DURMA

*Head Quarter & Ataevler*

## *Durmazlar has aimed continous development since 1956*

*Owes one of the world's most contemporary production plants in the production technology business .3 different plants oriented to different product families, 1000 dedicated employees and 150.000 m2 footprint.*

*In order to offer solution according to clients' needs and enriching the quantity and quality of its own patent rights; long experienced Engineering Department transformed to Durma Research & Develepment Center has opened in the year 2010. Designed and engineered with modern technics; its products are equipped with proven quality components to precisely fulfill your requirements. We serve " accuracy, speed, flexibility, durability, reliability and advanced technology" with high performance/price ratio.Worldwide Durma distributors and technical support network assures perfect support to our clients.*

*With its 55 years of experience, its product quality, innovative solutions Durma gives importance and cares you with proactive approach. We thank all our clients to hold us at the top segment of the world brands.*

*Laser Factory*

*Başköy Factory*

# Durma Plate Rolls

*Reliable mechanical and hydraulics systems are designed by experienced engineers of Durma by utilising parametric 3D engineering technology as well as implementation of mechanical and kinematics analysis.*

*Safe and best performance electrics and electronics systems are designed by Durma Research & Development Center.After the longterm tests and evaluations machines can be manufactured in serial production.*

*Robust Machine Body for long life-time machines uses in the bending processes*
*User friendly Control Unit options*
*Low maintainence & Best bendng performance by strengthen Bearing System*
*Precise bendings by Hardened Rolls And Crowning System*
*Short cycle times by high Torque Drive System*

## HRB -4 Series

*Hydraulics Plate 4-Roll Bending Machine*
*Accurate, ease of operate, fastest roll bendings*

## HRB-3 Series

*Hydraulics Plate 3-Roll Bending Machine*
*Flexiblity of 3 roll for medium sizes by Durma technology*
*Prebending of both the leading and trailing edge*

## HRB-3V Series

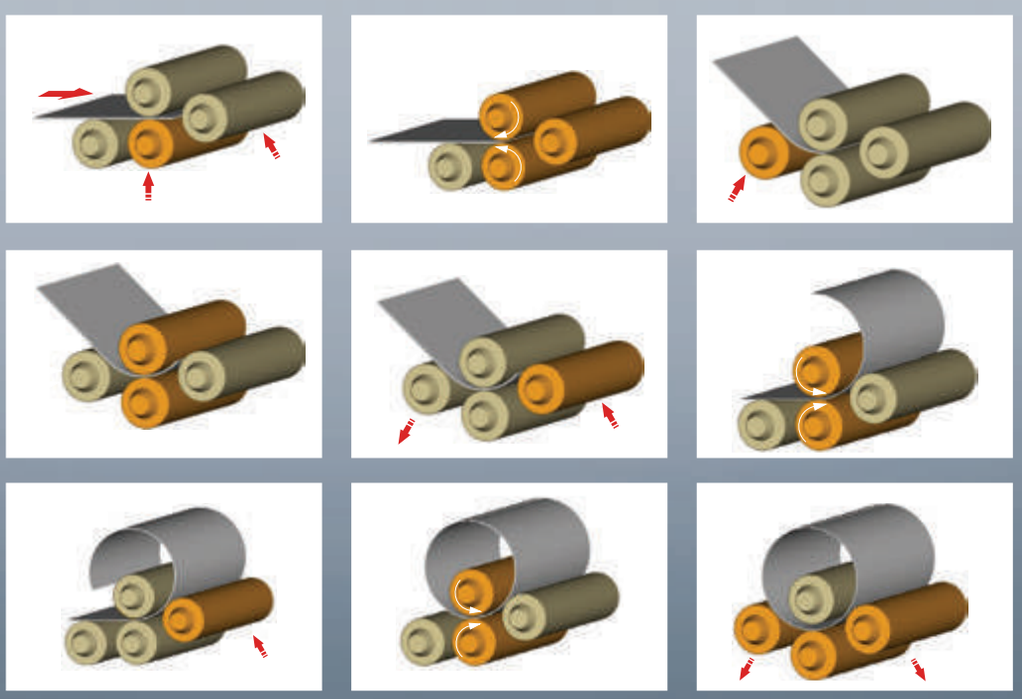
*Hydraulics Plate 3-Variable Bending Machine*
*Variable bottom rolls symetry opening machine is best choice for wind tower style of production*

## MRB Series

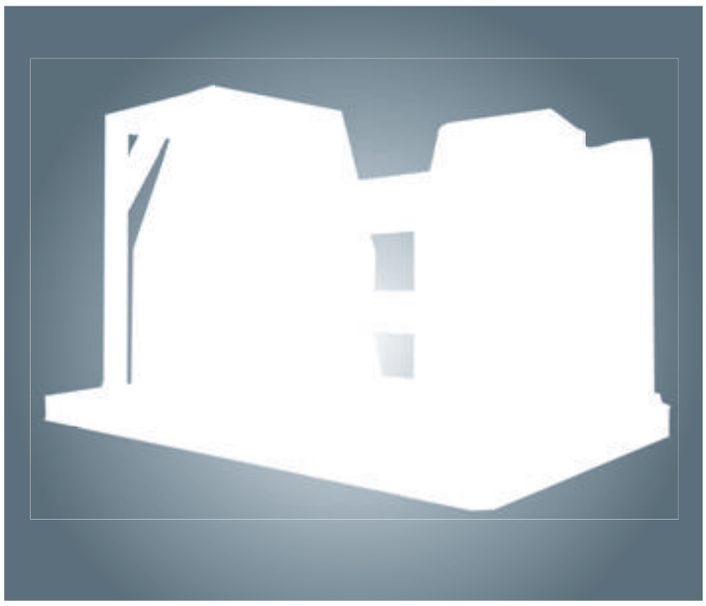
*Motorised Plate 3-Assymetrical Bending Machine*
*Economical pinching for variety of Rolling process*

# HRB-4 SERIES

- *Accurate, ease of operate, fastest roll bendings*
- *Flat zone of the sheet edges is minimised*
- *Pre-bending, conical bending and ellipse bending can be done easily*
- *Double pre-bends (both ends) in one pass*
- *Hydraulic and electrical systems have been safeguarded from overloads and require minimum maintenance. Hydraulic and electrical components are modular and designed according to world standards.*
- *The sheet is controlled by tightening of top and bottom rolls*
- *Most suitable bending operation for CNC applications.*
- *More efficient for cycle times*
- *User friendly operations without dependence to operator competence.*

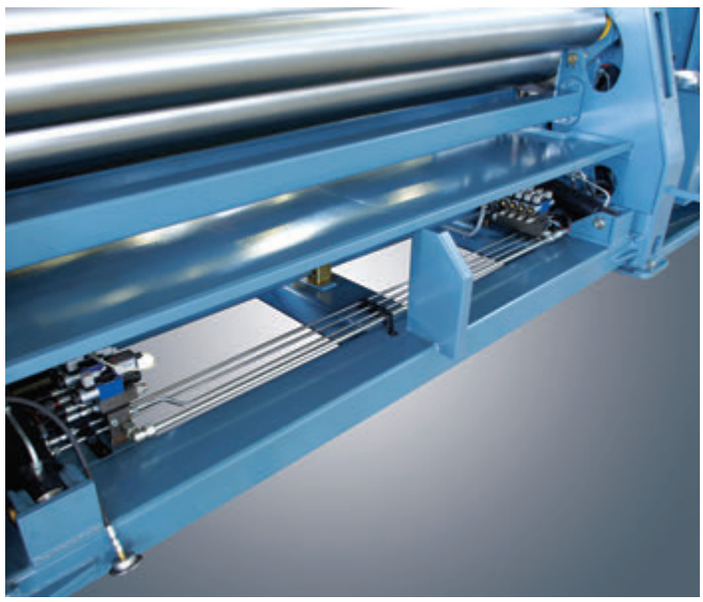


# HRB-4 Series Features



## Robust Machine Body

*Machine body is strengthen and lowered to minimise the twists and deformation. Machine body, frame and steel bar connections are stres relieved after the welding operation.*

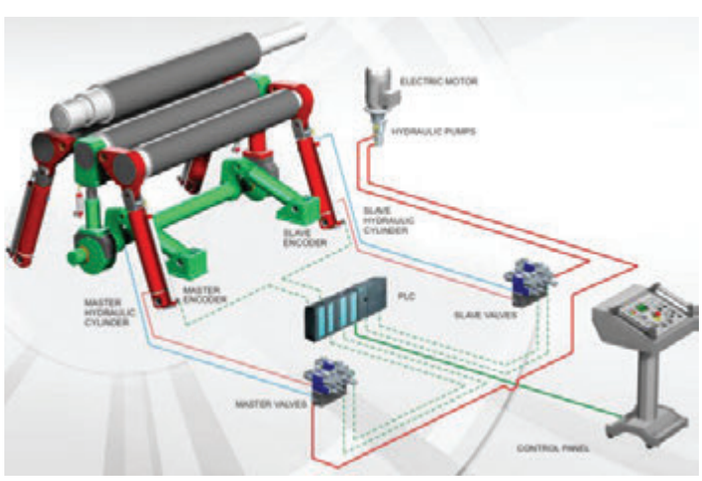


## Planetary Swing Rolls System

*Side rolls are guided by swing beds which allows them to act as 2 independent axes moving on curve shape orbits.Side rolls are approaches to the top roll on curve movement which allows to get perfect prebendings as well as spring back minimisation. (Rectilinear Rolls System designed for top roll dia ≥460mm)*

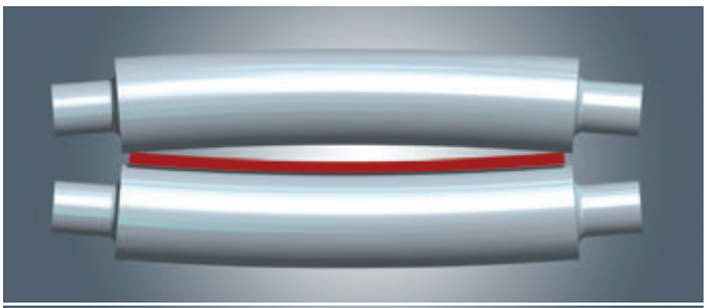
## Strengthen Bearing System

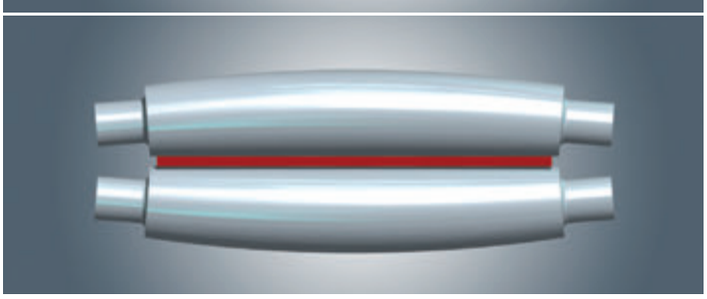
*Rolls are guided with spherical roller bearings and bronze housings. Guiding system requires less lubrication and keeps it precision in long term.*




## Synchronized Rolls System

*Bottom roll tightens different thickness of sheets without deformation and taking to the consideration of its paralelism by hydraulic adjustable pressure torsion bar.*





*2-4 Drive*
*Top roll Ø 140mm - 430mm*

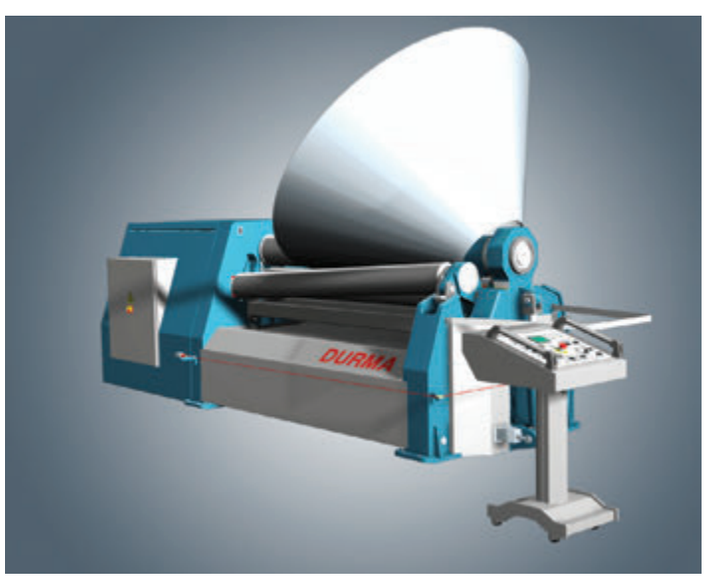
*4-4 Drive*
*Top roll Ø 460mm - 1070mm*

## *Hardened Rolls And Crowning System*

*Highly durable carbon steel (C45) rolls are machined by CNC Lathes with high precision without creating notch effect.*
*Working surfaces of the rolls are induction hardened to HRC 54±2*
*Rolls are machined as crowning shape to compansate the deflactions on the rolls during the bending.*

## *High Torque Drive System*

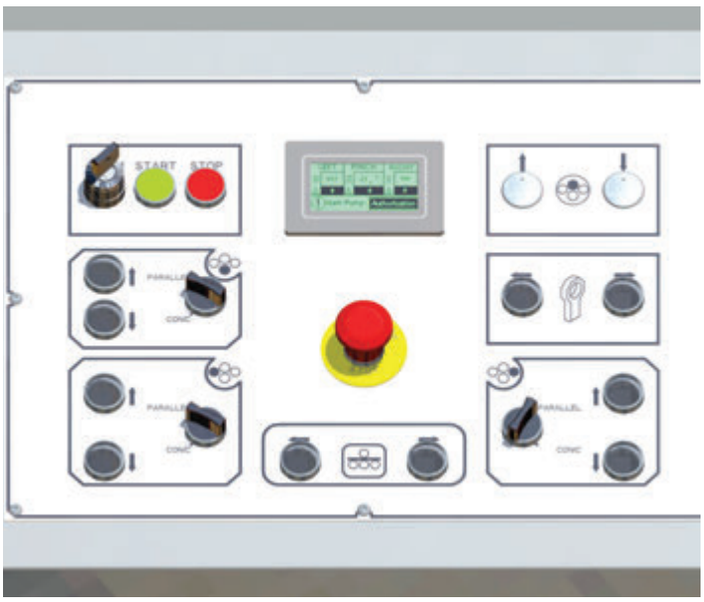
*By its high torque, Durma machines bend the sheet with less steps.*
*Top and bottom rolls powered by planatery reducer, hydraulic motor and gear system.*
*Strong Hydraulic Brake system does not allow the sheet to slip back*
*Pressure safety valves are protecting the hydromotor and other components from overloads and peak pressures.*



## *Conical Bending System*

*By strong body and angular bottom and side rolls, wide angle & small diameter conical parts are easily bend.*
*While machines in the market is bending conical bendings of 3 times of top roll,Durma HRB-4 machines can bend conical bending of 1.5 times easily.*

# Control Units



## Digital readout

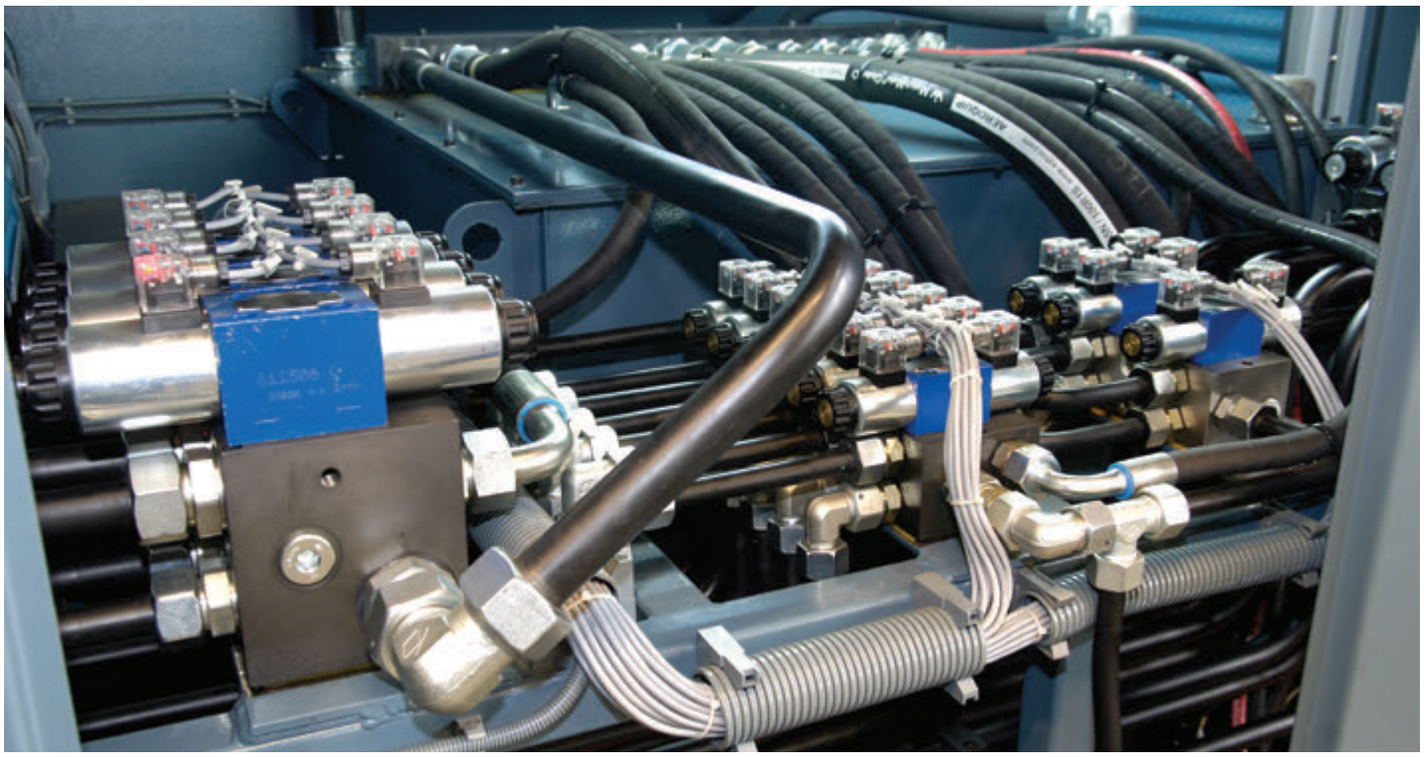
*Ensures the machine's bottom and side rollers' synchronous operation.*
*This process is provided via the PLC with 6-axis control and touch screen operator panel. Bending up to 5 steps of the program, is ease of use and saves time.*

## NC Control

*İn addition to the Digital readout control system, In teaching mode for the operator to bend all the steps are recorded respectively. In automatic mode all recorded movements are repeated, respectively by the machine. NC control system has the capacity to save 70 programs consisting of Max 100-steps.*

## CNC Control

*CNC control system, in addition to the NC control system with its graphical control system allows the bending done step by step or automatically calculating the bendind steps without the need for operator skill. Due to ready bending shapes polisentrik bending and twisting like an ellipse, is also easily done*

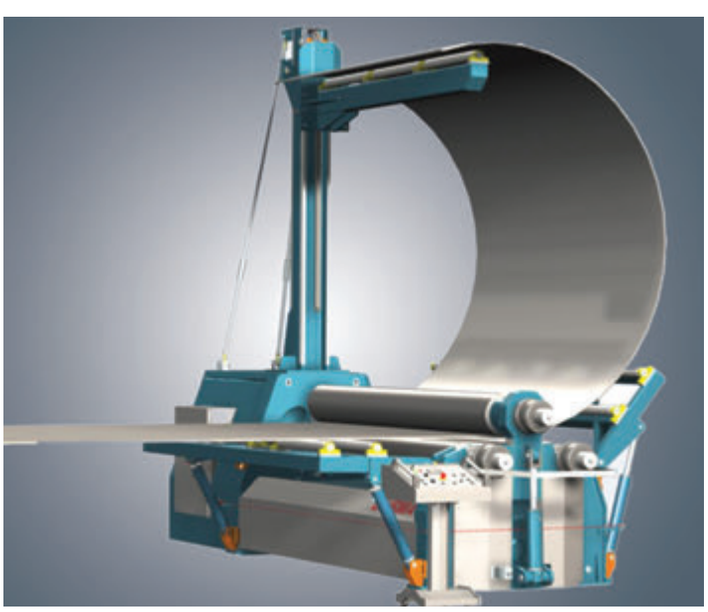


## *Hydraulic System*

*Machine movements are trigerred by hydraulic components. The precision on the all axes are acquired by world leader valves' high speed response ability. And pressure safety valves used against peak pressures and overload, provides protection for motors and other components.*

## *Electrical and Electronic System*

*Electrial system designed compatible with CE safety regulations. The system consists of well known electrical components .The system is protected by current overloadings for its components', powersupplies, electronics and motors.*



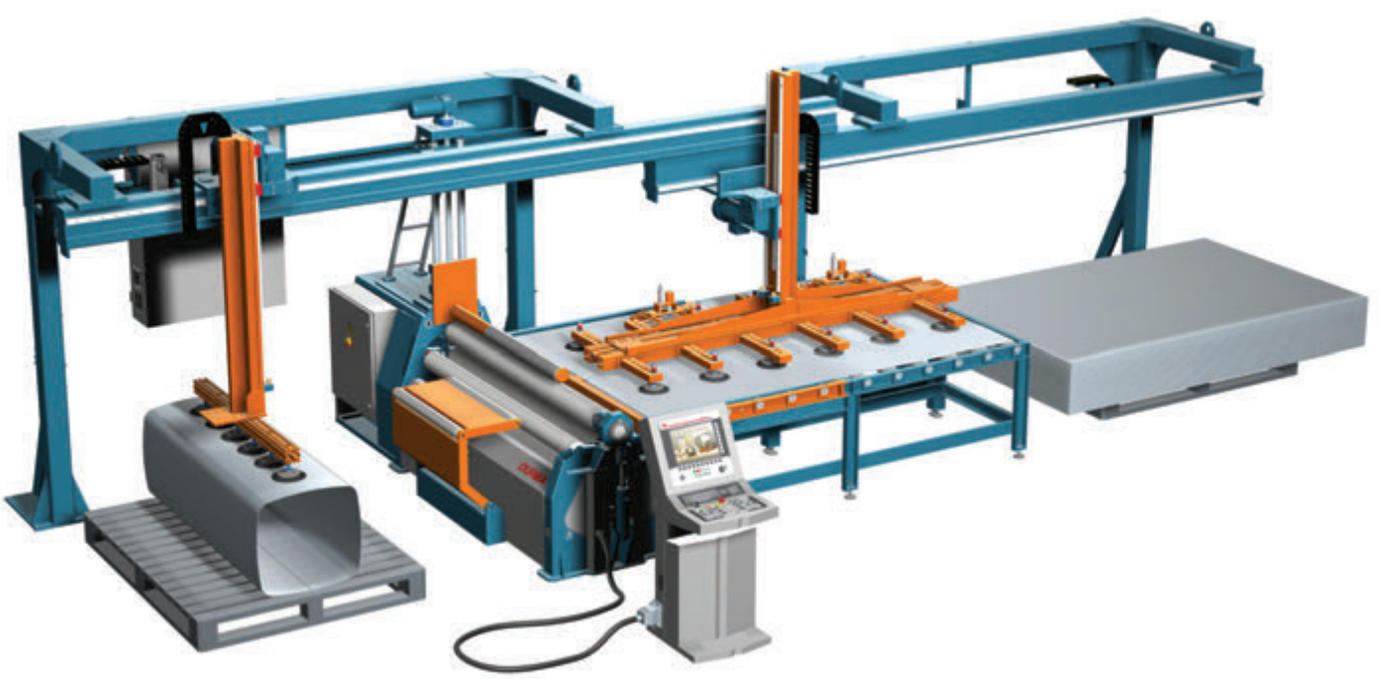
## *Top Support System*

*In large-scale bend it ensures internal support in the vertical direction.*

## *Side Supports System*

*In large-scale bend, it ensures support for the machine from both sides from the bottom. The rip fence systems, hydraulically separated and controlled from the operator panel can be added to the machine as an option.*

## *Automatic Bending Loading Unloading System*



# HRB-4

## STANDARD EQUIPMENTS

- CE-Norm for EU
- Control unit with digital readout
- Conical bending
- Induction hardened rolls
- Side rolls positioning from electronic synchronize PLC
- Bottom roll rigid mechanic synchronized
- Stress relieved steel contruction body
- Rolls seated with bearings
- Top roll hydraulic opening device
- Bottom and top rolls hydraulic motor driven and planetary gear box
- Side rolls hydramotor, diameter 360 and above gear box plus hydramotor
- Electrical and hydraulic protection against overloads
- Hydraulic pressure adjustable bottom rools
- All axis positioning with adjustable speed at CNC machines

## OPTIONAL EQUIPMENTS

- NC Control Unit
- CNC Control Unit - Color - graphic Control
- Polished Rolls
- Variable speed control
- Oil Coolant
- Side supports at both side
- Vertical support crane system (mechanical or hydraulics)
- Changeable top Roll for smaller diameters
- Longer rolls for profile bending
- Welding possibility on the machine
- Preparation for Vertical support crane system
- Material feeding table
- Special applications for Wind-tower production

## HRB-4

| | | "Min. Int. Dia Ø Dmin" | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ødx1,5 | Ødx3 | Ødx5 | | | | | | | | | |
| | Bending Length | Pre-Bending Capacities | Bending Capacities | Bending Capacities | Top Roll | Bottom Roll | Side Rolls | Max. Pass Through | Length | Width | Height | Working Height | Weight | Motor Power |
| | L(mm) | s(mm) | S(mm) | S(mm) | ød(mm) | ød(mm) | ød(mm) | A(mm) | U(mm) | G(mm) | Y(mm) | C(mm) | kg | (kW) |
| HRB-4 1507 | 1550 | 5 | 7 | 8 | 170 | 150 | 140 | 15 | 3040 | 970 | 1140 | 865 | 2600 | 5,5 |
| HRB-4 2006 | 2050 | 4 | 6 | 7 | 170 | 150 | 140 | 15 | 3540 | 970 | 1140 | 865 | 3030 | 5,5 |
| HRB-4 2008 | 2050 | 6 | 8 | 10 | 200 | 190 | 170 | 30 | 3830 | 1160 | 1180 | 840 | 4730 | 7,5 |
| HRB-4 2010 | 2050 | 8 | 10 | 12 | 210 | 190 | 180 | 30 | 3830 | 1160 | 1180 | 835 | 4940 | 7,5 |
| HRB-4 2013 | 2050 | 10 | 13 | 15 | 230 | 210 | 190 | 30 | 3830 | 1160 | 1180 | 825 | 5280 | 11 |
| HRB-4 2016 | 2050 | 13 | 16 | 18 | 270 | 250 | 220 | 50 | 4260 | 1660 | 1590 | 1155 | 9600 | 15 |
| HRB-4 2020 | 2050 | 16 | 20 | 22 | 300 | 270 | 220 | 50 | 4260 | 1660 | 1590 | 1140 | 10000 | 18,5 |
| HRB-4 2025 | 2050 | 20 | 25 | 28 | 330 | 300 | 240 | 50 | 4260 | 1660 | 1590 | 1125 | 10800 | 22 |
| HRB-4 2030 | 2050 | 25 | 30 | 33 | 360 | 330 | 270 | 60 | 4510 | 2060 | 2050 | 1510 | 15700 | 30 |
| HRB-4 2035 | 2050 | 30 | 35 | 38 | 400 | 370 | 290 | 65 | 4510 | 2060 | 2050 | 1490 | 16800 | 37 |
| HRB-4 2040 | 2050 | 35 | 40 | 44 | 430 | 400 | 320 | 70 | 4510 | 2060 | 2050 | 1475 | 17900 | 45 |
| HRB-4 2065 | 2050 | 50 | 65 | 70 | 490 | 490 | 390 | 100 | 5250 | 2300 | 2600 | 1865 | 30000 | 60 |
| HRB-4 2506 | 2550 | 4 | 6 | 7 | 200 | 190 | 170 | 30 | 4330 | 1160 | 1180 | 840 | 5240 | 7,5 |
| HRB-4 2508 | 2550 | 6 | 8 | 10 | 210 | 190 | 180 | 30 | 4330 | 1160 | 1180 | 835 | 5500 | 7,5 |
| HRB-4 2510 | 2550 | 8 | 10 | 12 | 230 | 210 | 190 | 30 | 4330 | 1160 | 1180 | 825 | 5920 | 11 |
| HRB-4 2513 | 2550 | 10 | 13 | 15 | 270 | 250 | 220 | 50 | 4760 | 1660 | 1590 | 1155 | 10600 | 15 |
| HRB-4 2516 | 2550 | 13 | 16 | 18 | 300 | 270 | 220 | 50 | 4760 | 1660 | 1590 | 1140 | 11100 | 18,5 |
| HRB-4 2520 | 2550 | 16 | 20 | 22 | 330 | 300 | 240 | 50 | 4760 | 1660 | 1590 | 1125 | 12100 | 22 |
| HRB-4 2525 | 2550 | 20 | 25 | 28 | 360 | 330 | 270 | 60 | 5010 | 2060 | 2050 | 1510 | 17500 | 22 |
| HRB-4 3006 | 3100 | 4 | 6 | 7 | 210 | 190 | 180 | 30 | 4880 | 1160 | 1180 | 835 | 6200 | 7,5 |
| HRB-4 3008 | 3100 | 6 | 8 | 10 | 230 | 210 | 190 | 30 | 4880 | 1160 | 1180 | 825 | 6700 | 11 |
| HRB-4 3010 | 3100 | 8 | 10 | 12 | 270 | 250 | 220 | 50 | 5310 | 1660 | 1590 | 1155 | 11800 | 11 |
| HRB-4 3013 | 3100 | 10 | 13 | 15 | 300 | 270 | 220 | 50 | 5310 | 1660 | 1590 | 1140 | 12300 | 15 |
| HRB-4 3016 | 3100 | 13 | 16 | 18 | 330 | 300 | 240 | 50 | 5310 | 1660 | 1590 | 1125 | 13400 | 18,5 |
| HRB-4 3020 | 3100 | 16 | 20 | 22 | 360 | 330 | 270 | 60 | 5560 | 2060 | 2050 | 1510 | 19000 | 22 |
| HRB-4 3025 | 3100 | 20 | 25 | 28 | 400 | 370 | 290 | 65 | 5560 | 2060 | 2050 | 1490 | 20800 | 30 |
| HRB-4 3030 | 3100 | 25 | 30 | 33 | 430 | 400 | 320 | 70 | 5560 | 2060 | 2050 | 1475 | 22600 | 37 |
| HRB-4 3035 | 3100 | 30 | 35 | 38 | 460 | 460 | 370 | 90 | 6200 | 2300 | 2530 | 1875 | 34000 | 44 |
| HRB-4 3040 | 3100 | 35 | 40 | 44 | 490 | 490 | 370 | 100 | 6300 | 2300 | 2600 | 1865 | 40000 | 52 |
| HRB-4 3050 * | 3100 | 40 | 50 | 55 | 500 | 500 | 410 | 100 | 6400 | 2350 | 2650 | 1840 | 45000 | 60 |
| HRB-4 3065 * | 3100 | 50 | 65 | 70 | 650 | 610 | 500 | 125 | 6350 | 3240 | 3660 | 2825 | 70000 | 74 |
| HRB-4 3085 * | 3100 | 70 | 85 | 90 | 760 | 720 | 600 | 160 | 7500 | 3600 | 3950 | 3000 | 90000 | 110 |
| HRB-4 3160 * | 3100 | 140 | 160 | 168 | 1070 | 1020 | 870 | 280 | 8500 | 5300 | 5500 | 4190 | 230000 | 300 |
| HRB-4 4008 | 4100 | 6 | 8 | 10 | 300 | 270 | 220 | 50 | 6310 | 1660 | 1590 | 1140 | 14600 | 11 |
| HRB-4 4013 | 4100 | 10 | 13 | 15 | 360 | 330 | 270 | 60 | 6560 | 2060 | 2050 | 1510 | 22400 | 18,5 |
| HRB-4 4016 | 4100 | 13 | 16 | 18 | 400 | 370 | 290 | 65 | 6560 | 2060 | 2050 | 1490 | 24600 | 22 |
| HRB-4 4020 | 4100 | 16 | 20 | 22 | 430 | 400 | 320 | 70 | 6560 | 2060 | 2050 | 1475 | 27000 | 30 |
| HRB-4 4035 * | 4100 | 30 | 35 | 38 | 500 | 500 | 410 | 100 | 7400 | 2350 | 2650 | 1840 | 54000 | 52 |

*For 240 N/mm² yield point material * Ø Dmin= Ødx2 (Pre Bending) ; Ødx4 (Bending) Conical bending capacity can be taken half of above values.*

# HRB-3 SERIES

- *Flexible roller especially for medium thick*
- *Cost effective solutions for big diameters*
- *Wide working range*
- *Excellence of cone bends*
- *Good value for precision and reliability*
- *All 3 rolls are driven with superior roll torque and speed*

# HRB-3

## STANDARD EQUIPMENTS

- CE-Norm for EU
- Control unit with digital readout
- Conical bending
- Induction hardened rolls
- Side rolls positioning from electronic synchronize PLC
- Bottom roll rigid mechanic synchronized
- Stress relieved steel contruction body
- Rolls seated with bearings
- Top roll hydraulic opening device
- Top rolls hydraulic motor driven and planetary gear box
- Side rolls hydramotor, diameter 360 and above gear box plus hydramotor
- Electrical and hydraulic protection against overloads

## OPTIONAL EQUIPMENTS

- Polished Rolls
- Variable speed control
- Oil Coolant
- Side supports at both side
- Vertical support crane system (mechanical or hydraulics)
- Material feeding table
- Changeable top Roll for smaller diameters
- Longer rolls for profile bending
- Welding possibility on the machine
- Preparation for Vertical support crane system

## HRB-3

| | | | Min. Int. Dia Ø Dmin | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ødx1,5 | Ødx3 | | | | | | | | |
| | Bending Length | Pre-Bending Capacities | Bending Capacities | Top Roll | Side Rolls | Max. Pass Through | Length | Width | Height | Working Height | Weight | Motor Power |
| | L(mm) | s(mm) | S(mm) | ød(mm) | ød(mm) | A(mm) | U(mm) | G(mm) | Y(mm) | C(mm) | kg | (kW) |
| HRB-3 2006 | 2050 | 4 | 6 | 185 | 165 | 70 | 3850 | 1300 | 1150 | 810 | 2500 | 5.5 |
| HRB-3 2008 | 2050 | 6 | 8 | 200 | 180 | 70 | 3850 | 1300 | 1150 | 820 | 3300 | 7.5 |
| HRB-3 2010 | 2050 | 8 | 10 | 220 | 200 | 55 | 3950 | 1400 | 1150 | 820 | 4000 | 7.5 |
| HRB-3 2013 | 2050 | 10 | 13 | 230 | 210 | 80 | 3950 | 1400 | 1500 | 900 | 4800 | 11 |
| HRB-3 2016 | 2050 | 13 | 16 | 270 | 250 | 100 | 4150 | 1650 | 1400 | 980 | 6000 | 15 |
| HRB-3 2020 | 2050 | 16 | 20 | 300 | 270 | 100 | 4150 | 1650 | 1400 | 1030 | 7200 | 18.5 |
| HRB-3 2025 | 2050 | 20 | 25 | 330 | 290 | 100 | 4350 | 1900 | 1700 | 1075 | 9300 | 22 |
| HRB-3 2030 | 2050 | 25 | 30 | 360 | 320 | 100 | 4350 | 1900 | 1700 | 1235 | 10000 | 30 |
| HRB-3 2506 | 2550 | 4 | 6 | 200 | 180 | 70 | 3850 | 1300 | 1150 | 820 | 3800 | 7.5 |
| HRB-3 2508 | 2550 | 6 | 8 | 220 | 200 | 55 | 4450 | 1400 | 1150 | 820 | 4500 | 7.5 |
| HRB-3 2510 | 2550 | 8 | 10 | 230 | 210 | 80 | 4450 | 1400 | 1500 | 900 | 5500 | 11 |
| HRB-3 2513 | 2550 | 10 | 13 | 270 | 250 | 100 | 4650 | 1650 | 1400 | 980 | 6700 | 15 |
| HRB-3 2516 | 2550 | 13 | 16 | 300 | 270 | 100 | 4650 | 1650 | 1400 | 1030 | 8000 | 18.5 |
| HRB-3 2520 | 2550 | 16 | 20 | 330 | 290 | 100 | 4850 | 1900 | 1700 | 1075 | 10400 | 22 |
| HRB-3 2525 | 2550 | 20 | 25 | 360 | 320 | 100 | 4850 | 1900 | 1700 | 1235 | 11500 | 22 |
| HRB-3 3006 | 3100 | 4 | 6 | 220 | 200 | 55 | 5000 | 1400 | 1150 | 820 | 5000 | 7.5 |
| HRB-3 3008 | 3100 | 6 | 8 | 230 | 210 | 80 | 5000 | 1400 | 1500 | 900 | 6000 | 7.5 |
| HRB-3 3010 | 3100 | 8 | 10 | 270 | 250 | 100 | 5200 | 1650 | 1400 | 980 | 7500 | 11 |
| HRB-3 3013 | 3100 | 10 | 13 | 300 | 270 | 100 | 5200 | 1650 | 1400 | 1030 | 9000 | 15 |
| HRB-3 3016 | 3100 | 13 | 16 | 330 | 290 | 100 | 5400 | 1900 | 1700 | 1075 | 11800 | 18.5 |
| HRB-3 3020 | 3100 | 16 | 20 | 360 | 320 | 100 | 5400 | 1900 | 1700 | 1235 | 12500 | 22 |
| HRB-3 3025 | 3100 | 20 | 25 | 410 | 380 | 70 | 6000 | 2100 | 1900 | 1240 | 17000 | 30 |
| HRB-3 3030 | 3100 | 25 | 30 | 430 | 390 | 100 | 6000 | 2200 | 2000 | 1430 | 21000 | 37 |
| HRB-3 4008 | 4100 | 6 | 8 | 300 | 270 | 100 | 6200 | 1650 | 1400 | 1030 | 11000 | 11 |
| HRB-3 4013 | 4100 | 10 | 13 | 360 | 320 | 100 | 6400 | 1900 | 1700 | 1235 | 18000 | 18.5 |
| HRB-3 4016 | 4100 | 13 | 16 | 410 | 380 | 70 | 7000 | 2100 | 1900 | 1240 | 22000 | 22 |

*For 240 N/mm² yield point material*
** Ø Dmin= Ødx2 (Pre Bending) ; Ødx4 (Bending)*
*Conical bending capacity can be taken half of above values.*

# HRB-3V SERIES

*3 rolls variable axis plate roll bending machines are more precise,faster, more productive and safer plate roll benders by its user friendly operations without dependence to operator competence.*

*They are suitable for medium and thick plate bending. Unlike the usual cylinder machines, the lower rolls move horizontally to right and left and the upper roll moves up and down.*
*As at 4 roll Machines steel load parallel to the floor so machine pit can be at machine working level*
*With the system functioning upper roller trainer can be used as a traditional press.*

*Forming operations and calibration of the welded tubes finishes.*
*The sheet is controlled by tightening of top and bottom rolls.This operation does not allow the sheet is skid and fall down.The machine can also be installed below the ground.*

*Please ask for detail specifications*

# MRB-S SERIES

*MOTORISED ASSYMETRICAL 3 ROLL MACHINES*

*Especially for thinner sheets with small lot sizes*
*Easy prebending thanks to top & bottom rolls tighten the workpiece*
*Cost-oriented solutions for small and medium enterprises*
*Wide range of industrial usage*

| STANDARD EQUIPMENTS |
|---|
| CE |
| Conical bending |
| Motorised back roll |
| Top and bottom rolls gear driven |
| Pendant command panel |
| SAE 1050 steel rolls |
| Induction hardened rolls |
| Stress relieved steel construction |
| Support on 2,5 and 3 m machines |
| Brake system for precise bendings |

| OPTIONAL EQUIPMENTS |
|---|
| Digital readout |
| Motorised bottom roll tightening |
| Ground rolls |
| Roll extention for profile bending |
| Special rolls for profile bending |

| MRB-S Series | Unit | 1506 | 2005 | 2006 | 2504 | 2506 | 2508 | 3004 | 3006 |
|---|---|---|---|---|---|---|---|---|---|
| Bending length | mm | 1530 | 2030 | 2030 | 2530 | 2530 | 2530 | 3030 | 3030 |
| Bending capacity | mm | 6 | 5 | 6 | 4 | 6 | 8 | 4 | 6 |
| Pre bending | mm | 4 | 4 | 5 | 3 | 4 | 6 | 2 | 4 |
| Top roll Ø | mm | 150 | 160 | 170 | 170 | 190 | 220 | 180 | 220 |
| Motor power | kW | 4 | 4 | 4 | 4 | 5,5 | 5,5 | 4 | 5,5 |
| Length | mm | 3100 | 3600 | 3600 | 4100 | 4250 | 4250 | 4600 | 4750 |
| Height | mm | 1120 | 1120 | 1120 | 1120 | 1200 | 1200 | 1120 | 1200 |
| Width | mm | 1020 | 1020 | 1020 | 1020 | 1150 | 1150 | 1020 | 1150 |
| Weight | kg | 2100 | 2300 | 2400 | 2700 | 3750 | 4430 | 4250 | 4920 |

# MRB SERIES

| STANDARD EQUIPMENTS |
|---|
| CE |
| Conical Bending |
| Bottom and back rolls manuel |
| Top and bottom rolls powered by electric motor,gearbox and gear drive |
| Pendant control panel |
| Cast Iron frame |
| Precise bending with motor brake |

| OPTIONAL EQUIPMENTS |
|---|
| Digital readout |
| Motorised botttom roll |
| Motorised back roll |
| Hardened rolls |
| Ground rolls |
| Extented rolls for profile bending |
| Special rolls for profile bending |

| MRB Series | Unit | 1004 | 1204 | 1503 | 1504 | 2004 |
|---|---|---|---|---|---|---|
| Bending length | mm | 1030 | 1280 | 1530 | 1530 | 2030 |
| Bending capacity | mm | 4 | 4 | 3 | 4 | 4 |
| Pre bending | mm | 3 | 3 | 2 | 3 | 2.5 |
| Top roll Ø | mm | 110 | 120 | 110 | 130 | 140 |
| Motor power | kW | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Length | mm | 1900 | 2150 | 2400 | 2400 | 2900 |
| Height | mm | 1120 | 1120 | 1120 | 1120 | 1120 |
| Width | mm | 940 | 940 | 940 | 940 | 940 |
| Weight | kg | 1195 | 1345 | 1388 | 1425 | 1565 |

# MRB-E SERIES

## STANDARD EQUIPMENTS

- CE
- Conical bending
- Bottom and back rolls manual
- Cast Iron frame
- SAE 1050 steel rolls
- Rode bending channels  on bottom and back rolls
- Pendant foot pedal
- Emergency stop

## OPTIONAL EQUIPMENTS

- Hardened rolls
- Ground rolls

| MRB E Series | Unit | 1001 | 1002 | 1003 | 1202 | 1203 | 1525 | 2015 |
|---|---|---|---|---|---|---|---|---|
| Bending length | mm | 1030 | 1030 | 1030 | 1280 | 1280 | 1530 | 2030 |
| Bending capacity | mm | 1 | 2 | 3 | 2 | 3 | 2,5 | 1,5 |
| Pre bending | mm | 0,8 | 1,2 | 2 | 1,2 | 2 | 1,5 | 0,8 |
| Top roll Ø | mm | 56 | 75 | 90 | 75 | 95 | 95 | 90 |
| Motor power | kW | 0,75 | 0,75 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 |
| Length | mm | 1750 | 1750 | 1750 | 2000 | 2000 | 2250 | 2750 |
| Height | mm | 1100 | 1135 | 1135 | 1135 | 1135 | 1135 | 1135 |
| Width | mm | 840 | 840 | 840 | 840 | 840 | 840 | 840 |
| Weight | kg | 280 | 385 | 440 | 455 | 555 | 630 | 680 |

# RB SERIES

## STANDARD EQUIPMENTS

- CE
- Conical bending
- Casting frame
- SAE 1050 steel rolls
- Rode bending channels  on bottom and back rolls

## OPTIONAL EQUIPMENTS

- Hardened rolls
- Ground rolls

| RB Series | Unit | 1001 | 1002 | 1003 | 1202 | 1225 | 1203 | 1525 |
|---|---|---|---|---|---|---|---|---|
| Bending length | mm | 1030 | 1030 | 1030 | 1280 | 1280 | 1280 | 1530 |
| Bending capacity | mm | 1 | 2 | 3 | 2 | 2,5 | 3 | 2,5 |
| Pre bending | mm | 0,8 | 1,2 | 2 | 1,2 | 1,5 | 2 | 1,5 |
| Top roll Ø | mm | 56 | 75 | 90 | 75 | 90 | 95 | 95 |
| Length | mm | 1500 | 1750 | 1750 | 2000 | 2000 | 2000 | 2250 |
| Height | mm | 1100 | 1135 | 1135 | 1135 | 1135 | 1135 | 1135 |
| Width | mm | 520 | 520 | 520 | 520 | 520 | 50 | 520 |
| Weight | kg | 220 | 370 | 410 | 430 | 490 | 515 | 595 |