

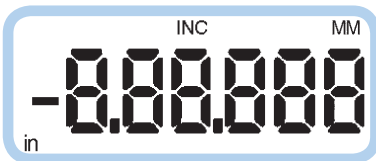
Digital Height Gauge 190-DBL Series

Please carefully review these instructions to ensure proper and accurate use of your new Digital Height Gauge.

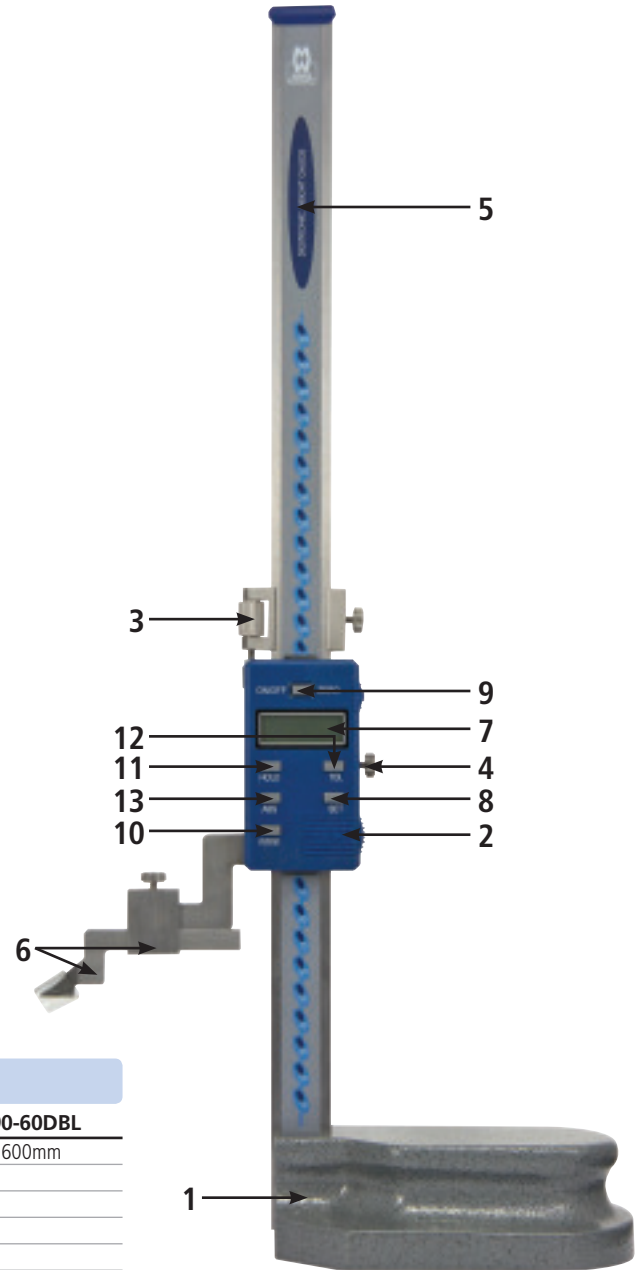
Features

1. Base
2. Battery compartment
3. Fine adjustment
4. Carriage locking screw
5. Beam/Scale
6. Carbide tipped measuring scriber and clamp
7. LCD Display
8. Set button
9. On/off/zero button
10. mm/inch conversion
11. Hold button
12. Tolerance button
13. ABS/incremental measurement button

LCD Display



- in:** Inch measuring mode
- mm:** Metric measuring mode
- INC:** Relative measuring mode
- ABS:** No symbol present



TECHNICAL SPECIFICATIONS

	MW190-30DBL	MW190-50DBL	MW190-60DBL
Range	0-12" / 300mm	0-20" / 500mm	0-24" / 600mm
Resolution	0.0005" / 0.010mm		
Repeatability	0.0005" / 0.010mm		
Indication accuracy	±0.0015" / 0.040mm	±0.002" / 0.050mm	
Battery	1.5V LR44 Silver Oxide		

Functions

- **ON/OFF/ZERO button**
 1. Press the ON/OFF/Zero button (for **no longer** than 3 seconds) in Relative measuring mode to set the current position as the Relative zero point.
 2. Press the ON/OFF/Zero button (for **no longer** than 3 seconds) in Absolute measuring mode to set the current position as the Absolute zero point.
 3. Press the ON/OFF/Zero button (for **longer** than 3 seconds) in either mode turns off the electronic display.
- **MM/INCH button: Metric/Inch Conversion**
 1. Press the MM/INCH button to switch between measurements in either millimetres or inches.

- **ABS button (Relative measuring and Absolute measuring)**
 1. The gauge switches on in Absolute measuring mode.
 2. To set the Absolute zero point, press the zero button (for **no longer** than 3 seconds).
 3. When the height gauge is in Absolute Mode, press the ABS button to enter in to Relative/Incremental measuring mode, the screen will display INC, press the zero button again and the gauge will be set at a relative zero point.
 4. To return to Absolute measuring mode, press the ABS button, the original stored zero position in ABS mode will be maintained.
- **HOLD button (Display hold)**
 1. Press the hold button, H appears in the display, move the carriage to a different position, the displayed value will not change, although the processor is still operating. Press the HOLD button again, H will disappear from the display and the current measuring position will be shown.
- **SET button (Pre-set button)**
 1. To enter a Pre-set value to be used in ABS mode, press the SET button, SET flashes in the display, (0 is displayed when in relative mode, the last entered pre-set value is displayed when in Absolute mode) by holding down the SET button, the units will flash in turn from left to right, when you see the unit you want to set flashing, release the SET button.
 2. Press the SET button once (for no longer than one second) the current unit will scroll from 0-9 in turn every time the button is pressed, after this unit is set; hold the SET button down again until the next desired unit is reached, then release and press SET once to again scroll from 0-9. Repeat this until the desired value is displayed. Once displayed, press and hold the SET button until 'SET' flashes in the display, press SET to store the entered preset value.
 3. Press the ON/OFF/ZERO Button at any point during this operation to exit the setting procedure.
- **TOL button (Tolerance setting button)**
 1. Press the TOL Button, "↑" will appear in the display and SET will flash, you can then start setting the Upper Tolerance Limit by holding down the TOL button, the units will flash in turn from left to right, when you see the unit you want to set, release the TOL button.
 2. Press the TOL button once [for no longer than one second] the current unit will scroll from 0-9 in turn every time the button is pressed, after this unit is set; hold the TOL button down again until the next desired unit is reached, then release and press TOL button once to again scroll from 0-9.
 3. Repeat this step until the desired value is displayed. Once displayed, press and hold the TOL button until 'SET' flashes in the display, whilst SET is flashing, press the TOL button, "↓" will appear in the display and SET will continue to flash.
 4. You can then set the Lower Tolerance Limit in the same way. When finished, press the TOL button until SET is flashing, the Lower Tolerance Limit is displayed, press TOL to store the entered tolerance values, the Height Gauge is then in Tolerance Mode, When the indicator "↑" is displayed the measured value is beyond the Upper limit, when the indicator "↓" is displayed the measured value is beyond the Lower limit. When "OK" is displayed the measured value is within the tolerances set.
 5. To exit TOLERANCE mode, press the TOL Button once.
- **POWER ON/OFF**
 1. **Auto Power off**

When the carriage has not moved for more than 3 ½ minutes (approx.) the display switches off, moving the carriage or pressing the ON/OFF/ZERO button the display turns back on with NO LOSS of the zero setting point.

When the carriage has not moved for more than 30 minutes, it is in a powered off state, so can only be turned on by pressing the ON/OFF/ZERO button. There is still NO LOSS of the zero setting point.
 2. **Manual Power off**

To manually turn off the power to conserve battery life, press the ON/OFF/ZERO button for longer than three seconds.
- **Battery Replacement**
 1. Flashing digits or a blank display indicates a flat battery. Remove the battery cover in the direction of the arrow, and replace the battery (1.5V Silver Oxide) the positive pole of the battery should face outwards.
 2. The pre-set value and zero position will require re-setting after replacing the battery.