

## Graphic presentation of Helios

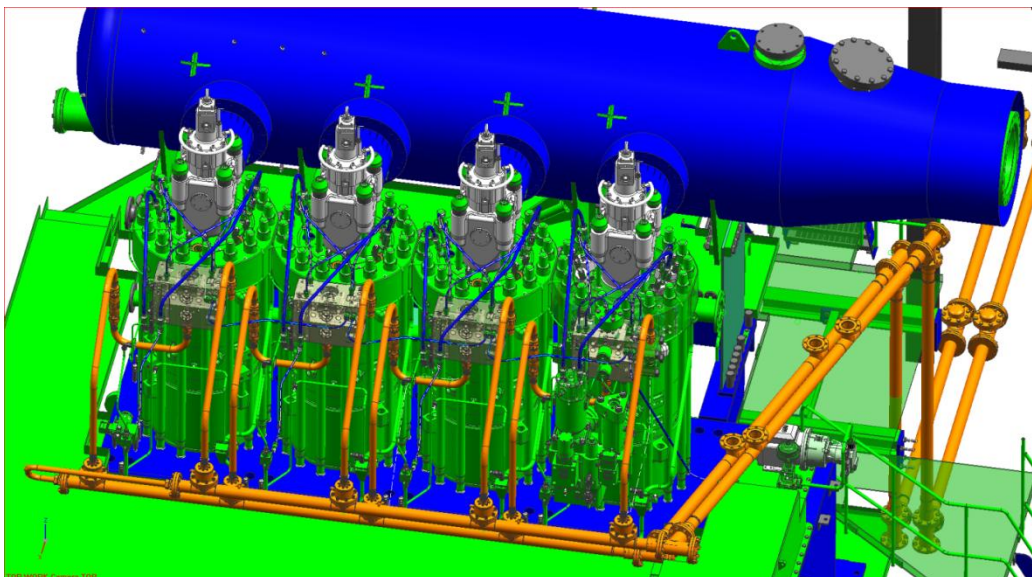
Many tests in Helios take place at the research platform (building in front) of MDT in Copenhagen:



Consortium:

Name	Type	Country
MAN Diesel & Turbo	Large company	Denmark
University of Erlangen	University	Germany
Germanischer Lloyd	Large company	Germany
Jönköping University	University	Sweden
Kistler Instrumente Wintherthur AG	Large company	Switzerland
Lund University	University	Sweden
Sandvik Powdermet	Large company	Sweden
TGE Marine Gas Engineering	Large company	Germany
Uppsala University	University	Sweden

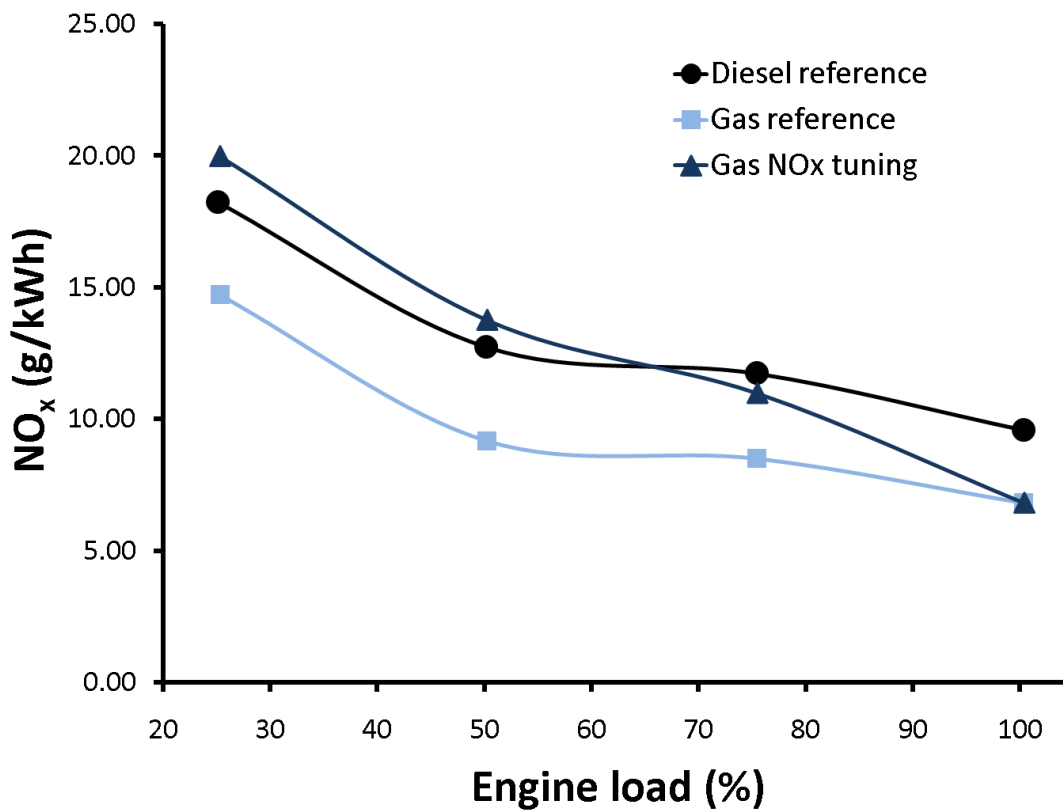
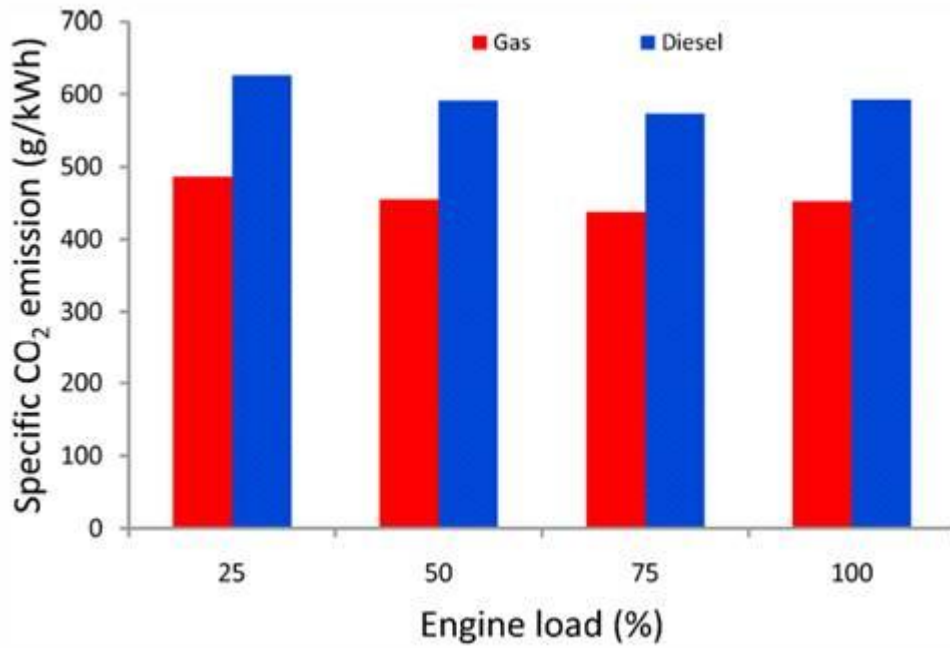
Sketch of the top of the cylinders showing the gas supply:



The Helios test results have been encouraging, as they confirm that the gas engine runs as a diesel engine and that the emissions are less than from diesel fuelling:

<i>Pollutant</i>	<i>Reduction</i>
<i>NO<sub>x</sub></i>	<i>24-30%</i>
<i>CO<sub>2</sub></i>	<i>23%</i>
<i>Methane</i>	<i>Large 0.2-0.3 g/kWh</i>
<i>CO</i>	<i>Significant</i>
<i>Smoke</i>	<i>Almost eliminated</i>
<i>SO<sub>2</sub></i>	<i>95% at 100% load Gas is SO<sub>2</sub>-free</i>

The reduction of emissions depends on the load. Below graphs show CO<sub>2</sub> and NO<sub>x</sub> reductions:



The handheld calibration device developed in WP6 to be patented:

