



DDCC SCanView

Burner Management System



Forbes and
Hunt Boilers

SAACKE

Combustion and Energy Systems

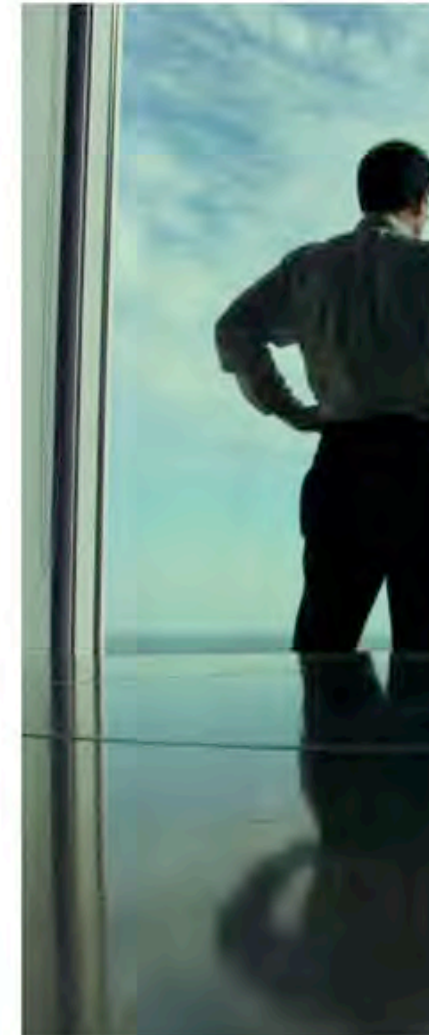
SCanView

If you're asking yourself these questions

- Does my burner control system meet the latest legislation?
- Can I cut downtime and the costs that go with it?
- And can I achieve maximum reliability – with CanBus connections?
- How do I obtain reliability of positional feedback tested to 2,000,000 cycles?
- Is it possible to optimise my choice of future fuels?

...then talk to Saacke

The Saacke DDCC SCanView Burner Management System has been specifically designed to address current issues and concerns. And it does so by delivering enhanced control combined with better performance.



Creating new standards: delivering greater benefits

The latest development from Saacke offers significant advances in burner management and air/fuel ratio control. This is the Direct Digital Combustion Control (DDCC) SCanView Burner Management System and it delivers a number of substantial benefits:

- increased quality and accuracy
- a more user-friendly display
- enhanced safety
- improved reliability
- better maintenance
- and greater fuel flexibility

Innovation and experience

The latest improvements are backed by Saacke's long and successful history, which includes over 75 years' experience in burner control and more than 20 years' developmental knowledge of electronic air/fuel ratio control systems.

Cutting-edge technology

SCanView combines the repeatability and control provided by other DDCC systems with the additional benefits provided by state-of-the-art technology such as a Touchscreen HMI, CanBus communication, superior plant safety features and a highly effective Maintenance Aid System.

Total integration

SCanView gives you fully integrated electronic burner management and digital air/fuel ratio control. This includes the management and control of all sequence timings, flame supervision, fuel valves, ignition, fan motor and modulation rate. For increased efficiency, microprocessor technology replaces traditional cam and linkages.

Flexible fuel options

SCanView broadens your fuel options as it is suitable for oil only, gas only or dual fuel burners. And it can be fitted to new equipment or as an upgrade to existing combustion equipment. It offers the flexibility of combined firing in order to support alternative fuels and includes the facility for on-line fuel changeover between main fuels.

Effective safety and communications

SCanView's quality and safety are underlined by its compliance with the requirements of EN298 and being designed to SIL 2 standards. The SCanView system's integrity is reinforced by CanBus communication between the controller, servomotors and display.



Enhancing safety: burner and plant



Improved safety

Designing a successful safety-critical control application means meeting the highest possible standard: incorporating protection safeguards at every stage. Saacke's rigorous and continuing commitment to safety ensures the SCanView system fully complies with all relevant European Standards and includes further enhanced features to ensure easy, effective and safe operation including test approved self-checking flame scanners and flame pressure or temperature transmitters.

Safety Test System

Our system gives you the control and supervisory standalone safety tests to assist operators in maintaining regular site/mandatory safety checks. This online test system oversees the boiler safety valves, flame failure system, level alarms and the boiler temperature/pressure limit alarm.

The SCanView not only provides legislative leak detection for the gas control train as part of the programming, it can also perform an oil valve leak check during the burner control shut-down. This enhances the levels of safety when firing to the levels already achieved for the firing of gaseous fuels.

Advanced system security

An onboard 'watchdog' maintains the security of the system while the software incorporates fail-safe algorithms for continuous monitoring. As a result, in the unlikely event of a software malfunction the system is automatically shut down, raising the alarm and ensuring stored data is protected.

Multi-tiered access code

The access code is multi-tiered to prevent any unauthorized adjustments. Safety is further enhanced by the use of CAN bus communications, which can prevent any corrupting external influences.

Single integrated control

Saacke has simplified the burner cabinet and improved reliability by incorporating the burner control, gas

SCanView

Greater control: better performance

Enhanced reliability

To give you unmatched precision, SCanView uses profiling information stored in its memory to position the motors. And to eliminate hysteresis, high-resolution control algorithms give you the ability to control the valves and damper positions exactly.

To maintain the quality of control, the precision motors incorporate high-resolution feedback potentiometers which guarantee that the motors are correctly synchronised throughout the firing range.

Stringent testing

These controls have undergone stringent testing to meet all required standards and the system is approved to EN298:2003 Tested in accordance with the Gas Appliance Directive (GAD 90/396 EEC). This encompasses the following standards:

- EN298:2003 with amendments, effective end 2007
- EN230:2005
- EN12067 – 2:2004
- EN1643:2000
- System designed to Safety Integrity Level Standard: SIL 2
- ENV 1954. Internal and external behaviour of safety related electronic parts
- EN298 (September 2003). Automatic gas burner control systems for gas burners and gas burning appliances with or without fans
- EN60730-1 (November 2000). Automatic electrical controls for household and similar use
- EN12067 (March 2004). Gas/air ratio controls for gas burners as gas burning appliances
- EN1643 (October 2000). Valve proving systems
- EN1854 (December 1997). Pressure sensing devices for gas burners and gas burning appliances
- EN230 (June 2005). Monobloc oil burners – safety, control and regulation devices and safety times.

Better maintenance

Saacke's unique Maintenance Aid System gives you greater control of combustion by providing a detailed indication of when it is necessary to service any equipment or replace important safety devices, such as the photocell. By simply using the Touchscreen, you can also re-commission replacement parts much more quickly because the commissioning data is held within the controller.

And if you combine the Maintenance Aid System with a Service Contract, you can further ensure that your equipment is operating efficiently and that downtime is minimised.

Greater flexibility

To give you more operational adaptability, the SCanView has built-in programming for combined fuel which allows the co-firing of Bio-gases or Bio-oils standard fuel. The system also has more than two number of set points over a mechanical system, with four characterising curves and up to ten motor drives.

Choice of controls

You can gain major cost savings by adding Oxyge Control and Variable Speed combustion air fan control.

In addition, you can control the burner modulation in three ways: manually from the Touchscreen; remotely using analogue or digital signals; or automatically pressure or temperature signals. The system also lets you two boiler set points: one for normal operation and a second for low demand periods such as overnight weekend working.

Optional communications

Your plant operators can save substantial amounts of time using the optional Ethernet and PROFIBUS communications. These facilitate rapid analysis, maintenance planning and faultfinding.



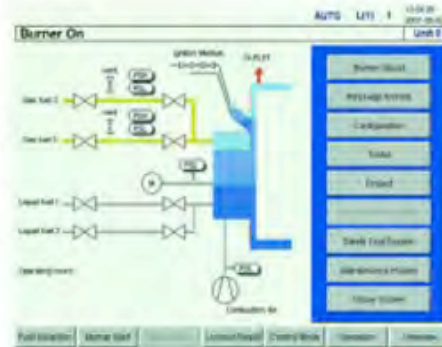
SCanView

Easier to use: easier to understand

The Touchscreen display

Saacke's latest Touchscreen display maximises the benefits of creating a simple Human Machine Interface (HMI). This means you gain greater control and any operator is able to view data on the colour display. The onscreen graphics include a burner line diagram, active valve/motor/alarms devices, a ripple-through light-up sequence, trend graphs and event/alarm message archives. You can also view the burner status on the display and use onscreen scroll buttons to run through the event history log.

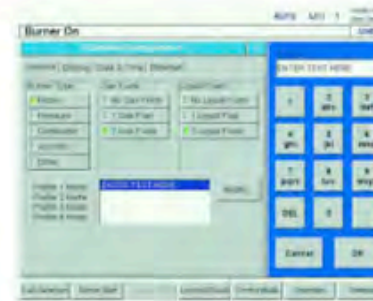
The simple display, operator and scroll buttons ensure that the system is easy to manipulate and user-friendly. They also make things simple by reducing the number of panel-mounted lights and switches. In the case of standard applications, these can be completely eliminated.



User-friendly graphics

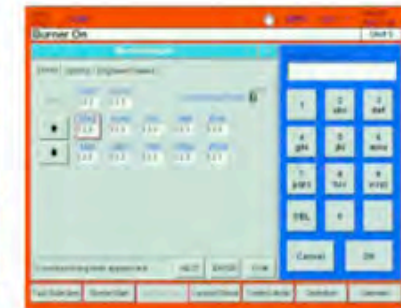
Here, the Touchscreen display shows a ripple-through start-up sequence. It can also mimic the burner in operation and indicate the active valves.

Designed to be easy to use, the system allows even the most inexperienced boiler operator to quickly establish the position of the burner during light-up and normal operation.



Simple and effective security

The simple Touchscreen display lets you adjust the system variables very easily while the security of the system is insured with multi-level password protection. This guarantees that only correctly trained individuals can access the safety critical adjustments. To aid multi-boiler commissioning, it is a simple matter to upload the commissioning set-points to the system although full commissioning checks must still be completed.



Comprehensive management logs

For a typical burner operation, the HMI Message Archive provides a one-month event log, a three-month alarm log, a five-year maintenance log and a five-year safety test system log. The system not only logs any adjustments made, complete with individual operator login codes, but will also log exactly who has made the changes.

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