RE2 Highly Dexterous Manipulation System

RE2’s Highly Dexterous Manipulation System (HDMS) is a dual-arm robotic system that provides a high degree of agility for complex tasks. HDMS is available in selectable configurations, including 11, 15 or 16 degrees of freedom (DoF) that meet or exceed the dexterity of a human arm.

HDMS provides operators with agile, human-like control in a variety of complex indoor and outdoor environments. The system is extremely flexible and configurable, allowing for both the dexterous manipulation and precision placement of objects. In addition, since HDMS offers a form factor similar to that of an average human, it can easily move and operate within an existing infrastructure, decreasing the need for costly facility upgrades.

Our arms provide human-like capabilities beyond traditional industrial arms and cooperative robots. They combine strength, dexterity, and efficiency all in a compact, rugged, lightweight package.

STANDARD CONFIGURATION:
Available in 11, 15 or 16 Degrees of Freedom:
- 11 DoF: Two identical 5-DoF arms (shoulder roll, shoulder pitch, shoulder yaw, elbow pitch, wrist roll) with a torso pitch.
- 15 DoF: Two identical 7-DoF arms (includes all of the above plus a wrist pitch and an additional wrist roll joint) plus a 1-DoF torso pitch.
- 16 DoF: Two identical 7-DoF arms plus a 2-DoF torso (pitch and yaw).

COMPATIBILITY:
- Open architecture that supports a variety of Ethernet communication protocols
- IP 65 Standard Rating
- 48 Volt DC
- Intuitive control using RE2 Robotics' Imitative Controller
STANDARD FEATURES

- **Power-dense**: The 11-DoF HDMS system weighs just 33.5 pounds, but can lift 120 pounds (more than triple its body weight).
- **Power-efficient**: Runs off of standard DC voltages, drawing minimal current.
- **Quick Release technology**: which allows end effectors at the end of a robotic arm to be quickly and effortlessly changed.
- **Accessory independent**: HDMS has more payload ports than a single-arm system, allowing users to add extra accessories, such as cameras, imaging sensors, navigation and communication systems.
- **Intuitive Control**: HDMS is controlled using RE2’s propriety Imitative Controller, which is a scaled model of the robot’s manipulators.