

*Supporting  
your Growth.*



**metazet™**



## ***Working together is the strongest structure***

The best cultivation and logistics solutions aren't offered by just anyone, as the only way to know what a grower really needs is a deep understanding of what goes on in the greenhouse. It means you have to be there with the grower, listen and look carefully, share your thoughts, and above all think things through. Nothing works better than discovering needs together with the customer, and really feeling how growth and working conditions can be improved. You're already planting the seed in your head at this stage, before converting it into a proper bespoke solution on the drawing board and in the workshop. You don't just work for each other, even more importantly you work with each other. As a family business which supports growth, this is something we're very familiar with.

Smarter cultivation, relying on appropriate, practical and reliable solutions, is always our goal. This involves our proven systems that we've produced for many years, alongside innovations that prepare

greenhouses for the future. We increase crop productivity, make sure people can work more easily and safely, and improve the efficiency of processes. Our work always works, and our customers know it. Why? Firstly, we develop our products and systems in-house, fabricate them in our own workshops, and extensively test them in our own demo greenhouse and R&D centre. Secondly, our people enjoy a unique combination of skill, boundless enthusiasm, and a desire to constantly improve.

Even though we've been the go-to manufacturing company for greenhouse horticulture since 1978, we're still bursting with ambition. We help others grow, but we haven't stopped growing ourselves. What drives us to do better, day in and day out? To be the new standard in cultivation and logistics solutions, through a continual process of learning, developing talent, and bringing out the best in ourselves and our customers. One thing we're sure about; working together is the strongest structure!

metazet<sup>TM</sup>



Leo and Luke van Adrichem drove the first pile for the current building on Zwethove in 1978.

## A story that began back in 1978

More than 45 years of horticultural innovation started in 1978 with hooks and brackets for heating systems. These were made of metal, as is reflected in our name to this day. As a supporter of growth, we help growers grow more smartly. These days, we offer many more solutions, because we ourselves have grown over the years. Our big breakthrough was the tube rail system with our solid tube rail supports, a basis for further successes. We developed cultivation gutters, hoisting installations, and wire products. Supplemented later by chain conveyor systems, harvesting carts, and electric tractors. After a number of moves, we've now settled at our current location; Zwethove business park in Wateringen, the Netherlands, where our premises cover no less than 17,200 m<sup>2</sup>. More than 75 employees work at our head office in Wateringen alone. Since we also help growers outside the Netherlands, we have a number of branches around the world. In 2000, we took an interest in FormFlex, leading to a full takeover in 2010 and the birth of Metazet FormFlex.

We've come a long way, from selling modest hooks and brackets to becoming a globally recognised player in the horticultural sector, all thanks to collaboration with growers.



On the pipe at the grower's to feast our eyes and ears. We've been doing that for years.





## **How we help the horticulture sector grow**

Nurseries and installers all over the world turn to Metazet for complete professional greenhouse equipment. They trust the systems and products we design, produce, and deliver, and our extensive expertise in this special field. Our employees possess the technical experience necessary to be at home in the greenhouse. We brainstorm with you about the ideal off-the-shelf or custom made products for your needs, and support you from design to realisation. You can also rely on support afterwards.

### **Greenhouse equipment we supply:**

- *Cultivation systems*
- *Hoisting systems*
- *Tube rail systems*
- *Suspension materials*
- *Logistics systems*
- *Internal transports*

## ***All expertise in-house***

With our advanced and very comprehensive professional machine park, our services include the following:

- *Laser cutting of plates*
- *Laser cutting of tubes*
- *Robot welding*
- *Forming*
- *Punching*
- *Cutting*
- *Wire bending*
- *Pressing*
- *Roll-forming*
- *Welding*
- *Milling*
- *Turning*

## ***Tool making***

Custom made production often requires custom made tools and machines, so we adapt or build machines and tools ourselves in our own tool shop. We make sure our machines and tools meet strict, environmental, health and safety requirements. Our tool shop department is responsible for maintaining all the machines, tools and installations in our factory.

## ***Assembly***

Our flexible assembly line allows us to prepare each following series of products quickly and easily. Final assembly is taken into account when designing new products so that we can guarantee quality, avoid impractical solutions, and reduce delivery times.

## ***Electrical department***

Our electricians and electronics engineers are skilled and solution-orientated in every aspect, whether it concerns wiring our M-Tracks or writing a complete program for an induction-controlled logistics system. Electric vehicles are becoming more common, and their technology is constantly improving. Not a problem for Metazet, as we do everything necessary to keep our knowledge up to date.



# Cultivation systems

*“Metazet supplies various solutions so you can grow your products with care. They significantly increase harvesting efficiency, because the fruits become more accessible.”*

## **FORMFLEX®**, the standard in cultivation gutters for horticulture

Our FormFlex® cultivation gutter models set the standard worldwide. Each gutter can be fully adapted to your needs, so that it suits each specific crop and situation. We produce cultivation gutters in any desired length, which reduces the number of connections to a minimum. With our mobile profiling machines, we can profile cultivation gutters on location.



Watch the video about our cultivation gutter systems.





## Advantages of growing on gutters:

- Cultivation above infertile soil made possible
- Lower water consumption through reuse of drain water
- Less fertiliser and nutrient consumption through reuse of drain water
- Identical water management for every plant
- Optimal air circulation through the crop
- Easier to control the crop growth
- Diseases and pests have less chance
- Labour productivity increases
- Better working conditions since work is carried out at the right height





# ***Suspension and support***

Metazet provides a complete range of suspension and supporting materials, such as gutter supports, mounting materials, end tension pieces, and facade construction materials.

## ***Supported or suspended gutters***

We calculate the strength of all our support and suspension materials, which are then designed and produced in our own factory. This means we can supply a wide variety of models.







## ***Wire products***

Metazet supplies wire products for various cultivation solutions. Whether you need gutter brackets, drip hooks, supports for growpipes, crop support brackets, retaining brackets, stem brackets or wire lowering hooks, we provide advice on these solutions and fabricate them in-house.



# Hoisting systems

We supply hoisting installations that support heating pipes and heats the crop with maximum efficiency. HDL systems and HGS systems are available, to hoist the entire tube rail or gutter system. We also supply a swing system which the grower can use to move cultivation gutters sideways to increase space for harvesting. Metazet's self-made hoisting systems improve harvests and reduce the workload, thanks to their smart technology and high-quality materials.

Whether an existing or new greenhouse, our hoisting system can be installed in almost every situation. Firstly, we make a design, complete with drawings and calculations. We then produce all parts in-house, all vulnerable products will be hot-dip galvanised to significantly extend the lifespan of the hoisting installation. We provide detailed technical drawings so that our systems can be installed correctly. We work with experienced mounting professionals that mount our systems quickly and professionally. All parts, such as drives, self-locking worm gear boxes and shafts, are carefully calculated by us for a long service life.







## ***Hoistable heating pipe system***

Our hoistable heating pipe system ensures the crop is heated in the right place. The hoisting shaft is connected to a drive so that the height of the heating pipes can be adjusted. The tube itself can be mounted separately, in an A-hook or J-hook, or on a beam. The heating therefore accompanies the growth of the crop, and the heat continuously stimulates growth.

## ***Hoisting system for floriculture***

The Metazet hoisting installation for cut flowers/ ornamental plants combines two functions. Firstly, it supports the crop, and secondly, the heating pipes accompany the growth of the crop. It is often used for the cultivation of chrysanthemums, freesias, lilies, and lisianthus.





## HDL system

To hoist greater weights, Metazet developed the HDL (Heavy Duty Lift) system. This system is capable of hoisting a weight of up to 15 kg per m<sup>2</sup> of greenhouse surface, equivalent to a weight of 150 tonnes per hectare.

The system is highly suitable for lifting tube rail systems, gutters, and long beams in various cultivations, as well as for lifting cultivation wires in combination with the tube rail system and gutter system. Additionally, the HDL system is particularly well-suited for optimizing cultivation space utilization. Consider, for example, cultivating in adjustable gutters, allowing for a second layer of cultivation underneath, and for organic cultivations in open ground.







Watch the video about  
our Swing system.

**“Metazet develops  
hoisting systems with  
smart technology and  
high-quality materials.”**

## ***Swing system***

Our Swing system allows the cultivation area to be used better, with associated higher production. Easy to install, the system can be placed in both new and existing greenhouses. It creates an ideal working height and workspace for a relatively low investment. Another major advantage of the Swing system is that plants have more space to grow, which results in a bigger harvest. This system is mainly used in strawberry cultivation.





# Tube rail systems

*“A good tube rail system ensures that the heating pipes are in the right place, and provides a sound basis for the transport system in a greenhouse. For this reason, it's important to choose the right support to be able to work stably and safely. A Metazet tube rail system is your guarantee for safe and optimised working conditions.”*

## Tube rail supports

Our tube rail supports allow safe and reliable transport over the tube rail. The pipes lie deep in the support, so any lateral movement is avoided. The pipe can also stretch and shrink, because it's not fixed with a tube rail strap. The tube rails therefore remain in a straight line, resulting in a safer tube rail system. An additional advantage is the uniform transport over the pipe, which increases the service life of the transport system. In the past, tube rail supports often

used to be secured to the pipe with a strap, but our KLEM system now sets the standard. For extra hygiene, growers can opt for closed tubes to keep dirt out.

## Baywide supports

To make the tube rail system even more stable, safer, and better aligned, we developed the baywide support, with head piece guides, centre fixation, and an end stop. The system ensures stability in long and high greenhouses, a must when it comes to automation. Just like our tube rail supports, baywide supports are available in various sizes. Baywide supports can also be equipped with supports for the cultivation gutter.







### **Advantages of the baywide supports:**

- *Confining the support between the posts allows fixed distribution of the pipes.*
- *Fixed distribution of the pipes makes crossing the centre aisle easier and safer*
- *Fixed distribution of the pipes enables automation*
- *Less labour needed to mount the system*
- *Mounting the system is more accurate*
- *Tube rail system become more stable thanks to the long base plate*
- *Prevents the system subsiding on softer surfaces*
- *System can be combined with cultivation gutters*
- *If cultivation gutters are combined with a baywide supports, the greenhouse structure doesn't have to support the cultivation system, a useful solution for less sturdy greenhouses.*



# Suspension materials

Whether needed for heating, irrigation, lighting, electricity, cultivation or screening, Metazet makes every kind of suspension material for greenhouses. Our materials, from rings to consoles and from facade hooks to truss brackets, are made from strip steel or round steel. Everything is designed, strength-calculated, and produced in our own factory, so we can supply any model in any size.





# ***Metazet makes it***

We like to visit growers in the greenhouse to check which suspension materials suits best. What kind of things do we make? Monorail hooks, truss brackets, u-bolts, roof brackets, facades, facade consoles, extension strips, and boat hooks. Metazet can also make anything to measure if a grower needs something specific.



# Logistics solutions for the horticultural sector

Our transport systems make life easier by providing better working conditions and reducing effort. In addition to complete systems, we also supply transport equipment that helps growers move anything. These include electric tractors, aerial work platforms, and harvest carts, all individually designed to make it easier to get from A to B, and all manufactured in our own factory. Need something made to measure? No problem. Metazet's strength lies in providing tailored solutions.

## Advantages of our logistics products and systems

- *Easier and faster harvesting*
- *Ergonomic and safe working conditions*
- *Lower workload and less effort*
- *Lower labour costs for the same work*
- *Customisation available, as we produce in-house*







## Chain Track

Metazet's chain track system takes your carts individually, automatically and quietly from A to B. This low-maintenance system is mainly mechanical, very easy to use and can be fully adapted to specific circumstances. Our chain track can be built in different shapes, from a greenhouse with a T-junction or a nursery with multiple greenhouses to a central processing area. It can also be combined with the current processing line. Do you need harvest carts with cart recognition? No problem, we'd be happy to show you the many applications.



## M-Track

The M-Track is based on an induction-guided tractor to which harvesting carts can be coupled. The sensor in the M-Track follows the predetermined route via an induction wire. The control panel can send commands through the wire to individual tractors.

The M-Track is ideal for combining with other logistics systems, because the routing system has virtually no limits. Unloading units, pushing units, buffer controls, and disinfection units are among the many options. We also have harvesting carts suitable for every crop and system.



*Watch the video about  
our M-Track system.*



## ***Hanging Basket system (HBS)***

The hanging basket system (HBS) was specially developed for the cultivation of hanging plants. It can be used as a second cultivation layer above another crop, or at working height in the processing room. Because the track can be lowered while it is running, all the work on this extra cultivation layer can be carried out from one place. The HBS can be installed in almost any greenhouse, entirely according to specific wishes and requirements. For example, it can be adapted to the distance between plants, number of loops and length of the track. The HBS is suitable for almost all pot sizes. Plants can also be suspended with extension hooks at multiple heights in the track. Our comprehensive control unit is easy to install, and makes automatic watering possible, among other things. HBS is designed for DIY installation.



*Watch the video about our  
Hanging Basket system.*

## ***Clapper Track***

Heavy crates or boxes are often used in a greenhouse. These are usually placed on the ground when bulbs are being brought into flower or when sorting by colour, so employees have to bend over or shift them around. Metazet has developed a smart solution that makes this work much easier: the Clapper Track. Products are moved over the Clapper Track by air pressure, so bending over and shifting things around manually is no longer necessary.







## M-Service

The M-Service scissor lift travels equally easily over tube rails or concrete paths. Since it moves effortlessly from the transition between a concrete path and pipe rail, the grower saves a lot of time during tasks such as scouting or maintenance.



*Watch the video about  
our M-Service.*

## JBL

The JBL cart is a simple electric aerial work platform that can be adjusted in height really easily. The clever design of this crop-care cart maximises stability. The cart can be easily moved over the tube rail by operating one of the two foot pedals. The speed of the JBL cart can be adjusted by simply turning a rotary knob. Automatic raising and lowering is rarely necessary when caring for the crop, so the JBL cart is a budget-friendly alternative to more advanced hydraulic scissor carts.





# Internal Transport Systems

## H-400

The H-400 is an electric walk-along tractor, ideal for pulling, steering, and pushing heavy loads such as Danish trolleys, roll containers, and auction carts. Due to its compact design, it is highly maneuverable and thus excellently suited for small spaces. The H-400 is available with various convenient options.



## HT-series

The electric HT series moves goods, resources and products effortlessly through the greenhouse. It makes internal logistics more efficient and reduces the physical burden on people. Goods can also be transported on the tractor itself. The compact HT series is easy to operate where space is limited. These tractors are easy to use, and ready to work all day long. The HT series consists of the HT-400XL and the HT-1500, which have different load capacities. Both can be adapted to your wishes and fitted with various options.



*Watch the video  
about the HT-1500.*







## **Trike series**

The Trike is an electric tractor that can also be used for transporting the operator. The series consists of the Trike 400, Trike 1200, and Trike 3000S, which vary in power and capacity, and all three can be customized with various options. This compact and highly agile tricycle is a really easy way of getting around.



Watch the video  
about the Trikes series.

## **E-Nova**

The E-Nova is our powerful seated electric tug. With a turning circle of just 1.8 metres, it's incredibly manoeuvrable. The E-Nova can handle soft surfaces easily and smoothly thanks to its three pneumatic tyres. It's features a comfortable seat with backrest as standard. The handlebar height is adjustable.



Watch the video  
about the E-Nova.

	<b>Trike 400</b>	<b>Trike 1200</b>	<b>Trike 3000S</b>
<b>Pulling Force</b>	250kg	1600kg	3500kg
<b>Turning Circle</b>	1,2 meters	1,5 meters	1,7 meters
<b>Dimensions LxW</b>	1350x570	1436x752	1486x802

**“Metazet makes it  
easier to transport  
people and products.”**



# Innovations

Metazet's strength lies in its ability to think along with the modern grower. With our team of experts, engineers, specialists and enthusiastic colleagues, our favourite challenge is to devise a solution for every problem. These cover everything from ground-breaking innovations to smaller customer-specific solutions that we manufacture quickly and professionally in larger numbers with our own machines.







# MetaFIT:

## *weld-free heating pipe connections*

Welding heating pipes is a labour-intensive and specialist task. It also has to be carried out early in the construction process, which poses logistical limitations. Metazet's MetaFIT solution is the answer: conicity ensures heating pipes are connected securely and watertight, without welding. MetaFIT is a faster solution that requires less specialist intervention. Pipe installation can be left to the final stage of construction, which considerably shortens the time needed to complete a greenhouse. In addition, it offers benefits in terms of safety on the construction site, because there is no fire hazard from welding. Extensive load tests have shown that MetaFIT is just as effective as a weld. In practice, the system has been shown to be completely watertight, even when subjected to the same load for more than 25 years.

### **The advantages of MetaFIT:**

- *Weld-free connection*
- *As strong and watertight as a welded joint*
- *Considerably faster construction, due to logistical advantages and faster connection principle*
- *Facilitates the installation of new or additional growth pipes or low-quality heating pipes in existing greenhouse complexes*
- *Preparation can be carried out on location worldwide*
- *Can be sprayed completely, no coating repairs required*
- *Less physical work and specialist skills required, easy to scale up*
- *Weld seam transition removed at tube sides*



# Second Skin

Metazet helps growers work more hygienically with Second Skin: this specially designed patented plastic top layer completely encloses and shields cultivation gutters. The annual application and removal of foil is no longer necessary. Folds cannot form in the hard, preformed top layer, so optimal drainage is guaranteed. Thanks to the smooth finish, algae, fungi, viruses and fertilizers have little chance of adhering. The UV resistance of the impact-resistant material used is in the highest class, so Second Skin will last for many years. It's also easy to clean with high-pressure cleaners and common cleaning agents.

## **The benefits of Second Skin:**

- *Upgrades existing cultivation gutters to give many more years of service*
- *Resistant to common cleaning agents and high-pressure cleaners*
- *Produced efficiently and rapidly on site with our mobile profiling machine*
- *Custom-made with seamless connection for any cultivation system*
- *Smooth finish, giving algae and fertiliser little chance*
- *UV-resistant and impact-resistant material*
- *Food safe*
- *100% recyclable*







# ***Our branches***

## **Metazet B.V.**

De Lierseweg 6  
2291 PD Wateringen  
The Netherlands

+31 (174) 22 58 22  
[info@metazet.com](mailto:info@metazet.com)

## **Metazet Polen**

Raba Wyzna 382 E  
34-721 Raba Wyzna  
Poland

+48 18 267 1136  
[info@metazet.com.pl](mailto:info@metazet.com.pl)

## **Metazet Canada**

9-86 Wigle Ave  
Kingsville, ON  
N9Y 2J8, Canada

+1 (877) 845-7376  
[info@metazet.ca](mailto:info@metazet.ca)

## **Beijing Metazet Agricultural Technology Co.Ltd**

No. 10815, 8th Floor, Unit 1, Block 3,  
Yuxi Plaza, Taibai South Road, Yanta  
District, Xi 'an, Shaanxi Province,  
P.R. of China

+86 138 1015 7767  
[daishuangrong@metazet.com](mailto:daishuangrong@metazet.com)

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