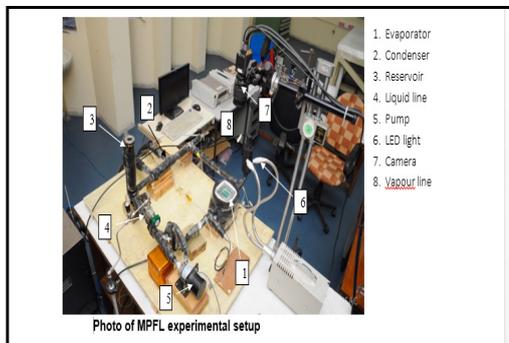


Two Phase Mechanically Pumped Fluid Loop (MPFL) with 100 W heat load capacity

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed two phase Mechanically Pumped Fluid Loop (MPFL) with 100 W heat load capacity. It can be used to transport large heat from source to thermal radiator.



Salient Features

- ✦ Works under gravity condition.
- ✦ Working fluids: Ethanol, Acetone and Pentane.
- ✦ Centrifugal pump for circulating working fluid in the loop.
- ✦ Shell and tube heat exchanger is used as a condenser.
- ✦ Temperature drop across the evaporator is less than 2 °C.

Major Specifications

- ✦ Heat load carrying capacity : 100 W
- ✦ Heat flux capacity : > 5 W/cm²
- ✦ Pump capacity : 27 litres / minute
- ✦ Loop length : approx. 2 m
- ✦ Total mass of the device : within 4 kg

Technology Transfer

URSC/ISRO offers to transfer this technology of two phase Mechanically Pumped Fluid Loop (MPFL) with 100 W heat load capacity developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),

📍 U R Rao Satellite Centre (URSC), ISRO, HAL Airport Road,
Vimanapura Post, Bangalore – 560 017.

✉ Email-id: tt-icd@ursc.gov.in

☎ Fax No: 080-25205261

🌐 <https://www.ursc.gov.in/industry/index.jsp>