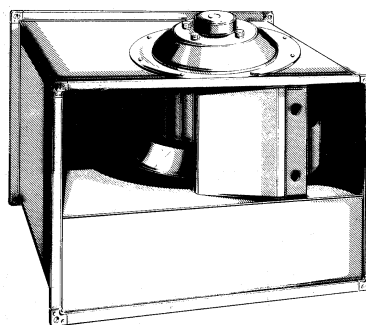
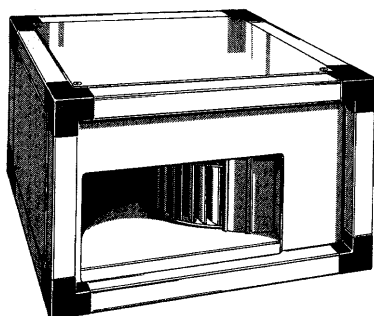
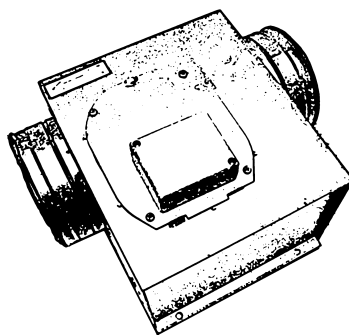


Maintenance and Operating Instructions

(English Version)

Model: RF, EKN, EKNS, DKN, DKNS



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This operation instruction contains important technical advice and information about safety.
Therefore please pay attention to this operation instruction before unpacking, installation or any other work is undertaken on this fan!

1. SAFETY

The following symbols refer to particular dangers or give advice for safe operation



Danger



Danger from electric current / high voltage!



Danger! Do not step under hanging load!



Crush danger!



Important, information

Safety advice



Wolter In line ducts are produced in accordance with the latest technical standards and our quality assurance programme, which includes material and function tests, ensures that the final product is of a high quality and durability. Never the less these fans can be dangerous if they are not used and installed correctly, according to the instructions



Before installing and operating this fan please read instructions carefully! Only use the fan after it has been securely mounted and fitted with protection guards and maintenance cover to suit the application (Tested guards can be supplied for all fans from our programme). Installation, electrical and mechanical maintenance and service should only be undertaken by qualified worker! The fan must only be used according to its design parameters, with regard to required performance stated in the name-plate and mediums passing through it!

2. DESCRIPTION

Duct fans were especially developed for use in modern ventilation systems. By using external rotor motors there are significant technical advantages in operation. All duct fans are 100% speed controllable and are statically and dynamically balanced as a composite unit in our factory. The fans are also available with motor/impellers to be folded out for maintenance

3. CONDITIONS OF USE

Duct fans can be used for ventilation of:

- Clean air
- Slightly dusty and greasy air
- Slightly aggressive gases and fumes (please refer to our engineers)
- mediums up to an atmospheric density of 1,2 kg/m³

- Mediums passing through with a temperature of -30°C up to + 40°C
- Mediums up to a max. Humidity of 95%

4. STORAGE & TRANSPORT



- Store the fan on a dry place and weather protected in its original packing
- Cover open pallets with a tarpaulin and protect the fans against influence of dirt (i.e. Stones, splinters, wires, etc.).
- Storage temperatures between -30°C and + 40°C
- With storage times of more than 1 year, please check the bearings on soft running before mounting (turn by hand).
- Transport the fan with suitable loading means:.
- Do not damage casing.
- Use suitable assembling means as e.g. scaffolds conforming to specifications.



Danger! Do not step under hanging load!

5. INSTALLATION



Installation and electric work only by skilled and introduced workers and in accordance to applying regulations!



Installation of fan either with mounting flange directly to the duct system, possibly by conjunctions with a sound attenuator or, in order to avoid noise transmission, with flexible connectors, installed on the inlet and outlet. The standard method of mounting is via a pre-prepared platform or for vertical mounting channel section brackets fixed to the fan casing. (8" weight as per chart in enclosure

For installation on mounting flange use M8 screws and secure properly



Avoid sound bridges by use of isolation material (i.e. sponge rubber)

Check impeller rotation by hand for soft running
For external mounting weather protection should be used. This should be designed to suit the installation and is supplied by others.



The duct system must not be supported by the fan casing !

Electric wiring must be in accordance with technical connection regulations and local ordinances and national electric codes as per enclosed wiring diagram in the terminal box or on the casing.

- If the junction box is to be fitted to the fan casing, the holes for fixing (Ø 2,5 mm) must be drilled outside the impeller rotation area.
- Fix the junction box with screws (max. dia of 4 mm) to fan casing.
- Insert cable according to the instructions in the junction box and seal it.
- Connect thermal contacts for motor protection according to the instructions- otherwise the guarantee is invalid. Connect electric supply.



Do not use metal compression-gland fittings with plastic terminal boxes!



Before control of direction of rotation:

- Remove any foreign matter from the fan.
- Install protection guards or give no entry to fan.
- Check direction of rotation as per direction arrow on the casing by short turning on.
 - with 3-phase-motor
-change of direction of rotation possibly by change of two phases!
 - with 1-phase-motor
-change direction of rotation if necessary with changing of Z1 (black) and Z2 (orange)
-change of current direction in secondary winding.)



Crush danger! Do not reach into rotating impeller!

- Close maintenance cover (if any)

6. OPERATION

Prepare fan for first operation

- Correct mechanical installation
- Electrical installation in accordance with regulations
- Remove foreign matter from inlet and outlet area and from inside of fan
- Protection guard installed, maintenance cover closed, no entry to fan or fan being installed out of arm sweep.



Only commence operation when it is installed in accordance with ordinances!



If the fan is started under free blow conditions, i.e. prior to connecting to ducting system, the current consumption may exceed the normal maximum (forbidden area of performance curve)!



The terminal protection of the motor may activate!

Taking fan in operation

- Observe correct function (smoothness of running, vibration, unbalance current consumption, possibly controllability)



By regular inspection of the fan inlet make sure debris has not collected on the guard and clean if necessary!!

7. Maintenance



Our fans are maintenance free with normal operation! When using them in the fringe range simple maintenance work may be required!



Before any maintenance work is undertaken:



Stop fan in accordance to regulations and disconnect all poles from mains supply.



- Wait until impeller is stationary!
- Make sure that restart is not possible!

Clean fan

- Clean impeller
- Keep the motor dry!
- Do not damage impeller, blades!



Only use usual commercial cleaning material paying attention to the prescribed safety measures and do not use any abrasive tools (surface protection will be destroyed!)

General controls

- Bearing play too large?
- Grease leaking on bearings?
- Surface protection affected by medium to be ventilated too aggressive?
- Unusual operation noise?
- Fan capacity for possibly exceeded duct system still sufficient causing overloading?

8. REPAIR



Before any repairs are undertaken

Please:



Stop fan in accordance to regulations and disconnect all poles from mains supply. Wait until impeller is stationary!

Make sure that restart is not possible!



Only use original spare parts manufactured and supplied by Wolter!

Change of motor impeller

- Disconnect electrical supply in junction box
- Unscrew motor mounting and pull out of the casing complete with motor impeller
- Install a new motor impeller complete with motor mounting in casing
- Connect electric supply

Control whether installation is correct

- motor impeller must rotate freely
- control whether direction of rotation is correct !
- Install maintenance cover if any

9. SERVICE, ADDRESS OF PRODUCER

Wolter products are subject to steady quality controls and are in accordance with valid regulations. In case you have any questions with regard to our products please contact either your local agent of your air handling unit or directly to one of our distributors or:

Wolter GmbH Co Kg
Am Wasen 11,
D-76316 Malsch
Tel: 49-7204 9210,
Telefax: 49-7204 920111

Please contact your local Sale & Support Service at:



10. APPENDIX: WEIGHT CHART

Three Phase - DKN/DKNS - 400V/50Hz

Type	C400V uF	Approx. Kg	Wire Connection
400-4		65	DS1
355-4		58	DDO
400-6		76	DS1
315-4		35	DDO
315-4 Ex stb		35	DD1
280-4		22	DDO
280-4 Ex stb		24	DD1
250-4		17	DS1
250-4 Ex stb		17	DS3
225-4		12	DS1
225-4 Ex stb		14	DS3
200-4		10	DS1
355-6		43	DDO
355-6 Ex stb		40	DD1
400-8		63	DS1
315-6		26	DDO
280-6		20	DS1
450-6		80	DS1

Single Phase - RF, EKN/EKNS - 230V/50Hz

Type	C400V uF	Approx. Kg	Wire Connection
280-4	16	12,5	E12
250-4	14	22	E12
225-4	8	14	E12
200-4	8	10	E12
315-6	10	29	E12
280-6	10	24	E12
250-6	6	22	E12
200-2	4	10	E11
RF 150-4	2	5,4	E16-3

