DGS 205, 254
Grain Auger

Instructions for operation

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Contents

General instructions

Read the entire user guide before assembling and operating the auger conveyor.

If the purchaser makes any technical changes to the auger, the declaration of conformity issued by the producer will become invalid.

The guarantee is only valid if the following conditions are met:

- Assembly, operation and servicing in accordance with this user's guide
- The auger conveyor is manufactured for use in horizontal and inclined transport of nearly all agricultural corn/grain/cereal, seed and flour-like products. .
- Operate the auger only with safety motor or safety star delta switch (motor overload protector)
- Documented compliance to routine periodic maintenance procedures
- Use only of the manufacturers' original reserve parts

The manufacturer maintains the right to make technical changes.

Safety instructions

Instructions and especially safety information must be read thoroughly before assembling, operating, servicing and maintaining the appliance.

All appliances and components must be assembled in accordance with the relevant regulations for prevention of accidents.

Connection of the delivered auger conveyor to the electric power source must be undertaken by an authorised electrician.

Devices for the prevention of accidents or removal of risk must be regularly maintained.

Safety fittings which are removed during repair, cleaning or maintenance work must be secured into place again before the auger conveyor is taken into use again.

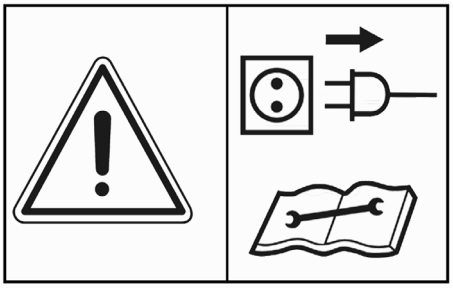
During every repair electric power must be disconnected to avoid someone accidentally turning on the appliance.

While the auger is in use you must not put your hand into either the inlet or outlet openings or into the slide valve.

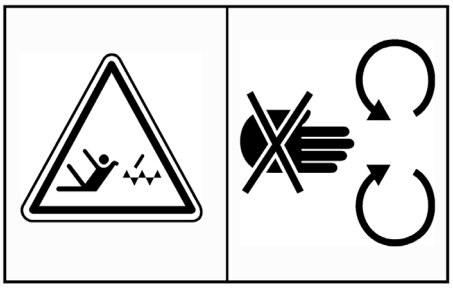
The user must only use the appliance when it is in total working order and must report immediately any changes that have an effect on safety.

The manufacturer is not responsible for damage that arises from incorrect use of, or technical changes to, the appliance; or if the user guidelines are not followed.

Explanation of hazard labels



Before repair, maintenance and cleaning work the motor must be turned off and the electric plug pulled out.



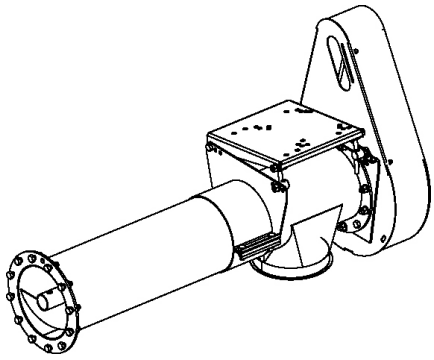
Moving machine parts can be dangerous. They must only be touched when all parts are completely still.

Residual risk

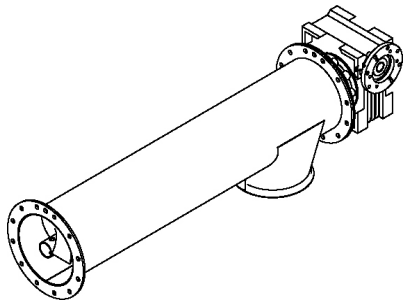
The auger conveyor is manufactured in accordance to the relevant safety regulations for augers. If these regulations are disregarded the augers can be a danger to the user's or other person's life and limb.

Description of components

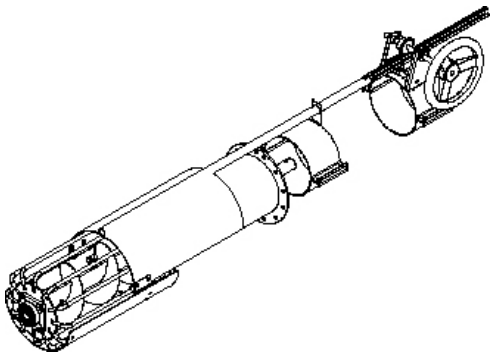
Auger head with motor mount and belt drive



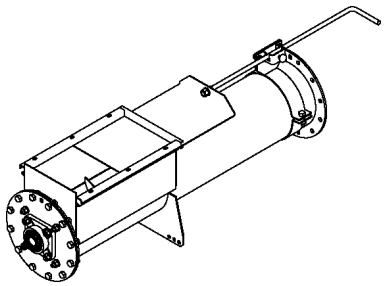
Auger head with gear



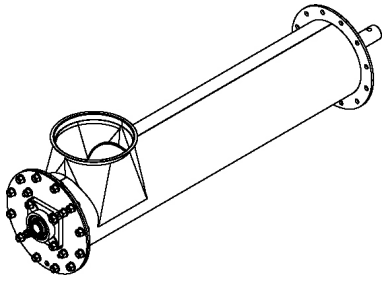
Auger foot, inlet with protective grating and regulation



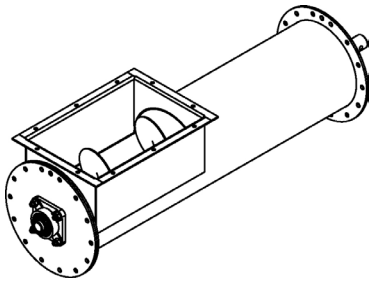
Long inlet with or without slide valve



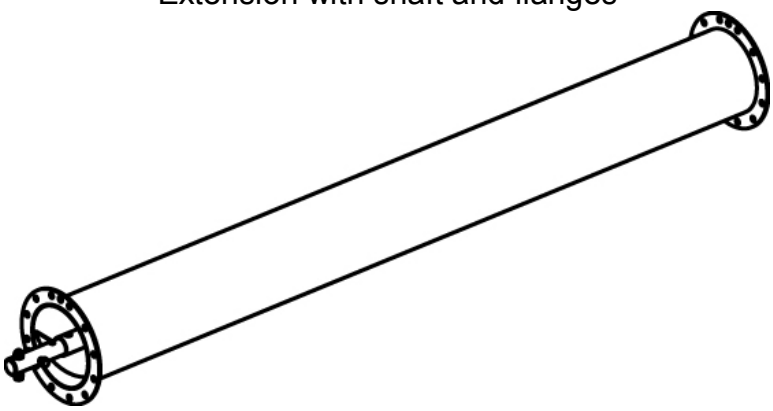
Auger foot, inlet/outlet DGS205



Auger foot, inlet/outlet DGS254



Extension with shaft and flanges



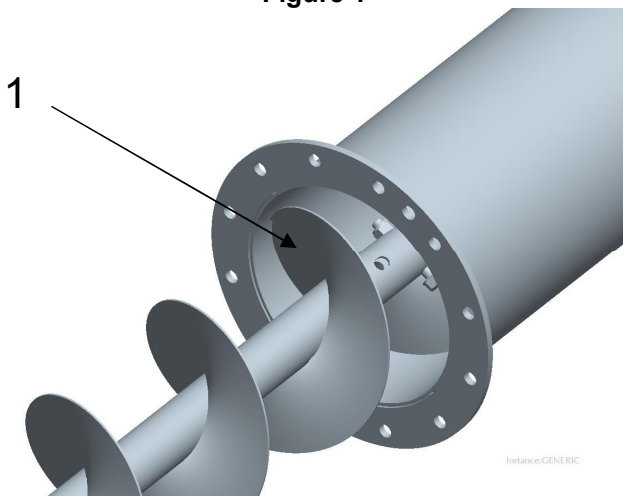
Assembly

Technical expertise is a pre-requisite for assembling the auger.

Auger head with belt drive

The conveyor head is delivered already assembled.
Using the coupling bolt, pull out the internal auger a little from the outer tube of the extension and connect to the internal auger of the conveyor head, aligning the flighting of the two auger sections (see figure 1 position 1). Attach the outer tube of the extension flange to flange. Assemble additional extensions in a similar way.

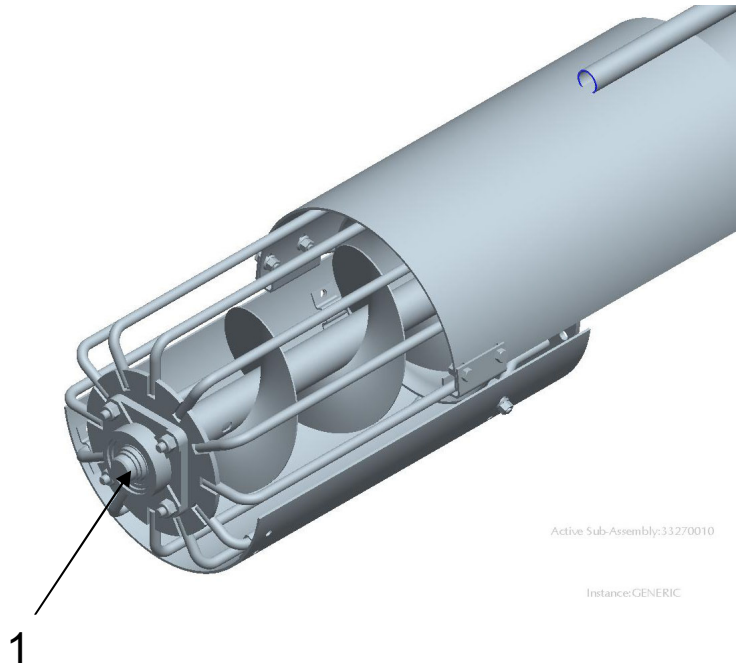
Figure 1



Auger foot, inlet with grate

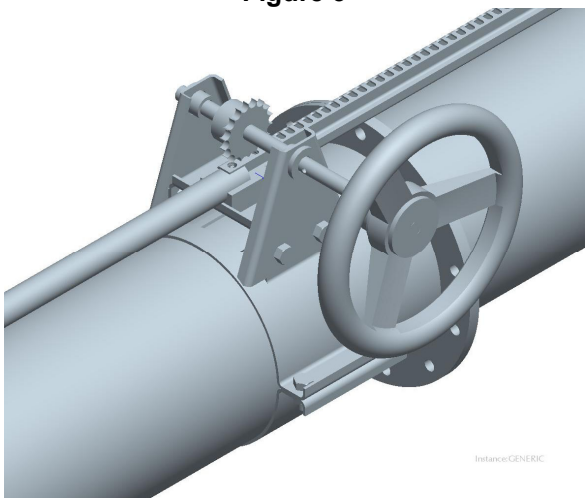
The auger foot is assembled in a similar way to the extension, the inner auger is attached to the end bearing (see figure 2, position1).

Figure 2



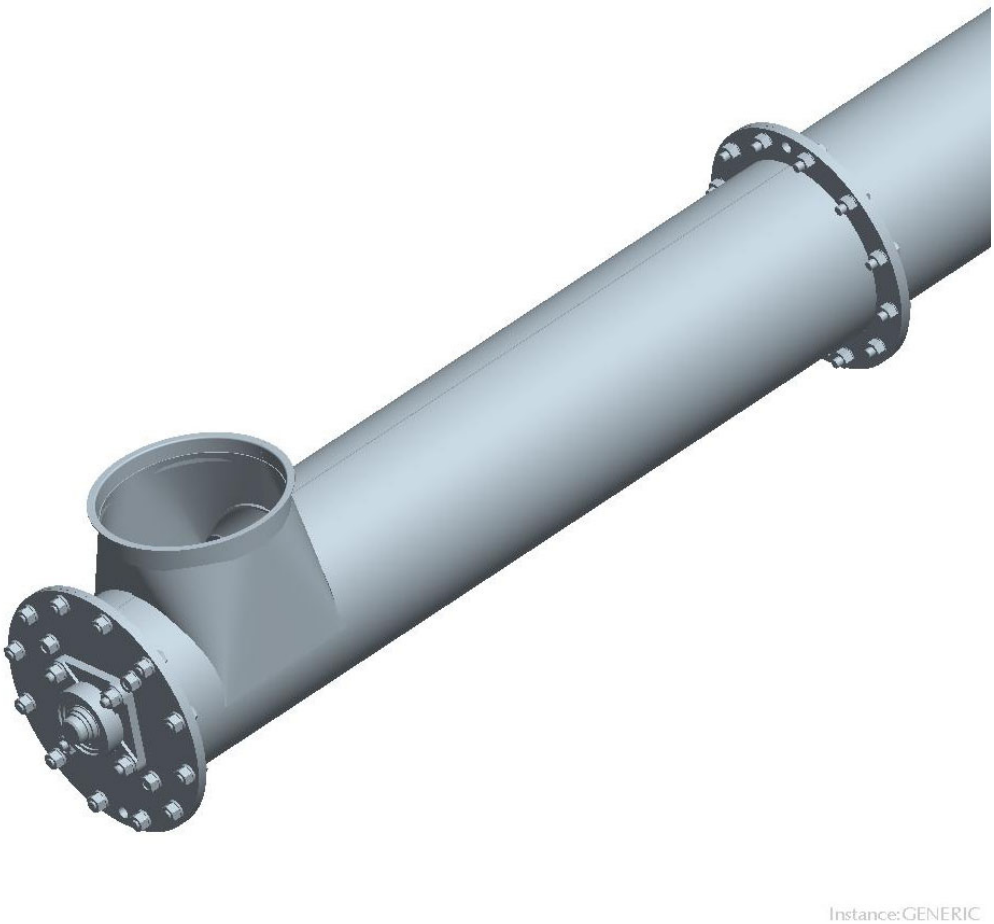
The operating rod with attachments is placed on the extension's outer tube whilst the slide valve is firmly closed. Operation is controlled by turning the hand wheel.

Figure 3



Auger foot, round inlet (square på DGS254)

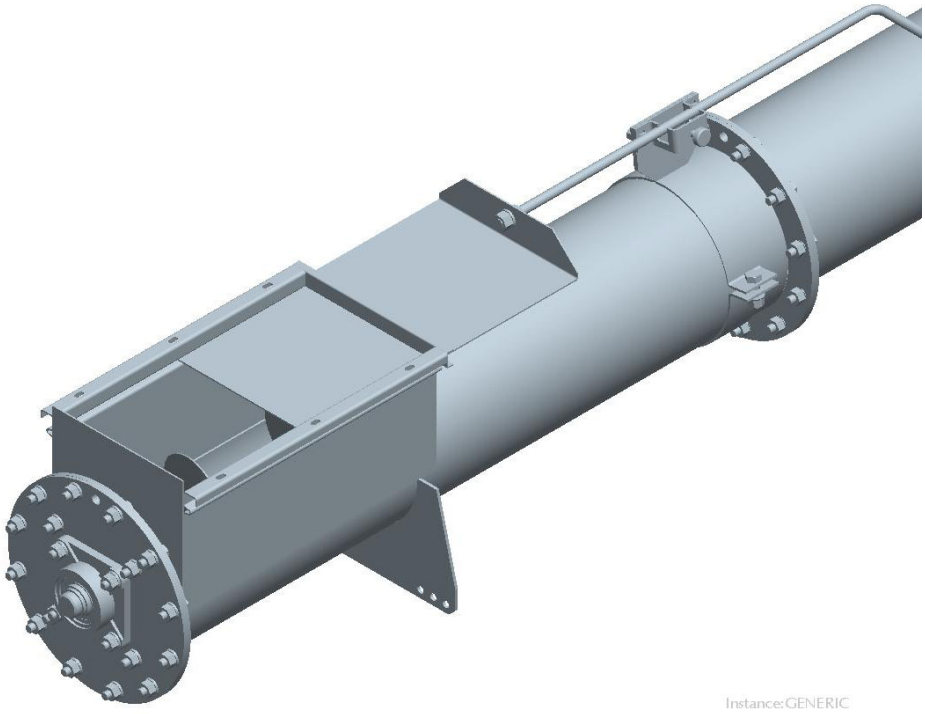
The auger foot is in principle assembled similarly to the auger foot with grating.



Long inlet

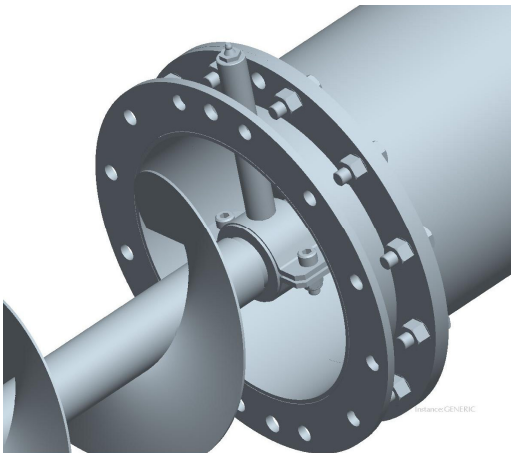
The long inlet is assembled similarly to the extension; first detach the inner auger in the long inlet and screw it on to the inner auger of the extension. Thereafter, attach the outer tube flange to flange, finally screwing the bolt firmly in to the end bearing (see figure 4)

Figure 4



Assembly of intermediate bearing

The assembly shaft comes with an extra set of holes 50mm apart, so that an intermediate bearing, with a bronze bearing, can be mounted between the two extensions.



Assembly of Motor and V-belt drive pulleys

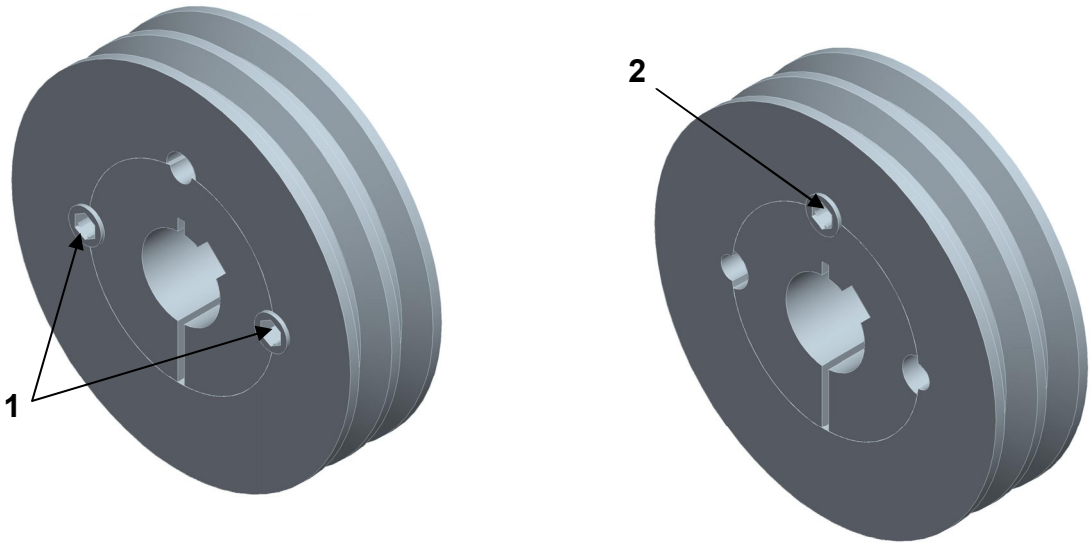
Remove the protection plate/cover. Put together loosely the large belt drive pulley and taper-lock bush (see special instructions), push onto the auger's drive axle and secure tightly with two threaded pins.
Attach the motor onto the motor bracket with 4 screws.
Turn the drive belt attachment system right down.
Assemble the little belt drive pulley and push onto the motor axle.
Position the two belt drive pulley so that they line up with each other.
Then fasten it with the two threaded pins.
Put on the belt and tighten enough so the belt can only be pushed in 7-8 mm.
Secure the protective cover again.

Taper-lock

Figure 5

In order to secure the belt drive pulley to the axle, tighten threaded pins in the 2 opposite holes (position 1)

In order to loosen the taper-lock bush screw out the threaded pins, screw one of these threaded pins in again into the third hole (position 2) and tighten.



Auger head with gear motor

Assemble the auger head and extension in the same way as auger head with drive belt.
If the auger is ordered with a motor it will be mounted onto the gear and auger head at the factory, otherwise it should be mounted according to the instructions from the motor manufacturer.

Electrical equipment

Connection to the electric power supply of the device supplied by us must only be undertaken by an authorised electrician.

During installation be aware of the voltage and information provided on the advisory label.
Connect the terminals of the motor according to the instructions. The motor is protected by a safety cut-out switch and a lockable main cut-out switch, otherwise the guarantee from the motor manufacturer is nullified (safety and main cut-outs are not included in the delivery).

If a frequency converter is installed, it is essential to accurately abide by the information on the converter and advisory label.

When the auger is connected, check the direction of travel is in accordance with the arrow.

Figure 6

Operation

During operation of the auger, the relevant regulations for prevention of accidents must be observed.

Add materials to be transported by the auger and check that it freely get out of the outlet.

Avoid as much as possible running the auger empty, as it causes considerable wear of the flighting and the auger will run more nosily.

During normal usage the auger will be completely filled.

Maintenance

During maintenance work all prescribed safety regulations must be observed.

The tension of the belt drive must be checked as a rule every third month. With frequent operation of the auger, the tension of the belt drive must be checked every month. When the belt can no longer be tightened it must be replaced.

The internal surface of the auger will show signs of wear depending on the percentage of extraneous coarse material in the material transported, and it should therefore be checked once a year in case of excessive wear or damage. Damage to the screw can be caused by foreign objects such as lumps of wood, stone or iron.

Should such an obstacle be stuck inside the auger, it can be removed using an appropriate tool, but under no circumstances should it be removed by hand. In such an event the auger must be disassembled. The inner parts of the auger should be replaced if there are signs of wear or damage.

The electric motor is of sufficient size that it will not be overloaded under normal functioning, if the unit is correctly assembled and installed. The motor safety switch will disconnect the electricity supply if the motor runs hot or if there is a fault in the electricity supply. Fuses and the motor safety switch must be checked and when necessary replaced by an electrician.

Technical data

Noise level: Under 75 dB (during transport of grain)

Motor capacity: Between 3 kW and 11 kW. See the motor's advisory label for more information.

Gear: V arvel RT/RS
Synthetic gear oil ISO VG 320 "long-life" oil

Transport capacity: DGS205 up to 60 t/h horizontal
DGS254 up to 90 t/h horizontal

Diagram of measurements DGS205

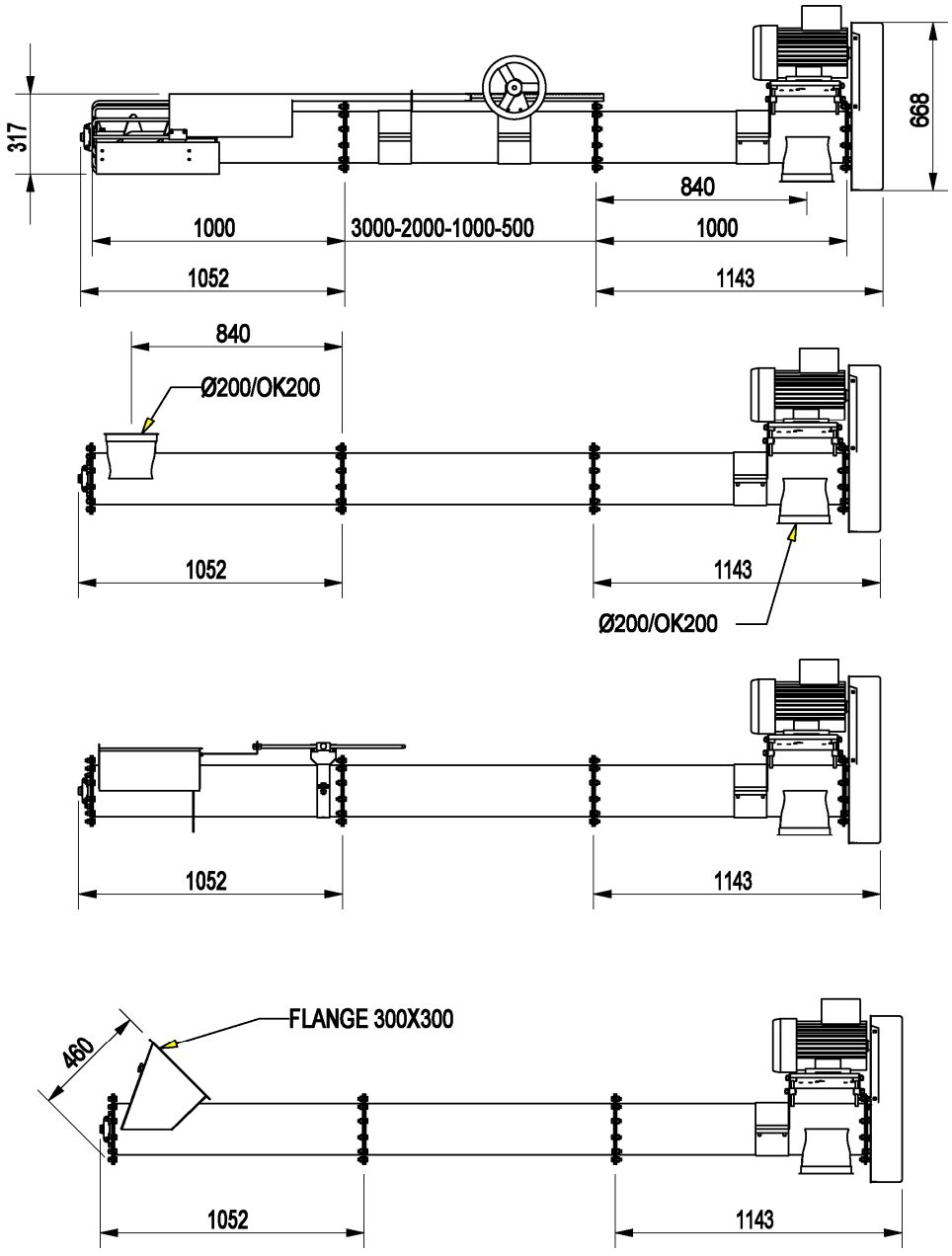
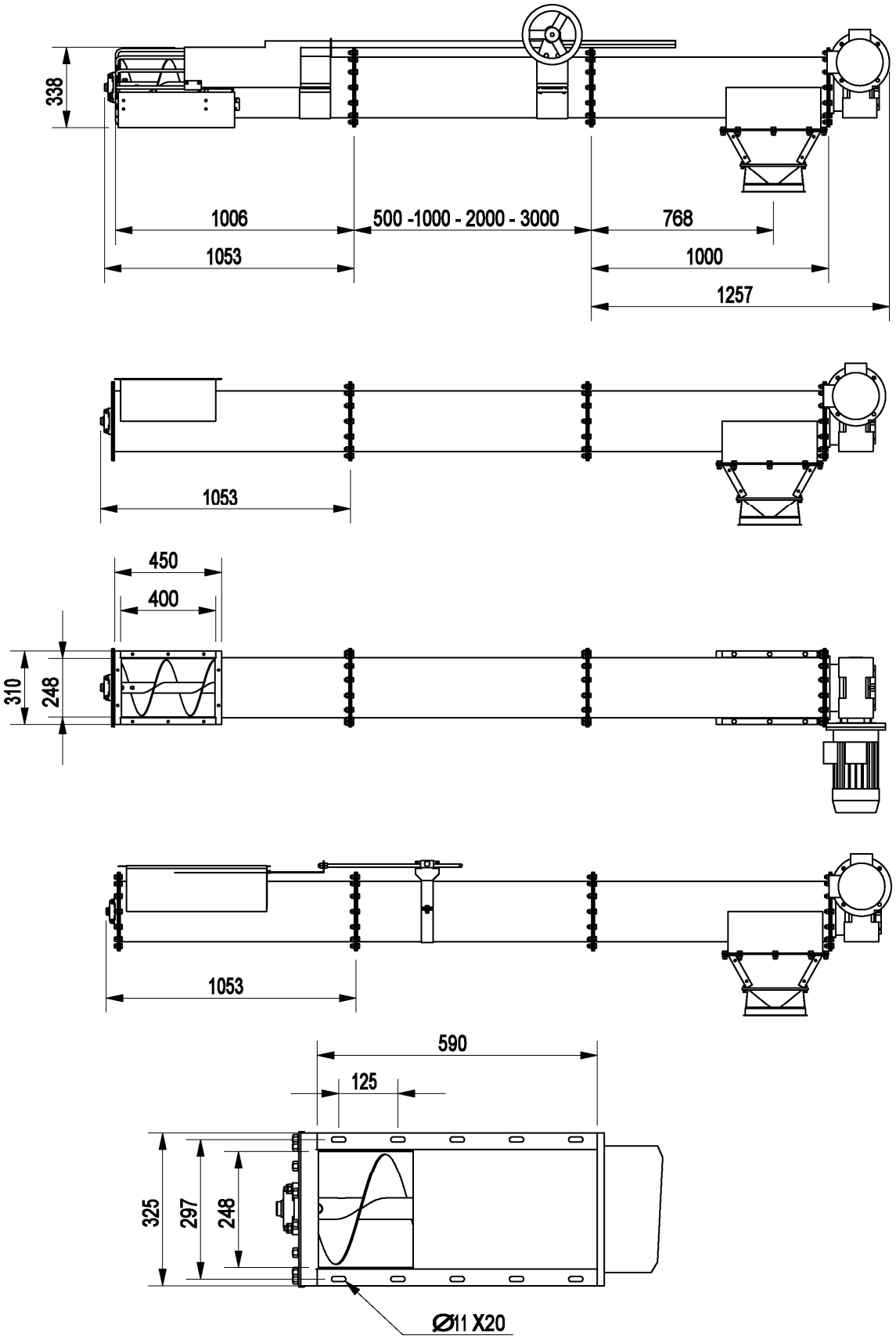


Diagram of measurements DGS254



Trouble shooting

Trouble P	**ossible cause**	**Advice**
The auger will not start	Electricity supply is cut	Check electric power cable and if necessary replace it
	The motor's fuse is defective	Replace the fuse
	The motor's safety switch is defective	Replace the motor safety switch
	The motor is defective	Replace the motor
	Foreign object is blocking the auger	Remove obstacle using appropriate tools
The motor stops / is overheated overbelastet	Foreign object is blocking the auger	Remove obstacle using appropriate tools
	The outlet is blocked	Clear outlet
	Too much material being transported in the tube	Adjust/reduce the amount of material entering the unit
	Electricity supply is cut off	Check the power cable, replace if necessary
	The motor's fuses are defective	Replace fuses
Auger does not transports material or does so irregularly	The drive shaft/axle is broken	Replace the shaft
	The inner parts are worn out	Replace inner parts
	The inner parts are crooked because of obstacle	Remove obstacle with appropriate tools, straighten the auger, or replace if neccessary
	Drive belt tension is too loose	Tighten up the belt or replace if necessary
	Material being transported is polluted	Clean the material
	Material being transported is too damp	Dry the material
	Insufficient material available for transport	Add more material

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