

DigiTube



The digital printing machine
for tubes, sleeves and cartridges

Always well-rounded



//polytype is the world leader in the manufacture of systems for direct printing of plastic tubes. //polytype machines combine innovative technology with the highest levels of reliability complemented by the most user-friendly operation. Its international customers appreciate the modularity of the design and the expansion opportunities of the machines.

//polytype is part of the Swiss wifag//polytype Group, which operates globally and has branches in Switzerland, Germany, Italy, the USA and Thailand. This alliance gives //polytype access to a broad technology base and guarantees a global and professional partnership for your success.

The new way of decoration

//Efficiency

- // Changeover times reduced to near zero
- // Printing of single cup production and long production runs on same machine
- // Cost-effective for small batches
- // Increase of production output
- // Significant reduction of startup and running waste

// Cost-effective for small batches

//Print Quality

- // Extremely high print quality comparable to IML / Sleeve / Label decorating
- // Flexibility in selection of the print design
- // Print from the lip to the bottom of the cup
- // White available for clear and colored containers
- // Glossy effect

// Photo realistic graphics

//Easy to use

- // Reduction of process steps
- // Only 5 inks to handle (CMYK and white)
- // Quality not dependent on operator skill
- // Consistent print quality from beginning to end

// Computer to product

//Variable data

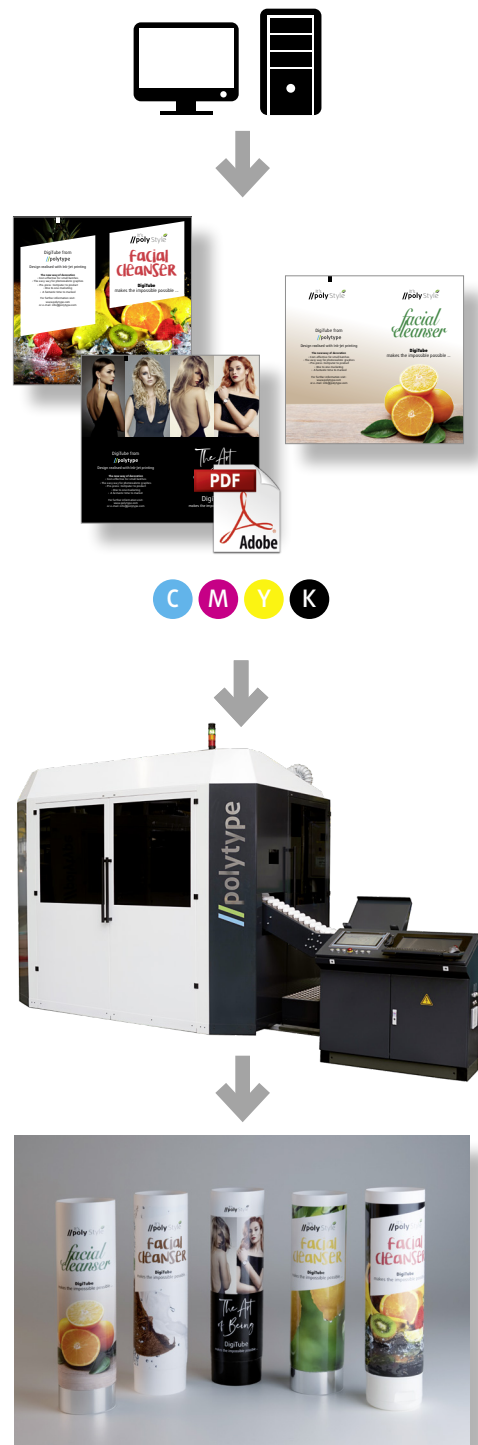
- // Printing variable data «each cup can be different»
- // Individualization and personalization for marketing opportunities

// One to one marketing

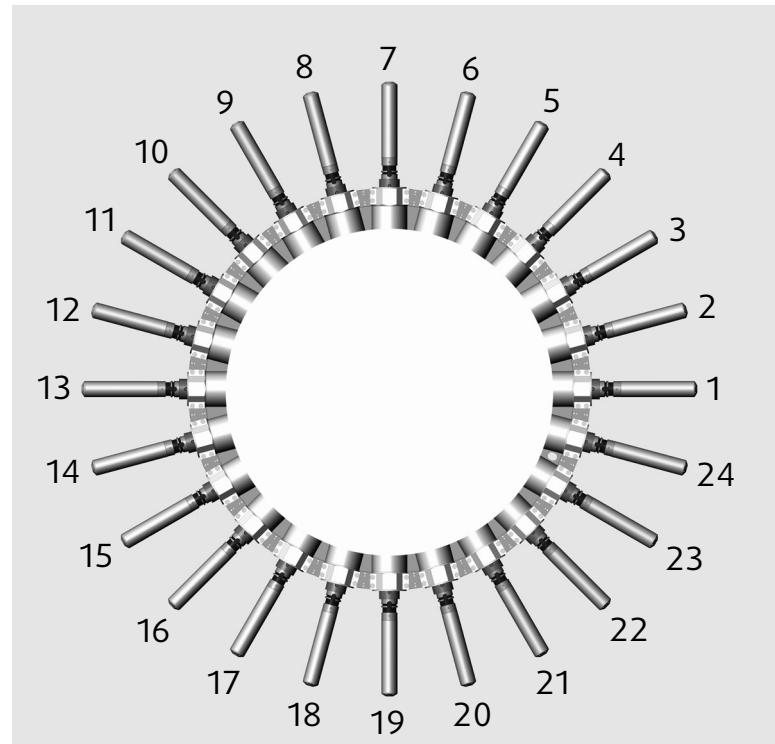
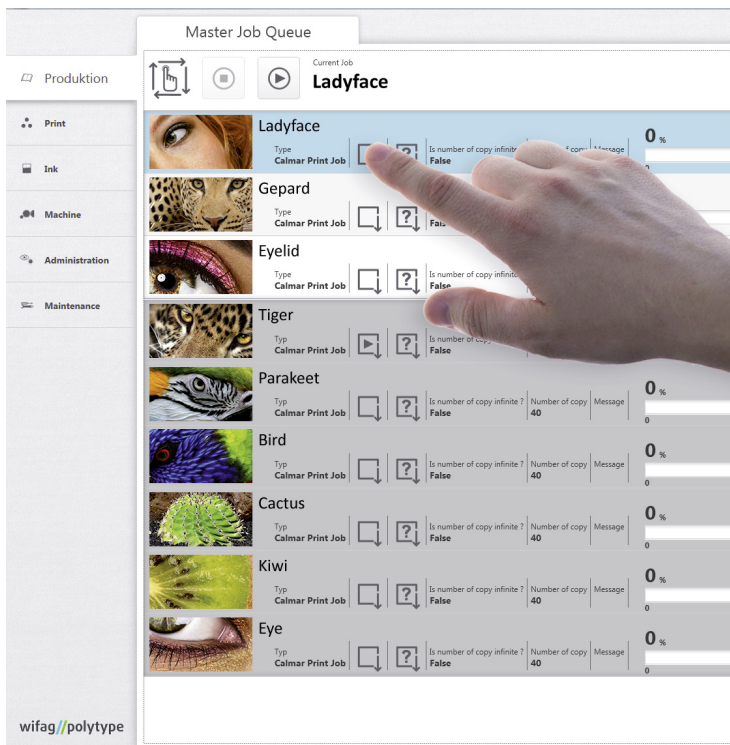
//New workflow

- // No printing plates
- // No back loop for corrections
- // A fast and efficient way for decoration

// Time to market



- // Highly reliable Ink-jet printing machine
- // High level of productivity
- // Live time extension with up-dates
- // Highly market acceptance based on a stable and repeatable production



//polytype Calmar System

To convert input data like PDF files to a printed image on the substrate //polytype developed its own ink-jet system and called it Calmar.

Calmar comprises the following elements:

- // Intuitive graphical user interface
- // Data processing software
- // Network technology
- // Printhead driving electronics
- // Ink supply

Calmar is a complete ink-jet printing technology platform. Thanks to that //polytype controls every aspect in the lifecycle of the system – from developing new features tailored to the cup industry over producing industrial grade electronics and software to a professional after-sales service.

Station set up for the DigiTube

- 1, 2 – Tube loading / Tube presents control
- 3 – Pre-treatment by corona or gas
- 4 – Dust removal
- 5 – Positioning to previous design
- 6-8 – White
- 9-16 – Cyan, Magenta, Yellow, Black
- 17-19 – UV Curing
- 20 – Image quality control
- 21 – Laquering
- 22, 23 – Unloading
- 24 – Unloading control

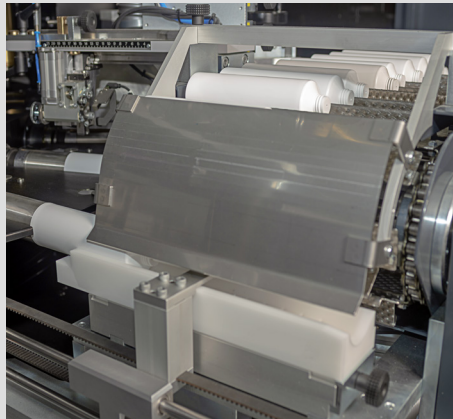
Control panels

With the two control panels, the operator does have everything at a glance. The first panel is for the manipulation of the printing machine and the second for the preparation of the printing jobs.



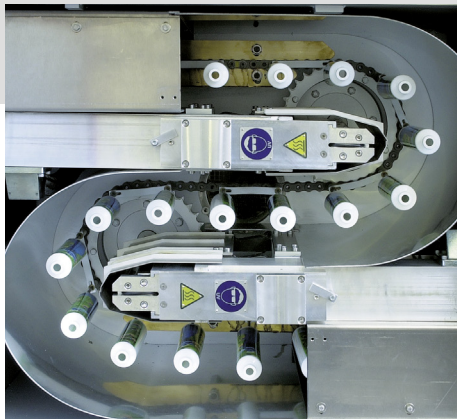
Tube/Sleeve loading

Tubes can be fed in manually, semi-automatically from a storage magazine or fully automatically using a drum.



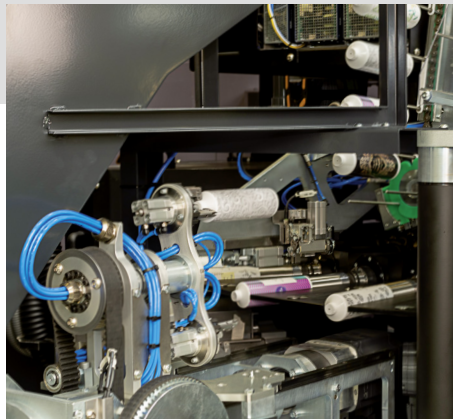
Surface pre-treatment

To ensure reliable ink adhesion, this station is used to pre-treat the surface of the tubes with gas or a corona.



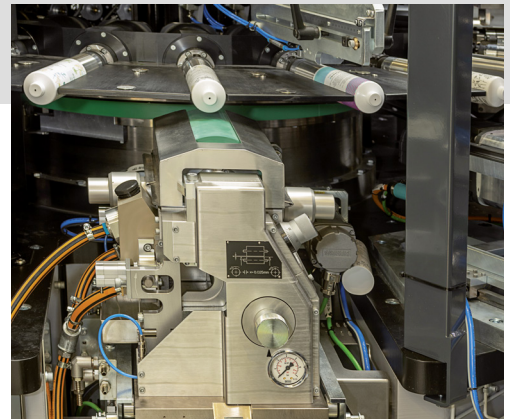
Lacquer curing

A separate //polytype UV oven is used to ensure uniform lacquer curing. Its progressive power regulation is designed for premium lacquer quality.



Tube unloading

//polytype DigiTube offers high process stability for transferring tubes from the mandrels to the transport chain.



Varnishing

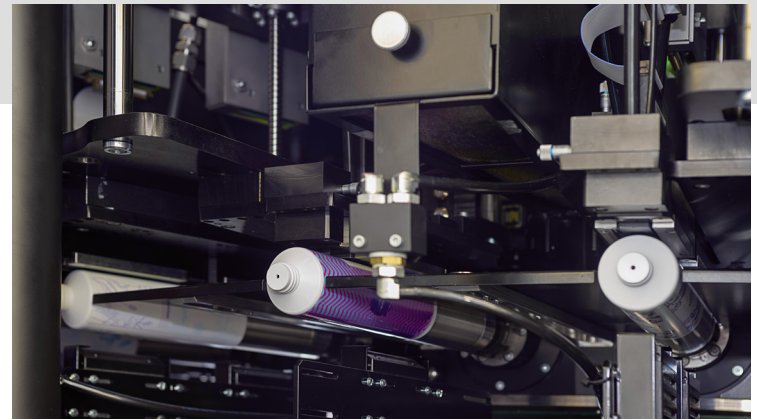
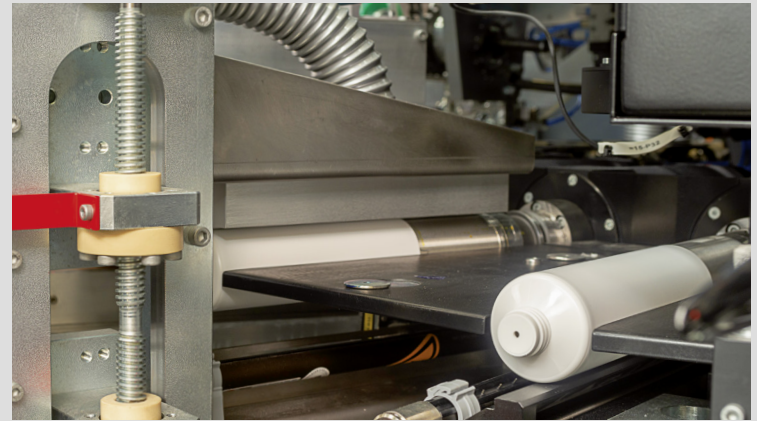
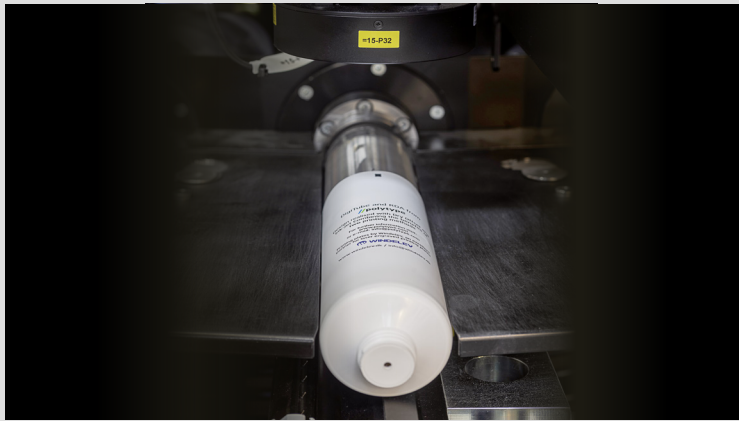
The anilox lacquering unit ensures a highly reliable application of every glossy or matt varnish. The unit can be pulled out, which ensures excellent accessibility. A temperature control system is also integrated.

Positioning to a previous design with camera

With the combination with a former design, it is possible to use the strengths of two or more decoration kinds. For example, little lettering and pantone colours with a previous decoration and imaging with the DigiTube.

Ionisation with dust exhaust

To clean the tubes, particles are neutralized electrostatically and then cleaned of dirt particles using a vacuum.



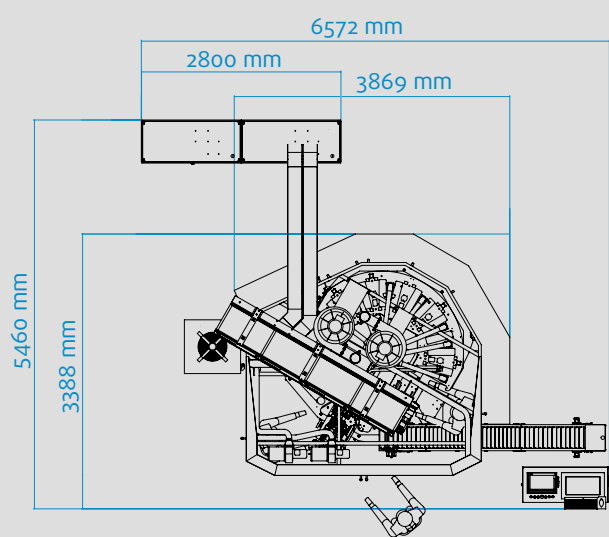
Final ink curing

The UV ink curing process is equipped with progressive power control. It was developed for quick lamp changes and ease of maintenance.

White pre-print and 4 colour process printing

For transparent or coloured tubes, a white base coat is indispensable. The pre-print can be all over the tube or only there where it is needed to highlight the process colours. To make it fast, each of the CYMK colour will be printed separately. The high precise positioning system ensures the perfect match for fantastic imaging of the tube and/or on the cap.

- // polytype the expert for digital printing machines for tubes
- // Over a decade of experience in digital printing
- // All around service from one hand



Technical data	DigiTube
Min./max. tube diameter:	19-50 mm
Min./max. tube length:	50-215 mm
Tube head incl. cap height max.:	50 mm
Print height, up to:	210 mm
Resolution, up to:	1200 dpi
Mandrels:	24
Max. printing speed:	120 tubes/min
Weight of main machine:	~ 13000 kg

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