

## Workshop: Direct conductor cooling

### Theme 2: Electric drives and charging



**Swedish Electromobility Centre Theme 2 electric drives and charging are happy to welcome you this webinar on *Direct Conductor Cooling*.**

Electric motors are fundamentally limited by heat generated in their windings. In conventional traction motors, this heat is removed through relatively long thermal paths—via stator jackets or rotor shafts—leading to high conductor temperatures that constrain efficiency, power density, and lifetime.

Hyperdrives, a German deep-tech company, has developed a direct conductor cooling approach using hollow copper conductors with coolant flowing inside the winding itself. By extracting heat directly at its source, this technology enables significantly higher current densities, resulting in motors that are up to 50 % smaller, require around 40 % less material, and deliver up to 10 % higher efficiency in typical operating cycles.

In this webinar, Michael Numberger, Founder and CTO of Hyperdrives, will present the underlying cooling concept, discuss key technical and manufacturing considerations, and share real-world examples from Hyperdrives' electric drive systems.



**When:** 11 May 2026, 13:00-14:30

**Where:** Digital Webinar in Teams

**What:** Webinar on Direct Conductor Cooling

## AGENDA

Time	Activity
13.00	Welcome and introduction
13.10	Hyperdrives' direct conductor cooling technology by Michael Numberger
13.55	Short break
14.00	Q&A from the audience
14.30	End of the webinar

For questions please contact [fran.marquez@iea.lth.se](mailto:fran.marquez@iea.lth.se)