

The new BAUM 1620 folders include a new design of fold roll gap adjusting gapsets that only require the operator to turn the gapset knob to the correct number for the thickness and proper number of sheets required to effectively drive the signatures through the fold rolls. This new paperless gapset design does not require the operator to tear strips of paper and place them into the gapsets.

Safety:

1. ***It is recommended to shut incoming power off to the folder by using the main power disconnect located on the parallel unit or disconnecting power to the machine by unplugging it from any/all power source(s).***
2. ***Due to possible injury, never attempt or allow anyone to attempt to set the fold roll gapsets while the fold rolls are running.***

Critical items that need special attention during initial build/rebuild of gapsets: to ensure proper gapset operation:

1. The 5/16-18 elastic stop nut must only be tightened just enough to where it touches the gapset knob.

Note: Any torque on this nut onto the gapset knob will cause an improper gapset calibration.

2. The gapset rod/block weldment has a center drill spot on the block. This center drill spot is placed on the block to indicate which orientation this block is to be placed in reference to the foldhead frame.

Note: The side of the block with the center drill spot is to face away from the foldhead frame such that when the gapset assembly is complete, you should see this center drill spot.



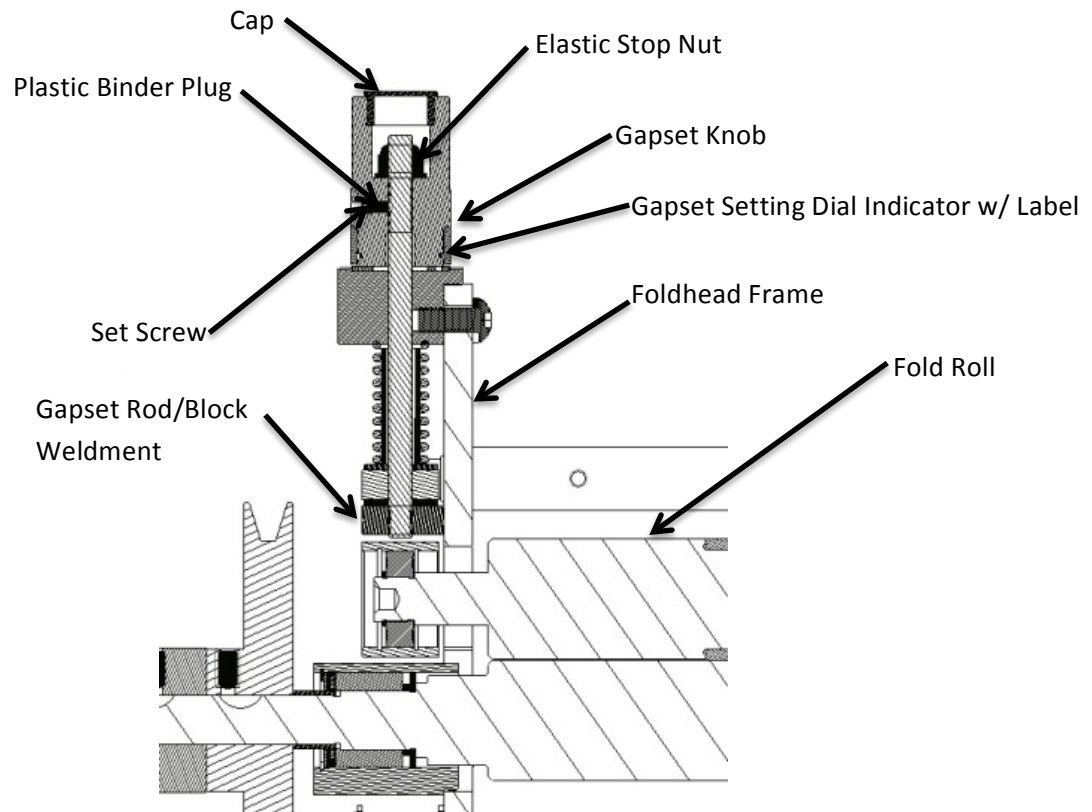
Gapset block
center drill points

3. Due to tolerance stackup of components used in the gapset assemblies, there will be a variation as to where the max setting of each gapset knob will be. Some gapset knobs may not rotate a full 360 degrees and stop at a setting of 13. Some gapset knobs may rotate beyond 360 degrees and stop at a setting greater than the intended max setting of 15.

Note: Due to the tolerance stackup of the components used in this gapset assembly and the possibility of the gapset being rotated more than 360 degrees and going beyond a setting of 15 required a point of reference for the operator to return the gapset back to a setting of 1. This is the only purpose of the 5/16-18 elastic stop nut in the gapset assembly.

4. This new type of gapset was designed around 20# (0.0037" thick) bond paper being the most common stock folded on our floor model folders. This factor was considered in both the pitch of thread used on the gapset knob/rod and also the design of the gapset knob setting label. With this fact in mind, each full graduation on the gapset knob label indicates 1 sheet thickness of 20# bond.

Note: Due to the possibility of the gapset knob being able to opened up past 15 on the gapset knob, the operator should not operate the folder with any/all gapsets at a setting greater than 15. If the operator does operate the folder with any of the gapsets at settings greater than 15, then there is a possibility of the fold rolls rubbing the intakes/deflectors of the fold pans. This would cause premature wear/damage to the foldpans/fold rolls.



Factory Calibration of 1620 Gapsets & Field/Service Fold Roll Replacement:

1. The proper fold roll gapset calibration sequence is as follows:
 - a) #1 fold roll to main fold roll
 - b) #2 fold roll to main fold roll
 - c) #3 fold roll to #2 fold roll
 - d) #4 fold roll to #3 fold roll
 - e) #5 fold roll to #4 fold roll

This sequence of setting the fold rolls must be followed, as not doing so may result in improper calibration of the fold rolls causing inaccurate/crooked folds.

2. Ensure that there is an equal gap on both the operator and non-operator sides between all fold rolls. This gap only needs to be large enough to allow a single sheet thickness of 20# bond paper to freely be slid between the rolls.
 - To increase the gap between the fold rolls, turn the gapset knob clockwise
 - To decrease the gap between the fold rolls, turn the gapset knob counter-clockwise.
3. Place (1) 1" wide strip of 20# bond paper towards the outer portion of the main and #1 fold rolls ensuring that the paper is making full contact with the urethane bands of the fold rolls.



As you place each strip of paper into the proper fold rolls that you are calibrating the gapsets for, it is helpful to turn the gapset knob counter-clockwise until the strip of paper is being held lightly by the fold rolls.

- While placing the strip of paper on the operator side of the fold rolls, adjust the #1 gapset knob on the operator side.
- While placing the strip of paper on the non-operator side of the fold rolls, adjust the #1 gapset knob on the non-operator side.

4. Setting the fold roll gap/pressure.

Note: The proper factory calibration of the gapsets is to where by individually pulling on each strip of paper and the fold rolls just starting to rotate.

Not enough fold roll pressure could cause the folds to be tight and not provide enough drive for the sheets to flow through the roll bank.

Too much fold roll pressure can cause unnecessary cracking, especially on coated stocks, and could cause premature wear of the fold rolls.

- a) To do this, gently pull on the strip of paper on the operator side and feel the amount of pressure the fold rolls are applying.
 - If pulling on this strip of paper feels like there is not enough pressure and does not cause the fold rolls to start rotating, turn the gapset knob counter-clock wise to add more fold roll pressure.
 - If pulling on this strip of paper feels like there is too much pressure and cause the strip of paper to tear rotating, turn the gapset knob clock wise to reduce the amount of fold roll pressure.
- b) After feeling the pressure on the strip of paper on the operator side, gently pull on the strip of paper on the non-operator side and feel the amount of pressure the fold rolls are applying.
 - If pulling on this strip of paper feels like there is not enough pressure and does not cause the fold rolls to start rotating, turn the gapset knob counter-clock wise to add more fold roll pressure.
 - If pulling on this strip of paper feels like there is too much pressure and cause the strip of paper to tear rotating, turn the gapset knob clock wise to reduce the amount of fold roll pressure.
- c) Now that you have initially calibrated the fold roll pressures on the operator and non-operator sides, you must go back and check the pressures on each strip of paper again to ensure the pressures remained the same. You may have to readjust the pressure on each side to ensure the proper amount of fold roll pressure is maintained.

During calibration of the fold roll pressure settings, it is critical to ensure that the amount of drag on both the operator and non-operator sides is the same!

d) Repeat steps 3 & 4 by adjust the proper gapset knobs for:

#2 fold roll to main fold roll(strips of paper in between the #2 and main fold rolls & adjusting the #2 gapset knobs), then

#3 fold roll to #2 fold roll(strips of paper in between the #3 and #2 fold rolls & adjusting the #3 gapset knobs), then

#4 fold roll to #3 fold roll(strips of paper in between the #4 and #3 fold rolls & adjusting the #4 gapset knobs), then

#5 fold roll to #4 fold roll(strips of paper in between the #5 and #4 fold rolls & adjusting the #5 gapset knobs.

5. Now that all of the fold roll pressures have been set properly, while holding each gapset knob so that it does not move(if the gapset knob turns, the fold roll pressures will change), turn each gapset indicator dial so that each dial is set at 1.



6. On all gapset knobs, using a 2mm allen wrench, tighten the set screws that hold the plastic binder plug so that the binder plug applies pressure to the gapset threaded rod. Tighten this set screw so that the plastic binder plug is actually “compressed” on the threads of the gapset rod threads. This step will ensure that the gapset knob does not turn as the rolls open and close as the sheets are passing through the fold roll bank.



7. Each gapset indicator dial has a label with indication of settings from 1 – 15, with an open area in which the label does not wrap around the entire ring. Turn all of the gapset knob counter-clockwise until the gapset indicates halfway in between the 1 & 15 indicators.

Do not just turn the dial indicator ring, only turn the gapset knobs!



8. While holding the gapset knob so it does not turn, tighten the elastic stop nut located in the cavity of the gapset knobs slowly to ensure that it just contacts the gapset knob. This is done using a 1/2" or 13mm nut driver. Do this for all gapset knobs.

Do not torque this nut onto the gapset knob; only tighten this nut until it just touches the gapset knob!



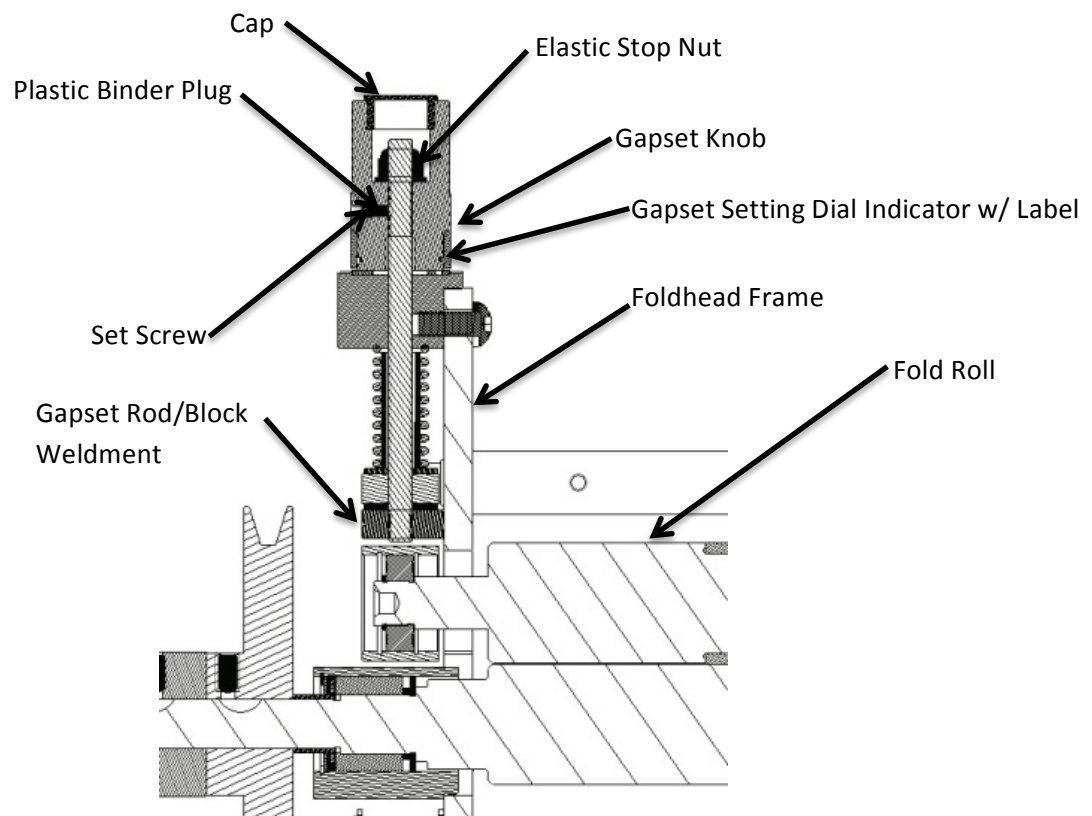
These nuts on top of the gapset knobs serve 2 purposes:

- a) With the nuts just tightened until they are just touching the gapset knobs while the gapset is set in between 1 & 15, the operator can now adjust the fold roll pressures for running a thinner stock than 20# bond such as Bible paper, etc.
 - b) If the operator is able to set the gapsets to a gapset setting greater than 15, the operator can just turn the gapset knob counter-clockwise until it contacts this nut. The operator can then turn the knob clockwise until a gapset setting of 1. The fold roll pressure for this roll should now be set for a single sheet of 20# bond paper.
9. Turn all of the gapset knobs back to 1. It is recommended that you check the fold roll pressures of all fold rolls by using 1" wide strips of 20# bond paper and doing the pull test. If the fold roll pressures remained the same with all gapset knobs set at 1, then you may proceed to the next step. If the fold roll pressures do not feel correct, it will be necessary to repeat steps 4 - 6 to properly set the fold roll pressures.
 10. The gapset knob caps can now be pressed into the top of the gapset knobs.
 11. The gapset calibration is now complete.

Recalibrating Fold Roll Pressures for Fold Roll Wear:

Safety:

- 1. It is recommended to shut incoming power off to the folder by using the main power disconnect located on the parallel unit or disconnecting power to the machine by unplugging it from any/all power source(s).**
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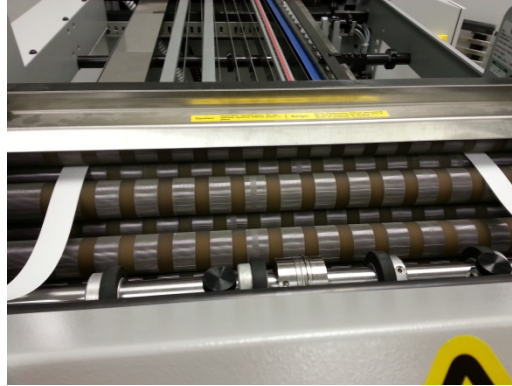


Adjusting fold rolls due to normal wear and tear on the folder is common. Recalibrating the fold rolls for this is very easy.

1. Remove plastic caps from the top of all of the gapset knobs.
2. Loosen the nuts in all of the gapset knob cavity using a ½" or 13mm nut driver.
3. Place (1) 1" wide strip of 20# bond paper towards the outer portion of the main and #1 fold rolls ensuring that the paper is making full contact with the urethane bands of the fold rolls.

As you place each strip of paper into the proper fold rolls that you are setting the gapsets for, it is helpful to turn the gapset knob counter-clockwise until the strip of paper is being held lightly by the fold rolls.

- While placing the strip of paper on the operator side of the fold rolls, adjust the #1 gapset knob on the operator side.
- While placing the strip of paper on the non-operator side of the fold rolls, adjust the #1 gapset knob on the non-operator side.



4. Calibrating the fold roll gap/pressure.

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- b) After feeling the pressure on the strip of paper on the operator side, gently pull on the strip of paper on the non-operator side and feel the amount of pressure the fold rolls are applying.
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#3 fold roll to #2 fold roll(strips of paper in between the #3 and #2 fold rolls & adjusting the #3 gapset knobs), then

#4 fold roll to #3 fold roll(strips of paper in between the #4 and #3 fold rolls & adjusting the #4 gapset knobs), then

#5 fold roll to #4 fold roll(strips of paper in between the #5 and #4 fold rolls & adjusting the #5 gapset knobs.

- 5. Now that all of the fold roll pressures have been calibrated properly, while holding each gapset knob so that it does not move(if the gapset knob turns, the fold roll pressures will change), turn each gapset indicator dial so that each dial is set at 1.



It is possible that you may have to turn the gapset knob to have the room to tighten this set screw on some of the gapset knobs. If you must turn the gapset knob to tighten this set screw, after you tighten this set screw as described, ensure that you turn the gapset knob back to a setting of 1.

6. Each gapset indicator dial has a label with indication of settings from 1 – 15, with an open area in which the label does not wrap around the entire ring. Turn all of the gapset knob counter-clockwise until the gapset indicates halfway in between the 1 & 15 indicators.

Do not just turn the dial indicator ring, only turn the gapset knobs!



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 - b) If the operator is able to set the gapsets to a gapset setting greater than 15, the operator can just turn the gapset knob counter-clockwise until it contacts this nut. The operator can then turn the knob clockwise until a gapset setting of 1. The fold roll pressure for this roll should now be set for a single sheet of 20# bond paper.
8. Turn all of the gapset knobs back to 1. It is recommended that you check the fold roll pressures of all fold rolls by using 1" wide strips of 20# bond paper and doing the pull test. IF the fold roll pressures remained the same with all gapset knobs set at 1, then you may proceed to the next step. If the fold roll pressures do not feel correct, it will be necessary to repeat steps 4 - 6 to properly set the fold roll pressures.
 9. The gapset knob caps can now be pressed into the top of the gapset knobs.
 10. The gapset calibration is now complete.

Setting of Gapset Knobs for the operation of the folder:

Proper setting of each gapset is determined by the least amount of sheet thicknesses passing thru each nip between the different fold rolls.

For instance, if you are folding a sheet of 20# bond, and the least amount of sheet thicknesses of passing thru the #1, #2 & #3 rolls was 1, and the least amount of sheet thicknesses of passing thru the #4 was 2, and the least amount of sheet thicknesses of passing thru #5 was 4, then you would set the gapset knobs for the #1, #2 & #3 rolls at 1, the #3 & #4 rolls at 2, and the #5 roll at 4.

For thicker and thinner stocks than the 20# bond, set the gapsets as you would for 20# bond.

- a) If you notice pressure marks or sever cracking on the sheet, reduce the amount of fold roll pressure of the proper fold roll by rotating the gapset knob clockwise.
- b) If you notice that the sheet is stumbling as it passes thru the fold bank or the fold is not crisp/tight enough, increase the amount of fold roll pressure of the proper fold roll by rotating the gapset knobs counter-clockwise.