

## Holzma Panel Cutter Type HPL 400, CADmatic 4 PowerEdition

Holzma's HPL 400 PowerEdition is a flexible saw center. This CNC controlled machine features fast, simple programming coupled with high operating speeds to meet today's varied production requirements. Designed for clean and accurate cutting of a wide range of sheet goods. Equipped with rear lift table, feed system, with main saw and scoring saw. Run by a single operator, the saw is capable of executing a wide range of cutting pattern types.

- Unique Holzma EcoPlus System offers energy savings up to 20% and includes:
  - Standby button
  - Motors are IE3 energy efficiency rating
- The heavily built machine body provides a stable base for vibration free cutting.
- Holzma's patented frame leg for perfect alignment of the saw tables in reference to the material being cut.
- The control technology together with the servo motors, solid state drives and robust mechanical system are optimized together for industry leading cycle times.
- Holzma's Power Concept System.
- The machine cuts left to right to the right angle fence.
- Saw dust collection for pressure beam and saw carriage on the right side of the machine.

<b>main saw motor</b>		<b>21 kw</b>	<b>28 hp</b>
<b>scoring saw motor</b>		<b>2.2 kw</b>	<b>3 hp</b>
<b>opening of clamps</b>	<b>max.</b>	<b>125 mm</b>	<b>4.9"</b>
<b>projection of main saw blade</b>	<b>max.</b>	<b>125 mm</b>	<b>4.9"</b>
<b>saw carriage speed forward</b>		<b>0-150m/min.</b>	<b>0-492 fpm</b>
<b>Saw carriage speed reverse</b>	<b>Constant</b>	<b>150m/min.</b>	<b>492 fpm</b>

**CADmatic 4 Operator Interface** with swiveling movement. This flexibility of swiveling allows the greatest range of positioning for the operator.

## **Hardware of the CADmatic 4**

- Computer: Industrial PC, in accordance with IEC61131
  - Intel i5 dual-core processor
  - 4 GB RAM or higher (working memory)
  - SATA 2 -250 GB hard drive or higher
  - Intel HD graphics card
  - 2 Ethernet interface 10/100
  - Multi-touch widescreen 21.5 Display
  - 6 USB ports
  - 1 serial port
  - ATNDVI video port
  - Keyboard connection
  - Operating systems Windows 7 Pro Imbedded
  - Homag powerTouch Control System
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- The CADmatic 4 is based on an industrial PC and is equipped with a Multi-touch widescreen 21” Display.
  - The PC provides real time machine control eliminating the need for a separate PLC. This allows the saw to operate quicker and optimize and control all machine functions.
  - Holzma CADmatic 4 interface provides the most intelligent interface between the operator and the saw. The 3D graphics and intuitive menus make it easy for inexperienced people to learn how to be productive. Key board skills are at a minimum with the touch screen.
  - The control settings are personalized for each operator at log in. Each user’s profile customizes such settings as language, measurement mode (decimal inch, fractional inch and millimeter) screen layouts and colors.
  - The easy to understand menu gives the saw operator the tools necessary to perform the various jobs the panel saw can handle throughout the day.
  - Single Part: Utilize this feature for quick and easy programming of a single part in a pattern
  - Fixed Position: The panel saw becomes an electronically controlled cut off saw. This can be used with fixtures for specialty cutting needs.
  - Cut-to-Length: This handy capability will measure the panel as it is pulled back and tell the operator how much is left after making each cut. Especially useful when processing strips.
  - Edit pattern: A powerful graphic interface for manually entering complicated patterns. The graphic interface gives the operator a visual reference to his input, and eliminates the need for function codes.
  - Select patterns: Allows the operator to view and select patterns for cutting. The operator can select a complete job of a series of patterns or random patterns from different jobs, to tailor the sequence to specific production needs.

## **Characteristics of the Cadmatic**

- New cutting patterns can be entered or down loaded while the machine is in the process of cutting a previously entered pattern.
- A large memory capacity hard drive for cutting patterns is virtually unlimited. It includes simple utilities to maintain files.
- 3-D Moving Graphics-the multi-touch widescreen 21" monitor displays the cutting sequence in real time. As the cutting of each part is finished, the monitor displays the actual part information as a graphic, as well as such textual information as part description, size, and edgebanding information. This clearly displayed information allows a truly paperless operation.
- Parametrically controlled saw carriage speed for narrow front or rear trim cuts. This feature keeps the saw cutting at optimal speeds regardless of operator experience.
- Integrated tool tracking software – prompts operator when to change blades, and improving blade life
- The Cadmatic speaks your language: multiple languages available: The control can be configured to have your language displayed when you log in.

## **Machine Reporting**

Holzma's Cadmatic Control has extensive standard reporting features.

- The MMR records important production figures; such as, output of parts, time use per day, number of sheet cut, and travel length of rip saw.
- Maintenance display and tracking are standard. The machine prompts the Operator when the saw needs maintenance. The operator logs in that it has been performed; so, there is accountability.
- Errors are first displayed in plain text.
- The CADmatic 4 maintains a file of the last 15 errors to occur on the machine. This feature helps to track and fix small problems before they become serious.
- The ability to review in real time the actual status of inputs or outputs along with the status of the switches is available on the screen of the Cadmatic.
- Additional screens show the status of the counters. Counters show the programmed position of such moving components of the saw as the saw carriage or the program fence, which can be compared to the actual position.
- The onboard software allows for remote diagnostics from the technical support team to speed the troubleshooting process.

## **Homag powerTouch Control System**

### **Equal**

- Consistent control and design elements are used across all Homag Group machines.
- The basic structure of the screen is the same for all machines
- The fact that users can transfer their knowledge about the operation of one machine onto other machines reduces training cost

### **Easy**

- Important machine status and messages can be seen at a glance
- Color coded assistant shows whether the machine is production ready
- Intelligently designed icons and touch design makes it easier for less experience operators

### **Ergonomic**

- Operating panel with Multi-touch widescreen 21" Display
- Ergonomic touch operating with gestures such as zoom in, scrolling and swiping
- Simple navigation for standardized and intuitive operation of the machine

### **Evolutionary**

- The blending of state of the art technologies and modern design provides premium operability of the machine control.
- Machine data capturing for operating analysis (e.g. number of pieces, production time, and basic maintenance)

## **Lift Feeding System**

- Electro Hydraulic four column lift with a capacity of 7 tons.
- Lift is guided at four corners by solid steel columns. Accurate infeeding assured.
- Low maintenance since neither spindles nor chains are used.
- Rugged backing wall dowelled to the floor
- The back wall is not connected to the machine frame, vibration from loading is not passed onto the roller rails or machine body, and aligning against the back wall will have no detrimental effect on cut quality or accuracy.
- Lift platform is equipped with driven heavy-duty roller track running lengthwise. Center to center spacing of the rollers is 198 mm (7.79").
- Features forklift cutouts for feeding or unloading the lift from the rear.
- Feeding from 3 sides is possible with optional rollers.
- Enter the required number of panels per book and total number of panels required and the infeed system automatically controls the infeeding even when changing loads.
- Infeeding done with two (2) Holzma patented Micro-Infeeds. Each unit works individually of the other equipped with electronic measuring device to determine exact stack height and are located in front of the program fence.
- Micro-Infeeds are the best solution for thin and wavy bundles of material
- Two alignment devices set in the rear support table press the panel or book of panels into the clamp jaws for perfect aligning, permitting minimal trim cuts.

## **Saw Carriage**

- Solid steel construction for long working life.
- Main saw motor is fixed reducing the weight of raising the main saw blade, resulting in faster up/down time while reducing vibration at the blade, improving cutting speed and blade life.
- Saw carriage guided by chromed, hardened steel guide rods and hardened steel, precision V-groove rollers; Holzma's unique "monorail" locked-in guidance system. Over the last 40 years, Holzma's "monorail" saw carriage guide system has been proven world-wide to provide clean, accurate cuts in even the most difficult to cut, prefinished materials.
- Excellent saw blade life and cut quality due to the monorail guide system.
- Precision machining guarantees absolute parallel positioning of the guide ways in relationship to the surface of the machine bed, hence to the panels being cut, which prevents the scoring saw from running untrue.
- Saw carriage guides are positioned closer to the cutline than on any other saw, eliminating any effect that the drive system vibrations could have on the cut quality.
- Automatic cutting height adjustment provides optimal blade exposure.
- Automatic continuous cutting length control by sensor provides optimal saw carriage travel distance, regardless of strip width.
- Cutting speed infinitely variable; adjustable from control panel.
- Rack and pinion driven via AC servo motor.
- Scoring saw adjustment from control panel during operation. Safe and fast for the operator.
- Extraction via sawdust channel.
- Tool tracking software sets the scoring blade to its last position minimizing adjustment.

## **Pressure Beam**

- Minimum opening for blade passage to exert pressure right at the cutting line, where it is needed.
- Guided equally on both sides by racks and pinions, which guarantee that the pressure beam remains parallel, even when cross cutting a single stack of narrow strips.
- Pressure applied equally on both sides of cutline resulting in superior cut quality.
- Optimum extraction of sawdust by means of an extraction outlet and a separate extraction channel.
- Pressure beam opening defined by book height, saving distance traveled and reducing time lost.

## **Automatic Side Pressure Device**

- Integrated into saw carriage.
- Precisely positioned by the saw carriage to reduce cycle times.
- Pressure infinitely variable.
- Automatic positioning via sensor, no pre-adjustment required.
- Quick alignment for single strips.
- Double alignment for multiple strips
- Alignment width: Min. 0 mm -Max: complete cutting length of machine.
- Heavy steel right angle fence is part of the machine frame leg for consistent, square cuts.

## **Clamp-Equipped Program Fence**

- AC servo drive electronically controls the program fence for quick, accurate positioning, with minimal wear and tear.
- The saw control constantly drives the program fence at the optimal speed of travel, regardless of distance traveled for short cycle time.
- Strongest clamping pressure, regardless of book height; clamp jaws feature parallel motion which keeps material in clamp for better position accuracy.
- Holzma's unique clamp design keeps single panels or complete books of panels clamped and under control of the program fence until the rip or crosscut operation is completed.
- Upper clamp jaw is covered with a special, non-marring pad, preventing any possible damage to the surface of the panel material.
- Easy access to all pneumatic and electrical switches for easy maintenance.
- Magnetically based measuring system, completely independent from the drive system of the program fence with no wear, or even touching parts for long working life.
- +/- 0.1 mm/m positioning accuracy of the program fence (measurement does not apply to the cut parts)
- Tighter tolerance resolution, longer working life, less adjustment than with optical encoders

## **Machine Tables**

- Rear support table consists of rails with narrow pitch rollers for friction-free panel movement and protection from scratches.
- Machine table is equipped with large wear resistant phenolic plates with precision machined slots for the clamps. Part of this machining the is a T-cut profile that improves dust collection without additional CFM requirements
- Because of these plates; machine bed remains at full thickness and strength, providing maximum stability.
- Air tables at the front of the machine for easy material handling.

## Machine Tables (continued)

- dustEX System with air floatation valves to produce air flow parallel to cut line in direction of right angle fence. Assists in control and extraction of dust.
- Air floatation in machine bed to reduce drag on sensitive materials at the cut line.

cutting length		3800 mm	149.6"
cutting width		3800 mm	149.6"
1 power clamp	not raisable	100 mm	3.93"
5 clamps with lifting element		225 mm	8.85"
		325 mm	12.79"
		475 mm	18.70"
		675 mm	26.57"
		775 mm	30.51"
power clamp	strip width max	650 mm	25.59"
	strip width min	175 mm	6.88"
standard 2 finger clamps		1075 mm	42.32"
		2325 mm	91.54"
		3125 mm	123.02"
optional 2- finger clamps available for		1525 mm	60.03"
		2725 mm	107.28"
		3625 mm	142.72"
3 air tables	one fan	2160 x 800 mm	85" x 31.5"
lift stack height	floor mounted	560 mm	22.04"
	pit mounted	780 mm	30.70"
lift capacity	3800/1600	149.6" x 63"	14,000 lbs.
total connected load	31 kw		
air pressure	required	6 bar	86 lbs.
total air volume	based on 6 bar	210 nl/min.	7.41 cfm
extraction	minimum	3800	2237 cfm
	(velocity)	(26 m/sec.)	85 f/s
diameter of dust connectors	pressure beam	140 mm	5.51"
diameter of dust connectors	saw carriage	160 mm	6.30"
diameter of dust connectors	right angle fence	80 mm	3.15"
main saw blade	450 mm x 4.8 mm x 60 mm		
scoring saw blade	180 mm x 4.4-5.4 mm x 45 mm		

## **Power Concept HPP/L 3/4 Series**

- Allows several strips with different cross cutting lengths to be cut together.
- Performance increase up to 40%
- Considerably reduced cycle times
- Reduction of the per piece cost
- With separate drive, guidance, and measurement system.
  - One clamp (3 fingers), Power Concept can be positioned independently of the program fence.
  - Five clamps (2 fingers) with angled lifting element, positions 225/325/475/675/775 mm (8.85",12.79",18.7",26.57",30.51")
  - The standard clamps on position. 75/27/475 will be cancelled
- First air table 800 mm wide instead of 650 mm
- Moving device for second air table
- Synchronous locking (Power Concept and Program Fence)
- Strip width for power concept: max. 650 mm  
min. 175 mm

## **General Information**

Control circuit for a recommended Pneumatic Shut Off Gate for the Pressure Beam dust pipe is included. Customer to provide the blast gate.

Minimum operating temperature +41f

Maximum operating temperature +95f

If the maximum operating temperature is exceeded, an optional cooling unit should be used

Shop floor requirements:

- Concrete grade C25/30
- Concrete thickness min 200 mm (7.87")
- Without covering layers e.g. parquet, bitumen etc.
- Customer is responsible for grouting all the machine legs with non-shrink machine grout after the assembly has been completed



## **Additional Features Included in this Machine**

### **Automatic Label Application at Pressure Beam**

*(Machine must come from factory with this feature)*

Automatic Label Application for sequence optimization and reduction of cycle times. Consisting of:

- Automatic thermo-transfer label printer integrated at the pressure beam
- Label printing software with parts graphic
- Zebra Label Printer

#### Technical Data:

Type of Printer	Thermo-direct/Thermo-transfer
Capacity:	10 labels/min
Speed:	50 m/min
Travel way:	50- 2200 mm
Min. part size:	200 x 100 mm
Optimal label size:	80 mm
Automatic rewinder:	yes

### **Information Handling Package**

- Includes USB transfer/ Downloading via network
- Cadmatic Label Printing Software
- Zebra Label Printer and Stand

### **Automatic Grooving (Depth set through Cadmatic)**

- Grooving position (length/crosswise), grooving width, distance to panel edge and grooving depth are freely programmable through the Cadmatic control.
- Grooving rabbeting or dadoing occurs during the cutting cycle.
- Symmetrical grooving or rabbeting and intermittent grooving and cutting are freely programmable.
- Grooving depth +/- .2mm.
- Grooving width +/- .2mm

### **Air Conditioning in the Switch Cabinet**