

Lot 15 Preparatory Study

BASE CASE DATA SHEET



BC:
 Name:

Version:
 Date:

ENERGY USE

Nominal Power Output: kW
 Efficiency at Nominal Power (NCV): %
 Efficiency, net annual use (NCV): %

USE PATTERN

Applicable Fuel(s)
 Hours of Use per Year: hours
 Product lifetime: years

ECONOMIC INPUTS

Annual Sales mln units
 EU Stock mln units
 Product Price EUR/unit
 Installation Costs EUR/unit
 Fuel Cost EUR/GJ
 Electricity Cost EUR/kWh
 Repair and Maintenance Cost EUR/unit

ELECTRICITY CONSUMPTION

On-mode consumption kW
 On-mode: hours per year hrs/y
 Standby consumption kW
 Standby: Hours / year hrs/y

MISCELLANEOUS

New vs Stock Factor
 Volume of packaging: m³

BILL OF MATERIALS

DESCRIPTION	WEIGHT (g)	CATEGORY	MATERIAL
Fire enclosure, supports and framing	6220	3-Ferro	21-St sheet galv.
Fire enclosure, supports and framing	25064	3-Ferro	23-Cast iron
Appliance framing and aesthetics	271000	7-Misc.	85 - Refractory Ceramics
Total:	<input type="text" value="302"/>	kg	

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MISCELLANEOUS

New vs Stock Factor
 Volume of packaging: m³

BILL OF MATERIALS

DESCRIPTION	WEIGHT (g)	CATEGORY	MATERIAL
CLOSED FIREPLACE BOM - HALF			
Fire enclosure, supports and framing	25000	3-Ferro	21-St sheet galv.
Fire enclosure, supports and framing	47350	3-Ferro	23-Cast iron
Appliance framing and asthetics	19300	7-Misc.	85 - Refractory Ceramics
Coatings on steel	300	5-Coating	40-Cu/Ni/Cr plating
Glass viewing pane	1250	7-Misc.	54-Glass for lamps
Sealing compound	200	7-Misc.	58-Concrete
STOVE BOM - HALF			
Fire enclosure, supports and framing	444	3-Ferro	21-St sheet galv.
Fire enclosure, supports and framing	71558	3-Ferro	23-Cast iron
Appliance framing and asthetics	1480	7-Misc.	85 - Refractory Ceramics
Coatings on steel	74	5-Coating	40-Cu/Ni/Cr plating
Glass window	74	7-Misc.	54-Glass for lamps
Total:	<input type="text" value="167"/>	kg	

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Improvement Option - Product Cases



			1	2	3	4	5	6	7	8
Product			Closed fireplace, fireplace insert & stove	Advanced cooker	Slow heat release stove	Pellet stove	Pellet boiler	Downdraught gasifying boiler	Stoker boiler, coal	Chips/coal boiler
Energy & Environmental performance	Power output	kW	7	8	15	7	25	20	25	160
	Efficiency	%	81	79	84	92	92	90	89	91
	Seasonal efficiency	%	65	60	75	80	84	84	84	86
	E _{CO}	mg/m ³	1400	1800	1000	170	170	100	90	170
	E _{NOx}		190	190	190	140	140	140	210	140
	E _{PM}		60	90	60	30	25	60	40	30
	E _{OGC}		100	110	80	4	4	4	10	10
	El. Consumpt.	Wh _{el.} /kWh _{th}				4	4	4	2	2
BOM	Total	kg	126	170	1450	120	350	360	399	1170
	Steel		98	153	170	102	335	330	385	950
	Cast iron									
	Ceramics		28	16	1279	17	14	30	14	220
	Glass			1	1	1	1			
	Electronics									
Costs	Purchase	€	1935	2995	1938	2652	6816	6305	4000	11000

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Improvement Option - Component Cases



			1	2	3	4	5	6	7	8	9	10	11	12	
Product			Draught control	Stove regulator	Fan assisted direct heat exchange	Fan assisted draught	Boiler/heat storage	Air staging and control	Lambda probe control	Unburnt sensor - CO (lambda probe optimisation)	Room & weather control	Combustion chamber internal circulation/vorticity	Catalyst afterburning	ESP	
Energy & Environmental performance	Efficiency	% change	5	5	3	5	2	2	1	2	1	1			
	E _{CO}		-(5-10)	-(5-10)		-(5-10)		-(5-15)	-10	-20		-20	-70		
	E _{NOx}														
	E _{PM}		-5	-5		-5		-(5-15)				-20	-30	-90	
	E _{OGC}		-(5-10)	-(5-10)		-(5-10)						-20	-40		
	El. consumpt.	Wh _{el.} /kW h _{th}		1	1	1									2
BOM	Total	kg	1,5	9	2	3	160	1						5	
	Steel		1,5	8	2	3	160	1							4
	Cast iron														
	Ceramics														
	Glass														
	Electronics			1											
Costs	Purchase	€	130	2380	700	960	2500				1000			1500	