

Travel in **comfort** with
Hispacold HVAC systems



 **hispacold**
Railway HVAC Systems

HVAC Systems for Railway Applications

Travel in **comfort** with **Hispacold HVAC** systems



Hispacold Railway HVAC Solutions: specialists in passenger comfort with first-class engineering quality.

Hispacold is a world leader company in climate systems specialized in passenger comfort with more than 45 years' experience.

Hispacold designs, manufactures and distributes HVAC systems for all rail vehicles: trams, metros, EMUs, DMUs, LRVs... with proven and reliable technology solutions.

Hispacold is certified in the most recognized international quality management, environment and safety standards: ISO 9001, ISO 14001, ISO 45001, EN 15805-2 and ISO/TS 22163 (IRIS).

The legacy of tomorrow

Strategic contribution to the Sustainable Development Goals (SDGs)

NEW HISPACOLD FACILITIES

Free Trade Zone port
SEVILLA SPAIN

36,000 m²



Hispacold has developed technology of its own, becoming a reference worldwide actor in the passenger transportation air conditioning sector. Hispacold fully aligned with the United Nations 2030 Agenda and strategically contributes to the Sustainable Development Goals (SDGs).

INDIRECT EMISSION



Integration of key processes in a single facility



New factory with self-sufficient energy



Carbon-neutral footprint

DIRECT EMISSION



Use of natural refrigerants (R290)



Recyclable materials



Ultralight and efficient systems

Sustainable Global Solutions
Our most natural air

R290

NATURAL REFRIGERANT

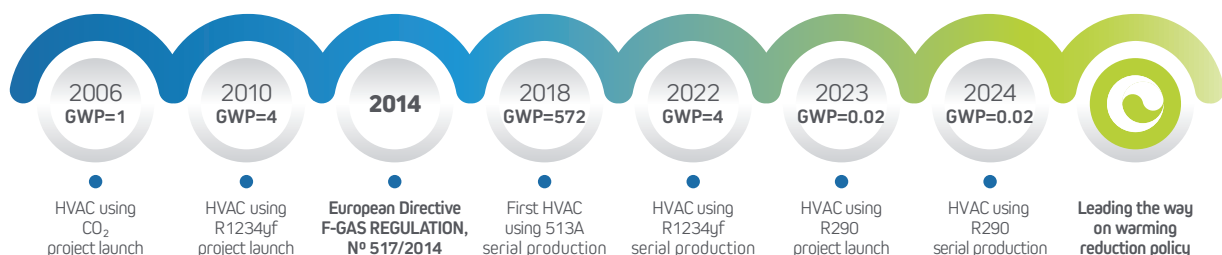
Natural refrigerants and **low GWP** solutions

Hispacold has always been committed with global warming reduction policies.

Since 2006 **Hispacold** R&D works in development and testing of alternative refrigerants with lower GWP and Natural refrigerants: CO₂, R290, HFO's and blended HFO's.

After several studies, evaluations, and tests, **Hispacold R&D**, selected **R290** as a global and long-term natural refrigerant to enhance **sustainability and energy efficiency** in HVAC for railway transportation.

- > **Low Environmental Impact:** with a low Global Warming Potential (GWP), R290 reduced environmental impact compared to synthetic refrigerants, which is crucial for reducing the carbon footprint.
- > **Performance and energy efficiency:** proven tested and extensively used in different HVAC applications, R290 demonstrate reliable performance, cost-effective across a wide range of operational conditions, which makes it suitable for application in different climatic zones.
- > **Cost and Availability:** R290 is widely available, based equipment operates with comparable components and configurations to synthetic refrigerant which simplifies its use and maintenance in train HVAC systems.
- > **Reliability:** reliability concerns have been effectively resolved in railway application, risk assessment and tests carried out by Hispacold confirms that R290 performs reliably under the demanding conditions, meeting the high standards required for passenger trains.



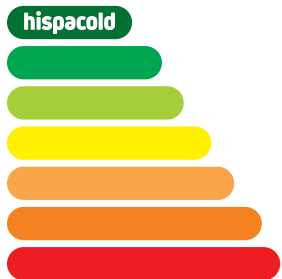


Energy efficiency



Selecting innovative components for design and testing in very hard climate conditions, **Hispacold** developed its **own heatpump technology, with up to 30% consumption reduction.**

Inaugurated new Technological and Innovation Center: climatic test laboratory, data monitoring test room, automatic test programming and HVAC system performance results in terms of cooling, heating capacity and Energy efficiency. Capacity COP and EER of HVAC system under ASHRAE-37, EN 14825, AHRI 210-240 and EN 14511 standards covering temperatures between -25 °C and 60 °C and humidity between 5% and 95%.



Indoor air treatment solutions



**OPTIMIZED
FRESH AIR LEVEL**



UV LAMPS



ECO₃ AIR PURIFIER

Ten years ago, concerned about the air quality inside vehicles and as part of its firm commitment to R&D, **Hispacold** developed various air treatment solutions in response to the demand from rail operators for safe, healthy, and comfortable rail transportation.

eco₃ air purifier eliminates microbes (bacteria, viruses including SARS-Cov-2, fungi), allergens and germs in general.

- > **Neutralizes bad odours**
- > **Reduces the risk of infection and illness**
- > **Proven and tested in vehicle in real conditions**



Own **technology** and **innovation**

Hispacold, with a long and deep experience in HVAC solutions, designs systems for all climatic conditions and any type of thermal needs.

Our engineers are working on projects involving new trains, as well as train refurbishing projects.



SALOON UNITS

S100



S101 / S102 / S103 / S104

TRAM
EMU
LRV

S200



S201 / S202

EMU
REGIONAL TRAIN
DMU



S203

EMU
REGIONAL TRAIN
DMU



S204

EMU
REGIONAL TRAIN
DMU

S300



S301 / S302

METRO



S303 / S304

METRO



S305

METRO



S306

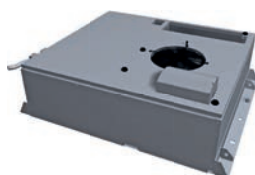
METRO

CABIN AND LOCOMOTIVE UNITS



C100

TRAM
EMU
LRV



C200

DMU
TRAM
EMU
LRV



C300

METRO



C400

LOCO



SALOON UNITS

S290



S205

EMU
REGIONAL TRAIN
DMU

S206

EMU
REGIONAL TRAIN
DMU

S291

TRAM
LRV
EMU

S292

TRAM
LRV
EMU

S400



S401

METRO

S402

METRO

R290

NATURAL REFRIGERANT

Our most natural air

CABIN AND LOCOMOTIVE

C290



C290

TRAM
LRV
EMU

Main projects



Regional DMU
Sardinia (Italy)



Commuter Train
Toluca (Mexico)



Metro
Malaga (Spain)



Tramway
Granada (Spain)



Metro
Mexico City (Mexico)



Metro
Bucharest (Romania)



Metro
Istanbul (Turkey)



Tramway
Budapest (Hungary)



Metro
Barcelona (Spain)



Tramway
Belgrade (Serbia)



Tramway
Birmingham (UK)



Tramway
Saint-Étienne (France)



Tramway
Cuiaba (Brazil)



Tramway
Stockholm (Sweden)



Train-Tram
Cadiz (Spain)



EMU Transpennine
United Kingdom



Metro
Quito (Ecuador)



Tramway
Oslo (Norway)



Metro
Naples (Italy)



Tramway
Vitoria (Spain)



LRV
Essen (Germany)



Metro
Bonn (Germany)



Metro
Cairo (Egypt)



Metro
Hannover (Germany)



Tramway
Kaohsiung (China)



Tramway
Tallinn (Estonia)



Tramway
Amsterdam (Netherlands)



Tramway
De Lijn (Belgium)



Tramway
Utrecht (Netherlands)



Tramway
Luxembourg



Tramway
Mauritius Islands



Tramway
Lund (Sweden)



Tramway
Cagliari (Italy)



Tramway
Canberra (Australia)



EMU FEVE
Spain



EMU FGC
Spain



Hvle Locomotives
Germany



Metro
Amsterdam (Netherlands)



Train Tram
Szeged



Tram
Liège (Belgium)



Tramway
Lugano (Switzerland)



LRV
Manila (Philippines)



Train-Tram
Szeged (Hungary)



Loco
Rodoviario (Portugal)



Tramway
Marseille (France)



EMU
Lithuania



LRV
Essen (Germany)



Tram
Sarajevo (Bosnia and Herzegovina)

World presence



| | | | |
|------------|----------------------|-------------------|---------------|
| Amsterdam | Cuiaba | London | Oslo |
| Antalya | De Lijn | Lugano | Quito |
| Augsburg | Edinburgh | Lund | Saint-Étienne |
| Barcelona | Essen | Luxembourg | Sarajevo |
| Basel | Genoa | Malaga | Sardinia |
| Belgrade | Granada | Manila | Schönbuch |
| Birmingham | Halle | Marseille | Sidney |
| Bonn | Hannover R290 | Mauritius Islands | Stockholm |
| Bucharest | Istanbul | Mexico City | Szeged |
| Budapest | Jerusalem | Milan | Toluca |
| Cádiz | Kaohsiung | Monterrey | Taiwan |
| Cagliari | Kayseri | Myanmar | Tallinn |
| Cairo | Liege | Naples | Utrecht |
| Canberra | Lisbon | New South Wales | Vitoria |

Hispacold is a company of Irizar Group SC, which employees more than 3500 people and has a global turnover of more than 700 Million €. This gives Hispacold the benefits from a multinational organization while maintaining an individual company spirit.

Hispacold HVAC systems are running in all five continents and in more than 100 countries.

more info



Avda. Hacienda San Antonio 1
41016 Sevilla - Spain.
T. +34 954 677 480

hispacold.es