

**GB** Operating Instructions

**CRANEFRIGOR™**  
**Air-cleaning appliance FT 15**



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## 1 Symbols


### 1.1 Warning notices

#### Gradation of the warning notices

The warning notices differ from one another concerning the type of danger through the following signal words:

- **Caution** warns against damage to property.
- **Warning** warns against bodily harm.
- **Danger** warns against danger to life.

#### Composition of the warning notices

	<b>Type and source of the danger!</b> ⇒ Measure to avoid the danger.
<b>Signal words</b>	

### 1.2 Other symbols

#### Operating instructions

Composition of the operation instructions:

- ⇒ Guidance to an operation.

Indication of an outcome, if necessary.

#### Lists

Composition of the non numbered lists:

- List level 1
  - List level 2

#### Composition of the numbered schedules:

1. List level 1
2. List level 1
  - 2.1 List level 2
  - 2.2 List level 2

## 2 Safety and dangers

- Use Air-cleaning appliance exclusively according to the instructions.
- Keep the documentation in a place accessible for all persons.
- Use Air-cleaning appliance exclusively in its original state without any unauthorised modifications and in faultless technical condition.
- Make sure that only trained persons work on the Air-cleaning appliance.
- Make sure that Air-cleaning appliance is installed and maintained exclusively by skilled expert personnel.
- Prior to installation and maintenance, make sure that Air-cleaning appliance is completely disconnected.
- Operate Air-cleaning appliance exclusively after installation and startup are completed.
- Ensure that all protection devices are fully operational.

## 3 Correct ways of employment

- Use Air-cleaning appliance exclusively to prepare outside air as the fresh air percentage for the climatization of:
  - crane cabins
  - containers
  - crane bridges
  - equipment cabinets
  - control stands in heat plants

## 4 Function

### 4.1 Function

Use the following filtersteps depending on the application:

- pre-filter G3
- chemical combination filter
- fine filter F5
- fine filter F7

### 4.2 Construction

The Air-cleaning appliance is a robust sheet steel construction and includes:

- filter housing
- filter inserts
- fresh air fan

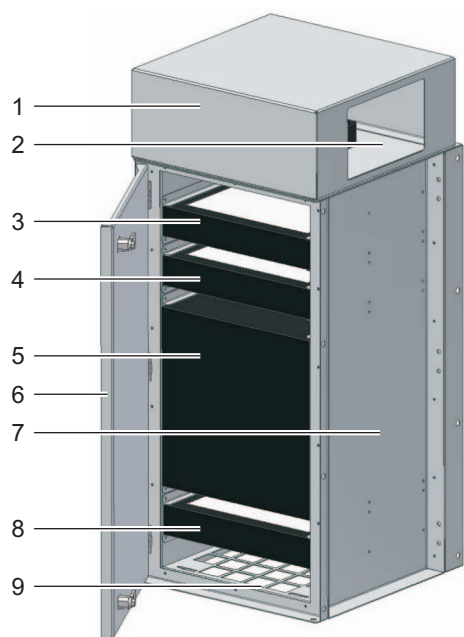


Fig. 1 Air-cleaning appliance

- (1) fresh air fan (hidden in the picture)
- (2) air outlet
- (3) F7 filter (optional)
- (4) F5 filter
- (5) combination filter (optional)
- (6) revision door
- (7) installation side
- (8) G3 filter
- (9) air inlet

## 5 Assembly



**Danger**

### **Danger to life due to electric shock!**

- ➔ Make sure that the assembly is executed exclusively by qualified expert personnel.

### 5.1 Transport



**Danger**

### **Danger to life due to component parts dropping!**

- ➔ Observe national and regional safety and transport regulations.
- ➔ Make sure that lifting capacity of lifting devices is sufficient.

For transport with hoisting devices:

- ➔ Use edge protection.
- ➔ Make sure that load strap angle is 60° at most.



**Warning**

### **Damage to property due to incorrect transport!**

- ➔ Exclusively transport Air-cleaning appliance correctly.

After delivery:

- ➔ Check whether delivery is complete.
- ➔ Check whether delivery has been damaged during transport.
- ➔ Inform transport company about any defects.

### 5.2 Set-up

- ➔ Avoid structure-borne sound transmission to the cabin.

Um Filterwechsel zu ermöglichen:

- ➔ Keep a distance of at least 30 cm to wall at revision opening.

## 5.3 Assembly



### **Danger to life due to rotating parts!**

- ➔ Install safety devices according to DIN 294 if the following areas are freely accessible:
  - fan suction intakes
  - fan exhaust vents
  - drive vents
  - rotating parts

**NOTE** *Protective grids as covers for fan suction intakes or exhaust vents, drive elements and other rotating parts are available as accessories.*

- ➔ Stick sealing tape to air connection.
- ➔ Make sure that sealing tape makes connection impermeable.
- ➔ Position the Air-cleaning appliance on the wall.
- ➔ Press the Air-cleaning appliance to the joint and screw it to the wall.

## 5.4 Electric connection



### **Danger to life due to electric shock!**

- ➔ Make sure that electric connections are exclusively connected by qualified expert personnel.
- ➔ Execute the electric connection exclusively if the unit is completely disconnected.
- ➔ Make sure that current type and tension of the power supply correspond to the indications on the type plate of the drive motor and the circuit diagram.

- ➔ Dimension cables according to VDE (association of German electrical engineers) regulations and local stipulations.
- ➔ Run cables through cable entries in connecting box.
- ➔ Execute electrical connection according to circuit diagram in equipment cabinet of crane air-conditioning unit.

### Alarm contact

**NOTE** *Alarm contacts are potential-free.*

**NOTE** *FrigorTec GmbH recommends signalling of alarm contacts in crane cabin or container.*

Alarm contacts signal the following faults:

- Motor protection of fan has responded.



## 6 Startup

### 6.1 Check prior to startup

- Make sure that all mechanical and electric safety devices are installed, connected and fully functional.
- Remove residue from installation, foreign particles and dirt from Air-cleaning appliance and channel system.
- Check if fan wheel turns smoothly by turning it by hand.
- Close revision doors.

### 6.2 Startup

- Switch on main switch on equipment cabinet.
- Set operation selector switch in cabin to 1.

## 7 Operation

### 7.1 Switching on

- Switch on main switch on equipment cabinet.
- Set operation selector switch in cabin to 1.

Air-cleaning appliance is switched on.

### 7.2 Switching off

- Set operation selector switch in cabin to 0.

Air-cleaning appliance is switched off.

## 8 Shutdown

- Set operation selector switch in cabin to 0.
- Switch off main switch.

### Demounting



**Danger**

#### **Danger to life due to electric shock!**

- Make sure that electric connections are exclusively disassembled by qualified expert personnel.
- Disassemble the electric connection exclusively if the unit is completely disconnected.

- Disconnect connections from equipment cabinet of crane air-conditioning unit to Air-cleaning appliance.
- Dismount Air-cleaning appliance.

## 9 Disposal

- Dispose of Air-cleaning appliance according to effective waste disposal regulations.

## 10 Maintenance



**Danger**

### **Danger to life due to electric shock!**

➔ Make sure that any maintenance works or cleaning is exclusively done by qualified expert personnel.

Prior to all works:

- ➔ Switch off main switch.
- ➔ Protect main switch against accidental switching-on.



**Danger**

### **Danger to life due to rotating parts!**

Before opening the revision door:

➔ Make sure that fan is idle.

When works are finished:

- ➔ Close revision door.
- ➔ Make sure that all protection devices are active.

**NOTE** *Maintenance intervals depend on contamination of ambient air.*

➔ If necessary, adjust maintenance intervals to degree of contamination and stress.

**NOTE** *The filter life depends on the pollution and dust load of the environment of the craine air-conditioning unit.*

### 10.1 Monthly maintenance

- ➔ Check if revision door moves smoothly and is impermeable.
- ➔ Adjust revision door if necessary.
- ➔ Lubricate moving parts (e.g. hinges).
- ➔ Check impermeability of pipe connection.

#### Housing

- ➔ Check housing for contamination.
- ➔ Clean housing if necessary.
- ➔ Check housing for damages or corrosion.
- ➔ Remedy damage or corrosion if necessary.

## Weather protection grid

- ⇒ Check weather protection grid for contamination.
- ⇒ Clean weather protection grid if necessary.
- ⇒ Check weather protection grid for damages or corrosion.
- ⇒ Remedy damage or corrosion if necessary.
- ⇒ Check if weather protection grid is firmly attached.

## Filter

- ⇒ Clean fresh air filter.
- ⇒ Exclusively beat out or steam out filter steps.
- ⇒ If necessary, replace filter steps.
- ⇒ If necessary, replace chemical filter.
- ⇒ Check impermeability of filter pad.

## 11 Troubleshooting



**Danger**

### **Danger to life due to electric shock!**

➔ Make sure that any work on the Air-cleaning appliance is exclusively done by qualified expert personnel.

Prior to all works:

- ➔ Switch off main switch.
- ➔ Protect main switch against accidental switching-on.



**Danger**

### **Danger to life due to rotating parts!**

Before opening revision doors:

- ➔ Make sure that fans are idle.

When works are finished:

- ➔ Close revision doors.
- ➔ Make sure that all protection devices are active.

Effect	Cause	Remedy
Fresh air fan does not work	Current supply interrupted	➔ Press main switch. ➔ Check fuses. ➔ Check cables.
	Fuses or short-circuit releases have responded	➔ Check fuses. ➔ Check short-circuit releases. If short-circuit release responds more than two times in a row: ➔ Check cables.
Considerably reduced amount of fresh air	Filter very dirty	➔ Replace filter steps.
	Air ducts leaky	➔ Seal air ducts.
Loud noises by fresh air fan	Defective fan	➔ Replace fan.
Little or no cleaning effect of fresh air	Defective filter	➔ Replace filter steps.
	Revision door open	➔ Close revision door.
	Defective joint on revision door	➔ Replace joint.

## 12 Standards and legislation

Air-cleaning appliance meets the following standards:

- IEC 364
- DIN VDE 0100
- VDE 0113 Part 1
- EN 60 204-1
- EN 1050
- VDI 6022
- EN 292 Safety of machinery, Part 1 and Part 2
- EN 294
- EN 349

## 13 Technical data

Fresh air filter insert G3	Z-filter 295 x 295 x 50
Fresh air combination filter insert (optional)	Filter cartridge 298 x 298 x 600 Suitable types: → CP-Blend Media → Chemisorbant Media → Puracarb AM → Puracarb Media → Puracoll Media → Triple-Blend Media
Fresh air filter insert F5	Z-filter 295 x 295 x 50
Fresh air filter insert F7 (optional)	Z-filter 295 x 295 x 50
Dimensions	370 mm x 380 mm x 700 mm
weight	about 20 kg
protection rating	≥ IP 64
max. ambient temperature	65 °C
fresh air fan	
Voltage	24 V DC
max. power consumption	1 A



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