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## Requirements for equipment in Cooling Section of EIC Low Energy Cooler

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The Electron Ion Collider (EIC) requires an electron cooler operating at the EIC injection energy to obtain the design proton beam emittances. A non-magnetized RF-based electron cooler, the EIC Low Energy Cooler (LEC), is currently under design. It will be operating at  $\gamma$ -factor 25 and will be delivering 70 mA electron current to a 170 m long cooling section (CS). To obtain required cooling an input from electron-proton relative trajectory misalignment into an overall angles in the cooling section must be kept below 15 urad. In this paper we give comprehensive consideration of the factors affecting the trajectory angles and set the resulting requirements to various CS subsystems.

### Footnotes

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