PRL-Workshop

The workshop is one of the laboratory's oldest and largest service centres. Today, the workshop continues its tradition of extending valuable services to the research and development activities of the organisation. Over the years, it has played a crucial role in the design and fabrication of many of our experiments, quite a few of which were very difficult and complicated. Starting from the fabrication of nose tips for rockets and huge antennae for receiving signals during the early days of the laboratory, the workshop is at present fabricating sophisticated Payloads for Rockets & Balloons, Scientific Instruments, Back-End Instruments for Telescopes, Lab Setups and different parts for Satellites.

PRL's mechanical workshop has been actively working with various groups in the PRL. The workshop is engaged in the design optimisation, fabrication, and testing of various mechanical subsystems of several ongoing developmental projects in the laboratory. The PRL workshop facilities in Navrangpura and Thaltej campuses are equipped with several state-of-the-art machines for the manufacturing of mechanical components, e.g. Vertical Machining Centre (VMC 850 & VMC 640), Wire Cut Electrical Discharge machine, Electrical Discharge Machine (EDM), CNC turning centre (DX 200), Turn Mill Center (nvu 200), etc. The workshop has made notable contributions to the development of back-end instruments for the Mt. Abu observatory, as well as the development of various subsystems/scientific instruments and setups for several scientific payloads for upcoming missions. In addition, the workshop continues to cater to several specific requirements of several R & D laboratories in PRL by closely working with the different Projects/Group members to develop specialised experimental setups. The workshop also continues to support various operational activities of laboratories and facilities in PRL. The Workshop has been associated with jobs ranging from a high degree of complexity and criticality to the nominal extent and high precision to mass-produce components with the help of tradesman/trainees on VMC, TMC and CNC Machines.

The Workshop has been involved in a variety of Technical work, which included (i) designing various systems and their constituent components using CAD software, (ii) manufacturing and fabricating the approved design and drawings by using technical facilities and manpower of PRL workshops, (iii) planning & execution of materials & tools procurement, purchasing of new machines, old/new machine repairs & maintenance, collaboration with outsourcing parties for manufacturing of diff. systems and critical components, identifying proper material vendors & machine tools suppliers, vendor identification for specialised jobs, etc.; (iv) involved in some mechanical work for USO/Mt. Abu observatories in PRL-Workshop (v) collaborating with SAC, IPR and other registered agencies for designing, manufacturing & completing significant systems and critical components. (vi) preparation of 2-D/3-D drawings/designs for welding structures and assemblies using mechanical design software like Solid Works and Inventor, which is further given to technicians/trainees for fabrication work.

Vertical Machining Center-450 (VMC)

Turn Mill Center-200 NVU (TMC)