
Overview

This standard covers the configuration, operation, control and maintenance of 'production-scale' digital colour printing machines.

It applies to you if you work in a studio, imaging bureau or digital printing environment and you are responsible for the operation of a production-scale digital colour printing machine.

This is what the standard covers

Modern digital colour printing machines have become extremely sophisticated, high speed devices capable of producing high quality print. Some toner and inkjet printers can now produce print that is as good as or even better than 'litho' reproductions. Most digital printers also have a range of options for finishing 'in-line', ranging from a single staple of a collated set to a perfect bound book.

Whilst the operator interfaces for these machines often provide for quick and easy access for simple copying or printing, the additional controls available for managing colour, determining printing and finishing options can be complex and require a high level of knowledge and ability by the operator.

For documents sent directly to the printer from a computer, the inclusion (or omission) of a source or destination 'profile' in an image file and the selection in print dialogue boxes of colour matching or rendering options can make a dramatic difference to the colour output from the printer.

In order to maintain consistent colour output over time from a digital colour printer, it may also be necessary to run calibration routines at required intervals, to ensure that the colour management system within the workflow is correctly used and, if necessary, make sure that the colour profiles for the printer are still accurate.

Overall print quality is usually maintained by ensuring all consumables are replenished when required, using only the authorised materials for the machine, and routine cleaning and maintenance operations are performed according to the manufacturer's instructions.

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Control digital colour printing machines

Performance criteria

Prepare digital colour printing machines for print

You must be able to:

- P1 check that the digital colour printer is in serviceable condition and ready for production and that colour calibration and/or other periodic checks are up to date.
- P2 check that you have all the details required for the job
- P3 check that you have enough materials of the right type for the job
- P4 determine the imposition requirements for the job
- P5 determine the post-printing requirements for the job
- P6 if necessary, preflight digital files for printing and check whether any source or destination colour profiles are embedded in the document. make sure the printer software is set to handle any colour profiles correctly. if incorrect colour profiles are embedded, follow you organisation's procedures for dealing with them.
- P7 set up the print parameters for the printer and job requirements, including any colour settings.
- P8 download or print the digital job file(s) to the digital printing machine using the correct settings so that:
 - P8.1 the print output meets the job specification
 - P8.2 the image is complete, colour accurate, free from contamination or other faults, and in register
 - P8.3 the correct fonts have been used
 - P8.4 the correct substrates have been used
 - P8.5 any duplexing or finishing options are correct
 - P8.6 imposition, scaling and orientation are correct
 - P8.7 the output satisfies the required quality standard.
- P9 make adjustments to the machine settings or print download settings as necessary to achieve the required job specification and quality standards
- P10 promptly report any machine faults which it is not your job to correct

Control the operation of digital colour printing machines

You must be able to:

- P11 run the digital printing machine at the required speed, safely and efficiently
- P12 keep up the supply of materials and consumables throughout the run
- P13 regularly check that quality standards and job specifications are met, including the quality of the image, colour consistency and finishing accuracy
- P14 resolve any machine problems which arise on the run that affect quality or productivity.
- P15 accurately record production and quality assurance details
- P16 follow the correct procedure for the removal of waste
- P17 stack work safely, using the approved method

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Maintain digital colour printing machines in serviceable condition

You must be able to:

- P18 make sure that the manufacturer's instructions for the cleaning and maintenance of the digital printer are followed and completed at the recommended intervals.
- P19 accurately identify faults which
 - P19.1 affect the quality of the image
 - P19.2 produce a shortfall in output
 - P19.3 create risks to health and safety
- P20 correct machine faults which it is your job to correct
- P21 obtain assistance from the machine service engineer for machine problems that you are unable or unauthorised to correct.
- P22 if appropriate, follow the instructions of service engineers to resolve machine problems via remote diagnostic features
- P23 make sure that colour calibration and / or colour profiling is undertaken at the required intervals and that any colour profiles required by a colour management system are installed in the correct location.
- P24 make sure that the digital workflow is correctly configured and operated so that colour documents and images are accurately and reliably reproduced.

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Knowledge and understanding

Maintain digital colour printing machines in serviceable condition

You need to know and understand:

- K1 the law as it affects printing
 - K1.1 defamation
 - K1.2 copyright & ownership of images
 - K1.3 obscenity.
 - K1.4 incitement
 - K1.5 forgery
 - K1.6 data protection
 - K1.7 the printers imprint
- K2 ethical issues relevant to printing
 - K2.1 confidentiality
- K3 health & safety
 - K3.1 your duties and responsibilities for health & safety as defined by any specific legislation covering your job role working practices
 - K3.2 the way you actually do your job, more particularly the activities and techniques and the way that materials and equipment are used.
 - K3.3 hazards & risks in your own job, their assessment and the action to take to deal with them manufacturers' and suppliers' health & safety instructions / advice
- K4 the safe handling of customer material
 - K4.1 what kinds of customer materials are likely to be handled, including original photographs or artwork, samples, disks, raw materials for print or finishing;
 - K4.2 techniques for protecting customer materials; insurance;
 - K4.3 the potential for loss or damage
- K5 security & storage
 - K5.1 computer system security and virus protection -
 - K5.2 print with time-sensitive or restricted release dates -
 - K5.3 high value products or print with a high risk of theft -
 - K5.4 secure means of archiving digital and conventional artwork
- K6 communication
 - K6.1 with colleagues
 - K6.2 with customers
 - K6.3 with suppliers
- K7 workplace policy & practice
 - K7.1 workplace objectives, priorities, standards & procedures
- K8 the operation of equipment
 - K8.1 the set-up of digital communications equipment and software

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- K8.2 the operation of digital communications equipment and software
- K9 printing
 - K9.1 the principles of digital printing
- K10 how to deal with digital files
 - K10.1 file conversion techniques
 - K10.2 file compression and decompression techniques
 - K10.3 the transmission of digital files
 - K10.4 file management
- K11 the causes and treatment of common faults
 - K11.1 raw material faults
 - K11.2 processing faults
 - K11.3 machine faults
- K12 administrative procedures
 - K12.1 planning
 - K12.2 scheduling
 - K12.3 recording and reporting
 - K12.4 product labelling
- K13 environmental
 - K13.1 the legal requirements for the classification, storage, carriage and disposal of waste
- K14 quality assurance & control
 - K14.1 the main features of quality assurance & quality control systems
 - K14.2 techniques for controlling quality
 - K14.3 equipment for controlling quality in printing
 - K14.4 light standards for viewing and assessing colour print
- K15 problem solving
 - K15.1 types of problems that may need to be solved
 - K15.2 sources of information
 - K15.3 techniques for solving complex problems
 - K15.4 techniques for assessing machine faults
- K16 materials
 - K16.1 the types & characteristics of paper, board and other commonly used substrates includes the range of commonly used uncoated, coated, embossed papers & boards; grammage, thickness, opacity, brightness/whiteness, strength, dimensional stability, gloss the types & characteristics of inks, toners & coatings
 - K16.2 maintaining the quality of materials during storage & handling
- K17 cleaning, lubrication & maintenance
 - K17.1 the principal activities involved with machine cleaning, lubrication & maintenance roles & responsibilities for cleaning, lubrication & maintenance
 - K17.2 machine faults & how they can be rectified
 - K17.3 the maintenance plans for machines which you operate which components wear or become degraded over time
 - K17.4 what is meant by the phrase 'safe system of work' and how it

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applies to cleaning, lubrication & maintenance activities

K17.5 the choice and use of suitable cleaning agents and lubricants

K17.6 what parts of the machine you are allowed to clean, lubricate & maintain preventive v. predictive maintenance

K18 proofing

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Additional Information

Scope/range

Control Digital Colour Printing Machines

This standard requires you to demonstrate that you have the ability to control all aspects of a production-scale digital colour printing machine in a production environment – to keep the machine running consistently from day to day, to maintain colour accuracy, to solve problems that may arise and to understand and use correctly all the parameters and options in the printer software and device driver / print dialogue boxes.

Note: This standard has been written for operators of 'production-scale' digital printers and therefore operation of an office or desktop laser/inkjet printer will not provide sufficient evidence of competence for this standard.

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Control digital colour printing machines

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Relevant occupations Originators compositors and print preps; Printers; Screen printers; Printing machine minders and assistants; Bookbinders and print finishers; Graphic designers

Suite Digital Print Production

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