

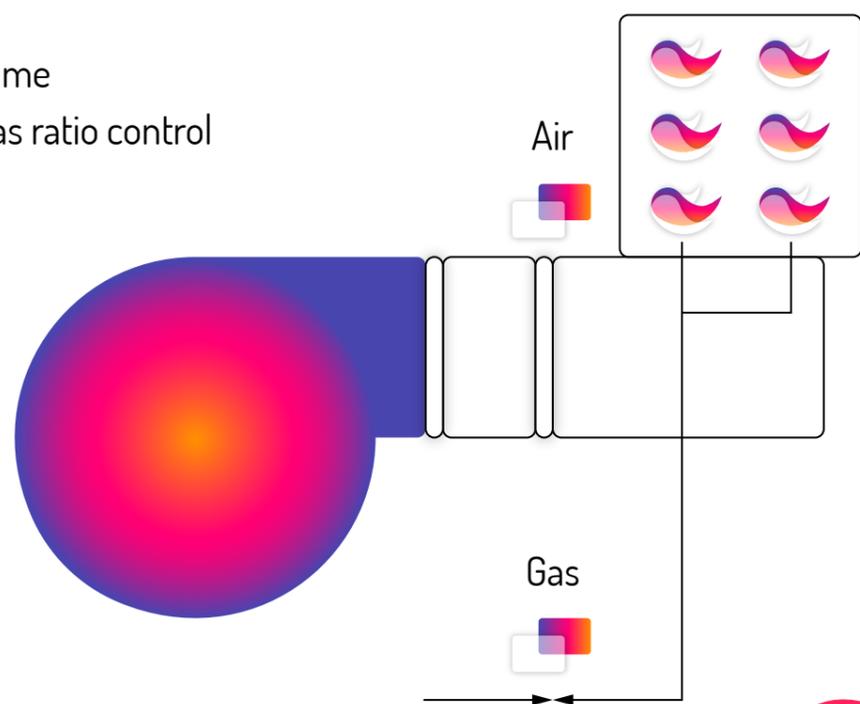
Phoenix Pro[®] Integrated combustion control system

We developed Phoenix basing on a strong experience in combustion systems for paper industry. It is a product able to adapt to all production needs, and characterized by great reliability, simplicity of operation and self-diagnosis.

Phoenix is one of the solutions that we can provide to promote energy saving for industry fields in which too much steps have to be done. Talking about Pulp and Paper industry, most part of paper mills runs with old generation burners, with a lot of problems about safety, efficiency and reliability, this drives to high risks about workers and production losses.

- Ignition phases according to EN 746;
- Air-ratio at each power level;
- Combustion air control loop;
- Process air temperature control loop;
- Low fire conditions;
- Preheating before ignition;
- CO and O2 emissions;
- Washing times up to SIL2
- Historical of all burner parameters ;
- Smart Wizard of burner problem troubleshooting;
- Remote assistance with industrial VPN

Real time
Air/Gas ratio control



Burner management system (BMS) Phoenix is provided with a BMS in order to guarantee the execution of ignition and test phases according to EN 746 norm ("Industrial thermoprocessing equipment"). This unit allows also to manage air-fuel ratio, through can bus communication with fuel and combustion air valves/dampers actuators.

Gas valve and combustion air damper actuators Phoenix is provided with actuators capable to guarantee SIL 2 level of functional safety. Flame detection device signal is directly acquired by Siemens LMV. Controllo presenza fiamma mediante fotocellula direttamente collegata alla centralina di sicurezza.

- BMS programming interface
- User-friendly interface
- Multi-level password (basic user, service and O&M)
- Modbus communication with burner PLC

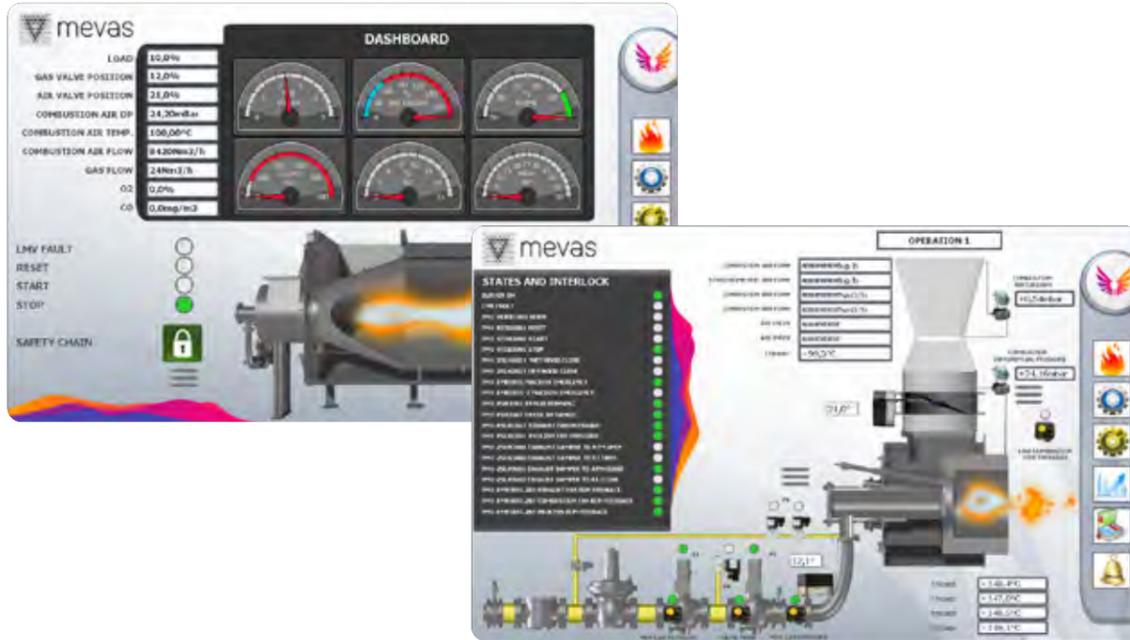
Standard PLC for integrated combustion management Standard PLC for control and management of burner. Instant diagnostic and graphic trend of main process parameters.

PLC controls:

- Combustion air loop, with direct control of operating set-point of the fan
- Thermoregulation loop. PLC acquires temperature signal from three transmitters on field, and modulate gas valve opening after a comparison between measures and desired operation set-point
- Low-fire management
- Pre-heating during ignition phase
- PLC communicates by profinet or profibus with customer supervision system

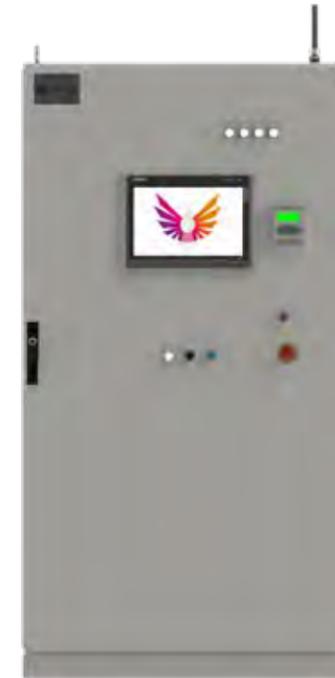
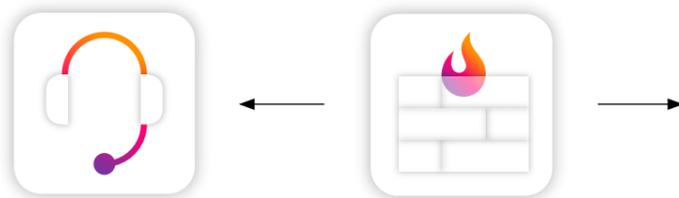


HMI with user-friendly interface for visualization of each combustion stage.
 System is engineered with an optimized graphic interface, through a 12" HMI in which the operator can see for example trend of combustion process variables, ignition phases, pollutants level, log of occurred errors and so on. Basically the HMI is completely customizable according to customer requests, thanks to the high number of acquired signals from the process.



Remote connection device.

Another step to optimize combustion is the implementation of remote control. Through an encrypted connection is possible to manage each process parameter. This solution strongly reduce service costs, the system infact can be setted in order to send e-mail diagnosis and reports regarding operational status of the burner, in order to speed-up intervention timings.



Industrial firewall



Internet



Remote assistance



Gas consumption optimization



Real time flame monitoring



O₂, CO_e



Pressure



Temperature



DCS



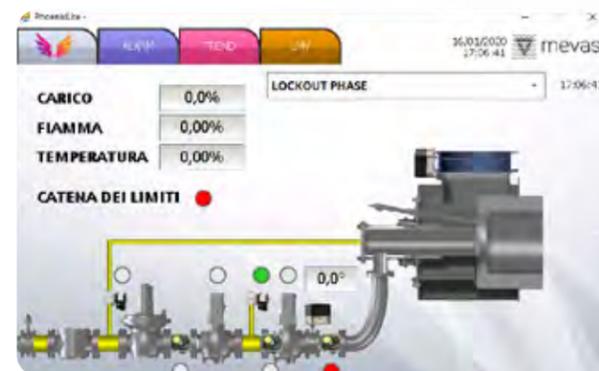
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Phoenix Lite® Integrated combustion control system

Phoenix Lite® is the smart version of Phoenix product family.
It is characterized by:

- Ignition phases according to EN 746;
- Air-ratio at each power level;
- Combustion air control loop;
- Process air temperature control loop;
- Preheating before ignition;
- Washing times up to SIL2
- Historical of 2 temperatures probes and main burner parameters ;
- BMS programming interface;
- Modbus communication with customer DCS;
- Safety basic PLC ;

Phoenix Lite® is the smart solution for revamping your old combustion system.

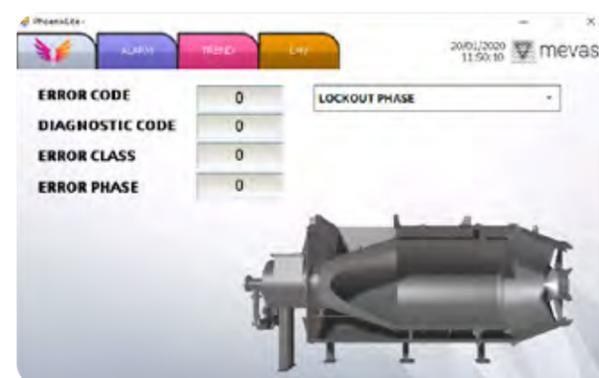


HMI

Phoenix Lite® is equipped with 7" colour touch panel for continuous monitoring of combustion process :

- Starting sequence
- Safety devices status (pressure switches, temperature switches);
- Modbus interface with BMS and sharing of main safety error messages;

Mevas Phoenix Lite® is designed according to latest technical norms.



Product Info

Phoenix is available with two different product versions

Features	Phoenix Pro®	Phoenix Lite®
Ignition phases according to EN 746	✓	✓
Air-ratio to all burner load	✓	✓
System washing time sequence up to SIL2	✓	✓
Smart HMI completely connected to BMS	✓	✓
Integrated safety PLC for burner and air system safety signal management	✓	✓
Historical of all burner parameter	✓	
Emissions analysis CO, O2 & NOx	✓	
Pre-heat for long time start up	✓	
Low fire safety control up to SIL 2	✓	
Safety loop for combustion DP up to SIL 2	✓	
Safety combustion air control up to SIL 2	✓	
Possibility of Integrated control loop of process air temperature	✓	
Remote assistance with industrial VPN	✓	
Smart Wizard of burner problem troubleshooting	✓	

Phoenix let your combustion system work safely

