



CITYSOLAR

smart bin  
compactor

FINBIN<sup>®</sup>

# CitySolar

## SOLAR-POWERED SMART BIN COMPACTOR

### Largest capacity

Waste capacity up to 2,000 litres.

1

### Patented compaction system

The patented compaction system allows you to maximise the use of the bin's capacity.

2

### No false readings

No unreliable measurement results based on ultrasonic or laser technology. Patented fill level measurement technology.

3

### 100% solar-powered

Designed and tested to work in Nordic light conditions.

4

NEW!

### 3-in-1 inner container

Ability to change capacity from 120L, 240L or to 360L depending on preference or seasonal needs. You can adjust the capacity by using a standard 240-liter waste bin as is or by adding a 120-liter aluminum inner liner to the bin.

5

### NEW DESIGN!



10

### Real-time data in our cloud service

The FinbinCare cloud service shows the bin's fill level and other information in real time.

9

### Cost-effective

The biggest savings are gained when both the costs and the carbon footprint are considered.

8

### Corrosion-resistant materials

CitySolar is made of aluminium, SST, and unique galvanized steel. The material choices improve the fire safety of the bin and the highest corrosion class C5 makes the bin resistant to corrosion.

7

### Replaceable panels

Field-replaceable panels, which can be swiftly changed in under 10 minutes. This feature radically minimizes the costs of vandalism and extends the product's lifespan.

NEW!

### Safety and ergonomics

The standard 240-litre container (EN-840) can be emptied mechanically, avoiding any risks related to manual emptying, e.g. back problems.

6

# HOW DOES IT WORK?

## Fill level information in our cloud service

CitySolar reports fill level information to our cloud service. This enables just-in-time emptying, reducing costs.

## Solar power

CitySolar is powered by efficient solar panels, which fill batteries up with energy.

## Powerful compaction

The patented compaction system has been designed to maximise the capacity of the bin. The system's compaction power reaches up to 600 kg. The powerful compaction system provides a waste capacity of up to 2,000 litres.

## Accurate measurement system

CitySolar's patented measurement system is reliable and does not trigger false warnings. This ensures that the bin is only emptied when full.

1

## Largest capacity

### CitySolar holds up to 2000 litres of waste.

This equals at least 8 standard 240 litre bins of uncompressed waste.

## 600 litres

CitySolar with 240 l wheelie bin + 120 l inner liner

## 1,200 litres

CitySolar with standard 240 l wheelie bin

## up to 2,000 litres

CitySolar with standard 360 l wheelie bin



## 2

# Reliable fill level measurement thanks to patented compaction system

The powerful patented compaction system allows you to maximise the bin's waste capacity by compressing the waste down to the bottom of the bin.

Our patented fill level measurement system is based on data generated during compaction. The system gives us reliable information on the bin's fill level in real time. The system also collects data on how many times the bin door is opened.

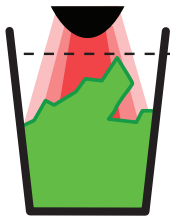
## Secret behind the massive capacity

Prerequisites for a high compaction rate

1. **Standard 240 l or 360 l waste container**  
Standard 240-litre wheeled waste container as the inner container. The possibility for a standard 360 liter waste container by changing the back panel.
2. **Intensive compaction**  
The compaction is at least 60% of the depth of the inner container with a minimum total compaction distance of 620 mm.
3. **Enough power**  
Compression power more than 600 kg
4. **Frequent compaction cycle**  
The compaction mechanism activates after every 15 uses.

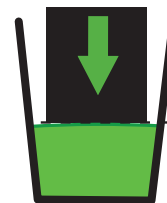
## 3

# Measurement technology is crucial



### Why do we not use laser or ultrasonic technology?

Laser and ultrasonic technologies detect the volume of waste collected but the readings can easily be distorted by, for example, individual pieces of litter placed higher than the rest of the waste mass.



### CitySolar's patented fill level measurement technology

CitySolar's technology measures the fill level during compaction. This ensures reliable results.



4

## Solar panels tested in Nordic conditions

CitySolar is designed and manufactured in Finland. Finland is known as the land of thousands of lakes and tens of thousands of engineers. Top-level technology expertise is crucial in the building of high-quality infrastructures in our demanding natural conditions.

In mid-winter, there is less than six hours of daylight in southern Finland. In the north, the sun does not

rise at all for nearly two months. The temperature varies between +30°C and -30°C during the year. Our high-quality solar panels and batteries ensure that the system works in these conditions.

CitySolar is ideal for Finnish conditions and works everywhere.

**Solar panel: min. 50 W**  
**Battery: min. 50 AH**

5

# The only 3-in-1 inner container on the market



**Upgrade capacity!  
Changeable back panel  
for 360 L wheelie bin.**

CitySolar is the only product on the market with an adjustable inner container: easy and quick to switch from 240 litres to 120 litres. It takes less than 5 minutes!

The possibility also for a 360 litre waste container just by changing the back panel. This increases the capacity up to 2000 litres.

6

## Occupational safety and ergonomics



Annually, there are more than 6,000 occupational accidents as a result of carrying a load manually (Statistics Finland 2019). The smaller container can be emptied manually without the heavy load straining your back. During major events, the bin capacity can be maximised by switching from 120 litres to 240 litres or even 360 litres. The standard 240/360 litre container is emptied mechanically.



The bin's filling hatch can be opened hygienically with a foot pedal.

## Corrosion-resistant materials

8

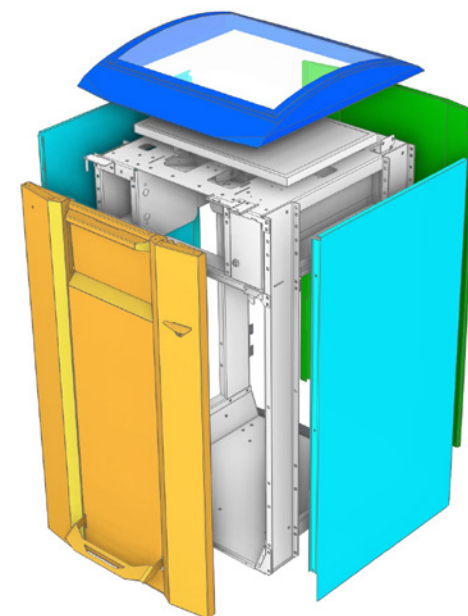
CitySolar is made of aluminium, SST, and unique galvanized steel. The material choices improve the fire safety of the bin and the highest corrosion class C5 makes the bin resistant to corrosion.

7

## Replaceable panels

Field-replaceable panels, which can be swiftly changed in under 10 minutes. This feature radically minimizes the costs of vandalism and extends the product's lifespan.

**Field-replaceable panels can be changed in less than 10 minutes!**



## Easy to use and maintain

- **The bin's filling hatch can be opened by hand or with a foot pedal**
- **Service door with a triangular lock**
- **Easy to install spare parts readily available**
- **Inner container: affordable standard 240 or 360 litre container**



# Specifications

## Materials

CitySolar is made of aluminium, SST, and unique galvanized steel. The material choices improve the fire safety of the bin and the highest corrosion class C5 makes the bin resistant to corrosion.

## Dimensions

height: 1500 mm  
width: 780 mm  
depth (with foot pedal) 960 mm  
hatch: width 380 mm

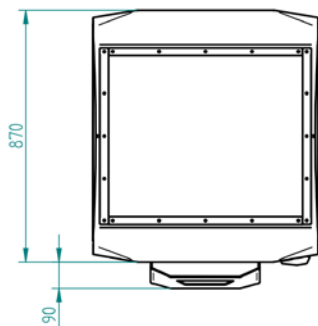
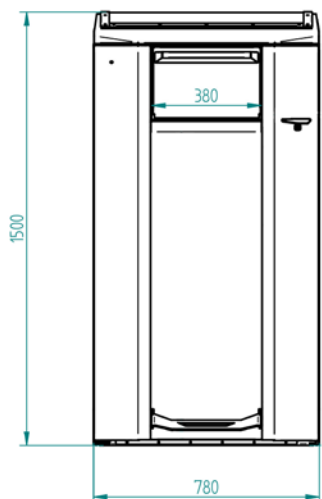
Inner container:

Standard 240 l waste container (EN-840),  
Standard 360 l waste container (with larger back panel)

Capacity: Up to 2,000 litres

## Solar panel

Solar panel: min. 50 W  
Battery: min. 50 AH



## SCANDINAVIAN DESIGN

"The CitySolar smart bin features a sleek and minimalist Scandinavian design, with clean lines and a modern aesthetic. Its streamlined form is both functional and visually appealing."

- Henri Sydänheimo, Design Lead



# Minimise the Carbon Footprint

CitySolar is an eco-friendly choice in multiple respects. Our principle is to minimise the carbon footprint of waste management.

CitySolar promotes efficient waste collection routes, leading to fewer collection trips and up to 90% reduced CO2 emissions from transportation.

We do not use the unecological hot galvanizing technique in the manufacture of CitySolar smart bins. Additionally, 95% of the materials used in CitySolar Smart Bins are recyclable.

Many of our clients have decided to promote positive environmental actions on their bin labels. CitySolar end users' feedback has been enthusiastic!



9

# Where do the savings come from?

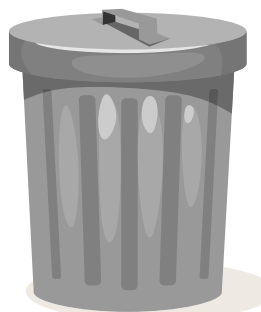
Replacing normal litter bins with CitySolar smart bins reduces the carbon footprint of waste management and decreases your waste management expenses significantly. CitySolar's compaction system, reliable fill level measurement and real-time reporting will bring you substantial savings in waste management expenses.

How much money will you save by replacing your bins with CitySolar smart bins?

**WE CAN GIVE YOU AN ESTIMATE!**

**An example estimate for a client whose weekly waste volume is 29,400 litres.**

## 70 LITTER BINS (á 60 l)



Total capacity  
**4,200 litres**

Number of times emptied per week  
**7 times per bin**  
In total **490 times emptied**

Price for emptying  
**EUR 3 per bin**

Total cost of emptying per month  
**EUR 6,365**

**VS**

## 25 CITYSOLAR smart bins (240 l)

Total capacity  
**30,000 litres**

Number of times emptied per week  
**Once per bin**  
In total **25 times emptied**

Price for emptying  
**EUR 7 per bin**

Total cost of emptying per month  
**EUR 758**



**Savings EUR 5,607/month\***

Investment payback time less than 2 years

\*1 month = 4,33 weeks



# Many cities across Europe have already chosen CitySolar.



Stockholm, Sweden



Rouen, France



Helsinki, Finland



Oslo, Norway



Nantes, France



Turku, Finland



Pays de l'Or, France

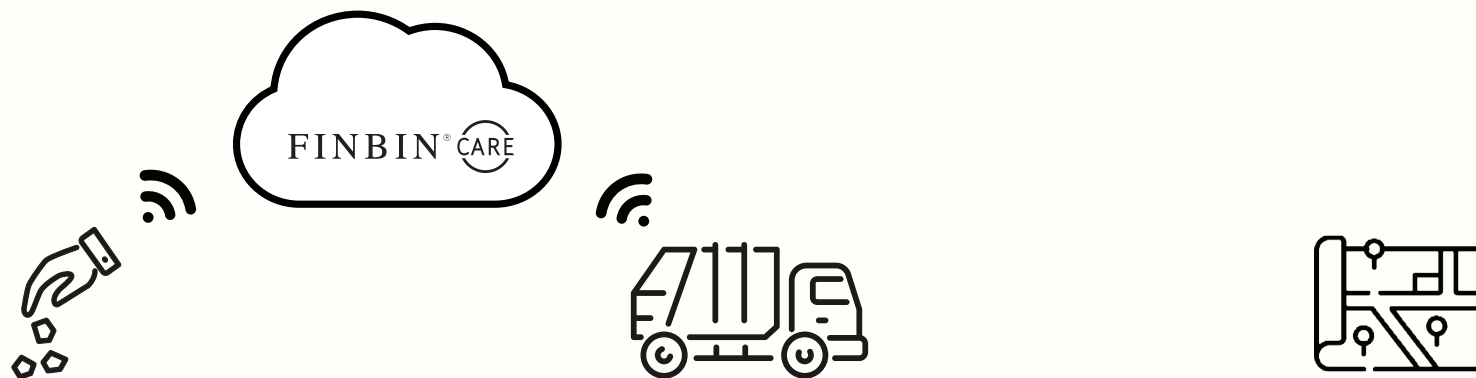




10

## Finbin Care cloud service

Finbin® Care waste management software is a cloud-based service that can be accessed online with a smartphone or computer. The service does not require any software installation. Finbin Care monitors CitySolar's fill level in real-time.



### Fill level information in our cloud service

CitySolar reports fill level data and how many times the bin door has been opened to a cloud service.

### Automatic maintenance request

A maintenance request is sent directly to the person in charge when the waste volume reaches the limit set by the client.

### Map view shows the overall situation

In addition to fill level information, CitySolar smart bins' basic information and locations can be viewed in the service. It is also possible to add other street furniture to the service and view them in the map view.

# CitySolar vs other smart bins

	CitySolar	Other smart bins on the market
Compaction capacity up to 2,000 litres	Yes	No
The patented fill level measurement system prevents false readings	Yes	No
Three waste capacity options in one bin: 600 / 1,200/ up to 2,000 litres	Yes	No
Fire- and corrosion-resistant materials	Yes	Some models
Option to switch between a 120 / 240/ 360 litre container.	Yes	No
Field-replaceable panels that can be changed in less than 10 minutes	Yes	No
Designed and tested to work in Nordic light conditions.	Yes	No
Inner container: standard 240 l or 360 l waste container.	Yes	Some models
Easy and affordable maintenance	Yes	Some models
Foot pedal as standard.	Yes	Some models
Many colour options	Yes	Some models
Can be emptied manually or mechanically (waste truck)	Yes	Some models
Reports fill level data and need for maintenance to a cloud service	Yes	Some models
Waste management optimisation based on usage data in the cloud service.	Yes	No

**Interested to learn more?**  
**Contact our experts**

[info@finbin.fi](mailto:info@finbin.fi)

+358 (0)3 7846 777



Learn more!  
[citysolar.fi](http://citysolar.fi)







**LITTER BINS**



**INDOOR RECYCLING**



**BIN SHELTERS**



**CITYSOLAR SMART BINS**

**Check out our  
wide selection!**  
[finbin.fi](https://finbin.fi)

# SETTING NEW STANDARDS



## FINBIN<sup>®</sup>

finbin.fi

info@finbin.fi

+358 (0)3 7846 777

