Printers

Types of Printer

Inkjet Printer

Inkjet or Ink Tank printers are one of the user friendly computer printers. It works by propelling variably-sized droplets of liquid or molten material (ink) onto almost any medium. They are the most common type of printer for the general consumer due to their low cost, high quality of output, capability of printing in glowing color, and easy to use and handle.

Laser Printer

Laser printer uses LED-technology to obtain small particles of toner from a cartridge onto paper. They produce high quality text and graphics on plain paper. They are generally more economical to use than the ink of inkjet printers.

Plotters Printer

Plotters printer are very different from others printers. Unlike other printer Pen Plotters print by moving a pen across the surface of a piece of paper. Plotters printer is the best way to produce color high-resolution vector-based artwork, or very large drawings efficiently.

Dot-Matrix Printer

This printer is somehow like typewriting. They create characters by striking pins against an ink ribbon. Each pin makes a dot, and combinations of dots form characters and illustrations. The printing involves mechanical pressure, so these printers can create carbon copies and carbonless copies as well. Mostly used for payment slip / receipt printing.

Thermal Printer

Thermal printer is an inexpensive printer that works by pushing heated pins against heat-sensitive paper. Thermal printers are generally used in calculators and fax machines. Thermal printers print faster and more quietly than dot matrix printers. They are also more economical since their only consumable is the paper itself.

Things to be looked for in a Printer

Whether a user decided on an inkjet or a laser printer or a dot matrix printer, these are some features to look out for:

Speed

A printer's advertised speed is the maximum speed of the machine's engine, measured in pages per minute (ppm).

Status Panels

Some printers will include an LCD display with menu options, either as text or with graphics. A detailed display with 'paper jam' and 'low toner' indicators can be helpful with troubleshooting.

Connections

Most modern printers will come with a USB port – and the necessary cables – for direct connection to a computer. Some may also have an Ethernet port

for joining a wired network, which can be located away from the work desk, helping to save on space.

Wireless

Wireless connectivity will mean that can connect computers and other digital devices such as phone or tablet to the printer without worrying about cables. Variations include Google Cloudprint, AirPrint (iOS only), Pict-Bridge and Bluetooth.

Duplexing

Automatic double-sided printing can save a lot of paper costs and wastage over the life of the printer.

Tray Size

The input tray on most personal colour laser MFPs will hold 150 to 250 sheets of A4 paper, and some printers have a second tray for a different paper type such as headed stationery.

Manual Feed

This feature makes it easier to print on envelopes, letterhead or specialty papers.

Memory Card Slot

Many printers support memory cards. This can be very handy for printing a "contact sheet" of thumbnails and selected pictures without needing a computer. Some will be able to handle MiniSD cards with a separate adaptor.

Print Heads on Cartridge

A printer head that's not part of the cartridge will often last for the life of the printer itself, but if it does wear out

it can be expensive to replace. Cartridges that include a print head won't usually wear out over the life of the single-fill cartridge, but this adds to the cartridge cost.

Printing Options

There are several printing options a user may find;

Page Per Sheet

Most printers can print multiple pages on one sheet of paper, but some can print up to 25 pages on one sheet.

Poster Printing

This option automatically segments a large file (designed as an A1 page for example) into smaller pages (e.g. multiple A4s) that can then be joined together after printing.

A3 Paper

Some printers can print on larger paper sizes – usually A3, but in some cases even larger

Booklets

Booklet printing sorts the pages so user can fold the output and staple it into a booklet.

Borderless Printing

Not all printers can print right up to the edge of the paper or a photographic print. If a user printing photos or graphics, this is an especially useful feature.

Optical Disc Printing

This can be handy, but exists only on some inkjet printers and requires special printable CD/DVD blanks.

Transparency

A few inkjet printers can print onto transparencies – this may require special ink.

Watermark

A watermark function lets you print a light mark or outline on the page without requiring imaging software like Photoshop.

OCR (Optical Character Recognition)

Most multifunctional printers come with OCR software so user can scan in a hard-copy document that will be read as a text or Microsoft Word file.

Specification for a Colour Printer

Feature	Minimum Required Specification
Brand	(Specify)
Model	(Specify)
Country of Origin	(Specify)
Country of Manufacture/Assembled	(Specify)
Year of Manufacture	(Specify)
Type	Inkjet - Ink Tank
Printing Resolution	4800 (horizontal) x 1200 (vertical) dpi or higher
Ink Type:	Individual Ink Bottle
Number of Nozzles	(Specify)
Ink Droplet Size	(Specify)
Ink Bottle:	(Cyan, Magenta, Yellow, Black)
Document: Colour ESAT / Simplex	Approx. 15ppm / 5.0ipm
Document: B/W ESAT / Simplex	Approx. 13PPM / 8.8ipm
Bordered	Up to 203.2mm (8-inch)
Top margin	31.2mm
Bottom margin	32.5mm
Paper Size	A4, A5, B5, Letter, Legal, 4 x 6", 5 x 7", Envelopes (DL,COM10), Custom size (width 101.6 - 215.9mm, length 152.4 - 676mm)
Interface	USB
Cost Per Page	Should be Less than Rs.1 per page (Please specify the Price of the Ink & the Yield Certified by the Manufactures)
Manufacturer Experience	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)
Bidders Experience	The bidder should have successfully sold same similar product for last 3 years (Bidder should provide documentary evidence to support the above)
Manufacturer Authorization Certificate	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)
Warranty	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)
Warranty Information	A sticker with
	-Supplier name
	-Contact Numbers
	-Date of Commissioning of Hardware

	-Warranty period
	on all printers
Brochure	Supplier should provide brochure of make/model quoted as per above specification

Specification for a Colour Laser Printer

Feature	Minimum Required Specification
Brand	(Specify)
Model	(Specify)
Country of Origin	(Specify)
Country of Manufacture / Assembled	(Specify)
Year of Manufacture	(Specify)
Technology	Laser
Print Speed	(A4): Up to 18ppm (Mono/Colour)
Print Resolution	Up to 9,600 (equivalent) x 600dpi
Device Memory	Minimum 1GB Standard
Input Paper Tray	250 sheets, A4 Plain Paper
Paper Sizes	Letter, A 4.
Paper Types	Paper (bond, letterhead, plain, preprinted, recycled, rough, and light)
Interface	USB, Fast Ethernet 10/100, & Wi-Fi
Duplex Printing	Auto Duplex Printing
Duty Cycle	30,000 or above/25000
Power Source	220 ~ 240V
Operating Systems Support	Windows 8 and higher
Software	Printer Driver Software with Media Kit for Windows 10, Ubuntu
Energy Star Certificate	Quoted Model should be Energy Star Complied, Documentary Evidence should be Provided
Manufacture Experience	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand.(Proof document should be attached)
Bidders Experience	The bidder should have successfully sold same similar product for last 3 years (Bidder should provide documentary evidence to support the above)
Manufacturer Authorization Certificate	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)
Warranty	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)
Warranty Information	A sticker with
	-Suppler name

	-Contact Numbers
	-Date of Commissioning of Hardware
	-Warranty period
	on all Printers
Brochure	Supplier should provide brochure of make/model quoted as per above specification

Specification for a Mono Printer

Feature	Type I	Type II	Type III
Brand	(Specify)	(Specify)	(Specify)
Model	(Specify)	(Specify)	(Specify)
Country of Origin	(Specify)	(Specify)	(Specify)
Country of Manufacture / Assembled	(Specify)	(Specify)	(Specify)
Year of Manufacture	(Specify)	(Specify)	(Specify)
Technology	Laser/Ink Tank	Laser/Ink Tank	Laser / Ink Tank
Print Speed	Black Draft Text 34 PPM or above	Black Draft Text 40 PPM or above	Black Draft Text 50 PPM or above
Print Resolution	600 × 600 dpi, 1200 × 1200 dpi (equivalent)	600 × 600 dpi, 1200 × 1200 dpi (equivalent)	600 × 600 dpi, 1200 × 1200 dpi (equivalent)
Memory	Specify	Minimum 1GB Standard	Minimum 1GB Standard or Higher
Input Paper Tray	250 sheets, A4 Plain Paper	250 sheets, A4 Plain Paper	500 sheets, A4 Plain Paper
Paper Sizes	Letter, A 4.	Letter, A 4.	Letter, A 4, Legal
Paper Types	Paper (bond, letterhead, plain, preprinted, recycled, rough, and light).	Paper (bond, letterhead, plain, preprinted, recycled, rough, and light).	Paper (bond, letterhead, plain, preprinted, recycled, rough, and light).
Interface	USB, Fast Ethernet 10/100, & Wi-Fi	USB, Fast Ethernet 10x100,10x1000 & Wi-Fi	USB, Fast Ethernet 10/100, Gigabit Ethernet 10/1000 & Wi-Fi
Duplex Printing	Auto Duplex Printing	Auto Duplex Printing	Auto Duplex Printing
Duty Cycle	25,000 or above	75,000 or above	100,000 or above
Power Source	220 ~ 240V	220 ~ 240V	220 ~ 240V
Operating Systems Support	Windows 7, Windows 10	Windows 7, Windows 10, mac OS, Linux	Windows 7, Windows 10, Mac OS, Linux
Software	Printer Driver Software with Media Kit for Windows7, Ubuntu	Printer Driver Software with Media Kit for Windows 7, Ubuntu	Printer Driver Software with Media Kit for Windows 7, Ubuntu
Certificates	Quoted Model should be Energy Star, CE Complied, (Documentary Evidence should be Provided)	Quoted Model should be Energy Star, CE Complied, (Documentary Evidence should be Provided)	Quoted Model should be Energy Star ,CE Complied, (Documentary Evidence should be Provided)

Manufacture Experience	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand.(Proof document should be attached)	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)
Bidders Experience	The bidder should have successfully sold same similar Product for last 5 years (Bidder should provide documentary evidence to support the above)	The bidder should have successfully sold same similar product for last 5 years (Bidder should provide documentary evidence to support the above)	The bidder should have successfully sold the same brand for last 5 years (Bidder should provide documentary evidence to support the above)
Manufacturer Authorization Certificate	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)
Warranty	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each ranch/regional)	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a)Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Vender should attend to the repair within 48 Hours of report of default. Replacement unit should be provided if repairs take more than 72 Hours. 7.30 a.m. to 2.30 p.m. call center Support for problem reporting and issues resolution. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a)Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)
Cost per Page	Should be Less than Rs.1 per page. Please specify the Price of the Ink /Toner & the Yield Certified by the Manufactures	Should be Less than Rs.3 per page. Please specify the Price of the Ink /Toner & the Yield Certified by the Manufactures	Should be Less than Rs.3 per page. Please specify the Price of the Ink /Toner & the Yield Certified by the Manufactures

Warranty Information	A sticker with	A sticker with	A sticker with
	-Supplier name	-Supplier name	-Supplier name
	-Contact Numbers	-Contact Numbers	-Contact Numbers
	-Date of Commissioning of Hardware	-Date of Commissioning of Hardware	-Date of Commissioning of Hardware
	-Warranty period on all printers	-Warranty period on all printers	-Warranty period on all printers
Brochure	Supplier should provide original brochure of make/model quoted as per above specification	Supplier should provide original brochure of make/model quoted as per above specification	Supplier should provide original brochure of make/model quoted as per above specification

Specification for a Dot Matrix Printer

Criteria	Sub-Criteria	Dot Matrix - Narrow	Dot Matrix - Wide
Brand		(Specify)	(Specify)
Model		(Specify)	(Specify)
Country of Origin		(Specify)	(Specify)
Country of Manufacture /Assembled		(Specify)	(Specify)
Year of Manufacture		(Specify)	(Specify)
Printing Technology	Print Method	Impact dot Matrix	Impact dot Matrix
	Number of Pins in Head	24 pins	24 pins
	Print Direction	Bi-direction with logic seeking	Bi-direction with logic seeking
Print Speed	High Speed Draft 10 / 12 cpi	347/416 cps	480/576 cps
	Draft 10 / 12 / 15 cpi	260/312/390 cps	360/432/540 cps
	Draft Condensed 17 / 20 cpi	222/260 cps	308/360 cps
	Letter Quality 10 / 12 / 15 cpi	86/103/129 cps	120/144/180 cps
	Letter Quality Condensed 17 / 20 cpi	147/172 cps	205/240 cps
Print Characteristics	Character Sets	(Specify)	(Specify)
	Bitmap Fonts	(Specify)	(Specify)
	Scalable Fonts	(Specify)	(Specify)
	Barcode Fonts	(Specify)	(Specify)
Printable Columns	Pitch 10 / 12 / 15 / 17 / 20 cpi	80/96/120/137/160 cpi	136 / 163 / 204 / 233 / 272 cpi

Paper Handling	Paper Path - Tractor	Rear in, Top out	Push Tractor (Front or Rear in, Top out), Pull Tractor(Front or Rear or Bottom in, Top out)
	Paper Path - Manual Insertion	Rear in, Top out	Front or Rear in, Top out
Paper Size	Cut Sheet (Single Sheet)	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Cut Sheet (Multi Part)	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Envelope (No.6)	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Envelope (No.10)	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Continuous Paper (Single Sheet and Multi part)	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Roll Paper	(Specify Length, Width & Thickness)	(Specify Length, Width & Thickness)
	Card	-	(Specify Length, Width & Thickness)
	Label (Cut Sheet and Fan Fold)	-	(Specify Length, Width & Thickness)
Paper Feeding	Standard	Friction, Push Tractor	Friction, Push Tractor
	Optional	Roll Paper Holder	Roll Paper Holder
Copies		Original + 3 copies	Original +5 Copies
Line Spacing		4.23mm (1/6") or programmable in increments of 0.118mm (1/216")	4.23mm (1/6") or programmable in increments of 0.0706mm (1/360")
Input Data Buffer		128KB or better	128KB or better
Interface	Standard	Bi-directional parallel interface	Bi-directional parallel interface (IEEE-1284 Nibble Mode)
		USB 2.0 Full-Speed	USB 2.0 Full-Speed
		Serial	Option: Type B I/F level 2 (Network Print Server)
			Option: Serial
Ribbon Cartridge	Standard	Fabric Ribbon Cartridge (Black)	Fabric Ribbon Cartridge (Black)
	Ribbon Life	Approx. 2.5 million characters (Draft 10 cpi, 48 dots/character) or better	Approx. 15 Million Characters
Acoustic Noise		Approx. 53 dB(A) (ISO 7779 pattern)	Approx. 54db or lesser
Reliability	Mean Print Volume Between Failure (MVBF)	Approx. 20 million lines or better	Approx. 40 million lines or better
	Mean Time Between Failure (MTBF)	Approx. 10,000 POH or better	Approx. 20,000 POH or better
	Print Head Life	Approx. 400 million strokes/wire or better	Approx. 400 million strokes/wire or better

Environmental Conditions (Operating)	Temperature	5 ~ 35°C	5 ~ 35°C
	Humidity	10 ~ 80 % RH	10 ~ 80 % RH
Electrical Specification	Rated Voltage	AC 220 - 240V	AC 220 - 240V
	Rated Frequency	50Hz ~ 60Hz	50Hz ~ 60Hz
	Power Consumption (Operating)	22W or Lesser	46W or Lesser
Printer Driver / Utility	Operating System	Microsoft Windows 10 or better	Microsoft Windows 10 or better
Manufacture Experience		Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)
Bidders Experience		The bidder should have successfully sold same similar product for last 3 years (Bidder should provide documentary evidence to support the above)	The bidder should have successfully sold same similar product for last 3 years (Bidder should provide documentary evidence to support the above)
Manufacturer Authorization Certificate		Manufacturer Authorization Certificate should be provided (Originals should be provided on request)	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)
Warranty		Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a)Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network. Documentary evidence to be provided of the following under bidders' name. (a)Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional)
Warranty Information		A sticker with	A sticker with
		-Supplier name	-Supplier name
		-Contact Numbers	-Contact Numbers
		-Date of Commissioning of Hardware	-Date of Commissioning of Hardware
		-Warranty period on all Printers	-Warranty period on all Printers
Brochure		Supplier should provide original brochure of make/model quoted as per above specification	Supplier should provide original brochure of make/model quoted as per above specification

Specimen Bidder's Compliance Check Sheet

Important:

It is compulsory to use the most recent version of the ICTA Specifications at the time of the Bidding Document Publication. The purchaser should mention the particular version of the specification in the Technical Specification section of the bidding document in the following format:
Example: If the purchaser refers the Narrow Dot Matrix Printer of this Printer Specification Version

ICTA Version: Printers | ICT-ES-2.1V | Dot Matrix - Narrow

Features	Required Minimum Specification	Bidder's Compliance	
		Yes/No	If "No", Bidder's Response
Brand			
Model			
Country of Origin & Country of Manufacture / assembly			
Processor			
Base Frequency			
Cache			
Form Factor			
Chassis			
Chipset			
Motherboard			
Memory			
Maximum memory			
Memory Dims			
Hard disk			
Keyboard			
Mouse			
Optical drive			
Expansion slots			
Video controller			
Network interface			
I/O ports			
Power Supply			
Operating system			
Application Software			
Product certifications of the quoted Model			
Display			
Manufacturer Experience			
Bidders Experience			
Manufacturer Authorization Certificate			
Warranty			
Warranty Information			
Brochure			

Content References

- *https://byte-notes.com*
- *https://pcpartpicker.com*
- *https://www.choice.com.au*
- *https://www.cnet.com*
- *http://www.globusinfocom.com*
- *https://www.icta.lk*
- *https://www.itbusiness.ca*
- *https://www.pcworld.com*
- *https://www.streetdirectory.com*

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