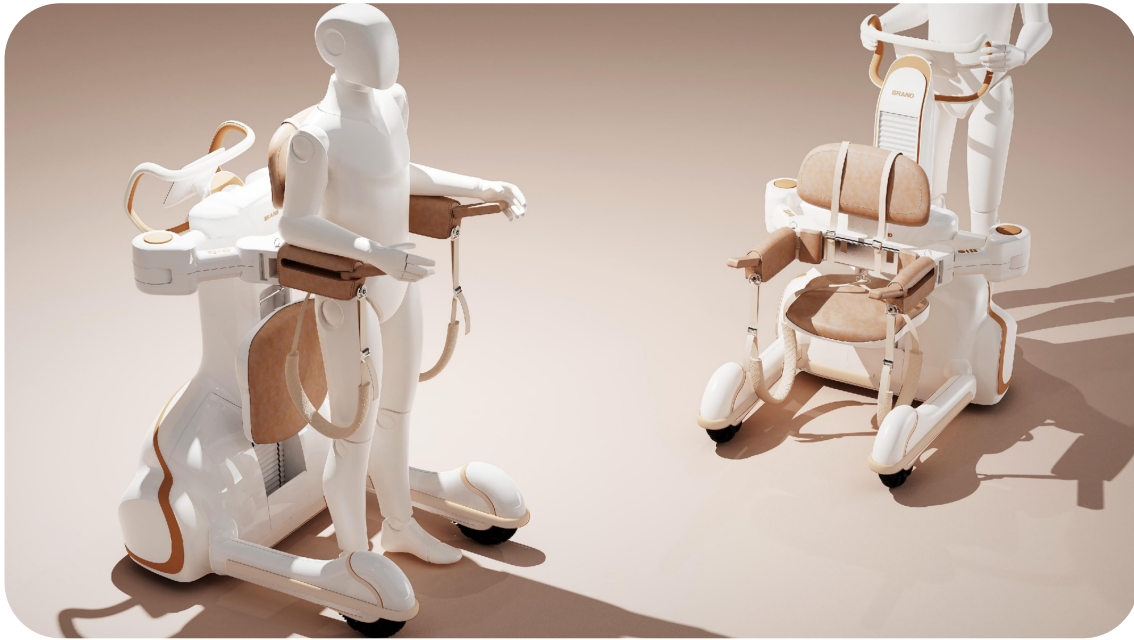


Data-driven Robotic Balance Assistant

— DRBA —





Data-driven Robotic Balance Assistant (DRBA) features multi-jointed flexible low-damping mechanical arms. Incorporating ergonomic and bionic technologies, it achieves human-like arm movements that simulate the hands of professional therapists, providing real-time support and protection during user training. Leveraging an established large-scale database of human walking patterns, the system employs artificial intelligence to construct intelligent robotic models. These models can dynamically determine user movement intent for intelligent following, while simultaneously perceiving user posture to provide fall prevention protection.

Scope Of Application

Brain Lesion

Including patients with hemiplegia, monoplegia or multiple limb paralysis caused by cerebral palsy, stroke (apoplexy), neurodegenerative diseases, brain trauma, etc.

Spinal Cord Injury

Including patients with paraplegia caused by spinal cord injury, myelitis, or spinal cord lesions; patients with musculoskeletal system diseases; patients with cardiopulmonary system diseases.

Elderly Rehabilitation

Patients with Parkinson's disease, elderly patients with mobility difficulties.

Other Rehabilitation

Obese patients, amputee patients, etc.

Product Features

1 Flexible Mechanical Arm

Multi-Joint Flexible Low-Damping Mechanical Arm.



2 Multi-Mode Selection

Full-Lock, Semi-Lock, Follow, and Balance Assessment Modes.

3 Adjustable Parameters

Customizable fall resistance, speed, and session dura-

4 Intelligent Fall Protection

Emergency stop and multi-layered safety protocols.

5 Intelligent Following

Responsive to walking intent, stopping as needed.

6 Balance Assessment

Real-time hip trajectory visualization and data output.

7 Quick Self-Test

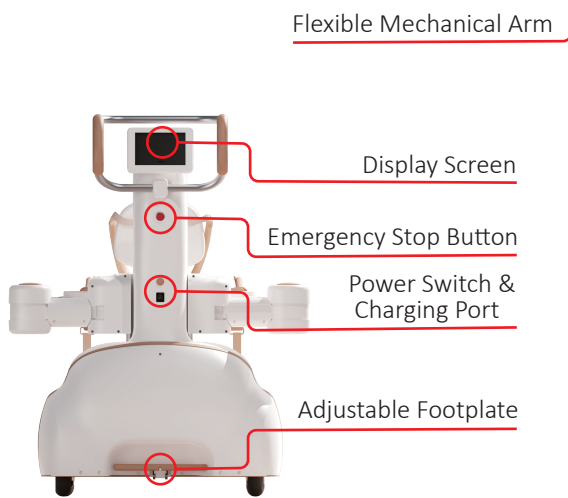
10-second initialization check.



Functions

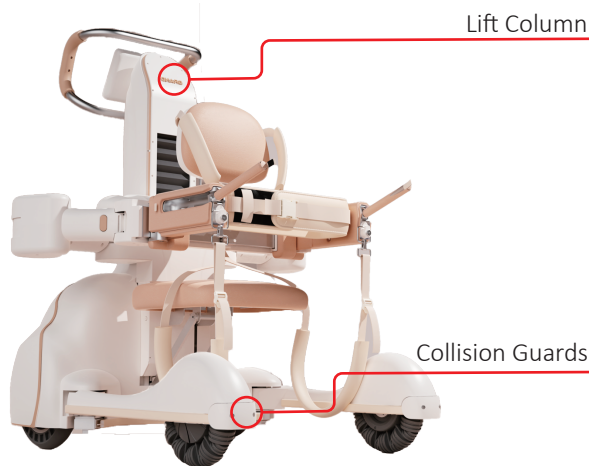
Intelligent Following

Simulate the therapist's arm, enabling patients to undergo higher-intensity and more challenging walking training in a safe and autonomous environment.



Intelligent Fall Prevention

Equipped with multiple safety protection measures, it can monitor the patient's status in real time and provide feedback. Ensure that the patient will not have an accident during use and provide a timely emergency stop function.



Technical Specifications

Dimensions

Appearance Size(L×W×H)

1m×0.8-1.3m×1.25-1.3m

Weight

170 kg

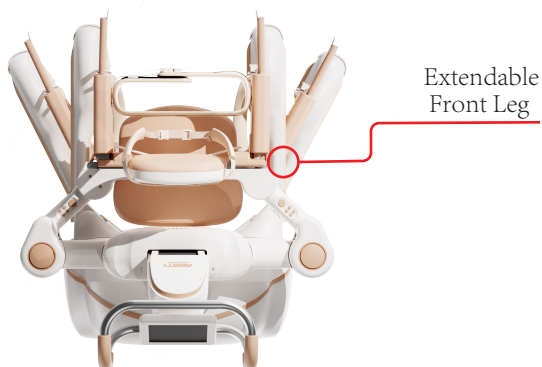
Applicable population

Max Load Capacity

100 kg

User Height Range

140~190 cm



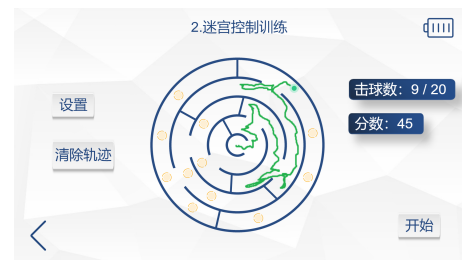
Balance Assessment

Balance Assessment & Training based on clinical operational needs, records all test data for quantitative analysis. Strengthens weak areas through targeted training to enhance rehabilitation effectiveness and patient motivation.



Postural Stability — Evaluates stability by analyzing cursor trajectory variations during static standing.

Maze Control—Helps to enhance proprioception and motor control capabilities. Various difficulty levels are designed to meet the rehabilitation needs of different patient groups.



Sway Control—Determine the maximum sway range that the patient can achieve without setting specific distance constraints.

Stability Limit—Requires moving the cursor from center to flashing targets and back, with minimized deviation.





***EMPOWERING CORE STRENGTH
FOR HUMAN HEALTH***

Tel: 0757-86220145

Moblle: 86-13770901391 (Mr. Li)

Email: li_lei@ntu.edu.sg

Add: 24th Floor, Building 13, Tian'an Center, NO.31, Jihua East Road,
Guicheng Street, Nanhai District, Foshan, Guangdong Province, China