The new Power Pallet PP30 25 kW genset is a renewable power solution that is a sensible answer to a critical need for distributed low-carbon energy. With standard grid-paralleling functionality, Combined Heat & Power, engine enclosure, and emissions control, the new PP30 meets the needs of modern, demanding power standards.

APL's unique patented multi-stage gasification architecture, in combination with our innovative gasifier-engine thermal integration, electronic control system and waste-heat recycling, gives the Power Pallet unprecedented biomass fuel flexibility and efficiency.

The Power Pallet uses agricultural and forestry waste materials that can be readily sourced very near the point of generation. It is compact and portable, easily transported to where the fuel is and where the power is needed. Unlike diesel fuel or gasoline, this fuel is often available at little or no cost, and most importantly, depending on feedstock selection and use details, the Power Pallet is capable of carbon-negative operation.

**FUEL COST COMPARISON (VARIES by REGION)**

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Cost Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel/LPG</td>
<td>$0.25 - $0.75/kWh</td>
</tr>
<tr>
<td>Gasoline</td>
<td>$0.25 - $0.75/kWh</td>
</tr>
<tr>
<td>Gasified Biomass</td>
<td>$0.00 - $0.06/kWh</td>
</tr>
</tbody>
</table>
ALL Power Labs

APL is the global leader in small-scale gasification technology. We make biomass-fueled power generators that are ready for everyday work, to serve real-world, distributed-energy needs. Our compact gasifiers are now at work in over thirty countries, and support research at more than fifty universities around the world.

Our APL team is an unusual combination of hands-on fabricators and university-trained scientists and engineers. The result is a powerful combination of technical ability and physical know-how for developing innovative energy solutions.

We are deeply committed to supporting and developing biomass energy conversion by curating and disseminating comprehensive information and data on gasification science and technology—online, in workshops, and free open house events.

Our facility is in Berkeley, CA. Please contact us to arrange a visit the next time you are in the Bay Area. We would love to show you around.

WARRANTY

ALL Power Labs products are covered by a 100% money back guarantee. If you buy something & find yourself unimpressed with the value of the product or company, we’ll refund all your money (minus shipping costs) within 30 days of delivery. APL directly warrants all parts we manufacture (i.e. gasifiers, electronics, & related components) for two years or 4000 hours, & passes along the OEM warranty for parts we source & configure into our end products (e.g. engines & genheads). See http://allpowerlabs.com/products/warranty for full details.

GAS-MAKING SYSTEM

Gasifier Type: APL v5.x Patented Multistage Heat Recycling Downdraft
Materials: 304/310/321 SS / Mild Steel
Hearth: Coated Ceramic
Char-Ash Removal: Automated Auger to 16 hour batch vessel
Fuel Feed: Automated: Hopper to Reactor
Hopper Capacity: 333 liters (88 gallons)
Hopper Filling: Manual while operating Continuous Feed Gate (optional)
Control System: On-Board Automation
Flare: Clean Swirl Combustor Auto Ignitor / Manual Mixture

ENGINE

Type: Ashok Leyland: Hino-Toyota Design
Displacement: 4.0 liter
Cylinder Configuration: Inline 4 cylinder
Compression Ratio: 12:1
RPM: 1500 @50 Hz, 1800@60 Hz
Valve Configuration: Overhead, Pushrod
Engine Block: Cast Iron: Industrial Diesel Based Cylinders Lined for In-frame Rebuild
Pistons: Aluminum Alloy: Center Dished Ring-trench Inserts Prevent Sticking
Cylinder Head: Cast Iron Crossflow w/ Hardened Exhaust Inserts
Ignition: Electronic: ECU Controlled
Lube Oil Capacity: 8 liters (8.5 quarts)
Coolant Capacity: 15 liters (16 quarts)
Auto Shutdown: Low Oil Pressure High Coolant Temperature
System voltage: 12 VDC
Charging System: AC Genhead Switch-mode Charger
System Voltage: 12 VDC
Recommended Battery: Grp 24 Marine: 75Ah, 880 CCA
Auxiliary Components: Cooling Fans Water Pump
Auxiliary Parasitic Load: 850 Watt, 300 Watt w/o Radiator
Speed Control: Elect. Gov. Woodward L-Series
Automated Mixture Control Bosch Wide-Band O2 Sensor

GENERATOR

Type: Marathon 284CSL1542, 12 wire
AVR: DSE A106 MK II
Available Voltages: 120-277, 240-480 VAC
Available 3φ Topologies: Series or Parallel, Delta or Star
Total Harmonic Distortion: <5%
Efficiency: 92%
Motor Surge Starting Cap: >300%
Maximum Step-load: 50% of Rated Power

All specifications are subject to change without notice.