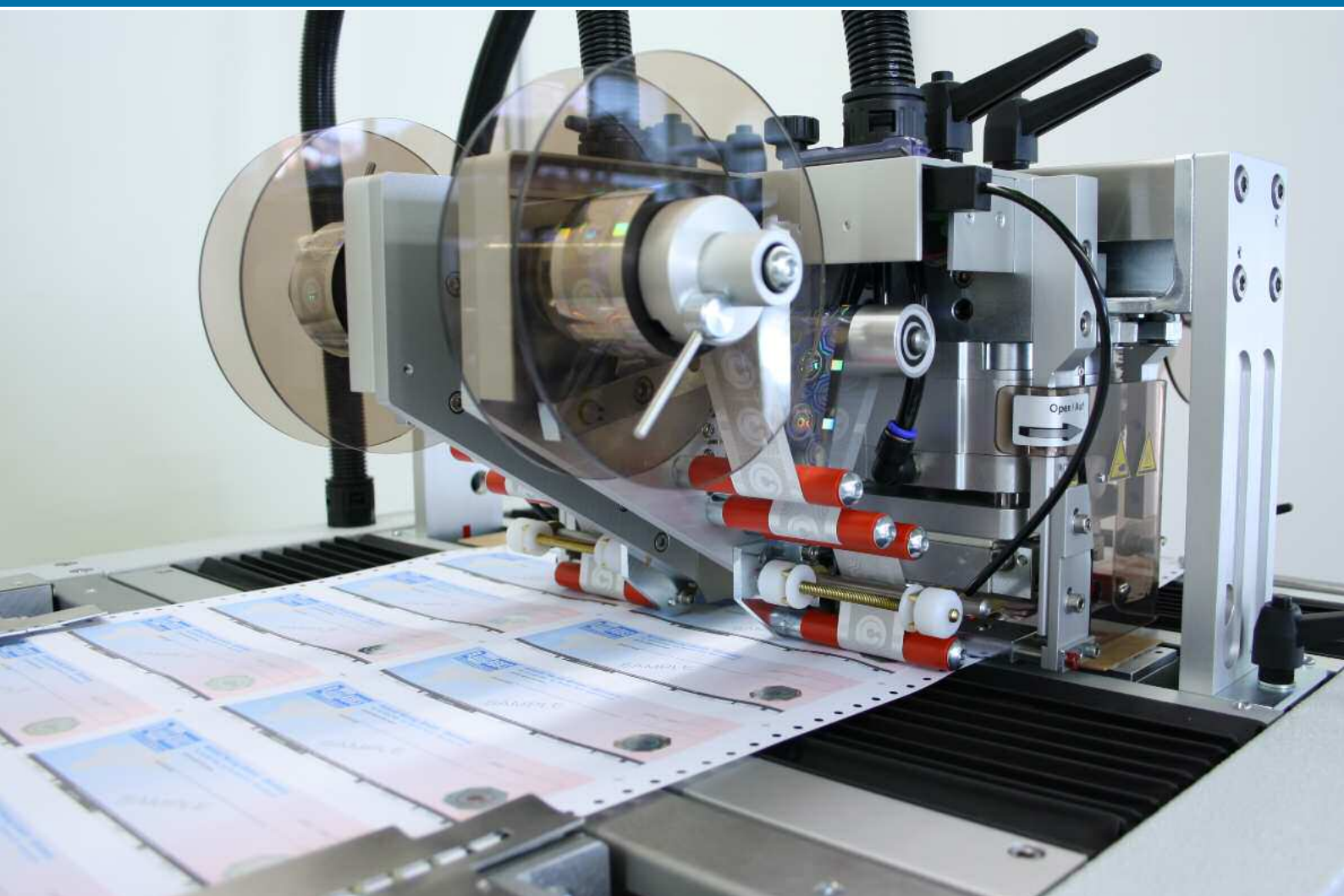




modular | flexible | future-oriented

# RADUS<sup>®</sup> CFS-610



HOLOGRAM | CODING | CONTINUOUS

# RADUS<sup>®</sup> HP3 – HOLOGRAM APPLICATOR

One System – Numerous Applications

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## PRODUCT SECURITY - ANTI-COUNTERFEIT

Product security is understood as those measures that can actively protect a product against piracy and forgery. A differentiation has to be made between an identification feature and a security feature. Identification features are logos and typical designs, for example. They differentiate a product from similar or competing products.

These identification features do not, however, offer any security as far as product copies, i.e. direct forgeries, are concerned. The situation is different with the iridescent HOLOGRAM security feature - optical effects such as movement or colour changes are produced when viewed from different angles. It takes a forger a great deal of effort to produce a counterfeit.

■ This results in the following:

The more difficult and with an effort it is to copy a security feature, the more suitable it is for product security. This type of product respectively document security in the graphic industry is best undertaken using hologram technology that potential forgers do not possess.

Inspired by this challenge, at the start of the 1990s our company developed the first hot stamping hologram applicator for continuous forms to secure vehicle title documents for an European government security printer.

The continuous growth in the market for product security and protection against forgery led to the go-ahead for collaboration with a world's leading hologram manufacturer in 1995. By combining the experience of both companies, we developed the HP3 applicator module for security holograms, which is still unrivalled in precision and flexibility, in spite of its numerous imitators.

## RADUS HP3 – THE HOLOGRAM APPLICATOR

### ■ One system – various applications

The sophisticated design of the HP3 hologram applicator can be used in a wide range of applications in the security-printing industry, from hologram applications on sheet-fed and continuous forms, to fitted OEM modules for ticket, visa and passport machines.

### ■ Benefit from our partnership!

Through the collaboration with leading hologram manufacturer, our customers around the world have skilled partners on hand for their security holograms and their application systems.



# RADUS<sup>®</sup> CFS-610

## HOLOGRAM APPLICATOR FOR CONTINUOUS FORMS

Customized Configurations – Any Time Extendibility

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### FUTURE-PROOF BY MODULAR EXTENDIBILITY

The RADUS CFS-610 provides highest efficiency and output along with its famous reliability at most various applications. Whether hologram application or numbering and print personalization on continuous forms – the RADUS CFS family of Arnold Herzig GmbH offers superior solutions, answering also tomorrow's market needs.

One-stop made in Germany!

- In-house research
- In-house development
- In-house design
- In-house engineering
- In-house programming
- In-house manufacturing
- In-house assembly

Thousands of RADUS-SYSTEMS are in use in governmental and private security printing houses all over the world. RADUS-SYSTEMS perfectly combine future-orientated modularity with unsurpassed durability, proven by more than 50 years of experience.





## SECURITY DOCUMENT ON HIGHEST STANDARDS

The base version of RADUS CFS-610 hologram applicator with the hologram hot stamping head HP3 covers all requirements in terms of hologram application on pre-printed continuous forms like business forms, computer forms, event tickets, gift vouchers, certificates etc. but also on high-security documents like bank drafts, cheques, visa and other ID related documents.

Due to its modular construction, the machine can be extended by retrofitting with increasing demand up to four hologram application heads, also at a later date. This enables the processing of 4 web-lines across simultaneously.

### HP3 hot stamping hologram applicator

The HP3 hologram application head contains the hot stamping press with the replaceable stamping die and the associated fine adjustment as well as the foil feed. In this way, the complete hologram application system can be moved across the paper direction of run in a quick adjustment for positioning. There is no complex conversion of the stamping die or tracking of the foil; jobs can be set-up in shortest time.

The hologram embossing unit work electronically / pneumatically and are monitored by the machine's process control. Because of its high flexibility the HP3 applicator is able to apply registered holograms, random pattern holographic foils and hot foil logos up to a size of 900mm<sup>2</sup>, further each hot stamping tool can be addressed separately. In addition the powerful HP3 hologram application head is also suitable for applying of scratch-off foils.

### Print mark recognition with unique „on the fly“ image positioning

A multistage tension control in the hologram track and an accurate guidance guarantee precise hologram feed. After registration mark detection „on the fly“, direct at the stamping die, the foil with the holographic image is positioned using electronics only (Resolution 0.05mm); there is no need for the time consuming manual fine adjustment of the photocells for image positioning. The image position of the hologram under the stamping die can be easily adjusted via the display - even during ongoing stamping operation.



# RADUS<sup>®</sup> CFS-610

## HOLOGRAM HOT STAMPING SYSTEM FOR CONTINUOUS FORMS

Highest Functionality - Lowest Life Cycle Costs

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### Tractor system

The tractor system processes fanfold continuous forms up to a width of 19" (23" optional) including sprocket-holes and operates in the base from pack to pack. Depending on the application, the system can be operated via contactless loop switches directly with un- and rewinding units. The processor-controlled system with its two well dimensioned tractors provides a regular paper transport and guidance of the web. The adjustable processing speed of the web allows an individual adaptation to the paper quality. Short distances between tractor system and printing station ensure less paper waste in the machine setup.

### Operating process

By the tractors the web is moved to the work station. Here, one or two HP3 hot stamping hologram heads can be used. The form is stopped under the hologram applicator heads at the required position; stamping then takes place. The operator selects whether one or both heads are used for hologram stamping at the position. After hologram application, the form is moved to the next position. In this way, each form can be stamped in 25 freely-selectable positions, e.g. for tickets, tax labels or cheques arranged one above the other. The completed form is passed to the adjustable delivery.

### Options

If necessary, further work stations can be retrofitted. Here too, one or two HP3 hot-stamping hologram heads or SU numbering heads can be used. With up to four hologram heads, even smaller product sizes at forms such as tickets or small tax labels can be processed with up to four lines across the web.

### Labels

The hot stamping head HP3 is also capable for the application of registered holograms on self-adhesive labels. For processing these label rolls, motorised un- and rewinding units are available.

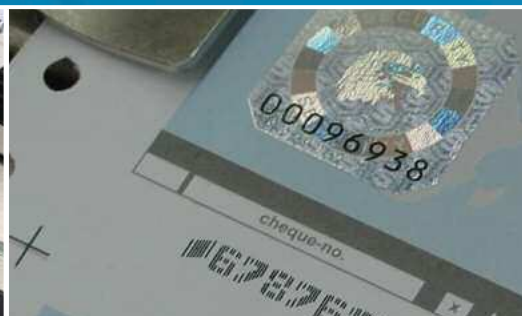
### Numbering extension stations

The machine can be extended by further working stations on demand, also at any later date. Available are solutions for numbering, coding, hologram application and personalization purposes.

Image: Hologram with hot stamping numbering (overprint)

### Pinless transport

The transport system for products without sprocket holes processes also narrow web from 50mm width. Product detection is done by fork light barriers or print mark readers at a resolution of 0,1mm.





## SPECIFICATIONS

### Functions

- \_Processing of continuous forms with sprocket holes
- \_Processing of web forms without sprocket holes (optional)
- \_Basic system from 1 x hologram applicator head HP3
- \_Expandability up to 4 x hologram applicator head HP3
- \_Expandability with numbering station CFS-601

### Basic Model CFS-610 with HP3 Hologram Applicator

Controlling	Microprocessor
Operation	Fully automatic / intermittent
Controll desk	Display and keyboard

### Transport System (remaliner pin feed)

Form width	3" - 19" incl. sprocket holes (opt. 23") / central adjustment
Form length	1/6" - 33"
	1/6", 1/8", and 1/10" feed division
Resolution	1/120"
Paper weight	from 40g/m <sup>2</sup> - form sets up to 400g/m <sup>2</sup>

### Transport System (pinless)

Form width	50mm - 500mm
Form length	10mm - 800mm
Resolution	0,1mm
Paper weight	max. approx. 400g/m <sup>2</sup>
Print mark	fork light barrier / print mark reader

### HP3 Hologram Applicator

Foil size	Width 55mm, max. diameter $\phi$ 150mm, core 1" und 3"
Stamping size	900mm <sup>2</sup> max., width max. 50mm
Stamping die	Interchangeable, straightened brass or etched magnesium clichés on brass carriers
Temperature	70° bis 250°C
Registration mark	Optical sensor direct at the stamping die
Foils	Registered security holograms - metallized and demetallized, KINEGRAM®, random pattern holographic foils, scratch foils, hot stamping foils
Foil separator	Fully automated cutting knife for the separation of the foil and paper after the stamping operation, can be switched off

### Connections

Air connection	4 - 8 bar, oil-free and dry
Air consumption	0,2Ni / per HP3-head
Electrical Con.	single phase 220-240V (110V), 50/60Hz, consumption 1,0kW
Dimensions	Length 1550mm (approx. 2300mm with 4 HP3-heads) Depth 1000mm Height 1500mm
Weight	approx. 350kg (depending on configuration)

### Performance

Continuous forms 12" 1up - max.	12.500 holograms /h
Continuous forms 3" 1up - max.	15.000 holograms /h
Continuous forms 3" 4up - max.	60.000 holograms /h

### Options

Numbering and coding extension CFS-601 (carbon / inkjet / laser)
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### Hologram Applicator Head HP3

The complete hologram application head HP3 can get positioned across the paper direction within seconds. There is no need for the time consuming repositioning of the stamping die and the foil tracking.

### Inline Operation without Loop Switch

The extension modules of the RADUS CFS series can be directly connected. As no loop switches are required, a space-saving arrangement with small footprint results. Furthermore there is no need for an additional paper tractor, providing a high cost benefit.

### Security Hologram

Iridescent HOLOGRAM security feature - optical effects such as movement or colour changes are produced when viewed from different angles.



# ARNOLD HERZIG GMBH

## Experience and Innovation

For over 50 years, our company has manufactured series and customized machines for print processing and has been a long established supplier to governmental and private security printing companies. Innovative and future-oriented concepts, in-house development and the production of highly-efficient and reliable machines explain the high degree of brand awareness for RADUS around the world.

The Arnold Herzig GmbH manufactures machines for the following applications:

Hologram hot stamping, crash numbering and coding, labeling, RFID chip encoding and variable data print personalization by high-resolution UV-DOD inkjet, laser and thermo transfer.

### Product lines

RadusCard: Chip encoding and print personalization for RFID smart cards (single cards ISO / ID-1)

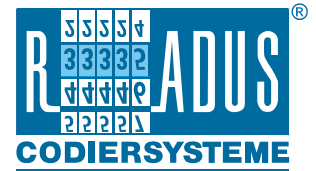
RadusTag: Chip encoding and print personalization for RFID smart labels and tickets, roll-to-roll

CFS series: Continuous forms pack-to-pack and roll-to-roll

SV series: Sheet-fed systems from ticket size to 50x70cm

SU series: Imprinting and numbering heads for use on RADUS systems and as OEM device

HP series: Hologram applicator - hot stamping heads for use on RADUS systems and as OEM device



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