The Winning Force

DURMA

AD-ES SERIES

Electrical Press Brake

- Perfect Precision
- High Capacity
- Low Energy Consumption
- Elegant Design

High Capacity
Low Energy
Consumption

durmazlar

DURMA The Winning Force

durmazlar
1958

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.

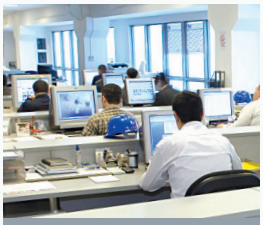
In our three production plants with a total of 150.000 m^2, we dedicate 1,000 employees to delivering high quality manufacturing solutions at the best performance-to-price ratio in the market.

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.

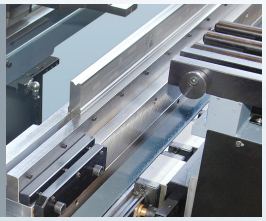
1

High technology, modern production lines



2

Top quality components



3

High quality machines designed in R&D Centre

AD-ES Series Electrical Press Brake

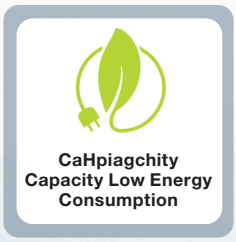
Environment Friendly

DURMA AD-ES CNC PRESS BRAKE serial can provide the production starting from 1250 mm table width to 2050 table width. It is also possible to apply different sizes in line with customer demands.

Welding is performed on the machine body and upper table and all waste is prevented by stress relieving and appropriate processing technologies. Reducer drive system, precision ball screw, and nut connection, high torque-resistant bearing cylinder provide high precision bending results.

Environment Friendly Low Cost High Gain

- Precise bending results
- Minimum tool change and adjustment time
- Maximum speed and safety



High Capacity

Robust Body

Perfect Precision

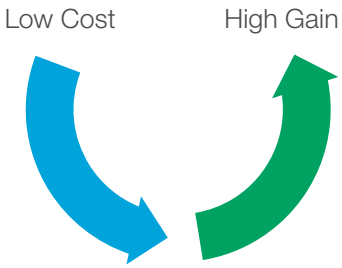
Winning

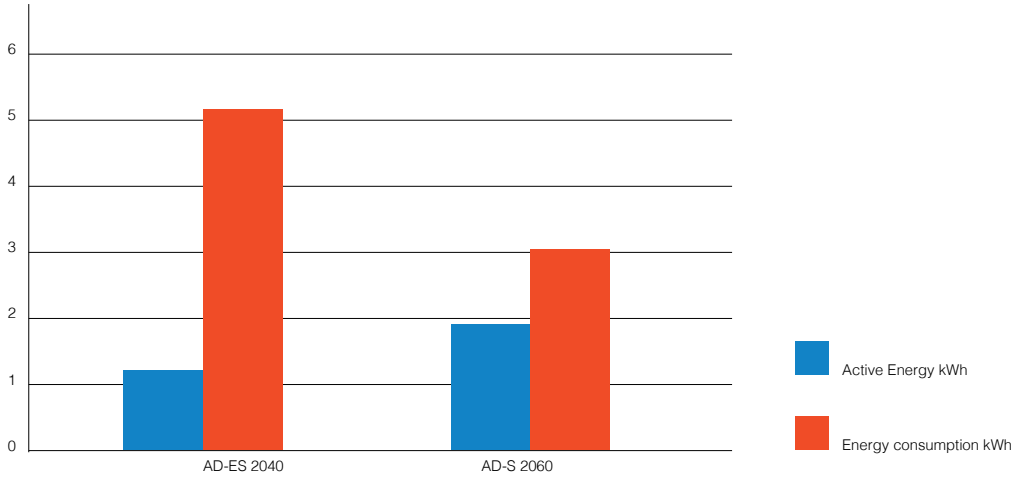
Ergonomic

Advantages

- High Energy Saving
- Decrease in operating costs
- Easy Cooling
- Operational reliability
- High availability
- Low investment cost
- System reliability
- Compliance with current technology
- Significant decrease in noise level
- Less measurement needing
- Ease of integration of control functions
- Low maintenance cost
- Compliance with European Union standards

Energy Consumption Comparisons of Press Brakes





Main Components

Servo-motor
Reducer
Ball screw and nut
Mechanical Roller Bearing
Software

Physical Features

Position Control
Press/Load Press Control

Efficiency

40% Less energy consumption
17% more productivity

Technical Data	AD-ES 2040	AD-S 2060
Motor Power	7.2 kW	7.5 kW
Power Consumption	3.1 kWh	5.2 kWh
Oil Capacity	-	100 lt
Approach Speed	115	200
Bending Speed	10	10
Rotation Speed	115	110

High Increase in Production Efficiency

Our AD-ES series solutions provide high energy savings to our business with speed, efficiency, quality and low power consumption.

- Energy saving
- Same consistency in each cycle
- Economic
- Repeatability at high speed

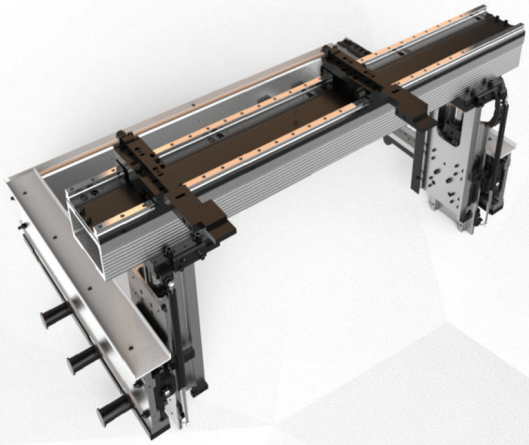
Fast, Efficient, Modern

General Specifications

- Precision reducer system
- Upper table suitable for EURO / Wila type tools.
- Robust body structure with long life and high performance
- Electric Panels creating a safer working environment
- Servo motors providing high speed and high precision
- Ball screw and nut connection providing excellent power and motion transmission
- Back support system with Japanese Yaskawa motor and rigid aluminum body
- AP1-AP2 system with high mobility and aluminum miter
- CE Norm Safety Standards

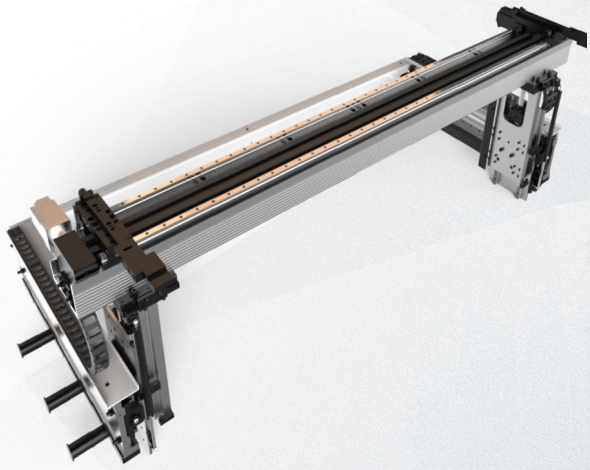
Strong Back Gauge System

- Precise
- Realiable
- Strong



X 650 X R (AL) Back Gauge

- Fast and high accuracy
- Safe movement
- Long-life linear motion elements
- No maintenance required
- Simple to use, easy to maintain



X 650 X R Z1 Z2 (AL) Back Gauge

Why DURMA Back Gauge?

The most important factor that affects bending quality is the stability and the design of the back gauge.

Perfect bending, perfect product is possible with a stable and precise back gauge.
High speed back gauge system moving with ballscrew is also supported with linear guides.
Thus, long life, precision and strength against collisions are provided.

Back gauge finger is designed to achieve all types of bendings in the maximum stability.

- AD-ES back gauge systems are long-life, precise and strength against collisions.
- High speed back gauge system moving with ballscrew is also supported with linear guides.

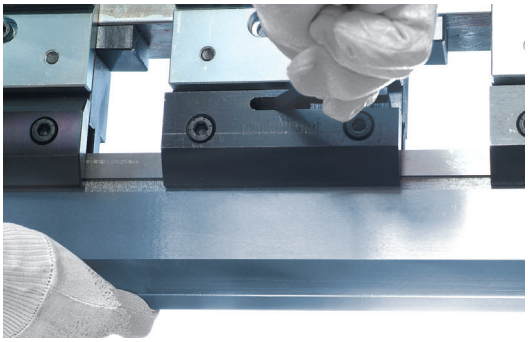
Tool Holders and Tools

The bending performance of the machine is increased by using High Quality European type clamping system and ease of use is provided. The lower body is designed as narrow for Z type bending and designed in accordance with European type tool holding system.

DURMA is your solution partner with various tool options.

European Type Standard Clamping System

European Type Tool and Holder (4V Bottom Tool) Quick Clamping



Quick Clamping System

Wila Bottom Tool Holder

Wila Top Tool Holder

Safe and Accurate Bends with Top Quality Equipments

Crowning System

CNC controlled, motorized crowning system provides perfect result in each point of bending.
Your bending differences arising from the material or other
factors are calculated by motorized CNC crowning system
and the perfect result is achieved.

CNC Crowning System

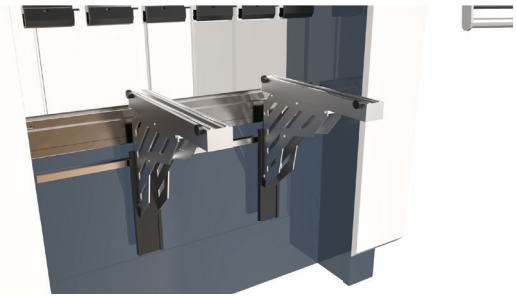
CE Safety Systems

Our machines are designed in accordance with European CE standards and directives in order to ensure your safety with hydraulic, electric, appropriate height covers and laser light curtains. CE safety in tandem machines are provided
with light barriers.

CE Laser Safety Systems

Aluminum Sheet Support System

Strong front arm can be moved to the right and left and fixed
at the desired position with linear slide and roller system.
With aluminum miter and bar support, the sheet material can
be easily moved to the machine.



Front Sheet Support System with Linear Slide, Aluminum Miter

Now Bending is More Easy

On the control unit's powerful simulation screen, the bending position can be monitored instantaneously and the bending parameters can be interfered. The blanking of the parts to be bent in CNC, back gauge positions, bending order, the compatibility of the bending parts with the stroke and the dies required for bending angles are automatically performed by the control unit on condition that the material information is defined. There is also the possibility to monitor the bends in three dimensions according to the type of the control unit and whether there is any collision during the bending or not.

SKY - 22

Automatic bending order
Perfect control of electrical servo systems
Archiving user bendings
2D/3D color graphics display and multi-simulation Windows 10 operating system
D-Bend ofline software
Tandem applications
21.5 " TFT color touch screen with USB port and backup Network interface
X1 - X2 - R1 - R2 - Z1 - Z2 and AP3 - AP4 part support system

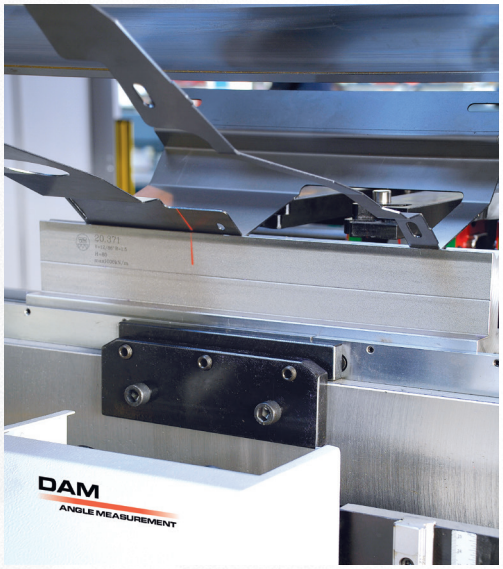
Delem - 66T

2D Graphic touch screen and programming mode
3D imaging in simulation and production
17 "High resolution colors
Suitable for full Windows applications Compatible with DelemModusys
USB and peripheral interface
User specific application support Multitasking competencies
Sensor bending and correction interface

DA - 69T

3D and 2D graphic touch screen programming
3D imaging in simulation and production
17 "high resolution colors
Suitable for full Windows applications Compatible with DelemModusys
USB and peripheral interface
Sensor bending correction interface
Multitasking competencies
Higher memory

DURMA Angle Measuring



Operator table support system

Robotic Solutions

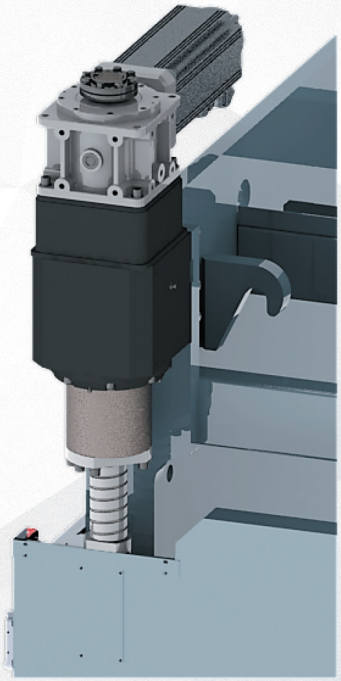
AD-ES series machine has component advantages with the drive system. Drive system consists of a few main parts and does not need oil for to generate press power. Machine sets up quickly and works long time with the same calibrate R-CELL Robot brand is Japan Yaskawa.

The MOTOMAN GP12 is a compact and flexible handling robot which provides a payload of 12 kg. Easy set - up and maintenance and a wrist structure with great environment resistance improve efficiency in installation, operation maintenance of equipment.

Advantages compared to classical press brakes

Drive System Group Equipment

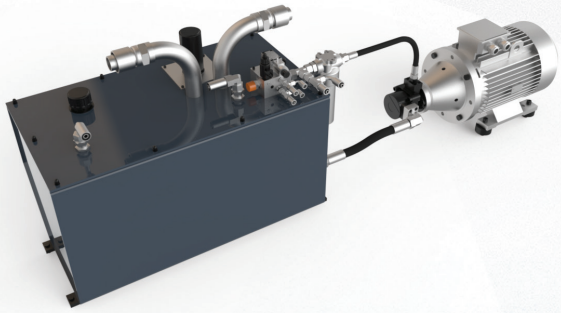
Servo Motor
Gearbox
Mechanical Roller Bearing
Ballscrew and Nut



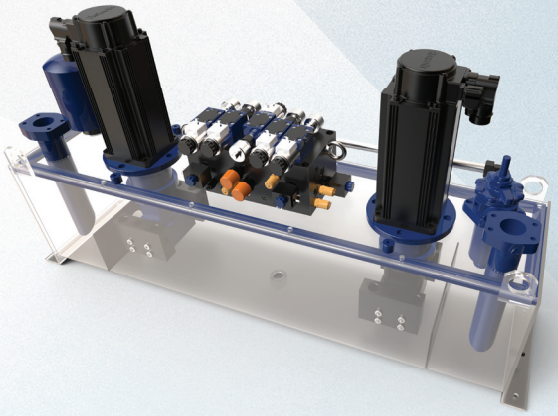
Equipment Advantages

Simpler Drive Group
Less Component
Easy and Fast Assembly
Easy and quick maintenance
Hydraulic oil-free drive system

Standard Hydraulic Press Brake



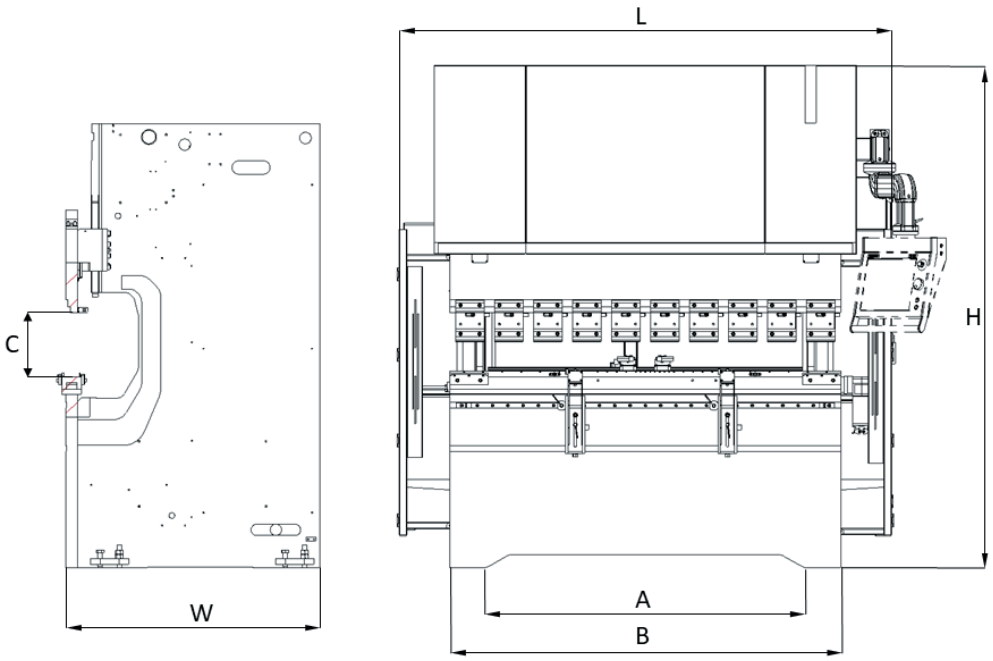
Servo Hydraulic Press Brake



AD-ES Series Technical Details

Machine Types	Bending Force	Bending Length	Distance Between Columns	Stroke	Daylight (D)	Throat Depth	Working Height (F)	Rapid Speed	Bending Speed	Return Speed	Back Gauge X Axis Length	Back Gauge R Axis Length	Length	Width	Height	Weight
Unit	Ton	mm	mm	mm	mm	mm	mm	mm/sec.	mm/sec.	mm/sec.	mm	mm	mm	mm	mm	kg
AD-ES 1240	40	1250	1050	200	440	250	1000	115	10-20*	115	650	250	2150	1625	2800	3.900
AD-ES 2040	40	2050	1700	200	440	350	1000	115	10-20*	115	650	250	2870	1625	2800	4.400

* According to CE norm, the bending speed should be maximum 10 mm / sec except for robotic use..



RobotCell Technical Details

Air Pressure	5 - 7 bar
Voltage	380 - 480 V
Power Supply	1.5 Kw
Robot Maximum Lifting Force	12 Kg
R-Cell Length	1250 mm
R-Cell Width	1950 mm
R-Cell Height	2150 mm
R-Cell Weight	1100 kg

Standard & Optional Equipment

Standard Equipment

Control Unit - DA 66T
Y1, Y2, X, R (4-Axis) X=650mm Back Support
CE F.AKAS BLVT Light barrier
Servo motor back support & linear guided & ballscrew system (X-R)
Motorized crowning controlled via CNC Unit
European type tool holding system
Sliding Front arms - Sliding Front arms slide on full-length linear slides with T-Channel &Locking

Optional Equipment

Control Unit - DA 69T
Control Unit - SKY 22
X=650mm X,R,Z1,Z2,Delta X +/- 125mm CNC Controlled (AL - double Guide)
X axis = 1000 mm – Back protection with light barriers
DBEND 3D bending edit and simulation
Laser angle measurement system (DAM)
Quick Clamping System
Hydraulic and Pneumatic tool holding system
Upper and lower tool
Central lubrication system
Additional support finger and additional sliding front sheet metal support system
Special packaging for overseas countries

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

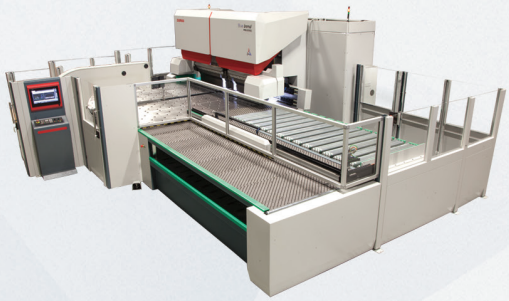
Service Agreements

Software

Training

Flexible Solution

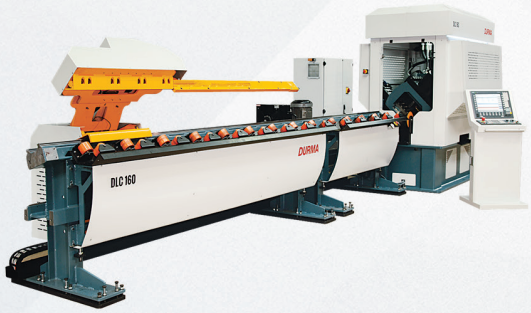
DURMA



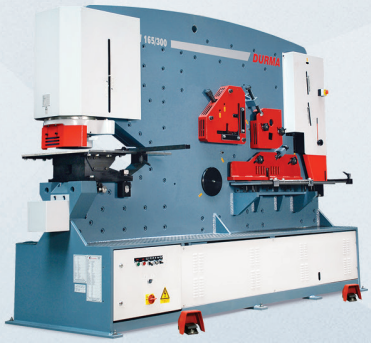
PANEL BENDER

PUNCH

PLASMA



L ANGLE PROCESSING CENTER

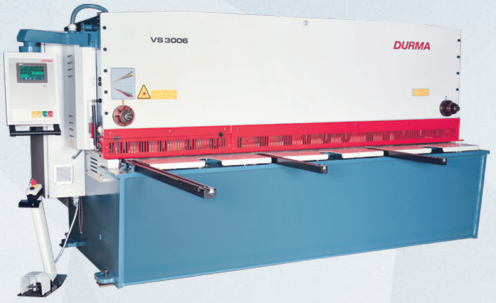


IRON WORKER

POWER OPERATED SHEAR

DURMA

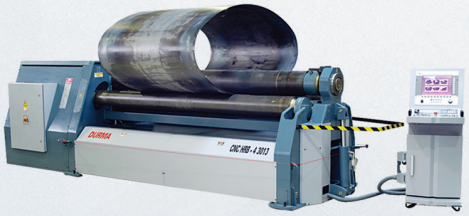
PRESS BRAKE



VARIABLE RAKE SHEAR

TUBE LASER CUTTING

FIBER LASER



ROLL BENDING

PROFILE BENDING

CORNER NOTCHER

DURMA

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															
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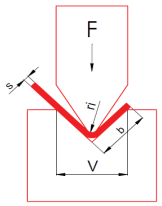
26	18	4,2					4	7,5	9	14	21													
30	22	5						6,5	8	12	19	24												
32	23	5,4							7,5	11,6	17	23	30											
37	25	5,8								10	14,5	20	26	33										
42	29	6,7									13	17	23	29	33,5									
45	32	7,5										16	21	27	33	48								
50	36	8,3											19	24	30	43	58							
60	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-ES SERIES

Electrical Press Brake

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