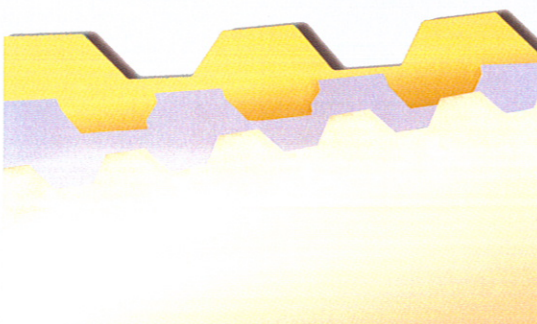
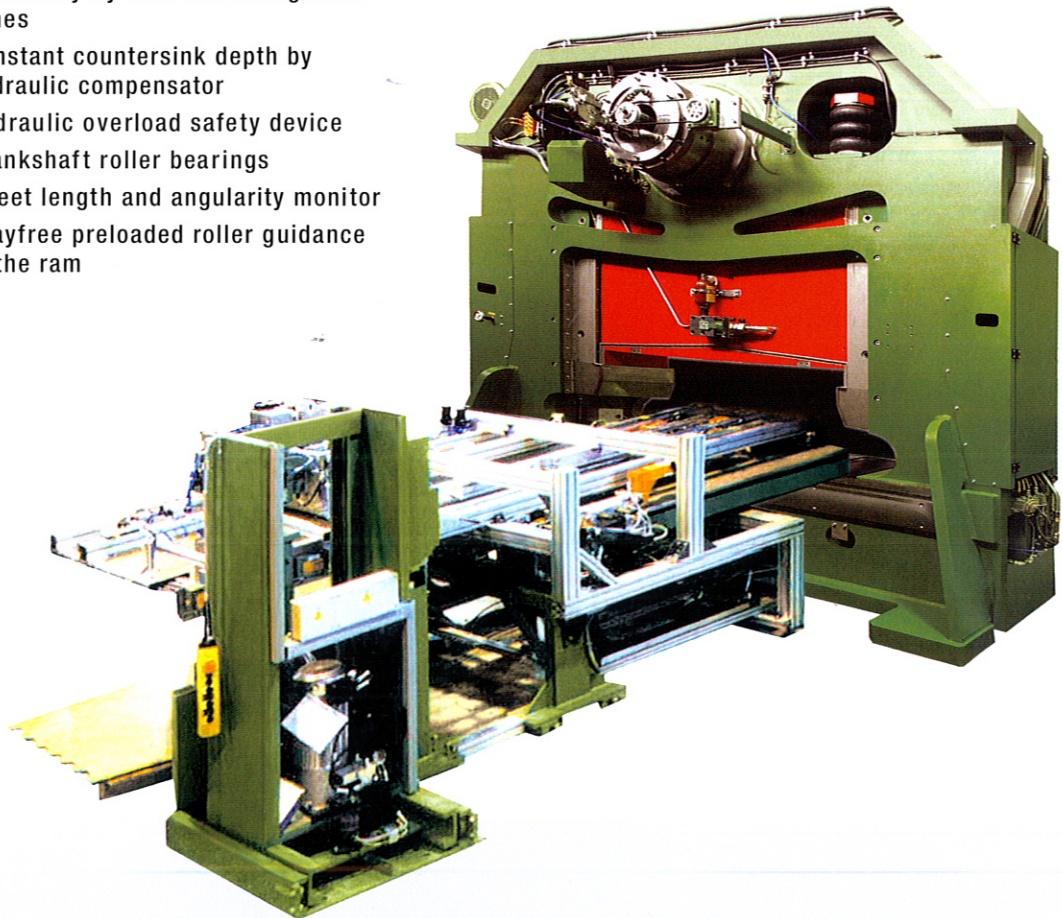


# CNC-OF(G)-P-125 MULTI DIE SHEET-FEED-PRESS



- Flexible press center for all types of ends and shells
- Sheet and coil feed up to 16-out, 250spm
- Material savings by utmost precision feed
- Manpower savings by direct sheet processing eliminating strip shearing
- Flexibility by shortest changeover times
- Constant countersink depth by hydraulic compensator
- Hydraulic overload safety device
- Crankshaft roller bearings
- Sheet length and angularity monitor
- Playfree preloaded roller guidance of the ram
- AC-maindrive with static frequency converter including recuperation of flywheel brake energy
- Die alignment system with electronic registering
- Automatic central lubrication with closed circuit
- Automatic pallet exchange system (optional)



# CNC-OF(G)-P-125 MULTI DIE SHEET-FEED-PRESS



**Alfons Haar**

## SEQUENCE OF OPERATION

The sheets, scrolled or un-scrolled, are destacked and fed to the prealignment station. On the way there is an optional rollertype sheet lubricator for double side or single side coating. Also the double sheet detection takes place there.

The prealignment station corrects the alignment of sheets which are out of range because of unprecise packed stillages.

According to the movement of the preceding sheets, the prealigned sheet is moved in the alignment station by a set of rollers driven by a servo motor. The alignment itself is made by using the scrolled edge of the sheet.

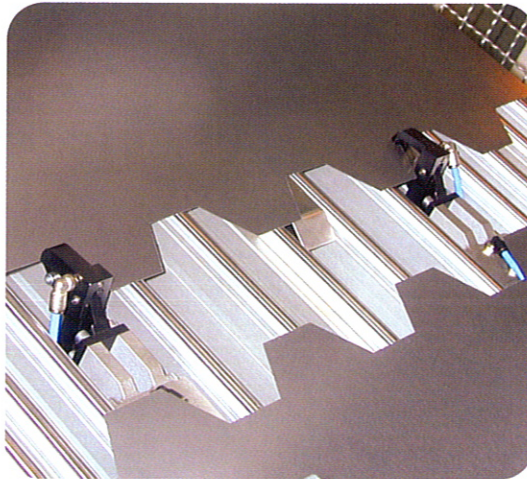
After the final alignment the sheet is fixed by the two grippers of the inner advance carriage and moved synchronous to the stroke of the press and the preceding sheet into the first punch position. The first position is adapted to the leading edge of the sheet. (See description on the next page).

The synchronization is made by overlapping the sheets without any idle stroke.

The feed from the punch position up to half way of the sheet, is made by the inner carriage.

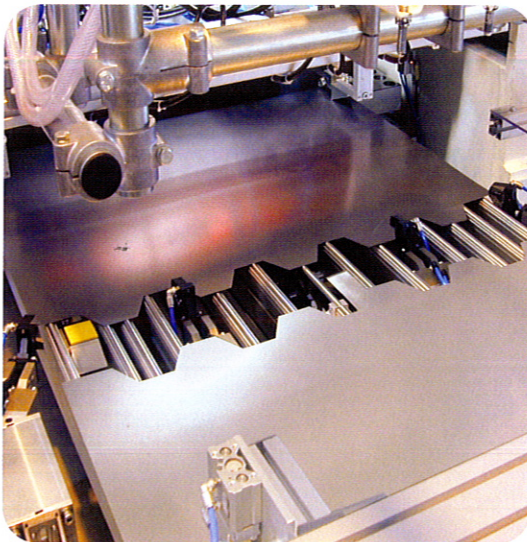
Then, when the sheet is fixed by the closed die, it is transferred to the grippers of the outer carriage, which moves the sheet up to the last punch position.

Finally a rollertype web ejector pushes the web out of the press.



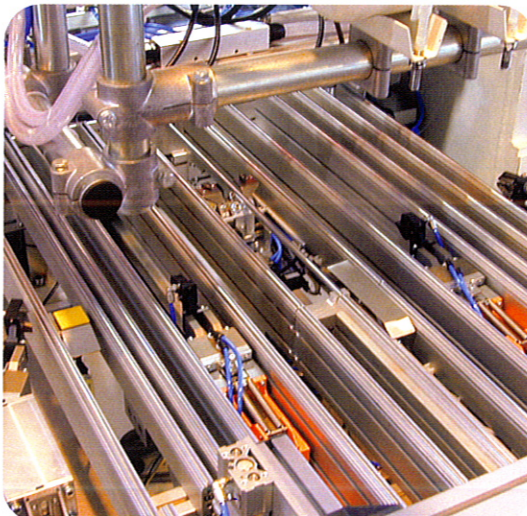
## INNER GRIPPERS

The grippers of the inner carriage fix the sheet in the alignment position. Both sets of grippers of the inner and outer carriage are equipped with a fluidic type gripper monitor which checks the correct grip during the complete operation.



## TRANSFER FROM INNER TO OUTER GRIPPER SYSTEM

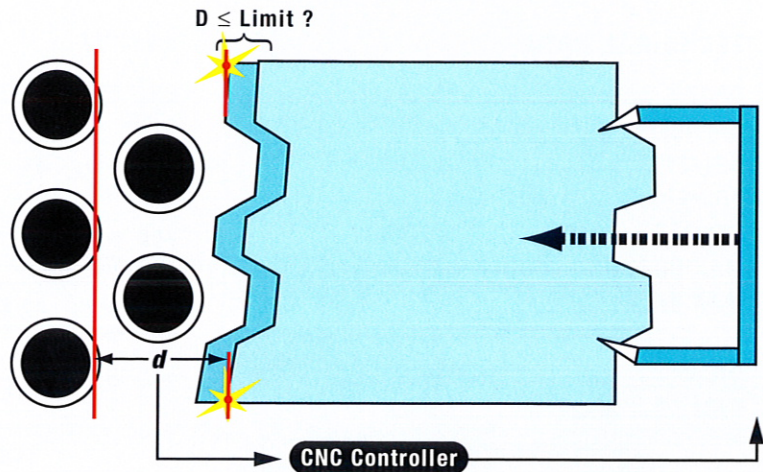
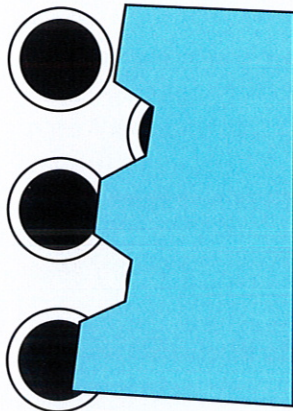
The transfer takes place after half of the sheet has gone through. During the time the sheet is fixed by the closed die (50ms), the inner grippers open and the outer grippers close. The outer grippers then guide the sheet till the last punch. This means, the sheet is positively gripped after alignment for all punch positions including the last one.



## SHEET ADVANCE SYSTEM

The carriages are moved by synchronous linear motors. Linear motor technology reduces the number of moving parts to a minimum, which means extremely long service free lifetime only limited by the bearing.

# CNC-OF(G)-P-125 MULTI DIE SHEET-FEED-PRESS



## SHEET SQUARENESS MONITOR

This system is equipped with a double set of dies, which requires a certain care for the first and the last punch of the sheet. These two punch positions are defined by cutting only one set of the die within the sheet. To avoid clipping out, it is required to make sure that the leading edge of the sheet does not touch the second die set. Additionally it is to guarantee, that the blank of the active die set is perpendicular. Especially if the sheet geometry is out of square (which is often the case) or if due to other reasons the front or rear edge is out of angle. This requires an adaption sheet by sheet

The patented sheet squareness monitor guarantees compensation of sheet edges out of angle and sheet length tolerances without any clip out risk.

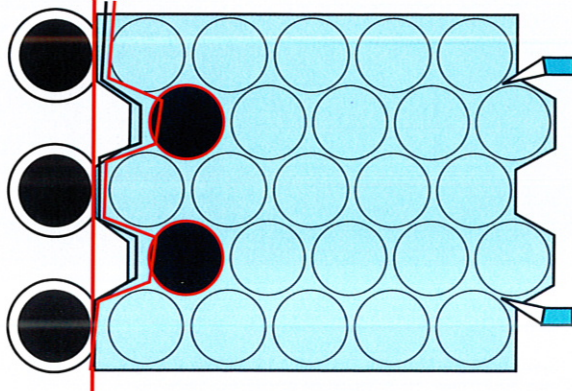
On its way from the alignment station to the first punch position the sheet passes two laser sensors which monitor the front edge in relation to the actual position of the inner carriage. The first trigger of one of these sensors will calculate the exact distance "d" which is the distance between the sensor and the cut edge of the second die set.

This guarantees the maximum space for the compensation of any misalignment of the sheet within a certain range "D".

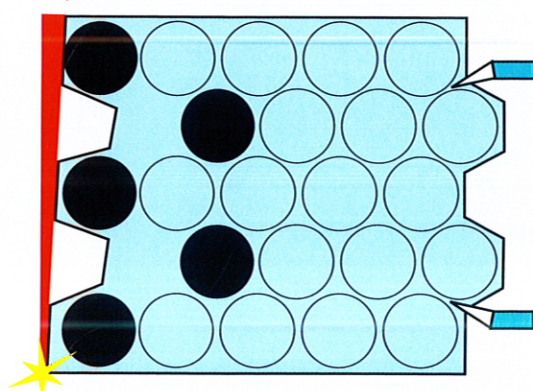
"D" is detected by the opposite sensor, which determines whether the sheet is within that acceptable clip out free range. The opposite sensor is always the one which is triggered second. This may be located on the right or on the left side. If the misalignment is out of the range of the first punch ("D > limit") this first punch is skipped and the sheet is moved directly into the second punch position which does not have the risk of clipping out.

The same function is operating on the rear edge of the sheet with the additional feature that the error angle is not only measured but it is also compensated by the independently moving grippers.

$D \leq \text{Limit}$      $D > \text{Limit}$



$D > \text{Limit}$



# CNC-OF(G)-P-125 MULTI DIE SHEET-FEED-PRESS



## TECHNICAL DATA

SPEED MAX:	250 spm
CAPACITY:	125 t
DRIVE:	DIRECT
POWER:	22 kW
STROKE LENGTH:	100 mm
MAX PRODUCT HEIGHT:	20 mm
MAX SHEET SIZE	1250 x 1200 mm 49 x 47 inches
DIES:	15
RAM ADJUSTMENT:	15 mm

## OUTPUT

END SIZE mm	CUTEDGE	No. of Tools OF / OFG	Output 1/min OF / OFG
200 mm 202 mm	60 - 71,6	15 16	3750 / 4000
206 mm 211 mm	71.1 - 82.5	13 14	3250 / 3500
209 mm 300 mm	82.6 - 97.4	11 12	2750 / 3000
307 mm 401 mm	102	9 10	2250 / 2500

## MATERIAL

- Scrolled and unscrolled sheets  
0,1 - 0,5 mm / .004" - .02"
- Aluminum
- Tinplate
- DR-TFS

## CHANGEOVER TIME

- < 3 hours incl.  
Tool change

## TOOLING

- Ends 9-out to 16-out

Reliable & Service friendly  
uncompromising use of  
up-to-date-components  
in modular construction

## TOOL PATTERN

Production Direction

