



MATHIAS BÄUERLE

Mathias Bäuerle GmbH · Gewerbehallestraße 7-11

D-78112 St.Georgen · Telefon (07724) 882-0 · Telefax (07724) 882-111

Internet: <http://www.mbfold.de> · E-mail: center@mbfold.de

GATE FOLD PLATE FFT

Operator's Manual

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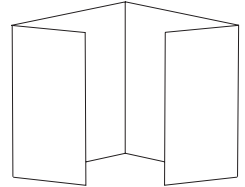
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GATE FOLD PLATE FFT

General

A parallel fold system with 3 standard fold plates and one gate fold plate is needed for making a gate fold with 3 folds.

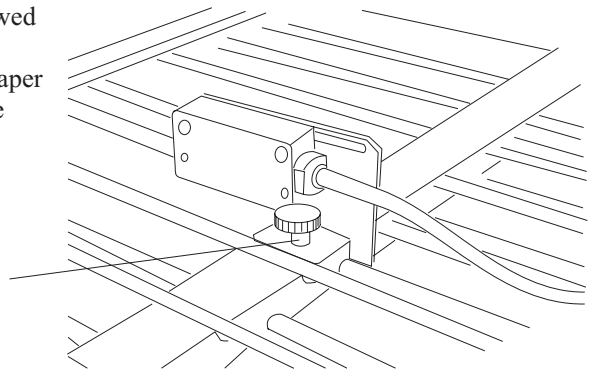
The gate fold is always made in fold plates 1, 3 and 4 while the gate fold plate is in position 4.



Always turn off the main switch before installing resp. removing fold plates. Inserting or pulling the plugs at the fold plates with the main switch on may damage electronic components!

The photodetector must be screwed to the paper stop of fold plate 3. If there is not yet a hole in the paper stop, an M4 tapped hole must be added.

M4 tapped hole



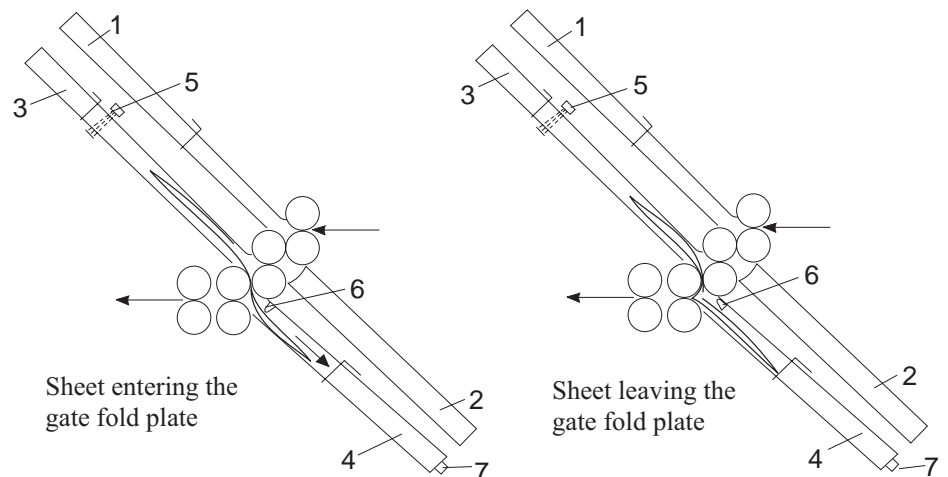
Functional Description

Contrary to the standard fold plates, the gate fold plate (4) is equipped with movable deflectors (6) across the whole width of the fold plate. This is to prevent that folds made in fold plates 1 and 3 are opened again.


The impulse needed for triggering this mechanism is generated by a photodetector (5) mounted on the paper stop of fold plate no. 3.

It can be set by means of a potentiometer (7).

Make the setting in such a way that the deflector moves forward at the right moment before the third fold is made, thus preventing the upper folded-in panel from being opened. The deflector remains in this position until the folded-in panels are gripped by the fold rollers and the third fold is made.



Setting the Fold Lengths

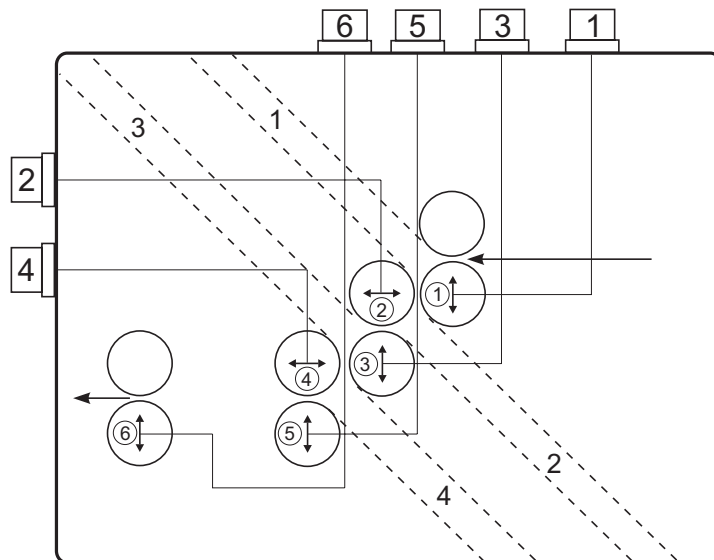
- Turn off the main switch.
- Remove fold plate 4 (standard fold plate).
- Turn on the main switch.
- Press key  and enter the fold lengths:
 - Fold plate 1: $\frac{1}{4}$ length of unfolded sheet
 - Fold plate 2: "0" - fold plate is closed by deflector
 - Fold plate 3: $\frac{1}{2}$ length of unfolded sheet
 - Fold plate 4: is not set, because this position will later be occupied by the gate fold plate

Setting the Gap between the Fold Rollers

To get a sharp fold and to avoid box folds, accurate setting of the fold roller gap is very important.

Example: 80 GSM, offset paper:

Roller 1:	0-position	1	0.00 mm
Roller 2:	0-position	2	0.00 mm
Roller 3:	1-fold paper thickness	3	0.10 mm
Roller 4:	1.5-fold paper thickness	4	0.25 mm
Roller 5:	4 to 10-fold paper thickness	5	0.55 mm
Roller 6:	min. 10-fold paper thickness	6	1.00 mm






Checking the Fold Lengths in Fold Plates 1 and 3

To check the fold lengths in fold plates 1 and 3, make the first folds *without* fold plate 4 and *without* the gate fold plate. The sheets drop out of the folder in position 4.

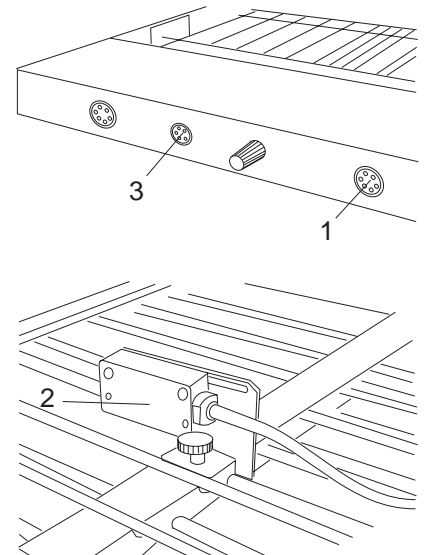


Always turn off the main switch before removing the fold plates!


- Set folding speed  to 3 - 4.
- Start the machine by pressing keys 
- Make some trial folds.
 -  If a box fold occurs when making the first fold, fold roller 5 is set too tight. Relieve the pressure and try again.
- Do not insert the gate fold plate until the fold lengths are correct.

Inserting and Connecting the Gate Fold Plate


- Turn off main switch.
- Insert the gate fold plate in position 4.
- Insert the plug in the right socket (1) of the gate fold plate.
- Attach the photodetector (2) to the stop of fold plate 3. To be able to do this, pull out the plug on fold plate 1 and pull back fold plate 1 somewhat.
- Insert the plug of the photodetector cable into the center socket (3) of the gate fold plate.
- Move fold plate 1 back to its original position and insert the plug.



Setting the Fold Length for the Gate Fold Plate

- Turn on the main switch.
- Press key  and enter $\frac{1}{4}$ length of the unfolded sheet.


Sample Folds and Correction of Malfunctions

- Start the machine by pushing keys 
- Make some sample folds.

The following malfunctions may occur:


- **The upper folded panel (first fold) is opened.
The lower folded panel (second fold) is folded again.
The lower folded panel (second fold) is folded back over itself.**

Cause: The deflector bracket is engaged too late and therefore does not exert pressure on the folded upper panel.

Remedy: Turn the potentiometer of the gate fold plate somewhat counter-clockwise. 
This reduces the time between recognition of the paper by the photodetector and the engagement of the deflector. Repeat this in small steps until the folded sheet remains closed.

- **The upper folded panel (first fold) has an additional fold.**

Cause: The deflector is engaged too early.

Remedy: Turn the potentiometer of the gate fold plate somewhat clockwise. 
This increases the time between recognition of the paper by the photodetector and the engagement of the deflector. Repeat this in small steps until the folded sheet remains closed.

- **The sheet does not hit the fold plate stop.**

Cause: Timing of the deflector incorrect.

Remedy: Readjust the timing of the deflector by means of the potentiometer.

- **The sheet remains in the fold unit.**


Cause: Insufficient pressure of the fold rollers.

Remedy: Reduce gap of roller 4 (e.g. from 0.25 to 0.15).

- **Potentiometer of gate fold plate in upper or lower end position.**

Cause: Folding speed too high.

Remedy: Reduce folding speed - set potentiometer to "3" 

 As soon as the folding speed is changed, the trigger moment for the deflector at the potentiometer of the gate fold plate must also be changed.

Further information about automatic setting via the operator panel is contained in the Operator's Manual.