



Laser Line

FIBER LASER ENGRAVER

Our newest product is the Fiber Laser Engraver for Flexo. Engraving resolutions up to 5,080 dpi with 1–2 beams give our customers new possibilities to engrave flexo plates, sleeves or cylinder with up to 200 Lpi. As well a CO₂ laser for flexo and screen engraving is available.



COSMOS LASER FLEXP

Easy handling, compact design, fast and high-quality engravings: This is what distinguishes our Cosmos Laser Flexo. With either fiber laser or CO₂ technology with multi-beam technology, the machine is suitable for dry offset engraving or label printing as well as 3D engraving and packaging printing of EPDM plates, sleeves and cylinders. 100 L/cm can be realized with up to 5,080 dpi.

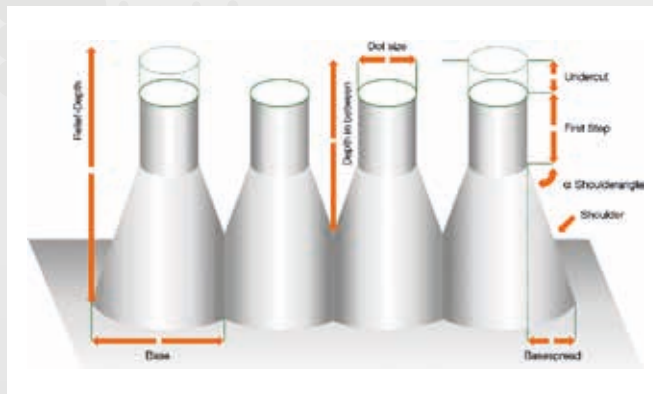
engraving machines, this is equipped with an acousto-optical modulator (AOM). With this technology, the finest engraving results can be achieved at high switching speeds.

Undercut, variable shoulder settings, the intelligent Easy Template software, a user-friendly interface and many other software tools simplify the handling of the machine. Individual requirements, such as the integration of the respective national language into the control panel, can also be implemented.

We have the right machine version for every customer: with up to 2000 watts, with single or double beam technology. For customers who want to engrave silicones or other non-fiber materials, we offer powerful Sealed CO₂ laser that produces fine engravings up to 2,540 dpi. Like all our laser

COSMOS LASER SCREEN

The Cosmos Laser Screen shows new possibilities of screen engraving. With a resolution of up to 2,540 dpi, our screen engraving is suitable for the highest demands and effective production. The highlight of our system: No external gas is required. This significantly reduces operating costs compared to conventional systems.



OUR COMPANY NETWORK



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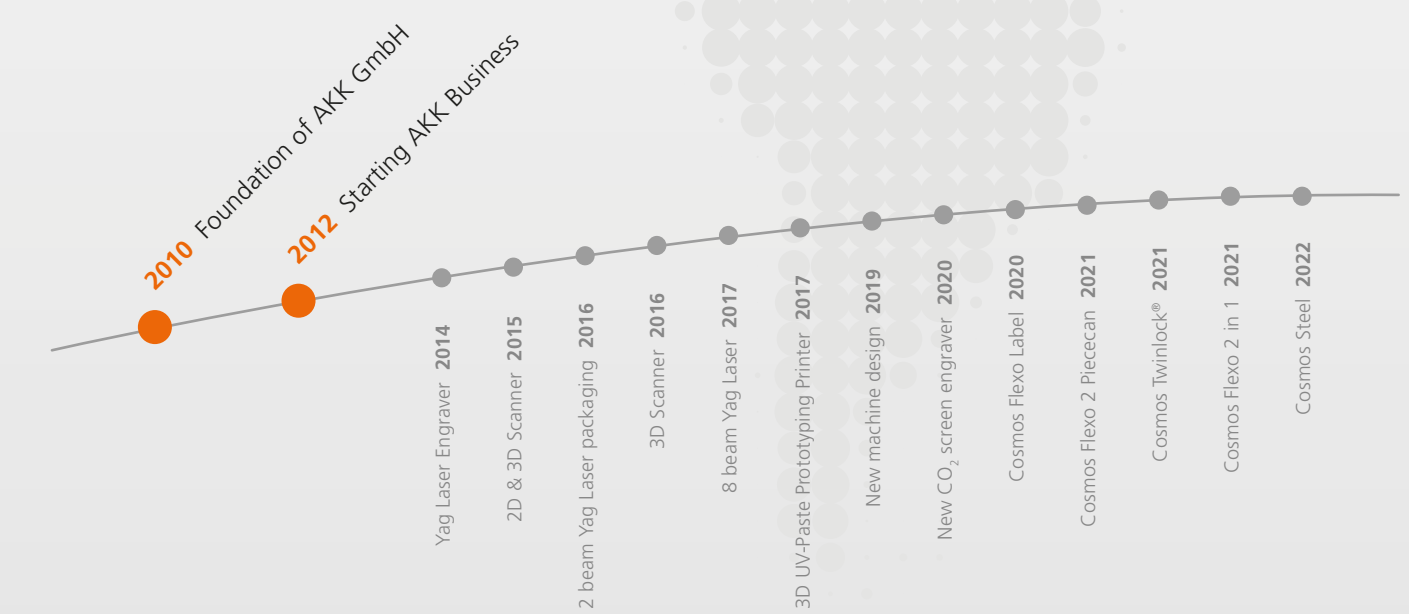
High performance products

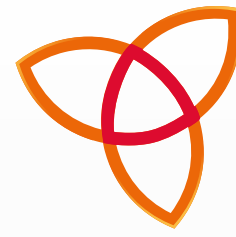
You prefer, we provide.

About

AKK GmbH was founded in 2010. We joined long term laser engraving experience by a consolidation of the team's knowledge of CST GmbH and Kesper Druckwalzen GmbH. Like our philosophy "you prefer, we provide" we find together with our customer the right way of investment. The AKK product portfolio covers any kind of solution to engrave or produce embossing cylinders, plates or molds. Different ways of engraving such as direct laser engraving, etch resist paste, or transfer wax process are provided for each customized application. To fulfill our product

range for the embossing we offer a high quality 3D scanner. For Prototyping we offer machines with up to 1,800 dpi for texture printing. 4 pico liter drops can be printed up to 100 layers. Our newest product is the Fiber Engraver for Flexo special designed for the 2 piececan and packaging business. Engraving resolutions up to 5,080 dpi with 1–2 beams give our customers new possibilities to engrave flexo plates, sleeves and cylinders with up to 200 Lpi. As well a CO₂ Laser for Flexo and Screen Engraving is available.





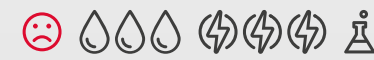
EPDM technology

THE COSMOS FLEXO WORKFLOW COMPARED TO THE POLYMER TECHNOLOGY

STEPS	POLYMER TECHNOLOGY	EPDM TECHNOLOGY
1	DTP workstation	DTP workstation
2	Back side exposure	Plate mounting directly on printing adapter
3	Mask exposure	3D engraving
4	Main exposure	Washing with water, ready for printing machine
5	Developing and washing	
6	Dry plates	
7	UVA surface hardening	
8	UVC surface hardening	
9	Cutting plates	
10	Register holes	
11	Plate mounting on printing adapter	
12	Ready for printing machine	

NEW

More effective and faster than the Polymer!



Elaborate, non-standardized board production based on water. Large consumption of energy resources.

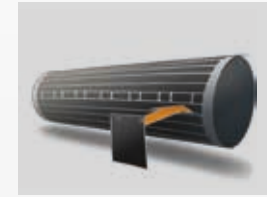


Standardized plate production with repeatability guarantee. Chemical-free and low energy resource consumption.

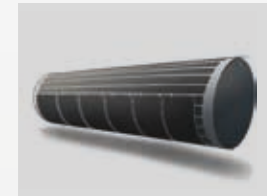
2PieceCan



The magnetic roller is fixed in the machine mounted.



Customized locating pins ensure exact positioning of the EPDM sheet with steel backing. Adhesive tapes are not needed!



Depending on the application, between 1 and 12 EPDM plates can be attached to the magnetic cylinder.



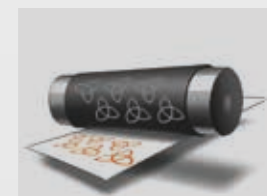
AKK Template Software allows easy assignment of files to EPDM plates. Engraving files can be dragged with the cursor onto the virtually displayed plate on the monitor.



Engraving is completed with up to 5,080 dpi and 650 Watt Laser power.



Easy cleaning with water pressure. Green process = No toxic waste

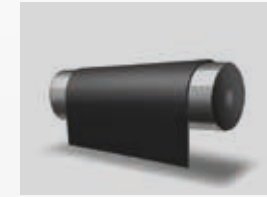


The EPDM plates are now ready for printing. The design will fit perfect.

Label Industry



Maximum flexibility: the printing cylinders of the printing press can be used.



Customized designed vacuum cylinder with register system ensure exact positioning of the EPDM plates. The EPDM plate must be taped on printing cylinder!



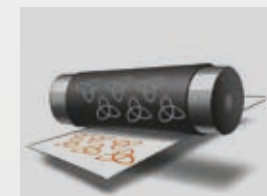
AKK adapts to the needs of the customer. The AKK software offers many setting options and can be reprogrammed for the customer's work flow if required.



The plate gets engraved by 1 or 2 beams with up to 5.080dpi directly on the printing cylinder.



The cylinder must be cleaned. This can be done automatically in a cleaning machine or by hand in a bath.

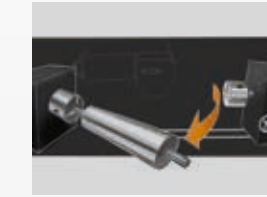


The cylinder is ready for printing. The printing cylinder is used for engraving and printing. No extra mounting of the plate. The 4c design will fit perfect during printing.

Sleeve/cylinder



Maximum flexibility: EPDM plates, dry offset, Sleeves and cylinders can be engraved.



The innovative cantilever system makes it possible to change sleeves quickly when using them directly in the Cosmos unit.



The mandrill can be swivelled and the sleeve can be pushed on or off.



The mandrill with the sleeve is moved back to the starting position, locks into place and the engraving data can be entered.



AKK adapts to the needs of the customer. The AKK software offers many setting options and can be reprogrammed for the customer's work flow if required.



The sleeve / cylinder gets engraved by 1 or 2 beams with up to 5.080dpi.



The sleeve / cylinder must be cleaned. This can be done automatically in a cleaning machine or by hand in a bath.

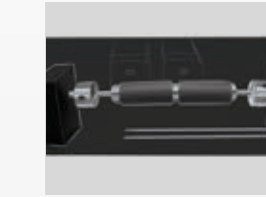


The sleeve / cylinder is ready for printing.

2 in 1



Maximum flexibility: EPDM plates, dry offset, Sleeves and cylinders can be engraved.



The two engraving heads can engrave a plate/sleeve together as one head. This is used for engraving depths > 0.6mm.

Optionally, both heads can be moved towards each other to engrave two plates/sleeves independently at the same time. Here it is important that one head can engrave 0.6mm deep engravings at 100% power.

This means that the 2in1 uses the laser with maximum efficiency and reduces the engraving time by 50%.

tesa®Twinlock

In Cooperation with TESa, our engraving systems can be optimised with Twinlock®. Contact us for an individual solution.



Cosmos Flexo



PRODUCTION

- ✓ Standardized digital plate production
- ✓ No fluctuations within the plate production
- ✓ Extremely hard-wearing sheet material
- ✓ Significantly less waste
- ✓ Very low cleaning and maintenance costs (approx. 5 minutes per day)
- ✓ Printing personnel can procedure clichés printing plates themselves
- ✓ Manufacturing process free of toxic materials
- ✓ Production of low-cost, high-quality printing plates
- ✓ Lower total production costs EPDM vs. polymer

ENVIRONMENT

- ✓ No use of hazardous substances
- ✓ No polluting exhaust gases during production
- ✓ No waste to be disposed of after use
- ✓ No chemical cleaning agents necessary
- ✓ Lower CO₂ consumption during production compared to the polymer plate process

