

Inkjet direct printing system

MÜPRINT MDP Series

for the printing of elastic and non-elastic tapes using
the CMYK colour space



MÜPRINT MDP Series

Concept

The MÜPRINT MDP digital printing systems are designed for the contactless, direct printing of textile tapes.

As early as 2011, Jakob Müller introduced the MÜPRINT MDP2, the world's first system for the direct printing of tapes using sublimation inks. The MÜPRINT MDP2 was able to carry out the contactless, direct printing of up to 16 polyester tapes with a total width of 400 mm and, using an integrated thermofixing process, manufacture a product suitable for immediate sale, fulfilling demands in abrasion resistance and colour fastness, as well as textile standards (OEKO-TEX®).

Product advantages

As opposed to transfer and screen printing, the direct printing of textile tapes using digital ink jet technology offers a wealth of advantages:

- Quick and inexpensive ad-hoc production of printed tape patterns
- Print-on-demand from digital designs to just-tape in-time production, short reaction period
- Brief changeover times and fast article switches
- Single-process, continuous production with a limited operator requirement
- Contactless, direct printing that is suitable for use with open fabrics or tapes with uneven or alternating thicknesses (chiffon, velvet, knits, hook and loop, zips, nets)
- Excellent wash fastness and abrasion resistance
- Bleed off printing over the tape edge
- Any repeat lengths and endless printing
- Employment of variable data from Excel or text files for personalised / individualised printing or serial numbers
- Photorealistic printing
- No costs for printing forms, storage, cleaning or transfer paper
- High levels of reproducibility without resetting as in screen or flexographic printing
- High ink yield

MÜPRINT MDP2 for non-elastic fabrics

The MÜPRINT MDP2 system incorporates the following process steps:

- Unwinding of tapes from rolls
- Ink jet printing using a motor drive
- Thermofixing MÜPRINT MDP-Series and drying (tape is heated from the non-printed side using contact heat)
- Winding of the finished, ready for sale tapes on rolls



MÜPRINT MDP2 for printing of non-elastic fabrics

MÜPRINT MDP2E for elastic and non-elastic

With the MÜPRINT MDP2E an inkjet system is available that has been specially designed for the printing of elastic tapes (also non-elastic).

The process steps consist of:

- Untangling
- The de-tensioning of the elastic tapes using a pre-transport motor
- Creation of defined pre-tension using a run-in motor
- Inkjet printing with a motor drive
- Thermofixing through a combination of hot air and infrared oven
- Creation of defined tape tension using a take-off motor
- Storage of the tapes in boxes



MÜPRINT MDP2E for printing of elastic and non-elastic fabrics

MÜPRINT MDP3E

The MÜPRINT MDP3E is equipped with a “high-precision” printing head that has been specially designed for the employment of sublimation inks on textiles.

High ratings with regard to abrasion resistance and colour fastness, the fulfilment of textile standards (e.g. OEKO-TEX®) are obtained.

The MÜPRINT MDP3E printing system with a printing width of 2 x 410 mm is characterized by:

- Production output up to max. 46 m²/h
- Printing resolution of max. 1440 x 720 dpi
- High printer reliability
- Large-volume ink system
- Precise and reproducible print quality
- Brilliant colours, intense black tones, clear contours and gentle graduations
- Outstanding light/washing fastness and abrasion resistance

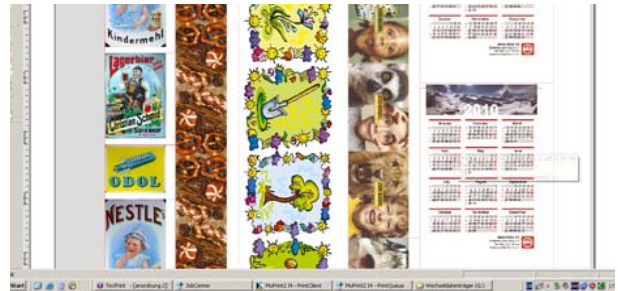
The process steps of the MÜPRINT MDP3E are principally identical to those of the MÜPRINT MDP2E.



MÜPRINT MDP3E

Additional options (all MDP systems)

- “Texprint” RIP software for the transfer of design/photo files, printing layouts and colour adjustments to the textile materials



Printjob on MDP RIP

- Supplementary software: variable data and the creation of printing profiles for specific materials in order to create maximum printout reproducibility
- Software modules for the independent creation of colour profiles; available with or without a photo-spectrometer
- Portable, ultrasonic tape welder device for tape linkage

Additional options for MDP2E and MDP3E

- UPS (uninterrupted power supply)
- Version for the printing of finished zips
- Extractors for steam / ink mist (office use)
- In-line pre-coating device, which is positioned upstream of the MDP printers for the pre-treatment of highly absorbent tapes and improved colour quality.

Technical data

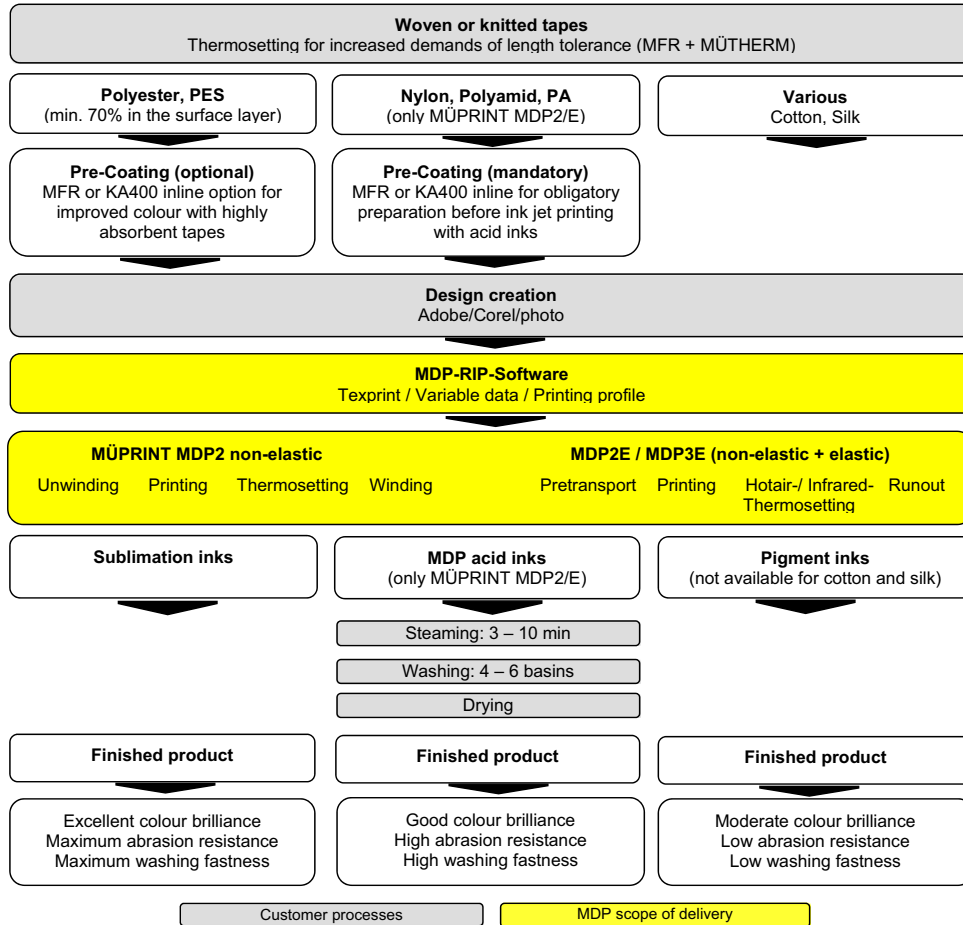
	MÜPRINT MDP2	MÜPRINT MDP2E	MÜPRINT MDP3E
Working width mm	400	400	2 x 410
Minimum working widths mm	15	8	8
Max. number of tapes	16	10	2 x 10
Connected load	3 kW	8,5 kW	15 kW
Pneumatic connection		6 bar	6 bar
Air consumption		1,5 l/min	3 l/min
Waste air	Waste air produced during printing must be conducted out of the building		
Weight	300	500	750
Dimensions (L x W x H)	1206 x 960 x 1412	2830 x 1110 x 2190	3580 x 1630 x 2150

MÜPRINT MDP Series

Tape materials, MÜPRINT MDP process stages and consumables

In general, the aforementioned advantages of the MDP inkjet system relate to polyester as a tape material. Nonetheless, these benefits also apply with limitations to other tape materials. While the employment of both sublimation and pigment inks in MDP printing

systems results in finished products, especially in the case of acid ink use, customer will require additional process capacity for steaming, washing and drying. The table below provides an overview of the available inks, tape materials and their characteristics.



Guidelines relating to consumables

- All inks match the respective printer, or have been specially developed for it. The mixing or cross-use of inks from another printing system are not possible and lead to printing head blockages.
- The immediately subsequent use of differing inks in a printer is not possible. However, the possibility exists for a second printer in the machine, which can be utilised on an alternating basis.
- Pre-coatings for colour enhancement, or as tape preparation in case of acid inks are fully matched to the inks used. The employment of third-party makes results in major reductions in colour quality, abrasion resistance and wash fastness.
- All tapes produced adjacent to one another must have similar structures and same thicknesses
- CMYK colour space

Copyright © 2017 by Jakob Müller AG Frick
5070 Frick, Switzerland

Printed in Switzerland. All rights reserved.

No part of this publication may be reproduced by any means, nor translated, nor transmitted into a machine language without the written permission of the publisher.

This leaflet contains photos and technical data for information only, without contractual engagement.

Fascination of Ribbons and Narrow Fabrics Innovation in Machinery

Rep.:



Jakob Müller AG Frick
5070 Frick, Switzerland
Tel +41 62 8655 111
Fax +41 62 8655 777
www.mueller-frick.com

