



JFY BUS BAR

Punching & Bending Machines

Jin Fang Yuan CNC Machine Company., Ltd (JFY) is one of the premier fabrications machine tool builders in Asia. Annually, they produce over 1,000 CNC fabricating machine tools. M & E Values, Inc. is proud to represent JFY CNC bus bar punching/shearing and angle bending machines. We also proudly offer their Beyeler-designed CNC press brakes and shears. JFY has over 60% of the CNC turret press market in China, and their products also include a CNC right angle punch shear, and CNC laser with FANUC resonator. Our coverage includes North, Central and South America, the U.K., Europe and the Middle East. Our most recent sale was their new eight station CNC bus bar MC-50 punch/ shear in Canada.

Our General Manager, Greg Sweigert, has been involved with NC & CNC machine tools since 1980. Incorporated in 2001, M & E Values, represents some of the largest global machinery builders of CNC machine tools and fabrication equipment. Our staff has expertise in robotic loading systems for press brakes, CNC programming software, multiple CNC bus bar installations, with service and applications performed by factory trained personnel. When it comes to finding a partner to help solve your manufacturing challenges, we hope you will choose our company, M & E Values, Inc.

www.m-e-values.com





JFY MC-40 CNC PUNCH

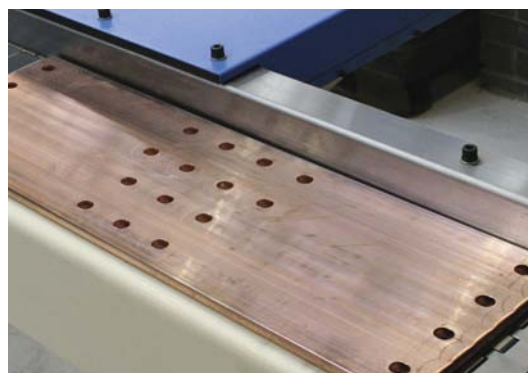
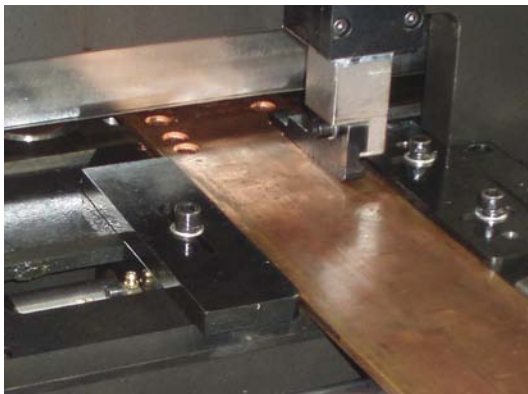
Efficient, Quality Bus Bar Production

Programming of the MC-40 punch can be performed at the machine using simple machine codes, or offline and transferred using the RS-232 port or PCMCIA card. The FANUC OMi Mate controller uses three FANUC servo motors and amplifiers.

Our sister company, Rydal Precision, supplies dies and punches that are installed in the tool magazine. The magazine, moving in the Y axis, can be loaded with five punches and a parting tool. Die changing is made easier by a pneumatically actuated die lifter.

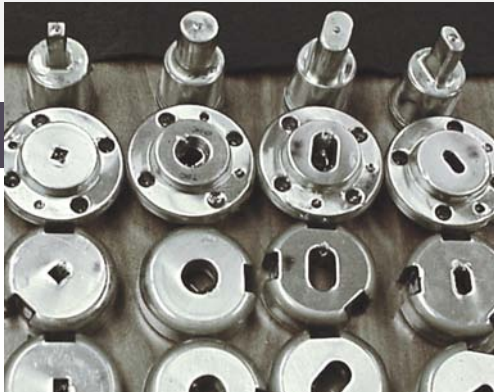
Bar stock is loaded on the roller conveyor and moved to the pneumatically controlled material stop. The lateral motion SMC pneumatic clamp, traversing the X axis, securely grips the stock prior to punching. Unlike clamping jaws, lateral clamps allow punching right to the edge of the work piece. The MC-40 can process bus bar stock up to 7.87" wide and 5/8" thick.

A Bosch-Rexroth hydraulic system and ABB motor operates the 40-ton punching cylinder. Hydraulics are cooled by a Hydac cooling system with an ABB motor.



SPECIFICATIONS

Punch Force (Tons)	44
Positioning Speed (inches/min.)	1.57
Max. Stroke - X Axis (inches)	39.37
Max. Stroke - Y Axis (inches)	39.37
Max. Stroke - Z Axis (inches)	7.87
Punch Speed (per min.)	50
Accuracy (inches)	0.004
Max. Sheet Thickness (inches)	.59 copper/.39 steel
Max. Punch Diameter (inches)	1.26
Sheet Size (inches)	157 x 7.87
Hydraulic Cylinder Stroke (inches)	1.02
Max. Hydraulic Pressure (psi)	3916
Air Pressure (psi)	72
Power (kilowatts)	25
Dimensions (inches)	335 x 123 x 73
Weight (pounds)	9260



JFY or Wilson Tooling



The tool carriage consists of six tools, each with five springs for long service. Punching tools can have dies made with different clearances to accommodate bus bar thicknesses of .117"-.195", .195"-.312", .312"-.585" Tooling can be furnished by JFY or Wilson. They can design custom tools to punch, shear, or corner edge copper bar.

Hydraulic System - Bosch-Rexroth

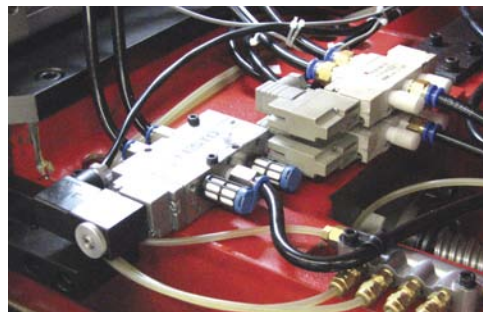
The punching operation is driven by the stable, reliable hydraulic system that is manufactured by Bosch-Rexroth. The hydraulic cooling system is by Hydac with ABB motors.

Individual valves, cylinders and other components are furnished by internationally known providers.



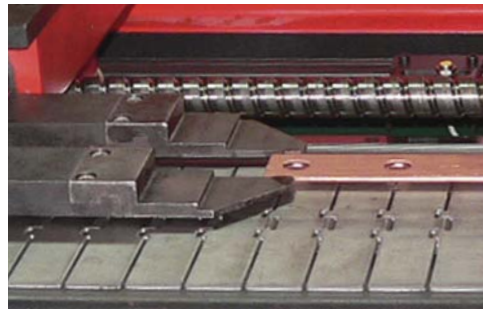
Ballscrew and Guideway - THK, Blis

Two critical components of the MC-40 punch are the ballscrews and linear guideways. They provide the 0.004" accuracy needed to produce precision parts for years. These components are stocked in the Chicago area.



Pneumatic Clamping - Festo, SMC

Maintenance and troubleshooting of the MC-40 are simplified by the use of readily accessible components and locally available pneumatic parts.



A variety of clamping options are available. For larger bar we recommend the Pull type lateral clamping system that moves along the X axis. With multiple positioning, long 12' bars are accommodated.



8-Station MC-50 Model

MC-50 adds a cutting (shearing) station with a 120mm x 10mm max. per cut and a logo marking station with a marking area of 130mm x 80 mm max. Specifications for the MC-50 are identical to the MC-40 except for a punch force of 55 tons.

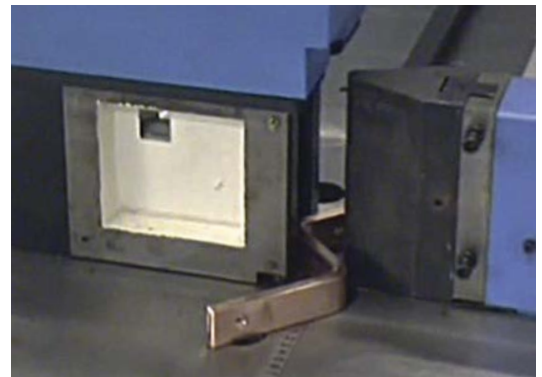
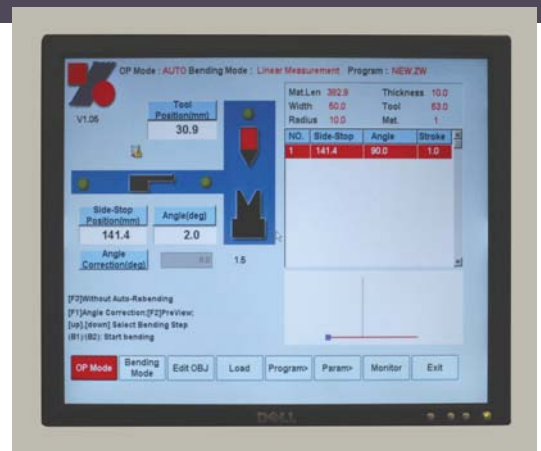


JFY MZ-40 CNC BUS BAR BENDER

The JFY bending unit is a companion unit to the JFY punch, however, it is a fully independent machine tool. The MZ-40 is designed specifically for bus bar, including U-bends. It is supplied standard with 160mm tooling with 200mm available.

Programming and tool changing are simplified by using a computer graphics program and controller. The MZ-40 has an advanced PC control with graphic simulation software. Through 2-D graphics dimensioning information, the software develops the part profile and bend allowances. Once programmed, the part can be named and saved to the PC.

The MZ-40 utilizes two encoders. The first monitors the punch stroke, used in manual program forming. The back-gauge is driven by the servo motor and highly accurate ballscrew. The second is a rotary encoding on the automatic feedback die that monitors the material bend for accurate repeatability of the part. Because of the MZ-40's repeatability, high accurate bends can be achieved from the very first bend, reducing material waste dramatically.



Stroke Measurement

Switching from angular measurement to stroke measurement allows for infinite selection of the ram stroke and depth of the punch into the die. The stroke function can then be stored for later use on the same piece part. Bending consistency is dependent, of course, on material consistency and programmer expertise.

Angular Measurement

Measuring accuracy of $\pm 0.1^\circ$ is assured by the computer controlled angular bending technology. The precision Heidenheim feed back scale provides bending accuracy within $\pm 0.3^\circ$. Spring back is automatically compensated by electronic auto-feedback.

SPECIFICATIONS

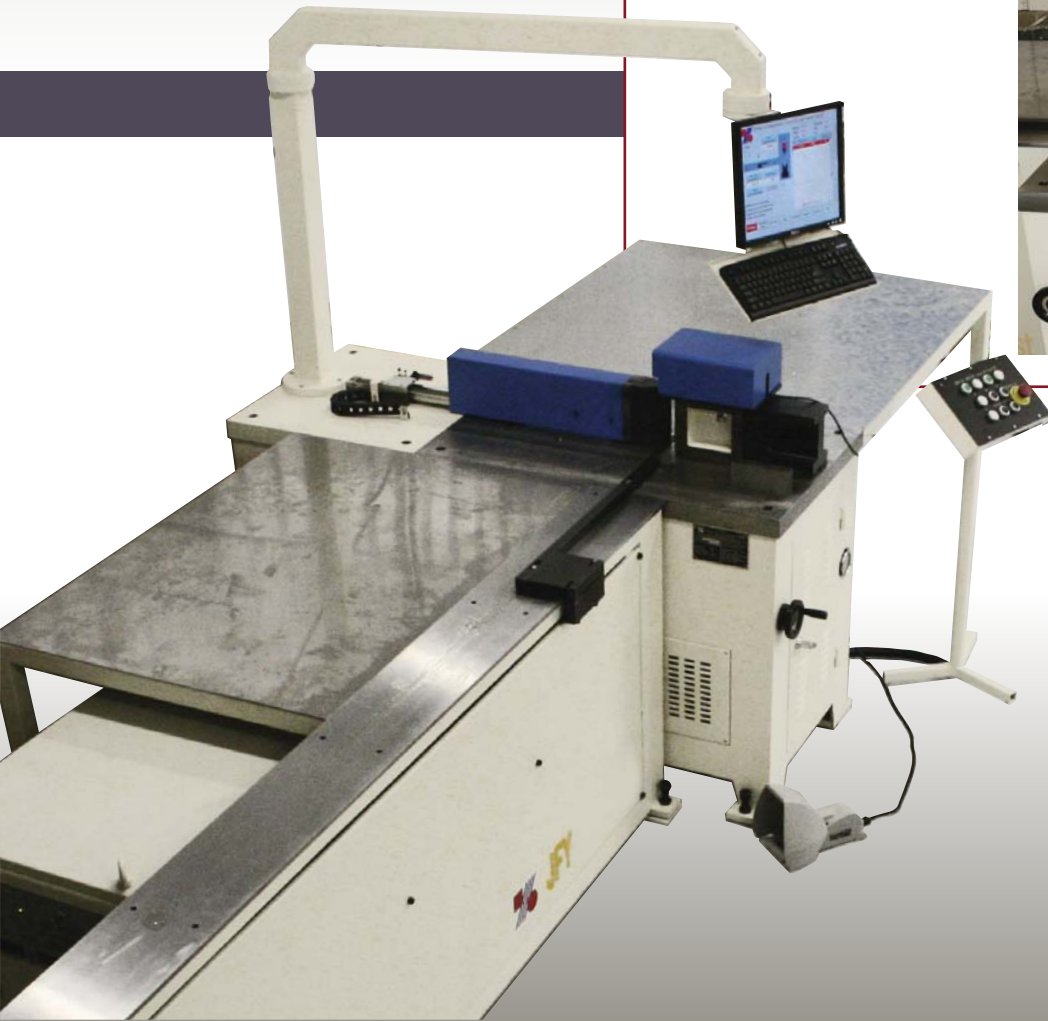
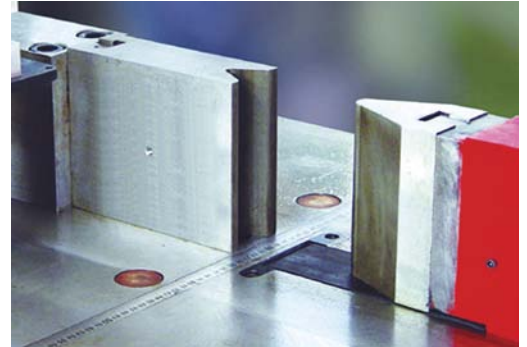
Bending Force (Tons)	44
Bending Accuracy	± 0.3
Adjustable Stroke - (inches)	0 - .5
Max. Bending Stroke (inches)	7.87
Max. Bending Angle (degrees)	95
Max. Size Vert. Bend (inches)	.59 x 6.30
Max. Size Horiz. Bend (inches)	.47 x 3.94
Min. Inner Width U-Bend (inches)	1.57
Backgauge Stroke (inches)	59
Max. Backgauge Speed (in./sec.)	13
Max. Hydraulic Pressure (psi)	3916
Air Pressure (psi)	72.5
Power (kilowatts)	7
Dimensions (inches)	170 x 61 x 65
Weight (pounds)	3306

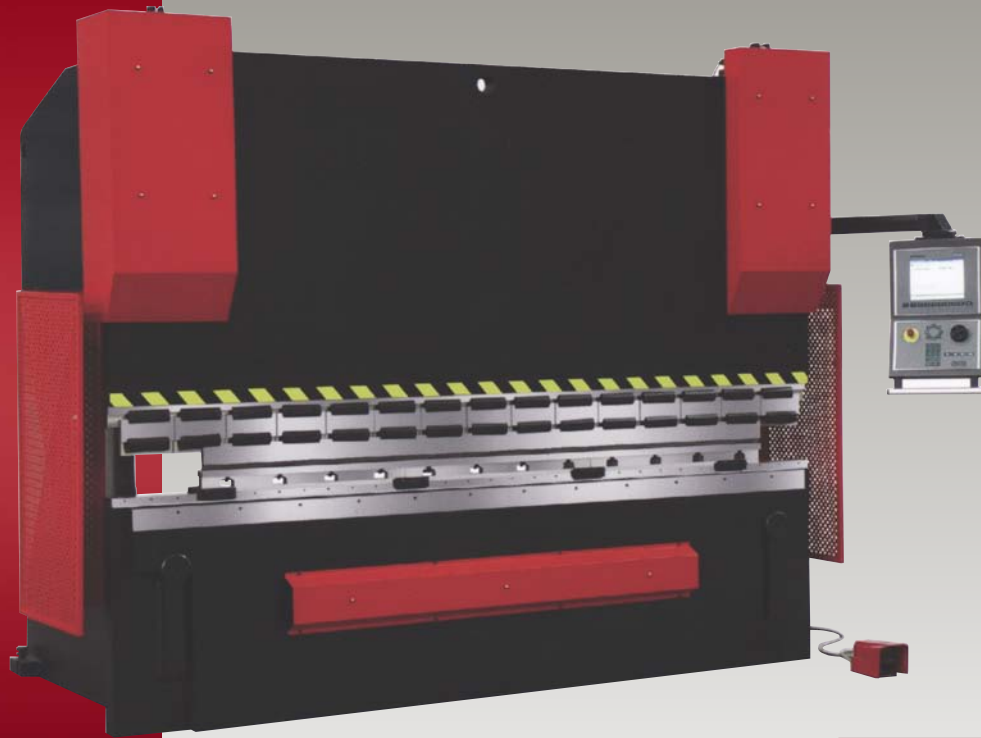
Electronic Cavity Die

Close tolerance accuracy and efficiency is achieved with the unique electronic cavity die that measures bending angle within $\pm 0.1^\circ$ and bending accuracy within $\pm 0.3^\circ$.

CNC Control

The MZ-40 is equipped with an advanced industrial control computer with graphic simulation to achieve automatic angle compensation plus precise backgauge control.





JFY PRESS BRAKES PR Series



JFY is a major worldwide supplier of CNC press brakes developed in cooperation with Beyeler in Germany. The range of 110 Ton to 715 Ton 6 axis brakes are offered in a wide range of bed lengths.

Quality Built

The inherent quality starts with the rigid frame. After welding the heavy steel plate, the body is positioned in the fixture only once, and machined entirely by the CNC pentahedron processing center.

Delem CNC Control

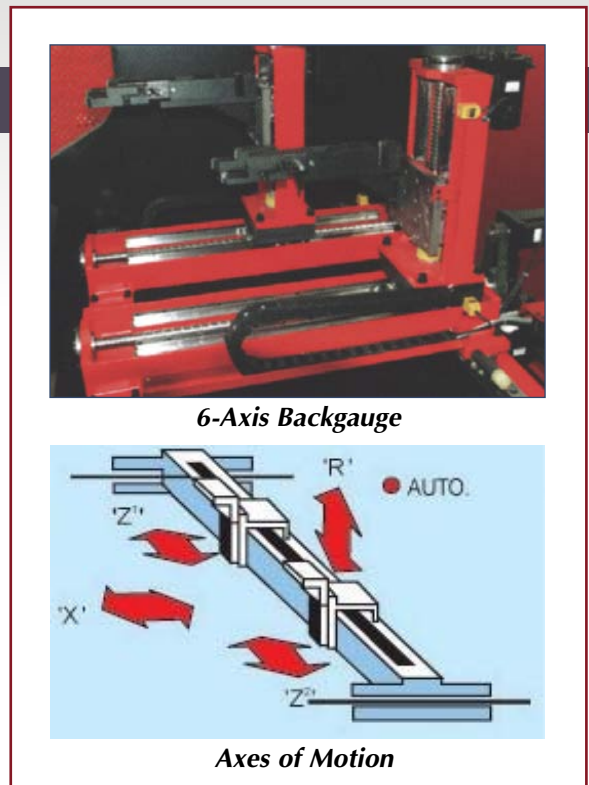
The Delem CNC intelligent modular system features built-in PLC function, automatic programming and bending simulation, comprehensive shock inspection, remote diagnosis and high resolution color TFT display.

Consistent Accuracy

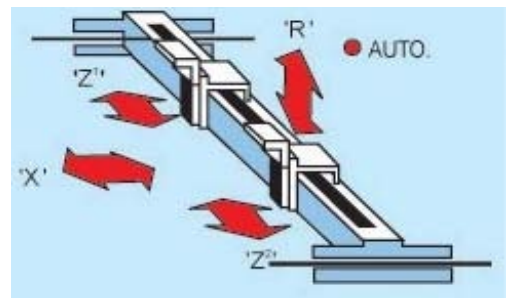
The Delem electro-hydraulic servo system controls cylinder synchronization. Combined with an optical curtain, the fully closed loop assures consistent linearity, bending angle and repetitive positioning accuracy.

Deflection Compensation

The CNC cylinder deflection compensation system helps prevent the deformed sliding block from affecting work-piece quality by assuring linearity and bending angle. The CNC system adjusts the compensation automatically.



6-Axis Backgauge



Axes of Motion

Bosch Hydraulics

The integrated hydraulic system reduces piping connections and virtually eliminates leakage. The inner engaged gear pump reduces system noise and extends service life.

Precise Positioning

Large lead ballscrews and linear guideway from Bosch-Rexroth and BLIS assure exact positioning. Full functional backgauge can be extended up to 6 axes, allowing infinite bending angles.

JFY PRESS BRAKE/PR SERIES SPECIFICATIONS

Model	60x2050	60x2550	100x3100	100x4100	150x3100	150x4100	225x3100	225x4100	320x3100	320x4100	400x3100	400x4100	500x3100
Tonnage	60	60	100	100	150	150	225	225	320	320	400	400	400
Max. Bed Length (inches)	80	100	121	80	80	80	80	80	80	80	80	80	80
Column Distance (inches)	62.40	78.0	101.40	160.	101.40	160.	101.40	160.	101.40	160.	101.40	160.	101.40
Throat Depth (inches)	13.65	13.65	15.60	15.60	15.60	15.60	15.60	15.60	19.50	19.50	19.50	19.50	19.50
Ram Stroke (inches)	6.44	6.44	8.39	8.39	8.39	8.39	8.39	8.39	10.34	10.34	10.34	10.34	12.29
Table Height (inches)	34.71	34.71	34.71	34.71	34.71	34.71	32.37	32.37	32.37	32.37	32.37	32.37	35.10
Table Width (inches)	1.95	1.95	2.34	2.73	2.73	3.12	3.12	3.51	3.51	3.90	4.29	4.68	4.68
Daylight (inches)	16.38	16.38	16.38	16.38	16.38	16.38	18.72	18.72	20.67	20.67	18.72	18.72	20.67
Approach Speed (in/sec.)	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	3.12	3.12	3.12
Pressing Speed (in/sec.)	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.27
Return Speed (in/sec.)	3.90	3.90	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12
Main Motor (horsepower)	7.5	7.5	10	10	15	15	20	20	30	30	30	40	50
Oil Capacity (gallons)	42.4	53.0	58.3	79.5	106.0	132.5	106.0	140.5	119.3	159.0	106.0	159.0	198.8
Oil Tanks (number)	2	3	3	4	3	4	3	4	3	4	3	4	3
Backgauge Accuracy (in.)	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0039	±.0078
Backgauge Distance (in.)	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
Backgauge Speed (in/sec.)	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	7.8	7.8	7.8
Backgauge Power (hp)	1	1	1	1	1	1	1	1	1	1	1	1	1
Length (inches)	113.1	132.6	134.6	173.6	135.3	174.3	136.1	175.1	136.9	175.9	134.9	173.9	138.8
Width (inches)	54.6	54.6	62.4	62.4	67.1	67.1	76.4	76.4	85.8	85.8	83.9	83.9	87.8
Height (inches)	88.5	88.5	97.9	97.9	97.9	97.9	107.6	107.6	121.7	121.7	128.7	128.7	128.7
Weight (lbs)	10560	12760	17710	23100	21230	30360	30910	39160	42900	51700	52360	57640	57200



GUILLOTINE JFY SHEARS VR Series

The JFY Guillotine Shear is the perfect companion tool for the JFY Press Brake. Six models with capacities of 1/4", .312 and .39 in bed sizes of 10' and 13'.

Integrated Hydraulics

Bosch-Rexroth integrated hydraulic system improves work flow and eliminates leakage by reducing piping connections.

High Speed CNC Backgauge

Advanced precision linear guideway and ballscrew with shear speeds up to 8"/s and return speeds up to 39"/s. Optional pneumatic rear supports ease the shearing of long and thin plates.

Delem CNC Control

In addition to the backgauge, the Delem DAC350 CNC system can control ram stroke, shear angle, blade clearance and workpiece quantity.

Automatic Shear Programming

Shearing angle automatically adjusts to reduce workpiece deformation when shearing plates of differing lengths. Ram stroke can also be adjusted to increase speed and accuracy of shorter workpieces.



Precision Linear Guideway and Ballscrew



Bosch-Rexroth Integrated Hydraulic System

SPECIFICATIONS

Model	6x3000	6x4000	8x3000	8x4000	10x3000	10x4000
Capacity (inches)	.234	.234	.312	.312	.39	.39
Bed Width (feet)	10	13.23	10	13.23	10	13.23
Strokes (per minute)	18-48	15-35	15-35	15-35	15-35	15-35
Backgauge (inches)	5-1000	5-1000	5-1000	5-1000	5-1000	5-1000
Cutting Angle (degrees)	.5-2.0	1.0-2.0	1.0-2.5	1.0-2.0	1.0-2.5	1.0-2.0
Backgauge Speed (in/sec)	11.7	11.7	11.7	11.7	11.7	11.7
Clamping Jacks	14	18	14	18	14	18
Tank Capacity (gal)	79	79	79	79	79	79
Weight (lbs)	13560	17750	18740	24250	23150	27560

More Quality JFY Values

TURRET PRESSES

JFY's line consists of three turret press models with speeds from 300 to 1000 hits per minute. The 33-ton presses feature fully bushed turrets, choice of 24 or 32 turret stations, and bed sizes to 59" x 157". Rigid integrated beam and carriage structure assures precise positioning and stable feed at high traverse rates, and prevents X and Y axes worktable deflection. JFY blends their manufacturing expertise with world class components from Festo, NSK, NTN, FANUC, Siemens, Bosch-Rexroth, and Schneider.



RIGHT ANGLE PUNCH/SHEAR

The JFY APSS punch/shear combination tool is designed for unmanned operation with single and multicolumn warehouse towers. The unit enhances processing accuracy, reduces logistic time and improves material utilization. Programming software creates automatic processing procedures for material cutting, route optimization and tool management.



617 S. Busse Road • Mt. Prospect, IL 60056
Phone 847-593-1751 • Mobile 847-571-0523 • Fax 847-593-1944
email gregs@m-e-values.com • www.m-e-values.com