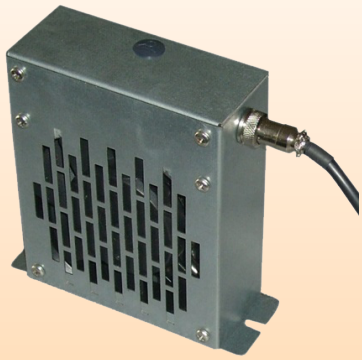
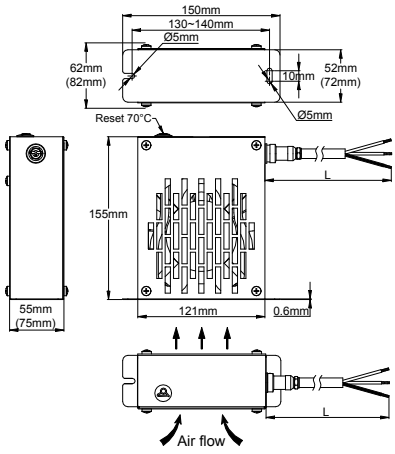
Section 5
Commercial and industrial convention radiators

Commercial and industrial convention radiators

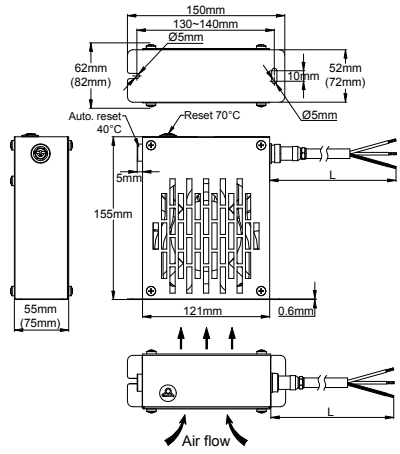
Cabinet fan heaters, range from 50 to 400W

Type 9PF

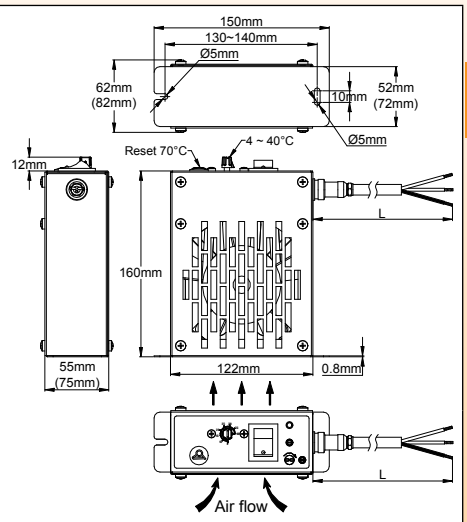




Model 9PF1: For remote control by thermostat or humidistat, it has only a fixed setting manual reset temperature limiter.



Model 9PF2: Self-controlled, equipped with a fixed setting control thermostat, and a fixed setting manual reset temperature limiter.



Model 9PF3: Self-controlled, equipped with an adjustable control thermostat which the probe is mounted directly in the air flow, with a dial printed in °C and °F, and a fixed setting manual reset temperature limiter. In this model it is possible to select two modes of operation: continuous ventilation mode, wherein the fan operates continuously and the thermostat switches on and off the heater depending on the temperature setting, and an automatic mode, wherein the ventilation and heating are simultaneously controlled by the thermostat.

Typical Applications:

Heavy duty fan heating in Traffic Signal Control Boxes, Automatic Teller Machines, Outdoor Electrical Power Enclosures, Control Panels, Control Valve Housings, Switch Gear, Clothing Lockers and Railway station lockers.

Operation: Temperature differences in cabinets, mostly in outdoor applications, often result in humidity and condensation which may cause function failures and corrosion. The use of the appropriate heating unit inside the cabinet will eliminate these problems.

Simply keep the cabinet temperature above the outer temperature (thermostat controlled models), or a humidity level below 50% (Humidistats controlled models). It also happens that the very low external temperature dips below the minimally acceptable ranges for electronics or other components. In this case the heaters are used to bring the internal temperature of the cabinet above the limit. The fan distribute the internal warm air equally throughout the control cabinet

Compared to PTC heaters, sheathed tubular heaters deliver unsurpassed strength, a power invariable in time, they do not age and do not drift, and do not produce huge peak starting current.

The metal casing provides increased mechanical protection and the best heat resistance.

Main features

Heating Element: 8mm diameter, 304L sheathed stainless steel heater. Other features of these elements (Humidity resistance, insulation etc…) see P3 of section 4.

Heater surface load: 0.5w/cm² (2.2W/in²) or 1w/cm² (6.5W/in²) to avoid overheating.

Case Material: Electro-galvanized steel or 304 stainless steel according to models.

Manual reset temperature safety cut-out: set at 70°C (158°F) to protect against over-heating in case of fan failure, or obstructed air flow inlet

Setting range: 4°C to 40°C (40 to 105°F) for adjustable models. 40°C(105°F) for fixed setting models

Fan: 120 × 120mm, air flow: 100m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.

Control lamp: illuminated when heating is on (on model 9PF3)

Commercial and industrial convention radiators

Operating voltage: 220-240V AC, 50/60Hz, (100-120V AC on request).
Operating temperature: -45 to +70°C. Max 90% RH.
Ingress protection: IP 20
Electrical connection: by screw locking connector (cord with connector, 2 meters, H05VVF 3 × 0.75mm² supplied)
Mounting: two screws, 130 to 140mm distance. We recommend installing heaters in the lower part of the cabinets, which is usually the coldest area, with ventilation blowing up, to produce optimal air circulation.
Option: mounting clips for 35mm DIN rail. (EN60715).
Accessories:
- See P5-P6 of section 8, Din rail mounting remote thermostats and humidistat used in cabinet heaters.
- See section 2 of this catalog tables providing heaters power selection vs temperature and cabinet sizes.
(Add additional 50% to the determined power if the cabinet must be located in windy conditions)

Main references

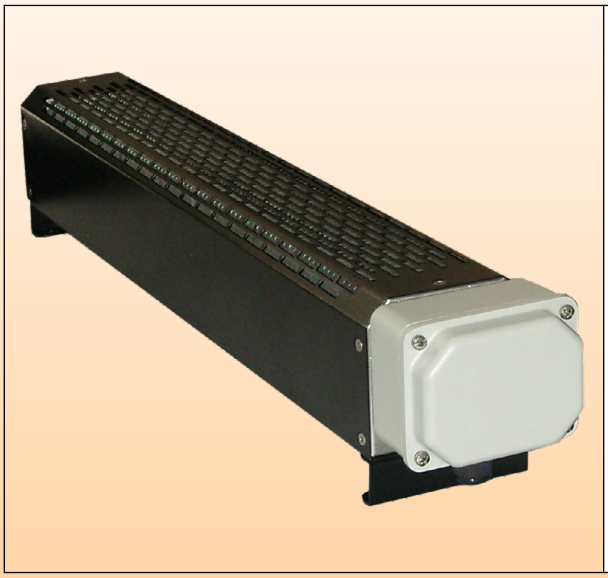
Type 1 (remote control)	Type 2 (built in fixed setting control)	Type 3 (built in adjustable thermostat)	Enclosure material	Thickness	Power (W)*
9PF1058LG23005EC	9PF2058LG23005EC	9PF3058LG23005EC	Zinc electro-plated steel	55mm	50W
9PF1108LG23010EC	9PF2108LG23010EC	9PF3108LG23010EC	Zinc electro-plated steel	55mm	100W
9PF1058LH23020EC	9PF2058LH23020EC	9PF3058LH23020EC	Zinc electro-plated steel	75mm	200W
9PF1108LH23040EC	9PF2108LH23040EC	9PF3108LH23040EC	Zinc electro-plated steel	75mm	400W
9PF1058L423005EC	9PF2058L423005EC	9PF3058L423005EC	304 stainless steel	55mm	50W
9PF1108L423010EC	9PF2108L423010EC	9PF3108L423010EC	304 stainless steel	55mm	100W
9PF1058L523020EC	9PF2058L523020EC	9PF3058L523020EC	304 stainless steel	75mm	200W
9PF1108L523040EC	9PF2108L523040EC	9PF3108L523040EC	304 stainless steel	75mm	400W

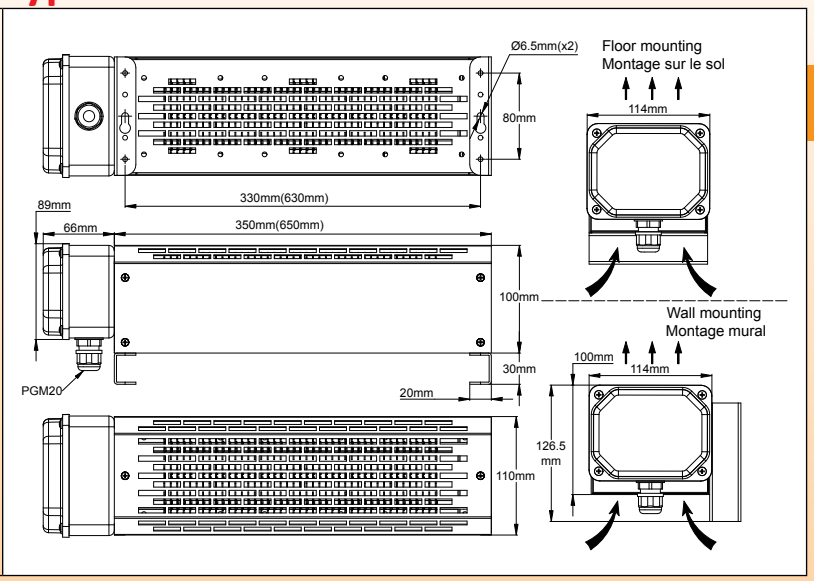
* For higher power models, see page 7 of section 5

Commercial and industrial convention radiators

110mm compact range, IP65, without fan

Type 9CG1





Main applications

These heavy duty and very small sub-assemblies, are designed for assemblers, to be used as protected heating elements in professional applications, where the temperature control is added by the assembler.
According to the surface power chosen, they can be used in natural convection or fan heating.
They are waterproof and can be used outdoors. They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, heating small volumes such as bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 2 body lengths: 350 or 650mm
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Heating elements are TIG welded on their mounting bracket, which ensures a perfect seal.
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Connection housing: Die-cast aluminum with molded silicone gasket; IP65; gray epoxy paint; stainless steel screws. PA66, M20 cable gland output.
Mounting: 2 removable legs can be mounted under the frame (floor mounting) or on the side (wall mounting).
Internal electrical connection: 4 ways, 6mm², ceramic terminal block
Voltage: 3 heating elements, 230V, which allows a single-phase connection (heaters wired in parallel) or 3 phases connections (heaters wired in star). Alternative voltages available on request.
Power: 1500 to 4500W depending on model
Temperature range: -50 to +150°C
Surface load:
We recommend a maximum surface load of 3W/cm² (20W/in²) for applications in natural convection, and 4.5 W/cm² (30W/in²) for applications in fan heating (air speed> 2m/s).
These devices do not have a fan. It should, if necessary in the application, be installed by the assembler.
See section 2 of this catalog surface temperatures and air temperature in convection heating and fan heating.
Net weight: 3.3kg (350mm); 5.2kg (650mm)
Option: manual reset safety limit, disc or capillary type. (The selection of the set point temperature depends on the application and must be specified by the assembler).

References with 230V power supply

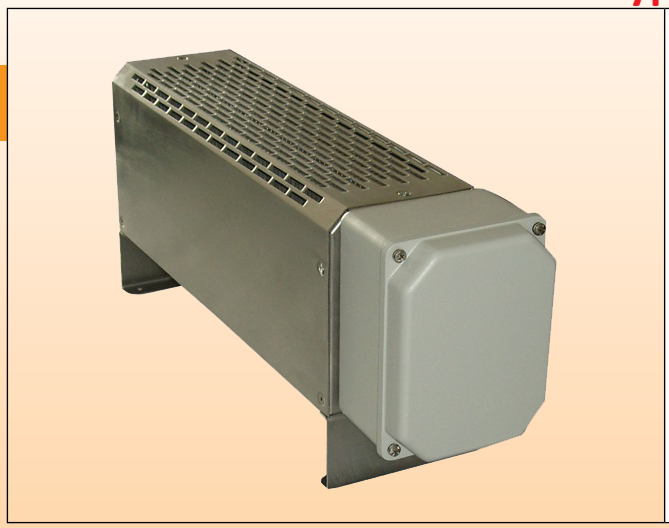
Black painted steel frame					304 stainless steel frame				
References	Power (W)	L	W/cm²	W/in²	References	Power (W)	L	W/cm²	W/in²
9CG13N23023150EB	1500	350	3	20	9CG13N23023150E4	1500	350	3	20
9CG13N24523225EB	2250	350	4.5*	30	9CG13N24523225E4	2250	350	4.5*	30
9CG16N23023300EB	3000	650	3	20	9CG16N23023300E4	3000	600	3	20
9CG16N24523450EB	4500	650	4.5*	30	9CG16N24523450E4	4000	600	4.5*	30

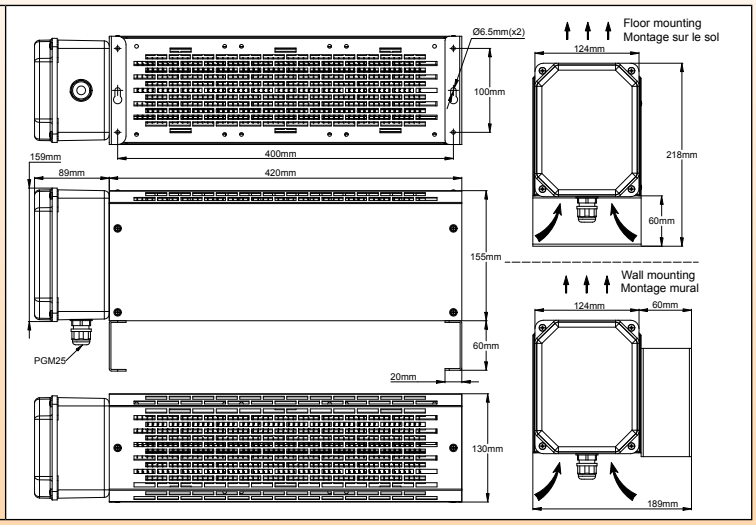
*Air velocity ≥2m/s is mandatory

Commercial and industrial convention radiators

130mm range, IP65, without fan

Type 9CG3





Main applications

These heavy duty sub-assemblies, are designed for assemblers, to be used as protected heating elements in professional applications, where the temperature control is added by the assembler.
According to the surface power chosen, they can be used in natural convection or fan heating.
They are waterproof and can be used outdoors. They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, heating small volumes such as bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 420 × 130 × 155mm body length
Heaters: 3 or 6 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Heating elements are TIG welded on their mounting bracket, which ensures a perfect seal.
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Connection housing: 159 × 124 × 89mm , die-cast aluminum with molded silicone gasket; IP65; gray epoxy paint; stainless steel screws. PA66, M25 cable gland output.
Mounting: 2 removable legs can be mounted under the frame (floor mounting) or on the side (wall mounting).
Internal electrical connection: 10mm², 4 ways, ceramic terminal block
Voltage: 3 heating elements, 230V, which allows a single-phase connection (heaters wired in parallel) or 3 phases connections (heaters wired in star). Alternative voltages available on request.
Power: 1500 to 4500W depending on model
Temperature range: -50 to +150°C
Surface load:
We recommend a maximum surface load of 3W/cm² (20W/in²) for applications in natural convection, and 4.5 W/cm² (30W/in²) for applications in fan heating (air speed> 2m/s).
These devices do not have a fan. It should, if necessary in the application, be installed by the assembler.
See section 2 of this catalog surface temperatures and air temperature in convection heating and fan heating.
Net weight: 6.4kg
Option: manual reset safety limit, disc or capillary type. (The selection of the set point temperature depends on the application and must be specified by the assembler).

References with 230V power supply

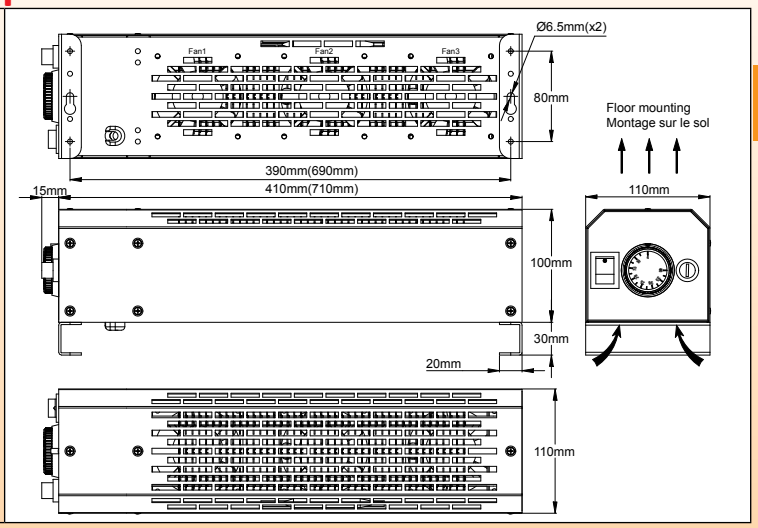
Black painted steel frame					304 stainless steel frame				
References	Power (W)	Heating element quantity	W/cm²	W/in²	References	Power (W)	Heating element quantity	W/cm²	W/in²
9CG34G33023200EB	2000	3	3	20	9CG34G33023200E4	2000	3	3	20
9CG34G34523230EB	2300	3	4.5*	30	9CG34G34523230E4	2300	3	4.5*	30
9CG34G63023400EB	4000	6	3	20	9CG34G63023400E4	4000	6	3	20
9CG34G64523460EB	4600	6	4.5*	30	9CG34G64523460E4	4600	6	4.5*	30

* Air velocity ≥2m/s is mandatory

Commercial and industrial convention radiators

Upward blowing models

Type 9CH



Main applications

These heavy duty fan heaters, are characterized by their very small size, and are designed for professional, commercial or industrial applications.
They are equipped with 3 ultra-thin fans, with a 2 poles, illuminated on-off switch, an adjustable control thermostat and a safety thermostat.
Although their heating elements are shielded and sealed, their fans and control box are not waterproof, and they should not be used outdoors. Their insulation class 1 does not allow to use them in bathroom and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, heating small volumes such as bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers. They can also be used as electrical heaters for large size electrical cabinets.

Main features

Dimensions: 2 body lengths: 410 or 710mm
Ingress protection: IP41
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm²
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans: 3 fans of 80 × 80mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls: adjustable bulb and capillary control thermostat, range 4 to 40°C, and fail safe high limit manual reset thermostat for protection against air outlet obstruction or fan failure.
Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm²
Mounting: 2 removable legs can be mounted under the frame (floor mounting) or on the side (wall mounting).
Voltage: 230V, 50/60Hz. Other voltages available on request.
Power: 1500W (410mm) and 3000W (710mm)
Ambient temperature: -20 to +60°C
Net weight: 4.1kg (410mm) ; 5.9kg (710mm)
Option: customization accepted

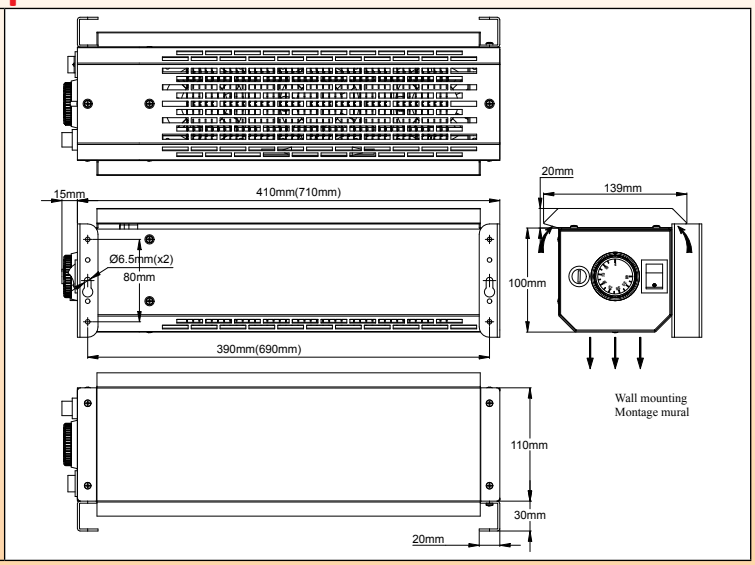
References with 230V power supply

Black painted steel frame			304 stainless steel frame		
References	Power (W)	L	References	Power (W)	L
9CH14033023150HB	1500	410	9CH14033023150H4	1500	410
9CH17033023300HB	3000	710	9CH17033023300H4	3000	710

Commercial and industrial convention radiators

Downward blowing models

Type 9CL



Main applications

These heavy duty fan heaters, downward blowing, are characterized by their very small size, and are designed for professional, commercial or industrial applications.
They must be mounted on a vertical wall, at more than 40cm from the floor or any board.
Top side air inlets are equipped with a baffle protecting the fans against liquid drops or particle inlet.
They are equipped with 3 ultra-thin fans, with a 2 poles, illuminated on-off switch, an adjustable control thermostat and a safety thermostat.
Although their heating elements are shielded and sealed, their control box is not waterproof, and they should not be used outdoors. Their insulation class 1 does not allow to use them in bathroom and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, heating small volumes such as bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 2 body lengths: 410 or 710mm
Ingress protection: IP44
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm²
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans: 3 fans of 80 × 80mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls: adjustable bulb and capillary control thermostat, range 4 to 40°C, and fail safe high limit manual reset thermostat for protection against air outlet obstruction or fan failure. (Both controls protected against water ingress)
Main switch: 2 poles, on off, illuminated, with water ingress protection boot
Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm²
Mounting: 2 wall mounting legs
Voltage: 230V, 50/60Hz. Other voltages available on request.
Power: 1500W (410mm) and 3000W (710mm)
Ambient temperature: -20 to +60°C
Net weight: 4.6kg (410mm) ; 6.8kg (710mm)
Option: customization accepted.

References with 230V power supply

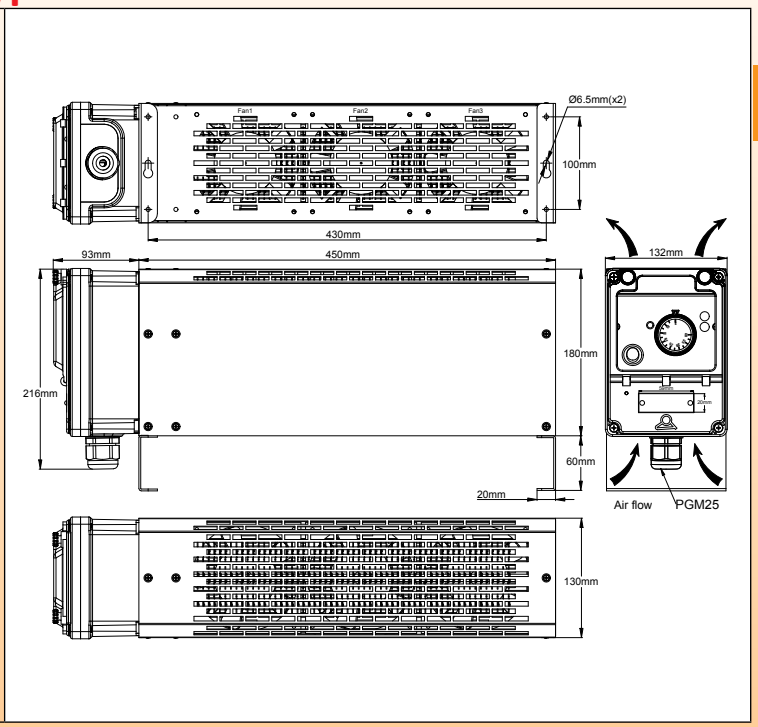
Black painted steel frame			304 stainless steel frame		
References	Power (W)	L	References	Power (W)	L
9CL14033023150HB	1500	410	9CL14033023150H4	1500	410
9CL17033023300HB	3000	710	9CL17033023300H4	3000	710

* Air velocity ≥2m/s is mandatory

Commercial and industrial convention radiators

Upward blowing models, thermostat control

Type 9CJ



Main applications

These heavy duty fan heaters, are designed for professional, commercial or industrial applications.
They are equipped with 3 silent high flow fans, and a waterproof control box equipped with a 2 poles, illuminated on-off switch, an adjustable control thermostat, a safety thermostat, and a tip over switch.
Although their heating elements and control boxes are waterproof, their fans are not, and they should not be used outdoors without proper protection of the hot air outlets against liquid drops and rain.
For outdoor applications, use the models without fans.
Their insulation class 1 does not allow using them in bathroom and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 450 × 130 × 150mm body (control box and legs not included)
Ingress protection: IP40 (fan heater models, or IP65 (models without fans)
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm² for fan models and 2W/cm² for no fan models.
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans (only for models with fans): 3 fans of 120 × 120mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls:
Located inside a PA66, IP65, IK10 protection box, with sealable window, providing access to:
- Adjustable bulb and capillary control thermostat, range 4 to 40°C,
- Fail safe high limit manual reset thermostat for protection against air outlet obstruction or fans failure
- Tip-over switch to protect against heater fail over

Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm² (no cable supplied in the 3 phases version)
Mounting: 2 removable legs can be mounted under the frame (floor mounting) or on the side (wall mounting).
Voltage: single phase 230V, 50/60Hz or 400V three phases with neutral
Power:
- IP40 single phase, 230V: 2000W, 3500W; 3 phases: 4000W
- IP65 single phase, 230V: 1300W, 2600W; 3 phases: 2600W

Ambient temperature: -20 to +60°C
Net weight: 8.1 kg

Commercial and industrial convention radiators

Option:
- Infrared on-off remote control
- Customization accepted

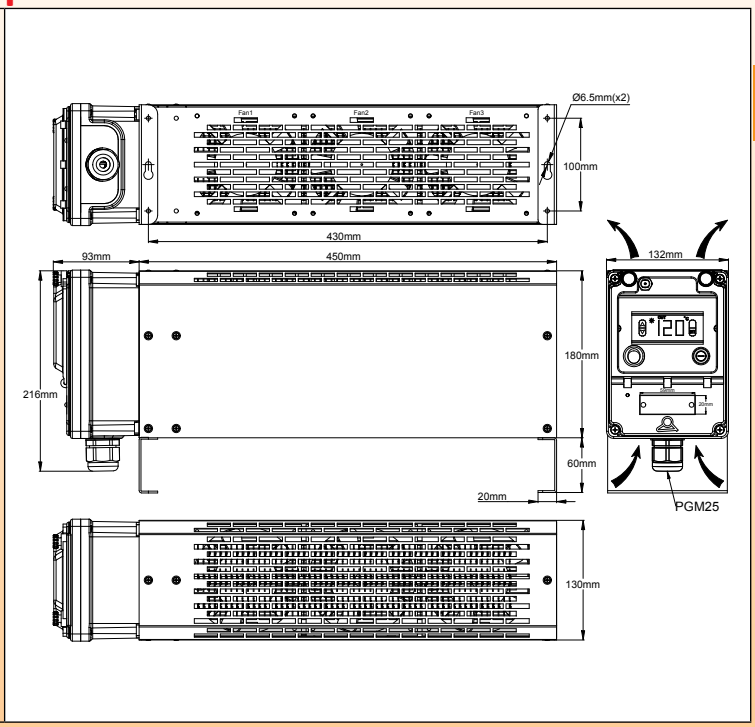
References, IP40 version with fans					
Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CJ34Y33023200HB	2000	230	9CJ34Y33023200H4	2000	230
9CJ34Y63023300HB	3500	230	9CJ34Y63023300H4	3500	230
9CJ34Y630433000B	4000	3 × 400	9CJ34Y6304330004	4000	3 × 400

References, IP65 version without fans					
Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CJ3DY32023130HB	1300	230	9CJ3DY32023130H4	1300	230
9CJ3DY23023260HB	2600	230	9CJ3DY62023260H4	2600	230
9CJ3DY620432600B	2600	3 × 400	9CJ3DY6204326004	2600	3 × 400

Commercial and industrial convention radiators

Upward blowing models, electronic control

Type 9CK



Main applications

These heavy duty fan heaters, are designed for professional, commercial or industrial applications.
They are equipped with 3 silent high flow fans, and a waterproof control box equipped with a 2 poles, illuminated on-off switch, an electronic temperature control with digital display, a safety thermostat, and a tip over switch.
Although their heating elements and control boxes are waterproof, their fans are not, and they should not be used outdoors without proper protection of the hot air outlets against liquid drops and rain.
For outdoor application, use the models without fans. Their insulation class 1 does not allow using them in bathroom and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 450 × 130 × 150mm body (control box and legs not included)
Ingress protection: IP40 (fan heater version) or IP65 (version without fans)
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm² for fan models and 2W/cm² for no fan models.
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans (only for version with fans): 3 fans of 120 × 120mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls:
Located inside a PA66, IK10 protection box, with sealable window, providing access to:
- Electronic temperature control, with differential adjustment, digital display at 1/10°, temperature range 4-40°C (can be set in °F)
- Fail safe high limit manual reset thermostat for protection against air outlet obstruction or fan failure
- Tip-over switch to protect against heater fail over

Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm² (no cable supplied in the 3 phases version)
Mounting: 2 removable legs can be mounted under the frame (floor mounting) or on the side (wall mounting).
Voltage: single phase 230V, 50/60Hz or 400V three phases with neutral
Power:
- IP40 single phase, 230V: 2000W, 3500W; 3 phases: 4000W
- IP65 single phase, 230V: 1300W, 2600W; 3 phases: 2600W

Ambient temperature: -20 to +60°C
Net weight: 8.4 kg

Commercial and industrial convention radiators

Option:
- Infrared on-off remote control
- Customization accepted

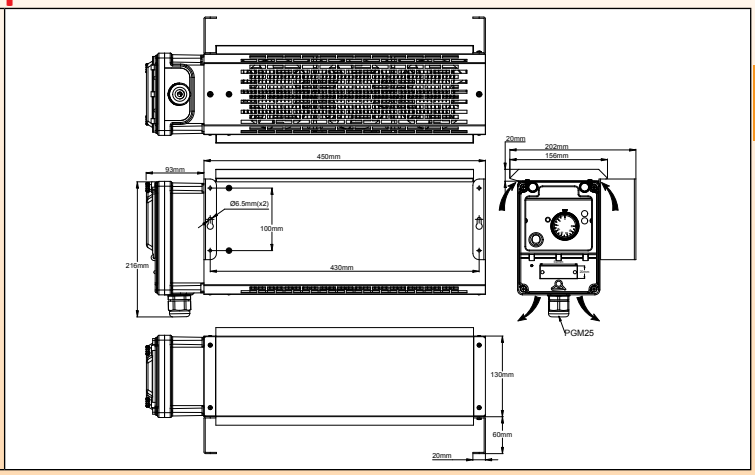
References, IP40 version with fans					
Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CK34Y33023200HB	2000	230	9CK34Y33023200H4	2000	230
9CK34Y63023300HB	3500	230	9CK34Y63023300H4	3500	230
9CK34Y630433000B	4000	3 × 400	9CK34Y6304330004	4000	3 × 400

References, IP65 version without fans					
Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CK3DY32023130HB	1300	230	9CK3DY32023130H4	1300	230
9CK3DY23023260HB	2600	230	9CK3DY62023260H4	2600	230
9CK3DY620432600B	2600	3 × 400	9CK3DY6204326004	2600	3 × 400

Commercial and industrial convention radiators

Thermostat control

Type 9CR



Main applications

These heavy duty fan heaters, downward blowing, are designed for professional, commercial or industrial applications.
They must be mounted on a vertical wall, at more than 40cms from the floor or any board.
Top side air inlets are equipped with a baffle protecting the fans against liquid drops or particle inlet.
They are equipped with 3 silent high flow fans, and a waterproof control box equipped with a 2 poles, illuminated on-off switch, an adjustable control thermostat, and a safety thermostat
Their insulation class 1 does not allow using them in bathrooms and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 450 × 130 × 150mm body (control box and legs not included)
Ingress protection: IP44
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm².
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans: 3 fans of 120 × 120mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls:
Located inside a PA66, IP65, IK10 protection box, with sealable window, providing access to:
- Adjustable bulb and capillary control thermostat, range 4 to 40°C,
- Fail safe high limit manual reset thermostat for protection against air outlet obstruction or fan failure

Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm² (no cable supplied in the 3 phases version)
Mounting: 2 wall mounting legs
Voltage: single phase 230V, 50/60Hz or 400V three phases with neutral
Power: single phase, 230V: 2000W, 3500W; 3 phases: 4000W
Ambient temperature: -20 to +60°C
Net weight: 8.8 kg
Options:
- Infrared remote switch
- Customization accepted

Net weight: 8.4 kg

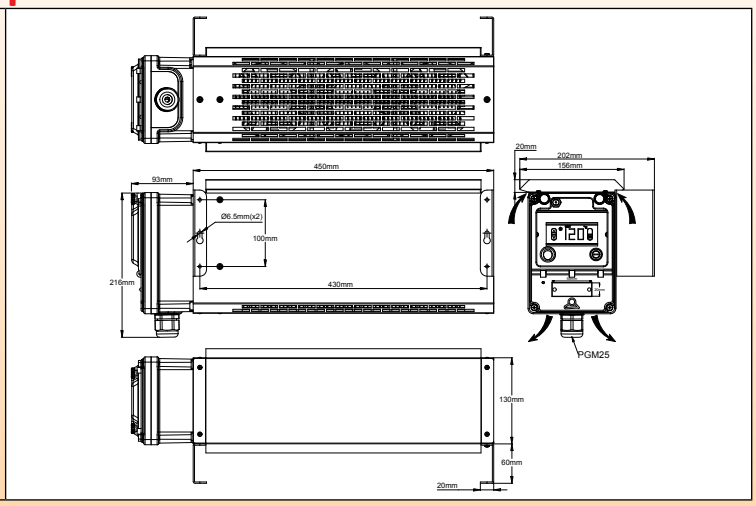
References

Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CR34Y33023200HB	2000	230	9CR34Y33023200H4	2000	230
9CR34Y63023300HB	3500	230	9CR34Y63023300H4	3500	230
9CR34Y630433000B	4000	3 × 400	9CR34Y6304330004	4000	3 × 400

Commercial and industrial convention radiators

Electronic control

Type 9CS



Main applications

These heavy duty fan heaters, are designed for professional, commercial or industrial applications.
They must be mounted on a vertical wall, at more than 40cms from the floor or any board.
Top side air inlets are equipped with a baffle protecting the fans against liquid drops or particle inlet.
They are equipped with 3 silent high flow fans, and a waterproof control box equipped with a 2 poles, illuminated on-off switch, an electronic temperature control with digital display, and a safety thermostat.
Their insulation class 1 does not allow using them in bathroom and in all places requiring Class II insulation. They are not designed for use in hazardous environments.
They exist with painted steel or stainless steel frame.
The main applications are heating of professional workshops, bungalows, crane cabins, construction equipment, wagons or locomotive cockpits, technical rooms, ovens, containers, dryers.

Main features

Dimensions: 450 × 130 × 150mm body (control box and legs not included)
Ingress protection: IP44
Heaters: 3 finned elements in 304L stainless steel. Fins 25 × 50mm 304 stainless steel. Surface load 3W/cm²
Frame material: 0.8mm thick sheet, high strength (Withstands +100kg distributed load), two versions:
- Galvanized steel sheet with black epoxy paint
- 304 stainless steel sheet.

Fans (only for version with fans): 3 fans of 120 × 120mm, flow 3 × 30m³/h. L10 life expectancy: 50,000 h (>5 years) at 25°C. L10 refers to the time at which statistically, 90% of the fan will still be operative. Life expectancy is reduced by about 50% when ambient temperature rises to 50-70°C.
Controls: Located inside a PA66, IP65, IK10 protection box, with sealable window, providing access to:
- Electronic temperature control, with differential adjustment, digital display at 1/10°, temperature range 4-40°C (can be set in °F)
- Fail safe high limit manual reset thermostat for protection against air outlet obstruction or fans failure
- Tip-over switch to protect against heater fail over (not available in the 3 phases version)

Electrical connection: by grounded euro plug, 2 meters, 3 × 1.5mm² (no cable supplied in the 3 phases version)
Mounting: 2 legs on the side (wall mounting).
Voltage: single phase 230V, 50/60Hz or 400V three phases with neutral
Power: single phase, 230V: 2000W, 3500W; 3 phases: 4000W
Ambient temperature: -20 to +60°C
Net weight: 9.1 kg
Option:
- Infrared remote on-off switch
- Customization accepted

References

Black painted steel frame			304 stainless steel frame		
References	Power (W)	Voltage (V)	References	Power (W)	Voltage (V)
9CS34Y33023200HB	2000	230	9CS34Y33023200H4	2000	230
9CS34Y63023300HB	3500	230	9CS34Y63023300H4	3500	230
9CS34Y630433000B	4000	3 × 400	9CS34Y6304330004	4000	3 × 400

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