

# AD-ES

Electrical Press Brakes

Series



Perfect  
Precision

High  
Capacity

Low Energy  
Consumption

Elegant  
Design



As a total supplier for sheet metal manufacturing with almost 70 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 1.615.000 ft<sup>2</sup>, we dedicate 1,000 employees to delivering high quality manufacturing solutions at the best performance-to-price ratio in the market.



# PRODUCTION IS MORE EFFECTIVE NOW



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.

**Durmazlar offers it's machines to the world markets under the Durma brand.**



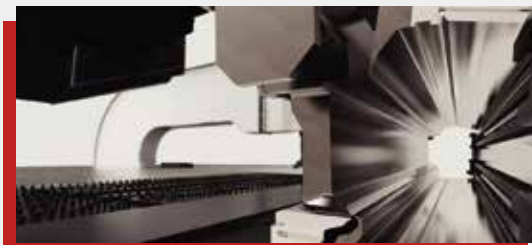
1

High technology,  
modern production  
lines



2

Top quality  
components



3

High quality  
machines designed  
in R&D Centre

# AD-ES

## **AD-ES Series Electrical Press Brake** **Environment Friendly**

DURMA AD-ES CNC PRESS BRAKE serial can provide the production starting from 4.1 ft. table width to 6.7 ft. 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.



Production is *More Effective Now.*

# ENVIRONMENT FRIENDLY LOW COST HIGH GAIN

- Precise bending result
- 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.

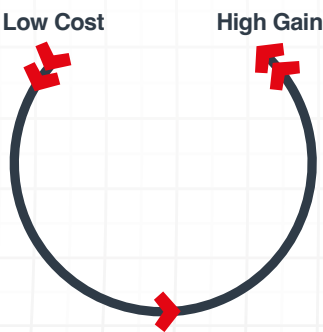
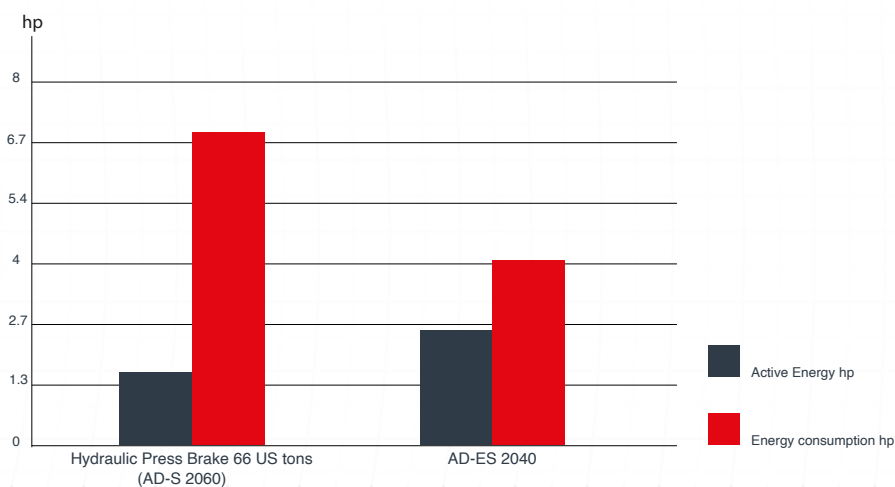
➤ High Capacity ➤ Robust Body ➤ Perfect Precision ➤ Winning ➤ Ergonomic

## 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
- Requires fewer precautions
- Ease of integration of control functions
- Low maintenance cost
- Compliance with European Union standards

Low Power  
Consumption

## 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               | 9.7 hp      | 10.1 hp   |
| Power Consumption         | 4.2 hp      | 6.9 hp    |
| Oil Capacity              | -           | 26.4 gal  |
| Approach Speed (inch/sec) | 4.5"        | 7.9"      |
| Bending Speed (inch/sec)  | 0.4" - 0.8" | 0.4"      |
| Return Speed (inch/sec)   | 4.5"        | 4.3"      |



Production is *More Effective Now.*

## 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



# AD-ES

## FAST, EFFICIENT, MODERN

AD-ES 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

- Precision reducer system
- Upper table suitable for world standard tools
- Rigid 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 rigid aluminum body
- AP1-AP2 system with high mobility and aluminum miter
- CE norm safety standards



Production is *More Effective Now.*

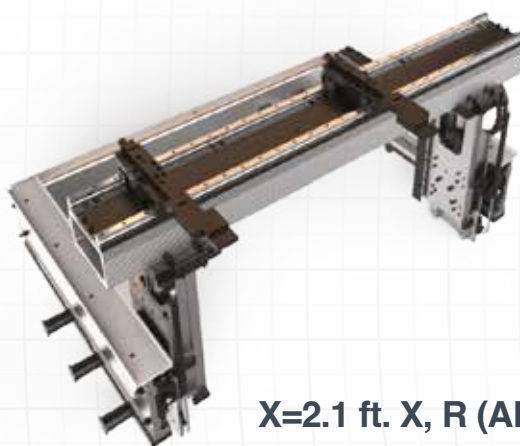
# STRONG BACK GAUGE SYSTEM

■ **Precise**

■ **Reliable**

■ **Strong**

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



**X=2.1 ft. X, R (AL) Back Gauge**



**X=2.1 ft. X, R, Z1, Z2 (AL) Back Gauge**

## Why DURMA Back Gauge ?

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

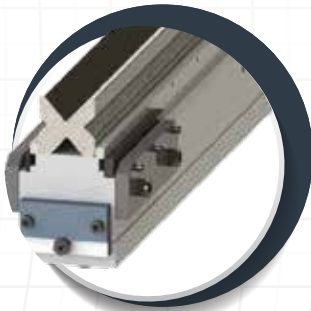
Special designed finger blocks with steps to achieve maximum stability can also be supplied for every kind of bending solution.

- 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.

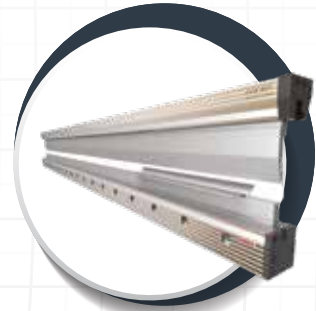
DURMA is your solution partner with various tool options.



European Type  
Bottom Tool (4V Die)



DURMA Multi  
V Bottom Tool



DURMA Hydraulic  
Holder



European  
Clamping System

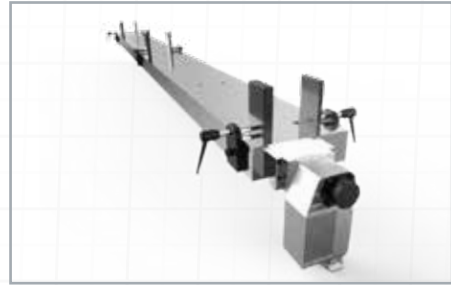


Quick  
Release Clamping

## 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.



Motorized 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

### ■ Delem DA-66S (Standard)



- 2D Graphic touch screen and programming mode
- 3D imaging in simulation and production
- 24" 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

### ■ Delem DA-69S (Optional)



- 24" TFT screen, 1920 x3080 pixels, 32 bit colour,
- Real-time Linux embedded OS
- Full touch screen control
- Storage capacity 4 GB
- Network connectivity
- Delem modusys compatible
- Tandem operation
- 2D/3D real-scale product programming and visualisation
- Automatic bending sequence calculation for 2D/3D
- DXF part & tool import support



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■ **DURMA Angle Measurement System**



■ **Operator Table Support System**



■ **Robotic Solutions**



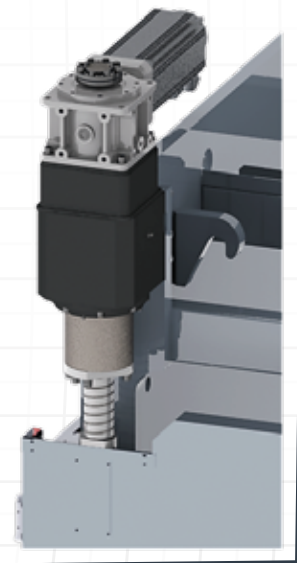
## ADVANTAGES COMPARED TO CLASSICAL PRESS BRAKES

### Drive System Group Equipment

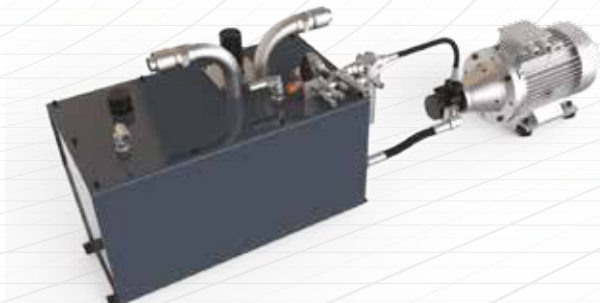
Servo Motor  
Gearbox  
Mechanical Roller Bearing  
Ballscrew and Nut

### Equipment Advantages

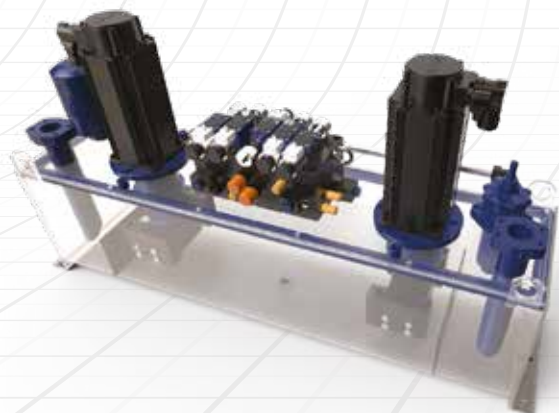
Simpler Drive Group  
Less Component  
Easy and Fast Assembly  
Easy and quick maintenance  
Hydraulic oil-free drive system



### ■ Standard Hydraulic Press Brake



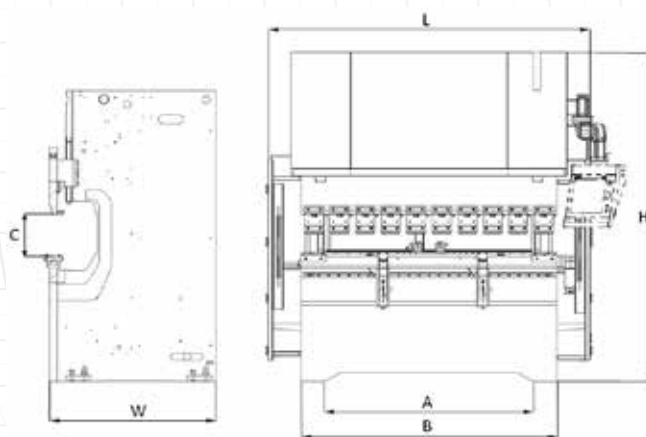
### ■ Servo Hydraulic Press Brake



# AD-ES SERIES TECHNICAL DETAILS

| Machine Types | Bending Force | Bending Length (B) | Distance Between Columns (A) | Stroke | Daylight (C) | Throat Depth | Working Height (F) | Rapid Speed | Bending Speed | Return Speed | Back Gauge X Axis Length | Back Gauge R Axis Length | Length (L) | Width (W) | Height (H) | Weight Approx. |
|---------------|---------------|--------------------|------------------------------|--------|--------------|--------------|--------------------|-------------|---------------|--------------|--------------------------|--------------------------|------------|-----------|------------|----------------|
| Unit          | US ton        | ft                 | ft                           | inch   | ft           | inch         | ft                 | inch/sec.   | inch/sec.     | inch/sec.    | ft                       | inch                     | ft         | ft        | ft         | lbs            |
| AD-ES 1240    | 44            | 4'1.2"             | 3'5.3"                       | 7.9"   | 1'5.3"       | 9.8"         | 3'3.4"             | 4.5"        | 0.4" - 0.8"   | 4.5"         | 2'1.6"                   | 9.8"                     | 7'1"       | 5'4"      | 9'2.2"     | 8600           |
| AD-ES 2040    | 44            | 6'8.7"             | 5'6.9"                       | 7.9"   | 1'5.3"       | 13.8"        | 3'3.4"             | 4.5"        | 0.4" - 0.8"   | 4.5"         | 2'1.6"                   | 9.8"                     | 9'5"       | 5'4"      | 9'2.2"     | 9700           |

\* According to CE norm, the bending speed should be maximum 4.78 inch/sec except for robotic use..



# ROBOTCELL TECHNICAL DETAILS

|                             |                  |
|-----------------------------|------------------|
| Air Pressure                | 72.5 - 101.5 psi |
| Voltage                     | 380 - 480 V      |
| Power Supply                | 2.0 hp           |
| Robot Maximum Lifting Force | 26.5 lbs         |
| R-Cell Length               | 4'1.2"           |
| R-Cell Width                | 6'4.8"           |
| R-Cell Height               | 7'0.6"           |
| R-Cell Weight               | 2425 lbs         |

# PRODUCTION IS MORE EFFECTIVE NOW







## STANDARD & OPTIONAL EQUIPMENT

### Standard Equipments

Control Unit - DA-66S

Y1, Y2, X, R - 4 Axis

F. AKAS LC 5 Front Safety System

Servo Motor Backgauge - Linear Guided & Ballscrew System (X-R)

CNC Controlled Motorized Crowning for AD-ES 2040

European Style Tool Clamping System

Sliding Front Support Arms (with T-Slot and Stopper)

World Standard Electric Equipment

### Optional Equipments

Control Unit - DA-69S

Motorized X, R, Z1, Z2 Axis Backgauge System

Delta X-Axis +/- 4.92" stroke

Durma Laser Angle Measurement (DAM)

DBEND 3D Bending Simulation Program

Quick Release Clamping System

Hydraulic and Pneumatic Tool Clamping Systems

Robot Integration

Special Packing for Overseas Shipments

Production is *More Effective Now.*

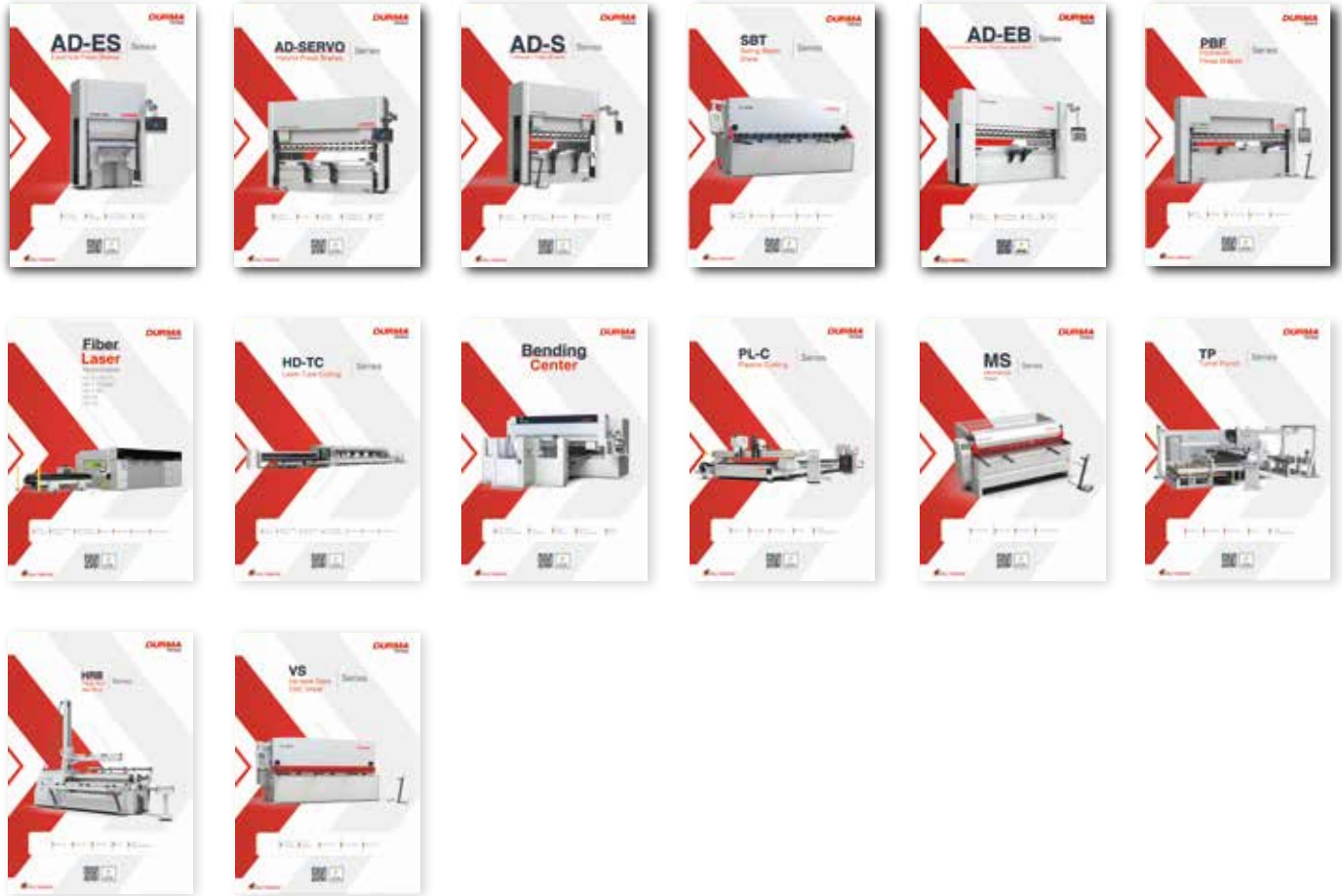
# FAST ON SERVICE AND SPARE PARTS

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.



# Product Groups

# **DURMA**



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**X** durmaint  
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