COLLECTION 2027

BADGIR | Rechargeable thermal comfort

AIR CONDITIONING
WITHOUT HEAVY INSTALLATION

Discreet, rechargeable emitters.
Buildings that can be cooled without a refrigerant circuit in every living space.

Metal wall unit • Metal console • Ceramic cone
Collective production and PCM storage.



CONCEPT VISUAL • BADGIR FAMILY

UNDERSTAND IT IN 30 SECONDS

One system, three comfort worlds

Collective cooling, local diffusion, optional heating.

01 / EMITTERS

Metal wall and console units;
iconic ceramic cone.
2 target capacities: 1.8 / 3.6 kW.

02 / ENERGY

Rechargeable PCM when no cooling network serves the premises;
HYDRO if a suitable network exists.

03 / CENTRAL UNIT

Shared production and recharging at the foot of the building; secure access.
Optional collective heating.

FOR THE ARCHITECT

Each room receives an emitter visually comparable to a radiator or a fan coil unit.

The station and the handling of modules are designed into the common areas.

The building’s architecture and access routes guide the choice between PCM and HYDRO.

TERMINAL RANGE

Three clearly identifiable units

Metal casings for the fan coil units; ceramic reserved for the iconic cone.



BADGIR WALL

Painted steel, ventilated front
1.8 or 3.6 kW: target capacities



BADGIR CONSOLE

Painted steel, radiator replacement
1.8 or 3.6 kW: target capacities



BADGIR CONE

Raw or glazed ceramic
1.8 or 3.6 kW: target capacities

OPTIONAL HEATING: electric or hydronic coil depending on the building’s equipment.

TECHNICAL ARCHITECTURE

A range suited to existing buildings

1.8 kW

Compact format / targeted zones

3.6 kW

Large rooms / higher loads

HYDRO + PCM

Installation for mixed uses

HEATING OPTIONS

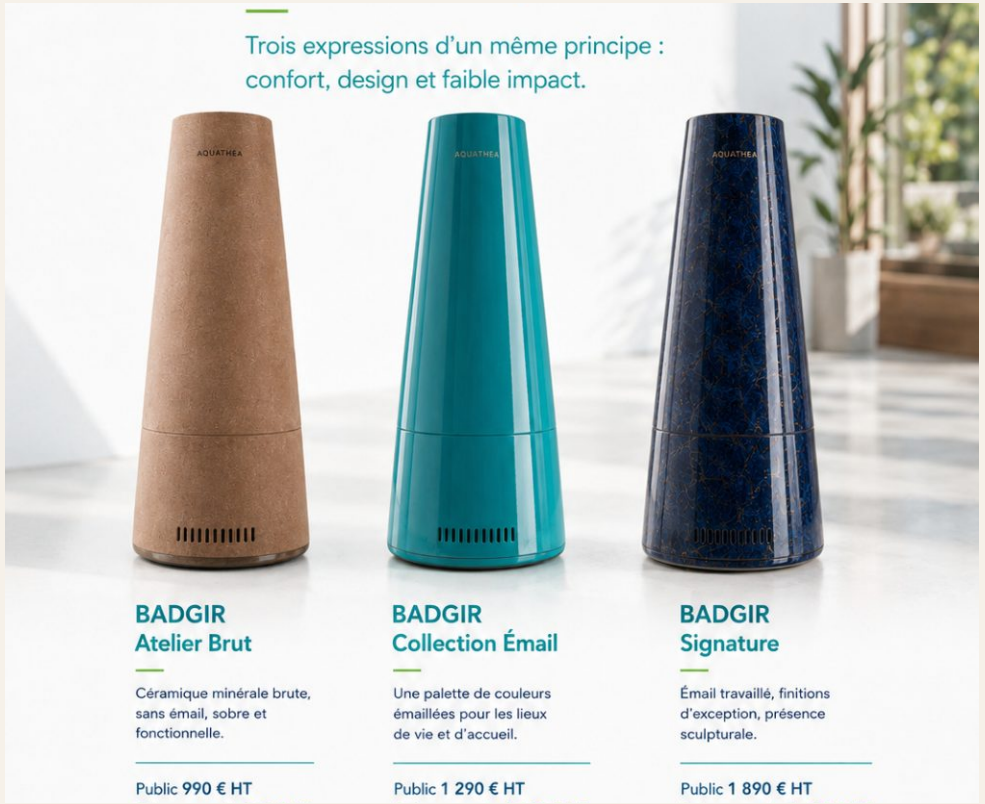
Electric coil: for sites with existing electric convectors.

Hydronic coil: for sites that already have central heating.

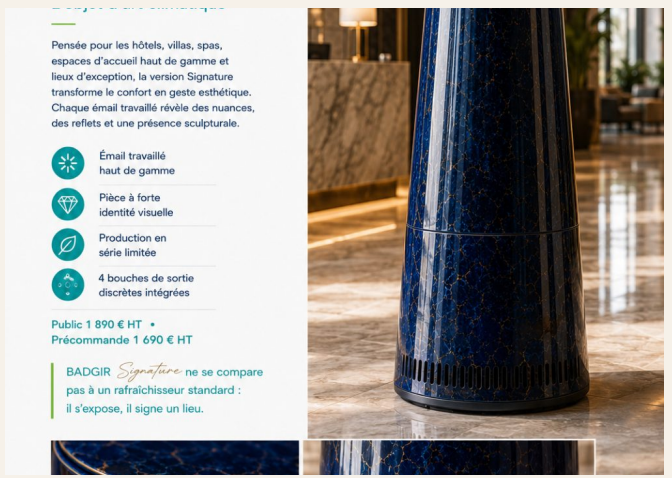
Heating options do not replace the capacity study or the electrical check.

SIGNATURE COLLECTION

The ceramic cone. A piece of architecture.







THREE FINISHES

Atelier Brut / Collection Émail / Signature
Mineral and glazed palette depending on the project.

RECHARGING STATIONS - 2 CONFIGURATIONS

Production outside. Recharging inside.

The same PCM logic, with two possible layouts depending on the building.

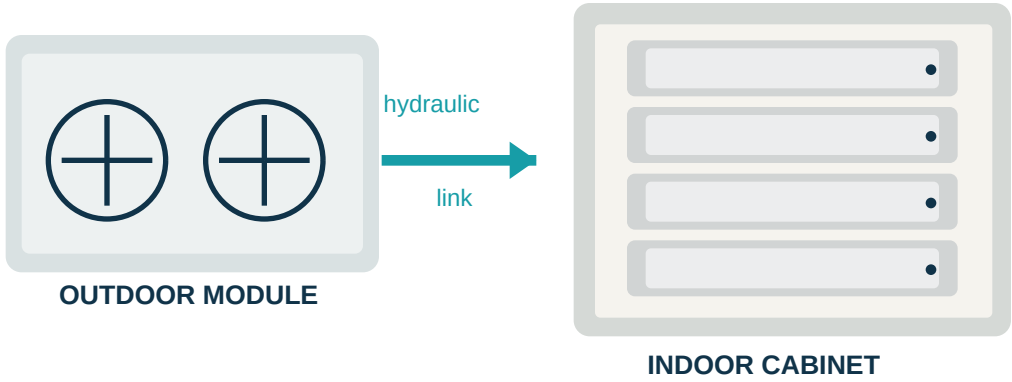
01 / INTEGRATED OUTDOOR STATION



Cooling production
and PCM recharging
in one outdoor unit.
Locked compartments,
central management.

For courtyards, car parks, kiosks or building entrances.

02 / SPLIT STATION



Simple slots for the PCM exchangers.
No compressor or chiller fan.

TO BE PLANNED IN BOTH CASES

Connections, charge control, locking, thermal safety and maintenance access.

APPLICATIONS

One station, several business models

SOCIAL HOUSING

Station at the foot of the building
Resident access by code / badge
Recharging included in services

CITY CENTRE

Shared kiosk on the street or in a courtyard
Pay-per-use or subsidised
Public / private operation

HOTELS & CAMPSITES

Outdoor station near reception
Service included, optional or billed
Staff or self-service guests

LISTED HERITAGE

Discreet technical station
No proliferation of split units
Heritage study for each site

PROPERTY DEVELOPMENT

Slot reservation
Phased roll-out by batches
Shared / private mix

LOCAL AUTHORITIES

Schools, offices, facilities
Pooled production
Monitoring and maintenance

CONTROL & SAFETY

The module is released only when access is authorised

01

Identify

Badge, code, account or QR

02

Authorise

Active right or validated payment

03

Unlock

Individual, interlocked compartment

04

Trace

Return, cycle, fault, maintenance

Targeted safety: locked drawers, PCM temperature control, electrical protection, fault detection and safe shutdown. The fee can be zero, flat-rate or per recharge.

BUILDING ECONOMICS

A competitive overall cost

Pre-industrialisation commercial assumptions, excluding VAT, to be confirmed by quotation.

Standard fan coil unit alone Equipment only, comparison baseline	**€250 to €500**
BADGIR emitter alone Target: +10 to +20% over standard	**€275 to €600**
BADGIR + share of central unit Assumption: about twice the standard cost	**€500 to €1,000**
Conventional installed mono-split Unit + installation, depending on the site	**€1,500 to €2,500**

BADGIR: the economic potential is assessed building by building.

The comparison will also include installation, PCM modules, access, rotation, energy and maintenance.

PRE-INDUSTRIALISATION

Working models, a range to be finalised

The design is well advanced; validation by a certification body is one of the remaining steps.

TESTED EMITTERS

Working, tested BADGIR models.
Wall and console units with metal casings
to keep a competitive industrial price.

STATIONS ALREADY MODELLED

Recharging stations designed and costed.
Outdoor packaged version or split system
with an indoor PCM recharging cabinet.

NATURAL REFRIGERANT: R290

Propane: very low global warming
potential (GWP100 0.02 under the EU framework).
Safety and installation conditions to be validated.

CERTIFICATION TO BE FINALISED

Functional tests carried out on the models.
Standardised performance, acoustics, hygiene
and safety to be documented by a body.

BADGIR IS IN THE PRE-INDUSTRIALISATION PHASE.

FROM PRODUCT TO SPECIFICATION

A whole building, not just one room

Seven pages to picture the project: housing, renovation, developers, offices, hotels, healthcare.

BUILDING STUDY

Cooling and heating loads.
Number of emitters and allocation.
Architectural constraints and uses.

SIZE THE STATION

Simultaneous power and energy / day.
Recharge duration, PCM stock.
Circulation routes and resident access.

CHECK OPERATIONS

Handling, safety, hygiene, noise.
Metering and possible billing.
Cost over 10 to 15 years; availability.

THE RIGHT APPROACH FOR SPECIFIERS

First plan an instrumented pilot building, then cost the complete equipment per dwelling or room.

Performance, autonomy and certifications are being consolidated before any contract.

An already heated building can become coolable

Summer comfort is added without imposing a refrigeration system in every room.

BEFORE: THE RADIATOR

Electric convector or water radiator.
Essential function: heating.
No answer to summer comfort.
Renovation sometimes very intrusive.

AFTER: BADGIR

A wall or console emitter in its place.
Heating retained depending on configuration.
Cooling via a PCM module
or a suitable hydronic network.

IN COMMON AREAS

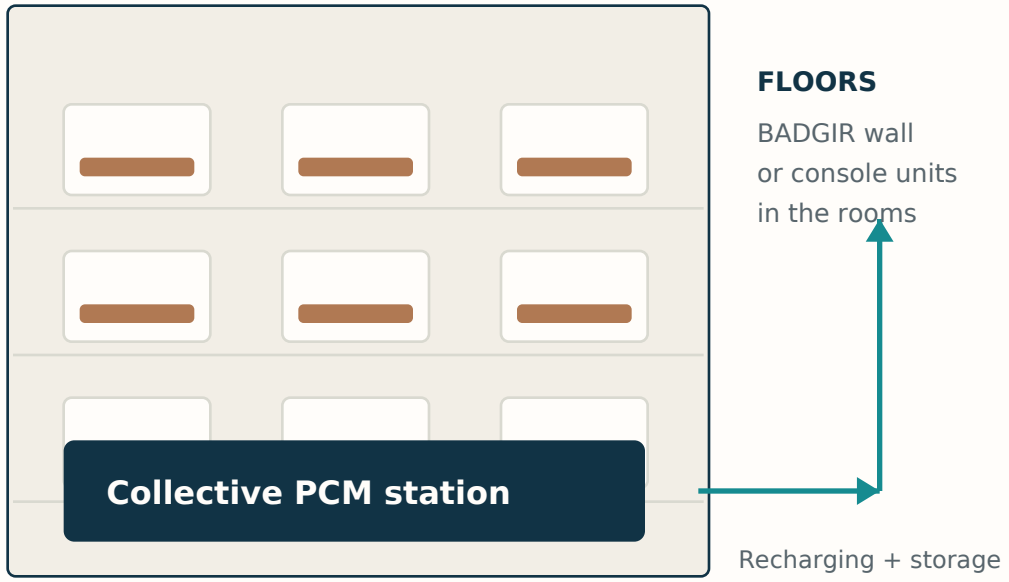
A shared recharging station.
No refrigerant link to
the apartments in the PCM version.
Equipment and maintenance grouped.

THE KEY IDEA FOR THE ARCHITECT

The building does not need to become a room-by-room refrigeration worksite: cooling energy is produced in a collective infrastructure, then distributed by interchangeable PCM modules.
A hydronic mode remains preferable when a suitable network exists or can be created.

The principle of collective recharging

Conceptual example: residence with a technical station on the ground floor.



THE USE CYCLE

1. The module is charged at the station.
2. It is removed after authorisation.
3. It is inserted into the emitter.
4. The discharged module returns to the station.

ACCESS & SAFETY

Access by code, badge or payment depending on the site.
Locking until removal is validated; control
of the module’s temperature and condition to be studied.

From the existing convector to summer comfort

Keep the heating logic, add cooling where it is missing.

ALL-ELECTRIC BUILDING

Convector removed or kept depending on the study.
BADGIR with optional electric heating coil.
Rechargeable PCM for cooling.
Check the line, protection and power demand.

BUILDING WITH CENTRAL HEATING

BADGIR with hydronic heating coil.
Connection to the existing network under conditions.
Cooling by PCM, or hydronic if the network is suitable.
Check flow rates, temperatures and controls.

FOR THE PROJECT OWNER

Gradual work, dwelling by dwelling.
Fewer façade modifications to consider.
Replacement consistent with thermal fixtures.
Possibility of trialling a pilot building.

FOR THE COST CONSULTANT

Quantify removal, wall repairs and finishes.
Cost access, deliveries and PCM cycles.
Compare CAPEX and operation over time.
Do not assume savings before a study.

The developer no longer sells just heating

It offers a collective summer comfort service, designed in from the outset.

01 AT THE FOOT OF THE BUILDING

An accessible, ventilated technical room sized for recharging.

02 IN THE DWELLINGS

Interchangeable wall or console emitters, with two capacity classes to be qualified.

03 DAY TO DAY

Resident code, badge or rental operation; secure removal of charged modules.

POINT OF ATTENTION: A COLLECTIVE SERVICE MUST BE SIZED

Plan for simultaneous peaks, spare modules, user routes, handling, fire and electrical protection, noise, accessibility for people with reduced mobility, maintenance, possible re-billing and co-ownership rules.

HIGH-VALUE USES

One principle, five different projects

The recharging model and logistics change with the type of occupancy.

SOCIAL LANDLORD

Station at the foot of the building; resident access; phased roll-out dwelling by dwelling.

OFFICES

Recharging in a technical area; managed by maintenance teams or occupants.

HOTEL / CAMPSITE

Outdoor station close to reception; module rotation managed by staff.

LISTED BUILDING

Possible reduction of wall openings; architectural integration and permits to be obtained.

HEALTHCARE / HOSPITAL

Study of hygiene, service continuity, ergonomics and safety before any pilot.

GOOD TO KNOW

The absence of a cooling network in rooms removes neither the recharging operations nor the operating constraints.

How to assess the real cost of a BADGIR project

The right comparison is the overall cost of the site, not the price of an emitter on its own.

ITEM	CONVENTIONAL SOLUTION	BADGIR SOLUTION
Equipment	Splits, radiators or fan coil units	Emitters + PCM + central unit
Works in the premises	Wall openings, networks, repairs	Terminal installation + PCM logistics
Shared installations	Multiple units or central production	Station + storage + access control
Operation	Servicing, electricity, call-outs	Energy, PCM renewal, handling
User service	Local adjustment	Access, recharging, availability

INDICATORS TO CALCULATE: €/equipped dwelling • €/measured useful kW • electrical kWh/year • cost per recharge • cost over 10–15 years • availability at peak times • operating labour.

PROGRESS STATUS

BADGIR enters pre-industrialisation

A family of working products, designed to move into series production and specification.

OPERATIONAL EQUIPMENT

Wall units, consoles and cones tested.

Two development capacities: 1.8 / 3.6 kW.

PCM or HYDRO cooling depending on configuration.

CENTRAL UNITS MODELLED AND COSTED

Outdoor packaged unit or split central unit.

Simple indoor cabinet for the PCM modules.

Access control by code, badge or payment.

INDUSTRIALISATION

Sheet-metal construction chosen to control cost.

Manufacturing and modularity studies to be finalised.

Detailed price list planned as an appendix.

COMPLIANCE IN PROGRESS

Independent validation of the technical data.

R290 refrigeration compliance and safety devices.

Standardised tests before contractual guarantees.

PRE-INDUSTRIALISATION EDITION — SPECIFICATIONS SUBJECT TO VALIDATION.

REFERENCE TECHNICAL SHEET

The data behind the sizing

Development benchmarks taken from existing brochures; contractual values after standardised tests.

TERMINALS: THE 3 FORMATS

WALL / CONSOLE / CONE: 1.8 and 3.6 kW targets.
Painted metal for WALL and CONSOLE.
Raw or glazed ceramic for the CONE.
Heating coil: electric or hydronic.

ENERGY AND EXCHANGE

1 PCM targeted for 1.8 kW; 2 for 3.6 kW.
Closed water loop: about 10 litres.
Indicative circulation: about 300 L/h.
Evaporation modulated by ambient humidity.

AIR AND COMFORT

Earlier cone: stated airflow up to 900 m3/h.
Humidity target: 40–60% RH.
EC fan, filtration, dew point control.
Circuit hygiene to be qualified for each use.

CENTRAL UNIT AND COMPLIANCE

Centralised production with R290, a natural refrigerant.
PCM recharging, buffer stock and secure access.
Optional heating / mid-season function.
Industrialisation and certification in progress.

Detailed price list announced as an appendix.

CONTACT & SPECIFICATION

BADGIR 2027 | Tomorrow’s comfort

A collective solution for housing, offices, hospitality and heritage buildings.



PACKAGED CENTRAL UNIT: OUTDOOR INSTALLATION

AQUATHEA

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DETAILED PRICE LIST ANNOUNCED AS AN APPENDIX — prices and configurations on study.