

Toner Cartridges:

What you need to know:

Toner cartridges come in many different types and sizes, depending on which laser printer they are designed to fit. Here we try to explain the different options available, highlighting advantages and disadvantages.

Why a Toner Cartridge Printer?

For many years most medium and larger businesses have chosen laser printers over inkjet, as they are faster, more reliable, prints are smudge and fade resistant and much sharper, and generally speaking toner cartridges will produce many more pages than an ink cartridge. The cost per printed page is therefore lower as cartridges don't need to be changed as frequently. Some commercial toner cartridges will produce up to 30,000 or more A4 pages.

Early laser printers were all "mono" - capable of printing black only, but in the last decade colour laser printers have become hugely popular. Gone are the days of having to use your local print-shop whenever you wanted headed paper or a professional finish to your documents. Laser-printed documents are so very sharp because the toner powder is burned onto the paper by a deadly-accurate laser beam. Although the very latest inkjet printers do produce good looking work, upon close scrutiny the difference is quite visible.

Toner cartridge 'page yield' is the terminology used for the typical number of A4 pages of text any given printer cartridge will deliver. It is not an exact number of course, because each different page has a different amount of ink or toner on it. A system was devised (called ISO/IEC 19752 testing) to try and standardise page yield quoting so the consumer could compare like-with-like when deciding between (say) a HIGH YIELD Toner Cartridge and a STANDARD YIELD one. If a standard yield cartridge is quoted at 6,000 pages and costs £80, and a high yield cartridge is quoted at 10,000 pages and costs £100 - the high yield model is clearly identifiable as better value for money - the cost per printed page is 33% lower.

Under this system the quoted page yield of any toner cartridge is usually based on 5% of each A4 sheet of paper being covered with toner - rather like when you print a typical letter or maybe an email. Clearly page yield will be reduced when large bold lettering is used - perhaps in a poster or an advertising flyer - when 15% or more of the sheet might be covered in print. When printing photographs, maps and the like, up to 100% of the paper is covered, so in this application the "quoted page yield" is pretty much meaningless. NB - never ever try to put photo paper through a laser printer, as the machine will be damaged - possibly beyond repair. Quite simply laser printers run too hot to cope with photo paper.

More recently big laser printer manufacturers like HP, Samsung, Canon, Brother and Lexmark have been producing smaller laser printers aimed at the smaller business and even domestic markets. The same principles as above still apply, but on a smaller scale. A great deal of care needs to be taken before choosing a printer, because the cost of running them (buying consumables) varies considerably.

For example in 2007 Samsung introduced an extremely popular range of desktop colour laser printers. The machines were very attractively priced and sold in big numbers. The toner cartridges are simple plastic cylinders of powder that slot into 4 foolproof holes, and although page yields are modest they are sensibly priced. The sting in the tail is that the drum unit needs replacing after only 12,000 pages, the cost of which is higher than the original machine! For a small business printing 4,000 pages a month on one of these machines there is a considerable expense every 3 months or so.

All the manufacturers are keen to sell their printer consumables of course, as they generate big profits for a period of time. Consequently they are happy to sell the machines at or even below cost, on the premise they will reap rewards selling toner cartridges, drum units etc over a period of time. Many end-users only ever buy branded consumables from the manufacturer - whatever the price. For many machines there are however perfectly good alternatives available.

[Cheap toner cartridges](#) are usually reconditioned original parts - known as remanufactured toner cartridges. A professionally remanufactured cartridge can often be bought for a fraction of the cost of a new branded one, delivering superb results and at least as many pages. Put simply, the remanufacturing process is this: An empty toner cartridge is first intensively cleaned, and any worn parts like the photoconductor or cleaning blade are replaced. It is then refilled with system-matched toner powder, and if there is an electronic chip it

is either reset or replaced. The reconditioned cartridge is then test-printed to check all is well, sealed and packaged in a box with generic branding. No cartridge remanufactured by anyone other than the original maker of the printer can be sold showing a any official logo or brand identity.

Hewlett Packard (HP) are by far and away the biggest producer of laser printers and toner cartridges globally. Their machines generally offer very good build quality and reliability coupled with sensible running costs for both larger and smaller users. Because they sell in such huge numbers, the availability of empty cartridges to feed the remanufacturing industry is good. As a result you can buy a brand new laser printer (colour or mono), and very quickly afterwards you'll have the choice of whether to buy HP branded toner cartridges, or remanufactured ones (cheap toner cartridges) at a much lower cost.