

The Winning Force

# PBH SERIES

Hydraulic Profile Bending



# PBM SERIES

Motorised Profile Bending



- Reliable
- Efficient
- Ergonomic
- High Capacity
- Low Investment Cost



**DURMA** The Winning Force





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<sup>2</sup>, 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

# PBH Series Profile Bending Machines

## “Fast, Accurate and Easy to Operate”

Robust machine frame is rugged steel construction, machined after the welding for rigidity. Precise bending by large shaft diameters and bearings also minimizes deflection. Longlife of machine by strong frame and world class components. Short cycle times by high drive torque and speed. Minimised straight edge by hydraulic adjustments. Low energy and maintenance costs by friction free planetary swing guides. Powerful guide rolls.





Fast and Reliable

Efficient Cycle Times

User Friendly, Easy to Operate

Increased Productivity

Up to IPE 1000

# PBH Series Profile Bending Machines

## PBH 60

PBH 60 are expressly designed for rolling profiles with high resistance to the bending. This is the reason why the structures are heavily dimensioned and are built with heavy thickness plates of certified quality steel.

## PBH 80-100

PBH 100 equipped with cutting edge technology providing customer maximum satisfaction in pipe and tube bending. DURMA product line offers a wide range of solutions; in addition every roll bender or tooling can be custom-designed to satisfy specific pipe bends needs.



### PBH-4 Special Application

4 rollers profile bending created for the minimum pre-bending levels.



# PBH Series Features

## Planetary Swing Rolls System

Rolls are guided by swing beds which allows them to act as 2 independent axes moving on curve shape orbits. Rolls are approaches to the top roll on curve movement which allows to get perfect prebendings as well as spring back minimisation.



## 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.



## High Torque Drive System

High Torque Drive System enables Durma roller bending machines to bend metal sheets with less steps. PBH 60 to 125 machines has top and bottom rolls powered by planetary reducer, hydraulic motor and gear system. PBH 180 to 600 machines has top and side rolls powered by planetary reducer, hydraulic motor and gear system. Strong Hydraulic Brake system does not allow the profile to slip back. Pressure safety valves are protecting the hydromotor and other components from overloads and peak pressures.



## High Strengthen Shaft and Balls

DURMA PBH Machine shafts and rollers manufactured from certified and crack controlled high strength tempered steel. On CNC machines are handled high sensitivity and tolerance without causing notch effect.





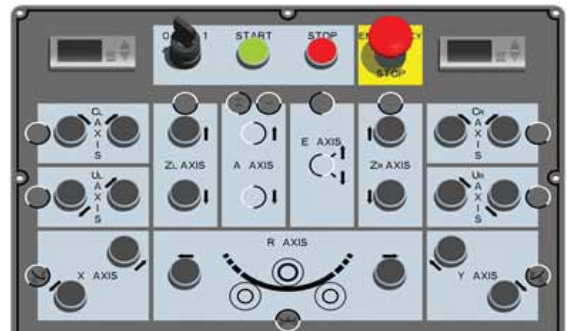
## Side Support System

There are 3-axis movable hydraulic side support on both sides of the machine. Back - Forth and rotation movements controlled by single hydraulic cylinder drive system. Bending profile to be continuously vertical by automatically positioned to provide side support . Side support system is suitable for bending iron angles and it is standard for PBH 60 and upper machines .



## Digital Display

In Durmazlar Machine digital read out , for circular bends a certain diameter to bend the workpiece. Top position of the last three bending step may be provided as a set point.



## NC Control

NC Control System , In addition to the PLC control system, it offers manual and automatic mode options. NC control system has the capacity to save 2500 programs consisting of Max 100-steps.



## Hydraulic System

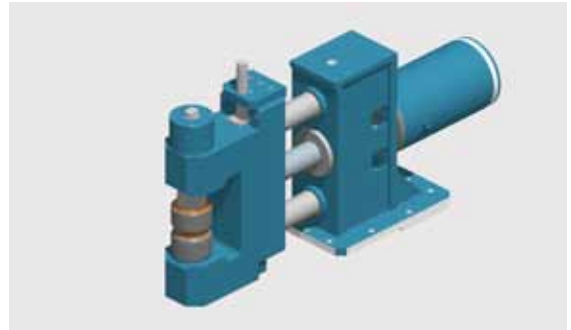
Machine movements are triggered by hydraulic components. The precision on the all axes are acquired by world leader valves' high speed response ability. And pressure safety valves used against peak pressures and overload, provides protection for motors and other components.



# PBH Series Features

## Puller Aparatus

The problem is reduced with big ratio by special deformation blocker I, H bending apparatus.



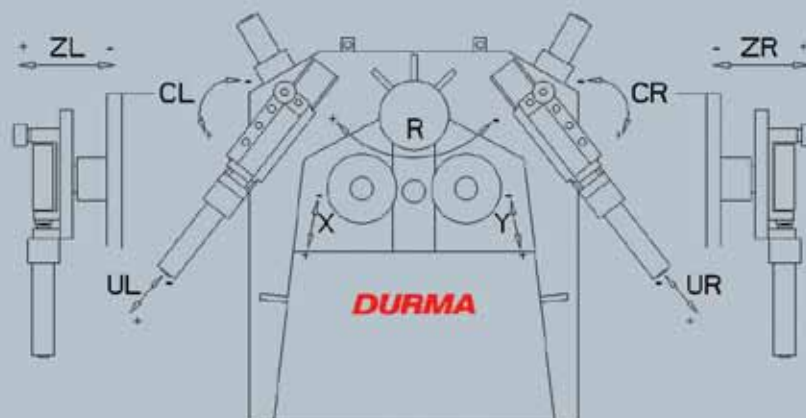
## Special Aplication

On one step, straight sheet becomes U form, then performs circular bends .



## Special Aplication

Apparatus and table for special and heavy spiral bends.



# Standard & Optional Equipment

## Standard Equipments

- CE
- Digital readout (X,Y axis)
- All rolls driven by planetary gear box and hydramotor (PBH 60 to 125)
- All rolls 3 different planetary gear box and hydramotor driven (PBH 180 to 600)
- Special support for angle profile
- 3 axis (Z, U, C) side supports Z hydraulic control (PBH 60 to 100)
- 3 axis (Z, U, C) side supports full hydraulic control (PBH 125 to 600)
- Movable command panel seperate from the machine
- Horizontal working feature
- Vertical working feature (PBH 60 to 125)
- Stress relieved stell construction body
- Electrical and hydraulic protection against overloads
- 1 set standard hardened and ground rolls made by special steel

## Optional Equipments

- Digital readout for Z Axis
- Tai bar for upper roll
- NC control system
- Adjustable turning speed
- Oil cooler
- Oil heater
- Special rolls (Pipe, profile, angle iron)
- Special aparatus to prevent deformation on U-I-H bending
- Spiral apparatus

# Technical Details

NO	PROFILE TYPE	PBH 60		PBH 80		PBH 100		PBH 125		NOTES
		Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	
1		40x40 20x20	500 300	50x50 30x30	500 300	60x60 30x30	700 400	75x75 35x35	750 500	○
2		70x10 30x10	600 250	80x20 30x10	500 350	100x25 40x10	1500 400	120x25 50x10	1300 500	○
3		90x25 50x5	500 250	120x30 50x10	650 300	180x35 60x10	900 400	200x40 100x10	1200 500	○
4		60x7 20x3	600 250	80x9 30x4	1000 300	120x13 30x4	1200 400	130x14 30x4	1300 500	○
5		60x7 20x3	600 250	80x9 30x4	1000 300	100x11 30x4	1000 400	120x13 30x4	1200 500	○
6		60x7 20x3	800 250	80x9 30x4	1300 300	100x11 30x4	1300 400	100x12 30x4	1200 500	○
7		50x5 30x3	500 250	80x8 30x3	800 450	100x10 40x4	1400 700	120x12 50x5	1300 700	●
8		50x5 30x4	1000 350	80x8 30x3	1200 450	100x12 40x4	1600 700	100x10 50x5	1200 700	●
9		60x60x4	(1)	70x70x4	(1)	80x80x5	(1)	100x100x6	(1)	○ ●
10		80x40x3	(1)	80x40x4	(1)	100x50x6	(1)	140x40x3	(1)	○ ●
11		Ø40 Ø20	500 300	Ø50 Ø20	500 350	Ø70 Ø30	800 400	Ø85 Ø40	850 500	●
12		Ø60.3x3.9 Ø21.3x2.7	600 250	Ø88.9x4 Ø26.9x2.6	1000 300	Ø114.3x4.5 Ø33.7x3.2	1600 450	Ø5"x5 Ø11/4"x3.2	1500 500	●
13		Ø60x2 Ø20x1	600 250	Ø100x2.5 Ø20x1	1300 300	Ø120x2.5 Ø30x2	1400 400	Ø140x3 Ø40x2	1500 500	●
14		UPN 120 UPN 30	850 300	UPN 120 UPN 30	850 300	UPN 160 UPN 30	800 400	UPN 220 UPN 40	1000 500	○ ●
15		UPN 80 UPN 30	550 250	UPN 120 UPN 30	1000 450	UPN 160 UPN 30	1000 400	UPN 220 UPN 40	1200 500	○ ●
16								UPN 100 UPN 50	8000 (1) 2000 (1)	● ▲
17		IPE 80	600	IPE 120	600	IPE 180 IPE 80	1000 500	IPE 200 IPE 80	1000 500	○ ●
18								IPE 120 IPE 80	2500 (1) 1000 (1)	● ▲
19						HEA 120 HEB 100	1000 1200	HEA 140 HEB 120	1200 1300	○ ●
20								HEA 120 HEB 100	4000 (1) 3000 (1)	● ▲
Shaft diameter		mm	Ø60	Ø85		Ø110 - Ø100		Ø140 - Ø120		
Roll diameter		mm	Ø177	Ø247		Ø315		Ø380		
Motor Power		kW	3+1.5		7.5		11		15	
Turning Speed		m/min.	5		7		8		9	
Weight		kg	950		2350		3360		4600	
Length		mm	1160		1580		1750		1850	
Width		mm	1000		1200		1340		1550	
Height		mm	1175		1410		1650		1685	

(1) Can be changed according to deformation. ○ Standart Rolls ● Special Rolls ▲ Special Apparatus

NO	PROFILE TYPE	PBH 180		PBH 240		PBH 300		PBH 360		PBH 500		PBH 600		NOTES
		Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	
1		90x90	1300	110x110	1500	150x150	2200	200x200	2500	240x240	2500	300x300	2800	○
2		150x30	1000	175x40	1200	250x60	2000	300x80	3000	400x60	2800	500x110	3000	○
3		250x40	1000	350x50	900	450x70	1000	500x100	1800	650x100	1800	900x150	2000	○
4		150x15	1400	160x20	1500	200x28	2000	200x28	1600	200x28	1600	200x28	1600	○●
5		150x15	1300	160x20	1500	200x28	2000	200x28	1500	200x28	1500	200x28	1300	○●
6		130x15	1800	150x20	2000	200x20	2800	200x28	2300	200x28	2300	200x28	2000	○●
7		150x15	1200	160x20	1600	200x28	2300	200x28	1800	200x28	1800	200x26	1300	●
8		130x15	1400	150x20	1600	200x20	2300	200x28	2000	200x28	2000	200x26	1500	●
9		120x120x8	(1)	150x150x8	(1)	200x200x10	(1)	300x300x12	(1)	400x400x15	(1)	500x500x20	(1)	○●
10		180x70x8	(1)	200x75x8	(1)	200x150x10	(1)							○●
11		Ø100	1000	Ø130	1600	Ø170	1800	Ø220	2300	Ø260	2000	Ø360	3000	●
12		Ø170x6	2800	Ø220x8	2800	Ø300x10	4000	Ø406x12,7	8000	Ø500x15	16500	Ø610x17,5	25000 (1)	●
13		UPN 300	1400	UPN 360	1400	UPN 500	2250	UPN 600	1500	UPN 1000	4000	UPN 1000	3500	○●
14		UPN 300	1700	UPN 360	1600	UPN 500	2600	UPN 600	1500	UPN 1000	4000	UPN 1000	3500	○●
15		UPN 160	10000 (1)	UPN 200	12000 (1)	UPN 260	10000 (1)	UNP 320	20000 (1)	UNP 400	40000 (1)	UPN 600	85000 (1)	●▲
16		IPE 300	1400	IPE 360	1500	IPE 500	2000	IPE 600	2000	IPE 1000	5000	IPE 1000	5000	○●
17		IPE 160	4000 (1)	IPE 200	5000 (1)	IPE 300	13000 (1)	IPE 360	20000 (1)	IPE 550	20000 (1)	IPE 600	26000 (1)	●▲
18		HEA 180 HEB 120	1200 1200	HEA 240 HEB 200	1500 1500	HEA 320 HEB 280	2500 2000	HEA 600 HEB 500	3000 3000	HEA 1000 HEB 1000	6000 8000	HEA 1000 HEB 1000	5000 7000	○●
19		HEA 120	4000 (1)	HEA 180	4500 (1)	HEA 220	10000 (1)	HEA 360	35000 (1)	HEA 550	40000 (1)	HEA 600	40000 (1)	●▲
20		HEB 120	3000 (1)	HEB 160	3200 (1)	HEB 200	6000 (1)	HEB 340	15000 (1)	HEB 500	30000 (1)	HEB 550	40000 (1)	●▲
Shaft diameter	mm	Ø180 - Ø160		Ø240 - Ø220		Ø300 - Ø280		Ø360		Ø360		Ø420 - Ø400		
Roll diameter	mm	Ø460		Ø550		Ø740		Ø780		Ø800		Ø800		
Motor Power	kW	30		37		55+15		77		90		120		
Turning Speed	m/min.	7		6		5		5		5		7		
Weight	kg	8600		16000		24000		~45000		~55000		78000		
Length	mm	2500		2900		3850		~6000		~6500		6100		
Width	mm	2000		2300		3050		~5000		~5300		5150		
Height	mm	1900		2150		2800		~3500		~3750		4300		





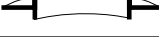
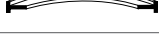









(1) Can be changed according to deformation. ○ Standart Rolls ● Special Rolls ▲ Special Apparatus

# PBM Series Profile Bending Machines

Motorised Profile Bending



# Technical Details

NO	PROFILE TYPE	PBM 30		PBM 50		PBH 45		NOTES
		Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	Dimensions	Min.inter. Dia.	
1		30x30 10x10	650 200	35x35 20x20	1200 400	35x35 15x15	600 300	○
2		50x10 20x6	700 300	60x10 30x10	800 350	60x10 20x10	600 300	○
3		80x15 30x6	700 500	100x15 50x10	750 500	80x15 50x20	600 450	○
4		50x6 20x3	600 400	60x7 30x4	900 500	50x6 20x3	650 300	○ ●
5		50x6 20x3	600 400	60x7 30x4	900 500	50x6 20x3	650 300	○ ●
6		50x6 20x3	700 400	60x7 30x4	1000 500	50x6 20x3	800 300	○ ●
7		40x5 30x4	500 350	50x5 40x4	850 500	50x6 30x3	600 400	● ◆
8		40x5 30x4	600 400	50x5 40x4	1200 800	50x6 30x3	900 600	● ◆
9		40x40x3	(1)	60x60x3	(1)	45x45x3	(1)	○ ●
10		50x30x3	(1)	50x40x3	(1)	60x30x3	(1)	○ ●
11		Ø30 Ø10	650 200	Ø35 Ø15	800 300	Ø35 Ø20	600 300	●
12		Ø48.3x3.2 Ø13.5x2	800 300	Ø48.3x3.2 Ø17.2x2	650 350	Ø60.3x2.9 Ø21.3x2	1000 350	●
13		Ø60x1.5 Ø20x1.5	1000 550	Ø70x2 Ø30x2	1200 500	Ø60x2 Ø30x2	1000 450	●
14		UPN 50	450	UPN 60	600	UPN 80 UPN 30	800 400	●
15		UPN 50	550	UPN 60	750	UPN 80 UPN 30	1200 600	●
Shaft diameter		mm	Ø30	Ø50		Ø45		
Roll diameter		mm	Ø150	Ø165		Ø162		
Motor Power		kW	0.75	1.5		1.5+ 075		
Turning Speed		m/min.	3.6	3.6		3.9		
Weight		kg	200	385		600		
Length		mm	800	930		1000		
Width		mm	700	730		700		
Height		mm	1200	1400		1380		

(1) Can be changed according to deformation. ○ Standart Rolls ● Special Rolls ◆ Special Support Rolls For Angle  
All datas given according to 240 N/mm<sup>2</sup> yield point.

# Standard & Optional Equipment

## Standard Equipments

CE

1 set standard hardened and ground rolls made by special steel

Mechanic side supports

Horizontal & Vertical working feature

Foot pedal with Emergency button

Bottom rolls driven by motor & gearbox

Cast iron body

Movable command panel separate from the machine (PBH 45)

All rolls driven by motor & gearbox (PBH 45)

Top roll hydraulic movement up and down (PBH 45)

Top roll with digital readout (PBH 45)

Brake motor (PBH 45)

## Optional Equipments

Bar twist device

Digital readout

Mono phase motor

Special support for angle irons

Special rolls ( Pipe, profile, angle iron )

NC control (PBH 45)



# 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.



Consultancy



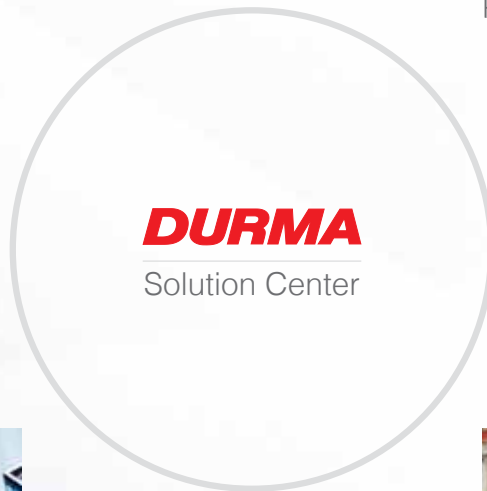
Spare Parts



R&D Center



After Sales Service



Service Agreements



Software

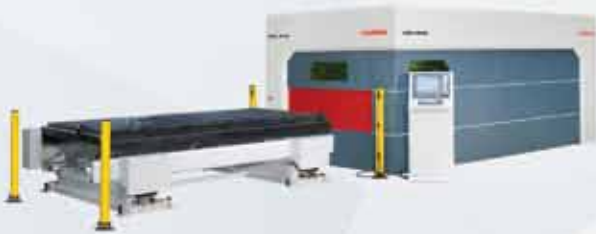


Training



Flexible Solution

**DURMA**



FIBER LASER



PUNCH



PLASMA



L ANGLE PROCESSING CENTER



IRON WORKER



POWER OPERATED SHEAR



PRESS BRAKE



VARIABLE RAKE SHEAR



ROLL BENDING



PROFILE BENDING



BANDSAW



CORNER NOTCHER

# DURMA

Today, Tomorrow and Forever with You...

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Hydraulic Profile Bending

**PBM** SERIES  
Motorised Profile Bending

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