

# ***XpertJet 1682WR***



## 64" Wide Format Dye Sublimation Printer Product Guide

Apr. 2021  
Version 1.0

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# Discover the XpertJet 1682WR

- 1 Product Concept, Target Public & Application Possibilities
- 2 Key Features, Product Enhancements and Performance
- 3 Standard Configuration & Pricing

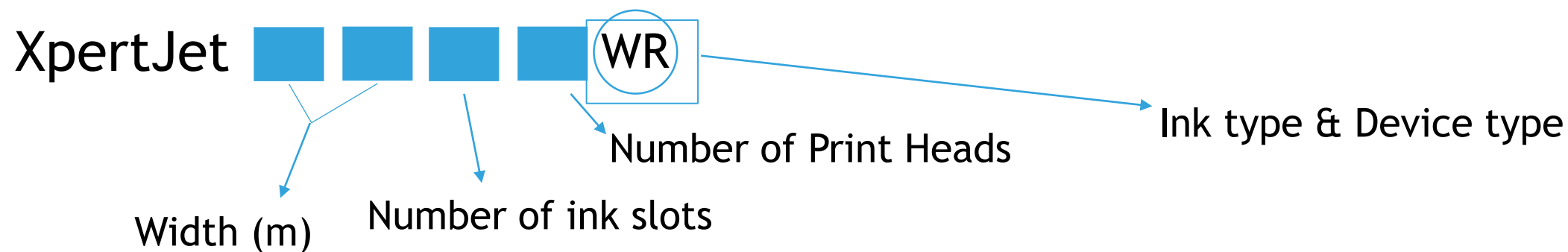
# Product Concept XPJ-1682WR

- Successor model for ValueJet 1638WX
- Maintain high industry standards set by ValueJet range
- Reach very robust output quality:
  - Overall higher print quality
  - Banding free output over a wider speed range
- New features & product enhancements



# Product Concept XPJ-1682WR

## Model Number Explained



### XpertJet-1682WR

- 1.6 m
- 8 channels - 4, 6, 7 or 8 colours
- 2 heads
- Water based
- Roll

# Target Public

- Starters and established print service providers
- Businesses looking for both high quality and volume printer
- Existing ValueJet water-based printer users looking for higher productivity
- Businesses in on-demand rapid customization of soft signage & transfer to polyester coated or polyester based substrates

# Application Possibilities

## Custom Apparel



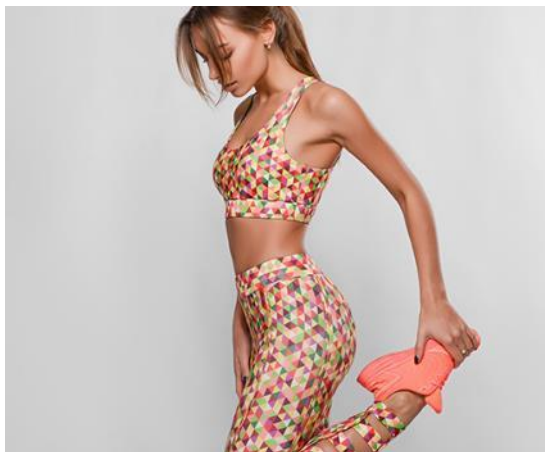
### Personalised clothing

- Fast fashion
- Blouses
- Shirts
- ...



# Application Possibilities

## Sportswear and Sporting Goods



- Sportswear
- Swimwear
- Snowboards
- Skateboards
- Helmets
- ...



# Application Possibilities

## Textile / Interior Décor

- Cushions, curtains, carpets, table cloths, ...
- Corporate branded textile furnishings



# Application Possibilities

## Soft Signage

- Advertising (POP, silicone edge graphics & backlit displays for shows & events, retail décor)
- Art replications, theatre backdrops, ...
- Information : directional banners, receptions, ...



# Application Possibilities

## Polyester Coated or Polyester Based Gadgets



### Personalised gadgets

- Bags
- Umbrellas
- Key hangers
- Mouse pads
- Pillows
- ...



# Key Specifications XPJ-1682WR



Print Head	2 piezo heads (staggered)
Nozzle Configuration	180 nozzles x 8 lines / head
Drop Volume Range (pl)	2.8 to 33.9
Resolutions	360 x 360 dpi up to 1440 x 1440 dpi
Head Heights	Low : 1.5 mm / Middle : 2.5 mm / High : 4.0 mm
Media Thickness <sup>1</sup>	0.3 / 1.3 / 2.8 mm
Media Width	500 mm (19.96") - 1625 mm (63,97")
Max. Print Width	1615 mm (63.58")
Media Measurements <sup>2</sup>	Ø 150 mm / 2" or 3" core / 30 kg, 40 kg or 100 kg take-up systems For roll off until Ø 250 mm, Mutoh offers a 100 kg feed and take-up unit.

<sup>1</sup>: Maximum media thickness is specified per head height. <sup>2</sup>: Standard non-motorised roll-off system.

# Latest Piezo Variable Drop Print Head Technology

Nozzle Configuration	180 nozzles x 8 lines
Drop Mass Range (pl) *	2,8 - 6,8 - 7,4 - 11,0 - 17,0 - 33,9
Print Resolutions	Up to 1440 x 1440 dpi

Variable dot

- Higher quality
- Photographic quality - low graininess
- Excellent gradients - skin tones

High durability  
print heads

- Lower long-term cost



PIEZO VARIABLE DROP

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

# NEW 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





# 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

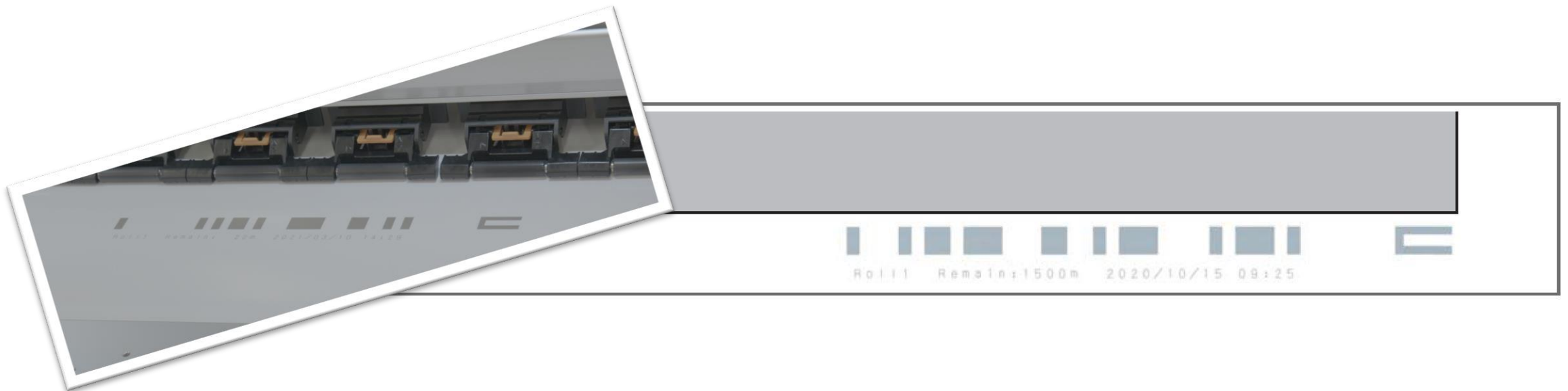


**NEW**

# 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

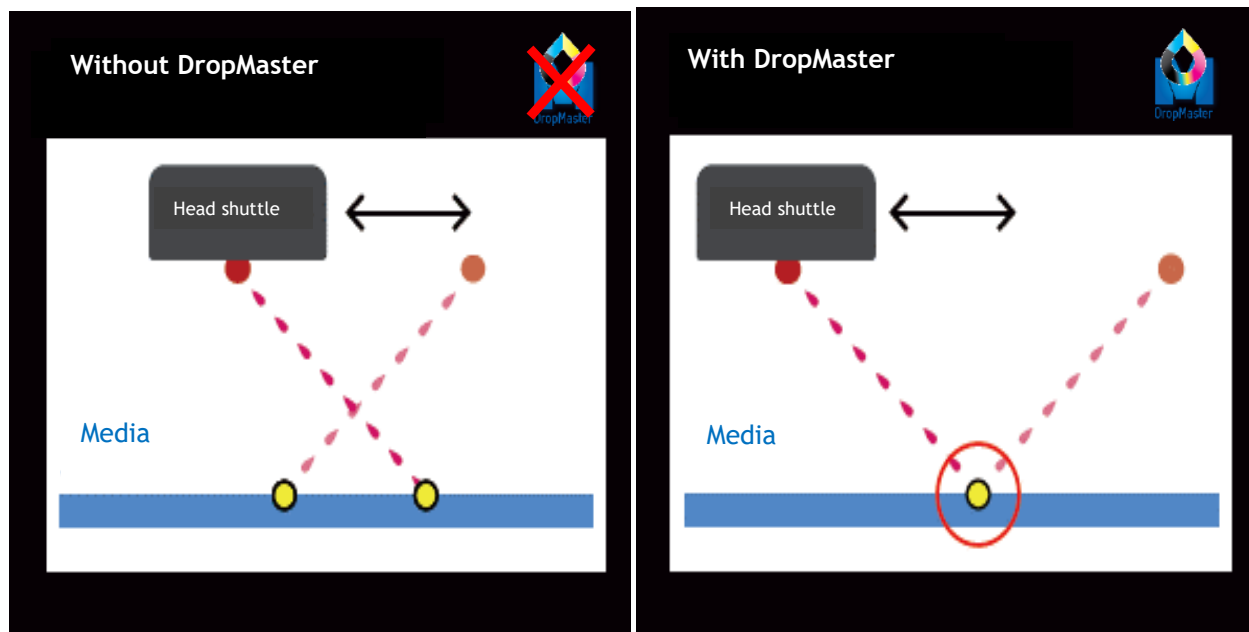


# DropMaster



When the user sets the correct media thickness, DropMaster will automatically adjust the jet fire timings in function of the thickness of the media loaded.

- Enables overall increase in image definition and smoothness
- Eliminates need for cumbersome and time consuming media dependent head adjustments



# **NEW** DropMaster 2

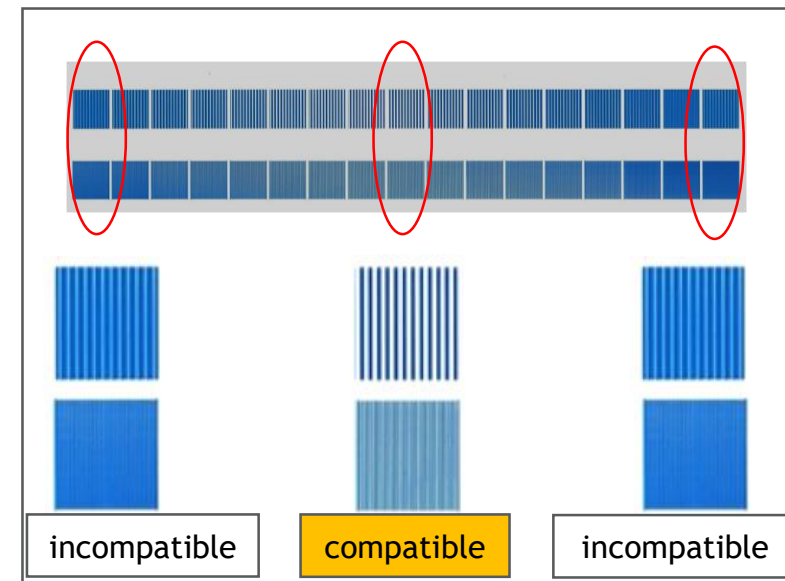
The XPJ-1682WR integrates the next level of DropMaster, **DropMaster2**:



**Automated** bidirectional alignment through built-in colour sensor

Advantages :

- fully automated calibration<sup>1</sup>
- reduced waste
- no variation in adjustment among different operators



<sup>1</sup> : The automatic adjustment may be misleading when using an ink/paper combination suffering from heavy cockling.



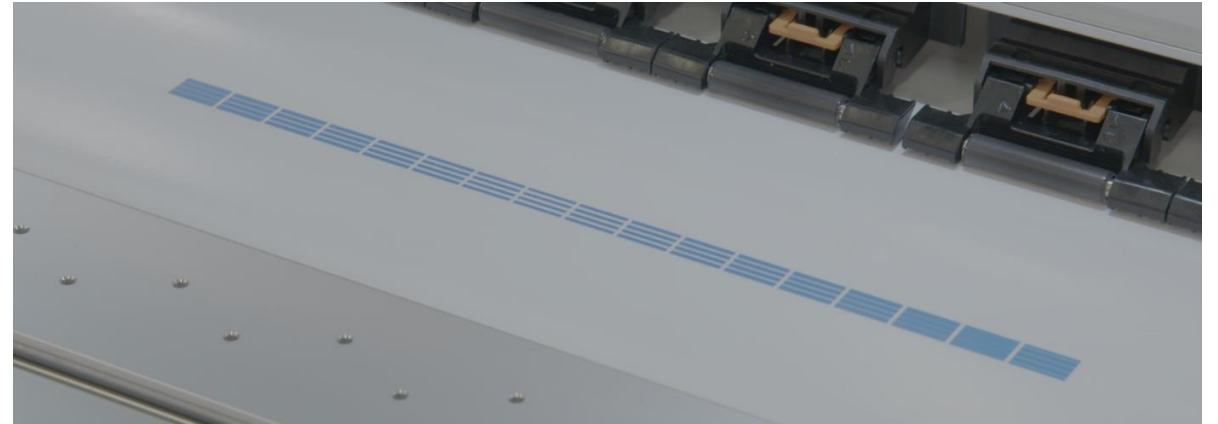
# Feed Master



Automated paper feed adjustment through built-in colour sensor

## Benefits :

- Fully automated calibration<sup>1</sup>
- Reduced waste
- No variation in adjustment among different operators



<sup>1</sup> : Manual adjustment remains possible if it is preferred by an experienced operator.

# Performance XPJ-1682WR



Thanks to the **renewed print head control tailored to sublimation printing inks**, the XpertJet 1682WR has a more robust output compared to VJ-1638WX:

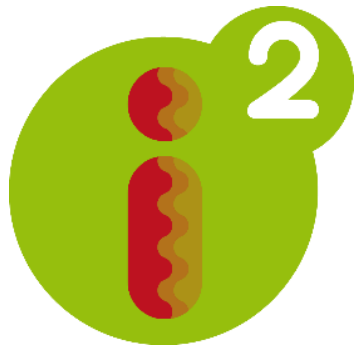
- Improved nozzle stability
- Improved Dot Quality
- Less satellite drops
- Overall higher print quality
- Banding free output over a wider speed range

720 x 1080 dpi, 6p, 12-scan	10.0 m <sup>2</sup> /h
360 x 1080 dpi, 3p, 6-scan	18.8 m <sup>2</sup> /h
720 x 720 dpi, 2p, 4-scan	30.7 m <sup>2</sup> /h
360 x 1080 dpi, 3p, 3-scan	40.7 m <sup>2</sup> /h
360 x 720 dpi, 2p, 2-scan	47.8 m <sup>2</sup> /h



# Highest Quality Inherited From ValueJet

- Intelligent Interweaving (i<sup>2</sup>)
- High image quality of 1440 dpi
  - Print resolution range: 360x360, 360x720, 360x1080, 720x720, 720x1080, 720x1440 & 1440x1440 dpi
- 3 variable drop families

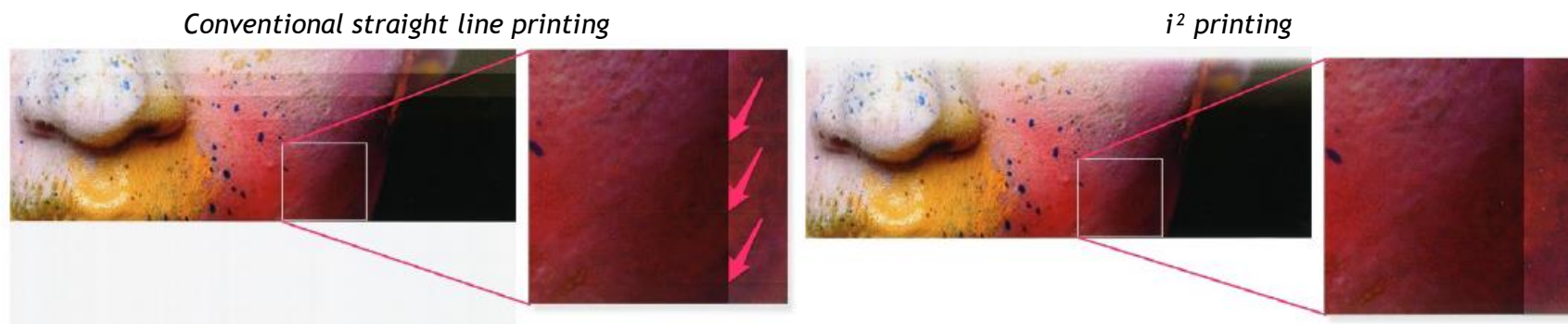


PIEZO VARIABLE DROP

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



- Overall better printing quality
- Improved operator comfort
- Improved working tolerances using recommended print modes
- Avoids production loss
- Better planning & scheduling of print production



# VSM Has Evolved to MSM



- New Graphics User Interface
- Faster response rate versus VSM
- Multilingual support for all functions
  - English, Dutch, French, German, Italian, Portuguese and Spanish



# Mutoh Status Monitor Mobile



MUTOH Status Monitor



- 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

# MSM For Desktop



MUTOH Status Monitor

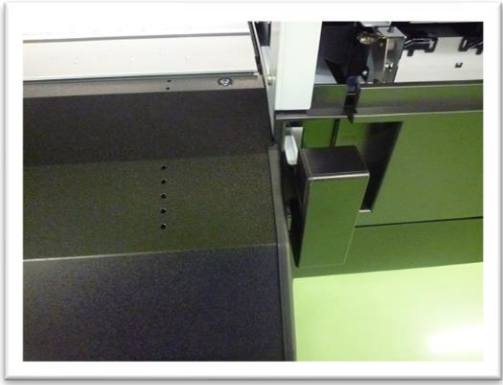
## Features:

- Printer status
- Heater information
- Remaining ink
- Print information: print time, print mode, print size, ink consumption



# Enhanced Media Handling / Transport

Front & rear pressure roller handle



Multi-level pinch roller system - adaptable pressure



New Roll Off System



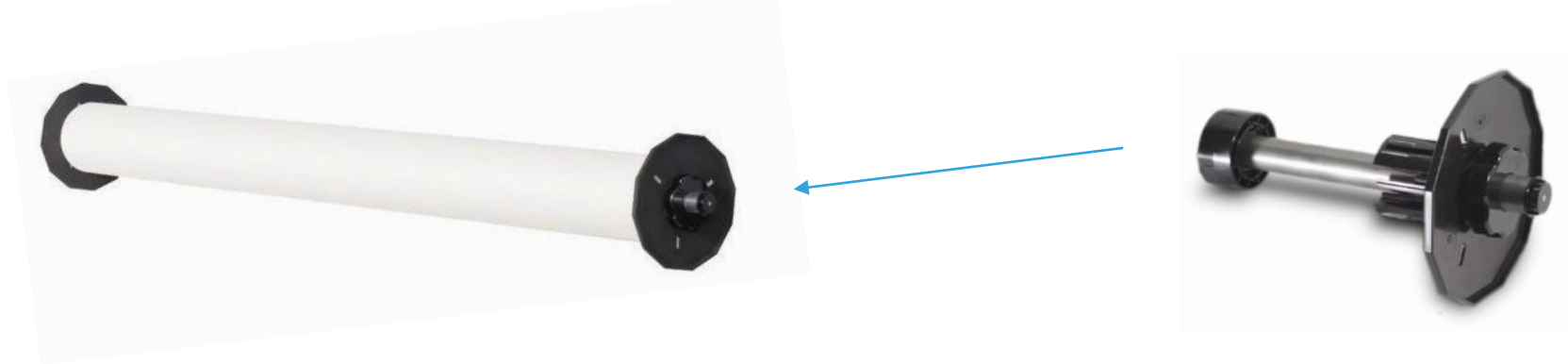
New media feed flanges





# New Media Feed Flanges

Push the media flanges into the core of the media roll.



By twisting the handle clockwise, the inside spreads out and locks the flanges.



# New Roll Off System

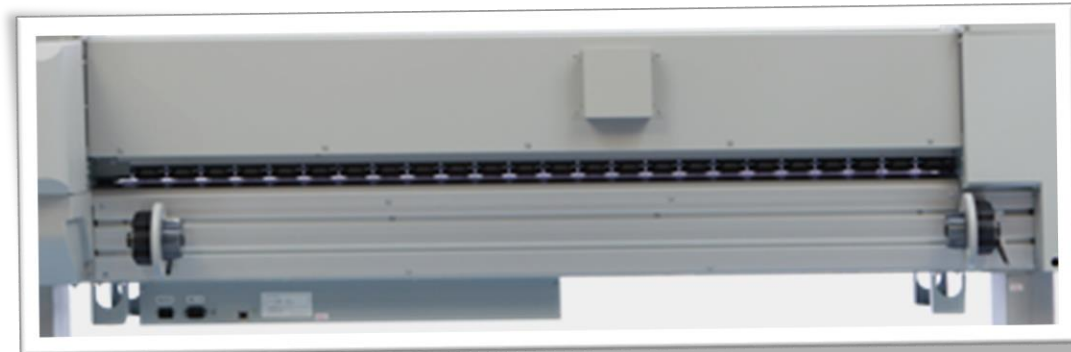
Newly built roll off system

Media roll “rests” on movable sliders

Once you have mounted the flanges, you simply place the roll on the roll off system.

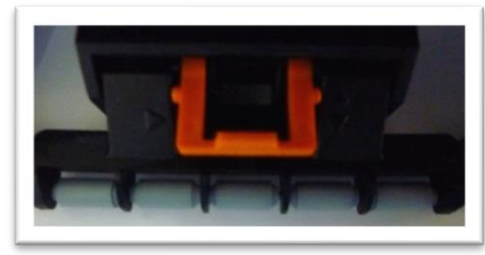


versus VJ-1638WX

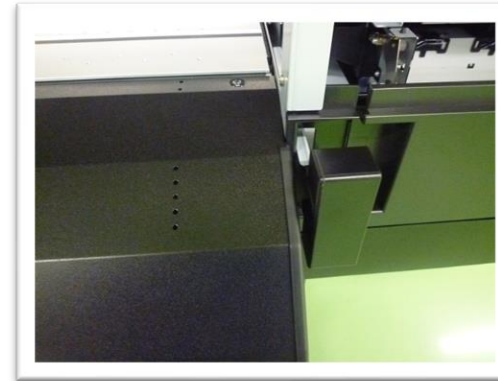


# Improved Media Feed Mechanism

- New multi level pinch rollers with adaptable pressure (up to 800 g)



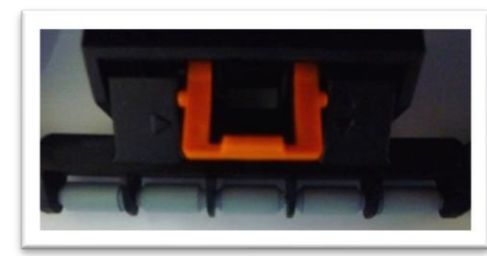
- Advantages
  - Worry free loading and optimum transport of the widest range of media :
    - Conventional paper for dye sub printers
    - Thin paper
    - Delicate paper
    - Slippery paper



# Improved Media Feed Mechanism

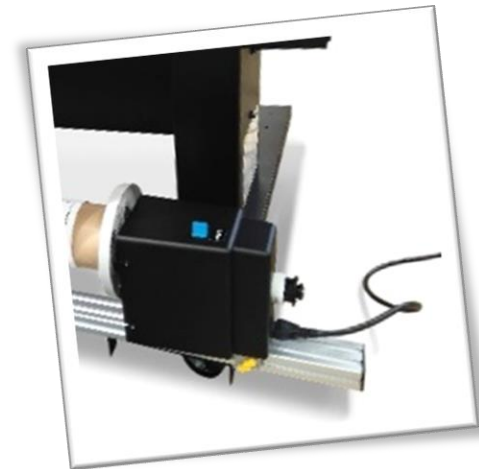
Adaptable Pressure - 4 levels:

HIGH (700 - 800 g)	Media of which back side is slippery
MIDDLE (500 -600 g)	Standard media
LOW (300-400 g)	Thin & delicate media
<b>PARTIAL PRESSURE</b> = individual disable (0 g)	<b>Will avoid cockling for thin and delicate media</b>



# 30 kg Torque Winder System

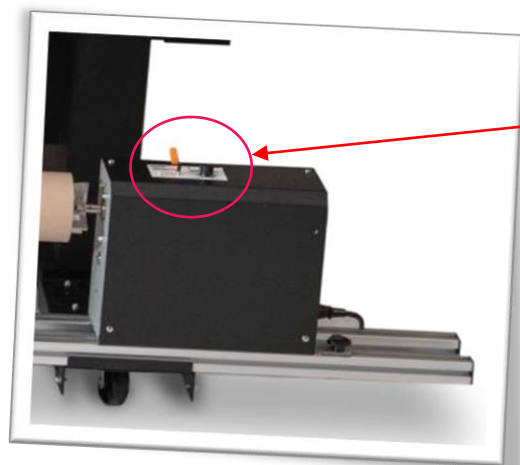
- Torque controlled continuous motorised take-up system
- DC geared motor drive
- Allows take-up of standard media rolls up to 30 kg
- Maximum roll-up **diameter of 150 mm**
- Face in & face out winding
- Adjustable torque strength & repositionable flanges for different media widths





# 40 kg Torque Winder System

- Maximum roll-up **diameter of 250 mm**
- Long-life brushless DC motor - low noise level
- Adapts to a wide range of media and various printing modes by using the 3-step take-up torque and stepless speed adjustment functions.
- Face in & face out winding
- Includes power saving function to automatically adapt the take-up rotation speed to the lowest speed when the printer stops printing for a certain time.



Operation indicator LED

Direction select switch

Torque selection lever

Speed adjustment



# 100 kg Feed & Take-up System



- Front & rear diameter up to **250 mm**
- Suited for your production intensity and workflow
- For long print runs and large graphics, completed jobs securely wound
- Easy and precise workflow; ready e.g. for feeding through roll-to-roll calendars
- Keep substrates tightly wound, avoid nicks, creases and scratches in the substrate
- Keep printed output clean - easy & safe storage



Position adjustment mechanism for tension bar

Position adjustment mechanism for roll units



Installed power switch device in the front arm

Support roll media weights up to 100 kg

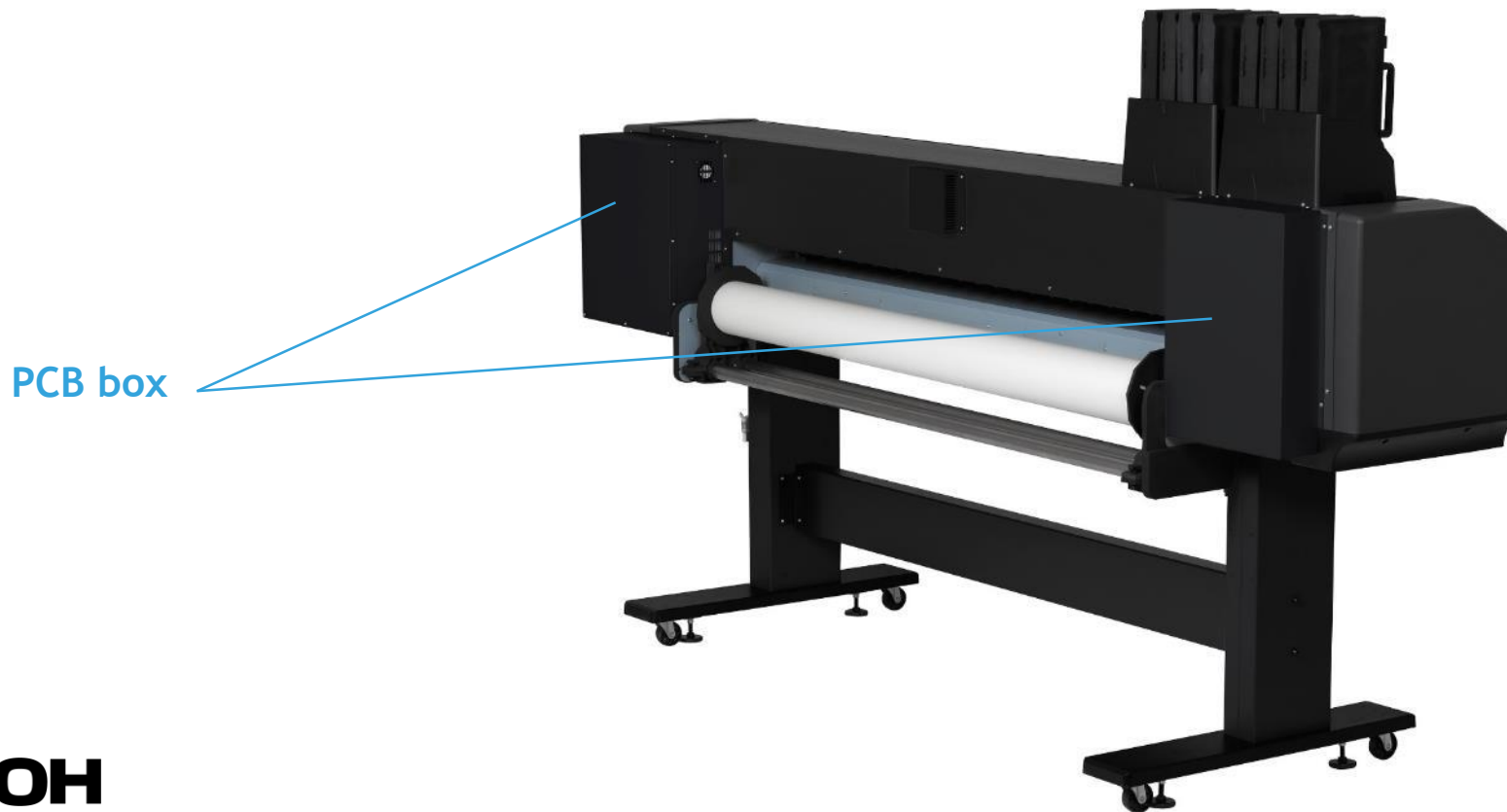
Resin type media flange as standard



# Enhanced Serviceability & Maintenance

## Smart PCB Box Design

- PCB box at the rear of the printer - easy access to all electronics
- Wet parts & electronics in different areas - no risk of damage due to accidental ink leaks in the maintenance station

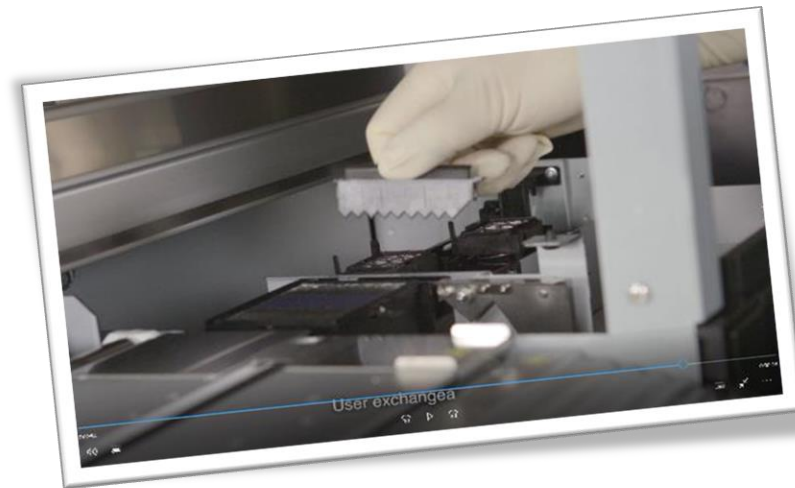


# Enhanced Serviceability & Maintenance

## Enhanced Periodical Maintenance

Enhanced periodical maintenance by operator

- Possibility to clean heads individually - less waste
- User replaceable wiper

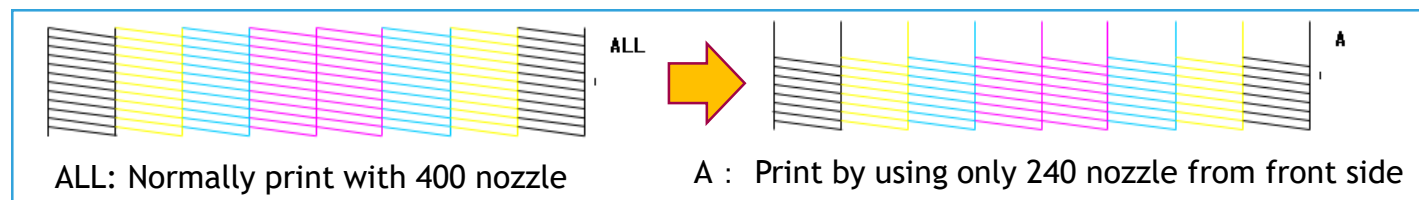




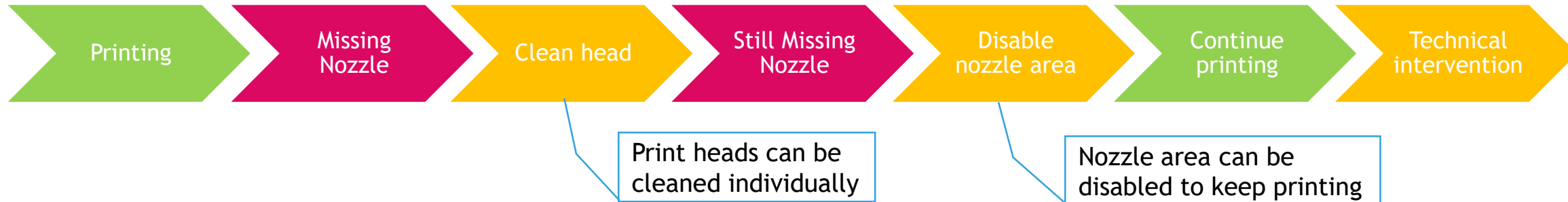
# Nozzle Area Select



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



## With Nozzle Area Select



## Without Nozzle Area Select



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

# Standard Configuration – XPJ-1682WR-30

XpertJet 1682WR + 30 kg Winder



- XpertJet 1682WR - 64" - 1625 mm - dual head + 30 kg torque winder (VJ1619-TUP30)
- 1 set (2 pcs) of media feed flanges - 1 kg torque
- 2 sets of Bulk Ink System (ZMY-089BU) + connection tubes (VJ-TUBE-CON)
- no software
- no ink



€ 18.995

# Standard Configuration – XPJ-1682WR-40

XpertJet 1682WR + 40 kg Winder



- XpertJet 1682WR - 64" - 1625 mm - dual head + 40 kg torque winder (VJ1619-TUP40)
- 1 set (2 pcs) of media feed flanges - 1 kg torque
- 2 sets of Bulk Ink System (ZMY-089BU) + connection tubes (VJ-TUBE-CON)
- no software
- no ink



€ 19.995



# Standard Configuration – XPJ-1682WR-100

XpertJet 1682WR + 100 kg Feed & Take-up System



- XpertJet 1682WR - 64" - 1625 mm - dual head + 100 kg feed & take-up system (IJ-TUP100-01)
- 1 set (2 pcs) of media feed flanges - 1 kg torque
- 2 sets of Bulk Ink System (ZMY-089BU) + connection tubes (VJ-TUBE-CON)
- no software
- no ink

€ 22.995



# Extended Info

for Mutoh Certified Distributors only

# Performance XPJ-1682WR



## Technical Explanation

Mode	Speed	Controlled Variable Drop *
<b>720 x 1080 dpi (custom 8, PQ170)</b> 6-scan mode, 6 pass (Normal), IP1.2 - Fine Fog3 Uni-Dir, head speed Slow, variable dot (VSD4) Single head	3,8 m <sup>2</sup> /h	S-M-L
<b>720 x 1080 dpi (custom 8, PQ170)</b> 12-scan mode, 6 pass (high quality), IP2.2 - Fine&Fog3 Bi-Dir, head speed Fast, Variable dot (VSD4)	10.0 m <sup>2</sup> /h	S-M-L
<b>360 x 1080 dpi (custom 19, PQ235)</b> 6-scan mode, 3 pass (Quality), IP2.2 - Fine&Fog3 Bi-Dir, head speed Fast, Variable dot (VSD3)	18.8 m <sup>2</sup> /h	S-M-L
<b>720 x 720 dpi (custom 9, PQ180)</b> 4-scan mode, 2 pass (Quality), IP2.2 - Fine&Fog3 Bi-Dir, head speed Fast, Variable dot (VSD3)	30.7 m <sup>2</sup> /h	M-L
<b>360 x 1080 dpi (custom 19, PQ235)</b> 3-scan mode, 3 pass (Normal), IP1.2 - Fine&Fog3 Bi-Dir, head speed Fast, Variable dot (VSD3)	40.7 m <sup>2</sup> /h	M-L
<b>360 x 720 dpi (custom 15, PQ240)</b> 2-scan mode, 2 pass (Normal), IP1.2 - i-Weave Ex3 Bi-Dir, head speed Fast, Fixed dot (VSD3-L)	47.8 m <sup>2</sup> /h	M-L
<b>360 x 720 dpi (custom 15, PQ240)</b> 2-scan mode, 2 pass (Normal), IP1.2 - Fine&Fog3 Bi-Dir, head speed Fast, Fixed dot (VSD3-L)	58.9 m <sup>2</sup> /h	M-L

\* : Using full variable drop (Small, Middle and large drops of each drop family), the output is banding free up to 18.8 m<sup>2</sup>/h. When printing faster, artefacts like banding may start occurring. This is caused by the ballistic behaviour of the smallest drops and considered normal behaviour. In these circumstances, Mutoh recommends to generate profiles using only Middle and large drops or, to limit the small drops around 30% density. This allows production outputs of transfer prints up to 47.8 m<sup>2</sup>/h.

Note : Using full variable drop at all available speeds always results in output quality which is similar or better than the VJ-1638WX.



# XPJ-1682WR Media Feed Tips

There are 4 main items influencing the feed media stability while printing:

- Setting of the pressure on the multi-level pinch rollers
- Vacuum fan setting
- Selection of media feed flange ( standard or high torque\*) \*high torque is optional
- Take-up unit\* media tension control \*100kg/40kg/30kg take-up units

Media thickness	Thin/Light	Thick/Heavy
Multi-level pinch rollers	Low	High
Vacuum fan	Low	High
Media feed flange	Low	High
Take-up unit media tension control	High	Normal

※ This is a general trend for XPJ-1682WR operation, and the optimal settings vary depending on conditions such as type of media, print mode, printing rate, with or without take-up device, temperature and humidity environment.

# Tips for Handling Thin Transfer Paper

## Using thin transfer paper

### **STEP1 Setting the pressure on the multi-level pinch rollers**

Reduce the pressure. Cancel the pressure mode on both sides of media or areas where cocking is likely to occur

### **STEP2 Vacuum fan setting**

If the suction force is too strong, the media feeding will be jammed, and it will cause cockling. The vacuum fan force should be reduced.

- In reverse, the “High” modes are effective for thick and firm papers, because this setting can neutralize the natural substrate’s memory curl and pull it flat.

### **STEP3 Media feed flange**

Exchange standard to high torque media flange\* to remove slack occurred from the roll to grid entrance

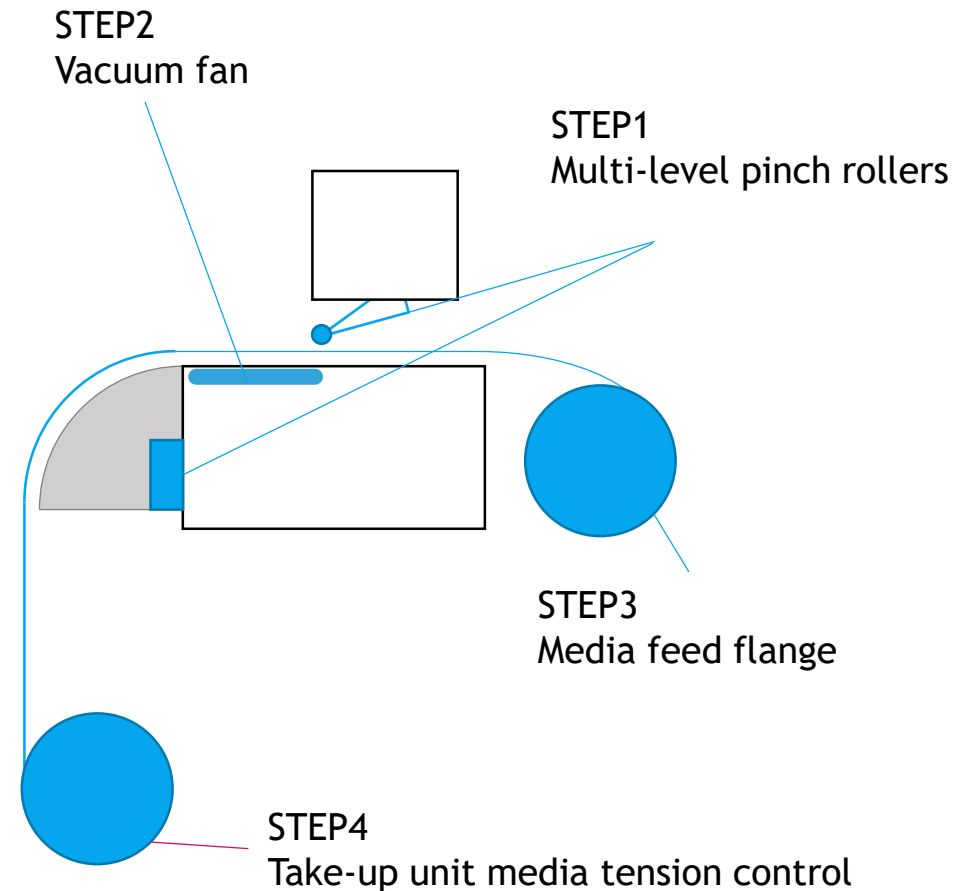
### **STEP4 Take-up unit media tension control**

- If the torque setting is stronger than the pressure, the media is always wound forcibly, so reduce the torque force
- Since the media weight is changed by the volume of take-up, the setting should be changed according to the volume.

*\*High torque media feed flange is optional.*

Since optimal setting on each step may be affected by other settings, review the previous steps.

## Media feeding flow



# Factory Warranty



- Unit: 2 years, excluding parts with limited life time
- Print Head(s): 6 months or  $6 \times 10^9$  droplets per nozzle, whatever comes first  
(When used with Mutoh genuine inks)



# Minimum Required Installation Space

Package size: W: 2900 mm x D: 1020 mm x H: 1073 mm Weight: 266 kg

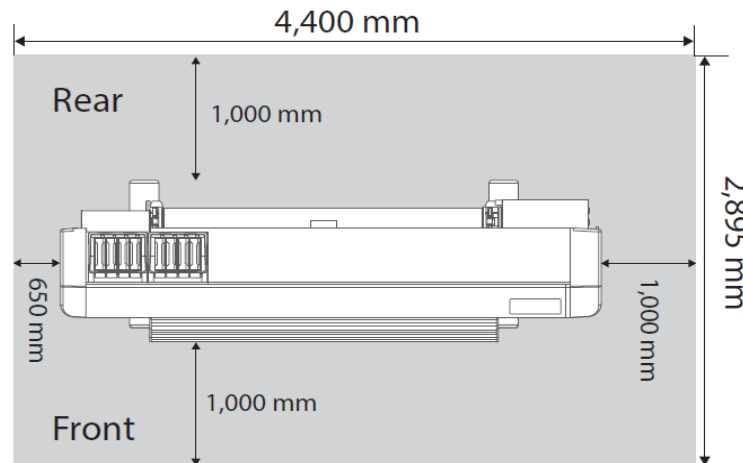
## <Installation Location Requirements>

Choose the location which satisfies the requirements below.

- The floor must be level.
- Avoid vibration from the neighboring devices.
- Low humidity and free from dust.
- Less chance of temperature and humidity changes.
- Avoid direct sunlight.
- Avoid water.
- Avoid direct air onto the printer.
- Low levels of electromagnetic waves.

## ⚠ CAUTION

- Choose the floor that can safely support the weight of this product. The total weight of printer and stand is 175kg. If the floor does not have sufficient load capacity. It can lead to injury from a fall.
- Keep the work area well ventilated while operating. Ink odor may cause health problem such as headache, dizziness or dull. If you experience these symptoms, stop printer operation and move to fresh air. Seek medical attention if vomit persists.



## <Minimum Space Requirement>

The following space is required for installation.  
W x D x H: 4400 mm x 2895 mm x 1760 mm

# XPJ-1682WR Accessories

Name	Description	Amount
VJ-CB	Cutter Blade	Replacement cutter blade
VJ16STG-FB-W3	XPJ-1682WR Flushing Pad	3 pieces/box
RH2 Clean stick	Cleaning Stick	100 pieces/box
PJ-POLYNITW	Polyester Knit Wipe	300 pieces/box
MEDIA-FLANGE	Roll Media Flange	Torque: 1 kgf.cm - 1 piece/box
MEDIA-FLANGE-H	Roll Media Flange_high torque	Torque: 4 kgf.cm - 1 piece/box

# Machine Measurements – XPJ1682WR



Width x Depth x Height	2698 x 885 x 1261 mm
Weight	219 kg (printer + stand)

# Recommended Working Environment

Temperature	22 °C - 30 °C with $\Delta t$ : max. 2 °C/h
Humidity	40 % - 60 % (no condensation) with $\Delta RH$ : max. 5 % RH/h
Power Requirements	AC 100-120 V / AC 200-240 - 60/50 Hz
Power Consumption	During printing: 180 W In Stand-by: 40 W Power Off : 1 W

※ At all times, it is important to bring the relative humidity of the print environment within Mutoh's environment specifications (40% - 60% RH). During dry winter months particularly, humidification may be required.

# Power Connection

AC 200-240V

1



# Machine Packaging & Dimensions

## XpertJet 1682WR + 30 kg Winder

#	Order code	Item	Packaging	Length	Width	Height	Volume	Weight
1	XPJ-1682WR	Printer	Box	290 cm	102 cm	108 cm	3.19 m <sup>3</sup>	266 kg
2	VJ1619-TUP30	Winder	Box	256 cm	33 cm	33 cm	0.28 m <sup>3</sup>	14 kg



Packaging details of other compatible winding systems :

Order code	Box	Length	Width	Height	Volume	Weight
VJ1619-TUP40	1	282 cm	44 cm	38 cm	0.47 m <sup>3</sup>	22 kg
IJ-TUP100-01	1/3	244 cm	34 cm	33 cm	0.27 m <sup>3</sup>	41 kg
	2/3	244 cm	34 cm	33 cm	0.27 m <sup>3</sup>	38 kg
	3/3	244 cm	34 cm	33 cm	0.27 m <sup>3</sup>	25 kg



# Activation, Startup Info, Daily & Periodical Maintenance

- For activation of an XpertJet printer, please visit the dedicated printer registration and activation page on our website, accessible with your reseller login, which provides a direct link to the Mutoh Club web page (@ Mutoh Japan).
- For startup of an XpertJet printer, please refer to the “Startup Guide”.
- For daily maintenance instructions (by operator), please refer to the XpertJet “Operation Manual - Chapter 3”.
- For periodical maintenance info (by certified service technician), please refer to the XpertJet “Maintenance Manual”.



# Additional Product Information & Pricing Details

- For latest retail pricing info of machines, options and accessories, please refer to the Hardware Retail Price List on the My Mutoh Zone at [www.mutoh.eu](http://www.mutoh.eu)
- For latest technical information (spare parts & supplies list, maintenance manual, TIBs...) please check the Knowledge database.
- Public product information & datasheets can be found on our website.

# Revision History

Number	Description & Info	Performed by
Revision 1 - April 2021	First version	EMEA Application & Marketing Dpt.

Questions / remarks on this document can be sent to [Application Dpt.](#)