroom cultivation and compost industry. Start from design, to build and operate, all over the world. In addition, we are constantly looking for solutions - from the cradle to cradle concept - to create added value from organic residual flows and improve bio-efficiency.*

We convert our passion and knowledge of mushroom growing and organic composting into smart products and innovative solutions. Solutions that not only increase the efficiency for our customers, but also contribute to a sustainable world.



# INNOVATION

*Christiaens Group fully understands the need of innovation to be able to produce more cost effective and with minimal demand for natural resources. We are working on new concepts of growing mushrooms and compost production with a focus on maintaining high quality mushrooms or substrates with substantial improvements on harvesting efficiencies as well as energy efficiency and safety.*


Implementation of energy efficient technologies in the projects is a must to contribute to a sustainable world. Technologies like heatpumps, ammonia chilling, storage of energy in the ground, optimising climate control and heat recovery will become more common in a mushroom farm or compost yard.











# PROJECT DESIGN AND ENGINEERING

*Christiaens Group designs complete facilities from A to Z.*

Setting up or renovating a mushroom and or compost facility is not an easy task. Many items have influence on each other and on the most efficient set up. Process needs are key in the design. Focus is there as well on hygiene, energy and labor efficiency. And of course local regulations are taken into the design as well. Together with the customer we will come to the most optimal solution.

The wide expertise and many years of experience makes it possible to develop and engineer a facility in a very short time.









# PRODUCT INFORMATION

## COMPOST PHASE 1

### *Phase 1*

Phase 1 is the start of a good result. A good recipe, mixing and fermentation are the key for a productive substrate. Christiaens Group build up a lot of experience in building and constructing these kind of facilities.

### *Building*

Christiaens Group supplies the complete building as well as parts needed for the construction. We have a lot of experience in setting up an outdoor or indoor facility. By doing all disciplines in house there will be a lot of integration which contributes to a cost effective project.

### *Air handling system and control*

For controlling the process we deliver air handling and control systems. The configuration depends on the facility and customer/process needs. We also design and build odour treatment like extraction ducts with heat recovery, ammonia scrubbers and bio filters.

### *Technical installation*

In addition we can also offer other installations for the process water treatment and water supply throughout the facility.

### *Machines*

Christiaens Group invented the overhead filling system of which the first one was built early 90's. Also walking floor hoppers and tunnels are the invention of our company. Compost handling is our specialty!









# PRODUCT INFORMATION COMPOST PHASE 2/3

## *Phase 2/3*

A good pasteurization and spawn run is very important for an optimal output. Setting up and building these facilities are not tolerating any mistakes. Christiaens Group has build up many tunnel facilities, using know-how to make these facilities perform well. Process control, hygiene, labour and energy efficiency are very important elements in an optimal design.

## *Building*

The phase 2/3 building is the most crucial building in the process. Little mistakes can cause huge hygiene issues. For these kind of projects Christiaens Group supplies also the complete building as well as parts for the construction like doors or grid floors. We can offer either insulation panel or gas concrete tunnels. In our design we make sure that the climate installation and machineries are optimal integrated.

## *Air handling system and control*

For controlling the pasteurisation, conditioning and spawn run proces we deliver air handling control systems.

## *Technical installation*

In addition we can also offer installations like cooling, steam and cleaning systems.

## *Machines*

We supply the complete machine set for phase 2/3 facilities. While hygiene is crucial we have designed the machines in a way that cleaning is made as easy as possible.









# PRODUCT INFORMATION

## MUSHROOM GROWING

### *Growing*

The markets demands a good quality product. A good performing mushroom farm is a must to achieve good quality mushrooms. Christiaens Group is building mushroom farms for many years from basic to luxury.

### *Building*

Christiaens Group designs the total building. We produce total buildings as well as parts of the construction to suit customer's needs. A lot of important details are incorporated in the design.

### *Shelving*

We produce shelving from aluminium as well as galvanised steel or a combination. Depending on the needs we select the best shelving.

### *Lorries*

For every budget we have a solution from manual till full automatic lorries. We invented the self-driven hydraulic lorry.

### *Air handling system and control*

A good balanced climate is crucial for the best quality. We adapt the air handling systems for every environment. We have built mushroom farms for all kind of climates all over the world.

### *Machines*

Christiaens Group is the leading company in the supply of machines for mushroom farms.

### *Technical installation*

In addition to the airhandling we can also offer the complete technical installation for supplying the energy and water throughout the facility.





# SUPERVISION / MOUNTING ON SITE

Christiaens Group not only supplies but also assist you in construction and installation. We can organise a dedicated supervisor on site to help the local crew with the installation. We can also offer the complete mounting. In consultation with the customer we determine the most suitable way.

# START UP/TECHNICAL TRAINING AND GUIDANCE

Besides the technical start up we can also organize a grower and/or composter to do the warm start up. During the first months after the first fill this person will train and guide the employees to come on a high level. This gives an immediate boost on the performance of the project.

The production of good quality compost and mushrooms is not only depending on the equipment and design but also of:

- Raw material
- Grower / composter
- Management
- Maintenance
- Pickers (experience/ on time picking)
- Quality / quantity balance



## **Your innovative partner for:**

- Engineering
- Construction
- Machines
- Technology
- Realisation
- Operation



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