

## The Practical Choice for Hot Water Heating



Decker Brand Boilers meet any BTU requirements.

### Quality Control and Certification

With over 25 years of experience, The Decker Brand Boiler gives you peace of mind knowing the product and workmanship is guaranteed to be high quality. Our Quality Control Program is certified by ASME (American Standards of Mechanical Engineering), CRN (Canadian Registration Number), and CSA (Canadian Standards Association). Additional boiler safety organizations include; The National Board of Boiler and Pressure Vessel Inspectors, Manitoba Department of Labour, TSSA (Technical Standards & Safety Authority) and is TUV test ordered.

Decker Brand boilers conform to and are certified by boiler safety and pressure vessel organizations. This means all materials used are certified traceable and welding is done by certified pressure welders. Even the welding electrode material of each weld is certified and traceable.

Sophisticated efficiency testing is conducted by certified professionals on the Decker Brand boiler for various types of solid fuel including wood pellets and coal.

We offer a limited warranty on the pressure vessel and conditional warranty on all other components.



Manitoba  
Labour  
Mechanical and  
Engineering

Travell  
Manitoba  
Mechanical and  
technique



## DECKER MANUFACTURING LTD.

The Practical Choice for  
Hot Water Heating

Save up to 90%  
on Heating Costs!

Sales and Service  
Worldwide

Over 25 Years Experience



- 🔥 Pressure Boiler
- 🔥 Fully Certified
- 🔥 High Efficiency
- 🔥 Environmentally Friendly
- 🔥 Multi-Fuel
- 🔥 Wood Pellets
- 🔥 Coal

Sales: 204-412-0234  
General: 204-764-2861  
Fax: 204-764-2594  
E-mail: [dbb@deckerbrand.com](mailto:dbb@deckerbrand.com)  
Web: [www.deckerbrand.com](http://www.deckerbrand.com)

## Decker Brand Boiler

The pressurized industrial Decker Brand Boiler is designed to heat facilities such as greenhouses, manufacturing plants, livestock facilities and machine shops. We strive to produce the cleanest burning boiler in the industry saving you up to 90% of your current heating bill. Decker Brand Boilers are certified and go through strict emission testing designed to exceed government industry standards and keep our air as clean as possible. This economical, environmentally friendly, low maintenance heating system will provide you with years of virtually trouble-free service.

### Features of the Decker Brand Boiler include:

- Designed for multi-fuels including wood pellets, oat hull pellets and coal
- Six sizes available: 500,000 to 3,500,000 BTU
- Up to 85% efficient (efficiency test reports available)
- Increase efficiency up to an additional 10% with Decker Brand Waste Heat Boiler
- Limited manufacturer's warranty
- Automated tube cleaning system for maximum efficiency
- Automated ash removal system
- Environmentally friendly (emission test results available)
- Fully insulated
- Standard pre-wired, built-in alarm system
- PLC touch control system available
- Can be installed in series to meet any BTU requirement
- Engineering or designing of complete heating systems available
- One boiler can heat several buildings
- North American Certification
- TUV test ordered

The Decker Brand Stoker is fabricated to the same quality standards as the Decker Brand Boiler. Each size of stoker comes complete with a variable speed gear drive and direct drive blowers. The larger boilers are provided with longer stokers to accommodate larger bins for increased fuel storage.

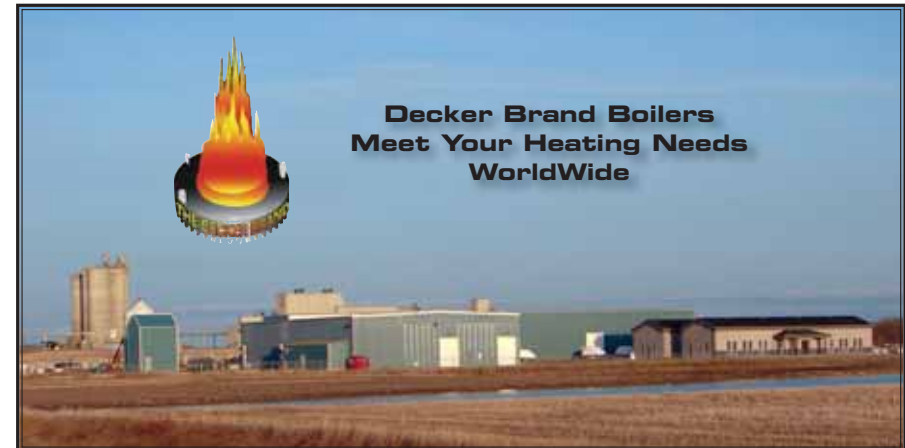
We can supply your entire heating system including engineering services, certified boiler installation, boiler start-up, operator training and worldwide 24-hour emergency phone service. We offer competitive pricing on all heating equipment including; heat exchangers, fibreglass piping, pumps and unit heaters. Complimentary estimates are available.

### Specifications

MODEL #	BTU Rating	Horsepower (HP)	Kilowatt Hour	Mega Watt	Approx. Shipping Weight (kg)	Height	Diameter	Water Outlet	Approx. Heat Area (ft. <sup>2</sup> )	Approx. Greenhouse Heat Area (ft. <sup>2</sup> )	Water Capacity (Imp. Gal)
DBB60	3,500,000	104.5	1025	1.025	4052	156"	85"	4"	116,000	30,000	DBB60 – 460
DBB55	2,500,000	74.6	732	.732	3500	156"	60"	4"	83,000	21,000	DBB55 – 415
DBB50	1,800,000	53.7	527	.527	2800	132"	55"	4"	60,000	15,000	DBB50 – 335
DBB42	1,000,000	29.8	293	.293	2200	132"	47"	3"	30,000	8,300	DBB42 – 223
DBB36	750,000	22.5	219	.219	1600	132"	41"	2"	25,000	6,200	DBB36 – 175
DBB30	500,000	14.9	146	.146	1200	120"	35"	2"	18,000	4,100	DBB30 – 127

## Emission Test - Boiler with the Waste Heat Boiler and Baghouse

Particulate Results Pine Wood Pellets				
Parameter	Test 1	Test 2	Test 3	Average
Start Time	10:30	11:45	1:05	N/A
Stop Time	11:35	12:52	2:10	N/A
Gas Temperature (°C)	79.9	82.0	78.3	80.1
% Moisture	5.8	5.6	5.2	5.5
Velocity (m/sec)	12.70	13.05	13.23	12.99
ACFM	1975	2029	2057	2021
Std. Dry Flow Rate (m <sup>3</sup> /sec)	0.68	0.70	0.72	0.70
Tot Part. Dry Basis ref. Cond. (mg/m <sup>3</sup> )	2.23	1.16	2.61	2.00
Mass Emission Rate (kg/hr)	0.01	0.00	0.01	0.01
*December 4, 2007				
Organic Results Pine Wood Pellets				
Parameter				
Start Time		10:30		
Stop Time		14:00		
Wet (ppm)		7.31		
% Moisture		5.55		
Dry (ppm)		7.74		
Converted to (mg/m <sup>3</sup> )		14.19		
m <sup>3</sup> /sec		0.70		
Mass Emission Rate (kg/hr)		0.036		
Carbon Monoxide Results Pine Wood Pellets				
Parameter				
Start Time		10:30		
Stop Time		14:00		
ppm		137.9		
Converted to (mg/m <sup>3</sup> )		160.53		
m <sup>3</sup> /sec		0.70		
Mass Emission Rate (kg/hr)		0.40		



Fibreglass Plant Canada

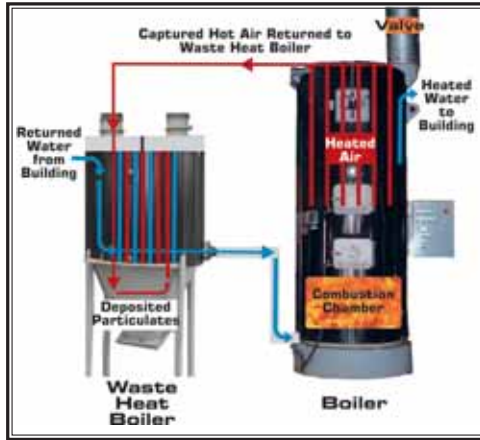
## Decker Waste Heat Boiler

Increase efficiency an additional 10% with Decker Brand Waste Heat Boiler by capturing heat and bringing the gases to a temperature acceptable for the baghouse filter. Dramatically improving boiler efficiency and traps dangerous particulates.

Our patented flue cleaning system helps us achieve our mission of producing the cleanest burning boiler in the industry. Our system incorporates spiral flue gas diffusers that facilitate maximum heat absorption and reduce stack temperature.



Boiler with the Waste Heat Boiler



## Emission Test - Boiler with the Waste Heat Boiler

Gas Temperature:	252 °F	122 °C
Moisture Content (by volume):	7.7 %	
Average Stack Gas Velocity:	64.1 ft/sec	19.5 m/sec
Total Actual Gas Flow Rate:	1347 ACFM	
Dry Gas flow Rate at Reference Conditions:	919 SCFM	.4 m <sup>3</sup> /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	0.024 gr/m <sup>3</sup>	55.4 mg/m <sup>3</sup>
Mass Emission Rate	0.19 lb/hr	0.09 kg/hr
<b>SUMMARY OF AIR EMISSION TESTS</b>		
Gas Temperature:	252 °F	122 °C
Moisture Content (by volume):	8.0 %	
Average Stack Gas Velocity:	63.5 ft/sec	19.3 m/sec
Total Actual Gas Flow Rate:	1332 ACFM	
Dry Gas flow Rate at Reference Conditions:	906 SCFM	.4 m <sup>3</sup> /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.023 gr/m <sup>3</sup>	53.6 mg/m <sup>3</sup>
Mass Emission Rate	0.18 lb/hr	0.08 kg/hr

## Filter Baghouse System

The Decker Brand Boiler uses the versatile Dalamatic dust collectors for continuous-duty dust collection to handle the most difficult product recovery.



### Continuous Collection

Provides continuous filtration of high dust concentrations at high filtration velocities and constant levels of resistance in almost any industry and application.

### Compact Design

Unique modular design allows for installation in the most space restricted areas. Envelope-shaped bags maximize the amount of media in a given space and allow for increased space between bags, minimizing the chances of bridging.

### Dura-Life™ Filter Bags

Provide better surface loading and better pulse cleaning reducing maintenance and operating costs.

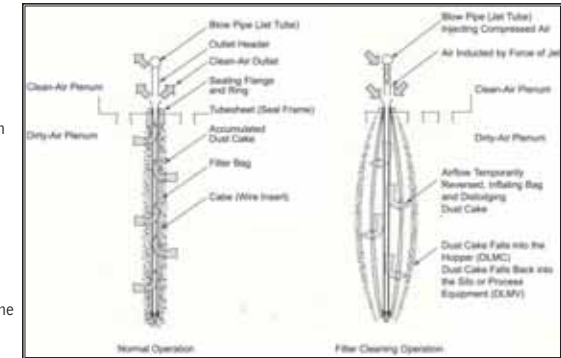
### Versatility

A full range of sizes and types of bags are available for a wide variety of dust collection applications.

### Efficient Media Design

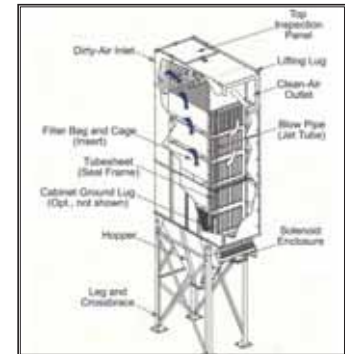
The Dalamatic advantage is found in the breakthrough technology of Dura-Life filter bags. Dura-Life bags offer longer bag life and reduced emissions. This unique operation of the filter bag helps achieve high filtration efficiencies.

- Dust accumulation on the outer surface of the filter bag as air penetrates the media.
- The blowpipe (jet tube) injects a burst of compressed air into the filter bag.
- Airflow is then briefly reversed, inflating the filter bag and dislodging dust.
- The dislodged dust cake falls into the collection hopper for final removal or directly back in the process. The envelope-shaped filter bag, which is mounted on a unique wire frame, ensures optimum airflow and thorough cleaning.



### Dalamatic Cased (DLMC)

- Envelope-shaped bags provide maximum filter area per given space and ensure efficient cleaning
- Air volumes range from 1,500 to 100,000 cfm
- Modular design gives dimensional and capacity flexibility
- Downward airflow pattern minimizes dust re-entrainment
- Installed face to face (double-banked) reduces required platforms and ductwork for easy access and maintenance
- Standard leg pack meets IBC 2003 requirements



## Decker Brand Boiler System Flow



## Emission Test - Boiler with the Waste Heat Boiler and Baghouse

Particulate Results Estavan Coal				
Parameter	Test 1	Test 2	Test 3	Average
Start Time	11:15	12:48	2:00	N/A
Stop Time	12:20	1:55	3:07	N/A
Gas Temperature (°C)	78.6	79.7	77.6	78.8
% Moisture	5.2	5.7	5.4	5.5
Velocity (m/sec)	15.32	12.92	12.76	13.67
ACFM	2382	2009	1985	2125
Std. Dry Flow Rate (m <sup>3</sup> /sec)	0.83	0.69	0.69	0.74
Tot Part. Dry Basis ref. Cond. (mg/m <sup>3</sup> )	3.69	2.71	2.54	2.98
Mass Emission Rate (kg/hr)	0.01	0.01	0.01	0.01
* December 3, 2007				

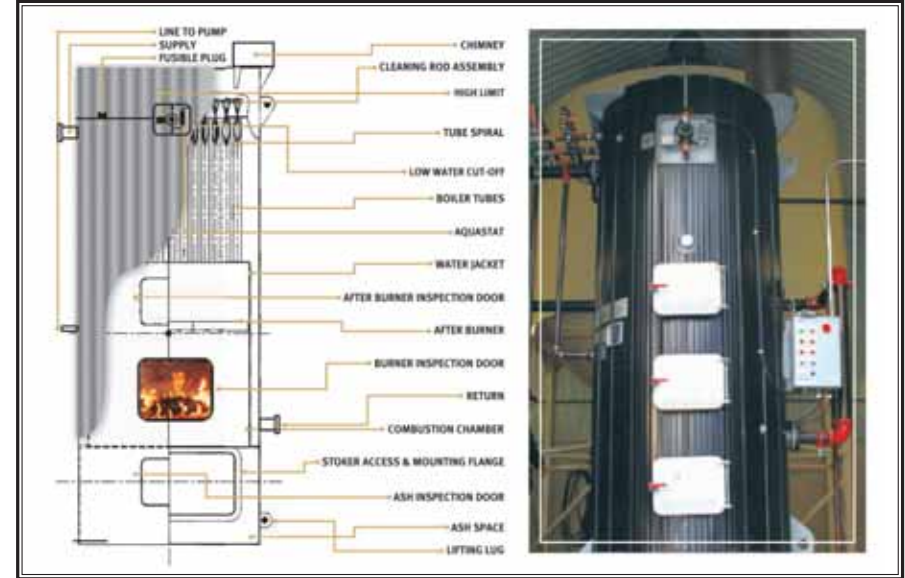
  

Organic Results Estavan Coal	
Parameter	
Start Time	11:45
Stop Time	15:00
Wet (ppm)	20.00
% Moisture	5.45
Dry (ppm)	21.15
Converted to (mg/m <sup>3</sup> )	38.79
m <sup>3</sup> /sec	0.74
Mass Emission Rate (kg/hr)	0.103

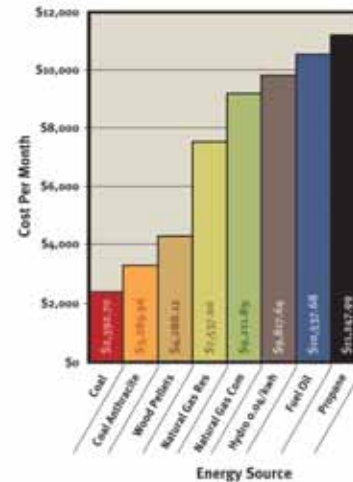
  

Results Estavan Coal			
Parameter	Sulphur Dioxide	Carbon Monoxide	Nitrogen Oxides
Start Time	11:45	11:45	11:45
Stop Time	15:00	15:00	15:00
ppm	81.8	89.2	27.0
Converted to (mg/m <sup>3</sup> )	217.94	103.82	51.85
m <sup>3</sup> /sec	0.74	0.74	0.74
Mass Emission Rate (kg/hr)	0.58	0.28	0.14

## Decker Brand Boiler



## Cost Per Month



## Fuel Type

Fuel Type	Units	BTU's Units
Natural Gas	Cubic Metre	35,310
Bulk Propane	Libre	24,175
Heating Oil	Libre	36,740
Propane Gas	Cubic Metre	91,524
Electrical	Kilowatt Hour	3,413
<b>Coal</b>		
Anthracite	Per Ton	27,360,000
Dodd's Kohle	Per Ton	19,600,000
Estevan	Per Ton	13,900,000
Wyoming	Per Ton	19,600,000
<b>Wood</b>		
Apple	Per Cord	30,000,000
Aspen	Per Cord	18,000,000
Cottonwood	Per Cord	17,000,000
Elm, Red	Per Cord	29,000,000
Fir, Douglas	Per Cord	24,000,000
Hickory	Per Cord	27,000,000
Juniper	Per Cord	15,000,000
Maple, Silver	Per Cord	20,000,000
Oak, Red	Per Cord	30,000,000
Oak, White	Per Cord	32,000,000
Pine, Lodgepole	Per Cord	21,000,000
Pine, Pinon	Per Cord	27,000,000
Pine, Ponderosa	Per Cord	20,000,000
Spruce, Englem	Per Cord	18,000,000