

# 腿衛士套具 Leg Guarder Kit

## 同時解決慢性靜脈功能不全和膝關節痛問題的壓力襪及護膝 Compression Hosiery and Knee Brace for Chronic Venous Insufficiency (CVI) and Knee Pain

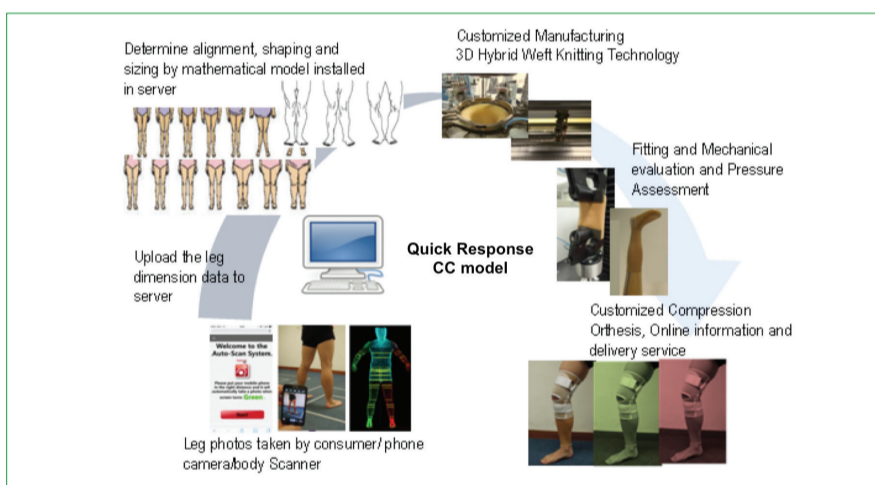
專利申請編號及國家: 201630054799.2(中國)

部分年長人士同時受到慢性靜脈功能不全和膝關節痛的困擾，這種情況越來越普遍，但目前市面上並未有同時針對上述兩種情況的解決方案。理大利用先進3D混合緯編技術和快速反應生產流程，研發出一套名為「腿衛士套具」的壓力矯形器。此項新發明能夠利用高效的雙向軸向拉伸彈性和精確的遞減梯度壓力，改善腿部血液循環和穿著舒適感，協調膝關節的受控活動，以解決慢性靜脈功能不全及膝關節痛等問題。



腿衛士套具  
The functions of Leg Guarder Kit

腿衛士套具多面視圖  
Different views of the Leg Guarder Kit



從人體測量到製造的一站式客制化過程  
One-Stop Customized Anthropometry to Customized Product manufacturing process

### 特色與優點

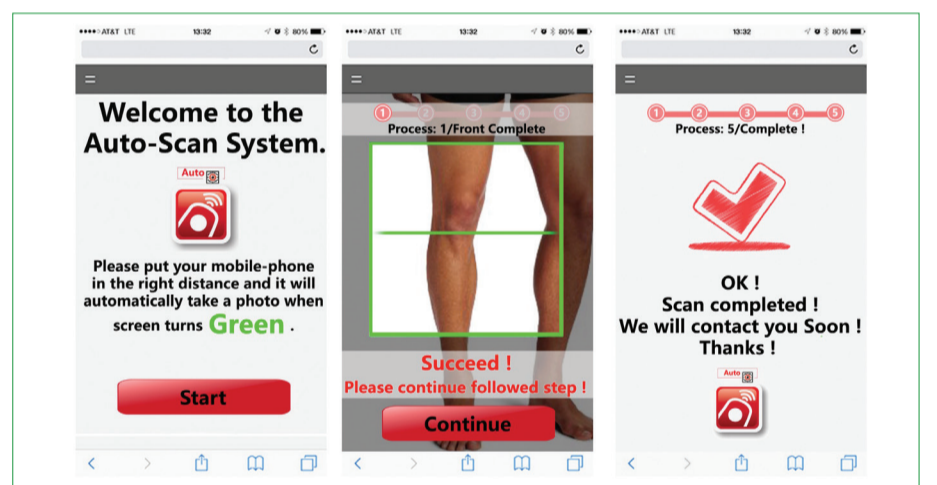
- 通過梯度壓力和支持套具同時提供給腿部壓力治療和穩定膝關節，以同時改善下肢血循環，預防和緩解膝關節痛
- 提供不同梯度的壓力 (15-40mmHg)
- 無縫一體成型針織結構賦予舒適無痕的穿著感受
- 快速及一站式的製作過程，從用家身體測量至製造的服務模式

### 應用

- 下肢血循環不暢的人士（如靜脈曲張，腫脹，疼痛，沉重等）
- 由不同原因（如骨關節炎，運動損傷，韌帶損傷等）所造成的膝關節痛

### 獎項

- 第44屆瑞士日內瓦國際發明展 - 銅獎 (2016年4月)



消費者數位化體型掃描 及資料登錄線上系統  
Customer's Digital Body Scanner and Data Input Online System

Patent Application No.: 201630054799.2(PRC)

### Special Features and Advantages

- Provide gradient compression to the leg and controlled mobility of knee joint to improve blood circulation and prevent or reduce knee pain
- Provide a wide range (15-40mmHg) of compression with controlled gradient to the leg
- Seamless one-piece knitted design offers perfect fit and comfort
- Quick-response manufacturing process is achieved by a one-stop CC model (production of Customized compression orthosis based on the Customized anthropometry) to ensure dimensional fitting and wearing comfort

### Applications

- People with CVI in the lower limbs (e.g. varicose veins, swelling, achy, heavy, etc.)
- People who suffer from knee pain resulting from knee osteoarthritis, sports injuries, anterior cruciate ligament (ACL) injuries, etc.

### Award

- Bronze Medal – 44th International Exhibition of Inventions of Geneva, Switzerland (April 2016)

It is very common for aging people to suffer from Chronic Venous Insufficiency (CVI) and knee osteoarthritis simultaneously. However, no single solution available on the market can address both problems at the same time. Employing the advanced 3D hybrid weft knitting technology and a quick-response manufacturing process, PolyU has created a novel compression orthosis (Leg Guarder Kit) to treat and prevent both conditions. By delivering bi-axial elastic tension and precise degressive gradient compression, the orthosis can improve blood circulation in the leg and support the controlled mobilization of knee joints. It can also be tailored for patients to ensure maximum comfort and allow flexible knee movement.

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