

Latex Wide Format Printer

RICOH Pro L5160

FAQ

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Ricoh Pro L5160 Latex Wide Format Printer Frequently Asked Questions

Welcome to the FAQ (Frequently Asked Questions) guide for the Pro L5160. It provides answers to questions most commonly asked by customers about the new AR2 Aqueous Resin (latex) wide format printer from Ricoh and complements information provided in the Customer Expectations Document.

Version 1.0

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1. Printer

Q What are the configuration options for the Pro L5160?

The Pro L5160 has eight ink cartridge slots. It can be configured as four-colour printer or as a four-colour plus white printer:

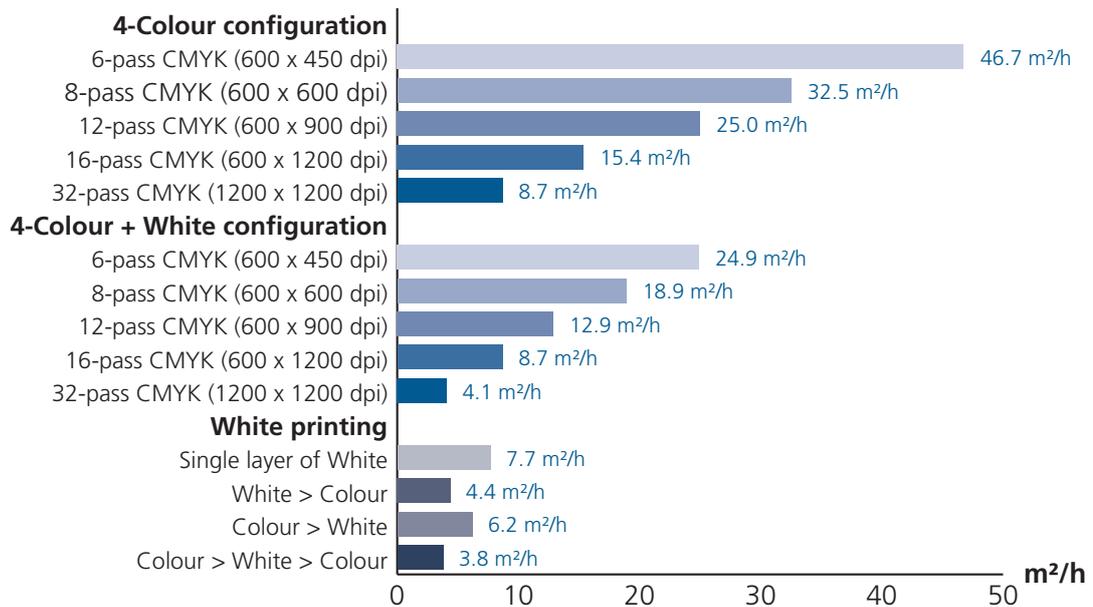
- 4-Colour Pro L5160 configuration: 
- 4-Colour + White Pro L5160 configuration: 

Q If I purchase a Pro L5160 as a four-colour printer, can I add white later?

Yes, a 4-Colour Pro L5160 can easily be converted to a 4-Colour + White configuration. The reverse is possible, but is time-consuming, costly and not recommended.

Q What are the actual print speeds of the printer?

The two configurations available for the Pro L5160 have different print speeds (because of the differing ink configurations) that also vary with print modes.



Note that the print resolution of White printing is always 600 x 900 dpi.

Q What are the dimensions of the Pro L5160?

Dimensions of the Pro L5160 are as follows:

- Width: 3,259 mm
- Depth: 999 mm
- Height: 1,472 mm
- Weight: 372 kg

Q How much space do I need around the printer?

It is recommended to have a minimum of 500 mm on each side and 1,000 mm of free space at the front of the Pro L5160 for the safe and effective operation of the equipment.

A minimum of 1,250 mm of free space at the rear is recommended in order to be able to provide ample access to load paper rolls into the machine.

Q Are there any special installation requirements?

Because of the size and weight of the system, space for unloading and access to the installation site need to be validated prior to installation.

The floor where the Pro L5160 will be installed needs to be strong, stable and level. The floor needs to be level to within 5 mm from front to rear and within 5 mm from left to right, and be able to withstand a minimum loading of 1,800 N/m².

The recommended operating environment is a temperature range of 15–30°C and a relative humidity range of 35–80%. The best performance—precision guaranteed—is achieved when the temperature is maintained between 20–25°C and 40–60% relative humidity.

Q Do I need venting where the printer is installed?

In normal operations—when the Pro L5160 is installed in a site that is well ventilated and spacious—there is no requirement for additional ventilation.

When you use the Pro L5160 for a long period of time—or carry out a large volume of printing—the machine may emit volatile organic compounds (VOCs) and give off odours. These are not hazardous nor toxic, but if additional ventilation is required Ricoh recommends a ventilation rate of 2,500 m³/h.

Q How long does it take to install?

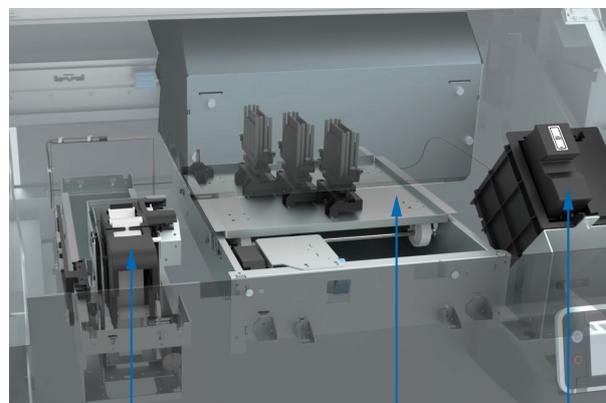
One day (by a trained service technician).

Q Why does the Pro L5160 appear to be bigger than comparable printers?

The Pro L5160 is built for high quality printing at high speed, as well as for long production runs. It's this combination of capabilities that requires a robust print chassis.

The platen accounts for a little more half of the width of the machine, designed to accommodate media up to 1,625 mm wide (64").

The right-hand-side of the machine—shown in cut-away at right—accounts of around 30% of the width of the Pro L5160. It provides the home position for the carriage (that houses a staggered array of three overlapping industrial grade printheads), the automated head cleaning station, and the home for the flushing cartridge.



Cleaning Cartridge Type C2

Carriage housing 3 x Ricoh MH5441 Gen5E printheads

Flushing Cartridge Type C2

The left-hand-side of the machine features the eight ink cartridge stations as well as a manual head cleaning zone. For manual cleaning, the carriage is parked at the left-hand-end of the printer—under the ink cartridge housing—with ample access to the printhead array for operators.

Q The Pro L5160 has wheels, why is it fixed in place when installed?

To achieve the performance that the Pro L5160 delivers—very high quality print at high speed—the printer needs to be stable and level to a high precision (for reliable feeding of media and printing). The wheels are provided to assist in manoeuvring the printer into position but do not provide the stability and the exactness required for high performance, reliable printing.

Q Does the Pro L5160 have any heaters?

Yes, the printer has four heaters: a Pre-heater (that heats the media before printing), a Print heater (that heats the media during the print process and helps improve image quality), and a Post-heater and Cure heater that dry prints.

Q Does the printer generate much heat?

During normal operations, the panels of the machine remain cool to the touch, there is no risk of burns from touching the panels, and there is no requirement for additional cooling of the operating environment.

Q How are prints dried?

The Post-heater dries ink from underneath the media after printing. The Cure heater heats and cures ink from above the media using infrared heat. The Cure heater can be turned on or off, whilst the Post heater is always on during the printing process.

Q What temperatures are used for drying?

Typical temperatures are 60°C for the Pre-heater, 55°C for the Print heater, and 70°C for the Post-heater. The maximum temperature settings are 70°C for the Pre-heater and Print heater, and 95°C for the Post-heater and Cure heater. Settings vary depending on the media being used and are included in the media profiles.

Q What power do I need for the Pro L5160?

The Pro L5160 requires two dedicated wall sockets rated for 20A 250V.

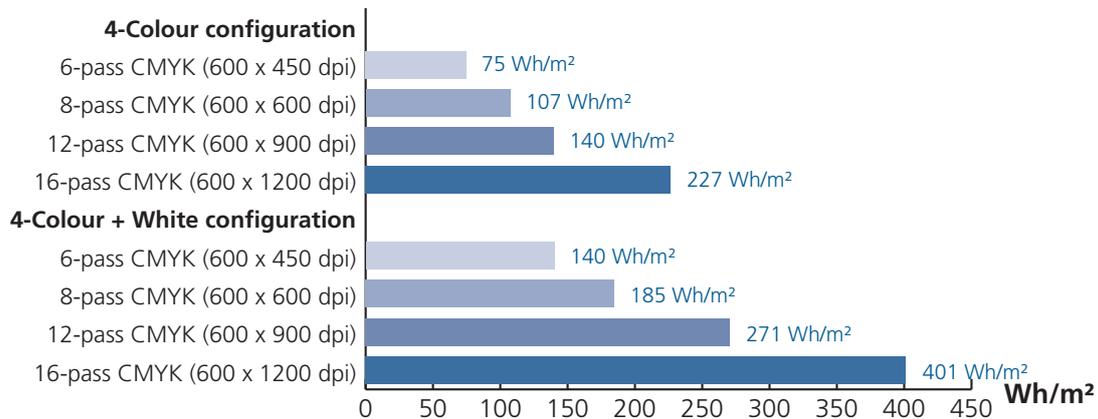
Q How much power does the Pro L5160 use?

During normal print operations, the power consumption for the Pro L5160 is typically around 3,490W. This is based on printing in 12-pass mode with temperature settings of 65°C (Pre-heater), 65°C (Print heater), 70°C (Post-heater) and 90°C (Cure heater).

In Energy Saver Mode (Sleep Mode), power consumption is 5.35W or less.

Auto Power-off consumes 0.5W or less.

The chart overleaf shows power consumption—in watt-hours per square metre—for different print modes:



Q How does power consumption compare with other latex printers?

Rather than comparing outright operating usage of power—which are comparable—you need to examine how much power is used per square metre. On this basis, the Pro L5160 uses significantly less than latex printers using thermal printheads—often less than half or more.

Here's an example. There's a competitive latex printer in the market with a similar price point to the Pro L5160. Operating power consumption is published as 4,000W (the Pro L5160 is 3,490W).

In 16-pass mode:

- Competitive latex model uses 667 Wh/m² (with a print speed of 6 m²/h)
- 4-Colour configured Pro L5160 uses 227 Wh/m² (with a print speed of 15.4 m²/h)

In this example the 4-Colour Pro L5160 uses just a little more than one-third of the power of the competitive latex model—and prints 150% faster.

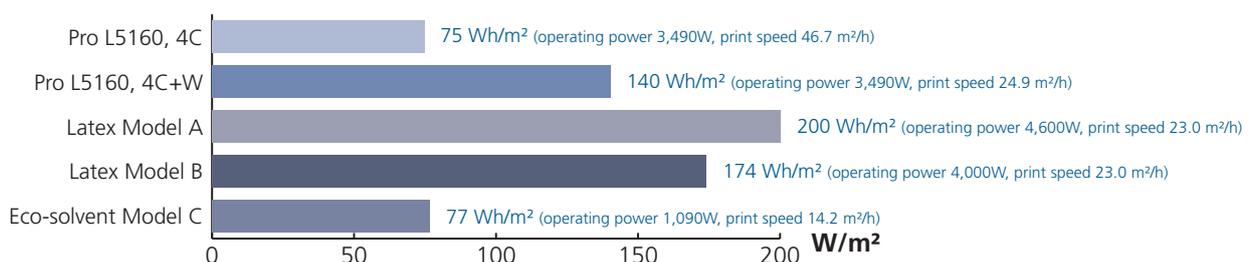
A Pro L5160 with white—which the competitive model cannot offer—would use 401 Wh/m² printing a CMYK job in 16-pass mode (using around 60% of the power per square metre). It would also complete the job quicker, printing CMYK work at 8.7 m²/h.

Q Don't latex printers use much more power than solvent printers?

It's true that latex printers use more power than solvent printers—because they use heat to dry printed output—but the power consumption needs to be assessed in context.

Firstly, printed output from latex printers are ready for immediate usage whereas output from eco-solvent printers needs a minimum of 6 hours of degassing (drying or dwell) time before usage. Often, that dwell time is overnight.

Secondly, power usage needs to be evaluated against print speed. The following chart shows power consumption for the Pro L5160 (in 4-Colour and 4-Colour + White configuration) compared with two other latex printers and a market-leading eco-solvent printer (all printing CMYK in 6-pass mode):



Another way to look at it is to see how long it would take to print a job and how much power would be used to produce that job. Here's a comparison of the same models to print a CMYK 100 m² job in 6-pass mode:

- Pro L5160, 4-Colour: 2:09 hours, 7.47 kWh
- Pro L5160, 4-Colour + White: 4:01 hours, 14.02 kWh
- Latex Model A: 4:21 hours, 20.00 kWh
- Latex Model B: 4:21 hours, 17.39 kWh
- Eco-solvent Model C: 7:05 hours, 7.68 kWh

Q When I power up the printer, how long does it take to be ready for printing?

The Pro L5160 takes around 7 minutes for the heaters to reach set temperatures from power-on (typical settings of 60°C for the Pre-heater, 55°C for the Print heater, and 70°C for the Post-heater).

Q Can I load media and leave the printer to print overnight?

Yes. The Pro L5160 can be left to print unattended as long as the output is attached to the take-up roll and there are enough remaining consumables for the print job. Note that the heaters remain on until the printer enters Sleep Mode

Q Is the printer noisy?

No. In Standby, the maximum sound power level is 67 db(A). Whilst printing, the maximum is 72 db(A). This is similar to other wide format roll-to-roll printers.

Q What is the vacuum used for?

The vacuum—driven by a fan—holds the media flat on the platen for reliable, even printing. It is adjustable between nine levels for optimum performance.

Q What is the back cover for?

The back cover covers the Pre-heater. It is opened when setting media or cleaning the Pre-heater. It needs to remain closed for printing.

Q What are the media guides for?

The media guides on each side of the platen are there to ensure reliable media feeding and printing. The media is fed under the media guide to eliminate any possibility of head strike on the edge of media.

Q What is the expected life of the printer?

The Pro L5160 has a unit life of 5 years or a maximum print volume of 60,900 m², whichever comes first.

2.

Printheads and Inks

Q What type of printhead is used in the Pro L5160?

The Pro L5160 features the Ricoh MH5441 Gen5E on demand piezoelectric printhead. They are industrial-grade printheads manufactured of stainless steel, offering excellent durability and an extended service life. They deliver high resolution printing at high speed and feature variable drop-size capability enabling grey-scale printing. The printhead features four rows of 320 nozzles, with the 1,280 nozzles delivering high resolution 600 dpi printing.

Q How many printheads are in the Pro L5160?

The printer has three Ricoh MH5441 Gen5E printheads in a staggered array to maximise productivity.



Q What is the ink configuration of the printheads?

In the 4-Colour configuration Pro L5160, the four rows in each printhead have separate colour paths (one row black, one row magenta, one row cyan, and one row yellow).

In the 4-Colour + White configuration, the middle printhead has white in each of the four rows. The other two printheads have separate colour paths in the four rows of each printhead (black, magenta, cyan and yellow).

Q Is the printhead a consumable?

No, the printhead is designed for a long service life (the average expected life of a Gen5E printhead is in excess of 66 litres). The printhead can only be replaced by a trained service technician.

Q What is the benefit of a permanent printhead?

Permanent printheads are designed to deliver consistent image quality throughout an extended service life. Print quality will not deteriorate like a thermal printhead where the performance is only guaranteed for a limited volume of ink.

Q What is the head height during printing?

The default height is 1.8 mm. This can be adjusted to 2.3 mm, 2.8 mm, or 3.8 mm.

Q What is the ink drop size?

One of the advantages of the Ricoh Gen5E printheads is the ability to jet three different drop sizes at once. The printer will dynamically choose—based on the requirements of the print job—the most appropriate drop size at the pixel level. It will choose between a small, medium or large drop and can combine any of the three sizes intelligently to maximise print quality in subtle areas such as skin tones and fine pitch lines.

When printing in 6-pass or 8-pass mode, the three droplet sizes are 6.5 pl, 13 pl, and 19 pl.

When printing in 12-pass, 16-pass, 32-pass or with white, the three droplet sizes are 5 pl, 6.5 pl, and 13 pl.

Q What type of ink does the Pro L5160 use?

The Pro L5160 utilises Ricoh's AR2 (Aqueous Resin) Latex ink.

Q Is this the first time that Ricoh has a printer with latex inks?

No, the Pro L4160 utilised Ricoh's AR (Aqueous Resin) Latex inks. The inks in the Pro L5160 are second generation AR inks, offering improved density, chroma and a broader colour gamut.

Q Why is the ink called a "latex" ink when it has no latex?

In nature, latex is a milky fluid produced by many plants, such as rubber trees (where it is the source of rubber) and sapodilla trees (the source of chicle used in chewing gum). It is a complex water-based emulsion of proteins, oils, resins, gums and other compounds.

The Aqueous Resin ink developed by Ricoh is a water-based (aqueous) emulsion of resin, pigments (colourants) and other compounds. It is a synthetic form of latex.

Q What are the benefits of latex ink?

The first key benefit is environmental. Being water-based, they produce low odour and emit little VOCs. There is no requirement for special ventilation or handling of inks. Ricoh's AR2 Latex inks are certified GREENGUARD Gold, meaning the inks have passed the strictest standards for low chemical emission and are safe to use in sensitive environments such as schools and healthcare facilities.

The second key benefit is the variety of media that can be used. Like solvent printers, you can print on a variety of impermeable media, such as PVC banners and self-adhesive, PET and PP film. Unlike solvent printers, you can also print on a broad array of permeable media, such as coated and plain paper, wallpaper, soft signage fabric, canvas and tarpaulin.

Finally, prints can be handled, finished and processed immediately after printing. There is no requirement for a dwell time of 6 hours or more when laminating prints (unlike prints from solvent printers).

Q Is there anything different about Ricoh's latex inks?

Yes. The first thing you'll notice is that the rich black ink density and vivid colours produced by the Pro L5160. With a cold cure capability of 60°C, you'll also notice the low energy consumption and the ability to run temperature-sensitive material. Finally, there's the low ink consumption of the printer.

Q Does the ink contain any solvents?

Yes, the ink does contain a very small proportion of amidic solvent (5–15%) and glycol (10–20%), with more than 50% of the ink comprised of water. The use of co-solvent helps bind the ink to a broader array of media.

Solvent—and Eco-Solvent—printers utilise ink that is made with various formulations of ethers and diols, contains no water, is flammable or combustible, and classified as hazardous.

Q Other latex printers claim that they contain no solvent.

Not true. Other latex printers use 2-pyrrolidone—also an amidic solvent—and diol (or glycol). The chemical composition is similar to Ricoh's AR2 Aqueous Resin ink used in the Pro L5160.

Q Other printers have Light Cyan and Light Magenta ink, why doesn't the Pro L5160 have this option?

When printing for indoor quality, the minimum drop size of the Pro L5160 is 5 picolitres. The small drop size maximises print quality in subtle areas like skin tones and gradients.

Latex printers with thermal print heads can only achieve a minimum drop size of 12 picolitres, necessitating the added cost and complexity of light cyan and light magenta in order to improve photo printing and gradient reproduction.

Q Other latex printer use an Optimizer, why doesn't the Pro L5160?

Other latex printers need Optimizer to improve sharp text and image detail reproduction, and to enable drying and curing at a lower temperature.

The Pro L5160 features a significantly smaller drop size of 5 picolitres for sharp details, and the inks have a lower drying and curing temperature (a cold cure of 60°C). There is no requirement for the added cost and complexity of another consumable.

Q What is the size and cost of the inks?

Black, Cyan, Magenta and Yellow ink cartridges each have a capacity of 1,200 ml and have a retail price of \$185 (ex GST).

The White ink is available in two ink cartridge sizes: 600 ml and 1,200 ml. The smaller cartridge has a retail price of \$345 and the larger \$595 (both ex GST).

Q What is the cost of the ink per millilitre?

The four-colour inks (Black, Cyan, Magenta and Yellow) cost 15.4¢ per ml. The White inks costs 57.5¢ per ml (600 ml cartridge) or 49.6¢ (1,200 ml cartridge). All prices are exclusive of GST.

Q What is the yield of the inks?

Ink yields will differ for the Pro L5160 configured as a 4-Colour and one configured for 4-Colour + White.

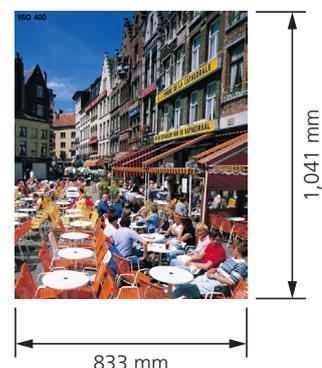
Based on repeatedly printing the image below in 12-pass mode (600 x 900 dpi) for the recommended monthly print volume using evaluation media, the yields per cartridge are as follows:

4-Colour configuration (recommended monthly print volume of 677 m²):

- Black: 1,074 m²
- Cyan: 416 m²
- Magenta: 399 m²
- Yellow: 420 m²

4-Colour + White configuration Pro L5160, CMYK printing only (recommended monthly print volume of 349 m²):

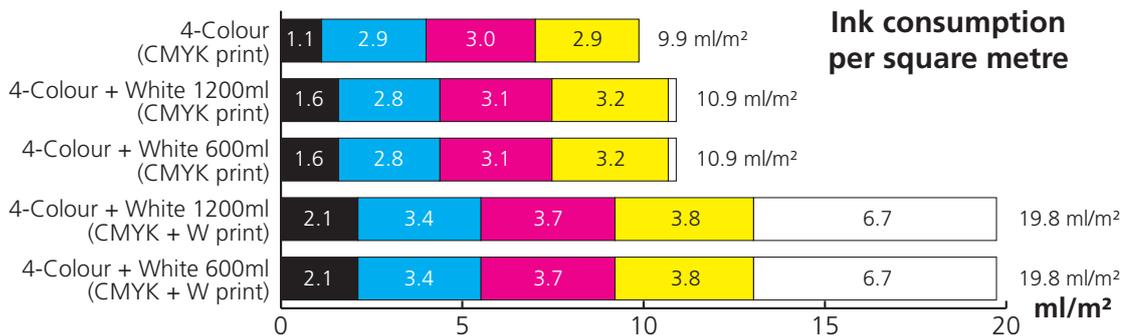
- Black: 755 m²
- Cyan: 430 m²
- Magenta: 388 m²
- Yellow: 374 m²
- White: 5,354 m² (1,200 ml cartridge) or 2,667 m² (600 ml cartridge)



4-Colour + White configuration Pro L5160, CMYK printing with White underlying the entire image (recommended monthly print volume of 168 m²):

- Black: 565 m²
- Cyan: 354 m²
- Magenta: 324 m²
- Yellow: 314 m²
- White: 179 m² (1,200 ml cartridge) or 89 m² (600 ml cartridge)

The following chart shows the amount of ink used in each of these scenarios (with the white ink underlying the entire image):



Q What is the cost of the ink per square metre?

Using the examples above—and the retail pricing of the ink cartridges—the chart below provides the cost per square metre (excluding GST):



Q How much ink is used during head cleaning?

A minimal amount of ink is consumed during head cleaning functions. The ink consumed is as follows:

- Head cleaning: under 0.5 ml / printhead
- Head refreshing: under 5.0 ml / printhead

The default frequency of head cleaning is every 12 hours (for CMYK) and every 4 hours (for White). The operator can increase the frequency if required.

Q Does the ink recirculate?

Only the white ink recirculates.

Q Why would I use white ink?

White ink helps with accurate colour reproduction on coloured and transparent media. Without white, colours will appear unnatural and/or washed-out.

White can also be used for special effects, such as three-layer printing whereby white is laid down between two coloured image layers on transparent material. An example might be an image looking down on a motor car when illuminated from the viewing side and a motor engine visible under the bonnet when illuminated from behind.

Q How many layers of white can I apply to a print job?

One. The opacity of Ricoh's AR2 Aqueous Resin Latex White Ink is such that only one layer of white is ever required for a print job.

Q What is the purpose of the displacement ink?

In a 4-Colour + White configuration Pro L5160, white ink is consumed even if there is no white used in the job (as part of the auto-maintenance routine). If white is not required for printing for an extended period of time then replacing the White Ink cartridges with Displacement Ink cartridges will reduce the running cost (Displacement Ink costs less than half the cost of a White Ink cartridge).

Q What is the shelf life of an ink cartridge?

Unopened, the shelf life of an ink cartridge is 24 months from date of manufacture. Once opened, the ink must be used within 3 months.

Q What happens if I put expired ink into the printer?

The ink cartridges have an expiry date printed on the cartridge as well as embedded into an IC chip on the cartridge. Ink cartridges can be used within 30 days of expiration but the printer will no longer operate past that date.

Q Are there any special requirements for the storage of inks?

No—there are no special handling or storage requirements for the ink cartridges. It is expected that inks will be stored in a similar environment in which the Pro L5160 is located.

Q What about disposal of inks?

The inks are not hazardous but disposal must be in accordance with current local laws and regulations.

3.

Media

Q What types of media can be run through the Pro L5160?

The Pro L5160 supports a wide range of impermeable (waterproof) and permeable (absorbent) roll media. The list includes PET film, PP film, coated paper, plain paper, wallpaper, synthetic paper, self-adhesive PVC, PVC for banners, soft signage fabric, canvas, and tarpaulin.

Q Can the Pro L5160 run any media that can't be run on other latex printers?

The AR2 Aqueous Resin latex inks used in the Pro L5160 can cold cure at 60°C, with the maximum available setting for drying and curing at 95°C. Other latex printers typically cure in excess of 100°C with a warning not to use media that cannot be used in an operating temperature above 125°C.

Temperature-sensitive media—such as thin films and paper-backed self-adhesives—will perform better in the Pro L5160 than competitive latex printers using thermal print heads.

Q Can the Pro L5160 run any media that can't be run on solvent printers?

Solvent printers work well on impermeable (waterproof) media—such as PVC banners and self-adhesive, PET and PP film—but won't run permeable (absorbent) media. Coated and plain papers, wallpaper, cotton or cotton-rich textiles, canvas and tarpaulins can all be run on the Pro L5160.

Q What are the dimensions of media that I can use?

Rolls need to be between 297 mm and 1,625 mm wide. The maximum roll diameter (outside) is 250 mm and maximum paper roll weight is 55 kg. Core diameter can be 3" or 2" (76.2 or 50.8 mm).

Q What is the thickness of media that I can use?

Acceptable media thickness is from 100 µm to 432 µm.

Q Is it possible to print on cut sheets of media?

Yes. Sheet width can be from 297 mm to 1,625 mm wide.

Q Why is media fed from the back of the printer?

To maximise printer performance and ensure even tension front-to-back.

Q Is the roll feed unit movable?

Yes, the roll feed unit is movable to assist with loading rolls of media, especially if they are heavy. Note that the printer cannot operate with the roll feed unit extended.

Q Can I print without using the winder?

Yes. Even though media not attached to the winder does not provide optimum front-to-back tension, there will be no discernible difference in print quality.

Q Is there any auto adjustment when loading media?

Yes. An auto adjustment sensor reads—and corrects—dot positioning in the scan direction (the gap at each printhead) and in the feed direction (drop timing) for automated media feed adjustment.

Q Will auto adjustment work with transparent media?

No. Manual adjustment is required with transparent media because the auto adjustment sensor can't read the printed marks. This may also be the case if you use media with an uneven surface (like a fabric or canvas) or coloured media with a colour similar to one of the ink colours.

Q Do I have to adjust each time I load media?

This is recommended practice however media information can be recalled within the operation panel.

Q If I recall a setting, will it print without any issues?

There is no guarantee that a recalled setting will work perfectly—the environment might have changed and media characteristics may vary from roll to roll.

4.

Printed Output

Q What is the print resolution?

The Pro L5160 has five print resolutions:

- 600 x 450 dpi (6-pass print mode)
- 600 x 600 dpi (8-pass print mode)
- 600 x 900 dpi (12-pass print mode and white printing)
- 600 x 1200 dpi (16-pass print mode)
- 1200 x 1200 dpi (32-pass print mode)

Q What technology do you use to eliminate banding?

Ricoh utilises a number of different, complementary technologies to eliminate banding. Halftone processing, drop size selection, UCR, random masks, and overlapped printing are used to suppress visible banding.

Q How many Pantone colours can the Pro L5160 reproduce?

The Pro L5160 can reproduce around 77.3% of the PANTONE PMS Solid Coated guide colours.

Q What are the options when printing with white?

There are four options for printing white on the Pro L5160:

- White as a single layer (when white is the required colour).
- White over colour (when the image is on the back of transparent material).
- Colour over white (when the image is printed on coloured media or a transparent repositionable film or label).
- Colour over white over colour (when special effects are required on transparent media, for example an image of a human body when illuminated from the viewing side and a skeleton visible through the body when illuminated from behind).

Q If there a clogged nozzle, what does the Pro L5160 do with the missing dot?

If the Pro L5160 detects a clogged nozzle—and the printer is operating in 6-pass, 8-pass or 12-pass mode—the dots are enlarged to fill-in the missing nozzle. In 16-pass and 32-pass mode, the printer utilises other nozzles to fill-in for the missing nozzle.

Q Is there a cutter?

Yes. The cutter is located at the front of the printer, after the Post-heater and Cure heater.

Q Why isn't the cutter located closer to the platen?

If the cutter was located closer to the platen, a groove would be required for the cutter to pass through causing a temperature differential in the media, resulting in cockling of the media.

Q Is there anything that can't be cut?

There's no hard-and-fast guide as to what may or may not cut well, but the cutter will struggle with some hard-to-cut media, such as textiles, canvas and tarpaulin.

Q How long will prints last?

The key question here is what is the expected light fade resistance (or light-fastness)? The answer depends on the media used and where the prints are used.

For outdoor applications, prints from the Pro L5160—on PVC—will last up to two years without lamination. With lamination, prints on PVC will last up to 5 years.

Prints from the Pro L5160 on wallpaper or PET—used indoors on/near windows—will last up to two years without lamination.

Q Is performance guaranteed?

Depending on the media and laminate used, laminated prints are guaranteed for up to five years when used outdoors or as vehicle wraps, and three years for marine applications. An example is Avery MPI1105 vinyl with DOL1000Z series laminate (ICS Performance Guaranteed for 5 years for outdoor and vehicle wrap, 3 years for marine, and 8 years indoor—go to <https://graphics.averydennison.com/en/home/services/warranty.html> for details).

Check with your media supplier for details.

Q How resistant are prints to scratching?

Prints are highly scratch-resistant, even immediately after printing. Using standard testing methodology, the worst result is a ΔE variance of 1.1 for yellow on PVC (which is barely discernible).

Q Are prints water resistant?

Yes, the prints are totally water resistant. Note that not all permeable media—like paper—is water-resistant.

Q Are prints resistant to alcohol?

Prints can be washed with regular detergent with no issue. Only an alcohol concentration of more than 30% would affect prints.

5. Software

Q What controller software is included with the printer?

The Pro L5160 includes ONYX RIPCenter as the default RIP controller software.

Q What type of computer do I need to operate the controller software?

The computer required to run ONYX RIPCenter requires the following minimum configuration:

- Windows Operating System: Windows 10 / 8 / 7 64-bit
- CPU: Intel Core i7 or later
- RAM: 16 GB or more
- HDD: 750 GB or more
- USB port: 2
- Network: Gigabit Ethernet adapter
- Screen Resolution: 1,280 x 1,024 minimum

Q Can I control multiple printers with one PC?

No, only one Pro L5160 can be controlled by a PC. However, that PC could also be used to operate another printer, like a Pro T7210 or Pro TF6250 UV Flatbed Printer.

Q Does the included software allow me to use white ink?

Not directly. The ONYX RIPCenter supplied as standard with the printer does not have a White Ink Tool (this available with ONYX PosterShop, ProductionHouse or Thrive).

Q Can I use other controller software with the Pro L5160?

Yes. The Pro L5160 is supported by Caldera, ColorGATE, ONYX PosterShop, ProductionHouse or Thrive, SAi Flexi, and Wasatch. Ricoh sells and supports ColorGATE.

Q What software do I need to create a profile?

You need software that has profile-making available, such as ONYX PosterShop, ProductionHouse or Thrive, or ColorGATE Productionserver with Profiler PFM.

6.

Maintenance

Q What are the daily maintenance requirements?

The only daily maintenance required for the Pro L5160 is if the machine is configured with white ink, in which case the daily maintenance involves simply taking each white ink cartridge out of its slot, giving it a shake, and returning it to its slot.

Q How are the printheads kept clean?

The Pro L5160 is fitted with a cleaning cartridge that eliminates the need to manually clean printheads daily. The cartridge contains a long roll of non-woven fabric that periodically—automatically—cleans the face of each printhead, wiping off any ink sticking around the head and providing stable image quality. Based on average monthly print volumes, the cleaning cartridge should last for 1½ months.

Q What happens if the cleaning cartridge has run out?

The operator has the choice of setting up the printer to stop printing or to continue printing. If the printer continues to be used without an operational cleaning cartridge in place, print quality may deteriorate and manual cleaning may be necessary.

Q So what maintenance do I have to undertake?

Every 1½ months it is recommended to clean around the waste ink line, printhead caps and the area around the printheads.

It is also recommended to annually run an ink refresh and purge.

The other maintenance is as required, such as cleaning the exterior of the printer, the platen, pre-heater, pinch roller, media guides and media sensors.

Q What maintenance items do I need?

The list of maintenance consumables available from Ricoh include:

- Maintenance Kit Type C2, which includes:
 - 1 bottle of 200 ml flushing solution
 - 3 sets of rubber gloves
 - 2 droppers
- Cleaning Cartridge Type C2:
- Waste Ink Bottle Type C2 (2 litre collector for waste ink)
- Cleaning Stick Type C2 (50 sticks, used to clean around print head and cap rubbers)
- Flushing Cartridge Type C2 (200 ml cleaning liquid cartridge)

The other maintenance items required—for general cleaning—include such things as a soft paint brush, cloth or paper towel.

Q What do I do if I have a clogged nozzle?

There are multiple steps an operator can undertake to resolve defects in a nozzle.

The first step is nozzle maintenance, executed through the operating panel.

If not resolved, the next step would be an ink refresh. Air purge would be the third step. The last step would be to manually clean the nozzle faces.

Q What happens if I use a white ink cartridge without shaking it?

If white ink cartridges are not used for a while, settled ink may clog the supply path or cause image defects may printing. The operation panel will display a warning: "White ink has settled. Please shake the white ink cartridge." The printer will not operate until the task is completed.

7.

Service and Support

Q Can I check on the status of the printer remotely?

An optional Attention Light is available for the Pro L5160 that enables operators to quickly check the status of the printer from across the room. Flashing blue means that data is being received by the printer, solid blue means the Pro L5160 is printing, flashing yellow means consumables are near end (only appears during printing), and flashing red means either there is a system error or supplies are out.

The Web Image Monitor allows users to remotely check on the status of the Pro L5160 and consumables using a web browser across a network.

Q What is the warranty period?

The Pro L5160 comes with 12 months warranty (from date of installation).

Q What does the warranty cover?

The warranty includes telephone support, on-site service and support (remove, repair and replace any failed components, including printheads), and system software upgrades.

Q Who do I call for help?

The Ricoh CIP Customer Support Centre is your first point of contact, available directly on 1300 887 414, or by email production_service@ricoh.com.au or web www.ricoh.com.au/support.

Q Who services the equipment?

The Pro L5160 is only serviced by Ricoh trained technicians, either Ricoh employees or technicians working for authorised resellers.

Q How long do I have to wait for a technician if I have a fault?

Calling the Ricoh CIP Customer Support Centre will have you discussing your issue with a trained service technician within minutes. If the fault requires on-site attendance, a trained technician will be on site within 4 hours (on average).

Q What does the Care Plan cover?

The Care Plan provides the same cover as is included in the warranty period. Annual plans are available for purchase.

Q What happens if I don't have a Care Plan and I have a problem?

If the Pro L5160 is past the warranty period—and no Care Plan is in place—then issues are resolved on a Time and Materials basis.

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www.ricoh.com.au

Ricoh Australia
2 Richardson Place
North Ryde NSW 2113

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