



Installation and Operating Instructions

ANTTI-PRECLEANER A 160 AND P 250

408032 (en) 11-2021

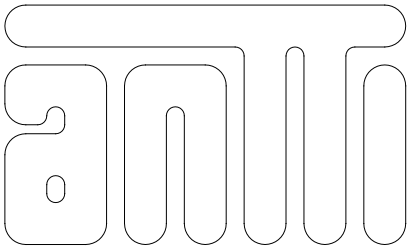
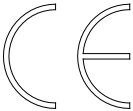
You'll see the difference

antti.fi

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TYYPPI TYPE		RUNKO N:o BODY N:o	
VALM. N:o MANUF. N:o		MOOTTORI MOTOR	kW
		KAPASIT. CAPACITY	TPH

It is advisable to fill in the data concerning your precleaner in the above copy of the name plate. This information is essential when ordering spare parts from the after sales service. The data can be found in the plate affixed to the precleaner.

Read the Installation and Instruction Manual carefully before installing the machine and putting it into operation.

INSTRUCTION MANUAL AND OPERATION OF THE MACHINE

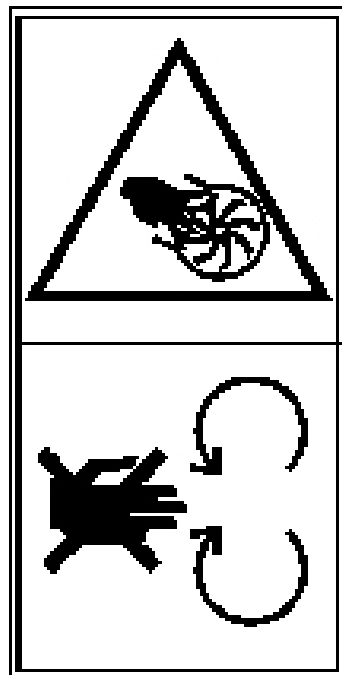
This manual is intended for skilled farmers. Operating the machine therefore requires normal basic knowledge and skills in agriculture.

SAFETY

The precleaner has moving parts that will cause serious injury if touched when the machine is in operation!

Never open the hatches and covers before you have made sure that the machine has been disconnected from the power supply e.g. by removing the fuse!

The precleaner has the following warning signs:



Never open the hatch while the machine is in operation, risk of injury to hands and fingers!

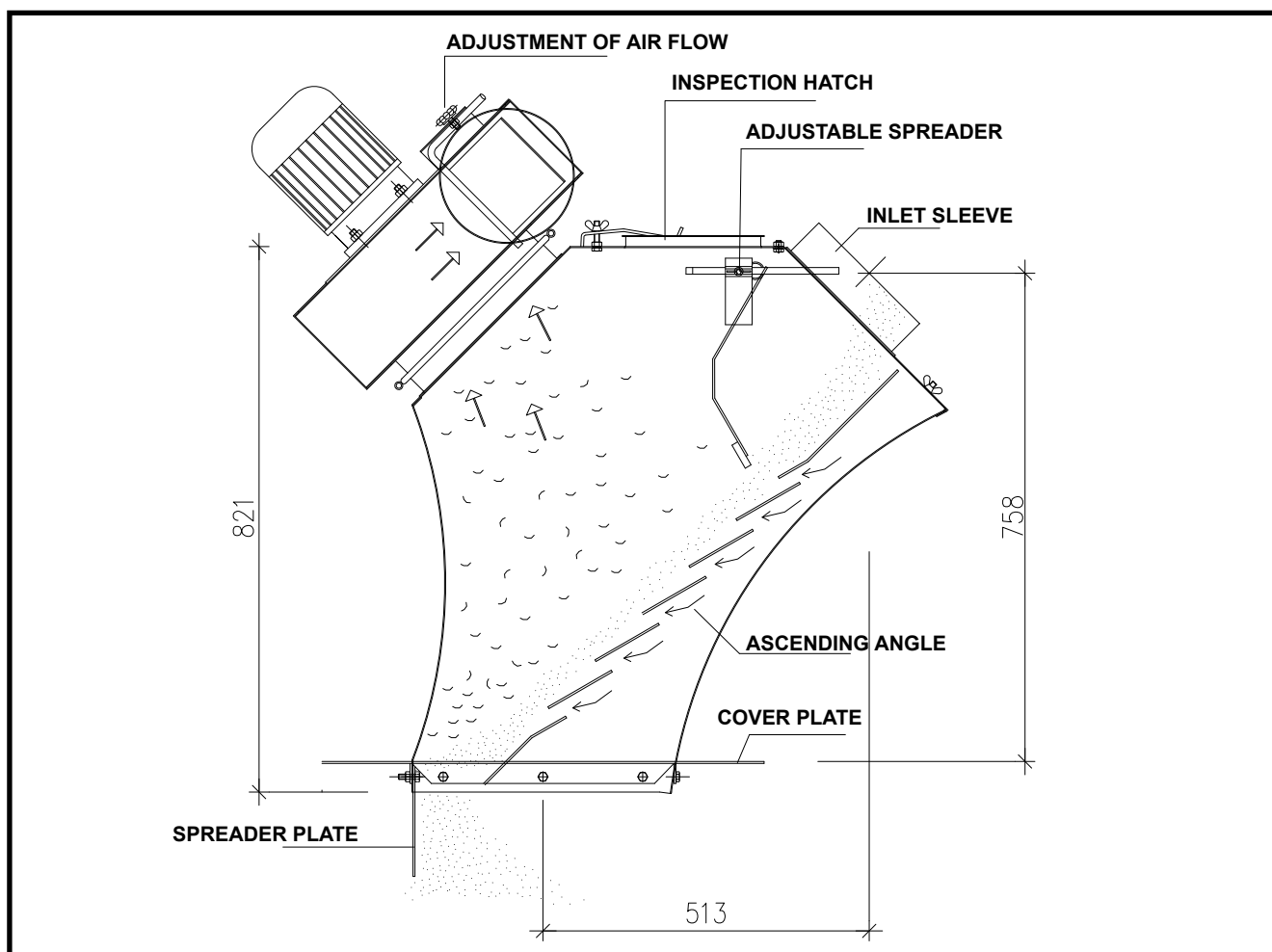
USE OF MACHINES

- Antti A160 and P250 precleaners are intended to preclean grain and seeds.
- Precleaning separates thrash, dust and impurities from the material to be cleaned, by using air.

PRESENTATION OF MACHINES

The A160 precleaner consists of three different parts:

- Cover plate
- Frame
- Fan with a 0.75 kW or 2,2 kW electric motor
- The noise level of the machine is 73 dB
- Air volumes: 0,75 kW / 3000 rpm, 400 Pa 1950 m³/h, 600 Pa 1720 m³/h
2,2 kW / 3000 rpm, 400 Pa 3000 m³/h, 600 Pa 2500 m³/h



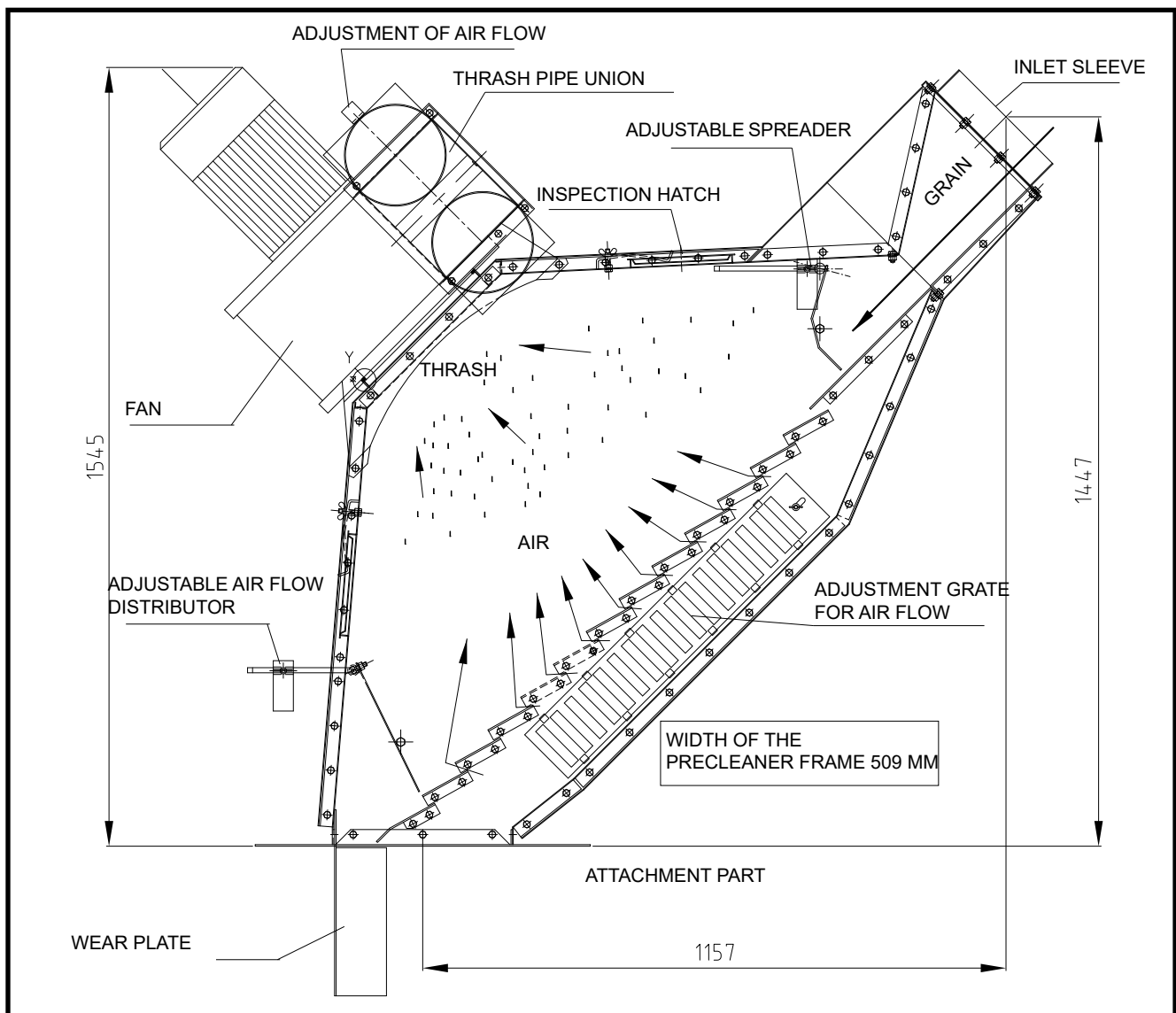
SAFETY

The precleaner has moving parts that will cause serious injury if touched while the machine is in operation!

Never open the hatches and covers of the machine unless you have first ensured that the power supply circuit is disconnected, e.g., by removing the fuse!

The P250 precleaner consists of following parts:

- Attachment part
- Frame
- Wear plate
- Fan with a 4.0 kW electric motor
- Thrash pipe joint
- Air volumes: 4 kW / 3000 rpm, 800 Pa 6100 m³/h



The precleaner has moving parts that will cause serious injury if touched when the machine is in operation!

Never open the hatches and covers of the machine unless you have first ensured that the power supply circuit is disconnected, e.g., by removing the fuse!

- Antti A160 and P250 precleaners are intended for installation on the top cover of the dryer.

OVERVIEW OF THE INSTALLATION OF A160 AND P250

1. INSTALLATION OF COVER PLATE

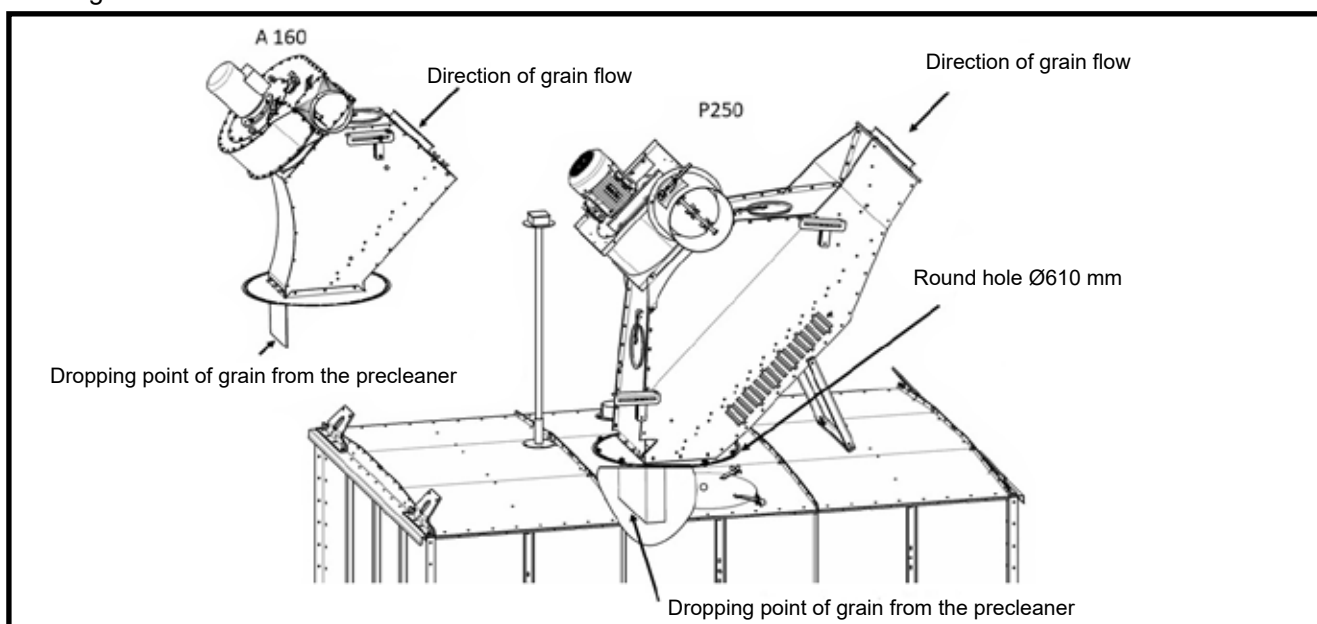
Antti dryers

- the cover plate is installed in the bolts on the dryer's top plate using a washer + nut

Machines other than Antti-dryers

- A round hole of $\varnothing 610$ mm is made in the dryer's top plate.

Drawing:



INSTALLATION OF A 160

1. PRECLEANER FRAME

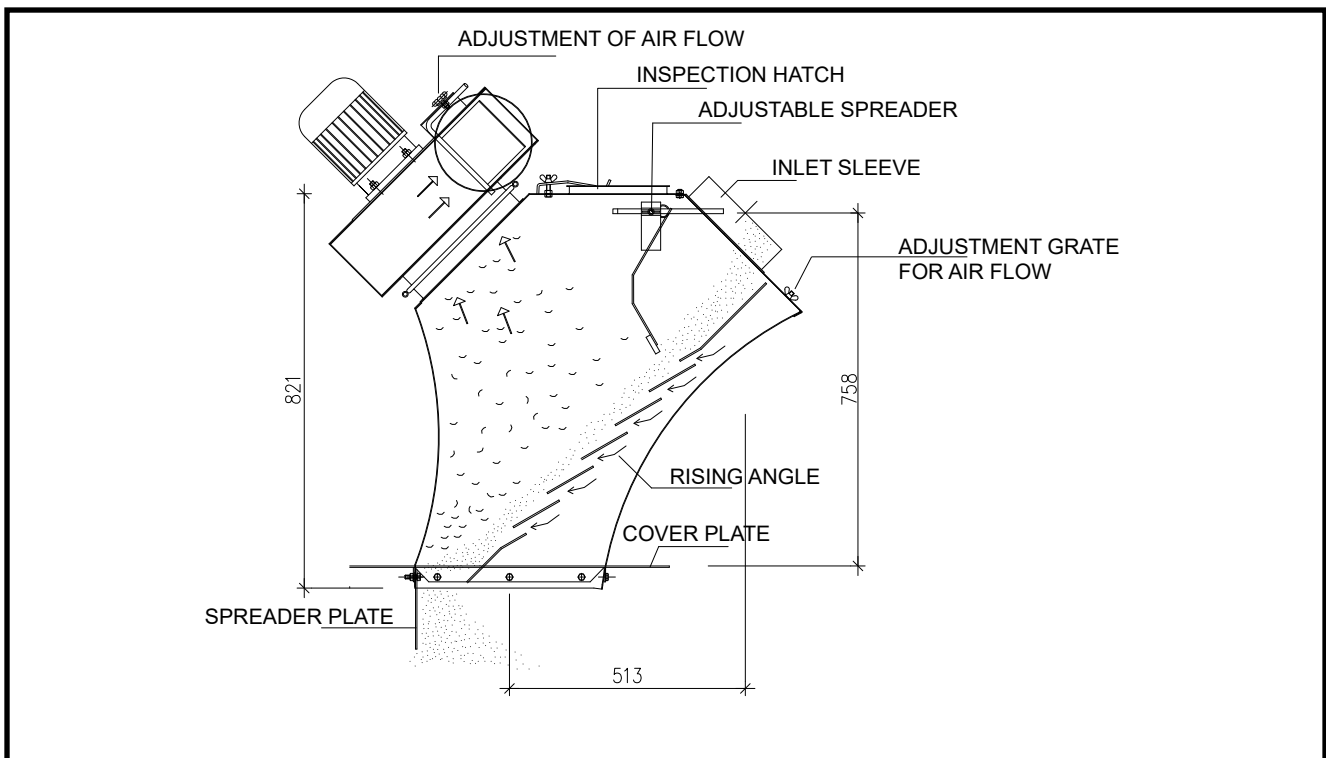
- The frame is attached to the round cover plate with screws (8 x 19 mm), so that the folds of the cover plate come downwards.
- The distributor plate is attached with 8 x 16 mm screws to the bottom edge of the frame.

2. ATTACHMENT OF FAN TO THE FRAME

- Remove the band from the fan's suction opening. Make sure that the suction cone remains in correct position in its place
 - Lift the fan onto the frame placing its suction opening against the attachment flange of the frame. Attach it with a band.
- Before tightening the band: point out the outlet pipe of the fan at desired direction.

3. PIPING

- Connect the end of the pipeline, supplying grain to the pre-cleaner, to the pipe flange of the inlet connector. Connect the 160-mm or the 200-mm pipeline to the pre-cleaner using the conversion part (see the drawing below).



NOTE! If the grain is wet, descending angle of the grain pipe must be at least 45°!

- Install the thrash pipe between the fan outlet and the thrash container.
- Locate the thrash space or container and suction opening for clean air to the heater on opposite sides of the building.

NOTE! Thrash in the heater's suction air is a fire hazard!

- Build up the thrash pipe of D200 ventilation pipes and 45° and 90° elbows..
- Use e.g. pierced steel rim band to support the pipes at every 1,0 - 2,0 metres.

The electric motor's electrical installation must always be carried out by an authorised electrician!

Always check the motor's direction of rotation in connection with installation (must be in direction of the arrow). The best moment to observe the direction of rotation of the motor's fan blades is when they stop. NOTE! If the direction of rotation is wrong the fan operates on partial efficiency.



BASIC ADJUSTMENTS OF A160 PRECLEANER

- Set the vertical side of the frame exactly upright using a builder's level. If the machine does not stand firmly in the vertical position, it must be supported with a separate bar.
- Before turning on the grain flow, move the transferable weight of the adjustable spreader to its extreme position, so that it will raise the spreader plate.
- As the grain flows, fine adjust the inlet flow to the middle of the precleaner's slanting surface.
- The grain flow can be observed from the inspection hatch on the top of the machine. Cover the inspection hatch with e.g. glass or plexiglass to avoid turbulence in the air flow.

WARNING! THE FAN'S MOTOR MUST NOT BE RUNNING WHEN OPENING THE HATCH

It is possible to reach the rotating blades by putting hand through the inspection hatch opening. Danger of serious injury.

- Flow of grain to the middle of the slanting surface can be controlled by turning the machine with respect to its vertical axis or changing the direction of the grain inlet pipe.
- After adjustment of the grain flow to the middle of the slanting surface, spread the "grain carpet" even over the whole width by adjusting the transferable weight. The circulation speed of the grain may increase as the grain becomes dryer. Make sure that the grain does not congest before reaching the cleaner.
- Set the air flow adjustment lever to the closed position for a time.
- Open the grate in the inlet connector.

OPERATION OF THE MACHINE

- After having set the flow speed of the grain inside the machine to normal/desired value, adjust the air flow suitable for each batch to be cleaned.
- If the grain is wet, adjust the air flow slowly to higher setting until you hear sharp rustle inside the thrash pipe. This indicates presence of grain among the thrash. After that, move the adjustment lever 10 - 15 mm towards the closed position (the rustle must now stop). If required, carry out an even more accurate air flow adjustment based on a sample taken from the thrash pipe end. Only the latter method can be used in connection with cleaning of light-weight seeds.

Warning!

A large object in the processed material may clog the precleaner. Always make sure before opening the service hatch that no other person is able to start the fan's motor by accident.

When cleaning a cogged precleaner, some grain or seeds can easily get into the environment. To avoid accidents clean the surrounding areas immediately, especially the stairs.



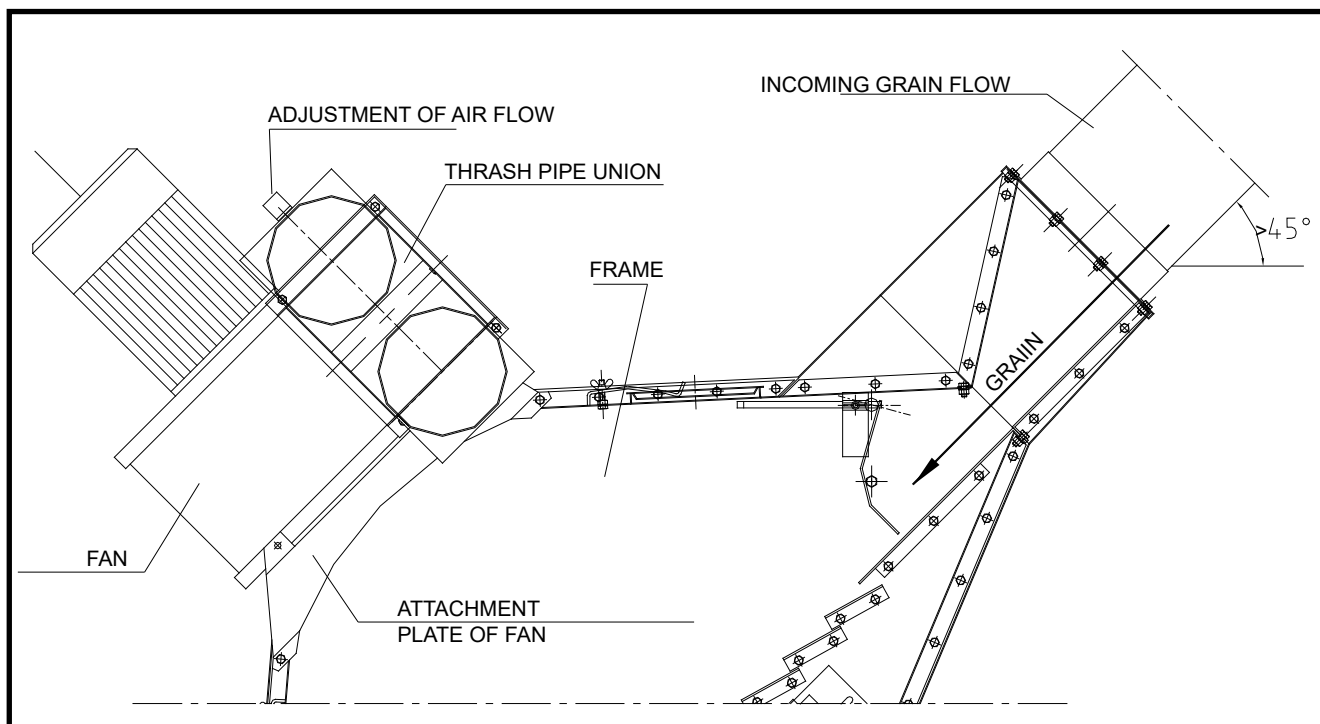
P250 INSTALLATION

1. PRECLEANER FRAME

- Attach the frame to the round attachment part with M8 x 20 mm screws (10 pcs.) so that the folds of the cover plate come upwards. Place the bent edges of the attachment part inside the frame.
- Install the wear plate working on the inside of the precleaner and insert the four (4) welded screws through the holes. Install the washers and M8 nuts. (The screws go through the frame and the attachment part).
- **Attach the precleaner frame to the dryer cover. Because the frame and the fan together weigh so much that their handling is difficult, support the frame well before installation of the fan on it.**

2. ATTACHMENT OF FAN TO THE FRAME

- Lift the fan onto the frame, so that the suction-opening collar comes on top of the collar on the frame. The seal in the bottom of the fan is pressed against the collar on the frame and seals the joint.
- The fan can be set to two different positions. The thrash pipe union must always be at right angles to the side plate. The fan can be turned 180° by shifting the attachment plates of the fan from one side to the other.
- Choose the correct position for the fan and fix the attachment plates to the fan with M8 x 20 mm screws (4 pcs.). To make the seam tight push the fan downward against the seal simultaneously with tightening of the screws.



3. THRASH PIPE UNION

- Fix the thrash pipe union in position where the air flow adjustment lever is upright.
- Attach the thrash pipe union to the fan flange with M8 x 20 mm screws (4 pieces)
- To ensure the tightness it is possible to apply sealing compound between the fan flange and the thrash pipe union flange. (See picture above.)

4. PIPING

- Connect the end of the pipeline, supplying grain to the pre-cleaner, to the pipe flange of the inlet connector (see the drawing above).

NOTE! If the grain is wet, descending angle of the grain pipe must be at least 45°!

- Install the thrash pipe between the fan outlet and the thrash container.
- Locate the thrash space or container and suction opening for clean air to the heater on opposite sides of the building.

NOTE! Thrash in the heater's suction air is a fire hazard!

- Build up the thrash pipe of D200 ventilation pipes and 45° and 90° elbows.
- Use e.g. pierced steel rim band to support the pipes at every 1,0 - 2,0 metres.



The electric motor's electrical installation must always be carried out by an authorised electrician!

Always check the motor's direction of rotation in connection with installation (must be in direction of the arrow). The best moment to observe the direction of rotation of the motor's fan blades is when they stop. NOTE! If the direction of rotation is wrong the fan operates on partial efficiency.

P250 BASIC ADJUSTMENTS OF PRECLEANER

- The frame, fan, thrash pipe union, thrash pipes and grain pipes must be fixed firmly so that they cannot move or fall.
- If they are not firmly fixed, they must be supported with support bars or bands..
- Before turning on the grain flow, move the transferable weight of the adjustable spreader to its extreme position in which it will raise the spreader plate and shift the air flow distributor to its open-position by adjusting the transferable weight (i.e. the grain can flow directly through the precleaner.)
- As the grain flows, fine adjust the inlet flow to the middle of the precleaner's slanting surface.
- The grain flow can be observed from the inspection hatch on the top of the machine. Cover the inspection hatch with e.g. glass or plexiglass to avoid turbulence in the air flow.

WARNING! THE FAN'S MOTOR MUST NOT BE RUNNING WHEN OPENING THE HATCH

It is possible to reach the rotating blades by putting hand through the inspection hatch opening.
Danger of serious injury.

- Flow of grain to the middle of the slanting surface can be controlled by turning the machine with respect to its vertical axis or changing the direction of the grain inlet pipe.
- After adjustment of the grain flow to the middle of the slanting surface, spread the "grain carpet" even over the whole width by adjusting the transferable weight. The circulation speed of the grain may increase as the grain becomes dryer. Make sure that the grain does not congest before reaching the cleaner.
- Close the air distributor plate by shifting the transferable weight. However, make sure that the pressure exerted by grain is able to open it thus allowing the grain flow through the cleaner. NOTE that grain must not congest inside the cleaner.
- Set the air flow adjustment lever in the thrash pipe union to closed-position.
- Set the adjustment grates on both sides of the cleaner to open-position.



OPERATION OF THE MACHINE

- After having set the flow speed of the grain inside the machine to normal/desired value, adjust the air flow suitable for each batch to be cleaned.
- If the grain is wet, adjust the air flow slowly to higher setting until you hear sharp rustle inside the thrash pipe. This indicates presence of grain among the thrash. After that, move the adjustment lever 10 - 15 mm towards the closed position (the rustle must now stop). If required, carry out an even more accurate air flow adjustment based on a sample taken from the thrash pipe end. Only the latter method can be used in connection with cleaning of light-weight seeds.

Warning!

A large object in the processed material may clog the precleaner. Always make sure before opening the service hatch that no other person is able to start the fan's motor by accident.

When cleaning a clogged precleaner, some grain or seeds can easily get into the environment. To avoid accidents clean the surrounding areas immediately, especially the stairs!

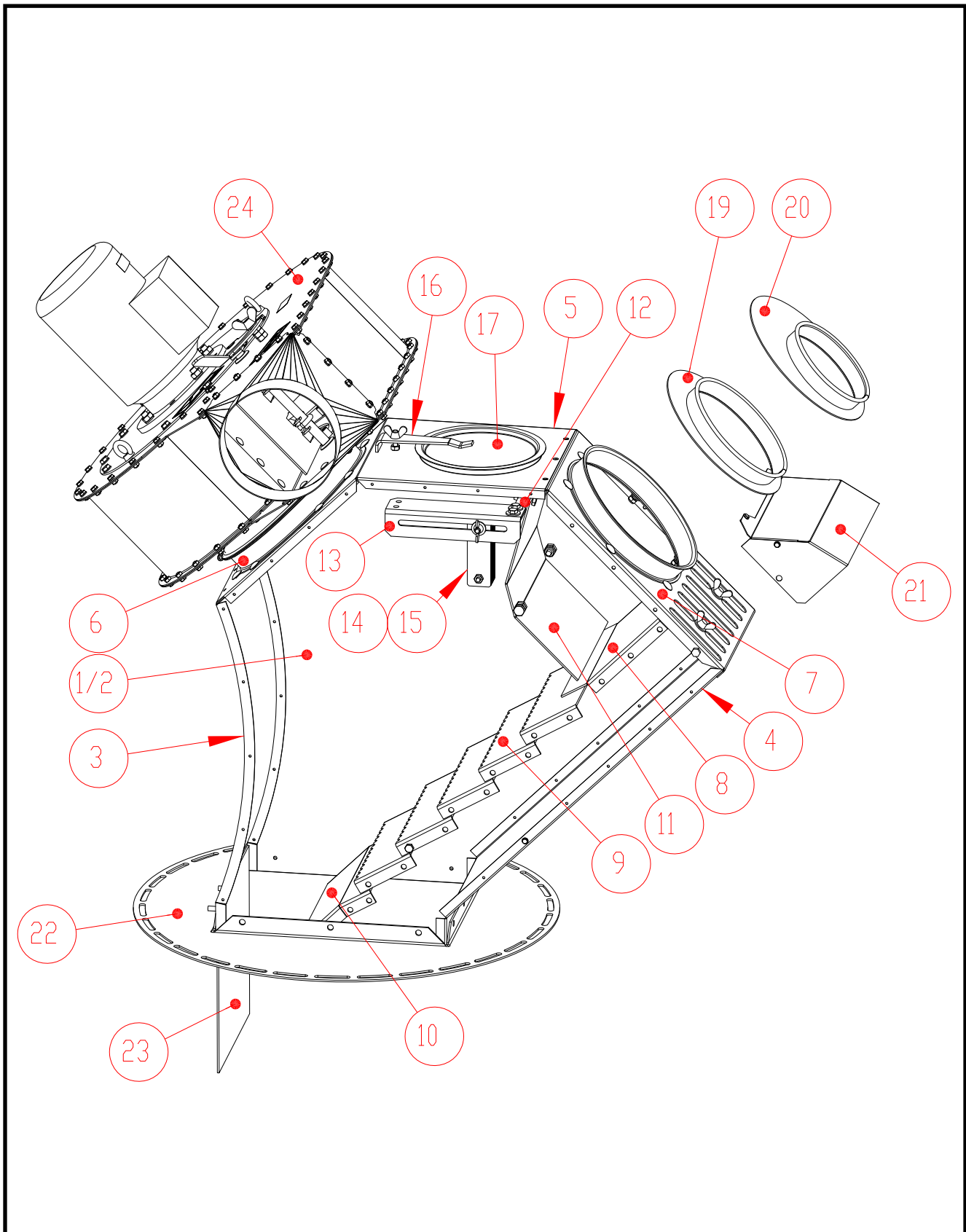
MAINTENANCE OF THE PRECLEANER

When cleaning extremely wet material the fan wheel. may catch dirt. This decreases the fan's efficiency and impairs its balance.

- Clean the fan blades once a year or as required.

WARNING! Always make sure before opening the service hatch that no other person is able to start the fan's motor by accident!

Spare parts drawing A160

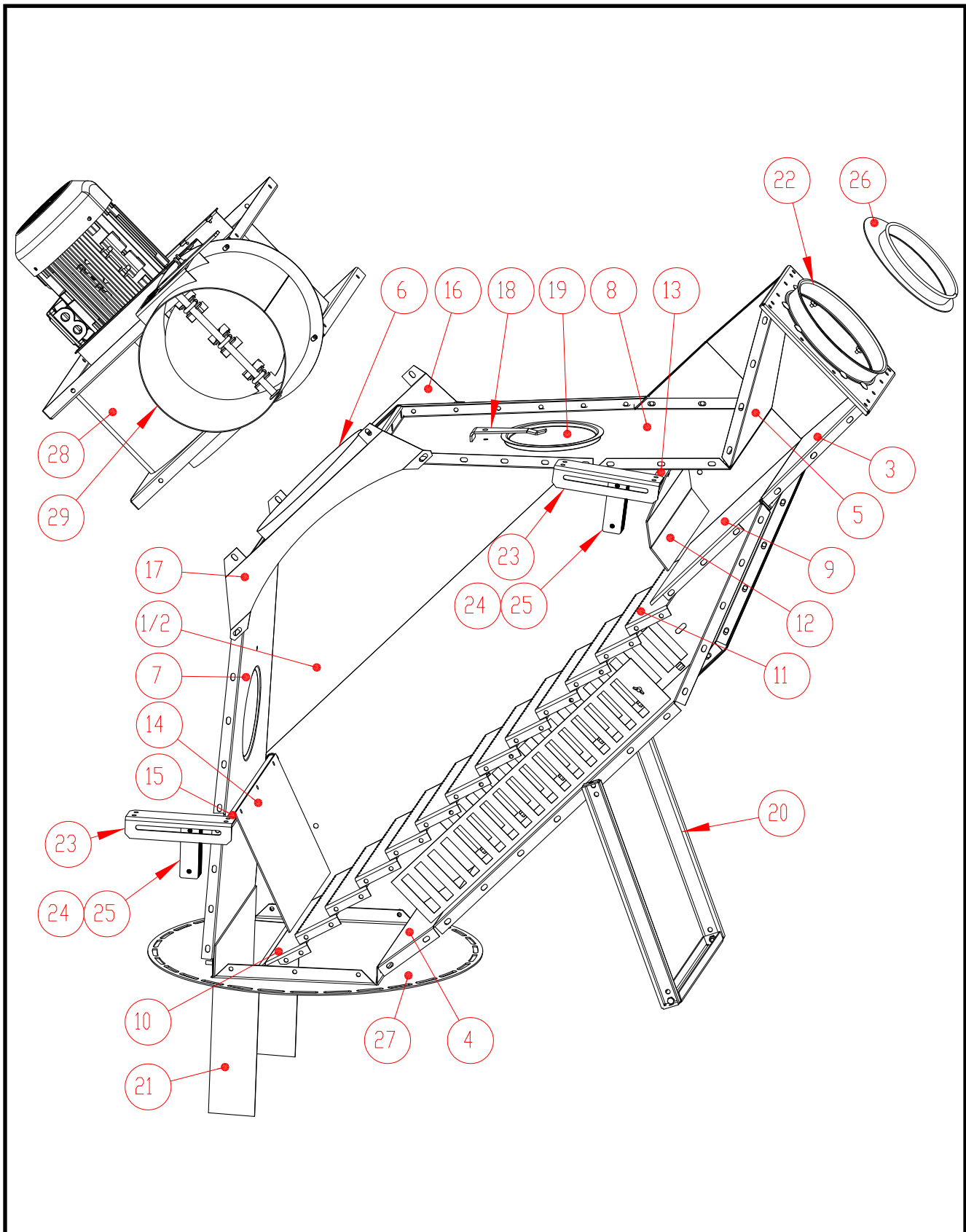




Part	Item	Denomination	Pcs.
	503991	PRE-CLEANER BODY	
1	A76050	PRECLEANER A-160 SIDE PLATE I M18	1
2	A76051	PRECLEANER A-160 SIDE PLATE II M18	1
3	32659	PRECLEANER TOP PLATE A-160/M00	1
4	32660	PRECLEANER REAR PLATE A-160/M00	1
5	A76052	PRECLEANER A-160 TOP PLATE M18	1
6	504015	BLOWER FLANGE D280	1
7	A72155	PRECLEANER INLET CONNECTOR COVER L-FLANGE A-160 D250 M08	1
8	A76053	PRECLEANER A-160 STEP GRATE I M18	1
9	A76054	PRECLEANER A-160 STEP GRATE II M18	5
10	A76055	PRECLEANER A-160 STEP GRATE III M18	1
11	41993	PRECLEANER A-160/M00 GUIDE PLATE	1
12	A76056	PRECLEANER A-160 GUIDE PLATE SHAFT PIPE D21,3x2,65-390/D9	1
13	A76057	PRECLEANER A-160 COUNTER WEIGHT HOLDER M18	1
14	A76058	PRECLEANER A-160 COUNTER WEIGHT PLATE I M18	16
15	A76059	PRECLEANER A-160 COUNTER WEIGHT PLATE II M18	4
16	400150	HATCH RETAINER	1
17	400141	HATCH D225	1
18	115570	CELL RUBBER BAND 4X8 EKO-40 100m roll	4
19	33282	GRAIN PIPE CONVERSION PART ASYMMETRIC D200/D250	1
20	A72235	CONVERSION PART ASYMMETRIC D250L/D160J	1
21	A75001	RAIN COVER GRATE FOR PRECLEANER WITH BOLTS A-160 M14	1
22	503994	PRECLEANER TOP PLATE A-160 M00	1
23	41992	PRECLEANER WEAR PLATE A-160/M99 295x300	1
24	114562	BLOWER 0.75kW	1
24	1979	BLOWER 2.2 KW	1

0,75 kW / 3000 rpm, 400 Pa 1950 m³/h, 600 Pa 1720 m³/h
2,2 kW / 3000 rpm, 400 Pa 3000 m³/h, 600 Pa 2500 m³/h

Spare parts drawing P250





Part	Item	Denomination	Pcs.
	1945	PRE-CLEANER BODY	
1	22448	PRECLEANER BODY SIDE PLATE P250 L M00	1
2	22449	PRECLEANER BODY SIDE PLATE P250 R M00	1
3	32807	PRECLEANER BODY BOTTOM PLATE P250 M00	1
4	32808	PRECLEANER BODY BOTTOM P250 M00	1
5	32810	PRECLEANER BODY END PLATE P250 M00	1
6	32832	PRECLEANER BODY CONNECTOR KIT ASSEMBLY P250	1
7	32812	PRECLEANER BODY BOTTOM PLATE P250 M00	1
8	32814	PRECLEANER BODY FRONT PLATE P250 M00	1
9	32815	PRECLEANER BODY GUIDE PLATE P250 M00	1
10	32816	PRECLEANER BODY GRATE PLATE P250 M00	1
11	42113	PRECLEANER BODY P250 GRATE PLATE 102x540	12
12	42114	PRECLEANER BODY P250 GUIDE PLATE	1
13	A76060	PRECLEANER P250 GUIDE PLATE SHAFT PIPE D21,3x2,65-606/D9	1
14	42119	PRECLEANER BODY P250 AIRFLOW GUIDE PLATE	1
15	A76061	PRECLEANER P250 AIRFLOW GUIDE PLATE SHAFT PIPE D21,3X2,65-606/D9 D15	1
16	32829	PRECLEANER BODY ATTACHMENT PLATE I P250	1
17	32830	PRECLEANER BODY ATTACHMENT PLATE II P250	1
18	400150	HATCH RETAINER	2
19	400141	HATCH D225	2
20	42244	PRECLEANER BODY P250 FRAME SUPPORT M00	1
21	42124	PRECLEANER WEAR PLATE ANTTI P250 M00	1
22	A72237	PRECLEANER INLET CONNECTOR COVER L-FLANGE P 250 D250 M09	1
23	A76057	PRECLEANER A-160 COUNTER WEIGHT BRACKET M18	2
24	A76058	PRECLEANER A-160 COUNTER WEIGHT PLATE I M18	32
25	A76059	PRECLEANER A-160 COUNTER WEIGHT PLATE II M18	8
26	33282	GRAIN PIPE CONVERSION PART ASYMMETRIC D200/D250	1
27	32820	PRECLEANER TOP PLATE P250 M00	1
28	114547	BLOWER CENTRIFUG FLANGE VENTUR GMT-500T 4KW (RD)	1
29	32984	CONVERSION PART BLOWER/THRASH PIPE VENTUR 4KW/D315	

4 kW / 3000 rpm, 800 Pa 6100 m³/h



GUARANTEE

The guarantee period for Antti A 160 and P 250 precleaners is one (1) operating season. The guarantee covers defects in material and workmanship. As far as the electric motors are concerned, separate guarantee terms issued by the importer apply.

A prerequisite for validity of the guarantee is that the instructions given by the manufacturer, and the valid regulations, are followed during the installation, operation and maintenance of the heater.

A prerequisite for validity of the product guarantee is that the control system and the components used are approved by Antti-Teollisuus.

All matters in connection with the guarantee shall be agreed with the manufacturer before any action is taken.



EU Declaration of Conformity

ANTTI-TEOLLISUUS OY
Koskentie 89
FI-25340 KANUNKI
Tel.: +358 2 7744700

declares that

PRECLEANER A160 AND P250

conform with the provisions of the following directives:

- **Machine Directive 2006/42/EU**

Kuusjoki 03.01.2020

Kalle Isotalo
Managing Director