# **HYBRID**

# **PAD PRINTING MACHINES**



Standard pad printing machine for minimum-size series production

Ideal for variable, frequently changed data amounts

2-colour printing, cliché production integrated

### The future in the pad printing process

Integrated cliché production using laser engraving. The pad printing machine HYBRID 90-2 combines the concept of the "hermetic" pad printing with the flexibility of the digital data for cliché production. Thanks to the software TAMPOPRINT 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  $\emptyset$  90 mm.

Our in-house developed microflex cliché band playes an important role making this concept possible. It possesses a high engraving quality and mechanical stability.

The control of the HYBRID 90-2 iTAMPOPRINT is already prepared for the use of the software iTAMPOPRINT. This offers the possibility to connect the pad printing machine for example to an ERP system in order to allow a complete data management. In addition, it is possible to process external information of camera systems, testing devices etc.



Reference: ABB Switzerland HYBRID replaces five conventional machines

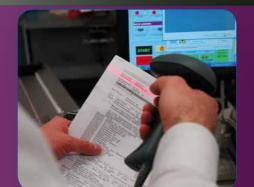


# WITH THE SPEED OF LIGHT TO THE TARGET

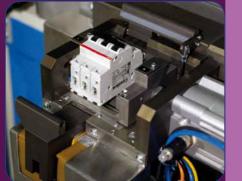


The data set for the printed images belonging to the product is loaded via SAP

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



Multi-sided printing of circuit breakers in one working step





# HYBRID 90-2 with option iTAMPOPRINT replaces five conventional pad printing machines

ABB production example (minimum amounts):

"Approximately 6.000 production orders with lot sizes down to five pieces run through our production". 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, KM August 2010





Slewable printing unit





Integrated laser unit for productio of printing clichés

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		

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

Detail view: rotary device





### TECHNOLOGY

### **HYBRID -SERIES**

HYBRID		HYBRID 90-2	HYBRID 90-2 Intaglio	HYBRID 90-2 ITAMPOPRINT
Item No. Floor standing / Integrated model		01 00 95	01 00 97	01 00 96
Ink residue pick-up system		integrated	integrated	integrated
Single cycle		yes	yes	yes
Multiple printing		yes	yes	yes
Continuous run		yes	yes	yes
Piece counter		yes	yes	yes
Variable speed control		yes	yes	yes
Cycles / hour	max.	1.200	1.200	1.200
Ink/doctoring cup size	Ø mm	2 x 90	2 x 90	2 x 90
Variable doctoring contact pressure		yes	yes	yes
Cliché band microflex 2x	mm	L 28.000 x B 120	L 28.000 x B 120	L 28.000 x B 120
Print image size max.	Ø mm	85	85	85
Number of colours		2	2	2
Variable pad stroke onto workpiece	mm	10–160	10–160	10–160
Variable pad stroke onto cliché	mm	10–70	10–70	10–70
Pad installation height max.	mm	95	95	95
Force of pressure	N	1.170	1.170	1.170
Drive		electropneumatic	electropneumatic	electropneumatic
Connected load	kW	1,5	1,5	1,5
Power supply	V/phase	230V/1/N/PE	230V/1/N/PE	230V/1/N/PE
Interface		D-SUB 37-pole	D-SUB 37-pole	D-SUB 37-pole and Ethernet connection
Power frequency	Hz	50–60	50–60	50–60
Control		PLC	PLC	network-compatible PLC for OPC + iTAMPOPRINT
Control voltage	V/DC	24	24	24
Prefuse	A	16	16	16
Pneumatic supply fine filter 5 µm	bar	6	6	6
Air consumption	NL	8	8	8
Width	mm	1.034 / 1.9621)	1.034 / 1.9621)	1.034 / 1.9621)
Depth	mm	1.215 / 2.6501)	1.215 / 2.6501)	1.215 / 2.6501)
Height	mm	1.925 / 1.085	1.925 / 1.085	1.925 / 1.085
Weight ap	prox. kg	530 / 420	530 / 420	530 / 420

1) = operating range

### Scope of supply

- Toolkit
- Paper cups
- Stirring spatula, metal
- Spray bottle 500 ml
- Ink/doctoring cups
- Ink cup holder
- Thrust collars Pad couplings
- Printing pads
- Pad cleaning Software iTAMPOPRINT light

### **HYBRID 90-2 ITAMPOPRINT:**

- SIEMENS OPC server
- Recipy administration
- Preparation for external data connection
- Software iTAMPOPRINT

### **Accessories & Options**

- Rotary index table
- Light curtain
- x-y cross support
- 2-colour ink/doctoring cups
- Workpiece sliding unit
- Bench model



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TAMPOPRINT products are permanently updated to keep pace with the latest technological developments. For this reason, figures and descriptions are non-binding. Our machines are manufactured based on the currently valid European Machinery Directives as well as the European product standards EN 1010 - 1 and EN 1010 - 2.

### Subject to alterations! @Copyright



### TAMPOPRINT® AG

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70825 Korntal-Münchingen, GERMANY

Cliché engraving with integrated laser source SK 62

+5°C up to +35°C,

aperture Ø 7 mm Focal length f-160 mm

120 mm x 120 mm

Language version: German, English, other languages upon request.

relative air humidity < 85% Galvo head, standard with

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.

19" component design with coded plug-in connection, front-end PC,

WIN 10 (64 Bit), touch-screen display and keyboard, standard interface 8-Bit selection 24 V

air-cooled 20-80 kHz

< 20 W

Laser source

Frequency **Output power** 

**Ambient** 

Optics Marking area

approx.

Software

Supply unit

temperature

**Deflection unit** 

Pulsed Yb:YAG fiber laser, 1064 nm,

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