

T Level Technical Qualification in Engineering, Manufacturing, Process and Control

**Employer-Set Project
(8730-034)**

**Task 2
Summer 2024**

Task 2 – Report

You are required to produce a report in response to the project brief outlining your suggestions when designing and manufacturing the valve adaptor.

With reference to the project brief and your research notes, you need to write a report detailing your intended initial approach to designing a pneumatic valve adaptor with consideration of:

- the thread types and sizes required at each end of the adaptor to allow connection of a pneumatic valve which has an internal 1" BSP thread to existing 2 " 7 TPI BSW external thread connections
- how a watertight seal will be achieved to prevent leakage through the threads of the 1" BSP thread
- how the required amount of adaptors would be manufactured in one batch efficiently
- how the pipework would be modified
- the length of the thread required at each end of the adaptor
- the materials selected and how they are compatible with food manufacturing and health and safety requirements
- the approach used to provide a mechanism for holding the adaptor whilst tightening or loosening the connecting pipework nuts including sizing for any materials used.

The written report will typically be 2000 words.

You can include downloads from Original Equipment Manufacturers (OEM) catalogues showing tooling aids and basic design sketches to support your intended approach as detailed in your report.

Timing of assessment

- You will have **four hours** to complete your report.

Conditions of assessment

- Your report must be completed working alone under supervised conditions.
- You must not share or discuss your work with other candidates.
- You will have access to a copy of your response to the previous task (for review purposes only).
- You will have access to the internet for the completion of this task.
- Assessment evidence must be handed in at the end of each session for secure storage which cannot be accessed.

What you must submit on completion of this task

- **Written report** (typically 2000 words) hard copy or file saved securely (e.g. in a secure online location or on memory stick to be handed in).

Additional evidence of your performance that will be captured for marking

- N/A

Marks available

- 18

Get in touch

City & Guilds Technicals Quality Team

We are here to answer any queries you may have regarding your T Level Technical Qualification delivery.

Should you require assistance, please contact us using the details below:

T: 0300 303 53 52 (Monday – Friday 08:30 – 17:00 GMT)

E: technicals.quality@cityandguilds.com

W: cityandguilds.com/tlevels

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