

Humanoid robot joins astronauts in space

Robonaut-2 not only looks human, but is also designed to work like one. R2 can use the same tools as space station crew and can replace astronauts during spacewalks that are difficult or dangerous

ROBONAUT-2 (Designed by NASA and GM)

Height: 102cm (from waist to head)

Shoulder width: 79cm

Weight: 150kg **Sensors:** 350

Arms: Twice as articulate as human arm

Vision

Five cameras provide stereo and infrared vision

Parts can be upgraded or replaced

Materials

Aluminium, steel, Kevlar, Teflon



Backpack

Conversion system allows R2's batteries to be charged by terrestrial or ISS power supplies

Flight suit

Each finger has grasping force of 2kg

Control

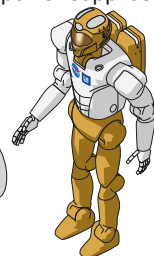
From Mission Control, or locally from International Space Station (ISS) laptop

Torso

Contains 38 PowerPC processors running VxWorks operating system

Strength

Can lift 9.5kg

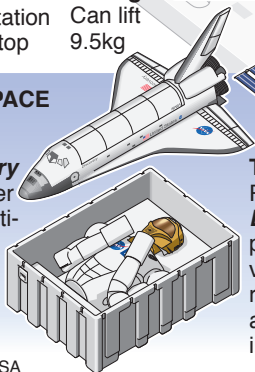


Lower body

Legs are still in development – R2 initially mounted on mobile base

R2 IN SPACE

Shuttle **Discovery** will deliver R2 in multi-purpose storage module



Testing

R2 will work in **Destiny laboratory**, providing data on vibration, zero gravity, radiation exposure, and electromagnetic interference

