

## **Trusted For Reliability & Service**

Hydraulic: Shearing Machines & Press Brake M/c







## **About Us**

Innovation for change & Effort for recognition With its mission to pursue a business of integrity and to achieve sustainable development, **M. R. GROUP** Since-2007 September and is determined in sustainable management.

Through its tireless efforts, the company's reputation and state-of-the-art technology has been gradually and profoundly built and strengthened. With the goal to become a client-oriented business, **M. R. GROUP.** and its branches share the same determination and are devoted to providing professional and outstanding services. In the coming future, we will improve the quality of our machine with modernized high-tech hydraulic systems. We always have great confidence that **M. R. GROUP** full automation is the world's lead.

#### Made in India:

We insist 100% manufactured in india, Since-2007 and here one hydraulics shearing, press brake & hydraulics all types of press machines are offered from us. Once you purchase equipment from M. R. GROUP, it will be covered by a complete supply chains, whatever mechanical parts, hydraulic system and control program, we cooperate with local partners to guarantee a long-term partnership with clients.

## **Technical Support:**

One year warranty is just basic, reducing downtime loss is the first. M. R. GROUP promise to respond in 24 hr for technical support, not only Email and phone call, we provide customer immediate online support by Whatsapp, Skype, Facebook, Zoom, etc, Further more, we always pleasure to dispatch our engineers for equipment commissioning, operator training and any urgent troubleshooting.



"We envision adhering to our Core Values of being a reliable market leader & simultaneously offering unsurpassed Organizational Excellence in all our undertaking"

"Our mission is to be a dynamic team, providing the highest quality material to customer with appropriate & satisfactory services available"









CUSTOMER SATISFACTION



QUALITY PRODUCTS



INTEGRITY



SAFETY FIRST



RESPECT FOR PEOPLE

**Core Values** 

## Hydraulic Shearing Machine

The Hydraulic Shearing Machines are designed from ultrasonically tested IS 2062 grade steel structures. Our MRG HVR Series Hydraulic Shearing Machine incorporates latest technologies with the high performance, simple operating device and is designed to function smoothly for a long time.

Robust construction gives more rigidity & strength to machines. These machines are capable to perform the accurate and precise cutting needs. The specially designed compact manifolds give smooth and silent operation.

MRG HVR Hydraulic Shearing Machine equipped with the product features and safety devices for optimum, accuracy and repeatability.





## Range:

- ✓ Shearing Thickness 02 mm to 25 mm
- ✓ Shearing Length 1500 mm to 7000 mm

#### **Technical Features:**

- ✓ Shearing Length 1500mm/ 2000mm/ 2500mm/ 3000mm/ 4000mm
- ✓ Shear Material MS / SS / ALUMINIUM / BRASS / COPPER
- ✓ Accuracy ± 0.1 mm / Meter
- ✓ Thickness Up to 25mm
- ✓ Back Gauge Length 600mm / 1000mm and as Per Requirement

#### **Product Features:**

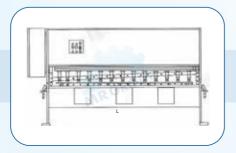
- ✓ Accurate clearance adjustment of both blades for BURS FREE shears.
- ✓ Manually/Motorized Back gauge for easy adjustment of shearing length.
- ✔ Better cutting accuracy in thin sheets at lower rake angle.
- Extra powerful clamping force by Holding Cylinders.
- ✓ International Quality Hydraulics Components, Special designed compact Manifolds gives Smooth & jerk less operations.
- ✔ Best Quality Electrical Components ensure trouble free Operation Over a Period of time.
- ✓ Pair of four edges HCHCR blade interchangeable & suitable to shear Mild Steel & Stainless Steel scale mounted on machine.
- ✓ Fastest & Easiest Pre-Calibrated blade Clearance Setting for burs free Cutting.

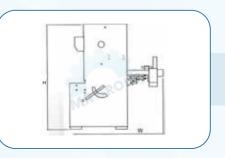
- ✔ Flexible Sheet Support for Longer & Heavier Plates / Sheets...
- ✓ Pair of Blades Installed with machine.
- ✓ Majoring Scale For Smaller pieces at front.
- ✓ Foot Switch for easier operation...
- Fine Stroke Adjustment rod with limit switch.



# Hydraulic Shearing Machine

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Model	Shearing Length	Nominal Rake Angle	Maximum Rake Angle	Nominal Rake Angle	Max. Rake Angle	Rake Angle	Rake Angle Range	Strokes/minute at min & max. Rake angle	Holddowns	Holding Force Kgs.	Power H.P.	Packing Dimension mm (LxWxH)	
MRGC2502	2500	2	3.15	1	1.6	1°	0.5-2°	22-10	13	1800	3	2950x1650x1550	
MRGC3002	3000	2	3.15	1	1.6	1°	0.5-2°	18-8	15	1800	5	3450x1650x1550	
MRGC1503	1500	3.15	4	2	3	1°15'	0.5-2°	24-10	8	2000	5	2300x1900x2100	
MRGC2503	2500	3.15	4	2	3	<b>1</b> °15'	0.5-2°	28-13	13	2500	5	3250x1950x2000	
MRGC3003	3000	3.15	4	2	3	1°15'	0.5-2°	24-9	15	2500	5	3750x1900x2000	
MRGC1504	1500	4	6	3	4	1°37'	0.5-3°	24-10	8	4500	5	2300x1900x2100	
MRGC2004	2000	4	6	3	4	1°37'	0.5-3°	24-10	11	6200	7.5	2850x1950x2100	
MRGC2504	2500	4	6	3	4	1°37'	0.5-3°	22-8	13	8000	7.5	3400x2350x2500	
MRGC3004	3000	4	6	3	4	1°37'	0.5-3°	22-8	15	10000	10	3800x2350x2500	
MRGC4004	4000	4	6	3	4	1°45'	0.5-3°	18-6	20	12000	10	4600x2350x2500	
MRGC1506	1500	6	8	4	6	1°45'	0.5-3°	24-8	8	6500	10	2350x2000x2200	
MRGC2006	2000	6	8	4	6	1°45'	0.5-3°	22-7	11	65000	10	2850x2000x2200	
MRGC2506	2500	6	8	4	6	1°45'	0.5-3°	28-8	13	8500	15	3400x2350x2600	
MRGC3006	3000	6	8	4	6	1°45'	0.5-3°	24-6	15	10800	15	3900x2350x2600	
MRGC4006	4000	6	8	4	6	2°	0.5-3°	24-6	20	13600	20	4900x2350x2600	
MRGC1508	1500	8	10	6	8	2°	0.5-3°	22-10	8	10500	15	2350x2150x2300	
MRGC2008	2000	8	10	6	8	2°	0.5-3°	18-8	11	12000	15	2850x2150x2300	
MRGC2508	2500	8	10	6	8	2°	0.5-3°	24-8	13	16500	20	3400x2450x2300	
MRGC3008	3000	8	10	6	8	2°	0.5-3°	20-6	15	18500	20	4000x2550x2800	
MRGC4008	4000	8	10	6	8	2°	0.5-3°	20-8	20	23000	30	4900x2450x2700	
MRGC15010	1500	10	13	8	10	2°	0.5-3°	20-10	8	10500	15	2350x2150x2400	
MRGC20010	2000	10	13	8	10	2°	0.5-3°	18-8	11	13500	15	2850x2150x2400	
MRGC25010	2500	10	13	8	10	2°	0.5-3°	24-8	13	17500	20	3400x2600x2900	
MRGC30010	3000	10	13	8	10	2°	0.5-3°	20-6	15	20000	20	3900x2600x2900	
MRGC40010	4000	10	13	8	10	2°	0.5-3°	18-6	20	25000	30	4900x2600x2900	
MRGC20013	2000	13	16	10	13	2°	0.5-3°	13-5	11	16500	20	2850x2300x2600	
MRGC25013	2500	13	16	10	13	2°	0.5-3°	15-10	13	32000	25	3450x2750x2900	
MRGC30013	3000	13	16	10	13	2°	0.5-3°	12-6	16	37000	25	3900x2700x2900	
MRGC40013	4000	13	16	10	13	2°	0.5-3°	10-4	20	22000	30	4950x2300x2900	
MRGC20016	2000	16	20	13	16	2°	0.5-3°	13-7	11	22000	25	2850x2300x2700	
MRGC25016	2500	16	20	13	16	2°	0.5-3°	15-8	13	40000	30	3600x2700x3000	
MRGC30016	3000	16	20	13	16	2°	0.5-3°	12-6	16	43500	30	4100x2700x3000	
MRGC40016	4000	16	20	13	16	2°	0.5-3°	10-4	20	30000	30	5200x2850x3000	





## NC Hydraulic Shearing Machine

NC shearing machine has all the advantages of hydraulic shearing machine (Semi-Automatic). The machines are supplied with easy to use axis NC Con-trolled heavy duty back gauge (Range 760 MM) with PLC based controller nisi ut aliquip ex ea commodo consequat duis aute irure dolor in reprehenderit.

The machine productivity and accuracy are much improved with NC controlled back gauge. The fast and accurate multi position back gauge system is very efficient and accurate.



#### Range:

✓ Shearing Thickness - 02 mm to 25 mm | ✓ Shearing Length - 1500 mm to 7000 mm

#### **Technical Features:**

- ✓ Shearing Length 1500mm/ 2000mm/ 2500mm/ 3000mm/ 4000mm
- ✓ Shear Material MS / SS / ALUMINIUM / BRASS / COPPER
- ✓ Accuracy ± 0.1 mm / Meter
- ✓ Thickness Up to 25mm
- ✓ Back Gauge Length 600mm / 1000mm and as Per Requirement

#### **Product Features:**

- ✓ HMI with 2 Line 16 character LCD monochrome screen & numeric keypad.
- Multi steps back gauge position program.
- ✓ Stroke Counter & Control on Screen.
- ✓ Hardened Ground Ball screw & Linear motion bearings.
- Rake angle adjustment through selector switch.
- ✓ Hardened ground Ball screw with better position accuracy.
- ✓ Linear motion bearings for smooth & accurate guiding.
- ✓ Various drives interface like two-speed motor, stepper motor/AC servo motor.

- ✓ HMI With 2 Line 16 Character LCD Monochrome Screen & Numeric Keypad.
- ✓ Hardened Ground Ball Screw & Linear Motion Bearings.
- ✓ Lever Operated Blade Clearance With Calibration.
- ✓ Rake Angle Selection Through Selector Switch.
- ✓ Stroke Adjustment Through Screen & Stroke Counter Meter.

## Hydraulic Press Break Machine

MR Enterprises Hydraulic Press Brakes are highly productive, accurate, and economical. Through advanced design and construction, DEV Hydraulic & Machinery offers quality Hydraulic Press Brakes that provide simplified and easily accessible controls for optimum operator efficiency and output.

Pair of hydraulic cylinders is synchronized mechanically by a heavy-duty torque tube construction. This facility ensures absolute parallelism between ram and table working surface.

These press brakes are manufactured to high standards of lifetime durability and precision accuracy.



#### Range:

✓ Tonnage - 20 MT to 600 MT | ✓ Length - 1500 mm to 6000 mm

#### **Technical Features:**

- ✓ Bending Length (mm) 1500mm/2000mm/2500mm/3000mm/4000mm
- ✓ Accuracy ± 0.03mm
- ✓ Thickness Up to 25mm
- ✓ Back Gauge Length As per requirements

#### **Product Features:**

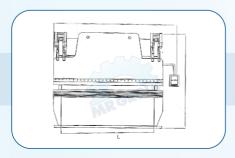
- Accurate right angle welded steel frame with tested material gives accu-rate bending.
- Accurately Synchronized cylinders for equally vertical force of RAM at full length.
- ✓ Use of hardened Pin and Bushes gives less maintenance.
- ✓ Flexible sheet support for longer and heavier plates/sheets.
- Emergency stop push switch with moveable console including motor on/off, RAM up/ down & cycle selection switch.
- ✓ Three Operating Mode Auto, Inch & Single cycle.
- Centrally lubrication system by Hand pump at all pin, bushes and joints.
- ✓ Five way V- Block (EN-31) in one and suitable Blade.
- Fine stroke adjustment Rod with limit switches.

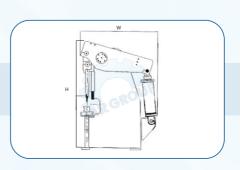
- ✓ V-Block Die & Punch
- Operating Mode
- ✓ Backgauge With Micro Setting
- ✓ Front Sheet Support
- ✓ Centralized Lubrication System By Manual Pump



# Hydraulic Press Break Machine

Model	Tonnage	Table Length	Bending Capacity (In MS, UTS 45 kg / mm²)	Table Width	Clear Pass	Ram Stroke	Open Height	Throat Depth	Speed Approach Passing Return	Power HP	Packing Dimensions (W x H x L)
			mm mm	mm	mm	mm	mm	mm	mm / sec		mm
		Α		В	С	D	Е	F			G H I
MRPB1520	20	1500	1.6 x 1500 2 x 1250	150	1050	100	250	200	25-7-30	3	1800x1150x2000
MRPB2030	30	2000	2 x 2000 3 x 1250	150	1550	100	250	200	23-6-30	3	2300x1250x2000
MRPB2540	40	2500	2 x 2500 3 x 1500	150	2050	100	250	200	23-6-30	5	2800x1250x2000
MRPB1550	50	1500	4 x 1500 5 x 1250	190	1050	100	250	200	23-6-30	5	1800x1250x2000
MRPB2050	50	2000	3 x 2000 4 x 1500	190	1550	100	250	200	23-6-30	5	2300x1250x2000
MRPB2550	50	2500	2.5 x 2500 3 x 2000	190	2050	100	250	200	23-6-30	5	2800x1250x2000
MRPB2565	65	2500	3 x 2500 4 x 2000	190	2050	150	330	200	28-4-30	5	2800x1300x2100
MRPB3065	65	3050	2.5 x 3000 3 x 2500	190	2550	150	330	200	28-4-30	5	3450x1300x2100
MRPB2580	80	2500	4 x 2500 5 x 2000	190	2050	150	330	200	35-5-43	7.5	2800x1650x2400
MRPB3080	80	3050	3 x 3000 4 x 2500	190	2550	150	330	200	35-5-43	7.5	3450x1650x2400
MRPB25100	100	2500	5 x 2500 6 x 2000	190	2050	150	330	200	35-5-43	7.5	2800x1650x2400
MRPB30100	100	3050	4 x 3000 5 x 2500	190	2550	150	330	200	35-5-43	7.5	3450x1650x2400
MRPB40100	100	4050	3×4000 4×3000	250	3250	150	330	200	35-5-43	7.5	4350x1750x2400
MRPB25125	125	2500	6 x 2500 8 x 2000	250	2150	150	350	300	35-4-38	10	2850x1750x2600
MRPB30125	125	3050	5 x 3000 6 x 2500	250	2650	150	350	300	35-4-38	10	3450x1750x2600
MRPB40125	125	4050	4 × 4000 5 × 3000	250	3250	150	350	300	35-4-38	10	4300x1750x2600
MRPB25160	160	2500	8 x 2500 10 x 2000	300	2150	150	350	300	32-4-38	15	2850x1900x2700
MRPB30160	160	3050	6 x 3000 8 x 2500	300	2650	150	350	300	32-4-39	15	3450x1900x2700
MRPB40160	160	4050	5 x 4000 6 x 3000	300	3250	150	350	300	32-5-39	15	4450x1900x2700
MRPB25200	200	2500	10 x 2500 12 x 2000	300	2150	200	400	300	32-6-33	20	2950x2150x2850
MRPB30200	200	3050	8 x 3000 10 x 2500	300	2650	200	400	300	32-6-33	20	3450x2150x2850
MRPB40200	200	4050	6 x 4000 8 x 3000	300	3250	200	400	300	32-6-33	20	4450x2150x2850
MRPB30250	250	3050	10 x 3000 12 x 2500	350	2650	200	400	300	32-5-39	25	3450x2200x2900
MRPB40250	250	4050	8 x 4000 10 x 3000	350	3250	200	400	300	32-5-39	25	4450x2200x2900
MRPB30300	300	3050	12 x 3000 15 x 2500	350	2650	200	400	300	28-5-33	30	3450x2250x3000
MRPB40300	300	4050	10 x 4000 12 x 3000	350	3250	200	400	300	28-4-31	30	4450x2250x3000
MRPB30400	400	3050	16 x 3000 20 x 2500	350	2650	250	500	350	28-4-31	40	3450x2300x3100
MRPB40400	400	4050	12 x 4000 16 x 3000	350	3250	250	500	350	28-4-31	40	4450x2300x3100







100/	4	8	12	16	20	24	32	40	48	65	80	96	120	150	180	200	250	300
I/W H(min)	3	6	8.5	11.5	14.5	17	23	29	34	46	57	68	85	110	130	145	180	215
(	0.6	1.3	2	2.5	3.3	4	5.3	6.7	8	10.5	13.5	16	20	25	30	33	42	50
0.5	4	2																
1	19	8	5												· **		4	
1.5		19	12	8	7													
2		38	22	16	12	10							Г.S. 72					` _
2.5			37	26	20	17	12				M	ultiply	Force	by 1.6				
3			56	36	28	24	17	14	11								1	
4				74	56	44	32	25	200	16								
5						75	50	40	33	24	19							
6							77	57	48	35	27	23						
8								112	86	64	50	41	33					
10	TI	ne forc	e requ	uired fo	or air b	endin	g can	be	150	100	80	60	51	43				
12		The force required for air bending can be calculated from the following formula								155	105	96	77	62	51			
15	L	Load, $P = \frac{K.L.S.t^2}{Metric Tones}$									180	150	120	96	80	72		
18				00V								200	160	128	107	96	77	
20													250	200	170	150	120	100
22														296	250	220	178	150

#### **STANDARD ACCESSORIES - HYD**

- ✓ Electrical control pane! with selection of 'AUTO', INCH' & 'SINGLE CYCLE AUTO1 mode operations
- ✓ Movable workstation with pair of foot switch
- ✔ Pair of lifting Sinks
- ✔ Pair of sheet support
- ✓ Fine stroke adjustment rod with limit switch
- ✓ 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 P. Program mode selection through screen
- ✓ Two axis dedicated CYB TOUCH 6 controller with s.r colour touch screen
- ✓ 200 lobs 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 8- Punch of EN-8" (unhardened and ungrounded)
- Centralized lubrication system with flow control valves for adequate lubrication
- ✔ Ram tilting arrangement on selected models

## NC Hydraulic Press Break Machine



NC hydraulic Press brakes are economical and very reliable solution for industry demand. NC hydraulic press brakes are designed to give more accuracy and better productivity. The controller has a facility to program the various jobs with complex bending sequence on screen.

The Numeric Control is used for Two Axis Control,

1. Y - Ram Axis 2. X-Back Gauge Axis

The program gives facility to bend different bending degrees; different back gauge positions & different open positions. It has a facility to save different pro-grams and same can be reloaded as & when required. The back gauge consists of Flip-top Fingers, Ball Screw & Linear Bearing along with drive.



#### Range:

✓ Tonnage - 20 MT to 600 MT | ✓ Length - 1500 mm to 6000 mm

#### **Technical Features:**

- ✓ Bending Length (mm) 1500mm/2000mm/2500mm/3000mm/4000mm
- ✓ Accuracy ± 0.03mm
- ✓ Thickness Up to 25mm
- ✔ Back Gauge Length As per requirements

#### **Product Features:**

- ✓ It has a facility to program the variegated jobs includes complex bending sequence.
- ✓ This facility helps to perform complicated bending job in a signal setting and repeatable production.
- ✓ Dedicated controller with LCD monochrome screen & numeric keypad. Bend angle & Depth Mode program.
- ✓ 128 Programs x 16 bends per program can be stored.
- Stroke control and stroke counter on screen.
- ✓ Highly Precise press brake scale for accurate Y- axis positioning.
- ✓ AC Servo drive for back gauge positioning.
- ✓ Hardened ground Balls screw and linear motion bearing for better position accuracy and longer life.

- ✓ NC Operating Mode 2-Axis Controller
- Operating Mode
- ✓ Centralized Lubrication System By Manual Pump
- ✓ V-Block Die & Punch
- Backgauge With Micro Setting

# Since 2007 MR GROUP Hydrauk Machinery & Products Services

## CNC Synchro Hydraulic Press Break Machine

CNC Synchro press brakes are designed to give more accuracy and better productivity. The controller has a facility to program the various jobs with complex bending sequence on screen. The CNC Control is used for Three Axis Control or more.

- ✓ Synchronized Ram Axes Y1& Y2
- ✓ Ÿ Back Gauge Axis-X

The program gives facility to bend different bending degrees; different back gauge positions & different open positions. It has a facility to save different programs and it can be reloaded as & when required. The back gauge consists of Flip-top Fingers, Ball Screw & Linear Bearing along with drive.

#### **Technical Features:**

- ✓ Bending Length (mm) 1500mm/2000mm/2500mm/3000mm/4000mm
- ✓ Accuracy ± 0.03mm
- ✓ Thickness Up to 25mm
- ✓ Back Gauge Length As per requirements

#### **Product Features:**

- ✓ World class dedicated controller from Delem or Cybelec.
- ✓ 3 or more axis control i.e. ram axis Y1,Y2 & Back gauge axis x.
- ✔ Bend angle & Depth Mode program.
- ✓ Highly Precise press brake scale for Y1, Y2 axis.
- ✓ Close loop proportional hydraulics for ram synchronization.
- ✓ Hardened & ground Multi Die & Punch.
- Quick release die clamps.
- ✓ Highly Precise proportional valve to control accurate beam movement.
- ✓ The power pack is supplied by Hoerbiger.
- ✓ Back gauge consist of hardened & ground ball screw, linear motion bearings and AC servo drive for accurate position up to 0.05 mm.

## **Standard Accesories Including Machine:**

- ✓ CNC Opeating Mode 3-Axis Controller
- Operating Mode
- ✓ Front Sheet Support

- ✓ V-Block Die & Punch
- ✓ Backgauge With Micro Setting
- ✔ Centralized Lubrication System By Manual Pump



#### Range:

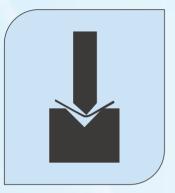
- ✓ Tonnage 20MT to 600MT
- ✓ Length 1500 mm to 6000 mm



## Bending Force Chart

Hydraulic Brake Machine

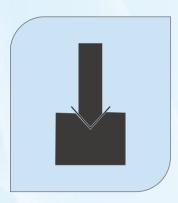
The capacity of Press Brake is generally defined in tons. Followings contained the details of load calculation in different types of bending methods like Air Bending, Formind etc. These are certain special applications like piercing, straightening etc, which also be used on press brakes. But these processes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



#### **Air Bending**

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

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



#### **Bottom Bending**

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

This process requires 3 - 5 time 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/mm²
Aluminium	25 Kg/mm²
Mild Steel	45 Kg/mm²
Stainless Steel	72 Kg/mm²
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

Load, P (Metric Tones) = K x L x S x t / 1000 x V

Suppose we want to bend 3.15 mm MS (10 Gauge) in 3000mm Length, Following are the Calculations.  $P=1.3(K) \times 3000mm$  (L)  $\times 45$  (S)  $\times 3.15^2 / 1000$  (24 mm) = 72 Metric Tones

Suppose we want to bend 3.15 mm SS (10 Gauge) in 3000mm Length, Following are the Calculations. P=1.3(K) x 3000mm (L) x 45 (S) x  $3.15^2 / 1000$  (24 mm) = 115 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 & thickness from vertical line, the matrix shows the total load in tons per meter. To achieve total load, this valve should be multiplied by the total length of job.



- Dev Machinery.
- Sonico Industries.
- Tucson Hydro Controls Pvt. Ltd.
- THM Huade Hydraulic Pvt. Ltd.



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