

# MUTOH

Creation, we make it happen...

## viper Dye Sublimation Printers

**extreme**



High speed, high volume sublimation inkjet printers

Print on the thinnest transfer papers and on closed polyester fabrics

Reliable high speed production thanks to mechanical robustness, 8 print heads and Mutoh's exclusive  $i^2$  Intelligent Interweaving print technology

Production speeds up to 37 m<sup>2</sup>/h with crisp, clean images ready for after-treatment

Top speeds up to 77 m<sup>2</sup>/h, with continuous ink supply option for longer runs

Deep & vivid colours from Mutoh water-based sublimation inks





## > Produce Unique Graphics for a Wide Variety of Applications

Sublimation inkjet technology makes up a fast growing and lucrative market within the wide-format graphics industry. Expand your fabric offerings to complement your existing screenprinting and/or digital imaging products. Discover Mutoh's Viper 65 Extreme (1651 mm – 65") and Viper 90 Extreme (2240 mm – 88") — purpose-designed with the latest features for sublimation printing, 8 high-end drop-on-demand piezo inkjet heads plus Mutoh's unique Intelligent Interweaving print technology, offering fit-for-purpose print quality. These are high-speed sublimation printers that produce exceptional quality, durable and washable images for a wide variety of applications : trade-show displays and banners, architectural graphics, sports arena displays, home decoration and much more.



### Turn ideas into products ...

Discover the benefits of digital transfer printing ! Mutoh's Viper Extreme will print on all typical dye sublimation transfer paper weights, even the thinnest transfer papers. The machines also allow direct printing onto closed non-stretch polyester fabrics. You can provide fast and worry-free production of soft signage & graphics for events, trade-shows, shops, exhibitions and many more uses. Not only for customised one-off projects, but also for short-run production volumes. Viper Extreme dye sub prints can also be used for dedicated applications such as customized gadgets (mugs, cups, mouse pads, ...), T-shirts, hand bags, luggage, sportswear, etc.



### Media compensation

Built for production, also on the thinnest lightweight transfer papers (70 g/m<sup>2</sup>), Viper Extreme printers allow transfer paper to expand when absorbing the dye sublimation ink, thanks to a proprietary pressure roller disabler tool. To compensate for media expansion during printing, Mutoh's patented ETT-system (Extra Tensioning Tool) keeps the media under a constant tension, minimising cockling and enabling accurate transfer of images. Additionally, the ETT-system easily adapts to support different media roll sizes.



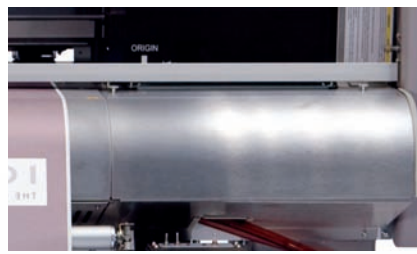
### Worry-free water-based inks

There are no harmful VOCs to permeate your working environment when you print with Mutoh high-speed dye sublimation water-based inks. That means there is no need for forced ventilation.

Mutoh fast-drying dye sublimation inks feature excellent nozzle stability for high speed and high volume printing. They offer a large colour gamut, including the deepest black on the market. Mutoh water-based disperse dye inks deliver top scores in wash fastness, rubbing and perspiration. The combination of affordable quality inks and engineering excellence make Viper Extreme sublimation inkjet printers impressively versatile, delivering superb images for a wide variety of applications.

### High-end piezo print head technology

Viper Extreme printers incorporate 8 drop-on-demand piezo inkjet heads. Each head has 2 x 180 nozzles. Using Dynamic Variable Dot Imaging Technology, each ink droplet is individually adjustable to provide high speed and high quality with low ink consumption.



### Media productivity path

Printed media are instantly acclimatised and dried with the aid of two built-in, digitally controlled heating elements. This results in a total removal of all water from the printed paper, as such preventing ghost images during calendering. Both heating elements are individually controllable, up to 70°C. No additional drying equipment after printing is required, even for high speed printing.

### i<sup>2</sup> Intelligent Interweaving

Mutoh i<sup>2</sup> Intelligent Interweaving technology means you can effortlessly select the most suitable print mode and predict how long printing will take. Predictability, reliability and consistent quality from Mutoh i<sup>2</sup> printing technology brings you satisfied customers, profitable printing and repeat business.

Learn more about Intelligent Interweaving and Viper Extreme's i<sup>2</sup> print modes at [www.mutoh.eu/interweaving](http://www.mutoh.eu/interweaving)

### Speed / Performance

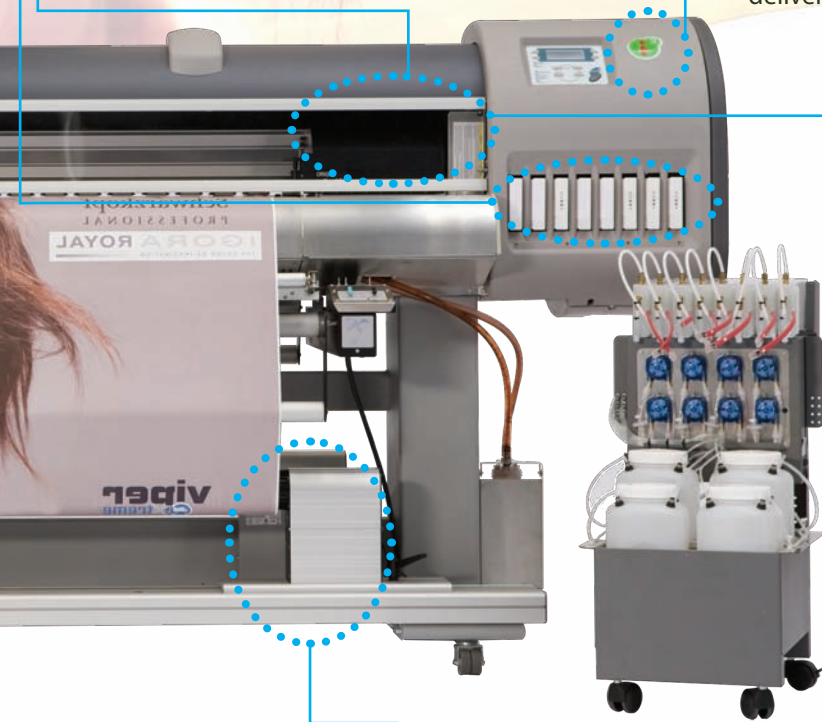
Mutoh's Viper 90 Extreme printer achieves a top speed of 77 m<sup>2</sup>/h (Viper 65 Extreme: 63 m<sup>2</sup>/h). Quality production speeds of 37 m<sup>2</sup>/h are reached (Viper 65 Extreme: 33 m<sup>2</sup>/h) with the intelligent interweaving 360 x 360 high definition mode. Highest quality prints (720 dpi) are delivered at 17 m<sup>2</sup>/h (Viper 65 Extreme : 15 m<sup>2</sup>/h)

### Managing Head Height

Viper Extreme printers have an adjustable head height that ranges from 1.2 mm up to 4.0 mm, allowing users to print onto various transfer papers & polyester fabrics without risking a head-strike.

### Volume printing with continuous ink delivery

Viper Extreme printers connect to Mutoh's optional professional continuous ink delivery system (BIS). BIS was developed for speed-intensive volume-oriented users, requiring a high-end, high-volume ink delivery and refill system that offers long unattended printing options along with minimum user intervention. Two BIS models are available for the Mutoh Viper Extreme : a 4-bottle system and an 8-bottle system. Each BIS ink bottle holds 4.3 litres and can be refilled during printing.



### Perfect media handling

Unattended roll-to-roll printing is possible with the fully motorized heavy-duty unwinding/winding system for media rolls up to 100 kg. Logical design means loading and unloading the unwinder/winder system is quick and simple. Accurate unrolling and adequate tensioning at the front of the printer are ensured as special design

media flanges on the (un)winder system maximize grip on the inside of the media core. This power grip mechanism provides increased grip on the cores without disturbing the media tracking. Perfect media tracking delivers straight winding of prints onto the take-up roll.



### Ready for after-treatment

Sensors ensure the front and rear tension bar system maintains constant tension as media moves through the printer. Winding under even tension is particularly important for after-treatment on a calender.



## Turn ideas into products

Transfer onto all possible flexible and rigid polyester materials, e.g. banners, flags, pennants, prototypes, sports goods (snowboards, helmets...), gadgets (umbrellas, mugs, mouse mats, iPods, mobiles, clocks...), apparel (blouses, outdoor jackets, T-shirts, sportswear...), personalized interior fabrics (curtains, sheets...), polyester coated ceramics and tile murals, tradeshow and exhibition graphics (carpets, customized banners, booth decoration...), floor graphics, POP-displays, posters and much, much more.

Direct printing on polyester fabrics with closed structure, e.g. curtains and display fabrics.

Printer specifications	Viper 65 Extreme	Viper 90 Extreme
Head Technology	8 High-end drop-on-demand piezo print heads – variable drop – 2 nozzle rows with 180 nozzles each/head – drop mass (ng): 5.4, 11.5, 14, 25, 28 and 41.5	
Maximum Media Width	1651 mm (65.00")	2240 mm (88.18")
Maximum Print Width	1640 mm (64.56")	2230 mm (87.79")
Media Types	Media thickness range: 0.05 mm – 1.5 mm Supports all typical dye sublimation transfer paper weights & closed non-stretch polyester fabrics Typical paper weights: from 70 g/m <sup>2</sup> to 150 g/m <sup>2</sup>	
Media Rolls	Maximum load: 100 kg - Maximum media diameter: 300 mm Media core: 2" or 3"	
Media Thickness Compensation	Automatic media thickness compensation Variable - RIP controlled - Head Height	
Max. Print Speed	63 m <sup>2</sup> /h	77 m <sup>2</sup> /h
Resolutions	360 x 360 dpi, 720 x 360 dpi, 540 x 720 dpi & 720 x 720 dpi, 1440 x 1440 dpi	
Intelligent Interweaving (i <sup>2</sup> )	<ul style="list-style-type: none"> <li>• 4 Levels: Off, Stitch, Picture/Speed and Sign/Quality</li> <li>• Compatibility: 360 x 360, 720 x 360, 540 x 720 and 720 x 720 dpi</li> <li>• Print modes: normal &amp; double density</li> </ul>	
Colour / Ink Setup	4 colours : 2x4 CMYK (same ink type – double autonomy) 6 & 8 colours : mix of process & spot colours possible	
Ink Capacity / Type	Mutoh high-speed dye sublimation inks – 1 litre & 5 litre bottles – C, M, Y, K. Large colour gamut including the deepest black on the market. Excellent nozzle stability for high speed and high volume printing.	
Heaters	Incorporated heater system: Pre-heater (max 70 °C) and Dryer (max 70 °C)	
LCD Display	Backlight LED – 4 lines x 20 characters – Blue background / white text	
Interface	Ethernet Network Card 10/100base-TX / Centronics, IEEE 1284 compatible	
Graphics Command Language	RTL-PASS	
Print Engine Working Environment	Temperature: 18 – 27 °C (Δt max 2 °C/h) Relative Humidity: 40 – 65 % RH (no condensation - ΔRH max 5 % RH/h))	
External Dimensions in mm (W x D x H)	3074 x 791 x 1289 mm	3677 x 791 x 1289 mm
Weight	300 kg	330 kg
Power Consumption	1200 W - 140 W in stand-by mode	
Power Supply	AC 100 – 120 V / AC 220 – 240 V 60/50 Hz	

© Copyright Mutoh Europe - Printed February 2009.

Specifications and machine configurations are liable to changes without prior notice. All trademarks mentioned are property of their respective owners. Images in printer courtesy of & copyrighted by Schwarzkopf Professional and Kinopolis Film Distribution.

# MUTOH

MUTOH EUROPE nv  
Tel.: 32-(0)59-56 14 00  
Fax: 32-(0)59-80 71 17  
E-mail: [mutoh@mutoh.be](mailto:mutoh@mutoh.be)  
<http://www.mutoh.eu>  
<http://www.mutoheurope.com>

MUTOH Deutschland GmbH  
Tel.: 49-211-385474-0  
Fax: 49-211-385474-74  
E-mail: [Mutoh-Sales@t-online.de](mailto:Mutoh-Sales@t-online.de)  
<http://www.mutoh.de>

Distributed by: