

armfield

Chemical | Civil | Mechanical | Geoscience | Environmental | Agricultural | Marine | Food

Engineering Teaching & Research Equipment for schools, colleges and universities

NEW Chemical Engineering Teaching & Research units :

- > Gas absorption
- > Liquid / liquid extraction
- > Water cooling tower

NEW Food Technology Teaching & Research units :

- > Carbonator / filler
- > Cross flow membrane filtration
- > Vacuum freeze dryer
- > Mixing vessels

NEW Data logging, acquisition and control software



edition 11
issue 2

Desktop Learning Modules

Acquisition & Control Software

Fluid Mechanics

Fluid Machines

Hydraulics & Hydrology

Water Treatment

Irrigation Water Management

Thermodynamics

Heat Transfer

Refrigeration & Air Conditioning

Internal Combustion Engines

Structural Engineering

Mechanical Engineering

Chemical Engineering
Unit Operations

Biochemical Engineering

Process Control Technology

Food Technology

DLMX

ARMSOFT

F/C/NA

FM

S/H

W

FE

TH

HT

RA
HVAC

CM

ST

MAM/SV

CE/UOP

BE

PCT

FT

www.discoverarmfield.com



An ISO 9001 Company

* including DLN range

CONTENTS

PROCESS CONTROL TECHNOLOGY

INDUSTRIAL PROCESS CONTROLLERS

A range of process teaching equipment is available to demonstrate relevant measurement and control experiments using real engineering equipment. The Armfield range is designed on a building-block approach, which ensures that experimental set-ups can be assembled economically to meet individual course requirements.

Each practical work study system consists of a bench top process demonstration unit and a control console, that contains the power supplies and interfacing for all measurement and actuation signals. Industrial controllers are available as accessories to further develop the practical instruction courses possible.

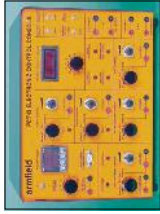
MULTI-FUNCTION PROCESS CONTROL TEACHING SYSTEM - PCT40

This provides a cost-effective way of teaching a wide range of process control techniques, including temperature, measurement and flow control.

More sophisticated aspects of process control can be addressed by adding optional extras to the basic system. The PCT40 is computer controlled with optional manual control available using the PCT43 console.

ELECTRONIC CONSOLE - PCT43

The PCT43 is an electronic console that can be used to control the PCT140 (and PCT141 Process Vessel Accessory/PCT42 pH Sensor Accessory) instead of a computer.



[view full details online: www.armfield.co.uk/pct43](http://www.armfield.co.uk/pct43)

INDUSTRIAL PLC CONTROLLER - PCT19BR

This industrial PLC controller is based on the Allen Bradley SLC500 with multi-channel analog and digital inputs/outputs and can be used to demonstrate single or multi-loop control. Serial communication is incorporated.



[view full details online: www.armfield.co.uk/pct19](http://www.armfield.co.uk/pct19)

INDUSTRIAL PID CONTROLLER - PCT20H

Based on the widely used Honeywell UDC3000 Series controller, this industrial PID controller has facilities for both voltage and current inputs and outputs; thermocouple input, alarm and relay outputs and serial communications.



[view full details online: www.armfield.co.uk/pct20h](http://www.armfield.co.uk/pct20h)



SCAN QR for Range info



SCAN QR for Range info

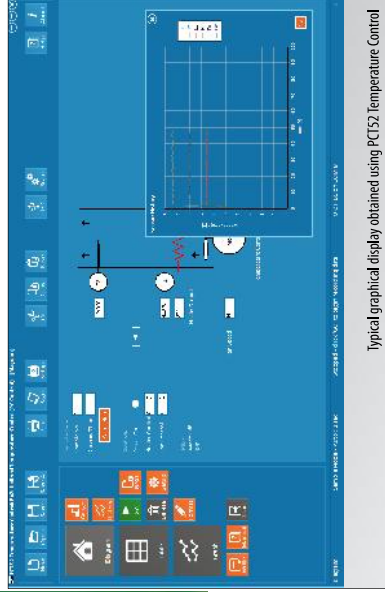


ESSENTIALS OF PROCESS CONTROL

The Essentials of Process Control (EPC) range of products takes students through the fundamentals and principles of process control, and progresses to give them a thorough grounding in the control of physical processes. Four independent process units demonstrate level, flow, temperature and pressure as the controlled variable.

The concepts of closed loop control, including on/off control, proportional control, proportional/integral and proportional/integral/derivative (PID) control can be explored and demonstrated. Some units also cover both time proportioning and analogue control of the same parameter. To demonstrate industrial control systems, two further controlling devices are available, a full function industrial PID controller with autoretune, and a programmable logic controller (PLC).

LEVEL|FLOW|TEMPERATURE|PRESSURE|PID|PROGRAMMABLE LOGIC|SENSOR CONDITIONING & CALIBRATION



Typical graphical display obtained using PCT52 Temperature Control

Industrial PID Controller - PCT54

Programmable Logic Controller (with PID algorithm) - PCT55

Sensor Conditioning and Calibration Trainer - PCT56