Assembly and Installation Guidelines

Wood Pellet Boiler with Automatic Fuel Refilling ETA PE

Type PE 15

Type PE 25

Guidance!

Only use the intended installation, assembly and maintenance equipment with this boiler.
Leave assembly, installation and start up to ETA authorised professionals.
Only use approved accessories and replacement parts with the ETA PE boiler. Failure to do so can impair the performance and safe operation of your boiler, and can also invalidate your parts and labour warranty.

Technical Information Subject to Change!

Due to constant advancement in technical capabilities illustrations shown may deviate slightly from the actual boiler, function steps and technical data.

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Notes

Delivery and Insertion

Delivery

Boiler with mounted lining
on a pallet with 80x130 cm
height = 1.8 m (inclusive pallet)

Insertion

Insertion should be done without vibrations in order to prevent damage to the refractory lined combustion chamber.

The boiler must be transported standing!

At difficult insertion conditions the disassembly of the lining is recommended.

The boiler has to be secured in the case of transport, so that no danger for involved persons can develop.

Note!

Examine scope of supply before beginning of all work for completeness.

Complete supply on a pallet welded into protective plastic film.

Cardboard Box

Sensor incl. Immersion sleeve
Flow sensor
Outside temperature sensor
Ash box handle
Cleaning tools
4 pipe clamps for pellet conveyor tube
Small parts and screws
Assembly and
Installation Guidelines
OPERATING INSTRUCTIONS
Stickers

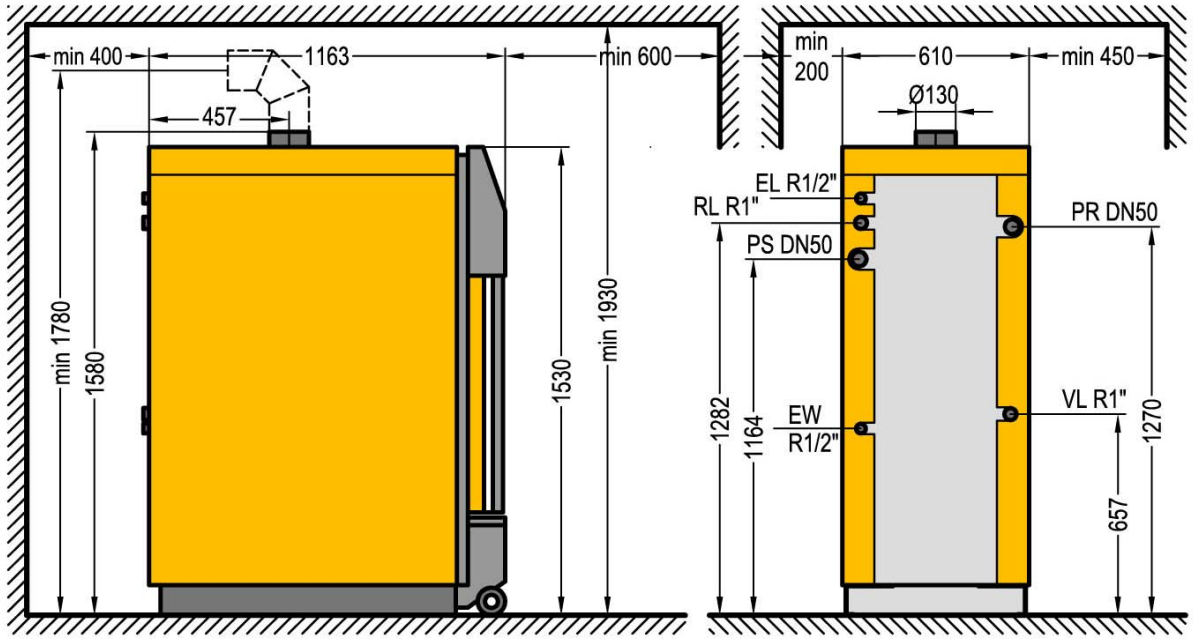
Technical Data

ETA PE		15	25
Rated capacity	kW	4,5 – 14,9	7,5 - 25,0
Efficiency partial/full load *	%	90,3 / 90,5	93,3 / 93,0
Dimensions B x T x H	mm	610 x 1.170 x 1.580	
Weight	kg	380	383
Water content	Litre	55	
Water flow resistance (ΔT=20°)	Pa / mWS	1.720 / 0,172	4.880 / 0,488
Pellet intermediate hopper on the boiler (net)	kg	60	
Max. Distance boiler – pellet store	m	20	
Ash box content	Litre	24	
Exhaust gas mass flow rate partial/full load	g/s	3,6 / 8,8	5,8 / 13,6
CO_2-content in dry exhaust gas partial/full load	%	10,0 / 14,0	10,0 / 15,0
Exhaust temperature partial/full load *	°C	90 / 140	80 /140
Chimney draught		2 Pa at partial load / 5 Pa at full load required up to 15 Pa no draught limiter required	
Emissions carbon monoxide (CO) partial/full load *	mg/MJ	24 / 17	41 / 34
	mg/m³ 13%O_2	37 / 27	64 / 52
Electrical power consumption full load *	W	100	143

Max. permitted operating pressure	3 bar	Boiler classification	3 according to EN 303-5
Range of setting for flow temperature	30 – 85°C	Tested Fuels	Wood pellets ÖNORM M 7135, DIN 51731
Max. permitted operating temperature	95°C	Power Supply	1 x 230V / 50Hz / 13A

Above 15 Pa of chimney draught, draught limiter required.
The maximum chimney draught of 15 Pa should not be exceeded.

Measurements



VL ...Flow	RL...Return	EW..Drain	EL...Air Vent	PS...Pellet Suction Line	PR...Pellet Back Air
R1" femal	R1" femal	R1/2" female	R1/2" female	DN 50 Hose Connection	DN 50 Hose Connection

Minimum Distances!

To the chimney	500mm
Before the front door	800mm
Behind the boiler	300mm
From the front	
right	200mm
left	500mm

Connection to chimney

The connection to the chimney should be done with a minimum angle of 15° (recommended 30-45°).
This results in a connection height of 2m or more depending on the angle and the distance to the chimney.

Requirements of central heating rooms

Ambient temperature

Permissible ambient temperature 40°C

Fire extinguisher

Up to 20m² : G6 (6kg)
Between 20-50m²: G12 (powder extinguisher - 12kg)

Installation

The installation in the heating room and the heating room itself has to meet the regional standards.

Chimney

Exhaust system

Due to low exhaust gas temperatures the chimney should be insulated to prevent condensation or a water resistant chimney construction should be used.

Impact sound

No flexible connection to the chimney!
At the connection to the chimney, the chimney pipe should be bonded with rock wool to prevent impact sound transmissions.

Insulation

The chimney pipe must be insulated with minimum 30mm rock wool in order to prevent condensation inside the chimney pipe.

Chimney pipe intersection

The chimney pipe is not allowed to extend into the chimney.

Draught Limiter

Up to 15 Pa chimney draught, no draught limiter required. The maximum chimney draught of 15 Pa should not be exceeded.

Chimney pipe

The connection to the chimney and the chimney pipe has to be leak-proof in order to prevent smoke coming out.

The connection to the chimney should be done with a minimum angle of 15° (recommended 30-45°).

Chimney Dimension

In most cases a chimney diameter of 140mm is suitable.

If any questions arise please contact your local chimney expert/sweeper.

Requirements of storage rooms

Storage rooms

The storage room has to be dry and tight.

The walls of the storage rooms must withstand the static stress from the weight of the pellets (650kg/m³).

Opposite of the filler nozzles we recommend having deflecting mats.

The door into the storage room has to be planked with wood.

The boarding should be mounted in an angle of 40-45° using plywood (27mm) with a smooth surface.

Safety Guide Lines!

Inside the pellet storage room there should be no electric wires, heating pipes, junction boxes or similar equipment.
In the case that there is such an equipment inside the storage room it has to be dust proof and without flanges.
Junction boxes and switches must be removed and the openings must be closed.

Lights and Lamps for the storage room have to be explosion proof.

No individuals should be inside the storage room during filling.

Start-up, Operation

Start-up

Before start-up the heating system has to be filled with water and vented.

The start-up must be done by a plumber or trained personnel only.

At the start-up the installation of all components has to be checked.
Also the settings and functions of all control and safety devices have to be tested.

At the start-up the customer has to be instructed in the operation and maintenance of the boiler, all accessory of the heating system and safety devices to guarantee a safe operation.

Operation

The manipulation of all setting like boiler temperature, exhaust gas temperature, residual O2 content, etc. can be done on the control panel of the boiler only (q.v. Operating Instructions).

The use of hazardous chemicals for lighting the boiler is prohibited.

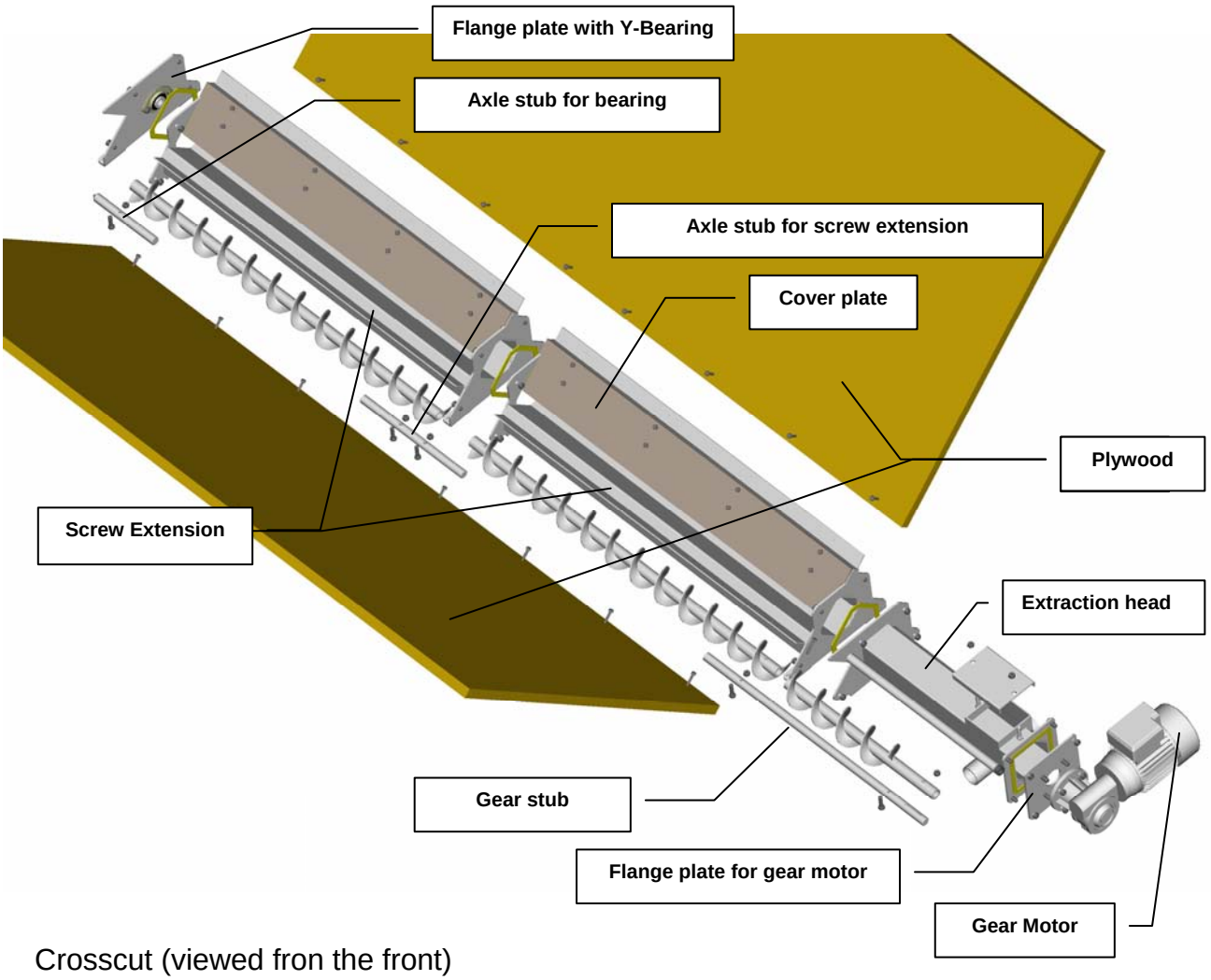
The lighting of the fuel is exclusively done by the automatic ignition device.

A maintenance contract is recommended to assure proper maintenance of the boiler and its accessory.

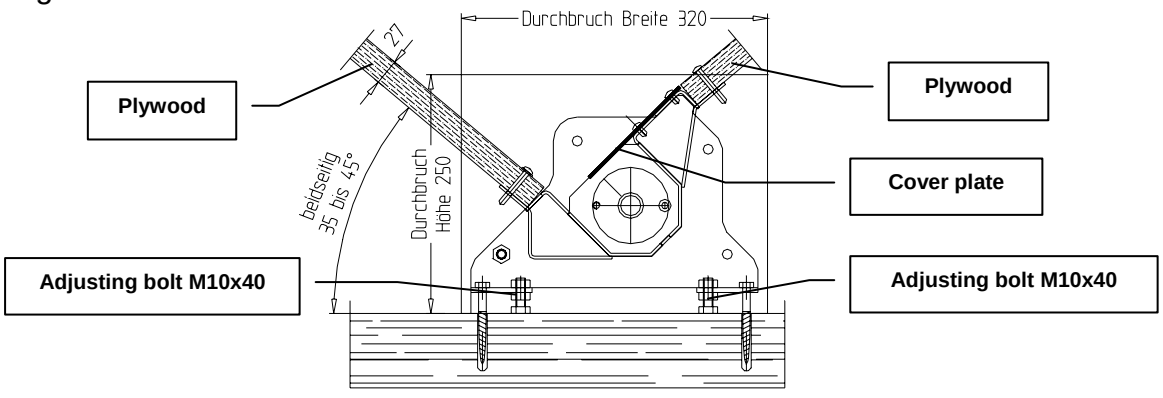
Assembly

Pellet Conveyor Screw

The individual channel and screw modules are flanged together with the appropriate connection shafts.



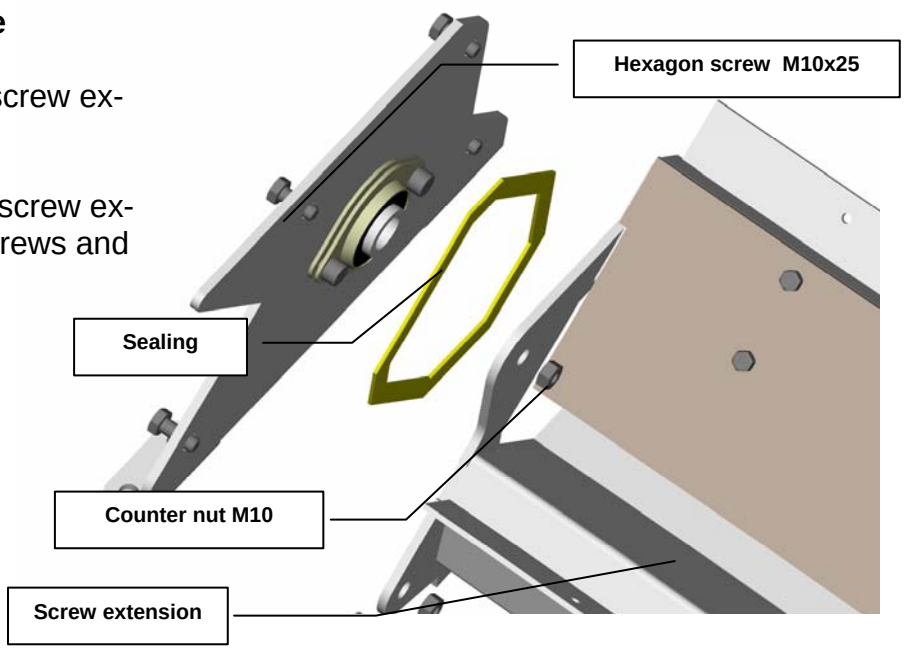
Crosscut (viewed fron the front)
Pellet screw has to be mounted horizontally and fixed with the screws on the bottom of the storage room.



Assembly of the flange plate

1. Stick the sealing onto the screw extension.

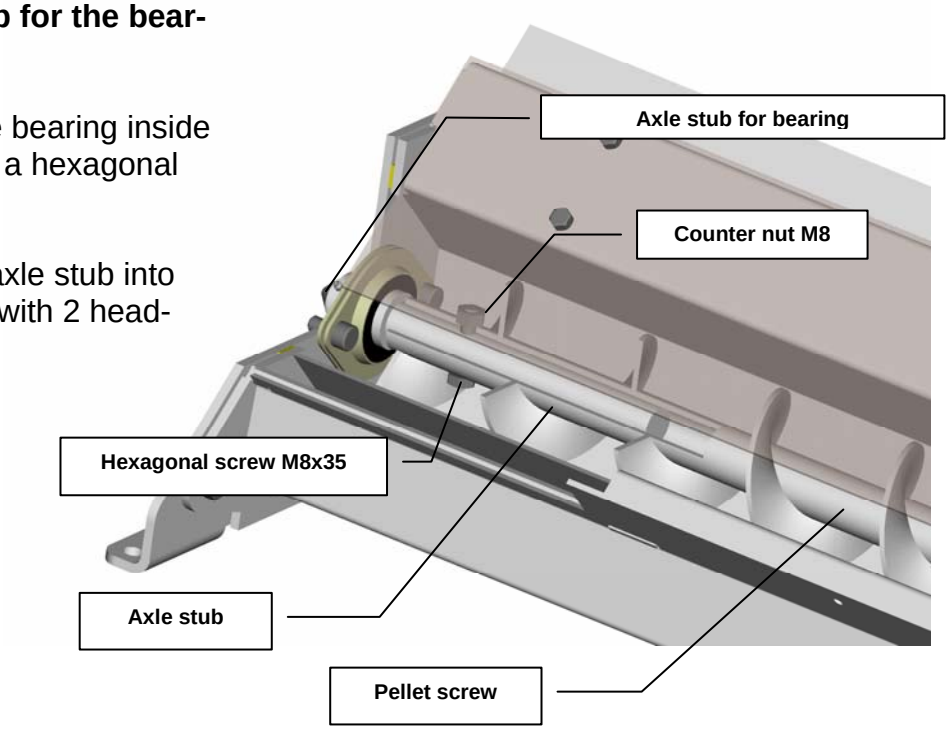
2. Fix the flange plate on the screw extension unsing hexagon screws and counter nuts.



Assembly of the axle stub for the bearing

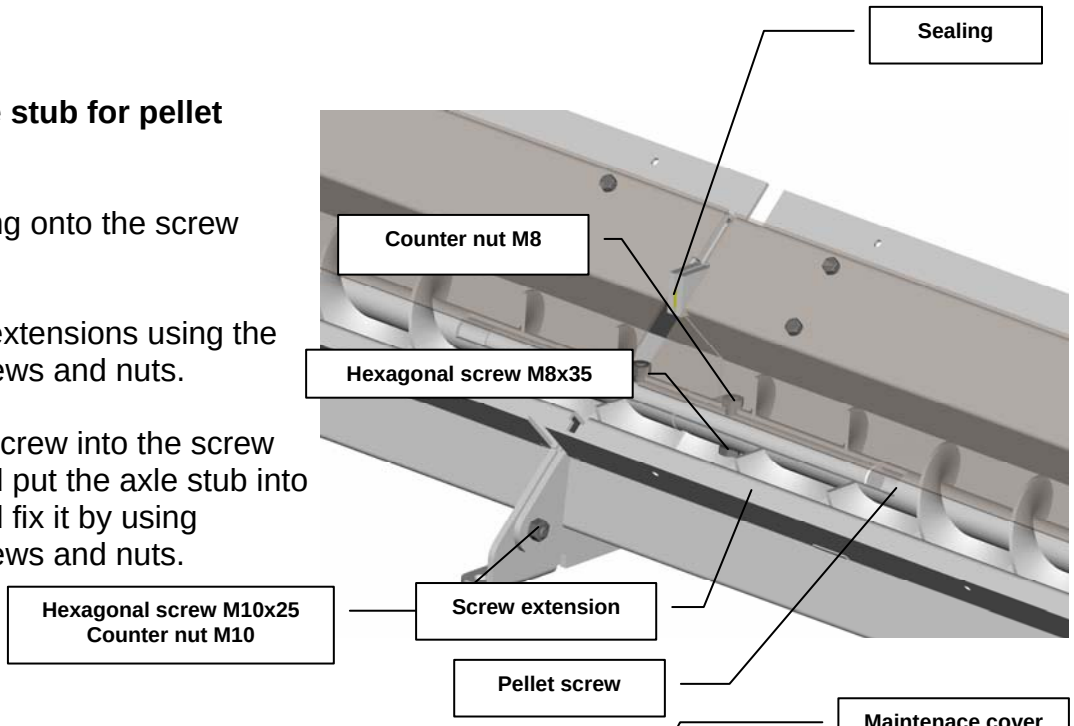
1. Putt he axle stub for the bearing inside the screw and fix it with a hexagonal screw and counter nut.

2. Put the screw with the axle stub into the Y-Bearing and fix it with 2 headless screws.



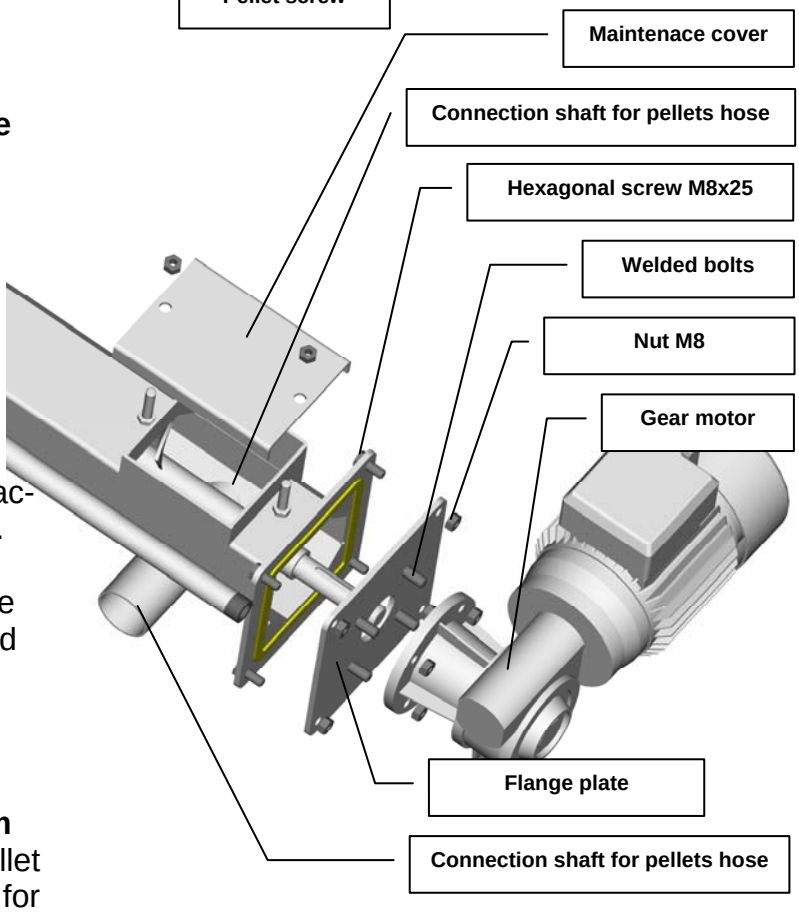
Assembly of axle stub for pellet screw extension

1. Stick the sealing onto the screw extension.
2. Fix the screw extensions using the hexagonal screws and nuts.
3. Put the pellet screw into the screw extensions and put the axle stub into the screws and fix it by using hexagonal screws and nuts.



Assembly of the gear motor and the flange plate.

1. Stick the sealing onto the screw extension.
2. Mount the gear motor on the welded bolts of the flange plate using hexagonal nuts.
3. Mount the flange plate on the extraction head using hexagonal screws.
4. Mount the maintenace cover on the welded bolts on the extraction head using hexagonal nuts.

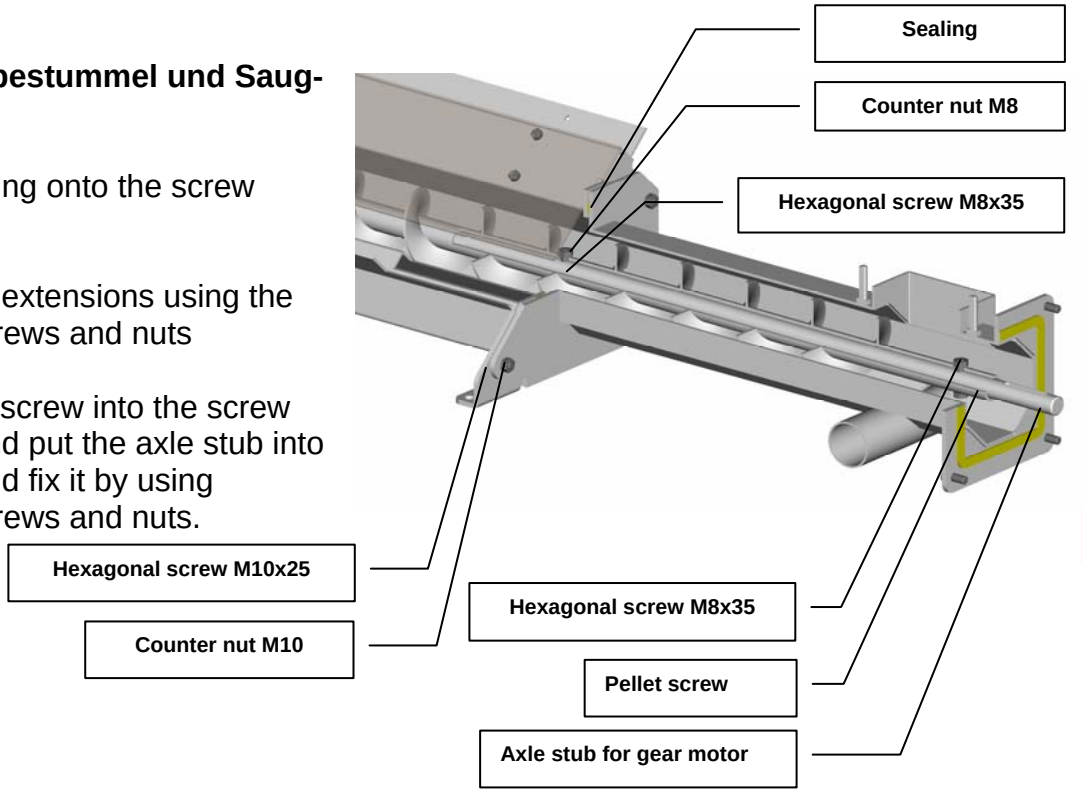


Assembly of the pellets hose.

On the right hand side (viewed from the front) is the connection for the pellet feed hose, opposite is the connection for the hose used for the back air.
Fix the hoses using the pipe clamps and connect the copper wire on the earthing of the boiler.

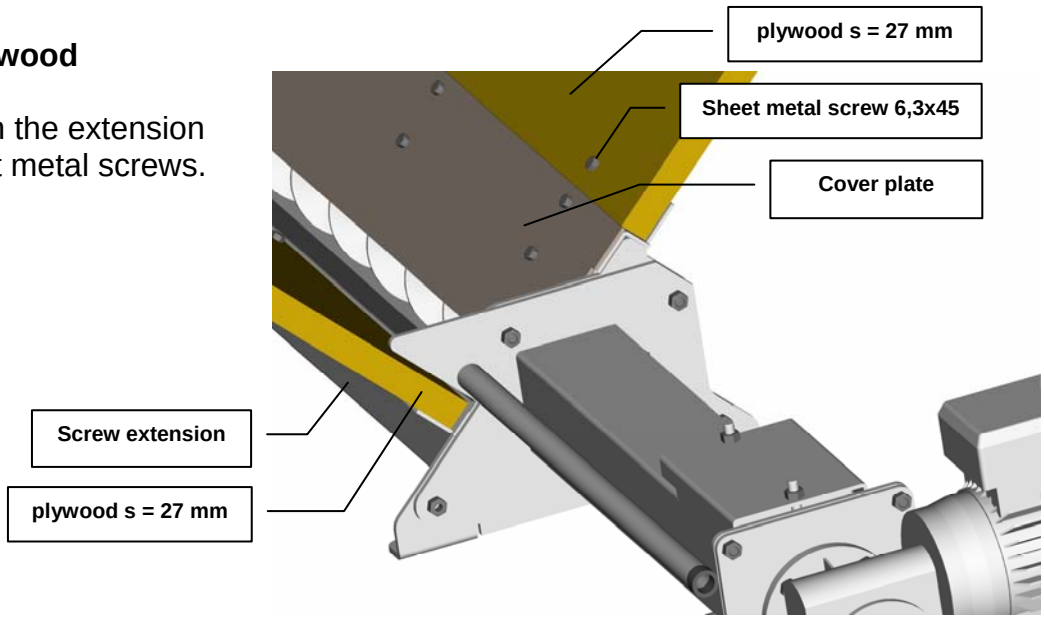
Montage Getriebestummel und Saug-stück

1. Stick the sealing onto the screw extension.
2. Fix the screw extensions using the hexagonal screws and nuts
3. Put the pellet screw into the screw extensions and put the axle stub into the screws and fix it by using hexagonal screws and nuts.



Assembly of the plywood

Mount the plywood on the extension screw using the sheet metal screws.



Electrical power supply for the gear motor of the pellet conveyor screw

The connection inside the junction box of the gear motor has to be done as described on the gear motor.
The connection on the control board of the boiler has to be done at the plug conveyor screw (Austragschnecke)

Important!
The rotation of the screw has to be clockwise.

Disassembling

The disassembling of the systems has to be done in the reversed order as the assembling.