

**SH-600  
Press Shut  
Height Gauge**

**molex**

**Application Tooling  
Specification Sheet**



**Order No. 63800-7900**

## Features

- Ensures standard press shut height to allow interchanging of applicators
- May be used in most industry-standard crimp presses designed to 135.8mm shut height
- Applies 850kgf (1870 lbf) load to press during measurement
- Measurement range: 135.8mm  $\pm$ 0.2mm (5.346 in.  $\pm$  0.008 in.)

## Scope

The Press Shut Height Gauge will measure the shut height of the following Molex presses:

TM-2000 (63800-8300 and 63800-8400)

TM-3000 (63801-7200 and 63801-7300)

TM-4000 (63801-7600)

Other industry-standard presses (with quick-change mini-applicator mounting and 135.8mm shut height) can also be measured with this gauge. Spacers are NOT furnished for other shut heights.

## Description

The principal parts of the Press Shut Height Gauge are shown in Figure 1.

## Operation

To measure the press shut height, use the following procedure:

1. Disconnect electrical power from the press.
2. Remove the crimp applicator from the press.
3. Wipe the applicator mounting surfaces (upper and lower) in the press clean.
4. Hand-cycle the press ram to its highest position (TDC).
5. Place the Shut Height Gauge in the press with the cap centered under the ram and the bottom plate resting flat on the press base plate. See Figure 2.

Note: Some presses may require some mounting hardware to be loosened or removed from the base plate so the Shut Height Gauge can rest flat.

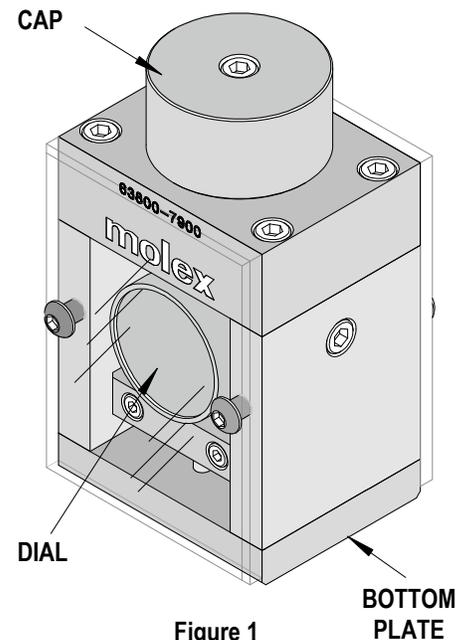


Figure 1

BOTTOM  
PLATE

- Hand cycle the press ram down. As it approaches its lowest point (BDC), the ram will touch the cap and press it down, causing the pointer on the dial indicator to turn clockwise.

**WARNING:** NEVER cycle the press ram under power when measuring shut height.

**NOTE:** Flywheel-driven presses should be hand-cycled using a socket wrench with a breaker bar. As the ram approaches BDC, continue to turn the flywheel while reading the gauge. If the flywheel stops turning near BDC, the upward force of the shut height gauge may cause the press to become locked.

**NOTE:** The shut height on some presses may be easier to measure if two operators are used (one to hand-cycle the press, one to read the dial indicator)

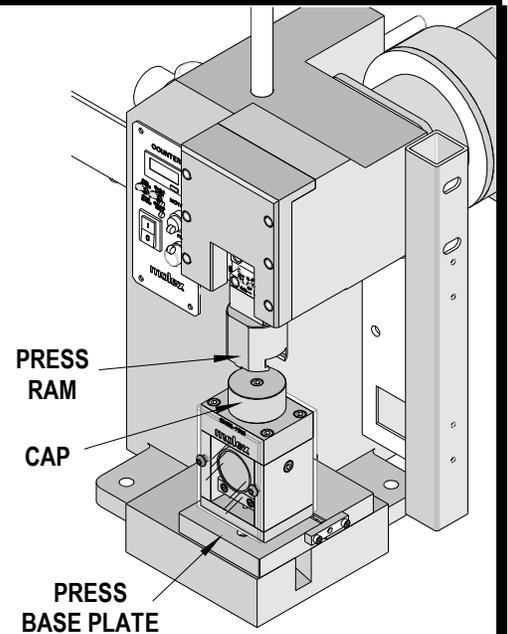
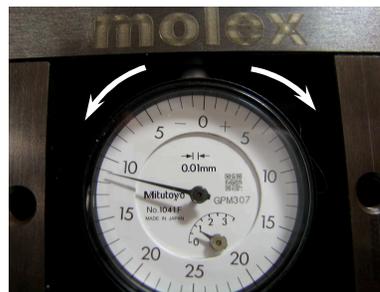


Figure 2  
(PRESS GUARDS NOT SHOWN)

- When the pointer stops turning clockwise, the press ram is at shut height (BDC). If the pointer stops at "0", then the press shut height is exactly 135.8mm (5.346 in). If the pointer stops away from "0" in a clockwise direction, then the press shut height is less than 135.8mm. Similarly, if the pointer stops away from "0" in a counterclockwise direction, then the press shut height is more than 135.8mm. See Figure 3.
- To read the shut height difference from "0", each line on the face of the dial indicator represents 0.01mm (0.0004 in) of travel. See Figure 3.

Shut height is more than 135.8mm



Shut height is less than 135.8mm

In this case,  
Press shut height =  $135.8 + (11 \times 0.01) = 135.91\text{mm}$

Figure 3

- Hand-cycle the press ram back to its highest position (TDC).
- If necessary, adjust the press shut height per the manufacturer's procedure. After adjustment, re-measure the press shut height.

## Shut Height Considerations

1. If the press shut height was never adjusted, or if it was adjusted with a gauge that exerted less than 850kg, then adjusting the shut height with the Molex Shut Height Gauge may necessitate applicator adjustments:
  - a. When installing any applicator after adjusting press shut height, ALWAYS adjust the crimp punches up in case the shut height adjustment caused additional travel of the press ram.
  - b. When installing any applicator after adjusting press shut height, ALWAYS hand-cycle the press through a full cycle. If any resistance is felt, STOP and examine the cause.
  - c. If the applicator hand-cycles freely after adjusting shut height, proceed with resetting the crimp punches to achieve the proper crimp heights.
2. In order to interchange applicators between various presses, all presses must have their shut heights adjusted using the same Shut Height Gauge.

## Maintenance and Adjustments

- Keep the Shut Height Gauge in a clean, dry place
- No lubrication or adjustments are required for the Shut Height Gauge
- Do not disassemble the Shut Height Gauge
- Do not drop the Shut Height Gauge. If it is dropped, it should be sent to Molex for recalibration.

## Calibration

- The Shut Height Gauge should be calibrated on a regular basis depending on use and the site's calibration schedule.
- Calibration of the height and force can be performed by returning the Gauge to Molex (nominal repair charge applies).

## Contact Information

For more information on Molex application tooling please contact your nearest Molex location shown below.

Visit our Web site at <http://www.molex.com>

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Height Gauge**



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Specification Sheet**



**Order No. 63800-7900**

**Certificate of Gauge Calibration/Re-Calibration**

**GAUGE DESCRIPTION:** Press Shut Height Gauge  
**MOLEX PART NUMBER:** 63800-7900  
**SERIAL NUMBER:** \_\_\_\_\_  
**INDICATOR SERIAL NUMBER:** \_\_\_\_\_  
**INDICATOR CALIBRATION CERTIFICATION NUMBER:** \_\_\_\_\_

**GAUGE CHARACTERISTICS (AS RECEIVED FROM CUSTOMER)**

\_\_\_\_\_ INDICATOR READING (mm) AT 135.80MM  
\_\_\_\_\_ GAUGE OUTPUT FORCE (kgf) AT 135.80MM

**GAUGE CHARACTERISTICS (AS VERIFIED AND SHIPPED FROM MOLEX)**

\_\_\_\_\_ INDICATOR READING (mm) AT 135.80MM  
\_\_\_\_\_ GAUGE OUTPUT FORCE (kgf) AT 135.80MM

**\*GAUGE CALIBRATION DATE:** \_\_\_\_\_

**CALIBRATION PERFORMED BY:** \_\_\_\_\_

**TOOLS USED TO CALIBRATE**

ATF289MX17-Load Cell  
ATR290MX17-Fixture

**NEXT CALIBRATION DUE DATE**

\_\_\_\_\_  
\_\_\_\_\_

\* RECOMMENDED CALIBRATION SCHEDULE: AT LEAST ONCE PER YEAR FROM START OF GAUGE USE AT CUSTOMER. IF GAUGE IS USED FREQUENTLY, CALIBRATION SCHEDULE SHOULD BE ADJUSTED ACCORDINGLY.