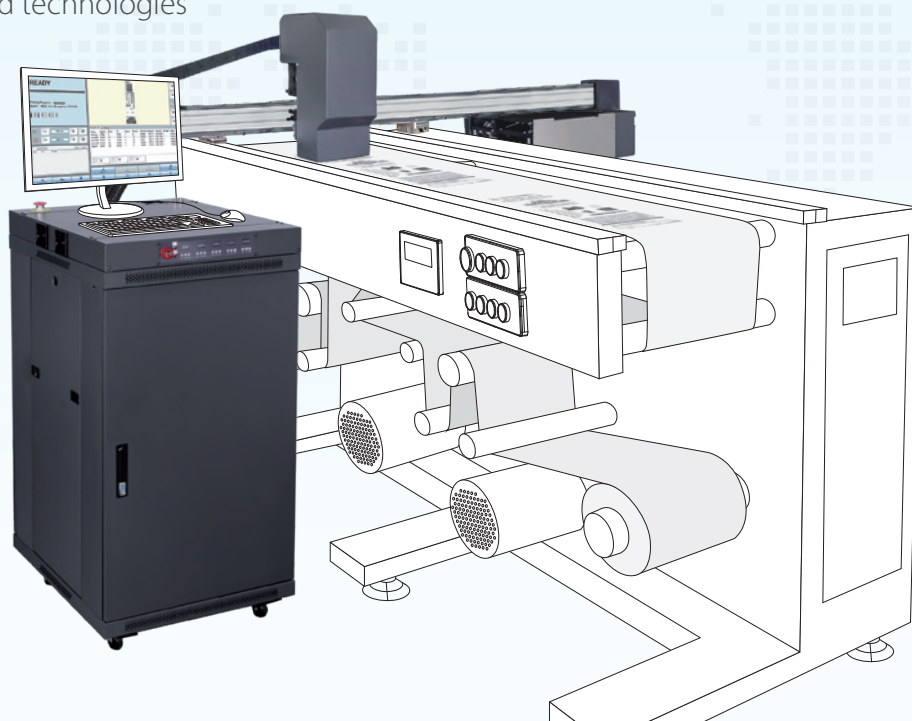


# Morpho

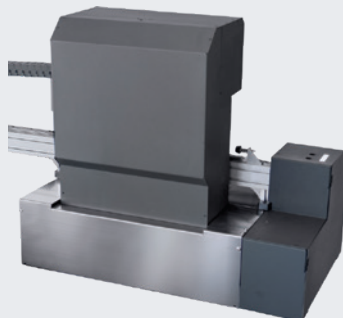
## High Performance Inkjet Printing Engine for VDP

### 108-PWC/108D-PWC/216-PWC/432-PWC

- Monochrome
- Based on Kyocera KJ4 print heads
- UV, water-based dye, pigment, or MICR ink
- Double speed up to 400m/ min. (1312ft/ min.)
- Full automatic print head cleaning system
- Involving multiple patented technologies



Morpho 108-PWC



Morpho 108D/ 216-PWC



Morpho 432-PWC

As a developer and manufacturer of industrial inkjet solutions established in 1988, Amica has been specializing in industrial image graphics and inkjet technologies for over 27 years. As early as 2008, Amica launched its first single-pass inkjet print engine for printing books and packaging boxes. Now Amica has been granted over 200 patents worldwide. The majority of Amica's products are compliant with CE or TUV standards carried out in Europe, or cTUVus standards in North America.

**Morpho-PWC Series** is available in 4 models – 108-PWC/ 108D-PWC/ 216-PWC/ 432-PWC – providing print widths of 108mm, 216mm or 432mm respectively at standard or double speed. All Morpho models are monochrome inkjet printing systems for variable data printing (VDP) applications.

Utilizing Kyocera KJ4 print heads, the high speed and high resolution piezo inkjet print head technology, Morpho-PWC Series meets the increasing and rigorous demands for printing barcodes, serial numbers, dates, logos, images, time, and texts on coated or uncoated substrates.

Morpho-PWC Series is suitable for web printing, sheet-fed printing, and both online and offline targeted marking printing. The modular design offers greater flexibility to combine the Morpho with different technologies, such as feeding, UV curing, camera inspection, or host PC. Moreover, different head modules of Morpho-PWC and Morpho Color-PWC can be combined to make a more complicated printing system for different print widths and print positions.

Morpho-PWC Series prints clear and sharp edges at a high resolution of 600×600dpi. Texts as small as 4pt is perfectly legible.

#### **Morpho-PWC Series includes:**

- *Data Imaging Board*
- *Printing Control Cabinet*
- *Print Head Module*
- *Automatic Print Head Maintenance Module (PWC Module)*
- *MagicPage VDP Software (Optional)*
- *Professional Printer Control Software (PCS Pro)*
- *Aluminum mounting cross frame (Optional)*

## Technical Specifications

### **Data Imaging Board**

- The Data Imaging Board is installed on PC. It connects to the PC motherboard via PCIe interface.
- It supports sustained 240M Bytes/ Second from 1 to 16 heads in grayscale mode.



Data Imaging Board

### **Printing Control Cabinet**

- Automatic ink supply system with a large 3 liters ink reservoir
- Ink Meniscus Pressure Control System with the digital display
- Dimensions (W × D × H) : 600mm × 600mm × 1100mm



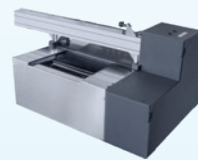
Printing Control Cabinet

### **Print Head Module**

- Head power management and head temperature controller
- Intermediate ink tanks with ink level sensors
- Sub-tank with anti-overflow function
- Dimensions (W × D × H) :  
108-PWC: 225mm × 210mm × 486mm  
108D/216-PWC: 400mm × 260mm × 490mm  
432-PWC: 633mm × 640mm × 512mm



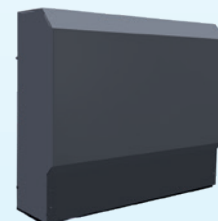
Head Module  
(108-PWC)



PWC Module  
(108-PWC)



Head Module  
(108D/ 216-PWC)



Head Module  
(432-PWC)



PWC Module  
(108D/ 216-PWC)



PWC Module  
(432-PWC)

### **PWC Module**

- Automatic purging, wiping and capping for print head maintenance.
- Automatic capping after the printer is idle for long time to prevent ink from getting dried and clogging the nozzles.
- Dimensions (W × D × H) :  
108-PWC: 420mm × 276.5mm × 162mm  
108D/216-PWC: 600mm × 398mm × 184mm  
432-PWC: 870mm × 399mm × 301mm

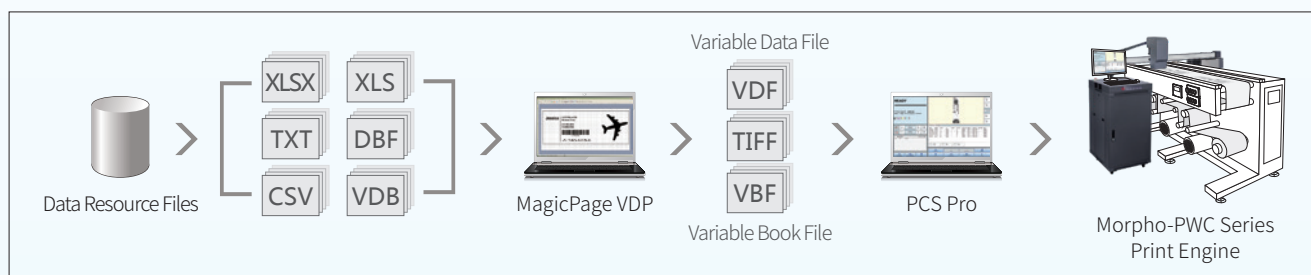
## Features

- The patented, multi-angle Head Module adjustment mounting bracket enables the operator to adjust the angle of the X, Y, and Z-axis directions for each print head module
- Field upgradable firmware and system software
- Automatic alarm signaling ink shortage
- Precise Active Meniscus Pressure Control
- Proven ink system
- Advanced variable droplet size control technology enables 1 to 3 levels of grayscale ink drop size control to improve the print quality of gradations and color
- Online inspection and automatic rectification system ensures accurate printing position by monitoring and analyzing pre-printed marker in real time
- Morpho 108D-PWC adopts the proprietary image data processing and digital inkjet printing technologies, realizing double-speed printing without compromising the printing precision.



Variable Droplet Size Control

## Efficient Workflow

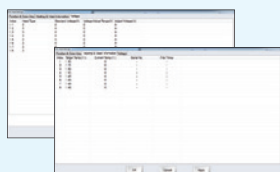


As a comprehensive monochrome VDP inkjet printing engine, Morpho works seamlessly with MagicPage and PCS Pro to achieve an efficient VDP workflow.

MagicPage also enables users to design and modify the output templates with extensive field editing tools. Professional Printer Control Software (PCS Pro) installed on a Host PC offers friendly graphical user interface to control, set options, and monitor printer status.



PCS Pro Main Window



Voltage and Temperature (PCS Pro)



MagicPage Main Window



MagicPage RIP Window

### Supported fonts and barcodes:

- Graphics, numeric codes, time, and serial numbers
- True Type and Open Type
- 1-D Barcodes: EAN 13, EAN 8, Code 39, Code 128, Codabar 2 Widths, GS1 DataBar (RSS-14), Interleaved 2 of 5, UPC-A, and USPS PostNet
- 2-D Barcodes: PDF417, QR-Code, and Data Matrix

### MICR standard support available for check printing:

- E-13B and CMC-7 font



EAN 13



QR Code

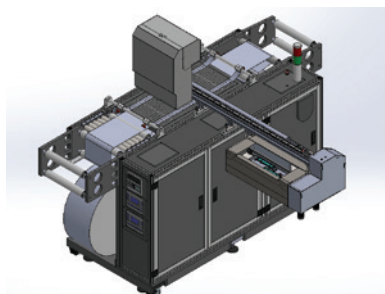


PDF417

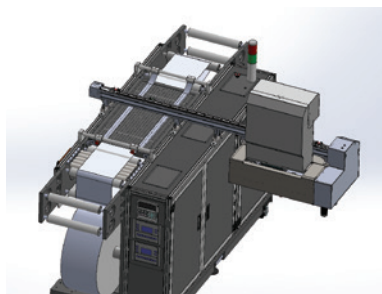


Code 39

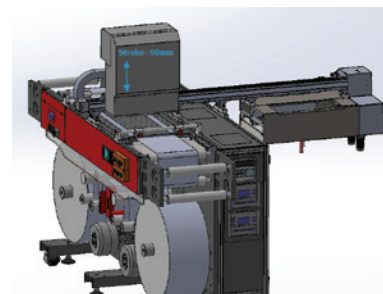
## Status



Printing Position







Automatic PWC Position



Manual Maintenance Position

## Basic Specifications

Head Modules*		Morpho 108-PWC	Morpho 108D-PWC	Morpho 216-PWC	Morpho 432-PWC
					
Print Head Model		Kyocera KJ4			
Number of Print Heads		1	2	2	4
Printing Width		108mm	108mm	216mm	432mm
Inks		UV, water-based dye, pigment, or MICR ink			
Number of Colors		Monochrome			
Resolution		600dpi			
Dropsize	Water-based ink	5pl, 7pl, 12pl, 18pl			
	UV ink	6pl, 7pl, 11pl, 14pl			
Print Type		Images, logos, texts, serial numbers, barcodes, dates, time, MICR Fonts, etc			

Print Productivity		Standard Print Head/ High Speed Print Head			Unit: m/ min. (ft/ min.)
Water-based ink	600 × 300dpi	150/ 200	300/ 400	150/ 200	
	600 × 600dpi	75/ 100	150/ 200	75/ 100	
UV ink	600 × 300dpi	100/ 150	200/ 300	100/ 150	
	600 × 600dpi	50/ 75	100/ 150	50/ 75	

\* Customized versions are available, including different print widths, numbers of colors, and print resolution.  
Please contact us to discuss your requirements.

## Applications

Envelopes | Business Forms | Security Printing | Labels | Packaging | Tickets | Plastic Cards | Lotteries/ Bingos



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