PRODPP412 (SQA Unit Code - H9KW 04)

# Set up and control digital flatbed die cutting machines

## Overview

This standard covers the configuration, operation and control of digital flatbed die cutting machines.

It applies if you operate a digital flatbed die cutting digital machine, in a large format digital printing environment and you are responsible for the final cutting of the printed product.

Digital flatbed die cutting machines can be used on many substrates including paper, board and metal using different cutting tools to suit the substrate.

You will be required to operate the machine from the selection of job from the dialogue box to finished product.

## Performance criteria

You must be able to:

**Make digital flatbed die cutting machine ready for production**

1. prepare your work area and machinery so it is safe and ready for production
2. check that all the details and materials for the job are available
3. select correct job from dialogue box and transfer correct file
4. select correct cutting tool for the substrate
5. select cutting height and width to suit image and substrate
6. set cutting speed to suit cutting tool and substrate
7. position substrate in the right place on machine bed
8. activate vacuum on bed and extraction unit in line with manufacturer's instructions
9. produce and inspect a sample against the company's quality standard
10. report, without delay, any machine faults that is not your job to correct

**Control the operation of digital flatbed die cutting machines**

11. run the digital die cutting machine at the required speed, in a safe and efficient manner
12. maintain sufficient supplies of materials throughout the run
13. check at regular intervals that quality standards and job specifications are met, including the quality of the cut and finishing accuracy
14. resolve any machine problems that arise on the run that affect quality or productivity in line with manufacturer's instructions and organisational guidelines
15. record accurate production and quality assurance details
16. follow the correct procedure for the removal of waste
17. stack work in a safe way, using the approved method

## Knowledge and understanding

You need to know and understand:

**Health and safety**

1. your duties and responsibilities for health and safety as defined by any specific legislation covering your job role
2. hazards and risks in the workplace, their assessment and the action to take to deal with them
3. manufacturers' and suppliers' health and safety instructions/advice
4. how to stop a machine in the event of an emergency

**The law as it affects printing**

5. defamation
6. copyright and ownership of images
7. obscenity
8. incitement
9. forgery
10. data protection

**Ethical and employment issues relevant to printing**

11. confidentiality

**Security and storage**

12. how to manage print with time-sensitive or restricted release dates
13. how to manage high value products or print with a high risk of theft

**Communication requirements and processes**

14. how to communicate with colleagues
15. how to communicate with suppliers

**Workplace policy and practice**

16. workplace objectives, priorities, standards and procedures
17. the range of work carried out in the workplace
18. the working practices existing in the workplace

**Time and resources**

19. the different types of resource, including labour, materials, machinery
20. the relationship between resource usage and profitability
21. how to maximise productivity

**Digital files**

22. how to transmit digital files
23. file management procedures

**The operation of equipment**

24. the operation of digital flatbed cutting machines
25. the uses of digital flatbed die cutting machines
26. the different cutting tools to suit different substrates including paper, board and metal
27. the effect of different cutting heights, widths and speeds
28. appropriate positioning for substrates

**The causes and treatment of common faults**

29. raw material faults
30. processing faults
31. machine faults

**Administrative procedures**

32. scheduling
33. recording and reporting
34. product labelling

**Environmental considerations**

35. the legal requirements for the classification, storage, carriage and disposal of waste
36. any specific environmental legislation that covers processes in your company
37. the control of pollution

**Quality assurance and control**

38. the main features of quality assurance and quality control systems
39. techniques for controlling quality

**Problem solving**

40. the kinds of problems that may need to be solved
41. sources of information
42. techniques for assessing machine faults

**Materials**

43. the range and characteristics of paper, board and other commonly used

substrates

44. the range and characteristics of inks, toners and coatings
45. maintaining the quality of materials during storage and handling

## Scope/range

Overall cut 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.

The machine can be set to perform multi cuts on a number of substrates including:

- Paper
- Vinyl
- Aluminium
- Plastic
- Corrugate
- Steel paper
- Magnetic rubber
- MDF (medium density fibreboard)

Using the appropriate cutting tools including:

- Blade
- Router
- Oscillating knife

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