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# Fan Heater

# Explosion-Proof

# type FE2

FE2 heaters are CE Marked & ATEX Approved to Directive 94/4/EC for use in hazardous locations. They are designed for dry indoor industrial applications such as oil refineries, petrochemical plants, pulp and paper mills, hazardous waste storage facilities, wastewater treatment plants, etc., where specific explosive gases or dusts maybe present.



**SINUS**  
**JEVI** 



Liquids



Gasses



Solids



Spaces



Resistors

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All FE2 heaters utilize the Vacucore® liquid-to-air heat exchanger. The induced vacuum within the sealed core provides greater efficiency, even distribution of heat across the face of the exchanger, and a faster warm-up. When necessary, the entire core can be safely and easily replaced with a new exchanger or core. The heater core assembly is contained in a sturdy, epoxy-coated, 14 gauge steel cabinet which also carries the motor and fan assembly. Adjustable louvers allow directional control of the airflow. A narrow gap, two-piece fan guard is provided



to shield all moving parts. All fasteners are zinc plated for corrosion protection.

All aspects and details of the FE2 are subjected to exhaustive technical analysis and testing during design and development, and are manufactured under a registered quality assurance program. As a result, they have consistently proven their safety and reliability.



## General specification for all FE2 models

Approvals	ATEX Approved (Directive 94/9/EC)
Hazardous Location Classifications	CE DEMKO 10 ATEX 0910365X Ex II 2 G, Ex d IIB T3 Gb
Enclosures	NEMA Type 7 & 9. For dry, indoor use only. Do not immerse in water. Do not store or use in areas exposed to rain or snow.
Motor Type	Explosion-proof. Thermally protected. Permanently lubricated ball bearings. 1425 RPM @50 Hz or 1725 RPM @ 60Hz.
Fan	Aluminium blade. Steel spider and hub with 15.875 mm (5/8") bore.
Fan guard	Split design with close wire spacing. Meets latest EN standards.
Mounting holes	Four 16 mm (5/8") diameter holes at top of the heater.
Heating elements	Three long-life, low Watt-density, high grade metal-sheathed elements.
Temperature High-Limit	Automatic reset type, snap-action bimetal, open on temperature rise. Rated 100,000 cycles at 10 amp, handles 0.130 amps.
Control Circuit	115 Volts, 0.130 amps, 15VA. (Grounded)
Optional Built-in Thermostat	Explosion-proof. 2°C to 28°C (36°F to 82°F)
Control Transformer	Multi-tap primary, 115 V secondary, 50 VA.
Contactors	60 or 80 amp. Rated for 1,00,000 mechanical operations. 120 Volts, 15VA coil (seperately fuse protected).
Heat Transfer Fluid	Long life formulated ethylene glycol and water, freeze protected to -45°C (-49°F)
Cabinet Material	14 gauge (0.075") (1.90 mm) steel. Epoxy coated with five stage pretreatment, including iron phosphate.
Core	Steel with integral aluminium fins, vacuum charged and hermetically sealed.
Conduit Material	Heavy wall, 0.122" (3.1 mm) steel
Overpressure Protection	Preset 100 psig (690 kPa) seep pressure relief valve, aluminium body, no field serviceable.
Operational Temperature Limitations	-20°C to 40°C (-4°F to 104°F).
Storage Limitations	-45°C to 80°C (-49°F to 176°F), short therm to 120°C (248°F). Do not immerse in water. Do not store or use in areas exposed to rain or snow.

# 50 HERTZ

	2.5 to 3 kW	3.7 to 5 kW	6.3 to 7.5 kW	8.4 to 10 kW	12.5 to 13.9 kW	14.9 to 20 kW	20.9 to 21 kW	22.4 to 23.1 kW
Max. Altitude	12,000 ft 3,658 m	8,000 ft 2,438 m	10,000 ft 3,048 m	7,000 ft 2,134 m	10,000 ft 3,048 m	7,000 ft 2,134 m	10,000 ft 3,048 m	7,000 ft 2,134 m
Air Delivery @70°F @ 21°C	400 CFM 679 m <sup>3</sup> /hr		700 CFM 1,189 m <sup>3</sup> /hr		1,450 CFM 2463 m <sup>3</sup> /hr		3,000 CFM 5096 m <sup>3</sup> /hr	
Horizontal Throw	25 ft (7.6 m)				35 ft (10.7 m)		60 ft (18.2 m)	
Maximum Mounting Height (to underside)	7 ft 2.1 m		10 ft 3.0 m		10 ft 3.0 m		20 ft 6.1 m	
Motor Speed	1,425 RPM				1,425 RPM		1,425 RPM	
Fan Diameter	12" (305 mm)				16" (406 mm)		20" (508 mm)	
Net Weight	140 lbs (63.5 kg)				168 lbs (76 kg)		201 lbs (91 kg)	
Shipping Weight	194 lbs (88 kg)				218 lbs (99 kg)		252 lbs (114 kg)	

Weights are an approximate maximum

## Specifications for 50 Hz models

Model	Voltage	Nominal Wattage	Phase	Total Current	Air Temperature Rise		Article number
					°F	°C	
FE2-220150-025	220 V	2.5 kW	1	11.4 A	10.3°F	5.7°C	D220 152 025
FE2-220150-042	220 V	4.2 kW	1	19.1 A	33.2°F	18.5°C	D220 152 042
FE2-220150-063	220 V	6.3 kW	1	28.6 A	28.4°F	15.8°C	D220 152 063
FE2-220150-084	220 V	8.4 kW	1	38.2 A	38.0°F	21.1°C	D220 152 084
FE2-220150-126	220 V	12.6 kW	1	57.3 A	27.5°F	15.3°C	D220 152 126
FE2-230150-028	230 V	2.8 kW	1	12.0 A	22.1°F	12.3°C	D230 152 028
FE2-230150-046	230 V	4.6 kW	1	20.0 A	36.3°F	20.2°C	D230 152 046
FE2-230150-069	230 V	6.9 kW	1	29.9 A	31.2°F	17.3°C	D230 152 069
FE2-230150-138	230 V	13.8 kW	1	59.9 A	30.1°F	16.7°C	D230 152 138
FE2-240150-030	240 V	3.0 kW	1	12.4 A	23.7°F	13.2°C	D240 152 030
FE2-240150-050	240 V	5.0 kW	1	20.8 A	39.6°F	22.0°C	D240 152 050
FE2-240150-075	240 V	7.5 kW	1	31.2 A	33.9°F	18.8°C	D240 152 075
FE2-240150-100	240 V	10.0 kW	1	41.7 A	45.2°F	25.1°C	D240 152 100
FE2-240150-150	240 V	15.0 kW	1	62.5 A	32.7°F	18.2°C	D240 152 150
FE2-380350-025	380 V	2.5 kW	3	3.8 A	19.8°F	11.0°C	D380 352 025
FE2-380350-042	380 V	4.2 kW	3	6.4 A	33.2°F	18.5°C	D380 352 042
FE2-380350-063	380 V	6.3 kW	3	9.6 A	28.4°F	15.8°C	D380 352 063
FE2-380350-084	380 V	8.4 kW	3	12.8 A	38.0°F	21.1°C	D380 352 084
FE2-380350-125	380 V	12.5 kW	3	19.0 A	27.3°F	15.1°C	D380 352 125
FE2-380350-167	380 V	16.7 kW	3	25.4 A	36.4°F	20.2°C	D380 352 167
FE2-380350-209	380 V	20.9 kW	3	31.8 A	22.0°F	12.2°C	D380 352 209
FE2-400350-028	400 V	2.8 kW	3	4.1 A	22.1°F	23.3°C	D400 352 028
FE2-400350-046	400 V	4.6 kW	3	6.6 A	36.3°F	20.2°C	D400 352 046
FE2-400350-069	400 V	6.9 kW	3	10.0 A	31.2°F	17.3°C	D400 352 069
FE2-400350-093	400 V	9.3 kW	3	13.4 A	42.0°F	23.3°C	D400 352 093
FE2-400350-139	400 V	13.9 kW	3	20.1 A	30.3°F	16.8°C	D400 352 139
FE2-400350-185	400 V	18.5 kW	3	26.7 A	40.4°F	22.4°C	D400 352 185
FE2-400350-231	400 V	23.1 kW	3	33.3 A	24.4°F	13.5°C	D400 352 231
FE2-415350-037	415 V	3.7 kW	3	5.1 A	16.3°F	29.3°C	D415 352 037
FE2-415350-075	415 V	7.5 kW	3	10.4 A	33.9°F	18.8°C	D415 352 075
FE2-415350-149	415 V	14.9 kW	3	20.7 A	32.5°F	18.1°C	D415 352 149
FE2-415350-224	415 V	22.4 kW	3	31.2 A	23.6°F	13.1°C	D415 352 224
FE2-440350-042	440 V	4.2 kW	3	5.5 A	33.2°F	18.5°C	D440 352 042
FE2-440350-084	440 V	8.4 kW	3	11.0 A	38.0°F	21.1°C	D440 352 084
FE2-440350-168	440 V	16.8 kW	3	22.0 A	36.7°F	20.4°C	D440 352 168
FE2-440350-210	440 V	21.0 kW	3	27.6 A	22.1°F	12.3°C	D440 352 210

To order a heater with a built-in room thermostat, add a "T" suffix to model number.

To order a heater with stainless steel cabinet add a "U" suffix to model number.

# 60 HERTZ

	2.5 to 3 kW	3.7 to 5 kW	6.3 to 7.5 kW	8.4 to 10 kW	12.5 to 13.9 kW	14.9 to 20 kW	20.9 to 21 kW	22.4 to 23.1 kW
Max. Altitude	12,000 ft 3,658 m	8,000 ft 2,438 m	10,000 ft 3,048 m	7,000 ft 2,134 m	10,000 ft 3,048 m	7,000 ft 2,134 m	10,000 ft 3,048 m	7,000 ft 2,134 m
Air Delivery @70°F @ 21°C	500 CFM 850 m³/hr		850 CFM 1,444 m³/hr		1,750 CFM 2973 m³/hr		3,600 CFM 6116 m³/hr	
Horizontal Throw	15 ft (4.6 m)		30 ft (9.1 m)		40 ft (12.2 m)		70 ft (21.3 m)	
Maximum Mounting Height (to underside)	7 ft 2.1 m		10 ft 3.0 m		10 ft 3.0 m		20 ft 6.1 m	
Motor Speed	1,725 RPM				1,725 RPM		1,725 RPM	
Fan Diameter	12" (305 mm)				16" (406 mm)		20" (508 mm)	
Net Weight	140 lbs (63.5 kg)				168 lbs (76 kg)		201 lbs (91 kg)	
Shipping Weight	194 lbs (88 kg)				218 lbs (99 kg)		252 lbs (114 kg)	

Weights are an approximate maximum

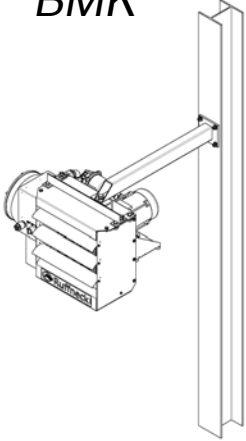
## Specifications for 60 Hz models

Model	Voltage	Nominal Wattage	Phase	Total Current	Air Temperature Rise		Article number
					°F	°C	
FE2-220160-025	220 V	2.5 kW	1	11.4 A	15.8°F	8.8°C	D220 162 025
FE2-220160-042	220 V	4.2 kW	1	19.1 A	26.6°F	14.8°C	D220 162 042
FE2-220160-063	220 V	6.3 kW	1	28.6 A	23.4°F	13.0°C	D220 162 063
FE2-220160-084	220 V	8.4 kW	1	38.2 A	31.3°F	17.4°C	D220 162 084
FE2-220160-126	220 V	12.6 kW	1	57.3 A	22.8°F	12.7°C	D220 162 126
FE2-230160-028	230 V	2.8 kW	1	12.0 A	17.7°F	9.8°C	D230 162 028
FE2-230160-046	230 V	4.6 kW	1	20.0 A	29.1°F	16.2°C	D230 162 046
FE2-230160-069	230 V	6.9 kW	1	29.9 A	25.7°F	14.3°C	D230 162 069
FE2-230160-092	230 V	9.2 kW	1	39.9 A	34.2°F	19.0°C	D230 162 092
FE2-230160-138	230 V	13.8 kW	1	59.9 A	24.9°F	13.9°C	D230 162 138
FE2-240160-030	240 V	3.0 kW	1	12.4 A	19.0°F	10.5°C	D240 162 030
FE2-240160-050	240 V	5.0 kW	1	20.8 A	31.7°F	17.6°C	D240 162 050
FE2-240160-075	240 V	7.5 kW	1	31.2 A	27.9°F	15.5°C	D240 162 075
FE2-240160-100	240 V	10.0 kW	1	41.7 A	37.2°F	20.7°C	D240 162 100
FE2-240160-150	240 V	15.0 kW	1	62.5 A	27.1°F	15.1°C	D240 162 150
FE2-440360-042	440 V	4.2 kW	3	5.5 A	26.6°F	14.8°C	D440 362 042
FE2-440360-084	440 V	8.4 kW	3	11.0 A	31.3°F	17.4°C	D440 362 084
FE2-440360-168	440 V	16.8 kW	3	22.0 A	30.4°F	16.9°C	D440 362 168
FE2-440360-210	440 V	21.0 kW	3	27.6 A	18.4°F	10.2°C	D440 362 210
FE2-480360-030	480 V	3.0 kW	3	3.6 A	19.0°F	10.5°C	D480 362 030
FE2-480360-050	480 V	5.0 kW	3	6.0 A	31.7°F	17.6°C	D480 362 050
FE2-480360-075	480 V	7.5 kW	3	9.0 A	27.9°F	15.5°C	D480 362 075
FE2-480360-100	480 V	10.0 kW	3	12.0 A	37.2°F	20.7°C	D480 362 100
FE2-480360-150	480 V	15.0 kW	3	18.0 A	27.1°F	15.1°C	D480 362 150
FE2-480360-200	480 V	20.0 kW	3	24.1 A	36.1°F	20.1°C	D480 362 200

To order a heater with a built-in room thermostat, add a "T" suffix to model number.  
 To order a heater with stainless steel cabinet add a "U" suffix to model number.

# Mounting Kits

## BMK



### Basic Mounting Kit

The BMK is suitable for applications where the support arm can be bolted or welded directly to structural steel or concrete

Model	Approximate Shipping Weight	
FE2 (12" fan)	16.5 lbs	7 kg
FE2 (16" fan)	18.2 lbs	8 kg
FE2 (20" fan)	19.3 lbs	9 kg

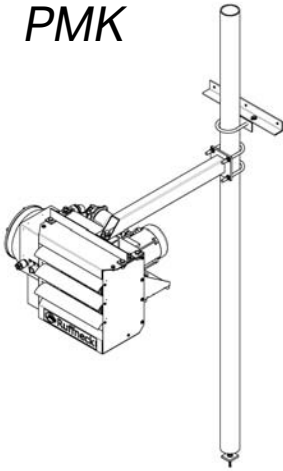
### NOTE:

Mounting kits are made of steel with a wet applied enamel paint. If the heater is installed on a structure that is to be transported, provide additional support for the heater during transit. The suspended weight should not exceed 300 lbs (136 kg).

When ordering mounting kits, specify the type of kit required and the basic model of the heater to be mounted.

# Mounting Kits on request

## PMK

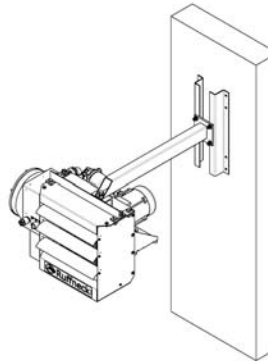


### Pipe Mounting Kit

Particularly useful in buildings with insufficient structural strength to use other types of mounts. Requires 3" pipe (3 1/2" O.D.) (not supplied).

Model	Approximate Shipping Weight	
FE2 (12" fan)	24.3 lbs	11 kg
FE2 (16" fan)	25.4 lbs	12 kg
FE2 (20" fan)	26.5 lbs	12 kg

## WMK

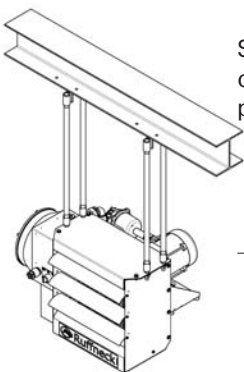


### Wall Mounting Kit

Ideal for use in buildings that have substantial walls. The Z sections provide additional support where necessary.

Model	Approximate Shipping Weight	
FE2 (12" fan)	24.3 lbs	11 kg
FE2 (16" fan)	25.4 lbs	12 kg
FE2 (20" fan)	26.5 lbs	12 kg

## HMK

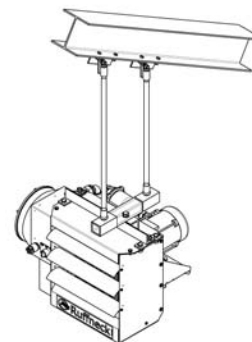


### Hanging Mounting Kit

Simple and economical if an adequate overhead structure exists. Requires 1/2" pipe, cut and threaded (not supplied).

Model	Approximate Shipping Weight	
Alle FE2 types	4.5 lbs	2 kg

## SHMK



### Swivel Hanging Mounting Kit

Swivels 360°. Requires 1/2" pipe, cut and threaded (not supplied).

Model	Approximate Shipping Weight	
FE2 (12" fan)	18.2 lbs	8 kg
FE2 (16" fan)	19.4 lbs	9 kg
FE2 (20" fan)	20.4 lbs	9 kg

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# SINUS JEVI

Sinus is one of the pioneers in the field of explosion proof heating equipment, today we are still operating at the forefront. We manufacture according to ATEX as well as IECEx and EAC directives.

For the production of Ex-proof equipment a PQAN (Product Quality Assurance Notification) is issued by TUV-Nord. Our ISO-9001 and ISO-14001 systems are also monitored by this organisation.

## NIBE