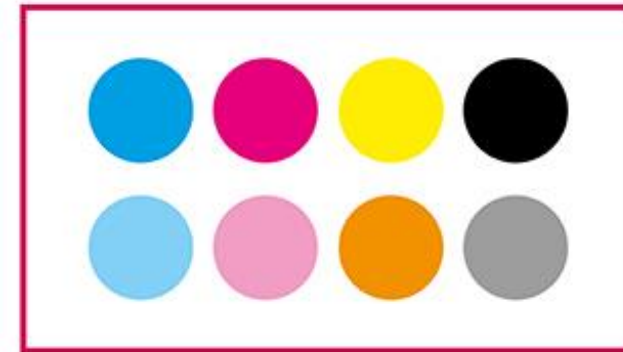# XpertJet 1682SR

8 Colour Sign & Display Printer

Product Guide

XpertJet 1682SR
Reassuringly Mutoh !

- Robustly built & reliable printer
- Multiple product enhancements versus ValueJet series printers
- Mutoh's first 8 colour printer platform - CMYK, Lc, Lm, Lk, Or
  → Say YES to a wider range of applications
- New i-Weave weaving algorithm
- MUTOH VerteLith RIP software in the box
- GREENGUARD Gold certified MS41 inks

XpertJet 1682SR

- Successor to ValueJet 1638X
- 1625 mm media width / 1615 mm print width
- Dual head - 8 colour channels - 2xCMYK
  or CMYK, Lc, Lm, Lk, Or
- Two ink types : MS41 (8C) or UMS (4C) inks
- 30, 40 kg motorized take up systems / 100 kg feed
  & take up system
- Excellent user experience ranking
- High user assistance for uninterrupted production

Piezo Variable Drop Print Head Technology

Nozzle Configuration	180 nozzles x 8 lines
Drop Mass Range (pl) *	3,5 – 4,4 – 7,8 – 8,7 – 16,0 – 21,8 – 35,0
Print Resolutions	Up to 1440 x 1440 dpi

PIEZO VARIABLE DROP

Variable dot
- Higher quality
- Photographic quality - low graininess
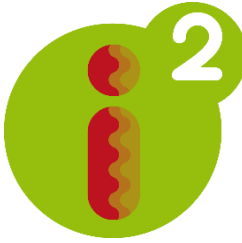- Excellent gradients – skin tones

High durability print heads
- Lower long-term cost

*: Maximum 3 drop sizes can be used per drop family

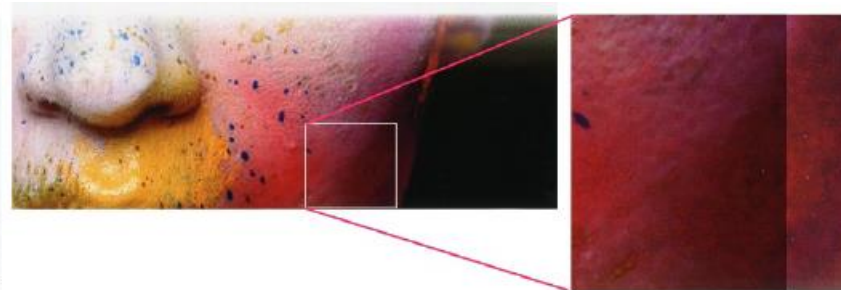# 3rd Generation i^2 Intelligent Interweaving i-Weave

- Reduces banding, mottling and bleeding
- Delivers pin sharp output and consistent high quality at production speed levels
- Less waste and increased efficiency

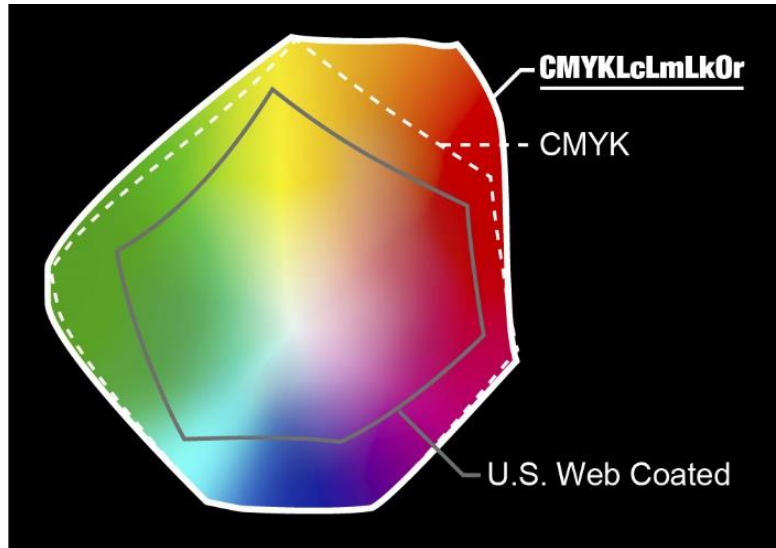*Conventional straight line printing*

i² printing

Key Specifications

Print Head	2 piezo heads (staggered)
Nozzle Configuration	180 nozzles x 8 lines / head
Drop Volume Range (pl)	3.5 to 35
Resolutions	360x360, 360x720, 720x720, 720x1080, 720x1440, 1440x1440 dpi
Head Height	Low : 1.5 mm / Middle : 2.5 mm / High : 4.0 mm
Media Thickness [1]	0.3 / 1.3 / 2.8 mm
Media Width	Minimum 500 mm (19,69") - up to 1625 mm (63.97")
Max. Print Width	1615 mm (63.58")
Media Measurements [2]	Ø 150 mm / 2" or 3" / 30 kg
Ink Type / Volume	MS41 / 300 ml & 1 litre packs or UMS11 inks / 1 litre packs

[1]: Maximum media thickness is specified per head height.   [2]: Standard non-motorised roll-off system.

MS41 - 8 colours – CMYK Lc Lm Lk Or

Light Cyan / Light Magenta : Smoother skin tones and colour gradients
Light Black : Print grey gradients without colour shift
Orange : Produce a new range of reds, oranges and yellows

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Ink Setup Guidance

MS41 + UMS11

| C | M | Y | K | C | M | Y | K |

Main focus on speed production & outdoor work :

Car wraps
Banners
Billboards
Soft Signage Textile

MS41

| C | M | Y | K | Lc | Lm | Lk | Or |

Main focus on high quality, photorealistic prints (smooth skin tones & gradients, rich & vivid colours) for short viewing distances (< 1 m) :

Indoor prints
Photo reproduction prints
Fine art
Small sized prints / small stickers

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Sweet Spot Speed Range

XpertJet **1682SR**

Colour Setup	C M Y K Lc Lm Lk Or	C M Y K C M Y K
Production Sweet Spot Speed Range(*)	4.8 – 7.6 m²/h	9.6 – 15 m²/h

(*) *The indicated speed range is applicable for worry free printing. allowing* **the broadest type of work and graphics selection ranging from posters to small detailed stickers for short viewing distances.**
The indicated speed range is based on experience with previous generations of Mutoh Sign & Display printers.

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Performance Overview [1]

Colour Setup	C M Y K Lc Lm Lk Or	C M Y K C M Y K
1080 x 1440 dpi [2] [3]	3.7 / 4.8 m²/h [3]	7.5 / 9.6 m²/h [3]
720 x 1440 dpi [2]	5.3 m²/h	11.5 m²/h
720 x 1080 dpi [2]	7.6 m²/h	15 m²/h
720 x 720 dpi [4]	5.3 – 17.0 m²/h	11.5 – 33.1 m²/h
360 x 720 dpi [5]	25.1 m²/h	48.2 m²/h
360 x 360 dpi [5]	48.1 m²/h	87.0 m²/h

[1] Applicability to be judged on individual basis and depending on region, application and print viewing distance.

[2] Indicates the most popular speed for this print resolution. Based on experience with previous generations of Mutoh Sign & Display printers.

[3] Both the new i-Weave as well as the Fine & Fog speed are indicated. i-Weave is more robust and maximises the suppression of banding & microstructures. Fine & Fog is slightly faster.

[4] Per print resolution a complete speed range can be created by varying the shuttle speed, uni-dir & bi-dir choice, weave (i²) settings, print passes etc. The given example shows the variation range for 720 x 720 dpi.

[5] Super Draft (360x720) & Maximum speed (360x360). Applicability to be judged on individual basis.

Target Applications

High quality & volume production of indoor/outdoor
sign & display graphics

- ❑ General signage
- ❑ Car wraps
- ❑ Stickers
- ❑ Interior décor
- ❑ Window graphics
- ❑ Photography
- ❑ Fine Art
- ❑ Backlits
- ❑ ...

XpertJet 1682SR

Indoor / Outdoor

GREENGUARD
GOLD

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Excellent User Experience

Intuitive Operation Panel

- OLED technology :
  - ➢ Improved image quality - better contrast, higher brightness, fuller viewing angle, faster refresh rates
  - ➢ Lower power consumption
- Intuitive : easy & quick navigation – unnecessary keys are hidden
- Multi-language : English, German, French, Italian, Spanish, Dutch, Portuguese
- Colour status bar enables remote viewing of printer status

Illuminated Print Platform

LED lights above the print platform:

- Easy inspection of calibration prints
- Easy inspection of the print quality during printing
- Illumination settings can be tuned by the operator

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Roll Off System / Media Feed Flanges

New Roll Off System

New media feed flanges

Media roll rests on movable sliders

Multi Level Pinch Rollers - 4 levels

Worry free loading and optimum transport of the widest range of media

HIGH (700 – 800 g)	Media of which back side is slippery – backlit, synthetic paper, self adhesive PVC with PE liner, etc.
MIDDLE (500 -600 g)	Standard media - PVC, tarpaulin, etc.
LOW (300-400 g)	Thin & delicate media, exclusive softsign fabrics, etc.
PARTIAL PRESSURE = individual disable (0 g)	Will avoid cockling for thin and delicate media

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Motorised Take Up Systems

- 30 kg torque controlled continuous motorised take-up system
- VJ1619-TUP30
  Maximum roll-up diameter of 150 mm

- 40 kg torque controlled continuous motorised take-up system
- VJ1619-TUP40
  Maximum roll-up diameter of 250 mm

- 100 kg Feed & Take-up System
- IJ-TUP100-01
  Front & rear diameter up to 250 mm

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Mutoh Status Monitor
MSM / MSM Mobile

- Upon unit activation of a Mutoh printer, each end-user automatically becomes member of Mutoh's Printer Club

- MSM is a light-weight software enabling remote control of the printer from a computer

- For mobile phone or tablet, it is also possible to be remotely connected to the printer using MSM Mobile

- Multilingual support for all functions : English, Dutch, French, German, Italian, Portuguese and Spanish

MSM For Desktop

Features:

- Printer status

- Heater information

- Remaining ink

- Print information: print time, print mode, print size, ink consumption

XpertJet 1682SR

VerteLith software in the box

VerteLith – MUTOH GENUINE RIP SOFTWARE

- ❑ Built around Harlequin® RIP Core
- ❑ Straightforward & powerful user interface
- ❑ Simple workflow
- ❑ ICC substrate profiling included
- ❑ Impressive features list, including finishing toolset
- ❑ Best possible output results from Mutoh printers
- ❑ Can also be hooked up to non-Mutoh RIP solutions
- ❑ Multi language chat support

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VerteLith – RIP Software – Top 5 Features

1

MUTOH Proprietary Half Tone Screening :
Clear Tone

More beautiful image quality

MUTOH Clear Tone

Less variation in colour density and smoother gradations

High image quality technology maximizing the performance of the XpertJet 1682SR

VerteLith – RIP Software – Top 5 Features

2 Accurate processing of PDF transparencies

VerteLith processing

Improper processing

More reliable output through accurate processing of PDF transparencies & drop shadows

High image quality technology maximizing the performance of the XpertJet 1682SR

VerteLith – RIP Software – Top 5 Features

3

**Powerful Preview Functions
to reduce errors and waste**

RIP preview

Preview "the actual printing dots"
on screen before printing

Even the variable dots are previewed for confirmation

Soft proof

Simulate "the colour" of the
printed image on screen before
printing

* For soft proofing, a display with monitor calibration is recommended

VerteLith – RIP Software – Top 5 Features

4

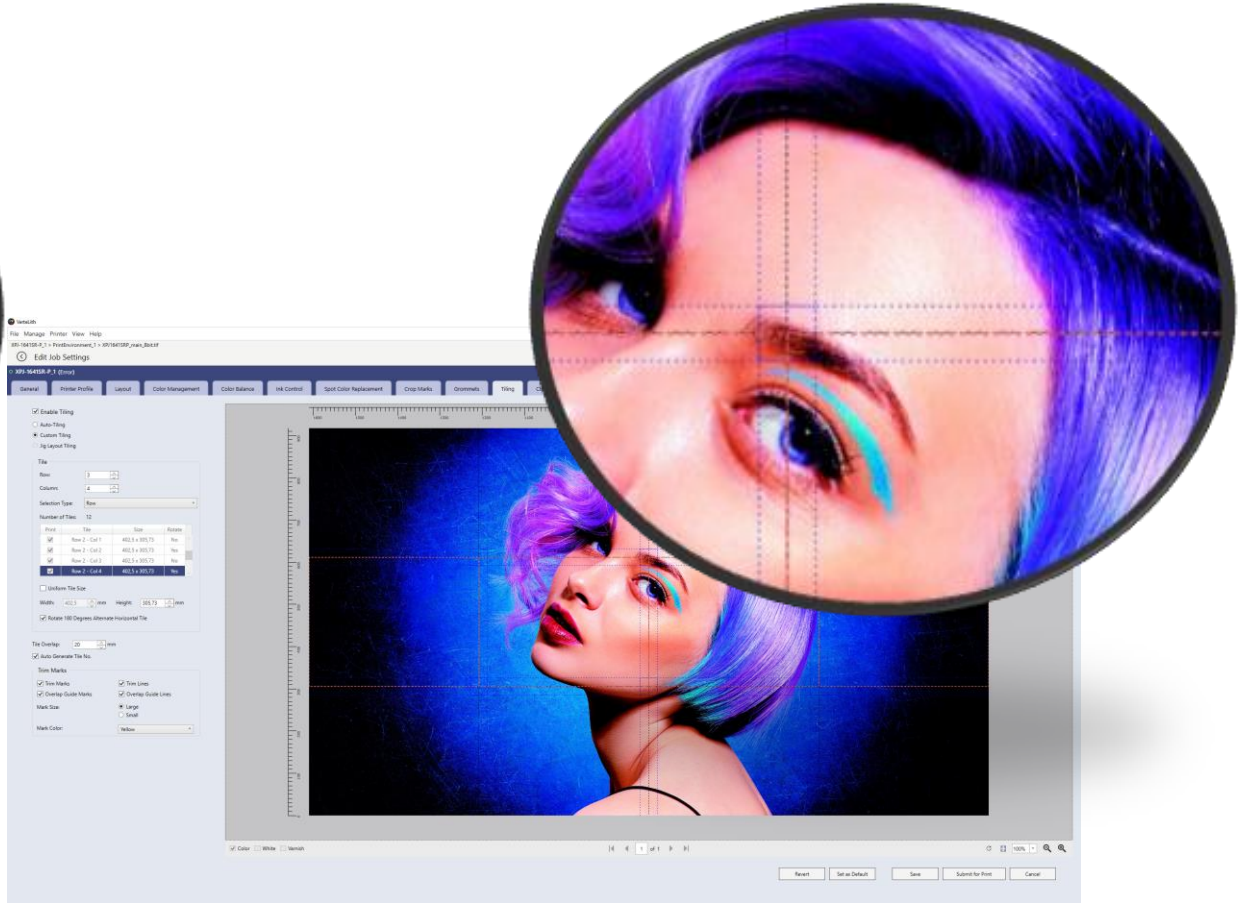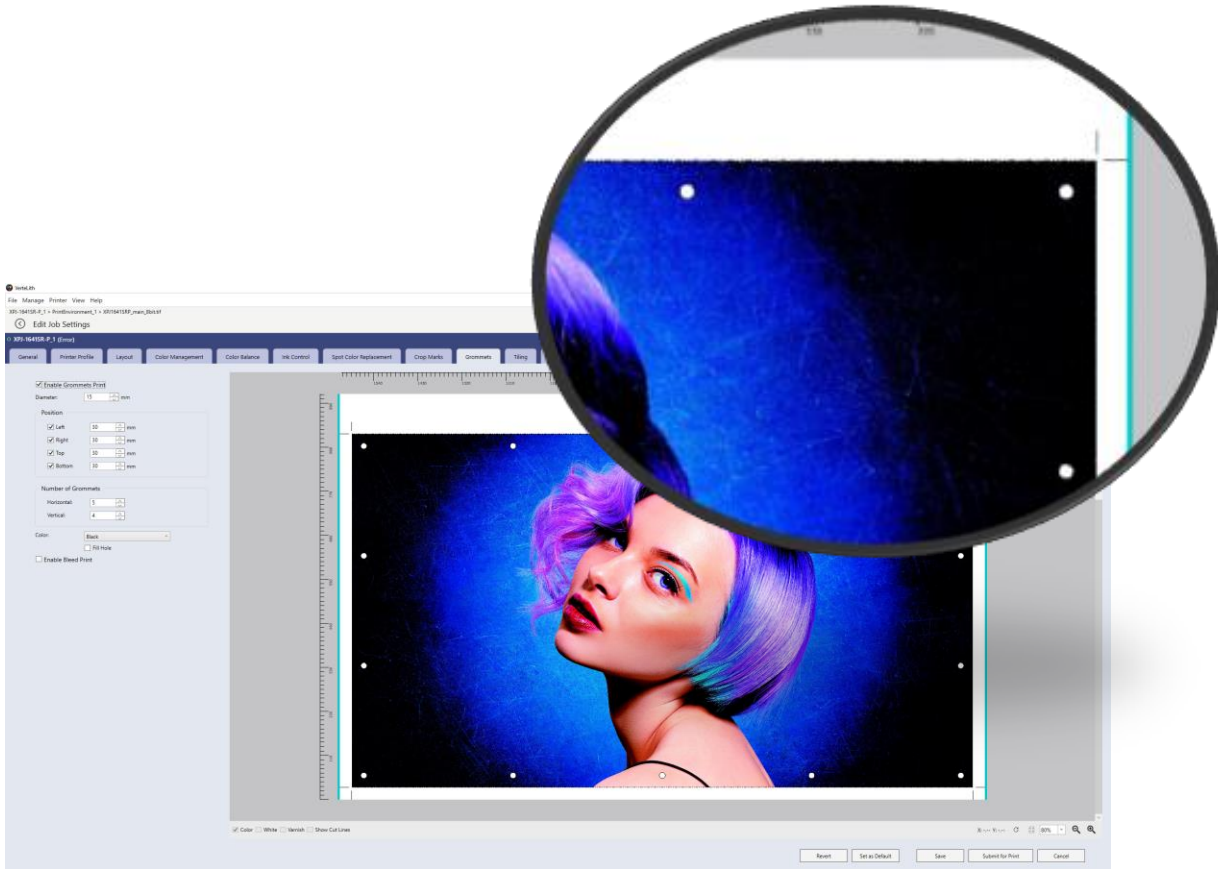**Workflow Efficiency & Finishing Tools**

- Add trim marks in different styles
- Add grommets for banner production
- Automated and manual tiling for jobs exceeding your substrate or printer width

- Step & repeat functionality for handling textile/wall deco patterns
- Automated layout processing and printing variable data with multi-page PDF

Operating environment: Windows 8.1/10

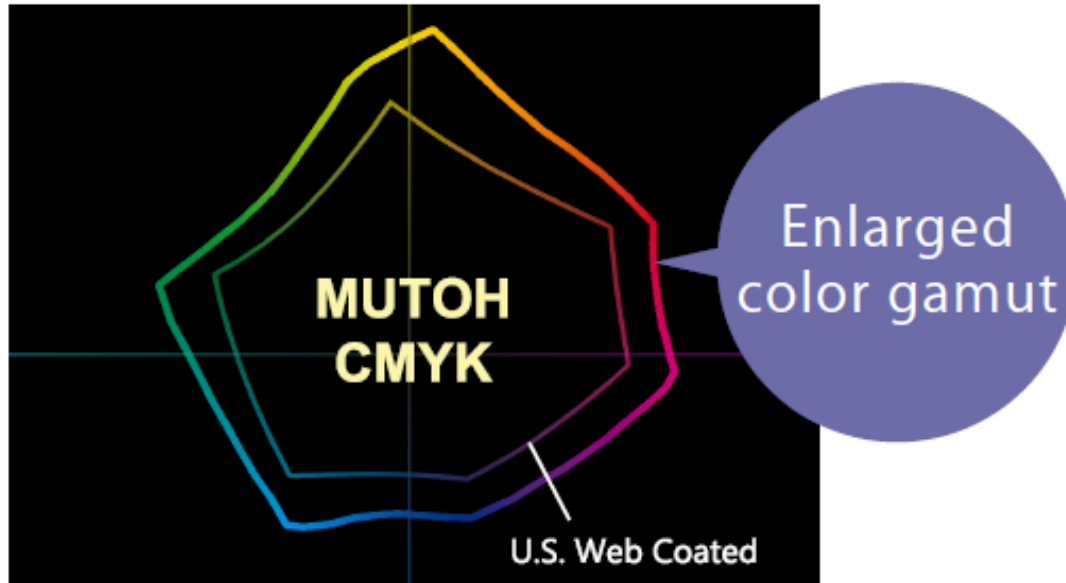Data format: PDF/PostScript/EPS/TIFF/JPEG/PNG

MUTOH

VerteLith – RIP Software – Top 5 Features

5

Wide color gamut ICC profile
MUTOH CMYK

Enlarged
color gamut

MUTOH
CMYK

U.S. Web Coated

Enlarges the color gamut of MUTOH printers & enables vivid colours

High image quality technology maximizing the performance of the XpertJet 1682SR
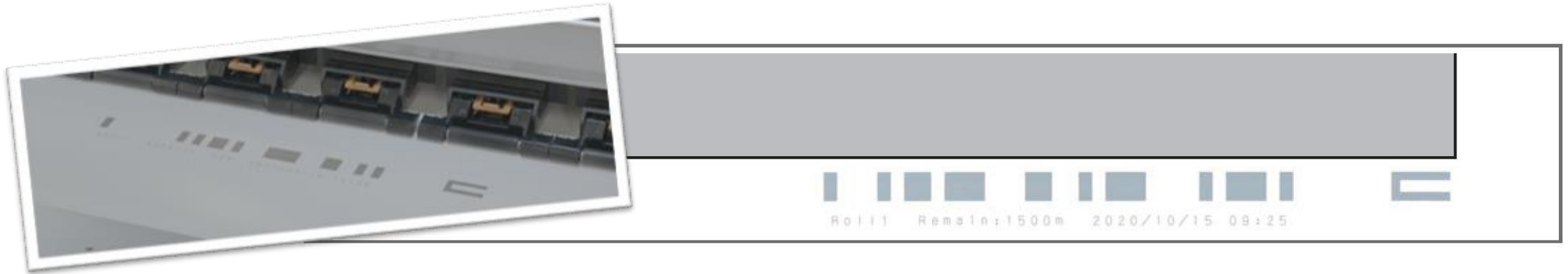
XpertJet 1682SR
High User Assistance

Media Tracker

1. Enter media length upon loading new media roll
2. Print bar code before removing roll in use
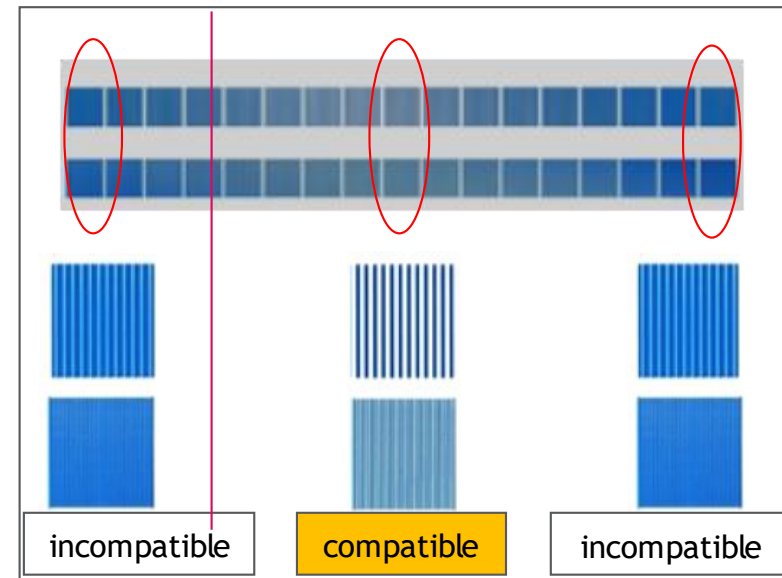3. Upon reloading roll, printer will read barcode and detect how much media is left on roll

Roll1 Remain:1500m 2020/10/15 09:25

DropMaster 2

Automated bidirectional alignment through built-in colour sensor

Advantages :

- fully automated calibration[1]
- reduced waste
- no variation in adjustment among different operators

| incompatible | compatible | incompatible |

1 : Manual adjustment remains possible if it is preferred by an experienced operator.
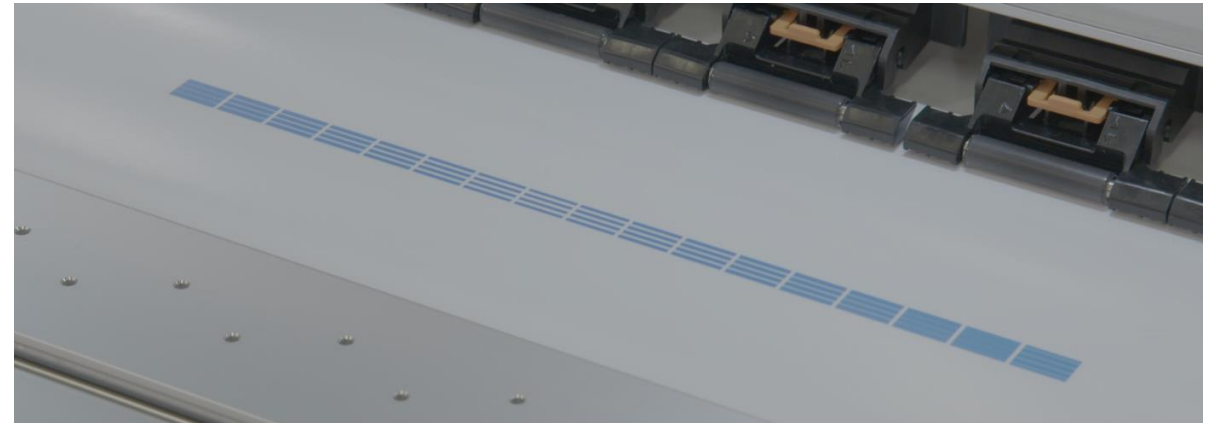
FeedMaster

Automated paper feed adjustment through built-in colour sensor

Benefits :

- Fully automated calibration[1]
- Reduced waste
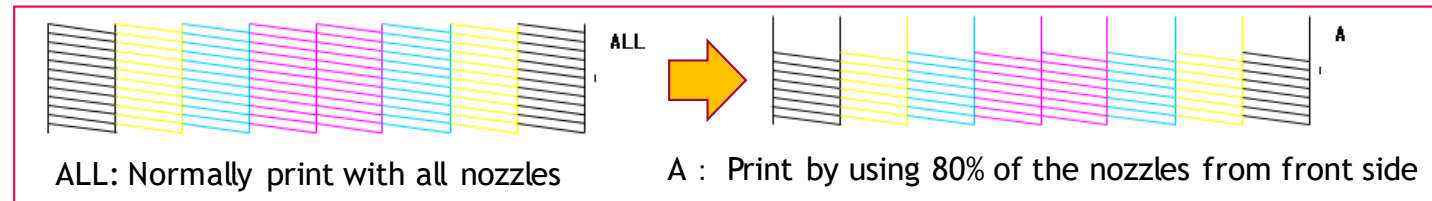- Identical adjustment among different operators

1 : Manual adjustment remains possible if it is preferred by an experienced operator.
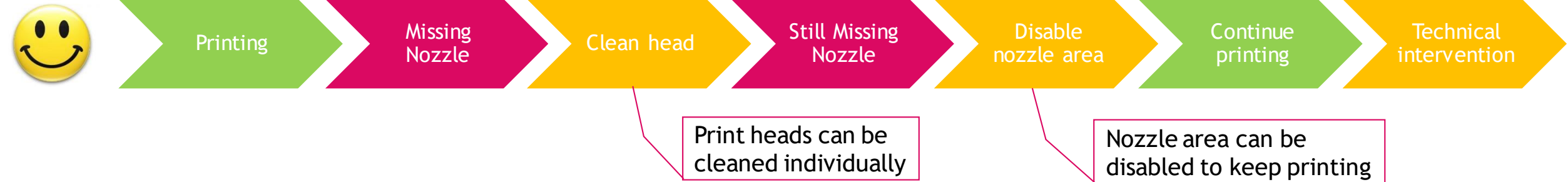
Nozzle Area Select

Eliminate downtime by selecting only active nozzle blocks in the event missing nozzles cannot be recovered

ALL: Normally print with all nozzles   A : Print by using 80% of the nozzles from front side

With Nozzle Area Select

Printing → Missing Nozzle → Clean head → Still Missing Nozzle → Disable nozzle area → Continue printing → Technical intervention

Print heads can be cleaned individually

Nozzle area can be disabled to keep printing

Without Nozzle Area Select

Printing → Missing Nozzle → Clean head → Still Missing Nozzle → No printing → Technical intervention

* : Reducing the amount of active nozzles will reduce the output speed.

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Inks

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Front Access Ink Cases

- Re-usable ink cases
- Front positioning for easier ink exchange
- Chip card separated from ink pack
- LED lamp flashes when ink level is low
- Replace empty ink packs while printing (integrated subtanks)

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MS41 Sign & Display Inks

- Mutoh's fourth generation Sign & Display 8 colour eco solvent inks
- 1 liter or 300 ml packs – in foil – less waste
- GREENGUARD Gold certification

GREENGUARD
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

XPJ-1682SR 8-Colour Configuration

C	M	Y	K	Lc	Lm	Lk	Or

XPJ-1682SR 2x4-Colour Configuration

C	M	Y	K	C	M	Y	K

MUTOH

MS41 Sign & Display Inks

- Wide colour gamut – deliver vibrant high density prints with excellent dot gain
- Print on a wide range of coated and uncoated substrates
- Suited for long term outdoor and indoor applications
- Excellent weather resistance, abrasion and chemical resistance
- UV durability without lamination up to 3 years outdoor*
- Operator friendly thanks to low maintenance
- 24 months shelf life

* UV durability rating for CMYK inks. For heavy-duty applications where mechanical stress or environmental impact is involved (floor, vehicle and marine graphics), lamination is required. Stabilisation is required prior to lamination.

XPJ-1682SR 8-Colour Configuration

| C | M | Y | K | Lc | Lm | Lk | Or |

XPJ-1682SR 2x4-Colour Configuration

| C | M | Y | K | C | M | Y | K |

MUTOH

MS41 - Unrestricted Level of Use

GREENGUARD
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

Outdoor / Indoor

MS41 - Unrestricted Level of Use

GREENGUARD Gold Certification

- MS41 inks meet the UL 2818-2013 Gold Standard for chemical emissions for building materials, finishes and furnishings.

- UL GREENGUARD Gold indicates that products – including inks, printed substrates and the combination of both for indoor applications – contribute to healthier indoor environments by minimizing potential exposure to airborne chemicals.

UL

GREENGUARD

PRODUCT CERTIFIED FOR
LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818

GOLD

MUTOH

MS41 - Unrestricted Level of Use

XpertJet
1682SR

GREENGUARD Gold Certification

- MS31/MS41 inks are certified at the highest level – category Wallpaper[1] (lowest emissions) and qualified as "unrestricted" to decorate a complete room.

- Category Wallpaper means :
  - Unrestricted for a fully decorated room 33,4 m² in an office environment and 94,6 m² in a classroom environment.

BENEFITS

- Prints can be used at full room coverage, even in sensitive environments such as schools and hospitals !

- Using GREENGUARD Gold inks widens the scope of applications !

GREENGUARD
PRODUCT CERTIFIED FOR
LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

1   The other categories of GREENGUARD Gold certification are :
    - Category Decorative Wall = one wall of less than 10,4 m²/h in office environment and less than 31,6 m² in a classroom environment
    - Category Signage = sign of less than 3 m² in office environment and less than 11,9 m² in a classroom environment

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MS41 - Backed Up by Leading Media Manufacturers!

Avery Dennison's ICS Performance Guarantee Program

The ICS Performance Guarantee assures the performance of Avery films with a printing platform when customers are working according to the relevant Avery Dennison Technical Bulletins associated with that product

3M Performance Guarantee

3M Performance Guarantee (PG) means specific performance guarantee for 3M Products when used with qualified OEM inks as set out in the 3M Commercial Graphics Warranty Matrix

UMS11- Universal Mild Solvent Inks

- Mutoh's fourth generation Sign & Display mild solvent inks
- 4 colours
- 1 liter packs – in foil – less waste

XPJ-1682SR 2x4-Colour Configuration

| C | M | Y | K |

UMS11 - Universal Mild Solvent Inks

- Mutoh's fourth generation mild solvent inks

- C, M, Y, K – available in liter packs for XpertJet series

- For outdoor and indoor sign & display applications

- Specifically formulated for Mutoh & only available from Mutoh

- Wide colour gamut, covering 83 % of the Pantone C® colour chart

- Virtually odourless in the print environment

- No need for forced ventilation

- Environmentally responsible : highly durable colour pigments, new blend of milder and non aggressive solvents & multi-resin mix

CMYK

Piezo Variable Drop

Outdoor / Indoor

Environmentally Responsible

Cost Effective

UMS11 - Cost-Effective Durable Ink

- Unique media gloss preservation

- Excellent application scuff : minimal superficial damage during application

- Good resistance against alcohol-based cleaners

- Fixed and dried at regular heating temperatures [1]

- Basic and easy maintenance (daily)

- Suited for high quality and high speed printing

- Wide media compatibility with uncoated & coated substrates

- 1 liter ink packs [2]

[1] : Some media will show a slower drying profile. To accelerate drying, infra red heating combined with a gentle airflow is recommended.
[2] : 1 litre ink packs for XpertJet were adapted to the XpertJet standard ink cases system.
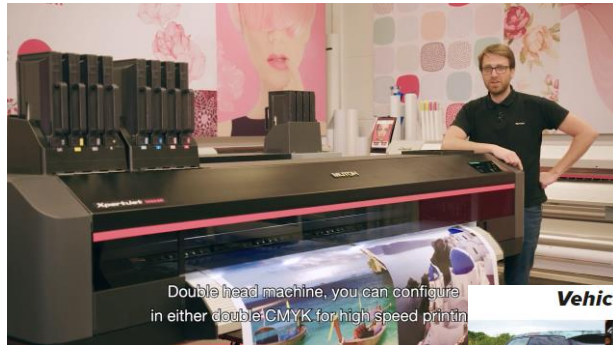
UMS or MS41 Inks on XPJ-1682SR?

Typical Customer Profile	
MS41 Inks	UMS Inks
2 x CMYK or CMYK, Lc, Lm, Lk, Or	2 x CMYK
Intermittent production	Continuous production
Maintenance discipline : moderate/low *(required once per week)*	Maintenance discipline : middle/high *(required daily [1 + 2])*
Typical yearly volume 500 – 3000 m²/year	Typical yearly volume 3000+ m²/y

[1] *Clean wiper, print head circumference & capping area.*
[2] *1 + Perform tube flush to rinse away ink remainders.*

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Marketing & Sales Resources

- XpertJet 1682SR with orange - teaser
- XpertJet 1641SR/1682SR introduction movie
- XpertJet product demo movie
- XpertJet features / core technologies
- 100 kg winder for XpertJet series

- XpertJet 1682SR webpage (available in 6 languages)
- VerteLith RIP software (available in 6 languages)
- Indoor & outdoor signage (available in 6 languages)
- Vehicle Graphics (available in 6 languages)
- User stories on solvent printing (available in 6 languages)
- MS41 ink information (available in 6 languages)
- UMS ink information (available in 6 languages)

- XpertJet 1682SR datasheet

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