

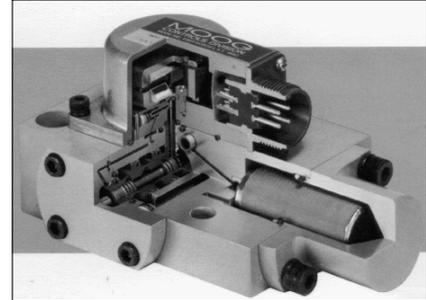
# An Introduction to Closed Loop Control - Course Syllabus

## Introduction

A one or two day course ideal for technical staff involved in fluid power motion control

## Aims

- To define closed loop control
- To inform about open and closed loop systems
- To review feedback, error and control modes and safe operation
- To consider how electronics are linked with hydraulics
- To gain a core glossary of terms used within closed loop control



## You might benefit from this course if:

- You have no knowledge of servomechanisms or closed loop control
- You are unfamiliar with transducers
- You manage testing staff or programmes and would benefit from an overview of closed loop control and devices
- You need to specify or purchase testing equipment

## Course content

- Definition of a servomechanism
- Electrohydraulic proportional control systems (Power source, control element, feedback sensor, error activator)
- Servo and proportional valves (including three stage valves if required).
- Feedback sensors - transducers - position, force and pressure etc. (including Rcal. and calibration).
- The error activator - the error path.
- The application of the basic elements in a closed loop control system.
- Step response - marginally stable criteria (include three stage valves if required).
- Electronics - amplifiers - proportional, integrating, differential and damping (PID)
- Digital -v- analogue electronics
- Control modes.
- Dither and servovalve balance.
- Glossary of terms.

The two day course gives the opportunity to run equipment live and to investigate some advanced controller features like mixed mode control, amplitude and gain matching etc.

Systems Services incorporate the following for each delegate in each training module:

- Full training notes including a copy of the course notes and attendance certificate.
- An additional package of useful information relevant to the course completed.

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“An informative and well presented course”