

## 1. Contents

 English

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## 2. Safety instructions

	<p>The Creasing &amp; Perforating Machine MCM-48 may only be operated by professional and well trained operators.</p> <p>The machine connections (cables) are to be laid in such a way as not to represent a tripping hazard.</p> <p>A trained customer services technician is to be called in whenever important adjustments or repairs become necessary, particularly to the electrical equipment.</p> <p>For safety reasons the main plug must always be pulled out during all repair and maintenance work.</p> <p>For functional reasons some moveable parts may be touched while the machine is running. A tolerable risk of getting the fingers caught exists at the infeed side using different feeders.</p> <p>A tolerable risk of taking in hair and ties exists in the sector of the transport belts. For safety reasons we suggest to wear a hair protecting net and to not wear ties, finger rings and wide clothing.</p> <p>In an emergency case the machine can be switched off by the red "emergency stop"-button.</p>
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## 3. Description of the creasing machine MCM-48

Multigraf has been manufacturing the high performance creasing machine DCM-45, a high capacity machine in the upper price range. The logic result was, to also build a cheaper machine for small printer, copy shops and digital printers. Still, the key features of the bigger machine should be included in this model. The result of it is the new table top creasing machine MCM-48.

Cam creasing machines as they are provided by different manufacturers are very slow. The requirement for higher performing machines has increased in some major markets. The answer to this is this new creasing machine MCM-48 in combination with the tools from Tech-ni-Fold. As already mentioned, it has been designed for smaller enterprises.

Up to now it was not possible to crease any digitally printed paper on a rotary system and avoid cracking. Tech-ni-Fold is the only company in the world which is capable of providing creasing tools which can handle digitally printed jobs on a rotary system in a way that the paper does not crack during the folding process. Of course this machine can not only handle digitally printed paper stocks.

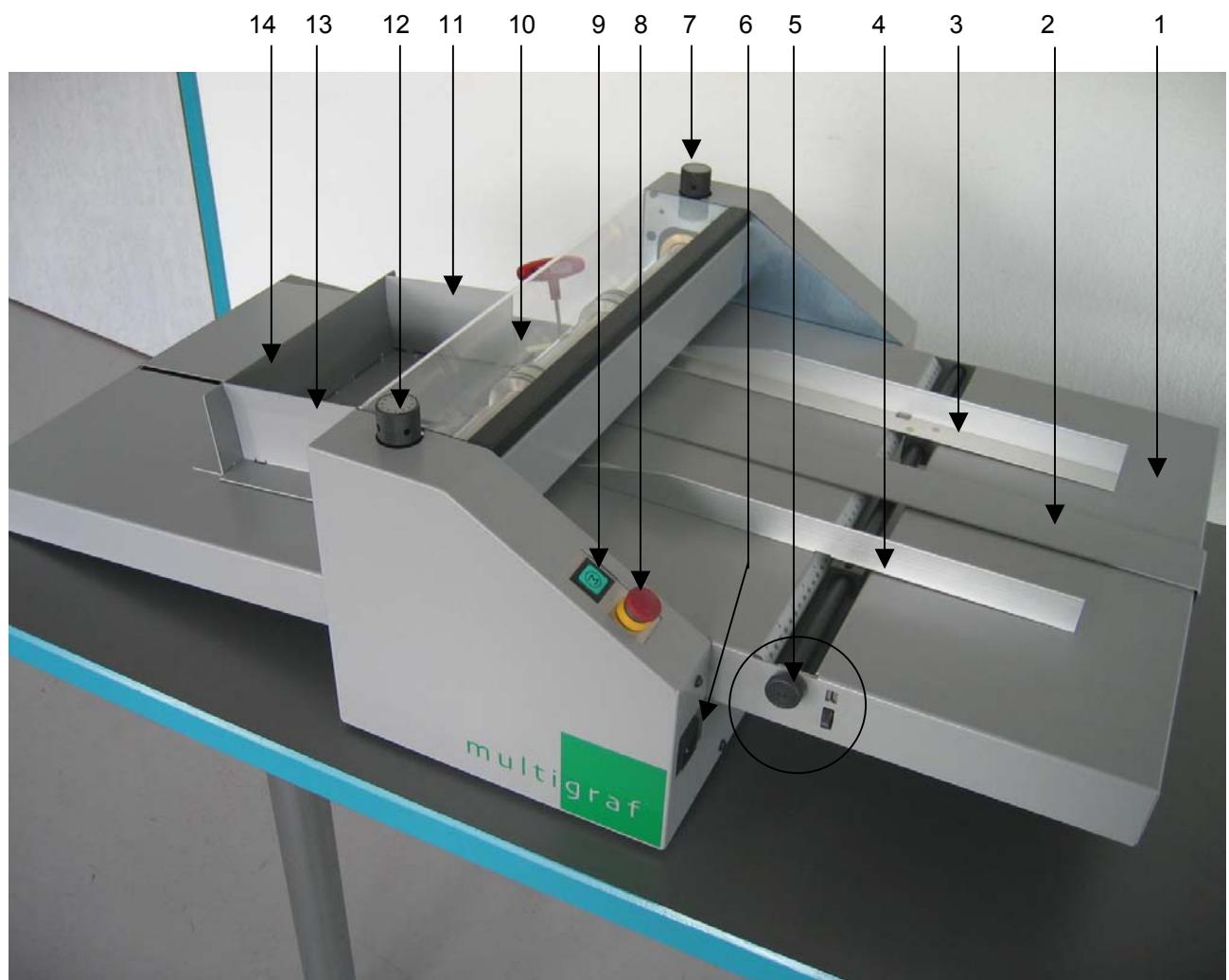
The shafts can be adjusted individually to different jobs. If more pressure is required on one side, it can be adjusted. The use of micro-perforating and slitting tools is also possible at any time. The MCM-48 is equipped with a simple hand feeding device.

The infeed width is 480 mm.

## 4. Operating instructions

### 4.1. Controls / designation of parts

1	Hand feeder	8	Emergency stop button
2	Adjusting plate	9	ON/OFF button
3	Infeed side guide R	10	Plexi cover
4	Infeed side guide L	11	Delivery side guide R
5	Sheet infeed adjustment	12	Shaft adjustment knob L
6	Electric connector	13	Delivery side guide L
7	Shaft adjustment knob R	14	Paper stop plate



## 4.2. Installation of the manual feeder and the delivery tray



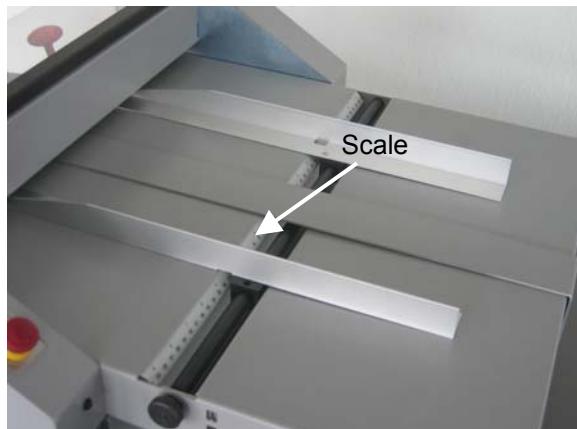
- Introduce the two tongues on the delivery into the slots on the rear of the body of the creasing machine. Fold it down to its resting position on the table.

ATTENTION: The delivery tray must lay on the table and not just hang in the air by its own weight.

- Mount the two magnetic side guides (11, 13).

## 4.3. Adjusting the manual feeder

### 4.3.1. Sheet size adjustment

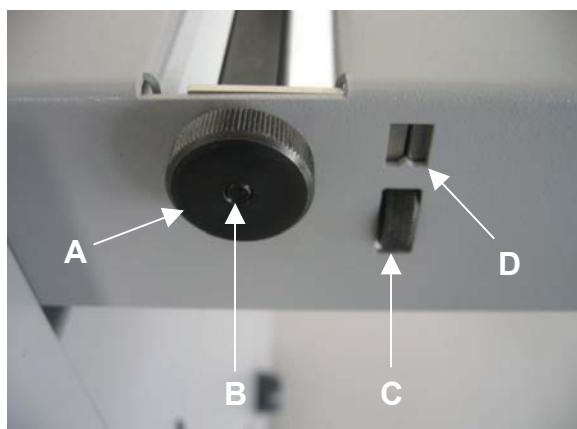


Adjust the side guides on the feeder according to the paper size. Use the millimetre or inch scale which is applied to the feeder.

It is recommended to always run the sheet in the centre of the machine. All adjustments should be done from the centre.

We recommend to position the side guides as closed to the paper as possible. The paper must be fed straight into the machine, without skewing.

### 4.3.2. Adjustment of the paper infeed



The manual feeder is equipped with a parallel side and a skew adjustment.

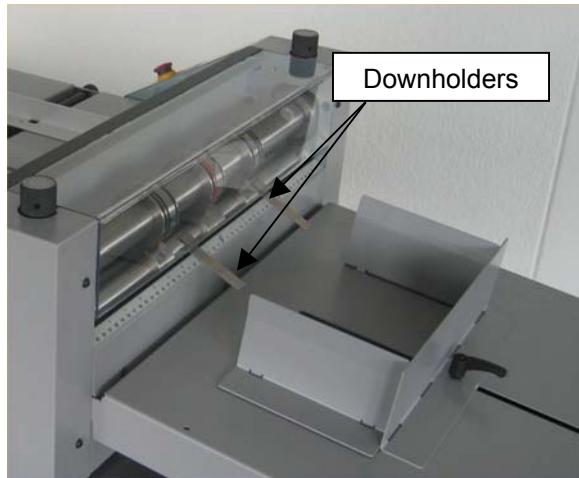
#### Parallel side adjustment

Move the paper pile into the desired direction by using the adjustment screw (A). The indication bolt (B) shows the operator the position of the infeed channel. Bolt is parallel with adjustment screw = centre.

#### Skew adjustment

Adjust by using the screw (C) to move the infeed channel in the desired direction. The indicator (D) shows the actual position.

#### 4.3.3. Adjustment of the delivery section



##### Paper downholders

Two downholders for the delivery side are supplied with every machine. They have to be fitted to the plexi cover as shown on the picture to lead the paper safely into the delivery tray.

Part number: 245.000.672

##### Delivery side guides

The delivery side guides and the paper stop plate need to be adjusted according to the paper size.

#### **4.4. Removal and fitting of the creasing shafts**

##### 4.4.1. Removal of the creasing shafts



##### **Step 1**

Release lock screw on creasing shaft.

##### **Step 2**

Slide the bearing to the left and move the shaft to the right into the gap.

##### **Step 3**

Remove the shaft by moving it out to the left.

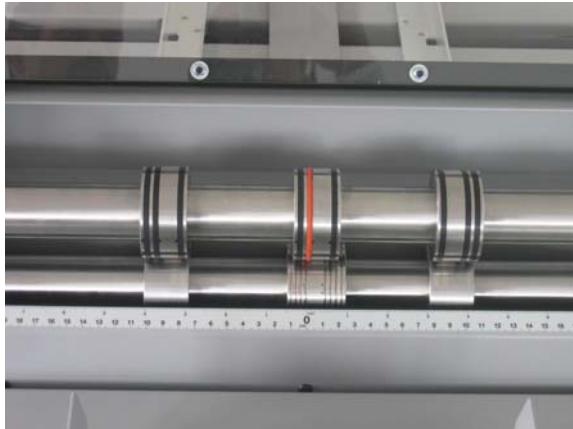
##### 4.4.2. Fitting of the creasing shafts

Slide the tools carefully onto the shafts. Be aware of the right order of the tools. We recommend a sample of the requested job is placed next to the shafts to simplify this adjustment. To achieve a high level of accuracy during production it is essential to position the guide wheels correctly according to the paper size. Please also see section 4.5 therefore.

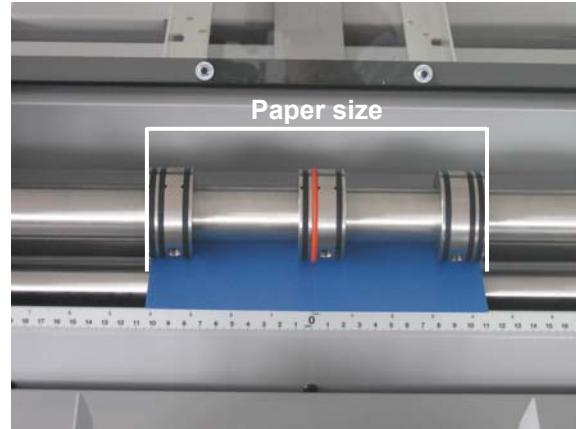


Refit the creasing shafts in the opposite order as described in section 4.4.1.

#### 4.5. Setting of the guide wheels



The guide wheels need to be positioned according to the paper size. They have to grip the paper equally on both sides of the sheet.

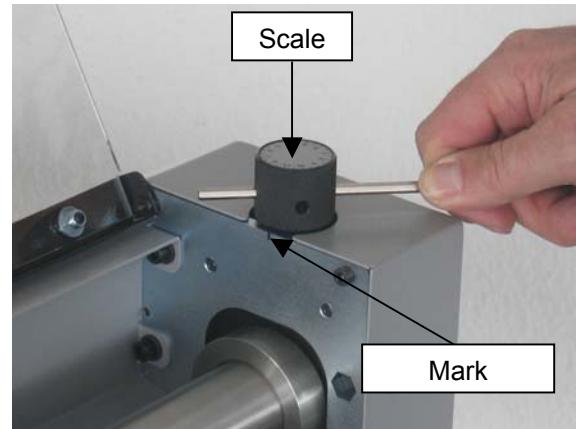


The correct positioning of the guide wheels is essential to achieve a high accuracy on the jobs to be run through the machine.

#### 4.6. Adjustment of the shaft pressure



The adjustment knobs can be adjusted manually ...



... or by using the Allan key no. 4 supplied with every creasing machine.

The pressure of the shafts needs to be adjusted according to the material to be run on the machine. Use therefore the scale on the adjustment knobs and the mark on the side frames of the machine (see above).

Basic value 0 = 80 gsm.

#### 4.7. Tri-Creaser tools



For the exact use of the Tri-Creaser tools and the micro-perforating devices we refer to the separate operating manuals supplied with every tool.

In particular, the use of the right creasing ribs (red, blue or yellow) is essential to obtain a high quality crease.

The cutting and slitting devices are also supplied with separate operating manuals.

Cutting and slitting tools are also available.

#### 4.8. Mounting of the stripper finger bar for perforation (option)

To avoid thin paper curling around the micro-perforating tools, the stripper finger bar needs to be mounted to the machine. This is NOT a standard equipment of the MCM-48 and needs to be ordered from your supplier separately (part number 245.100.072).



Mount the stripper finger bar according to steps 1-3. Put the stripper fingers into position closed to the perforating blade. For additional orders see section 5.

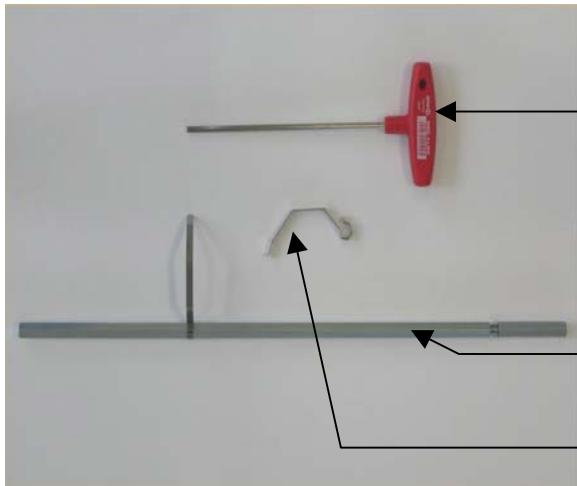
#### 4.9. Switch the machine ON



Switch the motor on with motor switch (9).

Use the emergency stop button (8) to immediately stop the machine.

## 5. Operating tools, accessories



An Allan screw driver nr. 4 is supplied with every creasing machine MCM-48 to operate the shafts.

050.000.310 Allan screw driver, nr. 4

The stripper finger bar avoids paper curling around the micro-perforating tools. It has to be ordered separately and does NOT belong to the standard equipment of the machine.

245.100.072 Stripper finger bar complete, including 2 stripper fingers.

245.000.677 Stripper finger, spare

## 6. Maintenance

- From time to time remove all residues of paper, powder or colour from the creasing shafts and guide rollers, using regenerator item no. 210.000.272.
- In line with the use of the machine, from time to time apply some oil to the bearings. Occasional lubrication of the gearwheels of the creasing shaft bushings will not only increase the life of these precision gearwheels but it will also ensure quiet operation of the machine.
- We recommend that any other repair or maintenance work be carried out only by a trained Customer Service technician.



## 7. Technical data

	Paper weight *	Minimum format	Maximum format
Models 245.702 / 703	80-500 g/m <sup>2</sup>	80 x 100 mm	480 x 500 mm

	Weight	Dimensions	Electricity	Fuse protection
Model 245.702	41 kg	1100x605x300 mm ( L x W x H )	230 V, 50 Hz 115 V, 60 Hz	6 A
Model 245.703				

Sound pressure level according to DIN 45635 part 27 does not exceed 82 dB (A).

\* The **thickness of the material (paper weight)** depends very much on the quality, on the paper grain and on the climatical conditions where the machine is being used. The thickness of the material can therefore vary slightly from the values indicated above.

## 8. Troubleshooting

Problem	Cause	Remedy
Machine does not work.	<ul style="list-style-type: none"><li>○ Emergency stop has been activated.</li><li>○ There is no power at the power outlet.</li><li>○ Cable disconnected.</li></ul>	<ul style="list-style-type: none"><li>○ Deactivate Emergency stop.</li><li>○ Check power supply and fuses of the building.</li><li>○ Check wire connections.</li></ul>
Paper is not creased accurately.	<ul style="list-style-type: none"><li>○ Bearings have not been put into place correctly, shaft can move horizontally.</li><li>○ Infeed is incorrectly set.</li><li>○ Guide wheels are incorrectly positioned.</li></ul>	<ul style="list-style-type: none"><li>○ Check the bearings and move them into place if necessary.</li><li>○ Check the paper infeed and apply adjustments, if necessary.</li><li>○ Infeed a sheet manually and check the positions of the guide wheels. Alter if necessary.</li></ul>
Paper is still cracking after being creased once.	<ul style="list-style-type: none"><li>○ Wrong creasing ribs applied to the tools.</li><li>○ Not enough pressure on the shafts.</li><li>○ Paper or cardboard is very thick.</li></ul>	<ul style="list-style-type: none"><li>○ Use the correct creasing ribs according to the paper stock.</li><li>○ Adjust the pressure of the shafts, to increase pressure.</li><li>○ We recommend double creasing on the same line in two (2) runs. Use less pressure on the first, more or maximum pressure on the second run to treat the paper grain smoothly.</li></ul>
Perforation is too strong, it cuts the sheet	<ul style="list-style-type: none"><li>○ Wrong PVC-sleeve applied.</li><li>○ Too much pressure on the shaft.</li><li>○ Wrong perforating blade applied.</li></ul>	<ul style="list-style-type: none"><li>○ Change PVC-sleeve (black for 25 and 52 TPI, blue for 17 TPI perforating blades).</li><li>○ Reduce pressure on the shaft.</li><li>○ Change perforating blade (17, 25 or 52 TPI).</li></ul>

