The Winning Force

DURMA

AD-Servo SERIES
PRESS BRAKES

- Perfect Precision
- Profit
- Energy Efficient
- Hi-Speed & Repeatability
- Elegant Design

Low Power Consumption

durmazlar

DURMA The Winning Force

durmazlar

As a total supplier for sheet metal manufacturing with almost 60 years of experience, Durma understands and recognizes the challenges, requirements and expectations of the industry. We strive to satisfy the ever higher demands of our customers by continuously improving our products and processes while researching and implementing the latest technologies.

In our three production plants with a total of 150.000 m^2, we dedicate 1,000 employees to delivering high quality manufacturing solutions at the best performance-to-price ratio in the market.

From the innovations developed at our Research & Development Center to the technical support given by our worldwide distributors, we all have one common mission: to be your preferred partner.

Present Durmazlar machines with **DURMA** name to the world.

1

High technology, modern production lines

2

Top quality components

3

High quality machines designed in R&D Centre

AD-Servo Series Press Brake

Now Production is More Effective

The future – as a result of rising energy costs and increasingly cost efficient speed-controlled drives offered on the market, variable-speed solutions are on the advance.

Cost Down
Profit Up

- Precise bending result at fast speed
- Minimalized tool change and adjustment time
- Maximized speed and safety

Energy-efficient Hydraulics with Variable Speed Pump Drives

Energy consumption has a significant effect on Total Cost of Ownership of plant and machinery: even with standard machines, the energy consumption represents 30% of total costs, and with particularly energy-intensive applications, this share is remarkably higher.

Low Power Consumption

High Capacity

Robust Body

Perfect Precision

Winning

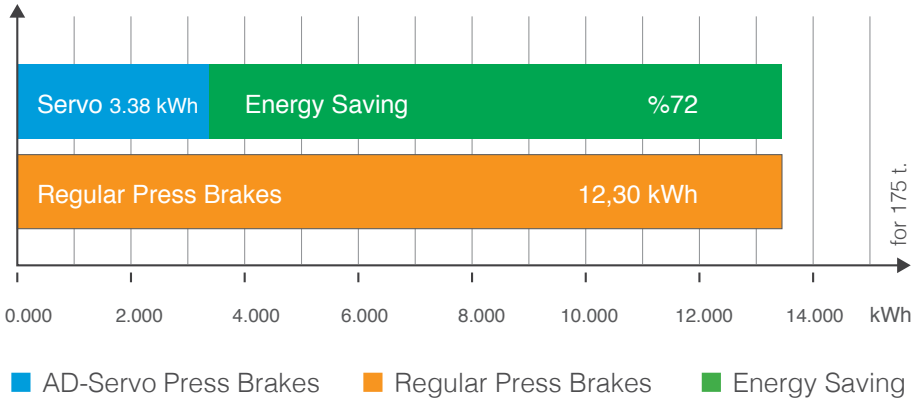
Ergonomic

Advantages

- High energy-saving potential
- Decreased operating costs
- Clearly reduced cooling effort
- Operational reliability
- High availability
- Lower investment
- System safety
- Future-oriented technology
- Remarkable noise reduction
- Fewer secondary measures
- Ease of integration of flexible check functions
- Decrease in the number of expensive machine failures
- Compliance with EU Directives

Comparison of Energy Consumption of a Press Brakes

Electric Consumption



Main components

Servomotor
Hydromotor-pump (4-quadr. oper.)
Servo controller IndraDrive C
Software-Technology function
Parameter
Bell housing and coupling
Power unit (Oil tank, accessories)
Valve block, prefill valve
Cylinder

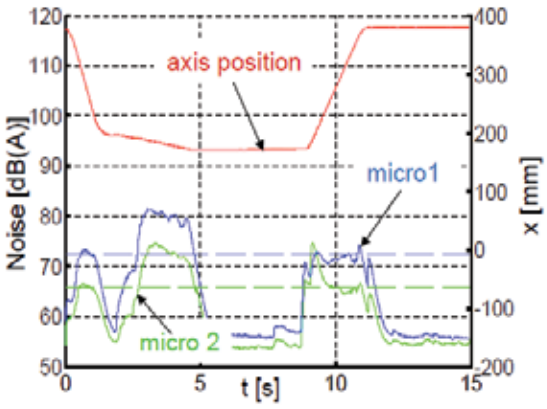
Physical characteristics

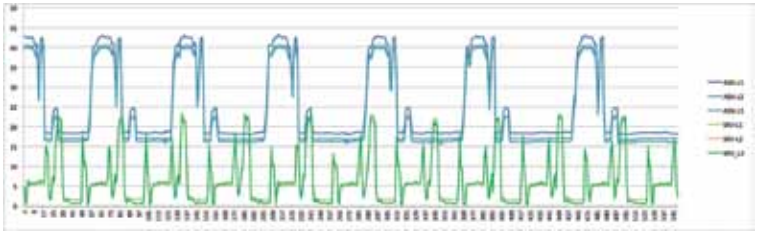
Control of position
Control of pressure/load pressure
Open/closed hydraulic circuit
4-quadrant operation

Productivity

At the same time %72 less energy and %60 less working time.

Less Noise Level





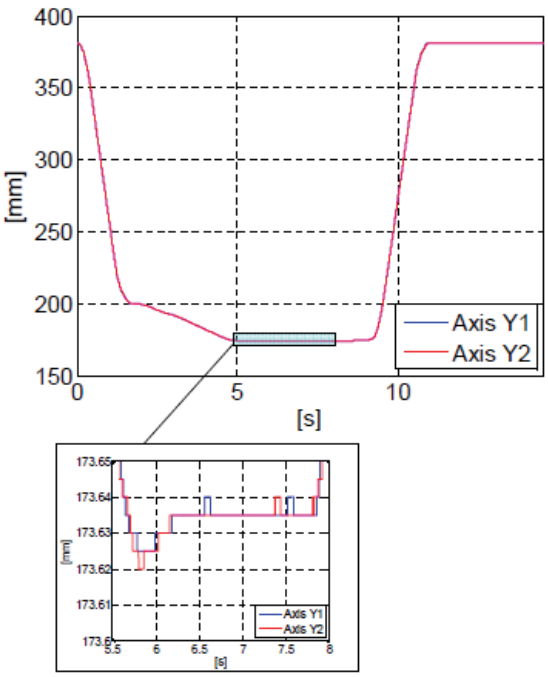
Fast Increase in Efficiency in Production

AD-Servo is high modularity of hydraulics also opens up economic options on existing plant and machinery by substituting fixed displacement power units by variable-speed pump drives with little effort.

- Energy Saver
- Accurate on each cycle
- Economy Proof
- Hi-Speed & Repeatability

Depending on cycle characteristics and rating, variable-speed pump drives achieve energy savings

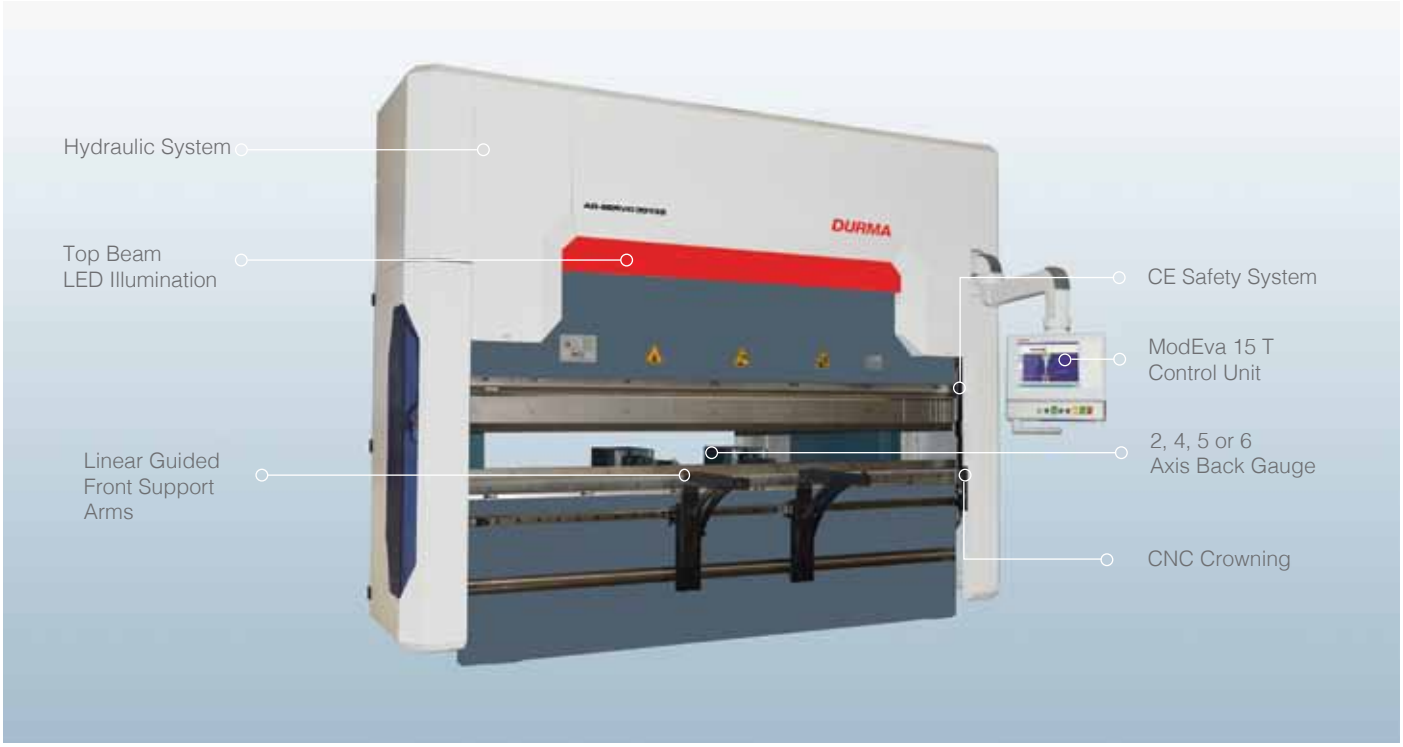
AD-Servo positioning accuracy at target position



Fast, Efficient, Modern

AD-Servo Series press brakes, designed with high technology to increase efficiency on precise part bending.

Quality approved components used.
Stress relieved made on bodies for long life and precise bending.



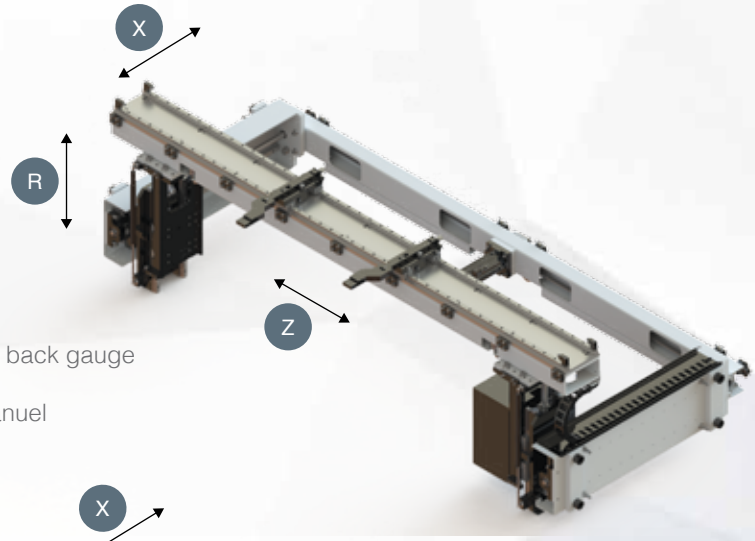
General Specifications

- High sensitivity, Stress relieved steel construction body, long life Mono Block Frame
- Automatic calibration and first start up
- *DURMA* designed and copyrighted guiding system
- Ball Screw and linear guide integrated perfect back gauge system
- Durable, long life and sensitive bending capable special hardened top tools
- Suitable for segmented tools special and fast tool holding system
- Sensitive solutions on long and deep bending
- High accuracy linear scales
- CE safety standards
- Best quality world wide accepted hydraulic and electric components

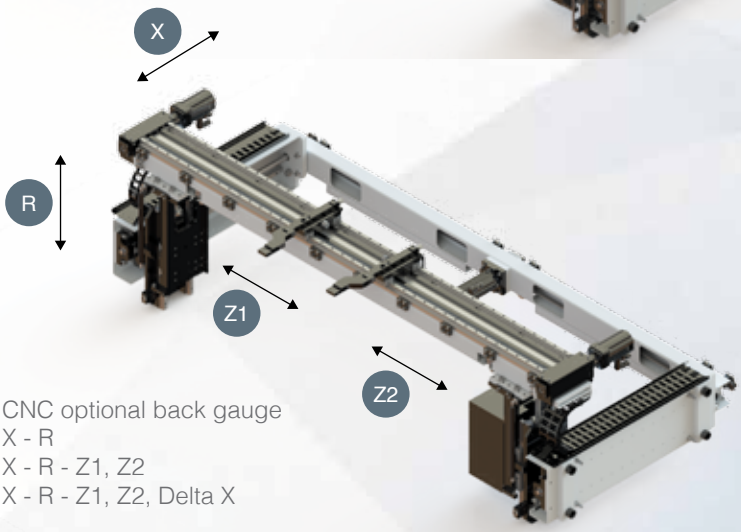
Strong Back Gauge System

- Precise
- Reliable
- Strong

- Fast and high accuracy
- Safe movement
- Resistance to crash
- Maintenance free
- Adjustment availability at every point



CNC back gauge
X - R
Z manuel



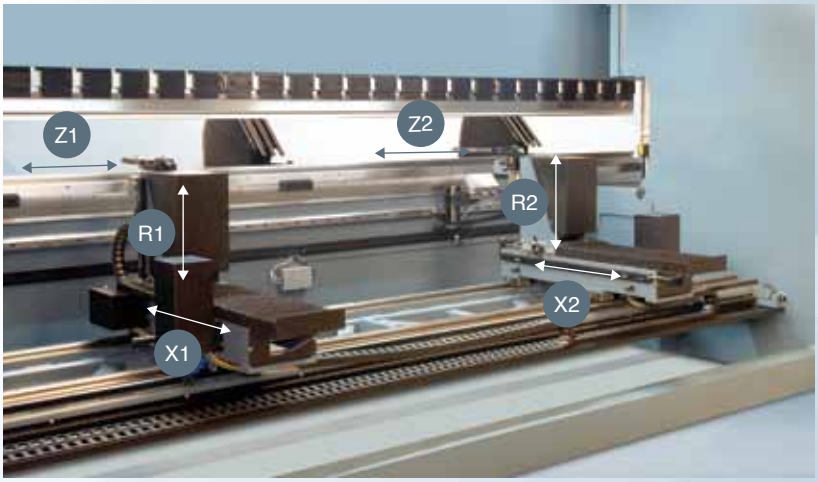
CNC optional back gauge
X - R
X - R - Z1, Z2
X - R - Z1, Z2, Delta X

Why *DURMA* Back Gauge ?

Most important feature to achieve perfect bending is the stability and the design of the back gauge, which allows an impeccable and correct product to be produced.

The high speed **ballscrew** back gauge system movement is also supported with **linear guides**, which helps the back gauge achieve long life, greater sensitivity and strengthens against any collisions.

Special designed finger blocks with steps to achieve maximum stability can also be supplied for every kind of bending solution.



CNC optional back gauge
X1 - X2, R1 - R2, Z1 - Z2

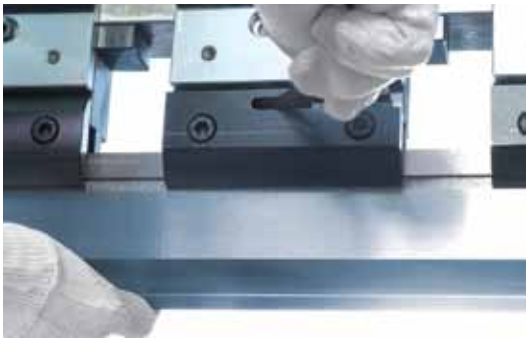
Tool Holders and Tools

Bending performance increased using with high quality European clamping system and easy to use. Narrow table designed for European style tool holder and Z bending.

DURMA is your solution partner with various tool options.

European Clamping System

European Type Bottom Tool (4V Die)



Quick Release Clamping

Wila Bottom Tool Clamping

Wila Top Tool Clamping

DURMA Multi V Bottom Tool

DURMA Top Tool

Safe and Accurate Bends with Top Quality Equipments

Crowning System

Manual or CNC-controlled motorized crowning system simplifies bending, by adjusting each point of the bending parts to acquire straight bends. The need for shimming is eliminated.

CNC Crowning System

Linear Guide Front Sheet Supports

Rugged support arms with tilting stops are mounted on a linear guide rail system. This allows “finger-tip” lateral adjustment as required by the bend length of the part. They are also equipped with side gauges for the fast, easy, and accurate feeding of parts small or large.

Linear Guide Front Sheet Supports

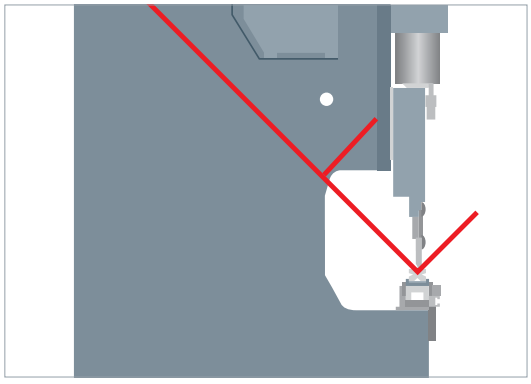
CE Safety Systems

Our machines are designed in accordance with Ce-Norms to ensure your safety with hydraulic, electric, appropriate height covers and laser light curtains. CE safety in tandem machines are also provided with light barriers.

Ce Laser Safety System

Stable Top Beam Movement

By using long and planar guiding surfaces, all the disadvantages of point guiding are eliminated 100% free bending space: guiding system that eliminates bending between frame has been moved to the outside of the frame.



90 Degree Endless Bend

Now Bending is More Easier

ModEva 15T

15" color Touch Screen
On-screen finger profile drawing
Automatic bend listing
Very simple and convenient data transfer
Higher productivity thanks to easy and rapid
Multi-simulation capability
Simulation criteria for better sheet management
Windows XPe for multitasking and file management
EC safety-cycle management
Ethernet for easy communication
Bundled Offline Software

DA-66T

2D graphical touch screen programming mode
3D visualisation in simulation and production
17" high resolution colour TFT
Full Windows application suite
Delem modusys compatibility
USB, peripheral interfacing
User specific application support within the controllers multitasking environment
Sensor bending & correction interface

Modeva Premium

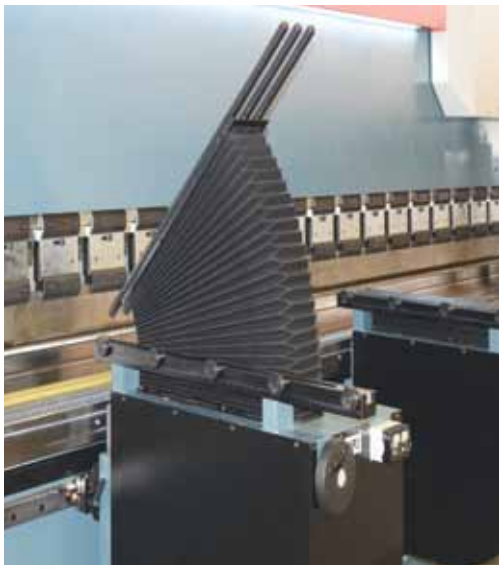
Full 3D simulation
Multiple view points while working
3D collision detection
User defined table for bend deduction
Rapid solution computation
Importing 3D models (MetaBEND, IGES)
Automatic Tool Shape Selection
Video-like bend simulation.
Almost unlimited quantity of programs and sequences

DA-69T

Higher grade of efficiency
3D and 2D graphical touch screen programming mode
17" high resolution colour TFT
Minimal set up time
Delem modusys compatability
Sensor bending correction interface
1 GB memory capacity
Integrated OEM-Panel
1280x1024 pixels, 16-bit colour
3D graphics acceleration

DURMA ANGLE MEASUREMENT

AP3 - AP4 SHEET FOLLOWER



ROBOTIC SOLUTIONS

Standard & Optional Equipment

Standard Equipment

Y1, Y2, X, R - 4- axis
Control Unit - CNC ModEva15T or 66T
CE BLVT safety – only for tandem machines
Servo motor back gauge & linear guided & ballscrew system (X-R)
CNC crowning
European style tool clamping system
Sliding front arms (With T-Slot and stopper)
World standards special design hydraulic block and valves
World standard electric equipment

Optional Equipment

Control unit - ModEva Premium or 69T
CE Manuel F. AKAS II M FPSC-B-C + safety covers with switch
CE F. AKAS-LC II AKAS-3 M Motorized + FPSC (safety PLC)
CE BLVT safety – only for tandem machines
Z1, Z2 axis
X1, X2 axis
R1, R2 axis
Delta X axis,± 250mm stroke or ± 125 mm with CNC Controlled
X axis = 1000 mm – light barrier back protection
AP3-AP4 sheet following system
Height adjustable laser angle measurement system
Quick release clamping system
Hydraulic and pneumatic tool clamping systems
Bottom and top tools
Bottom tool separation system
Parking area
Central lubrication system
Oil cooler
Additional back gauge finger and sliding front support arms
Special packing for overseas shipments

Fast on Service and Spare Parts

DURMA provides the best level of service and spare parts with qualified personnel and spare parts in stock. Our experienced and professional service personnel are always ready at your service. Our professional training and application enriched courses will give you an advantage to use our machinery.

Spare Parts

Consultancy

R&D Center

After Sales Service

DURMA

Solution Center

Service Agreements

Software

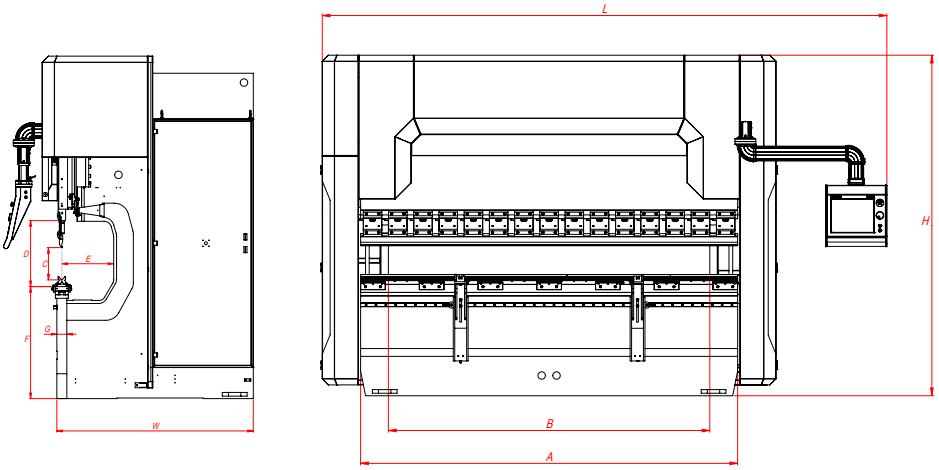
Training

Flexible Solution

AD-Servo Series Technical Details

AD-Servo Series	Bending Force (Ton)	Bending Length (mm)	Distence Between Columns (mm)	Stroke (mm)	Daylight (mm)	Throat Depth (mm)	Table Height (mm)	Table Width (mm)	Working Speed	
									Y Rapid Speed (mm/sec)	Y Working Speed (mm/sec)
		A	B	C	D	E	F	G		
AD-Servo 25100	100	2550	2200	265	530	410	900	104	200	10
AD-Servo 30100	100	3050	2600	265	530	410	900	104	200	10
AD-Servo 30135	135	3050	2600	265	530	410	900	104	200	10
AD-Servo 30175	175	3050	2600	265	530	410	900	104	200	10
AD-Servo 30220	220	3050	2600	265	530	410	900	104	200	12
AD-Servo 30320	320	3050	2600	365	630	410	900	154	160	10
AD-Servo 37175	175	3700	3100	265	530	410	900	104	200	10
AD-Servo 37220	220	3700	3100	265	530	410	900	104	200	12
AD-Servo 40175	175	4050	3600	265	530	410	900	104	200	10
AD-Servo 40220	220	4050	3600	265	530	410	900	104	200	12
AD-Servo 40320	320	4050	3600	365	630	410	900	154	160	10
AD-Servo 60220	220	6050	5100	265	530	410	1100	154	200	12
AD-Servo 60320	320	6050	5100	365	630	410	1100	154	160	10

* 750 mm throat depth
** 750 - 1000 - 1250 mm throat depth
Machines set according to optimum values.

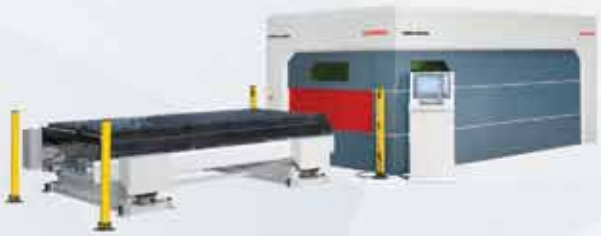


Y Return Speed (mm/sec)	X Axes Working Speed (mm/sec)	R Axes Working Speed	R Axes Working Distance (Motorized)	X Axes Distance			Motor Power	Length (mm)	Width (mm)	Height (mm)	Weight Approx. (kg)
				650	750	1000		L	W	H	
200	500	350	250	S	-	O	4 x 2	3800	1670	2750	8650
200	500	350	250	S	-	O	4 x 2	4200	1670	2750	9250
200	500	350	250	S	-	O	4 x 2	4200	1680	2750	10250
200	500	350	250	S	-	O	4 x 2	4250	1700	2750	11250
180	500	350	250	S	-	O	5,1 x 2	4250	1770	2900	12250
160	500	350	250	S	-	O	7,2 x 2	4300	1820	3230	17250
200	500	350	250	S	-	O	4 x 2	4950	1700	2900	13000
180	500	350	250	S	-	O	5,1 x 2	4950	1770	2900	14100
200	500	350	250	S	-	O	4 x 2	5250	1700	2750	12850
180	500	350	250	S	-	O	5,1 x 2	5250	1770	2900	14750
160	500	350	250	S	-	O	7,2 x 2	5300	1910	3230	20750
180	350	300	250	-	S	O	5,1 x 2	7500	1770	3250	20590
160	350	300	250	-	S	O	7,2 x 2	7500	1910	3450	28250

S : Standard

O : Option

DURMA



FIBER LASER

PUNCH

PLASMA

L ANGLE PROCESSING CENTER

IRON WORKER

POWER OPERATED SHEAR

DURMA

PRESS BRAKE

VARIABLE RAKE SHEAR

ROLL BENDING

PROFILE BENDING

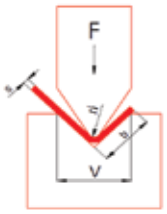
BANDSAW

CORNER NOTCHER

DURMA

Today, Tomorrow and Forever With You...

V	b	r_i	s(mm)																					
			0.5	0.8	1	1.2	1.5	1.8	2	2.5	3	3.5	4	4.5	5	6	7	8	9	10	12	15	18	20
6	5	1	2,5	6,5	10																			
8	6	1,3	2	5	8	11																		
10	7	1,7	1,5	4	6	9	13																	
12	9	2		3	5	7	11	16																
15	12	2,7			4	6	9	13	16															
20	15	3,3				4	7	10	12	19														
26	18	4,2					4	7,5	9	14	21													
30	22	5						6,5	8	12	19	24												
32	23	5,4							7,5	11,6	17	23	30											
37	25	5,8								10	14,5	20	26	33										
42	29	6,7									13	17	23	29	33,5									
45	32	7,5										16	21	27	33	48								
50	36	8,3											19	24	30	43	58							
60	43	10												20	25	36	49	64						
70	50	11,5													21	31	42	55	69					
80	57	13,5														27	37	48	60	75				
90	64	15															32	42	54	66	95			
100	71	17																38	48	60	86	134		
130	93	22																	37	46	66	103	149	
180	130	30																		33	48	75	107	153
200	145	33																			43	67	83	119
250	180	42																				54	77	92



$$F = \frac{1{,}42 \times L \times Rm \times s^2}{1000 \times V} (Ton)$$

F: Bending Force (Ton) L: Length (mm) Ri: Inside Radius (mm) Rm: Material Tensile Strength (daN/mm²) V: Channel Width (mm) B: Minimum Sheet Bending Side (mm) S: Thickness (mm)

AD-Servo SERIES
PRESS BRAKES

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