



— D • B • B R O O K S —



P O W E R T O C O N T R O L

INTRODUCTION

D · B · Brooks Ltd was founded in 1974 as an electrical installation company serving predominantly the Animal Feed, Flour Milling and Grain Handling industries. In 1980 we moved to our present site centrally based in Heanor, Derbyshire where control panels could be designed, built and tested under one roof.

As technology changed, the company expanded again to include PLC systems and in-house software design.

Further expansion prompted an extension to our works and offices, which was completed in the autumn of 1998. Our existing site still offers scope for further expansion when required.

We are proud of our long standing and loyal client base and are especially proud that we continue to work for our very first client.

We have built up over the years an impressive list of industries in which we continue to work. These include:

- | | | |
|-------------------------|------------------------|-------------------|
| ● Aggregates | ● Flour Milling | ● Pharmaceuticals |
| ● Alternative/Bio Fuels | ● Furnace Feed Systems | ● Plastics |
| ● Animal Feeds | ● Gas | ● Powder Handling |
| ● Baggage Handling | ● Grain Handling | ● Steel |
| ● Cement | ● Human Foods | ● Tobacco |
| ● Chemicals | ● Logistics | ● Waste |
| ● Confectionery | ● Pet Foods | ● Water |

Since 1974 we have completed many projects of varying sizes ranging from a few thousand up to approximately 1 million pounds GBP. We have worked worldwide with projects in:

- | | | |
|-------------|---------------|------------|
| ● Australia | ● Denmark | ● Ireland |
| ● Belgium | ● France | ● Tanzania |
| ● India | ● Russia | ● Iraq |
| ● Dubai | ● Ukraine | ● USA |
| ● Ghana | ● Romania | ● Japan |
| ● Spain | ● Ivory Coast | ● Uganda |



Our background, experience and breadth of scope make us a strong single source for all aspects of electrical engineering within the project.

We continue to grow, to innovate and to provide practical and competitive solutions to a developing range of clients and industries.

Existing clients rely on our ability to work from the most basic flow diagrams and information.

Our experience backed by site surveys where appropriate allows us to produce detailed and competitive quotations.

Our engineers have a broad range of industrial experience. We are particularly strong in weighing and process control.

Our strength in all three of the main complementary engineering disciplines allows us to bring a single source approach to a project. This frees our clients from the time consuming and potentially fraught area of interfacing between panel builder, site installer and software engineer. By combining these elements we are able to provide co-ordinated project management from initial enquiry to commissioning ending with high quality project documentation and on going service support contracts.

Our installation department is NICEIC Approved and carry out installations in accordance with the latest release of the IEE Wiring Regulations.

We offer:

- HV & LV Systems
- Machinery Wiring
 - Trunking Systems*
 - Cable Ladder*
 - Cable Tray*
- Power and Lighting Services
- Fire Alarms
- Portable Appliance Testing
- Lightning Protection
- Emergency Lighting
- Cat5e Data Networking
- Fibre Optic Systems
- Fieldbus Wiring Systems



Fieldbus and Networking Systems



Ethernet

DeviceNet

ControlNet

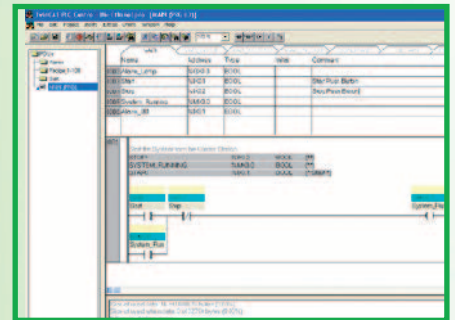
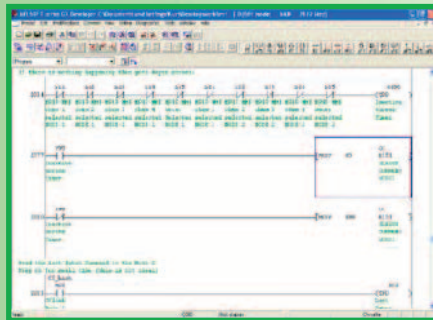
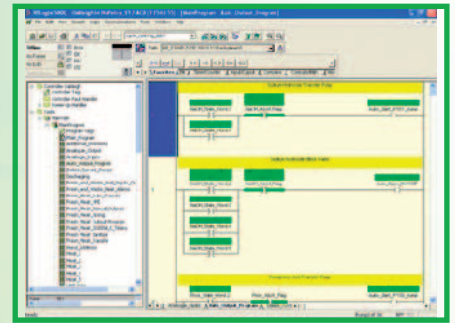
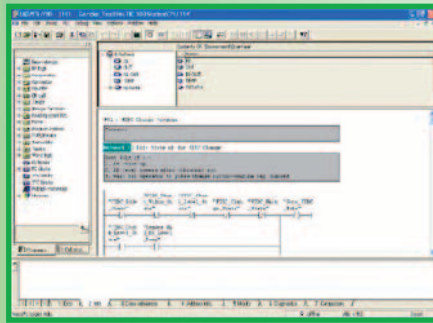


SOFTWARE

As panel builders it was a logical progression for us to replace relays & timers with simple PLC hardware. Similarly as SCADA developed it was logical, cost effective & beneficial to move from mimic diagrams to Graphical User Interfaces. From the beginning we have continued to take advantage of changes in technology to a point where today we work on web accessed networked systems. We link to supervisory and business management systems & create comprehensive reports. PLC's are networked & use remote I/O & fieldbus techniques where appropriate.

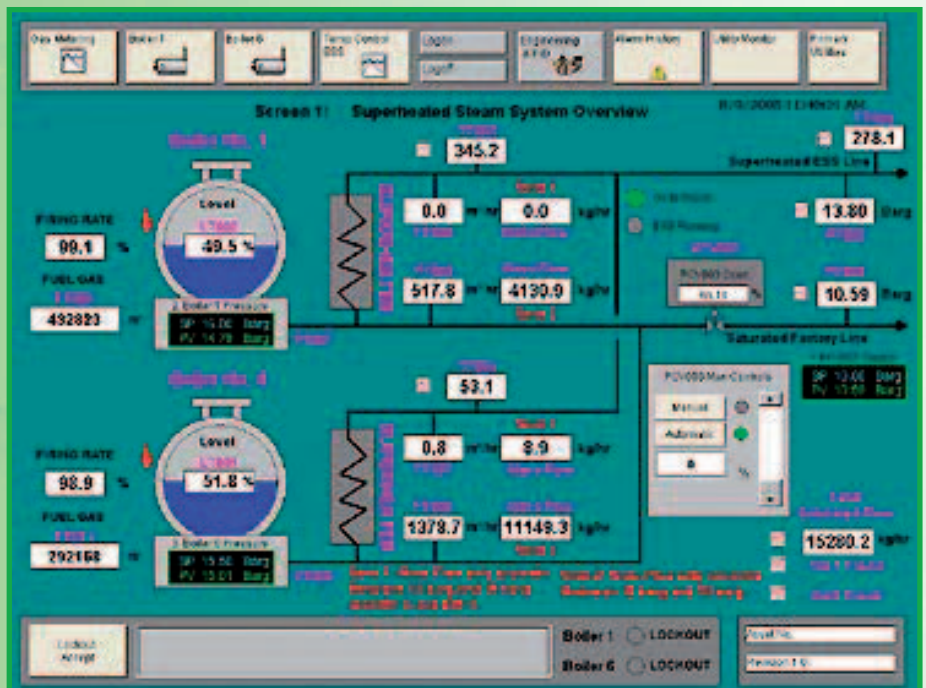
We are conversant with most leading PLC hardware including:

- Siemens
- Rockwell
- Mitsubishi
- Texas Instruments
- Beckhoff
- Modicon
- Omron



SCADA experience includes:

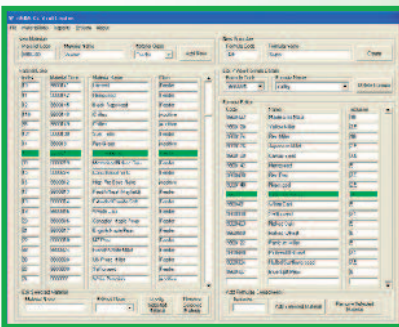
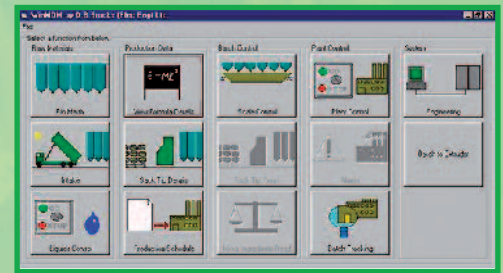
- Siemens Win.CC / Flex
- Siemens ProTool / Pro
- Wonderware InTouch
- Intellution Fix
- Citect
- Mitsubishi MX4
- ZenOn
- RSVIEW / Studio
- E - Designer



Win.MDM

We have developed our own powerful PC based Formulations and Management Data Software which runs on any Windows platform.

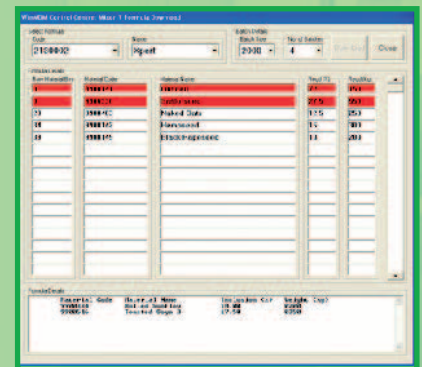
Win MDM is a Windows based Formulation and Management Data package primarily designed to control the blending and weighing of raw materials in accordance with pre-programmed formulations.



- ▶ New Raw Material data can be added to the database. Materials are classified as Bulk Ingredients, Bagged Ingredients, Liquids or Micro Ingredients. Formulations are compiled drawing on the database and can be arranged in a Production Schedule by the Manager and down loaded to Production.

shortages are displayed to allow them to be rectified before batch production begins.

After creating a formula, it can be viewed and verified before releasing it for manufacture. Any raw material



- ▶ Formulations are produced using weighing routines which are well proven and include single or two speed feed, automatic in flight compensation, automatic tare, over / under weight error checking with auto jog of underweights and variable batch size.

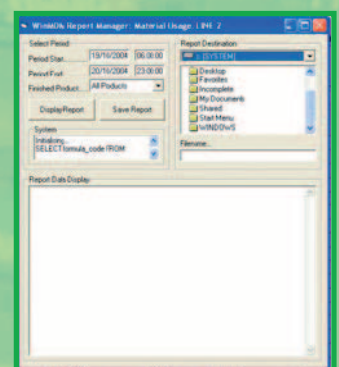
Hand added dry ingredients and dosed liquids form part of the formulation and are included in production reports. Micro ingredients / batches can be prepared off line using our Additives Control System. These systems interface with bench and platform scales, Bar code readers and Scanners.



- ▶ The package tracks the batch through the various stages of its production to preserve batch integrity and allow the operator to monitor production status.

Win MDM was conceived with connectivity in mind and writes its reports in a format compatible with Industry Standard Software Modules (e.g. Excel and Access). Reports include; Raw Materials Stocks and Usage, Batch Reports showing Theoretical and Actual values and reports showing production by product

over a user specified time period. Raw material costs can be included to provide a Theoretical and Actual cost of each batch. Bespoke communications protocols have been written for leading business management systems.



CONTROL PANEL BUILDING

Our control panel manufacturing department designs, builds and tests a wide range of panels including:

- Motor Control Centres (MCC's)
- PLC Control Panels
- Motor Starter Control Panels
- Inverter Control Panels
- Relay Logic Control Panels
- Mimic Control Panels
- Instrument Control Panels
- Control Desks
- AS-i/Profibus Panels
- LV Distribution Panels



Form 1,2,3 & 4 construction ●

ASTA certified busbar systems ●

Designed & built to BS EN 60204 ●

CAD produced drawings ●

Rigorous documented FAT tests ●

Standard enclosures or custom built steelwork ●

Upgrades & refurbishment of existing systems ●



Starter panel suite in automated dry extruded pet food plant.

This single tier Form 4 MCC controls gas extraction fans in a landfill site. It incorporates monitoring linked to an automatic dial out system which reports to a duty engineer in the event of a fault being found.

SMALL WORKS

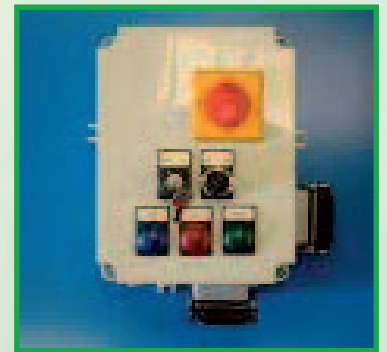
D.B.Brooks have recognised the need to operate a small works department that can offer a competitive service for small repeat order or multiple order control panels without compromising quality.



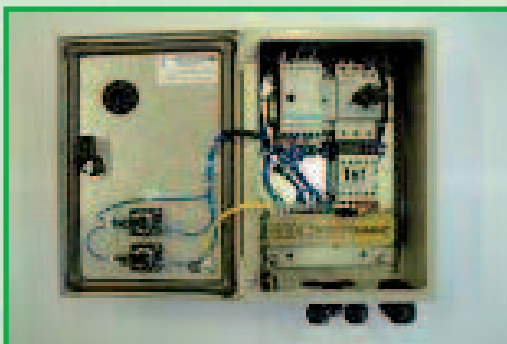
Intelligent Isolator



Remote I/O Panel



AS-i Starter Panel for baggage handling



AS-i Starter Panel for automated warehousing



AS-i Starter Panel for automated warehousing



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