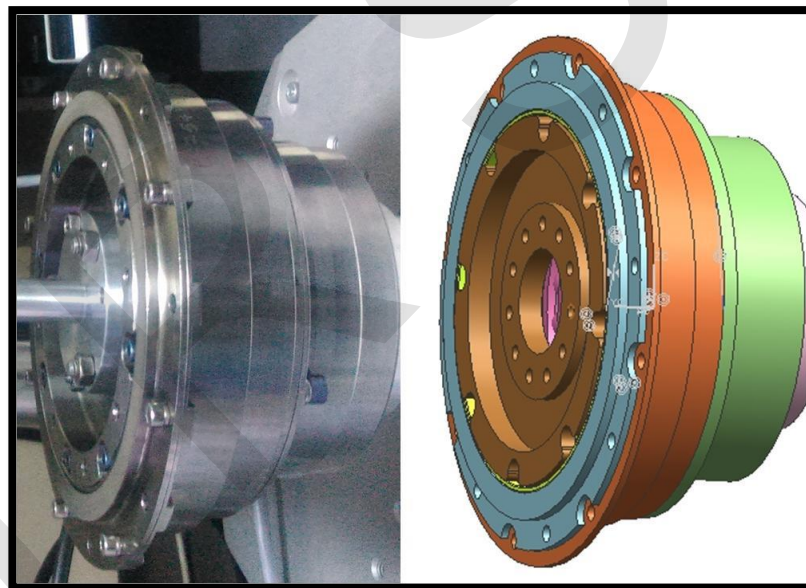


Rotary Actuator Mechanism (DM-32)

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed Rotary Actuator Mechanism (DM-32) is a high precision drive mechanism (DM) used in deployment, pointing and tracking payloads and appendages. The Rotary Actuator Mechanism (DM-32) has high torque capacity, load carrying capacity, precision and accuracy and comparable with space-grade actuators available worldwide. It has application for space, aerospace, defence/military, medical and similar industries, where such capabilities in actuators are required. The Mechanism employs the stepper motor and strain wave gearing system which ensures backlash free and high precision motion. The angular contact ball bearing pairs are used to support and provide load carrying capabilities desired for payloads and appendages.



Salient Features

- ❖ Rotary Actuator has low mass with high torque and high precision
- ❖ It provides backlash free motion at output.
- ❖ Good Torque to mass and torque to power ratio.
- ❖ Modular design with features to customise input and output assemblies.

- ❖ Provision for building angle readout devices on both input and output ends.
- ❖ Compact, ease of assembly and fully testable.

Major Specifications

➤ Range of Operation	: Continuous (0 ° - 360 °)
➤ Motion type	: Rotary
➤ Mass	: 1.75 Kg
➤ Overall Size	: ϕ 130 mm x 65 mm
➤ Minimum step size	: \pm 0.00625°
➤ Motion Precision	: \pm 0.00625°
➤ Nominal Drive Torque	: 40 N-m (@28V)
➤ Nominal Power	: ~10.5 W
➤ Operating Voltage	: 12 V to 35 V
➤ Unpowered Detent Torque	: > 12 N-m
➤ Bearing Load	: > 200 N-m

Technology Transfer

URSC-ISRO offers to transfer this technology of Rotary Actuator Mechanism (DM-32) developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining know how may write giving details of their present activities, infrastructure and facilities.

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

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