



**HYDRO SUPPLY CO.**  
COMMERCIAL CULTIVATION INFRASTRUCTURE

PRODUCT CATALOG

# GREENHOUSE BENCHES

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Ebb & flow, automatic, multilayer and metal rolling benches — engineered for efficient, labor-saving and space-saving seedling nurseries.

**EFFICIENT · LABOR-SAVING · SPACE-SAVING**

# Your Partner for Commercial Greenhouse Bench Systems

**Hydro Supply Co.** equips commercial growers, nurseries and cultivation facilities with a complete line of professional greenhouse benches — ebb & flow, automatic ebb & flow, multilayer and metal rolling systems — backed by hands-on technical support from layout to installation.

## WHAT WE SUPPLY

- Ebb & flow benches (fixed & mobile)
- Automatic ebb & flow with shuttle transport
- Multilayer vertical growing benches
- Metal rolling benches & flood trays
- Custom sizes and project layouts

## WHO WE SERVE

- Commercial greenhouses
- Seedling & propagation nurseries
- Cannabis & hemp cultivation facilities
- Hydroponics labs & research glasshouses
- Retail & institutional growers

**Built to spec.** Bench lengths splice to a maximum of 30 m, with UV-resistant ABS trays, 6063-T5 aluminum frames and hot-dip galvanized steel — rated for a 20-year service life. Other colors and configurations are available on request.

Benches featured in this catalog are produced for Hydro Supply Co. by our manufacturing partner, Anping Hongyu.

# Our Strengths

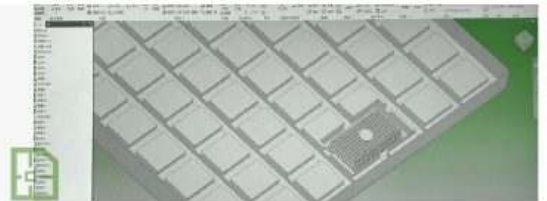
## High quality raw materials



High quality UV-resistant ABS plate ensures the ebb and flow bench remain in good conditions even under high temperature.

## Custom design drawings

We can supply customized greenhouse bench design drawing to meet your demands on specific projects.



## Advanced ABS forming machine



We introduced the advanced ABS vacuum forming machine to make the precision control of ABS bench tray production come true.

## 30 patents

With over 10 years of experience in greenhouse bench study, we have accumulated rich experience in product upgrade and innovation. We have established a mature R&D team and obtained about 30 patents involving greenhouse bench technologies. We will keep upgrading our products and bring more benefits to our customers.



## Large inventory



We have large stock and high production output to meet your needs for urgent orders and ensure timely delivery.

## Proper packing

All greenhouse bench components are properly packaged to ensure all products are free from damage during the transportation.



# Our Services

## Drawings Supply



We supply greenhouse bench design drawings and detailed technical data according to your requirements.

## Innovation Patents



We have obtained nearly 30 greenhouse bench patents. We keep upgrading our products to make sure our products meet and even exceed industry and international standards.

## Technical Support



We supply installation guidance and technical support for your efficient installation during your projects.

## Considerate Service



We can supply our customers with latest product catalog to let you know our latest news and we are ready to help you solve all problems 24/7.



# Our Bench Types

## Ebb And Flow Benches

Ebb and flow benches are ideal for growing seedlings, planting vegetables, flowers, herbs, crops and germinating grow.

They are widely used in

- Commercial greenhouses.
- Seedling nursery bases.
- Hydroponics laboratories.
- Research glasshouses.
- Retail and institutional uses.

*[ Page 07 ]*



## Automatic Ebb And Flow Benches

Automatic ebb & flow benches streamline all the production process and are especially used for large scale production of seedlings, flowers, vegetables, herbs and crops.

They are widely used in

- Large scale greenhouses.
- Seedling nursery bases.
- Commercial glasshouses.
- Flower production bases.
- Vegetable production bases.
- Retail and institutional uses.

*[ Page 13 ]*

## Multilayer Ebb and Flow Benches

Multilayer ebb and flow benches are especially suitable for places with limited space yet higher yield requirements for vertical growing.

They are widely used in

- Commercial greenhouses.
- Seedling nursery bases.
- Hydroponics laboratories.
- Research glasshouses.
- Retail and institutional uses.

*[ Page 15 ]*



## Metal Rolling Benches

Metal rolling benches are ideal for growing seedlings, planting vegetables, flowers, herbs, crops and germinating grow.

They are widely used in

- Commercial greenhouses.
- Seedling nursery bases.
- Hydroponics laboratories.
- Research glasshouses.
- Retail and institutional uses.

*[ Page 17 ]*



# EBB AND FLOW BENCHES

Ebb and flow benches, also known as ebb and flow tables, flood and drain tables, or flood benches, are an increasingly popular greenhouse bench for propagating seedlings and hydroponic growing in modern times.

It is specially equipped with an ebb and flow system made of ABS bench trays that are molded with a network of drainage channels. This unique structure allows nutrient-rich water pumped from the reservoir watering all plants evenly throughout the

entire surface of the greenhouse bench and then draining completely when the watering is finished. The water then returns to the reservoir under gravity for recycling.

Base Type



FIXED BASE



MOBILE BASE

Frame Type

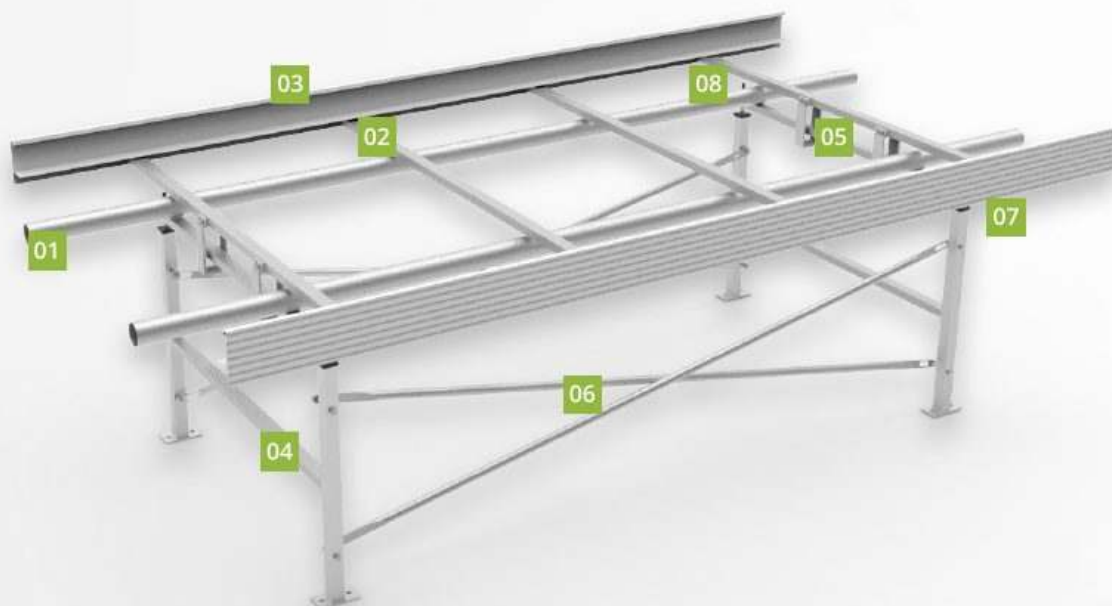


WITHOUT TOP FRAME



WITH TOP FRAME

## Structure



01

Wheel beam



02

Middle cross beam



03

Aluminium alloy frame



04

Hot-dip galvanized legs



05

Anti-tip bracket



06

Diagonal ligament



07

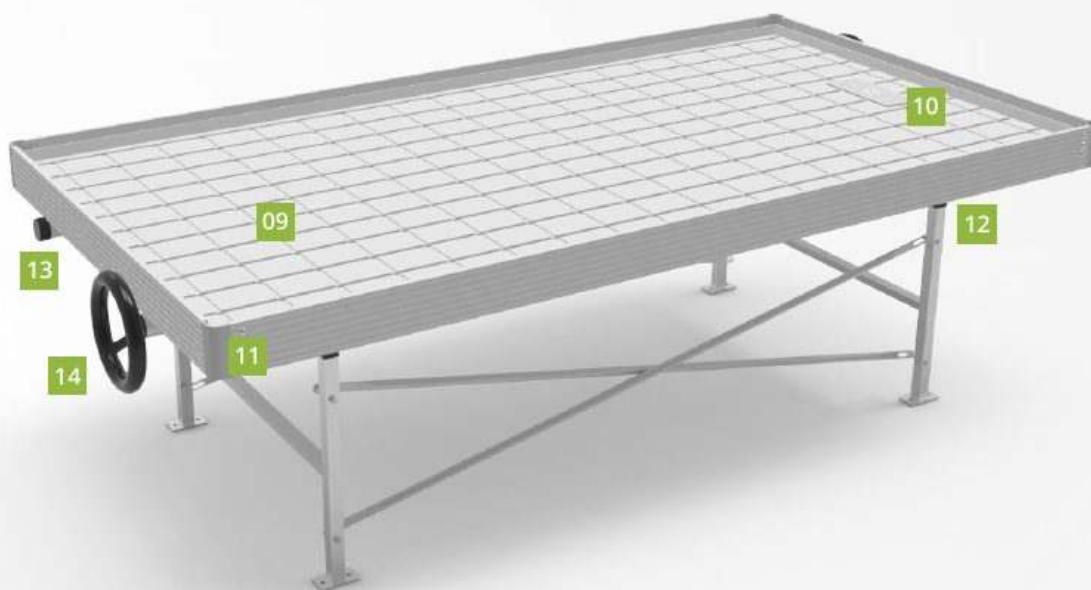
Waterproof cap



08

Adjustable blots





09

ABS grow tray



10

Filter screen



11

Corner bracket



12

Quick valve



13

Wheel beam cap



14

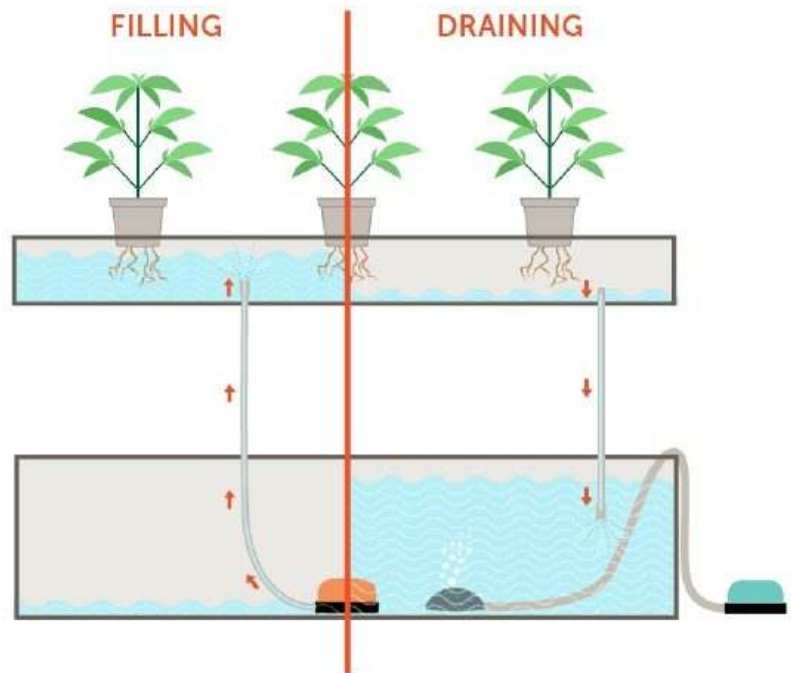
Steering wheel



## How They Work?

- Benches are designed to be perfectly level.
- Floor trays are molded with a network of drainage channels and plumbing wells to ensure complete drainage of irrigation water from plants when the watering is finished.
- When plants require watering, the nutrient solution is pumped into the bench and the capillary within the plant roots absorbs sufficient nutrient solution.
- The remaining nutrient solution is to be drained completely and returned to the reservoir under gravity for recycling.
- From start of irrigation cycle to complete drain of full irrigation takes approximately 20 minutes.

## EBB AND FLOW



## Features



- The fully recirculating system saves 50%–90% water, 75%–90% fertilizer and 60%–90% labor costs when compared to traditional watering methods.
- Plants are always watered very evenly while keeping the floor remaining clean and dry.
- Extended frame type is available for installing lighting system.
- It can easily control relative humidity, lighting and carbon dioxide level in the growing environment.
- Most plants grown on ebb & flow benches tend to finish 1 to 2 weeks earlier than other irrigation systems.
- Ebb & flow benches can be stacked in propagation and seeding areas, and growth chambers.
- Compatible with many computer control systems and various specifications are available to meet different demands.

## Specification

### Material

- Ebb and flow tray: ABS plastic.
- Frame: 6063-T5 aluminium profile.
- Middle cross beam: hot-dip galvanized steel tube.
- Bench stand: hot-dip galvanized steel tube.
- Wheel beam: hot-dip galvanized steel tube.
- Diagonal ligament: hot-dip galvanized steel tube.
- Feet: hot-dip galvanized steel tube.
- Bench end braces: hot-dip galvanized steel tube.
- Corner bracket: ABS
- Waterproof cap: plastic
- Steering wheel: bakelite.
- Wheel beam cap: plastic
- Anti-tip bracket: Nylon
- Clip on bench side profile: aluminum alloy + ABS.

### Specification of Ebb and Flow Trays

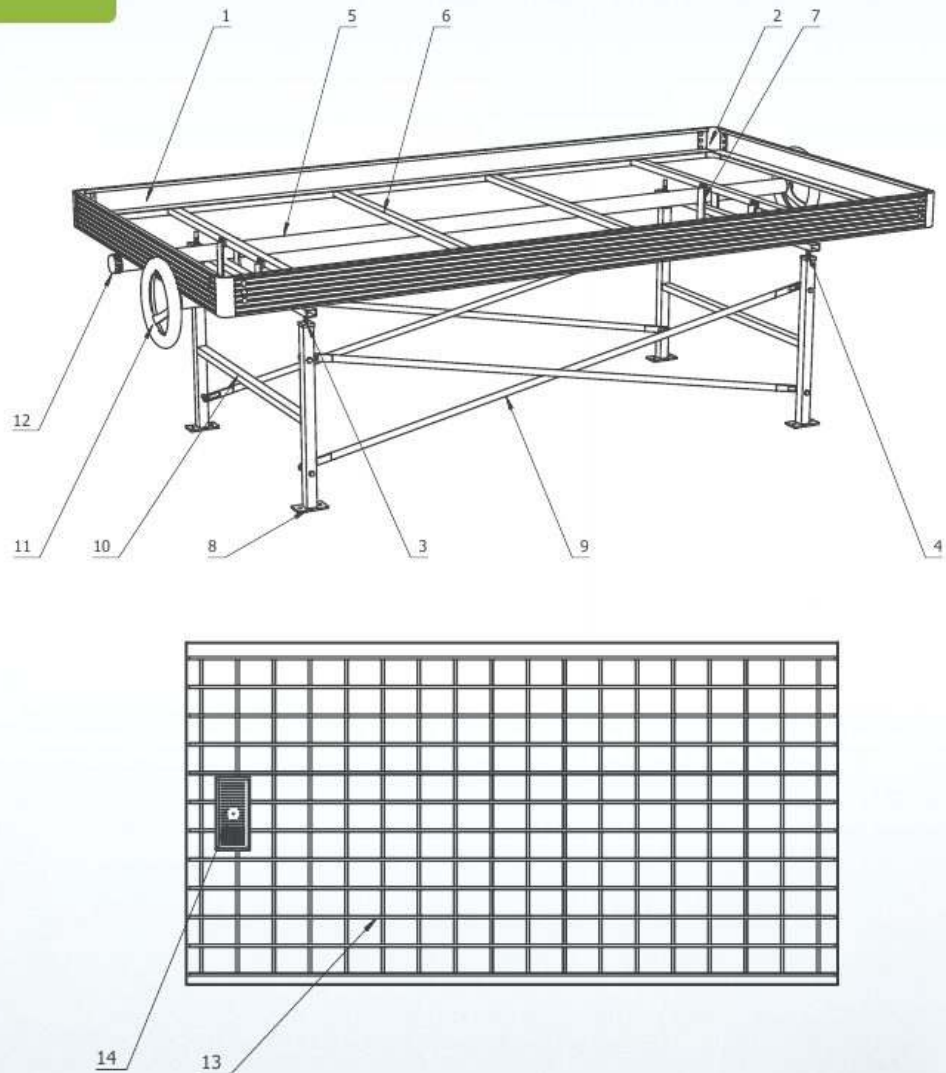
| Model  | Size        |            | Height |
|--------|-------------|------------|--------|
|        | (mm)        | (feet)     | (mm)   |
| EFT-01 | 711 × 2150  | 2.3 × 7.1  | 50     |
| EFT-02 | 914 × 2150  | 3 × 7.1    | 50     |
| EFT-03 | 1220 × 2150 | 4 × 7.1    | 50     |
| EFT-04 | 1530 × 2150 | 5 × 7.1    | 50     |
| EFT-05 | 1700 × 2150 | 5.6 × 7.1  | 50     |
| EFT-06 | 1780 × 2150 | 5.84 × 7.1 | 50     |
| EFT-07 | 610 × 1220  | 2 × 4      | 50     |
| EFT-08 | 1220 × 1220 | 4 × 4      | 50     |
| EFT-09 | 1220 × 2440 | 4 × 8      | 50     |
| EFT-10 | 1530 × 3400 | 5 × 11.2   | 150    |
| EFT-11 | 1650 × 3600 | 5.4 × 11.8 | 50     |
| EFT-12 | 1700 × 4450 | 5.6 × 14.6 | 50     |

### Technical Data of Ebb & Flow Bench

- Bench type: Ebb & flow bench
- Bench width: 2.3', 3', 4', 5', 5.4', 5.6', 5.84'
- Bench length: Any length can be spliced upon request with a maximum length of 30 m.
- Total length: About 70 cm with a adjustable range of 8–10 cm and a minimum height of 46 cm.
- Aluminum alloy frame: 50 × 105 × 1.5 mm
- Feet: 30 × 30 × 1.5 mm
- Middle cross beam: 20 × 30 × 1.5 mm
- Diagonal ligament: 20 × 1.2 mm
- Wheel beam: 48 × 2.0 mm
- Movable distance: 25–30 cm (each side)
- Color: Bench and frame are silver, bench tray is gray.  
Other colors are available upon request.
- UV-resistant: Yes
- Zinc coating: 500 g/m<sup>2</sup>
- Load capacity: 450–500 N/m<sup>2</sup> (45–50 kg/m<sup>2</sup>)
- Lifespan: 20 years



# EBB AND FLOW BENCHES



## Technical Notes:

- Moving space: 300 mm - 600 mm.
- Installation: expansion bolt grounded.
- Bench sizes can be customized according to your greenhouse area and layout.

1. Bench frame: 6063-T5 aluminium profile
2. Corner bracket: ABS
3. Waterproof cap: Plastic
4. Adjustable bolt: Galvanized steel + plastic
5. Wheel beam: Hot-dip galvanized steel pipe
6. Middle cross beam: Hot-dip galvanized steel pipe
7. Anti-tip bracket: Nylon

8. Welded feet: Hot-dip galvanized steel plate
9. Diagonal ligament: Hot-dip galvanized steel pipe
10. Bench end brace: Hot-dip galvanized steel pipe
11. Steering wheel: Bakelite
12. Wheel beam cap: Plastic
13. Ebb & flow tray: ABS
14. Filter screen: plastic



# AUTOMATIC EBB AND FLOW BENCHES

Automatic ebb and flow benches are the most advanced and efficient greenhouse cultivation system in modern times.

It is a specially designed ebb and flow benches equipped with shuttle vehicles and track transport lines. Shuttle vehicles ride underneath the rolling benches and takes the round pipes as rails. The computer control system can move the individual rolling bench to the track transport line via the shuttle bench. The track transport lines are designed to ensure that the rolling bench moves between rows and connects the growing area to the work area. In this way, the automatic plant nursery is realized.

Automatic ebb and flow benches maximize the space utilization while improving the survival and growth rate of seedlings.

ABS bench tray



Transport line



Shuttle vehicle



## Features



- It maximizes the utilization space and is especially suitable for large scale production.
- It greatly reduces the concurrence of gangrene and buckling leaves to improve the survival and growth rate of seedlings.
- It can easily control relative humidity, lighting and carbon dioxide level in the growing environment.
- It greatly reduces the labor costs and provides a high precision and efficient operation to maximize the production efficiency.
- It greatly saves water and nutrient solution and makes the fertilization more economic and efficient.
- Compatible with many computer control systems and various specifications are available to meet different demands.

## Specification

### Material

- Ebb and flow tray: ABS plastic.
- Frame: 6063-T5 aluminum profile.
- Corner bracket: ABS
- Track transport line: marine grade aluminum profile.
- Middle cross beam: hot-dip galvanized steel tube.
- Wheel beam: hot-dip galvanized steel tube.
- Supporting stand: hot-dip galvanized steel tube.

### Technical Data of Automatic Ebb & Flow Bench

- Bench type: Automatic ebb & flow bench
- Single bench size (W × L): 4' × 8', 4' × 10', 5' × 10', 5' × 12', etc.
- Bench tray height: 1.18", 2.95", 4.92", etc.
- Color: Bench and frame are silver, bench tray is gray.  
Other colors are available upon request.
- UV-resistant: Yes
- Zinc coating: 500 g/m<sup>2</sup>
- Load capacity: 450–500 N/m<sup>2</sup> (45–50 kg/m<sup>2</sup>)
- Lifespan: 20 years





# MULTILAYER EBB AND FLOW BENCHES



Multilayer ebb and flow benches are a kind of greenhouse benches especially suitable for vertical growing.

Similar to ebb and flow benches, it also consists of ABS bench trays and is widely used in greenhouse cultivation. The main difference lays the number of ebb and flow benches. It generally consists of two and above layers to improve its cultivation space and production yield.

It can be designed to be both mobile and stationary type and all sizes are customized to perfectly meet your cultivation demands.

**Fixed base**



**Mobile base**



## Features



- It optimizes your growing space in vertical direction and creates more growing area.
- It can simply double or triple your yields by increasing the number of bench trays in limited space.
- Plants are always watered very evenly as well as being fully fertilized.
- It greatly reduces your labor, water and fertilizer costs and improve your profits.
- It can easily control relative humidity, lighting and carbon dioxide level in the growing environment.
- Most plants grown on ebb & flow benches tend to finish 1 to 2 weeks earlier than other irrigation systems.
- Both mobile and stationary types are available in all sizes.

## Specification

### Material

- Ebb and flow tray: ABS plastic.
- Frame: 6063-T5 aluminum profile.
- Corner bracket: ABS
- Track transport line: marine grade aluminum profile.
- Middle cross beam: hot-dip galvanized steel tube.
- Wheel beam: hot-dip galvanized steel tube.
- Supporting stand: hot-dip galvanized steel tube.

### Size

As every customer has his own requirements for this bench, such as the number of layers and tray sizes. Therefore, there is no standard size, all sizes are available upon request.





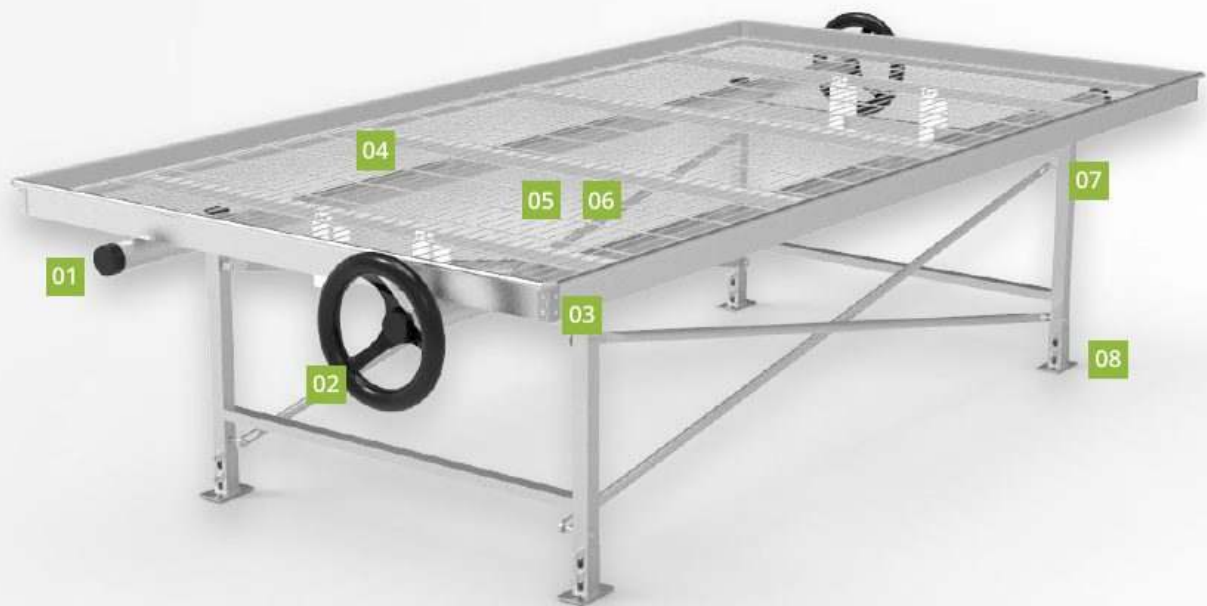
## METAL ROLLING BENCHES

Metal rolling benches are a kind of solid and economic greenhouse bench with welded wire mesh/expanded metal mesh tops.

Its unique structure allows maximum air and light penetration to make seedlings grow better and stronger. Its rolling design allows 25–30 cm adjustable distance each side to create flexible aisle and facilitate the grower looking after seedlings. In this way, it greatly reduces the labor cost and saves the cultivation area to make you gain higher profits.

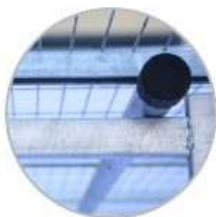
In addition, the hot-dip galvanized surface treatment makes it have excellent corrosion resistance performance and enjoy a service life of up to 20 years.

## Structure



01

Wheel beam cap



02

Steering wheel



03

Round corner bracket



04

Aluminum alloy frame



05

Welded wire mesh top



06

Expanded metal mesh top



07

Diagonal ligament



08

Adjustable feet



## Features



- Its mesh opening allows maximum air and light penetration to make seedlings grow better and stronger.
- Its rolling design allows 25–30 cm adjustable distance each side to create flexible aisle and facilitate the grower looking after seedlings.
- It greatly reduces the labor cost and increases the cultivation area to make you gain higher profits.
- Its galvanized surface treatment make it have excellent corrosion resistance performance and enjoy a service life of up to 20 years.
- Anti-tip brackets are provided to prevent bench top from overturning arising from the weight of plants on it.
- Rounded corner brackets prevent injury from sharp edges.

## Specification

### Material

- Bench top: hot-dip galvanized welded wire mesh.
- Frame: 6063-T5 aluminum profile.
- Middle cross beam: hot-dip galvanized steel tube.
- Bench stand: hot-dip galvanized steel tube.
- Wheel beam: hot-dip galvanized steel tube.
- Diagonal ligament: hot-dip galvanized steel tube.
- Bench end braces: hot-dip galvanized steel tube.
- Feet: hot-dip galvanized steel tube.
- Corner bracket: ABS
- Waterproof cap: plastic
- Steering wheel: bakelite.
- Wheel beam cap: plastic
- Anti-tip bracket: Nylon
- Clip on bench side profile: aluminum alloy + ABS.

### Technical Data of Metal Rolling Bench (Welded Wire Mesh Top)

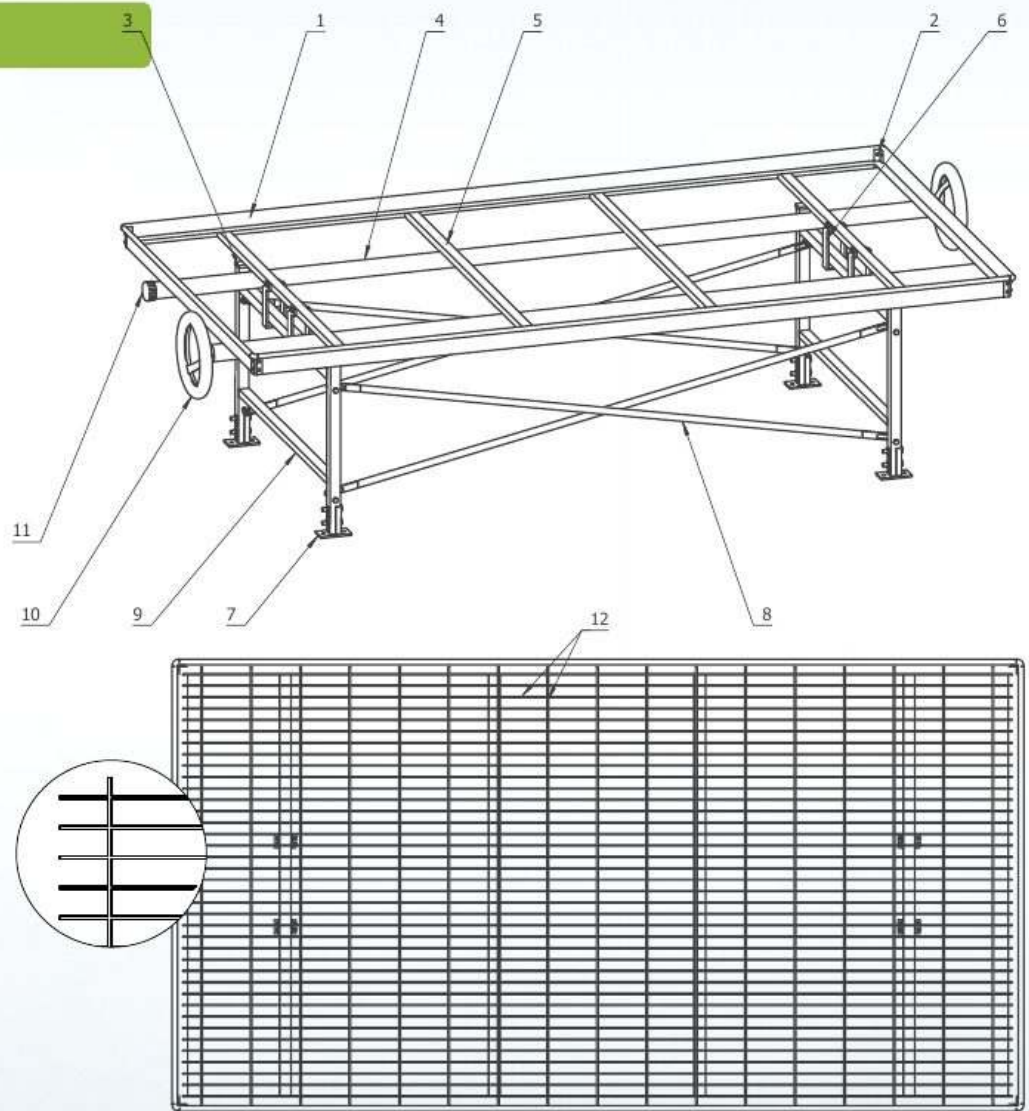
|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Bench type           | Welded wire mesh rolling bench                            |
| Mesh opening         | 120 × 25 mm, 130 × 30 mm, 125 × 50 mm, 50 × 50 mm         |
| Wire diameter        | 8 gauge (4 mm), 10 gauge (3.5 mm) and 12 gauge (3.2 mm)   |
| Panel width          | With a maximum width of 2.5 m or customized upon request. |
| Total length         | With a maximum length of 30 m or customized upon request. |
| Height               | About 70 cm with a adjustable range of 8–10 cm.           |
| Aluminum alloy frame | 50 × 105 × 1.5 mm                                         |
| Feet                 | 30 × 30 × 1.5 mm                                          |
| Middle cross beam    | 20 × 30 × 1.5 mm                                          |
| Diagonal ligament    | 20 × 1.2 mm                                               |
| Wheel beam           | 48 × 2.0 mm                                               |
| Movable distance     | 25–30 cm (each side)                                      |
| Color                | Sliver                                                    |
| Zinc coating         | 500 g/m <sup>2</sup>                                      |
| Load capacity        | 450–500 N/m <sup>2</sup> (45–50 kg/m <sup>2</sup> )       |
| Lifespan             | 20 years                                                  |

### Technical Data of Metal Rolling Bench (Expanded Metal Mesh Top)

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Bench type           | Expanded metal mesh rolling bench                         |
| Mesh opening         | 40 × 60 mm or customized                                  |
| Wire diameter        | 8 gauge (4 mm), 10 gauge (3.5 mm) and 12 gauge (3.2 mm)   |
| Panel width          | With a maximum width of 2.5 m or customized upon request. |
| Total length         | With a maximum length of 30 m or customized upon request. |
| Height               | About 70 cm with a adjustable range of 8–10 cm.           |
| Aluminum alloy frame | 50 × 105 × 1.5 mm                                         |
| Feet                 | 30 × 30 × 1.5 mm                                          |
| Middle cross beam    | 20 × 30 × 1.5 mm                                          |
| Diagonal ligament    | 20 × 1.2 mm                                               |
| Wheel beam           | 48 × 2.0 mm                                               |
| Movable distance     | 25–30 cm (each side)                                      |
| Color                | Sliver                                                    |
| Zinc coating         | 500 g/m <sup>2</sup>                                      |
| Load capacity        | 450–500 N/m <sup>2</sup> (45–50 kg/m <sup>2</sup> )       |
| Lifespan             | 20 years                                                  |

# METAL ROLLING BENCHES

## Drawing



### Technical Notes:

- Moving space: 300 mm - 600 mm.
- Installation: expansion bolt grounded.
- Bench sizes can be customized according to your greenhouse area and layout.

**1. Bench frame:** 6063-T5 aluminium profile

**2. Corner bracket:** ABS

**3. Waterproof cap:** Plastic

**4. Wheel beam:** Hot-dip galvanized steel pipe

**5. Middle cross beam:** Hot-dip galvanized steel pipe

**6. Anti-tip bracket:** Nylon

**7. Welded feet:** Hot-dip galvanized steel plate

**9. Diagonal ligament:** Hot-dip galvanized steel pipe

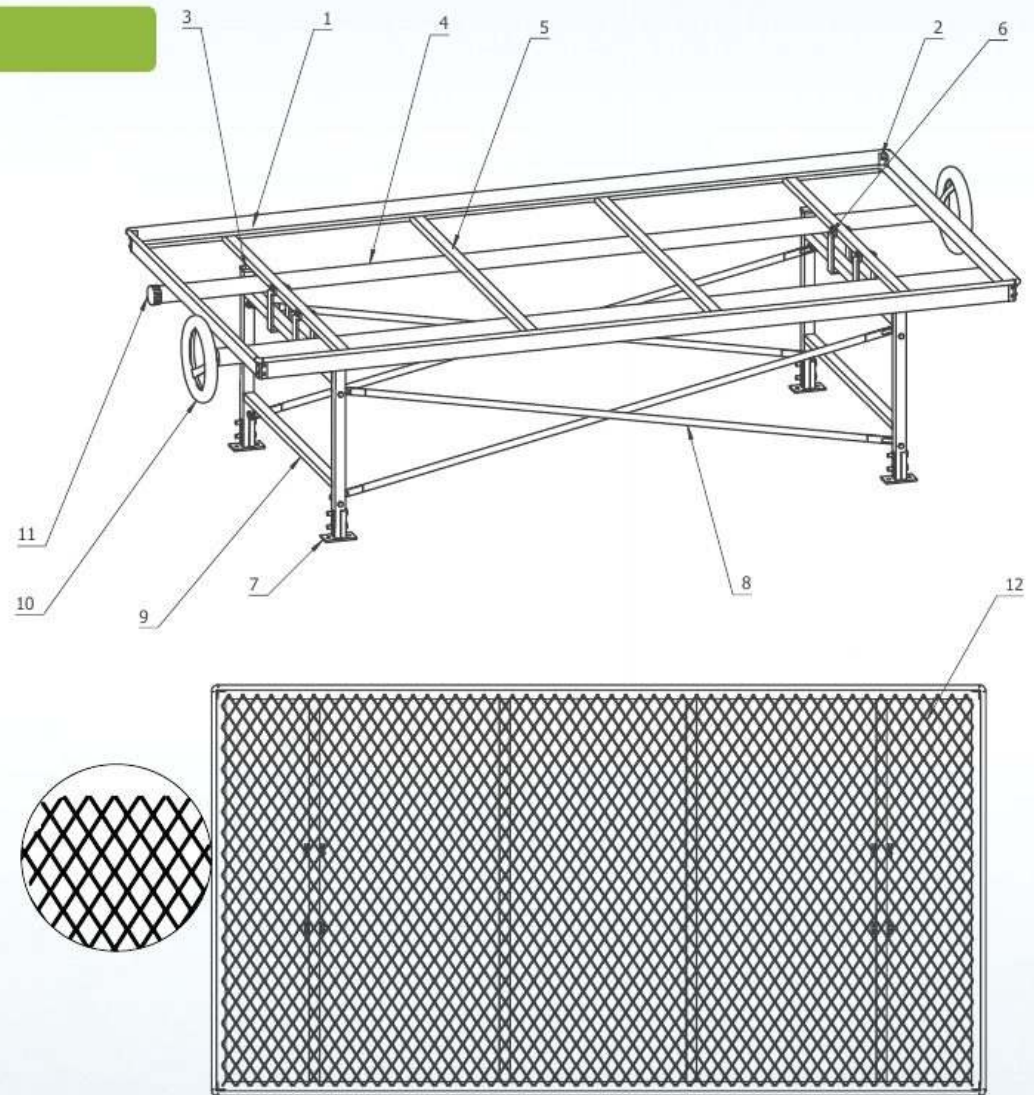
**10. Bench end brace:** Hot-dip galvanized steel pipe

**11. Steering wheel:** Bakelite

**12. Wheel beam cap:** Plastic

**13. Bench top:** Welded wire mesh

# METAL ROLLING BENCHES



## Technical Notes:

- Moving space: 300 mm - 600 mm.
- Installation: expansion bolt grounded.
- Bench sizes can be customized according to your greenhouse area and layout.

1. Bench frame: 6063-T5 aluminium profile

2. Corner bracket: ABS

3. Waterproof cap: Plastic

4. Wheel beam: Hot-dip galvanized steel pipe

5. Middle cross beam: Hot-dip galvanized steel pipe

6. Anti-tip bracket: Nylon

7. Welded feet: Hot-dip galvanized steel plate

9. Diagonal ligament: Hot-dip galvanized steel pipe

10. Bench end brace: Hot-dip galvanized steel pipe

11. Steering wheel: Bakelite

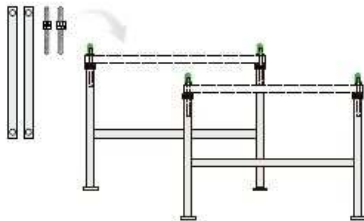
12. Wheel beam cap: Plastic

13. Bench top: Expanded metal mesh

# Installation Steps

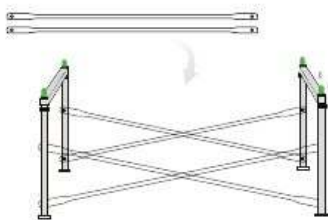
## STEPS 1 ▼

Put two bench stands on the ground. Install the cross beams and tighten the bolts with a wrench.  
Install the adjustable bolts with the bench stands and get the diagonal ligaments and bolts to be installed well prepared.



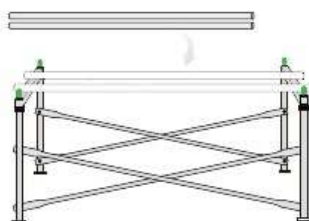
## STEPS 2 ▼

Install the diagonal ligaments with the bench stand and tighten the bolts with a wrench.



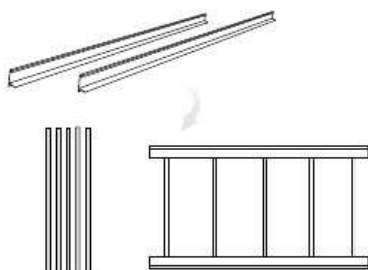
## STEPS 3 ▼

Put two wheel beams on the assembled bench stands.



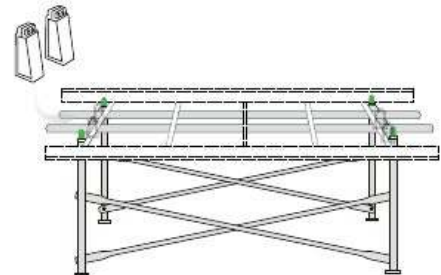
## STEPS 4 ▼

Assemble two aluminum alloy frames and five middle cross beams together and tighten the bolts.



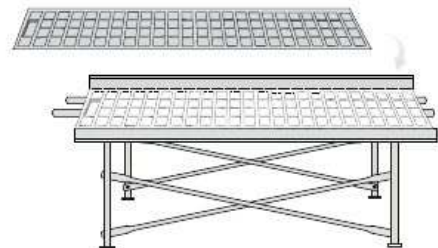
## STEPS 5 ▼

Put the assembled aluminum alloy frames on the bench stand. Install two anti-tip brackets to connect the first and the last middle cross beam with corresponding cross beams on the bench stand.



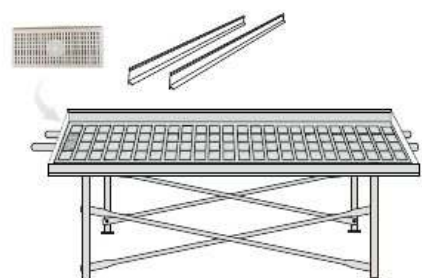
## STEPS 6 ▼

Insert the ABS flood tray into the aluminum alloy frame and glue each side of the ABS flood tray with the aluminum alloy frame.



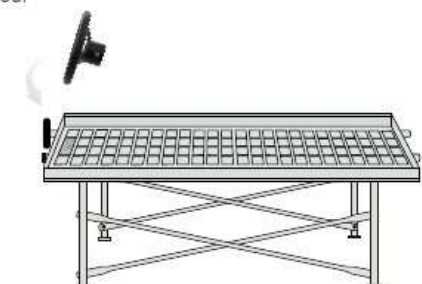
## STEPS 7 ▼

Install the corner brackets and the filter screen on the ABS flood tray and then install the quick valve for nutrient in and out.



## STEPS 8 ▼

Connect the steering wheel and wheel beam caps with corresponding wheel beam. The ebb and flow bench assembly is finished.



# Our Project



2015 · Finland

Product: ebb and flow bench  
Project: seedling nursery base  
Quantity: 6 × 40' HQ container



2016 · America

Product: greenhouse rolling bench  
Project: seedling nursery base  
Quantity: 15 × 40' HQ container



2017 · South Korea

Product: ebb and flow bench  
Project: flower nursery base  
Quantity: 3 × 40' HQ container



2017 · China

Product: greenhouse rolling bench  
Project: vegetable base  
Quantity: 6 × 40' HQ container



2018 · German

Product: ebb and flow bench  
Project: glass greenhouse  
Quantity: 4 × 40' HQ container



2019 · Canada

Product: automatic ebb and flow bench  
Project: Commercial greenhouse  
Quantity: 10 × 40' HQ container



# Hydro Supply Co.

*"Building the Future of Cultivation, One Partnership at a Time."*

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**Sean Bejarano**

SVP, Sales & Partnerships

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