

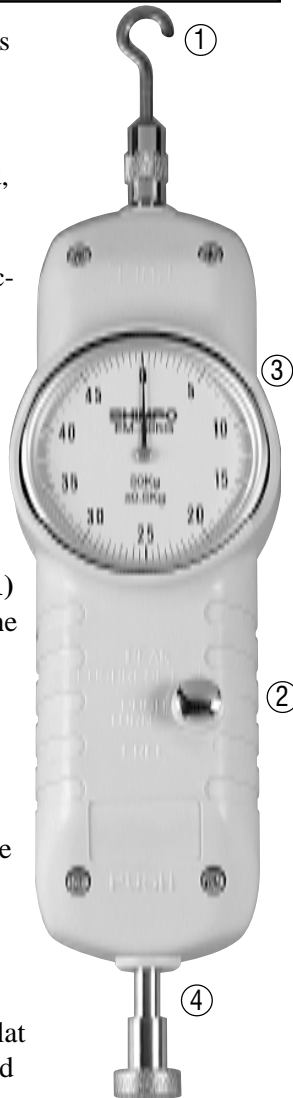
## Mechanical Force Gauge Series EM

## Instruction Manual

### Introduction

The EM mechanical force gauge is a direct reading, dial type instrument designed for measuring tension and compression forces. All models are housed in a rugged, ergonomically designed housing which makes these instruments ideal for material testing, manufacturing, quality control and laboratory environments.

- 1. Tension Sensing Rod (M6P1)**  
Measure tensile forces with the small hook attachment.
- 2. Measure switch**  
Use this switch to select real time or peak force.
- 3. Tare Ring**  
Rotate tare ring to compensate the attachment's weight.
- 4. Compression Sensing Rod (M6P1)**  
Measure compressive forces with following attachments: flat head, conical head, chisel head and notched head.



### Specifications

MODELS	CAPACITY	DIAL DIVISIONS	RESOLUTION
EM-2	2 lb	100	0.02 lb
EM-5	5 lb	100	0.05 lb
EM-10	10 lb	100	0.1 lb
EM-20	20 lb	100	0.2 lb
EM-30	30 lb	150	0.2 lb
EM-50	50 lb	100	0.5 lb
EM-100	100 lb	100	1 lb

MODELS	CAPACITY	DIAL DIVISIONS	RESOLUTION
EM-1kg	1 kg	100	10 g
EM-2kg	2 kg	100	20 g
EM-3kg	3 kg	150	20 g
EM-5kg	5 kg	100	50 g
EM-10kg	10 kg	100	100 g
EM-20kg	20 kg	100	200 g
EM-30kg	30 kg	150	200 g
EM-50kg	50 kg	100	500 g

Overload capacity is 75kg for all models.

EM Models  
Accuracy:  $\pm 0.2\%$  full scale  
Stroke: 10mm

### Precautions

Do not exceed capacity of unit.

Accuracy may be affected if unit is exposed to high humidity, dust or extreme shock.

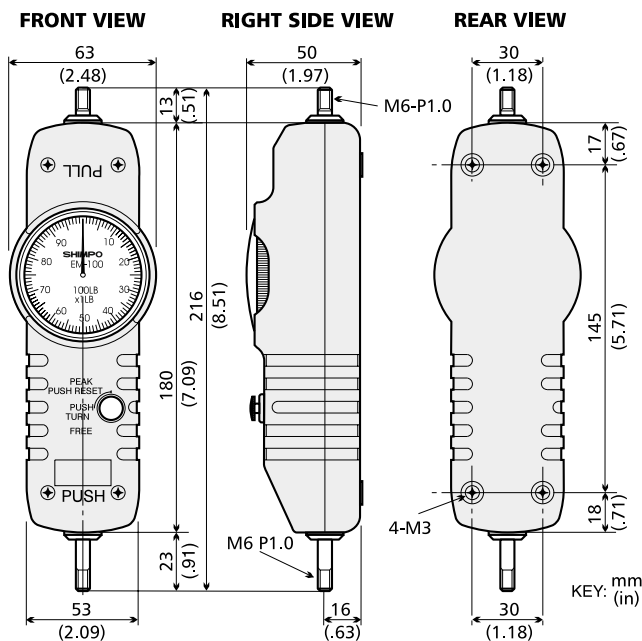
## General Operation

1. Use "selector button" to select average (real time) or peak mode.
2. Add proper attachment to push or pull measuring end.
3. Rotate tare ring to read "0". Adjustment should be made under the same conditions as those used when measuring actual load.
4. To select average mode, push button down and turn all the way counter clockwise.
5. To select peak mode, turn button all the way clockwise. To reset to zero, push button slightly.

Note: When in average mode you can still freeze the indicator needle when desired measurement is reached by turning selector all the way clockwise.

## Dimensions

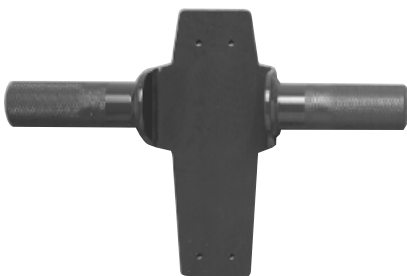
All dimensions in mm



## Optional Accessories

### Handle

Can be used with all models



## Optional Accessories (cont'd)

### Small Pin Grips

These special attachments are ideal for gripping fine wires or filaments. Choose between three ranges. Load capacity is 22 pounds for each range.

- 0 - .5mm Diameter Pin Grip
- .5 - 1mm Diameter Pin Grip
- 1 - 2mm Diameter Pin Grip



### 3mm Fine Point Grip

This narrow-faced grip is convenient for testing fine and medium gauge wire. It's also handy for testing electronic components in hard to reach places. Load capacity is 30 pounds.



### 8mm Ribbon Grip

This grip is excellent for measuring the tensile strength of ribbon, wire, tape and paper. The load capacity is 60 pounds.



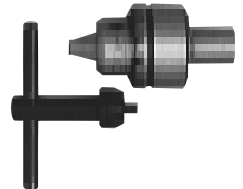
### 20mm Film Grip

Use this heavy duty, spring-loaded film grip to check samples up to 10mm thick. The serrated jaw is 20mm wide.



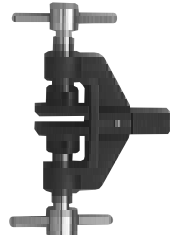
### Jacob's Chuck Grip

Designed for testing low gauge wire and rigid rods. Accepts diameters from .5mm to 5mm. Load capacity is 110 pounds.



### Flat Chuck Tensile Grip

Measure up to 110 pounds with this heavy duty flat tensile grip. The 20mm square serrated faces can accept materials to a maximum thickness of 10mm.



### Heavy Duty Wedge Grip

This self-clamping grip accepts materials up to 10mm thick. The retractable grooved jaw is 15mm wide. Load capacity is 500 pounds.

