Operation and Maintenance Manual



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1. Introduction

The pneumatic burner cleaner is an accessory suitable for optimal cleaning of the ATMOS A25 and A45 combustion chambers when burning poorer quality wooden pellets which form cakes (ash clumps), i.e. wooden pellets with greater amounts of bark and dirt.



WARNING – This equipment does not deal with the burning of plant pellets, grains, other biological waste pressed into pellets or wooden pellets with greater content of the above mentioned substances.

The equipment ensures the automatic removal of clumps and ash from the burner combustion chamber at regular intervals, or always after the burner burns out. The pneumatic burner cleaner is very fast, effective and reliable.



INFO – Pneumatic cleaning is not a replacement for regular servicing or where necessary the cleaning of the burner and boiler which has to be undertaken at regular intervals once every 7 to 90 days according to pellet quality. The interval between checks and cleaning of the combustion chamber should be looked at taking account of the amount of foreign matter and dirt in the pellets, which can result in growth of apertures (holes) in the combustion chamber for intake of combustion air.

Combustion chamber cleaning is undertaken according to a preset program in the ATMOS A25 or ATMOS A45 burner electronics. Its frequency must always correspond to the quality of pellets burnt. The poorer the pellet quality, the more frequent clumps must be removed from the combustion chamber.



INFO - Clumps of ash prevent combustion air from reaching the pellets, meaning they cannot burn properly in the required time in the combustion chamber. This subsequently results in the overfilling of the combustion chamber and blockage of the pellet inlet pipe between the burner and conveyor.

These ash clumps are not formed with high quality wooden pellets made of soft bark-free wood or other mixes of so-called white pellets, meaning pneumatic cleaning is unnecessary. However, if it is built into the burner it saves us time, facilitates work, ensures consistent combustion quality, and thus reliability.

The equipment works by day and night to ensure everything runs reliably. The customer may, however, wish to ensure cleaning does not take place at night where the boiler is located, e.g. near to a bedroom. In this case, a special 8 A timer can be used to control the compressor directly by time (Note – this cannot normally be bought in shops)



WARNING – You should, however, be aware that if the pellet quality is so poor as to require burner cleaning at intervals shorter than can be set by the timer, the burner will not work reliably and the pellet inlet pipe will block.

The equipment is supplied as am accessory in sets according to boiler type



Basic set package with compressor



Opened set with modified compressor



Basic set package without compressor



Opened set without compressor



INFO - The difference between the set for A25 burner and A45 burner is only that the ignition coil board (holder), combustion chamber and pneumatic cleaning channel have different dimensions. Other parts are the same. For the set designed for amended boilers, where the burner is built in to the upper doors and boilers DxxPX, PXxx, the hose is 1.5 m, where all other versions have hose lengths of 1 m.



Compressor accessories for compressor use as a source of compressed air.

This accessory use, if we want the compressor to run independently for example to blow out inside of the burner.

Contents:

- pressure hose 2 m
- cable with 3-pin connector (female)

code: H0520

code: H0521

Basic sets

1.1 CP25K set for A25 burner with compressor

for pellet boilers without exhaust fan

type: D14P, P14, P14/130, D21P, P21, D25P, P25, D15P, P15

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- AD02 module (to affix to boiler) to control the compressor via	
R2 reserve outlet	code: P0432
- 1500 W compressor with 6 l air receiver volume amended for	
pneumatic cleaning	code: H0305
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747

1.2 CP25 set for A25 burner without compressor

for pellet boilers without exhaust fan

type: D14P, P14, P14/130, D21P, P21, D25P, P25, D15P, P15

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- AD02 module (to affix to boiler) to control the compressor via	
R2 reserve outlet	code: P0432
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747
- 3-pin connector (male) for powering and controlling other compressor (valve)	code: S0647

code: H0524

code: H0525

1.3 CP25KS set for A25 boiler with compressor

for pellet boilers and DCxxSP combined boilers with exhaust fan

type: D20P, P20, DC18SP, DC25SP, DC30SPX, DC32SP, C18SP, C25SP

Set contents:

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- AD03 module (to affix to boiler) for controlling boiler exhaust fan	
from AD04 module through VV burner electronics terminal (15) and compressor	
through R2 reserve outlet	code: P0436
- AD04 module (to affix to burner) for controlling boiler exhaust fan	
through AD03 module and VV burner electronics terminal	code: P0446
- 1500 W compressor with 61 air receiver volume amended for	
pneumatic cleaning	code: H0305
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747

1.4 CP25S set for A25 burner without compressor

for pellet boilers and DCxxSP combined boilers with exhaust fan

typ: D20P, P20, DC18SP, DC25SP, DC30SPX, DC32SP, C18SP, C25SP

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- AD03 module (to affix to boiler) for controlling boiler exhaust fan	
from AD04 module through VV burner electronics terminal (15) and compressor	
through R2 reserve outlet	code: P0436
- AD04 module (to affix to burner) for controlling boiler exhaust fan	
through AD03 module and VV burner electronics terminal	code: P0446
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747
- 3-pin connector (male) for powering and controlling other compressor (valve)	code: S0647

1.5 CP25KGSP set for A25 boiler with compressor for pellet boilers and DCxxGSP combined boilers with exhaust fan

code: H0544

code: S0747

code: H0545

type: DC25GSP, DC30GSP

Set contents:

Set contents:

code: S0767
code: S0136
code: H0277
code: H0276
code: H0533
code: P0432
code: H0305

1.6 CP25GSP set for A25 burner without compressor for pellet boilers and DCxxGSP combined boilers with exhaust fan

typ: DC25GSP, DC30GSP

boiler and wall socket

Set contents:

code: S0767
code: S0136
code: H0277
code: H0276
code: H0533
code: P0432
code: S0747
code: S0647

code: H0522

code: H0523

1.7 CP45KS set for A45 burner with compressor

for pellet boilers with exhaust fan

type: D31P, D30P, D40P, D50P, P31, P30, P40, P50

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A45 burner	code: H0417
- new combustion chamber for A45 burner	code: H0418
- pneumatic cleaning channel with nut and washer for A45 burner	code: H0536
- AD03 module (to affix to boiler) for controlling boiler exhaust fan	
from AD04 module through VV burner electronics terminal (15) and compressor	
through R2 reserve outlet	code: P0436
- AD04 module (to affix to burner) for controlling boiler exhaust fan	
through AD03 module and VV burner electronics terminal	code: P0446
- 1500 W compressor with 61 air receiver volume amended for	
pneumatic cleaning	code: H0305
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747

1.8 CP45S set for A45 boiler without compressor

for pellet boilers with exhaust fan

type: D31P, D30P, D40P, D50P, P31, P30, P40, P50

Set contents:

- connecting air hose of length 1 m (diameter 28 mm)	code: S0767
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A45 burner	code: H0417
- new combustion chamber for A45 burner	code: H0418
- pneumatic cleaning channel with nut and washer for A45 burner	code: H0536
- AD03 module (to affix to boiler) for controlling boiler exhaust fan	
from AD04 module through VV burner electronics terminal (15) and compressor	
through R2 reserve outlet	code: P0436
- AD04 module (to affix to burner) for controlling boiler exhaust fan	
through AD03 module and VV burner electronics terminal	code: P0446
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747
- 3-pin connector (male) for powering and controlling other compressor (valve)	code: S0647

1.9 UCP25KS set for A25 burner with compressor code: H0526 for gasification boilers for wood, coal and briquettes with built-in burner in upper doors type: DCxxS(X), DCxxRS, CxxS(T), ACxxS, KCxxS **Set contents:** - connecting air hose of length 1,5 m (diameter 28 mm) code: S0768 - complete screw fitting (3/4") with solenoid control and connecting cable code: S0136 - new ignition coil board (holder) for A25 burner code: H0277 - new combustion chamber for A25 burner code: H0276 code: H0533 - pneumatic cleaning channel with nut and washer - AD03 module (to affix to boiler) for controlling boiler exhaust fan from AD04 module through VV burner electronics terminal (15) and compressor through R2 reserve outlet code: P0436 - AD04 module (to affix to burner) for controlling boiler exhaust fan through AD03 module and VV burner electronics terminal code: P0446 - 1500 W compressor with 61 air receiver volume amended for pneumatic cleaning code: H0305 - connecting cable with 3-pin connector (female) between the compressor, boiler and wall socket code: S0747 - additional grille code: H0534 - special valve (mechanism for closing space under flap controlled by FR 124 barometric damper (2 + 1 pcs.)code: H0535 1.10 UCP25S set for A25 burner without compressor code: H0527 for gasification boilers for wood, coal and briquettes with built-in burner in upper doors type: DCxxS(X), DCxxRS, CxxS(T), ACxxS, KCxxS **Set contents:** - connecting air hose of length 1,5 m (diameter 28 mm) code: S0768 - complete screw fitting (3/4") with solenoid control and connecting cable code: S0136 - new ignition coil board (holder) for A25 burner code: H0277 - new combustion chamber for A25 burner code: H0276 - pneumatic cleaning channel with nut and washer code: H0533 - AD03 module (to affix to boiler) for controlling boiler exhaust fan from AD04 module through VV burner electronics terminal(15) and compressor through R2 reserve outlet code: P0436 - AD04 module (to affix to burner) for controlling boiler exhaust fan through AD03 module and VV burner electronics terminal code: P0446 - connecting cable with 3-pin connector (female) between the compressor, boiler and wall socket code: S0747 - 3-pin connector (male) for powering and controlling other compressor (valve) code: S0647 - additional grille code: H0534 - special valve (mechanism for closing space under flap controlled by FR 124 barometric damper (2 + 1 pcs.)code: H0535

code: H0538

code: H0539

1.11 CPX25KS set for A25 boiler with compressor

for pellet boilers with exhaust fan

type: D15PX, D20PX, PX15, PX20

Set contents:

Set contents:

- connecting air hose of length 1,5 m (diameter 28 mm)	code: S0768
- complete screw fitting (3/4") with solenoid control	
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- 1500 W compressor with 61 air receiver volume amended for	
pneumatic cleaning	code: H0305
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747

1.12 CPX25S set for A25 burner without compressor

for pellet boilers with exhaust fan

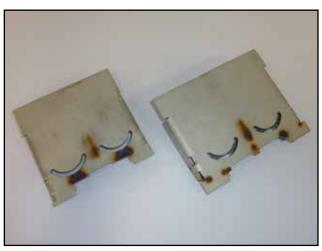
type: D15PX, D20PX, PX15, PX20

Set contents:

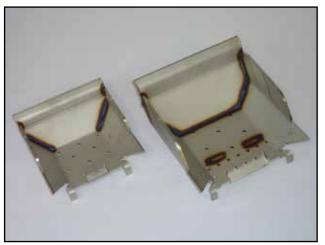
- connecting air hose of length 1,5 m (diameter 28 mm) - complete screw fitting (3/4") with solenoid control	code: S0768
and connecting cable	code: S0136
- new ignition coil board (holder) for A25 burner	code: H0277
- new combustion chamber for A25 burner	code: H0276
- pneumatic cleaning channel with nut and washer	code: H0533
- connecting cable with 3-pin connector (female) between the compressor,	
boiler and wall socket	code: S0747
- 3-pin connector (male) for powering and controlling other compressor (valve)	code: S0647



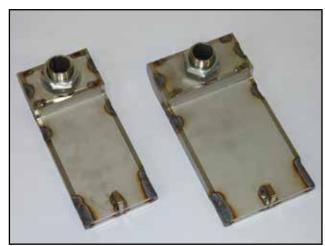
Complete screw fitting (3/4") with solenoid control and connecting cable



New ignition coil board (holder) for A25 and A45 burners



New combustion chamber for A25 and A45 burner



Pneumatic cleaning channel with nut and washer for A25 and A45 burners



AD02, AD03 and AD04 modules (except DxxPX, PXxx) Connecting cable with 3-pin connector (female) and separate 3-pin connector (male)



Amended compressor for pneumatic cleaning



INFO - The basic set without compressor should be chosen only if you have a compressor of receiver volume from 5 to 10 l which can reach a pressure of 5 - 8 bar (500 - 800 kPa). The compressor or receiver must be right next to the boiler and the basic pipe diameters with which the air is pumped into the chamber must be kept.

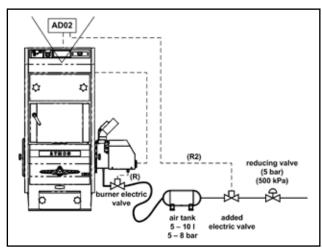


WARNING - If air is pumped in from a greater distance, we must add a small receiver of 5 to 10 l volume near the boiler which will allow its hassle-free filling with compressed air of 5 to 8 bar (500 - 800 kPa). Larger receivers cannot be used. This second solenoid fitted to the compressed air pipe is deliberatily located on the compressed air inlet into the additional receiver so that when cleaning the burner with compressed air there is not additional flow (release) of compressed air into the additional receiver. We install a reduction valve in front of the additional solenoid for setting the optimum pressure for the pneumatic burner cleaner (5 bar/500 kPa). The second valve must be controlled in the same way as the separate compressor, through output R2 through the AD03 or AD02 module.

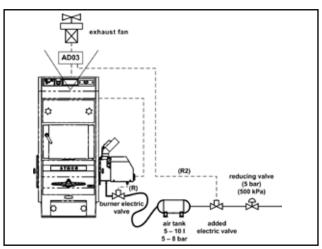


WARNING - Cleaning the burner using compressed air flowing directly from a central compressed air supply or from a receiver of greater than 10 l volume is strictly forbidden.

Connection diagram with additional receiver and second solenoid



For boilers D14P, P14, P14/130, D21P, P21, D25P, P25, D15P, P15



For boilers D20P, D30P, D40P, D50P, D31P, P20, P30, P40, P50, P31, DC18SP, DC25SP, DC30SPX, DC32SP, C18SP, C25SP, DC25GSP, DC30GSP, boilers with modification for burner - DCxxS(X), DCxxRS, CxxS(T), ACxxS, KCxxS DxxPX, PXxx (without AD03)

2. Technical data

Name: Pneumatic burner cleaner - accessory

Prescribed burner: ATMOS A25 and A45 AC07X models or higher

Power supply: 230 V / 50 Hz

Maximum power when using supplied compressor: 1500 W

Maximum power when using other equipment: according to equipment type

Control of functions: electronic regulation of burner AC07X, controlling both burner pneumatic cleaning and burner operations. Function using both reserve outlets R and R2, which thus cannot be used for other purposes.

Profiles: A25, A25 pneu, A25 GSP, A25 GSP pneu, A25PX, A25PX pneu, A45, A45 pneu

Other necessary information is included in the burner manual and manual for your specific boiler.

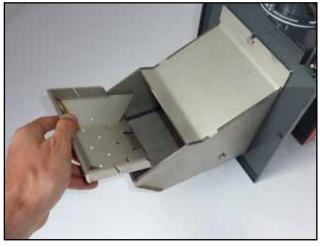
Pneumatic cleaner operating pressure: 2 - 8 bar (200 - 800 kPa)

3. Assembly instructions

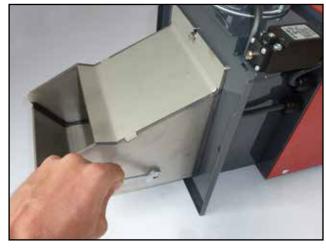


WARNING – pneumatic cleaner assembly may only be undertaken by a qualified person trained by the manufacturer in accordance with rules and regulations in force. Before running, you must familiarise yourself completely with the operation manual. You must also observe all general safety regulations for working with heating equipment and pressure vessels which are given by laws in force.

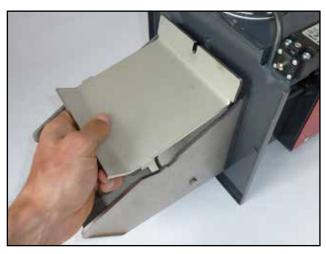
Assembly of the pneumatic cleaner in pictures



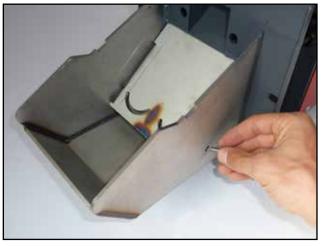
First place the burner on a table or hard surface Loosen the M6 screws which hold the ignition and remove the old combustion chamber



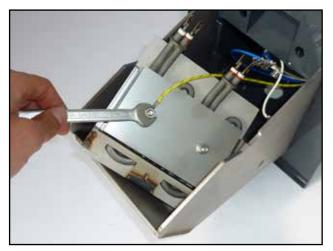
coil board



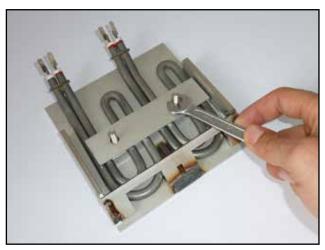
Loosen and screw out the M6 screw which holds the burner nozzle cover and remove the cover



Screw out the M6 screws which hold the ignition coil board



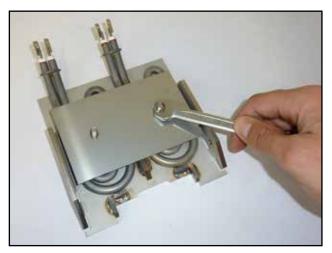
Disconnect the ignition coil connectors and frame, remove the board



Disassemble the ignition coils



INFO – the old combustion chamber and ignition coil board will no longer be used.



Take the new ignition coil board and put it together again in the same way (screw together)



Disassemble seal cover located on the lower section of the burner



WARNING – when assembling, ensure the **ignition coils evenly cover the holes where** the pellets and ignition bodies come into contact. Tighten firmly.



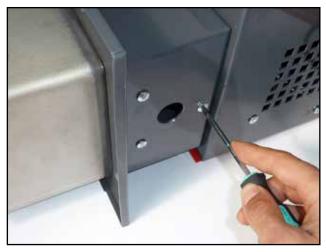
WARNING – for old burners which do not have a preprepared opening for pneumatic burner cleaning, holes for screws must be drilled according to product.

The product is supplied in an general model (one product) for small or large burners separately or with graduated drill.

Set for drilling aperture into body of older burner

code: S0623 The set is made up of a graduated drill for drilling a Ø 27 ±1 mm hole and product for predrilling a basic aperture in the burner body.

Separate general product for predrilling aperture in burner body

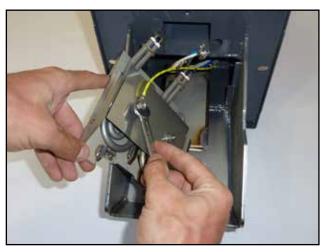


Screw the original screws back into the holes so Set the pneumatic cleaning channel in the burner air cannot flow through them or false air be sucked through them



code: S0610

and gently secure using washer and low nut



Insert the new board for holding the ignition coils into the burner while securely affixing the frame (green-yellow wire) under one of the nuts



Mount connectors to every ignition coil (white and blue always together on one ignition body)



Insert ignition coil board in its place and centre the pneumatic cleaning channel in its designeated place



Carefully tighten the nuts with washers to the burner body



Insert new combustion chamber and check everything once again, tightening where needed



Take complete screw fitting with solenoid control and connecting cable and screw it to the burner



INFO – the burner combustion chamber must fit freely into the burner, and the pneumatic cleaning channel must be centred so that there is equal give along its sides.

4. Wiring instructions



WARNING - Wiring may only be undertaken by a **qualified person in accordance with all rules and regulations of your country** with careful attention paid to ensuring the safe earthing of the boiler and burner.

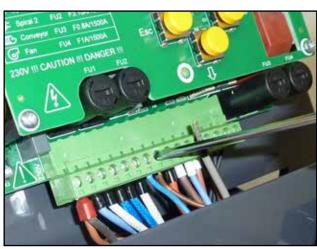
Connecting the solenoid valve control directly to the burner terminal (reserve R) or module AC07X-C



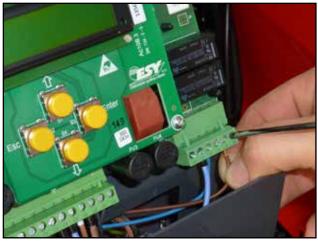
INFO - if the boiler is without an exhaust fan or boiler DCxxGSP, carefully insulate the unconnected grey wire; for boilers with exhaust fans, the grey wire will be used (not apply to DxxPX, PXxx).



Pull the solenoid valve (electrovalve) connecting cable using the grommet through the brake downt hole in the lower part of the burner body



From the burner terminal plate, disconnect the grey wire from terminal R (9), connect the brown wire from the solenoid valve to terminal R (9) and the blue wire to terminal N (8) (not apply to DxxPX, PXxx)

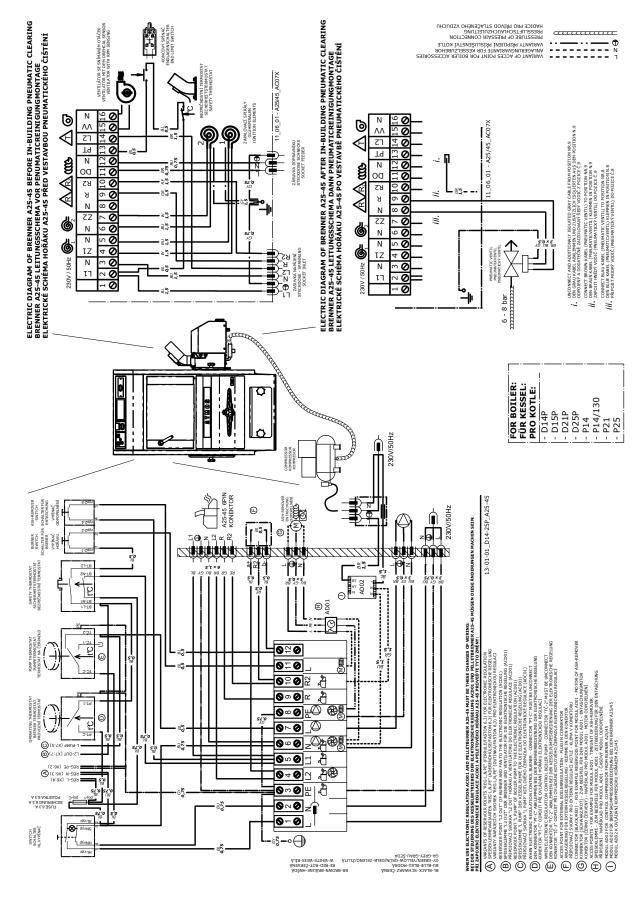


For models DxxPX and PXxx connect solenoid valve (electrovalve) into the AC07X-C module. Blue wire N to terminal (4) and brown wire L to terminal R6 (6)

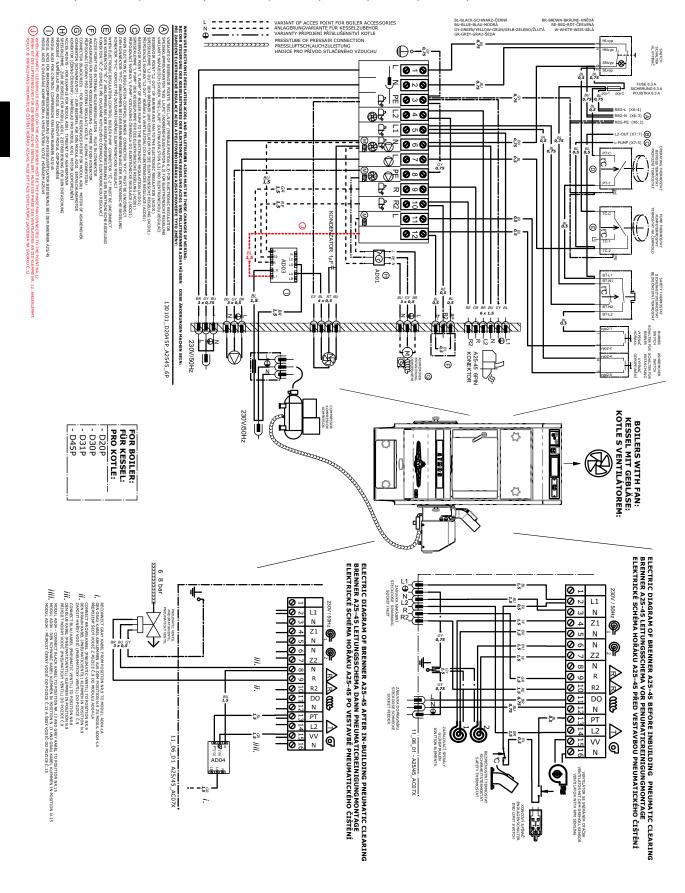


Connect the green and yellow wire with eyelet to the common frame on the burner body

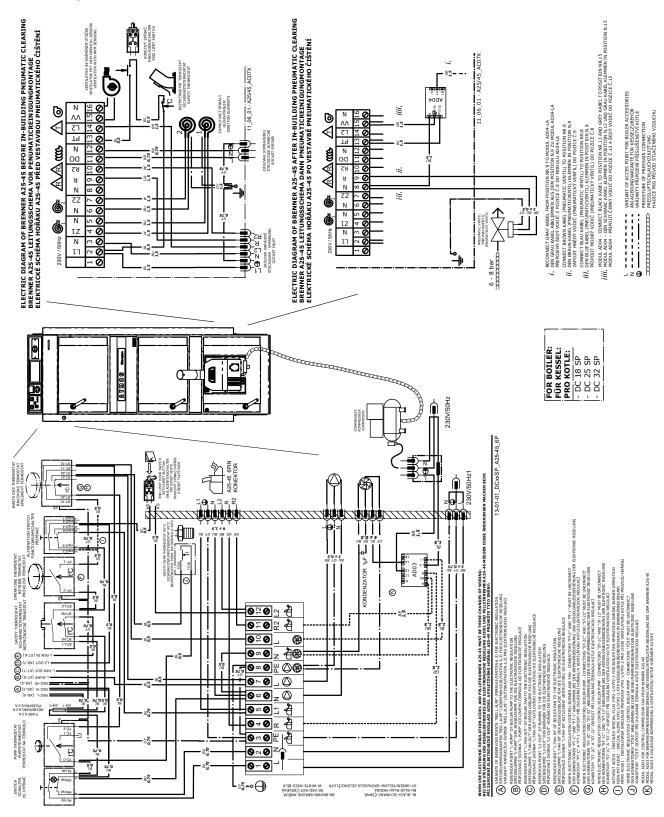
Wiring system for boiler running on pellets only without exhaust fan D14P, P14, P14/130, D21P, P21, D25P, P25, D15P, P15



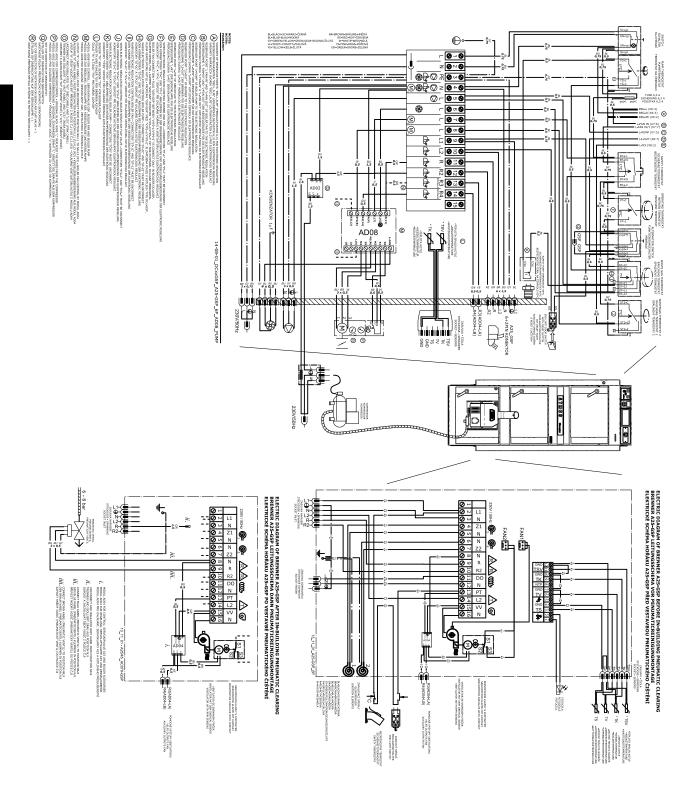
Wiring diagram for only pellet boilers with exhaust fan D20P, D31P, D30P, D40P, D50P, P20, P31, P30, P40, P50



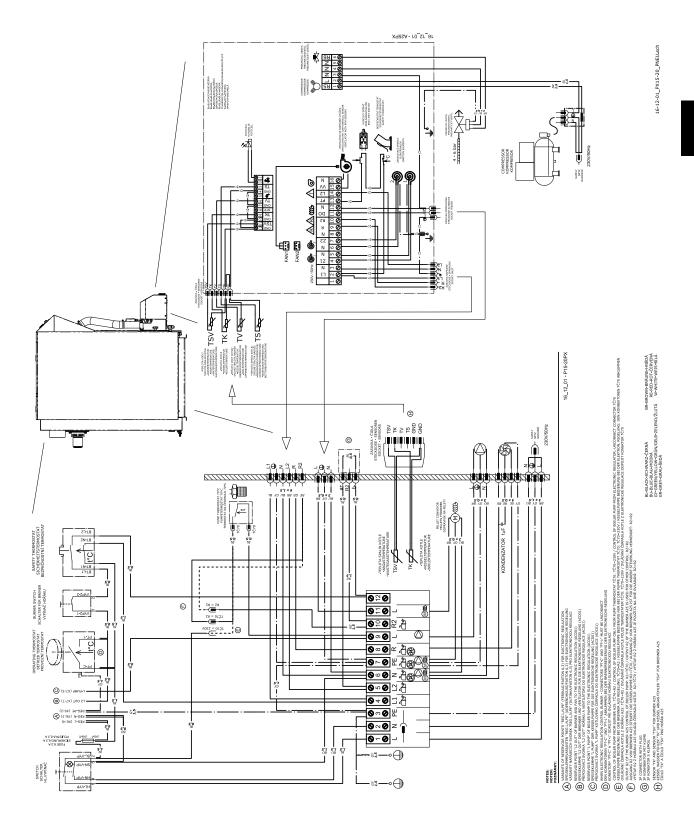
Wiring diagram for combined boilers for wood gasification and pellet burning DC18SP, DC25SP, DC30SPX, DC32SP, C18SP, C25SP, KC25S



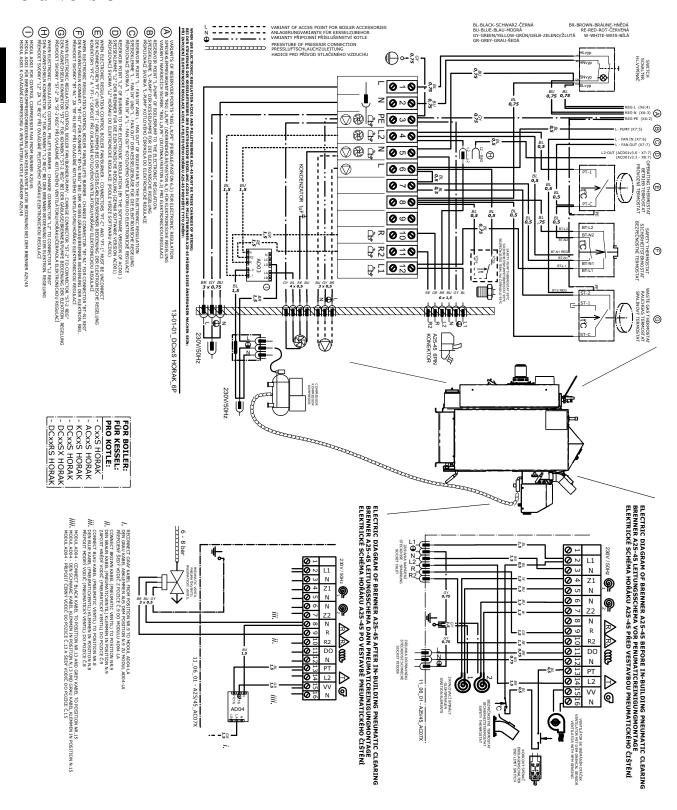
Wiring diagram for combined boilers for wood gasification and pellet burning DC25GSP, DC30GSP



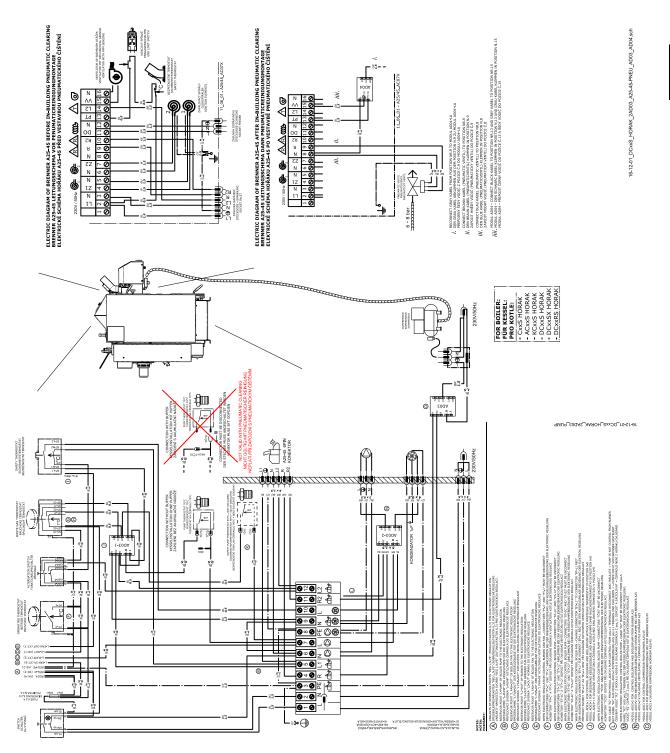
Wiring system for boiler running on pellets only without exhaust fan D15PX, D20PX, PX15, PX20



Wiring diagram for gasification boiler for wood, coal and briquettes equipped with exhaust fan with build-in burner in upper doors DCxxS(X), DCxxRS, CxxS(X), ACxxS, KCxxS - old version



Wiring diagram for gasification boiler for wood, coal and briquettes equipped with exhaust fan with build-in burner in upper doors DCxxS(X), DCxxRS, CxxS(X), ACxxS, KCxxS - Model 2017



INFO – when connecting the boiler with pneumatic burner cleaning the pump thermostat 70 °C is not normally disconnected. It serves to switch the pump in the boiler circle. Disconnection of the thermostat 70 °C is only possible if the additional thermostat is added on the outlet pipe from the boiler (set to 75 °C) and its parallel connection with the boiler flue gas thermostat.

Connecting boiler exhast fan controls via special AD04 module built in to A25 or A45 pellet burner (not apply to DxxPX, PXxx)



INFO – The AD04 special module should be fitted onto the A25 or A45 pellet (except A25 burner for boilers DCxxGSP where the AD04 modul is already inbuild) burner only if the boiler is fitted with an exhaust fan. This module allows the boiler exhaust fan to be operated together with the burner fan regardless of its speed. This is managed without use of R or R2 reserves from the VV burner electronics terminal (15) (not apply to DxxPX, PXxx).

For DxxPX and PXxx boilers is the pump in boiler circuit and exhaust fan of the boiler controlled directly from the burner with reserves R and R2 - factory connection - never change.





Insert the AD04 module to the lower section of the burner so it does not obstruct the suction of combustion air into the burner and connect it according to the previous diagrams (except the A25 burner for boilers DCxxGSP where the AD04 modul is already inbuild)



INFO - connect the **grey wire** previously disconnected from terminal R (9) to the AD04 module at LA position. If needed, the AD04 module can be affixed to the lower interior burner section (not apply to DxxPX, PXxx).



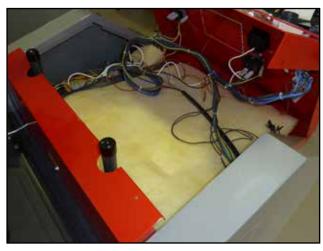
Affix the pellet burner to the appropriate boiler and fully tighten



Connect the connecting cable with a 6-pin connector on both ends between the burner and boiler

Adjusting and connecting wiring in boiler (not apply to DxxPX, PXxx)





Remove the screws at the back of the boiler hood and take off the hood

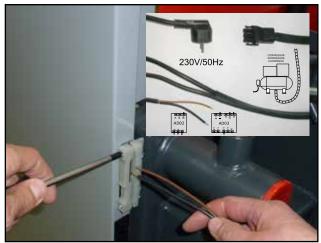


WARNING – before performing this task, ensure the **boiler is disconnected from the electricity** (power connector on boiler hood disconnected).

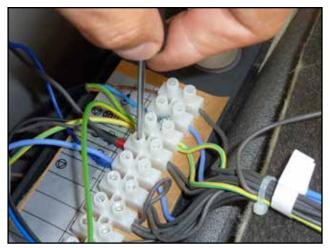
Connecting compressor control via AD02 or AD03 module built in to boiler. Connecting boiler exhaust fan control via AD03 module second terminal.



INFO - terminal R (9) on the **boiler terminal place** is used to communicate between the AD04 and AD03 module for controlling the boiler exhaust fan (except the A25 burner for boilers DCxxGSP), and terminal R2 (10) is used for controlling the compressor through the AD02 or AD03 module.specific boiler type to the boiler terminal plate (not apply to DxxPX, PXxx)



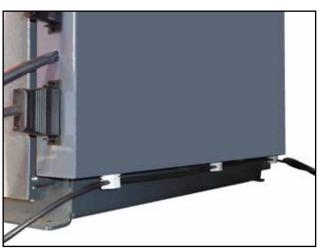
With the rear grommet, pull through the connecting cable ending on one side with two wires (black and brown) and on the other with a 3-pin connector (female) for connecting with the compressor and terminal for power supply to the compressor from the wall socket (not apply to DxxPX, PXxx)



Connect the wire leading from the AD02 or AD03 module according to the wiring diagram for the specific boiler type to the boiler terminal plate (not apply to DxxPX, PXxx)



Connection of the compressor control to the AC07X-C additional module terminals for DxxPX and PXxx boilers, brown wire L to terminal R5 (1), black wire to the terminal (2)



An example of fixing the connection during installation of pneumatic cleaning of the pellet burner (connection of the burner and compressor) for DxxPX and PXxx boilers



Connect the wires (brown and black) from the connecting cable to the AD02 or AD03 module according to the wiring diagrame for the specific boiler type



Return the back section of the machine hood to its place and fix securely



INFO - Connect the black wire disconnected from the boiler terminal plate originally for connecting the exhaust fan to the AD03 module to the LA terminal (not apply to DxxPX, PXxx).



WARNING - for combined boilers for wood gasification and pellet burning DC18SP, DC25SP, DC30SPX, DC32SP, C18SP, C25SP, KC25SP don't forget to insert the special clamp to the on-off switch to ensure the exhause fan operates together with the pellet burner. Without this clamp, the pneumatic burner cleaner should not be put into operation for these boilers.



WARNING – When pneumatic cleaning is installed on the A25/45 burner must be on boilers D20P, D30P, D31P, D40P, D50P, P20, P30, P31, P40, P50 the phase fan connected to the point nr.12

Connecting the compressed air system



Take the connecting tube, screw it to the compressor and tighten fully



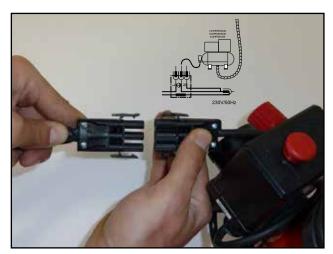
Take the other end of the connecting tube with the seal and carefully connect it to the complete screw fitting with solenoid



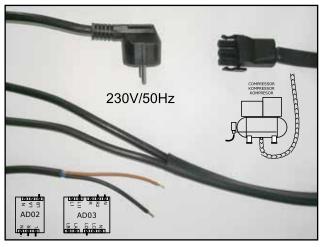
INFO – turn the solenoid with screw to a tight position so the tube isn't twisted and everything the set-up looks good, taking account of the position of the compressor in the boiler room.



WARNING – the compressor and tube should be located **sufficiently far from any heat sources** to ensure they are not damaged.



Connect the connecting cable with 3-pin connector to the compressor



Connecting cable with 3-pin connector (female) between the compressor, boiler (module ACD02/03 and wall socket 230 V / 50 Hz





Connect the connecting cable to the wall socket, either directly or using a special timer with 8 A inductive load... code: S0090 (Note – cannot normally be bought in shops)



WARNING – the compressor must never be powered directly from the boiler.



Photo of suction filter screwed onto compressor



Compressor set up beside boiler



INFO – the compressor is supplied assembled, but after final assembly you will need to **screw on the suction filter**. The suction filter channel must always lead downwards.

5. Requirements for chimneys, flues and other boiler parts during operation with pneumatic burner cleaner

Chimney

All requirements are identical to the requirements detailed in the boiler operation manual.

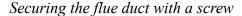
Flue way duct

Principle requirements are identical to the requirements detailed in the boiler operation manual.

You should be aware, however, that during pneumatic cleaning of the burner, expansion of compressed air takes place in the burner and boiler combustion chamber. As such, you need to secure the flue from falling out of the chimney and falling from the boiler neck. The flue must be mechanically affixed to the boiler neck with a pin or screw. Similarly, other parts such as elbows or extensions should be carefully secured to each other at joints.

You should also ensure that **ash and dust is not blown out of flue duct joints between the boiler and chimney** during pneumatic cleaning. As such, all joints and flue outlets should be tightened with an aluminium strip, putty or other similar method.







Tightening the flue with an aluminium tape



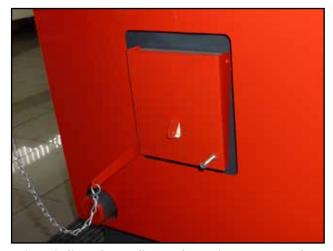
WARNING – When using draught limiter placed on the flue way between the boiler and the chimney is not permitted to use the type for the open double flap out of the flue way (explosive type) because of possible dusting into the boiler room. If required, install draught limiter into the cleaning hole at the foot of the chimney.

Tubing between burner and conveyor, pellet inlet pipe with rim

All joints on the tube and pellet inlet pipe to the burner must be carefully tightened so that no dust can fall from the pellets into the boiler space.

Flaps for combustion air intake

For DCxxSP(X), CxxSP, KCxxSP combined boilers and DxxP, Pxx boilers purely for pellets which allow the burning of pieces of wood in an emergency, you should ensure that all apertures through which combustion air flows in heating with wood are closed during operation of burner with pneumatic cleaner.



Closed flap for inflow of combustion air for DxxP, Pxx boiler



Tightened additional secondary air cap for DxxP, Pxx boiler



Closed flap for inflow of combustion air for DCxxSP(X), CxxSP, KCxxSP boilers



Combustion air inlet for the boiler DCxxGSP closed automatically using Belimo actuator

For gasification boilers for wood, coal and briquettes with an in-built burner in the upper doors DCxxS(X), DCxxRS, CxxS(T), ACxxS, KCxxS you need to mount a closing mechanism (valve) under the regulating FR24 flap with controlled draft regulator which you should close when burning pellets so that no dirt can fall through the grille under the flap into the boiler space. When burning wood, coal or briquettes, the flap is open.



Disassembling flap for combustion air inflow



Asesmbling valve under flap with grille



Closed valve and regulating flap when burning pellets



Open valve and regulating flap when burning with manually added fuel



WARNING – any other apertures on the boiler which are used for taking out ash or cleaning the boiler must be securely closed so that dirt cannot escape into the boiler space.



INFO - Pneumatic burner cleaning is completely safe, since it is performed once the fuel has fully burnt. Nevertheless, do your utmost to ensure the boiler remains relatively clean.

Boiler exhaust fan, gasifier nozzle and gasifier grille

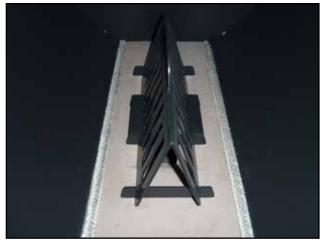
The boiler exhaust fan ensures suction pressure un the combustion chamber when operating a pellet burner.

Its function is very important for boilers with in-built burners in upper doors due to the narrower cross-sections in the gasifier nozzle and gasifier grille.

In this case, the exhaust fan must be constantly running when the pellet burner pusher fan is running.



WARNING – for safety reasons, a special grille is supplied as an accessory in the set for boilers with in-built burners in upper doors, which prevents the blockage of gasifier nozzles and gasifier grille with ash clumps ejected from the pellet burner combustion chamber in pneumatic cleaning.



Positioning special grille for gasifier nozzle for DCxxS(X) boiler



Positioning special grille for gasifier nozzle for DCxxRS boiler



CxxS(T), ACxxS, KCxxS boiler gasifer grille without special additional grille



Affixing sticker with important information (ATTENTION – During burner operation with pneumatic cleaning...)



WARNING - remember **you must regularly check and clean the upper boiler chamber** so the flue gas outlet from the boiler is not blocked with particles and ash removed by pneumatic cleaning (gasifier nozzle, gasifier grille).

6. Setting up the pneumatic burner cleaner

If you want to operate the pneumatic burner cleaner system, its operation must be set up on the AC07X burner electronic regulation.

Basic presets can be done by changing the profile in menu **PARAMETERS** at version of the AC10 version 0.31 and higher. With the burner ATMOS A25 change the profile from the profile **A25** (**GSP**) to profile **A25**(**GSP**)**pneu**. With the burner ATMOS A45 change the profile from the profile **A45** to profile **A45pneu**. In earlier program versions make the setting separately for each parameters. For DxxPX and PXxx boilers set A25PX pneu profile.

Exact setting make according to the pellet type, see the table on page 36 - 37.



INFO - in case of lower program version of the older burner is recommended to send the electronics in to the ATMOS company, where will be instaled latest program version for free (valid for AC07X). In the case that in older burner is electronics AC07 with only one reserve output is necessary to exchanged this electronics for new type AC07X with two reserve outputs.



WARNING - **check and secure everything before operating** the pneumatic burner cleaner so that everything is properly connected and secured according to the operation manual.

Setting parameters

- parameter T5 Rundown time of the fan after the STOP command for optimal burning out of pellets in the combustion chamber ...(15 min) set to 25 35 min
- $\underline{ \bullet \ parameter \ S6} \text{determines function of first } \mathbf{reserve} \ R \ \text{-} \ \text{added output}$

The first reserve R is used most commonly for controlling the boiler exhaust fan (S6 = 4), but in this case we use it for controlling the solenoid which releases compressed air into the burner combustion chamber (not apply for DxxPX, PXxx - do not change for this boilers).

Set S6 = 16

 $\underline{ \bullet \ parameter \ S14} - \text{determins function of second } \\ reserve \ R2 \ - \ \text{added output}$

The second reserve R2 is used most commonly for controlling the pump in the boiler circuit (S14 = 13), but in this case we use it to control the compressor via the AD02 or AD03 module (not apply for DxxPX, PXxx - do not change for this boilers).

Set S14 = 15



INFO - for standard setting when **parameter S1** is set to a value of 2, you can connect an appliance of **maximum current 2.46** A (approx. 566 VA) to R and R2 reserve terminals together.

When setting where **parameter S1 is set to a value of 4**, which means that at the start both ignition coils are run, you can connect an appliance of **maximum current 0.29 A (approx. 67 VA)** to R and R2 reserve terminals together.

To activate the function you need to set the specific times and working number of cycles after which the burner is cleaned. Values in brackets are set by the manufacturer!

- parameter S41 is the function for automatic burner cleaning with compressed air after a specific number of working cycles (burn-out). The function assumes use of both reserve outputs (S6 = 16, S14 = 15) non-standard function... (4)
- a) S41 = 1 to 9... function where burner cleaning will take place only once, and after the set number of cycles have run (1, 2, 3, 4, 5, 6, 7, 8, 9 number of cycles)
- b) S41 = 11 to 19... function where burner cleaning will take place always twice in a row after the set number of cycles have run (11 = 1, 12 = 2, 13 = 3, 14 = 4, 15 = 5, 16 = 6, 17 = 7, 18 = 8, 19 = 9 10 number of cycles) (from 1.4.2013)

If parameter S41 = 0 or 10, the function is switched off.

• parameter S42 – is the function for automatic burner cleaning with compressed air after a specific period of operation time has passed. Once the subsequent working cycle has ended (burn-out), the burner tubing is cleaned. The function assumes use of both reserve outputs (S6 = 16, S14 = 15) – non-standard function... (6 hours)

Once the S42 period is over, the fuel is burnt out and the burner is cleaned, with the display showing the message AUTO STOP.

The value set is the actual time in hours.

• parameter S43 – is the function for automatic burner cleaning with compressed air after a specific period of operation time has passed. Once the set time has bassed, the burner immediately burns out, it is cleaned and once again run. If required at all requirements for START are met. (regardless of S41 and S42 parameters). The function assumes use of both reserve outputs (S6 = 16, S14 = 15) – non-standard function... (12 hours)

The value set is the actual time in hours.

- parameter S44 is the function for the compressor for automatic burner cleaning with compressed air where this parameter sets the period the compressor is run for so that a sufficient amount of compressed air is ready (pressure, function S6 = 16) non-standard function... (2 min) The value set is the actual time in minutes.
- parameter S45 is the function for the solenoid for automatic burner cleaning with compressed air where this parameter sets the period the solenoid is open to ensure perfect cleaning of burner combustion chambers (function S14 = 15) non-standard function... (1 s)

The value set is the actual time in seconds. Never set a lower value than 1 s.

• parameter S58 – characterizes the amount of compressed air for the first pre-cleaning of the burner when installing pneumatic cleaning the burner. This is the time at which the partial filling compressor air tank for pre-cleaning of the burner ... (6 s) - standardly do not change

• Parameter S67 - characterizes function of R5 reserve output similar with S6 and S14 parameters with instaled AC07X-C additional module. Primary is this reserve used to control air pump for pellet burner pneumatic ash cleaning system S67 = 15.

Function is only for DxxPX (PXxx) boilers, burner profile A25PX (A25PX pneu)...... (0)

Set S67 = 15

• Parameter S68 - characterizes function of R6 reserve output similar with S6 and S14 parameters with instaled AC07X-C additional module. Primary is this reserve used to control air pump for pellet burner pneumatic ash cleaning system S68 = 16.

Function is only for DxxPX (PXxx) boilers, burner profile A25PX (A25PX pneu)...... (0)

Set S68 = 16

Recommended parameter settings according to the quality of pellets - not apply for DxxPX, PXxx

Pellet type and quality	T5	S6	S14	S41	S42	S43	S44	S45
Quality white pellets without bark which do not form ash clumps	25	16	15	8	24	32	1 *	1
Wooden pellets with small amount of bark which create ash clumps in about a week	25	16	15	8	24	32	1 *	1
Wooden pellets with large amount of bark, where ash clumps have to be removed once a day	25	16	15	4	6	12	1 *	1
Wooden pellets of worst quality where high ash clumps are created after two to three hours operation	25	16	15	1	2	3	1 *	1
Pneumatic cleaning setting when using weekly timer	25	16	15	1	4	5	1 *	1

When connection of the pneumatic cleaning of the burner with the original or other compressor (up to $10 \, l$ air tank) set $S58 = 6 \, s$. When connection to a central compressed air distribution with pressure reducing valve and air tank up to $10 \, l$ set $S58 = 1 \, s$.

^{*} Applies for the supplied compressor that is part of the set.

Recommended parameter settings according to the quality of pellets - for boilers DxxPX, PXxx

Pellet type and quality	T5	S6	S14	S41	S42	S43	S44	S45	S67	S68
Quality white pellets without bark which do not form ash clumps	25	3	12	8	24	32	1 *	1	15	16
Wooden pellets with small amount of bark which create ash clumps in about a week	25	3	12	8	24	32	1 *	1	15	16
Wooden pellets with large amount of bark, where ash clumps have to be removed once a day	25	3	12	4	6	12	1 *	1	15	16
Wooden pellets of worst quality where high ash clumps are created after two to three hours operation	25	3	12	1	2	3	1 *	1	15	16
Pneumatic cleaning setting when using weekly timer	25	3	12	1	4	5	1 *	1	15	16

When connection of the pneumatic cleaning of the burner with the original or other compressor (up to $10 \, l$ air tank) set $S58 = 6 \, s$. When connection to a central compressed air distribution with pressure reducing valve and air tank up to $10 \, l$ set $S58 = 1 \, s$.

^{*} Applies for the supplied compressor that is part of the set.



INFO - You should note the optimal pressure with which the burner should be cleaned. For the compressor which is supplied as part of the set, it is set to 5 - 8 bar (500 - 800 kPa). When connecting your own compressor or to a central compressed air system, set initial pressure to 5 bar (500 kPa).



WARNING – if you use the special 8 A weekly timer for directly control of the compressor according to time (note – cannot normally be bought in shops), parameter S41 must always be set at 1 (S41 = 1). Set other parameters according to the final table row. On the timer, set which times it is allowed (forbidden) to use the pneumatic cleaner, e.g. at night. You cannot forbid pneumatic cleaner operation in one go for periods greater than 12 hours.



WARNING - The timer cannot be used if you want to burn pellets with a large amount of bark and dirt, as the combustion chamber has to be cleaned more often than once a day.



WARNING - to regulate and set the optimal amount of compressed air for pneumatic cleaning of the burner, never use the solenoid opening time which is directly set on the burner (never parameter S45).

7. Maintenance and cleaning of burner with combustion chamber pneumatic cleaner

Basic maintenance and cleaning of the pellet burner is described in the manual for the specific boiler and pellet burner. We want to draw attention to the most important points however!



INFO - Pneumatic cleaning of the burner significantly extends the period between combustion chamber cleanings and reduces boiler heat exchanger clogging (tube sheet). Nevertheless, the burner should be regularly checked and cleaned when necessary.

Cleaning the burner combustion chamber, specifically cleaning the aperture for combustion air inflow is undertaken in dependence on the pellet quality and amount of additions in the pellets such as starch, cornflour and various wood glues. These substances make apertures for combustion air inflow grow, especially from the bottom of the combustion chamber. The interval between combustion chamber cleanings is generally between 7 days and 4 months.



Slightly clogged apertures in combustion chamber after 4 months of use



Example of cleaning the combustion chamber

Cleaning of the channels for compressed air inflow to the combustion chamber is undertaken in dependence on the quality of pellets from once a month to once every 4 months.



Slight clogging after 4 months of use



Example of cleaning the front part of the compressed air inflow channel

Cleaning the burner interior space located under the pellet inlet tube to the burner is undertaken in dependence on tha mount of dust in the pellets, from once a month to once a season.



Clogging after 3 months use with crushed pellets with large amount of dust



Example of cleaning the space under the pellet inlet tube

As needed, but at least **once a season** blow out (vacuum up) space inside the burner.



WARNING - electronic unit AC07X never cleaned mechanically.



Example of cleaning (blow out) space inside the burner. (without power!)



Example of cleaning (blow out) pressure fan impeller of the burner once a season

!POZOR - ATTENTION - ACHTUNG!

Při provozu hořáku s pneumatickým čištěním je zakázáno otevírat jakákoliv dvířka nebo víčka bez vypnutí hlavního vypínače na kotli.

During burner operation with pneumatic cleaning is forbidden to open any doors or lids without turning off the main switch on the boiler.

Während Betrieb des Brenners mit pneumatischer Reinigung ist verboten die Tür oder Deckel zu öffnen - ohne Ausschalten des Hauptschalters am Kessel.

Important warning stuck on boiler hood

Compressor maintenance, specifically checking the amount of oil, is undertaken once to twice a year. In addition, depending on dust level in the boiler room the compressor filter is cleaned once to twice a year. If the compressor is located in a very dusty environment, according to need. Also once a year, check all tubing and connections so as no compressed air can escape.



WARNING - The air receiver (compressed air container) is a pressuried container and must be regularly checked with regular services carried out on it in accordance with the law in force in your country.



Checking oil levels in compressor



Cleaning compressor filter

WARRANTY PROVISIONS

A25/A45 pneumatic burner cleaner

- 1. If you observe the method of use, operation and maintenance of this product described in this manual, we guarantee that the product will keep the properties described by relevant technical standards and conditions over the whole warranty period, this being within 24 months from the day of receipt of the appliance, and a max. 32 months from the date of sale of the product by the sales representative.
- 2. If a fault occurs with the product during the warranty period which was not caused by the user, the product will be repaired under the warranty free of charge for the customer.
- 3. The warranty period is extended by the time over which the product is repaired under warranty.
- 4. Repairs undertaken during the warranty period are claimed by the customer using our service operations.
- 5. The product warranty is only recognised where the equipment is assembled by a qualified person in accordance with standards in force and the operation manual. A requirement for any warranty to be recognised is the details on the company which performed the assembly being legibly and fully completed. If the product is damaged through poor assembly, costs associated will be borne by the company which performed the assembly.
- 6. The purchaser has been demonstrably informed of the use and operation of the product.
- 7. Repairs undertaken after the warranty period ends are also claimed by the customer using our service operations. In this case, the customer pays the cost of repair himself.
- 8. The user is required to observe the instructions in the Operation and Maintenance Manual. If the customer does not follow the Operation and Maintenance Manual instructions, is careless, or handles the product incorrectly, the warranty is void and the customer is required to pay for any repairs resulting from damage

Warranty and post-warranty repairs are performed by:

- the company representing ATMOS in your country for your region
- the assembly company which installed the product
- Jaroslav Cankař a syn ATMOS, Velenského 487, 294 21 Bělá pod Bezdězem, Česká republika, Tel. +420 326 701 404