



**METEOR**  
**SYSTEMS®**



# Growing systems Vegetables



## 1 Custom solution

Every crop is unique, just like every grower. Our innovative growing systems are therefore fully tailored to your needs, with one objective: optimum growth.



## 2 Production

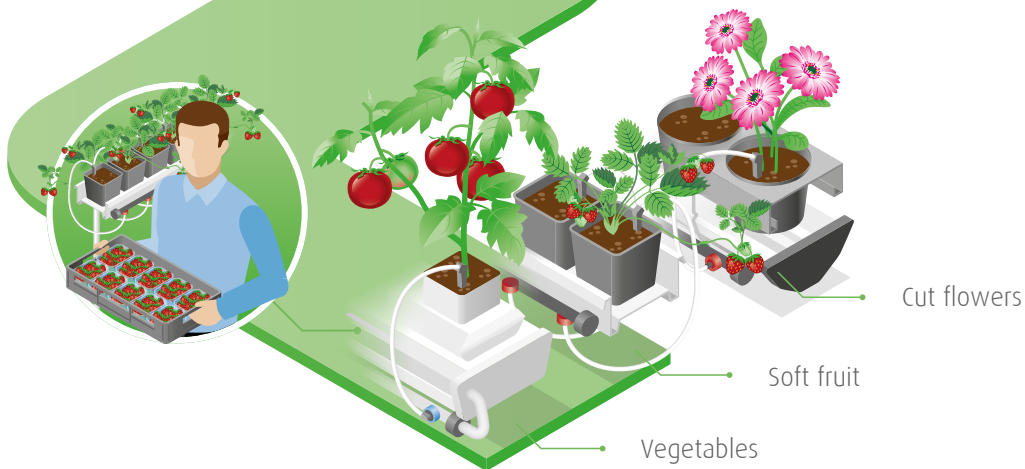
We produce all our materials and systems in-house, resulting in perfect integration and an impeccable fit. We've been doing this for over 20 years.

## 3 Transport

Our products are used by progressive horticultural businesses worldwide. Wherever you are, you can rely on Meteor Systems.

## 4 Technical service

Our advisers and technicians ensure that you get the most out of your crop. Our technical support literally knows no bounds.



## 5 Final product

Our growing systems are user-friendly and sustainable, reducing your labour costs and minimizing water, fertilizers and energy consumption.



**Choose growth,  
choose Meteor Systems**







## Introduction

Meteor Systems produces steel growing gutters with matching suspended systems, supports, wire products, drip systems, pipe rail supports, bay wide supports, attachment materials for heating pipes, and fruit covers. Our products are used by the professional horticultural sector all over the world, for growing vegetables, soft fruit, cut flowers and medicinal cannabis.

### **Our mission**

To develop, produce and distribute complete growing systems worldwide for every crop in professional horticulture.

Meteor Systems growing systems help you get the very best from your crop.

Our growing system are a perfect fit for the specific requirements of every modern grower and their growing conditions. Quality, optimisation and efficiency are the core values we apply to our growing systems. Because we manufacture our products in-house, we are flexible, and we can respond quickly and effectively to any requests. We deliver tailor-made solutions and work with you to meet your needs. This brochure therefore acts primarily as a guideline: we are happy to discuss any other requirements you may have.

# Contents



## Disclaimer

**Editorial team** Meteor Systems,  
Marketing and Communication Department

**Design** vdS creatie

**Texts** Meteor Systems

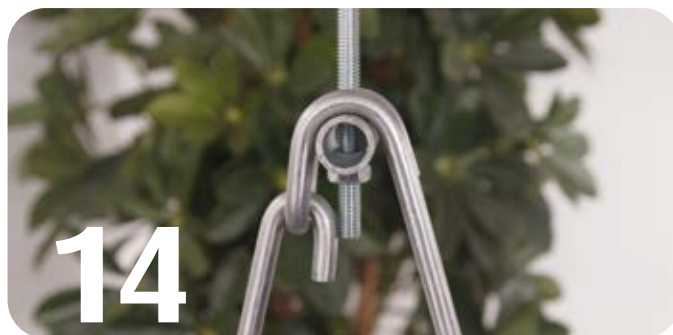
Products subject to change. Errors and omissions excepted. Images, colours, descriptions and specifications relating to dimensions, properties etc are approximate and non-binding. All information in this publication is protected by copyright. No information (text, image etc.) contained in this publication may be reproduced, copied, changed, published or approved for publication in whole or in part without the prior written permission of Meteor Systems.

**Edition** 02-2022

## 8

### Growing gutters

Growing gutters	10
Types growing gutters	12



## 14

### Suspended systems and supports

Suspended systems for growing gutters	16
Supports for growing gutters	20





22

## Gable systems

V-shaped suspension and semi V suspension	24
End and side gable supporting	24



30

## Options

End caps	32
Turn around brackets	34
Stem supports	36
Irrigation bracket	38
Plastic irrigation hooks	38
Crop wires and Crop wire droppers	40



26

## Drain trays

Central and end drain trays	28
-----------------------------	----



42


## Pipe rail supports and bay wide supports

Pipe rail supports and bay wide supports	44
--	----

# Growing gutters







*'Growing gutters are designed  
for long-term use.  
That's why you are opting for  
Meteor Systems growing gutters'*

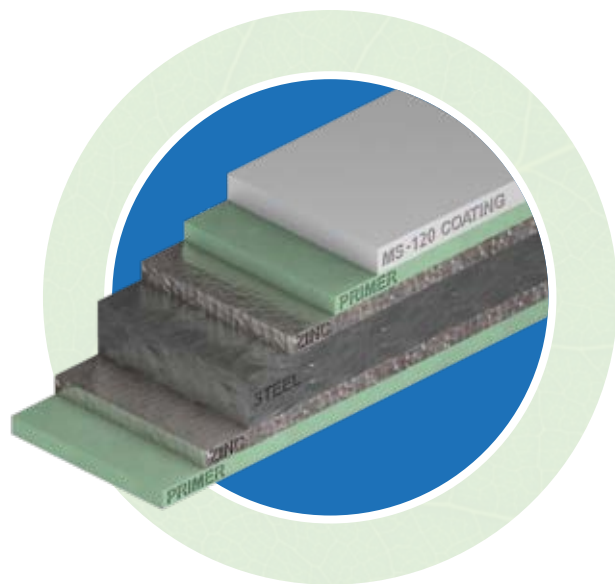
Meteor Systems growing gutters are made of top-quality coated strip steel and consist of multiple coating layers. Depending on your situation, we can roll form growing gutters on site or deliver them from our factory in individual parts. With more than 35 different variants, we offer a ready-made solution for every crop.

# Growing gutters

The gutters form the basis for any growing system. The combination of the crop, the span and the substrate holder determine the gutter shape and width. Our growing gutters allow you to recirculate the drain water, which can significantly reduce the quantity of water and fertilisers you use. Our growing gutters also contribute to better hygiene, thus minimising the spread of diseases. What's more, the air circulates more freely around the growing gutter, creating a drier climate.

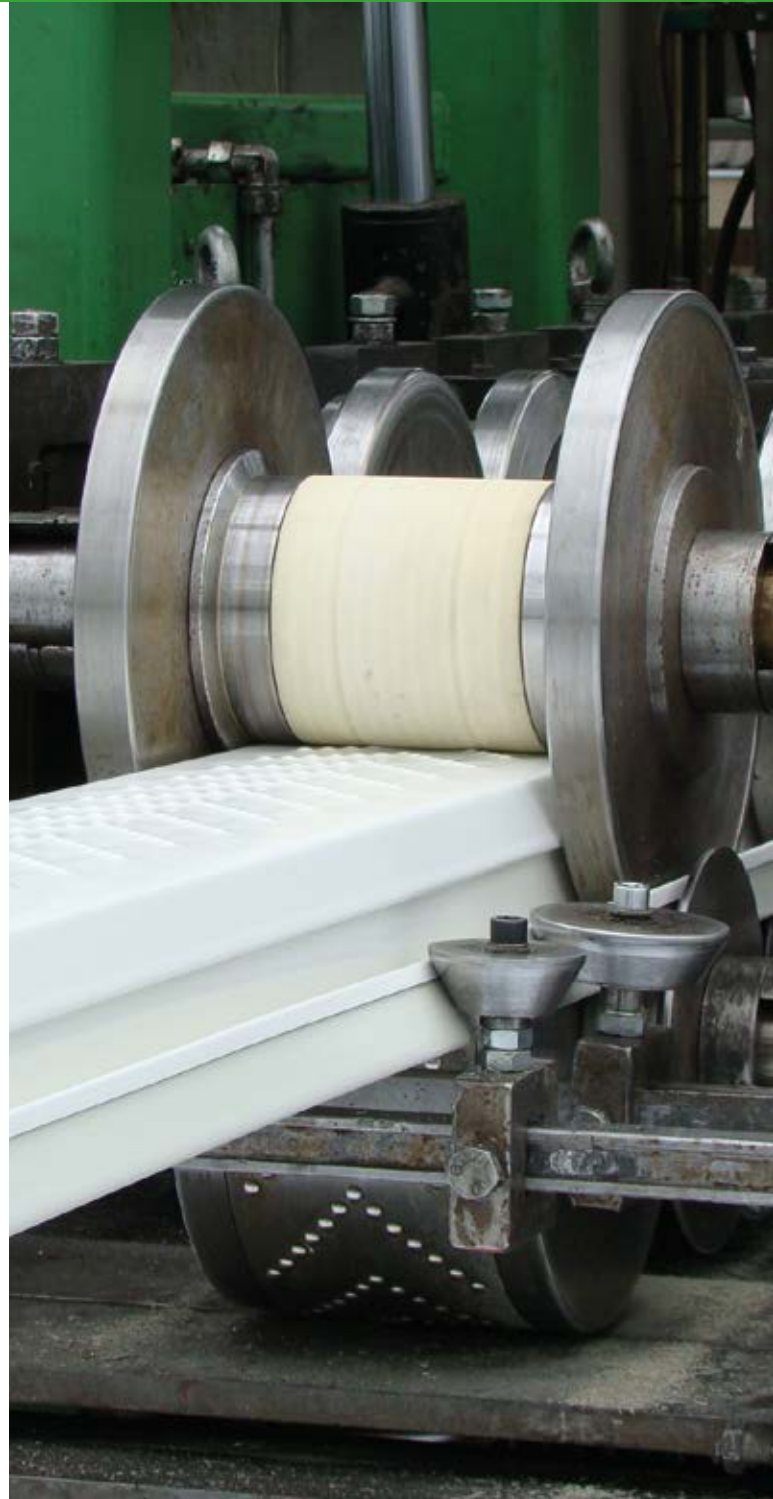
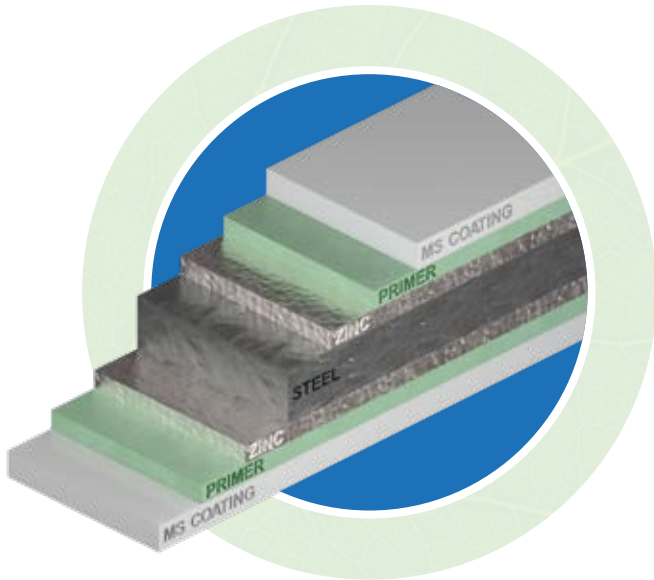
- Reuse of drain water
- More air circulation around the crop
- Less fertiliser usage
- Perfectly flat subsurface
- Ideal working height
- Better hygiene

To prevent corrosion, the strip steel is galvanised on both sides, primed and then finished with a single or double-sided food-safe MS-35 or MS-120 coating.










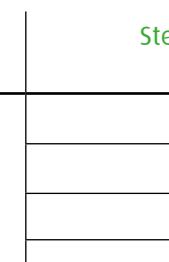
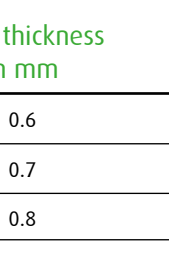
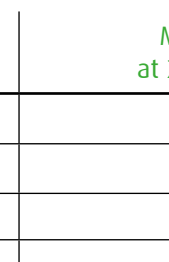
The strip steel is available in thicknesses between 0.5 and 1.0 mm. The coated strip steel is made up of multiple layers as follows, depending on the coating chosen:



# Types of growing gutters

Type	Model	Steel thickness in mm	Max. span at 25.0 kg/m <sup>1</sup>
GM-03		0.5	3.0
		0.6	4.0
		0.7	4.5
		0.8	5.0
GM-05		0.5	3.0
		0.6	4.0
		0.7	4.5
		0.8	5.0
GM-07 HD		0.6	5.0
		0.7	5.0
		0.8	5.0
GM-07 XHD		0.6	5.0
		0.7	5.0
		0.8	5.0
GM-14		0.6	5.0
		0.7	5.0
		0.8	5.0




Type	Model	Steel thickness in mm	Max. span at 25.0 kg/m <sup>1</sup>
GM-15		0.6	3.0
		0.7	4.0
		0.8	4.0
GM-16		0.6	4.5
		0.7	4.5
		0.8	5.0
GM-21		0.6	4.0
		0.7	4.5
		0.8	5.0
GM-26		0.6	5.0
		0.7	5.0
		0.8	5.0

# Suspended systems and supports







*'Meteor Systems' hanging and supporting growing systems give growers exactly what they need'*

Growing gutters from Meteor Systems can be integrated into a greenhouse structure by suspending them from or placing them on suitable supports.

# Suspended systems for growing gutters

In consultation with you, we design a special suspension for every crop that best suits your situation. Then we extensively test it to check that it can carry the weight of the fully loaded growing gutter. Suspended systems for growing gutters are supplied in custom lengths. We offer each basic component in a range of versions. A suspension generally consists of a fastening to attach it to the trellis or tunnel tube, a steel cable, a grow tube hook and a suspension bracket.

- Custom length for every situation
- Freely suspended growing system

Attach it to the trellis



2.1.1



2.1.6



2.1.0

Steel cables



2.2.1



# Index

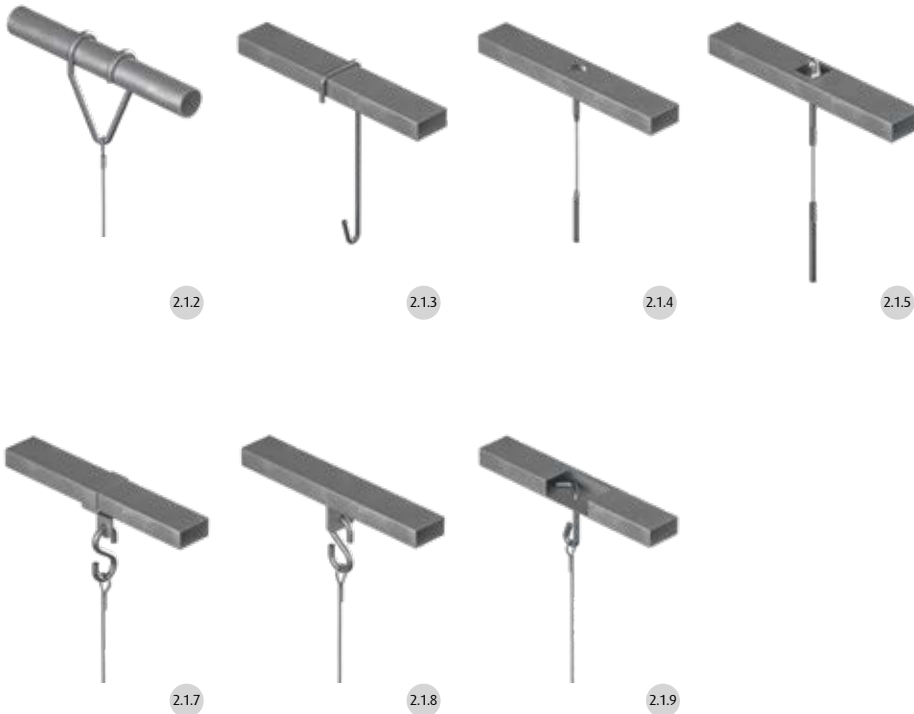
## 2.1.0 Complete suspension

### Attach it to the trellis

- 2.1.1 Trellis Bracket
- 2.1.2 Trellis Bracket pipe
- 2.1.3 Trelly hook
- 2.1.4 Steel wire rope galvanized, T-terminal - threaded end
- 2.1.5 Steel wire rope galvanized, tread-rod 2x
- 2.1.6 Steel wire rope galvanized, talurit eyebolt
- 2.1.7 Trellis strip S-hook
- 2.1.8 S-hook
- 2.1.9 Inter trelly bracket

### Steel cables

- 2.2.1 Loop
- 2.2.2 Turnbuckle
- 2.2.3 Threaded end



# Suspended systems and supports



Grow tube hook



2.3.1



2.3.6

Suspension bracket



2.1.0



2.4.1



# Index

## 2.1.0 Complete suspension

### Grow tube hook

- 2.3.1 Loop - Grow pipe hook
- 2.3.2 Loop - Grow pipe hook double
- 2.3.3 Threaded end - Grow pipe hook
- 2.3.4 Double grow pipe hook 3D
- 2.3.5 Grow pipe hook central on line
- 2.3.6 Grow pipe hook strip
- 2.3.7 Grow pipe hook, cableglider
- 2.3.8 Grow pipe hook between steel wire rope

### Suspension bracket

- 2.4.1 Loop - Grow pipe hook - triangle bracket
- 2.4.2 Threaded end- triangle bracket
- 2.4.3 Triangle bracket with grow pipe, interior
- 2.4.4 Triangle bracket with grow pipe externally 2x
- 2.4.5 J-hook from pipe
- 2.4.6 J-hook strip



2.3.2



2.3.3



2.3.4



2.3.5



2.3.7



2.3.8



2.4.2



2.4.3



2.4.4



2.4.5



2.4.6

# Supports for growing gutters

In a greenhouse or tunnel structure, the load on a suspended system can be extremely high. To accommodate this weight, Meteor Systems has developed supports that raise the height of the growing gutters. Our gutter supports are galvanised and can be installed directly on the ground or on the concrete floor in the greenhouse. These gutter supports are often used in combination with bay wide supports and pipe rail supports. Meteor Systems manufactures many different types of gutter supports. Feel free to ask us for advice on the most suitable option for your crop.

- Height-adjustable
- Suitable for both soft and hard surfaces
- Can be combined with bay wide supports and/or pipe rail supports



2.5.1



2.5.2



2.5.3

# Index

## Gutter stands

- 2.5.1 Gutter stand on the ground
- 2.5.2 Fixation plates
- 2.5.3 Gutter stand in the ground

## Gutter stand - fixed

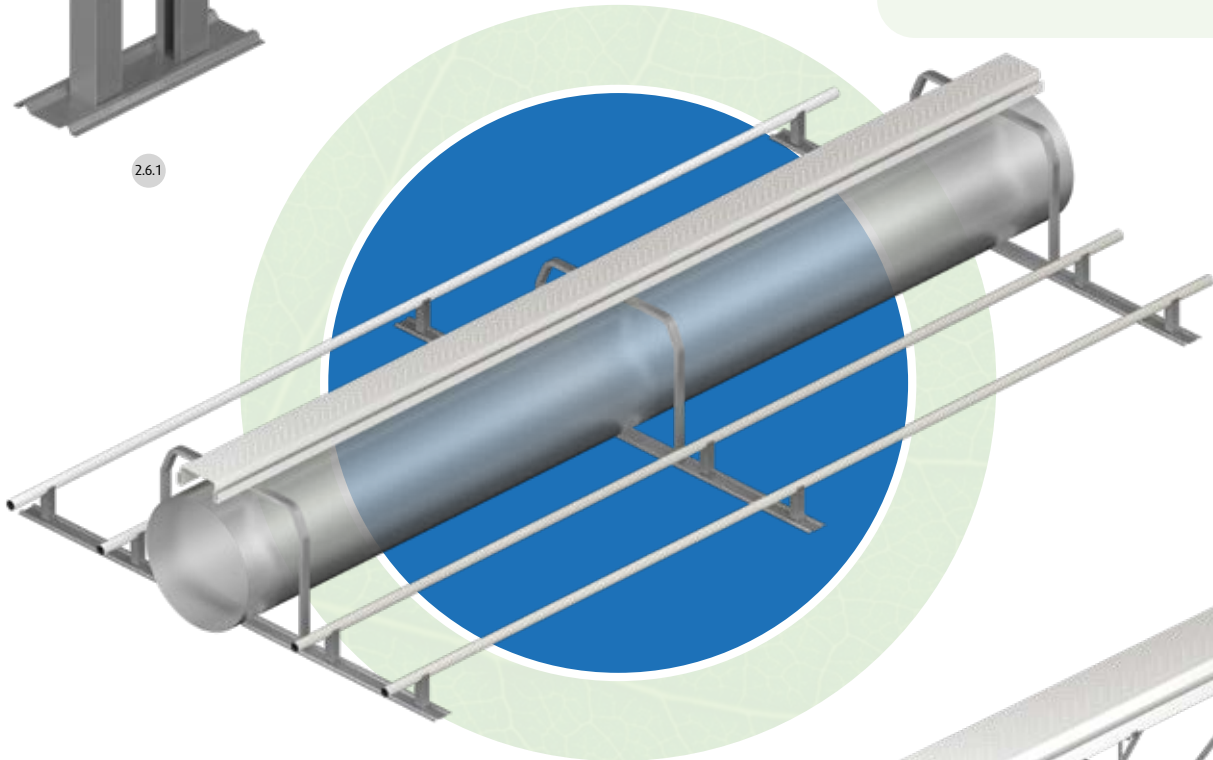
- 2.6.1 Gutter stand - fixed
- 2.6.2 V-bar

## Bow gutter stand

- 2.7.1 Bow gutter stand



2.6.1



2.7.1




2.6.2



# Gable systems





*'A specific system for every crop!  
Meteor Systems supplies  
attachment materials to your  
specifications'*

To fully stabilise our growing gutters, we use a gable system or V-suspension. The gable system is secured to the greenhouse column, it is height-adjustable and supports the end of the gutter. The V-suspension is adjustable, it hangs from the penultimate trellis or tunnel tube and supports the overhanging part of the gutter.

# V-shaped suspension and semi V-suspension

With a V-shaped or semi V-suspension near the central aisle, an extra support point is created for the gutter if it protrudes more than 75 cm beyond the first suspension. With a V- or semi V-suspension device on the end gable you can create a walkway in the greenhouse or even keep the wall free for other features. A V-suspension is often used when it is not possible to fit a gable system or at emergency exits in the end gables.

# End and side gable supporting

The gable system is secured to the greenhouse column and is height adjustable. In addition, besides supporting the growing gutters, it is also suitable for suspending a gable gutter and distribution and collection pipes. On the side gables columns, gable supports are used to prevent the side gable gutter from tilting.

- Stabilises the growing gutters
- Suitable for suspending pipes
- A V-suspension allows an emergency exit to be created



3.1.1



3.2.3



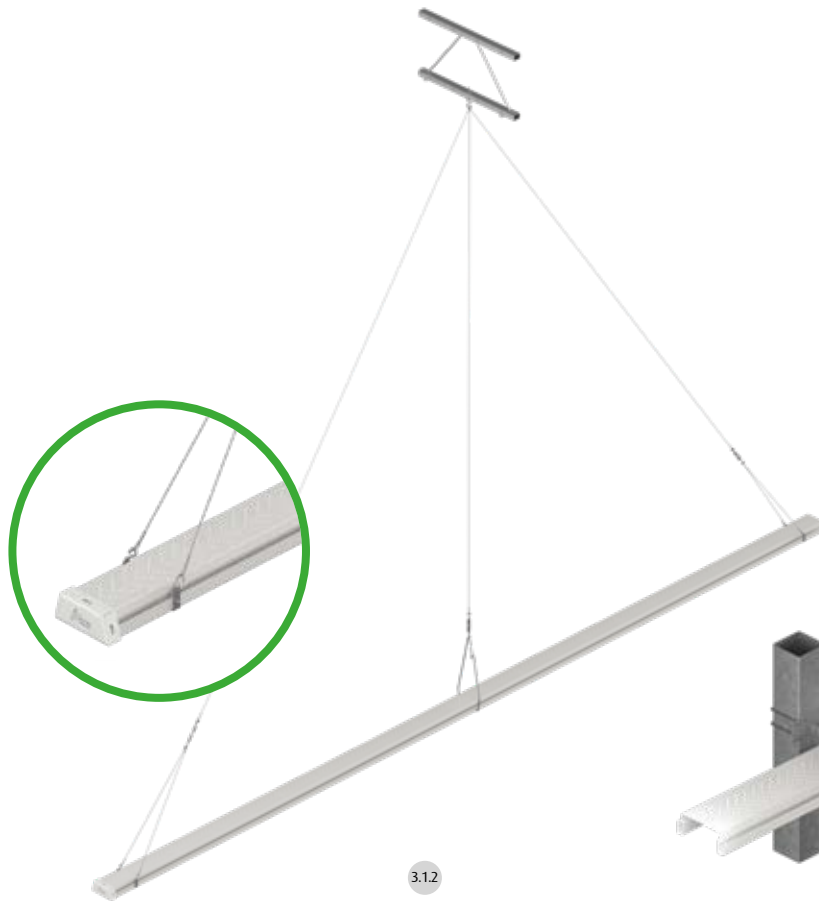
# Index

## Suspension

- 3.1.1 Semi V-suspension
- 3.1.2 V-suspension


## Gable system

- 3.2.1 Side gable system with suspended gutter
- 3.2.2 Gable system
- 3.2.3 Gable system with suspended end gable gutter
- 3.2.4 Gable system with end gable gutter support
- 3.2.5 Side gable system with supported gutter
- 3.2.6 Gable systems with intergrated headers



# Drain trays





*'At Meteor Systems, the grower's needs are our top priority. We look at what you require'*

The drain water is collected in drain channels in the gutter and in a drain tray at the end of the gutter. Meteor Systems has a drain tray to fit every type of gutter. These trays are attached to the gutters with a watertight seal. One drain tray at the end of the gutter is sufficient for gutters up to approx. 100 m in length. For longer lengths, a central drain tray could be required.



# Central and end drain trays

Collecting drain water reduces the risk of spreading diseases. The drain water is drained off via a closed (above or below ground) central pipe. Every end drain tray comes with a vertical connection and is supplied complete with a pipe clamp, a flexible drainage pipe, fastenings and food-grade sealant as standard. Stainless steel filters and a horizontal connection are available as an optional extra. Our central and end drain trays are made of white plastic and are UV-resistant. This produces a sustainable system with an attractively clean and neat appearance.

- Drain water and fertilisers collected can be reused or drained off
- Connects seamlessly to drain channels on the growing gutter



4.1.1



4.1.4



4.1.7

## Index

### End drain trays

- 4.1.1 End drain tray, vertical connection
- 4.1.2 End drain tray, side connection
- 4.1.3 End drain tray, horizontal connection
- 4.1.4 End drain collecting gutter partly covered
- 4.1.5 End drain tray, side outlet with stainless steel filter
- 4.1.6 End drain tray with lid
- 4.1.7 End drain collecting gutter covered
- 4.1.8 Combined end drain tray with side connection

### Central draintrays

- 4.2.1 Central draintray



4.1.2



4.1.3



4.1.5



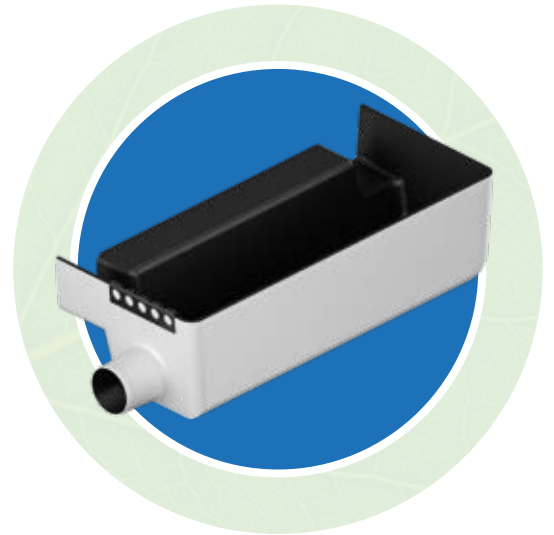
4.1.6



4.1.8




4.2.1



# Options







*'Cultivation systems customized  
to your vision and company'*

To complete your growing system, we offer a number of options to professionalize your crop. These options are custom made and allow your crop to grow even more efficiently and sustainably. Let us think along in the best solution for you.

# End caps

End caps are made of white plastic or powder-coated galvanised steel. Sharp edges at the ends of the gutter are therefore covered over, protecting users against injury and preventing crop damage. End caps provide a neat finish.

- Tailor-made for every growing gutter
- Improves the appearance of the growing system

## Index

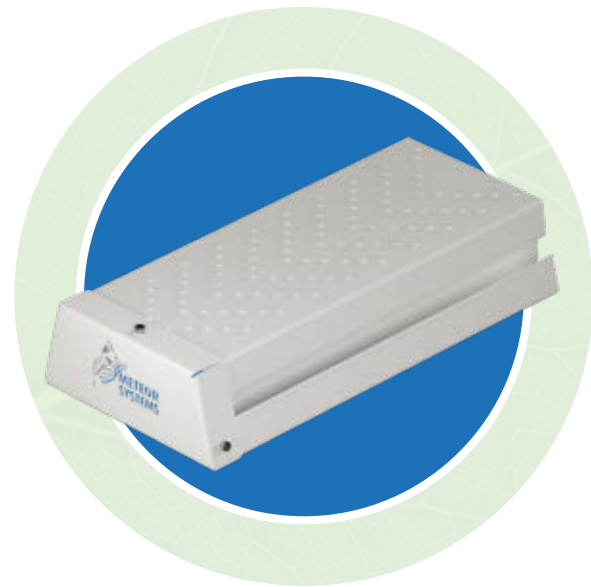
- 5.1.1 Steel end cap
- 5.1.2 Plastic end cap



5.1.1



5.1.2

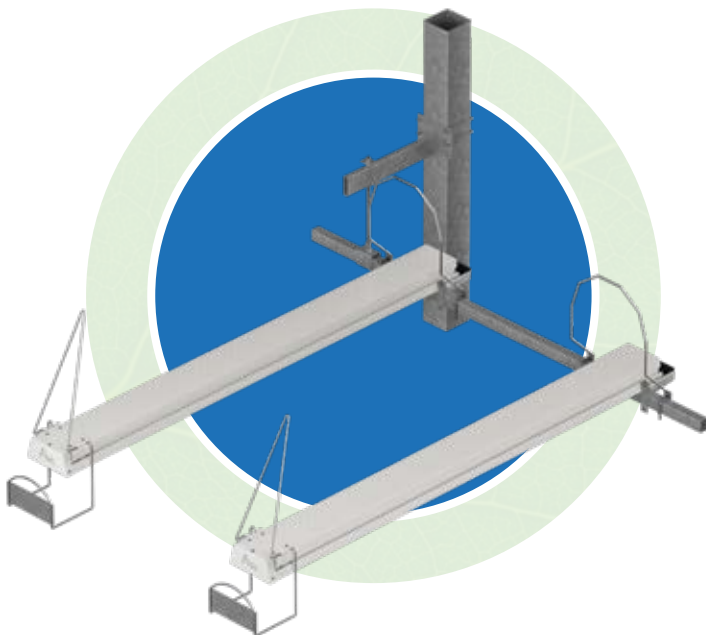




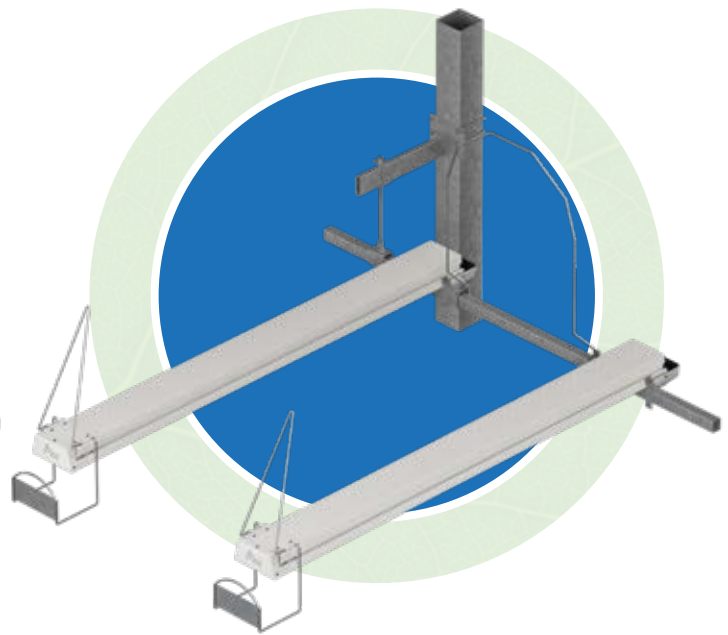


# Turn around brackets

Turn around brackets are mainly used in the cultivation of tomatoes and high wire cucumbers to support and guide plant stems on both ends of the growing gutter. The stems are turned around these brackets at the ends of the gutters so that they can continue to grow along the other side of the gutter. These turn around brackets protect the stems against kinking and damage.



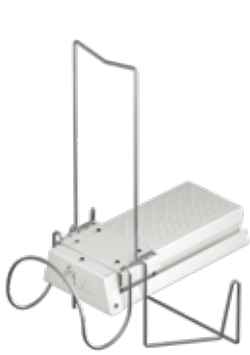
5.2.1



5.2.2

# Index

- 5.2.1 Turn around bracket over the gutter
- 5.2.2 Turn around bracket between the gutters
- 5.2.3 Turn around bracket with stem support
- 5.2.4 Turn around bracket, front side with stem support
- 5.2.5 Turn around brack with note board
- 5.2.6 Turn around bracket with note board on top
- 5.2.7 Turn around bracket with grow pipe support
- 5.2.8 Turn around bracket straight
- 5.2.9 Special turn around bracket
- 5.2.10 Turn around bracket rear side between gutters
- 5.2.11 Turn around bracket with double grow pipe support
- 5.2.12 Turn around bracket, rear side of the gutter, special
- 5.2.13 Turn around bracket rear side with grow pipe hook



5.2.3



5.2.4



5.2.5



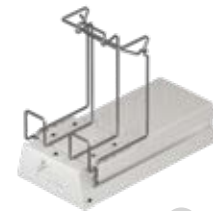
5.2.6



5.2.7



5.2.8



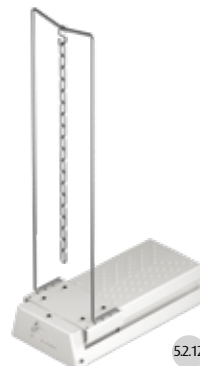
5.2.9



5.2.10



5.2.11



5.2.12



5.2.13

## Stem supports

Stems are held together and kept off the ground by stem supports on both sides of the gutter. Depending on the type of growing gutter and the situation, we can supply various models of stem supports.



5.3.1



5.3.2



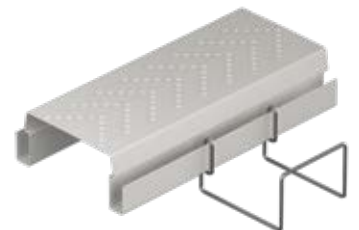
5.3.3



5.3.5



5.3.6

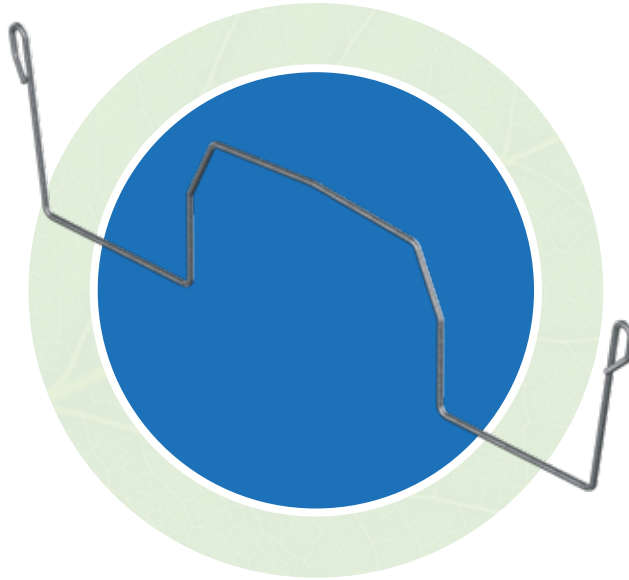


5.3.7



## Index

- 5.3.1 Stem supports supporting on gutter
- 5.3.2 Stem supports hanging sidegable
- 5.3.3 Stem supports clamped under gutter
- 5.3.4 Stem support, clamped, with wire guide
- 5.3.5 Stem support, suspended above the two drain channels with wire support
- 5.3.6 Stem support hanging
- 5.3.7 Stem supports hanging sidegable
- 5.3.8 Stem support on the substrate mat
- 5.3.9 Stem supports hanging grow pipe single
- 5.3.10 Stem supports hanging grow pipe double



5.3.4



5.3.8



5.3.9



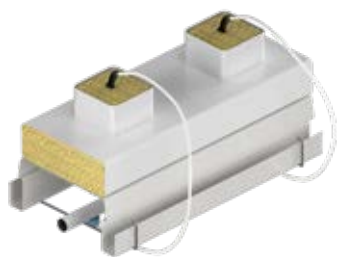
5.3.10

### Irrigation bracket

Irrigation brackets are mounted under the gutter and provide it with extra rigidity. They can also be used to support one or more drip hoses or a CO<sub>2</sub> hose on the gutter.

### Plastic irrigation hooks

Our plastic irrigation hooks are simple to use for suspending the drip hose from the gutter, enabling you to quickly install or remove the drip hose as required. For each gutter, we have a matching plastic irrigation hook that can be clamped to the edge of the gutter. These irrigation hooks are available for every standard drip hose.



5.4.1



5.4.2



5.4.3



5.4.4



5.4.5

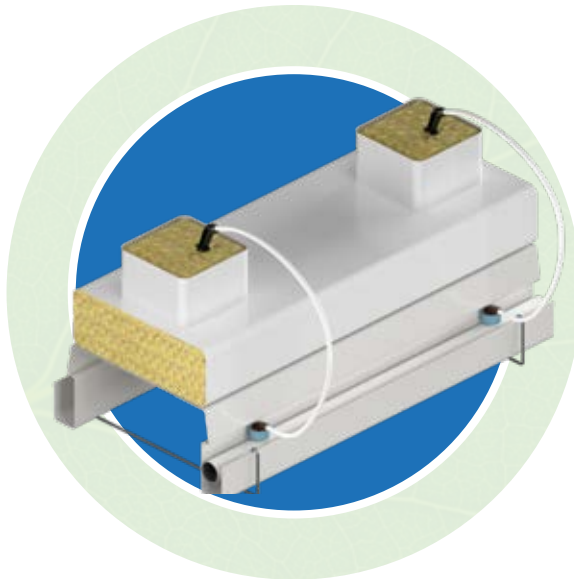


5.4.6

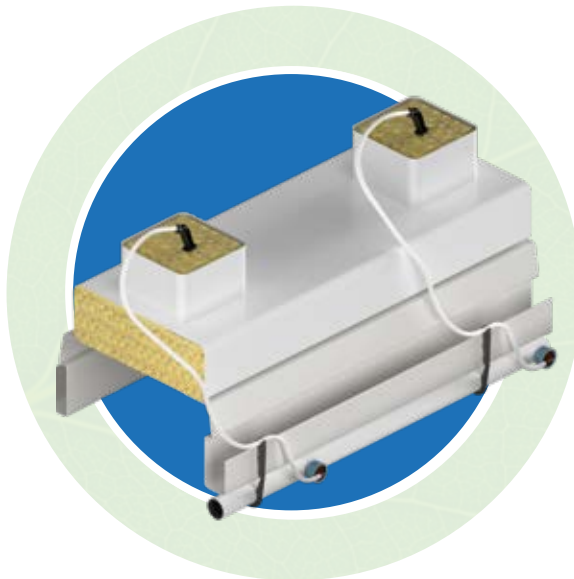
## Index

- 5.4.1 Irrigation bracket with irrigation lateral under gutter
- 5.4.2 Irrigation brackets, under the gutter, with wire guide
- 5.4.3 Irrigation brackets, under the gutter, with irrigation lateral and CO<sub>2</sub> tube
- 5.4.4 Irrigation bracket - LT net
- 5.4.5 Irrigation bracket, hanging at one side of the gutter
- 5.4.6 Irrigation brackets, alongside the gutter, clamped
- 5.4.7 Irrigation brackets, in drain water channel gutter

- 5.5.1 Irrigation hook - side of the gutter
- 5.5.2 Plastic irrigation hook
- 5.5.3 Plastic irrigation hook
- 5.5.4 Plastic irrigation hook
- 5.5.5 Plastic irrigation hook



5.4.7



5.5.1



5.5.2



5.5.3



5.5.4



5.5.5



# Crop wires and Crop wire droppers

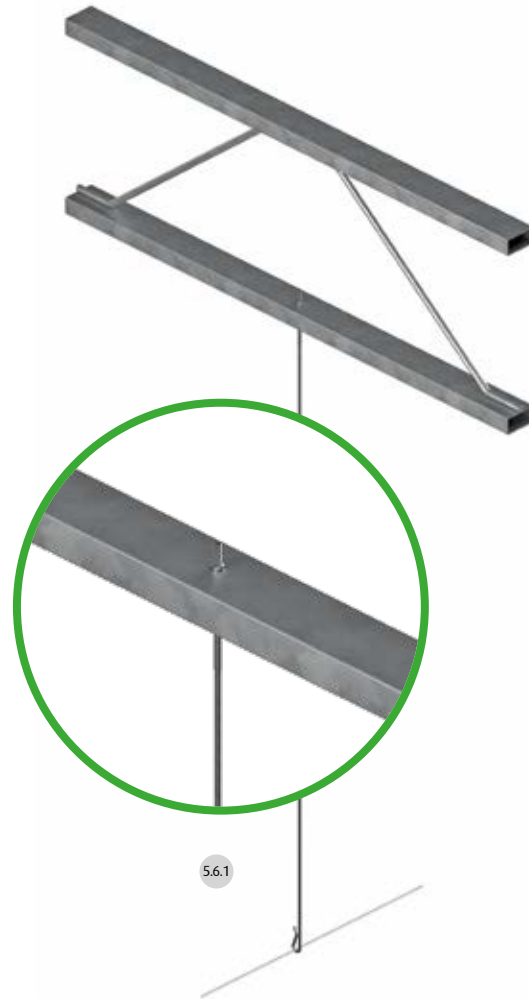
For the support of your vegetable crops, we supply crop wires at row length with the corresponding crop wire droppers.

We also supply fastening sets for mounting the crop wire to the existing wire arches in your greenhouse.

The crop wire droppers are available in three versions:

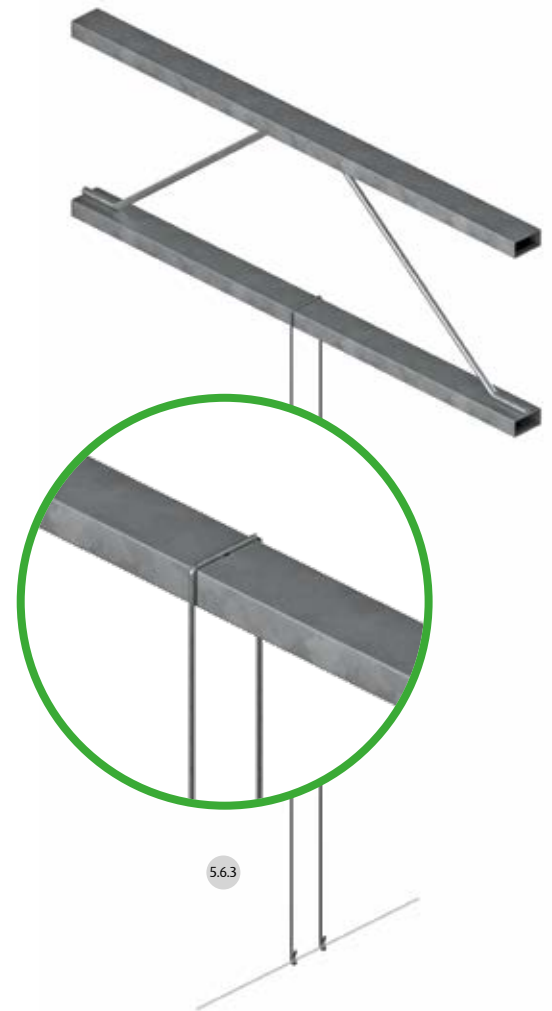
- Single crop wire dropper
- Double crop wires dropper
- Crop wire dropper with threaded end

If desired, we can also supply a hoisting system for these crop wires



## Index


- 5.6.1 Crope wire dropper with threaded end
- 5.6.2 Single crope wire dropper
- 5.6.3 Double crope wire dropper



# Pipe rail supports and bay wide supports





A green background with a leaf-like texture. A white, curved, semi-transparent shape is positioned on the left side, partially overlapping the green area.

*'With Meteor Systems you are  
creating a stable basis for  
automating your production'*

Meteor Systems produces pipe rail supports and bay wide supports. Pipe rail supports carry heating pipes between the rows of crops. Bay wide supports create regular spacing in your greenhouse. All pipe rail supports and bay wide supports are solid, fully galvanised and available in any desired size.

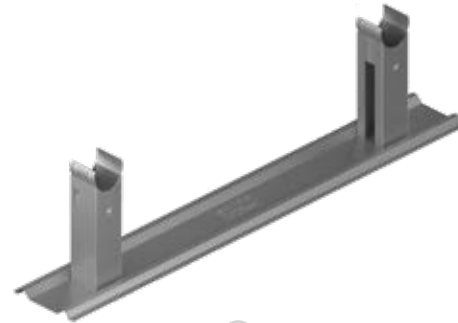
# Pipe rail supports and bay wide supports

Pipe rail supports carry heating pipes between the rows of crops and are also used for internal transport. Pipe rail supports are available with open and closed legs and with height-adjustable supports.

We also supply pipe clamps in any common heating pipe diameter for our pipe rail supports. They can be delivered ready fitted or separately. Alternatively, we also supply galvanised strips that are easy to mount over the pipe.

Bay wide supports are designed to create regular spacing in your greenhouse. They are also suitable for further automation of your production process, such as the use of a spray robot.

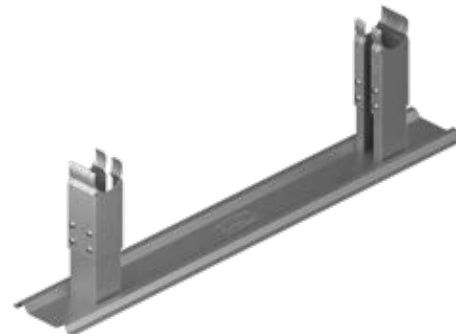
- Suitable for further automation of your system
- Available in all sizes and height-adjustable
- Prevents pipe rail trolleys from tilting
- Ideal to combine together



6.1.1



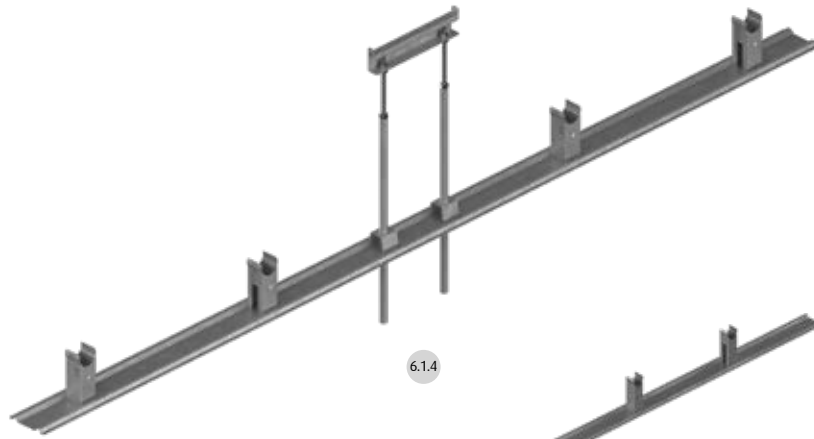
6.1.2



6.1.3

## Index

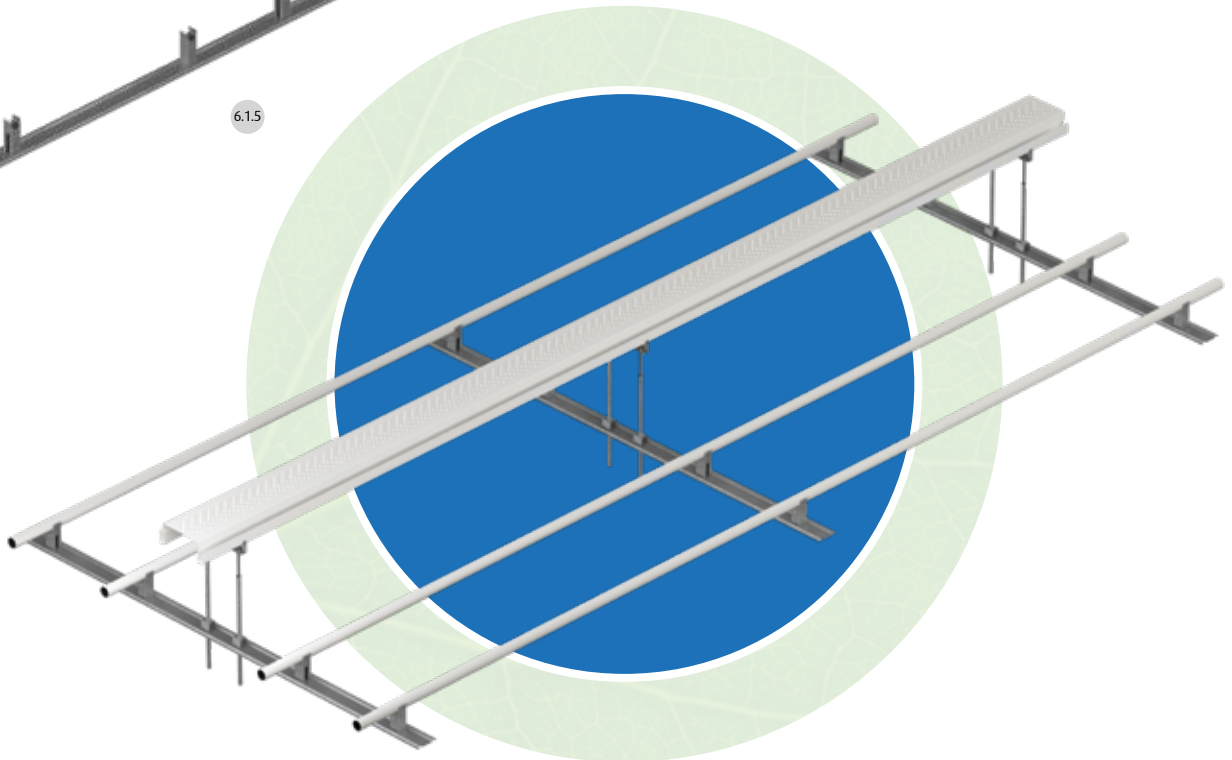
- 6.1.1 Pipe rail support - open
  - 6.1.2 Pipe rail support - closed
  - 6.1.3 Pipe rail support - adjustable
- 
- 6.1.4 Bay wide support, gutter stand and pipe rail support
  - 6.1.5 Bay wide support
  - 6.1.6 Bay wide support, gutter stand, pipe rails supports with gutter



6.1.4

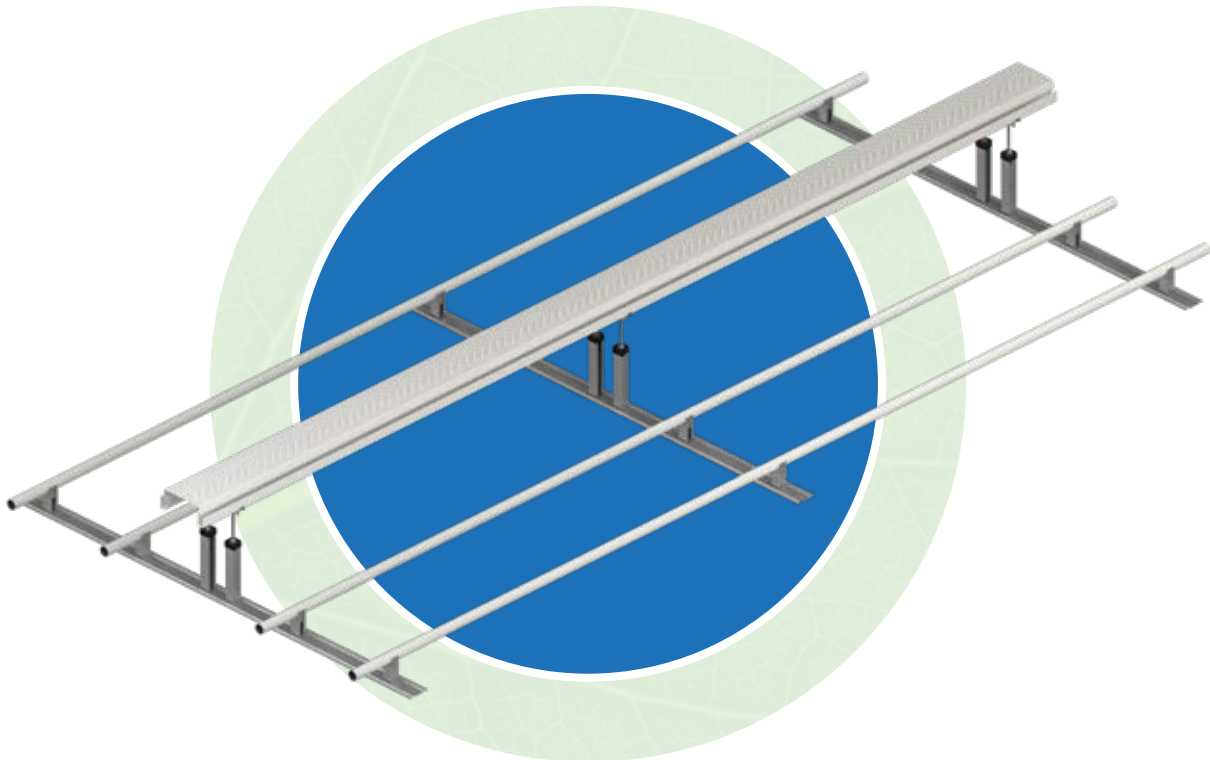
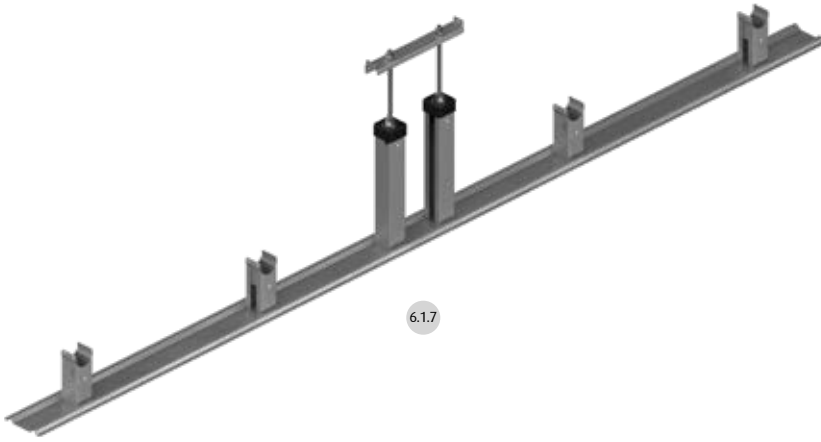


6.1.5



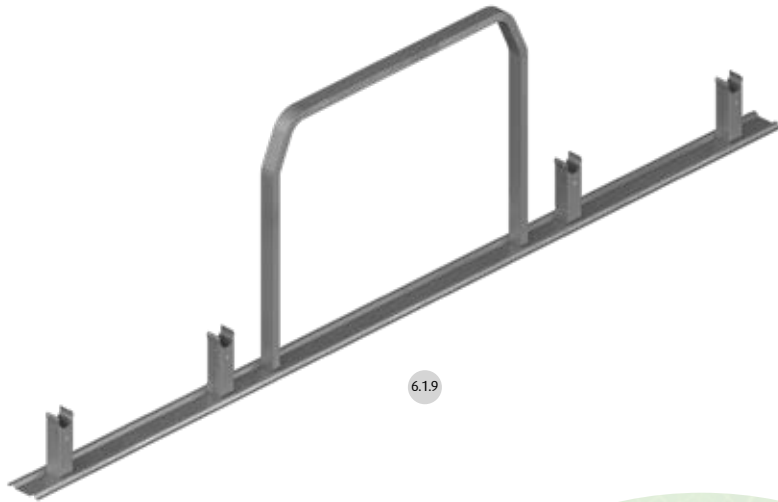
6.1.6



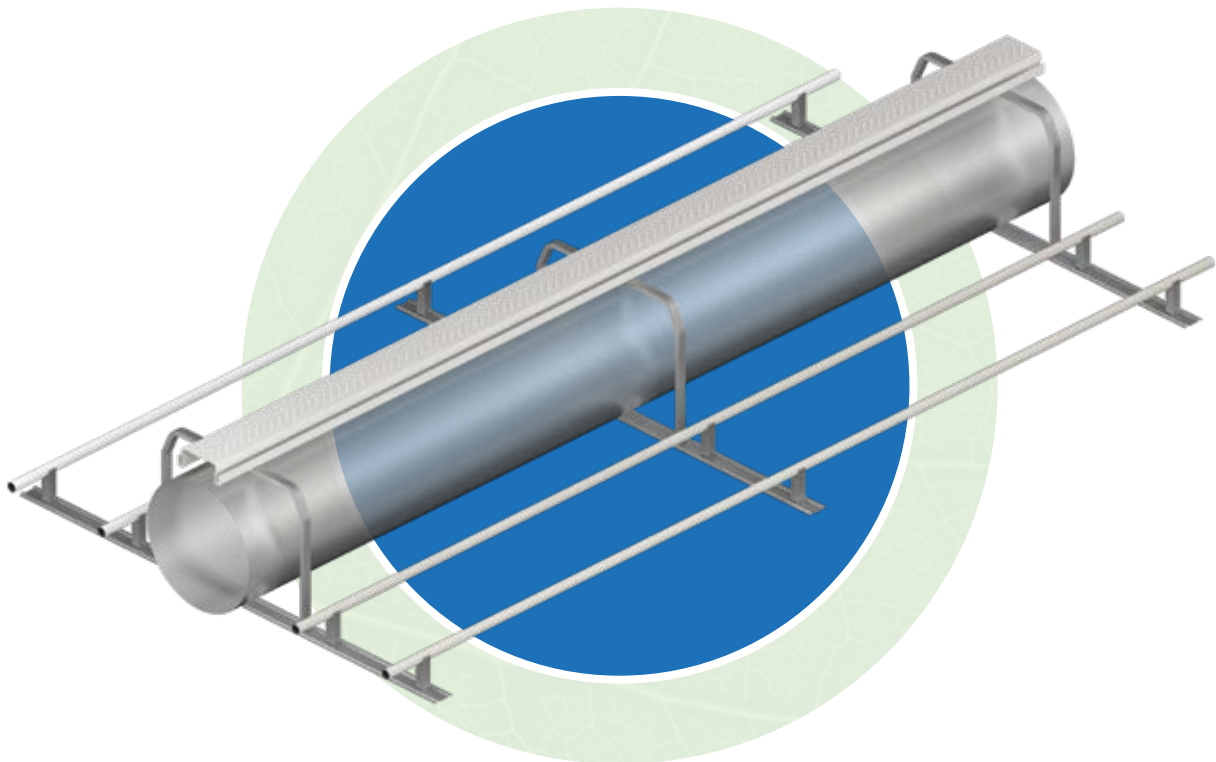


## Index

- 6.1.7 Bay wide support - fixed gutter stand and pipe rail supports
- 6.1.8 Bay wide support - fixed gutter stand, pipe rail supports and gutter
- 6.1.9 Bay wide support, bow gutter stand and pipe rail supports
- 6.1.10 Bay wide support, bow gutter stand, pipe rail support and gutter



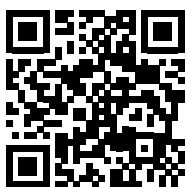
6.1.9



6.1.10



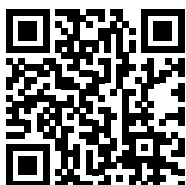
**METEOR**  
**SYSTEMS®**



### **Meteor Systems**

Minervum 7081  
4817 ZK Breda  
The Netherlands

T. +31 76 504 28 42  
[info@meteorsystems.nl](mailto:info@meteorsystems.nl)  
[www.meteorsystems.nl](http://www.meteorsystems.nl)



### **Meteor Horticultural Systems**


419 Seacliff Drive East  
Leamington, Ontario N8H 3V7  
Canada

T. +1 519 324 9900  
[info@meteorsystems.com](mailto:info@meteorsystems.com)  
[www.meteorsystems.com](http://www.meteorsystems.com)



### **Meteor Systems China**

B67, Guanjie Building,  
No. 668 Shenchang Road,  
201100 Minhang District,  
Shanghai

T. +86 1522 1996 072  
 MeteorSystems  
[www.meteorsystems.nl/zh](http://www.meteorsystems.nl/zh)

# Worldwide in





# leading manufacturer horticultural systems



[meteorsystems.com](http://meteorsystems.com)

**From knowledge to technology**

[meteorsystems.com](http://meteorsystems.com)