



## POLAR Cutting Machines

CERTIFIED TO DIN EN ISO 9001:2000

## The POLAR brand has signified success for over a hundred years and has become synonymous with cutting machines worldwide.

POLAR is the world's largest manufacturer of high-speed cutters with a production of over 130,000 machines. Today more than ever POLAR enjoys a solid reputation as an innovative and reliable partner.

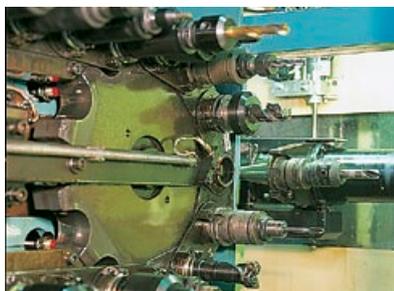
POLAR N high-speed cutters have now taken the already legendary features to another level of perfection with their 11th generation of machines.

The new and dynamic growth market of digital printing has also gained in every respect from the company's undertaking only to produce the best possible machines. In the small format sector, genuine, professional POLAR cutting machines are available at conditions which are very advantageous, both from a technical and economic point of view.

As market and technology leader, it is POLAR's established company policy always to set new standards of investment security and work process automation.

From the smallest cutting machines right up to the fully automatic PACE system, POLAR offers the most cost-effective solution for all requirements.

When it comes to quality, POLAR makes no compromises: Production depth is over 55% and the software for machine control as well as all the hydraulics are manufactured in house.



## POLAR Cutting Machines – tailored to the specific demands of digital printing

POLAR cutting machines are the durable, programmable cutting machines with hydraulic drive units. Quick-print shops, copy shops, commercial print shops, in-house print offices value not only the uncomplicated operation, but also the long service life of the cutting machines. The unique cutting precision is obtained by the sturdy construction and the direct measurement.

The precise and gentle bevel swing cut is carried out hydraulically on all of our models. This allows to adjust the dwell time of the knife in the BDC to the respective material. The corrosion free table surface provides very easy gliding which makes the material easy to handle. On model POLAR 80, this effect is supported by air jets. The clamping pressure can be continuously adjusted within a large range by means of a turning knob with scale to suit any material to be cut. A variable pre-clamping time control optimizes cutting quality when dealing with different materials. Luminous LEDs indicate the cutting line to the operator.

### The highlights

- Wide range of programming options
- Easy knife changing with automatic shutoff in bottom dead center and fine adjustment from the front
- A machine frame with optimized stability takes the forces produced during the cutting process in the best possible way and guarantees maximum cutting precision.
- Minimum expenditure of maintenance thanks to innovative materials
- Digital workflow integration (only NET model)

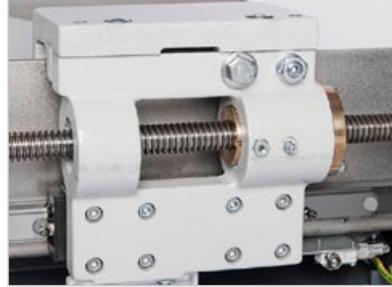


## POLAR Cutting Machines provide convincing technology

In the major technical features POLAR cutting machines benefit from the bigger members of the family:



Bulk hydraulic power pack with double pump ensures a long-lasting safe application



Linear ball bearing – maintenance-free and extremely precise



A cutting stick ejector eases and abbreviates the knife change



Transparent rear-table cover ensures the best possible illumination



Direct measurement via rotary transducer flanged to the spindle



LED cutting-line indicators ensure optimum illumination, even when lighting is poor. The indicator can be clearly seen on many materials.



Backgauge rakes with plastic gliders treat the table surface with care



Knife depth can be conveniently adjusted from the front

## Comprehensive standard equipment rather than options. The two models



### ECO

The machine is operated via an ergonomically arranged control panel with 5.5" monochrome display and extra low-profile keyboard. Repeat sequences can be saved in one of 198 available memory positions and even be adapted at any time. The cutting programs are either generated manually or menu-driven and intuitive via block programming.

#### Functions:

- Low-profile keyboard with easy-to-understand symbols
- Menu-driven knife change
- Programming during cutting
- Block programming available
- Format tables
- 198 program memory locations
- Program information with plain text
- Cutting cycle shown with symbols
- Programmable jogging mark
- Clamping time before cutting
- Clamping without cutting
- Programmable ejector
- Protect program
- Lubrication interval signal



### NET

The machine is operated via an ergonomically arranged 18.5" touch-sensitive display. Repeat sequences can be saved and adapted at any time. To do so, the system has 1,998 memory positions available. Due to digital workflow integration Compucut® takes the cutting data supplied as ppf or jdf files direct from the prepress stage. Compucut® generates the cutting program automatically. In order to start the cutting program automatically, the machine is furnished with a bar-code reader. This allows setup times to be reduced to almost zero. The process visualization gives the operator a graphic indication of the material handling. This minimizes the proneness to errors considerably.

#### Additional functions as compared with ECO:

- Prepress data is taken as a basis for generating cutting programs (P-Net Service Compucut®)
- A bar-code reader facilitates easy loading of cutting programs
- Process visualization for a graphic indication of material handling reduces the proneness to errors.
- Production report for acquiring the machine performance data
- 1,998 Program memory locations
- Progress control
- Copy program



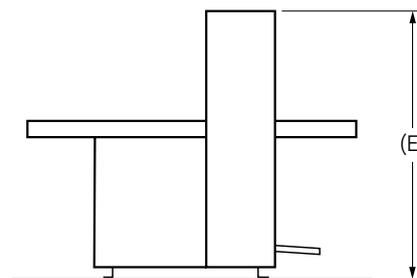
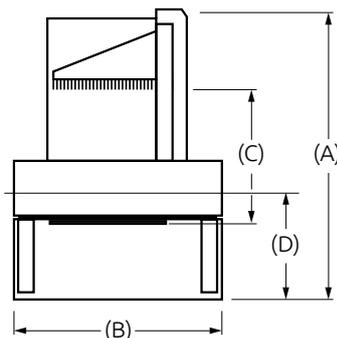
## Measuring up!

Technical Data		POLAR 56	POLAR 66	POLAR 80
Cutting width	mm	560	670	800
Feed depth (C)	mm	560	670	800
Feeding height, max. (without false clamp plate)	mm	80	80	100
Length of front table (D)	mm	670	670	670
Table height	mm	900	900	900
Clamping pressure, min.	daN	180	180	180
Clamping pressure, max.	daN	1,200	1,500	2,700
Backgauge speed, return stroke (0 - ...)	mm/sec	70	70	130
Knife speed	Cycles/min.	20	20	20
Thickness of knife	mm	9.70	9.70	11.75
Grinding reserve (HSS18 knife) max.	mm	22	22	25
Smallest cut, manual, without false clamp plate	mm	-	-	15
Smallest cut, automatic, without false clamp plate	mm	15	15	15
Smallest cut, automatic, with false clamp plate	mm	50	50	50
Noise emission (EN 13023)	dB(A)	76.5	76.5	76.5
Installation data				
Width (B)	mm	1,150	1,250	1,550
Depth (A)	mm	1,670	1,825	1,970
Frame height (E)	mm	1,500	1,500	1,500
Weight, total net	kg	575	675	900
Static floor load	daN/m <sup>2</sup>	330	330	626
Dynamic surcharge	%	20	20	20
Electr. power draw (apparent power)	kVA	2.2	2.4	4
Thermal output	BTU/h	7,135	7,784	12,973

Subject to technical alterations

## Available accessories:

- Cutting sticks (Set of 10 items)
- HSS-knives
- Carbide-tipped knives
- Knocking block
- EasySlide



## POLAR One-Knife Trimmer BC-330

The robust, networkable POLAR one-knife trimmer is the machine for automatically cutting perfect-bound or saddle-stitched products. In contrast to a three-knife trimmer, it only has one knife. The product is put into the cutting position by a gripper.

The cut is hydraulic, which enables the time the knife spends in the bottom dead center to be adapted to the material. The robust cutting unit guarantees a precise cut that is gentle on the material. The applied pressure can be infinitely adjusted to every material to be cut within a large adjustment range.

To increase performance, several products, stacked on top of each other, can be cut simultaneously. The container for waste can be accessed from the outside.

The machine is operated using an ergonomically positioned 18.5" touchscreen display. Recurring cut sizes can be stored

and adapted at any time. Integrated in the digital workflow, the cutting data is transferred directly. The machine can be equipped with a bar-code reader to automatically launch the cutting program. This reduces the set-up time to practically zero.

### The highlights

- Integration in the digital workflow
- Format can be varied from product to product
- Simple knife exchange with automatic shut-off in bottom dead center and fine adjustment from the front

### Technical Data

Performance (single   multiple block)	Books/h	240   550
Inner book untrimmed min.   max.	mm	120 x 152   305 x 330
Inner book trimmed min.   max.	mm	105 x 148   297 x 325
Head trim min.   max.	mm	2   100
Front trim min.   max.	mm	2   100
Tail trim min.   max.	mm	2   100
Book thickness min.   max.	mm	5   51
Dimensions (W x D x H)	mm	1,780 x 1,530 x 1,580





## An independent family-owned business, POLAR has developed into the world leader

It marks an important milestone in the life of a family company to be able to look back over more than one hundred years of history.

Adolf Mohr was an entrepreneur, bringing vision and strength to bear in creating the roots of something that people in this company are developing successfully, to this very day. Technological developments have always met the customers' needs to ensure that the "POLAR" brand is now globally acknowledged as synonymous with state-of-the-art cutting machines and ergonomic systems. This reputation is an eloquent reflection of the confidence that our company has enjoyed on the markets for decades.

As the world's technological leader, POLAR expertly implements process automation with its systems:

- Cutting Systems streamline the finishing process
- Jogging Systems increase the efficiency before the cutting process
- LabelSystems for square-cut and die-cut labels give the product that distinctive design
- P-Net is an Ethernet-compatible network connection for production data communication

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Today, with more than 200 agencies in 170 countries, POLAR is in close proximity to its customers and, by maintaining a constant dialog and exchange of experiences with its international service centers, has gained a substantial lead in the development of technical solutions.

POLAR's performance profile marks it out as a strategic partner when it comes to intelligent finishing solutions of continuous value.

For further information on products and company see:  
[www.polar-mohr.com](http://www.polar-mohr.com)



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