



# CALORIFIC VALUE OF WOOD PELLETS

**48<sup>+</sup>** Years  
Of experience



In Association with SVCH-Technologii, Moscow (Russia)  
ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018

# ABOUT US

KERONE is now renowned for serving the specialized needs of customers with the best quality and economical process of application engineering solutions and industrial heating products manufactured in a high-quality environment by a trained and qualified workforce (special purpose machinery)



KERONE is a pioneer in application and implementation engineering with its vast experience and team of professionals.



KERONE is devoted to serve the industry to optimize its operations both economically and environmentally with its specialized process engineering solutions.



KERONE is having immense expertise in manufacturing and implementing various types of engineering solutions.



KERONE is possessing employee strength of more than 280+ experts continuously putting efforts for happy industrial engineering solutions



48+ Years Manufacturing Excellence



Great Sale Support



Highly Customized Product



Adherence to Standards



Sound Infrastructure



Team of experts Delivering Quality



Timely Delivery



Cost Effective Solutions



# WHY CHOOSE US

"Choose Kerone for innovative solutions tailored to your unique product needs, ensuring efficiency, reliability, and unmatched quality."

With decades of expertise, cutting-edge technology, and a customer-centric approach, Kerone Engineering offers tailor-made Applications Engineering solutions that prioritize quality, flexibility, and cost-effectiveness. Benefit from our commitment to excellence, post-sales support, and innovative solutions for your unique Applications Engineering needs. Choose Kerone Engineering for reliability, performance, and unmatched value.

## MISSION



To enhance the value of customer operation through our customer need centric engineering solution.



We are committed to providing our customers with unique and best-in-class products in the industrial thermal processing segments. Through strategic tie-ups for technical know-how with renowned leaders in industry-specific segments, we ensure that our offerings meet the highest standards of quality and innovation.

## VISION



Turn into a world leader in providing specialized, top-notch quality and ecological industrial heating, cooling, and drying solutions across the globe.



To attain global recognition as the best of quality and environment-friendly engineering solution company.



Enhance the value of customer operation through our customer need centric engineering solution.



# TRUSTED PARTNERS



The average calorific value of wood pellets is  $4400 \pm 100$  Kcal/Kg, but it varies with different materials.



## Calorific values of different wood pellets

Types	raw material source	lower calorific value kcal/kg	Density t/m <sup>3</sup>	Ash content %
Pine	cedar, spruce, fir	4300-4500	$\geq 1.20$	$\leq 0.9$
Hardwood	Xylosma, Catalpa, elm	4500	$\geq 1.2$	$\leq 0.9$
Softwood	poplar, birch	4300	$\geq 1.20$	$\leq 1.1\%$
Crop waste	Bean stalk, cotton stalk, peanut shell	3800	$\geq 1.15$	$\leq 6.0\%$
	corn stalk, rape shoot	3700	$\geq 1.15$	$\leq 6.0$
	wheat straw	3500	$\geq 1.10$	$\leq 7.0$
	potato straw	3400	$\geq 1.10$	$\leq 7.0$
	rice straw	3200	$\geq 1.10$	$\leq 8.0$

## Compositions of different biomass materials

Material	Moisture %	Ash %	volatiles %	Fixed carbon %	calorific value kcal/kg	Sulfur %
weed	5.43	9.10	68.27	16.40	3873	0.22
Straw	3.61	12.20	67.80	19.36	4215	0.09
Maize stalk	6.10	4.70	76.00	13.20	4241	0.11
Corn cob	4.87	5.93	71.95	17.25	4238	0.01
wheat straw	4.39	8.90	67.36	19.32	4429	0.07
Peanut shell	7.88	1.60	68.10	22.42	5119	0.10
Cedar	3.27	0.71	81.20	14.79	4587	0.03
Pine	6.00	0.40	79.60	17.00	4552	0.00



## Calorific value of wood pellets and other fuels

Fuels	Average calorific value kcal/kg	Heat utilization rate	Pollutant
Raw coal	4984	0.80	sulphur
Crude oil	9969	0.85	sulphur
Gasoline	10268	0.85	sulphur
Kerosene	10268	0.85	sulphur
Diesel	10168	0.85	sulphur
liquefied petroleum gas	11303	0.85	sulphur
Coke oven gas	3987kcal/m <sup>3</sup>	0.85	sulphur
Electricity	857kcal/KWH	0.90	none
Wood pellets	4400	0.90	none

In conclusion, wood pellets have the following advantages:

### High calorific value

Usually around 3800-4600kcal/kg. After carbonization, the calorific value is up to 7000- 8000kcal/kg.

### High heat utilization rate

Wood pellets contains carbon of 75-85%, ash content 3-6%, moisture 1-3%, without gangue or other substance that doesn't generate heat.

### Environmental friendly

Wood pellets contains no sulphur or phosphorus, and there is no SO<sub>2</sub> or P<sub>2</sub>O<sub>5</sub> emission in burning. Meanwhile, it is carbon neutral. Burning wood pellets will not cause corrosion to the boiler or not give rise to air pollution or acid rain.

### Clean and convenient

Due to small and uniform size, wood pellets are easy to utilize. It can be fed into the boiler automatically so as to save labor. The ash and slag after combustion is little. It doesn't take much place. Besides, the wood pellet ashes are high-quality organic potassium fertilizer, which can be applied on farms or in gardens.

# OUR CLIENTS









# THANK YOU

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