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LINEAR **M**EASUREMENT **I**NSTRUMENTS, Corp.

Research, Development and Manufacturing of Precision Measuring Systems

LMI 241-BWV2

Flush & Gap Transducer



INSTRUCTION MANUAL

LMI Corporation

LMI 241-BWV2, SIMULTANEOUS FLUSH AND GAP GAGE

The following information is broke down into two sections. The first section contains the basic instructions on how to apply the gage to make measurements with the second section containing the necessary information on how to attach and adjust the many accessories available for the LMI 241-BWV2.

SECTION 1:

MAKING FLUSH AND GAP CHECKS

1. Properly calibrate and master the LMI 241-BWV2 with your specific data collection system.

Note: The LMI 241-BWV2 requires a three point calibration procedure for both the flush and the gap readings. The 10mm span of the flush and the gap travel is internally preset and represents the two outer points of calibration. The third point of calibration is the master position and is set by using an LMI 3030 Master Block. Due to the large variety of data collection systems on the market, please contact LMI for specific calibration instructions.

2. Retract the GAP CHECK FINGER with the aid of the thumb screw on the side of the gage. Refer to figure 1.
3. Insert the three fingers into the gap of the part and set the three STABILIZING PADS onto the part.
4. Release the thumb screw so the GAP CHECK FINGER makes contact with the adjacent part.
5. Position the gage so that the two LOCATING FINGERS are making contact with the part the gage is resting on.
6. At this time the FLUSH TIP and the GAP CHECK FINGER should be in contact with the part and ready to make a check. Refer to figure 1.

Note: The LMI 241-BWV2 comes equipped with finger grip pads. To maximize repeatability, it is important that all operators utilize the gage in the same manner.

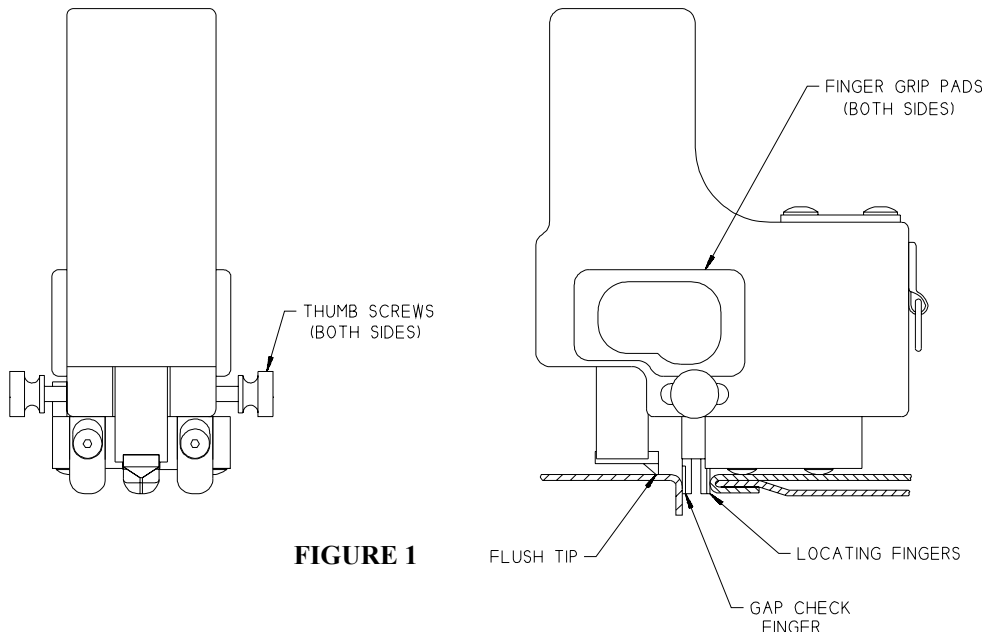
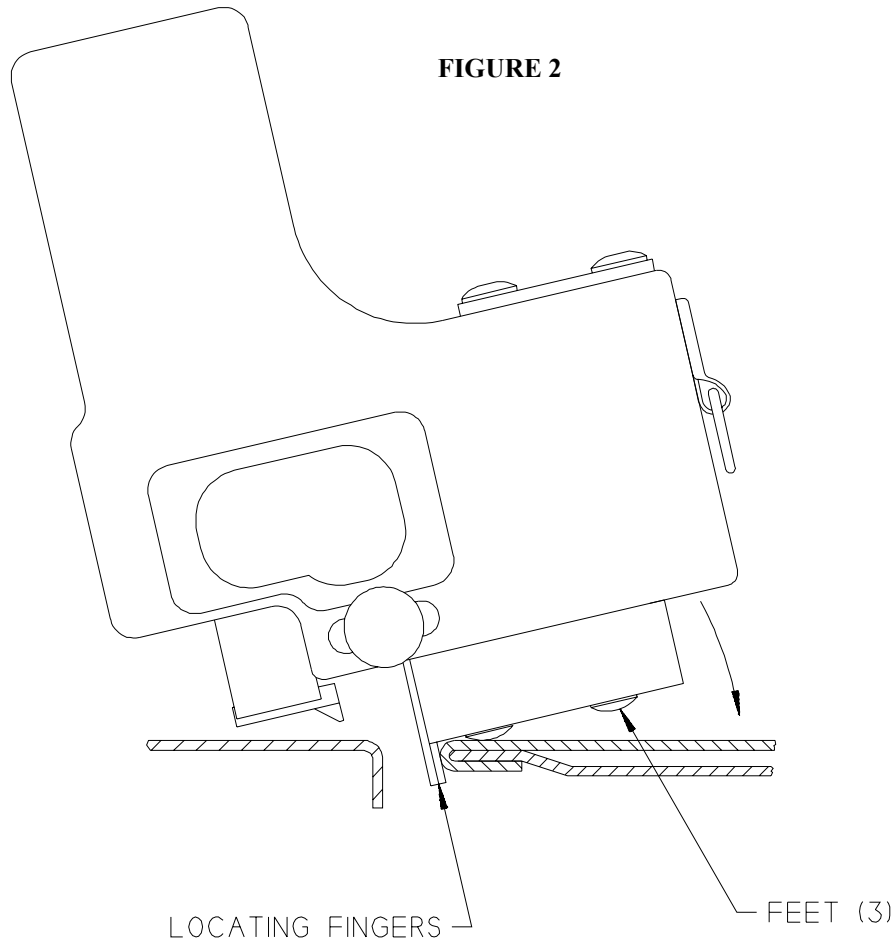


FIGURE 1

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HELPFUL GAGE LOCATING TIP:

Insert the transducer into the gap as shown in figure 2. Pull the locating fingers against the surface that the gage is resting on while pivoting the gage back to sit on all three feet. You will be able to “feel” the gage seat itself on and against the part.



SECTION 2:

ACCESSORIES AND GAGE ADJUSTMENTS

LMI offers a variety of extension pad kits, flush tips and different length gap check fingers and locating fingers to meet the customer's needs. The following provides information on LMI's accessories as well as instructions on how to replace or adjust them. Contact LMI for specific model information for ordering purposes.

NOTE: All of the following modifications require a 1/16" Hex ball driver that is supplied with the gage.

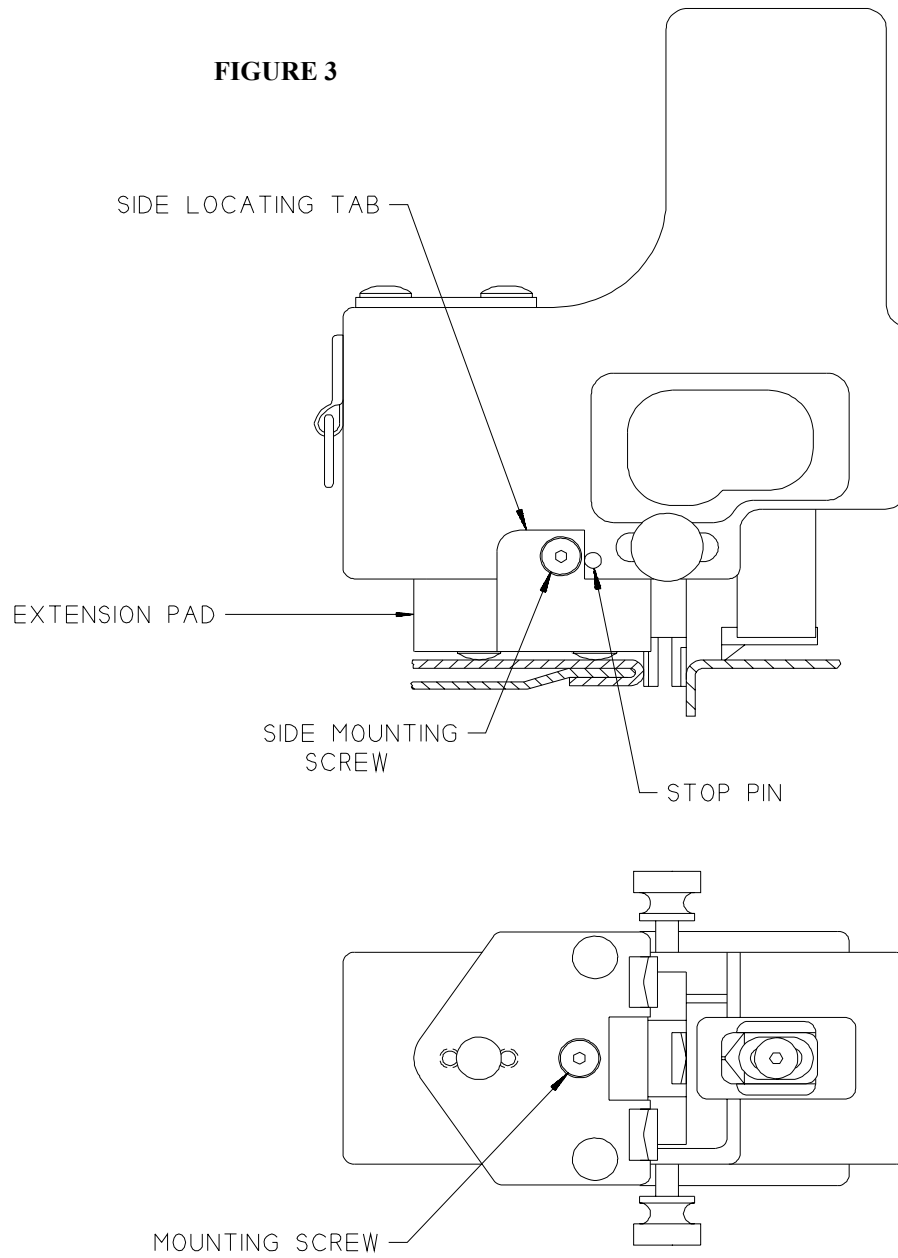
EXTENSION PADS AND FEET:

Extension pad kits are available with non-marring or stainless steel stabilizing feet. To change feet, the extension pad needs to be removed by removing the two screws shown in figure 3. The feet are secured by a slight press fit, and can be pressed out from the back. The new feet can then be pressed back into location and the extension pad reattached. Make sure that the side locating tab makes contact with the stop pin and that the side mounting screw is tightened first. Refer to figure 3.

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CAUTION: Pressing the feet in and out of the extension pad will eventually oversize the acceptance hole. When this happens, the extension pad must be replaced.

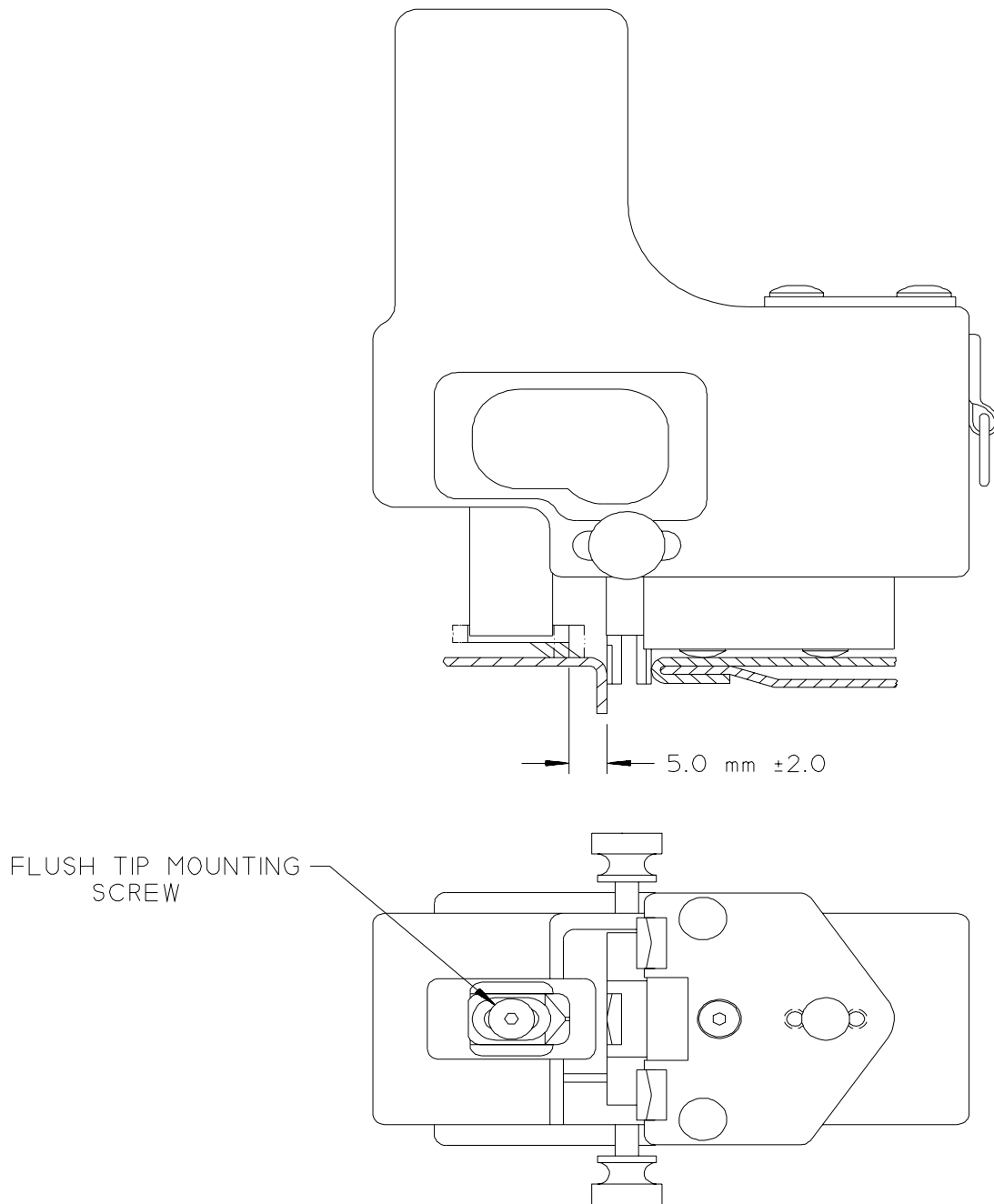
FIGURE 3



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FLUSH TIPS:

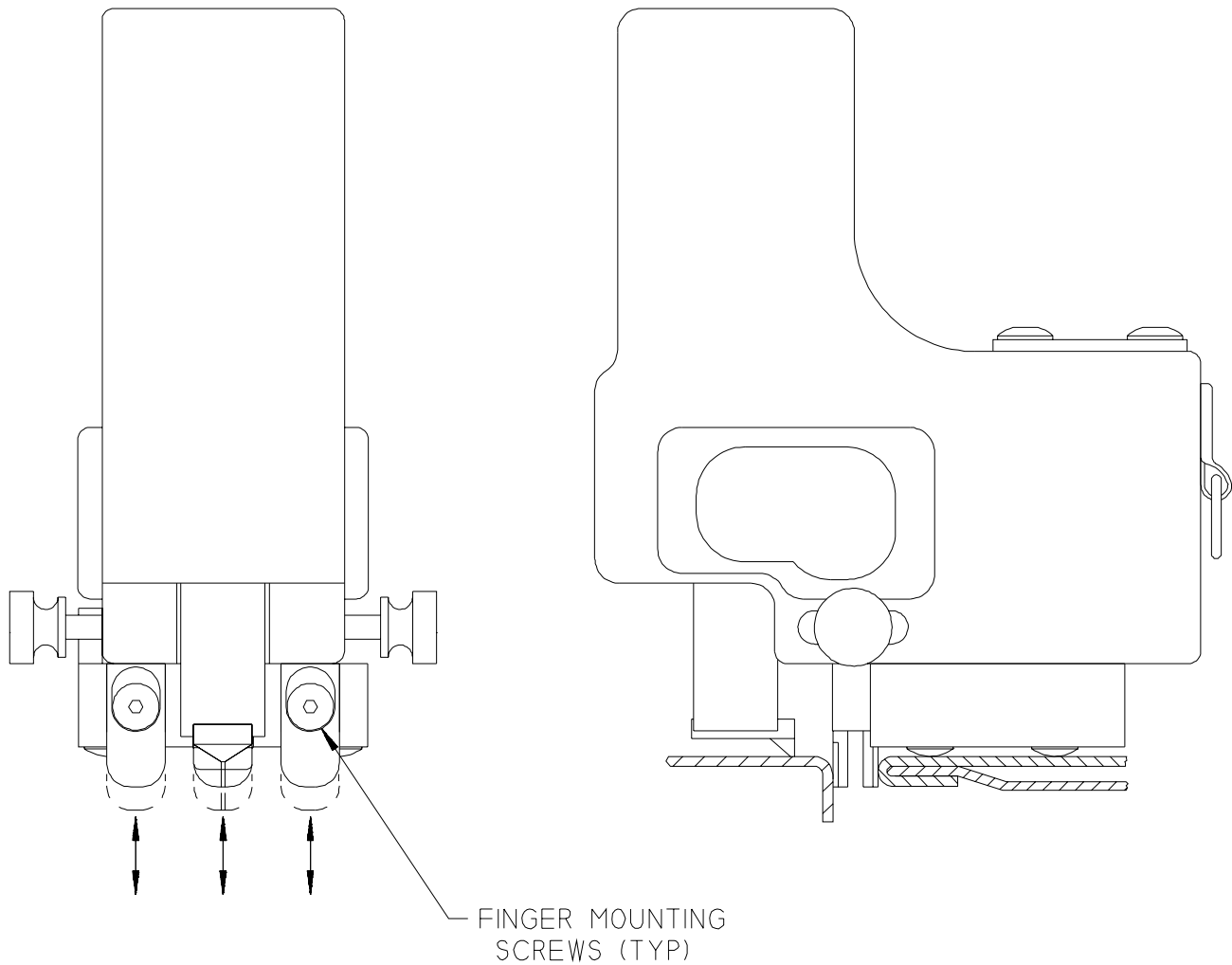
Flush tips are available in different materials as well as configurations. The two standard configurations are an adjustable single point tip and a blade tip. To replace the tip simply remove the screw indicated in figure 4. Put the new tip on and replace the screw. The point tip has a slotted mounting hole, designed to adjust the tip anywhere from 3-7 mm away from the gap check finger. To adjust the point tip, simply loosen the screw and slide the flush tip to the desired location and re-tighten.



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GAP CHECK FINGERS AND LOCATION FINGERS:

LMI offers sets of fingers which include (2) Locating Fingers and (1) Gap Check Finger. The fingers are adjustable within a 2 mm range and are available in the following lengths: 0-2mm, 2-4mm, 4-6mm, 6-8mm and 8-10mm. To adjust the locating fingers simply loosen the mounting screw and slide the fingers to the desired length and re-tighten. See figure 5.



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SPECIAL INSTRUCTIONS FOR GAP CHECK FINGER:

To adjust or remove the Gap Check Finger the Flush Tip must be removed. See figure 4.

To move the Gap Check Finger retract the flush arm completely, then insert the ball driver and loosen the screw to allow movement. Move the finger to the desired position and retighten the screw. (Insert ball driver at an angle per figure 6).

For removal of the Gap Check Finger repeat the process above but remove the screw completely and pull out the Gap Check Finger.

When reinstalling a Gap Check Finger care and a certain technique is required to complete the following process. While holding the flush arm fully retracted (Tip: you can use a rubber band wrapped around the gage body and flush arm to hold it) insert the new gap finger pushing it in far enough to see the threaded hole in the carrier. Tip the gage up and drop the screw into the slot. Now before attempting to tighten the screw you must align the screw and hold it normal to the tapped hole, if not the screw may cross thread and damage the threads. Once aligned turn the screw gently until it seats and tighten. Reinstall the flush tip.

