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**ROBUST**  
**Electric fan heaters for**  
**demanding environments**



# ROBUST

## Electric fan heaters for demanding environments

Robust is a range of electric fan heaters that are suitable for environments with stringent safety requirements, such as potentially flammable or corrosive environments.

- 4 models for various harsh environments
- ROBUST F for potentially flammable environments
- ROBUST C for corrosive environments
- Robust H for industrial applications  
(up to 70 °C ambient temperature)
- ROBUST V for ships and offshore
- All models are suitable for 50 and 60 Hz.

### Design

Refer to respective model as the design varies.

### Feedback Control

All models include an integrated thermostat and power selector.  
For control using external accessories, see respective model.



### Approvals

Fan heater tested and approved by Intertek Semko AB according to:  
LVD directive: EN 60335-1, EN 60335-2-30, SEMKO 111FF-1987 (Robust F only) and  
EMKO-TUB(61)N289/90 (Robust F only).  
EMC directives: EN 61000-6-2, EN 61000-6-3 and EN 61000-6-3-11.  
EMF directive: EN 62233

Robust V is additionally approved in accordance with the following:  
DNV; vibration test



# ROBUST F

## Electric fan heaters for fire hazardous environments

Robust F has been tested and is approved for use in premises that are classified as potentially flammable due to the amount of dust they contain. Examples of application areas include animal barns and woodworking joinery shops.

- Approved for use in potentially flammable areas
- Low heating element temperature prevents dust from igniting
- Casing, heating elements, grille and legs/stand made of stainless steel
- IP65 degree of protection—protected against dust and water jets

### Design

The casing is made of stainless sheet steel, EN 1.4016, the heating elements and grille are made of acid-resistant stainless steel, EN 1.4404, and the legs/stand are made of stainless steel, EN 1.4301. Integrated thermostat and power selector.

Easy electrical installation with plug (except 230 VAC 3-ph.).

IP65 degree of protection (protected against dust and water jets).



## Product Range Overview

Type		F2	F3	F6	F6N	F9	F9N
Voltage	V	230 VAC 1-ph. 50/60 Hz	230 VAC 1-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	230 VAC 3-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	230 VAC 3-ph. 50/60 Hz
Output	kW	2	3	6	6	9	9
Output stage	kW	0-1-2	0-2-3	0-3-6	0-3-6	0-4.5-9	0-4.5-9
Current	A	4.4 / 8.8	9.1 / 13.5	4.8 / 9.1	8 / 15.5	6.7 / 13.2	11.6 / 22.9
Temp. increase due to heater	°C	14	21	24	24	25	25
Thermostat	°C	0-35	0-35	0-35	0-35	0-35	0-35
Sound pressure level <sup>1)</sup>	dB(A)	48	48	53	53	55	55
Air volume	m <sup>3</sup> /h	400	400	700	700	1000	1000
Weight	kg	11	11	13	13	19	19
Width × Height × Depth	mm	300 × 375 × 360	300 × 375 × 360	300 × 375 × 360	300 × 375 × 360	375 × 445 × 432	375 × 445 × 432

<sup>1)</sup> Measured at 5 metres in front of appliance.

## Project Design/Orders

### Description – Robust F

Electrical fan heater, VEAB type Robust F, with casing made of stainless sheet steel, EN 1.4016, heating elements and grille made of acid-resistant stainless steel, EN 1.4404, and legs/stand made of stainless steel, EN 1.4301. IP65 degree of protection. Feedback control is achieved by means of the integrated thermostat and the power selector.

# ROBUST C

## Electric fan heaters for corrosive environments

Robust C has been specially designed for wall-mounting in corrosive environments, such as vehicle washing facilities, sewage treatment plants and industrial plants. Robust C features an IP65 degree of protection and is thus protected against water projected from a nozzle.

- Approved for use in humid and corrosive environments
- Casing, heating elements, grille and legs/stand made of stainless steel
- All models are for mobile use or wall mounting
- IP65 degree of protection—protected against dust and water jets
- Corrosion class C5-M

### Design

The casing, heating elements and grille are made of acid-resistant stainless steel, EN 1.4404 and the legs/stand are made of stainless steel, EN 1.4301. Integrated thermostat and power selector. Easy electrical installation with plug (except 230 VAC 1-ph., 230 VAC 3-ph.). IP65 degree of protection (protected against dust and water jets).

### Accessories

An external RTC/RTC4 control box, with IP65 degree of protection can be connected to the Robust C.



## Product Range Overview

Type		C3	C6	C6N	C9	C9N	C15
Voltage	V	230 VAC 1-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	230 VAC 3-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	230 VAC 3-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz
Output	kW	3	6	6	9	9	15
Output stage	kW	0-2-3	0-3-6	0-3-6	0-4.5-9	0-4.5-9	0-7.5-15
Current	A	9.1 / 13.5	4.5 / 8.9	7.8 / 15.4	6.7 / 13.2	11.6 / 22.9	11.2 / 22
Temp. increase due to heater	°C	21	17	17	25	25	32
Thermostat	°C	0-35	0-35	0-35	0-35	0-35	0-35
Sound pressure level <sup>1)</sup>	dB(A)	48	55	55	55	55	62
Air volume	m <sup>3</sup> /h	400	1000	1000	1000	1000	1300
Weight	kg	11	19	19	19	19	22
Width	mm	300	375	375	375	375	375
Height	mm	375	445	445	445	445	445
Depth	mm	360	432	432	432	432	432

<sup>1)</sup> Measured at 5 metres in front of appliance.

## Project Design/Orders

### Description – Robust C

Electrical fan heater, VEAB type Robust C, with casing, heating element and grille made of stainless, acid-resistant steel, EN 1.4404, and legs/stand made of stainless steel, EN 1.4301. IP65 degree of protection. Feedback control is achieved by means of the integrated thermostat and the power selector. Optional RTC/RTC4 external control box to be ordered separately.

# ROBUST H

## Electric fan heaters for industrial applications

Robust H is intended for applications and premises that need to be heated to a max. temperature of 70 °C. The fans are used for drying and curing processes as well as for pest control.

- Approved for temperatures up to 70 °C
- Casing, heating elements, grille and legs/stand made of stainless steel
- All models are for mobile use or wall mounting
- IP44 degree of protection splash-proof

### Design

The casing is made of stainless sheet steel, EN 1.4016, the heating elements and grille are made of acid-resistant stainless steel, EN 1.4404, and the legs/stand are made of stainless steel, EN 1.4301. Integrated thermostat and power selector. Easy electrical installation with plug (except 230 VAC 3-ph.). IP44 degree of protection (splash-proof).

### Accessories

An external RTH thermostat, with IP44 degree of protection can be connected to the Robust H.



## Product Range Overview

Type		H6	H6N	H9
Voltage	V	400 VAC 3-ph. N 50/60 Hz	230 VAC 3-ph. 50/60 Hz	400 VAC 3-ph. N 50/60 Hz
Output	kW	6	6	9
Output stage	kW	0-3-6	0-3-6	0-4.5-9
Current	A	4.5 / 8.9	7.8 / 15.4	6.7 / 13.2
Temp. increase due to heater	°C	17	17	25
Thermostat	°C	0-70	0-70	0-70
Sound pressure level <sup>1)</sup>	dB(A)A	55	55	55
Air volume	m <sup>3</sup> /h	1000	1000	1000
Weight	kg	19	19	19
Width × Height × Depth	mm	375 × 445 × 432	375 × 445 × 432	375 × 445 × 432

<sup>1)</sup> Measured at 5 metres in front of appliance.

## Project Design/Orders

### Description – Robust H

Electrical fan heater, VEAB type Robust H, with casing made of stainless sheet steel, EN 1.4016, heating elements and grille made of acid-resistant stainless steel, EN 1.4404, and legs/stand made of stainless steel, EN 1.4301. IP44 degree of protection. Feedback control is achieved by means of the integrated thermostat and the power selector. Optional RTH thermostat to be ordered separately.

# ROBUST V

## Electric fan heaters for marine and offshore applications

Robust V is designed for use on ships and in the offshore industry.

The heating elements are electrically insulated from the casing to prevent leakage currents.

- Tested and approved by Det Norske Veritas
- Electrical safety and vibration tested for use on ships
- Reinforced electrical insulation
- Bracketed heating elements and reinforced motor support
- All models are for mobile use or wall mounting
- IP44 degree of protection splash-proof



The bracket is designed so that the heater can also be placed on the floor.

### Design

The casing is made of stainless sheet steel, EN 1.4016, the grille is made of stainless steel, EN 1.4301, and the legs/wall bracket are made of zinc-plated sheet steel lacquered with black epoxy. Robust V3, V3R and V3.6 come with heating elements made of acid-resistant stainless steel, EN 1.4404 and Robust V5, V5N and V6 come with heating elements made of stainless steel, EN 1.4301. The heating elements are electrically insulated from the casing to eliminate leakage currents. Heating element package and motor with reinforced fastenings to handle vibrations on ships. Integrated thermostat and power selector. IP44 degree of protection (splash-proof).

### Accessories

An external RTC/RTC4 control box, with IP65 degree of protection can be connected to the Robust V.



## Product Range Overview

Type		V3R	V3	V3.6	V5N	V5	V6
Voltage	V	230 VAC 1-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	440 VAC 3-ph. 50/60 Hz	230 VAC 3-ph. 50/60 Hz	400 VAC 3-ph. 50/60 Hz	440 VAC 3-ph. 50/60 Hz
Output	kW	3	3	3.6	5	5	6
Output stage	kW	0-2-3	0-1.5-3	0-1.8-3.6	0-2.5-5	0-2.5-5	0-3-6
Current	A	9.1 / 13.5	4.0 / 4.6	4.4 / 5.1	10.7 / 12.0	6.5 / 7.5	7.1 / 8.2
Temp. increase due to heater	°C	21	21	25	20	20	24
Thermostat	°C	0-35	0-35	0-35	0-35	0-35	0-35
Sound pressure level <sup>1)</sup>	dB(A)	48	48	48	53	53	53
Air volume	m <sup>3</sup> /h	400	400	400	700	700	700
Weight	kg	12	12	12	12	12	12
Width	mm	300	300	300	300	300	300
Height	mm	375	375	375	375	375	375
Depth	mm	360	360	360	360	360	360




<sup>1)</sup> Measured at 5 metres in front of appliance.

## Project Design/Orders

### Description – Robust V

Electrical fan heater, VEAB type Robust V, with casing made of stainless sheet steel, EN 1.4016, grille made of stainless steel, EN 1.4301, and legs/wall bracket made of zinc-plated sheet steel lacquered with black epoxy. Robust V3, V3R and V3.6 come with heating elements made of acid-resistant stainless steel, EN 1.4404 and Robust V5, V5N, V6T and V6 come with heating elements made of stainless steel, EN 1.4301. The heating elements are electrically insulated from the casing. Heating element package and motor with reinforced fastenings. IP44 degree of protection. Feedback control is achieved by means of the integrated thermostat and the power selector. Optional RTC/RTC4 external control box to be ordered separately.

## Accessories

	Product	Description	Degree of protection
	RTH For Robust H	External thermostat, temperature range 0-70 °C.  125x175x75 mm	IP44
	RTC For Robust C and V	Control box, for external control, with thermostat and operating mode switch. Temperature range 0-35 °C.  125x175x75 mm	IP65
	RTC4 For Robust C and V	Control box, for external control, with thermostat and operating mode switch. Able to control up to 4 appliances. Temperature range 0-35 °C.  254x360x111 mm	IP65



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