



HYDRO CONTROL SYSTEM

MODULAR THERMO MANAGEMENT SYSTEM FOR ENERGY SAVING COMPONENT CONDITIONING

The Hydro Control System (HCS) is a compact and light weight system solution which conditions the battery and the drivetrain, provides comfort to the passenger compartment and the driver's place in a most efficient, energy saving way.

It can be modular adapted to the customer's needs and is already equipped with the interfaces and the control algorithms for easy integration and reliable operation.

ALL BENEFITS AT A GLANCE



Modular:

- Functionally adaptable to meet specific customer requirements
- Modules for battery conditioning, powertrain conditioning, front box cooling available
- Supports active and passive cooling as well as heating
- Energy manager software scalable for any number of modules
- Communication via E-Control or CAN



Active Energy Saving:

- Achieves up to 23% energy savings compared to AC systems with heat pump
- Harvests waste thermal energy from various sources
- Enables controlled deployment and reuse of harvested thermal energy for heating and conditioning



Life cycle costs:

- Reduces life cycle costs by utilizing waste heat in heating mode
- Replaces electrical heating with recovered thermal energy
- Delivers maximum efficiency in moderate and cold climate zones



Ready to Use Design:

- Easy installation via plug- and play approach
- Each module weighs less than 8 kg
- Flexible positioning for various vehicle layouts
- Fully integrated components – ready for operation
- Compact size and flexible positioning possible
- Compatible with the Eberspächer service world for remote monitoring and diagnostics

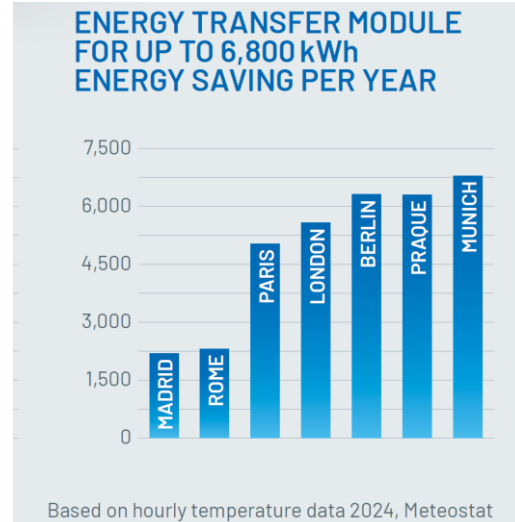
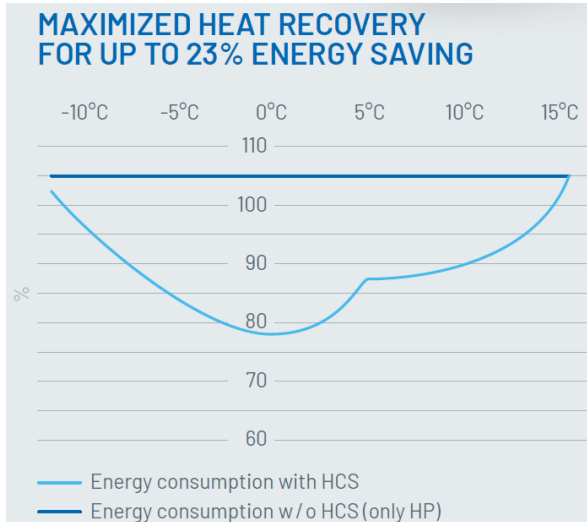


Component Temperature Conditioning:

- Precise battery conditioning to ensure long service life
- Optimized powertrain conditioning for peak performance
- Hydraulically balanced via integrated buffer tanks
- Connects all thermal and cooling sources and loads in a unified system
- Radiator connection and management included



ENERGY SAVING



TECHNICAL DATA

PARAMETER	HCS
Electrical Input	24 VDC (16-32 VDC)
Power Consumption	max. 265 W
Size total	ca. 736 x 421 x 358 mm ³
Weight total / 1 Modul (empty)	ca. 18.5 kg / max. 7.5 kg
Ambient temperature	-40°C to 85°C
Flow temperatures	-40°C to 85°C
Control	Onboard E-Control 2.0 + Energy Manager Software
Communication	CAN
e-connected Telematics	Ready
Connections (consumer/heat pump)	Hose ID 22mm / 28mm

SEGMENTS: all electrical buses