



Automatic Wood Pellet Boiler System

Maintenance and Servicing
Guidance (OE12)

**ÖkoFEN Automatic Wood Pellet Boiler System
(OE12) Maintenance and Servicing Guidance**

Customer Details
Name:
Phone No:
Email:
House No.:
Street:
Town/City:
County:
Post Code:

Service Company Details
Name:
Phone No:
Email:
Company:
Street:
Town/City:
County:
Post Code:

Engineers Details
Date:
Signed:
<small>Field Service Engineer</small>
Print:
<small>Field Service Engineer</small>

Service Details
Date:
Pellematic Boiler Type:
Boiler Set Output in kW:
Boiler Serial No:
Boiler Controller Type:
Heating Controller Type:
Controller SW Version:
System Installed:
Last Service:
Next Service Due:

Boiler Readings & Measurements
Total Boiler Run Time:
Number of Start Ups:
Average Run Time:
Igniter Resistance:
Flue Gas Analysis: O2 %
Co2 %
CO ppm

Engineers Observations & Notes:

Note: Please fill out this form and return it to the address at the bottom of this page no later than 30 days after the service!

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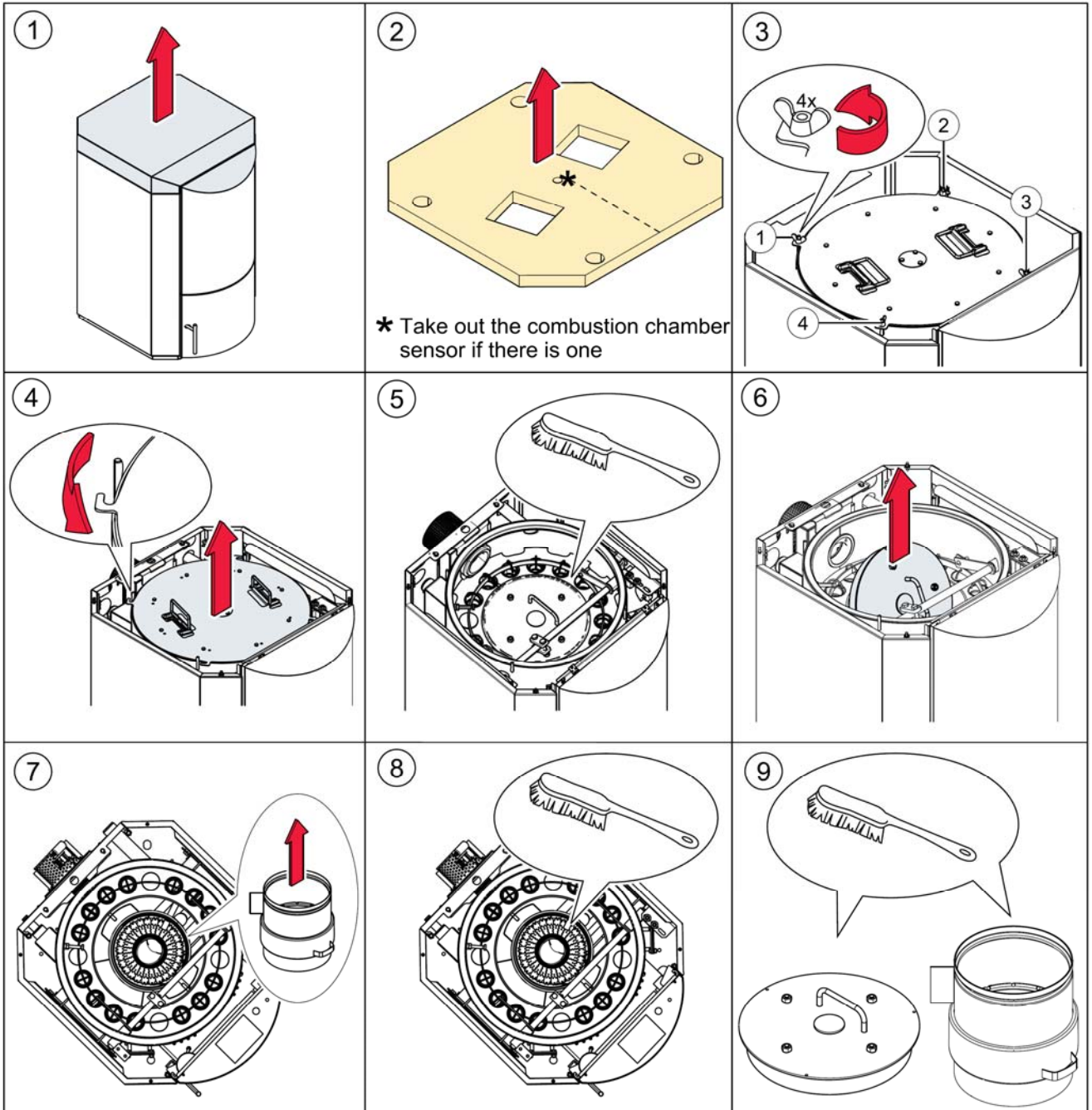
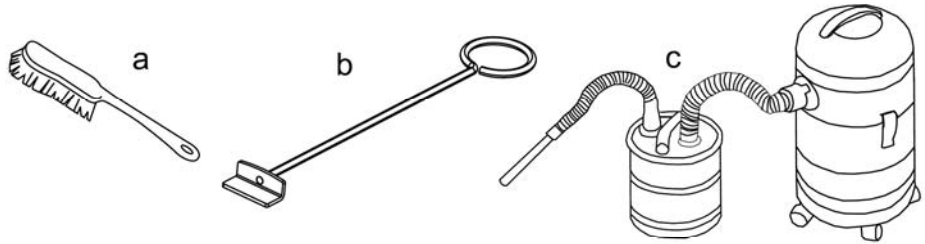


CLEANING AND SERVICING INTERVALS:	
	<ul style="list-style-type: none"> ▪ The flue should be swept once a year.
▪	Flue sweeping is NOT part of the OkoFEN engineers' service. This should be carried out by a member of the Federation of Chimney Sweeps.
▪	The boiler should be cleaned and undergo an engineer's service every year or every 1,500 hours of operating time (whichever is sooner).
▪	Please request that the boiler is switched off the night before.

BOILER CLEANING CHECK LIST:	Check:
▪ Isolate power supply	
▪ Boiler dust is very fine, it is important to work clean.	
▪ Protect all areas with dust sheets etc.	
▪ Take the necessary personal protection measures: Overalls, dust mask, gloves.	
▪ You will need a suitable, bucket type vacuum cleaner with a good filter system.	

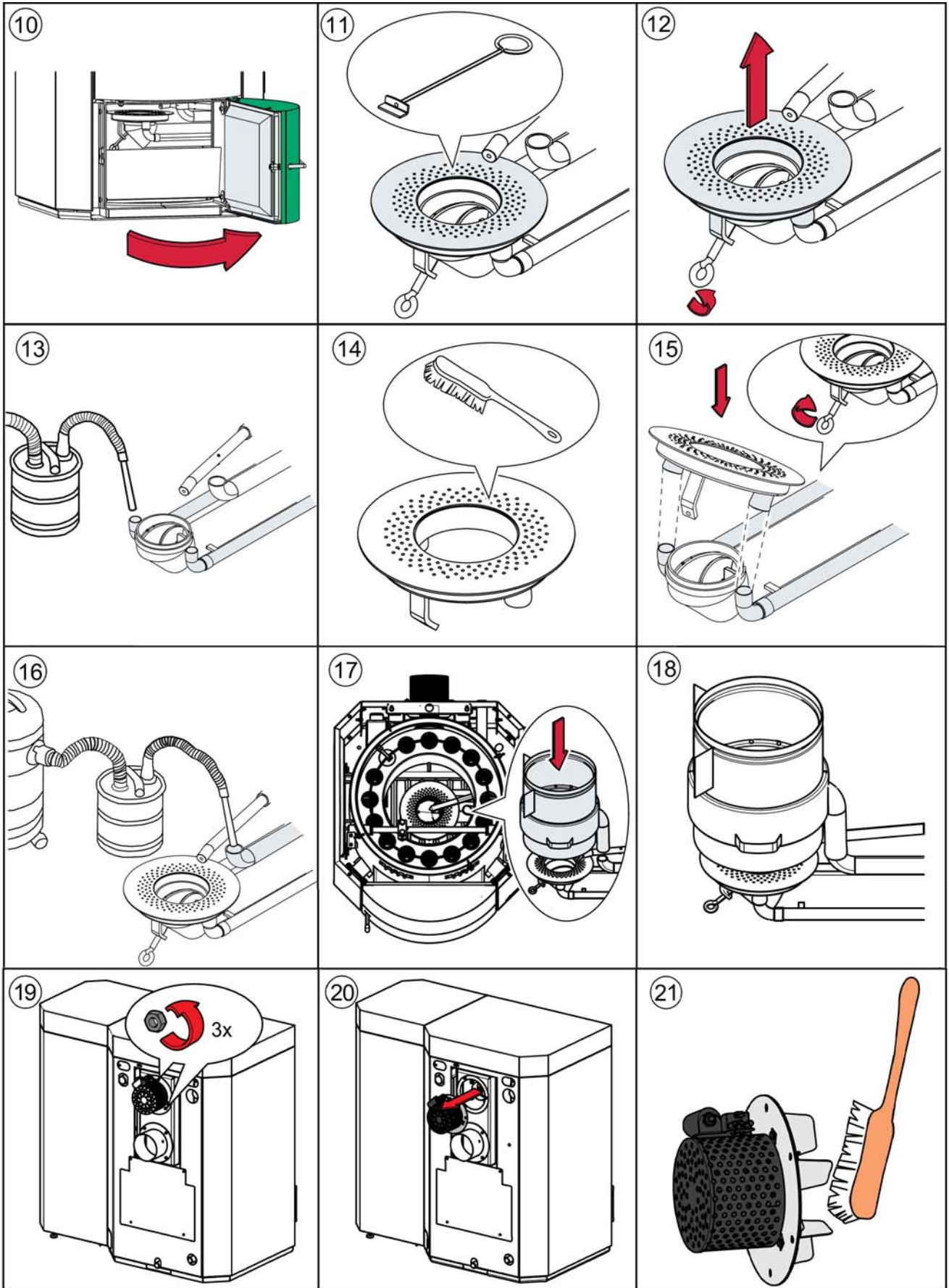
PROCEDURE FOR CLEANING THE BOILER:	Check:
Note: Always clean from the top down and try not to disturb too much of the dust.	
a) Lift outer boiler lid off and set aside (1).	
b) Remove flame temperature sensor from its pocket and examine (2)	
c) Remove insulation and set aside (2)	
d) Remove top boiler lid - take special care to lift the lid vertically clear of boiler when a flame sensor is fitted , vacuum off lid before putting on dust sheet (3 & 4).	
e) Lift out combustion chamber lid and vacuum off lid before putting on dust sheet (5 & 6)	
f) Carefully remove the main burner [flame] tube. Clean it off and examine. Is it damaged? If so incorrect fuel may be indicated and replacement may be necessary (7)	
g) Clean down the inside of the boiler body (8).	
h) Vacuum up the ash & partially burnt pellets from the burner end of the boiler auger. (This is best done from the top).	
i) Open ash door, clear surface of burner disc and loosen off the wing nut that retains the burner disc (10 & 11).	
j) Lift off burner disc. Ensure NO debris falls into the primary air supply pipes (12 & 13).	
k) Clean with a wire brush, removing any carbon deposits. Examine and check condition then replace. Note: Small fractures radiating from the weld at the centre of the burner disk are normal and don't impair its function (14 & 15). N/A to segmented burner plate.	
l) From the top of the boiler look into the boiler auger, using an old chisel or screwdriver remove any carbon deposits at / in the end of the boiler auger (Image 15).	
m) Remove ash pan, empty & clean (10).	
n) Clean round the inside base of the boiler cavity (10)	
o) Clean the air tubes using a vacuum cleaner (13 & 16).	
p) With side casing removed vacuum clean the burner auger motor to ensure it is dust free. Clean around the other burner assembly components too.	
q) With side casing already off lightly grease drive chain on both auger and vacuum type boilers.	
r) Remove flue fan and clean out thoroughly with a vacuum cleaner (19, 20 21).	

You need:
 a) Brush
 b) Poker
 c) Vacuum cleaner with ash filter

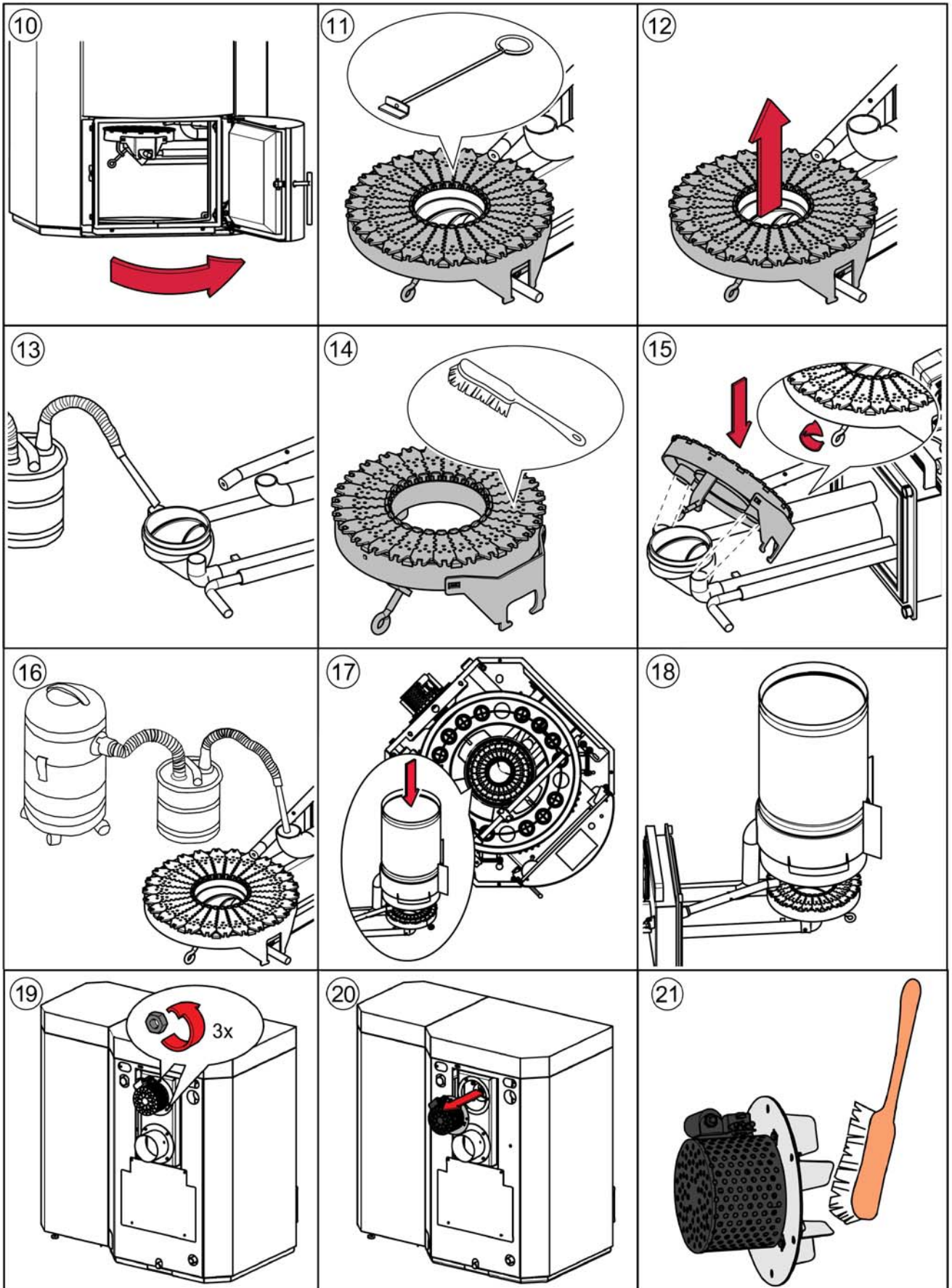


NOTE: Reduction in boiler performance and damage to pellet boiler due to blockages in the air inlets. Ensure all air intakes on the burner plate and flame tube are clean.

Pre-Segmented Burner Plate without Cleaning Mechanism



Segmented Burner Plate with Cleaning Mechanism



NOW THE BOILER IS CLEAN, SWITCH THE BOILER ON AND CHECK ALL CONNECTED OUTPUTS.
<ul style="list-style-type: none"> For Boilers with FA Board go to "Output Test" in PE or PES Menu. <u>How to get to "Output Test" Menu:</u> <ol style="list-style-type: none"> Press "Home Symbol" in the left right corner of the Touch controller and go to "Code". Enter 4 digits Code (first 2 digits of the time and first 2 digits of the date) and press tick. Go to "PE" or "PES" Menu and go down to "Output Test" Menu.
<ul style="list-style-type: none"> For Boilers with CMP Board got to Level 200 Parameter P203. <u>How to get to "Level 200" Menu:</u> <ol style="list-style-type: none"> Remove the Boilers' front cover by unscrewing the two 6mm. nuts found at the top of the cover inside the control panel on the left and right. Near the top front left hand side of the main boiler board there is 'selector knob'. Scroll to P199 by rotating the selector anticlockwise. Enter 2 digits Code (add first 2 digits of the time to first 2 digits of the date) and press tick
Note: Code level is for qualified ÖkoFEN engineers only, please do not disclose the code to anyone.

OUTPUT TEST:	Check:
a) Burner Auger Motor [ES] – Does the motor feeds pellets to the burner plate?	
b) Suction Fan [VAK] – Does the fan run?	
c) Delivery Auger Motor Storage Tank [RA] – Does the auger run in the right direction?	
d) Motor ash auger [AV] – If installed does the auger run?	
e) Motor burner plate cleaning system [AV] – Does it rotate back and forth?	
f) Combustion Air Fan [LUFT] – Does the fan run on 20%, 40%, 60%, 80% and 100%?	
g) Magnet Valve [MA] - Can you here it click? Note: Condense Boilers only.	
h) Cleaning Motor [RM] – Does the springs reach their maximum height? Adjust if/as required!	
i) Flue Fan [SZ] – Does the flue fan run on 20%, 40%, 60%, 80% and 100%?	
j) Boiler Controlled Pump [UW] – Does the pump run? Note: Only possible if connected.	
k) Fault signal relay [SM] – Does the relay switch on and off, can you here it clicking?	
l) Anti-burn back system [BSK] – Does the Belimo valve open and close?	
m) Internal Hopper Motor [RES1] – Does this motor run?	
n) Ignition [ZUEND] – Test the impedence of igniter when warm. Note: The Combustion Air Fan Must Be Running when the Ignitor is switched ON. <u>To warm up the igniter:</u> <ol style="list-style-type: none"> Switch the Combustion Air Fan to 100%. Then switch ON the Igniter for 60 seconds. Switch the Igniter OFF. Switch the Combustion Air Fan OFF. Disconnect Igniter plug from Boiler board (terminal ZÜND / 22 PE N). Check impedence across live and negative. A good igniter will give a reading of between 180 & 220 Ω REPLACE if necessary. Reconnect Igniter 	

REASSEMBLE & CLEAN EXTERIOR OF BOILER:	Check:
<ul style="list-style-type: none"> Ensure the inner combustion chamber lid is correctly seated. 	
<ul style="list-style-type: none"> Refit outer lid and panels. 	
<ul style="list-style-type: none"> Refit ash pan and ash compression chain. 	
<ul style="list-style-type: none"> Dust off boiler exterior, clean and polish. 	
<ul style="list-style-type: none"> Remove overalls 	

SYSTEM EXAMINATION: PE Auger Boiler	Check:
a) Is the external auger motor fitted correctly? Is it clear of obstructions?	
b) Is the auger motor bracket fitted correctly? If the auger is fitted on the right hand side the support bracket should be on the bottom, if fitted on the left then the support bracket will be on the top... <u>Very important!</u>	
c) Check the flexi hose between the external auger and the auger fire gate is not broken or damaged in any way. This should be near vertically straight as possible.	

SYSTEM EXAMINATION: PES Vacuum Boiler	Check:
a) Are all vacuum connections air tight?	
b) Check the vacuum hose from boiler to FleXilo is clear of obstructions.	
c) Is the top cover of the day hopper with the vacuum motor attached airtight?	
d) Check the capacity sensor functions properly. Check the LED light on/off.	
e) Visually inspect wiring and in particular the earthing of vacuum hoses etc.	

SYSTEM EXAMINATION: FleXilo Tank	Check:
a) Check the overall construction of the tank, is it in good order?	
b) Is the filler nozzle at the maximum height possible?	
c) Check auger or vacuum unit is fitted correctly to tank.	
d) If the emergency shut off slot is open on the spigot (S type tanks only) underneath the tank clear dust off and cover with duct tape.	

FINAL BOILER CHECKS:	Check:
a) Start the boiler and run on full load for 15 min. Check the flue gas analysis and adjust air flow as/if necessary. Recommendation is: O ₂ = 10%, Co ₂ = 10% and CO < 150ppm.	
b) Check heating controls (TEM, Plus or Touch). Adjust as/if necessary.	
c) Check function of pump sets and mixers. Adjust as/if necessary.	

ENGINEERS OBSERVATIONS and NOTES: