



產線快速精準量測利器

提升產製效能、生產即品保、顧客滿意

TIMI

遠心影像量測儀

TELECENTRIC IMAGE MEASUREMENT INSTRUMENT

TIMI量測視野範圍大，而且量測精度達微米級。

Large field-of-view measurement with micron-level precision.

360° 全周旋轉量測，直立工件可免夾持。

Measure upright object in a 360° rotation without tool clamping.

操作介面人性化，即框即量，輕鬆上手。

User-friendly interface and area-selection measuring method makes measurement easy to get started.

量測腳本可編輯，一個按鍵自動量測全尺寸。

Configure a measurement script and press a button to measure full size of the part.

即時制程監控，量測資料快、密、準。

Real-time monitor in-process QC with fast, dense and accurate measurement.



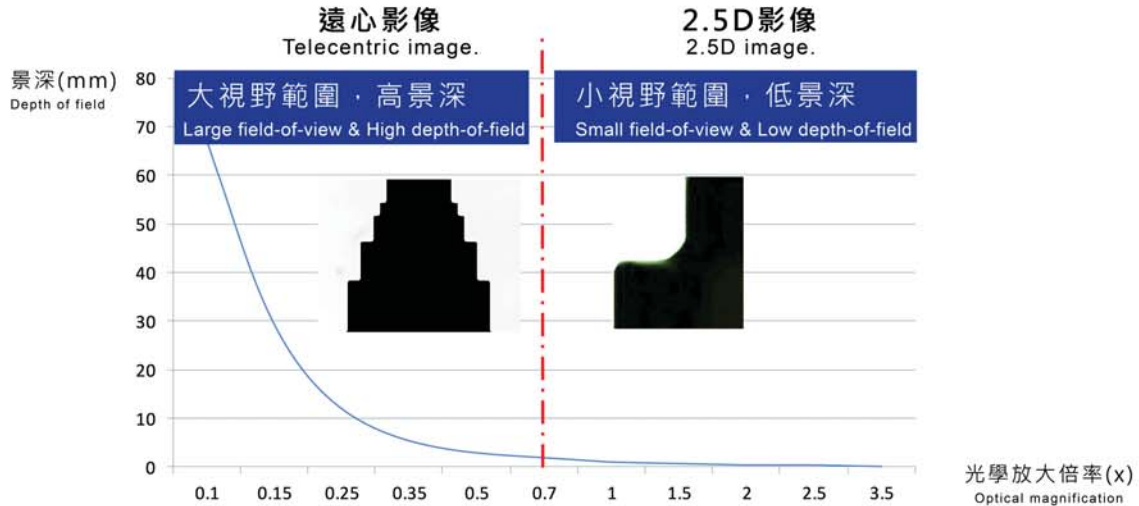
TIMI精密快速之輪廓 R角量測

FAST & PRECISE CONTOUR MEASUREMENT SOLUTION FOR ARC RADIUS.



高景深「遠心影像」清晰不失真，最小可量測到R0.1mm

High-quality telecentric image provides high depth-of-field, enabling the minimum measuring arc radius up to R0.1mm.



- ◆ 較低光學放大倍率的雙遠心光學鏡頭，有較大的量測範圍與深度，及微米級的量測精度
A lower optical magnification bi-telecentric lens gets larger measuring field and depth and to achieve micron-level precision.



多元R角量測功能，「即框即量」快、密、準

Multiple measuring functions for arc radius provide high precision and high efficiency by using the method of “Instant Select-Measure”.

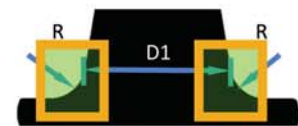


同時量測三個方向的球徑
Measure the ball diameter in three directions simultaneously.

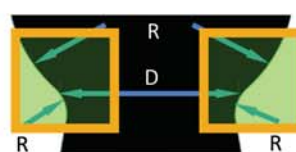
Ø10mm量測全距範圍在5µm以內
The range of measuring Ø10mm is within 5µm.



單獨量測一個R角
Measure only one arc.



同時量測一直線連接一個R角與其一個轉折點
Measure one arc coupled with one tangent line, and deliver the arc radius and its conjunction point.



同時量測兩個R角與其一個轉折點
Measure two consecutive arcs, and deliver two arc radii and the conjunction point.

R1.2量測全距範圍在10µm以內
The range of measuring R1.2 is within 10µm.



同時量測兩直線之間R角與其兩個轉折點
Measure one arc coupled with two tangent lines on both sides, and deliver the arc radius and two conjunction points.

R2.0量測全距範圍在20µm以內
The range of measuring R2.0 is within 20µm.

TIMI之自動旋轉量測

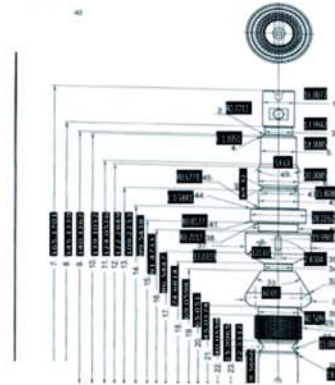
Automatic Rotational Measurement



軸件製程量測

In-Process Inspection for Shaft Parts

Turning 車削 → Punching 沖壓 → Cooling 退火 → Refining 精修

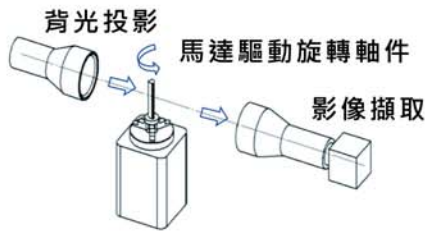


- ◆ 一次旋轉同時量測最大/最小外徑、真圓度、同心度
Measuring max./min.diameter, roundness and concentricity simultaneously at one rotation.
- ◆ 每十秒完成一個行程十個以上的尺寸量測
Measuring at least 10 sizes per stroke within 10 seconds.

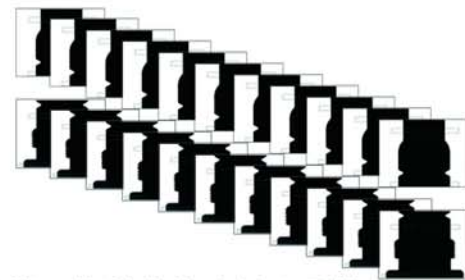


免對正軸心量測真圓度和同心度

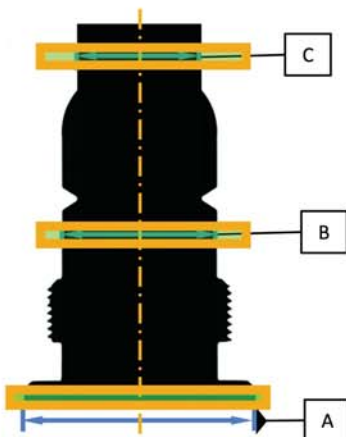
Measuring Roundness and Concentricity without Centering



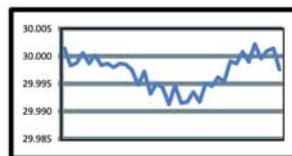
遠心光學之影像量測系統
Telecentric optics based image measurement system



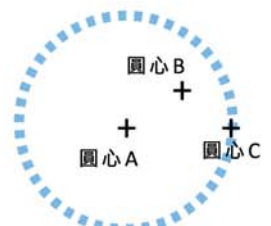
連續擷取旋轉軸件之遠心影像
Continuously capture the telecentric images of the rotating shaft



軸件之遠心影像及A,B,C量測位置
Telecentric image of the shaft and the measuring position A, B, C



A真圓度之直徑分佈趨勢圖
Trend of diameter distribution indicates the roundness of position A



A,B,C 同心度之圓偏心位置圖
Eccentricity position map indicates the concentricity of position A,B & C

一鍵式自動量測全尺寸

A Button to Measure Full Sizes



標準螺絲頭型量測腳本

Measurement Script for Standard Screw Head

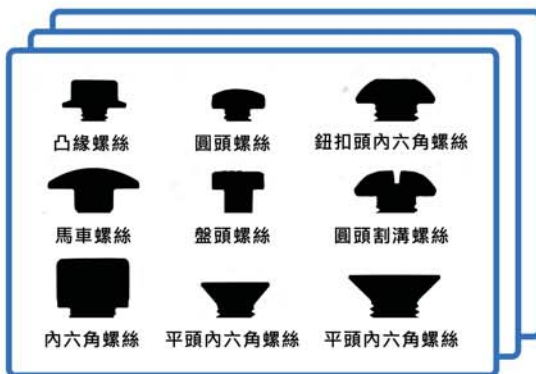
選取量測腳本
Select Measurement Script

執行
Execution

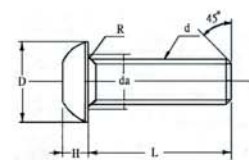
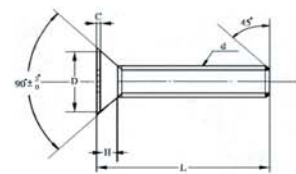
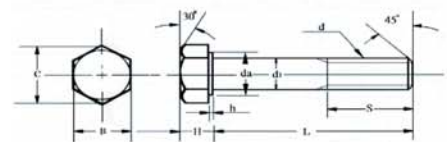
輸出量測資料
Output Measuring Data



六角頭螺絲
Hex head screw



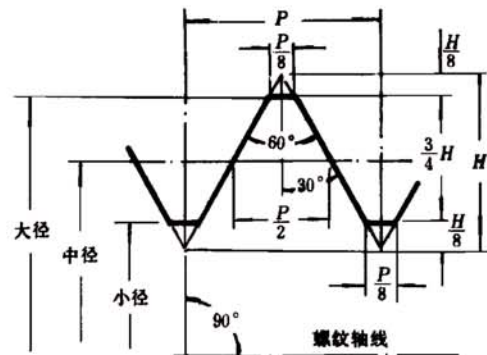
標準螺絲頭型之量測腳本資料庫
Measurement Script Data Base
of Standard Screw Head



標準螺絲量測尺寸
Measuring Dimensions
of Standard Screw



即框即量機械螺紋尺寸
Instantly Select-Measure
Mechanical Thread



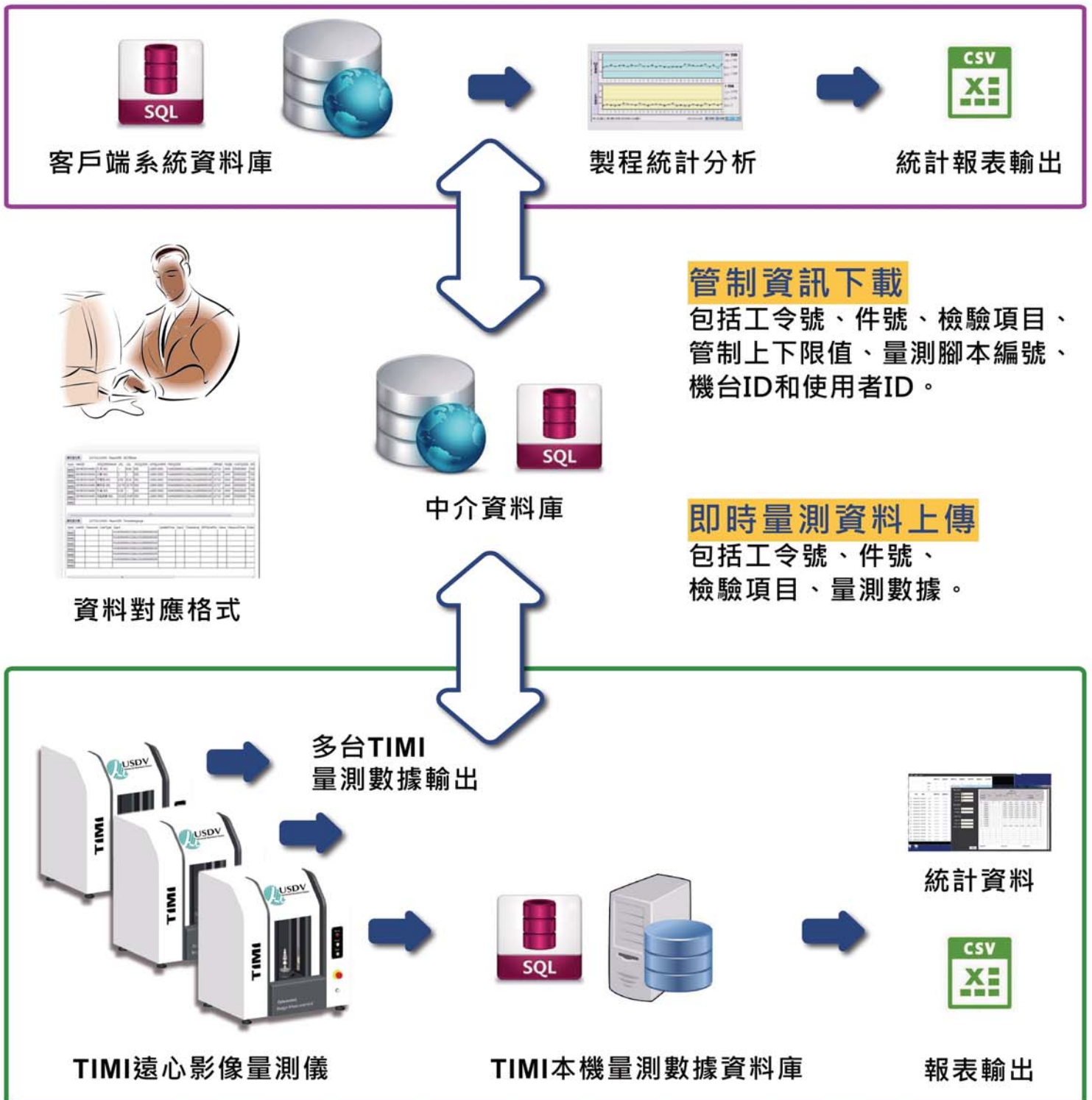
機械螺絲量測尺寸
Measuring Dimensions
of Mechanical Thread

- ◆ 瞬秒自動量測機械螺紋六個尺寸，包括牙外徑、牙底徑、有效徑、節距、牙角和螺旋角
Instantly measure the six dimensions of mechanical thread, including O.D., I.D., P.D., Pitch, Thread Angle and Helix Angle.
- ◆ 可整合個別頭型和螺紋之量測腳本，調整長度設定即可重複量測長度不同之同類型螺絲的全尺寸
Easily integrate the head and thread measurement scripts into one. Comfortably create a new script by adjusting the length setting for the same type but different length screw.

TIMI 打造智能量測方案

實現即製即量品質大未來

在產線導入TIMI遠心影像量測儀，建置量測數據資料庫，量測資料匯流公司品保系統，提供即時品質監控與分析回饋，以達到提升品質及降低廢品之效益。



量測功能(Measurement Function)

元素建立 Element	 、  、  、  、  、   、  、  、  、  、  、 
角度量測 Angle	 、  、  、 
距離量測 Distance	 、  、  、  、  、 
圓弧量測 Arc & Circle	 、  、  、  、  、 
寬度量測 Width	 、  、  、 
幾何量測 Geometry	 、  、  、  、 
旋轉量測 Rotation	 、  、  、  、 
螺牙量測 Screw	 (外徑O.D.、底徑I.D.、有效徑P.D.、節距Pitch、牙角Thread angle、螺旋角Helix angle)

產品規格(Product Specification)

型號 Model	TIMI 16		TIMI 34		TIMI 76	
	桌上型 Desktop	立櫃型 Stand-up cabinet	桌上型 Desktop	立櫃型 Stand-up cabinet	桌上型 Desktop	立櫃型 Stand-up cabinet
視野範圍 Field of view	16mm(X)	16mm(X)	34mm(X)	34mm(X)	76mm(X)	
掃描範圍 Scanning range	200mm(Z) 360° (R)	300mm(Z) 360° (R)	200mm(Z) 360° (R)	300mm(Z) 360° (R)	64mm(Z) 360° (R)	訂製規格 Custom specifications
量測解析度 Image resolution	0.007mm(X,Z),0.018° (R)		0.014mm(X,Z),0.018° (R)		0.03mm(X,Z),0.018° (R)	
重複精度 Repeation accuracy	±0.3µm		±0.5µm		±1µm	
量測精度 Precision	±2µm		±3µm		±6µm	
外觀尺寸 Size	750mm (W) 600mm (D) 800mm (H)	860mm (W) 680mm (D) 1825mm (H)	750mm (W) 600mm (D) 800mm (H)	860mm (W) 680mm (D) 1825mm (H)	訂製規格 Custom specifications	
重量 Weight	110Kg	230Kg	110Kg	230Kg		
使用電源 Power	單相 110V, 10A Single-phase 110V,10A					

※量測精度計算以原廠標準規量測值±2σ為準。 Precision is estimated as ±2σ by measuring original standard gauge.



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