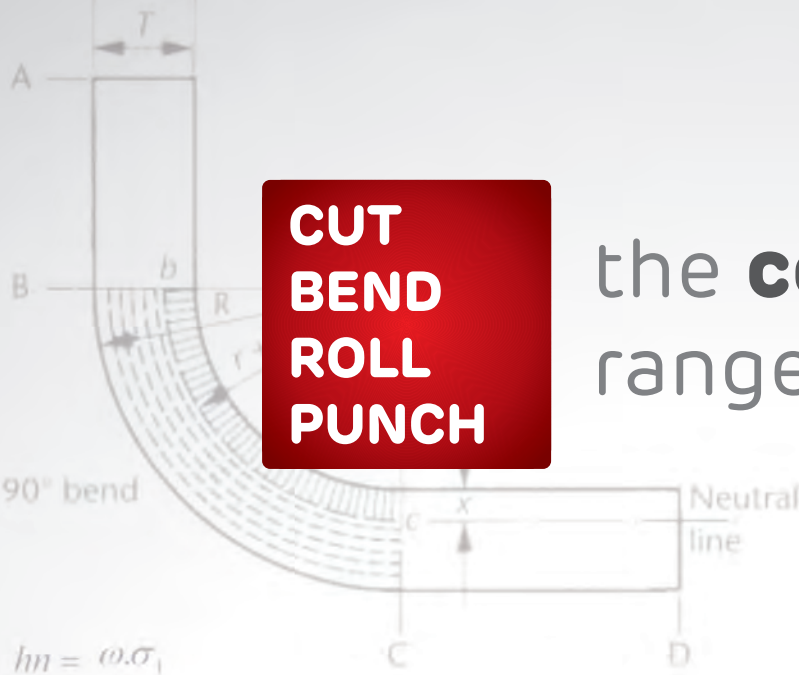
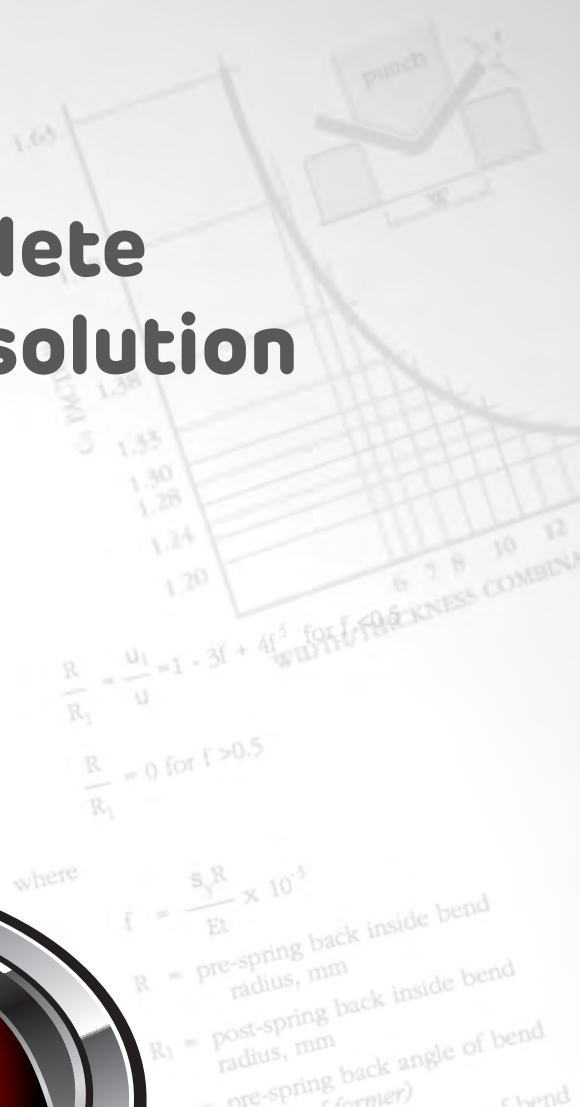


**CUT
BEND
ROLL
PUNCH**

the **complete**
range of **solution**



$$\begin{aligned}
 hn &= \omega \cdot \sigma_1 \\
 k'n &= \omega \cdot KN \\
 k'l' &= \rho \cdot c \\
 hn &= \sigma_y \cdot mn \\
 mn &= P_{\eta\omega} \cdot k'l' - Q_{\theta,\eta} \cdot k'n \\
 mn &= P_{\eta\omega} \cdot \rho \cdot c - Q_{\theta,\eta} \cdot \omega \cdot KN \\
 \omega &= \frac{P_{\eta\omega} \cdot \rho \cdot c}{\sigma_1 + Q_{\theta,\eta} \cdot KN}
 \end{aligned}$$



www.energymission.com

HYDRAULIC
SHEARING

HYDRAULIC
PRESS BRAKE



SCAN FOR LIVE CHAT



ENERGYMISSION
MACHINERIES (INDIA) LIMITED



Energy Mission Machineries (India) Ltd. was established in 1999 with strong vision to deliver most reliable & economical solutions in sheet metal industry. Today Energy Mission is one of the fastest growing company with maximum satisfied customer base in India and Abroad.

WE ARE LEADING MANUFACTURER OF

- ◆ CNC Servo Hybrid & Synchro Press Brakes
- ◆ NC / Conventional Hydraulic Press Brakes
- ◆ CNC / NC / Conventional Hydraulic Shearing Machines
- ◆ Four / Three Roll Plate Rolling Machines
- ◆ Hydraulic Iron Workers
- ◆ Hydraulic / NC Busbar Cutting, Bending & Punching Machines
- ◆ Single / Double / Triple Action Deep Drawing Presses
- ◆ CNC Servo H & C Type Presses
- ◆ Punching & Blanking Hydraulic Presses
- ◆ CNC V Grooving Machines

OUR STRENGTH

- ◆ 25 years of Experience in Manufacturing
- ◆ World Class manufacturing facility spread in 2,50,000 sq.ft
- ◆ Production capacity of 1200 machines per annum
- ◆ More than 5500+ installation across India & Abroad
- ◆ Trained & qualified team of 350+ employees
- ◆ Dedicated team for design & development
- ◆ Sales & service network all over India
- ◆ Keen quality control on each component & process
- ◆ Awarded as "Outstanding Entrepreneur of Year" in Year 2008-09 & Year 2014-15, DR Ambedkar Business Excellence Award 2021 - 2022

OUR VISION

We at "Energy Mission" believe to deliver high quality products at competitive price supported by best service support. To achieve this mission, we have developed in-house manufacturing facilities, focused manufacturing processes with in-depth technology know-how, sales network associates across India & abroad. Enthusiastic team of customer care is always ready to rush within shortest time at the doorstep of customer or any requirements. Our skilled workforce has a proven performance record in satisfying diverse needs of customers around the globe.

MANUFACTURING FACILITY



INFRASTRUCTURE



FLOOR BORING MACHINE

- ◆ In house single reference machining Facility ensures required quality parameters.
- ◆ CNC Floor Boring machines with Traverse Travel of 9 mtr & 8 mtr.
- ◆ Heavy duty 360° Machining position Rotary table

CNC TURNING & VERTICAL MILLING CENTRE

- ◆ High-tech CNC lathe with 8 station turret for precise cylinder component machining
- ◆ CNC Vertical milling machine with 24 stations auto Turret
- ◆ CNC boring machine suitable for Concave & Convex shapes machining.



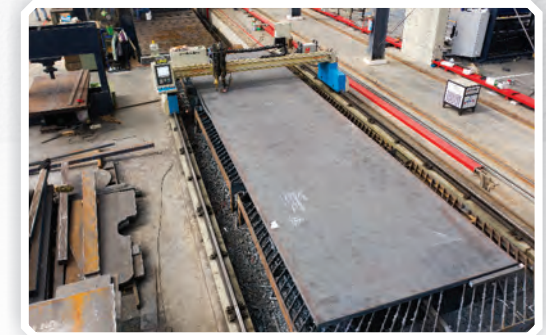
CNC PLANO MILLER

- ◆ CNC Plano Milling machines Up to 6 meter bed length
- ◆ Multiple head Single reference Machining
- ◆ Accurate, repetitive & fast operation reduces Production time & cost



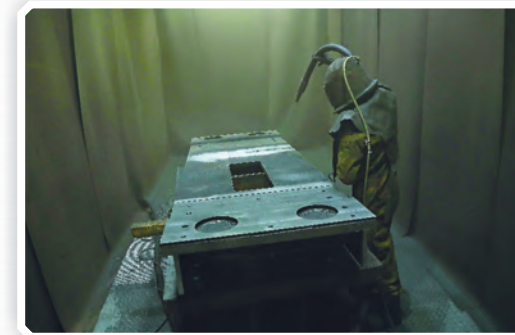
CNC PLASMA CUTTING

- ◆ Precise & Fast CNC plasma cutting with X & Y controlled axis suitable for 4 mtr wide & 13 mtr long plates.
- ◆ Precise & accurate cutting accelerates manufacturing process.
- ◆ Inbuilt Nesting Facility to reduce wastage & production time



SHOT BLASTING UNIT

- ◆ Environment Friendly surface preparation Facility to remove rust and corrosive materials from the surface
- ◆ Capacity to handle up to 7 mtr. Long Plates & Assembly Structures



PAINT BOOTH UNIT

- ◆ Cross Draft type Paint booth facility to make painting & refinishing parts & Fabricated structures
- ◆ Suitable for 10 Mtr. Long Plates & Assembly Structures



HYDRAULIC SHEARING MACHINE

RANGE | 2 mm to 32 mm
LENGTH | 1250 mm to 8000 mm

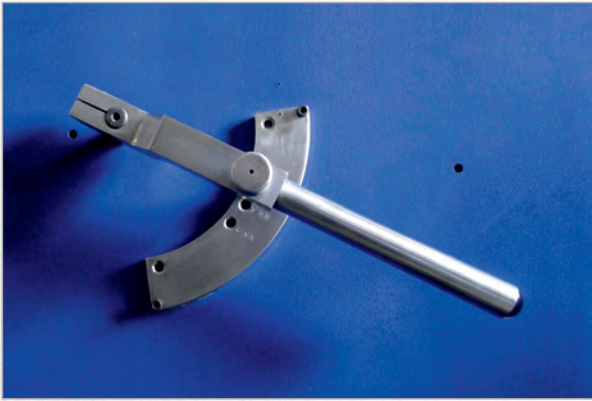


► SALIENT FEATURES

- ♦ Guillotine type hydraulically variable rake angle design
- ♦ Twist free & better cutting result in thin sheets at lower rake angle
- ♦ Cutting job accuracy as per DIN Standard
- ♦ Higher cutting capacity than rated capacity at higher rake angle
- ♦ The stable & robust structure from ultrasonically & tensile tested IS 2062 grade steel
- ♦ Rigid box type structure of ram & table with inclined member in direction of resultant force
- ♦ Hydraulic & electrical safety interlocks for overloading
- ♦ NC up-gradation possible
- ♦ Bolted type Square Box assembly for holding cylinder mounting.
- ♦ Special guided seal for holding cylinder to avoid leakage.
- ♦ All electrical & hydraulic component from reputed make
- ♦ Ram guided by six hardened & grounded guide rollers
- ♦ Suitable for upgradation with special optional features



HYDRAULIC SHEARING MACHINE



The fastest & easiest Pre calibrated blade clearance setting for burr free cutting.



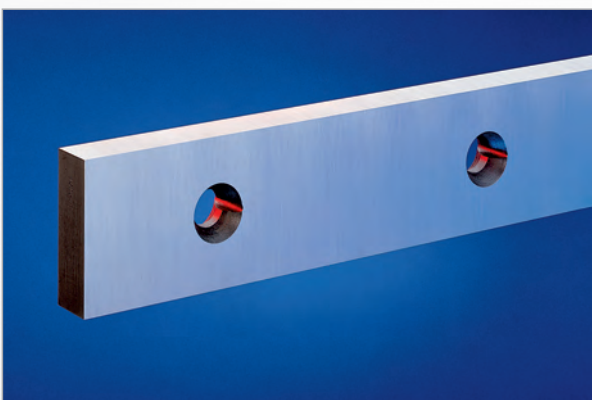
Electrical panel is made from reputed brand components like SIEMENS / SCHNEIDER / BCH.



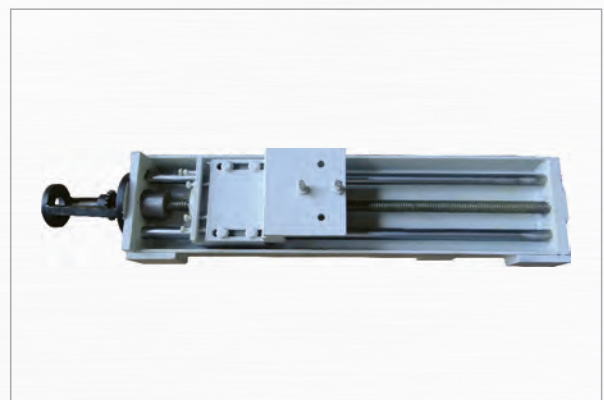
Sandwich bolted type square box design for mounting of holding cylinder to facilitate the maintenance.



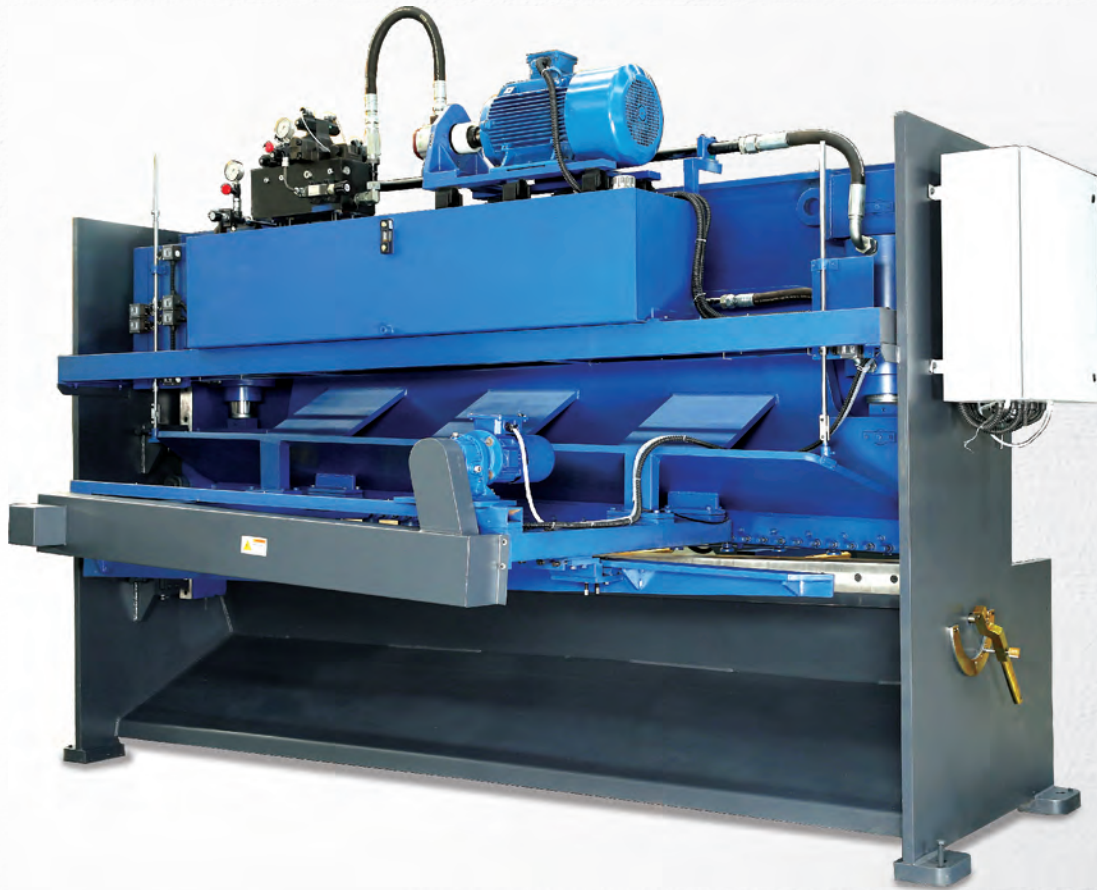
Conveniently located operating Console for machine operations with individual buttons for all operations.



Four edge inter changeable top & bottom Hardened & grounded HcHCr Shearing Blade suitable for MS & SS cutting.



Robust & accurate Backgauge supported by double hardened guides for long life.



OPTIONAL ACCESSORIES



Single step motorized back gauge with DRO from HENGSTLER Germany.



Multi-step motorized back gauge with touch screen DRO from DELTA Taiwan.



High Speed NC back gauge controller from Schneider with VFD



Ball Transfer table for fast and smooth handling of sheet.



CNC / NC HYDRAULIC SHEARING MACHINE

RANGE | 3 mm to 32 mm
LENGTH | 1250 mm to 8000 mm



► SALIENT FEATURES

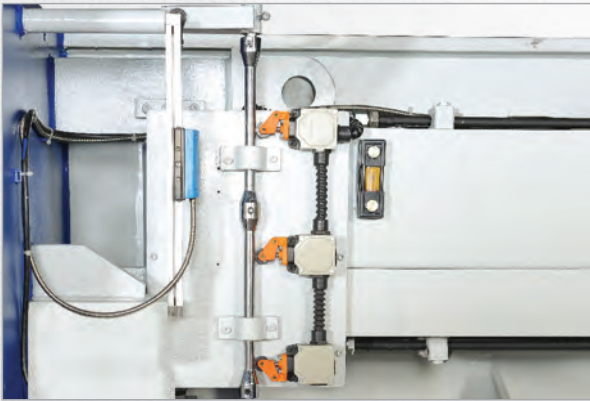
- ♦ AC Servo Motor & drive for High-speed back gauge movement
- ♦ User friendly Colour LCD screen for easy programming
- ♦ High-speed back gauge assembly with ball screw & timer belt
- ♦ Repeated position accuracy in $\pm 0.1\text{mm}$
- ♦ Multiple back-gauge position with stroke counting on screen
- ♦ Automatic Rake angle adjustment by controller
- ♦ Automatic Stroke length control by controller
- ♦ Automatic back gauge retraction after holding the sheet
- ♦ Multi Step positions on back gauge with desired no. of strokes on each position.
- ♦ The back gauge is equipped with hardened ball screw & LM Guides



CNC / NC HYDRAULIC SHEARING MACHINE



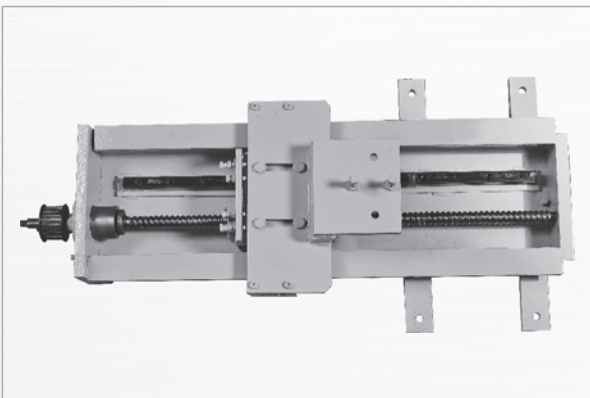
Cyb Touch 8 - Dedicated CNC / NC Shear controller from Cybelec Switzerland.



Automatic rack angle adjustment thru controller as per thickness of cutting sheet.



High-speed AC Servo driven Back gauge Assembly.
The timer belt is used for precise synchronized movement to avoid backlash error.



High speed AC servo driven back gauge equipped with hardened & grounded ball screw with LM guides mounted on heavy fabricated channel housing.



OPTIONAL ACCESSORIES



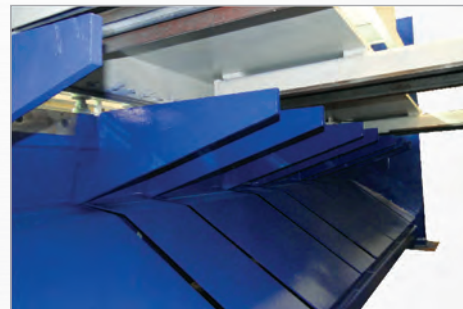
High Speed NC back gauge controller from Delta Taiwan with VFD



DAC-310T - Dedicated NC Shear controller from Delem Netherland



Cyb Touch 8 - Dedicated CNC Shear controller from Cybeclec Switzerland.



Hydraulic Rear Sheet Support for thin sheet cutting.



CNC / NC HYDRAULIC VALUE ADDITION

CNC / NC SHEARING MACHINE

The CNC / NC Shearing Machine is an advance technology machine for getting more productivity, accuracy & easy operation. The CNC / NC controller offers quick & easy programming of back gauge position & rake angle control.



THE UNIQUE FEATURES OF CNC/NC CONTROLLER SHEARING MACHINE OFFERS

- ♦ Automatic rake angle control
- ♦ Cutting material selection from controller
- ♦ Automatic blade gap adjustment (Available only on CNC Shearing Machine)
- ♦ Multi step high speed gauging gives higher productivity
- ♦ Auto-retraction back gauge
- ♦ Shearing length control on screen
- ♦ No skilled labour requirement for accurate Cutting results
- ♦ User friendly due to touch screen & bigger font size
- ♦ Stroke count & job count is available on screen
- ♦ The programs can be back-up by wireless connection to PC (With RF Link)

The CNC / NC controller has X - axis - Back gauge control. The operator can make program with different gauge position. The fast and accurate multi position back gauge system is very efficient and accurate for longer life. It can save different Back Gauge Position. These programs can be saved & recalled again for future use.

HIGH SPEED BACK GAUGE

Our CNC / NC back gauge is high speed, accurate & repeatable. The mechanical assembly of back gauge is driven by AC Servo Drive, hardened ball screws, LM Guides & timer belt. This combination provides the longer service life with trouble free operation.



The LM guide ensures High speed motion with low driving force, high position accuracy & smooth drive. The LM guides are wear resistant hence operation life is more.

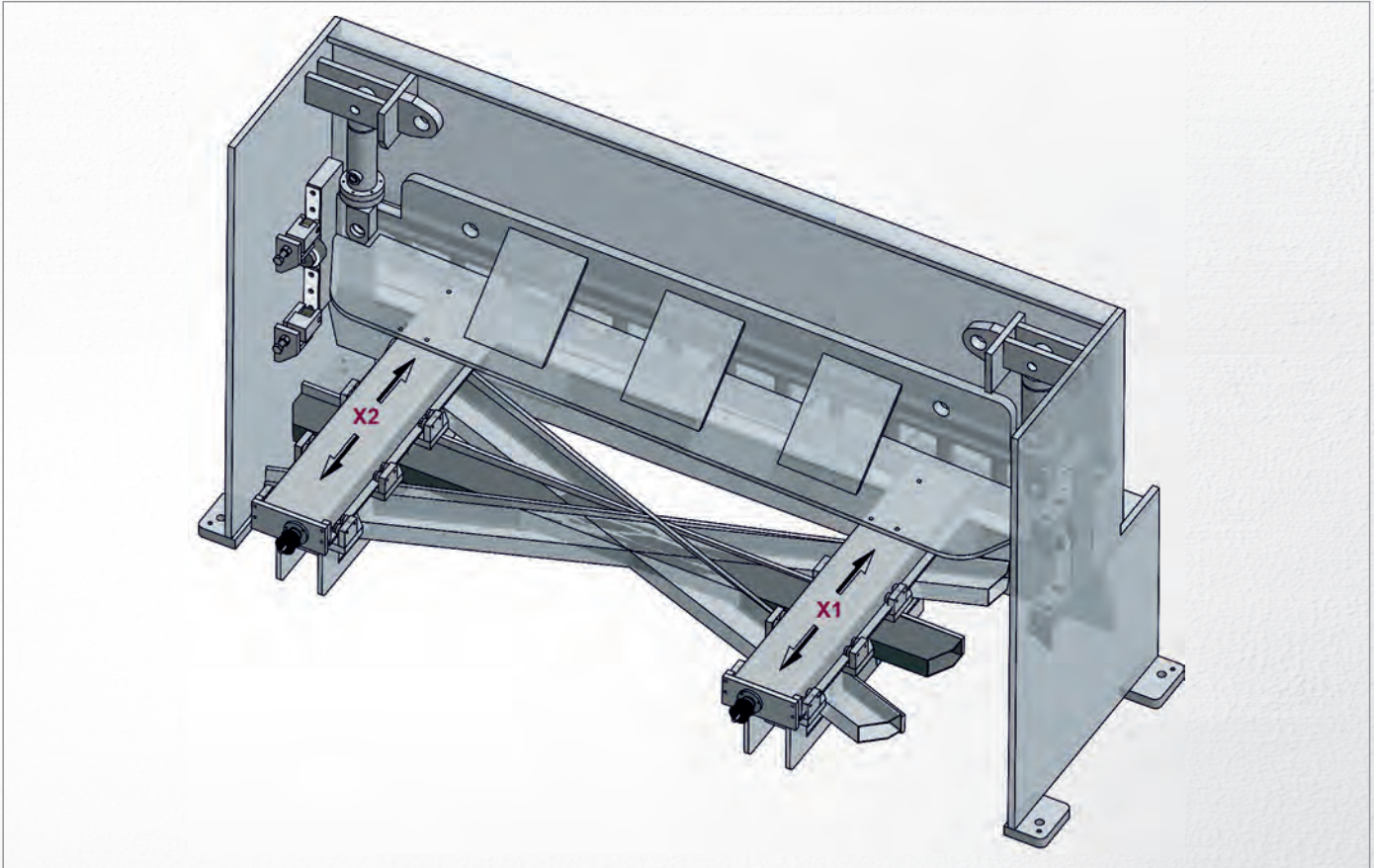


The hardened & ground ball screw are designed to take heavy load in high speed movement with smooth run. The backlash error is eliminated.



The back gauge position is achieved by AC Servo Drive. The back gauge position is highly accurate & repeatable.

TWO AXIS GAUGING SYSTEM [OPTIONAL]



The Two Axis CNC / NC package of shearing machine adds more flexibility on back gauge. It is designed to cater the special needs of taper cutting jobs. The back gauge is equipped with two axes CNC / NC gauging system X1 & X2 with individual servo drives for each axis.

The machine is capable of cutting straight as well taper cuts as per dimension fed in controller. It can program

multiple positions on back gauge with desired number of strokes on each position. The back gauge is equipped with Hardened Ball Screw, LM Guides, Timer belt & AC Servo Drive on machine. The back gauge position repeatability is $\pm 0.1\text{mm}$.

Apart from this special feature, it also contains all standard features of CNC / NC controller back gauge.



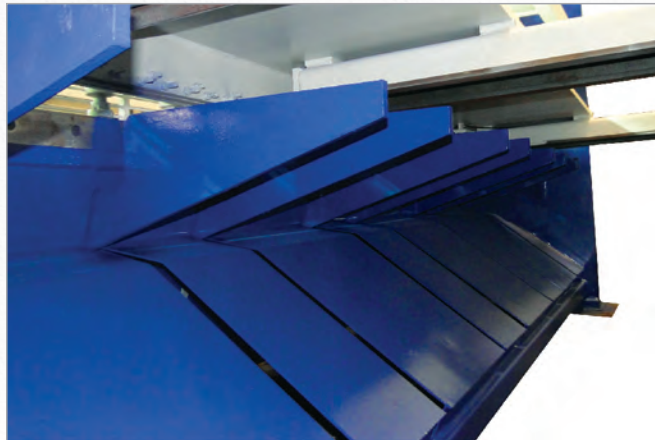
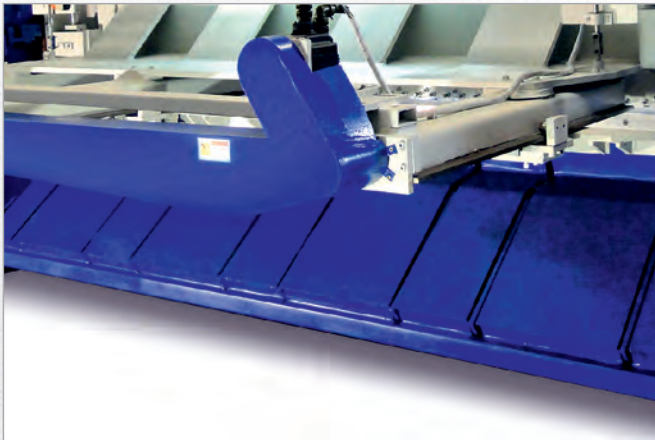
AUTOMATIC **BLADE GAP**

Automatic blade gap adjustment is an advance feature offered on CNC Shearing Machine. The CNC controller adjusts the gap between upper blade & lower blade as per cutting thickness programme done.

The blade gap is pre-calibrated in controller. The machine will not be operated unless the blade gap is changed to set value. This feature eliminates any human error & gives burr free clear cut on sheet. The life of cutting knife is also enhanced due to cutting of sheet at recommended blade gap every time.



REAR SHEET SUPPORT [OPTIONAL]



Rear sheet support is very useful option for thin sheet cutting in larger width with the help of back gauge. When thin sheet is cut in longer width (i.e. approx. > 200mm), the sheet is sagging due to self-weight & the back gauge dimension may vary due to bend in sheet when cutting is done by back gauge.

The rear sheet support provides the support for sheet on backside below back gauge. It is hydraulically operated support, which has selectable option for using it in cycle. The rear support will be in up position when sheet is inserted. Once the sheet is hold by cylinders, the support will go down to facilitate the sheet cutting. Once the cut piece slides out, the rear support will come back to up position for next shot.

EASY MATERIAL HANDLING [OPTIONAL]

The machine can be equipped with ball transfer beds for handling the large steel plates in 16mm thickness and 6300mm width by means of ball transfer bed. This saves manpower and time for handling material, results in higher productivity...



STANDARD ACCESSORIES - HYD

- ♦ Electric control panel
- ♦ Hardened transfer bars mounted on table
- ♦ Rake angle selection through selector switch
- ♦ Lever operated blade clearance with calibration
- ♦ Fine stroke adjustment rod with limit switch
- ♦ Back gauge on double guide rods & ball screw
- ♦ Front sheet support
- ♦ Squaring arm with steel rule on left side
- ♦ Hold down cylinders mounted on machine
- ♦ Cutting area illuminated for clear view of blades
- ♦ Four edge HCHCr blade suitable to MS & SS mounted on machine**
- ♦ Manual back gauge

Note : ** Blade are not under warranty.

STANDARD ACCESSORIES - CNC/NC

- ♦ Touch screen shear controller from Cybelec / Schneider / Delem
- ♦ Electric control panel
- ♦ Automatic rake angle adjustment
- ♦ Lever operated blade gap adjustment on NC Shear
- ♦ Automatic blade gap adjustment on CNC Shear
- ♦ Hardened ground ball screw & LM guides
- ♦ Stroke adjustment through screen
- ♦ Front sheet support
- ♦ Squaring arm with steel rule on left side
- ♦ Hardened transfer bars mounted on table
- ♦ Hold down cylinders mounted on machine
- ♦ Cutting area illuminated for clear view of blades
- ♦ Four edge HCHCr Blade suitable to MS & SS mounted on machine**

HYDRAULIC PRESS BRAKE

RANGE | 30 MT to 600 MT
LENGTH | 1250 mm to 8000 mm

► SALIENT FEATURES

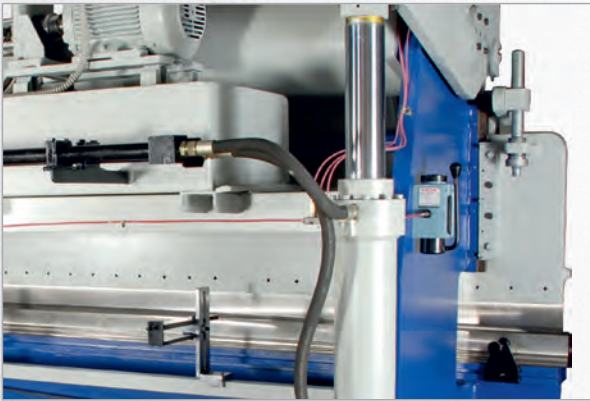
- ♦ The stable robust welded steel Frame made of ultrasonically and tensile tested IS 2062 plate as per guidelines of IMTMA standards
- ♦ Fast approach & fast return speed to save cycle time, slow pressing speed for better stroke control & bending accuracy, ensures high productivity
- ♦ Repeatability for ram position $\pm 0.05\text{mm}$
- ♦ Compact cylinders & low pressure system due to rear cylinders. Also it gives better rigidity & load carrying capacity against fatigue failure
- ♦ Positive synchronisation of cylinders with welded torque tube gives better bending accuracy on both ends
- ♦ Moving work station with manual, single cycle & automatic mode for easy operation with emergency stop button
- ♦ NC upgradation possible on site
- ♦ All electrical & hydraulic component from reputed make
- ♦ Hydraulic Cylinders made from seamless honed tube, hardened & grounded chrome plated piston rod fitted with twin type zero leak PU Seals
- ♦ Suitable for upgradation with special optional features



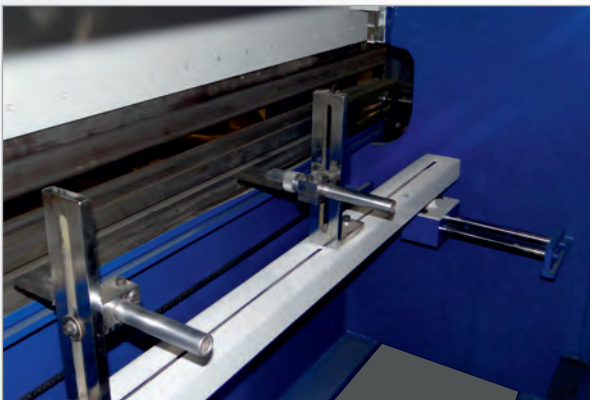
HYDRAULIC PRESS BRAKE



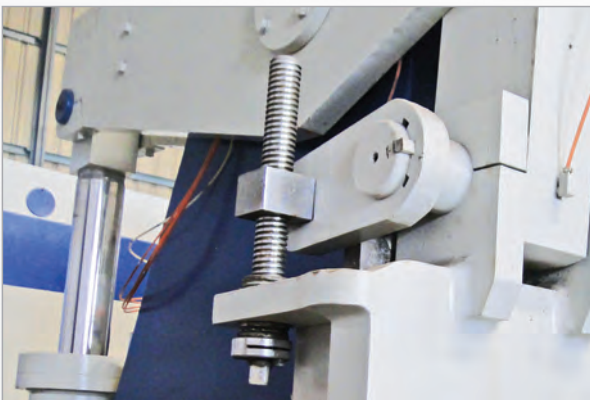
Unhardened & ungrounded multi "V" die and semi gooseneck Punch (Single / Segmented) for standard bending requirements. We also provide special tools suitable for complex & customized bending jobs.



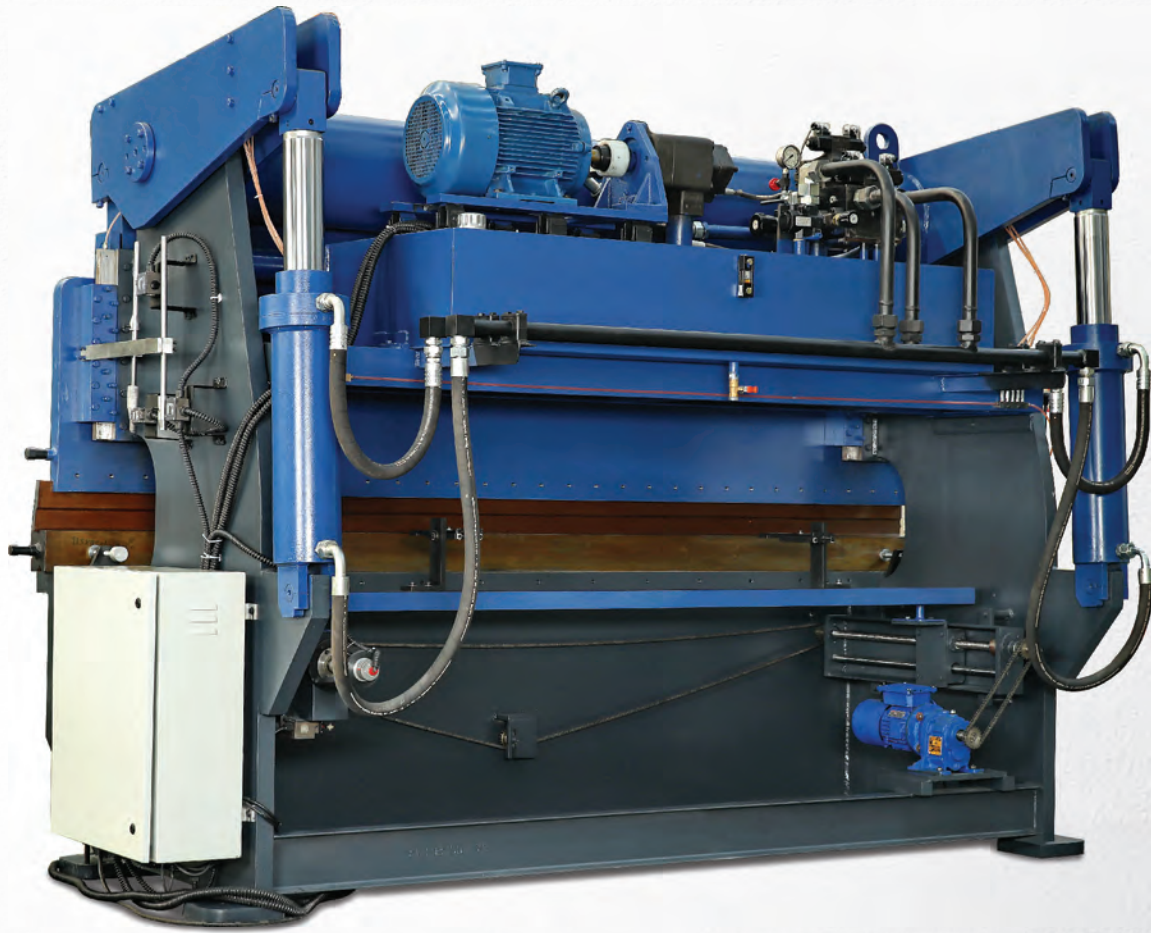
Rigid & Accurate five piece adjustable guides with special wear resistant liners for guiding the ram travel.
Centralized lubrication system with progressive block for all moving parts.



Front operated manual back gauge with two micro adjustment fingers is equipped with lead screws, double rod guides & synchronized by chain drive. Motorized back gauge is optional.



Specially designed ram tilting arrangement to nullify wear & tear effect of pin bush assembly. Hence maintaining bending accuracy for longer time.



OPTIONAL ACCESSORIES



Multistap DRO (DELTA)



Hardened & Grounded Segmented Die & Punch.



Single step motorized back gauge with DRO from HENGSTLER Germany.



Quick Release Clamp



Allen Key Type Clamp



High Speed NC back gauge controller from Schneider with VFD



NC HYDRAULIC PRESS BRAKE

RANGE | 30 MT to 600 MT
LENGTH | 1250 mm to 8000 mm

► SALIENT FEATURES

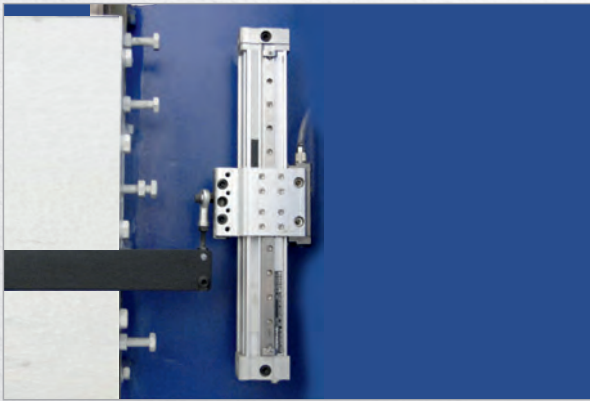
- Suitable for complex job bending
- Quick changeover for sample production & mass production
- 5.7" Colour graphic LED back light Screen
- Two axis automatic control - bending degree (Y Axis) & back gauge (X-Axis) program
- Multiple bends with different back gauge positions can be programmed
- 200 programs & 24 bends with individual back gauge positions in one program
- The back gauge position accuracy is 0.1mm
- Bend angle & depth mode program can be possible
- Programmable back gauge retraction
- Programmable angle correction & back gauge correction
- Programmable open height on each bend
- Job counter on screen
- Suitable for upgradation with special optional features



NC HYDRAULIC PRESS BRAKE



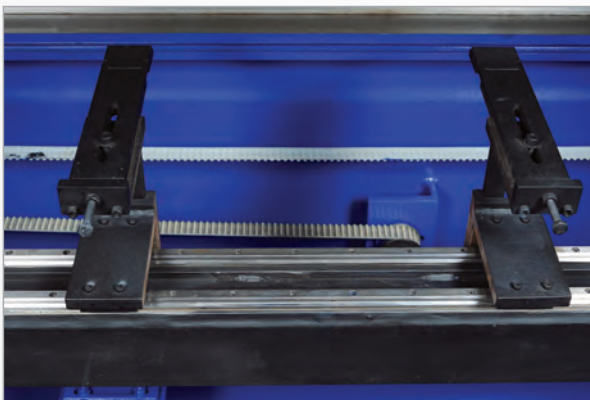
Cyb Touch 8P - touch screen two axis dedicated press brake controller from Cybelec Switzerland.



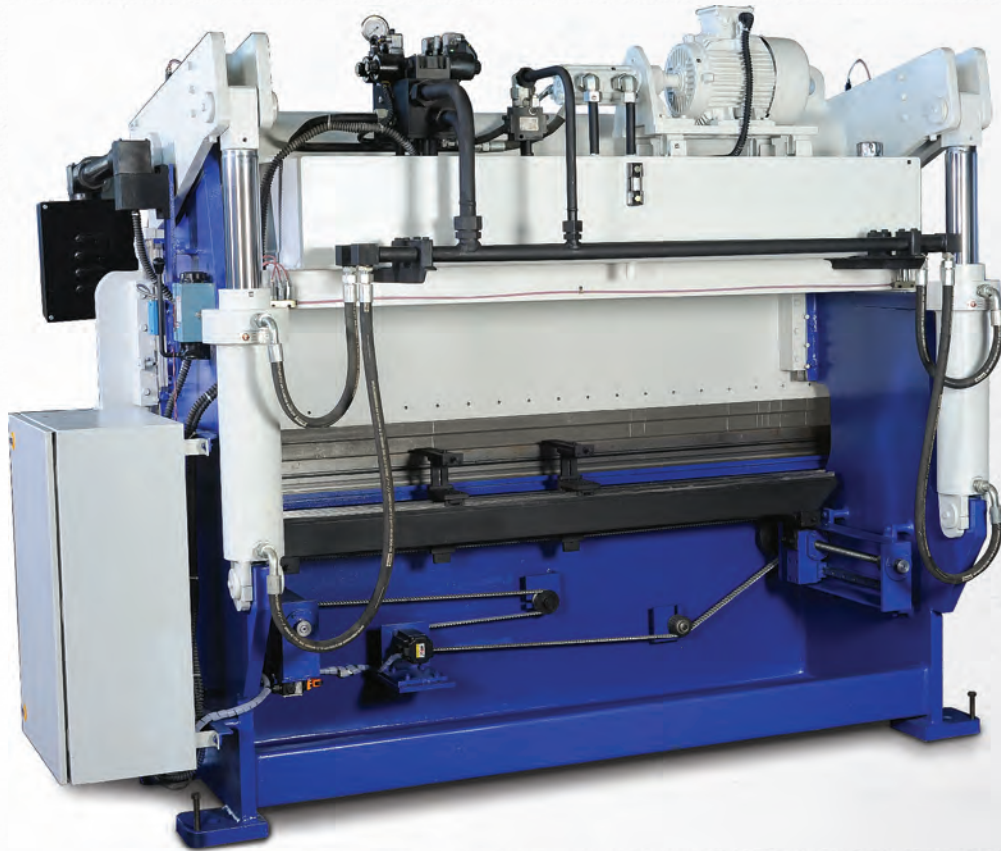
Highly precise 5 micron accuracy guided press brake scale for Y-axis positioning
Repeatability for ram position $\pm 0.03\text{mm}$



High speed AC servo driven back gauge equipped with hardened & ground ball screw with LM guides mounted on heavy fabricated channel housing. The timer belt is used for precise synchronized movement to avoid backlash error.



Back gauge finger with micro adjustment mounted on double LM guide for easy, fast & accurate "Z" axis movement across table length.



OPTIONAL ACCESSORIES



Force Control Module



DA-41T Delem NC Controller



Quick Release Clamp



Hardened & Grounded Segmented Die & Punch.



NC VALUE ADDITION

NC PRESS BRAKE

The NC Press Brake is an upgradation of standard press brake with automation for getting more productivity & easy operation. The NC controller offers quick & easy programming of complex bending jobs.

THE UNIQUE FEATURES OF NC CONTROLLER PRESS BRAKE OFFERS

- ♦ Quick & Easy programming
- ♦ Higher productivity & Saving on labour
- ♦ The program can be made as simple as reading the job drawing.
- ♦ Complex bending sequence in one go
- ♦ No skilled labour requirement for accurate bending results
- ♦ Easy to make samples for special jobs
- ♦ User Friendly due to Touch Screen & Bigger Font Size.



The NC controller has 2 axes control i.e. Y-axis - Beam control & X - axis - Back gauge control. It eliminates the need of adjusting bending degrees & marking of bending positions on job. The operator can make program with different degrees & different gauge position. In turn, we can save the time on material handling & job marking. The operator can finish the complete job in one sequence even if different bending degrees & different edge dimensions are required. Hence it is enhancing the productivity of machine.

It can save total 200 product programs & each program having 24 bends. These programs can be saved & recalled again for future use.



THE DETAILED TECHNICAL FEATURES

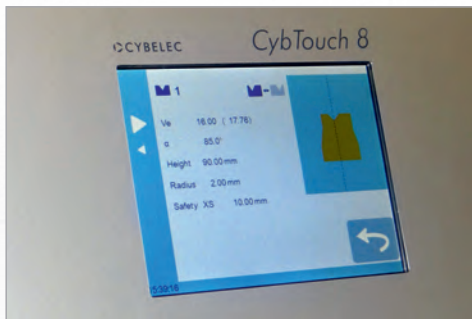
- ♦ Bend angle programming method
- ♦ Direct bending degree entry as per job drawing
- ♦ Depth Mode degree program is also available
- ♦ The bending edge dimensions can be programmed as per individual bends
- ♦ Inside & out side edge dimensions can be defined in the program
- ♦ Automatic Bending degree with correction factor for each bend
- ♦ Automatic back gauge positions with correction factor on each bend
- ♦ Optional hardened tools & Manual / Automatic crowning
- ♦ The programs can be back-up by wireless connection to PC



- ◆ Optional Force control for tool safety
- ◆ Auto-retraction back gauge feature for special Z bends
- ◆ Different job materials can be programmed
- ◆ Job count is available on screen
- ◆ Different open height on each bend
- ◆ Dwell time can be programmed



- ◆ Pre Programmable punch data
- ◆ Total 50 top tools can be programmed



- ◆ Pre Programmable die data
- ◆ Total 50 bottom tools can be programmed

High Speed Back Gauge

Our NC Back Gauge is high speed, accurate & repeatable. The mechanical assembly of back gauge is driven by AC Servo Drive, Hardened Ball Screws, LM Guides & Timer belt. This combination provides the longer service life with trouble free operation.



The LM guide ensures High speed motion with low driving force, high position accuracy & smooth drive. The LM guides are wear resistant hence operation life is more.



The hardened & ground ball screw are designed to take heavy load in high speed movement with smooth run. The backlash error is eliminated



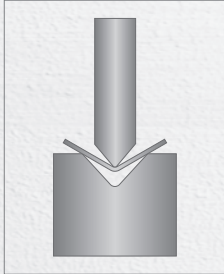
The back gauge position is achieved by AC Servo Drive. The back gauge position is highly accurate & repeatable



BENDING FORCE CHART (TONNES / METRE LENGTH)

HYDRAULIC PRESS BRAKE MACHINE

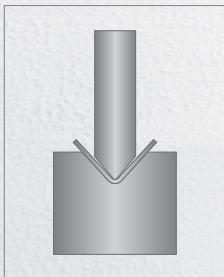
The capacity of Press Brake is generally defined in tons. Followings contain the details of load calculation in different types of bending methods like Air Bending, Bottoming, Forming etc. There are certain special applications like piercing, straightening etc, which can also be used on press brakes. But these processes need special tools and different load calculations.



AIR BENDING

Air Bending is the most widely used application on press brake. Air Bending is done on three contact lines, two die edge & cone punch edge. The calculation for air bending is as per following.

T Sheet Thickness in MM	0.5mm-8mm	9mm-10mm	12mm or More
V - Die Opening	8T	10T	12T



BOTTOM BENDING

In bottom bending the upper and lower dies are usually made with an include angle of 90 degree to ensure sharp corners on the formed part, In the forming process, the dies strike solidly and squeeze the material at stroke bottom.

This process requires 3 to 5 times the tonnage needed in air bending. Since more tonnage is required bottoming is seldom performed on steel greater than 12 gauge.

The adjustable "V" die opening for bottoming are : V=5 to 6x material thickness

PRESS BRAKE SELECTION GUIDELINES

The basic factors to be considered while selecting a press brake, or calculating the correct setting for operation are:

PARAMETERS	UNIT
Plate Thickness (t)	mm
Ultimate Tensile Strength of Plate (S)	Kg/mm ²
Aluminum	25 Kg/mm ²
Mild Steel	45 Kg/mm ²
Stainless Steel	72 Kg/mm ²
Bending Length(L)	mm

PARAMETERS	UNIT
Die Opening (V)	mm
Minimum Internal Radius	mm
Minimum Flange (H)	mm
Bending Correction Force (K)	1.3
Required Tonnage (P)	M. Tones

THE FORCE REQUIRED FOR AIR BENDING CAN BE CALCULATED FROM THE FOLLOWING FORMULA

$$\text{Load, P (Metric Tones)} = K \times L \times S \times t^2 / 1000 \times V$$

Suppose we want to bend 3.15 mm MS (10 Gauge) in 3000mm length, Following are the Calculation.

$$P = 1.3 (K) \times 3000\text{mm} (L) \times 45 (S) \times 3.15^2 / 1000 (24\text{mm}) = 72 \text{ Metric Tones}$$

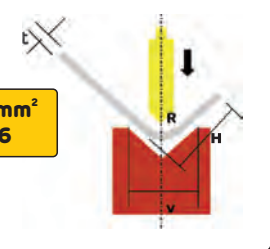
Suppose if we want to bend 3.15 mm SS (10 Gauge) in 3000mm length, Following are the Calculation.

$$P = 1.3 (K) \times 3000\text{mm} (L) \times 72 (S) \times 3.15^2 / 1000 (24\text{mm}) = 115 \text{ Metric Tones}$$

The bending chart also gives the bend radius & minimum bend edge also. The bending chart defines the load required per mm thickness per meter. To use bending chart, select the "V" opening from upper most line and thickness from vertical line, the matrix shows the total load in tons per meter. To achieve total load, this value should be multiplied by the total length of job.

BENDING FORCE CHART

t/V	4	6	8	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250
H (min)	3	4	5.5	6.5	8	10.5	13	16.5	21	26	32.5	41	52	65	81.5	104	130	163
Ri (min)	0.5	0.8	1	1.3	1.5	2	2.5	3.2	4.4	5	6.5	8	10	12	15	20	25	37
0.5	4	3	2															
0.8	12	7	5	4														
1.0		11	8	6	5													
1.2		18	12	9	7	5												
1.5			21	15	12	8	6											
2				30	23	16	12	9										
2.5					39	27	20	14	11									
3						43	31	23	16	12								
4							60	44	32	23	18							
5								76	54	39	23	22						
6									85	62	45	33	25					
8										121	88	70	46	35				
10											151	109	79	58	44			
12												173	124	91	66	50		
15													213	155	113	81	62	
20														302	220	158	115	89
25															378	269	187	144



**For SS U.T.S. 72 kg/mm²
Multiply Force by 1.6**

The force required for air bending can be calculated from the following formula:
Load, P = $\frac{K.L.S.t^2}{1000V}$ Metric Tones

STANDARD ACCESSORIES - HYD

- ✦ Electrical control panel with selection of 'AUTO', 'INCH' & 'SINGLE CYCLE AUTO' mode operations
- ✦ Movable workstation with pair of foot switch
- ✦ Pair of lifting links
- ✦ Pair of sheet support
- ✦ Fine stroke adjustment rod with limit switch.
- ✦ Front operated Manual back gauge with micro setting
- ✦ One suitable five way die & Punch of EN-8** (unhardened and ungrounded)
- ✦ Centralized lubrication system with flow control valves for adequate lubrication
- ✦ Ram tilting arrangement on selected models

STANDARD ACCESSORIES - NC

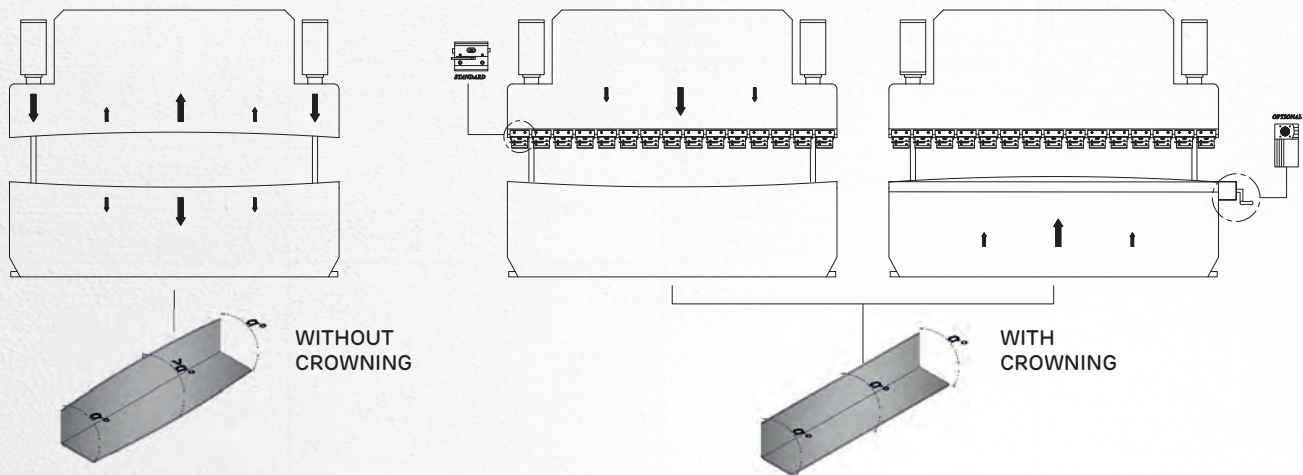
- ✦ Manual, Auto & Program mode selection through screen
- ✦ Two axis dedicated CYB TOUCH 8 controller with 5.7" colour touch screen
- ✦ 200 jobs X 24 bends program memory
- ✦ Movable workstation with pair of foot switch
- ✦ High-speed back gauge with AC Servo Drive, High Precision Ball screw, LM Guides & Timer belt
- ✦ Highly precise guided press brake scale for Y- axis positioning
- ✦ Pair of lifting links
- ✦ Pair of sheet support
- ✦ One suitable five way die & Punch of EN-8** (unhardened and ungrounded)
- ✦ Centralized lubrication system with flow control valves for adequate lubrication
- ✦ Ram tilting arrangement on selected models

Note : ** Tools are not under warranty.



OPTIONAL ACCESSORIES

CROWNING SYSTEM



With press brakes, the machine frames tend to deflect during the bending process. Without correction, the top tool does not penetrate the bottom die as deeply across the machine length, especially towards the centre of the press brake. As a result, the bending angle is not constant over the entire length. Crowning systems are characterized by their extremely compact design without any externally moving parts. Control often takes place automatically via a CNC drive motor integrated to the machine controller, eliminating the need for the press brake operator to make adjustments for machine deflection.

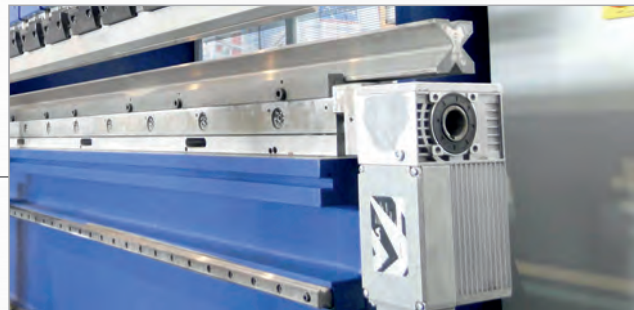
The crowning system is intended to overcome the deflection of structure. It is mounted on the bed (lower

beam) of the machine, designed to include stacks of mechanical wedges that could be increased or decreased in height, predominantly in the centre of the machine. This makes it possible to increase or decrease the curve in the crowning system to match the natural curve that was the result of deflection in the ram when the machine came under a load.

CNC Crowning ensures the ram and table are parallel during the bending operation. Sheet thickness, Length, Die Opening, and tensile Strength data are entered into the controller, Force and related deflection of the table and ram are automatically determined, preloading is optimally obtained for each bend.

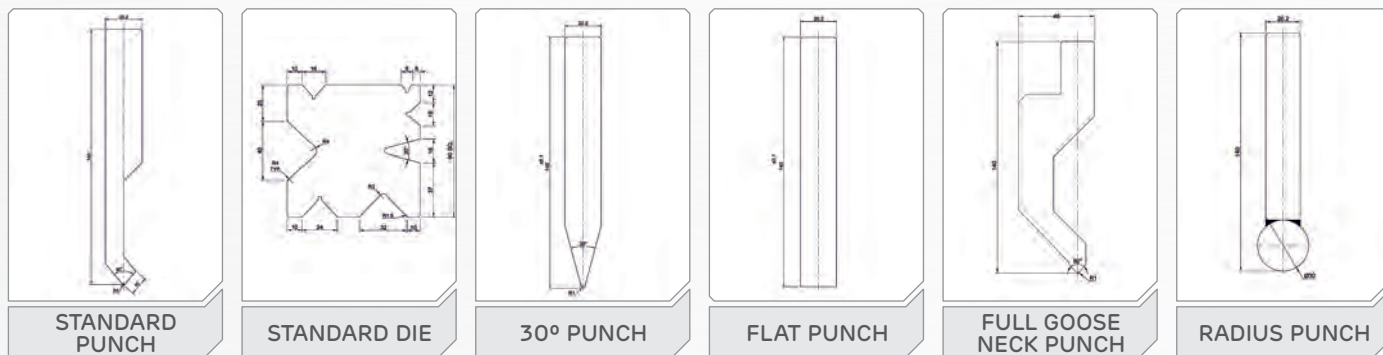


Manual Crowning



Automatic Crowning

TOOL PROFILES



ACHIEVEMENT



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PRODUCTS



CNC Press Brake



NC / Hyd. Press Brake



Hyd. Press Brake



Double Pinch Plate Roller



CNC / NC Shearing Machine



Hyd. Shearing Machine



Busbar Machine



Iron Worker Machine



Hyd. Deep Drawing Press



Hyd. C & H - Frame Press



Hyd. Servo Press



CNC V Grooving

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