Elettra Sincrotrone Trieste

Mechanical Engineer for the Elettra 2.0 Project

Deadline: 26 April 2026
Ref: RA/26/15

Background

Elettra Sincrotrone Trieste is an international multidisciplinary research centre offering international users access to synchrotron and free-electron laser radiation for the characterization and processing of matter. The extremely high quality of the light sources and beamlines has set new performance records and has been producing results of great scientific and technological interest. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new synchrotron radiation source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being installed and will join the already operating free-electron source FERMI in the second half of 2026. The new source will exhibit a major increase in the brilliance and coherence fraction of the photon beams. The Elettra 2.0 optics is based on our enhanced symmetric six bend achromat structure (S6BA-E) with a 12-fold symmetry and an emittance of 200 pm-rad at 2.4 GeV. The new structure creates also straight sections in the arcs permitting the installation of additional insertion devices, thus increasing the number of beamlines. Existing beamlines are being upgraded and new beamlines constructed to take full advantage of the characteristics of Elettra 2.0. See http://www.elettra.eu for more information.

Job description

The successful candidatewill be part of the team in charge of the mechanical design and manufacturing of mechanical systems, including structural, thermal and vibration analyses.

Main duties and responsibilities will be:

- design of storage ring components, including frames, girders, vacuum and cooled components;
- translating analysis results and technical requirements into design recommendations;
- producing technical documentation (design requirements, technical reports, purchasing documents);
- supervising procurement, manufacturing and construction of the components;
- carrying out acceptance tests;
- participating in installation activities;
- evaluating prototypes in terms of compliance with design specifications, as well as for the technical and economic feasibility of series production.

The successful candidate is expected to carry out the above duties in compliance with the scheduled objectives and deadlines of the Elettra 2.0 project, leading to the timely production of project deliverables.

The successful candidate will work in close collaboration with staff engineers experienced in mechanical engineering applied to particle accelerators and ultra-high-vacuum. The workplace will be Elettra - Sincrotrone Trieste, but travel to other research laboratories and supplier premises for factory acceptance tests (FATs) is expected.

Qualifications

A bachelor's degree in Mechanical Engineering or equivalent is required, together with experience in manufacturing processes and knowledge of international rules about drawing dimensions and tolerances (UNI and ISO standards).

The following technical skills will be positively evaluated:

- hands-on experience in the use of CAD software (knowledge of CATIA and PDM systems would be considered a strong

asset);

- knowledge of mechanical manufacturing processes;
- knowledge of mechanical design for HV and UHV environments;
- experience in installation, commissioning, fabrication follow-up and project management;
- experience in technical procurement management;
- knowledge of scientific instrumentation and high precision motorized systems.

Good oral and written communication skills in English and a working knowledge of the Italian language are required.

Good time management skills and the ability to prioritize are expected, together with the ability to interact with the facility staff and international users at all levels and to work as part of a multi-disciplinary team.

General information

The appointment envisioned is a fixed-term contract of an initial duration of 24 months, governed by the National Collective Labour Agreement (CCNL) for the Metalworking and Plant Installation Industry and by the Company Labour Agreement.

The salary will be commensurate with previous experience and qualifications of the candidates.

Applications should include a full curriculum vitae, any supporting evidence of the declared qualifications, and, if possible, the names and contact information (including electronic mail) of two professional references.

The interviews may be held via video conferencing.

The ranking of suitable candidates resulting from this selection process may be used within the following 24 months.

Employees or former employees of Elettra Sincrotrone Trieste S.C.p.A., as well as current or former personnel provided by temporary work agencies will be excluded from the present selection procedure. Employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years will also be excluded from the present selection procedure, in accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001.

The deadline for the submission of the application is April 26, 2026.

We thank all applicants in advance.
For more information, please contact Maurizio Polentarutti (email: maurizio.polentarutti@elettra.eu) or Giovanni Simonetti (email: giovanni.simonetti@elettra.eu).

To apply for this position please visit the following link:
https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=4292