ERMAK®

Sheet Metal Working Machinery

Synchronized Hydraulic Press Brake CNCAP

CNCAP SYNCHRONIZED HYDRAULIC PRESS BRAKE

ER 90 Controller

CNC Bending Simulations Work Center
Advanced 3D features.Touch-Screen 17''.
Simulations of Machine Body, Punch, Dies, Punch and Die holders Barries, Doors, Floor, Backgauge, Sheet Pieces, Real Time Bending Screen. ERMAK is a real onboard machine CAM. In fact graphic CREATION of tool and 2D/3D parts, SIMULATION and 2D/3D reproduction, in real time.

Standard

GENERAL SPECIFICATION

- The precision repeatability performance of these machines is achieved by synchronizing the hydraulic cylinders with the use of advanced proportional valve control,
- With automatic indexing of the axes at the start of running process, calibration is provided,
- Data inputs of material thickness, type and length through a user friendly software enables the control to calculate and provide the following:

- Determination of bending power required for each stroke,
- Graphical display of the unfolding of bending parts,
- Positioning of the back gauge for each step of the bending program,
- Determination of the most practical bending sequence
- Automatic calculation of top beam stroke for bending angle,
- Adaptation condition of tools and work pieces,
- Graphical display of potential interferences between material, tools and the machine,
- Storage of programs with alpha-numerical names and recalling,
- Programmable bending speeds,
- Manuel, semi-automatic or automatic working modes,
- Upper beam tilting for conical bending.

ERMAK Since 1965
SHEET METAL WORKING MACHINERY

CNCAP SYNCHRONIZED HYDRAULIC PRESS BRAKE

CNC CONTROLLERS

USB Flash Disc

Computer

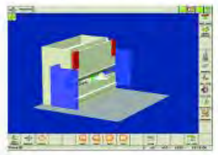
Standart *Office Offline Software (ER 90 PC)*

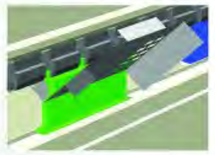
Optional EBS

Offline Software

Standard *Offline Software for ER 90*

Optional *ERMAK Bending Cad/Cam Simulation SOFTWARE (EBS)for ERMAK ER90 controller Metal sheet bending simulation CAD/CAM for ERMAK press brake systems. Import function from flat DXF part, 3D DXF part IGES/STEP solid part. 3D SIMULATION, Parametric automatic best bending sequence and best tooling search*





Server

Ethernet Network

ER 90 ***Standard***

ER 90 3D
STANDARD CORTROLLER

CNC Bending Simulations Work Center

Graphic Multi-axes numeric control that Windows™ style) and advanced 3D features. Another important feature of ERMAK is the environment dedicated to the PRODUCTION MANAGING, Its simple and friendly GUI (Graphical User Interface) is furthermore increased in value by an HIGH RESOLUTION LCD, with Touch-Screen 17". Simulations of Machine Body, Punch, Dies, Punch and Die holders Barriers, Doors, Floor, Backgauge, Sheet Pieces, Real Time Bending Screen. ERMAK is a real onboard machine CAM. In fact graphic CREATION of tool and 2D/3D parts, IMPORTATION of 3D parts from EBS CADCAM, SIMULATION and 2D/3D reproduction, in real time, of all of the bend phases, are only some of the available basic performances.

HARDWARE FEATURES:

CPU card: Standard module ETX, Pentium M 1.1 GHz, DDRAM 512 Mbyte.
Monitor: Colors LCD 17"d3 SVGA, Touch screen. Hard Disk: 60 Gbyte
Serials: COM1:RS232, COM2: RS422/RS232 USB: 3 channels 2.0
Net Card: Ethernet 10-100 Base T, with TCP/IP protocol.
OPTIONS: Wireless Net.

FUNCTIONAL FEATURES:

Available on two different development platform: The software of ERMAK cnc is available either in a REALTIME operating system version (which optimizes the system management and supports the oscilloscope feature) or for WindowsTM XP. Production Viewer: Environment that allows surveying of work time for parts execution and generating of detailed report of working. Interactive Function "d2Guided Tool Up": It guides tools placement with the help of backgauges. Function "d22D/3D Part Simulation"d3: The graphic representation of bend steps development to allow manual or automatic choose of the best sequence to make the desired part.

2D and 3D Visualization: Based on the type of drawing (2D or 3D), during bend program automatic execution, it displays, in real time, all the bend operations. Programs Compatibility: It supports 2D and 3D programs processed by Cam (Bending System software) Parts and Tools Creation: Cnc internal CAD to draw them or by importation from (EBS ERMAK Bending Software).

STANDARD CORTROLLER

ER80-3D + Cad interface

ERMAK bending solutions are displayed graphically in 2D and indicate possible collisions with the tools or the machine frame. The system also shows the position of the sheet within the tools. Windows XP Embedded numerical control, Its 10-inch TFT colour screen, its simplified keyboard with large keys, and the 2D graphic software make the use of this control very efficient and comfortable.

Standart offline 3D software and DXF or IGES conversion importing from CAD system ,simulate and display the feasibility of the product in 3D or 2D. Display, product , tools and detect collisions. Programing punch or Die , Bend functions key and It is possible to import a product created DXF or IGES file for use on a CAD system.

CYBELEC MODEVA 10 Controller General Specifications

- 2D DOS-based operating system,
- Wide ergonomic keyboard and integrated track sensor,
- 6 context-sensitive function keys.
- 10" TFT high resolution color screen
- Working memory flash 32 MB
- Integrated 3,5" floppy disc (optional CD-ROM, LS120 or others)
- Printer output and 2 RS232 port,
- Ethernet RJ45 and 2 USB port,
- VGA screen output,
- Conversion inch/mm, ton/tons,
- Measurement of speed, stopping time and leakage of the beam.
- Management of CE safety cycles.
- Interactive display of safety utilities and customized messages.
- 16 axes could be configured.

DELEM 66W 2D GENERAL SPECIFICATIONS

- 2D Windows® operating system,
- Stable, multitasking environment,
- 2D simulation of application before bending process,
- Microsoft Networking standard on board,
- Structured program storage (subdirectories),
- 10,4" TFT High Resolution Colour display (640 x 480 pixels, 16-bit colour),
- 200MHz microprocessor,
- 32 Mb memory capacity,
- 4Mb free product and tools memory,
- 20 digits alpha-numeric drawing number,
- 7 digits program number,
- Program repeat max. 9999,
- Step number, 25 max. (sequences),
- Step repeat, 99 max.,
- Millimeters/inches-USTON/KN,
- External connection of USB
- keyboard, mouse,
- Error messaging system,
- PLC functionality (sequencer),
- Machine time + stroke counter,
- Tandem operation,Delem Modular compatible,

OPTIONAL CORTROLLER

CYBELEC MODEVA 12 Controller General Specifications

- 3D Windows (Press CAD) based operating system,
- Wide ergonomic keyboard and integrated track sensor,
- 6 context-sensitive function keys.
- 12" TFT high resolution color screen
- Large hard disc (min 2 GB)
- Integrated 3,5" floppy disc (optional CD-ROM, LS120 or others)
- Printer output and 2 RS232 port,
- Ethernet RJ45 and 2 USB port,
- VGA screen output,
- Conversion inch/mm, ton/tons,
- Measurement of speed, stopping time and leakage of the beam.
- Management of CE safety cycles.
- Interactive display of safety utilities and customized messages.
- 16 axes could be configured and multi-lingual selection.

DELEM 69W 3D General Specifications

- Real Time 3D Windows® operating system,
- Stable, multitasking environment,
- 3D simulation of application before bending process,
- Microsoft Networking standard on board,
- Structured program storage (subdirectories),
- 10,4" TFT High Resolution Colour display (640 x 480 pixels, 16-bit colour),
- 300MHz microprocessor,
- 32 Mb memory capacity,
- 8Mb free product and tools memory,
- 7 digits program number,
- 20 digits alpha-numeric drawing number,
- Program repeat max. 9999,
- Step number, 25 max. (sequences),
- Step repeat, 99 max.,
- Millimeters / inches – USTON/KN ,
- External connection of USB keyboard, mouse,
- Error messaging system,
- PLC functionality (sequencer),
- Machine time + stroke counter,
- Tandem operation,
- Delem Modular compatible,

CYBELEC ModEva 15S 3D

- 15" TFT screen (1024x768 resolution)
- Optional Touch screen and Remote control
- ModEva15 3D Windows 15" screen,
- Wide ergonomic keyboard and quick cursor
- Integrated 3,5" floppy disc, extra socket for keyboard and mouse
- IP 54 class protection
- 400mHz CPU, 64 MB RAM, hard disc (min. 2GB)
- Ethernet RJ45, USB 1.1 Port PCMCIA,
- Printer port, VGA output
- RS 232 and RS 422 port
- Interactive display of safety utilities and customized messages.
- CE security system management
- 16 axes could be configured and multi-lingual selection.
- Standard PC1200, CYCAD and LUCIA programs

STANDARD EQUIPMENTS

- Mono block, welded steel frame rigid to deflection moment and high tensile with ST44 A1 material.
- Four axis (Y1, Y2, X, R)
- Standard graphic controllers can be selected from: Cybelec Mod Eva 10 S Color graphics with PC 1200 Delem DA66W 2D with colored graphics
  Esa Kvara Duemilla 2003
- Back gauge system with X+R axis driven by AC servo motors on linear bearings
- Original BOSCH-REXROTH or HOERBIGER servo hydraulic system
- Wila manual bottom table anti-deflection system
- Electrical panel with cooling system, designed to meet CE Standards and composed of automation and electrical equipments with SIEMENS brand,
- Hardened and grinded standard sectioned top and bottom tools (835 mm). Bottom tool is in 60x60 dimensions and 4 V-die
- Amada Promecam type tool holding system with quick release
- Ergonomic, user friendly, moveable control panel carrying all buttons,
- Back light guards (category-4),
- Synchronization of Y1+Y2 axis is provided by linear encoders with 0.01 tolerances,
- Back gauge fingers move along linear bearings with 0.01 tolerances,
- Foot pedal conforming to CE regulation,
- Front arms with T slot and mm/inch rulers,
- Throat depth 400 mm.
- Light Guard (category-4),

OPTIONAL EQUIPMENTS

- Graphic controllers; Cybelec ModEva15 3D, Cybelec ModEva12 3D,Delem 69W 3D
- Z1+Z2 axis,
- X1+X2 axis,
- R1+R2 axis,
- Motorized Wila Anti-Deflection System which operates automatically with CNC unit according to tonnage applied,
- Front light guard system, (category-4),
- Laser protection system for die area, LASER SAFE LZS AKAS II Sick V 4000 (Camera based system) DFS LASER
- Laser angle measurement system, with data M Cobra Lazer Check System
- Pneumatic top tool holding system,
- Hydraulic top and bottom tool holding system,
- Front arms with CNC control (AP3+AP4 axis),
- Sliding front arms with bearing rollers,
- Hydraulic oil coolant,
- Automatic slide greasing system,
- Special throat depth (500,600 or 750 mm),
- Special top and bottom tools
- Software options Delem V-Bend, V DXF modul, V-Draw)
- Delem profile on windows (profile W)
- SICK C4000 Advanced Finger Protections 14 mm (Easy Programable Sick Soft with PC: Blanking, Reduced Resolution, Cascade working etc)
- Tandem Application

ERMAK ROBOTIC SYSTEM

ROBOT AND ERMAK PRESS PROGRAMMING COMBINED:

CNCAP SYNCHRONIZED HYDRAULIC PRESS BRAKE

EQUIPMENTS

PRECISE, FAST AND POWERFULL BACK GAUGE ALTERNATIVES FROM 2 TO 6 AXIS

High speed back gauge system is driven by AC servo motors on linear bearings and ballscrews with ±0,01 tolerances.

6 axis backgauge system
optional

4 axis backgauge system
optional

EQUIPMENTS

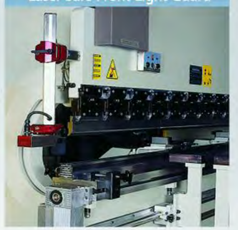
SICK Front Light Guard

standard

Back Side Protective Light Guard

standard

Laser Safe Front Light Guard



optional

Anti Deflection System (Manual)

standard

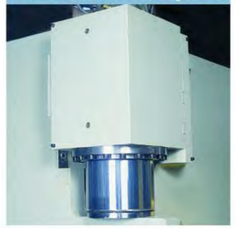
Quick Adjustable Front Arms

standard

Quick Relase Tool Holder System

standard

Crome Plated Pistons and Cylinders



standard

Hoerbiger-Rexroth Hydraulic System

standard

Lineer Encoders

standard

EQUIPMENTS

AKAS Front Laser Light Guard

optional

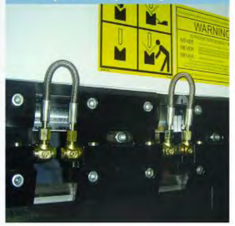
SICK Laser Front Light Guard

optional

Laser Angle Mesaurament

optional

Hydraulic Top Tool System



optional

Special Stroke and Top Tool System

optional

WILA Top and Bottom Tools

optional

Anti Deflection System (Motorized)

optional

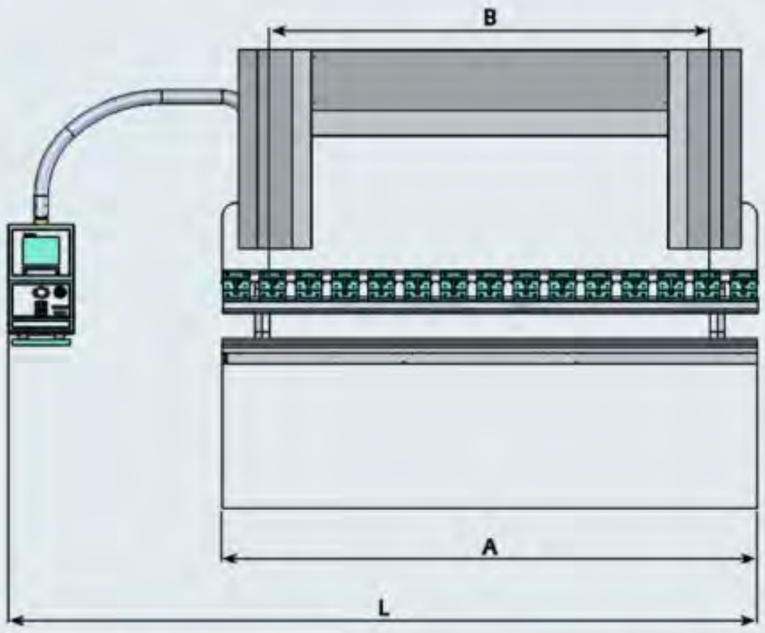
CNC Operated Part Support System

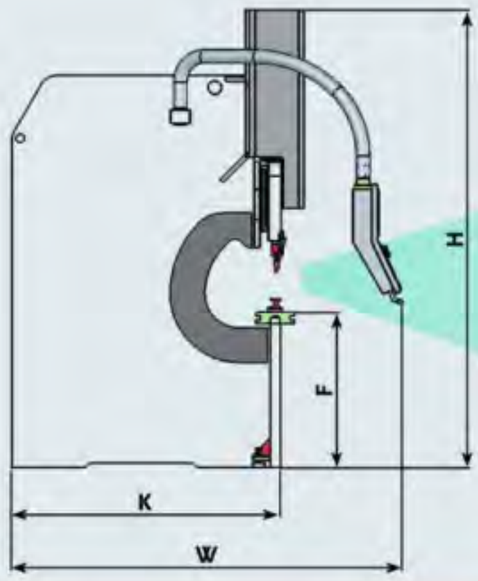
optional

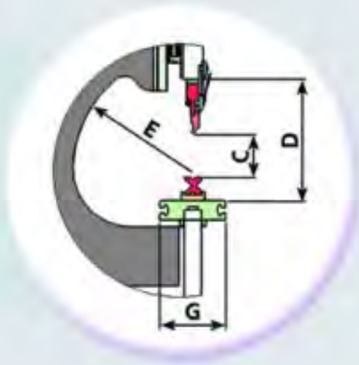
Tool Cabinet

optional

TECHNICAL DIMENSIONS







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	TRAVEL IN R AXIS	SPEED OF R 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	OPTIONAL		
	A		B													C	D	E	F	G	L	H	W		SPEED OF TRAVEL X1,X2 AXIS	SPEED OF TRAVEL R1,R2 AXIS	SPEED OF TRAVEL Z1,Z2 AXIS
	mm	Ton	mm	mm/sec	mm/sec	mm/sec	STANDARD	mm	mm/sec	mm	mm/sec	Amount	Amount	lt.	kW	mm	mm	mm	mm	mm	mm	mm	mm	kg.	mm/sec	mm/sec	mm/sec
CNC AP 1270 - 40	1270	40	1050	165	17	175	-	500	500	250	350	2	2	80	5,5	170	387	350	850	90	2150	2300	1650	3200	500	350	1000
CNC AP 1270 - 60	1270	60	1050	200	14	170	-	800	500	250	350	2	2	150	7,5	275	530	410	850	90	2250	2750	1960	4300	500	350	1000
CNC AP 2100 - 40	2100	40	1700	165	17	175	Manuel	500	500	250	350	2	2	80	5,5	170	387	350	850	90	2900	2300	1650	4100	500	350	1000
CNC AP 2100 - 60	2100	60	1700	200	14	170	Manuel	800	500	250	350	2	2	150	7,5	275	530	410	900	90	3250	2750	1960	5800	500	350	1000
CNC AP 2600 - 60	2600	60	2200	200	14	170	Manuel	800	500	250	350	2	2	150	7,5	275	530	410	900	90	3750	2750	1960	6500	500	350	1000
CNC AP 2600 - 100	2600	100	2200	200	13	205	Manuel	800	500	250	350	2	2	200	11	275	530	410	900	90	3750	2800	1950	7700	500	350	1000
CNC AP 2600 - 135	2600	135	2200	200	13,3	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	3750	2800	2050	8400	500	350	1000
CNC AP 3100 - 100	3100	100	2600	200	13	205	Manuel	800	500	250	350	2	2	200	11	275	530	410	900	90	4250	2800	1950	8500	500	350	1000
CNC AP 3100 - 135	3100	135	2600	200	13,3	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	4250	2800	2050	9200	500	350	1000
CNC AP 3100 - 175	3100	175	2600	200	10,9	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	4250	2800	2150	10500	500	350	1000
CNC AP 3100 - 220	3100	220	2600	200	11,3	210	Manuel	800	500	250	350	2	2	300	18,5	275	550	410	900	200	4550	2850	2250	12200	500	350	1000
CNC AP 3100 - 260	3100	260	2600	140	11	140	Manuel	800	500	250	350	2	2	300	22	275	550	410	900	220	4550	2900	2350	15200	500	350	1000
CNC AP 3100 - 320	3100	320	2600	140	11	160	Manuel	800	500	250	350	2	2	300	30	375	650	410	900	240	4550	3200	2450	16500	500	350	1000
CNC AP 3100 - 400	3100	400	2550	130	8,4	130	Motorized	800	500	250	350	2	2	500	30	375	650	510	1000	240	4550	3470	2650	21000	500	350	1000
CNC AP 3100 - 500	3100	500	2450	130	7,4	130	Motorized	800	500	250	350	2	2	500	30	375	675	510	1040	240	4900	3750	2650	26000	500	350	1000
CNC AP 3760 - 175	3760	175	3250	200	10,9	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	4900	2800	2150	12300	500	350	1000
CNC AP 3760 - 220	3760	220	3250	200	11,3	210	Manuel	800	500	250	350	2	2	300	18,5	275	550	410	900	160	5100	2900	2250	14500	500	350	1000
CNC AP 3760 - 320	3760	320	3250	140	11	160	Manuel	800	500	250	350	2	2	300	30	375	650	410	900	220	5100	3150	2450	19500	500	350	1000
CNC AP 4100 - 135	4100	135	3600	200	13,3	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	5100	2800	2100	10800	500	350	1000
CNC AP 4100 - 175	4100	175	3600	200	10,9	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	5100	2850	2150	13000	500	350	1000
CNC AP 4100 - 220	4100	220	3600	200	11,3	210	Manuel	800	500	250	350	2	2	300	18,5	275	550	410	900	160	5150	3000	2250	15500	500	350	1000
CNC AP 4100 - 260	4100	260	3600	140	11	140	Manuel	800	500	250	350	2	2	300	22	275	550	410	900	200	5150	3000	2350	17500	500	350	1000
CNC AP 4100 - 320	4100	320	3600	140	11	160	Manuel	800	500	250	350	2	2	300	30	375	650	410	900	220	5350	3150	2450	20000	500	350	1000
CNC AP 4100 - 400	4100	400	3550	130	8,4	130	Motorized	800	500	250	350	2	2	500	30	375	650	510	1000	240	5450	3470	2650	27000	500	350	1000
CNC AP 4100 - 500	4100	500	3400	130	7,4	130	Motorized	800	500	250	350	2	2	500	30	375	675	510	1100	240	5450	3850	2650	32500	500	350	1000
CNC AP 4100 - 600	4100	600	3400	130	8,3	140	Motorized	800	500	250	350	2	2	600	37	375	675	510	900	240	5900	3650	2650	38000	500	350	1000
CNC AP 4100 - 1250	4100	1250	3000	130	6	80	Motorized	1000	500	250	350	2	2	1200	55	510	1000	610	800	440	5900	4600	3300	86000	500	350	1000
CNC AP 4100 - 1500	4100	1500	2900	130	5,5	80	Motorized	1000	500	250	350	2	2	1500	75	610	1100	610	800	480	5900	5000	3700	99000	500	350	1000
CNC AP 4270 - 135	4270	135	3780	200	13,3	210	Manuel	800	500	250	350	2	2	200	15	275	550	410	900	90	5280	2800	2150	11100	500	350	1000
CNC AP 4270 - 220	4270	220	3780	200	11,3	210	Manuel	800	500	250	350	2	2	300	18,5	275	550	410	900	160	5320	3000	2250	15800	500	350	1000
CNC AP 4270 - 400	4270	400	3780	130	8,4	130	Motorized	800	500	250	350	2	2	500	30	375	650	510	1000	240	5600	3470	2650	27300	500	350	1000
CNC AP 4270 - 600	4270	600	3600	130	8,3	140	Motorized	800	500	250	350	2	2	600	37	375	675	510	900	240	6100	3600	2650	37000	500	350	1000
CNC AP 6100 - 220	6100	220	5100	130	13,3	120	Motorized	800	500	250	350	4	4	300	18,5	275	550	410	1100	160	7500	3200	2350	26000	500	350	1000
CNC AP 6100 - 320	6100	320	5100	130	11	140	Motorized	800	500	250	350	4	4	300	30	375	650	410	1100	160	7500	3350	2450	34000	500	350	1000
CNC AP 6100 - 400	6100	400	5100	130	8,4	130	Motorized	800	500	250	350	4	4	500	30	375	650	510	1100	200	7650	3750	2650	40600	500	350	1000
CNC AP 6100 - 500	6100	500	5100	130	7,4	65	Motorized	800	500	250	350	4	4	500	30	375	675	510	900	240	7900	3700	2650	44000	500	350	1000
CNC AP 6100 - 600	6100	600	5100	130	8,3	75	Motorized	800	500	250	350	4	4	600	37	375	675	510	900	240	7900	3900	2650	55000	500	350	1000
CNC AP 6100 - 800	6100	800	5100	130	6,1	65	Motorized	1000	500	250	350	4	4	800	37	410	710	610	900	240	7900	4100	3050	63000	500	350	1000
CNC AP 6100 - 1000	6100	1000	5100	100	6	70	Motorized	1000	500	250	350	4	4	1000	45	510	900	610	800	340	7900	4350	3250	76000	500	350	1000
CNC AP 6100 - 1250	6100	1250	5000	100	6	80	Motorized	1000	500	250	350	4	4	1200	55	510	1000	610	800	380	7900	4800	3400	102000	500	350	1000
CNC AP 6100 - 1500	6100	1500	4900	100	5,5	80	Motorized	1000	500	250	350	4	4	1500	75	610	1100	610	800	400	7900	5000	3700	120000	500	350	1000
CNC AP 7100 - 400	7100	400	6100	130	8,4	65	Motorized	800	500	250	350	4	4	500	30	375	650	510	900	200	8500	3750	2650	45000	500	350	1000
CNC AP 7100 - 500	7100	500	6100	130	7,4	65	Motorized	800	500	250	350	4	4	500	30	375	675	510	900	240	8500	3850	2650	53000	500	350	1000
CNC AP 7100 - 600	7100	600	6100	130	8,3	75	Motorized	800	500	250	350	4	4	600	37	375	675	510	900	240	8500	3950	2650	61000	500	350	1000
CNC AP 7100 - 800	7100	800	6100	130	6,1	65	Motorized	1000	500	250	350	4	4	800	37	410	710	610	900	240	8500	4250	3050	71000	500	350	1000
CNC AP 7100 - 1000	7100	1000	6100	100	6	70	Motorized	1000	500	250	350	4	4	1000	45	510	900	610	800	320	8500	4400	3250	92000	500	350	1000
CNC AP 7100 - 1250	7100	1250	6000	100	6	80	Motorized	1000	500	250	350	4	4	1200	55	510	1000	610	800	360	8500	5000	3400	122000	500	350	1000
CNC AP 7100 - 1500	7100	1500	5900	100	5,5	80	Motorized	1000	500	250	350	4	4	1500	75	610	1100	610	800	400	8500	5100	3700	140000	500	350	1000
CNC AP 8100 - 320	8100	320	7100	120	11	80	Motorized	800	500	250	350	4	4	300	30	375	650	410	900	160	9500	3700	2500	49000	500	350	1000
CNC AP 8100 - 400	8100	400	7100	120	8,4	65	Motorized	800	500	250	350	4	4	500	30	375	650	510	900	160	9500	4000	2650	55000	500	350	1000
CNC AP 8100 - 500	8100	500	7100	120	7,4	65	Motorized	800	500	250	350	4	4	500	30	375	675	510	900	220	9600	4000	2650	63000	500	350	1000
CNC AP 8100 - 600	8100	600	7100	120	8,3	70	Motorized	800	500	250	350	4	4	600	37	375	675	510	900	220	9600	4200	2950	71000	500	350	1000
CNC AP 8100 - 800	8100	800	7100	120	6,1	65	Motorized	1000	500	250	350	4	4	800	37	410	710	610	900	240	9650	4200	3050	90000	500	350	1000
CNC AP 8100 - 1000	8100	1000	7100	100	6	70	Motorized	1000	500	250	350	4	4	1000	45	510	900	610	800	280	9650	4500	3250	109000	500	350	1000
CNC AP 8100 - 1250	8100	1250	7000	80	6	70	Motorized	1000	500	250	350	4	4	1200	55	510	1000	610	800	320	9650	5200	3400	138000	500	350	1000
CNC AP 8100 - 1500	8100	1500	6500	80	5,5	70	Motorized	1000	500	250	350	4	4	1500	75	610	1100	610	800	360	9650	5200	3700	162000	500	350	1000
CNC AP 8100 - 2000	8100	2000	6100	70	5,5	60	Motorized	1000	500	250	350	4	4	2000	2 x 45	800	1300	610	750	400	9500	5600	4350	210000	500	350	1000
CNC AP 8100- 2500	8100	2500	6100	70	5,3	60	Motorized	1000	500	250	350	4	4	2500	2 x 55	800	1300	610	750	440	9600	5700	4700	277000	500	350	1000
CNC AP 8100- 3000	8100	3000	6100	70	5,2	60	Motorized	1000	500	250	350	4	4	3000	2 x 75	800	1300	610	750	480	9700	5900	4700	320000	500	350	1000

All specs are subject to change without notice

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

Consult to our company for special dimension and capacity applied machines.

ERMAKSAN MACHINERY