



# PHASE 1 TUNNELS

QUALITY COMPOST FOR AN OUTSTANDING HARVEST

  
**Christiaens  
Group**



## A GOOD START IS HALF THE WORK!

And that's how it is! But how do you provide that good start? You want your compost to be of outstanding, stable quality. A challenge when you look at market circumstances. High-quality raw materials are becoming scarcer and therefore more expensive. Having and keeping good staff is an equally big challenge. And what about environmental rules and guidelines? They vary from country to country, but they have one thing in common: they are becoming ever more strict. Something your process and your business have to keep up with, and something we can assist you with.

At Christiaens, we know and recognise these challenges. We have a proven track record in engineering and supply of mushroom cultivation and compost making facilities. In consultation with you, we look at your ideal picture. We base ourselves on your objective. What are you doing now, where do you want to go, what is your masterplan for now and the future? Then we look at the solution that suits you, based on minimum staffing levels and taking into account the environmental rules and directives that are in effect and those to come. That gives you a nice advantage now and peace of mind for the future.

# COMPONENTS FOR YOUR HOMOGENEOUS, CONSISTENT COMPOST

Once we know your needs and requirements, we look at how each of the components below fits into your production process:

## AERATION SYSTEM

Aeration of the compost is required for a good aerobic process. We design, manufacture and install state of the art air handling systems for a perfect control of the process. From low budget aerated floors to high sophisticated systems with recirculation of the process air. All controlled by the latest process technology and fully adaptable to the climate of your local environment.

## ODOUR MANAGEMENT

Odour emission is an important issue worldwide. It is therefore important to optimally control odour emissions from the installation. Our solutions for this are highly advanced: Air from working halls and process bunkers is extracted and passes through ammonia scrubbers and biofilters to become clean air.

## MIXING

We don't need to explain that mixing is a crucial step for good compost. We invented the overhead filling system with a moving floor hopper. The majority of compost producers around the world use this proven system to achieve a good mix with the highest productivity. A moving floor hopper ensures a very even release of the compost with a high capacity to the filling system. This optimises mixing with the other components, such as chicken manure, gypsum and water. And it is beneficial for an even flow towards the filling machine. Using a different type of hopper (i.e. chain hopper) gives a less uniform release.

## STRAW LINE

Destring strawbales and loosen the straw is an important step in the process which is done more and more by machines. These open up the straw, make sure it absorbs the water and forms the base of an excellent substrate. Automating this process gives you maximum efficiency with minimum staff input.

## BUILDING

We design the total construction including foundations and static calculation based on local conditions and demands. We produce and deliver the entire construction with maximum efficiency, always ensuring optimal cooperation and coordination between climate, machinery and construction.

## TOTAL CONCEPTS (GOING BEYOND PHASE 1)

All the above technologies are integrated into your concept for Phase 1. We are also the right place for the next steps in mushroom cultivation. We design, manufacture and install total projects from foundation to machinery and climate systems. You indicate your wishes and we think along with you. Whether it is a classic shelving system or a more advanced solution such as our tilting shelves or drawer system.

## PHASE 1 IN TUNNELS GIVES YOU:

- The best homogeneous aeration of the product
- Substantially better bio-efficiency of the raw materials
- A faster composting schedule
- Compact and fully indoor construction
- Less air scrubbing
- Further automation of processes (emptying/filling)
- Fewer loaders and less traffic movements
- Healthier and safer working environment for staff

**By doing phase 1 in tunnels, you have advantages in terms of process control, more efficient raw material use and odour control. In addition, with smaller facilities, the available infrastructure is used more efficiently.**

**This reduces your carbon footprint!**



## CHRISTIAENS GRID FLOOR SOLUTION

The principle grid floor solution is basically similar to Phase 2/3 in tunnels. The compost is filled in the tunnel with a filling cassette and emptied with a pulling winch. The compost lies on a special net on the aeration grids.

Of course, this set-up takes into account the higher demands on building and machinery quality needed for the more aggressive environment of phase 1.

Depending on the quantity of compost, both phase 1 and phase 2/3 can be in the same building. This gives you a compact installation. An ideal solution if your space is limited!

## WHICH SOLUTION DO YOU CHOOSE?

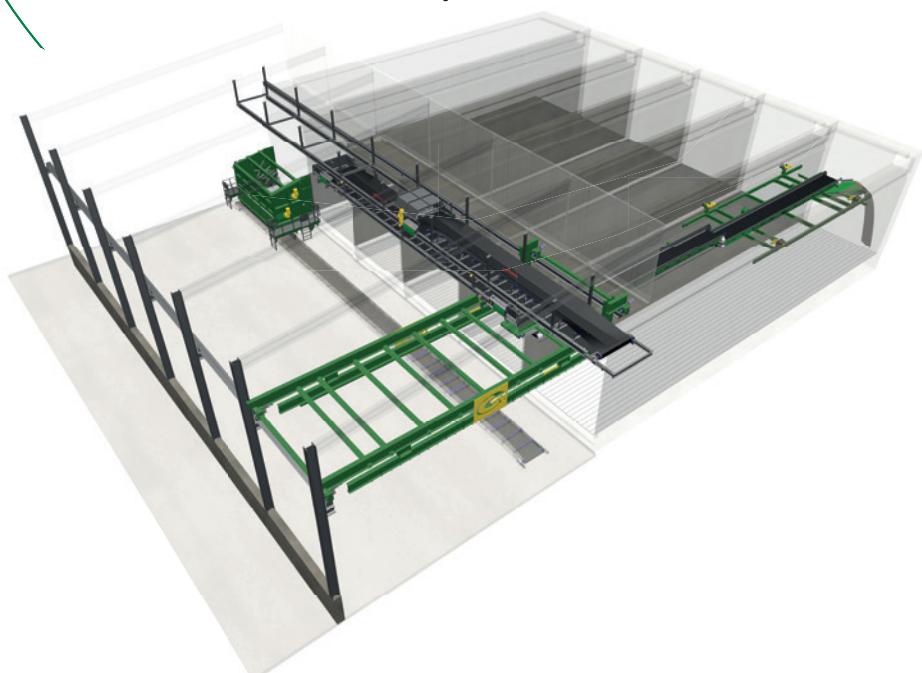
### CHRISTIAENS ADVANCED MOVING FLOOR SOLUTION

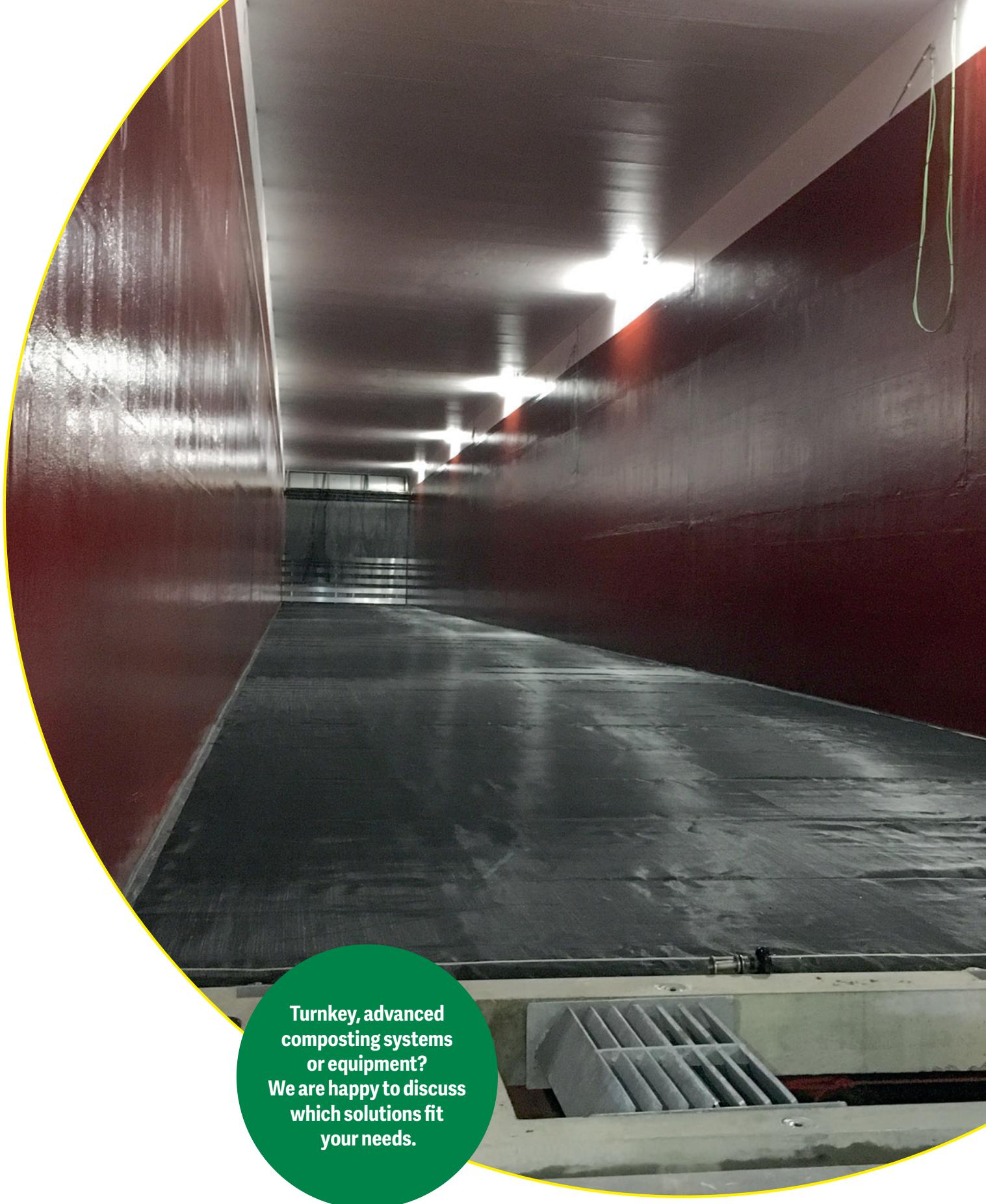
Our moving floors have been proving themselves since 1994. The compost is filled in a tunnel via a hybrid system of an overhead filler and a filling cassette. This gives you the best macro mix and micro mix. The compost falls onto a spigot floor with steel plates between the spigots that act as a moving floor.

When converting or emptying the tunnel, a moving floor pulling winch is placed in front of the tunnel. This automatically couples onto the plates and the moving floor mechanism empties the tunnel.

This is the solution if you are looking for:

- The highest achievable, homogeneous filling
- Low production costs
- Further mechanisation/automation
- More labour-friendly





Turnkey, advanced  
composting systems  
or equipment?  
We are happy to discuss  
which solutions fit  
your needs.

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