EN

SUPERMULTIPASS™

DURST WORKFLOW
FOR FABRICS

DIGITAL
PRETREATMENT

ALPHA SERIES 5

NEXT GENERATION
DRYING TECHNOLOGY

ADVANCED
DIGITAL PIGMENT

LEADING TECHNOLOGY FOR DIGITAL TEXTILE PRINTING

durst

ALPHA — LEADING TECHNOLOGY FOR DIGITAL TEXTILE PRINTING

Durst introduced Alpha, a comprehensive technology platform, to meet the increased demands of digital textile printing. At the forefront are the 5th generation Alpha printing systems, delivered with Durst's new workflow software, which gives users easy access to key functions in production such as color management and RIP. Expansion modules can be added to the software, from pre-press functions through to a web shop. The modules are integrated with the printing system to create a production process 'from pixel to output'. The range is rounded off by the Analytics Software, which monitors the most important production parameters and makes preventive service concepts possible.

The new Alpha Series 5 printing systems feature improvements in terms of material handling, efficiency increases, and material diversity.

The Alpha technology platform offers a sustainable, flexible, and scalable solution for every application, even enabling waterless one-step production with the new Advanced Digital Pigment ink.

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1 ALPHA 190/330 SERIES 5 PRINTING SYSTEMS

Alpha Series 5, the new SuperMultipass™, defines a new generation of digital printing systems, creating a new performance class through the integration of new technologies in the print heads, inks, drying units, and in the interaction with the software.

Material handling

Knitted and woven fabrics

Drying technology

Inline polymerization

Printhead technology

Circulating and temperature-controlled, symmetrical color arrangement

Efficiency

Dual Roll

Ink technology

Advanced Digital Pigment, Reactive HD, Re-Acid, Disperse HD

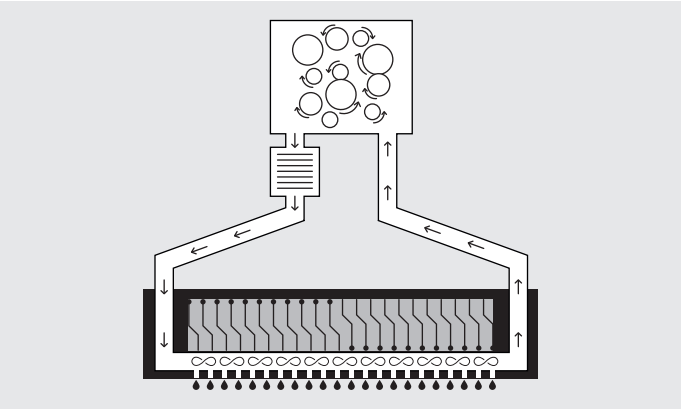
Software

Integrated Durst Workflow solution

SUPERMULTIPASS™ — 30% BETTER PERFORMANCE THAN COMPARABLE SYSTEMS

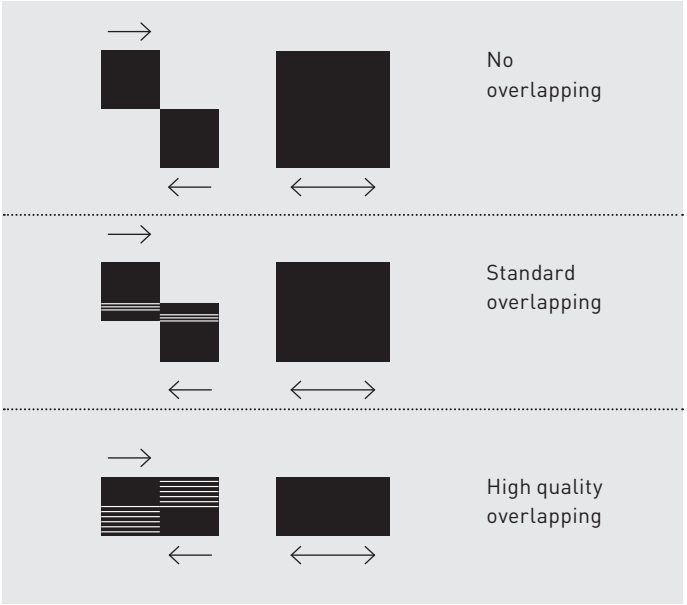
CONSTANT TEMPERATURE AND INK CIRCULATION

The constant temperature control of the inks results in a constant viscosity, exact drop sizes, and controlled image build-up. The ink circulation in all ink circuits ensures that the printheads are always ready.



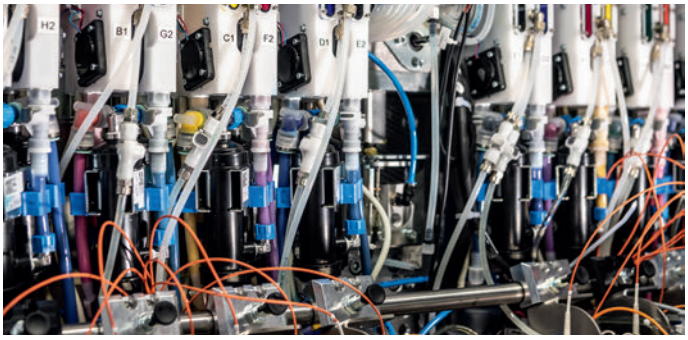
DURST ADVANCED STROKE CONTROL

DASC is a stepless (overlapping) pass control system, which calculates the drop placement according to the material and design while taking into account the drying times. This allows streak-free images to be printed at up to 80% higher production speeds.



SYMMETRICAL COLOR ARRANGEMENT

The symmetrical arrangement of the 8 printing inks means that the same sequences of colors are printed in both printing directions. This prevents color banding and increases the printing speed compared to an asymmetrical printhead arrangement.



MATERIAL FEED FOR KNITTED FABRICS

The Alpha Series 5 has an intelligent feed system for elastic knitted fabrics, which automatically adapts to the different textiles and roll circumferences. The respective dancer rollers, spreader rollers, center and batch winders can be selected and controlled via touch screen to ensure exact speed and tension up to the printing bed.

DUAL-ROLL MATERIAL GUIDE

The Alpha Series 5 enables parallel printing with up to two rolls on dimensionally stable fabrics. The respective parameters for the fabric feed are stored in the media channel and can be accessed at any time. Print jobs can be optimally distributed to the two print queues via the software control system.

NEW DRYING TECHNOLOGY

The new dryer unit has up to two motorized, autonomous conveyor belts that allow tension-free material feed for knitted fabrics with up to 3 passages and for dimensionally stable fabrics with up to 5 passages for inline polymerization. A second drying unit can be incorporated to increase the polymerization speed. The drying unit quickly reaches operating temperature and is impressively energy efficient.

DIGITAL PRETREATMENT WITH SWIFTJET

With digital pretreatment, the Alpha Series 5 offers an innovative, flexible, sustainable, and cost-effective way to prepare textile materials on-demand for digital printing. The patented SwiftJet Pretreatment System is positioned upstream of the Alpha printing system. Digital pretreatment is particularly valuable in small runs and fast-turnaround jobs.

TECHNICAL OVERVIEW

STANDARD SCOPE OF DELIVERY	ALPHA 190	ALPHA 330
Material width	190 cm	330 cm
Print width	190 cm	330 cm
Head configuration	32/64 Heads	32/64 Heads
Color channels	8	8
Drop size	Variable Drop 7/14/21 pl	Variable Drop 7/14/21 pl
Print resolution	300 x 600 dpi, 500 x 600 dpi	300 x 600 dpi, 500 x 600 dpi
Print Speed Single-Roll Mode	Up to 620 m/h, 990 m^2/h (1-Pass 300 x 600 dpi)	Up to 460 m/h, 1,470 m^2/h (1-Pass 300 x 600 dpi)
Print Speed Dual-Roll Mode	Not available	Up to 940 m/h, 1,184 m^2/h (1-Pass 300 x 600 dpi)
Printhead thermal control	Included	Included
Durst Advanced Stroke Control	Included	Included
Symetric color alignment	Included	Included
Single roll material usage	Included	Included
Woven material option	Included	Included
Single drying unit (gas, electric, oil, steam)	Included	Included

ADDITIONAL OPTIONS

Knit-wear option	Optional	Optional
Dual roll option	Not available	Optional
Small roll entry (50 cm diameter)	Optional	Optional
Jumbo-roll entry up to 2 m	Optional	Optional
Folded material entry	Optional	Optional
Small roll exit	Optional	Optional
Jumbo-roll exit up to 2 m	Optional	Optional
Folded material exit	Optional	Optional
Second drying unit	Optional	Optional

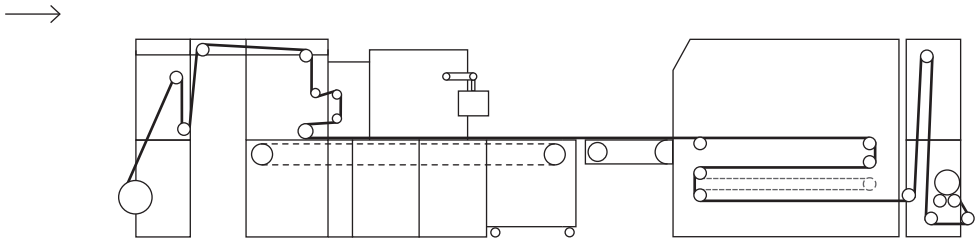
SPACE REQUIREMENTS for standard scope of delivery

Total length	994 cm	994 cm
Maximum required width	790 cm	1,070 cm
Infeed width	290 cm	431 cm
Exit width	290 cm	431 cm
Maximum height	270 cm	270 cm

ALPHA VERSIONS

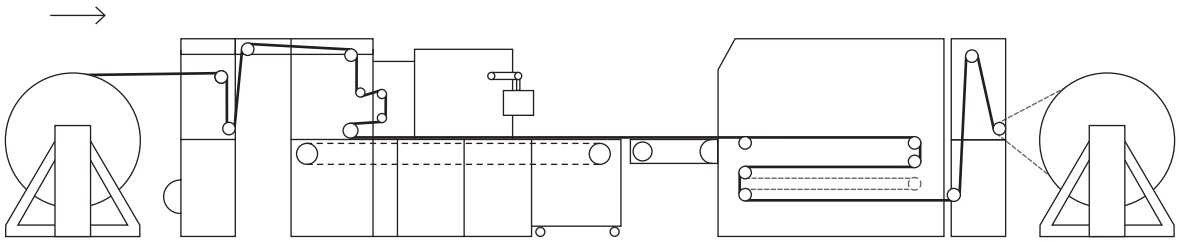
VERSION 1

Durst entry unit for small rolls and exit unit on uproller winder for small rolls.



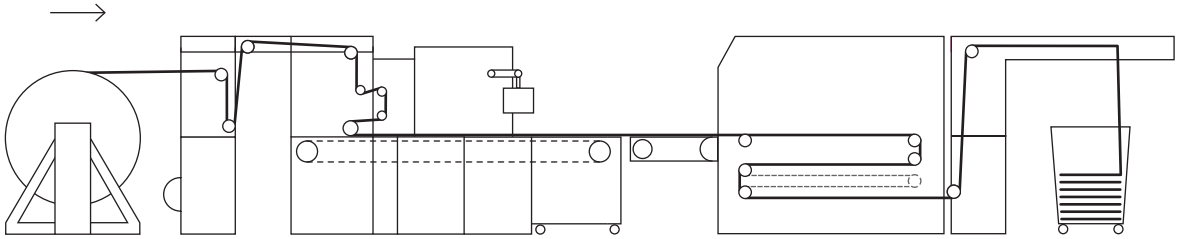
VERSION 2

Durst entry unit for small and big rolls, exit for big rolls.



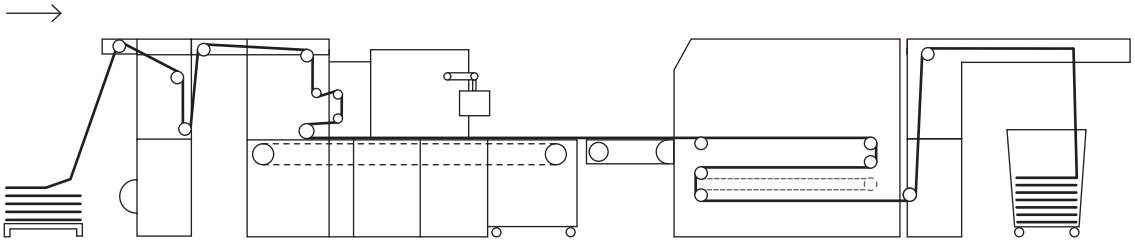
VERSION 3

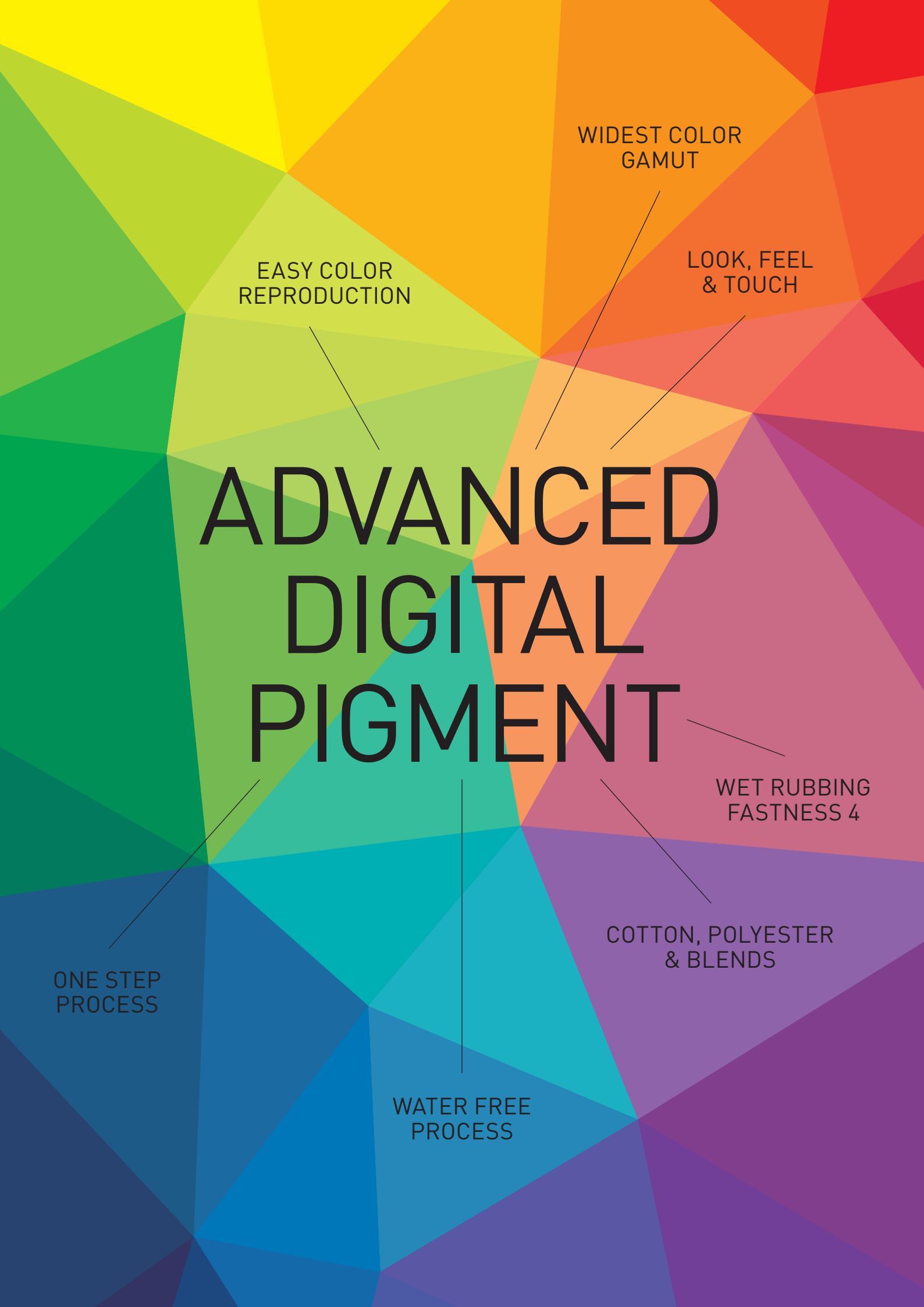
Durst entry unit for big rolls and small rolls, exit for folded fabrics.



VERSION 4

Durst entry and exit unit for folded fabrics.




WIDEST COLOR GAMUT
EASY COLOR REPRODUCTION
LOOK, FEEL & TOUCH
ADVANCED DIGITAL PIGMENT
WET RUBBING FASTNESS 4
COTTON, POLYESTER & BLENDS
ONE STEP PROCESS
WATER FREE PROCESS

2 ALPHA SERIES 5 INKS

For the Alpha Series 5, Durst offers environmentally friendly, water-based disperse-, acid- and reactive-based ink systems as well as the new Advanced Digital Pigment.

The Advanced Digital Pigment is the first ink system on the market that enables a one-step process with soft touch and brilliant colors. It delivers impressive printing results with excellent light fastness and wet rub fastness and can be used on all types of fabric.

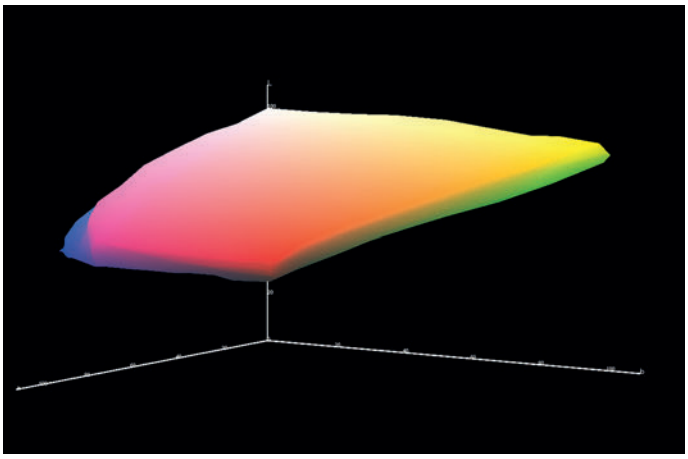
By extending the color space by 30% compared to existing ink systems, target colors can be achieved with lower ink consumption and better haptics as a result.

> GOTS 5.0 certified
> Compliant to Oeko-Tex 100 Standard
> Compliant to CTW Standard

DURST ADVANCED DIGITAL PIGMENT INK

The 'Advanced Digital Pigment' is specially developed by Durst and can be used universally in the textile field. It is characterized by outstanding color reproduction while offering a soft look and feel. There is no need for pre- and post-processing steps in most standard applications, thus guaranteeing maximum cost efficiency in production.

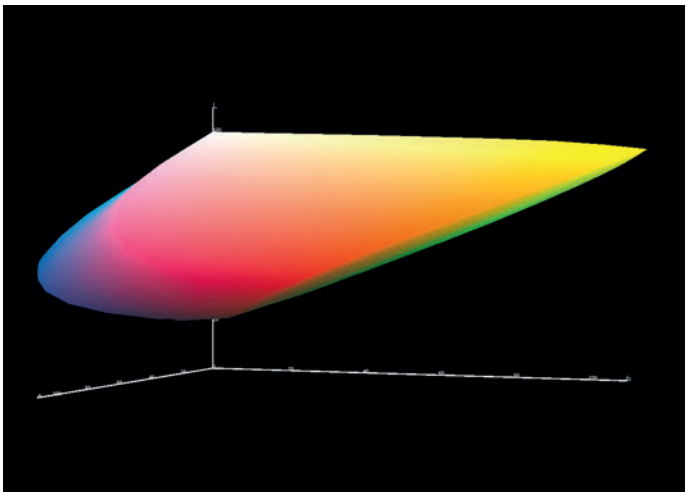
Textile Standards
Oekotex 100 compliant (Class I+II),
GOTS 5.0 compliant, Prop 65
Common Applications
Home Textiles, Apparel, Fashion



DURST DISPERSE HD INK

Durst Disperse HD is the first choice for Polyester Applications. It fits for Home Textiles, Apparel, Fashion and is also suitable for Flags, Banners, Outdoor Signage and other POP applications. Durst Disperse HD Inks were designed for printing on polyester and polyester mixtures with a polyester content of at least 50%.

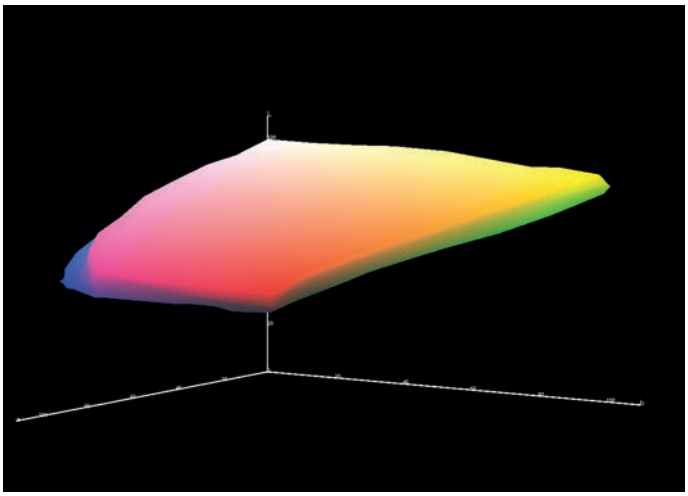
Textile Standards
Oekotex 100 compliant (Class I+II),
GOTS 5.0 compliant, Prop 65
Common Applications
Home Textiles, Apparel, Fashion, Flags, Banners,
Outdoor Signage



DURST REACTIVE HD INK

GOTS-certified Durst reactive inks were developed for classical applications such as household textiles, curtains, bed and sofa covers, apparel, and fashion. They are suitable for printing cotton and cotton mixtures with a cotton content of at least 60% as well as polyamide and silk.

Textile Standards
Oekotex 100 compliant (Class II), GOTS 5.0 compliant,
Oregon Toxic Free Kids Act compliant
Common Applications
Home Textiles, Apparel, Fashion



Fastness results
Pigment Ink

	Cyan	Magenta	Yellow	Black	Orange	Red	Green	Blue	
Light-Fastness (ISO 105-B02)	> 7	> 7	> 7	> 7	> 7	> 7	> 7	> 7	
Colour fastness to rubbing wet (ISO 105-X12)	4	4	4–5	4	4	4	4	4	
Colour fastness to rubbing dry (ISO 105-X12)	4–5	4–5	4–5	4–5	4–5	4–5	4–5	4–5	
Colour fastness to washing 60 °C (ISO 105-C06)	4–5	4–5	4–5	4–5	4–5	4–5	4–5	4–5	

Fastness results
Disperse HD Ink

	Cyan	Magenta	Yellow	Black	Orange	Violet	Light Magenta	Blue	Grey
Light-Fastness (ISO 105-B02)	5–6	5–6	> 6	6	3–4	> 6	5-6	> 6	4–5
Colour fastness to rubbing wet (ISO 105-X12)	4–5	4	4–5	4–5	4	4–5	4–5	4–5	4–5
Colour fastness to rubbing dry (ISO 105-X12)	4–5	3–4	4–5	4–5	3–4	4–5	4–5	4–5	4–5
Colour fastness to washing 60 °C (ISO 105-C06)	4–5	4–5	4–5	4–5	4–5	4–5	4–5	4–5	4–5

Fastness results
Reactive HD Ink

	Cyan	Magenta	Yellow	Black	Orange	Red	Blue	Grey	
Light-Fastness (ISO 105-B02)	6	5	5	6	5–6	5	6	4	
Colour fastness to rubbing wet (ISO 105-X12)	3–4	3–4	4	3–4	3–4	3–4	3–4	4	
Colour fastness to rubbing dry (ISO 105-X12)	4–5	4–5	5	4–5	4–5	4–5	4–5	5	
Colour fastness to washing 60 °C (ISO 105-C06)	4–5	4–5	4–5	4	4–5	4–5	4–5	4–5	

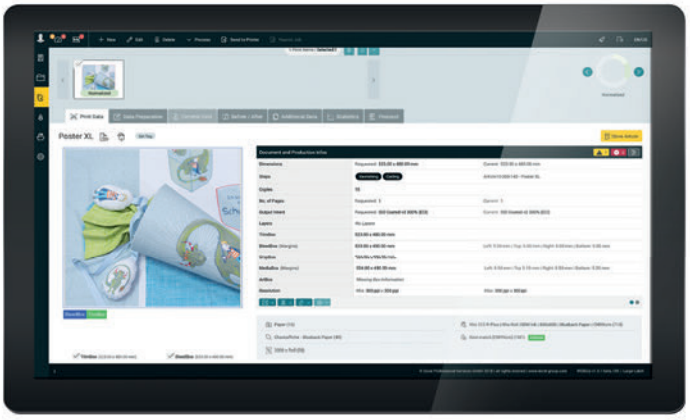
Grading of light fastness is in the scale of 8, all other gradings in the scale of 5. All values are dependent on the process and substrate.

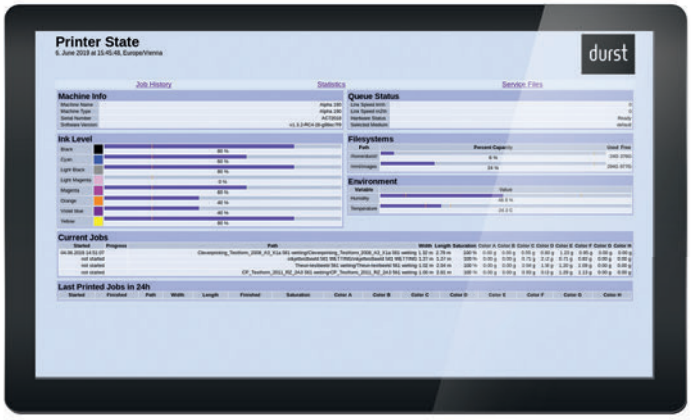
S
S+
W
W+
A
A+

3 DURST SOFTWARE ECOSYSTEM

The Alpha Series 5 printers are all equipped with the new software solution Durst Workflow Print and the monitoring tool Durst Analytics. This turns the printer into a production unit from day one.

To integrate e-commerce businesses, Durst offers a scalable solution with Durst Smart Shop. All Durst software can be modularly extended and managed with a web-based user interface.





DURST SOFTWARE MODULES

DURST SMART SHOP

The Durst Smart Shop solution is designed to get the maximum from your e-business by increasing the conversion rate of your online shop and the efficiency of the digital order fulfilment.

Durst Smart Shop is an innovative online shop system for the complete handling of your print and internet orders. Offer and sell your products and printing services on the internet.

DURST SMART SHOP

The Durst Smart Shop has all the essential functions of a web shop, enhanced by advanced calculations, realistic 3D previews and the use of print-specific attributes in the product configuration.

DURST SMART SHOP PLUS

Expand your web shop with an innovative graphical online editor. The Durst Smart Editor enables your customers to create browser-based print layouts. Everyone can design their own print products quickly and easily — without installing any additional software.

DURST WORKFLOW

The Durst Workflow is a revolutionary all-in-one solution to streamline the prepress and print production process.

Durst Workflow is a browser-based prepress and print production solution combining data, output preparation and color management to ensure efficient production with optimal results in the shortest possible time.

DURST WORKFLOW PRINT

A smart and simple solution to manage the print production. Easy data management combined with proven technology for color management and ripping takes your productivity to a new level.

DURST WORKFLOW PLUS

Expands your print production solution with prepress functionality for fast and flexible print data preparation. Customizable corrections, a sophisticated color matching toolbox and integration with your ERP/MIS systems streamlines and automates your processes.

DURST ANALYTICS

Analyze your most important print production data and monitor your printing systems via a web-based interface from virtually everywhere.

Durst Analytics helps to increase transparency of your production output and to monitor your printing systems. Easily determine your media, ink usage and productivity all at a glance.

DURST ANALYTICS

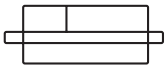
A web-based dashboard for your daily production figures such as print job statistics and productivity. Monitoring of the current status of the printing system and critical issues prevent downtime and enable faster reaction times for trouble shooting and support.

DURST ANALYTICS PLUS

The server-based system connects all printers equipped with Durst Analytics and makes the data available to a production planning or ERP systems. This allows straightforward customized report generation with our API.

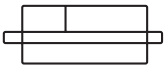
COMBINATION OF THE MODULES

INTEGRATED VERSION

Departments of printing company	PRODUCTION		
Needs of printing company	Produce production jobs	Print with high performance	Analyze production data
Products of Durst	W DURST WORKFLOW PRINT		A DURST ANALYTICS

Get the maximum out of the printer! The included Durst Workflow Print and Durst Analytics turn the printing system into a production unit. Simplify production, customize processes, analyze the data and bring your productivity to a new level.

FULL CONFIGURATION (OPTIONAL)

Departments of printing company	SALES & MARKETING		PREPRESS	PRODUCTION		
Needs of printing company	Attract new customers	Retain existing customers	Create print ready files	Produce production jobs	Print with high performance	Analyze production data
Products of Durst	S+ DURST SMART SHOP PLUS		W+ DURST WORKFLOW PLUS			A+ DURST ANALYTICS PLUS

A complete and streamlined solution from 'Pixel to Output'. The Durst software can be modularly extended with prepress functionality to expand sales channels with a powerful online system — seamlessly integrated with your IT environment.

For more information visit
durst-group.com/dps

4 CONSULTANCY & INTEGRATION

INTEGRATION

The seamless integration of the software into the customers workflow enables them to capture the full potential of automation and digitization of processes.

Durst Professional Services is your partner to integrate the Durst software solution in your IT environment.

We offer two integration service options:

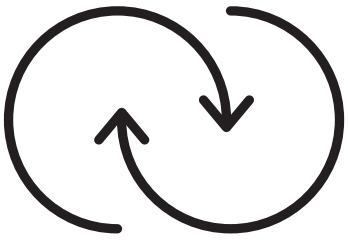
> Self-service option: Durst provides standard interface definitions for the integration of Durst Workflow Plus and Durst Analytics Plus
> Full-service option: A Durst Professional Service expert manages the integration project

CONSULTANCY

We offer you expert consultancy for your e-commerce, prepress, applications and software projects. Our system integrators help you with their broad knowledge to find the best solutions for your needs.

Our skilled consultants and integrators will work with you to:

> Streamline and automate your prepress and print workflow
> Improve your application results
> Successfully implement an e-commerce solution



For more information visit
durst-group.com/dps

5 TRAINING

Our training center offers customers the opportunity to participate in one of our target group-oriented training courses.

OPERATOR TRAINING

> 2 days
> Qualified operator
> Printing process control

This training is intended for machine operators to learn the general handling and maintenance of the printing system.

MAINTENANCE ENGINEER TRAINING

> 3 days
> Preventive maintenance
> Guided troubleshooting

Proper Repair Level 1
This module enables maintenance engineers to deepen their machine knowledge, as well as remotely guided first-aid troubleshooting.

Proper Repair Level 2
The engineer gains advanced technical knowledge in troubleshooting and repairing, based on detailed information about the various printer components and troubleshooting guidelines.

SHIFT SUPERVISOR TRAINING

> 1 day
> Printing performance
> Maintenance process
> Production statistics

This course deepens the knowledge from production planning to the production process in order to achieve optimum printing performance.

PRINT WORKFLOW PREPRESS TRAINING

> 2 days
> Printing performance
> Efficient workflow

This module includes general 'Print Workflow Operations' and focuses on the workflow from the image file/ prepress to the final print, including conducting printer linearization, media profiling, determining ink-limits and color management specific settings.

CUSTOMIZED TRAINING

Alternatively, our training center offers a tailor-made, customized training concept for your team with individual training programs for the needs of your organization. Tailor-made for your production process as certification or further training for your staff.

For more information visit durst-group.com/dps

6 SERVICE AGREEMENTS

DURST PRINTER SERVICE AGREEMENTS

The Printer Service Agreements always ensure maximum uptime and the required printing quality with predictable and stable service costs. Furthermore, Durst Service results in higher resale value due to maintaining the printer continuously in a top condition:

> Preventive maintenance performed at a regular interval
> Service intervention whenever needed
> Remote support by phone, e-mail or online

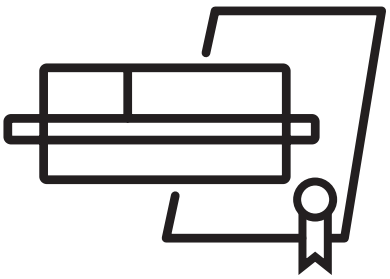
The agreements are flexible and tailored to individual customer needs.

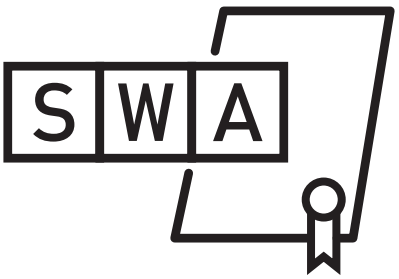
DURST SOFTWARE AGREEMENTS

The Durst Software Agreement keeps the Durst software ecosystem always up to date and makes the latest innovations accessible:

> Free updates including new features and functionalities
> Special offers for local support, software trainings and consultancy
> Predictable and stable costs
> Professional remote support by Durst certified technicians
> Software as a service (coming soon)

The duration and payment conditions of the agreements are flexible depending on the customer needs.





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DURST. ADVANCED DIGITAL PRINTING AND PRODUCTION TECHNOLOGY

Durst is a manufacturer of advanced digital production technologies. In the active business areas, Durst is the first choice for the transformation and digitization of industrial production processes. Durst is a family company with an 80-year history, where values are focused on innovation, customer orientation, sustainability, and quality.

> Customer orientation
> Innovation
> Quality
> Sustainability

Durst Headquarters, Brixen, Italy

Durst Production Site, Lienz, Austria

dUrst

durst-group.com/textile

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