SOLARFOCUS

Biomasseheizungen | Wärmepumpen | Solaranlagen

Combi boiler

thermi nator II - touch

Technical report

DR-0037-EN / v13-260306

1 Technical data combi boiler

thermi[nator] II touch combi	**EH**	**22**	**30**	**40**	**49**	**60**
Nominal heat output pellets	[kW]	22	30	40	49	60
Nominal heat output for logs	[kW]	18	27	36	49	60
Heat output range pellets	[kW]	6.3 - 22	9 - 30	11.8 - 40	14.7 - 49	17.9 - 60
Heat output range for logs	[kW]	-	-	19.4 - 40	24.5 - 49	29.8 - 60
Energy efficiency class		A	A	A	A	A
Boiler class according to EN 305:5 2012		5	5	5	5	5
Dimensions						
Width without ignition	[cm]	62	62	67	83	83
Height including adjustable feet	[cm]	155	155	166	167	167
Depth without fan	[cm]	104	104	115	136	136
Total depth (D)	[cm]	120	120	130	151	151
Minimum room height [2]	[cm]	168	168	186	186	186
Exhaust side						
Exhaust pipe DM	[cm]	13	13	15	20	20
Height to centre of exhaust pipe [1]	[cm]	78	78	88	90	90
Minimum traction requirement [3]	[Pa]	5	5	5	5	5
Maximum exhaust gas temperature at full load [4]	[°C]	140	140	140	140	140
Maximum exhaust gas temperature, partial load [4]	[°C]	100	100	100	100	100
Weight						
Weight	[kg]	534	534	652	777	777
Sound specifications						
Max. sound power level	dB(A)	58	58	58	58	58
Water side						
Water content	[l]	90	90	126	188	188
Maximum permissible operating pressure	[bar]	3	3	3	3	3
Connection KVL/KRL	["]	5/4 M	5/4 M	5/4 M	6/4 M	6/4 M
Connection for drainage	["]	1/2 M	1/2 M	1/2 M	1/2 M	1/2 M
Connection for thermal drain safety device (TAS)	["]	1/2 M	1/2 M	1/2 M	1/2 M	1/2 M
Immersion sleeve for TAS temperature sensors	["]	1/2 F	1/2 F	1/2 F	1/2 F	1/2 F
Flow rate / differential pressure at ΔT 10°K	[kg/h] [hPa]	1710 5.8	2474 11.5	3430 18.6	5140 35.6	5140 35.6
Flow rate / differential pressure at ΔT 20°K	[kg/h] [hPa]	860 1.5	1237 3.0	1710 4.9	2570 9.4	2570 9.4
Fuel						
Fuel		Wood pellets in accordance with EN 17225-2, EN plus-A1; logs in accordance with EN 17225-5				
Filling chamber opening W x H	[cm	34 x 24	34 x 24	39 x 24	54 x 24	54 x 24
Filling chamber volume for logs	[l]	145	145	186	290	290
Maximum log length	[cm]	56	56	56	56	56
Emissions according to test report *Pellet operation*						
Exhaust gas values (based on 13% O_2) from test report: Testing institute / test report number		TÜV-Süd / 2219079 - 1	TÜV South / 2220013 - 1	TÜV Süd / 2220016 - 3	TÜV Süd / 2219079 - 4	TÜV South / 2220016 - 5
CO full load	[mg/m³]	7	7	7	12	17
CO Partial load	[mg/m³]	36	36	131	139	151
NOx at full load	[mg/m³]	109	108	107	108	109
NOx Partial load	[mg/m³]	100	100	86	88	91

thermi[nator] II touch combi	EH	22	30	40	49	60
Org. C at full load	[mg/m³]	0.5	0.4	0.3	0.2	0.3
Org. C at partial load	[mg/m³]	2	2	1	1.9	3
Dust content at full load	[mg/m³]	4	3	3	4	17
Dust content at partial load	[mg/m³]	15	18	18	16	13
Exhaust gas mass flow at full load	[g/s]	11.5	16	22	25	32
Exhaust gas mass flow at partial load	[g/s]	3.8	4.7	4	7.7	10
Emissions according to test report *Log operation*						
Exhaust gas values (based on 13% O_2) from test report: Testing institute / test report number		TÜV Austria / 10-UW-Wels-EX-029-3	TÜV Austria / 13 U 500 SD	TÜV Austria / 12-UW-Wels-EX-127-2	TÜV Austria / 16 U 406 SD	BLT / 042-06
CO full load	[mg/m³]	158	118.5	79	99.7	191
NOx at full load	[mg/m³]	114	119.5	125	131.3	133
Org. C Full load	[mg/m³]	4.4	3.2	2	2	4
Dust content at full load	[mg/m³]	8	11	14	14.9	14
Exhaust gas mass flow at full load	[g/s]	10	14.1	20.2	26.3	31.5
Regulation (EU) 2015/1187 *Pellets*						
Nominal heat output	[kW]	22	30	40	49	60
Energy efficiency class of the boiler		A	A	A	A	A
Energy efficiency class EEI Boiler and controller combination		A	A	A	A	A
Energy efficiency index of the boiler		115	118	120	120	120
Energy efficiency index EEI Boiler and controller combination		119	122	124	124	124
Annual space heating efficiency etaS	[%]	82	82	82	83	84
Annual emission values						
CO - Carbon monoxide	[mg/m³]	59	44	154	166	180
NOx - Nitrogen oxide	[mg/m³]	140	132	122	125	140
Total C - Carbon	[mg/m³]	1	1	1	1	1
Dust	[mg/m³]	18	18	21	20	16
Regulation (EU) *2015/1187 Logs*						
Nominal heat output	[kW]	18	27	36	49	60
Energy efficiency class of the boiler		A	A	A	A	A
Energy efficiency class EEI Boiler and controller combination		A	A	A	A	A
Energy efficiency index of the boiler		120	118	118	119	118
Energy Efficiency Index EEI Boiler and controller combination		124	122	122	123	122
Annual space heating efficiency etaS	[%]	82	81	82	81.6	81
Annual emission values						
CO - Carbon monoxide	[mg/m³]	218	164	109	299	343
NO_x - Nitrogen oxide	[mg/m³]	156	164	171	154	191
Total C - Carbon	[mg/m³]	6.1	4.6	3	6.2	11
Dust	[mg/m³]	11	15	19	15	16

[1] Levelling feet at maximum screw-in depth

[2] The minimum room height is required for maintenance work.

[3] If the draught exceeds 15 Pa, a draught limiter must be installed

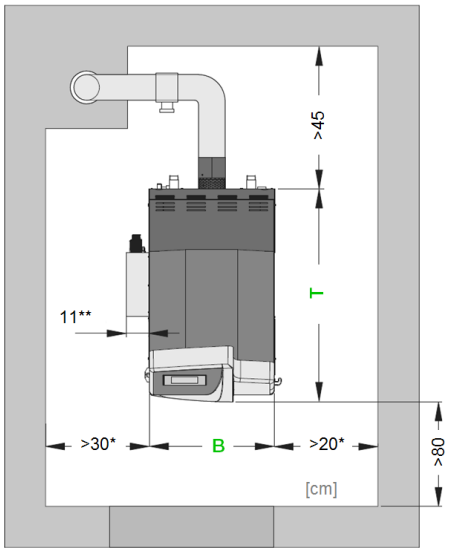
[4] The exhaust gas temperature can be adjusted electronically

2 Installation dimensions

The following applies to log wood and combi boilers:

		A = Distance between boiler door and centre of insert	**B =** Width without ignition	**T =** Depth without blower
Boiler	**Unit**	**Length A**	**Length B**	**Length T**
therminator II touch 18/22	cm	45	62	104
therminator II touch 27/30	cm	45	62	104
therminator II touch 36/40	cm	47	67	115
therminator II touch 49	cm	54	83	136
therminator II touch 60	cm	54	83	136

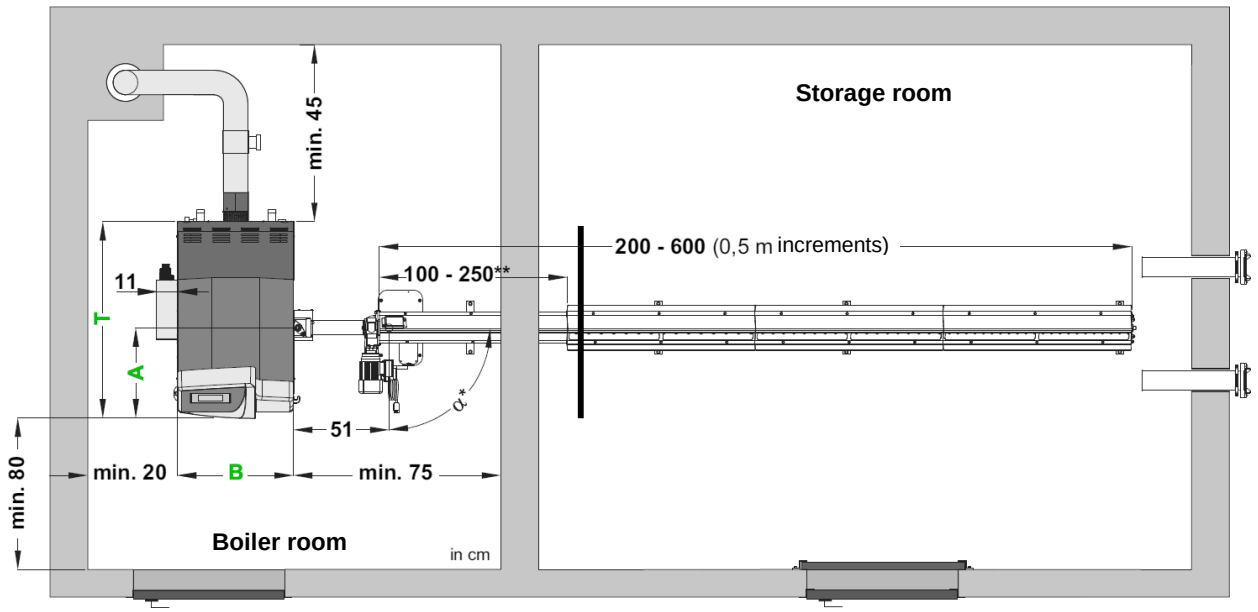
Wood-fired boiler



* Access to the rear of the boiler must be ensured. This means that there must be a minimum clearance of 45 cm on either the left or right side.

** The optional *automatic ignition* can be installed on the right or left.

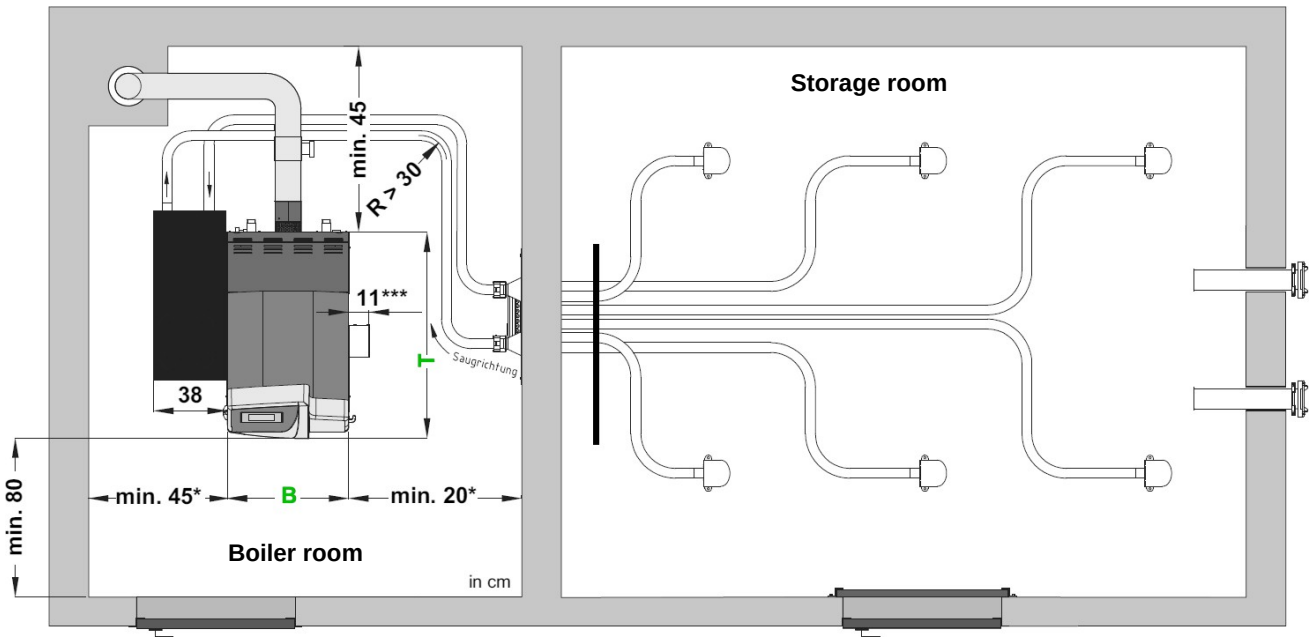
Combi boiler



* Installation angle α from 0° to 180°

** Covered length

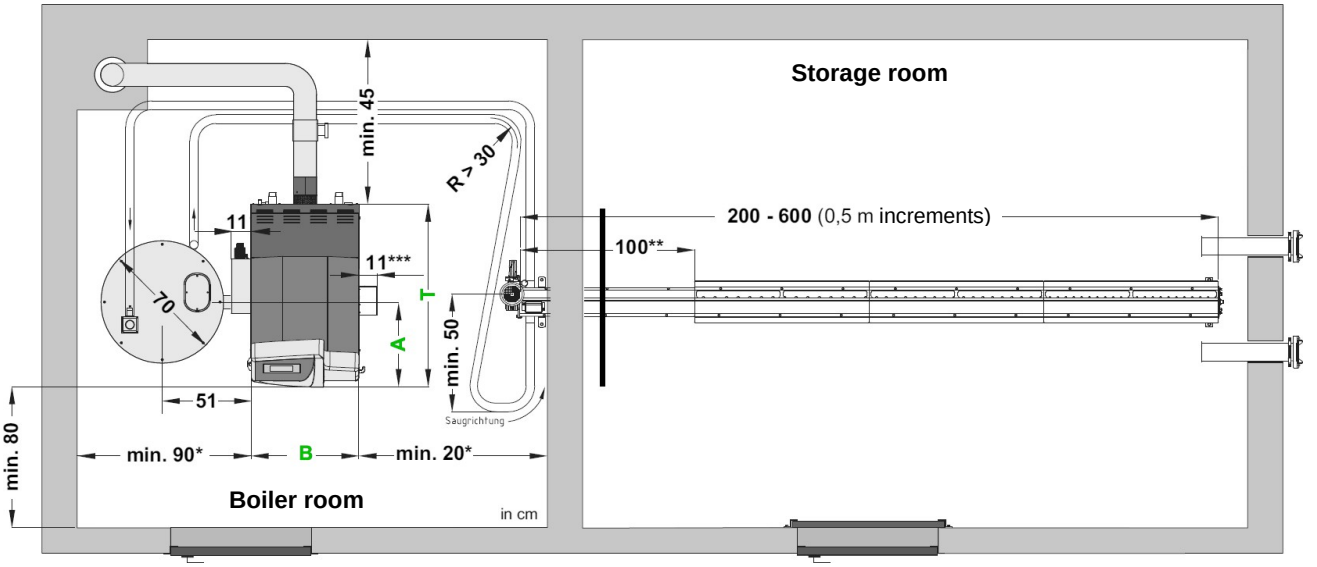
110-litre storage tank with suction system (suction probes or suction screws)



* Access to the rear of the boiler must be ensured. This means that there must be a minimum clearance of 45 cm on either the left or right side.

*** Optional item: Automatic switchover from logs to pellets

250-litre storage container with suction system (suction probes or suction screws)



* Access to the rear of the boiler must be ensured. This means that there must be a minimum clearance of 45 cm on either the left or right side.

** Covered length

*** Optional item Automatic switchover from logs to pellets

Automatic switchover from logs to pellets

This item can be added to the combi boiler as an optional extra: *Automatic switchover from logs to pellets.*
It is flanged to the side of the boiler opposite the automatic ignition (recommendation: right). A special motor transmits vibration to the stainless steel grate at adjustable intervals.

For retrofitting or possible replacement of the vibrating motor linkage, the minimum side clearances on the boiler must be observed:

Boiler	Unit	Side clearance
thermi[nator] II touch 18-30	cm	23
thermi[nator] II touch 36-40	cm	27
thermi[nator] II touch 49-60	cm	33

SOLARFOCUS

Biomass heating | Heat pumps | Solar systems

Pellet boiler

ecotopzero:	15 to 24 kW
pelletelegance:	15 to 24 kW
octoplus:	15 to 22 kW
pellettop:	35 to 70 kW
ecoPELL:	50 to 120 kW
maximus:	150 to 300 kW

Dual fuel boiler for wood and pellets

therminator II combi:	22 to 60 kW

Log wood boiler

therminator II SH:	18 to 60 kW

Wood chip boiler

ecoHACK:	30 to 120 kW
maximus:	150 to 250 kW

Air source heat pump

vampair PRO 08 - 10
vampair PRO 12 - 15
vampair PRO 20
vampair ECO 08 - 12
vampair ECO 15

Solar technology

CPC collector
Sunnyline
SUNeco

Photovoltaics

PV modules
Battery storage
Heat pump and PV

SOLARFOCUS GmbH, A-4451 St. Ulrich/Steyr, Werkstraße 1
www.solarfocus.at | office@solarfocus.at | T: 07252 50 002 - 0

SOLARFOCUS GmbH, D-64653 Lorsch, Marie-Curie-Str. 14-16
www.solarfocus.de | office@solarfocus.de | T: 06251 13 665 - 00

SOLARFOCUS Schweiz GmbH, CH-6246 Altishofen, Feldmatt 12
www.solarfocus.ch | info@solarfocus.ch | T: 041 984 08 80

SOLARFOCUS GmbH, Villanova Mondovì (CN), Largo Annunziata 26
www.solarfocus.com | italia@solarfocus.eu | T: 0174 24 65 28