Pneumatic Trainer Series

Individual Finger Stretching Trainer

(Professional Edition)

SKD

Design Principles

ZIGLITE® HEALTHCARE

氣泵控制
Air pump control

訓練終端
Training terminal

模 式
Mode

時 長
Time

力 度
Strength

週 期
Cycle

- Control the training terminal through an air pump for rehabilitation training exercises.

- The principle is that the main air pump connects the air pressure to the airbag of the training glove, and controls the pump to inflate and extract air to control the expansion and contraction of the airbag of the training terminal, thereby achieving finger movement back and forth.
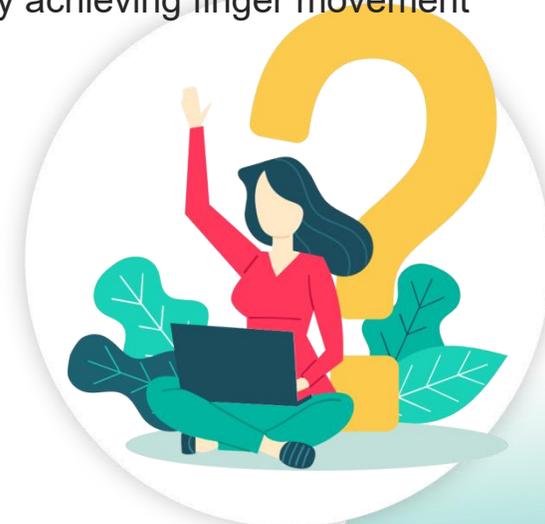
Product Features

ZIGLITE®
HEALTHCARE

空氣驅動

Air Powered

+

被動式
等長練習

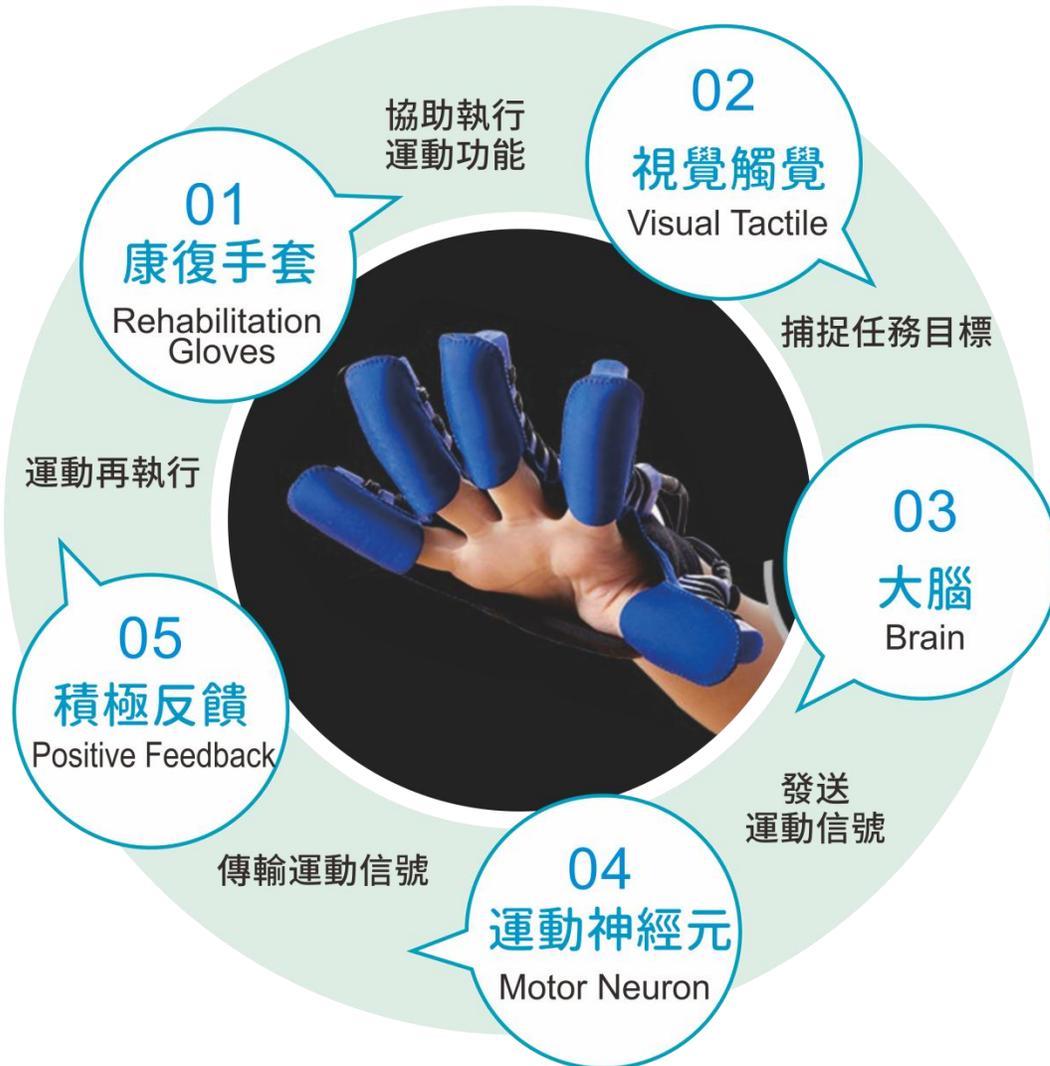Passive Isometric
Exercise

=

氣動式
康復訓練

Pneumatic
Training

- Using air pressure as the driving force, automatically driving fingers for passive training, easy to operate, and safe.

- The combination of passive training and master-slave mirror training aims to achieve the dual goals of finger function rehabilitation and brain function reconstruction.

- The duration of the stretching position can be adjusted, and the pressure can be adjusted to suit patients with different muscle tone.

- The equipment is easy to operate, and family members can assist from the side, saving medical costs.

Product Features

ZIGLITE®
HEALTHCARE

Diagram

- **01 康復手套** Rehabilitation Gloves — 協助執行運動功能
- **02 視覺觸覺** Visual Tactile — 捕捉任務目標
- **03 大腦** Brain — 發送運動信號
- **04 運動神經元** Motor Neuron — 傳輸運動信號
- **05 積極反饋** Positive Feedback — 運動再執行

Technology Driven

Mirror training & passive training to promote rehabilitation

| Cyclic Training | Mirror Training | Finger Selection |

Based on the principle of brain reconstruction, combine task oriented exercises with hand rehabilitation robot training.

Assist patients in collaborative and controlled motor function training.

Through repeated reinforcement training, it promotes the functional reconstruction of the central nervous system of the brain.

Product Features

ZIGLITE®
HEALTHCARE

Simulate Muscle Drive Mode

The driving module's degree of freedom of movement is consistent with the degree of freedom of hand joint movement, simulating the human body's kinematic mechanism to avoid secondary injury to patients.

Mirror Training Enhances Control

Mirror training can map the movement mode of the healthy hand to the affected hand, stimulating mirror neurons through mirror movement to promote the remodeling and recovery of brain and hand functions.

Cyclic Training Relieves Muscle Tension

The circular training mode adopts a fully automated design, which helps to promote the recovery of muscle strength in the affected hand, increase joint mobility, and promote active flexion and extension movements.

Home Training To Promote Hand Rehabilitation Process

Home training for patients can maintain the results of hand training in medical institutions, help patients maintain the rhythm of hand stretching training, and promote the process of hand rehabilitation.
Patients with mobility disorders or in remote areas can also receive hand training at home.

Application Scenarios

康復機構 /Rehabilitation Facility

養老機構/ Elderly Care Institution

居家訓練/ Train At Home

▲ Five Finger Training

▲ Mirror Training

▲ Single Finger Training

▲ Double Finger Training

▲ Counter Finger Training

Introduction To Our Products

ZIGLITE®
HEALTHCARE

Option Training | Cyclic Training | Mirror Training | Timing Control

- The fully automated passive training mode combined with mirror training helps to promote the recovery of muscle strength in the affected hand and promote the emergence of active flexion and extension movements.

- High definition LED digital tube, clear data display.

- All function keys are displayed with illustrations, making touch button operation easier and more convenient.

- Added a pressure display external control handle, which can clearly display the opening and contraction pressure status during training.

- With a running buzzer working sound prompt, keep track of the training situation at any time.

- The 'training strength' and 'training cycle' can be set to meet the needs of different patients.

Introduction To Our Products

ZIGLITE® HEALTHCARE

- Circular training and mirror training are optional
- Finger selection training
- 9-speed adjustable power
- Convenient touch button operation

Host 訓練器主機

- Mirror linkage training
- Moving the affected hand with the healthy hand
- Real time pressure sensing

Mirror Gloves
鏡像訓練手套

Training Gloves
聯驅多關節手套

- Principles of Human Kinematics
- Flexible flexion and extension
- Stretch/clench with a large tilt angle
- Enhance joint mobility and muscle strength recovery, promote active flexion and extension movements

Control Handle
外控手柄

- Clearly display the pressure status of opening and contracting during training
- Training pressure regulation

Introduction To Our Products

ZIGLITE®
HEALTHCARE

Digital Tube Display
Training intensity, opening and clenching time cycle displayed on digital tube.

Training Intensity Is Freely Adjustable
Intelligent touch buttons set training intensity, opening and clenching time cycle, adjustable in 9 gears.

Free Setting Of Training Time
The knob sets the training time, which is adjustable from 15 to 45 minutes, making it intuitive and convenient.

Finger Selection Training
Free to choose the fingers that require training.

Cyclic Training Mode Switching
Intelligent touch buttons, switch between finger by finger training mode and 5 finger training modes together.

Touch Button Control
The operation interface is simple and clear, making it easier to learn and operate. It is controlled by touch buttons and has stronger applicability.

Training Mode

Cyclic Training

Adopting fully automated design to promote the recovery of flexor and extensor muscle strength in affected fingers and increase joint mobility.
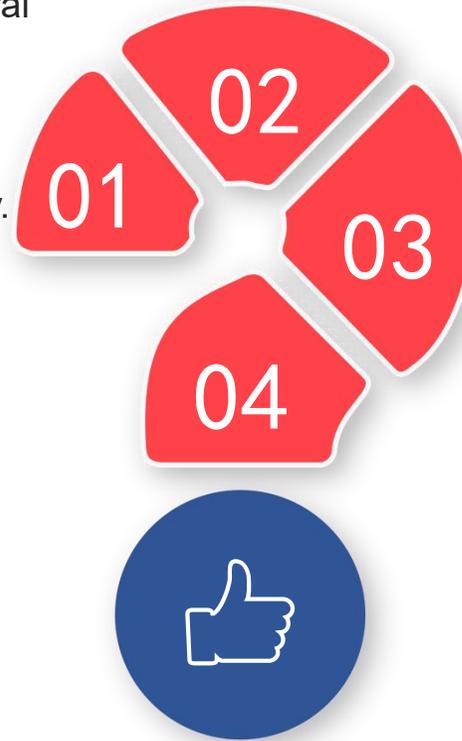
Mirror Training

健侧手 ➡ 患侧手

The healthy hand moves the affected hand, and visual stimulation activates mirror neurons, promoting the emergence of active motor function in the brain.

Applicable Population

ZIGLITE®
HEALTHCARE

Limb dysfunction caused by central nervous system injuries such as stroke, cerebral palsy, cerebral thrombosis, and spinal cord injury.

Patients with finger dysfunction who need rehabilitation from the stage of soft paralysis to the recovery stage.

01

02

03

04

Limb dysfunction caused by peripheral nerve injury such as orthopedic surgery and trauma.

People who need long-term hand training and are more convenient for family hand training.

Pneumatic Trainer Series

手指伸展訓練器（專業版）

Individual Finger Stretching Trainer
(Professional Edition)

SKD

設計原理
Design Principles

氣泵控制
Air pump control

訓練終端
Training terminal

模式
Mode

時長
Time

力度
Strength

週期
Cycle

- 通過氣泵控制訓練終端進行康復訓練運動。

- 其原理為：主機氣泵將氣壓連接到訓練手套的氣囊內，並控制氣泵打氣和抽氣工作來控制訓練終端的氣囊的擴張和收縮從而實現手指的來回運動。

產品特點
Product Features

空氣驅動

Air Powered

＋

被動式
等長練習

Passive Isometric
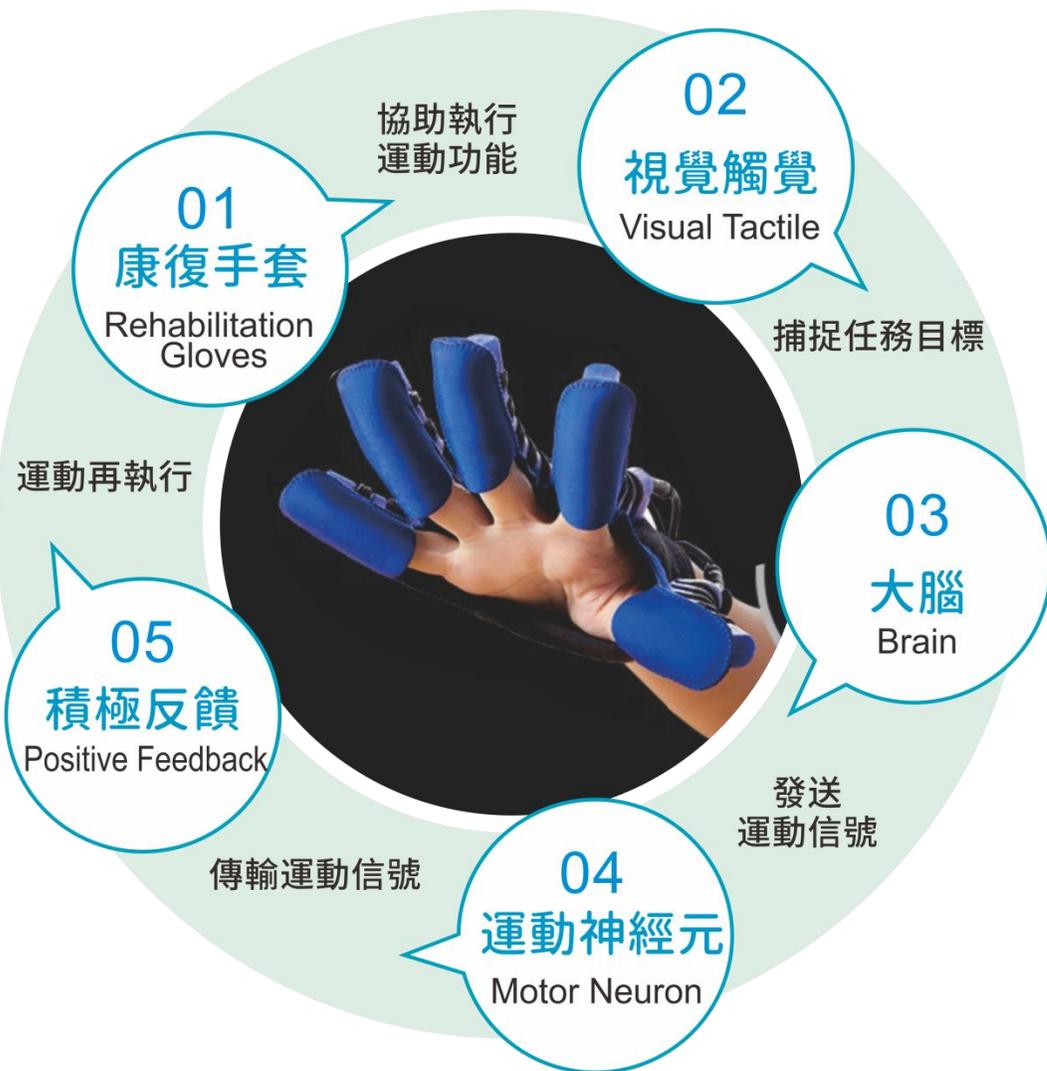Exercise

＝

氣動式
康復訓練

Pneumatic
Training

- 以空氣壓力作為動力，自動驅使手指被動訓練、操作簡單、安全。

- 被動訓練、主從式鏡像訓練結合，以達到手指功能康復和腦功能重建雙重目的。

- 伸展位持續時間可調，壓力可調，以適用不同肌張力患者。

- 可以促進上肢和手的功能, 強化患者的自信心, 輔助心裏治療。

- 設備設計精巧，可在床邊及任意空間使用。

- 設備操作簡便，家庭人員從旁協助即可，節省醫護成本。

產品特點
Product Features

ZIGLITE®
HEALTHCARE

01
康復手套
Rehabilitation Gloves

協助執行
運動功能

02
視覺觸覺
Visual Tactile

捕捉任務目標

運動再執行

03
大腦
Brain

05
積極反饋
Positive Feedback

發送
運動信號

傳輸運動信號

04
運動神經元
Motor Neuron

科技驅動

鏡像訓練與被動訓練相結合，促進康復

循環訓練　　鏡像訓練　　分指訓練

根據大腦重建原理，將任務導向練習和手部
康復機器人訓練結合，
幫助患者協同完成有控制性的運動功能訓練，
通過重複的強化訓練，從而促進大腦中樞神
經系統的功能重建。

產品特點
Product Features

模擬肌肉驅動方式

驅動模塊活動自由度與手關節運動自由度壹致，模擬人體運動學機理，避免對患者造成二次傷害。

鏡像訓練增強控制力

鏡像訓練可將健側手動作模式映射到患側手，通過鏡像運動刺激鏡像神經元，以促進腦功能及手功能的重塑及恢復。

循環訓練緩解肌張力

循環訓練模式采用全自動化設計，有助於促進患手肌力恢復，關節活動度增加，促使主動屈伸運動出現。

居家訓練，促進手康復進程

患者居家訓練，可保持醫療機構手部訓練成果，幫助患者維持手部伸展訓練節奏，並能促進手康復進程。

行動障礙患者或偏遠地區患者，也可居家進行手部訓練。

ZIGLITE
HEALTHCARE

應用場景
Application Scenarios

康復機構 /Rehabilitation Facility

養老機構/ Elderly Care Institution

居家訓練/ Train At Home

▲ 五指訓練

▲ 鏡像訓練

▲ 單指訓練

▲ 雙指訓練

▲ 對指訓練

ZIGLITE®
HEALTHCARE

選項訓練 | 循環訓練 | 鏡像訓練 | 定時控制

- 全自動化被動訓練模式+鏡像訓練，有助於促進患手肌力恢復，促使主動屈伸運動出現。

- 高清LED數碼管，數據顯示清晰。

- 所有功能鍵均有圖示顯示，觸摸按鍵操作更輕鬆便捷。

- 增加了壓力顯示外控手柄，可以清晰顯示訓練中的張開及收縮的壓力狀況。

- 帶運行蜂鳴器工作音提示，隨時掌握訓練情況。

- "訓練力量"及"訓練週期"可設定，滿足不同患者的需求。

產品介紹
Introduction to our products

ZIGLITE ® HEALTHCARE

- 循環訓練、鏡像訓練可選
- 手指選擇訓練
- 9檔力量可調
- 便捷觸摸按鍵操作

訓練器主機 Host

- 鏡像聯動訓練
- 健側手帶動患側手
- 實時壓力傳感

鏡像訓練手套
Mirror Gloves

聯驅多關節手套
Training Gloves

- 人體運動學原理
- 柔性屈伸
- 拉伸/握拳仰角度大
- 增強關節活動度及肌力恢復，促使主動屈伸運動出現

外控手柄
External Control Handle

- 清晰顯示訓練中的張開及收縮的壓力狀況
- 訓練壓力調節

ZIGLITE®
HEALTHCARE

數碼管顯示
訓練力度，張開、握拳時間週期數碼管顯示

訓練力度自由可調
智能觸摸按鍵設定訓練力度，張開、握拳時間週期，9檔可調。

訓練時間自由設置
旋鈕設置訓練時間，15~45分鐘可調，直觀方便。

手指選擇訓練
自由選擇需要鍛鍊的手指進行訓練。

循環訓練模式切換
智能觸摸按鍵，逐個手指訓練模式和5個手指一起訓練模式進行切換。

觸摸按鍵控制
操作介面簡單明白，更易學易操作，觸摸按鍵控制，適用性更強。

訓練模式
Training Mode

ZIGLITE® HEALTHCARE

循環訓練

採用全自動化設計，促進患手指屈伸

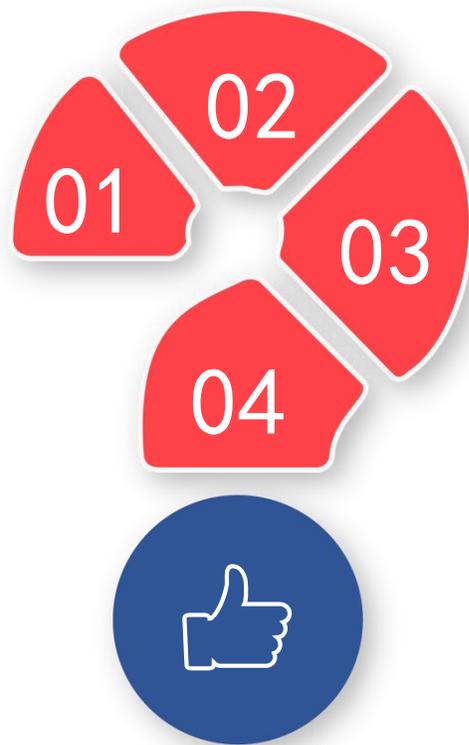肌力恢復，關節活動度新增

鏡像訓練

健側手帶動患側手，視覺刺激啟動鏡像

神經元，促發腦部主動

運動功能的出現

健側手 ➡ 患側手

適用人群
Applicable Population

ZIGLITE ®
HEALTHCARE

◆ 腦卒中、腦癱、腦血栓、脊髓損傷等中樞神經系統損傷引起的肢體功能障礙。

◆ 骨科手術、外傷等外周神經損傷引起的肢體功能障礙。

01
02
03
04

◆ 手指功能障礙從軟癱期至恢復期的康復需求的患者。

◆ 需要長期手部鍛鍊，以及更方便家庭手部訓練的人群。

THANKS