



THE STRONGEST LINK.

**STAHL**

## **SOLUTIONS FOR DISTILLERIES**

Proven services and applications for  
harsh and hazardous areas

# DECADES OF DISTILLERY SUPPORT

Photo courtesy of Macallan Distillery

## R. STAHL – THE PROVEN PARTNER

When Forsyths - Grants (of Dufftown, Moray) and Elite Controls (of Livingston) were contracted to supply the control system for the new £140 million Macallan Distillery for Edrington they knew that they needed a hazardous area interface system and supplier that they could rely upon.

Enter R. STAHL IS1+, whilst well-proven in service in applications around the world, it offers a modern, innovative remote I/O solution which is exactly what they required.

The major factors when selecting the interface system were acknowledged as being an easy integration into the company standard Allen Bradley PLC sys-

tems, a fully flexible and modular system, and an extremely high reliability. The ability to integrate seamlessly into the innovative but challenging 3-pod system design was also highly commended.

Supported from the R. STAHL UK office in Birmingham, equipment was specified and supplied in accordance with the demanding project schedule.

R. STAHL is extremely proud to be part of such a high-profile project, being able to meet and surpass the customers' expectations.

Brian Sneddon of Elite Controls, who provided the software integration for the project, stated: "The functionality and specification of the remote I/O solution provided by R. STAHL ticked all of the boxes for this project. In addition,

the EtherNet/IP integration was very easy to configure and use with the main PLC system."

Whilst Darren Green of Forsyths mechanical integrators and installers advised: "We are really happy with the design and make-up of the I/O system from an installers point of view. Commissioning of the plant was made easy with the channel status LEDs within the hazardous area. There's also a good selection of different I/O card types suitable for all of the applications we needed."

Finally, Raymond Bain of Edrington commented: "We are delighted with R. STAHL's remote I/O. The system more than met the demands of our application and our expectations. It has been a great success on this very important project."

## FEATURED PRODUCTS

Talk to us. We will find the perfect solution for every application – yours included.

### LINEAR LUMINAIRES FOR GENERAL & EMERGENCY LIGHTING



The EXLUX series can be fitted to the ceiling, a pole or, alternatively, it can be suspended. It is suited to general indoor and outdoor lighting applications, as well as indoor and outdoor emergency lighting.

It is the perfect replacement for luminaires that use fluorescent lamps, since efficient LED technology with high luminous efficacy delivers the same brightness for less energy. Another plus is the easy and quick installation and the central lock.

### SAFE LIGHTING, EVEN IN CASE OF A POWER FAILURE



Our central battery systems (CBS) power emergency lighting systems in hazardous atmospheres and in non-hazardous areas. The cabinets with an emergency power supply and control panel are installed in a non-hazardous area.

With a CBS that functions as a central computer, 63 CBS sub-group control panels can be networked, each of which can actuate up to 60 final subcircuits with over 600 luminaires.

### FIRST-RATE CONTROL BOXES FOR ALL YOUR REQUIREMENTS



R. STAHL's control box is configured to your exact specifications. Of particular interest is the option to use up to four contact elements with a single actuator. The colour of the LED indicator lamps can be changed by changing the calotte directly on the cover.

The control box is available in a range of different enclosure sizes and materials, such as stainless steel and glass-fibre reinforced polyester resin.

### IS1+ REMOTE I/O FOR EFFICIENT SIGNAL TRANSMISSION



Our explosion-protected remote I/O system is perfect for transmitting signals between a control system and I.S. or non-I.S. field devices. The remote I/O aggregates the communication of numerous field devices such as transmitters, proximity sensors, and solenoid valves, and transmits this communication via PROFIBUS or various Ethernet protocols.

The comprehensive diagnostics functions make it possible to use status monitoring as the basis for predictive maintenance.

# A COMPREHENSIVE PORTFOLIO FOR DISTILLERY APPLICATIONS

## LIGHTING & SOLUTIONS



### ESCAPE ROUTE SIGN LUMINAIRE

- Suited universally for both indoor and outdoor applications.
- Versatile: can be used to display the different signs and symbols.
- Can be operated independently of the main power supply for up to 90 minutes.
- Available for safe-area installation.



### FLOODLIGHT

- Energy-saving LEDs.
- Low maintenance.
- Long service life of up to 100,000 operating hours.
- Robust enclosure made from stainless steel or sheet steel.



### UNIVERSAL SPOTLIGHT

- Ultra light, ultra compact.
- Energy-saving LEDs.
- Additional extreme ambient temperature range.
- Versatile application: can be used as a bulkhead / pendant / high bay light fitting, or as a floodlight.
- Can be used indoors and outdoors.



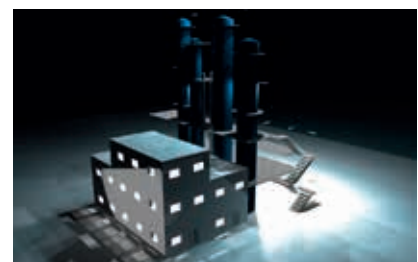
### DOORSTEP LIGHTING

- Special optical design to illuminate the first step outside the fire protection area.
- Increased optical efficiency and avoidance of light pollution.
- Suitable for indoor and outdoor installation.
- Designed to operate stand alone or powered by a central battery station.



### SMART EX LIGHTING (DALI)

- Digital light management in hazardous areas with an optional integrated DALI interface according to IEC 62386.
- Per DALI bus, 64 actuators can be linked in various topologies.
- Around 200 programmable commands are available.
- Remote control and monitoring via smartphone app.



### LIGHTING SOLUTIONS

- In-depth knowledge for lighting technology in hazardous areas.
- Comprehensive services and lighting solutions:
  - Lighting design.
  - Illumination optimisation.
  - Consultancy.
  - TCO calculations.
  - Central battery load studies.

Find all products in our electronic catalogue at [r-stahl.com/catalogue/en](http://r-stahl.com/catalogue/en)

## INSTALLATION & CONTROL



### PLUGS AND SOCKETS

- For currents 16 A – 125 A.
- Self-cleaning lamellar contacts provide optimum contact.
- Full AC-3 switching capacity according to IEC/EN 60947-3.
- High degree of protection IP66.
- Smooth surface – easy to clean.
- Small footprint.



### INSTALLATION EQUIPMENT

- Wide range of Ex i terminal boxes in various sizes and materials.
- Degree of protection IP66.
- Customised equipping in accordance with customer specifications.
- Enclosures with captive cover screws.
- Flange on enclosure sides (option).



### CONTROL BOX

- Numerous options make this easy to configure for your specific application.
- Enclosure made from glass-fibre reinforced polyester resin or stainless steel.
- Wide range of components for installing in control boxes.



### SAFETY SWITCHES

- Can be used with conventional drives and drives controlled by frequency converters.
- Intelligent design: a single rotary actuator for actuating both main and auxiliary contacts, leading auxiliary contact for safely disconnecting the frequency converter.
- IEC/EN 62626-1 Class 1 compliant.



### MODULAR DISTRIBUTION BOARDS

- Modular socket-outlet assemblies for commission and maintenance activities.
- For currents 16 A – 125 A.
- MCB / RCBO protection incorporated.
- Available in GRP or 316 stainless steel.
- Modularity minimises engineering effort.
- With large dissipation of heat loss.



### BESPOKE SOLUTIONS

- Complete product range through the design of customer-specific solutions.
- Project engineering, production and commissioning of cabinets from a single source.
- Combination of all types of explosion protection technologies.
- Guaranteed explosion protection for high-performance built-in components with large dissipation of heat loss.

# PROVEN DISTILLERY SERVICES AND APPLICATIONS

## AUTOMATION INTERFACE & SOLUTIONS



### I.S. REMOTE I/O SYSTEM

- Installation in Zone 1 and 2.
- No bulky switch and distribution cabinets in the control room.
- Communication via PROFIBUS DP / PROFINET / EtherNet/IP, or Modbus TCP.
- Full hot-work and hot-swap even in Zone 1.



### REMOTE I/O MODULES

- For I.S. and non-I.S. field devices.
- Full hot-swap in Zone 1 and 2.
- Up to 8 analogue I/O or 16 digital I/O.
- Integrated diagnostics and full HART support.



### FIELDBUS TECHNOLOGY

- Pure digital fieldbus installations with PROFIBUS PA and FOUNDATION Fieldbus H1.
- Cost-effective solution with High Power Trunk.
- Full range with Zone 1 and 2 device couplers / fieldbus power supplies, and physical layer diagnostics.



### ISOLATORS

- Space-saving design.
- Impressive range of functions.
- Life time of 15 years+.
- Installation-friendly concept.



### WIRELESS SOLUTIONS

- Provides Wi-Fi functionality with up to 300 Mbit/s for Zones 2 and 22.
- Robust and suitable for industrial applications.
- Integration of Wi-Fi equipment of Cisco / Aruba / Zyxcel / Siemens, etc.



### ETHERNET NETWORK SOLUTIONS

- Media converter and switches for industrial Ethernet in hazardous areas.
- All you need for installation: FO splice cassette and Ethernet terminal.
- Customised solutions.

Find all products in our electronic catalogue at [r-stahl.com/catalogue/en](http://r-stahl.com/catalogue/en)

## OPERATING, MONITORING (HMI) AND CAMERA & SURVEILLANCE SYSTEMS



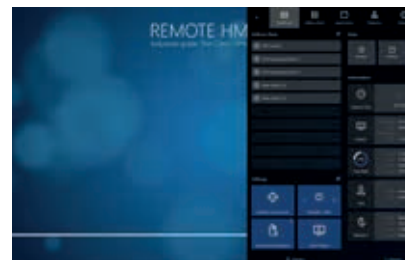
### OPERATOR STATIONS

- Operator stations for hazardous and safe industrial areas.
- Stainless steel, IP66, optionally in accordance with GMP.
- Compatible with all control systems.
- RFID readers and barcode scanners.



### PANEL-MOUNT HMIs

- Industrial computer and monitor in one device for operation in hazardous areas.
- Panel-mount for integration into machines.
- Touchscreens in sizes 10" and 15".



### THIN CLIENTS

- Industrial-grade Thin Client firmware – Remote HMI V5.
- For EXICOM operator stations / panel-mount HMIs, and Box Thin Clients.



### DOME CAMERA

- Ideally suited for large areas.
- Programmable presets for automatic security patrols.
- IP or analogue models available.
- Stainless-steel enclosures for rough ambient conditions.



### THERMAL IMAGING CAMERA

- High-resolution thermal imaging cameras for monitoring temperature changes indoors or during processes.
- Can detect changes in processes and leakages.
- Integrated thermography function.
- Colour coding can be set individually according to temperature.
- IP or analogue version available.



### VIDEO MANAGEMENT SOFTWARE

- Multivendor capable – an open system.
- Unlimited access.
- Highest degree of system stability and video analysis.
- Complex alarm scenarios.
- Practical system management.
- 3 basic packages available for 50 / 100, and an unlimited amount of cameras.

# Matured over 40 years & together with R.STAHL, our proof is our experience.

MacLean Electrical is a leading, specialist provider of ATEX and industrial electrical products, lighting systems, cable solutions and accessories to industries around the world.

As an approved R.STAHL distributor and stockist, MacLean Electrical's impressive footprint provides you with direct, efficient access to their innovative range of products.

With a combined history spanning over 170 years, our proof really is our experience.

For more information contact our Distillery team on 01349 868000 or email [maclean-dingwall@dnw.com](mailto:maclean-dingwall@dnw.com)

[maclean-electrical.com](http://maclean-electrical.com)

DINGWALL ABERDEEN CUMBERNAULD NEWCASTLE GREAT YARMOUTH NEWMARKET

**STAHL**

**R. STAHL LTD.**

Unit 11, Maybrook Business Park  
Maybrook Road, Minworth  
Birmingham, B76 1AL, United Kingdom  
T +44 121 767 64 00  
F +44 121 767 64 90  
[r-stahl.com/uk](http://r-stahl.com/uk)