



GLOBAL SOLUTIONS, LOCAL DELIVERY



Marine

Process

Power

Industrial

Flares & Thermal Oxidation



## GLOBAL SOLUTIONS



The Hamworthy Combustion® Group has an enviable reputation for nearly 100 years of innovation. Today, as a world leader in specialist combustion technology, we are still investing heavily and growing rapidly to help our customers meet the challenges of the 21st century.

We supply our products to customers in over 100 countries. We have a team of over 600 engineers and technical staff, with 100 specialists in each of the five market sectors we serve:

- Marine • Power • Industrial • Process • Flares & Thermal Oxidation

We bring together the expertise of four of the most respected names in combustion:

- Peabody Engineering • Chentronics • Airoil-Flaregas and  
• Hamworthy Combustion Engineering

We are a one-stop shop for all our customers' combustion needs, from individual burner parts to complete turnkey systems. This includes:

- Design • Manufacture • Project Management • Commissioning  
• Spares • Service

We are recognised as a world leader in combustion R&D. Our Combustion Technology Centre offers an unequalled technology testing and personnel training facility for all our customers.



## LOCAL DELIVERY



We pride ourselves in being totally customer-focused in all we do, delivering our global capability at a local level.

We have 18 offices covering over 80% of world GDP. We are also represented in a further 60 countries and still expanding – in the Americas, Asia-Pacific, Middle East and Europe, from mature to emerging markets. We have engineering, inspection and testing facilities in the UK, Italy and the USA, and specialised fabricating/contracting capability in Korea.

All our offices are staffed by local nationals to quickly and effectively assess local problems. They have direct access to our sophisticated knowledge management systems. Backed by a team of over 100 specialist Service Engineers on call around the globe, this means we respond rapidly at an international level to meet the immediate needs of our customers locally.

From leading edge design to precision engineering, from spare parts to complete turnkey solutions, we deliver a world-class combustion service to your door.

## OUR MARKET SECTORS



### MARINE & OFFSHORE

We are an acknowledged world leader in the supply of burners, combustion systems and ancillary equipment for the marine and offshore sector. This ranges from single components to complete turnkey steam and hot water combustion systems. Our products include:

- FPSO/FSO process and steam applications
- Register burners for auxiliary boilers and main steam propulsion
- HXG burners for LNG tankers
- HXGL TRPhase® low NOx burners for LNG tankers
- AMOxsafe® gas combustion units for LNG carriers
- Rotary cup burners for auxiliary boilers
- Burners for production platform process and steam applications
- ECOphase® VOC recovery combustion systems
- Offshore flares
- High energy ignition systems and SmartScan® 121 flame monitors.



### PROCESS

The refinery, petrochemical and process industries are served by an impressive range of Hamworthy Combustion burners. These use cutting edge technology developed at our own Combustion Technology Centre in the UK. Amongst the main product areas are:

- Burners for fired heaters, reformers and crackers
- Revolutionary split phased technology for ultra-low NOx performance
- Performance testing.



### POWER

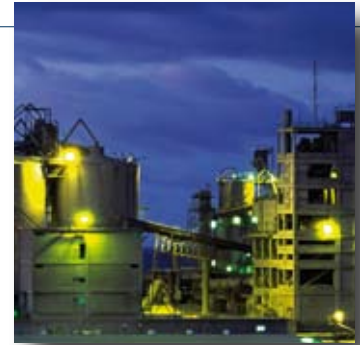
For the power industry we supply oil and gas burners and ancillaries for large power and industrial hot water/steam boilers, for air and thermal heaters and kilns. These include:

- Low emission systems and burners
- Burner management and combustion control systems
- Light up and low CV burners
- Flame monitors and ignitors/pilots
- Blast furnace gas burners
- High energy ignition systems.

## INDUSTRIAL

Hamworthy Combustion's innovative ultra-low NOx burners are at the forefront of packaged burner technology worldwide. Our range of products covers small and medium size hot water and steam boilers, as well as air heaters, kilns and thermal heaters. These include:

- Electrotec® heavy oil/gas rotary cup burners
- Envirojet® low NOx gas/oil burners
- The S Series pressure jet oil and gas burners
- Alphalink and Electrolink air/fuel ratio controllers
- The Sequence 2000 boiler sequencer
- Alarm diagnostic display systems
- The XCom® integrated burner management controller
- The XCView® system manager.



## FLARES & THERMAL OXIDATION

Our world Centre of Excellence for Flare Technology is based at Milan in Italy from where components and complete turnkey systems are executed throughout the world for land and offshore use. Our flare product range includes:

- Elevated and ground flares
- Ignition systems
- Flare smoke control, monitoring and control systems
- Wet liquid burners
- Burn pits, knock-out drums, molecular seals.

Hamworthy Combustion's Thermal Oxidiser Systems cover a vast range of liquid and gaseous incineration requirements, both on and offshore. These include:

- Thermal and catalytic incineration
- Heat recovery and post-combustion gas cleaning systems
- SRU equipment
- Direct fired air heaters.



## ANCILLARIES & CONTROLS

Ancillary equipment from our specialist firm Chentronics includes world-leading products for ignition, flame detection and monitoring such as the High Energy Igniter, SmartSpark®, SmartScan® I21 and SmartPilot®. Controls include Burner Management and Combustion Control Systems, Starter Panels, Man/Machine Interface Control Systems, and 24/7 Remote Condition Monitoring.

We are one of a few combustion specialists with a complete in-house capability for controls design, build, testing and commissioning.





#### GLOBAL TECHNOLOGY

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Our Combustion Technology Centre in the UK has expanded to be one of the largest combustion test facilities in the world. Its 14 burner test chambers simulate applications from flare stacks to ethylene cracking, from 100 kW to 100 MW.

The facilities fire a full range of project-specific liquid, gaseous and blended fuels, including low CV gases, LPG and hydrocarbon condensates, in any orientation. With continuing investment in the latest computational fluid dynamic (CFD) technology and state-of-the-art telemetry and emissions instrumentation, the Centre's innovative research and development keeps us at the cutting edge of combustion technology on the world stage.

#### SECTOR APPLICATION

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We have an outstanding record of technical innovation in each of our highly specialised market sectors. This gives us an unrivalled breadth of combustion expertise. It also enables us to transfer technology across market sectors and create truly innovative solutions for individual customer facilities.

In addition to in-house development work, the Combustion Technology Centre is available to trial and customise burners and systems for individual client applications. We test and develop products under precise working conditions before they are installed in customer facilities. The Centre also provides customers with a rolling programme of specialist technical training, to keep pace with latest developments in combustion technology.

### CUSTOMER SERVICE

With a team of over 600 specialist staff, our level of customer support is unique in the combustion industry. We have dedicated teams of more than 100 specialists in each of our five main market sectors. We provide a complete package of aftermarket services – from remote condition monitoring, parts, servicing, operator training, breakdown and emergency response to equipment leasing and total project management. A global team of over 100 internationally accredited Service Engineers provide round-the-clock service and spares.

We offer comprehensive training courses from control software and electrical fault-finding to combustion chemistry and maintenance. All are delivered by qualified engineers with extensive field experience either at our Technical Training Centre in the UK or at customer facilities anywhere in the world.



### KNOWLEDGE MANAGEMENT

Rapid access to customer-specific technical information is essential for the efficient delivery of all our services globally. Today we have in place a dedicated on line Virtual Private Network (VPN) that holds information covering our entire installed base of systems and equipment. This includes:

- Historic data on more than 20,000 contracts worldwide, recording sales, installation, spares, service and R&D
- A Digital Print Room with over 40,000 technical files
- Three-dimensional CAD for burner design.

Our field Service Engineers have on demand access to the VPN from customer premises anywhere in the world. This gives instant local access to all relevant information and allows well-informed decisions to be made quickly and locally.





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