

Data Sheet

Wood Gasifier Burkhardt V4.50 with Cogeneration Unit smartblock 50T



Complete System	
Operation Mode	Parallel Network Operation
Electrical Power	50 kW
Thermal Power	110 kW
Electric Efficiency (measured value)	25 %
Electric Self Consumption	max. 1.5 kW
Heating Supply Temperature	max. 90 °C
Heating Return Temperature	max. 70 °C

Wood Gasifier	Burkhardt V4.50
Operation Process	Updraught co-flow gasification with stationary fluidised bed
Fuel	Wood Pellets (EN Plus A1)
Pellets Consumption	0.8 kg/kWhel (40 kg/h at 50 kWel)
Thermal Power	25 kW
Byproduct	Wood Charcoal / Ash mixture 0.7-1.4 kg/h
Dimension, Weight and Connections	
Length / Width / Height	5400 mm / 1485 mm / 2300 mm
Weight with coolant	4000 kg
Heating Connection	R 1"
Electrical Connection	3 x 400 V 32 A

Cogeneration Unit	smartblock 50T
Basic Engine	HGM 434 / T (L4 engine)
Operation Process	4-Cycle Otto with turbocharging
Displacement	4.9 l
Rotation Speed	1500 1/min
Fuel	Wood Gas
Thermal Power	85 kW
CHP coefficient	0.59
Exhaust Gas Flow Rate (ca.)	230 kg/h / 240 m³/h
Exhaust Gas Temperature	140 - 160 °C
NOx	max. 500 mg/m³ based on 5% O2
CO	max. 300 mg/m³ based on 5% O2
Exhaust Gas Treatment	Catalyst
Generator	
Asynchronous Generator	Emod WKASYG
Cooling System	Water
Max. Apparent Power SA _{max}	52 kVA
Voltage / Frequency / cos Phi	400 V / 50 Hz / 0.97
Nominal Current I _r	75 A
Short-Circuit Current I _k	0.91 kA
Short-Circuit Current Rating	10 kA
Reactive Power Compensation	Included (Level 1)
Reactive Power per Step	25 kVAr
Detuning / Resonance Frequency	0
Operation mode	S1
Dimension, Weight and Connections	
Length / Width / Height	2260 mm / 960 mm / 1710 mm
Weight	1820 kg
Heating Connection	R 1 1/4"
Electrical Connection	3 x 400V 32A
Control Cabinet	
	800 mm / 400 mm / 1800 mm
	190 kg

The technical data are based on pellets with a heat value of 5 kWh/kg. The technical data are specified on standard terms and conditions according to DIN ISO 3046-1. All values are based on the system in norm operation. Standard terms and conditions: absolute air pressure 100 kPa; air temperature: 25 °C; relative air humidity: 30%. Power adaptation at ambient condition specified in DIN ISO 3046-1. At nominal power the tolerance for the specific fuel consumption is 5% and for the usable thermal power it is 7%. The process may cause power alternations of +/- 10%. Reservation: We reserve the right to change the data and features without notice.