

# TECHNOLOGY

# HYBRID -SERIES

<b>Hybrid</b>	<b>HYBRID 90-2</b>	
<b>Parts no.</b>	*01 00 95	
<b>Ink residue pick-up system</b>	integrated	
<b>Single cycle</b>	yes	
<b>Multiple printing</b>	yes	
<b>Continuous run</b>	yes	
<b>Piece counter</b>	yes	
<b>Variable speed control</b>	yes	
<b>Cycles/hour</b>	<b>max.</b>	1.200
<b>Ink cup/doctoring cup</b>	<b>∅ mm</b>	2 x 90
<b>Variable doctoring contact pressure</b>	yes	
<b>Cliché band "microflex"</b>	<b>mm</b>	L 28.000 x B 120
<b>Print image size max.</b>	<b>∅ mm</b>	85
<b>Variable tampon stroke onto workpiece</b>	<b>mm</b>	10 - 160
<b>Variable tampon stroke onto cliché</b>	<b>mm</b>	10 - 70
<b>Tampon installation height max.</b>	<b>mm</b>	95
<b>Force of pressure</b>	<b>N</b>	1.170
<b>Drive</b>	electropneumatic	
<b>Connected load</b>	<b>kW</b>	1,2
<b>Power supply</b>	<b>V/phase</b>	230V/1/N/PE
<b>Interface</b>	D-SUB 37-pole	
<b>Power frequency</b>	<b>Hz</b>	50-60
<b>Control</b>	PLC	
<b>Control voltage</b>	<b>V/DC</b>	24
<b>Prefuse</b>	<b>A</b>	16
<b>Pneumatic supply fine filter 5 µm</b>	<b>bar</b>	6
<b>Air consumption</b>	<b>NL</b>	8
<b>Width</b>	<b>mm</b>	1.034
<b>Depth</b>	<b>mm</b>	1.215 / **1.755
<b>Height</b>	<b>mm</b>	TT 1.085 / *TS 1.925
<b>Weight</b>	<b>approx. kg</b>	TT 420 / *TS 530

\*= Floor standing model, \*\*= Required space for pulled-out printing unit

### Scope of supply

- toolkit
- paper cups / 10 pcs.
- 2 brushes
- spray bottle 500 ml
- 2 ink/doctoring cups
- 1 ink cup holder
- 2 thrust collars
- 2 tampon couplings
- 2 tampons, 6 Shore-A, silicone material 03
- 1 tampon cleaning

### Accessories & Options

- Rotary index table
- Light curtain
- x-y cross support
- 2-colour ink/doctoring cups
- Workpiece sliding unit
- Control extension (also an interface to the external feeding of cliché data)
- Bench model
- Control extension, e.g. Ethernet connection
- Beam source at choice (cliché production)

### Dealer:



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<b>Cliché engraving</b>	<b>with integrated laser source "SK 60"</b>	
<b>Laser source</b>	Pulsed Yb:YAG fiber laser ,1064 nm, air-cooled	
<b>Q-switched</b>	20-100 kHz	
<b>Output power</b>	5 W / CW	
<b>Ambient temperature</b>	+5°C up to +35°C, relative air humidity < 85%	
<b>Heating period</b>	<10 min.	
<b>Deflection unit</b>	Galvo head, standard with aperture ∅ 7 mm	
<b>Optics</b>	Focal length f-160 mm	
<b>Marking area approx.</b>	120 mm x 120 mm	

### Software

graphical, Windows® oriented user interface, no editor, i.e. toolbar and context menu, incl. barcode module, code 39, 2 from 5 IL, 128 A-B-C, DataMatrix, standard data import: ai, .plt, Vektor format, variable text elements, i.e. date and time, series no., external texts, integrated database logging, option: external control via TCP/IP protocol or RS 232. Language version: Unicode compatible, German, English, French, Spanish, Portuguese, Italian, Turkish, Japanese, Chinese

### Supply unit

19" component design with coded plug-in connection, front-end PC, WIN XP, 17" TFT screen and keyboard, standard interface 8-Bit selection 24 V

<b>Power supply</b>	230V/1/N/PE (AC) +/- 10%
<b>Power frequency</b>	50-60 Hz
<b>Connected load</b>	1,0 kW



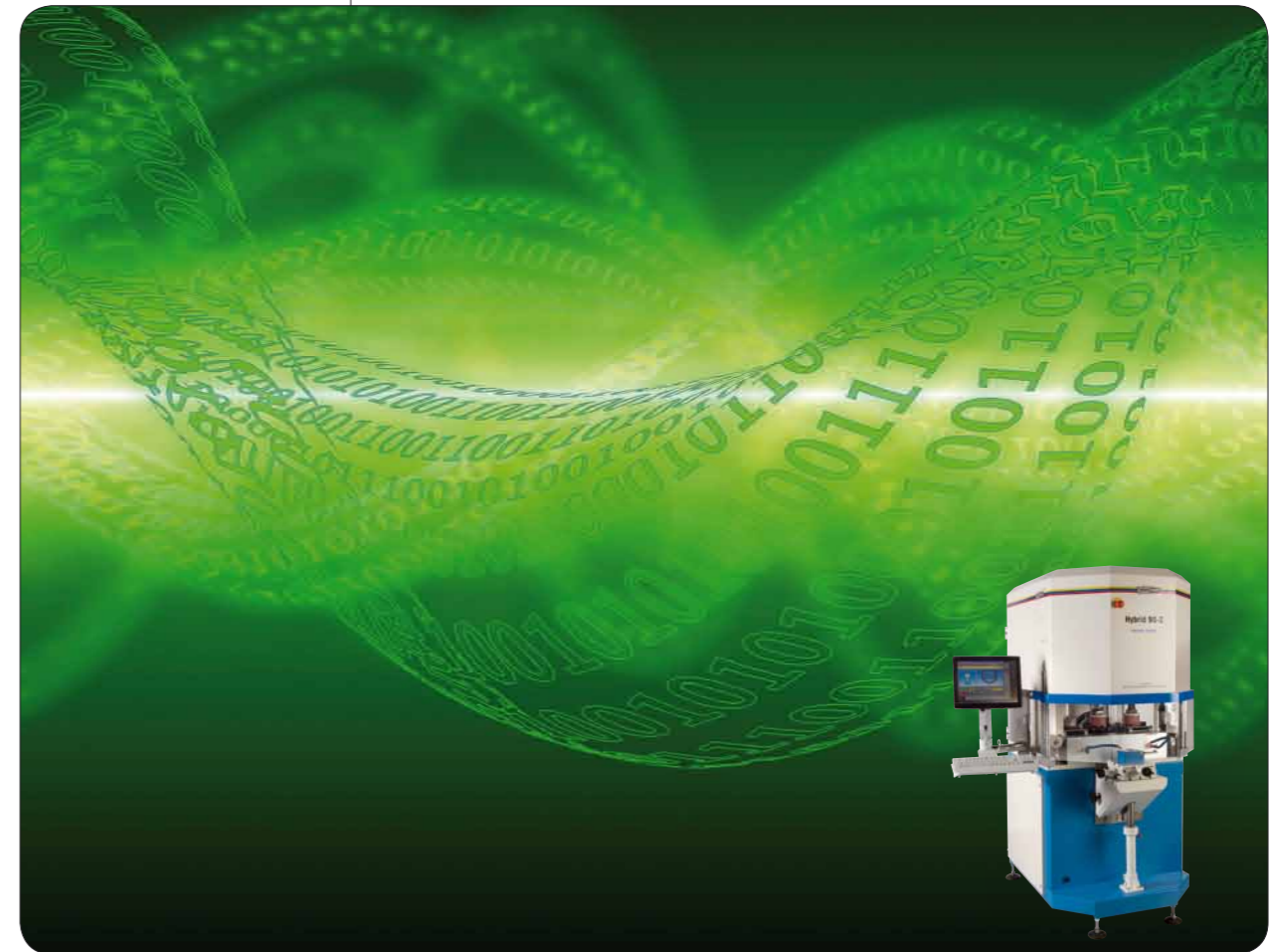
**TAMPOPRINT® AG**  
 Lingwiesenstraße 1  
 70825 Kornthal-Münchingen, GERMANY  
 ☎ +49 7150 928-0  
 Fax: +49 7150 928-400  
 E-Mail: info@tampoprint.de  
**"Ventes et Affaires Françaises"**  
 ☎ +49 7150 928-144  
 Fax: +49 7150 928-432  
 E-Mail: ventes@tampoprint.de  
 http: www.tampoprint.de

**TAMPOPRINT® INTERNATIONAL CORP.**  
 1400 26th Street, Vero Beach, FL 32960, USA  
 ☎ +1 772 778-8896, 800 810-8896  
 Fax: +1 772 778-8289  
 E-Mail: sales@tampoprint.com  
 http: www.tampoprint.com

**TAMPOPRINT® IBERIA S.A.U.**  
 c/Caspe 127-135 local B, 08013 Barcelona, SPAIN  
 ☎ +34 93 2327161  
 Fax: +34 93 2471500  
 E-Mail: tampoprint@tampoprint.es  
 http: www.tampoprint.es

# HYBRID

# TAMPON PRINTING MACHINES



- TAMPON PRINTING MACHINES
- ACCESSORIES
- SERVICE

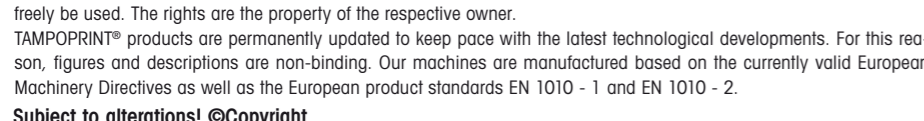
**Standard tampon printing machine for minimum-size series production**

**Variable, frequently changed data amounts without cliché change**

**2-colour printing, cliché production integrated**

*technologies for your future  
 made in germany*

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ORIGINAL



Tampon printing machines  
 ALFALAS® Laser Systems  
 Automations

**Tampon printing in minimum-size series**

Smart machine concept for economical production and clean fingers.

ABB production example:

Minimum amounts: "Approximately 6.000 production orders with lot sizes down to five pieces run through our production".

**Hybrid replaces five conventional tampon printing machines**

Having around 6.000 of these small orders per year has up to now meant producing film originals 6.000 times, producing clichés and replacing them, adjusting fits, cleaning and outsourcing and storing them. "This meant not only a lot of effort and expense, but also placed strain on the personnel, if only due to the unavoidable dirt produced. Today, the work can basically be carried out in a white shirt", states Marco Kampmann.

He also names a further quality-determining effect: "Errors due to insertion of incorrect clichés - a problem not to be underestimated with so many variants - are excluded here. And thanks to barcode readers and direct connection to the SAP system, incorrect information to the machine controls such as number confusion are no longer possible".

Excerpt from: [www.kunststoff-magazin.de](http://www.kunststoff-magazin.de), KM August 2010

Reference: ABB Switzerland  
Hybrid replaces five conventional machines



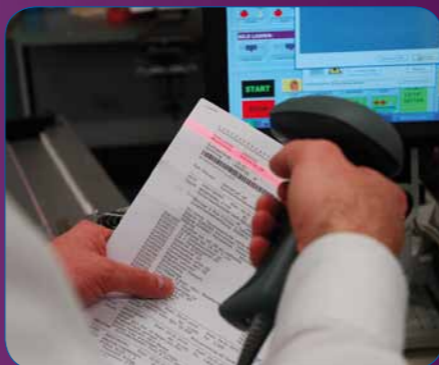
# WITH THE SPEED OF LIGHT TO THE TARGET



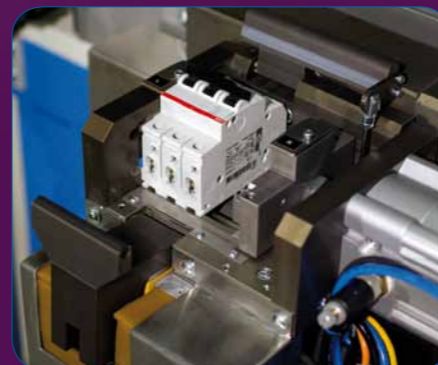
The data set for the printed images belonging to the product is loaded via SAP



Read-in of the barcode from the order papers on the machine controls



Multi-sided printing of circuit breakers in one working step



Rotary device autom. positions workpieces for double-sided tampon printing process.



Detail view: rotary device



**MADE IN GERMANY**



Stewable printing unit



Integrated laser unit for production of printing clichés

**Integrated cliché production**

using laser engraving. The future in the tampon printing process.

The tampon printing machine "HYBRID 90-2" combines the concept of the "hermetic" tampon printing with the flexibility of the digital data for cliché production. Thanks to the software "TP\_alfa" which was specifically developed for this purpose, the cliché production takes place in the "Hybrid 90-2". Automatic changeover of print motifs takes place in a matter of seconds. A multi-colour print motif will be directly produced with precise register setting.

The "HYBRID 90-2" is based on the well-tried "V-DUO" principle with an ink/doctoring cup size Ø 90 mm.

Our in-house developed "microflex" cliché band played an important role to make this concept possible. It has a high engraving quality and mechanical stability.

**Comparison**

Hybrid Cliché production by means of laser engraving	Production of Magnet-screen clichés
1 Prepress	1 Prepress
2 Setup laser software	2 Creation of film
3 Cliché engraving	3 Mounting of film
4 Printing	4 Exposure
-	5 Washing out
-	6 Curing
-	7 Mounting of cliché
-	8 Adjusting of register
-	9 Printing