Hydrogen Cooling System: "Racoon 45"

Racoon 45 is used where high performance is required, delivering over 45 kW cooling capacity.





Hydrogen Pre-Cooling Heat Exchangers realize many advantages for hydrogen pre-cooling, including virtually infinite B2B filling capability and significant savings due to low weight and fluid inventory.

As a result, they fit within a small footprint such as dispenser cabinets.



The cascade system is capable of delivering the required cooling capacity at anytime. This ensures:

- High B2B fillings, without recovery time
- A very compact Hydrogen cooling system, since a "diffusion bonded heat exchanger" is used

The Racoon is a cascade refrigeration system, using the refrigerants R449 and R744 (CO₂). Design conditions: 45kW cooling power at -39°C evaporation temperature and a condensation temperature of 47°C.

KUSTEC's control system, specially customized for Hydrogen cooling, guarantees high efficiency and reliability.

Electronically controlled valves and transmitters, in addition to the frequency inverters allow full control over the system.

Separate versions are available for the European and American markets accordingly.

Technical data



Cooling Capacity: 45 kW



Connection Load: ~ 50 kW



Temperature Protocol: T40 / MC Protocol



Refrigerant: R449A + R744



Application: Cars