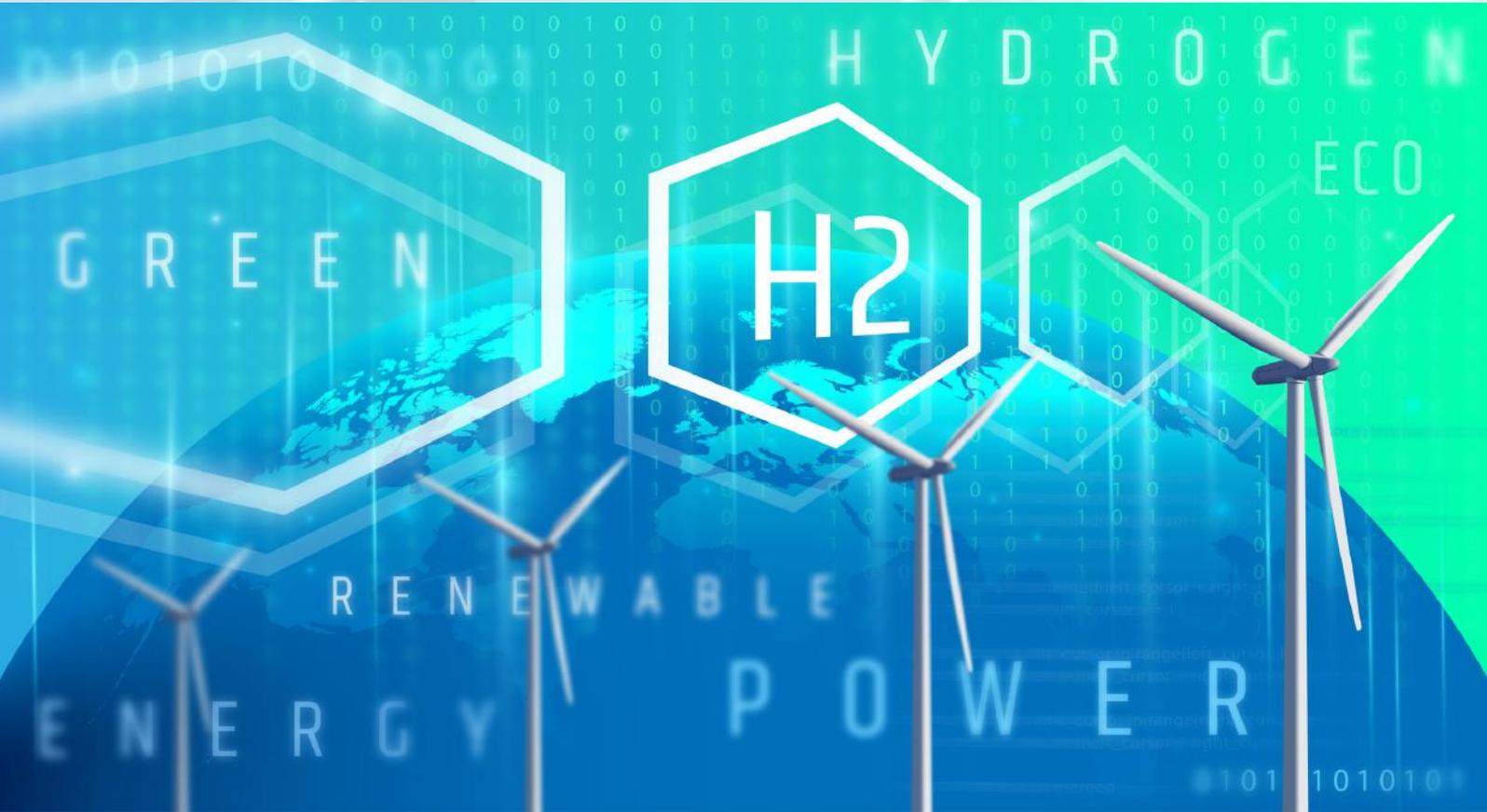




**HYDROGEN READY**





## Limpsfield Burners are 100% Hydrogen ready

Limpsfield Combustion have been firing Hydrogen successfully for over 20 years.

As part of the current move to Net Zero and decarbonization, Limpsfield is currently in discussions with the BEIS, H21, Edinburgh Napier University on behalf of many Scottish Distilleries, the CEA, amongst others within our industry in producing Hydrogen fired and Hydrogen ready burners. Limpsfield burners are currently firing 100% Hydrogen and are capable of firing any known mix of Hydrogen as long as the heat value of the fuel (CV) is known.

### What is Net Zero Carbon

Net Zero Carbon refers to achieving net zero carbon dioxide emissions by balancing carbon dioxide emissions with removal or simply eliminating carbon dioxide emissions altogether. Put simply, net zero refers to the balance between the amount of greenhouse gas produced and the amount removed from the atmosphere. We reach net zero when the amount we add is no more than the amount taken away. By burning Hydrogen as an alternative to Natural Gas, Limpsfield can make a huge step in achieving this goal.

### Why Net Zero Carbon matters?

Net Zero Carbon matters if we are to meet the government set goal of Net Zero Emissions by 2050. When sustainability solutions and net zero emissions are paramount, the team at Limpsfield Combustion have both the knowledge and experience to help meet these challenges.

We passionately care about the environment and have been designing and manufacturing Hydrogen fired burners for 20 years. The recent market demands has positioned us as one of the UK's leading manufactures of Hydrogen fired burners. Our burners are not only Hydrogen ready as standard but also meet the MCPD low NOx requirements. Like Natural gas, Hydrogen can produce NOx emissions when burned – however this can be almost eradicated with Limpsfield Low NOx burner technology and utilising Autoflame's ATEX combustion management control systems. Responsible organisations have to take decarbonisation seriously in order to meet future legislation and government targets..

Whilst it is unlikely that Hydrogen is the complete answer to our future fuel issues, recent discussions indicate that 100% Hydrogen is unlikely to be available in built up cities as huge improvements in infrastructure would be needed, such as laying new pipework underneath already overcrowded roads etc. that would be extremely costly and not practical. However decarbonization will most likely be achieved with a mixture of burning Hydrogen in areas where Hydrogen is produced locally, renewables, wind farms, burning fossil fuels efficiently such as Natural Gas or various Natural Gas / Hydrogen blends. Therefore it is important that the burners we supply now, to fire Natural Gas efficiently can also burn Hydrogen in the future with very minimal changes to burner settings.

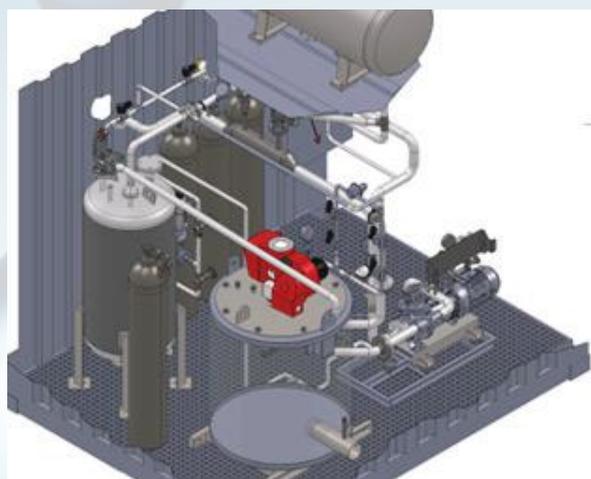
Please contact Limpsfield directly at [sales@limpsfield.com](mailto:sales@limpsfield.com) or via our website [www.limpsfield.com](http://www.limpsfield.com) or contact one of our Representatives all over the world as detailed on our Representation page on our website.



## Limpsfield Burners are 100% Hydrogen ready

### Case Report 1

A German company has developed a system where thermal oil is hydrogenated for safe storage and transportation. For this project, the hydrogenated thermal oil (LOHC) was generated in Erlangen and transported by truck to the Fraunhofer institute in Stuttgart. There the hydrogen was recovered by using a catalyst reactor technology. The hydrogen is used in a fuel cell to generate electric energy and in an Ascentec thermal oil system to heat up the catalyst reactor.



The main challenge for Ascentec was to find a small Hydrogen burner (50kW) capable of safely firing Hydrogen. They contacted us at Limpsfield because of our previous Hydrogen firing experience and due to our flexible approach to design. Limpsfield successfully manufactured a burner to meet this task.

### Case Report 2

One of our USA based customers, PVR Technical Services and a well known chemical company asked Limpsfield to design a burner that could operate efficiently on Natural Gas and burn their Hydrogen as a "free fuel" when their process made this gas available. Limpsfield took on this task and designed a twin gas combustion head to accommodate the different flame patterns and flame speeds via a simple change over switch without hardware changes.



Please contact Limpsfield at [sales@limpsfield.com](mailto:sales@limpsfield.com) or via our website [www.limpsfield.com](http://www.limpsfield.com) or contact one of our many Representatives all over the world as detailed on our Representation page on our website.



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