



## Job Description Template

<b>Job Title</b>	<b>Lead Engine Development Engineer</b>
<b>Objective</b>	To lead the development of the GyroSole thermal engine.
<b>Accountable to</b>	Development Programme Manager
<b>Responsible for</b>	All development activities associated with developing the GyroSole thermal engine from the present concept demonstration model to a full production model
<b>Working relationships</b>	Chief Technical Officer Solar Collection Development Engineer Thermal Development Engineer Electrical Power Development Engineer Control Systems Development Engineer
<b>Key result areas</b>	<p>Development and assembly of a 5 kW solar thermal demonstration system using commercial off the shelf parts.</p> <p>Development and construction of an Alfa prototype 25kW and 100kW engine assembly based on the prototype design document using the concepts developed by Dr Charles Bennett of Lawrence Livermore National Laboratories.</p> <p>Implementation of the LLNL (Bennett) harmonic valve system in the GyroSole engine.</p> <p>Documentation of the implementation design issues for inclusion in subsequent development models</p> <p>Documentation of trade secrets and intellectual property matters concerned with innovation in the development of the GyroSole engine</p> <p>Development and construction of a Beta Pre Production 25kW and 100kW engine based on the pre production design document, using the development lessons learned in the Alfa prototype phase.</p> <p>Input development lessons to the manufacturing design activity to ensure the design remains capable of cost effective production.</p> <p>Lead the criteria and selection process for engine manufacture partners/contractors</p> <p>Lead the technical aspects of the manufacture of the (first) production engine model(s) to ensure successful delivery of the first production engine(s)</p> <p>Produce operational, installation and commissioning, and maintenance documentation for demonstration, prototype and pre production engines.</p> <p>Oversee the production of documentation for the</p>



	production engine from engine manufacturer(s)..
<b>Key tasks</b>	<p>Build Demonstrator System</p> <p>Build Prototype engine</p> <p>Build Pre Production engine</p> <p>Manage build of production engine</p> <p>Provide reports as necessary to management staff</p> <p>Document intellectual property matters for input into patent material.</p> <p>Manage staff allocated to the engine design team.</p> <p>Manage engine related contractual relationships with suppliers, I&amp;C partners and maintenance partners.</p> <p>Additional tasks as may be directed by BridgeTech Industries LLC</p>
<b>Core skills</b>	<p>Engine mechanics for reciprocating and turbine engines systems</p> <p>In depth knowledge of small scale (under 200kW) steam engine systems</p> <p>In depth knowledge of thermodynamic principles of steam cycle engines</p> <p>Team player</p> <p>Ability to work without detailed supervision within the scope of a broad direction.</p> <p>Innovative and adaptable thinker</p> <p>Excellent English oral and written skills</p> <p>Extremely “hands on” capability. This person will actually be building the prototype and demonstrator engines; so the ability to use machine shop equipments (at the least lathes, pillar drills and bed grinding equipments) is essential.</p>
<b>Time Horizon</b>	Minimum 5 years.