

BOGRAMA AG

Bochsler Grafische Maschinen

OPERATING INSTRUCTIONS

Automatic Cut-and Punching-Machine



for Machine Types

BS MULTI 450 S

BS MULTI 750 S

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Transport, installation and maintenance of the machine

Transport

The machine is shipped already completely assembled.
Loose Parts (tools, Operation tools and other auxiliary accessories) are packed separately.
Select carefully packaging material!

Set-up

In order to bring the machine to its appointed location, it is possible to drive it with a lifter on rollers in order to shift it easily. If the floor is uneven, the machine should be set-up by the side pedestals lengthwise and crosswise with a water scale.

The electrical connection is wired for a voltage of 400 Volts. The connecting cable (about 5 meters) is mounted on the switchbox with a Cekon plug.

In case of wrong motor rotation reverse polarity.

Maintenance

The maintenance (greasing) covers only some spots on the machine. The column sleeves must be greased with a few drops of nonresinous oil twice (2 x) weekly. Both upper bushings of the eccentric rod should be greased monthly (press grease).

The side-bracket bearings of the eccentric bearing shaft must be greased every half-year.
All other spots of the shaft are filled with closed bearings with long lasting grease.

When the machine is delivered the pneumatic maintenance unit is filled with oil. Occasionally, the oil level must be checked and if needed the oil has to be refilled. Also the water separator of the maintenance unit should be checked and emptied when needed.

Work pressure: 7 bar

Coupling Wear:

The coupling running life is about 1 year till adjustment. If the hole-punching clamps do not remain in their highest position, the air space in the coupling must be readjusted. The coupling is worn out, when the last graduation of the scale has been reached.

Consumables:

Oil to lubricate the 4-column-guide:

ISO VG68, CGLP68

Grease for the bearings:

NLGI-2, DIN K2 / K-30

Operation - Control



Nr	function
1	main switch ON / OFF
2	automatic ON / OFF
3	photocell ON / OFF
4	release for MBO machine in front
5	jump default for the following machine
6	release of the following machine
7	release for the machine in front
8	external plug 230V
9	external plug 400V
10	power plug of pneum.holepunch unit
11	release of MBO-following machine

Control Pedestal - Operation Part A

Control- Drive – Adjust



Nr	function	description
1	Control circuit ON	Control circuit power ON
2	Control circuit OFF	Control circuit power OFF
3	Main drive	Power ON / OFF from main drive motor
4	Belt drive	Power ON / OFF from belt drive motor
5	Adjust	Allows machine to run with open guards
6	Singel stroke	Manual hole-punching pulse at set-up
7	Side Stopp limit	Aallows format set-up with pulled-up side stop limit
8	Stop limit	Allows lowering of stop limit
9	Belt at set-up	Belt runs at lower speed
10	Belt speed	Potentiometer to regulate belt speed
11	Emergency stop	Power OFF

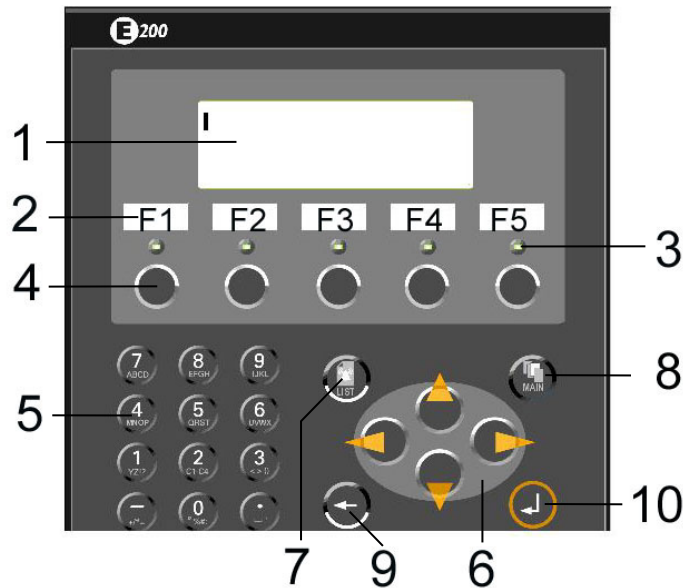
Control Pedestal - Operation Part B

Function Keys

Function Keys F1 F5 / Program selection of required function to set-up or change time.
Selected function appears on screen.

F1	Cycle Set-up Time:	Clutch, Inspection, Tape Drive
F2	Cycle Set-up Time - Stop Limit:	Stop Limit, Side Stop Limit (Transfer – Option)
F3	Item Counter:	Item Counter /Order Item Counter /Day Item Counter /Jump Feed Power Display
F4	Program Memory:	Memory space for repeated products (25 memory storage spaces)
F5	Service:	Hours of Operation Counter Cycle Counter/Coupling

Operation Index E 200



- 1 **Display Reading**
- 2 **Classification Field**
- 3 **LED**
- 4 **Function Keys** F1..... F5
- 5 **Numerical Keys** 0.....9
- 6 **Cursor Key** Arrow left = back / Arrow right = forward
- 7 **Empty**
- 8 **Menu Key** Main Program
- 9 **Cursor Reset** back
- 10 **Enter Key** **Save Key**

Program Control

Using Operation terminal E 200 it is possible to set-up a customized program, change an already existing program, save a completed program, or bring up an available program.

All required display readings for a format can be requested using function keys F1 – F4. After each function key use, a subsequent function appears. For function verification see sheet 9 till 13.

It is possible to set-up 25 different programs (orders), i.e. to save them and bring them up according to requirement.

Single values can be changed or saved, whether the machine is running or at a standstill.

When switching off the power control or the main switch, program numbers and values are still stored in memory. When switching the machine back on, the last program that was on the machine will be activated.

With each requested program selection all times can be changed. The times are accepted and saved only when key 10 (Enter) is pressed.

The function "Tape Drive" under function key F1 indicates Actual-and-Projected. The tape speed transmitted by the corresponding format can be entered under Projected. When pressing key 10 (Enter) the value under the respective program number is saved.

Important:

Prior to changing times or units in a new program selection number, a new program number must be saved in memory, otherwise the values of the requested program will be written over.

Program Set-up

(step 1)

- ◆ Press function key F4
- ⇒ On the display appears – Program selection Nr. 1
- ◆ Using key 5 enter number 2
- ◆ Press key 10 (Enter)
- ⇒ You have now applied program selection Nr. 2, however with the time values of program Nr. 1
- ◆ Press function key F1
- ⇒ On the display appears - Cycle Duration Setting – Manual Operation

(step 2)

- ◆ Press again function key F1
 - ⇒ On the display appears Coupling – Delay Time
 - ◆ Using key 5 enter the required value
 - ◆ Press key 10 (Enter)
- ⇒ The first value is entered and saved
- ⇒ Program all time values and Function F1 and F2 in the same way
- ⇒ If all -or some values- are entered under function keys F1 and F2:

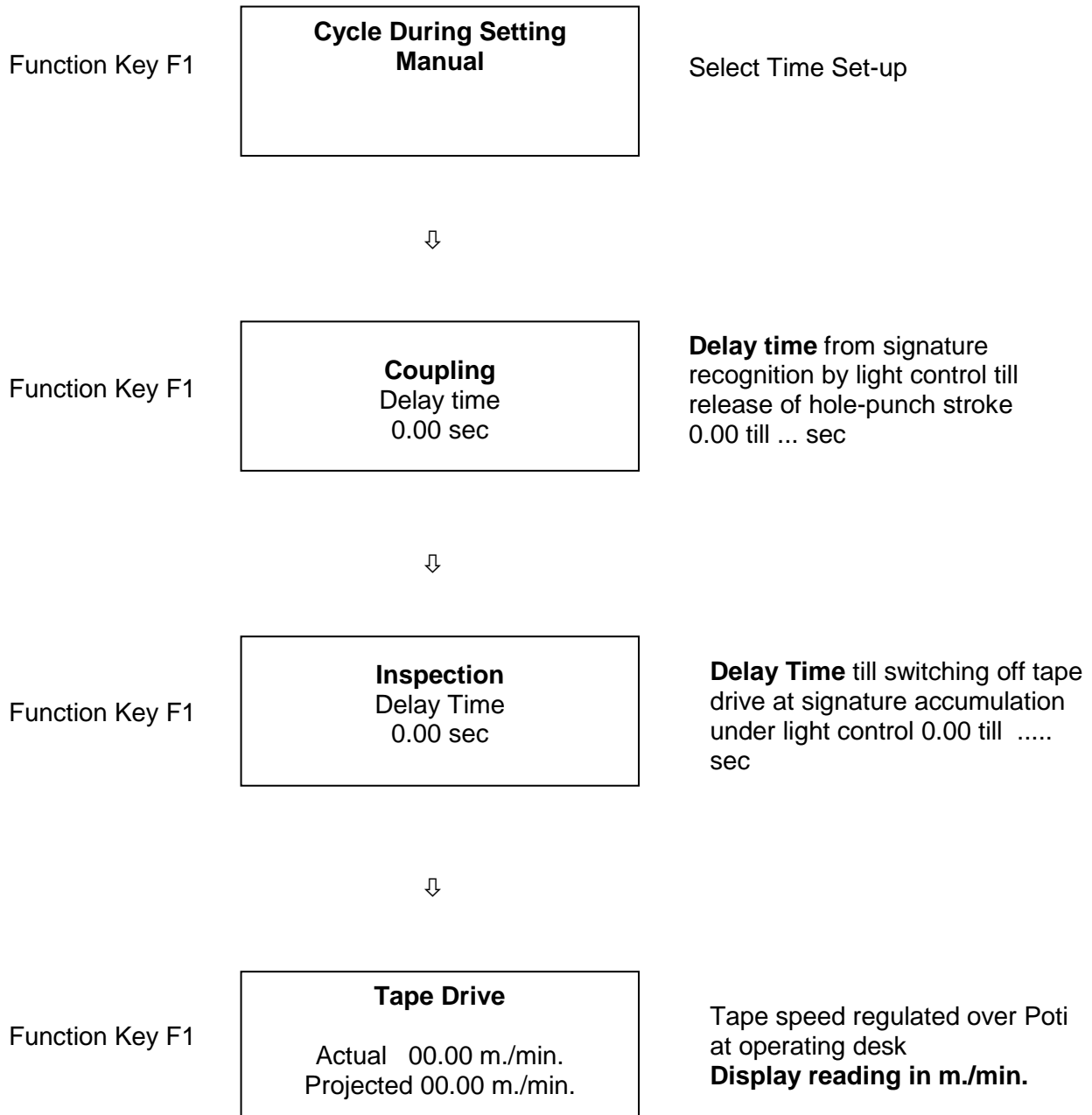
(step 3)

- ◆ Press function key F4
 - ◆ Using key 5 enter again number 2 (for Program 2)
 - ◆ Press key 10 (Enter)
 - ◆ Using key 6 position the cursor (right arrow) on format
 - ◆ Using key 5 enter format length (e.g. 12.0)
 - ◆ Using key 6 move the cursor (right arrow) further
 - ◆ Using key 5 enter the format width (e.g. 30.3)
 - ◆ Press key 10 (Enter)
- ⇒ All given time values, format size, and program number (e.g. under 2) are stored in memory.

Program Change – change single time value

- ◆ Call required value with function key F1 or F2
- ◆ Using key 5 enter required value
- ◆ Press key 10 (Enter)
- ⇒ The changed value is saved; the function works with the new value
- ⇒ Changed values will be automatically stored in memory under the opened program selection number.

Display Reading F1



Extended time set-up with function key **F2**
as well as (option-transfer jump) with function key **F3**

Display Reading F2

Function Key F2	<p>STOP LIMIT Delay time 0.00 sec</p>	<p>Delay time of end stops to release the product. 0.00 till ... sec.-</p>
	↓	
Function Key F2	<p>STOP LIMIT Operating Time Duration 0.00 sec</p>	<p>Operating Time Duration of return stop till release of signature . 0.00 till ... sec.-</p>
	↓	
Function Key F2	<p>SIDE STOP LIMIT Delay Time 0.00 sec (Time value must always be lower than coupling time F1)</p>	<p>Delay Time till side alignment of signature before hole-punching e.g. trimming 0.00 till ... sec.</p>
	↓	
Function Key F2	<p>SIDE STOP LIMIT Operating Time Duration 0.00 sec</p>	<p>Operating Time Duration of side stop limit till stop of signatures till hole-punching e.g. trimming 0.00 till sec</p>
	↓	
Function Key F2 (Option)	<p>TRANSFER Dealy Time 0.00 sec.</p>	<p>Delay Time of swivel sheet till transfer of products 0.00 till sec.</p>
	↓	
Function Key F2 (Option)	<p>TRANSFER Operating Time Duration 0.00 sec.</p>	<p>Operating Time Duration of swivel sheet till the shavings underneath are away. 0.00 till sec.</p>

Display Reading F3

Function Key F3	<p>ITEM COUNTER Unit / Order 000 000 Unit</p>	Summation meter for unit per order with reset on 0 – (by overwriting with 0)
	↓	
Function Key F3	<p>ITEM COUNTER Unit / Day 000 000 Unit</p>	Counter for unit per day with reset on 0 – (by overwriting with 0)
	↓	
Function Key F3	<p>ITEM COUNTER Jump Feed 00 unit</p>	Counter for jump feed unit count (Preselection e.g. 25 pieces – upwards count)
	↓	
Function Key F3	<p>JUMP SETTING Delay Time 0,00 sec.</p>	Delay Time till relais release to downstream machine 0.00 till sec.
	↓	
Function Key F3	<p>JUMP FEED Duration of Signal 0,00 sec.</p>	Time Duration of relais release to downstream machine 0.00 bis sec.
	↓	
Function Key F3	<p>POWER DISPLAY Cycles / Hour 0000 piece</p>	Reading of hourly power

Display Reading F4 and F5

Function Key F4

PROGRAM SELECTION
Nr. 1
Format 00.0 cm x 00.0 cm

Memory storage for repeated formats resp. products (25 memory spaces)



Function Key F5

SERVICE
Hours of Operation Counter
00 000 h

Counter for operation time – only with running tape drive without resetting on 0



Function Key F5

SERVICE
Cycle Counter/Coupling
0 000 000 piece

Counter for Coupling Cycles without resetting on 0

Cycle Control by Photocell

The machine cycle control is done by the photocell located in front of the punching station, that detects each single product.

All required functions are released via photocell.

All required time adjustments for the corresponding format sizes must be self-transmitted by trial. The correct time value is assessed when, in continuous operational mode, the successive signature moves about 5 – 8 cm forward to the signature already in the punching station.
(To set and save times see page 6 till 11 – Control Pedestal / Operation Part B)

It is recommended to copy the data transmitted for each product on the attached Data Sheets (Page 32 Addition)

Important:

All changed time values must be stored in memory after the set-up, so that the SPS memory bank can accept the values.

Control:

As the photocell serves at the same time as control for signatures accumulation, the control time should be set at the highest value during adjustments. Otherwise, with a time value lower than the coupling time, a tape drive switch would occur.

After adjustments, the control time can again be reduced to the minimum value.

Attention: If the machine is switched on again after a tape standstill, no signature should lie on the transition belt between photocell and hole-punching station. As the signature would have already passed the photocell, it would not trigger the hole punching; therefore causing a stop. If a signature lays under the hole-punching station, it can be released by using key "Single Stroke".

Cycle set-up times for BS MULTI

This cycle set-up times are ground parameters and not the optimum.

To reach the optimum parameters, you have to determine the parameters exactly for every job.

Belt speed (m/min.)	Controll delay time (sec.)	Clutch delay time (sec.)	End Stop limit delay time (sec.)	End Stop limit oper. duration (sec.)	Side Stop limit delay time (sec.)	Side Stop limit oper. duration (sec.)
60	0.30	0.25	0.00	0.25	0.22	0.15
70	0.25	0.20	0.00	0.20	0.17	0.15
80	0.20	0.15	0.00	0.15	0.12	0.15
90	0.17	0.10	0.00	0.12	0.09	0.10
100	0.15	0.08	0.00	0.10	0.07	0.10

Transition Belts

The belt transition is laid out in such a way that the various paper stream heights can be adjusted from 540 mm to 940 mm. (short version from 940 to 780 mm). After loosening the gripper screws on the support legs, the belt set can be swiveled to the required infeed height. Gripper screws to be tightened again well.

Maintenance of transition belts (swiveled feeding / infeed tapes / flow tapes) is limited to the actual exchange of the conveyor belts. (Tape wear)

In order to exchange the belts, the linch pins (on the service side) must be pushed on the corresponding belt rollers, so that between tape rollers and linch pins there is a gap through which the belts can be removed and also inserted. At this point the clamping pins, which are positioned in the shaft driving collars, must be released. (Pin key SW 4) After the belt exchange, position again tape rollers with the pins and tighten the clamping pins.

As products of different thickness sizes are processed in the machine, the upper belt rollers are movable height-wise. The height adjustment is done on the side bolts located on the friction bearings. The correct in-between-gap is reached, when the product can be pushed with a light pressure between the belt rollers. The upper conveyor belts can be deflected in infeed and run-out with adjustable belt roller holders, which can be changed at their adjusting angle. The pressure contact is to be adjusted so that the product is definitely driven in and out of the hole-punching station.

Conveyor Belts Sizes see page 30

BS MULTI only as Transport Extension:

When you do **not** need the machine, but do not want to take it off-line, then proceed as follows:

- | | |
|-----------------------------|--|
| 1. Lower the Stop Limit | Press down key Nr. 7 (see page 5) |
| 2. Deactivate the Photocell | Turn on the light barrier switch on the electrical box to Pos. 0 (see page 4) |

Note:

The punching stroke is not released now, but accumulation control is still active.

Tool Change

(only by combs)

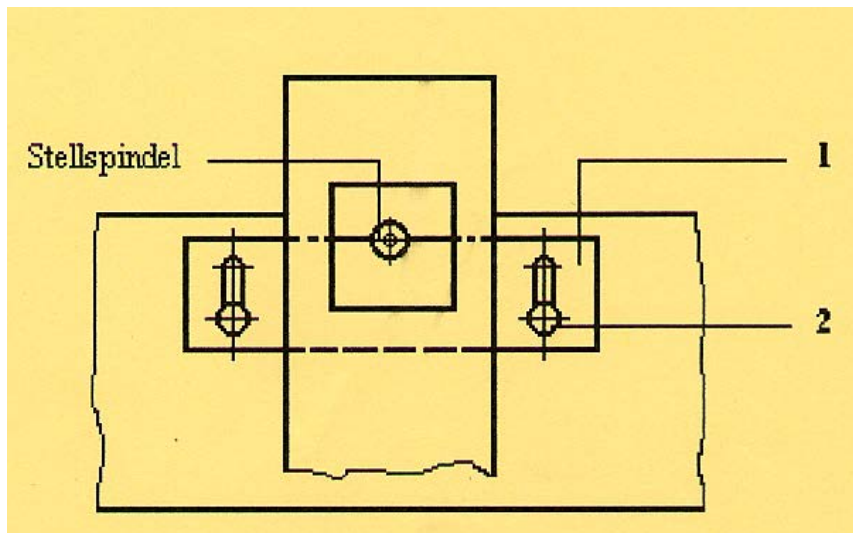
If products are worked with line perforation, edge perforation, punch hole or WIRE-O-punching, the corresponding tools (combs) should be moved from the service side to the tool carrier.

At this point **stop plate 1**, which is anchored to the service side, must be folded down after loosening both **clamping bolts 2**. Now the corresponding comb can be pushed into the tool carrier.

The comb is finely tuned by the fast-swivel of the stop plate in one of the turned annular tee-slots of the adjustable spindle, situated in the comb. Tighten again clamping screws. The comb can be fine-tuned about 5 mm right and left by turning the adjustable spindle. If the tuning space is not enough, the adjustable spindle is tuned in the next annular tee-slot.

Attention:

In tools with recessed window opening, the opening in the tool must correspond with the opening in the tool carrier when mounting. By tools disassembly, for which the back feed pile dividers go in the tool carrier, the pile dividers are to be removed first.



Adjusting and Lowering of the Clamping Bar with resharpened Tools

Clamping Bar adjustment is done as follows:

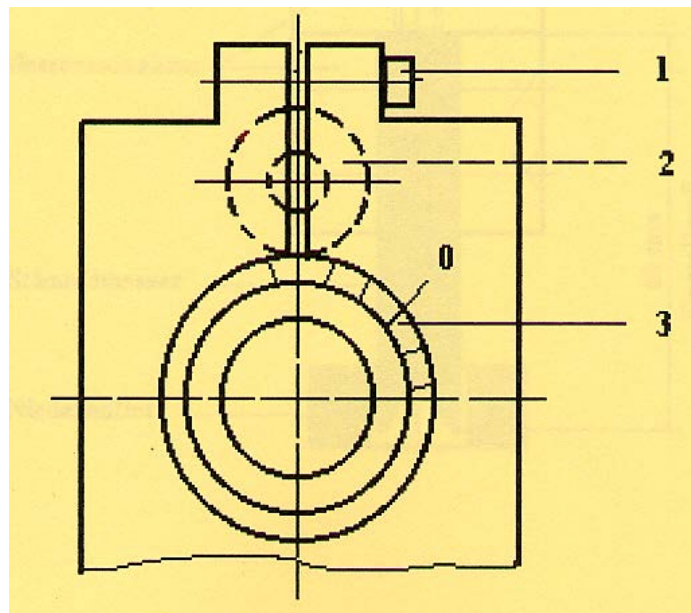
First both clamping screws 1, which are found in all upper pull rods, are opened. Afterwards, one of the hexagons 2 on the set shaft in front of the clamping bar is turned using fork spanner SW 30. The set shaft connects left and right pull rods so that both sides can be moved at the same time with an adjustment. The adjustment path can be controlled at graduated rings 3, which are in front of the pull rods. The scaling ranges from 1 to 7 mm and shows 1 mm adjustment path from scale to scale. **After completion of adjustment, clamping screws 1 are to be tightened again.**

After each fine-tuning, the machine should be rotated manually for safety in order to prevent damage to the tools in case of wrong adjustment.

Machine manual turning is done by means of the delivered hand wheel, which can be mounted on the eccentric peg found on the left hand-side of the machine.

In this case the rotary switch on electric panel automatic 0 / 1 (page 4) must be switched to 1. In this mode the electric power of the machine cannot be switched on for safety reasons.

With correct height adjustment, the product is stripped off the tool path and transported away from the tool. If the product remains hanging, the clamping bar is positioned too low.

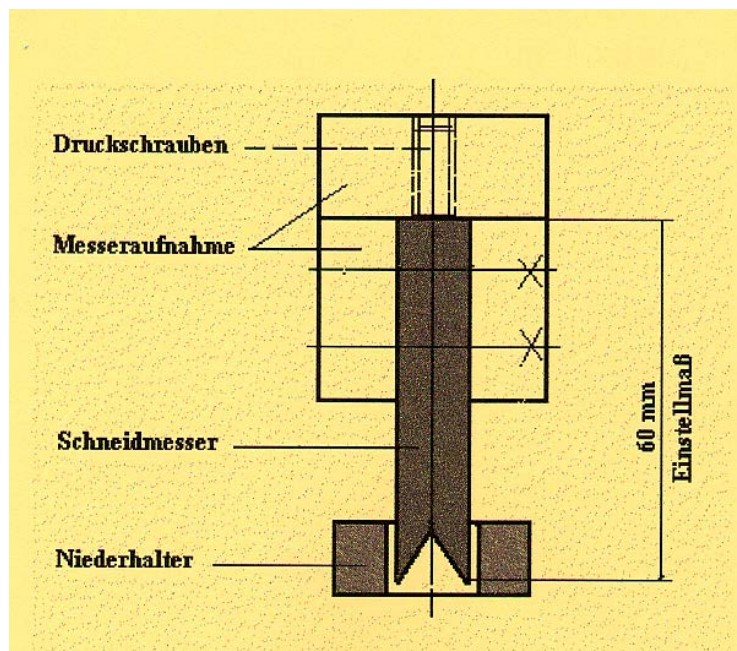


Trimming Knife Change: separation or cutout

When new trimming knives or resharpened knives are used, following must be observed:

New trimming knives have a recessed standard height from 60mm to 56mm. When inserting, the pressing screws are to be turned back in such a way that the trimming knife rests against the knife carrier.

With resharpened knives (that is shorter knives), when screwing in place the adjustment of 60mm – on the longer side of the knife – must be kept. Therefore, in the knife holder there are 5 pressing screws. All pressing screws must be pulled back in such a way that they rest against the knife acceptance unit.



Re-grinding of punching tools:

Punching knife:

Measurement "a" - Smoothing of surface; only if grooves are visible on the surface.

Measurement "b" - see measurement table (page 20)

Measurement "c" - see measurement table (page 20)

Standard knife-height is 60 to 56 mm (Blade-angle is 4 mm).
If knife is dull or the cutting-edge is damaged re-grind only the 60° blade-angle.
If knife measures below the 0.5mm to the 60mm knife-height, the knife-groove has to be re-ground.

The pusher-pins have to be shortened then by 0,5mm as well.

Upper knife:

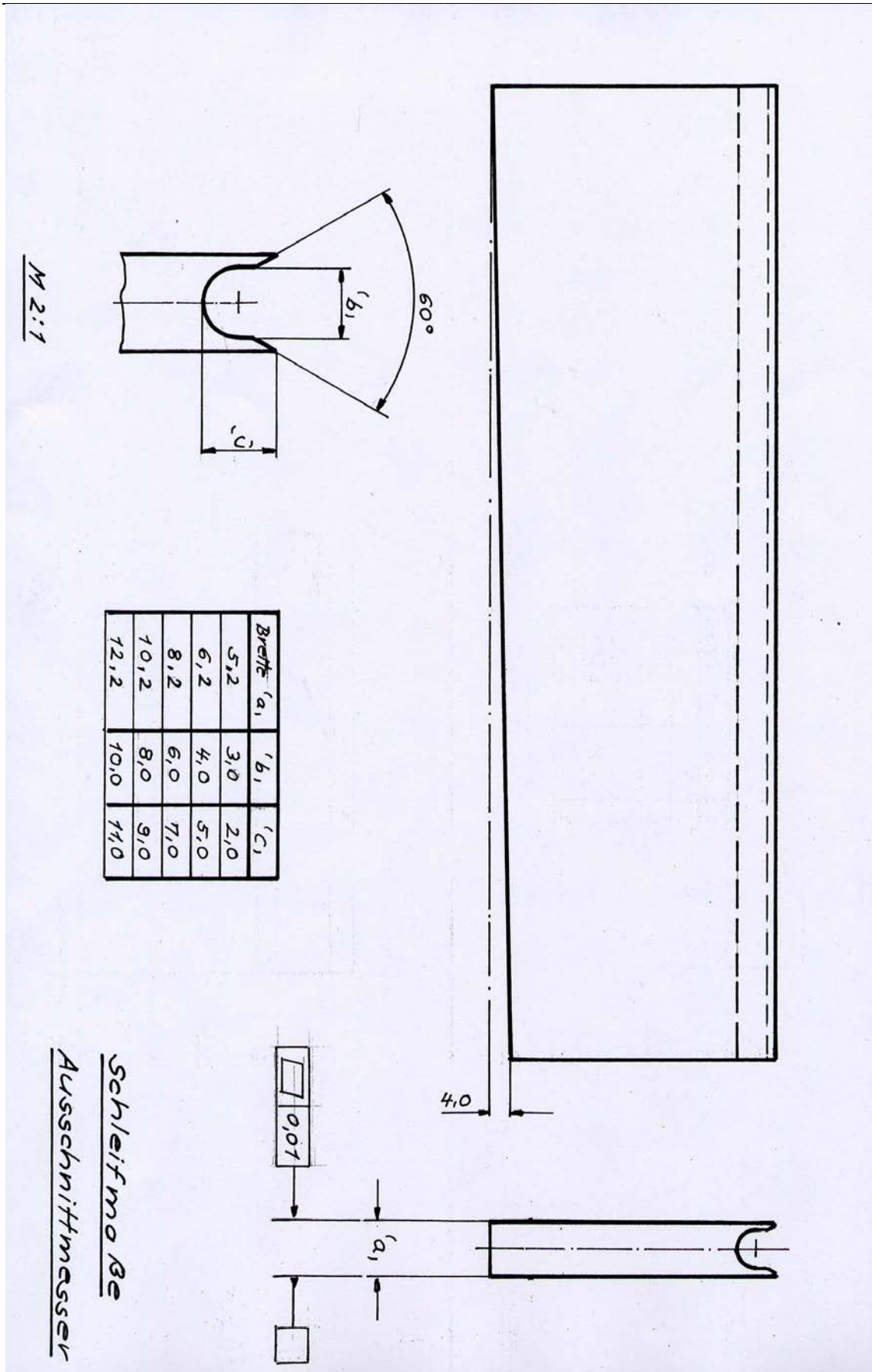
Only re-grind surface if grooves are visible on surface.

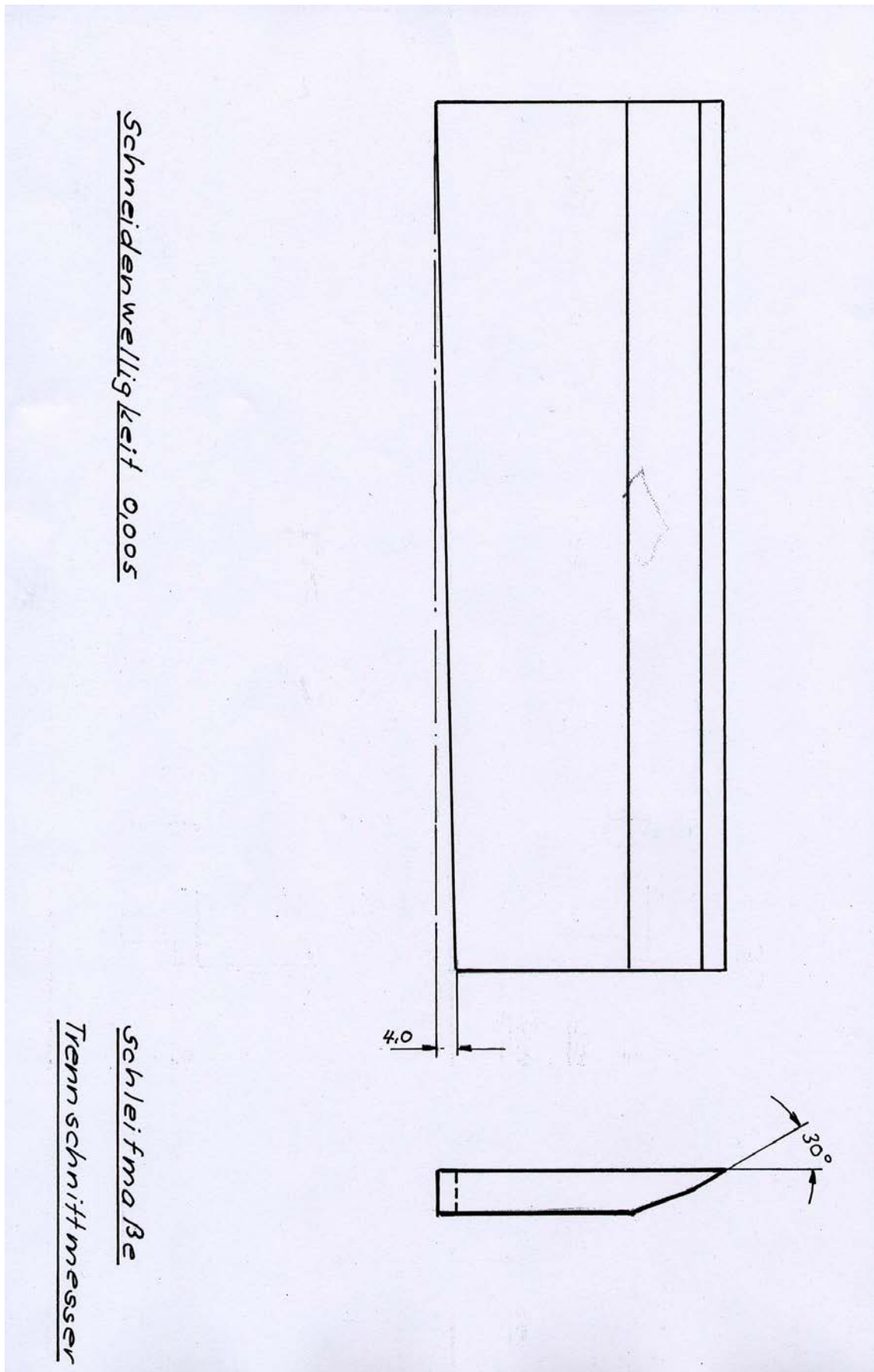
Grinding of blade-angle (see drawing on page 21)

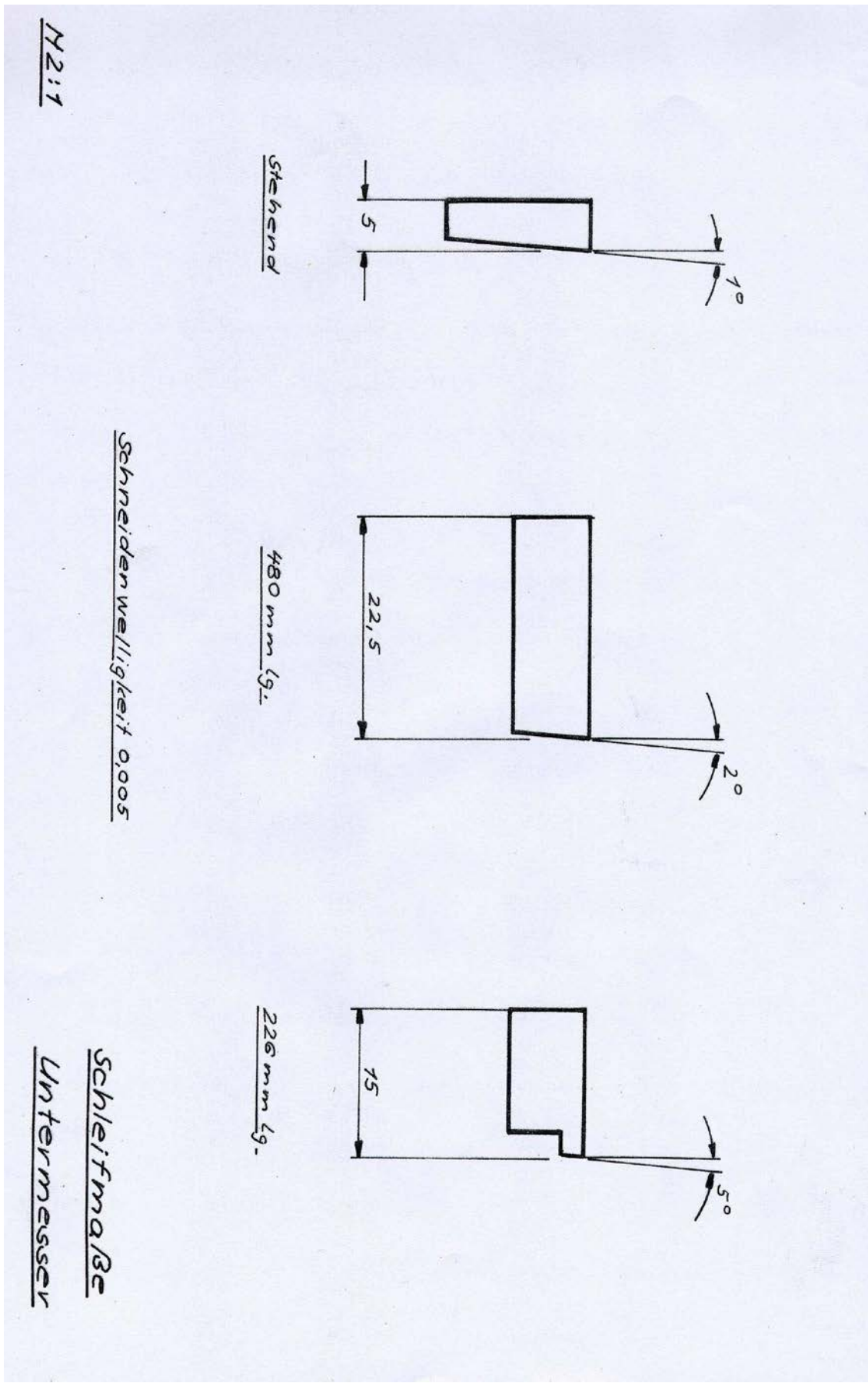
Lower knife:

Grinding of blade-angle (see drawing on page 22)

Grind surface only if required.







Die-cutting equipment

1. The adjustment of the pressurebar must be carried out as followings statements:

Firstly open the two **squeezerscrews 1**, which are situated on top of each pull-pole. Thereafter turn one of the **sixcorner 2** with a forkspanner SW 30, which is positioned on the adjustmentpole in front of the pressurebar. The adjustmentpole connects the left and right pullbar in a way, that while adjusting, both sides will be moved simultaneously. The adjustment-space can be controlled by **scalerings 3** on the pullbars. The scale goes from 1 to 6mm and shows from one point/mark to the next point/mark 1mm adjustment-space.

2. **Important:**

Before installing the die-cutting-tool, the pressurebar has to be in the toplevel-position on the scale 0. After the installation of the die-cutting-tool the pressurebar has to be turned down to a low level (approx. 1,5mm), that the product will be cut by turning the machine manually. If the product is not cut on various parts, you must put a thin paper on these places below the punchingplate.

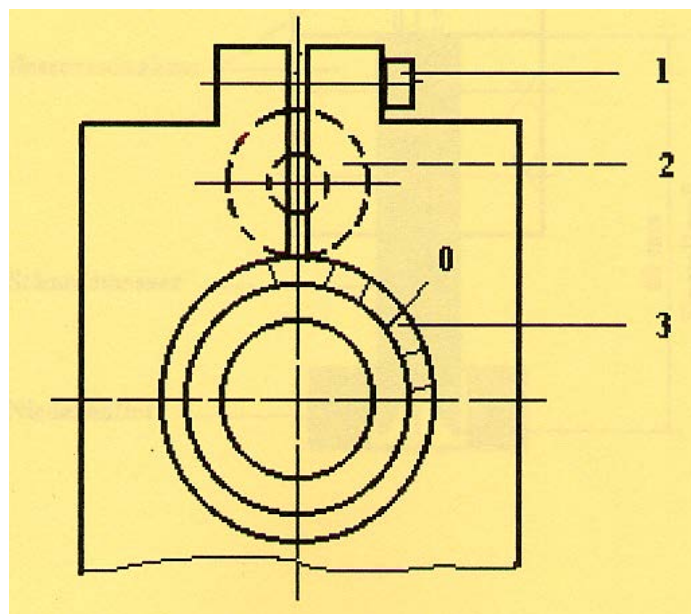
If the heightlevel of the pressurebar is adjusted correctly, the machine can be turned to the lowest position by hand on applying slight pressure.

If the pressurebar is set too low, the die-cutting-tool and the punching plate get unnecessarily worn which then has a negative effect on the lifetime of the tools.

After completion of adjustment, clamping screws 1 are to be tightened again.

3. **After each adjustment – for safety reasons - the machine must turned right around by hand.**

The manual turning of the machine ha to be done by the hand wheel, which is an inclusive accessory. It has to be put on the excenterplug on the left side of the machine.



Information for manufacture die-cut equipment

The die-cut equipment consists of a bottom plate (sandwichplate) and a die-cut tool. Some points are to be observed to manufacture the die-cut equipment.

To be observed before manufacturing:

1. It is important to know the running direction of the product. How should the product run in to the BS MULTI.
2. The waste on head and foot must be **min.25mm**, if the waste should be separated with belts. By not separating the waste with belts, the **min.** on head and foot must be **15mm**.
3. It is to note about the product thickness. (max. **2mm** thickness)
4. It needs the exact size of the product before die-cutting, to manufacture the die tool.
5. It needs the exact measurements (1:1) of the cutted end product shape.
6. **To order, or for support in manufacturing of die-cut tools and bottom plates (sandwich) thru BOGRAMA AG, it is very important that you give us many details about the product. Here for, fill out exactly the sheet on page 25 and answer all questions. You must send to BOGRAMA AG the product or the film of the shape per E-Mail in an Illustrator file (.eps).**

To be observe by manufacturing:

7. The plate (15mm thick) must fit to the settings on changeable ground plate. The settings on the ground plate from one hole to the other are 25mm.
8. It is important that the M4-threads and the Ø6-holes for the pins at the plate (15mm thick), are fitted on outside of the cutting line from the die-tool.
9. Windows (made by a milling-machine) in plate (15mm thick) for rollerbars must have a depth of 115mm and a width of at least 30mm. It is important that the windows are not in a cutting line of the tool.
10. Windows for end-stops are variable according to product. It is important that the windows are not in a cutting line of the tool.
11. The fitting hole of the die-cutting tool (plate of wood) must fit to the settings of tool mounting plate. The settings on tool mounting plate from one hole to the other are 15mm. It is important to set the fitting holes to the right position, cause to distribute the cutting pressure.

Material for bottom plate

- ◆ plate of DIN Ck 45 (DIN EN C45E) depending on format, grinded on both sides to a thickness 15 +0,05 mm
- ◆ Rubber of PUR-VULKOLLAN L4190 with 90° degrees Shore A depending on format, braun, thickness 3mm
- ◆ Sheet metal of X5CrNi18-10 depending on format, one-sided grinded, thickness 1mm.

Inventory-form for order or request a die-cutting-tool with opposite-plate

- a) Point 1 – 7 must be completed in full and to be faxed to BOGRAMA AG.
- b) Film in proportion 1 : 1 completely measured. Direction of movement is to be indicated (as it runs into BS MULTI, view of side one).
Film must be sent to BOGRAMA AG per E-Mail in an Illustrator file (.eps)

Our prescribed data:

- Waste on head and bottom min. 15 mm (If the waste **should not** be separated with belts)
- Waste on head and bottom min. 25 mm (If the waste **should be** separated with belts)
- Maximum format size BS MULTI 450: 400 x 210 mm
- Maximum format size BS MULTI 750: 600 x 210 mm
- Delivery time: approximately one week after getting all information.

Please complete the following in full:

1. Product-thickness in mm
2. Quality and weight (g/m²) of the paper
3. Specialities of the booklets, for example plastic foil _____

4.? up production
5. Are little holding-points possible? yes no
6. How should the waste be separated from the product? _____

7. We order the complete **bottom plate** (Sandwich) yes no
8. We order (quantity) e-cutting-tool
9. We order (quantity) bottom plate
- Date of delivery: Delivery by delivery service
- Date of installation by BOGRAMA-Mechanic

Date: _____ Signature: _____

Transportbelts for die-cutting-tool

Place of installation	Quantity	Width	Length	GG4E	MAT02H
Infeed bottom	4	10	440		X
Outfeed bottom	2	10	440		X
Outfeed bottom long	2	10	680		X
Outfeed top long	2	10	680		X
Infeed connection to outfeed	4	10	1460		X
Disposal	5	10	540		X

Service Tools

Following service tools are delivered to each machine: (each 1 piece)

Fork Spanner: SW 8, SW 10, SW 12, SW 13, SW 14, SW 17, SW 22, SW 30

Ball End Screw Driver: SW 3, SW 4, SW 5

Hexagon Socket Screw: SW 2, SW 2.5, SW 3, SW 4, SW 5, SW 6, SW 8

Screwdriver No. 0, 1, 5

T-Grip Hexagon Socket Screw: SW 6

Oil Injecting Canister

Grease Gun with Universal Nozzle

Inserting Hand Wheel

Tool-Box

Spare Parts

(Hole-punching Machine BS MULTI 450 / 750 P/S/PS)

Driving Motor:	Main Drive	DS-Motor (M2A100L6) 1,5kw / 1000 U/min 230/400 V 50/60Hz / IP 55 / B3
Coupling and Brake Combination:	14.800.16.11.1 - 24 V	
Immediate Control Device:	complete with holder	14.621.14.16.1
Plate Bar Replacement:	Plate Bar for Coupling or Brake	14.611.16 – 661
Compensator:	Coupling - 25 mf	14.666.01 – 25
Compensator:	Brake - 20 mf	14.666.01 – 20
<i>for USA:</i>	<i>Coupling - 20 mf</i>	<i>14.666.01 – 20</i>
	<i>Brake - 16 mf</i>	<i>14.666.01 – 16</i>
Belt Drive:		GST 04-1M-VCK / 071-32 0,37 kw / 240/415V / 50/60Hz
Frequency Converter:		FR-S 520S 0-4k – EC
Initiator:		24V DC – PNP – M12 – 3 Guide
Photocell:		FHDK 10P5101S35A with cable box ESG32AH0200
SPS – Control:		FX2N – 64MT-DSS
Operation Device:		E 200

Spare Parts

Drive Belts:	Motor – Coupling	13 (SPA) x 1041 Li
	Coupling – Eccentric Shaft	13 (SPA) x 1450 Li
Drive Belts:	Drive – Toothed Belts	HTD 1200 – 5M – 12
	Infeed – Toothed Belts	HTD 615 – D5M – 13
	Outfeed – Toothed Belts	HTD 615 – D5M – 13
	Infeed – Round Belts – RP green d 6,0 x 270 non-tensioned	
	Infeed – Round Belts – RP green d 6,0 x 240 non-tensioned	
Pneumatic:	Maintenance Unit	KWE-215-1/4 Kombi-We
	Shut-off Valve	FKH-210-1/4 3-W.-FI
	Magnet Valve – Battery	EWV-141/04-G60-1/4B-00
	Magnet spool	E22-024/= -HO
	Fitting Cylinder	0 822 010 721
	Guide Unit „H“ Cylinder	0 821 401 295 0 822 232 001
	Pressure Switch	PEV – ¼ B
Disk Brake	DH 10 FPM	

Spare Parts

(Hole-punching Machine BS MULTI 450 / 750 P/S/PS)

Conveyor Belts:	Swivel Guide (short version)	25 x 1,4 x 1800 non-tensioned GG4E 25 x 1,4 x 940 non-tensioned GG4E
	Front Cut Tool	Infeed – lower Outfeed – upper
		25 x 1,4 x diff. non-tensioned MATO2H 25 x 1,4 x diff. non-tensioned MATO2H
	Outfeed – lower Outfeed – upper	25 x 1,4 x 670 non-tensioned MATO2H 25 x 1,4 x 670 non-tensioned MATO2H
Trimming Tools	– lower	10 x 1,4 x 680 non-tensioned MATO2H
	– lower	10 x 1,4 x 680 non-tensioned MATO2H
Conveyor Belts by use with hole-punching tools		
	Infeed – lower Infeed – lower	25 x 1,4 x 660 non-tensioned MATO2H 25 x 1,4 x 660 non-tensioned MATO2H
	Outfeed – lower Outfeed – lower	25 x 1,4 x 620 non-tensioned MATO2H 25 x 1,4 x 620 non-tensioned MATO2H
Conveyor Belts by use with hole-punching tools		
	– lower - lower	25 x 1,4 x 650 non-tensioned MATO2H 25 x 1,4 x 650 non-tensioned MATO2H

Special Auxiliary Accessories (only on customers' request)

Rounded Belts Welding Fixture:	Drive Clamps	Type FZ – 01
	Welding Soldering Iron	Type FZ – 70
Transport Belts Welding Fixture:	Crosscut Scissors	Type AQ – 40
	Welding Press	Type PQ – 52
	Cooling Iron	Type DE – 60
	Guide Rails	Type FS – 25 mm - 20 mm - 15 mm - 12 mm - 10 mm
		(according to belt width)

STANDARD VALUES

Cycle time manual operation	Stop limit delay time	Unit item counter Jump	Programm Nr.
Clutch delay time	Stop limit operation duration	Unit item counter delay	
Inspection delay	Side stop limit delay time	Jump feed Signal duration	
Tape drive	Side stop limit operation duration		
	Transfer delay time		
	Transfer operation duration		
F 1	F 2	F 3	F 4

Value entry for
Jump feed
Only when needed.

Customer

Product

Format size

Output sizetimes

Cut-offmm Split-cut

Others