



ISO / IEC 17025



DIN EN ISO 9001

校驗標準規
CHECKMASTER GAUGE

台灣黑馬牌
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The
United
States
of
America

The Director of the United States
Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this 美國發明專利
United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the maintenance fees as provided

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.

多功能長度校正器

MULTI-FUNCTIONAL LENGTH CALIBRATOR



www.metrology.com.tw

Attest

BUNDESREPUBLIK DEUTSCHLAND

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URKUNDE

über die Eintragung des
Gebrauchsmusters

Nr. 296 22 530.4



ISO / IEC 17025



DIN EN ISO 9001

德國專利

GERMANY PATENT

平台覆檢校正器

SURFACE PLATE REPEAT CHECKING CALIBRATOR

Bezeichnung:
Längenkorrekturvorrichtung

Gebrauchsmusterinhaber:
Tzeng, Lee-Ching, Kaohsiung, TW

Tag der Anmeldung: 30.12.1996

Tag der Eintragung: 13.03.1997



電子式量規校正器

ELECTRONIC DIAL & GAUGE CALIBRATOR



Der Präsident des Deutschen Patentamts

Dipl.-Ing. N. Haugg

www.metrology.com.tw

校正器類

中華民國專利證書 CALIBRATORS 中華民國專利證書

發明第091006四號

發明名稱：電子式量規校正器
ELECTRONIC DIAL & GAUGE CALIBRATOR

專利權人：精石企業有限公司

發明人：曾禮清

專利權期間：自中華民國八十六年十月
至一〇六年一月五日止

上開發明業經專利權人依專利法之規定取得專利權

經濟部智慧財產局
局長 陳明邦



台灣黑馬牌
METROLOGY®

中華民國八十七年二月九日



新型第一五〇二一號

發明名稱：平台覆檢校正器
SURFACE PLATE REPEAT CHECKING CALIBRATOR

專利權人：精石企業有限公司

發明人：曾禮清

專利權期間：自中華民國八十八年八月
至九十八年八月十日止

上開發明業經專利權人依專利法之規定取得專利權

經濟部智慧財產局
局長 陳明邦



台灣黑馬牌
METROLOGY®

中華民國八十八年十二月二十九日



TAIWAN PATENT

中華民國專利證書

發明第0918八號

發明名稱：多功能長度校正器
MULTI-FUNCTIONAL LENGTH CALIBRATOR

專利權人：精石企業有限公司

發明人：曾禮清

專利權期間：自中華民國八十七年十一月
至一〇五年七月二十九日止

上開發明業經專利權人依專利法之規定取得專利權

經濟部智慧財產局
局長 陳明邦



台灣黑馬牌
METROLOGY®

中華民國八十七年十一月二十九日



中華民國專利證書

新型第一五〇五〇一號

發明名稱：校驗標準規
CHECKMASTER GAUGE

專利權人：精石企業有限公司

發明人：曾禮清

專利權期間：自中華民國八十八年八月
至九十九年十二月三十日止

上開發明業經專利權人依專利法之規定取得專利權

經濟部智慧財產局
局長 陳明邦



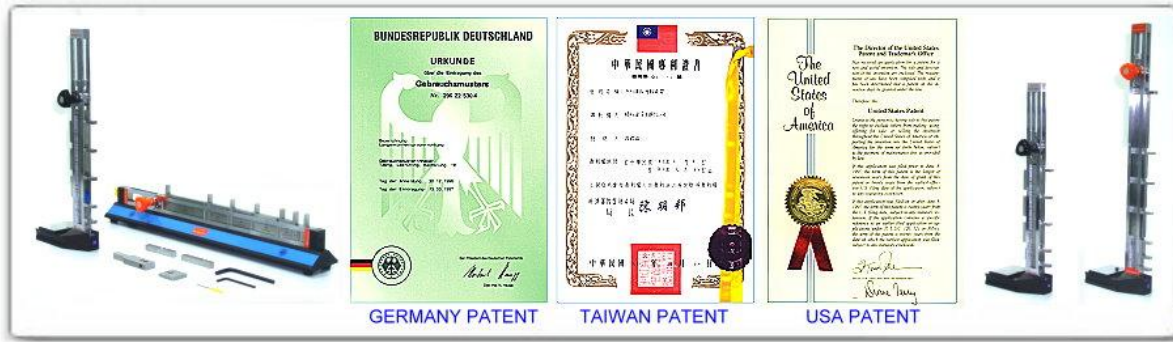
台灣黑馬牌
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中華民國八十八年十二月二十九日



台灣黑馬牌 量儀專家 METROLOGY®

◇ 多功能長度校正器 Multi-functional Length Calibrator



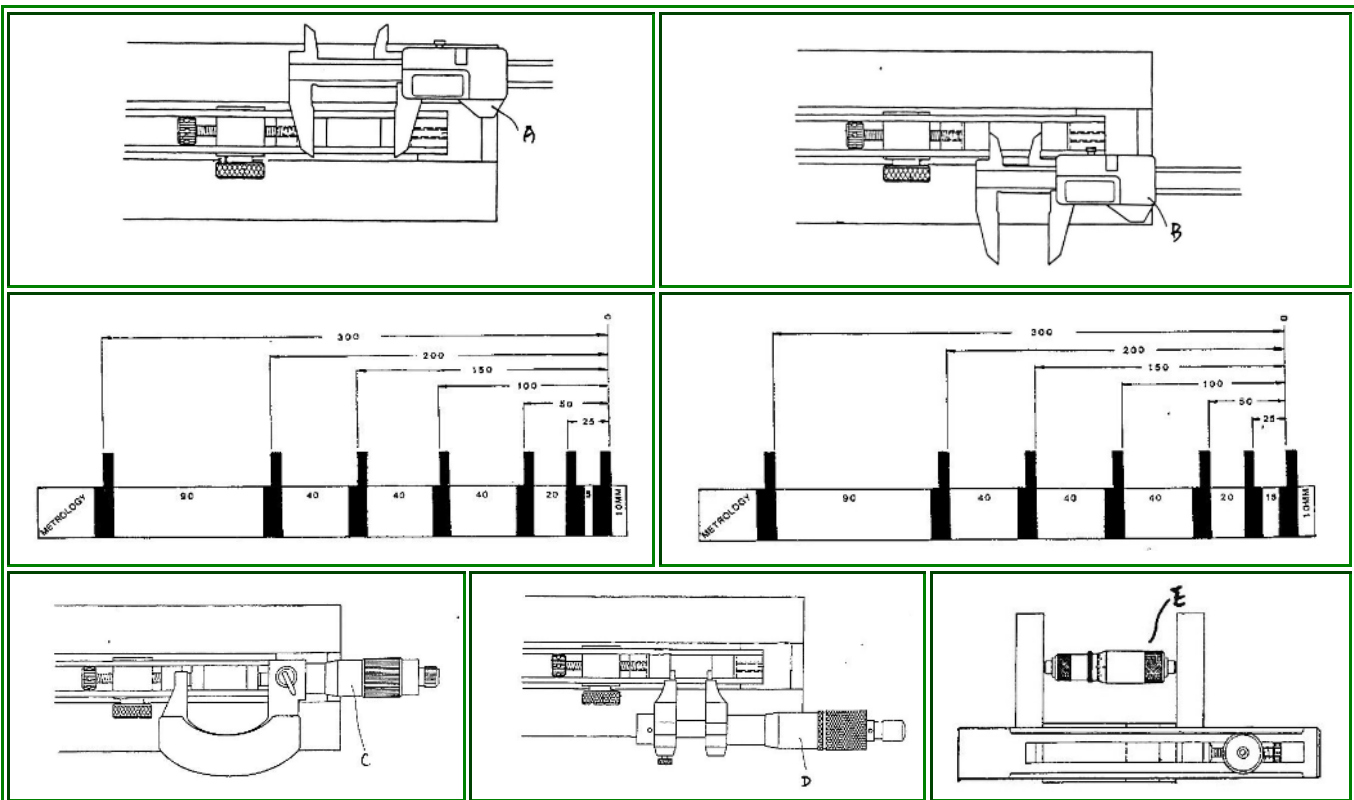
校正功能: 各種類型卡尺、測微器、高度計、量表類、測缸規、其它量測應用。

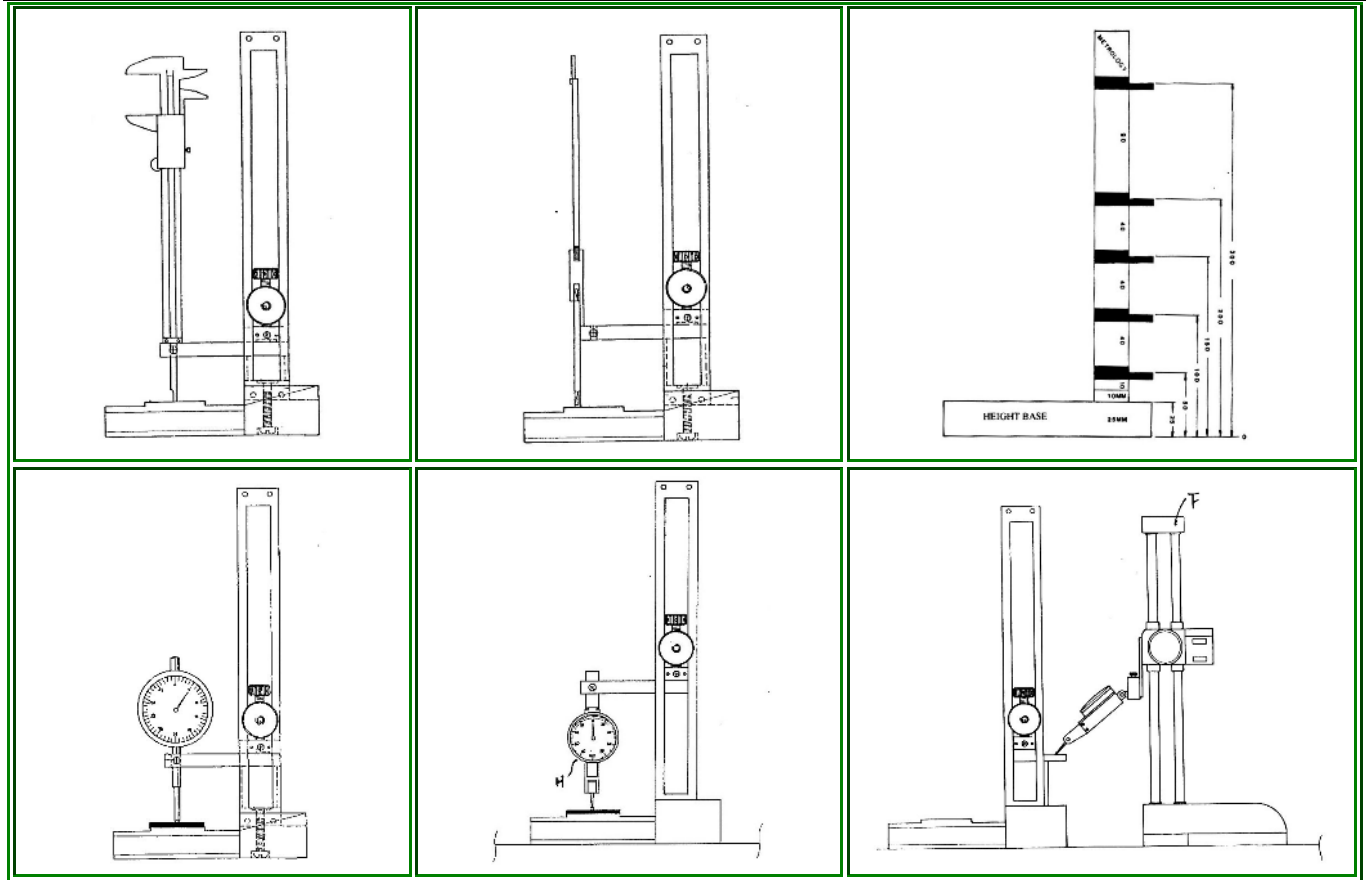
Calibration Function: All kind of caliper, micrometer, height gauge, dial indicator, bore gauge, and other measuring application.

型號 Model No.	校正範圍 Calibration Range	最大誤差 Max Error	價格 Price (NT\$)	備註 Remark
LEN-9001	200mm	0.003mm	100,000	材質: 硬鋼 Material: Hard Steel 精度 Accuracy: ±0.001mm(所有零組件 All of Equipment)
LEN-9002	300mm	0.004mm	110,000	
LEN-9003	600mm	0.006mm	130,000	
LEN-9004	1000mm	0.010mm	190,000	

標準配備(整組): 整組均含木盒包裝、操作說明書、品質保證書、符合 ISO-9001 量測追溯 ISO/IEC 17025 認可校正實驗室(JCC)出具之合格校正報告。

Standard Accessories (Sets): It includes wooden case, operational manual, quality warranty, JCC calibration report to comply with ISO-9001 measuring traceability & ISO/IEC 17025 Accreditation





標準附件(可單買) Standard Accessories(Individual Optional)

型號 Model No.	品名 Name	價格 Price (NT\$)	備註 Remark
LEN-GH1		24,000	基準塊 Master Block: 15mm/範圍 Range: 200mm
LEN-GH2	塊規夾持標準器	27,000	基準塊 Master Block: 15mm/範圍 Range R: 300mm
LEN-GH3	Gauge Block Hold Standard	36,000	基準塊 Master Block: 15mm/範圍 Range: 600mm
LEN-GH4		48,000	基準塊 Master Block: 15mm/範圍 Range: 1000mm
LEN-SB1		15,000	長度 Length: 300mm
LEN-SB2	標準器固定座	18,000	長度 Length: 400mm
LEN-SB3	Standard Hold Base	24,000	長度 Length: 700mm
LEN-SB4		30,000	長度 Length: 1100mm
LEN-HB1		27,000	
LEN-HB2	高度基座	27,000	基準高度 Master Height: 25mm
LEN-HB3	Height Base	36,000	
LEN-HB4		42,000	
LEN-TJ1			2 段尺寸 2Setp Size: 5/10mm x 6pcs/set
LEN-TJ2	雙向量測爪	3,000/pc	2 段尺寸 2Setp Size: 5/10mm x 7pcs/set
LEN-TJ3	Two-way Measuring Jaw		2 段尺寸 2Setp Size: 5/10mm x 10pcs/set
LEN-TJ4			2 段尺寸 2Setp Size: 5/10mm x 14pcs/set
LEN-MJ	複用量測爪	5,400	厚度 Thickness: 10mm 孔徑 ϕ : 8mm
	Multi-use Measuring Jaw		

選購附件 Optional Accessories

型號 Model No.	品名 Name	價格 Price (NT\$)	備註 Remark
LEN-PJ	平行量測爪	4,800 (2 pcs/pair)	厚度 T: 10mm 長度 L: 60mm 接桿內徑測微器校正和界限量測用 For Inside Micrometer Calibration and Limit Measuring Use
LEN-SG	設定規 Setting Gauge	3,600	卡尺深度、段差校正支撐用 For Caliper Depth and Step Calibration Support Use
LEN-GB1	塊規 Gauge Block	6,800 (set)	5, 10, 20, 40mm*3pcs
LEN-GB2	等級(Grade): 德國 DIN	8,800 (set)	5, 10, 20, 40*3pcs, 90mm*1pcs
LEN-GB3	876/1 級	14,800 (set)	5, 10, 20, 40*3pcs, 90mm*4pcs
LEN-GB4		22,800 (set)	5, 10, 20, 40*3pcs, 90mm*8pcs

◇ 校驗標準規 Checkmaster Gauge



校正功能: 各種類型卡尺、測微器、高度計、機械床台位移線性精度檢驗。

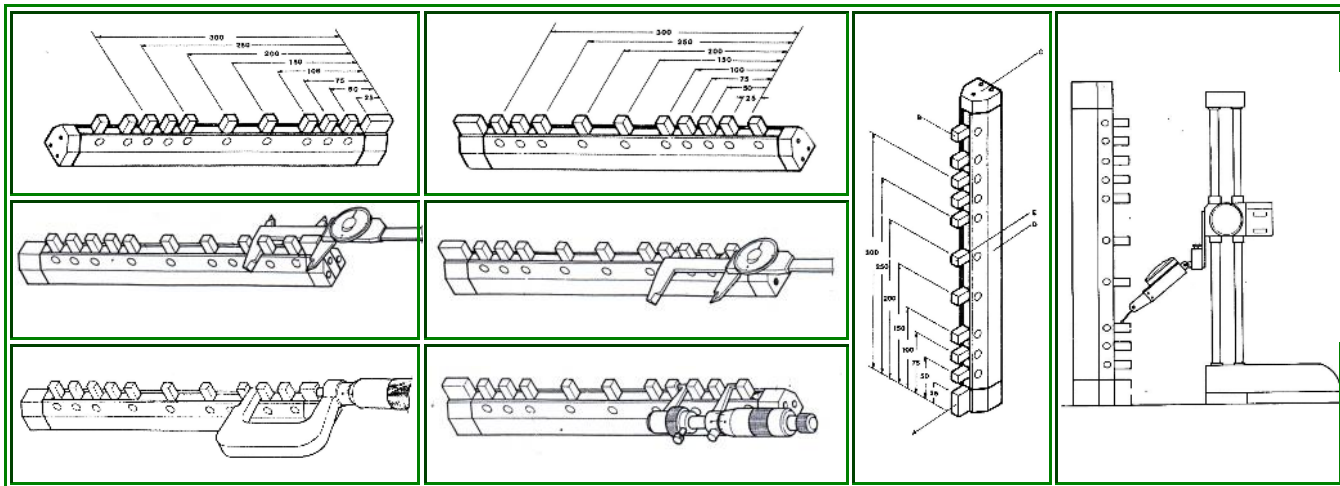
Calibration Function: All kind of caliper, micrometer, height gauge, machine or instrument linear accuracy calibration.

型號 Model No.	校正範圍 Calibration Range	校正點 Calibration Point	精度 Accuracy	價格 Price (NT\$)
CHE-9001 CHE-9003	300mm 600mm	25 50 75 100 150 200 250 300mm 25 50 100 150 200 300 400 500 600mm (for instrument accuracy calibration)	$\pm 0.005\text{mm}$ $\pm 0.007\text{mm}$	100,000 160,000
CHE- 9001H CHE- 9002H CHE- 9003H CHE- 9004H	300mm 450mm 600mm 1000mm	10mm/Step 10mm/Step 10mm/Step 10mm/Step (for machine & instrument linear accuracy calibration)	$\pm 0.002\text{mm}$ $\pm 0.003\text{mm}$ $\pm 0.004\text{mm}$ $\pm 0.005\text{mm}$	224,000 300,000 390,000 720,000

備註 Remark:材質: 硬鋼,可臥立兩用 Material: Harden Steel; Horizontal/Vertical Function

標準配備:整組均含木盒包裝、操作說明書、品質保固書、符合 ISO-9000 量測追溯及 ISO/IEC 17025 認可校正實驗室(JCC)出具之合格校正報告。

Standard Accessories: It includes wooden case, operational manual, quality warranty, and JCC calibration report to comply with ISO-9001 measuring traceability & ISO/IEC 17025 Accreditation



◇ 電子式量規校正器 Electronic Dial & Gauge Calibrator



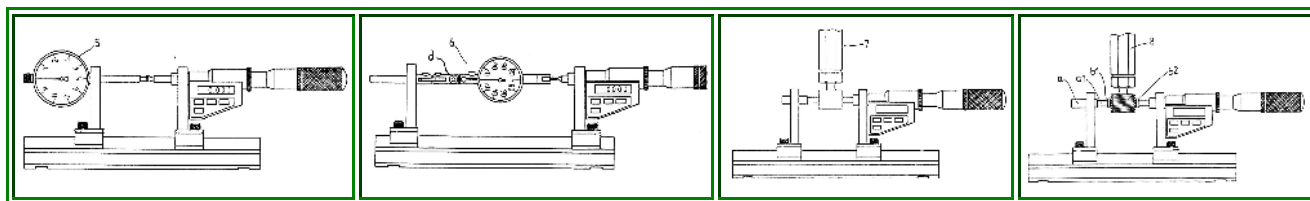
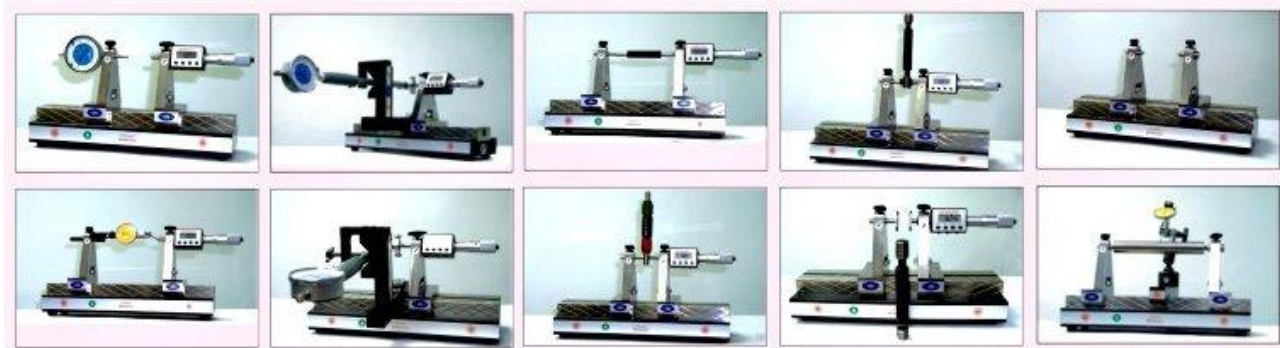
校正功能: 各種類型量表類、測缸規、小孔量規、針規、塞規、螺紋塞規、零組件之厚度、長度、同心度。
Calibration Function: All kind of dial indicator, bore gauge, pin gauge, plug gauge, thread plug gauge, concentric/thickness/length of parts.

型號 Model No.	校正範圍 Calibration Range	解析度 Resolution	精度 Accuracy	價格 Price (NT\$)
D&G- 9001	0-25mm/0-1"	0.001mm/0.00005"	±0.003mm	90,000
D&G- 9002	0-25mm/0-1"	0.001mm/0.00005"	±0.002mm	113,000
D&G- 9003	0-50mm/0-2"	0.001mm/0.00005"	±0.004mm	140,000
D&G- 9004	0-25mm/0-1"	0.0005mm/0.00002"	±0.001mm	360,000

備註:材質-硬鋼 **Remark: Material-Harden Steel**

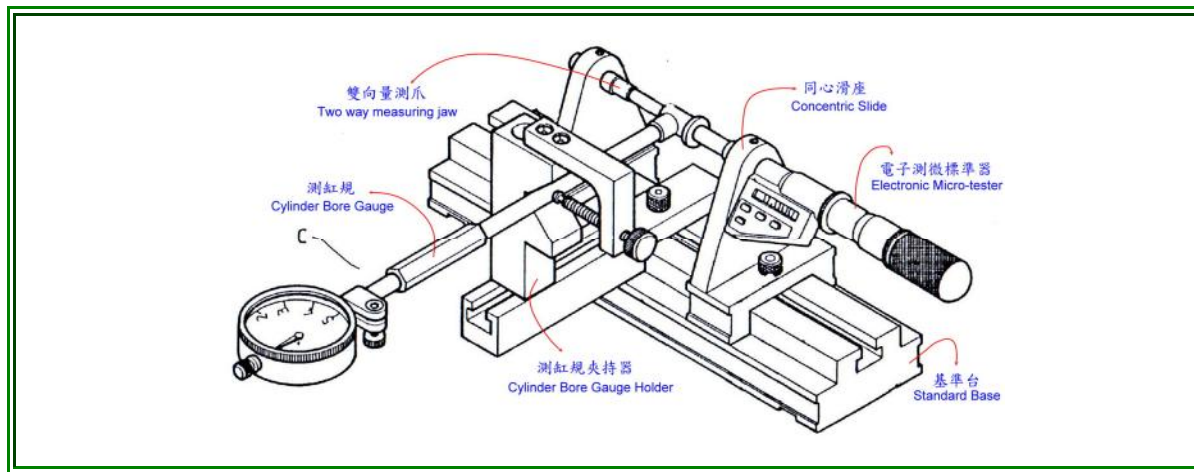
標準配備: 整組均含木盒包裝、操作說明書、品質保固書、符合 ISO-9000 量測追溯及 ISO/IEC 17025 認可校正實驗室(JCC)出具之合格校正報告。

Standard Accessories: It includes wooden case, operational manual, quality warranty, and JCC calibration report to comply with ISO-9001 measuring traceability & ISO/IEC 17025 Accreditation



標準附件(可單買) Standard Accessories(Individual Optional)

型號 Model No.	品名 Name	規格 Specification	價格 Price (NT\$)
D&G-BS1	校正器基準台及同心滑座	距離 Distance: 200mm(Economic)	68,000
D&G-BS2	Calibrator Standard Base &	距離 Distance: 200mm(Standard)	90,000
D&G-BS3	Concentric Slide	距離 Distance: 300mm(Standard)	110,000
D&G-EM1	電子測微標準器	0-25mm/0.001mm/±0.002mm	9,300
D&G-EM2	Electronic Micro-tester	0-50mm/0.001mm/±0.004mm (Range/Resolution/Accuracy)	15,000
D&G-UC	萬向夾具 Universal Clamp	長度 Length: 133mm ϕ 8mm	6,000
D&G-TJ	雙向量測爪 Two Way Measuring Jaw	直徑 Dia: ϕ 6.5/ ϕ 8mm (2 step size)	3,000



選購附件 Optional Accessories

型號 Model No.	品名 Name	價格 Price (NT\$)	備註 Remark
D&G-BH	測缸規夾持器 Cylinder Bore Gauge Holder	21,000	各類孔徑量規校正使用 For holding all kind of bore gauge
D&G-SB	設定塊規(1 級) Setting Gauge Block (Grade 1) 25/50/75/100mm	6,700	設定/延長量測或校正範圍用 For setting/extend measuring & calibration range
D&G-CT	中心測砧 Concentric Measuring Tip (2 pcs/1 pair)	6,000	校正測試棒或零組件同心度用 For calibration test bar or measuring concentric of parts

◇ 平台覆檢校正器 Surface Plate Repeat Checking Calibrator



校正功能: 鑄鐵平台平面度、花崗石平台平面度、機械床台平坦度、精密平台真直度。
Calibration Function: Flatness of casting iron/granite plate, flatness of machine bed, straightness of precision platform.

型號 Model No.	校正範圍 Calibration Range	價格 Price (NT\$)	備註 Remark
PLA- 9001	對角線 Diagonal $L \geq 150 \leq 550\text{mm}$	24,000	用途: 檢測平台平面度的區域誤差 Use: Check local error of plate flatness
PLA- 9002	對角線 Diagonal $L \geq 550 \leq 1100\text{mm}$	27,000	
PLA- 9003	對角線 Diagonal $L \geq 1100 \leq 2200\text{mm}$	33,000	
PLA- 9004	對角線 Diagonal $L \geq 2200 \leq 3300\text{mm}$	42,000	

備註:材質-硬鋼 Remark: Material-Harden Steel

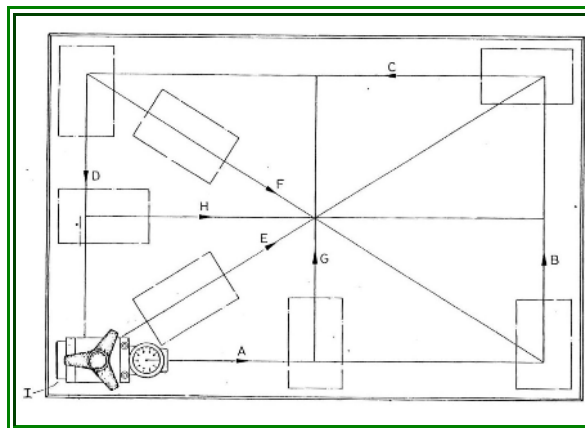
標準配備: 整組均含木盒包裝、操作說明書、品質保固書、符合 ISO-9000 量測追溯及 ISO/IEC 17025 認可校正實驗室(JCC)出具之合格校正報告。

Standard Accessories: It includes wooden case, operational manual, quality warranty, and JCC calibration report to comply with ISO-9001 measuring traceability & ISO/IEC 17025 Accreditation



選購附件 Optional Accessories

型號 Model No.	品名 Name	量測範圍 Measuring Range	解析度 Resolution	價格 Price (NT\$)	備註 Remark
DG-9000H	量表	0-1mm	0.001mm	4,200	ϕ 57mm 1 revolution:0.1mm
DG-Comp	Dial Gauge	$\pm 0.05\text{mm}$		14,000	Comparator type
ED-9005H	電子式量表	0-5mm/0.2"	0.001mm/0.00005"	12,800	ϕ 44mm Small Bezel
ED-9013HD	Electronic Digital Dial Gauge	0-13mm/0.5"		13,600	ϕ 64mm Double display
TS-PD	電子比測儀 Electronic compare measuring unit	$\pm 1.5\text{mm}/\pm 0.06"$	0.0001mm/ 0.000005"	175,000	with probe & display unit



BS Local Error 局部誤差

Grade	Calibration Result	
	mm	inch
0	0.004	0.00015
1	0.008	0.00030
2	0.016	0.00060
3	0.032	0.00120

FS Local Error 局部誤差

Diagonal Line	Calibration Result		
	mm	Grade: AA	Grade: A
≤ 800	0.9	1.5	2.8
800-1500	1.2	1.8	3.0
1500-2200	1.5	2.0	4.0
2200-3000	1.9	2.5	5.0

