

***HelioKlischograph K405 -
The Digital Engraver for
the HelioPackaging System***



**Your
Partner
for
Engraving**

HelioKlischograph K405 - Extended Functionality - New Design

Concept

The HelioKlischograph K405 is the digital engraver used in the Helio-Packaging system - the production route for packaging, label and decorative cylinders. The hardware is based on state-of-the-art electronics and standard PC components with Windows NT operating system.

The K405 supports a whole raft of new functions that boost the productivity of cylinder production and guarantee easy operation. The online link also delivers new and effective options for job preparation, production control and automation. This is all reflected in the new design.

HelioKlischograph K405: The Engraver Geared to your Particular Needs

Job Preparation

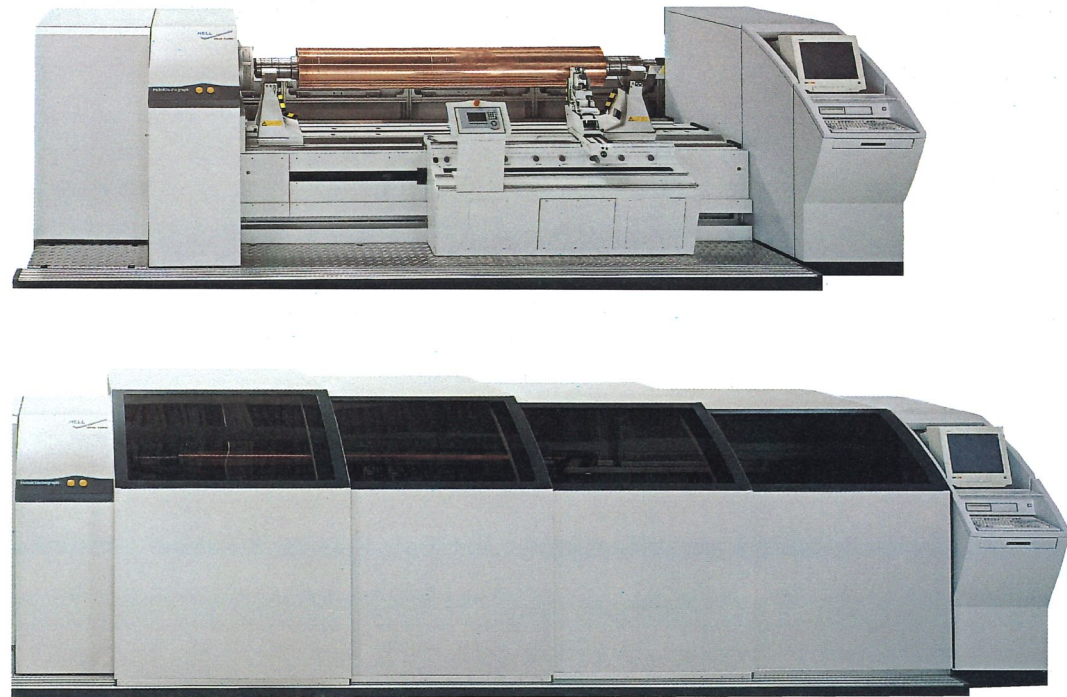
The HelioKlischograph employs digital engraving technology. The data being engraved and the engraving parameters are generated in Helio-Com, the cylinder layout workstation. They are monitored by a Formproof and then passed to the HelioKlischograph K405. Data are transferred online (or offline) and engraving starts immediately without any need for a separate computation process. This reduces the operator inputs required on the HelioKlischograph K405 to a minimum.

HelioPackaging: Reduced Downtimes

User interface

The modern user interface of the HelioKlischograph K405 is based on Windows NT, a standard that has found wide acceptance worldwide. The ergonomic control panel is located on the engraving carriage, from where the operator can control and monitor the entire workflow. This greatly reduces the setup time for the HelioKlischograph K405. Throughout the process, the operator is kept informed of the engraving time remaining.

HelioKlischograph K 405: Simple Operation, Perfect Execution



Safety measures

The safety regulations for rotating machinery have been tightened up significantly over recent years. The HelioKlischograph satisfies all the regulations with ease. To provide optimum protection at all times, the entire machine is fitted with a hood which opens and closes automatically. With the hood closed, the engraving noise is reduced to normal household levels.

Protective Hood: Safety for Man and Machine

The ergonomical control panel is located directly on the equipment carrier.

HelioSprint + Testcut: Greater Engraving Performance

HelioSprint - The High-Speed Engraving System

The HelioSprint engraving system can reach twice the speed of a standard engraver. Despite the impressive increase in engraving rate, the high quality of the engraved cells remains unchanged. Cylinders engraved with HelioSprint are fully compatible with cylinders engraved by standard engraving systems.

HelioSprint: Twice the Engraving Speed

Testcut - Automatic Measurement

The Testcut - up until now initiated manually by the operator - runs automatically on the HelioKlischograph K405. The Testcut is conducted using the values specified by the HelioCom for e.g. highlight and shadow. The cells are measured using a camera secured to the engraving head.

The measured values are sent directly to the HelioKlischograph's control unit where they are compared with the specified values and used for automatic correction of the engraving amplifier settings. The engraving is then started. This function runs automatically without any need for intervention by the operator. (This option is currently not available for the US market.)

Testcut: Shorter Setup Times

HelioRobot - Automation is Gathering Speed

HelioRobot - Automated Loading of Hollow Cylinders

HelioRobot allows you to equip the HelioKlischograph K405 automatically with up to six hollow cylinders in succession. After each fully automatic operation has been completed, the HelioRobot removes the engraved cylinder and mounts the next one ready for the following engraving. The forms to be engraved and the Testcut are predefined at the control terminal and entered in a queue. The cylinders are engraved in succession without any need for manual intervention.

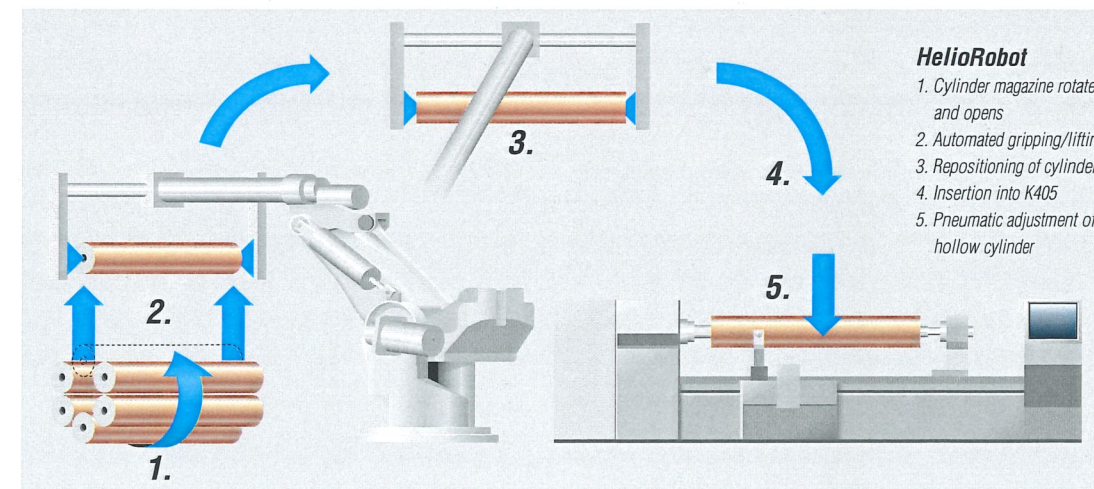
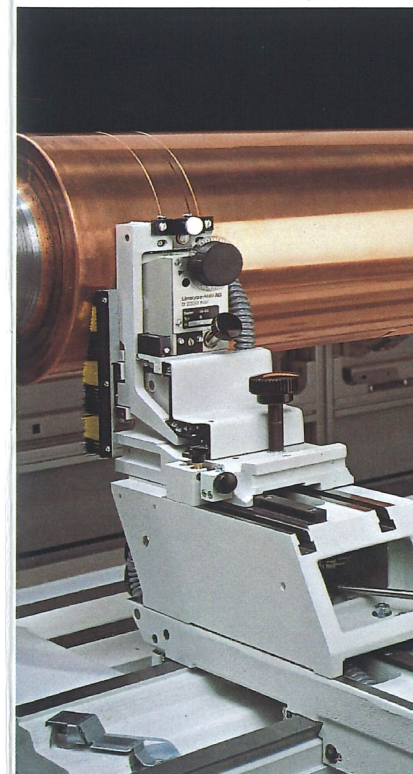
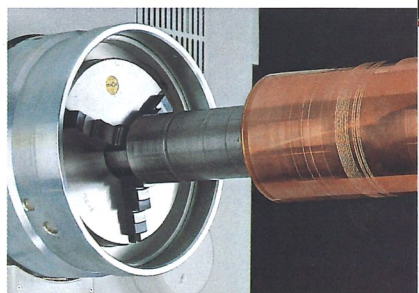
HelioRobot: Automated Engraving of Hollow Cylinders

Mount for Journal Cylinders

There are two possibilities of mounting journal cylinders in the HelioKlischograph K405. The first uses ball bearings, the other a three-jaw chuck which adjusts infinitely to the various journal diameters. Most journal cylinders can thus be fitted using the same cylinder mount.

The Result: Flexible Cylinder Mounting

Mounting of cylinders with different journal diameters is very easy with the three-jaw chuck.



HelioRobot

1. Cylinder magazine rotates and opens
2. Automated gripping/lifting
3. Repositioning of cylinder
4. Insertion into K405
5. Pneumatic adjustment of hollow cylinder

Fast Crossfeed, HelioTwin, Sequence Engraving: Increased Productivity

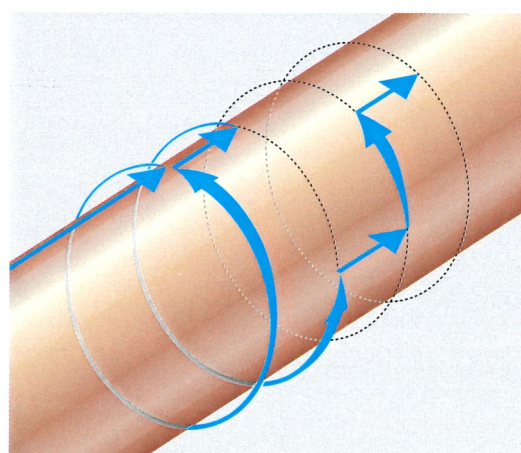
Automatic Fast Crossfeed

In packaging and decorative printing in particular there are many cylinders that need engraving in only a few areas. The information about areas that do not require engraving is sent to the HelioKlischograph K405 along with the engraving data from the HelioCom station. At the relevant positions, the HelioKlischograph K405 switches automatically to fast crossfeed. This cuts the average cylinder engraving time significantly.

Intelligent Crossfeed Control

In addition to fast crossfeed that switches areas not to be engraved, a premature crossfeed is activated as soon as there are no more cells to be engraved in the given circle line. This function further accelerates engraving.

Crossfeed:
Significant Increase
in Productivity



With the intelligent crossfeed, the engraver moves directly to the next polar line if there are no more cells to be engraved in the current line.

With the sequence engraving mode two cylinders can be engraved automatically one after the other.

HelioTwin with Two Gradations

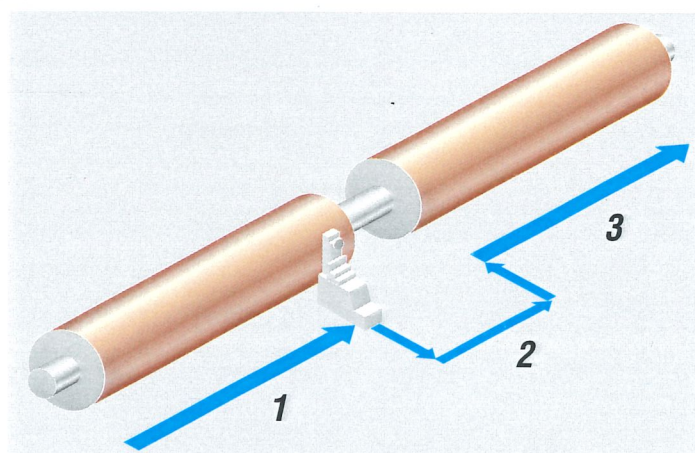
HelioTwin can engrave two cylinders simultaneously using two engraving systems. The two cylinders must have the same circumference and be engraved with the same screen and screen angle. A new feature is that the gradations can differ, however. This option can be used to double the throughput of the HelioKlischograph K405.

HelioTwin:
Twice the Capacity

Sequence Engraving on One Cylinder

HelioCom allows you to pre-program engraving sequences. You can thus engrave on a cylinder in one screen and then engrave a second form on the same cylinder in a different screen. This feature is particularly useful for fine texts and bar-codes, since it is not necessary to engrave the entire cylinder in the fine resolution required for this work.

Sequence Engraving:
Optimum Engraving Quality
in Less Time



With the automatic fast crossfeed, areas not to be engraved can be passed by.

Sequence Engraving on Two Cylinders

Since the HelioKlischograph K405 offers the option of automatically retracting the engraving head from the cylinder and repositioning it, sequential engraving can also be used to engrave two cylinders. Presupposing that both cylinders can be accommodated, first the one cylinder and then the other are engraved with the same engraving system. The cylinders can be of different sizes and can also have different screens and screen angles. This is ideal for unsupervised engraving of long jobs during the night shift. (This function is currently not available for the US market.)

Sequence Engraving:
Higher Machine Utilisation

New Functions - Operation Made Even Easier

The engravings carried out by the HelioKlischograph K405 can be pre-specified in the job preparation stage with HelioDisk. The HelioKlischograph has been specifically designed for automatic engraving. The following functions ensure that work is fast and reliable:

- Gradation Generation

The required gradations can be created with HelioDisk and assigned to the relevant colour.

- Optimum Capacity Utilisation

Since HelioDisk can accurately calculate the engraving time for each cylinder, the distribution of engraving jobs to various HelioKlischographs can be planned in order to ensure optimum utilisation and prevent downtimes.

- Selection of the Ideal Twin Partners

To boost the capacity of the HelioKlischograph K405, the cylinders to be engraved with HelioTwin are matched to each other.

The shrink compensation function reduces printing costs.



- Engraving Comments

A comment can be entered for every colour you want to engrave. This will be displayed to the operator automatically to draw his attention to specific features of the job.

- Automatic Testcut Positioning

The cylinder can be moved automatically to an optimum position for manual cell measurement.

- Mirroring

The K405 can mirror the complete forms supplied by HelioCom. Mirroring is possible in both axial and circumferential directions.

- Shrink Compensation

The shrinkage of the printing stock that occurs between the individual printing units during drying can be compensated in the engraving by performing colour-dependent scale changes.

- Automatic Repositioning of Engraving Head

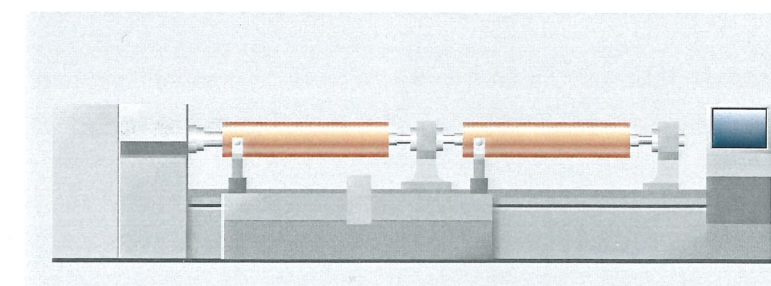
After engraving has been completed, the engraving head returns automatically to the start position.

Variants and Upgrades: Progress Built In

Entry-Level Version

The HelioKlischograph K405 can be configured for every application. In the entry-level version it is equipped with one engraving channel that can engrave one cylinder at a time.

Modular Concept:
Customised Configuration



HelioTwin

For higher throughput, the HelioKlischograph K405 can be fitted so that two cylinders can be engraved simultaneously. This version offers you two options:

- engraving the cylinders one after the other with one engraving channel or,
- engraving both cylinders at the same time using two engraving channels.

HelioTwin:
Twice the Productivity

Upgrading Existing Systems

Existing HelioKlischograph K201, K301, K304 and K305 units can all be upgraded to the K405. This lets you update your HelioKlischograph to the latest technology for automated engraving.

The HelioTwin version of the K405 is very productive, whether it is equipped with one or two engraving heads.

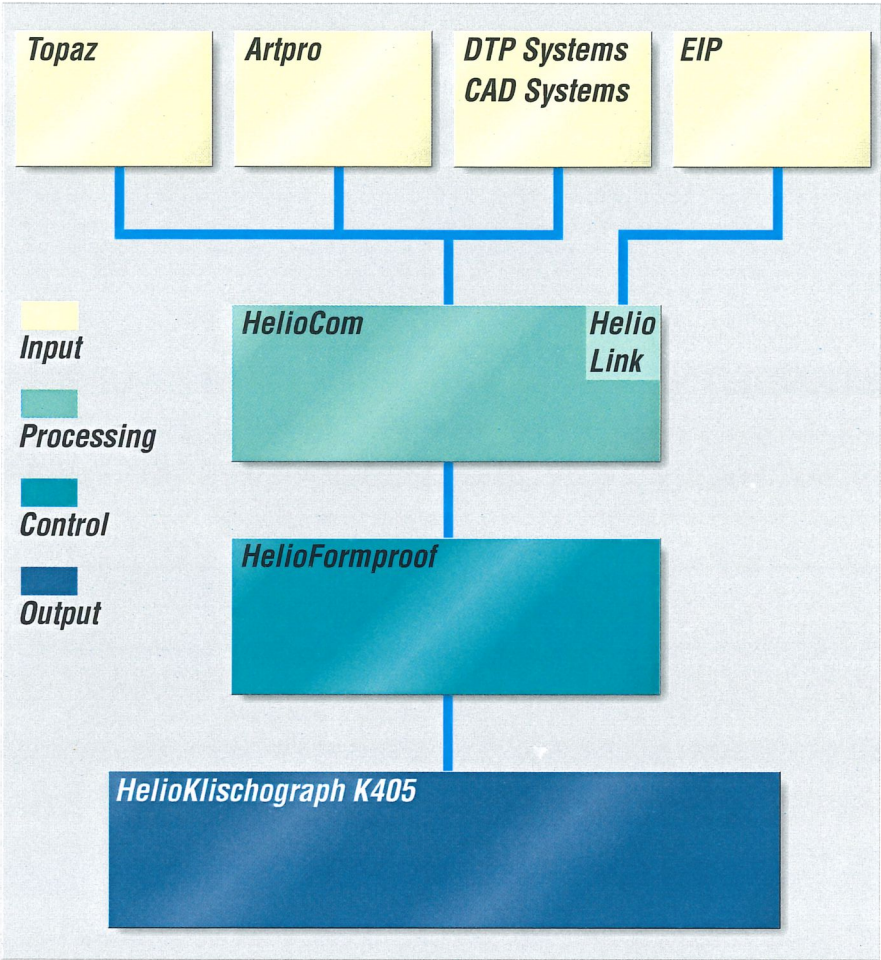
Upgrading:
Investing in the Future

HelioPackaging - The Complete Digital Production Line for Cylinder Engraving

Modular System

HelioPackaging is a modular system. The hardware is based on standards that have found acceptance worldwide. The software is geared to the special needs involved in the production of packaging and decorative cylinders. All components can be supplied and incorporated step by step.

Even better, all installed HelioKlischographs of models K201, K303, K304, K305 and the new K405 can be integrated seamlessly into the Helio-Packaging production line.



Flexible Data Input

A whole host of integrated interfaces enables HelioPackaging to capture data from all standard prepress systems such as Apple Macintosh, PCs, electronic image processing systems and even CAD systems. Data can be transferred both online and offline using all popular data media.

Archived films can be scanned in with digital descreening in Topaz and can then be used for further processing with HelioPackaging.

Reliable Production

Reliability is ensured at all production stations and at all times. This is made possible through online data transfer, the creation of cylinder layouts under visual control and user-oriented proofing options. All parameters and image data can be checked for accuracy, completeness and positioning before engraving starts.

Fast Engraving

The digital workflow with direct engraving of TIFF data shortens the time between the initial design idea and the finished cylinder. The HelioKlischograph K405 itself cuts the effective engraving time significantly through new features such as the high-speed engraving system HelioSprint and automated functions, e.g. 'sequential engraving'.

The aggregate effect is to more than double the productivity of the overall process.

Competitiveness

These developments have boosted the versatility, cost-effectiveness and, consequently, the competitiveness of digital form production.

HelioPackaging:
The Fast Way
from Design to Engraving

Technical Data HelioKlischograph K405

Machine Bed Length		4 m	5 m	6.5 m
Basic Unit				
Weight		4800 kg	5850 kg	7200 kg
Dimensions	Width	4.7 m	5.7 m	7.2 m
	Depth	1.3 m	1.3 m	1.3 m
	Height	1.6 m	1.6 m	1.6 m
Engraving Channels		max. 2	max. 2	max. 2
Cylinder Mount		Pivot, Ball Bearing, Three-Jaw Chuck		

Hood				
Weight		570 kg	760 kg	1000 kg
Dimensions	Width	5.5 m	6.5 m	8.0 m
	Depth	1.8 m	1.8 m	1.8 m
	Height	1.8 m	1.8 m	1.8 m

Electronics Cabinet		
Weight		300 kg
Dimensions		W: 0.80 m x D: 0.85 m x H:1.60 m
Power Consumption (Average)		2.2 kW

Control Station		
Weight		100 kg
Dimensions		0.60 m x 1.58 m x 1.462 m

Operating Console (Alternative to Control Station)		
Weight		80 kg

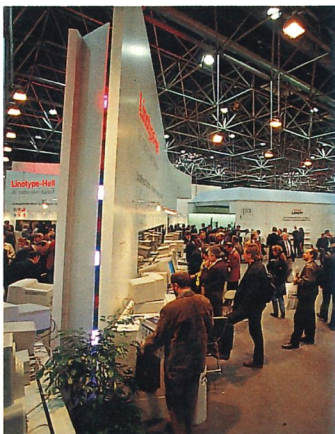
Installation Conditions:			
Space Required: (Incl. Access Areas)	3.9 m x 7.7 m	3.9 m x 8.7 m	3.9 m x 10.2 m
	Distance Electronic Cabinet / Control Station:		max. 15 m
	Distance Electronic Cabinet / Basic Unit:		max. 5 m
Air Conditioning:	Temperature 20 - 24 °C		
	Humidity 35 - 85 %, non-condensing		
Power Consumption:	3N PE AC400V +/- 10 %		
	50 / 60 Hz selectable, 13 KW		

A Little About Us



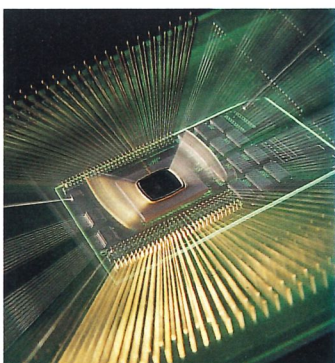
Ask the Experts

HELL Gravure Systems GmbH can offer a wealth of expertise in the production of gravure cylinders. The foundations for this technology were laid at Hell with the development of the HelioKlischograph family. Subsequent advances incorporated the tremendous progress made in text and image processing. As a result, our production systems today are the most versatile ever.



Perfect One-Stop Solution

HELL Gravure Systems is a member of the Heidelberg Group. This ensures that all prepress products can be integrated effortlessly into the digital workflow. As a system provider we can naturally supply you with all these products as a one-stop solution.



Putting your Company's Future First

Our products are well-known for their reliability and durability. Should you ever require assistance, however, you will find our representatives in many countries worldwide. Their number one goal - to ensure the efficiency and reliability of your production.

International Exchange of Experience

As a member of international engraving organisations such as the ERA (European Rotogravure Association) and the GAA (Gravure Association of America), we remain fully abreast of developments in the printing industry at all times. A fact reinforced by our close contact with our customers. This allows us to respond quickly to changing needs and changing trends.

We are Here to Help

Should you require any further information on our products, please do not hesitate to contact us. Our experts look forward to discussing your needs in detail.

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We also have representatives in many other countries of the world. Please ask for details of your local agent.