



NEW AGE
OF HVAC SYSTEMS

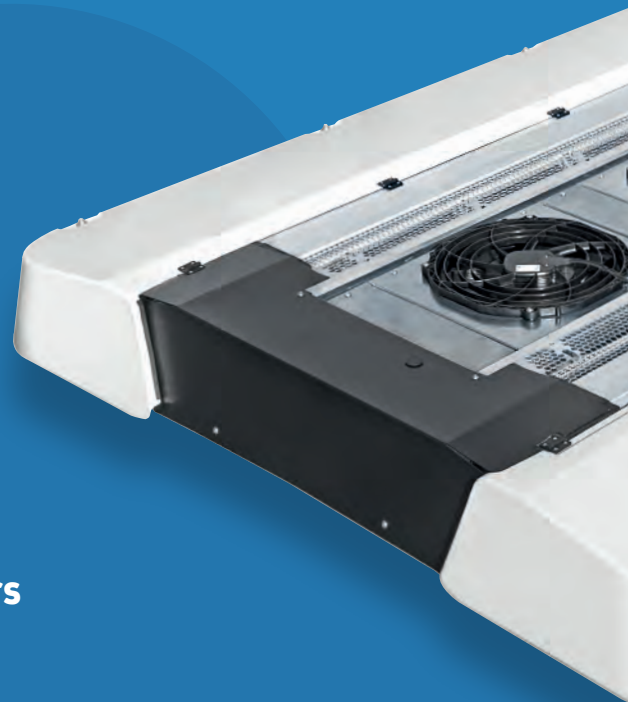
New **HVAC** Systems



Hispacold is a company with over 40 years of experience leading in the passenger transport HVAC sector.

- > HVAC SYSTEMS OPERATING IN MORE THAN 100 COUNTRIES ACROSS THE 5 CONTINENTS.
- > OWN TECHNOLOGY DEVELOPED AS RESULT OF ITS R&D POLICY.
- > COLLABORATION WITH TOP UNIVERSITIES AND TECHNOLOGY INSTITUTES.
- > SEVERAL PATENTS REGISTERED.
- > CERTIFIED MANAGEMENT SYSTEMS FOR QUALITY, ENVIRONMENT AND OCCUPATIONAL HEALTH AND SAFETY: EN 15085-2, ISO/TS 22163:2017 (IRIS), ISO 9001:2015 ENAC, ISO 14001:2015 ENAC AND OHSAS 18001:2007 ENAC.

Design, manufacturing and sales of HVAC systems and components for fuel, hybrid and electric buses and coaches and for rail vehicles, for any type of climate conditions.





NEW AGE OF HVAC SYSTEMS

NEW PRODUCT RANGE

- > HIGHLY EFFICIENT
- > SUSTAINABLE
- > WIDE RANGE OF POWER
- > MINIMUM WEIGHT AND SIZE
- > EASE INSTALLATION
- > FREE COOLING 0-100%
- > ADAPTABLE TO ALL TYPES OF VEHICLES
- > LOWEST REFRIGERANT CHARGE

The new range of HVAC systems
covers:

Electromobility, City and Intercity buses.



FUEL



ELECTRIC



TROLLEY



HYBRID

All climate and/or environmental areas.



NEW HVAC SYSTEMS

BREEZE RANGE



A new wave of **HVAC**



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Breeze range

HVAC SYSTEMS

DESIGN · POWER · SUSTAINABILITY

- > INNOVATIVE MATERIALS
- > NEW DESIGN
- > 60% LESS REFRIGERANT CHARGE
- > MINIMUM WEIGHT AND SIZE
- > EASE INSTALLATION
- > AIR EXTRACTION
- > ADAPTABLE TO ALL TYPES OF VEHICLES
- > MECHANICAL FIXATION
- > FREE COOLING 0-100%



	100	200	300	100e / 100e HP	200e / 200e HP
Vehicle type	Fuel			Electric / Electric with Heat Pump	
Listed cooling capacity (kW) ¹	28 / 32 / 34	38 / 41 / 44	46	22 / 27	34
Rated cooling capacity (kW) ²	18 / 21 / 23	25 / 27 / 30	34		
Heating capacity (kW) ³	35	49	36	35	49
Evaporator air capacity (m ³ /h) ⁴	5160	7740	10320	5160	7740
Fresh air intake range (%)	0-100	0-100	0-100	0-100	0-100
Dimensions W ⁵ x L x H (mm)	2000x1950x215	2000x2550x215	2000x2550x215	2000x2450x370	2000x3000x370
Average filling volume R134a (kg) ⁶	1,9	2,2	2,4	1,9	2,2
Weight (kg) (without and with heating and fresh air intake)	91-97	128-135	134-142	162-164 / 167-169	210 / 215

1 Conditions 40°C/40°C/95%

2 Conditions 35°C/27°C/19°C

3 Conditions -20°C/+80°C 16,7 l/min

4 Free blow with brushless motors

5 Width varie according to the radii of vehicles roof between 2000-2020 mm

6 All systems available with R513A

HP systems also available
with electrical resistance

Estimate system capacity with heat pump.
System under development.

NEW HVAC SYSTEMS

EN RANGE



Naturally efficient



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EN range

ELECTRICAL HVAC SYSTEMS

ECOLOGICAL · EFFICIENT · SILENT

- > **HIGH PERFORMANCE**
- > **EQUIPPED WITH DRIVER HVAC**
- > **OPTIMAL EFFICIENCY AT PARTIAL CHARGE**
- > **HIGHLY RELIABLE**
- > **FREE COOLING 0-100%**
- > **HEATING SUPPORT BY RESISTANCE OR WATER**
- > **WIDELY TESTED IN THE MARKET**
- > **NOISELESS**
- > **ZERO EMISSIONS**
- > **DEHUMIDIFICATION FUNCTION**
- > **REVERSIBLE HEAT PUMP**



	9EN 1C	12EN 1C	12EN 2C
Cooling capacity (kW)	28	36	42
Heating capacity (kW)	30	44	48
Dimensions (mm)	2097 x 1962 x 432	2695 x 1962 x 432	2695 x 1962 x 433
Weight (kg)	240	300	430
Heat pump capacity (kW)	14	18	22

NEW HVAC SYSTEMS

NA RANGE



The most reliable adaptability



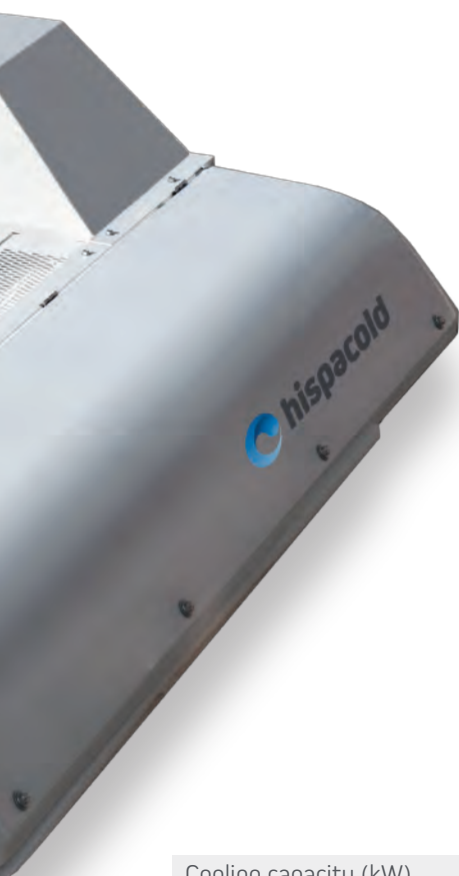
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NA range

HVAC SYSTEMS FOR FUEL, HYBRID AND ELECTRIC VEHICLES

RELIABILITY · ADAPTABILITY · COMPACTNESS

- > **COMPACT**
- > **AIR EXTRACTION**
- > **HIGHLY RELIABLE**
- > **FREE COOLING 0-100%**
- > **MECHANICAL FIXATION**
- > **FOR VEHICLES UP TO 9 M IN HOT AREAS**
- > **FOR VEHICLES UP TO 12 M FOR NORTH EU COUNTRIES**



AVAILABLE FOR
FUEL, ELECTRIC AND HYBRID VEHICLES.



	9NAD	9NAH	9NAP
Cooling capacity (kW)	21	18	18
Heating capacity (kW)	20	20	20
Consumption (A)	45	45	45
Dimensions (mm) Width x Length x Height	2165 x 1952 x 188	2165 x 1954 x 377	2165 x 1954 x 377
Weight (kg)	148	208	220



BTMS

Thermal conditioning of electric batteries
for opportunity charge and night charge.



- > **OPPORTUNITY CHARGE AND NIGHT CHARGE**
- > **PLUG AND PLAY**
- > **HEATING OPTIONAL**
- > **RELIABILITY**
- > **INDEPENDENT FROM THE HVAC UNIT**
- > **J1939 CAN COMMUNICATION**
- > **INDEPENDENT CONTROL**
- > **ADAPTABLE SOLUTIONS**



COOLER

Cooling of engines and other electrical components in the power train.



- > **SELF-CLEANING**
- > **BRUSHLESS MOTORS**
- > CUSTOMIZABLE
- > J1939 CAN COMMUNICATION
- > INDEPENDENT CONTROL



ECOMASTER range

High range of automatic controls.

Regulate passengers and drivers comfort inside the vehicle.



- > **DUAL-AREA CLIMATE CONTROL**
- > **HIGHLY RELIABLE**
- > **DESIGNED TO SAVE FUEL AND ENERGY**
- > **AUTOMATIC AND MANUAL PREHEATING**
- > **DEHUMIDIFIER AND ECO FUNCTIONS**
- > **LONG OPERATING LIFE TIME**
- > **SELF-DIAGNOSING**
- > **BACK-LIT KEYPAD**
- > **MULTIPLEXED. 2B CAN COMMUNICATION**

Temperature regulation needs

Air conditioning
for passengers



Heating
for the driver



HVAC
for passengers



Driver and
passengers comfort



Control panels



BASIC



BASIC DOUBLE DECKER



BASIC DS



BASIC DHA



CLIMATE



COMFORT



IRICOMFORT



FUEL



ELECTRIC



TROLLEY



HYBRID

netiOs range

New range control panels.
Total HVAC control.



- > **IMPROVED COMMUNICATION AND CONNECTIVITY**
- > **FLEXIBILITY AND MODULARITY**
- > **REMOTE COMMUNICATION AND INTERNET CONNECTIVITY**
- > **INTERCHANGEABLE INTERFACE**
- > **USB AND BLUETOOTH**
- > **FOR ALL VEHICLES**



netiOs

Total HVAC control



COMPRESSORS

550 CC and 660 CC compressors

Increased power and performance in minimum space.



- > **HIGHLY RELIABLE AND EFFICIENT**
- > **ELECTROMAGNETIC CLUTCH
FOR HIGH-REQUIREMENT APPLICATIONS**
- > **DEVELOPED BY HISPACOLD**
- > **LOW NOISE AND VIBRATION LEVELS**
- > **LESS LUBRICANT**
- > **HIGHLY COMPACT**

COMPONENTS



eCo₃ air purifier

- > Eliminates bad odors.
- > Neutralizes bacteria, viruses, fungus, allergens and germs in general.
- > Increases the oxygen concentration to prevent the air from becoming contaminated.
- > Reduces feelings of tiredness for the driver.
- > Reduces feelings of motion sickness and nausea for passengers.
- > Acts on suspended particles.
- > Eliminates some chemical pollutants.
- > Compatible with vehicles that are already operating.



Heating station

- > Regulates the flows of heating water through the different circuits in the vehicle.
- > Easy assembly and maintenance.
- > Versatility: adaptable to any heating configuration with simple modifications.
- > Its geometry minimizes losses and optimizes heating flows.



Driver HVAC unit

- > High capacity with a reduced size.
- > Defogs the front windshield in a very short time.
- > Can reach the desired temperature in the driver's compartment.
- > Fresh air intake and filters to get excellent air quality
- > Windscreen-feet flaps to optimize air distribution.
- > Available with options for heating, heating + air conditioning, and manual or motorized water valve.

INTEGRATED SYSTEMS



Compressor, evaporator and condenser integrated in vehicle

- > Reduced weight.
- > Optimized cost.
- > No visual impact.
- > Takes no space on the roof.
- > Safe maintenance without live line



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