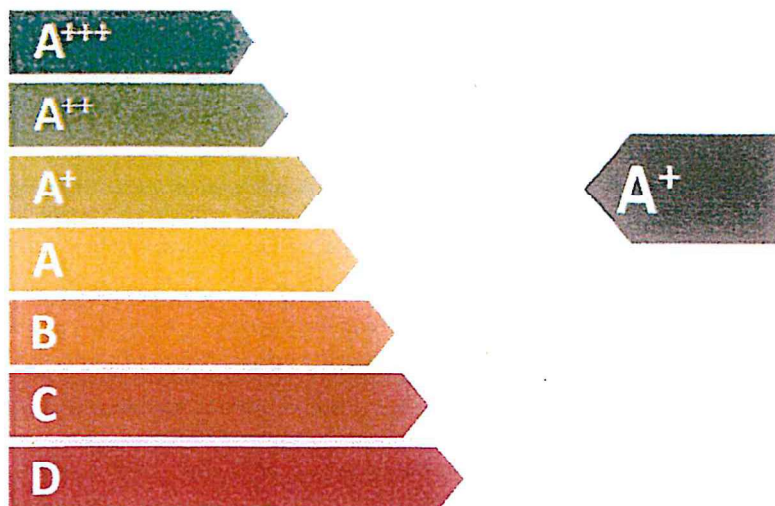




DC 70 GSX



70 kW



Strojírenský zkušební ústav, s.p., Brno, Česká republika
Engineering Test Institute, Public Enterprise, Czech Republic

OSVĚDČENÍ O ZKOUŠCE CERTIFICATE OF TEST

Číslo
Number **O-39-00194-18**

Výrobce - *Manufacturer* Jaroslav Cankář a syn ATMOS
Velenského 487, 294 21 Bělá pod Bezdězem
Česká republika - *Czech Republic*

Výrobek - *Product* Kotel teplovodní - *Hot-water boiler*

Typové označení - *Type designation* **DC 70 GSX (GSX 70)**

Požadavky na ekodesign - *Ecodesign requirements* Nařízení Komise (EU) č. 2015/1189, příloha II, čl. 1 –
Commission Regulation (EU) No. 2015/1189, Annex II, Art. 1
Nařízení Komise (EU) č. 2015/1187, příloha II –
Commission Regulation (EU) No. 2015/1187, Annex II

Metoda zkoušek - *Test method* ČSN EN 303-5:2013

Způsob topení - *Heating method* ruční - *manually*

Preferované palivo - *Preferred fuel* dřevo A - *wood A*

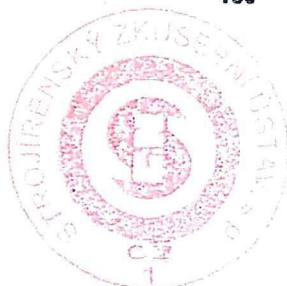
Výsledky - *Results*

Typ - *Type* **DC 70 GSX
(GSX 70)**

Jmenovitý výkon - <i>Nominal output</i>		
CO (10% O ₂)	mg/m _n ³	285
OGC (10% O ₂)	mg/m _n ³	13
Prach - <i>Dust</i> (10% O ₂)	mg/m _n ³	12
NOx (10% O ₂)	mg/m _n ³	180
Užitečná účinnost - <i>Useful efficiency</i>	%	83,1

Sezonní emise - *Seasonal emissions*

CO (10% O ₂)	mg/m _n ³	285
OGC (10% O ₂)	mg/m _n ³	13
Prach - <i>Dust</i> (10% O ₂)	mg/m _n ³	12
NOx (10% O ₂)	mg/m _n ³	180





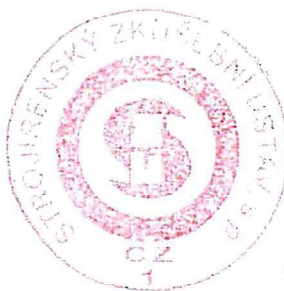
Typ - Type		DC 70 GSX (GSX 70)
η_{son}	%	83,1
F1	%	3
F2	%	0,3
Sezonní energetická účinnost - Seasonal space heating energy efficiency		
η_s	%	80
Index energetické účinnosti - Energy Efficiency Index		
EEI	%	117
Třída energetické účinnosti - Energy Efficiency Class		
		A ⁺

Podklad pro vydání osvědčení
- Basis for Certificate issue

Protokol č. - Report No.
39-11424 a protokoly navazující - and follow-up reports,
vydané Zkušební laboratoří č. 1045.1, akreditovanou ČIA o.p.s.,
číslo osvědčení o akreditaci 260/2017
issued by Testing Laboratory No. 1045.1, accredited by CAI,
Accreditation Certificate No. 260/2017

Strojírenský zkušební ústav, s.p. tímto osvědčení o zkoušce potvrzuje, že u předmětného výrobku provedl zkoušky a výpočty s výše uvedenými výsledky.
The Engineering Test Institute certifies by this Certificate of Test to have conducted for the given product the test and calculation with above stated results.

Brno, 2018-03-06



Milan Holomek
vedoucí zkušebny tepelných a ekologických zařízení
Head of Heat and Ecological Equipment Test Station

Informationsblad - Pannor för fast bränsle/ Product sheet - Solid fuel boilers

Varmvattenpannor för trä med manuell bränsleförsörjning / Hot-water boilers for wood with manual fuel supply

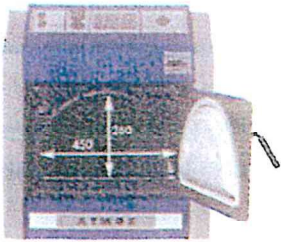
Leverantörens namn eller varumärke:
Supplier's name or trademark:

Jaroslav Cankar a styn ATMOS

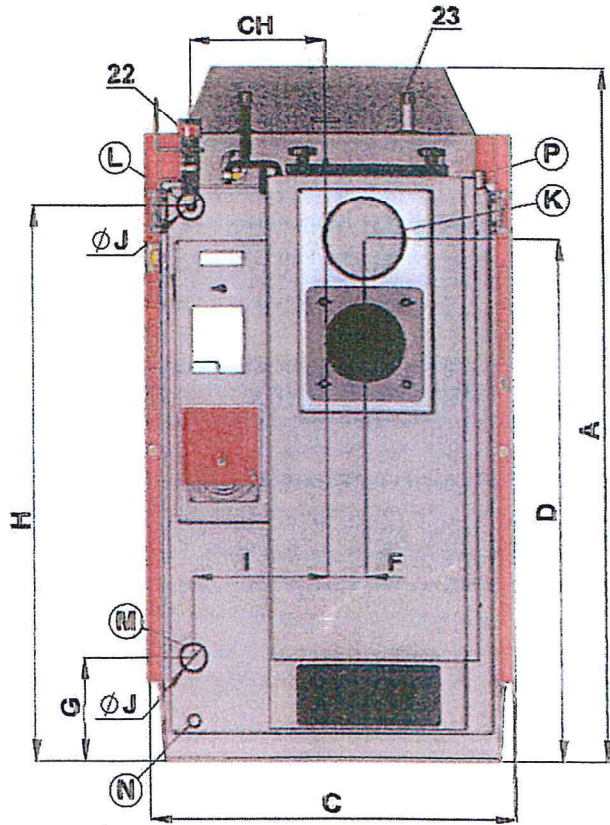
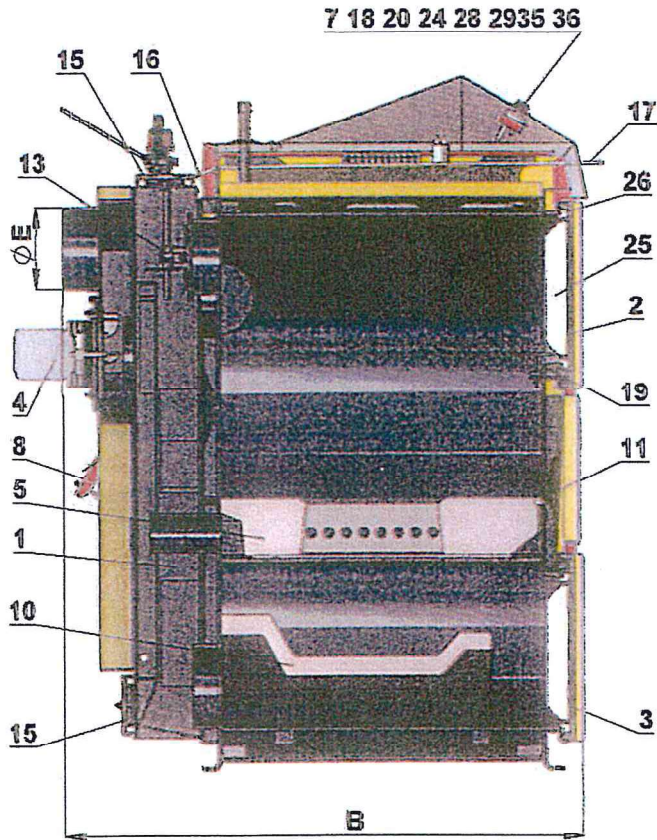


ATMOS

Modellbeteckning	Energieffektivitetssklass	Nominell avgiven värmeeffekt:	Energieffektivitetssindex	Säsongsnedverkningsgraden	Rekommenderat bränsle	Särskilda försiktighetsåtgärder
Model identifier	Energy efficiency class	Rated heat output	Energy Efficiency Index	Seasonal space heating energy efficiency	Preferred fuel	Specific precautions
		kW		%		
DC 50 GSX	A+	49	117	79	trä / wood	Pannans drifttemperatur / Operation temperature of the boiler 80 °C - 90 °C Maximalt drifttryck / Maximal operation pressure 250 kPa Minsta returvärmtemperatur / Minimal temperature of returning water into the boiler 65 °C
DC 60 GSX	A+	60	113	77	trä / wood	
DC 70 GSX	A+	70	110	75	trä / wood	
DC 70 GSX (komora 800 mm)	A+	70	117	80	trä / wood	



Size of feeding chamber
Technical data



LEGEND OF THE BOILER DIAGRAM

1. Boiler drum

2. Filling door - upper

3. Ash pan door - lower

4. Fan - pressure, exhaust (S)

5. Fireproof and heat-resisting fitting - nozzle

6. Control panel

7. Safety thermostat

8. Regulating safety valve

9. Fireproof and heat-resisting fitting - furnace side - GS

10. Fireproof and heat-resisting fitting - GS - round space L+P

11. Sealing - nozzles

12. Fireproof and heat-resisting fitting - half-moon

13. Firing safety valve
14. Fireproof and heat-resisting fitting - GS - rear face of round space

15. Cleaning cover

16. Orifice plate

17. Firing safety valve pull rod

18. Thermometer

19. Furnace orifice plate

20. Switch

22. Power regulator - Honeywell FR124

23. Cooling loop

24. Fan thermostat

25. V. Door panel - Sibrall

26. Door sealing - cord 18 x 18

27. Waste gas thermostat

Dimensions

	DC18	SDC22	SDC30	SXDC32	SDC40	SXDC50	SDC70	SDC15	SDC20	SDC25	SDC32	SDC40	SDC50	GSXDC70	GSXDC75	SEDC100	DC105	SDC150
A	1185	1185	1185	1185	1260	1260	1260	1399	1280	1280	1280	1280	1434	1563	1686	1487	1690	1813
B	758	959	959	959	959	959	1160	670	758	959	959	959	959	1042	1268	1487	1170	1095
C	675"	675"	675"	675"	678	678	678	678	678	678	678	678	678	678	678	774	970	1010
D	874	874	874	874	950	950	950	1047	950	950	950	950	1099	997	1086	1165	1290	1459
E	150	150	150	150	150	150	150	180	150	150	150	150	150	150	150	180	200	200
F	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)
G	65	65	65	65	69	69	69	90	69	69	69	69	69	70	58	82	80	129
H	208	208	208	208	185	185	185	325	185	185	185	185	185	184	184	194	590	721
I	933	933	933	933	1008	1008	1008	-	1008	1008	1008	1008	1152	1287	1407	1230	-	-
J	212	212	212	212	256	256	256	0	256	256	256	256	256	256	256	306	0	0
K	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"	2"	6/4"	6/4"	6/4"	6/4"	6/4"	2"	2"	2"	2"	2"

Type	DC18	SDC22	SDC30	SXDC32	SDC40	SXDC50	SDC70	SDC15	SDC20	SDC25	SDC32	SDC40	SDC50	GSXDC70	GSXDC75	SEDC100	DC105	SDC150
Boiler output (kW)	20	22	25/27	30	35	40	49,9	70	15	20	25	32	40	49	70	75	99	105

Required chimney draught (Pa)	20	23	23	24	24	24	25	30	16	20	23	25	25	25	26	30	35	25
Boiler weight (kg)	269	324	326	332	366	368	433	515	302	343	431	436	485	538	690	669	820	901
Water volume (l)	45	58	58	58	80	80	89	93	56	64	80	80	90	120	170	190	294	265
Fuel container volume (dm3)	66	100	100	100	140	140	180	180	66	80	120	125	160	210	280	345	400	300
Max. length of wood (mm)	330	530	530	530	530	530	730	730	250	330	530	530	530	530	730	1000	730	550
Typ. consumption in season (m3)	20	22	25	30	35	40	50	70	15	19	25	32	40	50	70	75	99	105
Required fuel (preffered)	Dry wood with specific energy 5 - 18 MJ/kg, diameter 80 - 150 mm, 12 - 20% water contents																	
Min. return water temperature	65 °C																	
Efficiency (%)	90,1 %	89,9 %	89,9 %	89,9 %	88,9 %	88,9 %	85,7 %	86,3 %	91,2 %	90,6 %	88,8 %	89,3 %	88,8 %	90,6 %	90,3 %	83 %	89 %	92 %
Flue gas temperature at nominal output (°C)	157	177	177	177	185	185	255	245	134	166	158	171	250	165	161		165	172
Boiler class CSN EN 303-5	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	3	5	5
Energy efficiency class	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+

Attention! The DC15E boiler is not equipped with a ventilator!
Boilers DC70S and DC100 are equipped with a blowing ventilator.



Wood gasification boilers
Modern boilers for burning wood based on generator gasification using a special nozzle and an exhaust fan (S).
Highest efficiency, low consumption, comfortable and environmentally friendly operation.



Wood
High quality dry chopped log fire wood: Ø 80 - 150 mm, length 330 – 1030 mm (depending on the boiler type), moisture 12 % - 20 % and 15 – 17 MJ.kg-1 calorific value.



Coal gasification boilers
The most up-to-date boilers for burning lignite, possibly wood as a substitute fuel, based on generator gasification using a patented revolving grate and an exhaust fan (S).
Special construction of the boiler ensures the highest possible efficiency, low consumption and comfortable and environmentally friendly operation.



Lignite
High quality lignite, size 20 - 40 mm, with 17 - 20 MJ.kg-1 calorific value.



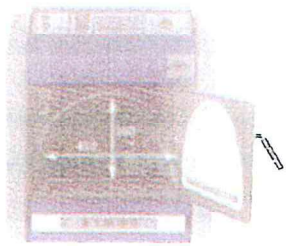
Black coal
High quality black coal, size 20 - 40 mm, with 20 - 30 MJ.kg-1 calorific value.



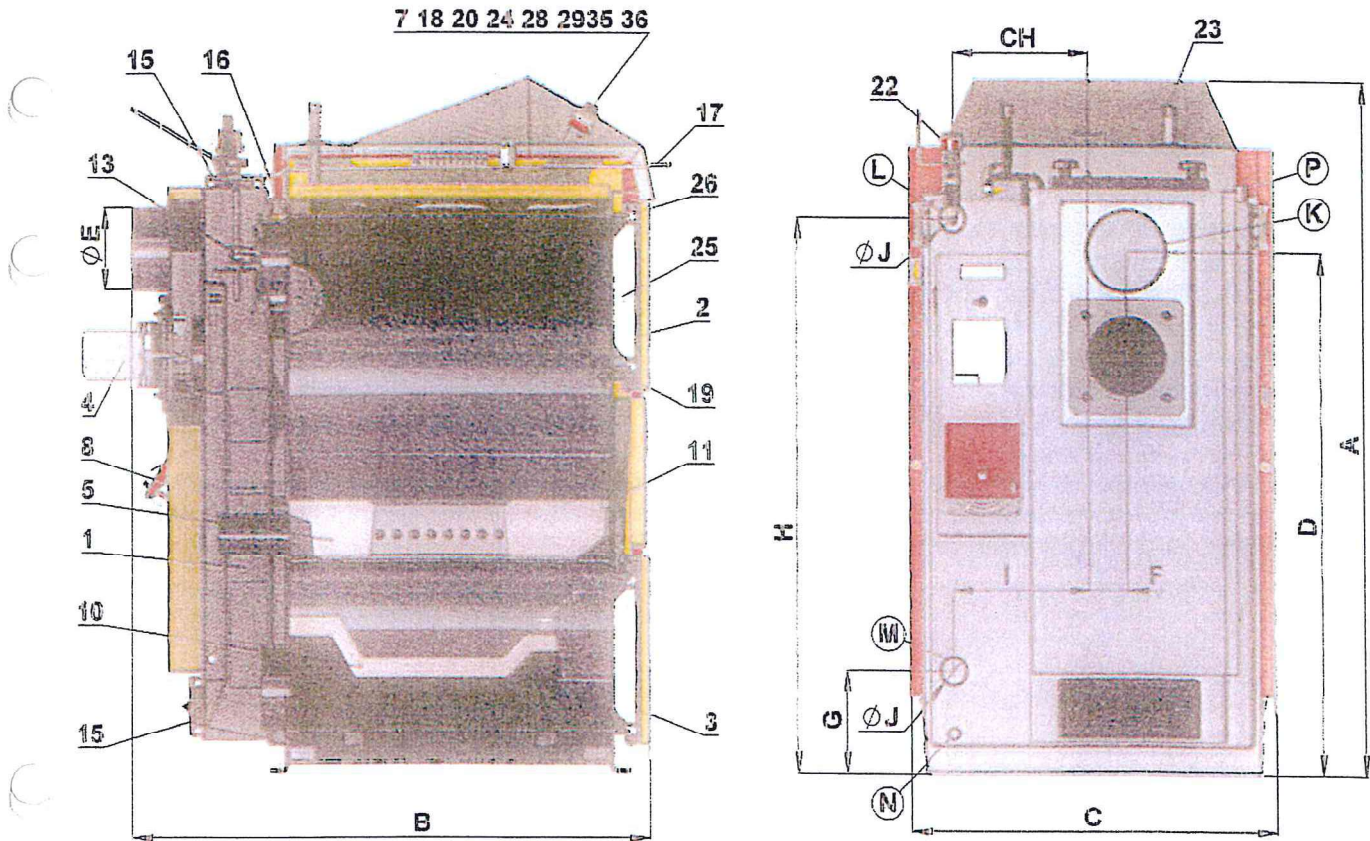
Coal briquettes
Lignite briquettes with 19 - 23 MJ.kg-1 calorific value.



Wood
High quality dry chopped log fire wood: Ø 80 - 150 mm, length 330 – 1030 mm (depending on the boiler type), moisture 12 % - 20 % and 15 – 17 MJ.kg-1 calorific value.



Size of feeding chamber
Technical data



LEGEND OF THE BOILER DIAGRAM

1. Boiler drum

2. Filling door - upper

3. Ash pan door - lower

4. Fan - pressure, exhaust (S)

5. Fireproof and heat-resisting fitting - nozzle

6. Control panel

7. Safety thermostat

8. Regulating safety valve

9. Fireproof and heat-resisting fitting - furnace side - GS

10. Fireproof and heat-resisting fitting - GS - round space L+P

11. Sealing - nozzles

12. Fireproof and heat-resisting fitting - half-moon

13. Firing safety valve

14. Fireproof and heat-resisting fitting - GS - rear face of round space

15. Cleaning cover

16. Orifice plate

17. Firing safety valve pull rod

18. Thermometer

19. Furnace orifice plate

20. Switch

22. Power regulator - Honeywell FR124

23. Cooling loop

24. Fan thermostat

25 V. Door panel - Sibrall

26 Door sealing - cord 18 x 18

27 Waste gas thermostat

Dimensions

	DC18	SDC22	SDC25	SDC30	SXDC32	SDC40	SXDC50	SDC70	SDC115	SDC20	SDC25	SDC32	SDC40	SDC50	GSXDC70	GSXDC75	SEDC100	DC105	SDC150S
A	1185	1185	1185	1185	1260	1260	1260	1399	1280	1280	1280	1280	1434	1563	1686	1487	1690	1813	1813
B	758	959	959	959	959	959	1160	1160	670	758	959	959	959	1042	1268	1487	1170	1095	1295
C	675"	675"	675"	675"	678	678	678	678	678	678	678	678	678	678	678	774	970	1010	1010
D	874	874	874	874	950	950	950	1047	950	950	950	950	1099	997	1086	1165	1290	1459	1459
E	150	150	150	150	150	150	150	180	150	150	150	150	150	150	150 (152)	180	200	200	200
F	65	65	65	65	69	69	69	90	69	69	69	69	70	58	82	80	129	129	
G	208	208	208	208	185	185	185	325	185	185	185	185	185	184	184	194	590	721	721
H	933	933	933	933	1008	1008	1008	-	1008	1008	1008	1008	1152	1287	1407	1230	-	-	-
CH	212	212	212	212	256	256	256	0	256	256	256	256	256	256	256	306	0	0	0
I	212	212	212	212	256	256	256	240	256	256	256	256	256	256	256	306	330	307	307
J	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"	2"	2"	6/4"	6/4"	6/4"	6/4"	2"	2"	2"	2"	2"	2"	2"

" boiler width is 555 mm after disassembling the side hoods
Type
ATMOS
Boiler
output (kW)

20	22	25/27	30	35	40	49.9	70	15	20	25	32	40	49	70	75	99	105	150
----	----	-------	----	----	----	------	----	----	----	----	----	----	----	----	----	----	-----	-----

Attention! The DC15E boiler is not equipped with a ventilator!
Boilers DC70S and DC100 are equipped with a blowing ventilator.

Modern wood gasification boilers
Special wood gasification boilers



Modern boilers for burning wood based on generator gasification using a special nozzle and an exhaust fan (S). Highest efficiency, low consumption, comfortable and environmentally friendly operation.

Fuel!



High quality dry chopped log fire wood: $\varnothing$ 80 - 150 mm, length 330 - 1030 mm (depending on the boiler type), moisture 12 % - 20 % and 15 - 17 MJ.kg⁻¹ calorific value.

SHOW MORE

Economical and lasting window solutions

World burning boilers

System justification

EXILES WITH MODIFICATION BY

2015.05.01

John Paul Gaudin

10/10/2010 10:10:10 AM

1997 *Journal of Interpersonal Violence* 12(1): 107-123.

Against poll taxes

Compass automatic

Page 13

Installation and operation

Systems for heating with pellets



ATMOS A23/45/85 pellet burners are designed to burn good quality wooden pellets with a diameter of 6 - 8 mm and length of 5 - 25 mm. The advantage of this burner is automatic ignition of the pellets by ignition spiral which ensure comfortable operation and minimum attendance needed. The burner is controlled via electronic regulation which can adjust the operation depending on actual situation of the entire system. The burners can be furnished with extra pneumatic cleaning which makes heating more comfortable and the operation less demanding, even with lower quality wooden pellets.

pellets.
[SHOP MORE](#)

SUPERIOR



Screw conveyors for pellets are designed for ATMOS pellet burners. ATMOS A25 pellet burner requires an external shaftless conveyor DA long from 1.5 m to 4 m. ATMOS A45 and ATMOS A85 pellet burners require external shaftless conveyors DRA long from 1.7 m to 5 m. The conveyors have their own motor with a gearbox. Each conveyor is delivered with a support leg.

The conveyors have their own motor with a gearbox. Each conveyor is delivered with a support leg.



ATMOS pellet tanks are intended for storage of pellets for automatic pellet boilers. Their positioning within the boiler room is very flexible. They are made in three basic sizes: 350 l, 500 l, and 1000 l.

ALMOST pelle
SHOW ME?

Specification	Boiler type					
	DC15GS	DC20GS	DC25GS	DC32GS	DC40GS	DC50GSX DC70GSX
Rated power	15	20	25	32	40	49 70
Heating surface	1,8	2	2,7	2,9	3,2	3,5 4,3
Fuel shaft volume	66	80	120	120	160	210 280
Filling hole dimensions	450 x 260	450 x 260	450 x 260	450 x 260	450 x 260	450 x 310 450 x 310
Prescripted chimney draft	16/0,16	20/0,20	23/0,23	25/0,25	25/0,25	25/0,25 26/0,26
Max. working water overpressure	250/2,5	250/2,5	250/2,5	250/2,5	250/2,5	250/2,5 250/2,5
Boiler weight	302	343	431	436	485	538 690
Gas-outlet pipe diameter	150/152	150/152	150/152	150/152	150/152	150/152 150/152
Ingress protection of electric parts	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20 20
Electric input	50	50	50	50	50	50 50
Efficiency over the entire performance range	91,2 %	90,6 %	90,3 %	89,3 %	88,8 %	90,6 % 90,3 %
Boiler class	5	5	5	5	5	5 5
Energy efficiency class	A+	A+	A+	A+	A+	A+ A+
Waste gas temperature at nominal output	134	166	158	171	250	165 161
Waste gas combustion products flow weight at nominal output	0,010	0,012	0,015	0,018	0,022	0,025 0,034
Specified fuel (preferred)	Dry wood with a calorific value of 15 – 18 MJ/kg ⁻¹ , water content 12 – 20 %, diameter 80 – 120 mm					
Average fuel consumption for the heating season	4,1	5,5	6,8	8,6	10	13 18
Wood lenght	250	330	530	530	530	530 730
Combustion time at nominal output	2	2	3	2	3	3 3
The volume of water in the boiler	56	64	80	80	90	120 170
Boiler hydraulic loss	0,20	0,22	0,22	0,23	0,22	0,23 0,22
Minimum buffer tank volume	500	500	500	500	500	500 750
Connecting voltage	230/50					
Minimum return water temperature during operation	65 °C					
EKODESIGN	✓	✓	✓	✓	✓	✓