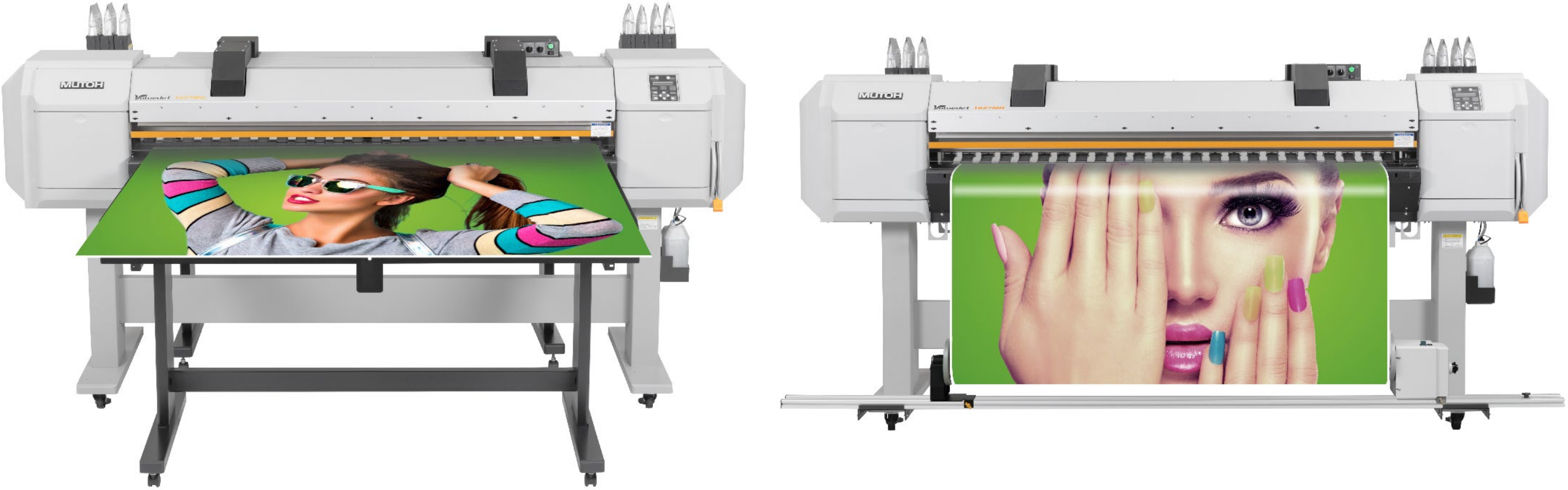
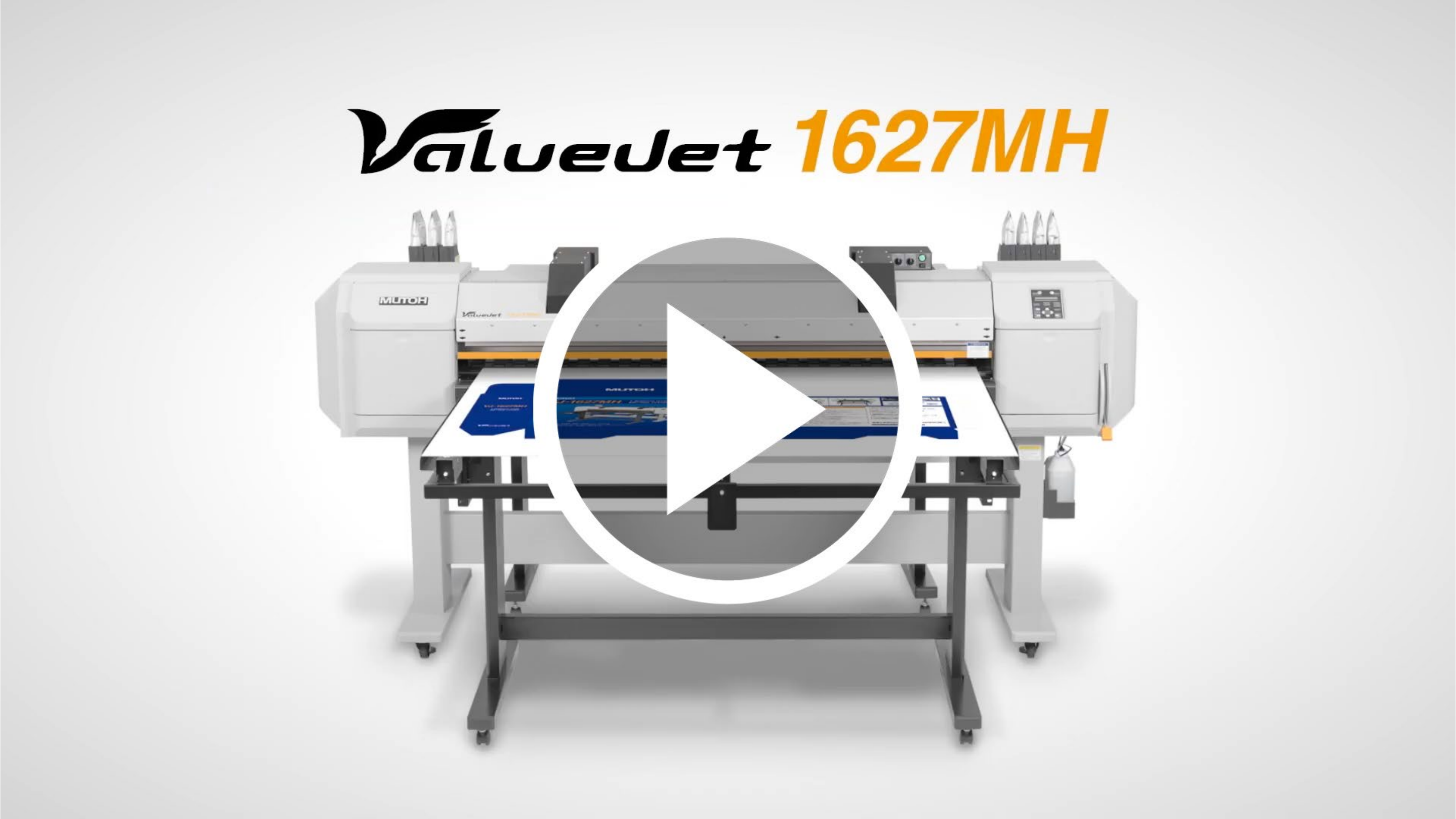
Product Guide
ValueJet 1627MH



64” Roll-to-Roll & Rigid Multi-Purpose Printer

Mar. 2019
Version 1.0

ValueJet 1627MH


ValueJet 1627MH

https://youtu.be/HnsmFwYCN4U

Discover the ValueJet 1627MH

1 Product

Product Overview, Product Features & Target Public

2 Ink

Properties, USPs, Consumption & Maintenance

3 Media, Performance & Applications

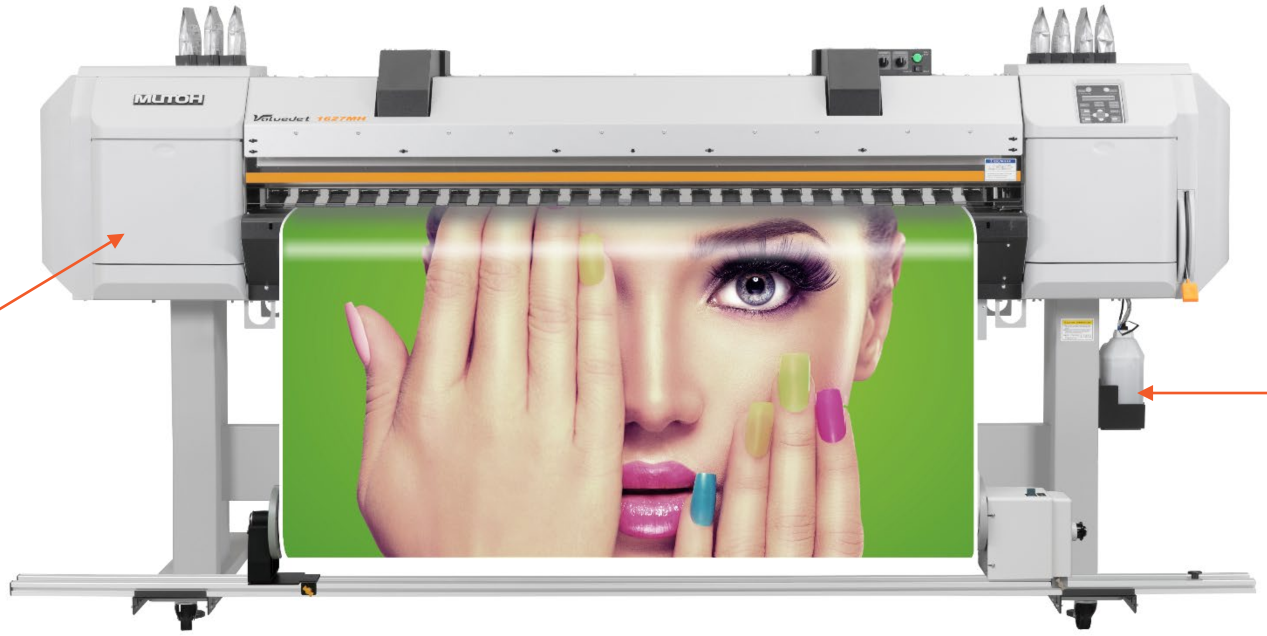
Specs, Media Compatibility & Print Methods

4 Standard Configuration, Options & Ink Price

Product Overview

NEW MP31 Multi-Purpose Inks
C, M, Y, K, Wh (500 ml packs)

Piezo drop-on-demand print head
(Print resolutions up to 1440 x 1440 dpi)



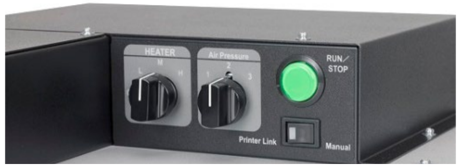
Easy access for daily maintenance
(left/right maintenance covers)

Waste bottle holder
with drip prevention tray

30 kg motorised take-up system (optional)

64” / 1625 mm

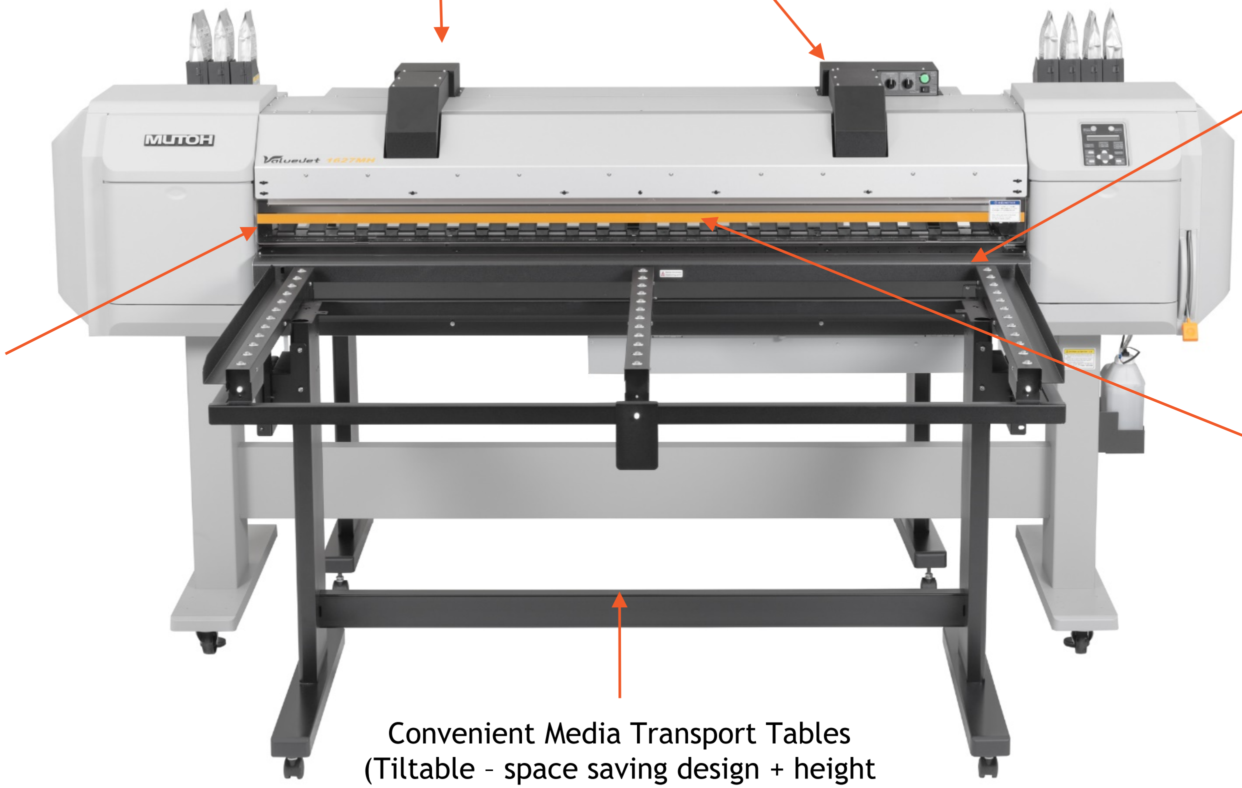
Product Overview

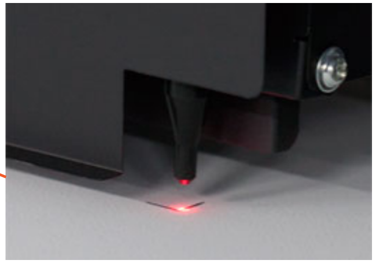

HEATER
Air Pressure
RUN/STOP
Printer Link
Manual

Blower Heater
Improved hot air system, dries the print surface

Rigids up to 15 kg & 16 mm thick

Media transport via
special rubber pressure
rollers


MUTOH
ValueJet



Automatic media height
detection

Convenient Media Transport Tables
(Tiltable - space saving design + height
adjustable caster wheels)

64” / 1625 mm

Product Features

Made in Japan · Multi-Purpose Inks · Rigid 16 mm · 64" Wide · CMYK & White

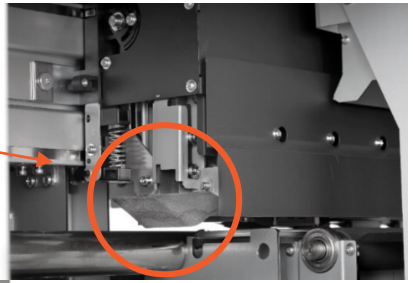
- Durable high quality prints, for close viewing distances, up to 1625 mm (63,97”) width
- Rigid media up to 16 mm / 15 kg
- Suitable for indoor & outdoor graphics – exterior durability up to 2 years* without lamination
- Latest generation gold-plated 8-channel 1440 nozzle piezo head on board
- Mutoh Intelligent Interweaving inside
- Unique resin-based solvent ink, called MP31 (Multi-Purpose Ink) CMYK + White – 500 ml packs
- Widest substrate compatibility

* : In case mechanical stress is involved, protection (lamination...) is required.

Product Features

Made in Japan | Multi-Purpose Inks | Rigid 16 mm | 64" Wide | CMYK & White

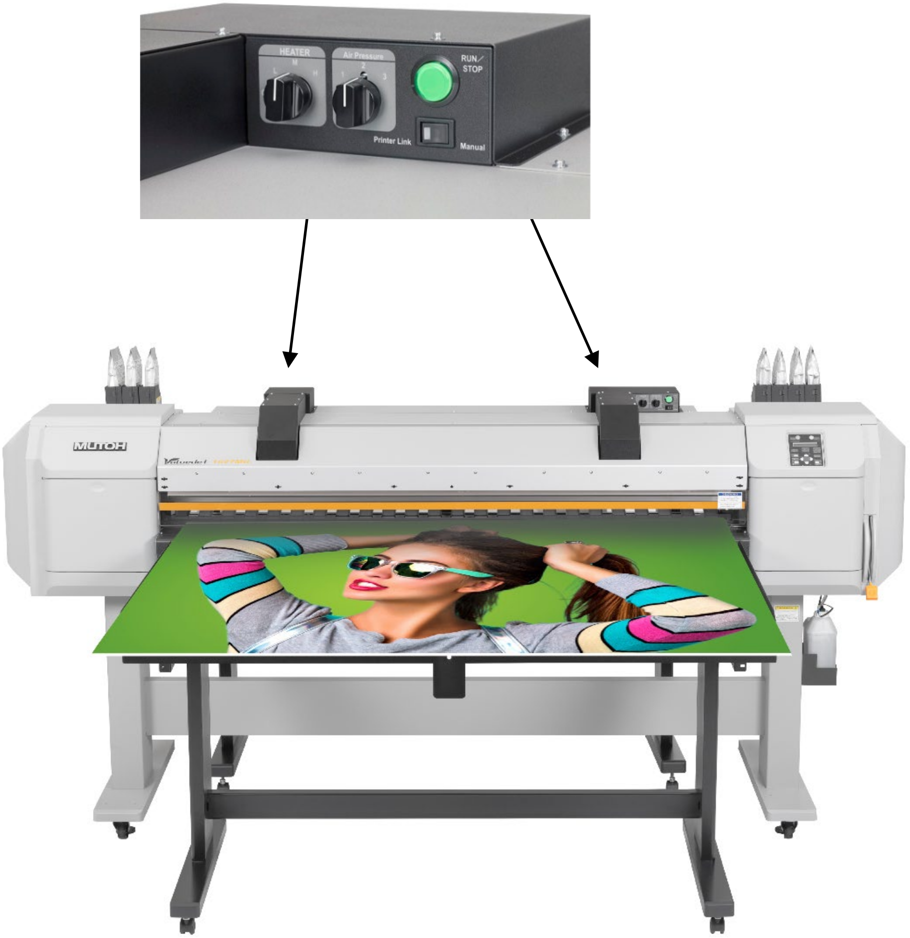
- Improved productivity:
  - Performance increase of 20% vs. VJ-1617H (Top speed of 16 m^2/h in CMYK Setup)
  - Increased carriage speed 10-15% faster
  - Media home positioning
  - New print resolution 360 x 1080 dpi
- Improved maintenance access – user replaceable head cleaning wiper – left & right maintenance cover
- Head protection sensor to detect media crash
- Waste bottle holder with drip prevention tray



Target Public

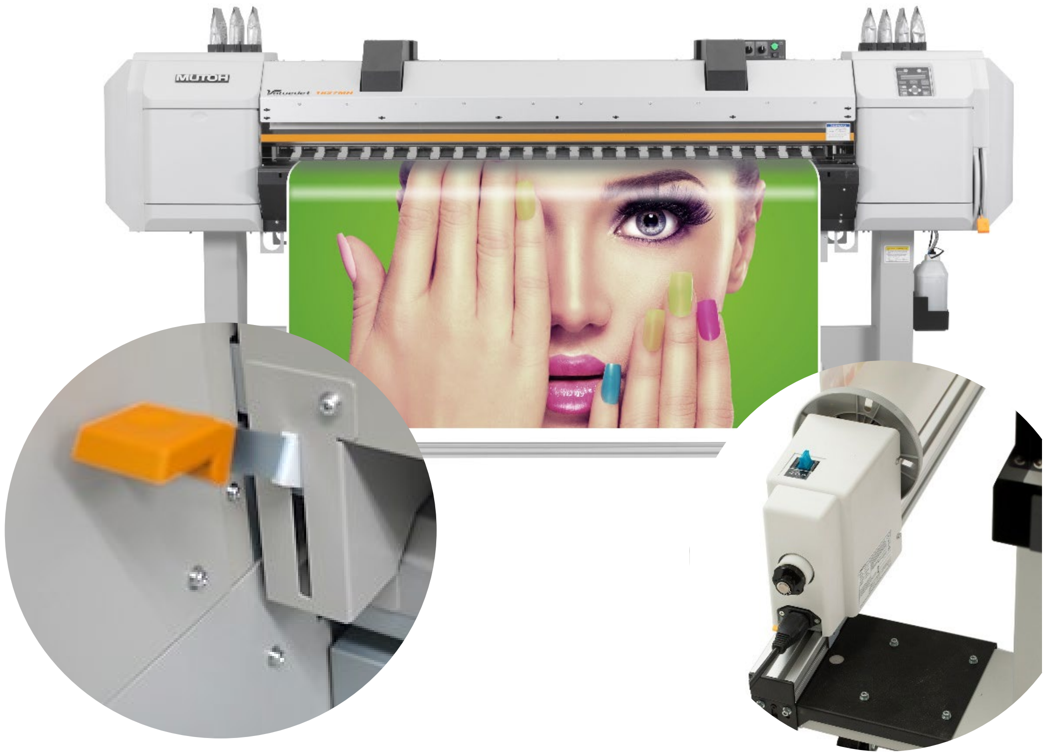
- Existing signmakers who:
    - want to expand
    - want extra capacity next to their existing (solvent) roll printer
    - no longer want to outsource rigid jobs / boards
    - no longer want to trim printed media and mount it on boards
    - are looking to offer prints with high added value
- Existing offset & screenprinters looking for short run print solution with high added value
- Packaging & thermo-forming industry for prototyping, customised labels, one-offs …

Media Drying System


HEATER
Air Pressure
RUN/STOP
Printer Link
Manual
MUTOH

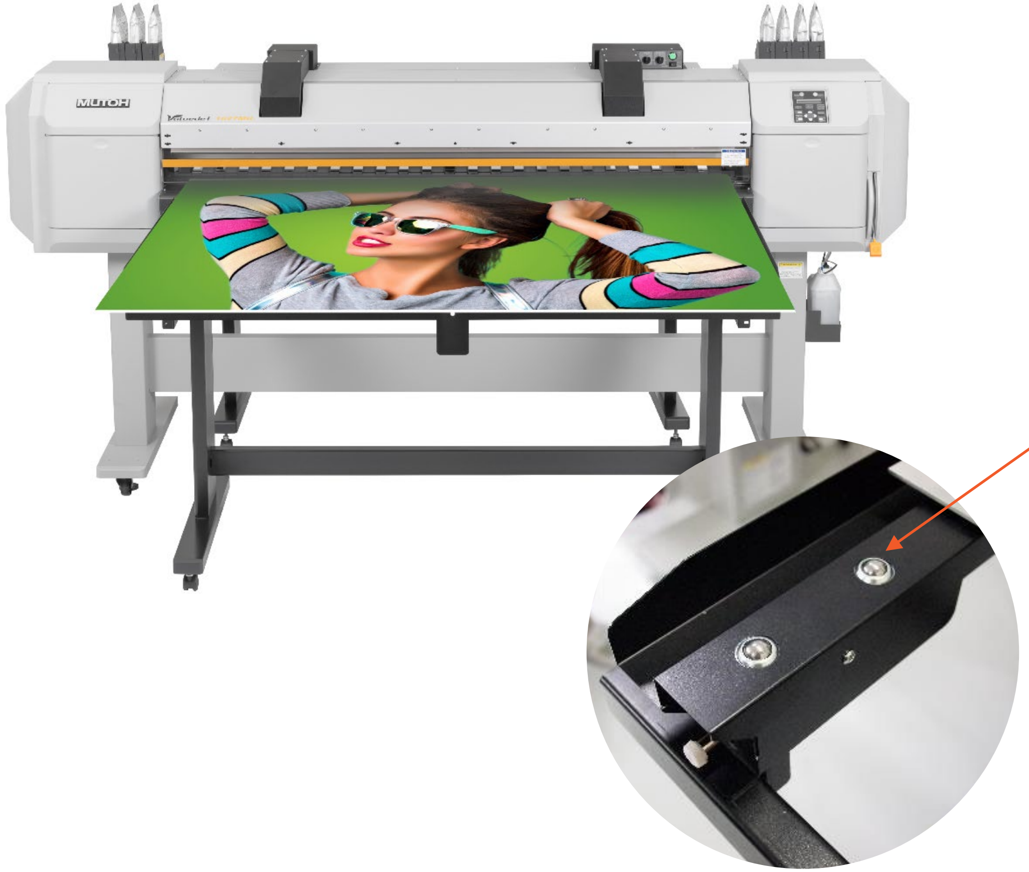
- Full width 64” hot air knife
- Temperature range:
  65° - 85° C (air T)
- Typical media surface temperature: 50°C or lower
- Prints are dry / ready for post-treatment when they come off the printer

Media Support Systems – Roll Setup



- Front and back side media loading lever
- Non-motorised roll-off system at back of machine
- Optional motorised 30 kg take-up system

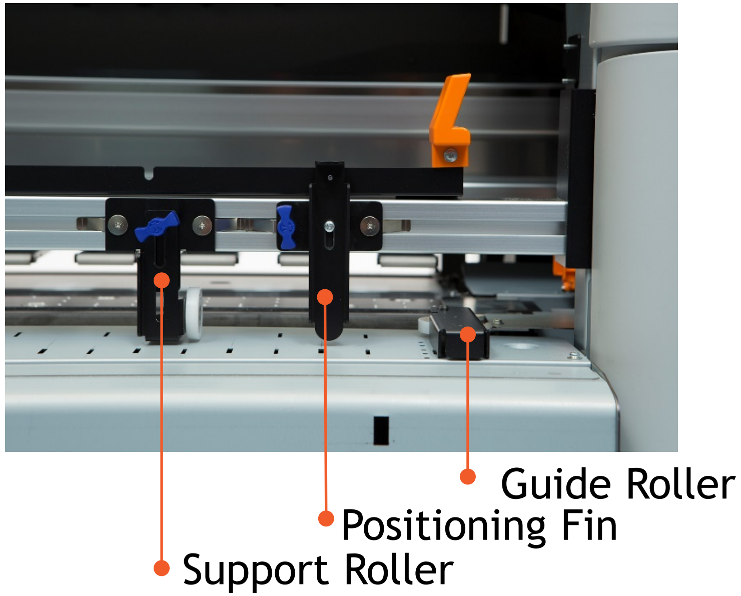
Media Support Systems – Rigid Setup



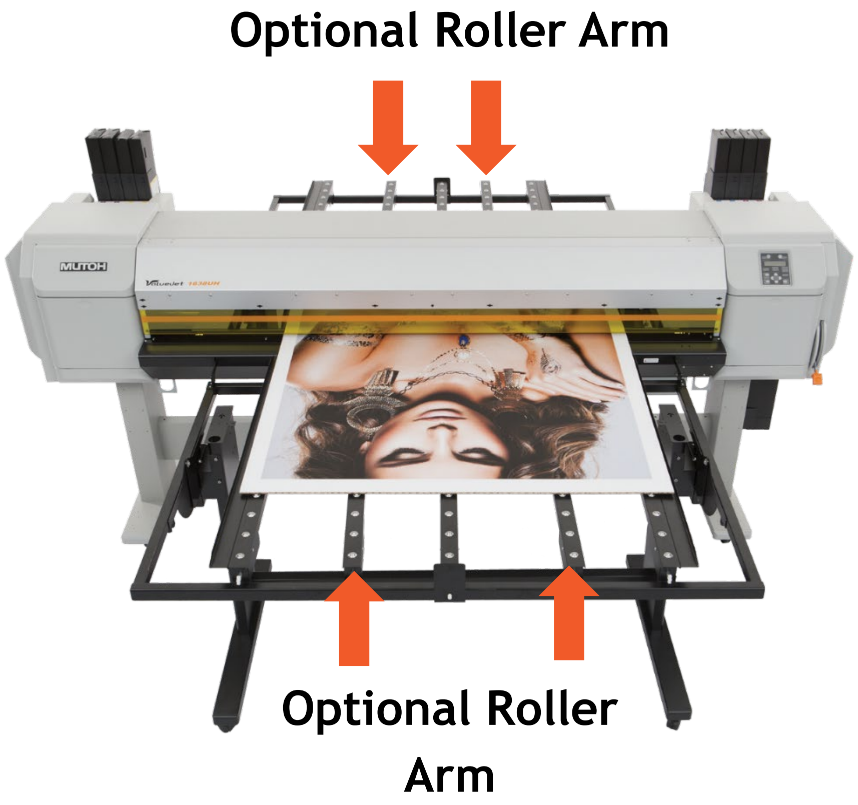
- Front & back tables
  - Height adjustable casters
  - Tiltable space saving design
  - Ball bearings ensure low media transport resistance
- Automatic media thickness measurement
- Media Alignment Option

Media Alignment Option

- Load rigid media with accurate positioning and reliable repeatability
- Will facilitate:
    - easy rigid media loading / realignment
    - double sided printing


Guide Roller
Positioning Fin
Support Roller

*Optional Roller Arm**

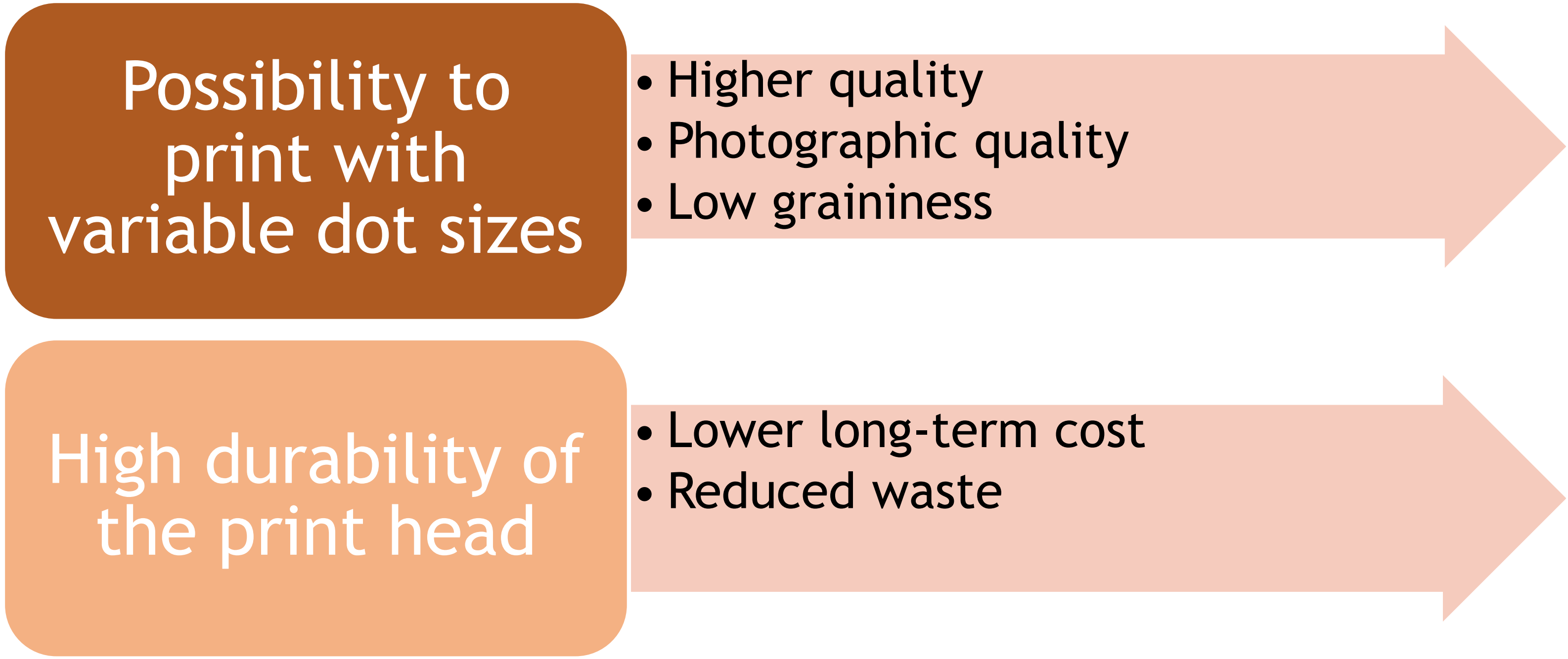

Optional Roller Arm
Optional Roller Arm

- Recommended for printing on thin & less stiff substrates
- Recommended to order 4 pieces / unit (2 front & 2 back)

* A standard rigid table comes with 3 roller arms.

Latest Piezo Variable Drop Print Head Technology

Nozzle Configuration	180 nozzles x 8 lines
Drop Mass Range (pl) *	CMYK: 3,5 - 4,4 - 7,8 - 8,7 - 16,0 - 21,8 White: 3,6 - 3,7 - 4,7 - 8,3 - 9,0 - 16,4 - 22,1
Print Resolutions	Up to 1440 x 1440 dpi



Possibility to print with variable dot sizes

- Higher quality
- Photographic quality
- Low graininess

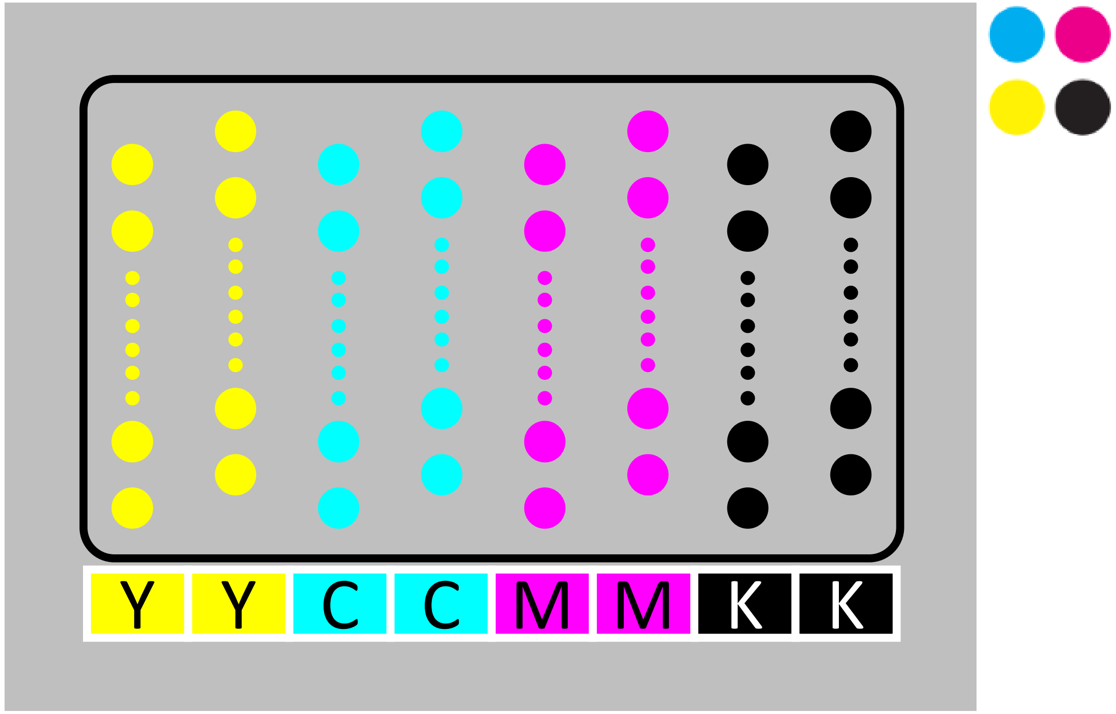
High durability of the print head

- Lower long-term cost
- Reduced waste

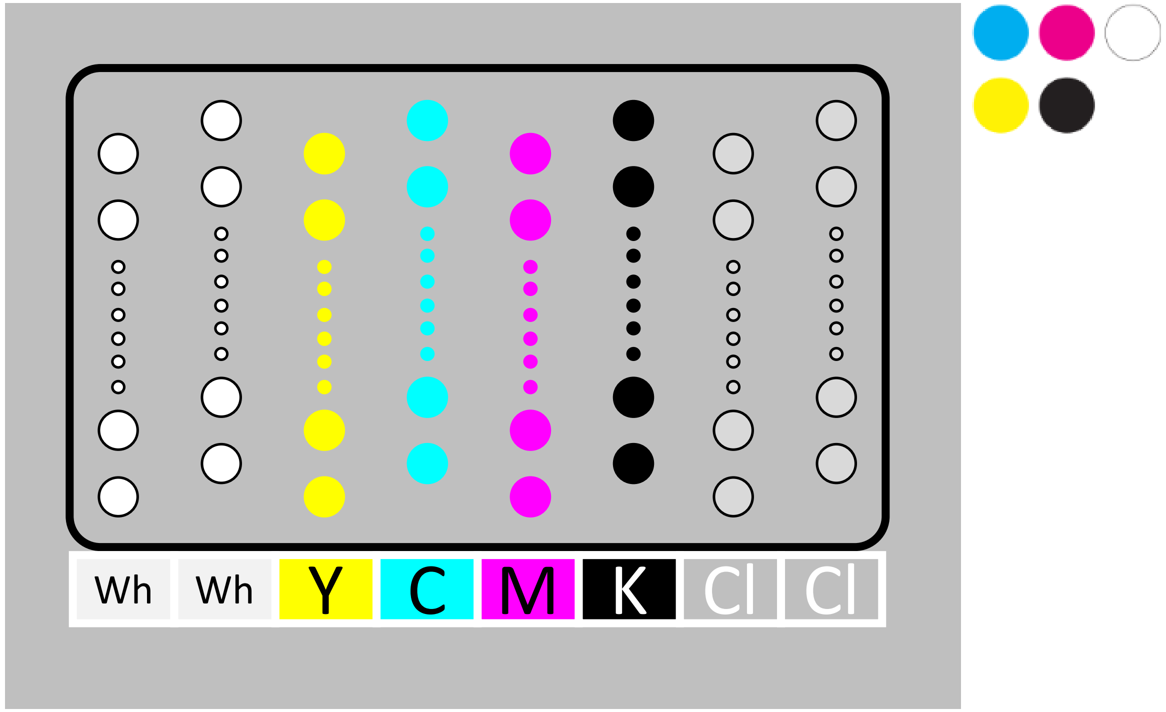
Variable Drop

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

Head Configuration



- No need for white ink
- Broad range of white substrates: next to standard media for solvent, also including challenging media typically reserved for UV inks
- Ink setup : CCMMYK + Cleaning



- White ink for non white, clear or metallic substrates
- Allows specialty printing
- Broad substrate range, including challenging media typically reserved for UV
- Ink setup : CMYK + White + Cleaning

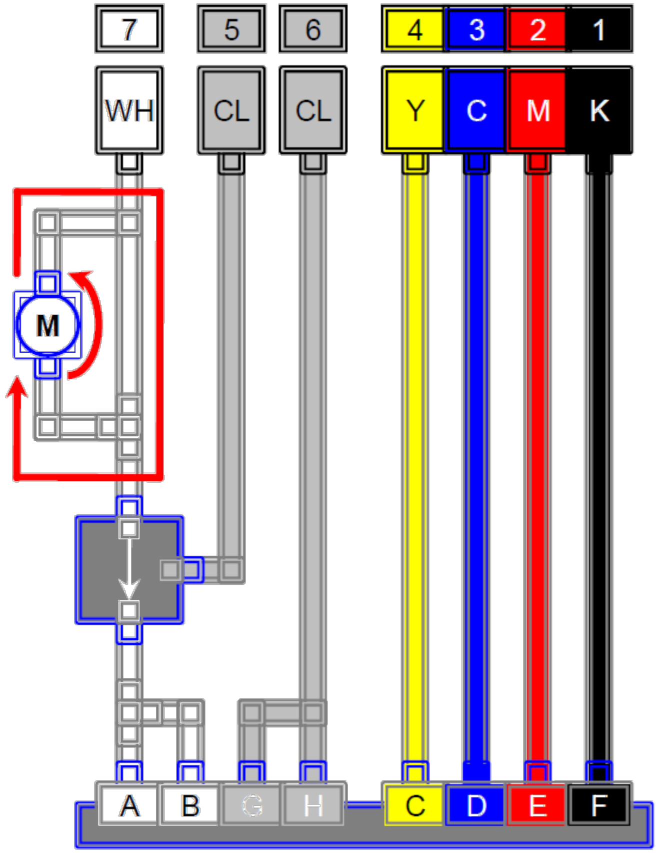
Switching from CMYK to CMYK + White is possible.

White Ink Circulation

When using White, it is important to agitate the white ink bags before use! Preferably daily.

White pigments are substantially heavier than other pigments, causing them to be much more vulnerable to sedimentation. If the white pigments are grinded too small, they become transparent.

This behaviour is inherent for all white inks water-based, solvent as well as UV and not specific to Mutoh.
Because of this natural tendency for sedimentation, the VJ-1627MH is equipped with an ink circulation system to avoid sedimentation in the white ink tubing.

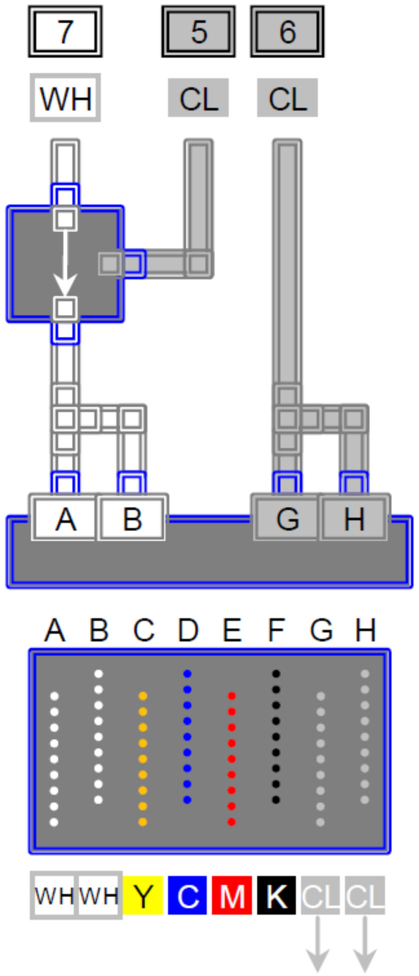


Cleaning Assistance

5-colour set-up:

- Cleaning liquid (ink slot 6) is used to:
  - wash the spitting sponge
  - prevent accumulation of dried white ink

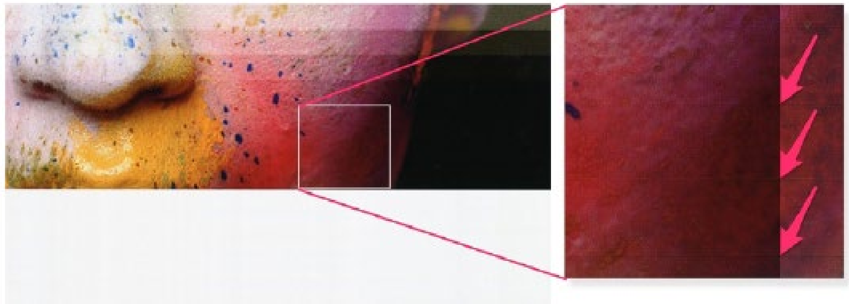
5-colour set-up


7
5
6
WH
CL
CL
A
B
G
H
A B C D E F G H
WH WH Y C M K CL CL

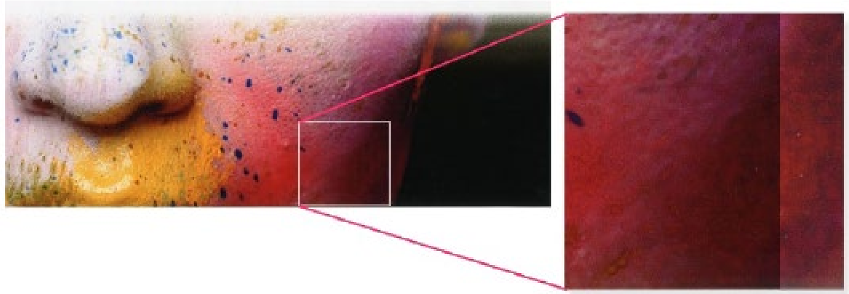
i^2 Intelligent Interweaving - Benefits

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

Conventional straight line printing



i^2 printing



ValueJet Status Monitor

VSM / VSM Mobile

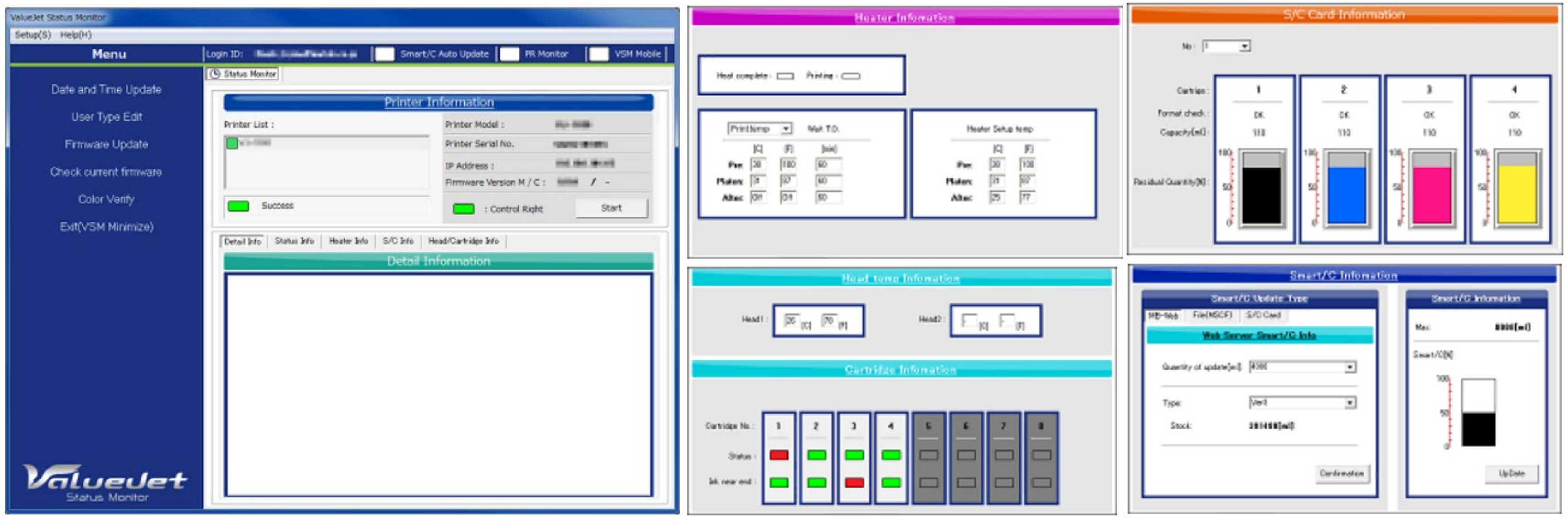
- Upon unit activation of a ValueJet, each end-user automatically becomes member of Mutoh’s ValueJet Club
- VSM is a light-weight software enabling you to remotely control your printer from your computer
- For mobile phone or tablet, you can be remotely connected to the printer using VSM Mobile

VSM
ValueJet Status Monitor

VSM For Desktop

Features:

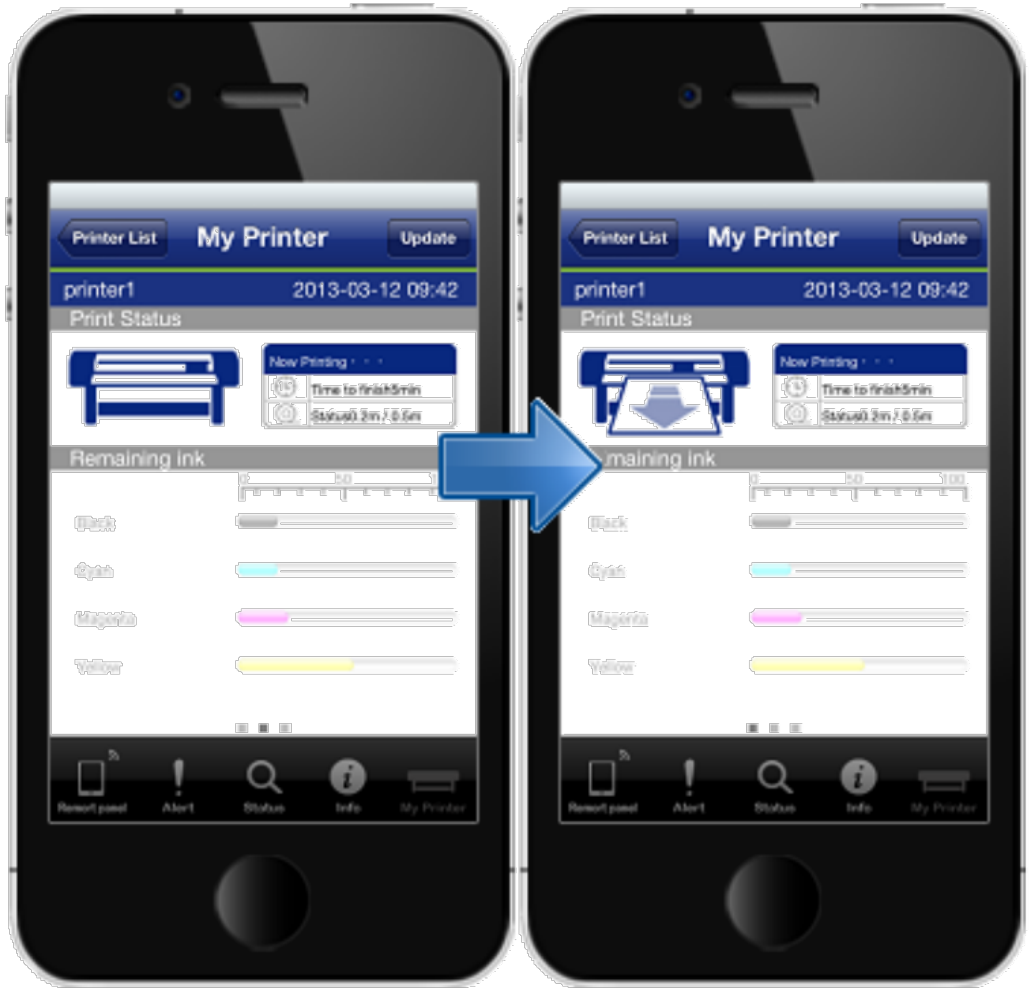
- Printer status
- Heater information
- Remaining ink
- Print information: print time, print mode, print size, ink consumption


ValueJet Status Monitor
Setup(S) Help(H)
Menu
Login ID:
Smart/C Auto Update
PR Monitor
VSM Mobile
Status Monitor
Date and Time Update
User Type Edit
Firmware Update
Check current firmware
Color Verify
Exit(VSM Minimize)
Printer Information
Printer List :
Printer Model :
Printer Serial No.
IP Address :
Firmware Version M / C :
Success
: Control Right
Start
Detail Info
Status Info
Heater Info
S/C Info
Head/Cartridge Info
Detail Information
ValueJet
Status Monitor
Heater Information
Heat complete :
Printing :
Heater Setup temp
Pre:
Platen:
After:
S/C Card Information
No :
Cartridge :
Format check :
Capacity(ml) :
Residual Quantity(%) :
Head temp Information
Head1 :
Head2 :
Cartridge Information
Cartridge No. :
Status :
Ink near end :
Smart/C Information
Smart/C Update Type
Web Server Smart/C Info
Quantity of update[ml]
Type:
Stock:
Confirmation
Smart/C Information
Max:
Smart/C[%]
UpDate

VSM Mobile

Features:

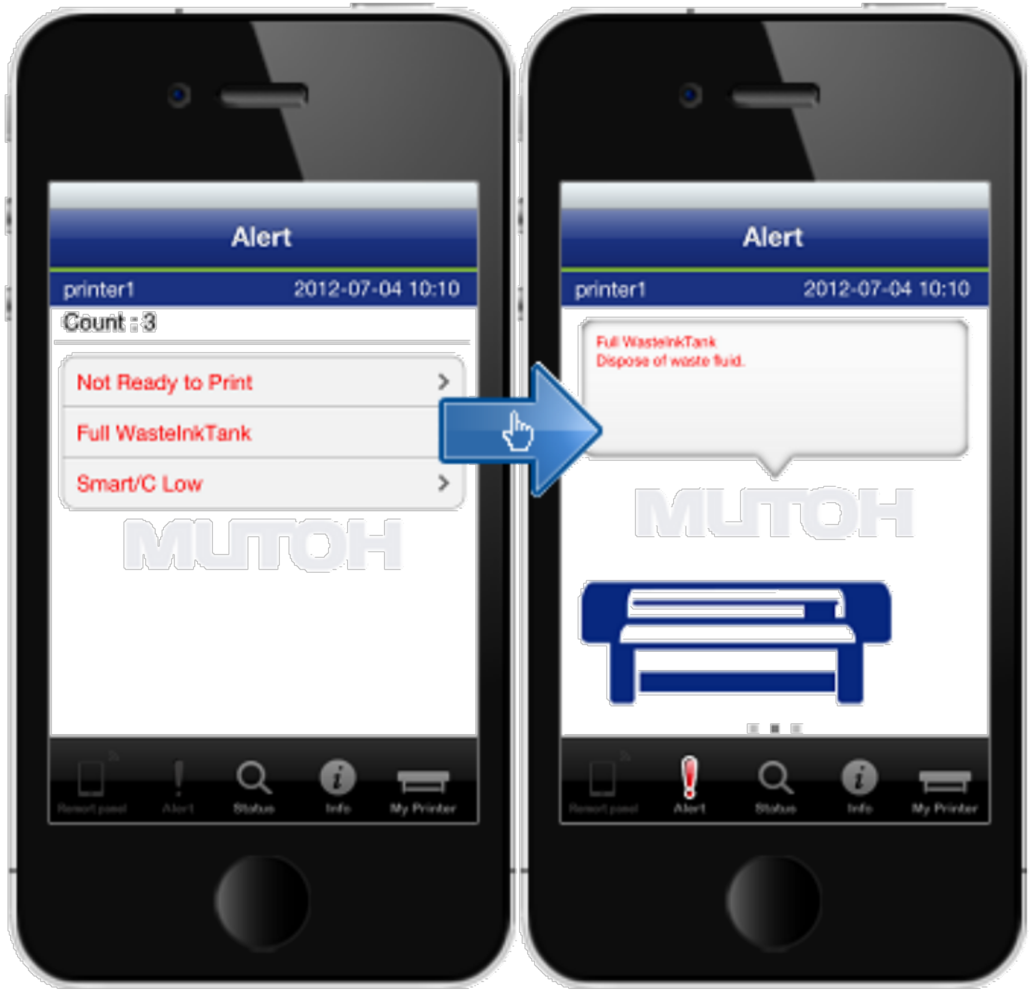
- Print status
- Alerts
- Printer status
- Remaining ink
- Firmware version
- Basic remote panel


Printer List
My Printer
Update
printer1
2013-03-12 09:42
Print Status
Now Printing
Time to finish5min
Status0.2m / 0.5m
Remaining ink
Black
Cyan
Magenta
Yellow
Remort panel
Alert
Status
Info
My Printer

VSM Mobile

Features:

- Print status
- Alerts
- Printer status
- Remaining ink
- Firmware version
- Basic remote panel



Alert

printer1 2012-07-04 10:10

Count : 3

Not Ready to Print

Full WasteInkTank

Smart/C Low

Alert

printer1 2012-07-04 10:10

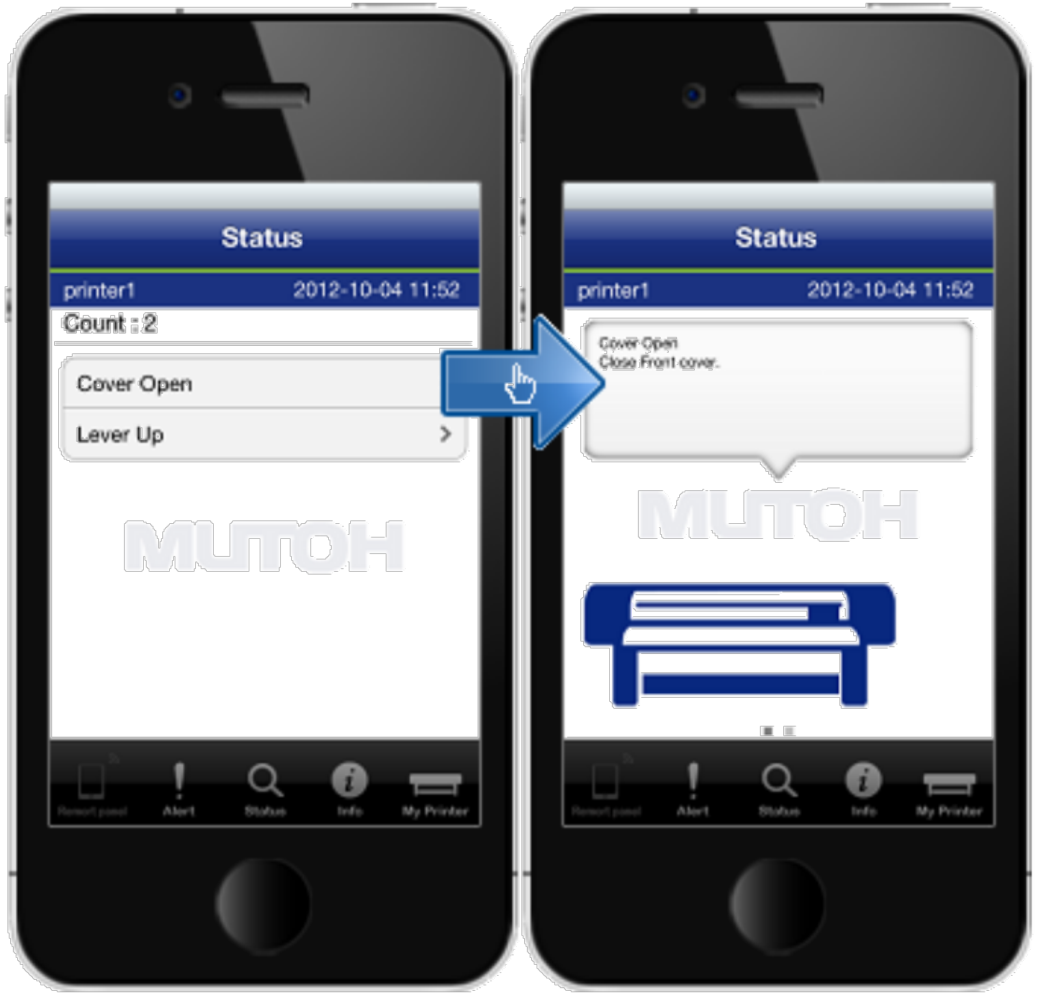
Full WasteInkTank
Dispose of waste fluid.

MUTOH
Remote panel
Alert
Status
Info
My Printer

VSM Mobile

Features:

- Print status
- Alerts
- Printer status
- Remaining ink
- Firmware version
- Basic remote panel


Status

printer1 2012-10-04 11:52

Count : 2

Cover Open

Lever Up

Status

printer1 2012-10-04 11:52

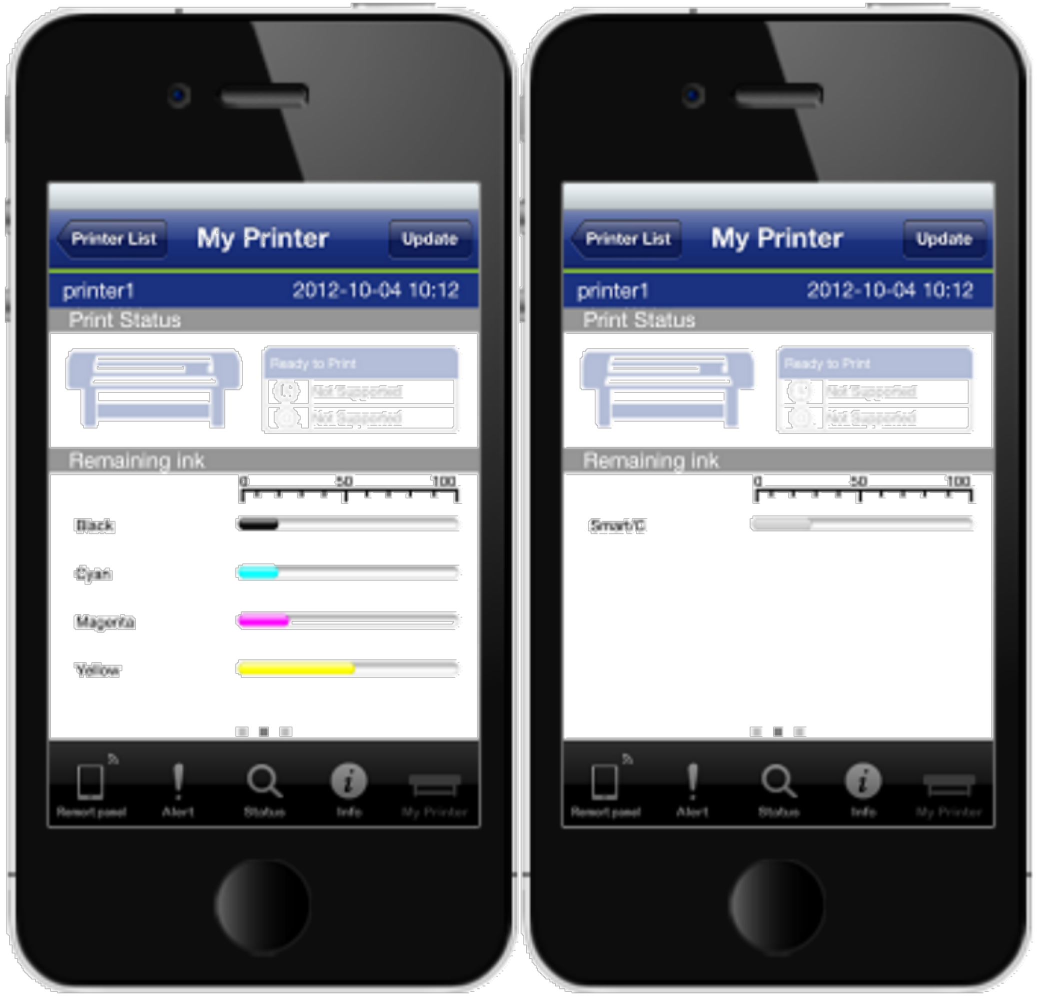
Cover Open
Close Front cover.

MUTOH
Remote panel
Alert
Status
Info
My Printer

VSM Mobile

Features:

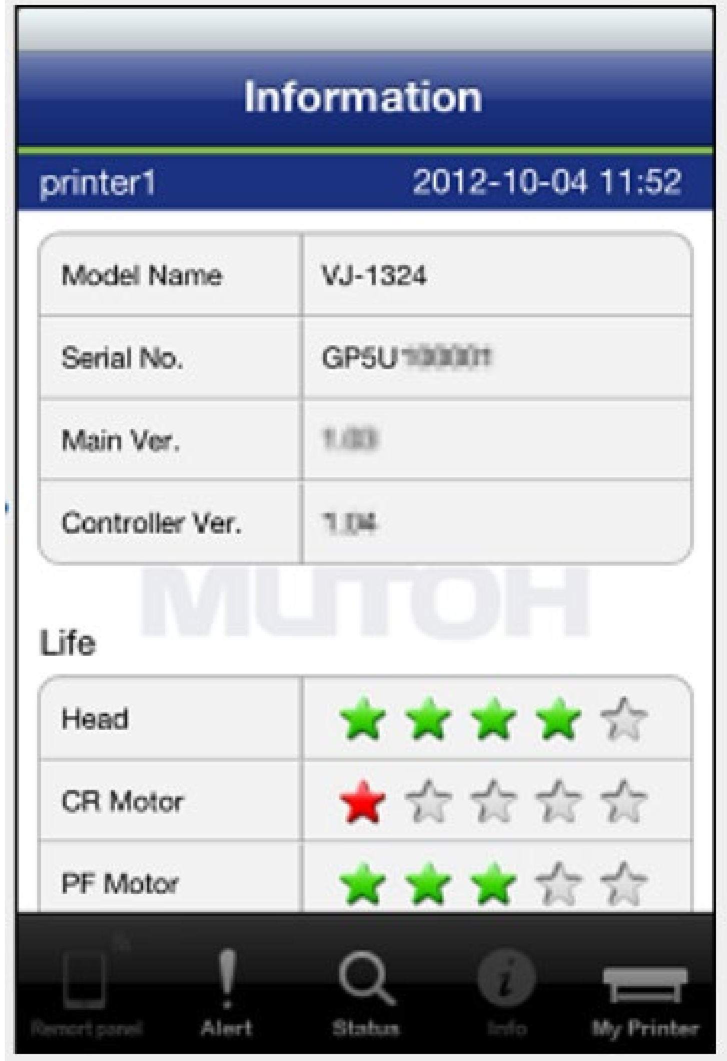
- Print status
- Alerts
- Printer status
- **Remaining ink**
- Firmware version
- Basic remote panel


Printer List
My Printer
Update
printer1
2012-10-04 10:12
Print Status
Ready to Print
Not Supported
Not Supported
Remaining ink
0
50
100
Black
Cyan
Magenta
Yellow
Remort panel
Alert
Status
Info
My Printer
Printer List
My Printer
Update
printer1
2012-10-04 10:12
Print Status
Ready to Print
Not Supported
Not Supported
Remaining ink
0
50
100
Smart/C
Remort panel
Alert
Status
Info
My Printer

VSM Mobile

Features:

- Print status
- Alerts
- Printer status
- Remaining ink
- Firmware version
- Basic remote panel



Information

printer1 2012-10-04 11:52

Model Name	VJ-1324
Serial No.	GP5U[redacted]
Main Ver.	[redacted]
Controller Ver.	[redacted]

Life

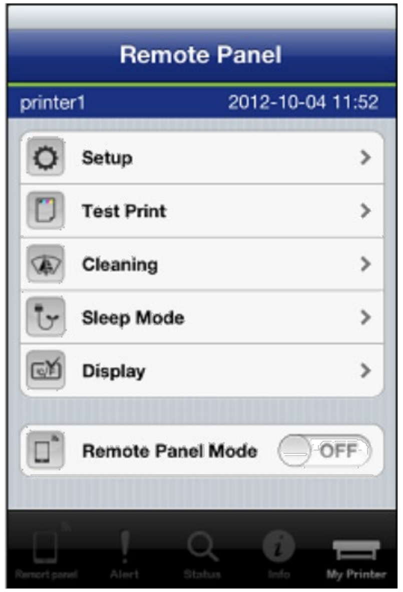
Head	★★★★☆
CR Motor	★☆☆☆☆
PF Motor	★★★☆☆

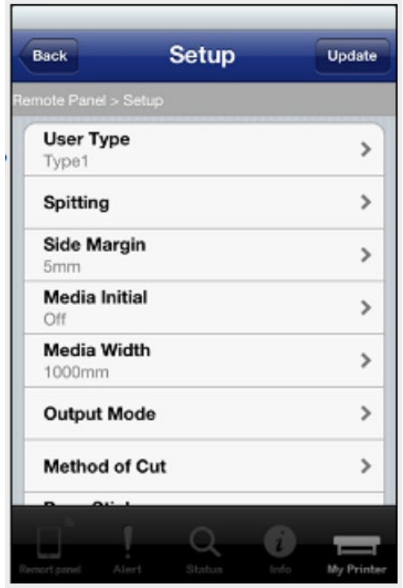
Remort panel
Alert
Status
Info
My Printer

VSM Mobile

Features:

- Print status
- Alerts
- Printer status
- Remaining ink
- Firmware version
- Basic remote panel


Remote Panel
printer1
2012-10-04 11:52
Setup
Test Print
Cleaning
Sleep Mode
Display
Remote Panel Mode
OFF
Remort panel
Alert
Status
Info
My Printer


Back
Setup
Update
Remote Panel > Setup

User Type
Type1

Spitting

Side Margin
5mm

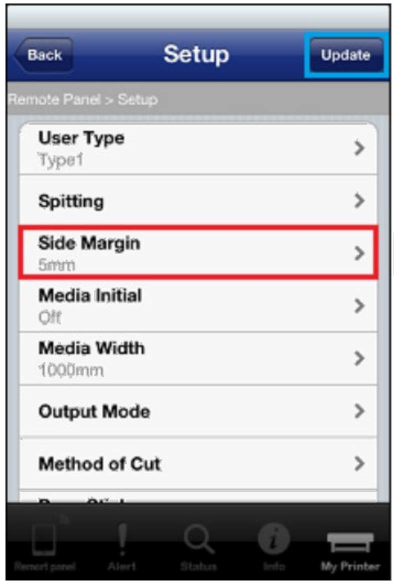
Media Initial
Off

Media Width
1000mm

Output Mode

Method of Cut

Remort panel
Alert
Status
Info
My Printer


Back
Setup
Update
Remote Panel > Setup

User Type
Type1

Spitting

Side Margin
5mm

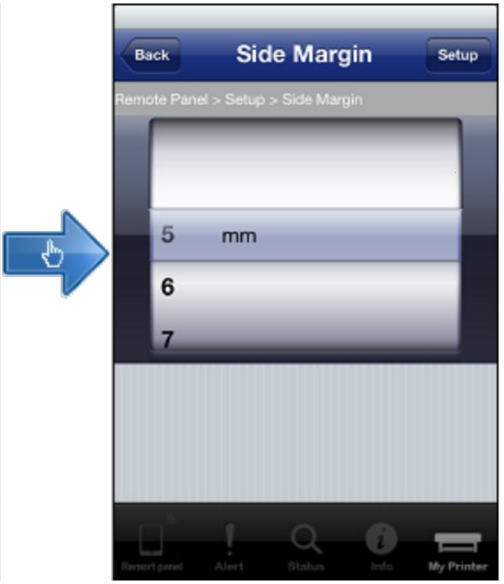
Media Initial
Off

Media Width
1000mm

Output Mode

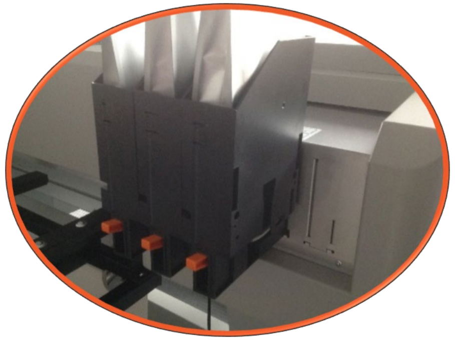
Method of Cut

Remort panel
Alert
Status
Info
My Printer


Back
Side Margin
Setup
Remote Panel > Setup > Side Margin
5
mm
6
7
Remort panel
Alert
Status
Info
My Printer

New MP31 Multi Purpose Ink

- ValueJet 1627MH + MP31 ink: Print on as Many substrates as Possible
- CMYK + White
- Inks are extremely stretchable and shrinkable
- UV Durability up to 2 years outdoor*
  - Comparable to solvent
  - Better than UV
- Preserve natural and original feel of media



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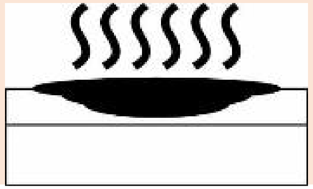
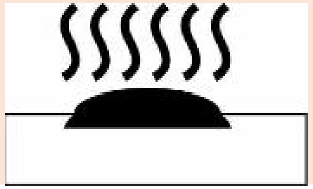
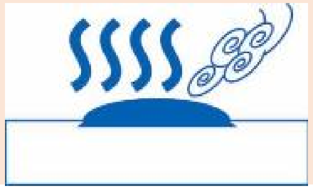
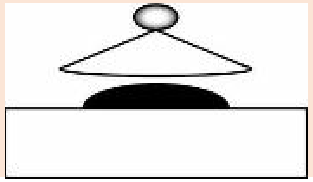
* : In case mechanical stress is involved, protection (lamination...) is required. Standard solvent type lamination films can be used unlike for UV prints, requiring more expensive lamination films featuring an adapted, thicker adhesive layer.

New MP31 Multi Purpose Ink

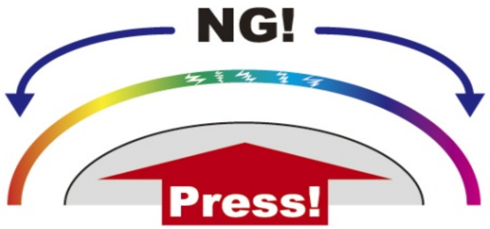
- No forced ventilation required
- All ink ingredients are selected with an environmentally responsible mind, meeting all industry standards with regards to health and safety
- Solvent carrier with unique resin mix
  - The solvents cause the media to soften & allow the resins to bind to the substrate
- Unlike Latex inks, MP31 inks are not heat activated. Media temperatures do not exceed 50°C
- Read more: Article by Nessan Cleary

MP31 Ink Adhesion

	Typical Solvent Ink	**MP31 Ink on Roll Media**	**MP31 Ink on Rigid Media**	**LED UV Ink**
Ink Fixation	Interact with and cling to the media surface	Soften and penetrate the media surface	Adhere to the rigid media	Adhere to the media surface
Ink Drying	Integrated heater	Hot air blowing	Hot air blowing	LED UV light
Ink Layer				

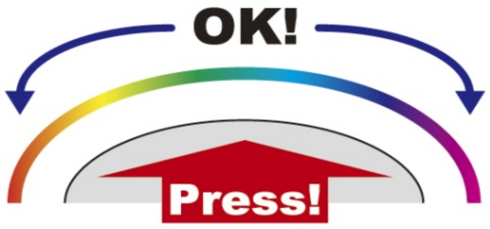
MP31 Extremely Stretchable & Shrinkable

Water-based Ink



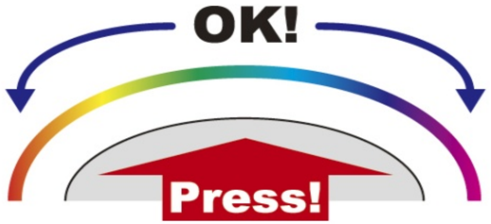
Media for water-based ink has a coating. When it is bent/stretched, the layer breaks and the drawing surface also breaks.

MUTOH MP31 Ink



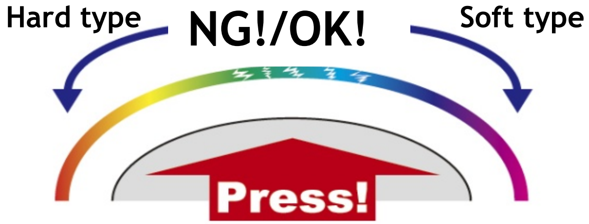
Since the MP31 ink clings (on)to the substrate and allows heat & stretching, the graphic is not easily broken.

Solvent Ink



Since the solvent ink softens the media and penetrates into the media, the graphic does not break easily. Application limited to compatible non-coated PVC media.

UV Ink/Heat Curing



Stretchable UV ink like US11 allows mild 3D forming. If elongation is too big, the ink layer breaks.

Application Possibilities

Husk vi også
serverer tørvejr

- Fine art
- Tradeshow graphics
- Banners
- Outdoor & indoor signage
- Stickers
- …

Special Applications

- Not only white paper containers/packages, but also transparent and shrink wrap film (LDPE[1], PVC) thanks to white ink
- Produces a natural finish making use of the original substrate feel/texture/gloss
- Compatible with heat and stretch processes: vacuum/thermoforming
  The printed image is expanded to 250%[2] or more
- For parts prototyping or mini-series such as meter panels, etc.
- ...

[1] Low Density Polyethylene

[2] The maximum stretch percentage is limited only by the amount of density loss which is acceptable. As the ink layer becomes thinner, the colour strength decreases.

Prints Are Dry When They Come Off The Printer

- Some substrates may not completely dry at high print speeds
- Any remaining liquids will evaporate in open air
- For lamination, in some cases a waiting time of 24h* is advised
- Final adhesion strength on challenging substrates like glass, ceramics, PP, PMMA are to be judged 24h after printing
- No risk for operator
- Output will be ready for further process as regular Eco Ultra prints

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*: Some coated inkjet media may show micro swelling of the coating during the drying process. This slows down the drying speeds, but is normal behaviour.

MP31 Ink Consumption

Average ink consumption : 6,6 ml/m^2
for regular coverage at 720 dpi
(CMYK setup)

Average ink cost : €1,73/m^2

Toy Certification

MP31 is compliant with Part 3 of the European Standard on safety of toys

✓ EN71-3:2013+A1:2014 “Safety of Toys – part 3: Migration of certain elements”

Latest Toy Certificate can be requested via ehsr.support@mutoh.eu.

Toy Certification – What is EN71?

- EN71 is a European standard allowing to benchmark the safety of toys
- Toy safety testing in accordance with EN71 is divided in 3 categories:
  1. First Category: Mechanical and physical properties of toys
  2. Second Category: Flammability of toys
  3. Third Category: Migration of certain elements
- In the third category, the focus is on paints, printing inks & varnishes.

  That is why our compliance declaration refers to Part 3.
- The third category testing applies to the detection of forbidden materials from any accessible part of any toy
- In extension, the test can also be applicable to other consumer products like: young children's footwear, key-rings, imitation food, wristbands, novelty slippers and colourful ornaments that could be appealing to children and may be interpreted as toys

Toy Certification – What is EN71?

- EN71-3 comprises maximum permitted levels for a list of 19 elements and substances of concern
- EN71-3 comprises tests corresponding to typical child interactions with toys.
  This means any hazardous situation due to sucking, licking or swallowing or prolonged skin contact when the toy or part of toy is used as intended or in a foreseeable way, bearing in mind the behaviour of children
- What is the meaning of: "MP is compliant with EN71-3:2013+A1:2014 ?"
  - ✓ It means during the testing of Mutoh's CMYK & White set of MP31 inks, none of the elements specified in the standard were detected or, if they were detected, the measured value was below the allowed limit value
  - ✓ All colours were tested at full coverage

Media Specifications – Roll Media

Min. / Max Media Width	182 mm (7,17”) / 1625 mm (63,97”)
Max. Print Width	1615 mm (63,58”)
Media Measurements*	Ø 150 mm / 2” & 3” / 30 kg

*: Standard non-motorised roll-off system at back of machine. Compatible with outside wound media only.

MUTOH
ValueJet 1627MH

Media Specifications – Rigid Media

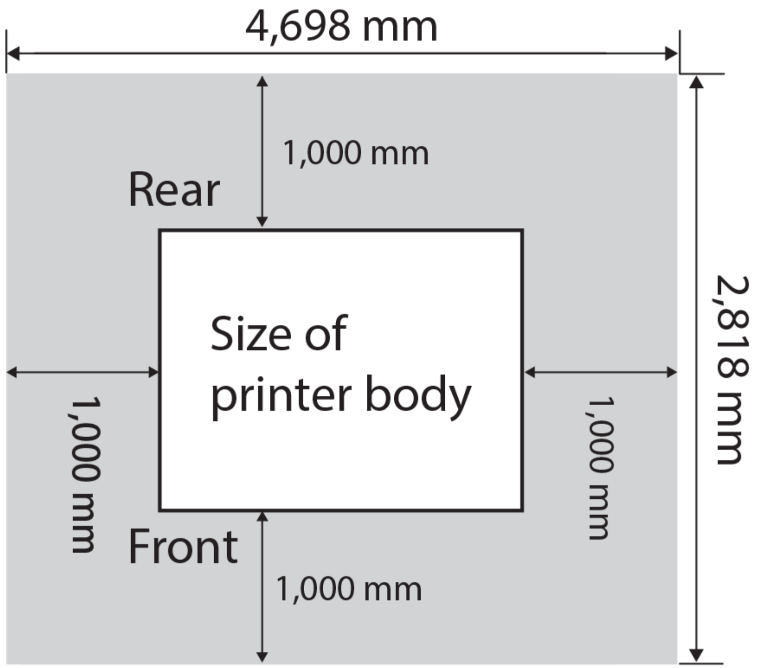
Min. / Max Media Width	182 mm (7,17”) / 1625 mm (63,97”)
Max. Print Width	1615 mm (63,58”)
Min. - Max. Media Length	200 mm (7,87”) - 1200 mm* (47,24”)
Max. Media Thickness	16 mm
Max. Media Weight	15 kg

MUTOH
ValueJet

*: 1200 mm = length when using standard rigid tables.
Adding extra tables will allow longer lengths, as long as weight of rigid loaded is not exceeding 15 kg.

Installation Space

Minimum Required Installation Space - Roll

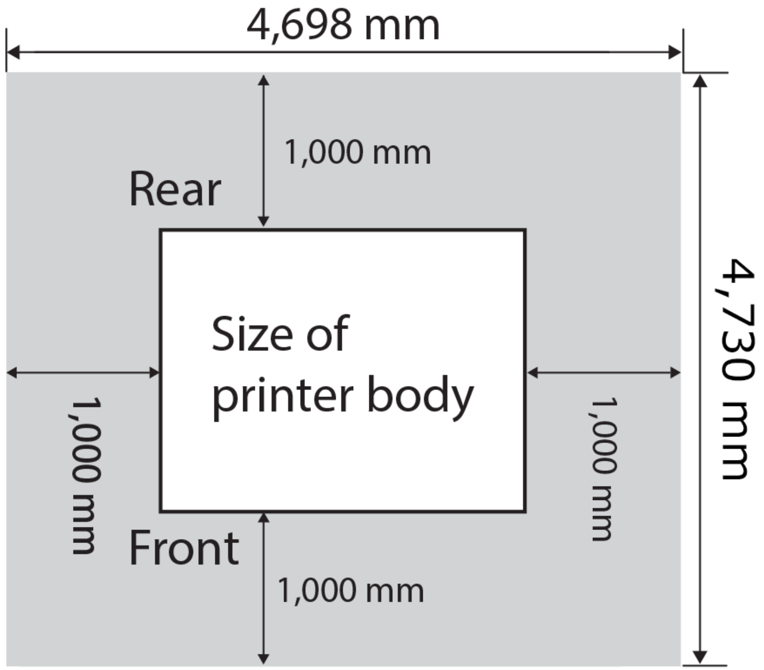

4,698 mm
1,000 mm
Rear
Size of printer body
1,000 mm
1,000 mm
2,818 mm
Front
1,000 mm

Size of printer body	
width x depth	: 2,698 mm x 818 mm
height	: 1,302 mm

Minimum required space
4698 mm x 2818 mm

Installation Space

Minimum Required Installation Space - Rigid


4,698 mm
1,000 mm
Rear
Size of printer body
1,000 mm
1,000 mm
4,730 mm
Front
1,000 mm

Size of printer body	
width x depth	: 2,698 mm x 2,730 mm
height	: 1,302 mm

Minimum required space
4698 mm x 4730 mm

Media Compatibility

- Print on the widest media range:
    - Roll & Rigid
    - Coloured / Black media
    - Transparent media
    - Reflective media
    - Heat-sensitive media
    - Shrink film
    - …

Media compatibility & Production print speeds

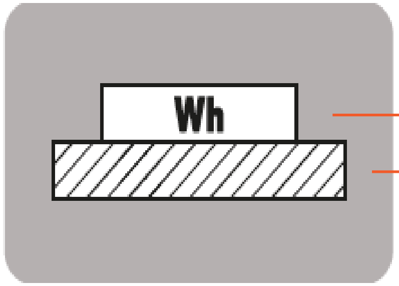
White Media	5-Colour Set-up - Single Layer CMYK Output - Speed in m²/h
Generic Self-adhesive Vinyl	7,8
Aluminium sandwich panel (Dibond®)	5,6
White Cardboard	5,6
Board with 2-side embossed canvas structure liner (Katz®)	5,6
White PVC foamboard (Brett Martin Foamalux® White)	5,6
Fluted (Corrugated) Polyprop board (PP)	5,6
Synthetic Leather (PU-based) White	1,8
Honeycomb board (FalconBoard®)	5,6

- The table shows an overview & variety of substrates which were tested by Mutoh Europe.
  Print speed will largely depend on the ink-substrate interaction. Individual testing is required.
- Please note that booting the machine up in 4-colour setup will not increase the production output speeds

White Printing Method 1

White only printing:

For non-transparent and transparent media



White layer

Media

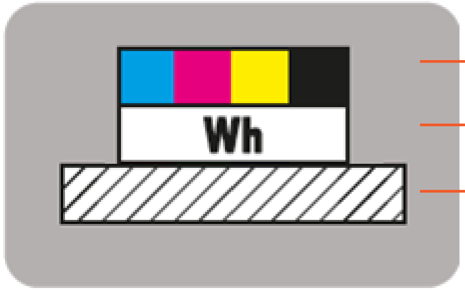
GRAPHIC DESIGN

Example on black media

White Printing Method 2

Under Lay Printing:

For non-transparent & transparent media



- CMYK layer
- White layer
- Media

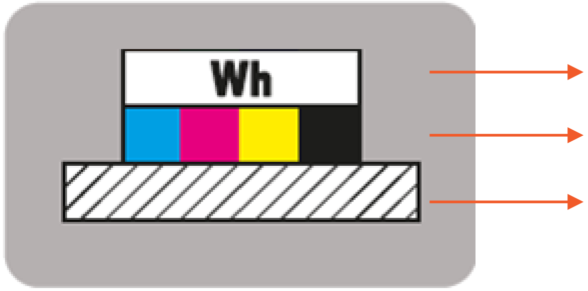
Just one moment
can change everything
ETERNITY
MOMENT
Calvin Klein

Example backlit film

White Printing Method 3

Over Lay Printing:

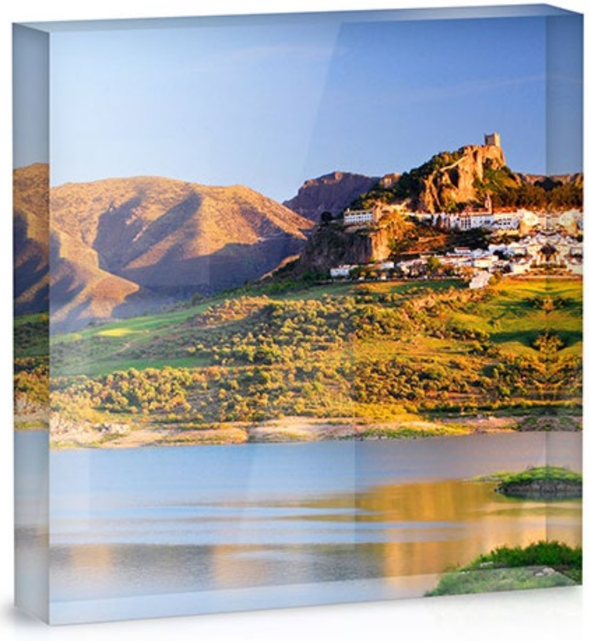
For transparent media with mirror-wise printing on one side and viewing from reverse side



White layer

CMYK layer

Media



Example of plexiglass

Sign & Display Applications

LES ÉDITIONS DE LA PROVINCE DE LIÈGE
LES ÉDITIONS DE LA
PROVINCE DE LIÈGE

Outdoor Pop-Up Banner

Interior Decoration

Vehicle Wrapping

Stickers

Art / Photographic Gallery

Sign & Display Applications

Corrugated Boards

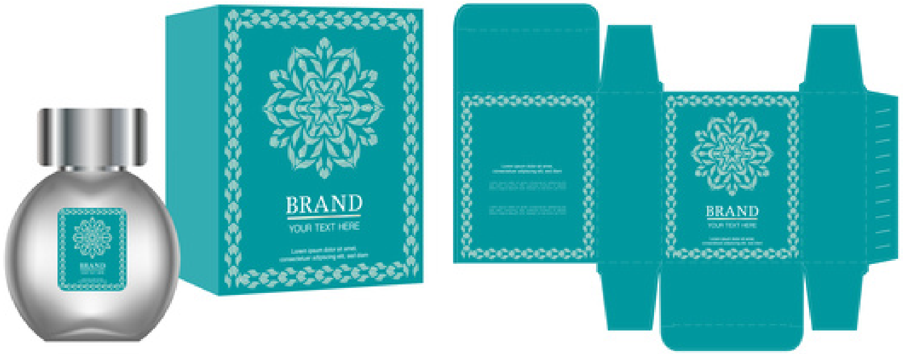
FAR'N'BEYOND
DESIGN PRINT DIGITAL .COM
Client & Team Parking

Indoor Sign

Real
Smart
REALTY
TOLL FREE

Outdoor Sign

Cardboard Prototypes


BRAND
YOUR TEXT HERE
BRAND
BRAND
YOUR TEXT HERE

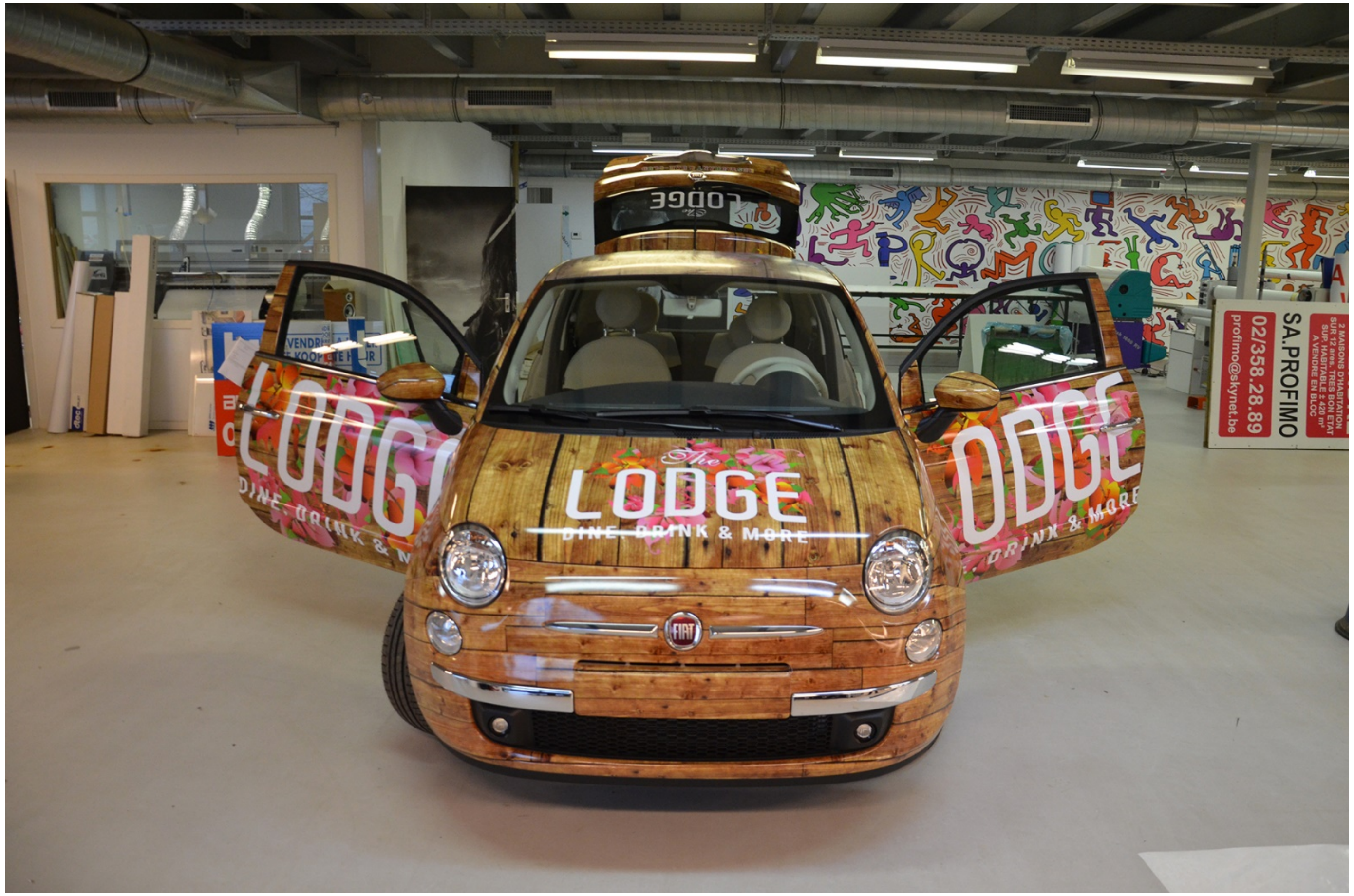
Shrink / Packaging Sleeves

Fresh Milk
Natural Mineral
WATER
Hand
Sanitizer
Instant
Kill 99.9 percent of germs
With Aloe Vera
8oz 240ml
PLASTIC
BOTTLE
VECTOR
MOCKUP
290 ml / 9.8oz
Fresh
Orange
Juice
100% Pure
Virgin
SunFlower
Oil
Quality Seeds
Cold Pressed
Hair
Shampoo
Natural
For Normal Hair
New Formula
8oz 240ml

Thermo – Vacuum Forming

https://youtu.be/CrD-pevfpmE

Wrapping


The
LODGE
DINE, DRINK & MORE
SA.PROFIMO
02/358.28.89
profimo@skynet.be

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Harcourt
Test Publishers

Ready To Team Up With Any Mutoh Cutting Plotter

- Productivity – Print! Cut! Print & Cut!
- Reliability – Error-free workflow : eliminate the risk to send wrong cutting data, wasting substrate(s), inks and resources thanks to barcode reading by the cutter
- Efficiency – Save time by optimising your production planning
- Flexibility – Cover the widest range of print and cut applications and prepare for rush jobs with peace of mind
- Expandability – Ready to grow with your business

Ready To Team Up With Any Mutoh Cutting Plotter

PRINT

CUT

CONTOUR-CUT

REGISTRATION
MARKS

BARCODE
SUPPORT

PRODUCTION
SOFTWARE

MUTOH

PRINT & CUT

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Your Happy Number 13

Read more: [Print & Cut Brochure]