Creating Renewable Heat for Future Generations

....Today

1. Feed auger and Grate
2. Recirculation Gas
3. Primary Air
4. Secondary Air (Rotary)
5. De-ashing system
6. Ignition fan
7. Rotary combustion chamber
8. Triple pass heat exchanger
9. Induced draft fan
10. High Density Insulation
For over 12 years, Fink Machine has been servicing British Columbia, and other provinces as well as installations in the US. Fink Machine has successfully completed KOB Biomass boiler installation projects large and small with utmost customer satisfaction. Our expertise, honed by a decade of experience and dedication includes commercial, institutional facilities, and multi-million dollar industrial based developments. Fink Machine’s mission is to provide cost savings to their customers by delivering reliable, cost competitive, clean energy solutions that maximize savings. We consult, design, supply, install and service a turnkey Biomass system that can also integrate seamlessly with our customer’s existing operations.
At Fink Machine, our KOB wood biomass boilers are designed to be very easy, simple, automated and requires low operator maintenance schedules. The KOB system is automated from the self feed wood fuel supply to the ignition chamber and automated feed to ash bins. A truly push button, automated system that can also be monitored remotely from an off site office.

Features that make us stand out above the crowd are:
• automated auger chip feeder
• precisely modulated mixture of combustion air, recirculated flue gases and fuel
• clean combustion with pneumatic boiler tube cleaning system
• automatic de-ashing
• flue gas deduster
• back-burn inhibiting system
• automatic fire extinguishing system
• easy access for routine maintenance
• ASME / CSA with 30 & 60 psi vessels Approvals across Canada
Biomass Energy results in no new net GHG emissions as it is part of the carbon cycle. Unlike coal and others forms of fossil fuel which have been buried millions of years ago and burning them adds to carbon in the atmosphere, responsible wood biomass energy generation results in no new carbon emissions or pollution. Fink Machine's KOB Biomass boilers utilizes wood pellets, wood chips, wood waste as its source of energy. Wood is a renewable resource and these wood by products are a very economical source of fuel compared to fossil fuels and electric heat. Unlike other forms of renewable energy like solar and wind power, Biomass can produce energy 24/7 continuously if required.

BC Ministry of Environment has completed emissions testing in Lillooet, BC with 43 mg/m3 (.05 lb/MMBtu) and recognizes the KOB boiler as a very safe application concerning community air quality. For GVRD 1190 Air Quality Bylaws in Metro Vancouver, metal web filtration achieve < 18mg/m3 (.02 lb/MMBtu) for particulate affordably.

Utilize Renewable Energy

The B.C. Ministry of Forests and Range commissioned an alternate energy heating system at the Kalamalka Forest Research Station in Vernon B.C. The Fink Machine high efficiency heating wood Biomass pellet boiler system was the selected proponent to provide a wood Biomass system. The Fink system greatly mitigated greenhouse gas emissions for the administration building and adjoining green houses from their previous natural gas boiler system. The project is also combined with a solar power thermal heating system that is seldom utilized.

Keep a Watchful Eye Around Environment!

Metal Web Filter offered by Viessmann. This gets the particulate matter PM 2.5 down to 15 mg/Nm3.
The community of Enderby, B.C. has realized the benefits of renewable energy starting first with their hookup to the Fink District Energy heating system heating the community’s swimming pool. The township then installed their own wood biomass heating system at their public works yard. This system not only heats the public works building but also is heating the City’s sludge drying beds, wood waste shed and future plans to heat the local dog pound. When connecting new city buildings to the existing system, there is no need to purchase new boilers or furnaces in new developments.

Fink Machine assists the client in designing a cost efficient wood Biomass boiler system. We assist in determining the client’s heating needs and the size of the Biomass boiler required to meet their anticipated heat demand. This consultation process defines the vision, scope of work and expectation of the project. Fink Machine also provides the customer with the projected cost and more importantly the payback costs and time line of their investment in a KOB system. Based on previous history, KOB systems that have replaced oil, electricity and propane systems have a payback average of three to seven years depending on the system and design.
Wood Biomass Systems Equals Cost Savings

Economics: A KOB boiler installation can achieve < 10 year paybacks. Space Heating, Domestic Hot Water & Process Heat separate or combined can be 50-70% of a buildings entire energy consumption. 1 heating system 50-70% of your envelope becoming carbon neutral. Further, switching to biomass energy creates pricing stability and a perpetual savings in cost of energy vs:

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Cost/kWh</th>
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<tbody>
<tr>
<td>Wood Biomass</td>
<td>1 – 4 cents/kWh</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>2.75 – 6 cents/kWh</td>
</tr>
<tr>
<td>Propane</td>
<td>5.5 – 11+ cents/kWh</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>6.8 – 8.5+ cents/kWh</td>
</tr>
<tr>
<td>Diesel Fuel</td>
<td>7.5 – 10+ cents/kWh</td>
</tr>
</tbody>
</table>

Environmental: Wood biomass according to Pacific Carbon Trust, Carbon Trust UK and EPA state that for every 1 kWh of energy consumed the following energy sources produce X kg of CO2e in GHG emissions. The “e” is an equivalency to Carbon Dioxide for other elements in the gas stream (e.g. Carbon Dioxide =1, Methane = 23, NOX = 296, SF6 = 22,200)

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>CO2e/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Pellets</td>
<td>.039 kg CO2e/kWh</td>
</tr>
<tr>
<td>Natural Gas (Methane)</td>
<td>.1773 kg CO2e/kWh</td>
</tr>
<tr>
<td>Propane</td>
<td>.214 kg CO2e/kWh</td>
</tr>
<tr>
<td>Diesel</td>
<td>.253 kg CO2e/kWh</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>.266 kg CO2e/kWh</td>
</tr>
</tbody>
</table>

Wood Energy in conjunction with Viessmann-KOB & Fink Machine Inc. is renewable energy with an actual return on investment for the environment and the ledger.
Service Orientated

Fink Machine is About Service!

We pride our Service on highly competent and efficient people who provide utmost customer satisfaction. Backed with professional administrative support staff and our dedication of performing both on-site and off-site aspects of the job, Fink Machine is able to deliver the highest quality with a high standard of customer satisfaction.

Fink Machine The Right Choice!

Choose Fink Machine for your next wood Biomass boiler project. Fink Machine is Canada’s proven expert in wood Biomass technology and can meet all your needs from commercial, industrial and institutional boiler installations.

New Generation Technology

Energy Efficient ....Today
Built on over a twelve years of experience with wood Biomass boilers in North America, Fink Machine has the reputation of being in the forefront when it comes to design, supply, installation and most importantly .... Service!

Fink Machine’s Biomass installation team is very knowledgeable and professional having proven themselves time and again with over 60 quality installations in Canada and in the United States.

We understand the importance of comprehensive consultation with our clients on our KOB wood biomass systems to achieve our ultimate goal which is our customer’s satisfaction. This has been our mission and goal since we started business. Please do not hesitate in contacting us to arrange a presentation or demonstration of our KOB wood biomass systems.

Our Clients

Huber Furniture
Fraser Wood Industries
Island Hot House
Madens Custom Furniture
Structurlam #1
Structurlam #2
Harney District Hospital
Ecco Waste System
New Meadow
French Language School
St. Joesph School
Nazko School
Spring Valley
Min of Forest-Kalamalka Research Station
Arctic Green Energy
SDBA
Public Arena
CJB School

Vernon, BC
Squamish, BC
Ladysmith, BC
Edmonton AB
Penticton, BC
Okanagan Falls, BC
Burns, Oregon
Calgary, AB
Farmington, PA
Wellinton, PEI
Yellowknife, NWT
Queensel, BC
Farmington, PA
Vernon, BC
Yellowknife, NWT
PEI
PEI
Yellowknife, NWT

University of the North
Min of Agriculture
Marlborough School
Oakland University
New Meadow Run
DOT
PWK School
Thebacha College
Health Center
Central Heating Plant
Baling facility
Camrose County
Westile School
Ecco Waste system
Arrow Fire Zone
Lillooet Recreation Centre
Fink District Heating
Yellowknife Airport Terminal
Yellowknife Airport Services

Princeton George, BC
Indian Head, Sk
Marlborough N.H.
Rochester, MI
Farmington, PA
Hay River, NWT
Hay River, NWT
Hay River, NWT
Hay River, NWT
Hay River, NWT
Yellowknife, NWT
Camrose, AB
PEI
Calgary, AB
Castlegar, BC
Lillooet, BC
Hay River, BC
Yellowknife, NWT

Westbank First Nations
Bechoko District Heating
City of Enderby
Elizabeth Mackenzie
Athena School
Anderson Thompson
Deh-Gah School
Teelt’it Gwich
Cheesh’na Tribal Council
Tappen Vale Farms
Western Hospital
Summerside School
Cowichan Lake Secondary
Kenny Lake School
Hay River Health Center
City of Yellowknife
District of Barriere

West Kelowna, BC
Enderby, B.C.
Rae, NWT
Summerside, PEI
Yellowknife, NWT
Fort Providence, NWT
Fort McPherson NWT
Alaska
Sorrento, BC
Alberton, PEI
Summerside, PEI
Cowichan, BC
Kenny Lake, Alaska
Hay River, NWT
Yellowknife, NWT

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