



Sample Project: Industrialization of an innovative CO₂-based prototype portable cooling unit

Code	PH1304
Programme	TRAIN-PTES
Department	PH
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Title

Industrialization of an innovative CO₂-based prototype portable cooling unit

Description

Evaporative CO₂ is gaining more and more interest as a cooling fluid in several applications due to its low Global Warming Potential, its low cost, its high availability, and its excellent thermo-physical properties. CO₂ is also the preferred choice for the thermal management of the next generation of particle tracking detectors. The Detector Technologies group of the Physics Department (PH-DT) has developed an innovative compact CO₂ unit for laboratory tests. Few prototypes in three different versions have been in-house designed and produced until now: the unit has now reached the status of its final development and is ready for its transfer towards an industrial partner.

Within this group we offer an opportunity to a young, highly motivated mechanical and/or electrical engineer to play the very formative role of the technical contact between the R&D and the production world, developing multiple engineering competences: heat transfer, mechanical design, electrical circuits, PLC-based control hardware and engineering for production. The Trainee will be part of a very motivated team and will be supervised by experienced engineers.

Skills

Mechanical Engineering: Fluid systems, Heat Transfer. Networks and Systems: Integrated circuits, VLSI. Theory of Electrical Engineering: Control theory, Dynamic systems, Signal processing

Disciplines

Electrical Engineering, Mechanical Engineering

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