The Domino N600i
High-productivity digital printing for labels
N600i Digital Label Press

For label printers, the Domino N600i is the only colour digital press that combines the productivity of flexo with the flexibility of digital printing. This means improving profitability through sales growth while reducing production cost by removing operational complexity.

Flexo versus Digital

A label printer today has the choice of ‘productive’ flexo printing or ‘flexible’ digital printing technologies. Flexo, while offering productivity and low consumable costs, requires a plate-making department, management and coordination of plates and plate inventory; time for make-ready; highly skilled operators to generate quality output and additional waste during set-up. Existing digital technology, while providing a simplified workflow and operation, including instantaneous job changes, has been restricted to short-run production due to lower productivity and costly ‘click’ charge schemes.

Domino’s N600i digital label press combines the productivity typically associated with conventional flexo with the flexibility of digital digital, but without the ‘click’ charges; it represents the next generation in label printing.

Modular Frame

The N600i has been designed with a modular frame, allowing for the future addition of a print section for white when it becomes available.

Access Doors

Large access doors at the front and rear of the N600i provide immediate access for easy ink replenishment and maintenance.

Production Control

Integrated with the N600i Digital Front End that is powered by EskoArtwork.
Cleaning & Capping
Automatic print head cleaning and capping during in-operation reduces operator involvement and improves reliability.

Unwind & Rewind
Supports rolls with a diameter up to 650mm (25”) and includes an automatic lift.

CMYK Ink Jet
Kyocera KJ4 print heads are situated in a positive air-filled chamber for improved reliability. Automatic print head alignment provides accurate registration and ease of set up. Compact design means the distance between the first and last colour printed is limited to up to 300mm (12”) for optimum colour-to-colour registration.
Service Support

Domino has more than 30 years of ink jet technology experience. Today more than 600 service technicians provide support for Domino’s solutions across the globe. The Domino Service Standard helps to ensure a consistent high level of performance is achieved in every region.

Integration

The N600i is available in reel-to-reel as well as reel-to-finishing line configurations. Through dancing arm input with tension control on the finishing line, the N600i can be integrated with industry-leading digital finishing solutions, including those from AB Graphics and Grafisk Maskinfabrik.

Print Quality

Utilising UV curable inks, vibrant high impact colour images are achieved, similar to the finish provided by flexo or offset.

For an ink jet solution, the N600i includes both a high 600dpi native print resolution (1200dpi nominal resolution), as well as up to four greyscale levels with one of the smallest drop size (6pl) to provide excellent fine detail.

The N600i prints text in small point sizes with crisp edge definition.

Reliability

Piezo ink jet technology is a non-contact printing solution with no consumable drums, blankets or plates; therefore there are fewer moving parts than conventional as well as other digital printing technologies.

The N600i print modules are within a positive air-filled enclosure preventing ingress of dust and improving Overall Equipment Effectiveness (OEE).

Maintenance

Through automation, requirements for manual intervention have been reduced. When the press is left in non-production mode, the print head modules are automatically moved into a cleaning station, where they are cleaned and capped. Print head alignment is also automated, achieving consistent accurate setup every time. The large front and rear access doors provide immediate access to all elements of the printing system. Any part replacement can normally be achieved in less than 60 minutes.

EskoArtwork Workflow

The N600i Digital Front End, powered by EskoArtwork, provides colour-matching conversion and a profile library, as well as seamless integration into existing production workflows.

Productivity

Operating up to 75m/min (246ft/m) with 600dpi native resolution, the N600i redefines the range of production work the label printer can consider for printing digitally. Not only does it offer the fast change-over and short run length options traditionally associated with digital technology, but printing up to 1,500m²/hr (16,000ft²/hr) also makes long production runs cost-effective.

Unique automatic functions including print head cleaning and capping and print head alignment help to maintain the highest levels of Overall Equipment Effectiveness (OEE).

A wide range of industry standard substrates can be printed onto without the requirement to separately coat before printing. Durable UV curable inks mean that over varnishing is not necessarily required.

Print Quality

Utilising UV curable inks, vibrant high impact colour images are achieved, similar to the finish provided by flexo or offset.

For an ink jet solution, the N600i includes both a high 600dpi native print resolution (1200dpi nominal resolution), as well as up to four greyscale levels with one of the smallest drop size (6pl) to provide excellent fine detail.

The N600i prints text in small point sizes with crisp edge definition.
Technical Specifications

Technology
• Piezo Drop on Demand ink jet

Printing Speed
• 50m/m (164ft/m) with 4 greyscale levels
• 75m/m (246ft/m) with 3 greyscale levels

Image Resolution
• 600dpi native including 4 greyscales (nominal 1200dpi)
• 600dpi x 1200dpi at 50% operating speed (nominal 1800dpi)

Image Format
• 333mm (13.11”) maximum print width
• No print repeat restriction in web travel direction

Web Width
• Up to 340mm (13.4“)

Substrate Type
• Self adhesive label stock
• Thermal paper

Inks
• UV curable Cyan, Magenta, Yellow, Black

Unwind /Rewind
• 650mm (25”) diameter up to 200kg (440lbs)
• Roll pick up from floor
• Touch screen interface
• Nip roller and tension control (rewind)
• Servo control

Central Print Module
• Corona treatment module
• Web cleaning and anti-static module
• Web guidance module
• Four-colour print section
• UV curing module (water-cooled option)

Digital Front End
• EskoArtwork RIP
• EskoArtwork Colour management
• EskoArtwork Variable data printing module (optional)

Dimensions
• 7.0m (L) x 2.1m (H) x 1.7m (W)
  (1.0m minimum clearance recommended)
• 23ft (L) x 6.9ft (H) x 5.6ft (W)
  (3.3ft minimum clearance recommended)

Weight
• Unwind: 420kg (930lbs)
• Printing section: Nominal 750kg (1650lbs)
• Rewind: 420kg (930lbs)

Services
• Single phase: Five 220-240V drops
• Three phase: Two 380-420V drops
• Compressed air: Four drops (total 9-10 bar)

Environment
• Optimal temperature range 20-30˚C (68-86˚F)
• Optimum humidity range 40-60%
• Dust controlled environment preferred

Dimensions in mm

[Diagram of the printer with dimensions]
Domino is all about ‘doing more’.

Our people share a distinctive attitude based on seeing new horizons.

It appeals to the belief we all have in the possibilities of curious exploration, or going further.

Our approach is apparent in the resourcefulness of our people in supporting customers, and in their willingness to embrace responsibility and do what’s right.

The result is a company that delivers customer solutions that are better because they are more innovative at the customer interface and create more possibilities for you.

In everything, Domino do more.

www.domino-printing.com