



**ERMAKSAN**

METAL FABRICATING MACHINERY

*innovative technologies.*

# POWER-BEND PRO

3 Axes (R Manual) CNC Press Brake





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[www.ermaksan.com.tr](http://www.ermaksan.com.tr)

## After half a century, Ermaksan is moving confidently into the future

With 48 years of technological investment and our innovative R&D department, Ermaksan has become one of the world's leading companies in the sheetmetal fabrication machinery industry.

Ermaksan is a pioneer in the industry with strong R&D department, 80.000 m<sup>2</sup> modern production facility, highly qualified team of 700 staff dedicated to high quality manufacturing of our machine tools.

Our factory is equipped with the latest industry leading precision CNC machines. Under the supervision of expert engineers, the factory manufactures 3,000+ machines annually. Ermaksan is one of the world's leading companies in the industry represented by exclusive dealers around the world with strong technical support in 70 countries.

Ermaksan designs and manufactures durable, productive, and value based machinery. We do this by, continuously meeting customer demands and exceeding industry standards towards sustainable growth.

High Tech  
CNC Machines  
manufactured by  
Ermaksan;

- New Generation Fiber Lasers
- CO<sub>2</sub> Lasers
- Press Brakes
- Servo Motorized Hybrid Press Brakes
- Plasma Cutting Machines
- Punch Presses
- Shears
- Iron Workers





# POWERBEND PRO

## 3 Axes (R Manual) CNC Press Brake

Power-Bend Series machines redesigned based on users preferences to become a unique machine with its individual electronic and mechanical features.

Power-Bend Pro Series are among the highest rated machines which will help you increase your productivity and keep costs at minimum level with its user friendly CNC controller and low cost hydraulic maintenance.

New Power-Bend Pro is exactly what you need for your production where complicated, sensitive, single or multiple bends on high speed are paramount.

# Stronger, faster and deeper bends...

**DELEM ER70.**  
10,4" high resolution 2D graphical screen comes optional with Power-Bend Pro.

**Sliding front support arms.**  
Scaled in metric, height adjustable front support arms.

**Rigid structure.**  
Dynamic and solid body machined with maximum sensitivity.

### Stronger, faster and deeper bends;

Power-Bend Pro Series allow you to have more production capacity and prevent time loss on production.



# Combination of speed and power

- ↓ High Free Fall Speed
- High Bending Speed
- ↑ High Return Speed

- High quality and repetitive bending is obtained by using synchronized cylinders and valves.
- Automatic utilisation of all axes on startup.
- All ERMAKSAN machines are designed using SOLID WORKS 3D programming and made with enhanced ST44-1 quality steel using the latest technology.
- Rigid upper beam runs on 8-point bearings with bending precision of 0,01 mm.
- Well-known top and bottom tool brands are long lasting hardened and provide precise bending.
- Silent high pressure pump.

- 2 axis (X, R)
- 4 axis (X, R, Z<sub>1</sub>, Z<sub>2</sub>)
- 6 axis (X, R, Z<sub>1</sub>, Z<sub>2</sub>, X<sub>1</sub>, X<sub>2</sub>)
- Servo motorized backgauge. (option)

Specially designed and produced backgauges by ERMAKSAN help with multifunctional and sensitive bending in complex parts.

CNC and Servo motors run on rail and with 0,01 mm sensitive high precision ball screws which help you to be competitive.



Standard

**Backgauge system.**  
Power-Bend Pro offers you motorized X axis back gauge and manual R axis as standard.

**Backgauge fingers.**  
Special design foldable back gauge fingers.

**SICK C 2000 rear light guard.**  
CE standards safety protections help you work in safer conditions.

Optional

**4 axis (X, R, Z<sub>1</sub>, Z<sub>2</sub>) servo motorized back gauge.**  
Backgauge positioning with 0,01 mm accuracy.







**ERMAKSAN** POWER-BEND PRO



**Quick release clamping system.**  
Promecam type top clamps can easily loaded & unloaded.

# General features

- Chrome coated cylinders are machined with 0,001 mm precision and pistons are specially hardened.
- Original clamps are user friendly and machined with high precision.
- Front support arms are slideable along machine length and easy to adjust.
- Compact and well-known brand HOERBIGER hydraulics are produced according to CE standards.
- Two photocells on sides for rear guard.
- Fast tool tightening.
- Optic linear scales are sensitive up to  $\pm 0,01$  mm.
- Synchronized working cylinders will give you the best bending result with its perfect repeatability ratio.
- 2 axis ultra strong backgauge system (X=800 mm and R), with  $\pm 0,01$  mm. repeatability, moves along rails and ball screw, bending length controlled by CNC controller, foldable back gauge fingers for reverse bending applications.
- Multifunctional and highly programmable, 2D CYBELEC DNC 600 CNC controller.
- SIEMENS electrical system.
- Automatic axis referencing when machine is turned on.
- Side guard is standard meeting CE regulations.



Hydraulic blocks.



HEIDENHEIN linear scales.

# Your best bending solution

- Perfect configuration for sensitive bending and economic solutions.
- Precise results for long and deep bends.
- Continuous sensitivity with crowning system.
- Long lasting rigid body is also suitable for heavy duty applications.
- Easy maintenance.

## Your best bending solution;

You can bend longer and deeper parts with maximum repeatability with standard Power-Bend Pro machines.



**Foot pedal.**  
Double foot pedal helps you to bend your parts automatically and easily.



**Impressive bending solutions;**

Equipment alternatives can be upgraded on Power-Bend Pro Series upon request. Thus, increased productivity achieved while bending.

Pendant arm.

Side guards.

**Rigid structure.**  
Dynamic and solid body machined with maximum sensitivity.

**AP3 / AP4 front sheet support arms. (Optional)**  
CNC controlled support arms reduces your bending time significantly and is a great help for perfect bending.



# Under your control

## General features

### Ease of use:

- High resolution 9,4" 2D graphic display.
- Easy set up and use that meets operator's needs.
- Rapid data input with the ergonomic keyboard with large keys.
- 2D graphic representation of the part.

### User friendly:

- Programming of all the part in a single page.
- Easy installation and training.
- Contextual help and warning pop-ups.
- 99 repeatable bends.
- Library of 50 upper and lower tools.
- Accurate ram positioning by closed loop control of speed, pressure and parallelism.
- Back up facility of the programs, tool library and machine parameters with the standard Cybelec backup software.
- Communication with the machine by full-blown graphical programming at the office environment with the standard PC 1200 2D software (offline software).

### First part, good part:

- Easy precision adjustment by simple access to the machine parameters.
- Consecutive program operating feature for high numbers of bend sequence.
- Inputting the angle and bend corrections directly on the controller.

### Powerful:

- All basic functions.
- CE safety management.
- Easy communication.
- More than 20 language options.
- Robust and ergonomic design.

User - friendly

 **CYBELEC**  
DNC600S





## Standard Equipment

- Height adjustable and movable sliding front support arms.
- Top and bottom tools are surface hardened by special treatment.
- Promecam easy clamping system.
- CYBELEC DNC 600S controller with PC1200 2D software.
- CNC controlled strong X=800 mm back gauge.
  
- 410 mm throat depth.
- 2 back gauge fingers.
- Scales in metric and inches.
- Crowning system in bottom beam (3100/.../4100 - 260 - 320 manual crowning and from 400 tn and above motorized crowning is standard.
- Foot pedal is produced according to CE standards and suitable for single and multiple bends.
- 2 photocells are placed facing each other for rear guards.
- Covers for cylinders and top beam.
- Preadjusted electrical requirements based on customer's geographical area.

## Optional Equipment

- Special stroke and throat depth gives extra advantages for deep bends.
- Delem ER70 controller (up to 5 axis).
- Cybelec DNC15 Touch controller (up to 7 axis).
- ER90 controller (3D touch screen).
- Special back gauge fingers can be added on optional backgauge stroke.
- Motorized crowning system.
- Hydraulic oil heating and cooling.
- Custom made table width and bottom tool V openings.
  - Optional top and bottom tools in different length.
- Special tools for box and pole bends.
- Laser front guard options.
- WILA type top and bottom tool clamping system.
- Rol1, 2, 3, 4, 5 different top and bottom quick release clamping systems.
- Tooling cabinet mounted to side of the machine to keep your tools clean and in easy reach.
- Automatic sliding system is lubricated automatically which is highly recommended to extend life.
- U type special bottom tools for bending thick materials.
- Additional front support arms to prevent waves on thin materials.
- Custom made machines upon customer special parameters.
- AP3 / AP4 front sheet support arms.
- Special parking units for front support arms.
- Electrical panel and / or controller can be mounted on right side of machine upon customer request.

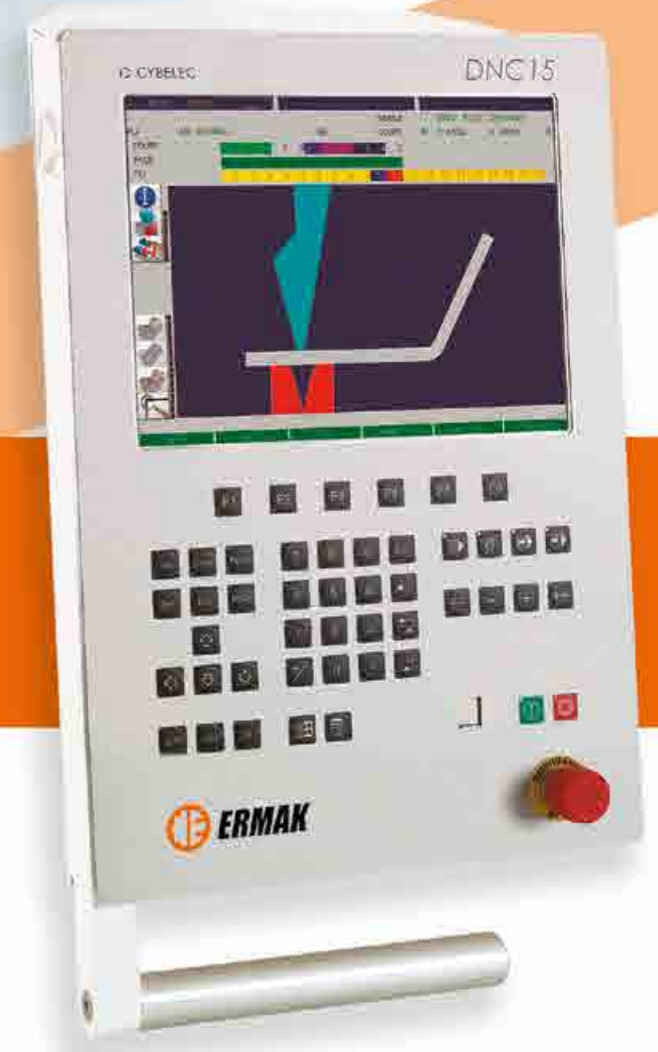


OPTIONAL CONTROLLER

ER70

OPTIONAL CONTROLLER

DNC15



## General features

- High performance user friendly CNC controller is offered at affordable price.
- 2D graphical bending simulation.
- 2D graphical part drawing.
- 2D graphical manual collision control.
- Automatic bend calculations for inner and outer parameters.
- Automatic X and R axis calculating for bending steps and part dimensions.
- Bend skip or bend change.
- Automatic calculations of bent parts.
- Automatic positioning for Y1 and Y2 upon sample part degree.
- Automatic stroke or inside radius calculation.
- Screen dimension: 10,4" TFT monochrome.
- OS: WINDOWS.
- Memory: 64 MB.
- Memory for end users. Min 2 GB, approximately 1000 programs.
- Programming feature for up to 99 steps.
- Maximum 99 steps for single program.
- Y1, Y2, X, R + motorized crowning (Max 5 axis).
- Tooling and V DIE memory 30/60.
- USB back up available for lost info.
- Additional 2 USB ports for your keyboard or mouse.
- Ethernet sample piece transfer. (Optional)
- Offline 2D part programming. (Optional)

## General features

- 15-inch colour touch screen, 2D graphic software
  - 2D offline software
  - Available in 2 versions: 4 or 7 axes either in panel or box design
  - Simple keyboard with large keys
  - Bending solutions are displayed graphically in 2D
  - Indicates possible collisions with the tools or the machine frame.
  - Shows the position of the sheet within the tools.
  - Conversion Inch/mm, TON/TONS etc.
  - Measurement of speed, stopping time and leakage of the beam.
  - Management of CE safety cycles.
  - Interactive display of safety utilities and customized messages.
  - Windows XP Embedded
  - 256 MB ram
  - Mass memory by compact flash (1 GB)
  - 4 USB 1.1 (2x external, 2x internal), 1 parallel (printer), 1 RS232, 1 RJ45 Ethernet, 1 VGA ports
- Languages:**  
 French, German, English, Italian, Spanish, Portuguese, Swedish, Danish, Finnish, Dutch, Hungarian, Polish, Czech, Slovene, Russian, Turkish, Chinese, Taiwanese.  
 Other languages on request.





OPTIONAL CONTROLLER

ER90 PLUS

## General features

- Windows-style operating system.
- 2D and 3D programming.
- 3-D drawing feature.
- 2D DXF and 3D DXF import feature.
- Automatic bending sequence search and collision control.
- 17" LCD touch-screen that facilitates sights of machine body, mould, back gauge, side protection guards, and components .
- Changeable color display unit (buttons, machine color, background color, color patterns, the background).
- Multi-functional alpha numeric keyboard.
- External keyboard and mouse usage possibility.
- Angle measurement and control through IMG 100 system.
- Enabling tandem type operational application.
- Help menu.
- Operator identification.
- Automatic tool selection from library for bending parts.
- Dynamic crowning.
- Remote access.
- Application of digital protractor.
- Motorized front-support system.
- Configuration that can be made up to 16 axes.
- Error message display.
- Inch / mm, t / us tons unit alterations.
- ER90 PC offline software.
- 4 usb ports.
- Language options: Turkish, Czech, Dutch, French, German, Italian, Japanese, Polish, Portuguese, Russian, Spanish, Finnish, Chinese.

### ERMAK CAD/CAM Bending Simulation Software:

- 3D solid part import.
- Automatic bend sequence calculation.
- Automatic tool selection from library.



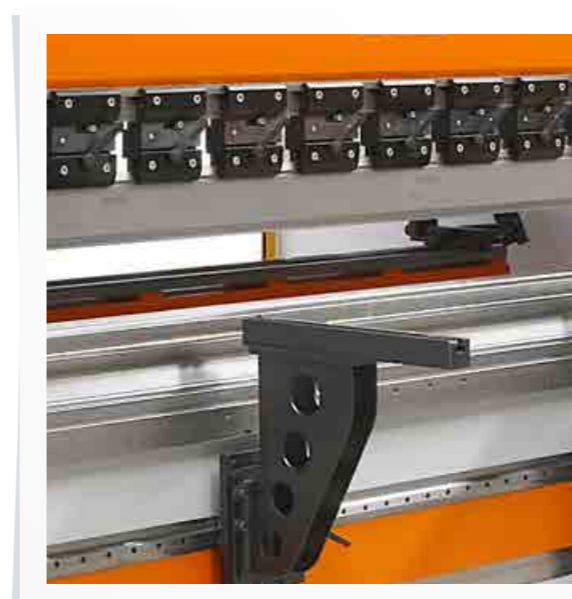
ER90 PLUS.  
Professional solutions with 3D controllers.



Fiessler Akas LCIM Protection System (O)



DSP Laser Protection System (O)



**Promecam Top Tool Clamping System (S)**  
Top tool clamping system which provides quick tool change.



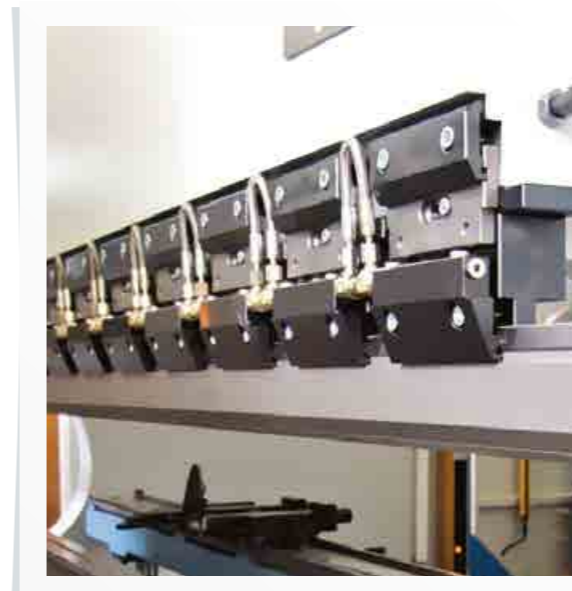
**Pneumatic Tool Clamping System (O)**  
Pneumatic tool clamping systems press and center the tools automatically with the help of the pressurized air. These are perfect solutions to shorten the setup timing and for automated press brakes.



**Laser Safe (O)**  
Laser safe that is produced specifically for press brakes and is the leader among safety systems. Laser safe keeps the operator's safety at the top level.



SICK Light Barrier (O)



**Hydraulic Tool Clamping System (O)**  
Hydraulic tool clamping systems clamp, correct and center the tools automatically without need for air. These are perfect solutions to shorten the setup timing and for automated press brakes.



Wila Tool Clamping System (O)



**C 2000 Rear Light Guard (S)**  
CE standards safety protections help you work in safer conditions.



**IMG 100 laser Safe and Angle Measurement System (O)**  
Laser Finger Protection helps you save time with easy installation.  
- Laser Safe can be used with DNC 600S and ER-70.  
- Angle Measurement can be used with ER-90.



# Bottom Tool Clamping and Crowning Systems

# Other Equipment



**Multi-V Bottom Tool (O)**  
Multi V or U type adjustable tools.



Wila Bottom Tool Clamping System (O)



**Throat (O)**  
Special throat depths are offered up to 1500 mm for large bends.



Sliding Front Support Arms (S)



Hydraulic Bottom Tool Clamping System (O)



Wila Hydraulic Tool Clamping Systems (O)



**Backgauge Fingers (S)**  
Specifically designed folding backgauge fingers.



**CNC Motorized Crowning System (\*)**  
CNC crowning system that communicates with the CNC controller, performs crowning automatically and enables the part to be at even bending angle at any given point.  
\* Up to 400 TN optional.  
From 400 TN and above standard.



**Manual Crowning System (\*)**  
Manual crowning system that enables the part to be at even bending angle at any given point.  
\* Up to 260 TN optional.  
On 260 and 320 TN standard.

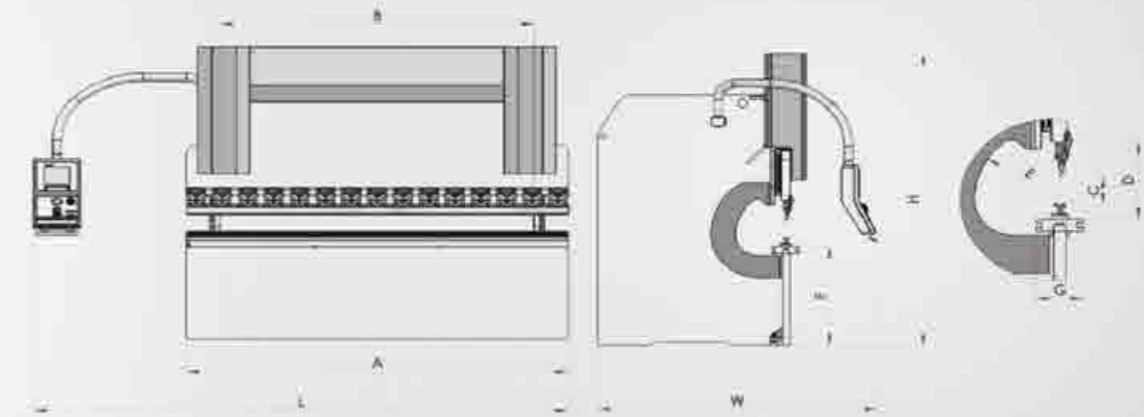


2 Axes (X,R)  
4 Axes (X, R, Z1, Z2)  
6 Axes (X, R, Z1, Z2, X1, X2) Rapid and Precise Back Support System with Servo Motor. (O)  
They enable you to increase the production performance and quality.



Tool Storing Cabinet (O)

### Technical Features



TYPE	BENDING LENGTH	BENDING POWER	DISTANCE BETWEEN COLUMNS	Y RAPID SPEED	Y WORKING SPEED *	Y RETURN SPEED	CROWNING	TRAVEL IN X AXIS	SPEED OF X AXIS	BACKGAUGE FINGER BLOCKS	NUMBER OF SHEET SUPPORT (Sliding front arms)	OIL CAPACITY	MOTOR POWER	STROKE	DAYLIGHT	THROAT DEPTH	TABLE HEIGHT	TABLE WIDTH	LENGTH	HEIGHT	WIDTH	WEIGHT
	A	B	mm	mm/s	mm/s	mm/s		mm	mm/s	Amount	Amount	lt.	kW	C	D	E	F	G	L	H	W	kg.
PB-PRO 1270 - 40	1270	40	1050	140	17	170	-	800	230	2	2	80	5.5	170	387	350	850	90	2150	2300	1650	3050
PB-PRO1270 - 60	1270	60	1000	200	14	165	-	800	230	2	2	150	7.5	275	530	410	900	90	2250	2750	1960	4150
PB-PRO 2100 - 40	2100	40	1700	140	17	170	-	800	230	2	2	80	5.5	170	387	350	850	90	2900	2300	1650	3950
PB-PRO 2100 - 60	2100	60	1700	200	14	165	-	800	230	2	2	150	7.5	275	530	410	900	90	3250	2750	1960	5650
PB-PRO 2600 - 60	2600	60	2200	200	14	165	-	800	230	2	2	150	7.5	275	530	410	900	90	3750	2750	1960	6050
PB-PRO 2600 - 100	2600	100	2200	200	9.5	155	-	800	230	2	2	150	7.5	275	530	410	900	90	3750	2800	1950	6850
PB-PRO 2600 - 135	2600	135	2200	160	10	120	-	800	230	2	2	200	11	275	550	410	900	90	3750	2800	2050	8250
PB-PRO 3100 - 100	3100	100	2600	200	9.5	155	-	800	230	2	2	150	7.5	275	530	410	900	90	4250	2800	1950	7450
PB-PRO 3100 - 135	3100	135	2600	200	10	120	-	800	230	2	2	200	11	275	550	410	900	90	4250	2800	2050	8650
PB-PRO 3100 - 175	3100	175	2600	180	10	135	-	800	230	2	2	200	15	275	550	410	900	90	4250	2800	2150	9450
PB-PRO 3100 - 220	3100	220	2600	180	11	160	-	800	230	2	2	300	18.5	275	550	410	900	200	4550	2850	2250	11500
PB-PRO 3100 - 260	3100	260	2600	140	11	135	Manual	800	230	2	2	300	22	275	550	410	900	220	4550	2900	2350	15000
PB-PRO 3100 - 320	3100	320	2600	140	10.5	150	Manual	800	230	2	2	400	30	375	650	410	900	240	4550	3200	2450	16800
PB-PRO 3100 - 400	3100	400	2550	110	8.4	130	Motorized	1000	230	2	2	400	30	375	650	510	1000	240	4550	3470	2650	20840
PB-PRO 3760 - 175	3760	175	3250	180	10	135	-	800	230	2	2	200	15	275	550	410	900	90	4900	2800	2150	10950
PB-PRO 3760 - 220	3760	220	3250	180	11	160	-	800	230	2	2	300	18.5	275	550	410	900	160	5100	2900	2250	12600
PB-PRO 3760 - 320	3760	320	3250	140	10.5	150	Manual	800	230	2	2	400	30	375	650	410	900	220	5100	3150	2450	20000
PB-PRO 4100 - 135	4100	135	3600	200	10	120	-	800	230	2	2	200	11	275	550	410	900	90	5100	2800	2100	10650
PB-PRO 4100 - 175	4100	175	3600	180	10	135	-	800	230	2	2	200	15	275	550	410	900	90	5100	2850	2150	11950
PB-PRO 4100 - 220	4100	220	3600	180	11	160	-	800	230	2	2	300	18.5	275	550	410	900	160	5150	3000	2250	13800
PB-PRO 4100 - 260	4100	260	3600	140	11	135	Manual	800	230	2	2	300	22	275	550	410	900	200	5150	3000	2350	16700
PB-PRO 4100 - 320	4100	320	3600	140	10.5	150	Manual	800	230	2	2	400	30	375	650	410	900	220	5350	3150	2450	21750
PB-PRO 4100 - 400	4100	400	3550	110	8.4	130	Motorized	1000	230	2	2	400	30	375	650	510	1000	240	5450	3470	2650	26330
PB-PRO 4270 - 135	4270	135	3780	200	10	120	-	800	230	2	2	200	11	275	550	410	900	90	5280	2800	2150	10950
PB-PRO 4270 - 220	4270	220	3780	180	11	160	-	800	230	2	2	300	18.5	275	550	410	900	160	5320	3000	2250	14600
PB-PRO 4270 - 400	4270	400	3780	110	8.4	130	Motorized	1000	230	2	2	400	30	375	650	510	1000	240	5600	3470	2650	26550
PB-PRO 6100 - 220	6100	220	5100	130	11	125	-	800	230	4	4	300	18.5	275	550	410	1100	180	7500	3200	2350	25800
PB-PRO 6100 - 320	6100	320	5100	80	10.5	75	Motorized	800	230	4	4	400	30	375	650	410	1100	180	7500	3350	2450	30900
PB-PRO 6100 - 400	6100	400	5100	80	8.4	65	Motorized	1000	230	4	4	400	30	375	650	510	1100	200	7650	3750	2650	39700

\* Working speed should be max. 10 mm / sec. at CE certified machines according to the EN12622 norm.

Ermaksan reserves the right to make changes on technical specs without prior notice.





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