

Smart Gap[®]

The leading adjustable system
for perfect die-cutting results

www.wink.de/smartgap

wink[®]
*You cut, **we** care.*

MIND THE GAP

In the narrow gap between the magnetic and anvil cylinder, smallest deviations decide on success and failure in rotary die-cutting.

Therefore, adjustable anvil cylinders have become indispensable in modern label production.

Leading printers and machine manufacturers worldwide rely on the SmartGap® system provided by Wink.

Smart  Gap®

ADJUSTABLE ANVIL SYSTEM

The SmartGap® sets benchmarks

The variety of materials and ever thinner liners place special demands on all die-cutting components. Adjustable anvil cylinders allow variable adjustment of the gap dimension and thus the cutting depth.

In many cases, however, conventional adjustable systems struggle with problems – especially with cutting-through, large working widths and high production speeds.

Wink's SmartGap® system overcomes these limitations. The SmartGap® enables you to flexibly and accurately adjust the cutting depth to your needs.

The system convinces with a highly precise gap adjustment on both sides and a particularly stable construction, which ensures unique running smoothness.

The basic Advance version can be easily upgraded to the digital Touch version, which can be extended with an AutoControl package.

No matter which version you choose, with the SmartGap® you are perfectly equipped for the future of rotary die-cutting.

The leading adjustable system for maximum die-cutting efficiency



Greatest functionality

Perfect cutting results and highest productivity

- high-precision adjustment of the cutting depth on both sides
- trouble-free processing of challenging materials and thin liners
- avoidance of complaints
- comfortable and user-friendly handling
- digital extensions for optimized workflow and automated die-cutting



Highest stability

Die-cutting without limitations

- no restrictions as with other adjustable systems
- unique running smoothness even with a high proportion of transversal lines
- high machine speeds possible
- suitable for larger working widths
- flawless cutting-through/perforating



Maximum efficiency

Minimized efforts and costs

- less waste and material consumption
- special construction prevents excessive heat development
- virtually maintenance-free, no additional lubrication necessary
- shorter set-up times and reduced machine downtimes
- longer service life of all cutting components (flexible dies, cylinders, bearer rings)

SIMPLY SMART.

The solid base for your die-cutting success

Efficient gap control

The gap between the magnetic cylinder and the anvil cylinder, also known as "clearance" or "undercut", is of particular importance during die-cutting. In combination with the thickness and composition of the liner material, the gap dimension determines the optimum height of the flexible die.

Changes in the gap size (e.g. due to wear or heating) have a negative effect on the cutting result. Moreover, there are further challenges in die-cutting: tool tolerances, fluctuating liner gauges and ever thinner liners.

With the adjustable SmartGap® system, you have the cutting process under control at all times. A high-precision eccentric mechanism quickly and precisely regulates the gap (and therefore the cutting depth).

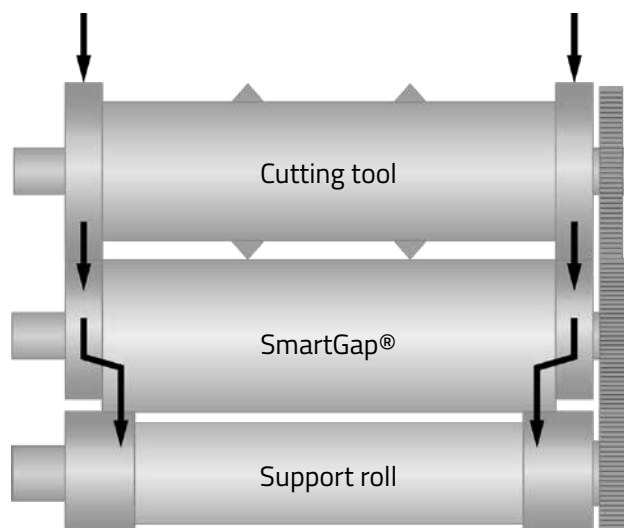


What makes the difference?

The advantages of SmartGap® compared to other systems are mainly based on its particularly high stability.

- A special support roll stabilizes the SmartGap® cylinder and absorbs the enormous forces in the cutting unit.
- The solid, through-hardened cylinder body keeps its position constantly. The gap is adjusted via the bearer rings, which run freely on their underside and thus have only minimal bearing tolerances.

Sketch: Pressure flow in the SmartGap® system



SmartGap® components

Control knobs / display

Intuitive gap adjustment
on both sides individually

Magnetic cylinder with flexible die

Individually set-up per job
as usual

Adjustment elements

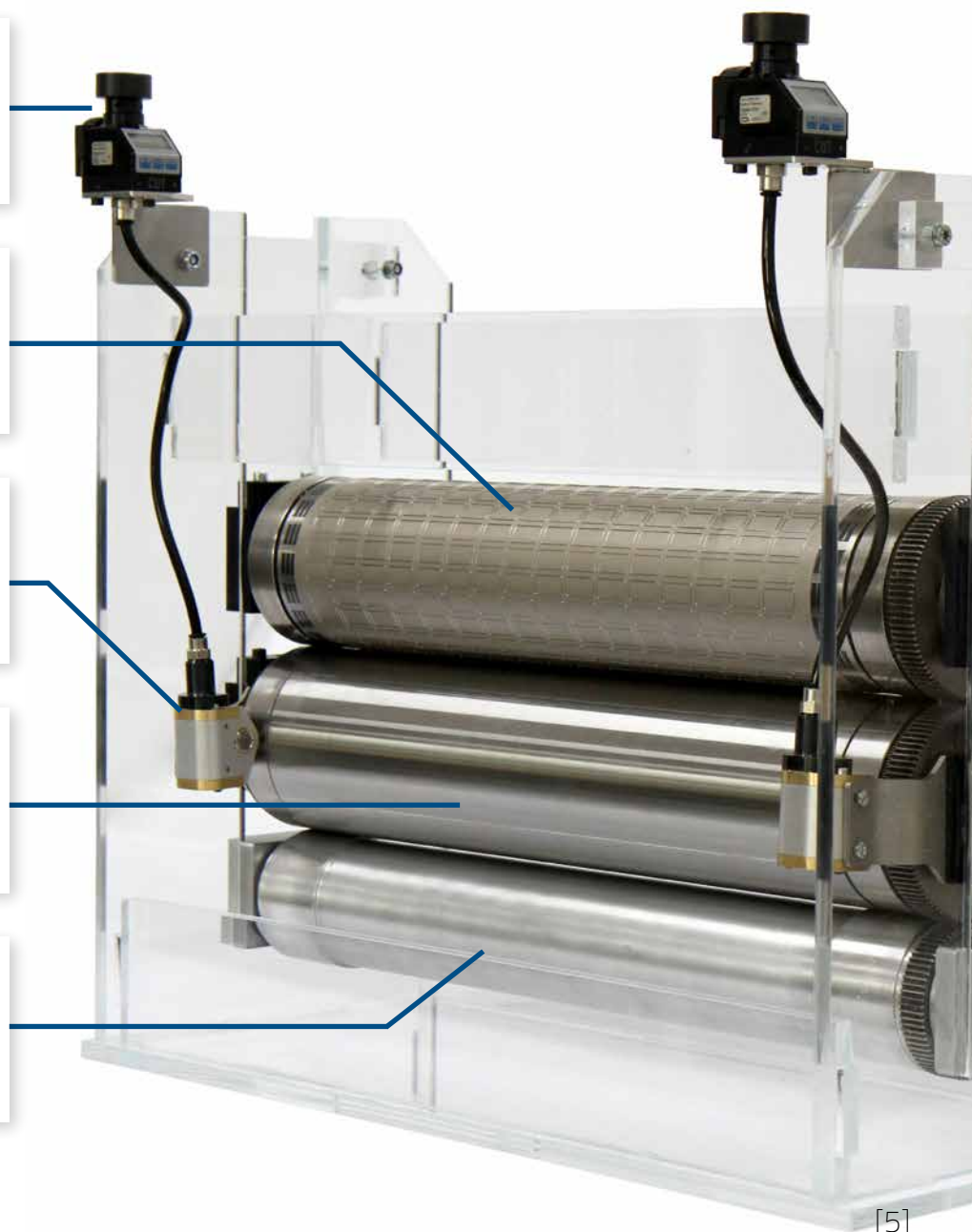
Transfer the adjustment steps to the
cylinder with the utmost precision

SmartGap® cylinder

Through-hardened cylinder with
eccentrically adjustable bearer rings

Special support roll

Provides the unique stability
of the system



ADVANCE

Your start into the SmartGap® world

Easy handling - maximum precision

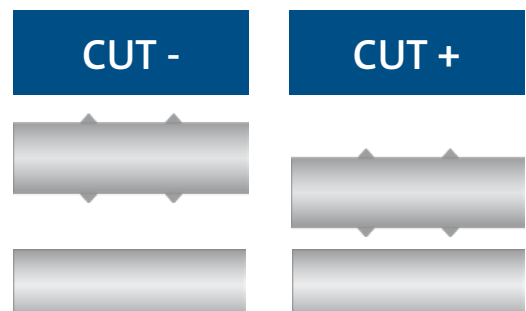
As the basic model of the SmartGap® series, the Advance already meets the highest demands in label production.

Before delivery, the system is set to the desired gap dimension and the corresponding value is shown on the display of the adjustment elements (European standard: 480 µm).

Using two rotary knobs on the unit frame, you can individually adjust the gap on both sides to compensate for one-sided wear, inaccuracies in the cutting tool and fluctuations in material thickness.

If the knob is turned in the "CUT +" direction, the gap size is reduced and thus the cutting becomes deeper. Turning the knob in the "CUT -" direction reduces the cutting depth by increasing the distance between the cylinders.

Adjustment is possible both at standstill and while the machine is running. The adjustment steps are only half a micron, so that even the smallest corrections can be made.

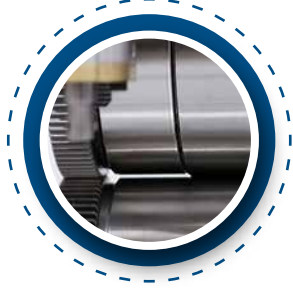


Features and benefits



Perfect results

- high-precision adjustment of cutting depth in steps of 0.5 µm
- trouble-free converting of the most challenging materials, including ultra-thin liners
- individual gap adjustment on drive and operator side
- less waste, high customer satisfaction



Die-cutting without limitations

- very smooth running without vibrations, even with very high speeds and high proportion of transversal lines
- easy processing of cutting-through/perforations
- larger working widths possible
- suitable for cutting from below



Easy handling

- intuitive operation with clearly visible display
- displays show the current gap size in µm
- gap adjustment possible during machine downtime and during operation



Time and cost savings

- no additional lubrication necessary, therefore only minimum maintenance effort
- special distribution of cutting pressure protects against excessive heating and wear
- longer life of all tooling saves costs



Flexible installation

- easy to learn installation and removal
- professional support from Wink, if necessary
- flexible positioning of the display units allows the complete housing of the cutting unit if required

SmartGap® Touch

The future of rotary die-cutting

The SmartGap® has quickly established itself as the leading adjustable system in the market. The digital development SmartGap® Touch is based on the proven success concept.

The system offers many "smart" features that further increase production efficiency. At the same time, the Touch technology provides the basis for your entry into future automation processes.



Overview of feature packages



The extended JobControl functions come as a standard with every SmartGap® Touch and will give you permanent access to important job data. The camera integrated in the display also allows tool parameters to be quickly and conveniently transferred to the system via QR code.



With the AutoControl extension, the cutting result is continuously monitored with a specially developed sensor bar, which sends immediate signals for automatic gap adjustment. Specifically programmed algorithms not only allow the detection of missing labels, but also a configurable control function against liner strike.



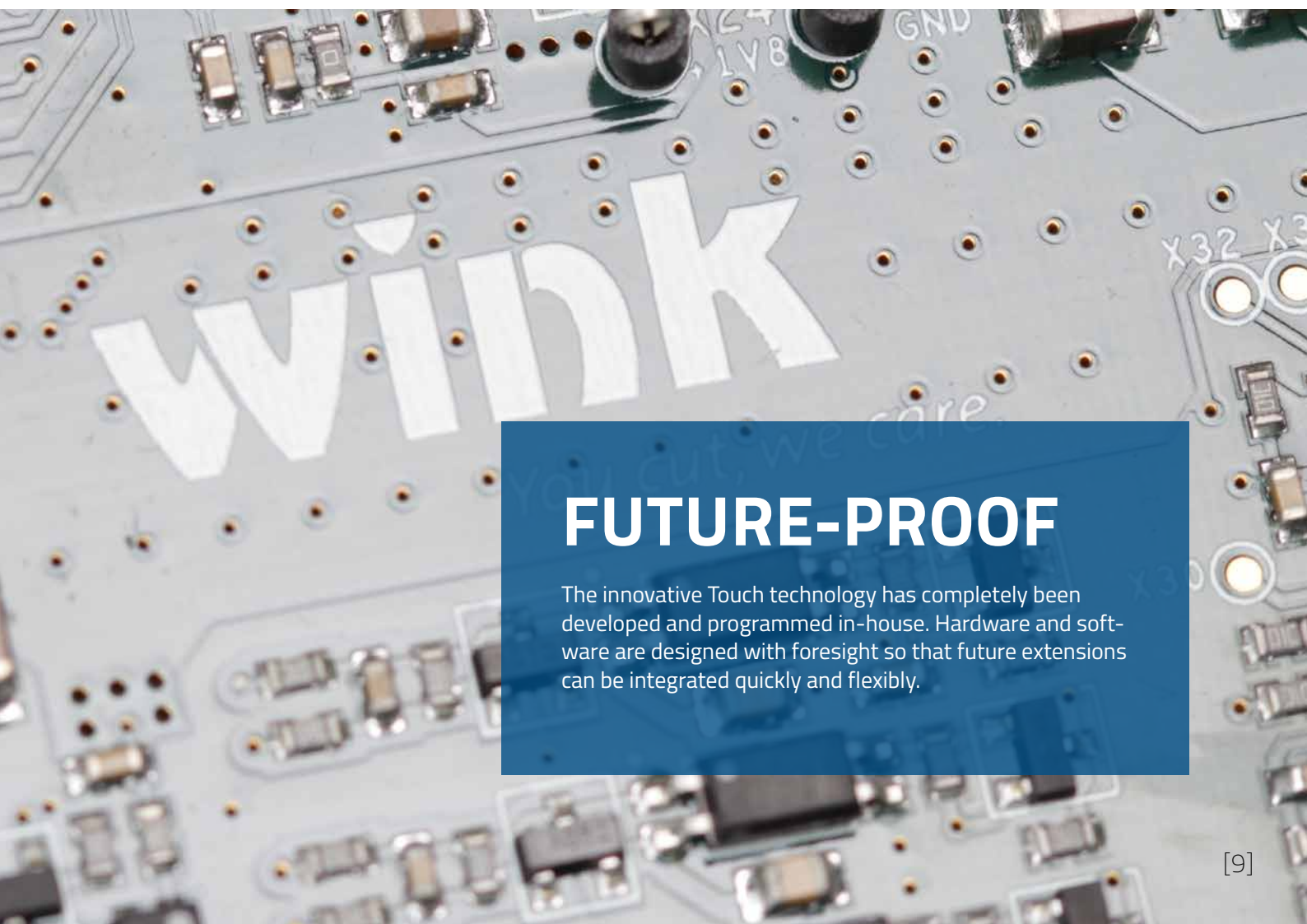
The Connect extension package is currently under development. Technically, the system already offers all interfaces for various networking options. SmartGap® units, for example, can communicate with each other via secure connections, but can also exchange data with customer software (ERP/MIS) or the machine. Remote maintenance is also made possible in the Connect version.



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FINALIST



FUTURE-PROOF

The innovative Touch technology has completely been developed and programmed in-house. Hardware and software are designed with foresight so that future extensions can be integrated quickly and flexibly.

TOUCH



Innovative die-cutting technology

Safe and efficient production processes through digital control

In contrast to the analog Advance version, the Touch is adjusted using digitally controlled stepper motors. The central BlackBox control unit can be flexibly attached to the machine.

The system is operated via a touch display, which is fixed to the unit via a freely swiveling magnetic holder. When clicking on the control elements, the corresponding signals are forwarded to the adjusting units via the BlackBox, thereby precisely adjusting the gap dimension.

At the same time, the touchscreen serves as a clear display for the currently set gap values. In addition, job and tool data are displayed upon request, which you can read via QR code with the integrated camera.

All order data and gap adjustment settings are stored in the system. In case of repeat jobs, you can start directly with the appropriate gap settings and thus save makeready time.



SmartGap[®] Touch

The digital SmartGap[®] Touch is based on the proven technology of the analog entry-level model Advance. As a result, it offers the same high stability and the resulting benefits of the SmartGap[®] system. However, the digital control offers numerous new functions that will help you increase your productivity and efficiency even further.

Features and benefits



Perfect die-cutting with unique precision

- digital control of the stepper motors enables very stable adjustment of the gap dimension with extreme precision
- standard adjustment steps of 0.5 microns
- smallest possible adjustment unit down to 0.1 microns
- high flexibility due to freely configurable adjustment of step sizes



Efficient workflows save time and money

- shorter set-up times by using presets that are supplied in the QR code of the flexible die
- reset function for automatic setting of initial values
- configurable, automatic moving apart of the cylinders at job changes avoids damage
- storage of all order data incl. adoption of last used gap values for repeat orders



Comfortable operation makes work easier

- intuitive control via swiveling and removable touch display
- both sides can be adjusted independently or parallel at the push of a button
- display of elementary order and tool data (read in via QR code)
- product information, care instructions and cutting tips always available



Future-proof and ready for "Industry 4.0"

- state-of-the-art hardware and software with own programming
- easy upgrade to AutoControl feature for automatic gap adjustment
- all interfaces for future Connect version available (network, communication, exchange of data)
- suitable for integration into the machine control system

AUTO CONTROL



SmartGap® AutoControl

Automatic gap adjustment

With AutoControl you can lean back and relax

The SmartGap® Touch already offers numerous advantages resulting from the digital control. With the AutoControl extension, you are taking another big step towards automation.

A specially developed sensor bar continuously monitors the die-cut material on the web. If the cutting is not deep enough, labels are pulled up with the waste matrix. The system detects these missing labels and reacts within fractions of a second if a threshold value is exceeded.

The cutting depth is then automatically increased until the die-cutting result is perfect again.

At the same time, AutoControl offers a configurable control function against cutting too deep to prevent damage to the liner material.

Of course, the AutoControl function can also be deactivated so that manual corrections can be made via the display, if necessary.

Ultimate efficiency

- optimum die-cutting results at all times
- satisfied customers, avoidance of complaints
- enormous time savings during setup, production and finishing
- operating personnel gain time for other tasks
- less waste and material consumption
- digital marking of incorrect labels
- documentation and evaluation of stored data and settings





THE BEST CHOICE

No matter which SmartGap® version you choose:
You are well prepared for the future of rotary die-cutting.
The basic Advance version can easily be upgraded to the digital Touch, which becomes the AutoControl version by installing a sensor bar with corresponding software upgrade.
Decide for yourself when you want to take the next step towards digitization and automation. We will be happy to assist you in implementing the optimal cutting technology.

Overview of versions



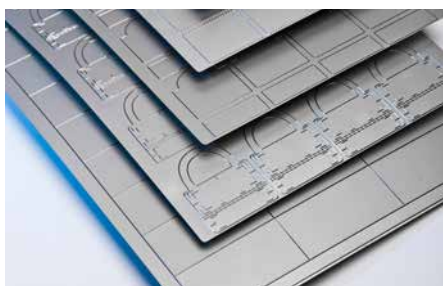
Basic functions	Advance	Touch	AutoControl
Technical basis	Through-hardened anvil cylinder with high-precision eccentric adjustment unit and special support roll for maximum stability		
Adjustment range	± 80 microns		
Minimum adjustment steps	0.5 microns	standard: 0.5 microns optionally down to 0.1 microns	
Operation/control	analog (rotary knobs)	digital (touch screen)	
Display	only gap value	Gap value (metric or imperial), controls and additional information	
Gap adjustment left/right individually	✓	✓	✓
Gap adjustment both sides simultaneously	—	✓	✓
Product information, care instructions, cutting tips	—	✓	✓
Network connection	—	✓	✓
Monitoring of web and die-cutting result	—	—	✓
Automatic adjustment of gap dimension	—	—	✓

You cut, we care.

TOOLS FOR SUCCESS.

Our flexible dies, rotary cylinders and accessory components are the ideal complement to the SmartGap® system. Because only if all components are in flawless condition and perfectly matched to each other, you will achieve optimum die-cutting results.

Wink is your one-stop shop for all tooling demands, with outstanding quality and the fastest delivery times. You can find further information online at www.wink.de.



SuperCut

Flexible dies



OptiMag

Magnetic cylinders



ForceControl

Pressure gauges

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