



GRANUM

Multifunctional green column
Greenery · Light · Smart City





How to **reintroduce living organisms** without on the land?

- Waterlogged soils, highly mineralised areas
- Difficulty planting trees in open ground
- Cities need urban renaturation without taking up any more ground space



GRANUM – a grain of light, a grain of life – is the **new range** of street lighting and street furniture from Ghm (Agora Makers Group) , **all of which feature** one or more green columns **as their central element**.

What is a green column?

The internal tubular steel structure is encased in a fibreglass shell onto which **all types of plants can be planted**. The surface is then quickly covered with dense, perennial vegetation.

How does the watering system work?

The entire GRANUM range incorporates **an internal irrigation system** ensuring uniform watering of the plants.

A simple water supply at the base of the column is all that is required. Once installed, the plants grow to cover the structure and **promote biodiversity**

.

The GRANUM column is a simple solution for greening public spaces and **promoting biodiversity, whilst** enhancing the urban landscape in a sustainable way.





A COLUMN AVAILABLE IN 3 VERSIONS



FABRIQUÉ
EN FRANCE

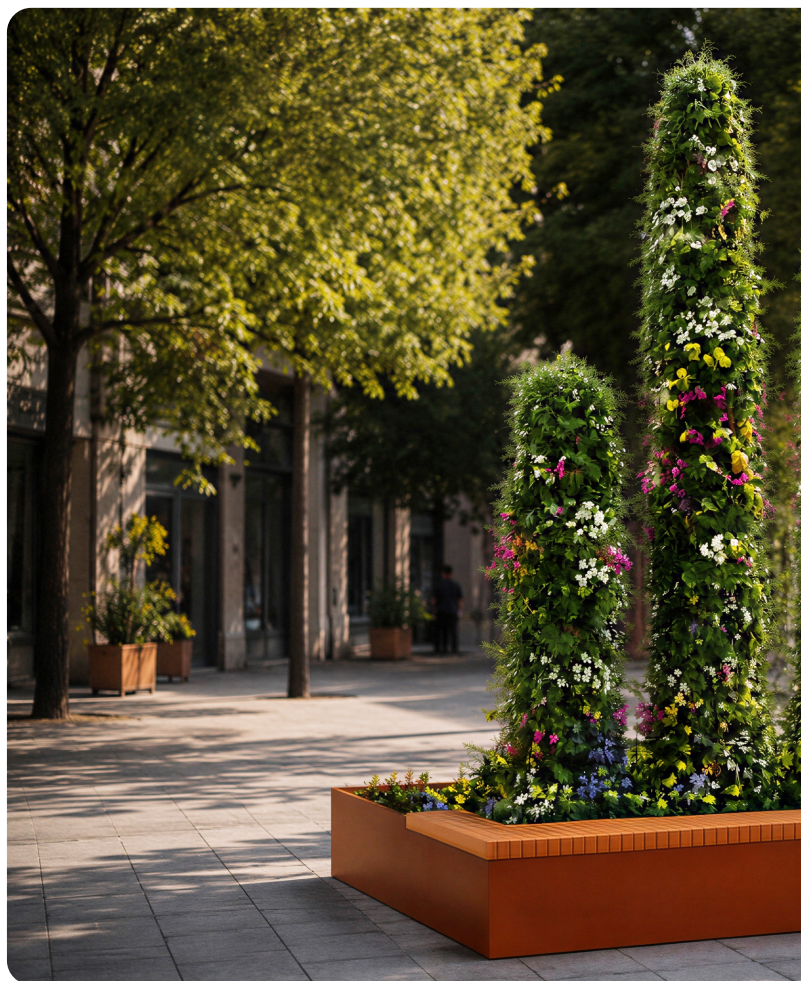
SOLO

GRAI

BOUQUET



Furniture



Furniture

NUM LUX



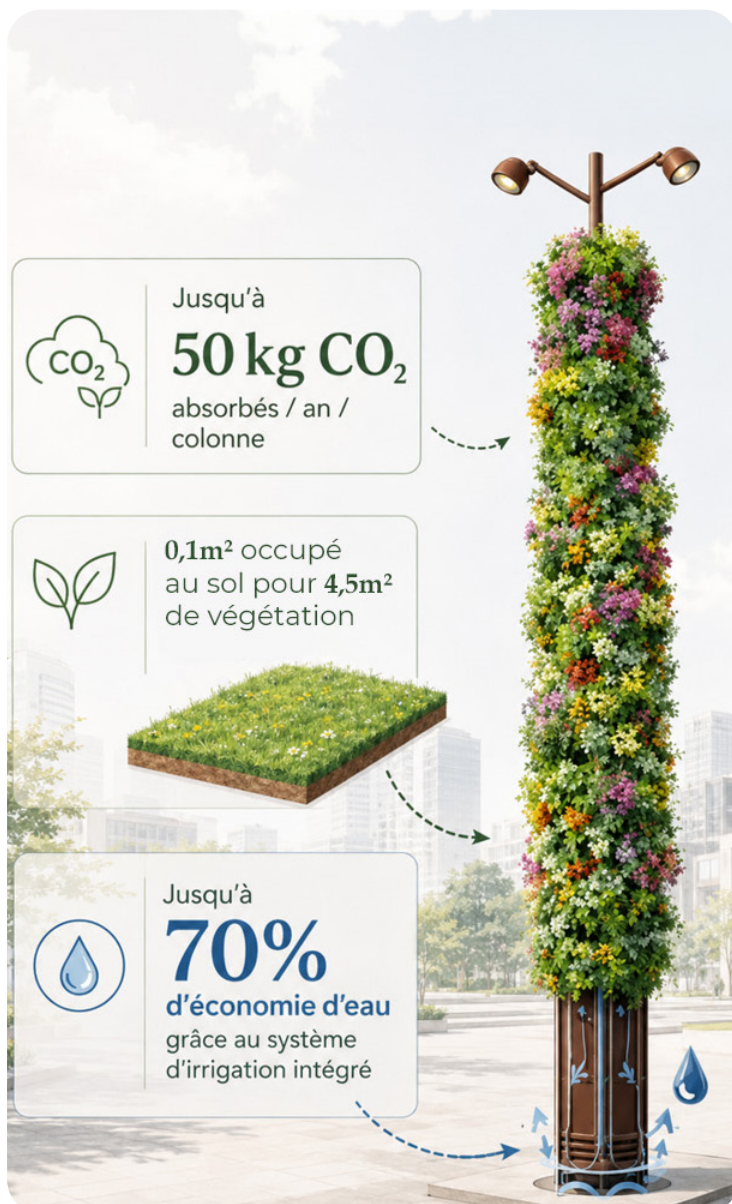
Lighting

GRANUM complements and enhances urban landscaping projects



Where can **GRANUM** be integrated?

- City centres
- Paved squares
- Forecourts, esplanades
- Projects above car parks or with sensitive underground utility networks
- Areas with no available open ground
- Creation of green screens to demarcate spaces
- An alternative to green walls



- **The ideal solution for dense, mineral-rich areas**

- **Equip without adding to** the number of fixtures – a single floor mount for multiple functions:

- lighting
- greening
- CCTV
- IoT sensors

- **Living organisms at work:**
Biodiversity and plant life
, all year round

GRANUM SOLO

RAPID RESTORATION OF AREAS

Technical specifications

Dimensions:

Heights: 2.5 m, 3.5 m, 4.5 m
Ø 356 mm

Integrated irrigation system

Approx. 1 m² of **green space** created for 1 m in height.

Plants planted directly in the growing medium

Substrate capacity: 180, 255 or 325 litres

Certification:

Eurocode (European construction standard)





Substrate and irrigation integrated into the column

Height 4.5 m

Height 3.5 m

Height 2.5 m

Water supply into the massif

Option for controlled irrigation management within a dedicated technical area

GRANUM BOUQUET

SELF-STANDING / PORTABLE / QUICK TO SET UP

Technical specifications

Dimensions:

Heights: 2.5 m, 3.5 m, 4.5 m
Ø 356 mm

Integrated irrigation system

The green area provides the equivalent of approximately 18 m² of green space

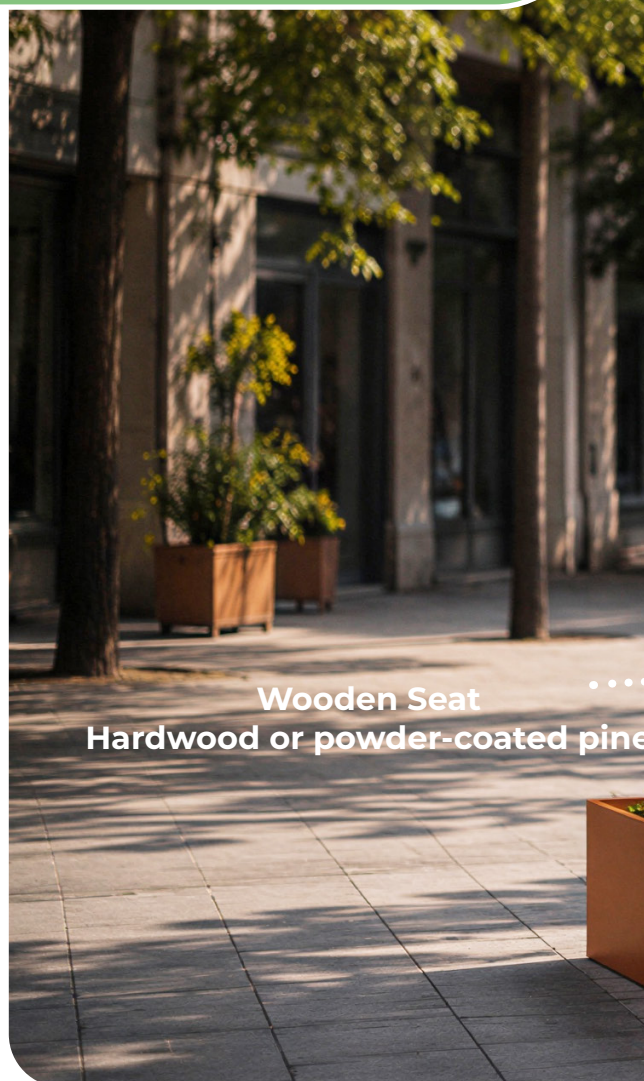
Plants planted directly into the growing medium

Substrate capacity: 180, 255 or 325 litres (excluding planter)

Certification:

Eurocode (European construction standard)

Street furniture: Metalco Grandifiore.



Wooden Seat
Hardwood or powder-coated pine



Weighted planter
box with a protected
technical area

Heights
2.5m, 3.5m, 4.5m

(3 columns
with 1 to 3 heights available
per location, mixed heights
possible)

The unit can be moved as it is ins-
talled
directly onto the slab
(without a foundation)

Corten steel or powder-coated steel

Water supply
under the sink

GRANUM LUX

CONNECTED PLANT COLUMN

Technical specifications

Dimensions:

Heights: 1 column with light point at
3.5m, 4.5m, 5.5m
Ø 356 mm

'Smart Irrigation System' and 'Smart Irrigation Controller'

- Integrated into the base of the column
- Connected to the water mains
- Humidity analysis via sensor
- Uniform water distribution
- Autonomous smart watering and remote-controlled

The two media (electricity and water) are separate and never come into contact

Configurations:

Compatible with ambience scenarios and smart control

EN40 **certification**



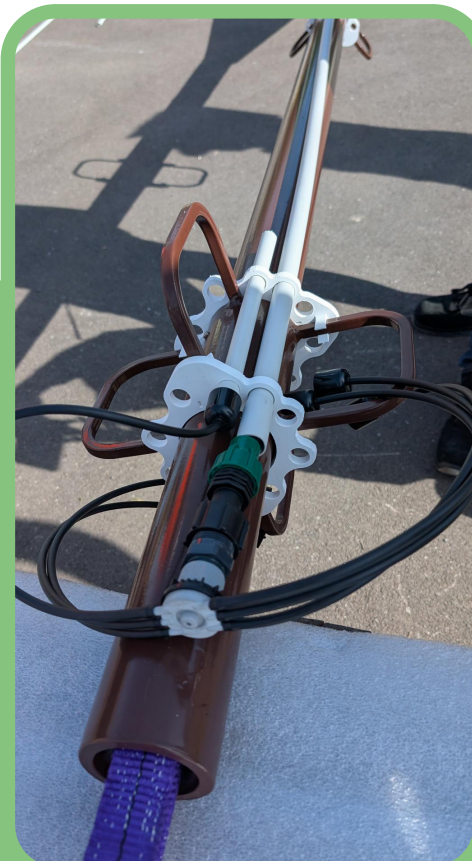


An innovative irrigation system

The irrigation system comprises a humidity sensor, a smart controller, a solenoid valve, a telecommunications system, a flow meter and a high-capacity battery.

It is concealed and protected within its dedicated technical compartment at the base of the mast.

The autonomous irrigation system is fully configurable and can be controlled remotely; it is suitable for all types of plants. All settings can be monitored, adjusted and modified via an online platform.



Developed by our partner mube, the irrigation system enables automatic control of watering for the vertical garden and delivers water savings of up to 70 per cent compared with an equivalent green space planted directly in the ground.



mube
Technology that grows

Green column,
after 1 year



Planting Day

TECHNICAL SPECIFICATIONS

Features	Granum Solo	Granum Bouquet	Granum Lux
Configuration type	1 green column	3 green columns combined with furniture/planters	1 green column with equipment at the top
Main function	Vertical greening	Vertical greening + street furniture	Vertical greening + lighting
Flowerbed	√	- set on a slab with street furniture / weighted planter	√
Height	2.5 m, 3.5 m, 4.5 m	3 columns of 2.5 m, 3.5 m, 4.5 m	4, 5 or 6 metres at the light point
Pole diameter	Ø 356 mm	Ø 356 mm per column	Ø 356 mm
Equipment at the top	-	-	√ lighting
Smart City features	-	-	Integrated smart lighting Under development: video, IoT sensors, signage and other functions
Irrigation system	Management by the operator	Managed by the operator	Integrated, automatic and connected, or managed by the operator
Technical area	-	-	√ 1 m high
Remote monitoring / adjustment	-	-	√ via online platform / app
Structural certification	Eurocode	Eurocode	EN40



A building block of a global vision

GRANUM forms part of a comprehensive urban renaturation programme that helps to combat heat islands, promote biodiversity and improve residents' quality of life: **'biodiversity and improve residents' quality of life'**

Mirabilis, Metalco



Lila, Ghm



Grandifiore,



O'Claire, Ghm



Fuente, Metalco



Cison, City D



Metalco



Gemini, Bellitalia



Granum, Ghm



Design



Foglia, Metalco



Tile, Metalco







'Lighting just right' has been **Ghm's** guiding principle in the design of lighting solutions since 1927.

Its teams design efficient, reliable and compliant solutions that create lasting, high-quality atmospheres.

Ghm is one of the flagship brands of the Agora **Makers** group, which brings together leading expertise in lighting and connected solutions for public spaces.



A different kind of commitment: our CSR approach, ' , lies at the heart of our overall strategy

We firmly believe that economic performance cannot be separated from a responsible commitment to society, social issues and the environment.

Our CSR approach therefore serves as a strategic lever **for sustainable**, inclusive and balanced **development**.

It embodies our commitment to acting ethically, **transparently and with goodwill**, by placing our stakeholders' expectations at the heart of our thinking and our actions.

Our commitment to the United Nations

September 2021. ECLATEC is now a signatory to the UN Global Compact, the United Nations' global pact on corporate social responsibility and sustainable development.

Through this strong commitment, which is in line with the organisation's values, the company is helping to make the global market more socially and economically inclusive.

Constantly evolving in terms of its practices and processes, ECLATEC is committed to making continuous progress towards upholding the principles of creating a symbiotic relationship between businesses and society.



Engagés dans la démarche RSE de l'UIMM :
signature de la charte d'engagement en mai 2024



Ghm a été labellisé Entreprise du Patrimoine Vivant en 2018.



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Ghm est une marque du groupe

 **agora
makers**
People shaping places