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# Issues and feasibility demonstration of CLIC supporting system chain active pre-alignment using a multi-module test setup (mock-up)

The implementation study of the CLIC (Compact Linear Collider) is under way at CERN with a focus on the challenging issues. The pre-alignment precision and accuracy requirements are part of these technical challenges: the transverse position tolerances of the linac components are typically 14 micrometers over sliding windows of 200m. To validate the proposed methods and strategies, the Large Scale Metrology section at CERN has performed campaigns of measurements on the CLIC Two Beam Test Modules, focusing inter alia on the alignment performance of the CLIC “snake”- girders configuration and the Main Beam Quadrupoles supporting structures.

This paper describes the activities and results of tests which were performed on the test mock-up for the qualification of the CLIC supporting system chain for active pre-alignment. The lessons learnt (“know how”), the issues encountered in the girder position determination as well as the behavior of the mechanical components are presented.

## Summary

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