

Precision Handling and Lifting Systems

De Pretto Industrie, through multiple contracts with F4E, has developed a set of capabilities in custom handling and lifting equipment for Big Science and nuclear projects, ensuring safe, precise, and automated movement of large components in fusion reactors, cryogenic environments, and high-load industrial applications. The company has developed specialized tools for fusion, fission, big science, and the aerospace sector, including in-cryostat lifting systems, magnet handling tools, and test benches

Capabilities and technologies

De Pretto's handling solutions include:

- Cryopump positioning & assembly tools for precise, multi-degree lifting and alignment inside vacuum chambers.
- In-cryostat trolleys for horizontal and vertical movement of reactor components during assembly.
- Magnet handling and lifting tools, adaptable for different magnet configurations.
- Engine lifting tools for high-load applications, including Ariane P120 solid-state engines (220-ton capacity).Mechanical test benches with automated testing programs for load simulation and ground condition testing.

Advantages and Potential Applications

- Precision lifting and handling for fusion and cryogenic environments, ensuring safety and operational accuracy.
- Automation and control features for repeatable, highprecision assembly processes.
- Adaptability to multiple configurations, making the tools versatile for different fusion components.
- Proven track record in ITER, showcasing reliability in extreme environments.

Collaboration opportunities

De Pretto Industrie provides custom handling and lifting solutions for fusion energy, aerospace, and research institutions looking for precision movement systems in high-tech environments. With decades of experience in Big Science projects, the company is ready to develop tailored lifting and handling solutions for demanding applications.

Fusion for Energy Technology Transfer Programme

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