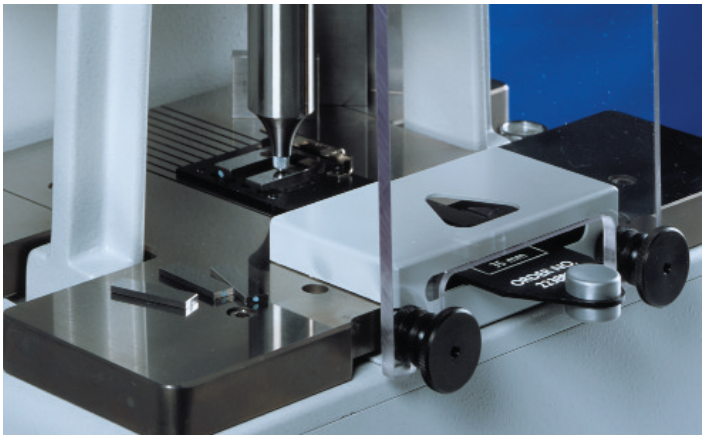
Block Positioner

A precision positioning mechanism is built into the platen of the 130B-24. The master block and the work block are loaded into spaces in the template. The mechanism swings into place between the contacts and guides the position of the blocks - first the master block to its reference position, then the work block to its reference position, then to the corners of the block.

Three easily interchangeable templates are included for comparison of square and two different sizes (30 mm and 35mm) rectangular blocks. Alternate templates are optionally available.

The positioner accommodates blocks as thin as .020" (0.5 mm) up to 4" (100 mm). It can be hinged for left-hand or right-hand operation, or it can be removed completely if not needed. The positioner includes an acrylic breath shield that keeps body heat out of the measurement area.



The Best Electronics

The amplifier, sensor, and computer work together to provide unequaled measuring accuracy, along with convenient and simple operation. The amplifier has no user controls. The entire user interface is built into the controlling computer, which can be either a desktop or a laptop model. Communication to the computer is via USB, and is two-way. The computer reads the sensor position and returns a controlling signal to the amplifier, instructing it exactly how much offset it needs to allow the extremely high magnification of the actual measurement.

The sensor is Mahr Federal's best, friction-free, LVDT-based sensor. It is mounted on stable flexures, allowing it to withstand the side loading of a sliding gage block without any loss of accuracy over time.

Model 130B-24

Specifications

Approximate Size (without computer)	15" x 15" x23" (400mmx400mmx600mm)
Approximate Weight (without computer)	225 lb (100kg)
Gaging Capacity	0.010" to 4" 0.25mm to 100mm
Gaging Force (Upper Contact) (Lower Contact)	3 oz (0.8N) 1 oz. (0.3N)
Contact Material	Tungsten Carbide, (Diamond - Optional)
Contact Radius	0.125" (3mm)
Sensor Range	±0.015" (±0.38mm)
Measurement Range	±500µ" (±10µm)
Repeatability	6σ <1µ" (25nm) Measured on a 1" gage block without removing the block
Linearity	Linearity <1µ" over the central ±50µ" and <1µ" in any 50µ" over the ±500µ" measuring range <20nm over the central ±1µm and <20nm in any ±1µm over the ±10µm measuring range

Ordering Information

	Order Number
Systems	
Complete System with Desktop Computer	2150076
Complete System with Laptop Computer	2150077
Complete System except without Computer	2150078
Options	
Templates	
30 mm Rectangular Block Template*	2238822
35 mm Rectangular Block Template*	2238821
Square Block Template*	2239637
Square Block Template - 4 positions	2238823
30mm Rect. Master/Square Work	2238826
35mm Rect. Master/Square Work	2238825
Square Master/30 mm Rect. Work	2240939
Square Master/35 mm Rect. Work	2240940
Replacement Contacts	
Tungsten Carbide*	
Upper	2240154
Lower	2239733
Diamond	
Upper	EPT-1029
Lower	EPT-1036
Software Only	2240073
DeskJet Printer	2950950
Printer Cable	ECB-1775

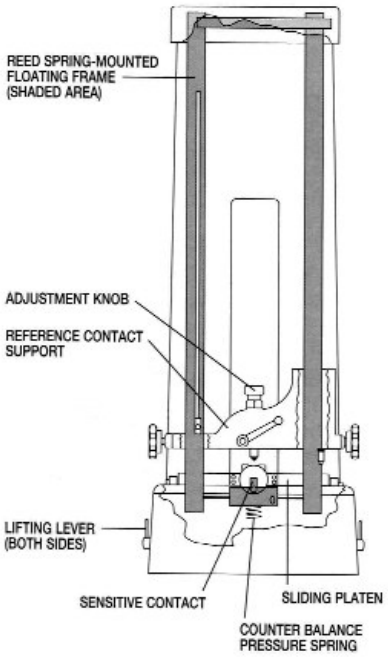
**Provided at no extra charge with systems*

Model 130B-16 "Long Block" Comparator

- Same highly linear, stable electronics as 130B-24.
- Designed for measuring blocks above 4.000" (100 mm) but capable of checking shorter blocks as well.
- Linear ball slide for smoothly moving long gage blocks without danger of tipping them over.
- Large platen area for staging blocks before measurement - critical to achieving thermal equilibrium with the gage.
- Fully counterbalanced "floating measurement frame" to isolate measurements from vibration.
- Open frame design allows comparison measurement of large disks, up to 24" in diameter.
- Can be operated from the same computer as 130B-24.
- Scale on left-hand post allows rough positioning, and micrometer-style spindle allows smooth, easy mechanical fine-adjustment.

Ordering Information	Order Number
Systems	
Complete System with Desktop Computer	2150080
Complete System with Laptop Computer	2150079
Complete System except without Computer	2150081
Options	
Replacement Contacts	
Tungsten Carbide*	
Upper	2240154
Lower	2239733
Diamond	
Upper	EPT-1029
Lower	EPT-1036
Software Only	2240073
DeskJet Printer	2950950
Printer Cable	ECB-1775

**Provided at no extra charge with systems*



"Floating Measuring Frame" in the 130B-16

Specifications

Approximate Size (without computer)	15" x 15" x40" (400mmx400mmx1016mm)
Approximate Weight (without computer)	310 lb (140kg)
Gaging Capacity	0.10" to 24" 2.5mm to 600mm
Gaging Force (Upper Contact) (Lower Contact)	4 oz (1.1N) 2 oz. (0.6N)
Contact Material	Tungsten Carbide (Diamond - Optional)
Contact Radius	0.125" (3mm)
Sensor Range/ Measurement Range	±0.015" (±0.38mm) ±500µ" (±10µm)
Repeatability	6σ <1µ" (25nm) Measured on a 1" gage block without removing the block
Linearity	Linearity <1µ" over the central ±50µ" and <1µ" in any 50µ" over the ±500µ" measuring range <20nm over the central ±1µm and <20nm in any ±1µm over the ±10µm measuring range