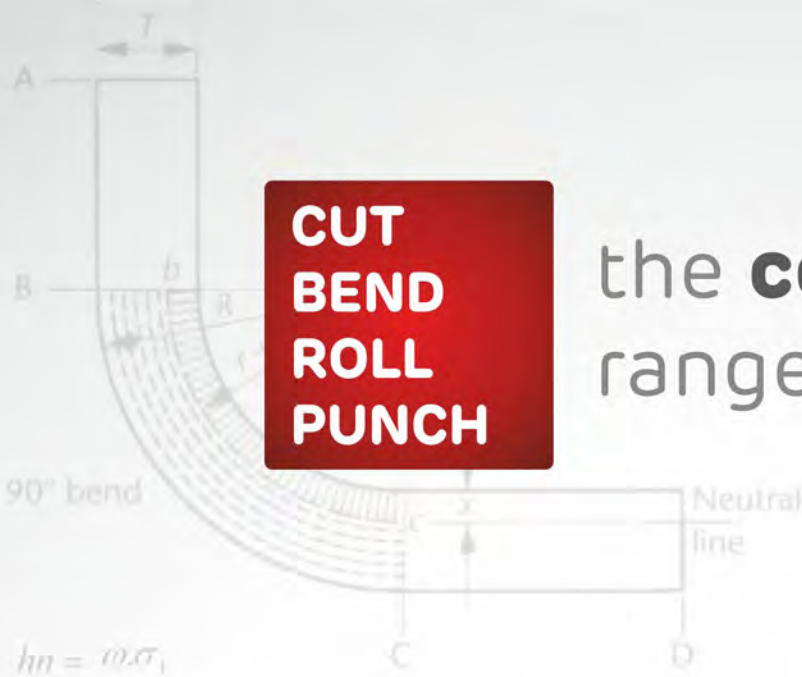


**CUT
BEND
ROLL
PUNCH**

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



$$\begin{aligned}
 hn &= \omega \cdot \sigma_1 \\
 k'n &= \omega \cdot KN \\
 k'l' &= \rho \cdot x \\
 hn &= \sigma_y \cdot mn \\
 mn &= P_{yo} \cdot k'l' - Q_{o,y} \cdot k'n \\
 mn &= P_{yo} \cdot \rho \cdot x - Q_{o,y} \cdot \omega \cdot KN \\
 \omega &= \frac{P_{yo} \cdot \rho \cdot x}{\sigma_1 + Q_{o,y} \cdot KN}
 \end{aligned}$$



**HYDRAULIC
SHEARING**





**FOCUS ON
BEING THE BEST**

ENERGYMISSION
Spirit of Commitment



Energy Mission Machineries (India) Pvt. 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. The Company has a trained workforce of 250 employees and 60000 Sq. ft. area with well-equipped workshop capable of delivering utmost quality products, in time delivery and continuous service back up.

WE ARE LEADING MANUFACTURER OF

- ◆ CNC Servo Hybrid & Syncro Press Brake
- ◆ NC/Conventional Hydraulic Press Brake
- ◆ CNC Hydraulic Shearing Machine
- ◆ NC / Conventional Hydraulic Shearing Machine
- ◆ Four / Three Roll Pate Rolling Machine
- ◆ Hydraulic Iron Worker
- ◆ Hydraulic / NC Busbar Cutting , Bending & Punching Machine
- ◆ Hydraulic Deep Drawing Press
- ◆ General Purpose Hydraulic Presses
- ◆ Special Purpose Machines.

OUR PLANTS



OUR STRENGTH

- ◆ 18 years of Experience in Manufacturing
- ◆ World Class manufacturing facility spread in 60000 sq.ft
- ◆ Production capacity of 400 machines per annum
- ◆ More than 3000+ installation across India & Abroad
- ◆ Trained & qualified team of 250 employees
- ◆ Keen quality control on each component & process
- ◆ Dedicated team for design & development
- ◆ Sales & service network all over India
- ◆ CNC Lathe, VMC & Floor Boring Machine ensuring single reference accurate machining
- ◆ Awarded as "Outstanding Entrepreneur of Year" in Year 2008-09 & Year 2014-15

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



FLOOR BORING



CNC PLANO MILLER



PLANO MILLER



BORING

MANUFACTURING FACILITY



CNC TURNING CENTER



ASSEMBLY LINE



VERTICAL MILLING CENTER



INSPECTION



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.



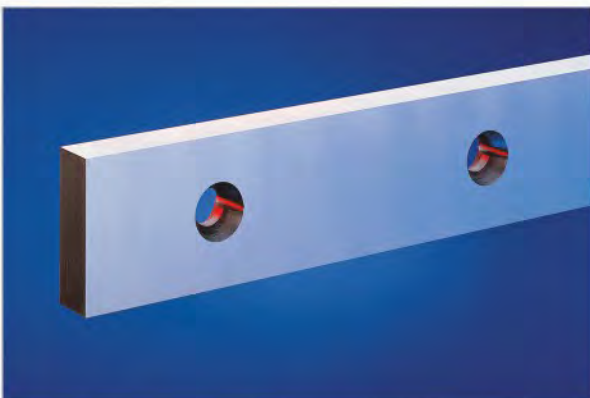
Electrical panel is made from reputed brand components like SIEMENS / SCHNEIDER / BCH.



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



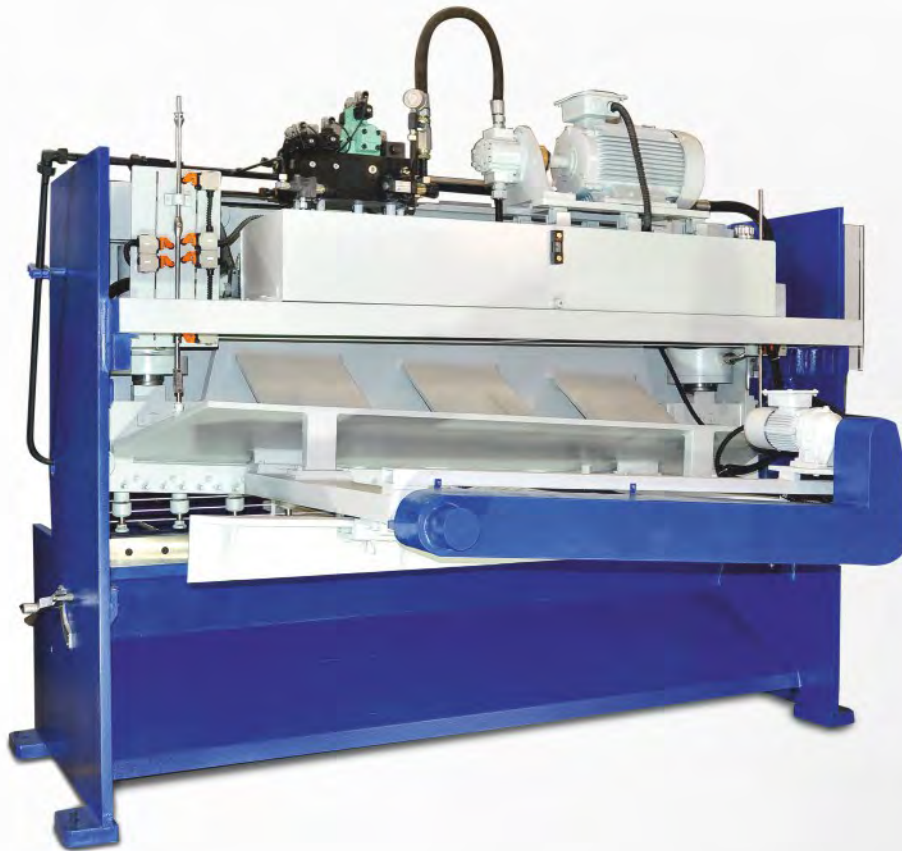
Conveniently located operating Console for machine operations with individual buttons for all operations.



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.



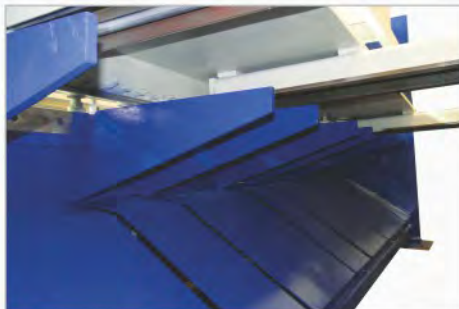
OPTIONAL ACCESSORIES



Single step motorized back gauge with DRO from HENGSTLER Germany.



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



Hydraulic Rear Sheet Support for thin sheet cutting.



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

- 5.7" Touch screen Shear controller from Cybelec / Delem
- User friendly Colour LCD screen for easy programming
- AC Servo drive from Schneider / Panasonic for High-speed back gauge movement
- High-speed back gauge assembly with ball screw & timer belt
- Repeated position accuracy in 0.1mm
- 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



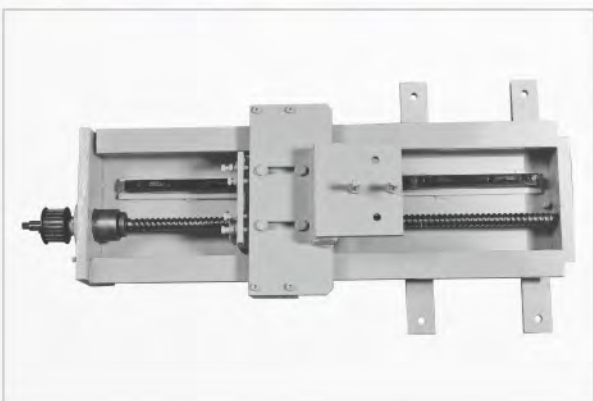
Cyb Touch 6 - Dedicated CNC / NC Shear controller from Cybelec Switzerland.



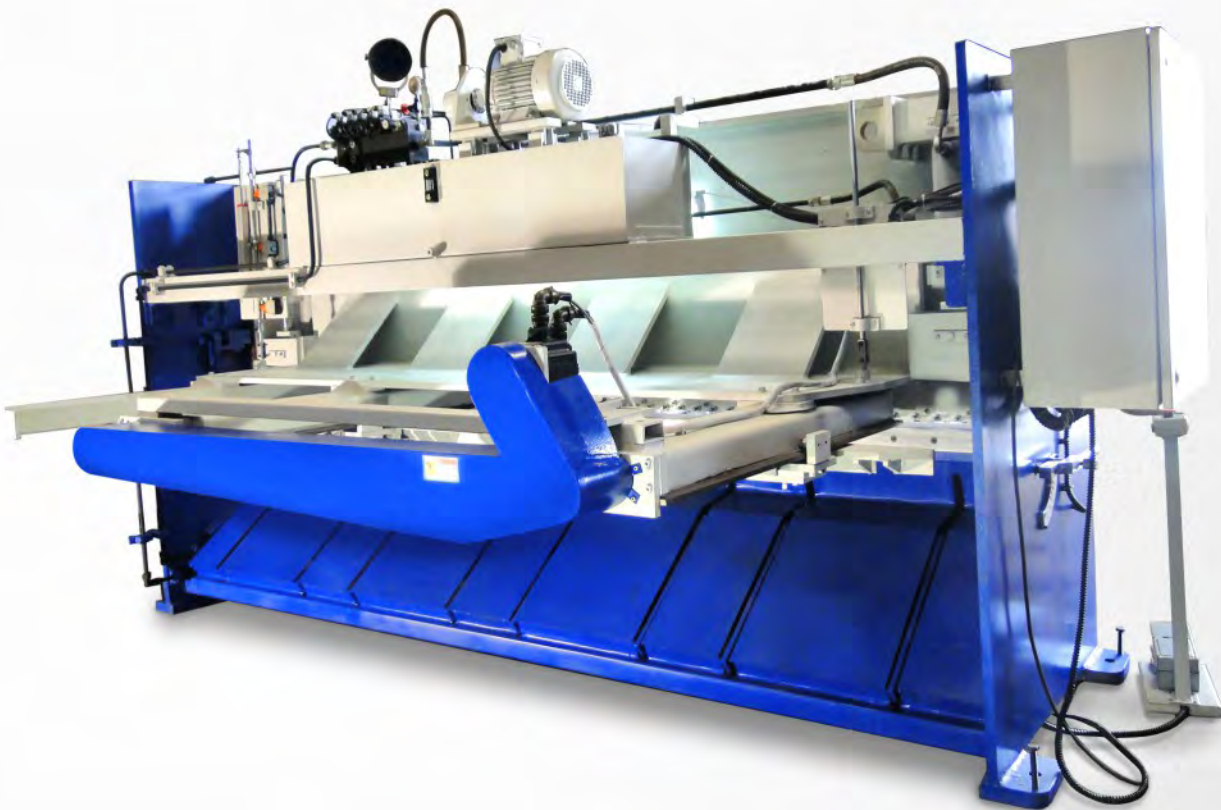
Automatic rack angle adjustment thru controller as per thickness of cutting sheet.



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-310 - Dedicated NC Shear controller from Delem Netherland



Cyb Touch 6 - Dedicated CNC Shear controller from CybeleC Switzerland.



DAC-360 - Dedicated CNC Shear controller from Delem Netherland



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.

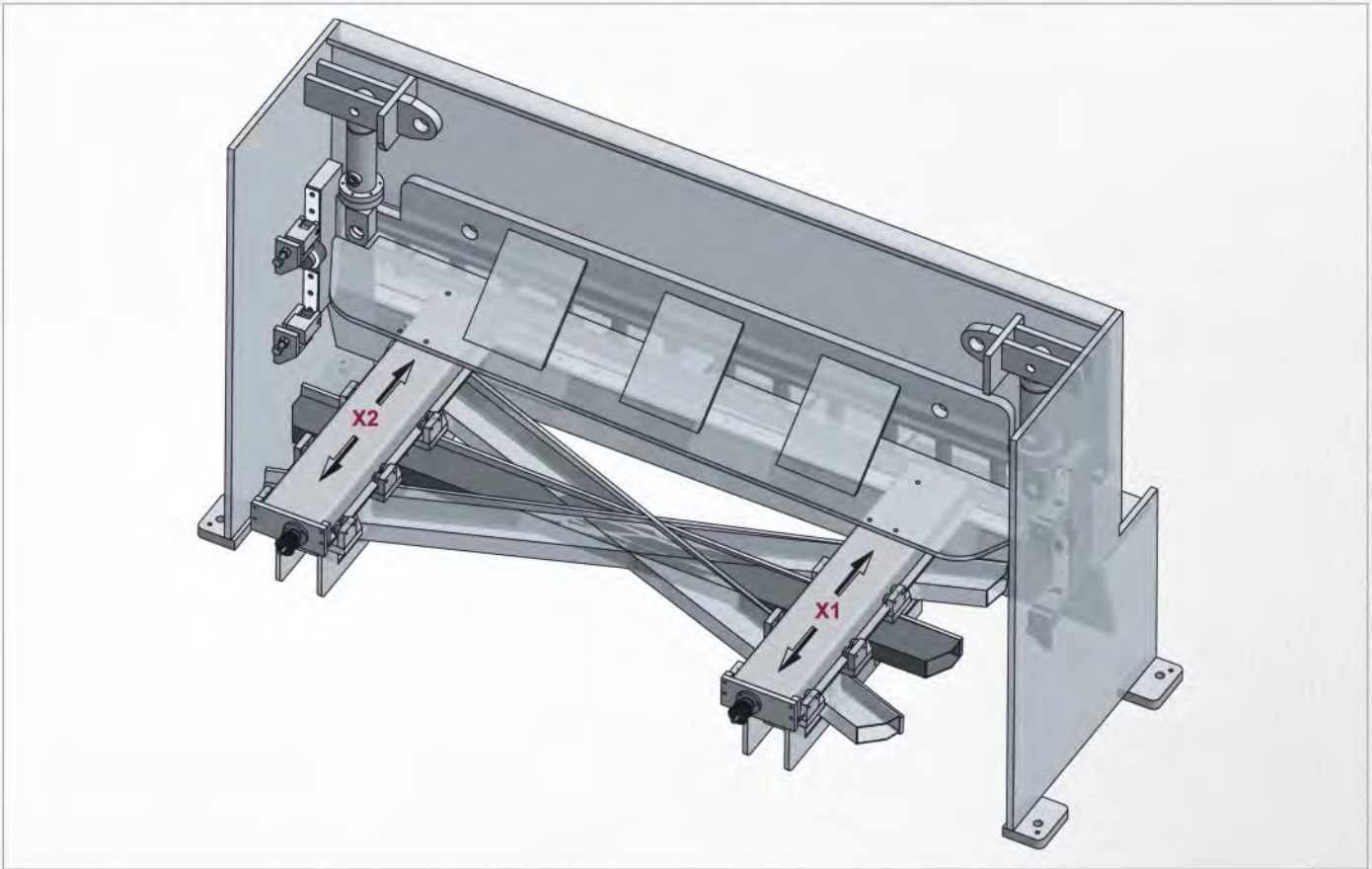


The hardened & ground ball screw are designed to take heavy load in high speed movement with smooth run. The backlash error is eliminated.



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.



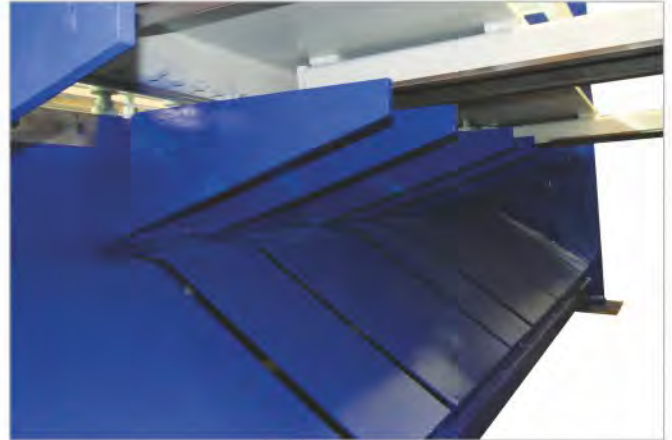
AUTOMATIC **BLADE GAP**

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 program 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

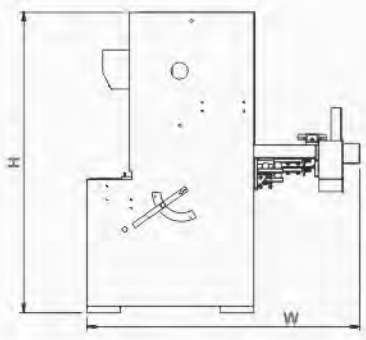
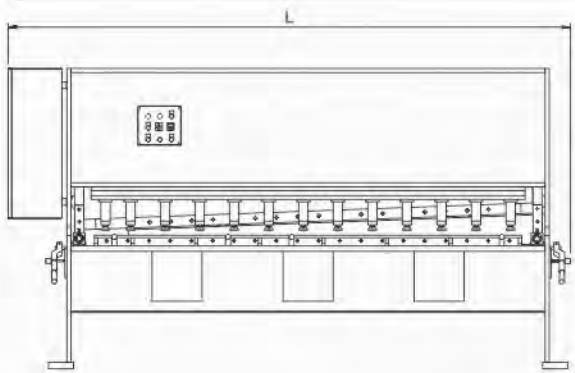
- ♦ Electric control panel
- ♦ Hardened transfer bars mounted on table
- ♦ Rake angle selection through selector switch
- ♦ Lever operated blade clearance with calibration
- ♦ Fine stroke adjustment rod with limit switch
- ♦ Back gauge on double guide rods & lead screw
- ♦ Front sheet support
- ♦ Squaring 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

- ♦ 5.7" Touch screen shear controller from Cybelec / 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**

Model	Cutting Length mm	Shearing capacity Thickness (mm)				Nominal Rake Angle Degree	Rake Angle Range Degree	Strokes Per Minute		No. of Hold Downs	Holding Force Kg.	Power HP	Packing Dimension (L x W x H) mm	Weight Kg.
		M.S.		S.S.				At Min. Rake Angle	At Max. Rake Angle					
		Nominal Rake Angle	Max. Rake Angle	Nominal Rake Angle	Max. Rake Angle									
HFR 215	1500	2	2	1.25	1.25	1°12'	1°12'	16	16	-	-	3	2000x1000x1250	1300
HFR 220	2000	2	2	1.25	1.25	1°12'	1°12'	12	12	-	-	3	2500x1250x1500	1700
HFR 225	2500	2	2	1.25	1.25	1°12'	1°12'	10	10	-	-	3	3000x1250x1850	2500
HVR 312	1250	3.15	4	2	3.15	1°30'	0.5-2°	16	11	8	1200	3	1700x1250x1950	2000
HVR 315	1500	3.15	4	2	3.15	1°30'	0.5-2°	15	10	9	1500	3	2200x1250x1950	2500
HVR 320	2000	3.15	4	2	3.15	1°30'	0.5-2°	14	8	11	2000	3	2700x1250x1950	3000
HVR 325	2500	3.15	4	2	3.15	1°30'	0.5-2°	19	11	13	2300	5	3200x1250x2000	3700
HVR 330	3000	3.15	4	2	3.15	1°30'	0.5-2°	18	9	16	2600	5	3700x1400x2100	4250
HVR 340	4000	3.15	4	2	3.15	1°30'	0.5-2°	15	8	20	3200	7.5	4700x1500x2250	6000
HVR 415	1500	4	6	3	4	1°37'	0.5-3°	23	13	9	4500	7.5	2250x1250x2050	3200
HVR 420	2000	4	6	3	4	1°37'	0.5-3°	23	11	11	6200	7.5	2750x1250x2100	3700
HVR 425	2500	4	6	3	4	1°37'	0.5-3°	21	9	13	8000	7.5	3300x1400x2250	4200
HVR 430	3000	4	6	3	4	1°37'	0.5-3°	23	10	16	10000	7.5	3700x1500x2400	5250
HVR 440	4000	4	6	3	4	1°37'	0.5-3°	22	8	20	12000	10	4700x1650x2600	7200
HVR 615	1500	6	8	4	6	1°45'	0.5-3°	23	13	9	6500	10	2250x1300x2100	3250
HVR 620	2000	6	8	4	6	1°45'	0.5-3°	22	10	11	6500	10	2750x1350x2150	4250
HVR 625	2500	6	8	4	6	1°45'	0.5-3°	21	9	13	8500	15	3300x1500x2300	5250
HVR 630	3000	6	8	4	6	1°45'	0.5-3°	20	8	16	10800	15	3800x1650x2500	5750
HVR 640	4000	6	8	4	6	1°45'	0.5-3°	22	9	20	13600	20	4800x1700x2750	8250
HVR 650	5000	6	8	4	6	1°45'	0.5-3°	21	7	24	16500	20	5700x1800x2850	11500
HVR 660	6300	6	8	4	6	1°45'	0.5-3°	18	6	28	19500	20	6700x1900x2950	14500
HVR 815	1500	8	10	6	8	2°	0.5-3°	15	8	9	10500	10	2250x1350x2100	4750
HVR 820	2000	8	10	6	8	2°	0.5-3°	15	6	11	12000	15	2750x1450x2250	5700
HVR 825	2500	8	10	6	8	2°	0.5-3°	18	8	13	16500	20	3300x1650x2450	6500
HVR 830	3000	8	10	6	8	2°	0.5-3°	17	6	16	18500	20	3800x1800x2600	7000
HVR 840	4000	8	10	6	8	2°	0.5-3°	15	5	20	23000	20	4800x1850x2800	9500
HVR 850	5000	8	10	6	8	2°	0.5-3°	18	6	24	27000	25	5750x1950x2900	12250
HVR 860	6300	8	10	6	8	2°	0.5-3°	15	5	30	31000	25	6750x2100x3100	17000
HVR 1015	1500	10	12	8	10	2°	0.5-3°	12	6	8	10500	10	2250x1350x2200	5000
HVR 1020	2000	10	12	8	10	2°	0.5-3°	13	5	11	13000	15	2750x1500x2300	6000
HVR 1025	2500	10	12	8	10	2°	0.5-3°	13	5	13	17500	20	3300x1650x2500	6750
HVR 1030	3000	10	12	8	10	2°	0.5-3°	12	4	16	20000	20	3800x1850x2750	9000
HVR 1040	4000	10	12	8	10	2°	0.5-3°	18	6	20	25000	25	4800x1950x2850	12000
HVR 1050	5000	10	12	8	10	2°	0.5-3°	14	5	24	30000	30	5750x2050x3000	15000
HVR 1060	6300	10	12	8	10	2°	0.5-3°	13	4	28	35000	30	6750x2200x3300	22000
HVR 1320	2000	13	16	10	13	2°	1-3°	13	6	11	16000	25	2850x1800x2600	9000
HVR 1325	2500	13	16	10	13	2°	1-3°	9	5	13	20000	25	3350x1900x2750	10000
HVR 1330	3000	13	16	10	13	2°	1-3°	8	4	16	25000	25	3800x1950x2850	11500
HVR 1340	4000	13	16	10	13	2°	1-3°	7	3	20	30000	30	4800x2000x2950	16000
HVR 1350	5000	13	16	10	13	2°	1-3°	9	4	24	35000	40	5750x2150x3150	21000
HVR 1360	6300	13	16	10	13	2°	1-3°	8	4	28	40000	40	6750x2300x3500	28000
HVR 1620	2000	16	20	13	16	2°	1-3°	9	5	11	20000	30	3000x1900x2800	10500
HVR 1625	2500	16	20	13	16	2°	1-3°	9	4	13	25000	30	3500x2000x2900	12250
HVR 1630	3000	16	20	13	16	2°	1-3°	8	4	16	28000	30	4000x2000x3000	14500
HVR 1640	4000	16	20	13	16	2°	1-3°	6	3	20	33000	30	4800x2050x3100	19000
HVR 1650	5000	16	20	13	16	2°	1-3°	7	3	24	38000	40	5750x2250x3300	26000
HVR 1660	6300	16	20	13	16	2°	1-3°	6	3	28	43000	40	6750x2350x3700	31500
HVR 2025	2500	20	25	16	20	2°	1-3°	6	3	13	28000	40	3500x2000x3000	16000
HVR 2030	3000	20	25	16	20	2°	1-3°	6	2	16	35000	40	4000x2100x3200	19500
HVR 2040	4000	20	25	16	20	2°	1-3°	5	2	20	40000	50	4800x2200x3300	23500
HVR 2050	5000	20	25	16	20	2°	1-3°	6	3	24	45000	60	5800x2350x3500	30000
HVR 2060	6300	20	25	16	20	2°	1-3°	5	2	28	50000	60	6800x2450x4100	36000
HVR 2525	2500	25	30	20	25	2°	1-3°	5	3	13	36000	60	3400x2250x3300	22000
HVR 2530	3000	25	30	20	25	2°	1-3°	4	2	16	45000	60	4000x2300x3300	25500
HVR 2540	4000	25	30	20	25	2°	1-3°	5	2	20	50000	75	5000x2300x3500	31000
HVR 2550	5000	25	30	20	25	2°	1-3°	4	2	24	55000	75	6000x2450x3700	36000
HVR 2560	6300	25	30	20	25	2°	1-3°	3	1	28	60000	75	7000x2600x4300	42000



ACHIEVEMENT



AWARDED AS "OUTSTANDING ENTREPRENEUR OF YEAR" IN YEAR 2008-09 & YEAR 2014-15

PRODUCTS



Servo CNC Press Brake



CNC Press Brake



NC Hyd. Press Brake



Hyd. Press Brake



CNC/NC Shearing Machine



Hyd. Shearing Machine



Double Pinch Plate Roller



Mechanical Plate Roller



Busbar Machine



Iron Worker



Hyd. Deep Drawing Press



Hyd. C-Frame Press

OUR CLIENTS



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