

# Wearable Robots Exoskeletons: Market Shares, Strategies, and Forecasts, 2019 to 2025

<https://marketpublishers.com/r/W96CEE225DCEN.html>

Date: February 2019

Pages: 525

Price: US\$ 4,400.00 (Single User License)

ID: W96CEE225DCEN

## Abstracts

LEXINGTON, Massachusetts (February 3, 2019) – WinterGreen Research announces that it has published a new study *Wearable Exoskeleton Robots: Market Shares, Strategy, and Forecasts, Worldwide, 2019 to 2025*. Wearable Robots leverage better technology, they support high quality, lightweight materials and long life batteries. Wearable robots, exoskeletons are used for permitting workers to lift 250 pounds and not get hurt while lifting, this is as close to superhuman powers as the comic books have imagined. The exoskeletons are used to assist patients with disabilities and war fighters with enormous excess baggage. Exoskeletons are as easy to use as getting dressed in the morning: Designs with multiple useful features are available. The study has 525 pages and 181 tables and figures.

Industrial workers and warfighters can perform at a higher level when wearing an exoskeleton. Exoskeletons can enable aerospace workers to work more efficiently when building or repairing airplanes. Industrial robots are very effective for ship building where heavy lifting can injure workers.

Exoskeleton devices have the potential to be adapted further for expanded use in every aspect of medical rehabilitation, industry, the military, and for first responders. Workers benefit from powered human augmentation technology because they can offload some of the dangerous part of lifting and supporting heavy tools. Robots assist wearers with lifting activities, improving the way that a job is performed and decreasing the quantity of disability. For this reason, it is anticipated that industrial exoskeleton robots will have very rapid adoption once they are fully tested and proven to work effectively for a particular task.

Exoskeletons are being developed in the U.S., China, Korea, Japan, and Europe. They

are generally intended for medical, logistical and engineering purposes, due to their short range and short battery life. Most exoskeletons can operate independently for several hours. Chinese manufacturers express hope that upgrades to exoskeletons extending the battery life could make them suitable for frontline infantry in difficult environments, including mountainous terrain.

Exoskeletons are capable of transferring the weight of heavy loads to the ground through powered legs without loss of human mobility. This can increase the distance that soldiers can cover in a day, or increase the load that they can carry through difficult terrain. Exoskeletons can significantly reduce operator fatigue and exposure to injury. Industrial robots help with lifting, walking, and sitting. Exoskeletons can be used to access efficiency of movement and improve efficiency.

Medical and military uses have driven initial exoskeleton development. Industrial workers and warfighters can perform at a higher level when wearing an exoskeleton. Exoskeletons can enable aerospace workers to work more efficiently when building or repairing airplanes. Industrial robots are very effective for ship building where heavy lifting can injure workers. New market opportunities of building and repair in the infrastructure, aerospace, and shipping industries offer large opportunity for growth of the exoskeleton markets.

Wearable robots, exoskeletons units are evolving additional functionality rapidly. Wearable robots functionality is used to assist to personal mobility via exoskeleton robots. They promote upright walking and relearning of lost functions for stroke victims and people who are paralyzed. Exoskeletons are helping people relearn to move after a stroke by creating new muscle memory. Exoskeletons deliver higher quality rehabilitation, provide the base for a growth strategy for clinical facilities.

In the able-bodied field, Ekso, Lockheed Martin, Sarcos/Raytheon, BAE Systems, Panasonic, Honda, Daewoo, Noonee, Revision Military, and Cyberdyne are each developing some form of exoskeleton for military and industrial applications. The field of robotic exoskeleton technology remains in its infancy.

Exoskeleton Wearable Robots markets at \$130 million in 2018 are anticipated to reach \$5.2 billion by 2025. Most of the measurable revenue in 2018 is from medical exoskeletons. New technology from a range of vendors provides multiple designs that actually work and will be on the market soon. This bodes well for market development.

WinterGreen Research is an independent research organization funded by the sale of

market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Global Information Info Shop, Market Research.com, Research and Markets, electronics.ca, and Thompson Financial. WinterGreen Research is positioned to help customers facing challenges that define the modern enterprises. The increasingly global nature of science, technology and engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust wintergreen research to work alongside them to ensure the success of the participation in a particular market segment.

WinterGreen Research supports various market segment programs; provides trusted technical services to the marketing departments. It carries out accurate market share and forecast analysis services for a range of commercial and government customers globally. These are all vital market research support solutions requiring trust and integrity.

## Contents

### **WEARABLE ROBOT EXOSKELETON EXECUTIVE SUMMARY**

Wearable Robot Exoskeleton Market Driving Forces

Industrial Exoskeleton Devices Positioned to Serve Commercial Wearable Purposes

Transition from Military Markets to Commercial Exoskeleton Markets

Wearable Exoskeleton Market Shares

Wearable Robot, Exoskeleton Market Forecasts

### **1. WEARABLE ROBOT EXOSKELETON MARKET DESCRIPTION AND MARKET DYNAMICS**

1.1 Wearable Robot Exoskeleton Market Definition

1.2 Market Growth Drivers For Exoskeletons

1.1.1 Exoskeleton Suit

1.1.2 Running with Robots

1.1.3 Use of Video Game Technology In PT

1.1.4 Telemedicine Growing Trend In The Physical Therapy

1.2 Stroke Rehabilitation

1.2.1 Home Mobility Exoskeletons

1.2.2 Exoskeleton Able-Bodied Industrial Applications

1.3 Industrial Active and Passive Wearable Exoskeletons

1.4 Paralyzed Patients Are Walking Again With Help From Pain Stimulator

1.5 Human Augmentation

### **2. EXOSKELETON MARKET SHARES AND MARKET FORECASTS**

2.1 Exoskeleton Market Driving Forces

2.1.1 Industrial Exoskeleton Devices Positioned to Serve Commercial Wearable Purposes

2.1.2 Military Exoskeleton Markets Shift

2.2 Wearable Exoskeleton Market Shares and Forecasts

2.3 Wearable Medical Exoskeleton Market Shares

2.4 Medical Market Forecasts for Exoskeletons

2.4.1 Able-Bodied Exoskeletons

2.4.2 Ekso Rehabilitation Robotics

2.4.3 Ekso GT

2.4.4 Parker-Hannifin's Indego

- 2.4.5 Hocoma
- 2.4.6 AlterG Anti-Gravity Treadmill in Action
- 2.4.7 Medical Rehabilitation Robot Market Analysis
- 2.4.8 Paralyzed Patient Medical Exoskeleton Market
- 2.5 Wearable Medical Exoskeleton Market Forecasts
- 2.6 Wearable Military Exoskeleton Market Shares
  - 2.6.1 UK Armed Police Super-Light Graphene Vests from US Army
  - 2.6.2 Honda Builds Unique Transportation Exoskeleton Device Market
  - 2.6.3 Lockheed
  - 2.6.4 Military Exoskeleton Robots Market Shares, Units and Dollars
- 2.7 Wearable Military Exoskeleton Market Forecasts
- 2.8 Wearable Law Enforcement and First Responder Exoskeleton Market Forecasts
- 2.9 Wearable Industrial Exoskeleton Market Shares
- 2.10 Wearable Commercial Exoskeleton Market Forecasts
  - 2.10.1 Commercial Exoskeleton Market Segments
  - 2.10.2 US Infrastructure: Bridges
  - 2.10.3 Aerospace
  - 2.10.4 Exoskeletons Change the Face of Shipbuilding
  - 2.10.5 Industrial Wearable Robot Shipyard Exoskeleton
  - 2.10.6 Industrial Wearable Robots, Exoskeleton Robot Market Segments
  - 2.10.7 Save Lives and Prevent Injury
  - 2.10.8 Korea
- 2.11 Exoskeleton Robots Regional Analysis
  - 2.11.1 US
  - 2.11.2 Europe

### **3. WEARABLE ROBOT EXOSKELETON PRODUCTS**

- 3.1 Ekso
  - 3.1.1 Ekso Exoskeletons and Body Armor for U.S. Special Operations Command (SOCOM)
  - 3.1.2 Ekso TALOS Suit
  - 3.1.3 Ekso SOCOM Collaborative Design of the Project
  - 3.1.4 Ekso Quiet Power Sources
  - 3.1.5 Esko Technology
  - 3.1.6 Ekso Bionics
  - 3.1.7 Esko Exoskeletons
  - 3.1.8 Ekso Builds Muscle Memory
  - 3.1.9 Ekso Bionics Wearable Bionic Suit

- 3.1.10 Ekso Gait Training Exoskeleton Uses
- 3.1.11 Ekso Bionics Robotic Suit Helps Paralyzed Man Walk Again
- 3.2 Rewalk
  - 3.2.1 Rewalk-Robotics-Personal Support
- 3.3 Lockheed Martin Exoskeleton Design
  - 3.3.1 Lockheed Martin HULC with Lift Assist Device Exoskeletons
  - 3.3.2 Lockheed Martin Military Exoskeleton Human Universal Load Carrier (HULC) with Lift Assist Device
  - 3.3.3 Lockheed Martin Fortis
  - 3.3.4 Collaboration Between National Center for Manufacturing Sciences, Lockheed Martin, and BAE Systems
  - 3.3.5 Lockheed Martin FORTIS Exoskeleton
- 3.4 Berkeley Robotics Laboratory Exoskeletons
  - 3.4.1 Berkeley Robotics Austin
  - 3.4.2 Berkley Robotics and Human Engineering Laboratory ExoHiker
  - 3.4.3 Berkley Robotics and Human Engineering Laboratory ExoClimber
  - 3.4.4 Berkeley Lower Extremity Exoskeleton (BLEEX)
  - 3.4.5 Berkley Robotics and Human Engineering Laboratory Exoskeleton
  - 3.4.6 Berkley Robotics and Human Engineering Laboratory
- 3.5 Bionic
- 3.6 Reha-Stim Harness
  - 3.6.1 Reha-Stim Bi-Manu-Track Hand and Wrist
- 3.7 Exoskeleton Designed by CAR
- 3.8 Sarcos
  - 3.8.1 Sarcos Guardian XO
  - 3.8.2 Sarcos Robot-as-a-Service (RaaS) Model
  - 3.8.3 Sarcos Raytheon XOS 2: Second Generation Exoskeleton
- 3.9 Cyberdyne
  - 3.9.1 Cyberdyne HAL
  - 3.9.2 Applications of Cyberdyne HAL
- 3.10 Berkley Robotics Laboratory Exoskeletons
  - 3.10.1 Berkley Robotics and Human Engineering Laboratory ExoHiker
  - 3.10.2 Berkley Robotics and Human Engineering Laboratory ExoClimber
  - 3.10.3 Berkeley Lower Extremity Exoskeleton (BLEEX)
  - 3.10.4 Berkley Robotics and Human Engineering Laboratory Exoskeleton
- 3.11 Rex Bionics
- 3.12 US Bionics suitX
- 3.13 Noonee
  - 3.13.1 Noonee Exoskeletons Chairless Chair

- 3.14 Hocoma
- 3.15 AlterG: PK100 PowerKnee
  - 3.15.1 AlterG Bionic Leg
  - 3.15.2 Alterg/Tibion Bionic Leg
  - 3.15.3 AlterG M300
- 3.16 Catholic University of America Arm Therapy Robot Armin III
- 3.17 U.S. Special Operations Command SOCOM Wearable Exoskeleton
  - 3.17.1 DARPA Funded Exoskeleton
  - 3.17.2 Darpa Secure, Smartphone Device
  - 3.17.3 Trek Aerospace Springtail/XFV Exo-skeleton Flying Vehicle
- 3.18 Revision Military Kinetic Operations Suit
- 3.19 HEXORR: Hand EXOskeleton Rehabilitation Robot
- 3.20 Honda
  - 3.20.1 Honda Walk Assist
  - 3.20.2 Honda Prototype Stride Management Motorized Assist Device
  - 3.20.3 Honda Builds Unique Transportation Exoskeleton Device Market
- 3.21 Revision Military - Exoskeleton Integrated Soldier Protection System
  - 3.21.1 Revision Military Armored Exoskeleton
- 3.22 Mira Lopes Gait Rehabilitation Device
  - 3.22.1 Prototype of University of Twente LOPES with 8 Actuated Degrees of Freedom
- 3.23 China North Industries Group Corporation (NORINCO)
  - 3.23.1 Chinese Exoskeletons for Combat
- 3.24 Russian Army: Combat Exoskeletons by 2020
- 3.25 UK Exoskeleton
  - 3.25.1 UK Exoskeleton Law Enforcement
  - 3.25.2 UK Armed Police Super-Light Graphene Vests
  - 3.25.3 Brain-Machine Interface (BMI) Based Robotic Exoskeleton
- 3.26 University of Texas in Austin: Robotic Upper-Body Rehab Exoskeleton
- 3.27 Daewoo Begins Testing Robotic Exoskeletons for Shipyard Workers in South Korea
  - 3.27.1 Daewoo Robotic Suit Gives Shipyard Workers Super Strength
  - 3.27.2 Daewoo Shipbuilding & Marine Engineering
  - 3.27.3 Daewoo Shipbuilding & Marine Engineering (DSME) Wearable Robot Tank Insulation Boxes of LNG Carriers
  - 3.27.4 Daewoo
- 3.28 Panasonic
  - 3.28.1 Panasonic Activelink

## **4. EXOSKELETON TECHNOLOGY**



- 4.1 Safety Standards for Exoskeletons in Industry
- 4.2 Types of Conditions and Rehabilitation Treatment by Condition
- 4.3 Clinical Evidence and Reimbursement
  - 4.3.1 Stroke
  - 4.3.2 Early Rehab After Stroke
  - 4.3.3 Multiple Sclerosis
  - 4.3.4 Knee-Replacement Surgery
  - 4.3.5 Neuro-Rehabilitation
  - 4.3.6 Prostheses
  - 4.3.7 Exoskeletons
  - 4.3.8 Exoskeleton-Based Rehabilitation
  - 4.3.9 End-effectors
  - 4.3.10 Mobility Training Level Of Distribution
  - 4.3.11 Rehabilitation Robots Cost-Benefit-Considerations
- 4.4 Disease Incidence and Prevalence Analysis
  - 4.4.1 Aging Of The Population
  - 4.4.2 Chronic Disease Rehabilitation
- 4.5 Industrial Robot Exoskeleton Standards
- 4.6 NCMS
- 4.7 Exoskeleton Standards Use Environment
  - 4.7.1 Sarcos Guardian XOS Industrial Applications
  - 4.7.2 UK Armed Police Super-Light Graphene Vests from US Army
  - 4.7.3 Daewoo Wearable Robot Is Made of Carbon, Aluminum Alloy and Steel
  - 4.7.4 Cyberdyne HAL for Labor Support and HAL for Care Support Meet ISO 13482 Standard
- 4.8 Exoskeleton Technology
- 4.9 Robotic Actuator Energy
  - 4.9.1 Elastic Actuators
  - 4.9.2 General Atomics Hybrid-Electric Power Unit
- 4.10 Robotic Modules for Disability Therapy
  - 4.10.1 Wearable Robotics for Disability Therapy
  - 4.10.2 Wearable Robotics for Disability Therapy
- 4.11 Robotic Risk Mitigation
- 4.12 Elastic Actuators
- 4.13 Exoskeleton Multi-Factor Solutions
  - 4.13.1 Biometallic Materials Titanium (Ti) and its Alloys
- 4.14 Cognitive Science
- 4.15 Artificial Muscle



- 4.16 Standards
- 4.17 Regulations
- 4.18 Automated Process for Rehabilitation Robots
- 4.19 Robotic Exoskeletons Empower Patient Rehabilitation Achievements
  - 4.19.1 Rehabilitation Options
  - 4.19.2 Rehabilitation Robots Economies Of Scale
- 4.20 Seizing the Robotics Opportunity
  - 4.20.1 Modular Self-Reconfiguring Robotic Systems

## **5. EXOSKELETON COMPANY PROFILES**

- 5.1 AlterG
  - 5.1.1 AlterG: PK100 PowerKnee
  - 5.1.2 AlterG Bionic Leg
  - 5.1.3 AlterG M300 Customers
  - 5.1.4 AlterG M300
  - 5.1.5 AlterG Acquires Tibion Bionic Leg
- 5.2 Berkeley Robotics Laboratory Exoskeletons
- 5.3 Exoskeleton Designed by CAR
- 5.4 Bionik Laboratories/Interactive Motion Technologies (IMT)
  - 5.4.1 Bionik Laboratories/Interactive Motion Technologies (IMT)
  - 5.4.2 Bionik Laboratories Acquires Interactive Motion Technologies, Inc. (IMT)
  - 5.4.3 BioNik/InMotion Robots for NHS study in the UK
  - 5.4.4 Bionik/Interactive Motion Technologies (IMT) InMotion Robots
  - 5.4.5 IMT Anklebot Evidence-Based Neurorehabilitation Technology
  - 5.4.6 Bionik Laboratories Fiscal Year 2018 Revenue
  - 5.4.7 Bionik Second Quarter Financial Results
- 5.5 CAREX Upper Limb Robotic Exoskeleton
- 5.6 Catholic University of America Arm Therapy Robot ARMin III
  - 5.6.1 Catholic University of America Armin Iii Project Description:
  - 5.6.2 Catholic University of America HandSOME Hand Spring Operated Movement Enhancer
- 5.7 China North Industries Group Corporation (NORINCO)
  - 5.7.1 China North Industries Corporation (NORINCO) Revenue
- 5.8 Cyberdyne
  - 5.8.1 Cyberdyne Wants to Offer Robot Suit HAL in the U.S.
  - 5.8.2 Robot Exoskeletons at Japan's Airports
  - 5.8.3 To Offset Aging Workforce, Japan Turns to Robot-Worked Airports
- 5.9 Ekso Bionics

- 5.9.1 Esko Employees
- 5.9.2 Ekso Rehabilitation Robotics
- 5.9.3 Ekso GT
- 5.9.4 Ekso Bionics Seeks to Lead the Technological Revolutions
- 5.9.5 Ekso Bionics Customers
- 5.9.6 Ekso Able-Bodied Industrial Applications
- 5.9.7 Ekso Rehabilitation Robotics
- 5.9.8 Ekso Bionics
- 5.9.9 Ekso Rehabilitation Robotics
- 5.9.10 Ekso GT
- 5.10 Fanuc
  - 5.10.1 Fanuc - Industrial Robot Automation Systems and Robodrill Machine Centers
- 5.11 Focal Meditech
  - 5.11.1 Focal Meditech BV Collaborating Partners:
- 5.12 HEXORR: Hand EXOskeleton Rehabilitation Robot
- 5.13 Homoca Helping Patients To Grasp The Initiative And Reach Towards Recovery
- 5.14 Honda Motor
  - 5.14.1 Honda Automobile Business
  - 5.14.2 Honda Walk Assist
  - 5.14.3 Honda Stride Management Motorized Assist Device
  - 5.14.4 Honda Builds Unique Transportation Exoskeleton Device Market
  - 5.14.5 Honda Stride Management Motorized Assist Device
  - 5.14.6 Honda Builds Transportation Exoskeleton Device Market
- 5.15 Interaxon
- 5.16 KDM
- 5.17 Levitate Technologies
- 5.18 Lockheed Martin
  - 5.18.1 Lockheed Martin 2018 Revenue
- 5.19 Lopes Gait Rehabilitation Device
  - 5.19.1 Lopes Gait Rehabilitation Device
- 5.20 MRISAR
- 5.21 Myomo
  - 5.21.1 Myomo mPower 1000
- 5.22 Noonee
- 5.23 Orthocare Innovations
  - 5.23.1 Orthocare Innovations Adaptive Systems For Advanced O&P Solutions.
  - 5.23.2 Orthocare Innovations Company Highlights
- 5.24 Panasonic
- 5.25 Parker Hannifin

- 5.25.1 Parker Revenue for Fiscal 2018
- 5.25.2 Parker and Freedom Innovations' Partnership
- 5.26 Reha Technology
- 5.27 Revision Military
- 5.28 ReWalk Robotics
  - 5.28.1 Rewalk
  - 5.28.2 ReWalk Robotics
  - 5.28.3 Rewalk Robotics Revenue
  - 5.28.4 ReWalk First Mover Advantage
  - 5.28.5 ReWalk Strategic Alliance with Yaskawa Electric Corporation
  - 5.28.6 ReWalk Scalable Manufacturing Capability
  - 5.28.7 ReWalk Leverages Core Technology Platforms
- 5.29 RexBionics
- 5.30 Robotdalen
- 5.31 Rostec
  - 5.31.1 Rostec Lines of Business
  - 5.31.2 Rostec Corporation Objectives
- 5.32 RU Robots
- 5.33 Sarcos
  - 5.33.1 Sarcos LC Acquires Raytheon Sarcos Unit
  - 5.33.2 Sarcos LC Acquires Raytheon Sarcos Unit of Raytheon
- 5.34 Shepherd Center
- 5.35 Socom (U.S. Special Operations Command)
- 5.36 SuitX
- 5.37 Trek Aerospace
- 5.38 University of Twente
- 5.39 United Instrument Manufacturing Corporation
- 5.40 Other Human Muscle Robotic Companies
  - 5.40.1 Additional Rehabilitation Robots
  - 5.40.2 Selected Rehabilitation Equipment Companies
  - 5.40.3 Spinal Cord Treatment Centers in the US

## About

### ABOUT THE COMPANY

Research Methodology

## List Of Tables

### LIST OF TABLES AND FIGURES

Figure 1. Industrial Exoskeleton Robot Market Driving Forces

Figure 2. Wearable Robot Exoskeleton Market Shares, Dollars, Worldwide, 2018

Figure 3. Wearable Robot Medical Exoskeleton Robot Market Shares, Dollars, Worldwide, 2018

Figure 4. Exoskeleton Medical Rehabilitation Robot Market Shares, Dollars, Worldwide, 2018

Figure 5. Wearable Robot, Exoskeleton Robot Market Shipments Forecasts Dollars, Worldwide, 2019-2025

Figure 6. Industrial Wearable Exoskeletons Specific Issues

Figure 7. Exoskeleton Robot Market Driving Forces

Figure 8. Wearable Robot Exoskeleton Robot Market Shipments Forecasts Dollars, Worldwide, 2019-2025

Figure 9. Wearable Robots, Exoskeleton Robot Markets, Dollars, Worldwide, 2019-2025

Figure 10. Wearable Robots, Exoskeleton Robot Markets, Units, Worldwide, 2019-2025

Figure 11. Wearable Robots, Exoskeleton Robot Market Segments, High End, Mid-Range, and Low End, Dollars, Worldwide, 2019-2025

Figure 12. Wearable Robots, Exoskeleton Robot Market Segments, Medical, Military, and Industrial, Dollars, Worldwide, 2019-2025

Figure 13. Wearable Robot Medical Exoskeleton Robot Market Shares, Dollars, Worldwide, 2018

Figure 14. Wearable Robot Medical Exoskeleton Robot Market Shares, Dollars, Worldwide, 2018

Figure 15. Wearable Medical Robots, Exoskeleton Robot Markets, Dollars, Worldwide, 2019-2025

Figure 16. Wearable Robots, Exoskeleton Robot Market Segments, Medical, Quadriplegia, Multiple Sclerosis, Stroke and Cerebral Palsy, Dollars, Worldwide, 2019-2025

Figure 17. Wearable Robots, Exoskeleton Robot Market Segments, Medical, Quadriplegia, Multiple Sclerosis, Stroke and Cerebral Palsy, Percent, Worldwide, 2019-2025

Figure 18. Wearable Robots, Exoskeleton Robot Market Segments, Medical, Quadriplegia, Multiple Sclerosis, Stroke and Cerebral Palsy, Percent, Worldwide, 2019-2025

Figure 19. Alterg Therapy Functions

Figure 20. Exoskeleton Medical Rehabilitation Robot Market Shares, Units and Dollars,

Worldwide, 2018

Figure 21. Paralyzed Patient Medical Exoskeleton Market Shares, Dollars, Worldwide, 2018

Figure 22. Spinal Cord Injury Causes, Worldwide, 2018

Figure 23. Wearable Medical Exoskeleton Market Forecasts, 2019-2025

Figure 24. Military Exoskeleton Robots Market Shares, Dollars, Worldwide, 2018

Figure 25. Military Exoskeleton Robots Market Shares, Dollars, Worldwide, 2018

Figure 26. Wearable Robots, Military Exoskeleton Robot Markets, Dollars, Worldwide, 2019-2025

Figure 27. Wearable Robots, Exoskeleton Robot Market Segments, Military, Warfighter Support, Protective Systems, Dollars, Worldwide, 2019-2025

Figure 28. Wearable Robots, Exoskeleton Robot Market Segments, Military Warfighter Support, Protective Systems, Percent, Worldwide, 2019-2025

Figure 29. Wearable Robots, Exoskeleton Robot Market Segments, Law Enforcement Protective Systems, Dollars, Worldwide, 2019-2025

Figure 30. Commercial Exoskeleton Robots Market Shares, Market Shares, Dollars, Worldwide, 2018

Figure 31. Wearable Robots, Industrial Exoskeleton Markets, Worldwide, 2019-2025

Figure 32. Wearable Robots, Exoskeleton Robot Market Segments, Industrial, Ship Building, Construction, Warehouse, and Manufacturing, Dollars, Worldwide, 2019-2025

Figure 33. Wearable Robots, Exoskeleton Robot Market Segments, Industrial, Ship Building, Construction, Warehouse, and Manufacturing, Percent, Worldwide, 2019-2025

Figure 34. Lockheed Martin Exoskeleton Transfers Load Weight

Figure 35. Lockheed Martin Fortis Aerospace

Figure 36. Lockheed Martin Fortis Hand tools

Figure 37. Daewoo Robotic Exoskeletons for Shipyard Workers in South Korea

Figure 38. Wearable Robots, Exoskeleton Robot Market Segments, Industrial, Ship Building, Construction, Warehouse, and Manufacturing, Dollars, Worldwide, 2019-2025

Figure 39. Number US Workers Needing Exoskeletons by Occupation

Figure 40. Daewoo Robotic Exoskeletons for Shipyard Workers in South Korea

Figure 41. Exoskeleton Robot Regional Market Segments, Dollars, 2018

Figure 42. Ekso Bionics

Figure 43. Esko Technology Battery-Powered Motors

Figure 44. Esko Technology

Figure 45. Ekso Bionics Gait Training

Figure 46. Ekso Bionics Gait Training Functions

Figure 47. Ekso Gait Training Exoskeleton Functions

Figure 48. Ekso Gait Training Exoskeleton Functions

Figure 49. Ekso Bionics Beep Bop: Rethink Robotics' Baxter Model

- Figure 50. Ekso Bionics Bionic Suit
- Figure 51. Rewalk-Robotics-Personal Support
- Figure 52. Lockheed Martin Human Universal Load Carrier (HULC) Features
- Figure 53. Lockheed Martin Human Universal Load Carrier (HULC) Specifications
- Figure 54. Lockheed HULC Exoskeleton
- Figure 55. US Navy Lockheed Martin Shipyard Exoskeleton
- Figure 56. Lockheed HULC Lifting Device Exoskeleton
- Figure 57. Lockheed Martin Fortis Exoskeleton Conforms to Different Body Types
- Figure 58. Lockheed Martin Fortis Use in Aerospace Industry
- Figure 59. Lockheed Martin Fortis
- Figure 60. Lockheed Martin Fortis Exoskeleton
- Figure 61. Lockheed Martin FORTIS Exoskeleton Welding
- Figure 62. Lockheed Martin FORTIS Exoskeleton Supporting
- Figure 63. Berkeley Robotics Austin
- Figure 64. Berkley Robotics and Human Engineering Laboratory ExoHiker
- Figure 65. Berkley Robotics and Human Engineering Laboratory ExoClimber
- Figure 66. Berkley Robotics and Human Engineering Laboratory Exoskeleton
- Figure 67. Berkley Robotics and Human Engineering Laboratory Research Work
- Figure 68. Berkley Robotics and Human Engineering Laboratory Research Work
- Figure 69. Reha-Stim Bi-Manu-Track Hand and Wrist Rehabilitation Device
- Figure 70. Reha-Stim Gait Trainer GT I Harness
- Figure 71. Sarcos Exoskeleton Human Support
- Figure 72. Sarcos XOS Exoframe
- Figure 73. Sarcos Guardian XO Capabilities
- Figure 74. Sarcos Guardian XOS
- Figure 75. Sarcos Guardian XOS Capabilities
- Figure 76. Sarcos Robot-as-a-Service (RaaS) Model
- Figure 77. Sarcos Exoskeleton Developed by Raytheon
- Figure 78. Sarcos Raytheon XOS Exoskeleton
- Figure 79. Raytheon XOS 2: Second Generation Exoskeleton
- Figure 80. Applications of Cyberdyne HAL
- Figure 81. Applications of Cyberdyne HAL
- Figure 82. Berkley Robotics and Human Engineering Laboratory ExoHiker
- Figure 83. Berkley Robotics and Human Engineering Laboratory ExoClimber
- Figure 84. Berkley Robotics and Human Engineering Laboratory Exoskeleton
- Figure 85. Rex Bionics Exoskeleton
- Figure 86. Rex Bionics
- Figure 87. Noonee Assembly Line Manufacturing Exoskeleton
- Figure 88. AlterG: PK100 PowerKnee



- Figure 89. AlterG Bionic Neurologic And Orthopedic Therapy Leg
- Figure 90. Tibion Bionic Leg
- Figure 91. AlterG Anti-Gravity Treadmill Precise Unweighting Technology Patient Rehabilitation Functions
- Figure 92. ARMin III Robot For Movement Therapy Following Stroke
- Figure 93. U.S. Special Operations Command Socom First-Generation TALOS Wearable Exoskeleton Suit
- Figure 94. Trek AEROSPACE SPRINGTAIL/XFV Exo-Skeleton Flying Vehicle
- Figure 95. HEXORR: Hand EXOskeleton Rehabilitation Robot Technology Benefits
- Figure 96. HEXORR: Hand EXOskeleton Rehabilitation Robot Treatment Benefits
- Figure 97. HEXORR: Hand EXOskeleton Rehabilitation Robot Technology Force and Motion Sensor Benefits
- Figure 98. Honda Walk Assist
- Figure 99. Honda Walk Assist
- Figure 100. Honda Motors Prototype Stride Management Motorized Assist Device
- Figure 101. Revision Military - Exoskeleton Integrated Soldier Protection Vision System
- Figure 102. Revision Military - Exoskeleton Integrated Soldier Protection System
- Figure 103. Prototype of University to Twente in the Netherlands LOPES with 8 actuated Degrees of Freedom by Means Of Series Elastic Actuation
- Figure 104. Prototype of University to Twente in the Netherlands LOPES with 8 actuated Degrees of Freedom by Means Of Series Elastic Actuation
- Figure 105. China North Industries Group Assisted Lifting
- Figure 106. Chinese Future Exoskeleton Warrior
- Figure 107. Russian Army: Combat Exoskeleton Features
- Figure 108. Russian Exoskeleton Prototype
- Figure 109. UK Equipping Police Officers With Technology
- Figure 110. UK Police Officer Exoskeleton
- Figure 111. UK Exoskeleton Provides Compelling Law Enforcement Presence
- Figure 112. University of Texas in Austin Robotic Upper Arm Exoskeleton
- Figure 113. Daewoo Robotic Exoskeletons for Shipyard Workers in South Korea
- Figure 114. Daewoo Exoskeleton 28-Kilogram Frame Weight.
- Figure 115. Daewoo Exoskeleton Lifting
- Figure 116. Daewoo Shipbuilding Wearable Robot Box Carrying Applications
- Figure 117. Daewoo Shipbuilding & Marine Engineering (DSME) Wearable Robot Tank Insulation
- Figure 118. Daewoo Insulation Boxes Used To Line The Tanks of LNG Carriers
- Figure 119. Daewoo Shipbuilding Wearable Robot Applications
- Figure 120. US Navy Lockheed Martin Exoskeleton
- Figure 121. Panasonic Consumer-Grade Robotic Exoskeleton Suit ActiveLink

- Figure 122. Panasonic Activelink Industrial Exoskeleton
- Figure 123. U.S. Rehab Patient Demographics
- Figure 124. Market Metrics for Rehab Patients
- Figure 125. Spinal Cord Injuries Causes, Number, Worldwide, 2018
- Figure 126. US Stroke Incidence Numbers
- Figure 127. Industrial Exoskeleton Standards Benefits
- Figure 128. Industrial Exoskeleton Standards Functions
- Figure 129. Industrial Robot Exoskeleton Standards
- Figure 130. Sarcos Guardian XO Capabilities
- Figure 131. Sarcos Guardian XOS Work Augmentation
- Figure 132. Stroke Rehabilitation Guidelines For Interactive Robotic Therapy
- Figure 133. Extremity Rehabilitation Robot Technology
- Figure 134. Health Care Conditions Treated With Rehabilitation Wearable Robotics
- Figure 135. Extremity Rehabilitation Robot Technology
- Figure 136. Exoskeleton System Concerns Addressed During System Design
- Figure 137. Rehabilitation Systems Initiate Active Movements
- Figure 138. Methods of Active Initiation of Movements In Robotic Rehabilitation
- Figure 139. Users Find Robots Preferable and More Versatile than Inadequate Human Trainers
- Figure 140. Rehabilitation Robots Software Functions
- Figure 141. Robotic Rehabilitation Devices Automated Process Benefits
- Figure 142. AlterG Anti-Gravity Treadmillsr Features, Built on differential air pressure technology
- Figure 143. AlterG: PK100 PowerKnee
- Figure 144. AlterG Bionic Neurologic And Orthopedic Therapy Leg
- Figure 145. AlterG Anti-Gravity Treadmillsr Target Markets
- Figure 146. AlterG Product Positioning
- Figure 147. Selected US Regional AlterG M300 Customer Clusters
- Figure 148. AlterG/Tibion Bionic Leg
- Figure 149. Berkeley Robotics Austin
- Figure 150. Interactive Motor Technologies Anklebot Exoskeletal Robotic System Design Principals
- Figure 151. BIONIK milestones during second half fiscal year 2019:
- Figure 152. ARMin III Robot For Movement Therapy Following Stroke
- Figure 153. China North Industries Corporation (NORINCO) Enterprise Group Product And Capital Operations Activities
- Figure 154. Cyberdyne HAL Lower Back Support
- Figure 155. Ekso Bionics Regional Presence
- Figure 156. FOCAL Meditech BV Products:

- Figure 157. Focal Meditech BV Collaborating Partners:
- Figure 158. Honda's Principal Automobile Products
- Figure 159. Honda Walk Assist
- Figure 160. Honda Motors Prototype Stride Management Motorized Assist Device
- Figure 161. Lockheed Martin Segment Positioning
- Figure 162. Noonee Chairless Chair
- Figure 163. Panasonic AWN- 03 Exoskeleton
- Figure 164. Panasonic PLN- 01 Exoskeleton
- Figure 165. Panasonic AWN-03 Helps with Lifting And Carrying Heavy Loads
- Figure 166. Parker Indego Exoskeleton
- Figure 167. Parker Hannifin Exoskeleton Customer Base
- Figure 168. Reha G-EO Robotic Rehabilitation Device
- Figure 169. Reha Technology G-EO System
- Figure 170. Revision Military On Going Projects
- Figure 171. ReWalker
- Figure 172. Rewalk Robotics Revenue
- Figure 173. Rostec Lines Of Business
- Figure 174. Rostec Corporation Objectives
- Figure 175. Principal Functions Of The Corporation
- Figure 176. RUR Key Market Areas For Robotic Technologies
- Figure 177. Sarcos Exoskeleton Human Support
- Figure 178. Sarcos Wear Exoskeleton Timeline
- Figure 179. Raytheon Tethered Exoskeleton
- Figure 180. Trek Aerospace Exoskeleton
- Figure 181. Trek Aerospace Exoskeleton Components

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