

Fabric Touch Tester (FTT)

織物觸感測試儀

The hand feel of a piece of fabric is an important issue when consumption decisions are made. On the basis of a complete neuro-physiological mechanism and clear physical interpretation, this project has developed a novel measurement method on fabric hand feel and instrument for the textiles industry. The fabric touch tester is able to measure multiple physical properties of fabric specimens including thermal transmission, bending, compression and surface friction aspects in both warp and weft directions in one single trial. Software with integrated prediction models is also designed to calculate touch feeling scores for fabrics. Industry can make use of these deliverables to develop a set of guidelines or product standards in term of touch feelings for specified products.

觸感在消費者做出購買決定時起可起關鍵作用。本項目在完整的觸感神經生理機制及清晰的物理測量演繹的基礎上，開發出一款新型的紡織品觸感測試方法及相關儀器——織物觸感測試儀。這台測試儀可以對織物的多種物理指標同時進行經緯方向的測量，這些指標包括有熱傳遞性能、彎曲特性、壓縮特性及表面磨擦特性。此外，本儀器內置一款含有紡織品觸感預測模型的分析軟件。業界可以運用這些研發成果為單一類型產品制定相關的觸感指引或產品標準。



Application 應用

- Development of new fabrics.
- Fabric evaluation and selection of designing apparel and textiles products.
- Quality control in fabric and garment manufacturing, merchandising and trading.
- Certification of fabric touch comfort performance for apparel and textile products.
- 研發新型布料。
- 設計服裝紡織產品時測試選擇布料原料。
- 在面料及服裝生產過程、採購及貿易時的質量控制。
- 服裝及紡織產品的布料觸感舒適度進行認證。

Industry Benefits 業界效益

- Physical testing is able to be based on the neuro-physiological stimulus mechanism of fabric touch feeling.
- The instrument with a unique design and motor principle is able to make measurements of bi-direction testing at the same time.
- Dynamic thermal properties testing by the instrument can bridge the current gap of the machines in the market and ensure comprehensive evaluation of fabrics.
- Testing duration is short and the programme interface is user-friendly.
- A single machine can be used to test the thermal, compression, bending, and surface properties of fabrics.
- 物理測試性能以神經生理學的觸感刺激原理為基礎。
- 基於其獨特的設計及運動原理，一次測試便能同時對布料的經緯雙方向進行評估。
- 採用織物動態熱性能的測量，填補了目前市場產品的不足，確保可以對織物觸感作出全面的評價。
- 測量時間快捷，系統介面簡易。
- 可以同時測量織物的熱性能、壓縮性能、彎曲性能及表面特性。

Technological Breakthrough 技術突破

A widely accepted rating system developed by the tester can provide scientific measurements which helps eliminate disagreement of subjective argument on fabric touch feelings. It will contribute to the development of a mature industry with objective measurements.

織物觸感測試儀可以開發出一套客觀的產品觸感評價標準，若廣為接受，可減少主觀評價的爭議，有助推動市場發展一套成熟客觀的觸感測量標準。

Licensing Details 獲取專利

A non-exclusive license of manufacturing Fabric Touch Tester for fast measurement of fabric touch properties such as surface friction properties, dynamic heat conductivity properties and dynamic bending properties of soft materials.

非獨家專利授權許可成為織物觸感測試儀的生產商，生產可快速量度織物觸感特性的測試儀器，這些特性包括柔性材料的表面摩擦力、壓縮動態熱傳遞特性及雙向彎曲特性。

Funding
Organisation
撥款機構



Research
Institution
科研機構



The Hong Kong Research Institute of Textiles and Apparel 香港紡織及成衣研發中心

R906, Shirley Chan Building, The Hong Kong Polytechnic University, Kowloon, Hong Kong 香港九龍香港理工大學陳鮑雪瑩樓R906室
T (852) 2627 0180 F (852) 2364 2727 E info@hkrita.com www.hkrita.com