

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 09-0162	Issue Date:	CBL: 398 B016001
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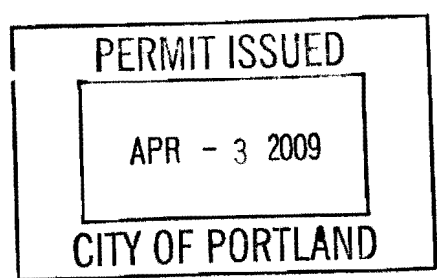
Location of Construction: 661 ALLEN AVE	Owner Name: FOWLER-GREAVES STEVE & JE	Owner Address: 661 ALLEN AVE	Phone:
Business Name:	Contractor Name: Robert Blanchard	Contractor Address: 39 Mountain Road Biddeford	Phone:
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R5

Past Use: Single Family Home	Proposed Use: Single Family Home - Install EkoVimar Wood Gasification Boiler in Outbuilding/Utility Room	Permit Fee: \$80.00	Cost of Work: \$5,500.00	CEO District: 4
Proposed Project Description: Install EkoVimar Wood Gasification Boiler in Outbuilding/Utility Room		FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: K3 Type: HVAC Signature: JRC 2003 Signature: DM 4/20/09	
		PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____		

Permit Taken By: lmd	Date Applied For: 03/04/2009	Zoning Approval
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- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

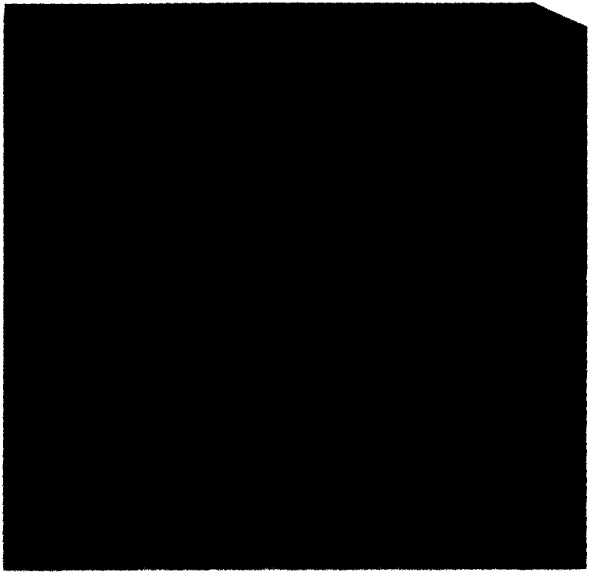
Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 4/2/09	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date: _____	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input checked="" type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: 4/2/09
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SCANNED

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



TUV

0720248342584

EGH

[
European U[#] conversion #
will be converted
and emailed to Jeanis B.
waiting for ^{EMISSIONS} certificate

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 09-0162	Date Applied For: 03/04/2009	CBL: 398 B016001
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Business Name:	Contractor Name: Robert Blanchard	Contractor Address: 39 Mountain Road Biddeford	Phone:
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Single Family Home - Install EkoVimar Wood Gasification Boiler in Outbuilding/Utility Room	Proposed Project Description: Install EkoVimar Wood Gasification Boiler in Outbuilding/Utility Room
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Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Tom Markley **Approval Date:** 04/02/2009

Note:**Ok to Issue:**

- 1) This is NOT an approval for an additional dwelling unit. You SHALL NOT add any additional kitchen equipment including, but not limited to items such as stoves, microwaves, refrigerators, or kitchen sinks, etc. Without special approvals.
- 2) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
- 3) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Tom Markley **Approval Date:** 04/02/2009

Note:**Ok to Issue:**

- 1) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm or HVAC or exhaust systems. Separate plans may need to be submitted for approval as a part of this process.
- 2) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
- 3) Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules

Comments:

3/5/2009-lmd: Received permit on 3/3/09, waiting on UL listing number, and emissions certification. I allowed an extension until March 31, 2009 for the removal or abandonment of the Big Johnson Wood Boiler that was denied.

3/5/2009-jmb: Emailed Alisa Schumacher for pdf doc as the doc she sent is corrupted or not the proper format

3/10/2009-jmb: Emailed Alisa S. Again for the documentation. Application is on hold and will not be routed for review until this information is received.

3/30/2009-jmb: Steve F-G came in and submitted certificate information. It does not specifically state that it is for emissions standards, so I googled the # and it does provide specific calculations. I do not know what the state standard is so I left a vcmg with Fred Hagan at the DEP (822-6315)

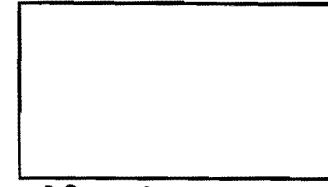
3/31/2009-jmb: Spoke with Fred Hagan of DEP, discussed European Certificate and the type of boiler to be installed. He thinks this system does not fall under DEP emissions standards. It is a wood fired boiler, no different than a wood stove. He would like to inspect when installed.

4/8/2009-jmb: Spoke to Steve F., he has verified that he has abandoned firing the Big Johnson system as of April 1 and will call for an inspection when this one is installed. It could be several weeks.



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



398-B-016

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 398-13-016 Use of Building Outbuilding / Utility ^{Permit} Date 3-3-09
 Name and address of owner of appliance 661 Allen Ave
Portland me 04103
 Installer's name and address ROBERT Blanchard 39 McLean Rd
BLADEFORD ME Telephone _____

<p>Location of appliance:</p> <p><input type="checkbox"/> Basement <input type="checkbox"/> Attic <input checked="" type="checkbox"/> Floor <u>out building utility room</u> <input type="checkbox"/> Roof</p> <p>Type of Fuel:</p> <p><input type="checkbox"/> Gas <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Solid <u>MAR - 3 2009</u> <u>EKO Vimar wood gasification</u></p> <p>Appliance Name: <u>Boiler</u></p> <p>U.L. Approved <input type="checkbox"/> Yes <input type="checkbox"/> No <u>TUV 072024834258486H</u></p> <p>Will appliance be installed in accordance with the manufacture's installation instructions? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>IF NO Explain: _____</p>	<p>Type of Chimney:</p> <p><input type="checkbox"/> Masonry Lined Factory built _____</p> <p><input checked="" type="checkbox"/> Metal Factory Built U.L. Listing # _____</p> <p><input type="checkbox"/> Direct Vent Type _____ UL# _____</p> <p>Type of Fuel Tank</p> <p><input type="checkbox"/> Oil <input type="checkbox"/> Gas <u>wood</u></p> <p>Size of Tank _____</p> <p>Number of Tanks _____</p> <p>Distance from Tank to Center of Flame _____ feet.</p> <p>Cost of Work: \$ <u>5,500.00</u></p> <p>Permit Fee: \$ <u>80.00</u></p>
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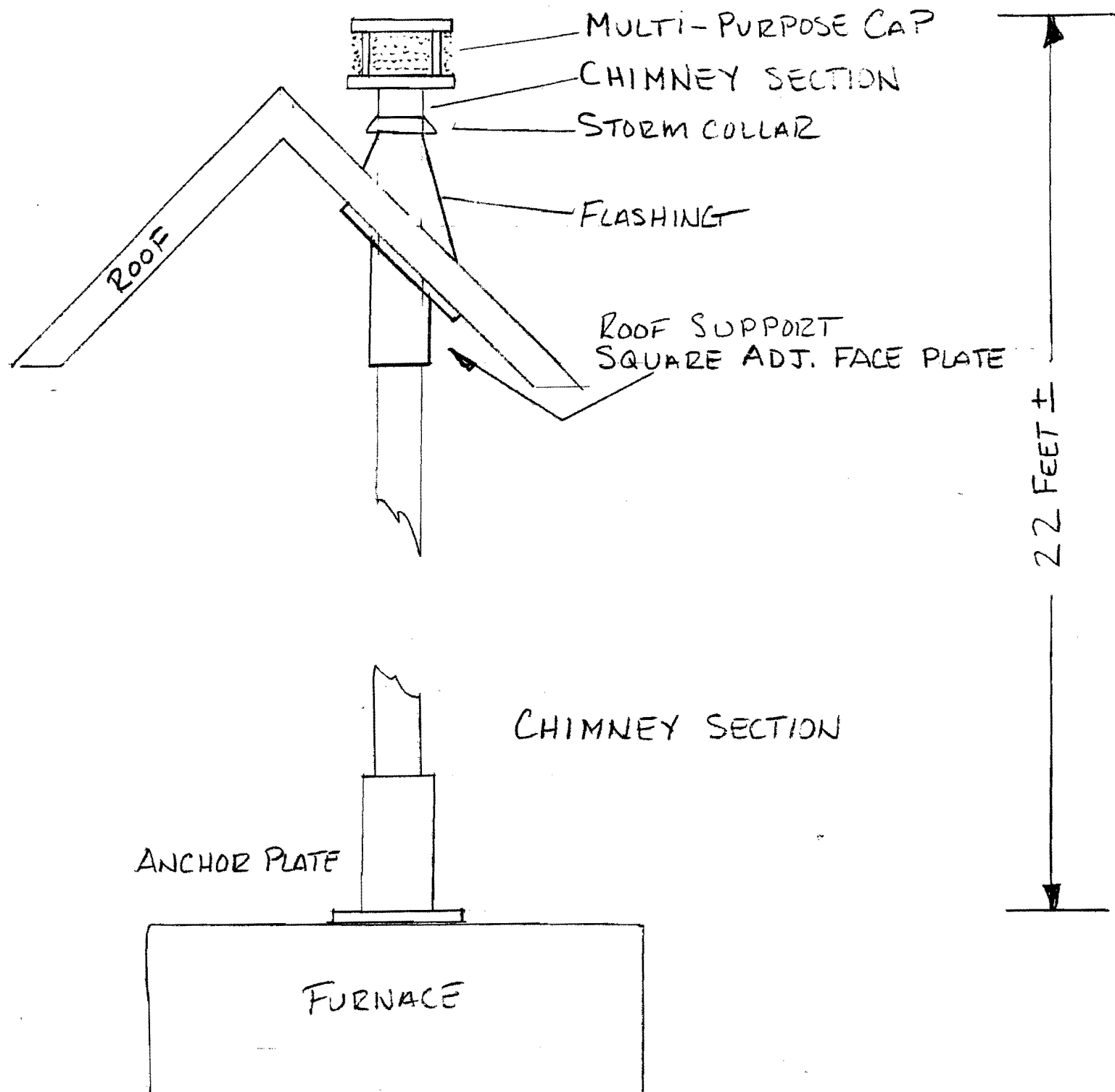
Approved	Approved with Conditions
Fire: _____	<input type="checkbox"/> See attached letter or requirement
Ele.: _____	
Bldg.: _____	
Signature of Installer <u>[Signature]</u>	Inspector's Signature _____ Date Approved _____

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

6661 ALLEN AVE

10/16/2007

PROPOSED STOVE PIPE INSTALLATION



From: Jeanie Bourke
To: Alisa Schumacher
Date: 3/10/2009 8:37:01 AM
Subject: Fwd: Re: Fw: Boiler Certifications

Hi Alisa,
I was concerned that you may have not received this email. Can you please send a pdf of the certificate and the corresponding UL # to the European TUV.
Thanks

>>> Jeanie Bourke 03/04 8:28 AM >>>

Hi Alisa,
Thanks for the prompt delivery of this documentation.
We are not able to open it in this format or it may be damaged, can you please resend as a pdf or word doc.
Thankyou

Jeanie Bourke
Code Enforcement Officer/Plan Reviewer

City of Portland
Planning & Urban Development Dept./ Inspections Division
389 Congress St. Rm 315
Portland, ME 04101
jmb@portlandmaine.gov
(207)874-8715

>>> Alisa Schumacher <ahona072002@yahoo.com> 03/03 12:07 PM >>>

Dear Jeanie Bourke,

Attached please find an certificate data for the EKO Wood Gasification Boilers.
We were requested to send you this documentation by Steve, a business Partner of one of our Dealers Greg Provost of Thick N Thin Lumber.

Please note these certification certificates for TUV exceed quality standards of the US, as European standards for gasification boilers have been in place for more than 2 decades,while the US Manufacturing sector is still new to gasification designs. Thus, the importation of Tarm, EKO, Atmos etc.

UL is the registered certification Mark of Underwriters Laboratories Inc. They are an independent product safety testing and certification organization. The mark is recolonized worldwide as well as TUV.

TUV is also an independent testing lab like UL. They are just a German version of UL, located in Hamburg, Germany. German safety standards are superior to US standards in many ways...as their technology in the gasification is world renown....and what all companies worldwide strive for.

Should you have any questions regarding the attached documentation, please feel free to call Mark Schoellig, CEO of Alternative Heating of North America (AHONA)at (607) 965-8101 or cell phone (607) 435-4753.

Thank you,

Alisa Schumacher

CC: Greg Provost- Thick N Thin Lumber Sales, Inc., Authorized Dealer

Alisa A. Schumacher
Alternative Heating of North America
Subsidiary of Grow & Bloom, Inc.
Office Telephone(607) 965-8101
www.ahona.com

----- Forwarded Message -----
From: Alisa Schumacher <ahona072002@yahoo.com>
To: JMD@PortlandMaine.gov
Cc: thknthn@verizon.net
Sent: Tuesday, March 3, 2009 10:05:46 AM
Subject: Boiler Certifications

Hello,

Attached please find the certification information for Mr. Greg Provost's Customer that is looking to install the EKO Model 80 Gasification Boiler.

Unfortunately, we did not receive the gentleman's name from the Dealer, so hopefully this will be easy for you to reference.

If you have any questions or require anything additional, please do not hesitate to contact Mark Schoellig at our office number (607) 965-8101.

Enjoy your day.
Sincerely yours,
Alisa Schumacher

CC: Greg Provost (Dealer) Thick N Thin Lumber Sales, Inc.

Alisa A. Schumacher
Alternative Heating of North America
Subsidiary of Grow & Bloom, Inc.
Office Telephone(607) 965-8101
www.ahona.com

CC: Lisa Danforth

CERTIFICATE

Quality- Assurance System
according to directive 97/23/EC

MAR 25 2008

Certificate No.: 07 202 4834 Z 5848/6/H rev. 1

Name and address of bearer: EKO-VIMAR ORLANSKI
ul. Nyska 17b
PL-48-385 Otmuchów

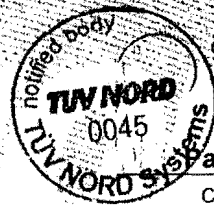
We hereby certify, that the manufacturer has established a quality system for the manufacturing of pressure equipment according to directive 97/23/EC. The manufacturer is entitled to mark the pressure equipment produced within the range of the quality system with the following mark:

CE 0045

Tested according to 97/23/EC: full quality assurance (module H)
Test report No.: 4834 P 5848/6/1
Range of products: Heating boilers for solid fuels (wood), acc. to EN 303-5
nominal heat output of 14 to 80 kW
Place of manufacture: ZP1: ul. Warszawska 20
PL-48-385 Otmuchów
ZP2: ul. Miru 371
CZ-79070 Javornik
valid until: September 2009

Katowice, 25.06.2008

TUV GERT- Zertifizierungsstelle
für Druckgeräte
der TUV NORD Systems
GmbH & Co. KG



[Signature]
Pawel Kaczmarek, Dipl.-Ing.
Certification Body EC-Reg No. 0045

TUV NORD Systems GmbH & Co. KG Tel. +48 32 207 30 29
Größe Bahnstr. 31 Fax +48 32 207 30 63
D-22525 Hamburg e-mail p.kaczmarek@tuv-nord.pl
Germany,

Member of



Certificat no. Rev. 1, 01.00



TEST REPORT No. 39-5188/T

Product: Hot water boiler burning wood

Type designation: ORLAN 80

Versions: -

Customer: EKO-VIMAR ORLAŃSKI
ul. Nyska 17 B
48-385 Otmuchów
POLAND

Manufacturer: EKO-VIMAR ORLAŃSKI
ul. Nyska 17 B
48-385 Otmuchów
POLAND

Responsible employee: Ing. Aleš Onderek

Report issue date: 2005-11-10

Distribution list: 1 copy to the Engineering Test Institute
1 copy to the Customer

APR - 1 2009

*Janis downloaded
off website*



Annex – photo-documentation

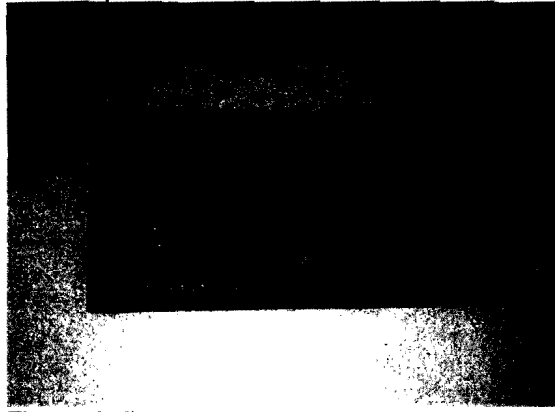


Fig. 1: - boiler controls



Fig. 2 - overall view of the boiler



Fig. 3: - combustion air fans

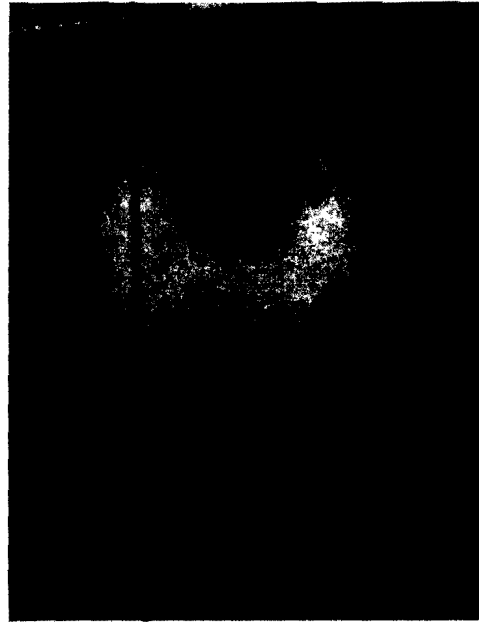


Fig. 4: - view of the boiler combustion chamber

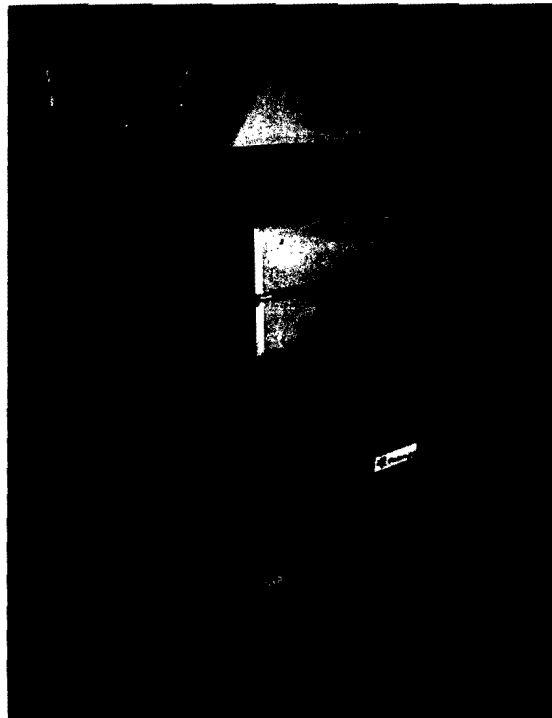


Fig. 5: - overall view of the boiler (with a combustion chamber test door and covered fan)

APR - 1 2009

Jeanine downloaded off website.

Issues

CERTIFICATE

number: **B-30-00751-07**

to the importer: EKO-VIMAR ORLAŇSKI
ul. Nyska 17b, 48-385 Otmuchów
Póland

for the products: Hot Water Boilers for Burning Wood with Hand Refuelling
type designation: ORLAN .. STANDARD (SUPER)
variants: ORLAN 25, (40, 60, 80) STANDARD
ORLAN 25, (40, 60, 80) SUPER

The Engineering Test Institute certifies hereby conformity of the said product sample properties with applicable requirements of

ČSN EN 303-5:2000.

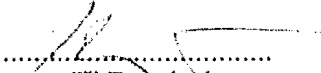
Boilers fulfill requirements of class 3.

The certificate has been issued on the basis of Final Report No. 30-7354 dated 2007-10-29, issued by the Engineering Test Institute.

The guidelines for handling the certificate are stated on page 2.

Brno 2007-10-29




Jiří Rozsival
Deputy Director

TUV NORD

CERTIFICATE

Quality Assurance System
according to ISO 9001
certification of ISO 9001

Manufacturer address of plant

We hereby certify that the installation of
of heating equipment according to drawing
heating equipment produced within the scope of the

CC 0045

Tested according to 97/23/EC:
Test report No.
Range of products:
Place of manufacture:
valid until:

Full quality assurance system
4834 P 8849/01
Heating boilers for solid fuel plants
ul. Wyszynska 10
PL-43-200 Gostynin
September 2002

Valid until 13.09.2002

TUV NORD



TUV NORD Group & Co KG
Unit 1, 2, 3, 4
D-42699 Solingen
Germany

Tel: +49 (0) 212 247-2100
Fax: +49 (0) 212 247-2200
e-mail: info@tuv-nord.de



Alternative Heating Of North America

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CORPORATE HISTORY [#2](#)
LOCATION [#3](#)
CONTACT US [#4](#)
SHOW DATES [#5](#)
CURRENT PROJECTS [#6](#)
DEALERS ONLY [#7](#)

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PRODUCTS - EKO INDOOR RESIDENTIAL FURNACES

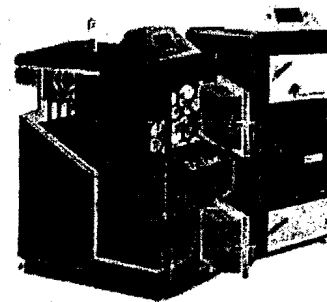
EKO Line boilers provide a convenient, safe and environmentally friendly way to heat your home and domestic hot water with wood. EKO boilers assure the independence and self-reliance that heating with wood provides.

Because the boilers use wood gasification combustion, they give unusually high overall heating efficiency. They use substantially less wood than conventional boilers and outdoor water stoves with no visible smoke when fully operating.

EKO boilers burn so clean, they are safer (virtually no risk of a chimney fire) and result in cleaner air for everyone. They also help to substantially reduce greenhouse gas emissions. EKO Line boilers enable you to increase the warm security of your home in a safe, environmentally responsible way.

Learn about
**Wood Gasification Process
&
Wood As A Fuel**

[Click HERE](#)



Boiler Specifications (pdf files)

- **Construction**
- **Dimensions**
- **Sizing**
- **Controls & Assembly**
- **Installation**
- **Additional equipment**

**Video Clip of Eko Line
Boiler Combustion**

**Video clip of Eko Line
Boiler Air Flow**

Boiler construction - its elements

- Sealed wood gasification chamber that is simultaneously used as a loading chamber. When appropriate amount of primary air supplied by the pressure fan is delivered, wood gas is generated
- A nozzle, made of refractory concrete, mixes wood gases with the secondary air and a flammable mixture is produced that undergoes self-ignition at about 1000° F
- Exhaust reheat space - the main combustion chamber, where temperature reaches about 2000° F serves also as an ash pit
- A smoke tube heat exchanger (flue gas to water) heats up the installation water
- A fan that communicates with the microchip controller monitors the quality of the whole burning process
- Safe guard thermostat - each boiler is equipped with an additional safe

guard thermostat, which switches off the fan while the water gets up to 180° F

- Steel turbulators in heat exchanger tubes provide turbulent flue gas flow, which results in low flue temperature

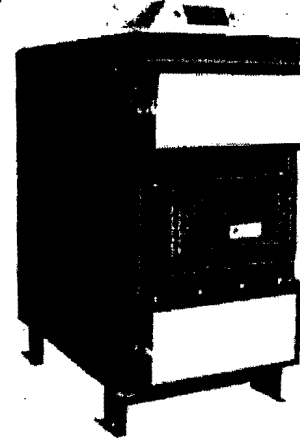
Boiler construction - materials

- Boiler body - boiler casing is made of welded metal sheets that are 1/4" thick
- Heat exchanger - smoke tub heat exchanger made of tube with a 2" diameter
- Insulation - boiler thermal insulation is composed of glass wool of Nobasil 1" thick, while the external casing consists of metal sheet panels 0.8mm thick (powder painted)
- Nozzle - ceramic element made of refractory concrete (working temp. up to 2100° F)
- Chimney flap - made of high quality steel. Tight flap adhesion to the combustion duct assures the burning chamber tightness
- Boiler regulator - placed on upper boiler cover. The regulator is fixed to the boiler cover by spring catch
- Chimney flue - 8 or 10" diameter, depending on the size of the boiler
- Ash pit - steel bottom of the burning chamber, ceramic ash pit (working temp. 2100° F) and additionally covered by refractory concrete
- Boiler door - produced of high quality steel, insulated with Nobasil thermal insulation and inside covered by refractory concrete layer. Also protected with heat-resisting fiberglass cord

EKO advantages

Orlan boilers are manufactured as ORLAN SUPER with cooling coil and mechanical cleaning device:

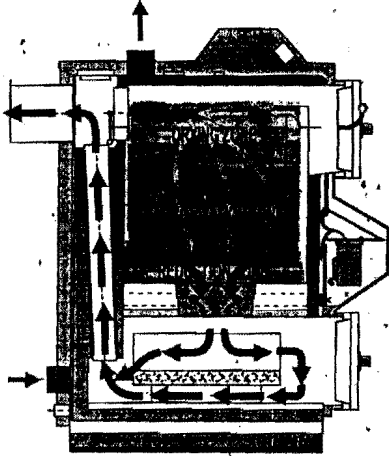
- Efficiency 91%
- Low service costs
- Easy and simply maintenance
- Small quantity of ash
- One load lasting from 8 to 12 hours
- Power range from 85 kBtu up to 275 kBtu
- Output power modulation from 40 to 100%
- Adapted for closed (pressurized) system
- Equipped with electronic regulator and room temperature sensor
- Nature friendly
- Made from boiler steel



Wood gasification proces

Gasification process in our central heating boiler is divided into 4 stages:

1. Drying and release of wood gases inside the loading chamber in slow glowing process.
2. Burning of gas mixture with secondary air in the lower chamber at 2200°F.
3. Flame reheating and heat exchange.
4. Combustion gases ejecting through chimney flue. **The best indicator of successful wood gasification is the lack of smoke exiting the chimney.**



Burning Zones

Wood as a fuel

Wood is a renewable resource like solar, water, or wind power. They are all energy sources, which never become depleted, unless improperly managed. Wood is also a fuel, which may be stored and preserved without energy loss. Wood storing reduces its humidity and simultaneously increases its heating value (energy volume, which may be used up during burning process).

Modern boilers utilizing wood in gasification processes use energy contained in wood with efficiency that is three times higher than traditional boilers. Smoke and other emissions are cut to a very low level, making our boilers very nature friendly.

ORLAN boilers are adapted for burning of any kind of wood ranging from sawdust to chunks of wood. The best way to achieve recommended wood humidity is to cut the timber during springtime.

STAGE 1
Wood drying and breakdown into gases

STAGE 2
Burning of mixed wood gases with secondary air

STAGE 3
Releasing heat through heat exchanger

STAGE 4
Ejecting combustion gases through smoke stack

Best humidity for gasification should be in 20% range.

Wood too dry (less than 15%) or too wet (more than 25%) will reduce boiler efficiency.

Raw wood humidity ranges from 60% (wood cut in winter) to 80% (cut in summer). Most favorable wood humidity is obtained after 12-18 months of storing.

is preferable to have a non-electric dump zone valve.

- A primary loop pump must feed all zones.
- Each boiler should be connected to the heating capacity which equals that of the boiler output.
- To protect the boiler against low-temperature corrosion the end-user should assure return temperature does not reach lower than 120F. One way to do this is by installing a four-way mixing valve.

Installation

Orlan EKO boilers are designed to conform to and be installed in accordance with the stringent European regulations known as PN 87/B 02411 and PN 91/B-02413. When installed in the United States, all applicable local codes and regulations should be observed.

Location, Location, Location

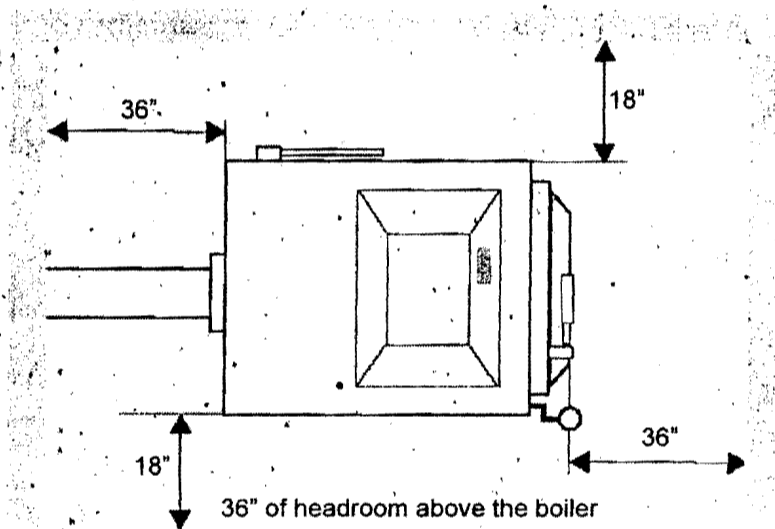
You will need to have adequate room around the boiler for installation, operation, cleaning and maintenance. You will need plenty of room for loading the boiler and emptying the ash bin and room to use the cleaning tools provided. You also need adequate clearances from combustibles. The distance between the boiler and the surrounding walls should be sufficient to allow access to all of the boiler's parts, as specified in the clearance diagram below. The boiler must be positioned to provide minimal clearances from combustibles and surfaces: Left and right side = 18," top, rear and front = 36."

The boiler can be placed in a utility room, basement or outbuilding, along with wood storage. Putting the boiler in an outside location is recommended for easy access to wood storage, and to keep the mess and flame out of the house.

The boiler must be located on a level concrete floor or an other non-flammable surface. Wood gasification boilers are heavy; be sure to consider the weight when planning the installation.

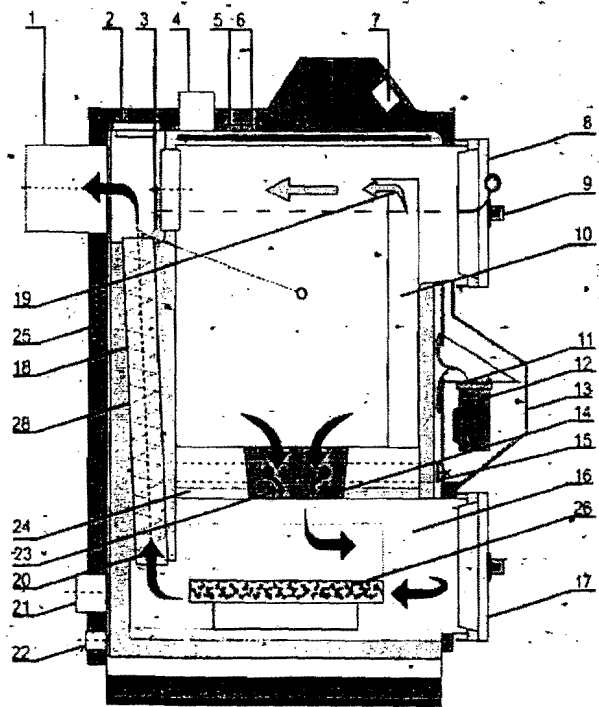
Combustion Air

The boiler requires fresh air for combustion. It is critical not to starve the boiler of air, as the air supply affects the quality of the burn as well as the strength of the chimney draft. If any fans are used in the room where the boiler is located, they should be installed so as not to create negative pressure, i.e., they should not be pulling air from the room. Likewise, you do not want too much positive air pressure, as it can cause the boiler to burn out of control. You may need to pull outdoor combustion air into the room if there are backdrafts, insufficient draft or improper combustion, among other problems. You can easily check this by opening a window or door to see if the problem goes away.



Recommended clearances.

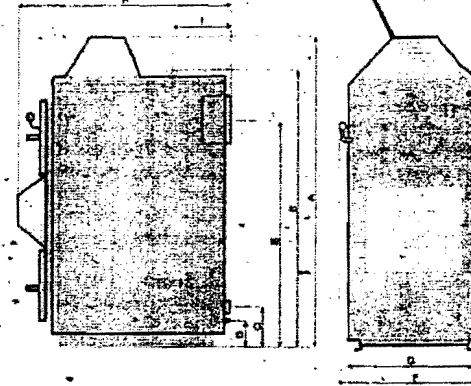
Boiler construction



- 1. Chimney flue outlet
- 2. Heat exchanger cleaning cover
- 3. Chimney flap
- 4. Hot water exit
- 5. Thermometer sensor
- 6. Safe guard thermometer sensor
- 7. Boiler controller
- 8. Upper door
- 9. Closing/opening door handle
- 10. Loading chamber (wood gasification)
- 11. Fan flap
- 12. Fan
- 13. Fan casing
- 14. Nozzle (refractory)
- 15. Secondary air adjustment
- 16. Combustion chamber
- 17. Lower door
- 18. Smoke tube heat exchanger
- 19. Primary airflow
- 20. Flue gas exit
- 21. Heating water entry
- 22. Drain valve
- 23. Secondary airflow
- 24. Water grate
- 25. Thermal insulation
- 26. Ash pit

Boiler construction

Boiler dimensions



Boiler dimensions scheme

Boiler type	45	60	80	100
Power range	85	137	205	275
Weight	1280	1390	2070	2712
Height	51.5	69	60.5	60.5
Height of chimney	48.5	56	56.5	56.5
Height of heating water entry	8.3	6.0	7.9	7.9
Height of chimney flue	5.1	2.7	5.1	5.1
Height of chimney	37.4	50.0	45.7	45.7
Width including casing	24.8	24.8	30.3	30.3
Width including casing	23.6	23.6	29.1	29.1
Depth	41.1	41.1	53.5	52.7
Hot water outlet	12.6	12.6	24.0	24.0
Temperature	7.8	7.8	8.2	8.2
Diameter of boiler exit	2.0	2.0	2.0	2.0
Diameter of boiler exit	2.0	2.0	2.0	2.0
Connection	thread	thread	flange	flange
Diameter	0.5	0.5	0.5	0.5
Water capacity	20	25	47	64
Water capacity	4.14	5.6	10.9	16.4
Power (kW)	50	50	100	100
Power (kW)		15 - 25		
Power (kW)		10 - 35		
Maximum log diameter	7	7	7	7
Maximum log diameter	20	20	25	39
Average flue gas temperature		340		
Maximum pressure		25		
Required chimney draught		.06 - .08		
Voltage/frequency		12V/60Hz		



CITY OF PORTLAND, MAINE
 Department of Building Inspections

Original Receipt

_____ 20 01

Received from James Andrew Jones

Location of Work 661 Allen Ave

Cost of Construction \$ _____ Building Fee: _____

Permit Fee \$ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

Building (I1) _____ Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other None

CBL: _____

Check #: CC-VISA **Total Collected \$** 300.00

No work is to be started until permit issued.
 If permit is Withdrawn or Denied, amount of the Refund is based on \$20.00 or 20% of the fee, (whichever is greater)
 In order to receive a refund, you **MUST** present the Original Receipt.

Taken by: Div...

WHITE - Applicant's Copy
 YELLOW - Office Copy
 PINK - Permit Copy

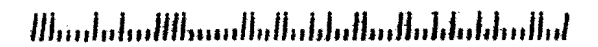
UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

DEPT OF PLANNING & URBAN DEVELOPMENT
PORTLAND CITY HALL ROOM 315
389 CONGRESS STREET
PORTLAND, MAINE 04101



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by <i>[Signature]</i> C. Date of Delivery</p>
<p>1. Article Addressed to:</p> <p style="text-align: center;">Steve Fowler-Greaves 661 Allen Ave Portland, Maine 04103</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <i>[Signature]</i> <input checked="" type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>398 B016</p> <p>2. Article Number <small>(transfer from service label)</small></p>	<p>7007 2560 0002 3788 5886</p>
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>	

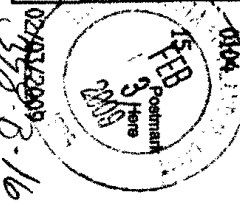
7407 2560 0002 3788 5886

U.S. Postal Service
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PROHIBITED FOR OFFICIAL USE

Postage	\$ 40.42
Certified Fee	\$2.70
Return Receipt Fee (Endorsement Required)	\$2.20
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$ 45.32



Sent to Steve Fowler - Greaves
 Street Apt No. 661 Allen Ave
 or PO Box No. _____
 City, State, Zip+4 Portland, ME 0403

P.S. Form 3800 August 2006 See Reverse for Instructions