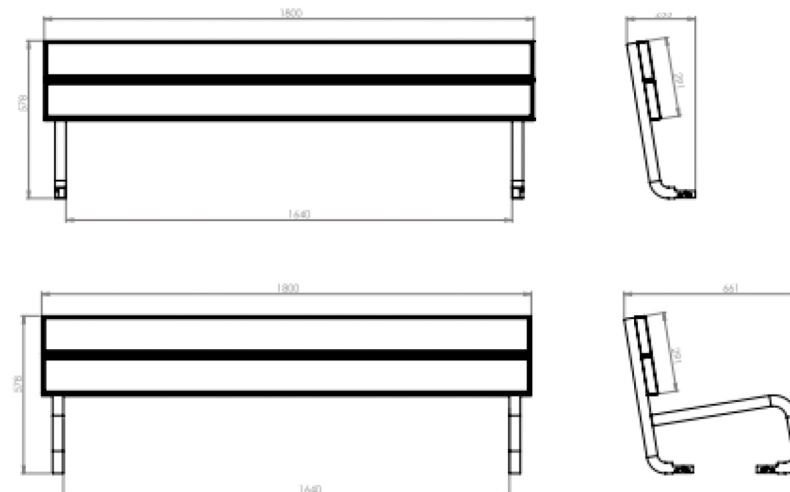# Steora

Steora

Each Steora bench can be upgraded by a variety of additional options, making every model fully modular and even more advanced.

There are mechanical add-ons, such as smart backrest and armrest, as well as electrical add-ons, such as smart USB chargers, air quality sensors, hybrid module and other.

Every additional option is designed, developed and intensively tested inside Include, ensuring highest reliability and quality even in severe conditions after several years of usage.

Most of the additional options can be integrated into the bench even after the installation process. Any future developed additional options are also going to be compatible with previously installed Steora benches.

Armrest

Weight
5 kg

USB fast chargers

Rated power
18 W per port (36 W combined)

Independent USBA & USBC connectors
Yes

Standards
DCP, QC2.0, QC3.0, PE+1.1, PE2.0, FCP, AFC, SFCP, SCP, USB PD

Backrest

Combined rated powe
67 W

MPPT tracking speed
<100 ms

Combined efficiency
50.00 %

MPPT for each beam
Yes

Rated power
7 W

Air flow
58m^3/h (35CFM)

Temperature trigger
20°C to 45°C

Noise level
30 dBA

Weight
34 kg

Steora
additional options

Hybrid module (Cyclo)

AC input
100-240V – 50/60Hz 2.7-1.1A

Rated power
192 W

Operating ambient temperature
-40°C to 50°C

Hybrid module (Classic/City)

AC input
100-240V – 50/60Hz 2.7-1.1A

Rated power
54 W

Operating ambient temperature
-40°C to 50°C

Wi-Fi module

Max power consumption
9 W

LTE category
4 (150Mbps Downlink, 50Mbps Uplink)

Wireless 2.4 GHz Max data rate
300 Mbit/s

10/100 Ethernet ports
1

LCD display

Max power consumption
40 W

Brightness
1000 lux

Operating ambient temperature
-20°C to 50°C

PPI
86

Resolution
1024 x 1280

Noise sensor

Backround noise sensor
30 dB - 120 dB

Seating surface heating system

Operating voltage
230 V

Max power consumption
450 W

Time controlled
Yes

Temperature controlled
Yes

Fused
10 A

Temperatrure protection
Bimetal switch per each beam

AI/ML camera

Resolution
2 MP

Operating ambient temperature
-20°C to 50°C

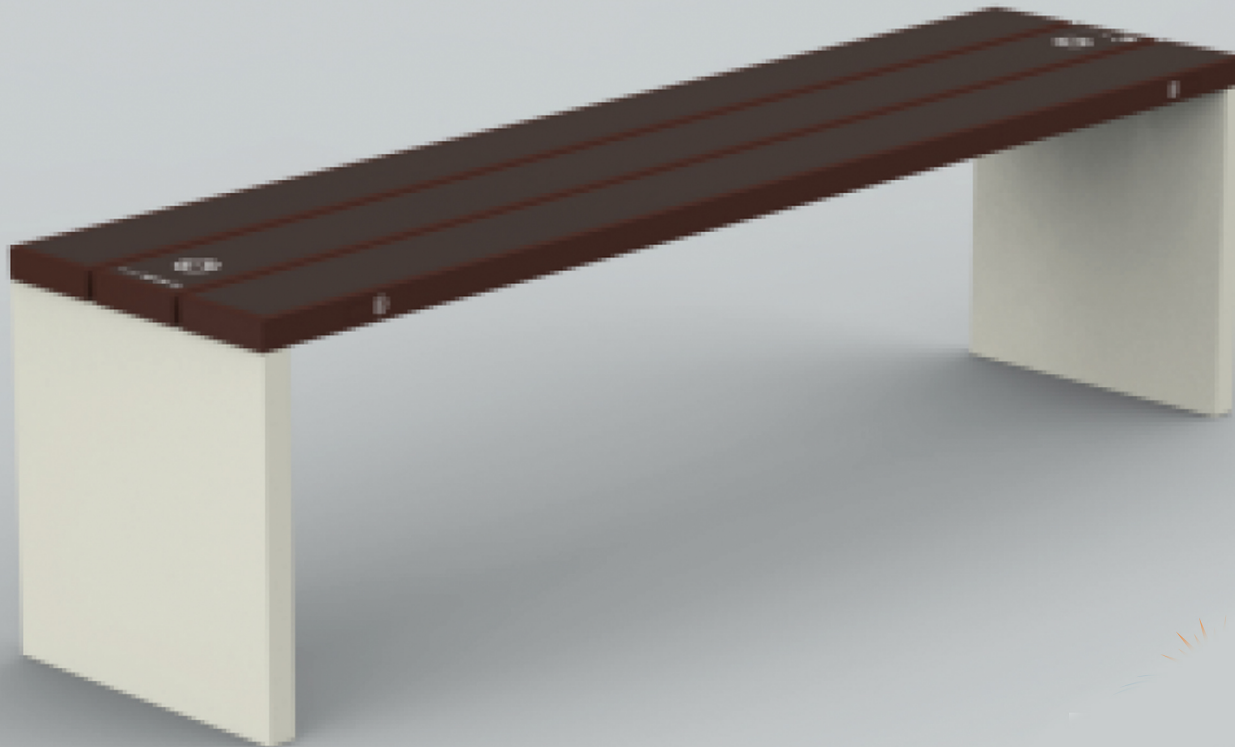**Max power consumption**
1.5 W

AIR quality sensor

Working temperature
-30°C to +50°C

PM senor
PM1.0, PM2.5, PM10 (µgm3)
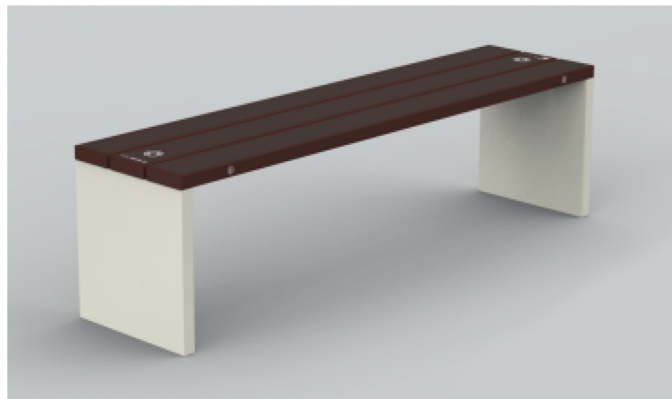
NO, NO2, O3
0-20ppm, <±0.5 (>15% RH, <85% RH)

Steora City

Steora
City

Steora City smart bench is the world most powerful bench ever created.

City shares same technology and core features as the Classic model, but with wider set of additional options.

When equipped with optional LCD display and advanced AI camera for precise DOOH advertising, City becomes a perfect option for high frequent locations, thus creating revenue and ROI - already proven in several cities around the world.

Our new City model also provides fast wireless charging and network of reliable sensors which gather information in bench surrounding – all packed in self-sustainable and environmentally friendly product with refurbishing option.

Dimensions
1800 x 505 x 440 mm

Weight
65 kg

IK rating
IK08

Materials
alu-zinc, aluminium, hot-dip zinc coated steel (EN10346), galvanized low carbon steel (ISO 2081)

Operating temperature
-20°C to 50°C

Operating Humidity
(RH) 0-100%

Environment
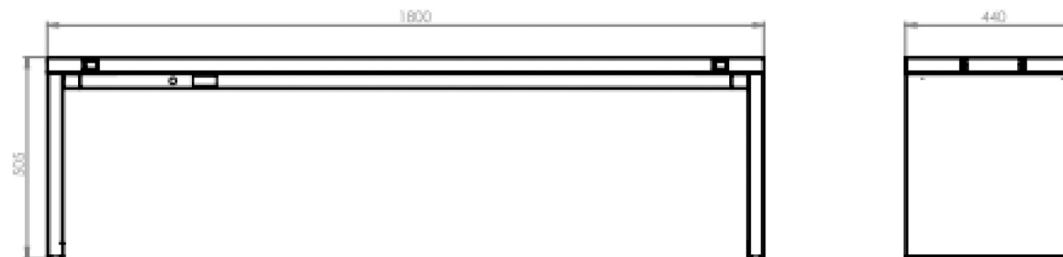C4/C5* (*on request)

IP rating
IP54/IP2X

Noise level
30 dBA

Maximum load per beam
250kg

Steora
City

PV modules

Combined rated power
100 W

MPPT tracking speed
<100ms

Combined efficiency
50.00%

MPPT for each beam
Yes

QI wireless charging

Rated power
10 W

Range
6 mm

QI efficiency
Up to 80%

QI activation time
<2s

LED ambient light

Rated power
8 W

Color temperature
4500 K

Dimmable
Yes

Time controlled light
Yes

Li-ion battery pack

Total energy
190 Wh

Rated voltage
11.1 V

Max. voltage
12.6 V

Peak power
400 W

Continuous power
300 W

Over current protection
40 A

Over discharge protection
<3 V per cell

Short circuit protection
<100μs

Cell balancing
Yes

State of charge indicator
Yes

Sensors

Pressure sensor
700 – 1100 hPa

Humidity sensor
0 – 99 %RH ±2.0 %RH (20–80%RH)

Temperature sensor
-40°C to 85°C ±2 °C

Occupancy sensor trigger
20 kg

Seating surface cooling system

Rated power
10 W

Air flow
52 CFM

Temperature trigger
20°C to 45°C

Noise level
30 dBA

Internal server communication system

GSM band
850/900/1800/1900 MHz

Transmitting power
Class 4 (2W) at 850/900MHz, Class 1 (1W) at 1800/1900MHz

GPS type
22 tracking (66 acquisition), GPS L1 C/A code

Accuracy
GPS L1 C/A code

Steora Classic

NÜ-NRG
GROUP

Steora
Classic

Steora Classic is developed as a replacement for all regular street benches around the world.

Core features are PV modules, fast wireless charging, ambient light and environmental sensors. The design is fully modular, with possibilities to change armrests, legs and other parts of the bench, making it adaptable for any location in the world.

Armrests hide two Qi charging spots, with room for additional USB fast chargers compliant with Apple, Huawei and Samsung standards.

Bottom of the seat houses LED strips controlled by an ambient light sensor that tracks natural lighting conditions and turns on automatically.

With a set of extraordinary additional options, the Classic model can become e.g. Mini weather station or even outdoor heating spot during the cold winter days.

Dimensions
1800 x 505 x 635 mm

Weight
55 kg

IK rating
IK08

Materials
alu-zinc, aluminium, hot-dip zinc coated steel [EN10346], galvanized low carbon steel [ISO 2081]

Operating temperature
-20°C to 50°C

Operating Humidity
(RH) 0-100%

Environment
C4/C5* (*on request)
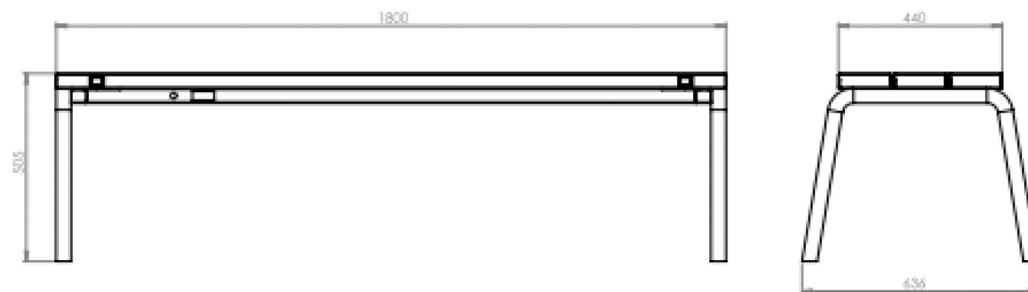
IP rating
IP54/IP2X

Noise level
30 dBA

Maximum load per beam
250kg

Steora
Classic

PV modules

Combined rated power
100 W

MPPT tracking speed
<100ms

Combined efficiency
50.00%

MPPT for each beam
Yes

QI wireless charging

Rated power
10 W

Range
6 mm

QI efficiency
Up to 80%

QI activation time
<2s

LED ambient light

Rated power
8 W

Color temperature
4500 K

Dimmable
Yes

Time controlled light
Yes

Li-ion battery pack

Total energy
190 Wh

Rated voltage
11.1 V

Max. voltage
12.6 V

Peak power
400 W

Continuous power
300 W

Over current protection
40 A

Over discharge protection
<3 V per cell

Short circuit protection
<100μs

Cell balancing
Yes

State of charge indicator
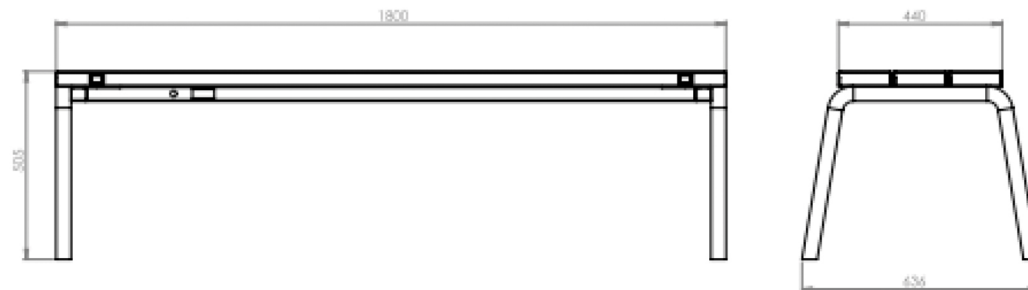Yes

Sensors

Pressure sensor
700 – 1100 hPa

Humidity sensor
0 – 99 %RH ±2.0 %RH (20–80%RH)

Temperature sensor
-40°C to 85°C ±2 °C

Occupancy sensor trigger
20 kg

Steora
Classic

Seating surface cooling system

Rated power
10 W

Air flow
52 CFM

Temperature trigger
20°C to 45°C

Noise level
30 dBA

Internal server communication system
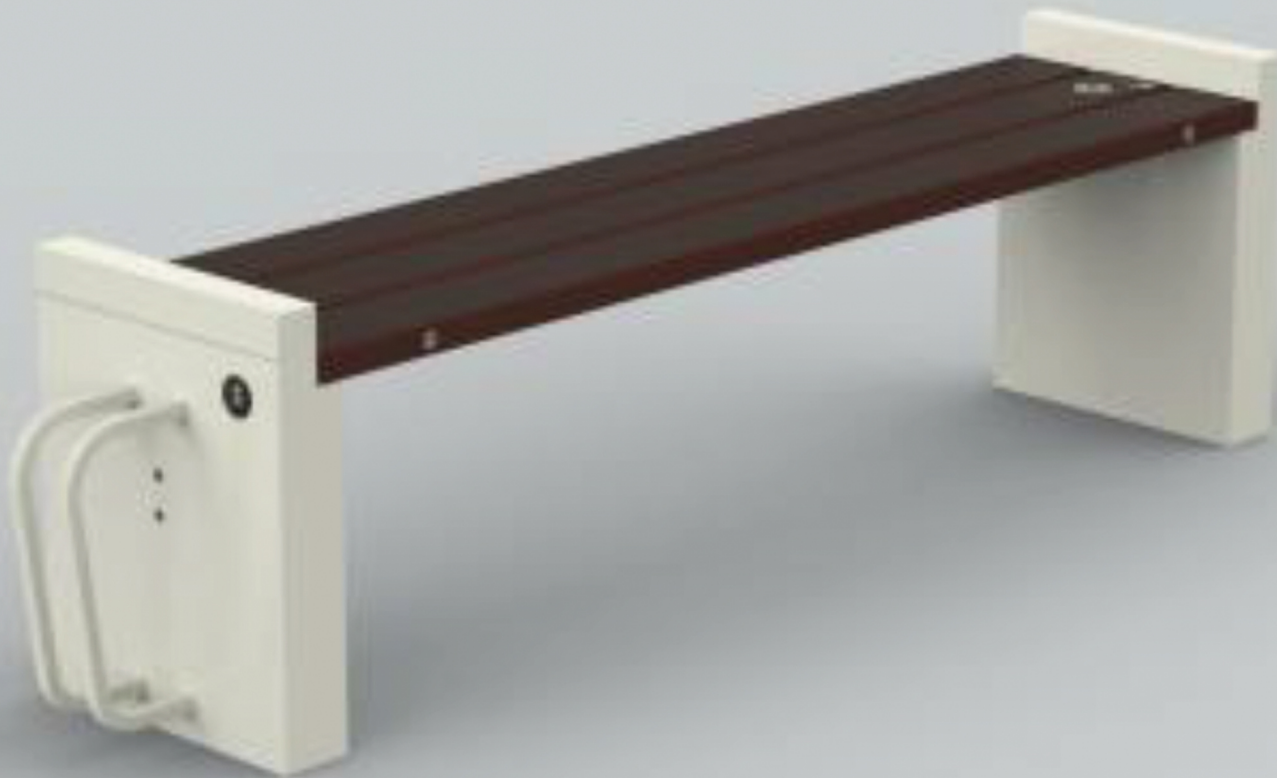
GSM band
850/900/1800/1900 MHz

Transmitting power
Class 4 (2W) at 850/900MHz, Class 1 (1W) at 1800/1900MHz

GPS type
22 tracking (66 acquisition), GPS L1 C/A code
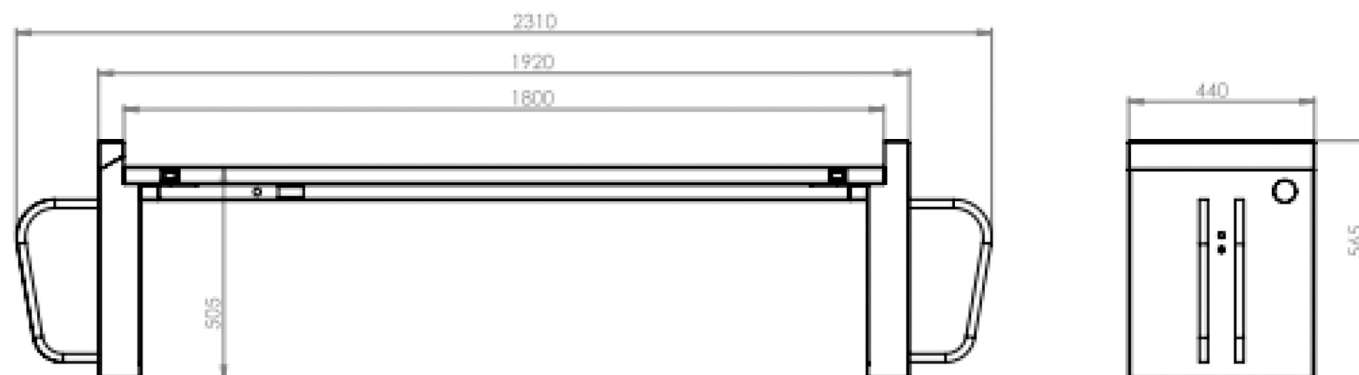
Accuracy
GPS L1 C/A code

Steora Cyclo

Steora
Cyclo

PV modules

Combined rated power
100 W

MPPT tracking speed
<100ms

Combined efficiency
50.00%

MPPT for each beam
Yes

QI wireless charging

Rated power
10 W

Range
6 mm

QI efficiency
Up to 80%

QI activation time
<2s

Li-ion battery pack

Total energy
320 Wh

Rated voltage
11.1 V

Max. voltage
12.6 V

Peak power
400 W

Continuous power
300 W

Over current protection
40 A

Over discharge protection
<3 V per cell

Short circuit protection
<100µs

Cell balancing
Yes

State of charge indicator
Yes

Steora
Cyclo

Developed for cycling off the beaten path, Steora Cyclo brings everything an urbanite or outdoorsy person might need on their bike or scooter commute - two bike racks, smart chargers for e-bikes and e-scooters, together with an air compressor and highquality tools kit, responding to all possible needs of bike and other lightweight vehicle users.

Cyclo model also comes with fast wireless charging, environmental sensors and is fully modular with add-ons such as lowerpot.

Bike repair station holds Phillips and flathead screwdrivers, hexagons size 4, 5 and 6 and wrenches from size 7 to 16. Built in air compressor unit allows riders to check the tire pressure and top up their tires using a schrader or presta valve.

Dimensions
2310 x 565 x 440 mm

Weight
105 kg

IK rating
IK08

Materials
alu-zinc, aluminium, hot-dip zinc coated steel [EN10346], galvanized low carbon steel [ISO 2081]

Operating temperature
-20°C to 50°C

Operating Humidity
(RH) 0-100%

Environment
C4/C5* (*on request)

IP rating
IP54/IP2X

Noise level
30 dBA

Maximum load per beam
250kg

Steora
Cyclo

LED ambient light

Rated power
8 W

Color temperature
4500 K

Dimmable
Yes

Time controlled light
Yes

Seating surface cooling system

Rated power
10 W

Air flow
52 CFM

Temperature trigger
20°C to 45°C

Noise level
30 dBA

Sensors

Pressure sensor
700 – 1100 hPa

Humidity sensor
0 – 99 %RH ±2.0 %RH (20–80%RH)

Temperature sensor
-40°C to 85°C ±2 °C

Occupancy sensor trigger
20 kg

AC socket

Output voltage
230 V

Max. power
300 W

Continuous power
150 W

Operating temperature
-20°C to 50°C

Thermal protection
Yes

DC charging

Output voltage
12V/24V/36V (automatic recognition)

Continuous power
63 W

Charging amperage
1.5 A

Air compressor

Compressor pressure
8 bar

Pressure sensor resolution
±0.1bar

Supported valves
Dunlop, Presta & Schrader

Hand tools

NFC trigger
2 cm

Spanner sizes (mm)
7, 8, 9, 10, 13, 14, 15, 16

Allen key sizes
4, 5, 6

Flat screwdriver size
4 mm

Tool lines length
1,2 m

Internal server communication system

GSM band
850/900/1800/1900 MHz

Transmitting power
Class 4 (2W) at 850/900MHz, Class 1 (1W) at 1800/1900MHz

GPS type
22 tracking (66 acquisition), GPS L1 C/A code

Accuracy
GPS L1 C/A code