NASA – Robonaout 2

APPLICATION

Robonaut 2 (R2) is a state of the art, highly dexterous anthropomorphic robot. The robot is designed to work with humans and have the ability to use the same workspace and tools.

The robot joints incorporate dual encoders for **position** and **torque** feedback while performing in dynamic application, vibration, shocks and wide temperature range.

REQUIREMENTS

- Hollow shaft
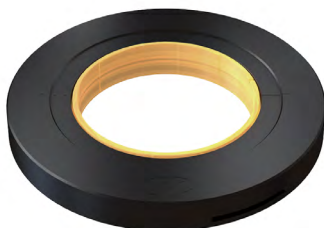- High precision
- Low profile
- Tourqe control

POSITION SENSOR

- Out of the basic **Netzer DS product line** of Absolute Position Electric Encoder™, for such applications, special outgassing materials and housings are usually needed.
- Netzer ability to design, manufacture & test special designs.
- Compact, low profile, lightweight & wide bore: Allowing high level integration for a low profile arm joint design.
- Frameless & contactless with a negligible rotor weight: No mechanical parts operating, resulting in a long-lasting operational time, introducing no extra weight & inertia (load) to the system.

- Immune to magnetic interference: Can be very close to the frameless motor magnets.
- High resolution 19 bit & accuracy < 0.010deg for very low speed & step moving accuracy with high repeatability of on stand still positioning of 1 count.
- Standard digital serial interfaces, SSi, BiSS.

R2 and the STS-133 Crew

PRODUCT FEATURES

RESISTANCE TO COSMIC RADIATION

RESISTANCE TO MAGNETIC FIELDS

HIGH PRECISION

DURABILITY
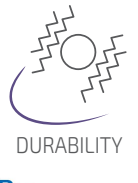
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