



LOCKHEED MARTIN 
We never forget who we're working for®

HULC™
Exoskeletons Enhance Mobility and Increase Endurance





PD079-208; Right: PD079-209

Traverses Tough Terrain



PD079-231

Lifts Heavy Objects with Front Attachment



PD079-232; Right: PD079-233

Enables Rapid Movement



Preserves Combat Flexibility

HULC™

Dismounted Warfighters often carry heavy combat loads that increase the stress on the body leading to potential injuries. With a HULC™ exoskeleton, these heavy loads are transferred to the ground through powered titanium legs without loss of mobility.

The HULC is a completely un-tethered, hydraulic-powered anthropomorphic exoskeleton that provides users with the ability to carry loads of up to 200 pounds for extended periods of time and over all terrains. Its flexible design allows for deep squats, crawls and upper-body lifting.

An onboard micro-computer ensures the exoskeleton moves in concert with the individual. The HULC's modularity allows for major components to be swapped out in the field. Additionally, its unique power-saving design allows the user to operate on battery power for extended missions. When battery power is low, the HULC system continues to support the loads and does not restrict mobility. HULC can also support a maximum load, with or without power.

Lockheed Martin is a leading provider of advanced technology solutions for the Warfighter including ground Soldier systems such as wearable situational awareness equipment and mobility assistance systems. Lockheed Martin is also exploring exoskeleton designs for industrial, medical and a wider variety of military mission specific applications.



Carries Heavy Loads

Specifications

- | | |
|--------------------|--|
| Weight | • Total weight without batteries: 53lb |
| Power | • Lithium polymer batteries |
| Electronics | • Flexible, expandable electronics architecture |
| | • Custom single-board micro electronics housed in a sealed enclosure |
| | • Heat sinks on actuators. No fans used or needed. |
| Hydraulics | • Efficient low-flow, high-pressure hydraulic system |
| | • Uses standard hydraulic fluid |

Features

- Range: 20 km on level terrain at 4 km per hour
- Payload: Up to 200lb; carries front and back loads
- Maximum Speed: 7 mph long duration; 10 mph burst speed
- Fits Warfighters' height range of 5'4" to 6'2"

Extensibility

- Wide variety of mission specific attachments
- Capable of serving as backbone for integrated systems such as armor, heating or cooling systems, sensors and other custom attachments
- Long-range extended 72-hour mission model available

Lockheed Martin Corporation
 Missiles and Fire Control
 Business Development
exo.info@lmco.com
 Phone: (407) 356-4464
 Fax: (407) 356-7199
www.lockheedmartin.com/mfc