

AUTOMATED SHEARING WITH BLANK RETURN AND DIRECT MACHINE FEED



SAFETY QUALITY

PRODUCTIVITY

Converting to LEAN MANUFACTURING requires machinery set-ups capable of high productivity with very short runs.

Canrack provides an automated shearing system that produces blanks to very close tolerances and directly feeds in-line turret punches or press brakes.

The system uses a CNC shear feeder that achieves \pm .005" tolerance without depending on the operator for accuracy. The sheet is held by pneumatic grippers that are advanced by the shear feeder. No hand contact is required by the operator. Productivity is higher than manual operation and different sizes can be sheared from the same sheet with no set-up time.

Up to 800 shearing programs are held in memory for parts that have repeat production. Blanks automatically convey back to the operator for re-shearing or on to conveyor lines feeding the next machine operation. This system functions with equivalent piece time for very short runs or longer runs with batch production.

Typically, pieces may be sheared as required for individual units of production and material flow is maintained from shearing to punching, to folding, to welding, or as many operations as are necessary to complete the component.

Sales agents from Canrack can produce simulations using your production data to accurately determine machine time required when this system is installed.

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SAMPLE PRODUCTIVITY SIMULATIONS

1. Shear 20 pcs. 24" x 48" from 5 sheets 48" x 96".

Step	Instruction	Length	Description	Run Time
0	A2	98	Load sheet 48" x 96" and trim	33.0 secs
1	3	24	Cut 3 pcs., 24"	9.6 secs
2	00	0	Eject & retract	7.0 secs

Total Run Time = 6 minutes.

2. Shear 80 pcs. 5.5" x 120" from 10 sheets 48" x 120".

Step	Instruction	Length	Description	Run Time
0	A2	48	Load sheet 48" x 120" and trim	33.0 secs
1	8	5.5	Cut 8 pcs., 5.5"	17.3 secs
2	A0	0	Retract	4.1 secs

Total Run Time = 11 minutes.

3. Shear 4800 pcs. 23" x 30" from 800 sheets 48" x 96".

Step	Instruction	Length	Description	Run Time			
0	A2	47	Load sheet 48" x 96" and trim	33.0 secs			
1	1	23	Cut 1 pcs., 23"	3.1 secs			
2	A2	23	Flip pc., reload and cut 23"	14.2 secs			
3	00	0	Eject & retract	4.2 secs			
Re-shear							
0	A2	95	Load 2 pcs. 23" x 96" and trim	13.0 secs			
1	3	30	cut 6 pcs., 30″	10.6 secs			
2	00	0	Eject & retract	5.8 secs			

Total Run Time = 18 hours & 44 minutes.

INFORMATION REQUIRED FOR PRODUCTIVITY SIMULATIONS

- 1. Size and number of pieces to be sheared.
- 2. Number and size of inventory (stock) sheets to be used.
- 3. Is a trim cut to be taken?
- 4. Is re-shearing necessary?