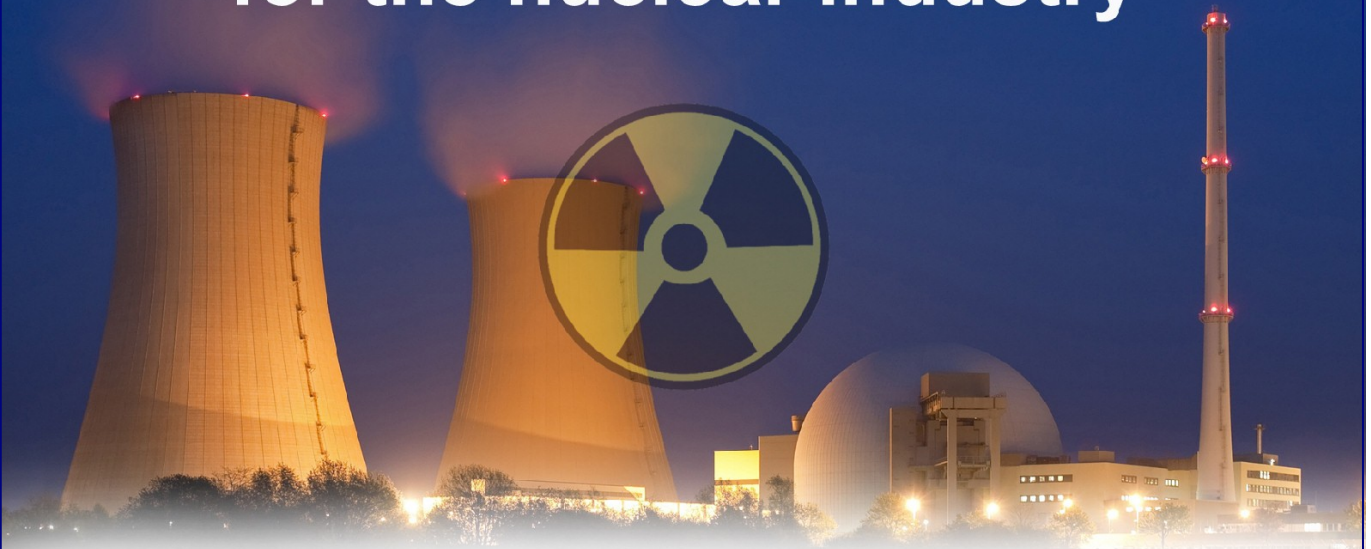




Procon Engineering
(A Division of National Oilwell Varco UK Limited)

Specialist safety critical weighing systems for the nuclear industry





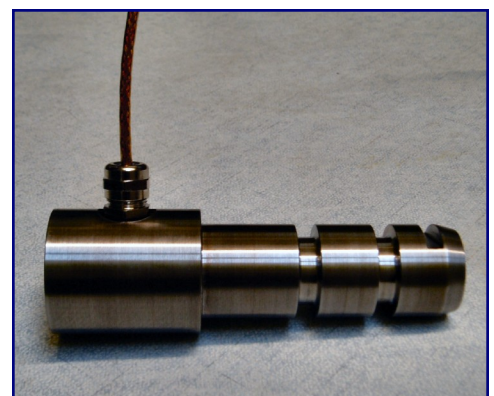
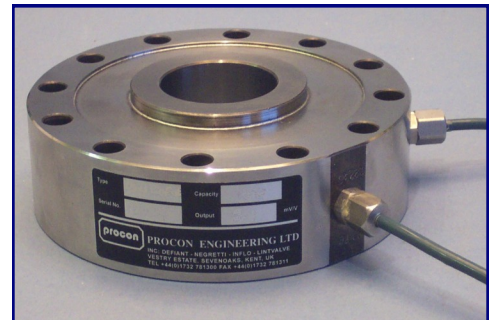
Procon Engineering designs and manufactures standard and customised load cells, in particular for integration into challenging environments.

The company employs specialist materials and design methodologies developed over 30 years, to satisfy special applications in both radioactive and corrosive environments, together with extended temperature ranges, if required, whilst maintaining high levels of accuracy.

Where applications demand safety critical weighing equipment, load cells may be supplied with multiple bridges to create topologies with redundancy.

With regard to physical strength, Procon Engineering load cells can be designed to withstand high levels of overload, utilising special robust and rugged construction techniques, should this be required.

Our specialist load cell design team frequently design load cells to fit specific applications, (rather than the application design being dictated by the load cells or pins) and this has resulted in some strange shaped load cells! But these nonetheless met all the technical requirements.



Type EP52 (EP50 MKII) Weight Indicator & Controller (Special version designed for Safety Critical Applications)



Safety critical version containing diverse and redundant hardware

Special safety critical software structures and functions

Software process kernel for safety and reliability

Primary load cell input and optional Analogue Output and Relay Output modules

IP65 front panel

114mm x 64mm backlit graphics and text display

- Special version of EP52 (EP50MKII) Weight Controller to meet ‘functional safety’ requirements for ‘Smart Instruments’
- Designed for use in ‘SIL’ rated applications in accordance with BS EN 61508
- Approved by Sellafield Ltd, applicable for SIL 1 Nuclear Industry applications (EMPHASIS)
- Controller hardware is equipped with various fault tolerant systems
- Special high integrity software for functional safety
- Incorporates unique intelligent watchdog system
- A full hardware **FMEDA** (Failure Modes Effects & Diagnostic Analysis) report is available
- Quality of design and manufacture assured using special processes accredited under Procon ISO9001:2008 management system

Multiple EP52 Controllers may be used to provide redundancy to increase ‘SIL’ ratings, Procon Engineering also specialise in the design and manufacture of custom built load cell and load pins, (some with multiple bridges), to implement weighing systems requiring additional redundancy or diversity.

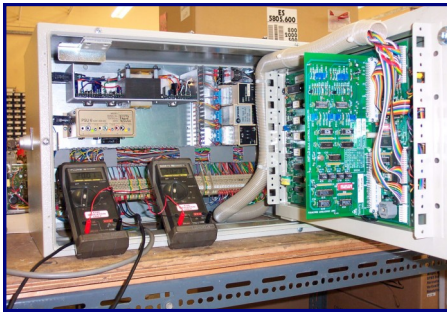
Our Pedigree

Procon Engineering is a leading manufacturer and supplier of solutions for Weighing & Process Control Systems. The company incorporates the well-established names of *Defiant & Negretti Weighing*, *Inflo Belt Weighers* and *Lintvalve Boiler Leak Detection Systems*.

We have experience across a broad spectrum of industries, e.g. Nuclear, Ministry of Defence, Chemical, Pharmaceutical, Food and Beverage, Minerals and Mining, Utilities and General Engineering

Our skill set includes:

- System Feasibility Studies and Design
- Project Management
- Mechanical and Electrical Engineering
- Panel Building
- Digital and Analogue Electronics
- Applications and System Software
- ATEX Systems Design
- Service Systems and Maintenance

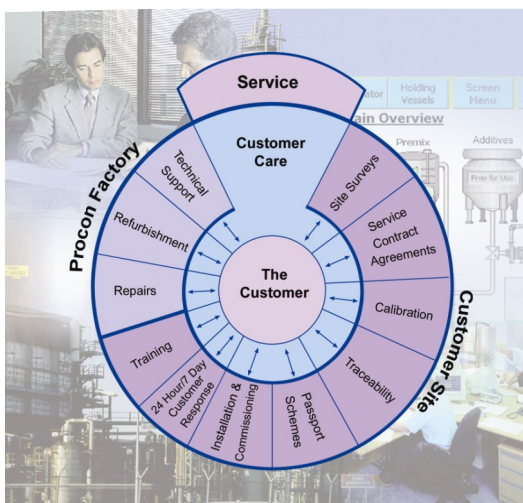
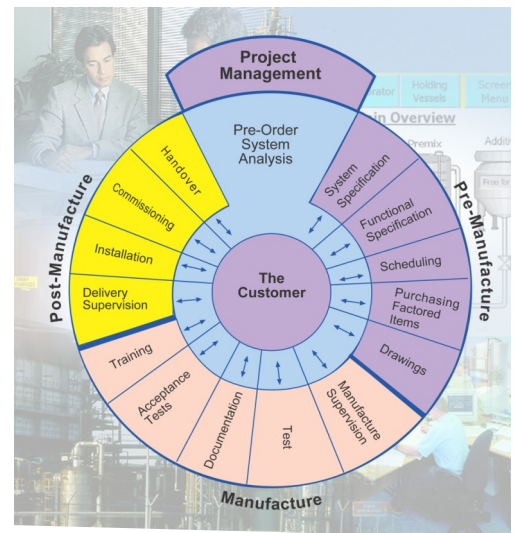


Panel Building

Electrical, electronic and pneumatic control panels, including MCC and multi-bay units, are built in-house specifically for each project using standard components. Panels are functionally tested and fully documented.

Project Management

Procon Engineering is organised specifically to provide highly effective project management. As part of this process we establish the functional design specification with our customers and provide detailed project plans, milestones and reviews - all under the umbrella of our ISO9001:2008 accreditation. We take full responsibility for your system providing you with one point of contact. In many applications we work in conjunction with clients' engineering departments to ensure smooth implementation with required time frames.



"Total Site" Service and Support



Procon Engineering places great emphasis on after-sales service and support. We operate a comprehensive service, support, installation and commissioning facility throughout the UK and the Rest of the World - 24 hours a day, 7 days a week. Our contract maintenance schemes ensure your plant performance is maintained at peak potential. We support and cover our own and most other manufacturers' products and systems.

We also offer application training, both in-house and on site, so that you can get the best from your system and process.

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Registered in England
No. 873028

Issue 2. November 2014

