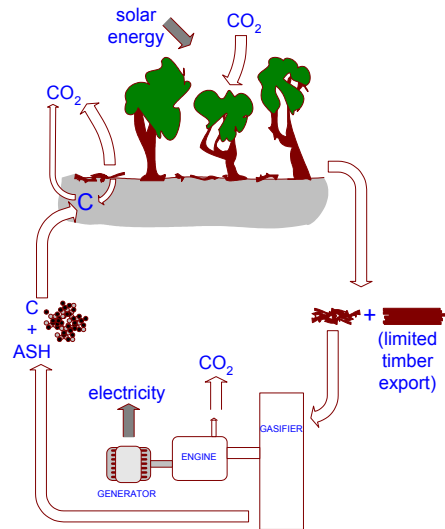


## The Technology

- High performance wood gasifier
- Suitable for driving internal combustion engines or for process heat applications
- Simple batch operation
- Dry scrubbing system
- Based on Fluidyne Gasification NZ Technology
- Developed and Manufactured in Australia



## Sustainable Electricity Production

Gasification Australia Pty Ltd has now commenced production of the 15 kWe Tasman Gasifier. This robust, high performance throated downdraft gasifier converts woody biomass into gaseous fuel suitable for driving internal combustion engines for motive power or on-demand electricity generation.

In off-grid and remote areas biomass gasification provides the opportunity for sustainable electricity production, allowing individuals and small communities the opportunity to de-couple from the ever-increasing cost of fossil hydrocarbon fuels.

## Cost-Effective

Tasman gasifier modules (rated to supply gas for existing power generators up to 15 kWe) start from as little as AUD \$26,500 and can be trailer or skid-mounted to get to where they are needed. Complete generator systems incorporating the gasifier with gas-engine and 15 kWe alternator are available from AUD \$35,000.

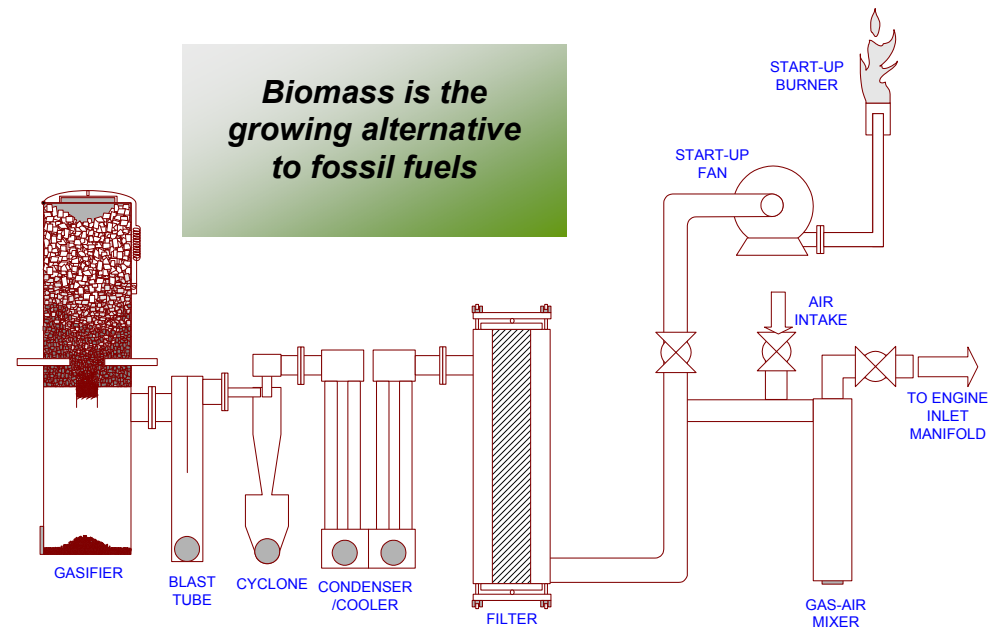
## Our Mission

- To present an integrated philosophy for sustainable forestry, energy production and carbon cycle management.

- To provide information and expertise on forest resource management and biomass gasification to the general public.
- To catalyse the practical uptake of sustainable biomass gasification systems for rural, industrial and vehicular applications through accessible gasifier technology.

## Other Services

Gasification Australia Pty Ltd has expertise in both gasification engineering and natural resource management. We can provide advice on biomass re-vegetation and sustainable harvesting programs as well as specialist engineering design and consulting services on downdraft and fluidized bed biomass gasifiers.



## Heat and Power From Wood

### Tasman Gasifier Specifications<sup>1</sup>

Original Design:	Fluidyne Gasification New Zealand
Gasifier type:	Throated downdraft gasifier
Operation:	Batch operated.
Footprint:	2.2 m x 0.9 m
Frame height:	1.4 m; excluding filter box and fuel hopper
Dry Weight:	580 kg
Fuel:	Wood from 20 to 50 mm mean size <sup>2</sup> .
Fuel feed rate:	Up to 20 kg per hour.
Reload rate:	Every 2 to 4 hours.
Cleanout rate:	After 20 hours run.
Filter changes:	After 20 hours run.
Gas cleaning:	Primary particulate removal via expansion box, baffle plate and cyclone system. Secondary particulate removal via dry gas filter utilising granular filter media. Gas cooling and moisture removal via condensing heat exchanger.
Gas output:	45 Nm <sup>3</sup> (maximum) per hour suitable for internal combustion engine with swept volume of approximately 3.0 litres and operation at 1500 / 1800 rpm.
Turndown ratio:	1:3
Gas	Approx. 5 MJ/m <sup>3</sup>

### Gas Composition (Fuel dependent; a guide only)

Component	Proportion
CO	20%
H <sub>2</sub>	19%
CH <sub>4</sub>	1%
CO <sub>2</sub>	9%
N <sub>2</sub>	51%
Tar	<80ppm

<sup>1</sup> Specifications are subject to change. Actual gasifier performance and gas quality will depend upon fuel characteristics such as density and moisture content, hence these data should be used as a guide only.

<sup>2</sup> Optimum size within this range will depend upon the characteristics of the proposed fuels and should be determined by testing



*Our vision is for a world where sustainable energy production meets responsible use; where biomass is valued for its energy contribution in a diversified energy market.*



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### Tasman Gasifier: Low-Cost 15 kW Wood Gasifier

