



Printing International N.V./S.A.



Machinery to decorate on

- ***Glass***
- ***Porcelain***
- ***Ceramics***



We add value to your product !



Decoration on Glass, Porcelain & Ceramics (GPC)

Decoration on glass, porcelain and ceramics in one colour or multiple colours with direct printing technology featuring application of any type of ink including thermoplastic inks.

General

- The result exceeds in high precision with superior colour quality and cannot be obtained by any other decoration method
- Pre-prints or decals are no longer required
- Decoration on irregular shaped products supported
- Quick and easy adaptation to customers' needs
- User- and environment-friendly



Thermoplastic inks (patented)

- As thermoplastic inks are fixed in, on or under the glaze by heating afterwards, prints are 100 % dishwasher resistant
- Guarantees scratch and dishwasher resistant prints
- Made to customers' wishes to print in full colour including gold and silver



Closed ink cups (patented)

- Prevent odour spread and are easily refillable
- The ink viscosity is kept constant by controlling the temperature
- Ink cups and printing plates are easily and quickly changeable
- No additional adjustments required on the raking after changing printing plate, ink or ink cup
- Different ink cup sizes are available: Ø 90, 130, 160, 220 and 350 mm

Applications

- Flatware
- Tableware
- Cosmetics
- Medical devices

Galaxy : solution to decorate flatware in high resolution with high capacity



The Galaxy is a fully automatic range of printing machines, with conveyor and loading device, optical assisted positioning of the objects, backstamp unit, heated and closed ink cup(s), automatic ejection and automatic colour registration, developed for so-called direct printing onto glass and flatware with multi-colour images.

Although the machine is not limited to one type of ink, the machine implements the patented application of thermoplastic inks. With the implemented direct printing technology, the image is transferred colour by colour onto the flatware items and thanks to the almost perfect colour registration, this printing machine reaches a resolution of 120-200 lpi resulting in decorations of photo realistic quality.

Changing over between different series is done very quickly and easily.

Features

The most important machine features can be summarised as follows :

- Direct printing technology supporting thermoplastic inks
- Up to 10 decoration units with maximal printing diameter of 350 mm (suited for plates up to diameter 320 mm)
- Consistent quality of the print at highest possible production capacity
- High accuracy and repeatability of the print position, regardless of the actual running speed
- Limited resources required to operate the machine
- Short changeover time (product and image change, ink change, pad change)
- No frozen stocks in consumables when decors are no longer applicable as inks and pads are used for different decors

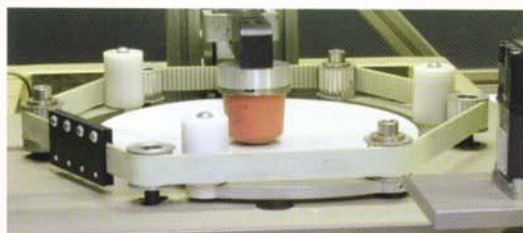
Optional features include :

- Optional in-line backstamping device
- Optional camera assisted image registration
- Optional integration of input manipulator(s) and output conveyor system



Infeed conveyor platform

The flatware items are presented individually or on piles of limited height that are being de-stacked automatically when fed into the machine.



Intermediate flatware positioning unit

Due to the inaccurate positioning of the flatware items on the infeed conveyor platform, the de-stacked flatware items need to be positioned roughly in an intermediate station using a diaphragm system. The diaphragm can be adjusted to allow positioning of different flatware types/diameters.

Backstamp unit

Optionally, the intermediate flatware positioning unit can be integrated with a so-called backstamp unit used to put a one colour mark on the backside of the flatware items. Different sizes and colours are supported.



Flatware fine positioning system

After transferring the flatware items from the intermediate flatware positioning unit to the main machine conveyor, the flatware items need to be positioned more accurately on the jigs to guarantee precise positioning of the image on the flatware items.

The fine positioning process consists of :

- a visual measurement of the shape and size of the flatware item using camera technology
- lifting the flatware item from the jig
- repositioning the flatware item on the jig whereas the flatware item centre position is placed with respect to the jig reference point within the given positioning accuracy of $\pm 0,15$ mm



Decoration cycle



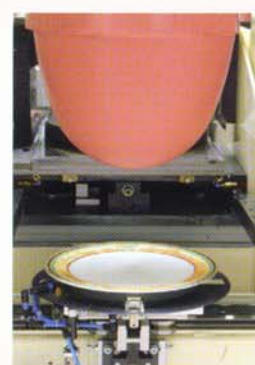
printing plate
inked



pad moves down,
taking up the ink



pad moves down,
depositing the ink



product is
printed



We add more than a print, we add value to your product

Linoprint : solution to decorate any type of products in high resolution with high flexibility



The Linoprint is a multiple colour printing machine to decorate glass, porcelain and ceramics. It is designed for highest possible flexibility resulting in output capacities up to 250 pcs/h in high resolution up to 8 colours.

Features

- Highest possible printing resolution from 120 up to 200 lpi
- Available in closed ink cups Ø 90, 130, 160, 220 and 350 mm
- Modular expandable up to 8 colours
- Only one jig is needed
- Settings for different images (for different series) can be stored in memory
- Limited resources required for operating the machine
- Short changeover time (product and image change, ink change, pad change)





We add more than a print, we add value to your product

Platinum



- Limited output in a single colour
- Available in closed ink cups Ø 90, 130, 160, 220 and 350 mm
- Automatic cleaning of the pad available but only necessary when using non-heated thermoplastic inks

Modulo



- Printing two colours or two positions
- Exchangeable modules with closed ink cups (Ø 90, 130, 160 mm)
- Settings for different kinds of products can be stored in memory

Based on our direct printing technology (patented) we offer:

- The solution to decorate your glass, porcelain and ceramic products of any shape
- Machines offering unique and patented solutions with guaranteed high flexibility offering following assets:
 - limited consumption of (thermoplastic) ink
 - easy and quick decor changeover
 - quick changeover from one series to another
- Development of:
 - pads adapted to the shape of the product
 - images and printing plates
 - the right colours and types of thermoplastic inks

The flexibility of direct printing in the right shade of colours on glass, porcelain and ceramics is the ultimate solution for decorating small and large series.



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