

Muscle Suits

Brand New Support Suits which assist person's Movements



Application example:
Support of Back + Elbow



Application example:
Support of Back + Elbow
+ Shoulder

Operating Principle: Rotate the Joints by transferring the Contraction Force of Pneumatic Artificial Muscle to the Joint Pulley through the Wire

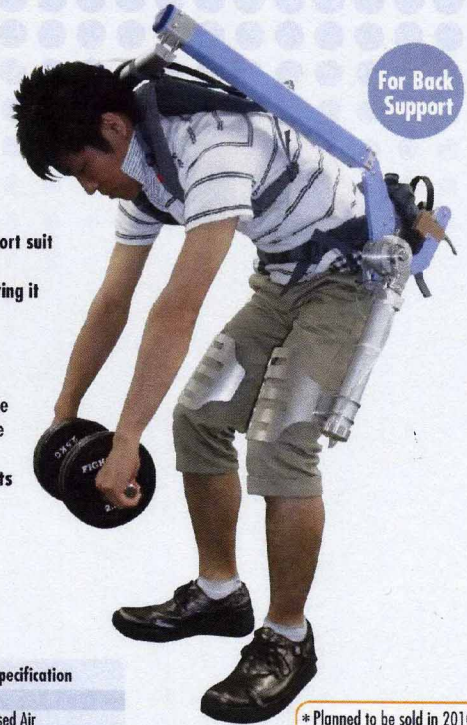


For
Arm & Back
Support

- Wearable Robot
- Light weight and low cost movement support suit (Arm/Back)
- Assist humane movement directly by wearing it



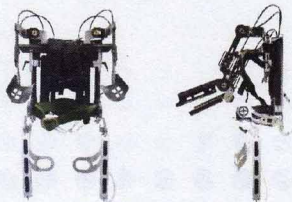
- Assist movements of older and physically handicapped persons who need nursing care
- Assist normal individual's pose and muscle especially for labor
- Possible to demonstrate various movements such as swings



For Back
Support

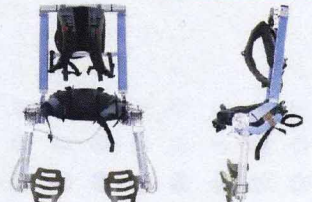
2009 Arm & Back Model Specification

Weight	7.5 Kg
Motivity	Compressed Air
DOF	Elbow 1 DOF Shoulder 4 DOF Back 1 DOF
Support Motion	Bending Elbow Inflection of Shoulder (To Front) Straighten Back
Support Torque	Elbow 45Nm Shoulder 45Nm Back 90Nm
Interface	Motion Playback by Switch



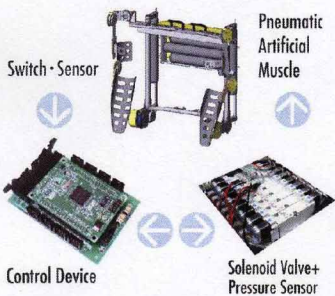
2009 Back Model Specification

Weight	3.5 Kg
Motivity	Compressed Air
DOF	Back 1 DOF
Support Motion	Straighten Back
Support Torque	Back 90 - 360Nm
Interface	Switch



*Planned to be sold in 2010
*Trial is welcome

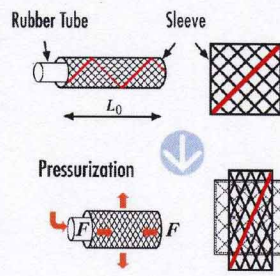
Muscle Suit



Compressor



Pneumatic Artificial Muscle



Flexible
Easy Structure
Lightweight: appx.300 g/m
Maximum Contraction Percentage appx. 30%
High Output: Maximum 150 kgf
Contraction Force
Possible to use in Water