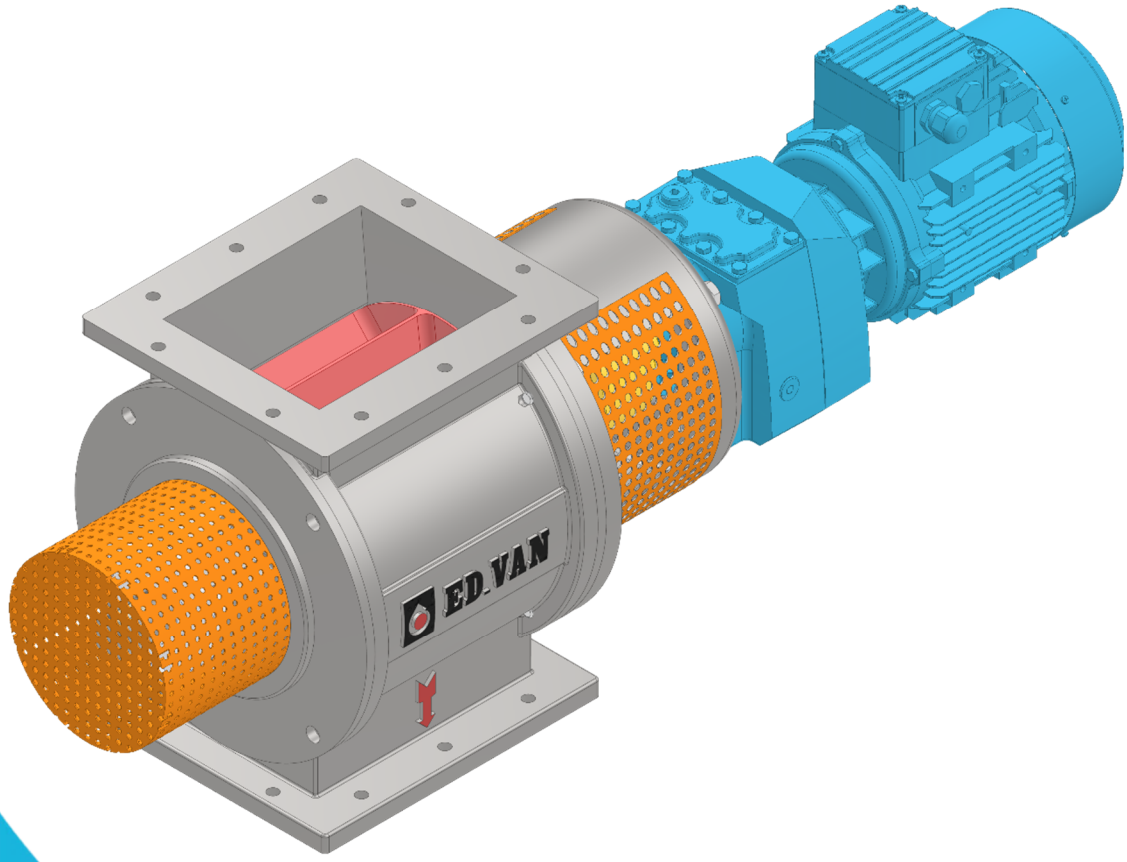
OPERATION AND MAINTENANCE MANUAL

FOR AIRLOCKS



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ED-VAN VANTİLATÖR

1.INTRODUCTION

ED-VAN VANTİLATÖR SANAYİ VE TİCARET LTD. ŞTİ. provides services in solving all kinds of dedusting and industrial ventilation problems with its expert technical staff. Our company has been established in an area of 19.500 m2 in 1975 and continues its activities in a closed area of 8.000 m2.

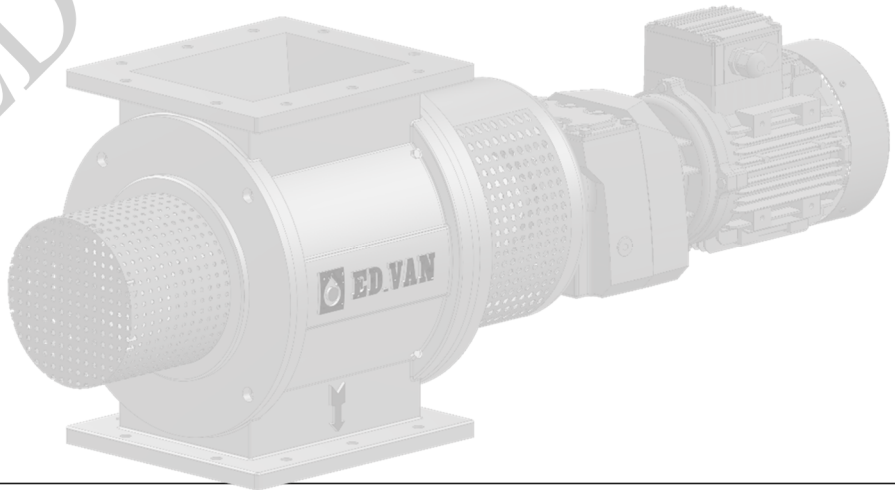
ED-VAN products used in all areas of the industry are manufactured in accordance with the national and international standards, taking into account the consumer protection principle. The design, planning, and manufacturing procedures of all kinds of products produced by our company are carried out in its own production facilities and by its own team.

Our R&D group continuously follows technological developments without compromising our quality. In the light of technological developments, tests of ventilators are carried out in our Edremit factory. The test results and test diagrams resulting from these tests are available in our company and are given to the customer upon request. We control all the problems that may occur in our products in advance, by making quality controls at every stage of the production before both manufacturing and shipment.

We declare that we produce our products in accordance with the requirements of;
-CE,
-TSE,
-ATEX,
-OHSAS 18001,
-ISO 9001:2008,
-ISO 14001:2015

WARNING:

Complying with the operating and maintenance manual will ensure you work uneventfully.

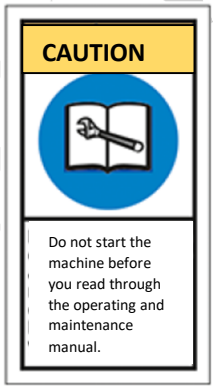


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2.SAFETY MEASURES

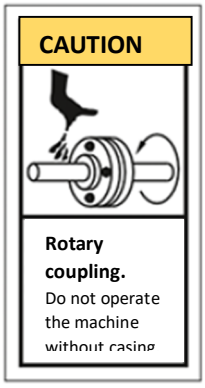
- Ventilator system instructions should be followed by trained and experienced staff.
- Security measures should be checked.
- Electrical systems should be checked.
- Before starting work, the copper plate should be touched with bare hands.
- Power consumption should be monitored. Max. power should not exceed the allowable power.
- Before any maintenance and cleaning, the power to the engine must be cut off.
- While the airlock is working, operations such as maintenance, repair, and adjustment should not be carried out.
- After starting, it should be checked if there is any noise, vibration, or abnormal situation.











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3.WARRANTY

- Our products are under a 1-year warranty as from the date of invoice against material and manufacturing defects; except for engine failures, wear, and misuse.
- The supply of material for overseas sales (EXW) is within the scope of warranty, and the service will be charged separately.
- The warranty period continues, provided that the delivered products are used and commissioned within a maximum of 120 days. Otherwise, any malfunction that may arise from waiting is out of warranty.
- Items not included within the scope of warranty by the seller:

(a) Defects caused by the failure to provide the appropriate installation environment for the product,

(b) Damages arising from the use of the product for purposes other than for which it was purchased,

(c) Damage caused by disasters such as fire, flood, wind, and lightning,

(d) Damage caused by unapproved additions and modifications;

(e) Any abuse and / or misuse by the purchaser, including improper assembly;

(f) Products damaged or altered by the buyer and / or their customers; or

(g) Performance problems caused by incorrect information.



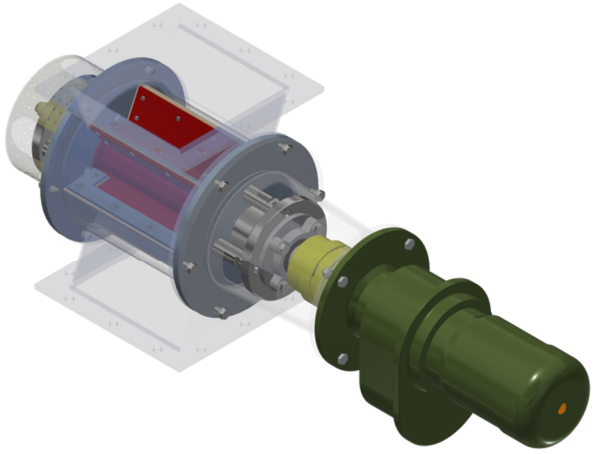
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4.DESCRIPTION OF THE AIRLOCK AND RELATED TERMS

Product Description and Terms

Customer details	
Airlock type	
Serial No	
Purchase order No	
V	
$n_{Red.}$	
$n_{mot.}$	
$N_{mot.}$	
Year of manufacture	
Drive type	
Carrier location	

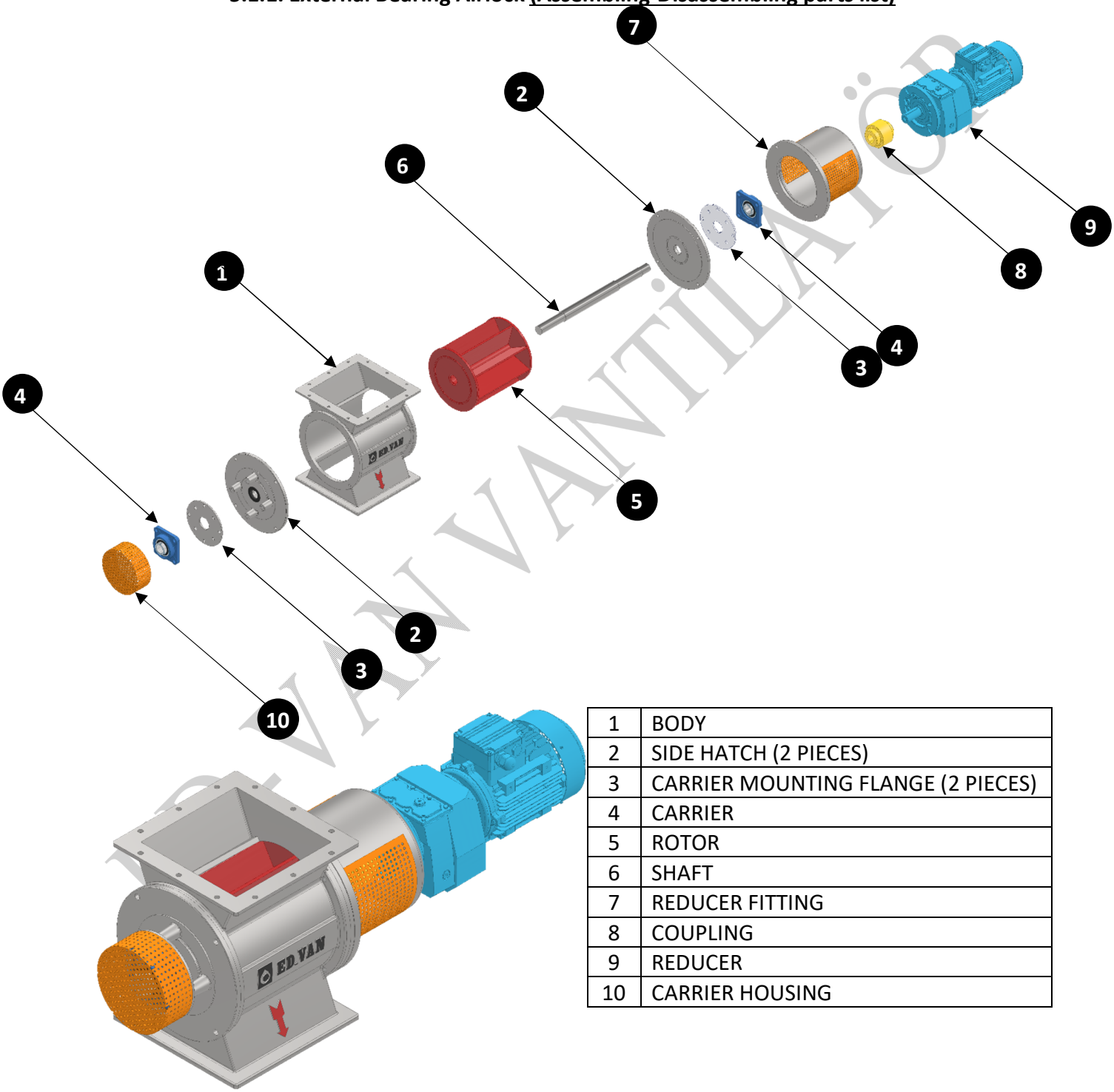
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5. PARTS AND ACCESSORIES OF AIRLOCKS

5.1.Parts List

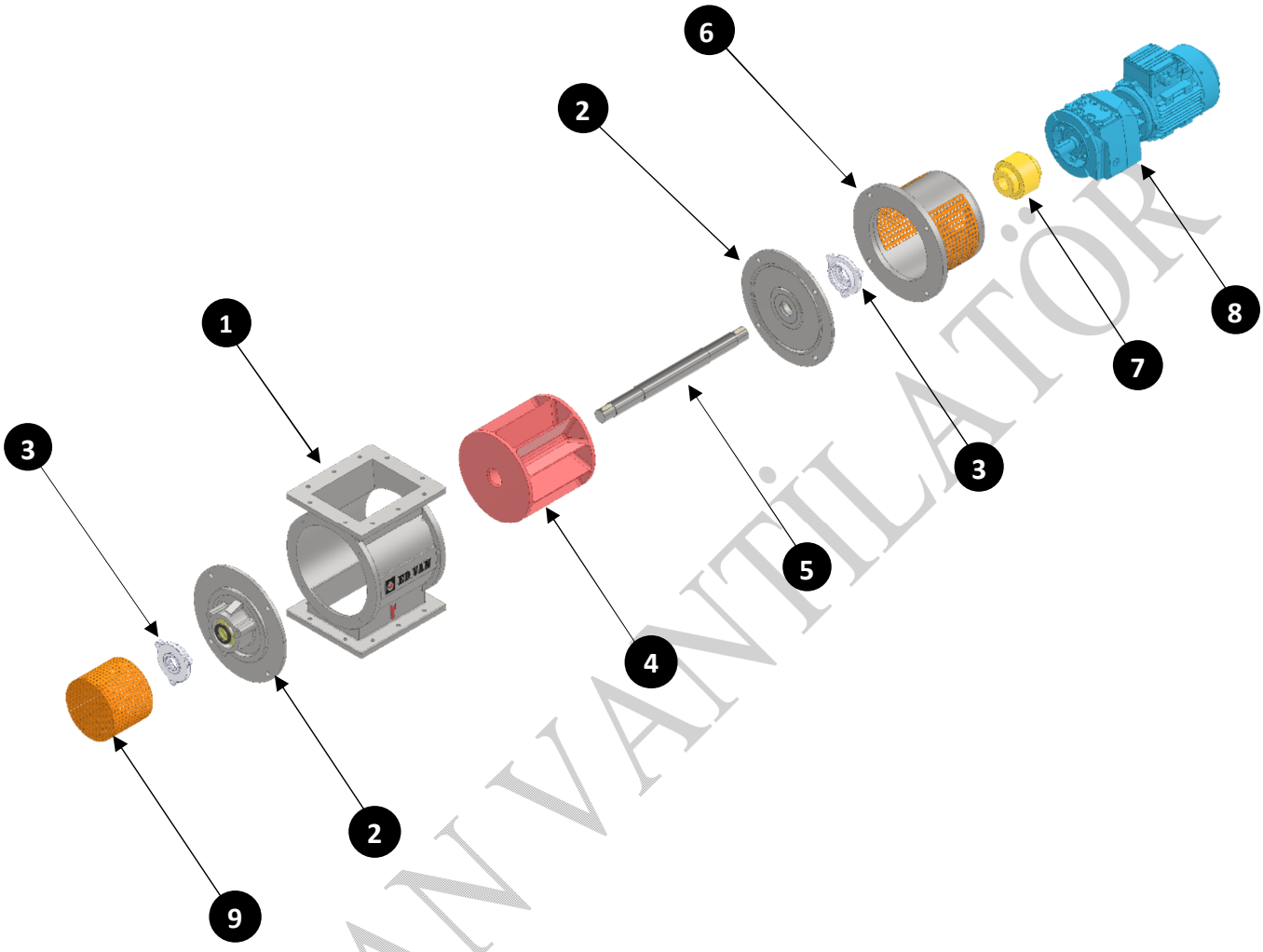
5.1.1. External Bearing Airlock (Assembling-Disassembling parts list)

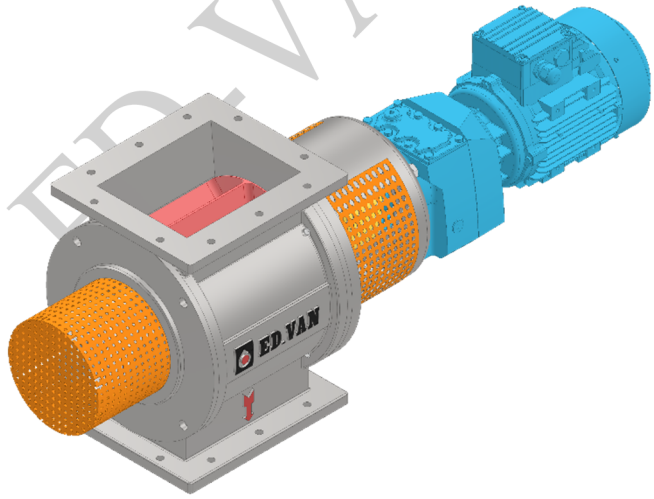


1	BODY
2	SIDE HATCH (2 PIECES)
3	CARRIER MOUNTING FLANGE (2 PIECES)
4	CARRIER
5	ROTOR
6	SHAFT
7	REDUCER FITTING
8	COUPLING
9	REDUCER
10	CARRIER HOUSING

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5.1.2. Standard Bearing Airlock (Assembling-Disassembling parts list)

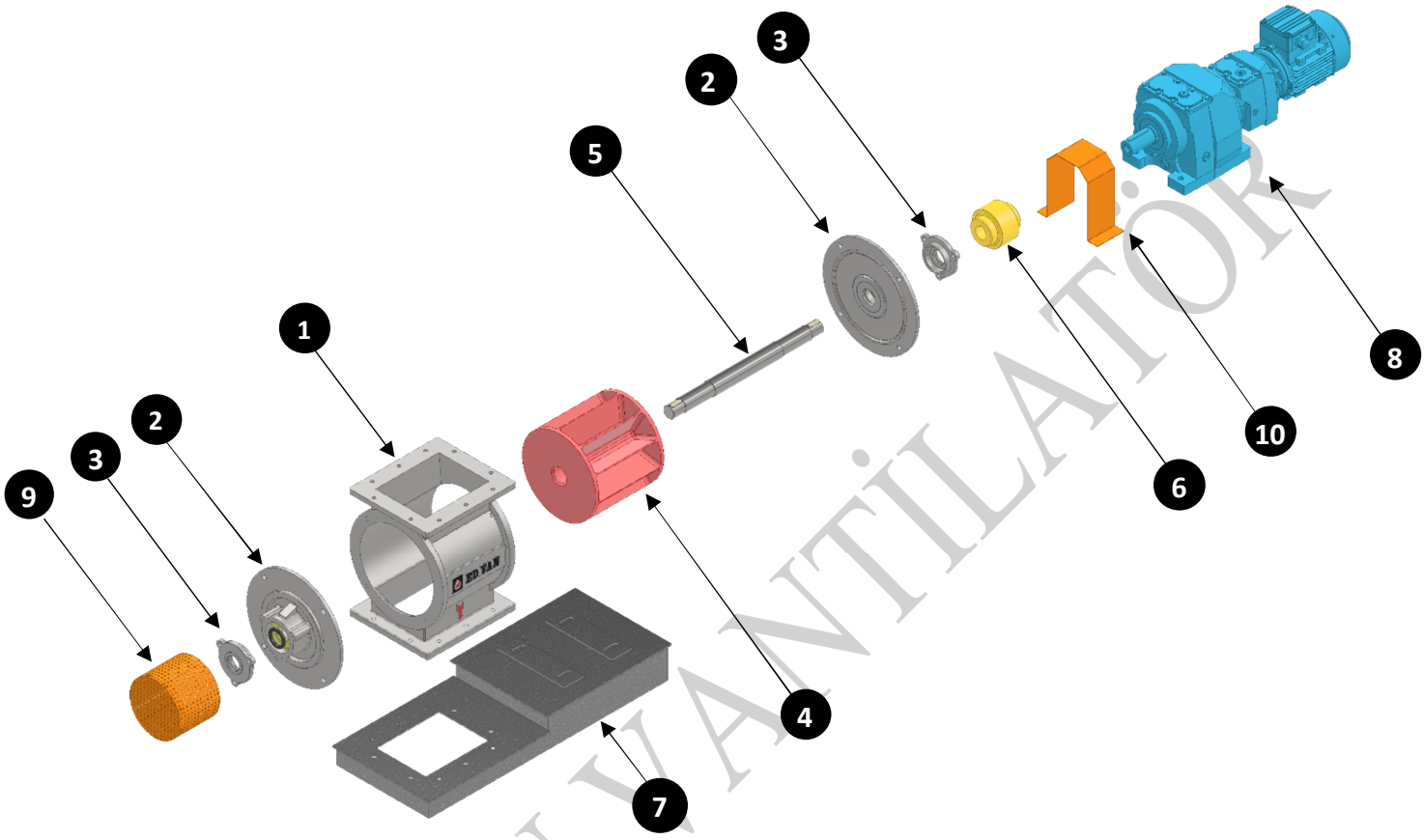


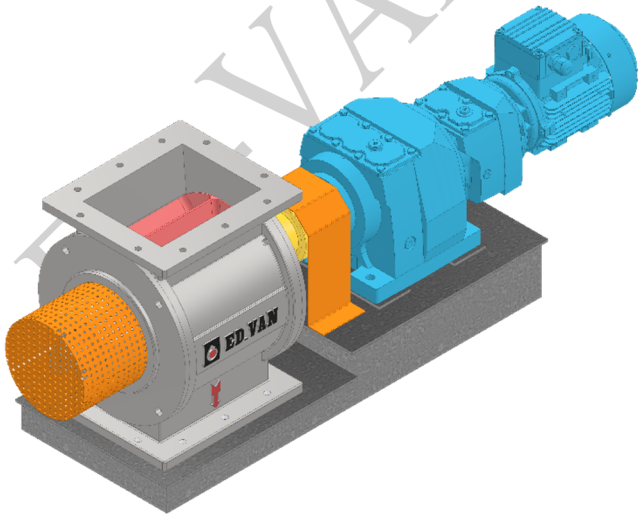


1	BODY
2	SIDE HATCH/CARRIER (2 pieces)
3	BEARING COVER (2 pieces)
4	ROTOR
5	SHAFT
6	REDUCER FITTING
7	COUPLING
8	REDUCER
9	CARRIER HOUSING

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5.1.3. Standard Bearing Bedplate Airlock (Assembling-Disassembling parts list)





1	BODY
2	SIDE COVER / CARRIER (2 pieces)
3	BEARING COVER (2 pieces)
4	ROTOR
5	SHAFT
6	COUPLING
7	BASE
8	REDUCER
9	CARRIER HOUSING
10	COUPLING CASE

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5.2.Accessories

5.2.1.Speed sensor

Optionally, a speed sensor can be used upon demand.





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6.COMMISSIONING AND OPERATING



6.1. Points to consider before commissioning:

- The electric engine and electric circuits must be connected and operated by a trained and experienced electrician.
- Electrical connections and panels must comply with EN 60204-1: 1995 standard.
- Check if the operating voltage written on the engine's label conforms to the mains voltage.
- The engine should be protected via a thermal relay calibrated according to the ampere of the engine.
- Grounding of the body should be done in accordance with the procedure.
- Before commissioning the airlock, all protection measures should be reviewed.
- While the airlock operates, foreign substances should be prevented from getting into the airlock inlets.
- It should be checked whether the rotor is rotating in the right direction (arrow direction on the airlock) by turning the engine switch on and off for a short time. If it does not turn in the right direction, the polar connections of the engine must be changed. Engine current should be checked with an ammeter after the reducer engine started up.
- The engine current should be checked with an ammeter after the airlock starts up.

WARNING :

- ***According to IEC Standards, the engine can be operated for a maximum of two minutes at 1.5 times the ampere rating of the engine. Adjust the engine thermal relay according to these ampere and time values. Generally, engine amps can be allowed to be up to 90% of the label value during operation.***



WARNING:

- ***When the airlock is active in machining:***

  -Do not put your hand into the rotor.

  -Do not hold the coupling and shaft.

  -Protect the airlock from materials such as rope, plastic, cloth, etc. that could get entangled in the rotor, shaft, and coupling.

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7. MAINTENANCE AND LUBRICATION

7.1. Maintenance

The most expensive maintenance is less expensive than the cheapest repair. The better the maintenance of the airlock, the more the airlock works smoothly. The staff responsible for the operation and maintenance of the ventilator are obliged to follow the rules specified in these instructions.

7.1.1 Monthly maintenance

WARNING:

During air lock maintenance, turn off the energy from the electrical panel, prevent it from being opened by others, and put a warning sign.

• If the Air Lock is driven by chain sprocket, check if there is any break or similar damage in the links of the chain.

• As the product passing through the Air Lock wears the blade and body, the lock will lose its impermeability. Replace worn blades with new ones.

• Make sure that there is no product left in it during prolonged stops. Since there will be hardening, which is called caking in products with high humidity, no product spillage occurs from the wings. In such cases, the entrance direction of the material is checked visually and it is observed whether the remaining product is hardened.

7.1.2. Annual maintenance

• Generally, annual maintenance can be done semi-annually, depending on the principles of the enterprise. Since the abrasions on the rotor and body are more in airlocks that work continuously for a long time, be careful to have spare parts and do not neglect to change the rubber strip on the rotor. If there is no rubber on the wings, you must replace the rotor with a new one.

• Check the drive group.

• If the space on the coupling expanded, replace it with a new one.

• Change the oil of the carriers.

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• Contact the authorized service for the reducer (considering its brand) and have it maintained.

7.2. Lubrication and Lubrication Period

7.2.1. Greasing

- When changing the oil, drain away the grease in the carriers. Then wash it off with pure gasoline or benzene. Diesel and kerosene should never be used. Do not dry with oakum or similar fibers and fluffy materials during the cleaning process. Always use clean and lint-free cloths. Apply grease to the ball part of the bearings. In the meantime, fill one-third of the carrier housing space with grease.

WARNING:

- If the carriers get hot after the grease is added, that means the amount of grease is too much. Drain some grease.
- To compensate for the grease loss, the same brand and type of grease should be added.
  - ✓ SHELL - Alvania Grease 3
  - ✓ MOBİL - Mobilux 2
  - ✓ BP - Energrease LS 2
  - ✓ PETROL OFİSİ - Regal Starfark Premium 2
  - ✓ SKF- LGWA 2

Original grease was applied by ED-VAN in carriers.

NOT: Reducer oil is out of the scope.

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8. OPERATIONAL TROUBLESHOOTING, CAUSES, AND SOLUTIONS ?

For the faults signed with and for their solutions, you should consult to ED-VAN!

FAILURE: 1

REDUCER IS WORKING, ROTOR IS NOT TURNING.

CAUSE OF FAILURE:	REPAIR OF FAILURE:
Coupling is broken or chipped.	Change the coupling.

FAILURE: 2

REDUCER AND ROTOR ARE NOT TURNING.

CAUSE OF FAILURE:	REPAIR OF FAILURE:
The thermic tripped.	Turn off the thermal switch.
Reducer motor burned.	Change the reducer motor.
Airlock rotor is stuck. There are foreign objects stuck in the rotor.	Remove the airlock. Clean the rotor.
Noise from the bearings.	The bearings may be broken, check it out. If necessary, replace the bearing and bearing seal.
The moist material has entered into the air lock and it is stuck between the body and the rotor.	Disassemble and clean the airlock.

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FAILURE: 3

AIRLOCK LOSES AIR EXCESSIVELY.

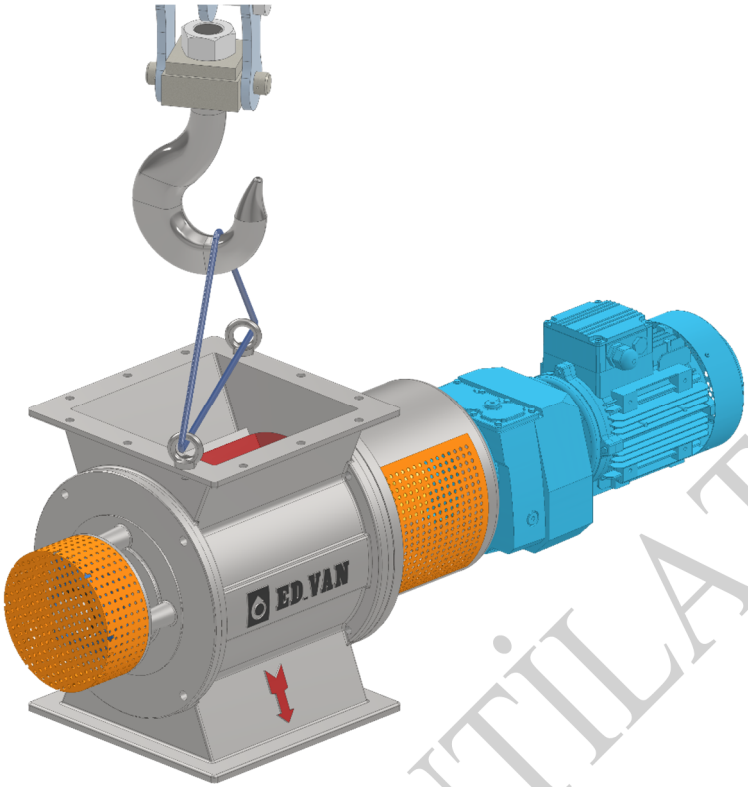
CAUSE OF FAILURE:	REPAIR OF FAILURE:
Airlock body is worn.	Check the body. Replace with a new body.
Airlock rotor blades are worn.	Check the rotor. Replace with a new rotor.
Rubber blades of the rotor are worn.	Check the rubber blades of the rotor. Replace with new rubber wings.

9. TRANSPORTATION AND STORAGE

9.1.Transportation

In order to transfer the airlock from one place to another, you should move it after attaching the carrying hooks to the carrying rings placed on the airlock or to the holes in the strength plates on the body.

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WARNING:

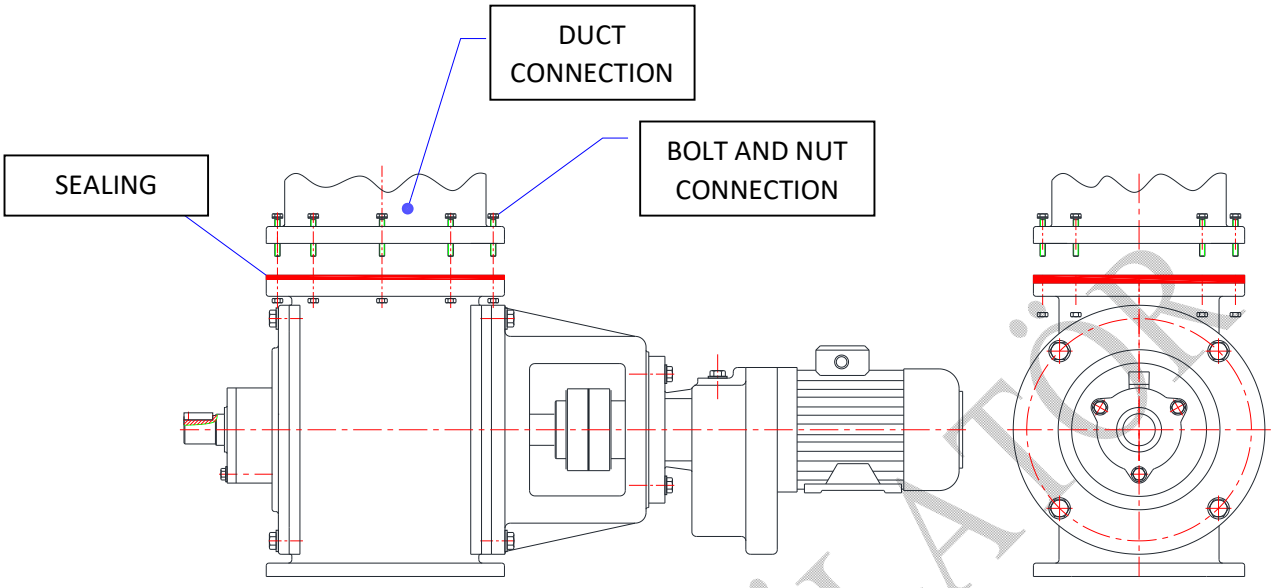
During transportation, the sensitive parts of the airlock (shaft, rotor, coupling, connecting neck, drive engine, etc.) must not be transported.

10.2.Storage

- Airlocks should be kept indoors and protected from moisture, chemical reactions, and rain.
- Shafts should be kept away from moisture and excessive heat in order to prevent corrosion.
- Reducer should always be kept lubricated.
- Our company cannot be held responsible for damages arising from the storage, and after the vehicle enters the customer's working area.

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10.3.Installing the Airlocks



Installing the airlock

- The airlock is mounted to the connection channel with the help of bolts.
- Tighten the bolts by placing one of the sealing elements (cord, rubber gasket, rope etc.) between the duct connection and the airlock in accordance with the operating conditions.

WARNING:

If the airlock is to be installed in an open area, it should be protected from rain and external factors.

Do not operate the airlock without tightening all the connecting bolts!

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