

---

# Sinus Jevi

# Air Duct Heaters

Sinus Jevi electrical duct heaters are designed for flange mounting in connection with climate control/heat generation and ventilation systems. Special constructions for e.g. grain dryers, process systems, ships and high-temperature duct heaters are made upon request.



**SINUS**  
**JEVI** 



Liquids



Gasses



Solids



Spaces



Resistors

**DUCT HEATERS TYPE EFR & EFRS**

Duct heaters for ventilation systems, such as additional heat in the case of heat recovery systems in homes or otherwise in connection with air duct systems. Duct heaters type EFR are supplied for 230 V as standard, but can be supplied for 400 V.

Duct heaters type EFRS are supplied for 3x400 V as standard.

**DESCRIPTION**

**Duct section:**

Hot galvanised spiral tube with rubber sealing rings at either end. Type EFRS can on request be supplied with flange connection and in stainless steel.

**Junction box:**

Electrogalvanised sheet iron box supplied with 2 x M20 cable glands. Electrical connection via the mounted terminal block (an installation guide will be supplied on delivery). Degree of protection EFR IP44 / EFRS from IP22 to IP66.

**Heating elements:**

Heating elements made of AISI 304 (stainless steel) with a surface load of 2.5 W/cm<sup>2</sup> for air speeds in excess of 2 m/sec.

**Overtemperature protection:**

A 1-pole thermal limiter (30-87°C) and a thermal cutout with manual reset (125°C) are built into the junction box.

**TEMPERATURE CONTROL**

It is recommended to regulate the air temperature with a room thermostat, such as Triac Pulser® 920 on 1-phase and TTC2000 on 3-phase models (see page 5 for brochure "Controls HVAC").



EFR



EFRS

Standard EFR 230V			
Article no.	Output	D (Ø)	L
402 125 033A	335 Watt	125 mm	400 mm
402 125 067A	670 Watt		
402 125 100A	1000 Watt		
402 125 200A	2000 Watt		
402 160 033A	335 Watt	160 mm	
402 160 067A	670 Watt		
402 160 100A	1000 Watt		
402 160 200A	2000 Watt		
402 200 033A	335 Watt	200 mm	
402 200 067A	670 Watt		
402 200 100A	1000 Watt		
402 200 200A	2000 Watt		
402 250 033A	335 Watt	250 mm	
402 250 067A	670 Watt		
402 250 100A	1000 Watt		
402 250 200A	2000 Watt		

Standard EFRS 3x400V			
Article no.	Output	D (Ø)	L
410 200 330A	3300 Watt	200 mm	400 mm
410 200 480A	4800 Watt		
410 250 600A	6000 Watt	250 mm	
410 250 750A	7500 Watt		
410 250 960A	9600 Watt		
410 315 600A	6300 Watt	315 mm	
410 315 960A	9600 Watt		

On request we can supply with other voltage, power, materials and diameter.

**EFFK**

**APPLICATION**

Duct heaters designed for flange mounting in connection with air conditioning/heat recovery and ventilation systems. Special versions for e.g. grain drying plants, process plants, ships and high temperature heaters can be produced to order. Supplied in 3x400V -Y~ as standard. Can be connected to 3x230V-D~ on request.

**MATERIAL SELECTION**

These duct heaters are made from hot-dip galvanised steel plate as standard, but other materials are also available depending on the application.

**DESCRIPTION**

*Duct section*

Hot-dip galvanised steel plate which is spot welded together and has a flange edge for attachment to the ventilation duct.

*Junction box*

This is integrated in the duct section and provided with cable glands. Electrical connection must take place via the terminals fitted (an installation guide will be supplied on delivery). Degree of protection IP22, but other degrees of protection can be supplied on request.

*Heating elements*

Heating elements made of AISI 304 (stainless steel) with a surface load of 2.5 W/cm<sup>2</sup> for air speeds in excess of 2 m/sec. A lower surface load is used for air speeds of less than 2 m/sec. AISI 309/Inconel (stainless steel) is used as the tubing material for high temperature heaters (tube cap temperature max. 800°C).

The heating elements are fitted with M14 nipples.

*Over temperature protection*

A thermal limiter with automatic reset and thermal limiter with manual reconnection are built into the junction box. These are connected to the temperature regulator.

*Temperature control*

See brochure "Temperature Control for HVAC", link on page 5.



**Standard Design EFFK 3 x 400 V-Y~**

Article number	H-W-L	Output	No. of groups	Group 1	Group 2	Group 3	Group 4
401 005 400A	300 mm	5.25 kW	3	0.75 kW	1.5 kW	3 kW	-
401 009 400A		9.6 kW	3	1.5 kW	2.7 kW	5.4 kW	-
401 018 400B		18.9 kW	3	2.7 kW	5.4 kW	10.8 kW	-
401 010 400A	400 mm	10.8 kW	3	1.5 kW	3.3 kW	6 kW	-
401 018 400A		18.9 kW	3	2.7 kW	5.4 kW	10.8 kW	-
401 029 400A		29.4 kW	4	2.1 kW	3.9 kW	7.8 kW	15.6 kW
401 038 400A	500 mm	38.1 kW	4	2.7 kW	5.4 kW	9.6 kW	20.4 kW
401 024 400A		24.6 kW	4	1.5 kW	3.3 kW	6.6 kW	13.2 kW
401 048 400A		48.6 kW	4	3.3 kW	6.6 kW	13.2 kW	25.5 kW
401 076 400A	600 mm	76.6 kW	4	5.1 kW	10.2 kW	20.4 kW	40.8 kW
401 031 400A		31.5 kW	4	2.1 kW	4.2 kW	8.4 kW	16.8 kW
401 058 400A		58.5 kW	4	3.9 kW	7.8 kW	15.6 kW	31.2 kW
401 094 400A		94.5 kW	4	6.3 kW	12.6 kW	25.2 kW	50.4 kW
401 112 400A		112.5 kW	4	7.5 kW	15 kW	30 kW	60 kW

## Examples of special-made duct heaters

### ENGINEERED DUCT HEATERS

Sinus Jevi can cater to your Specialty needs for duct heaters.

We offer duct heaters not only for HVAC applications but also for high temperature duct heaters up to approx. 500°C.

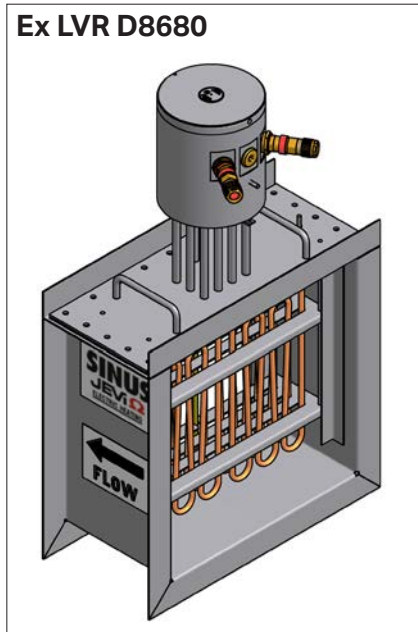
Ex- duct heaters for use in both gas- and dust- hazardous area's in either Ex-d, up to approx. 35kW, and Ex-e for high power output (35kW+).

Duct heaters for spray-dry towers and fluid beds in food- and pharma- applications.

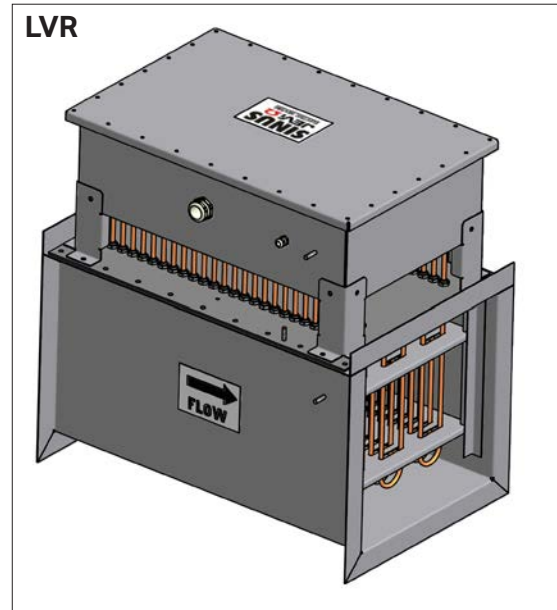
High power duct heaters for scrubber and many other applications.

Please contact our sales department for any specialty duct heaters needs you may have at [Info@SinusJevi.com](mailto:Info@SinusJevi.com)

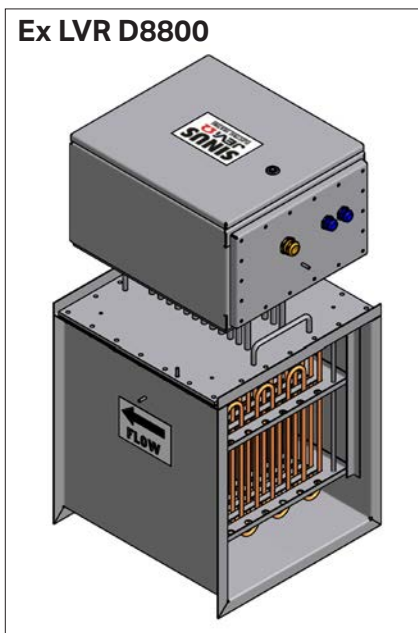
Ex LVR D8680



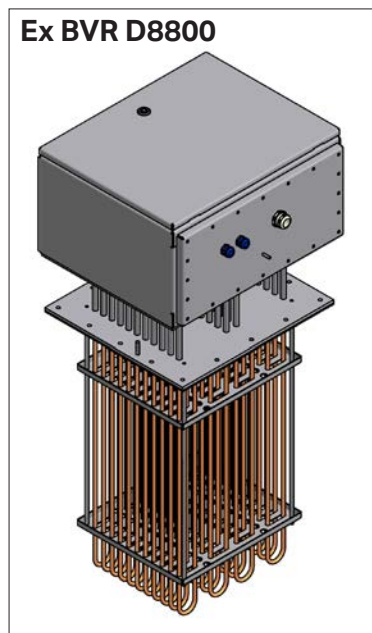
LVR



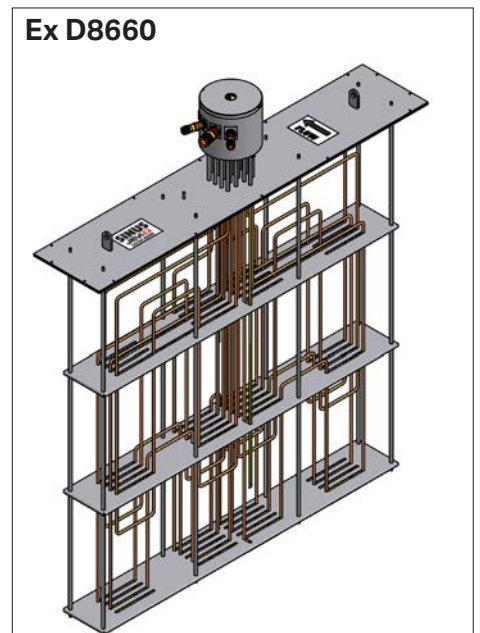
Ex LVR D8800



Ex BVR D8800



Ex D8660



**TEMPERATURE CONTROL SYSTEMS & COMPONENTS**

A variety of control- components and methods is available for duct heaters. Depending on your application needs you may choose for ON/OFF- Control, step-control, proportional control or even a combination of these.

**ON/OFF CONTROL**

Please refer to our brochure "Thermostats" for our range of electromechanical capillary thermostats or programmable electronic thermostats. Commonly used for single phase heaters up to 16A is the TG- and FC5- range. Programmable thermostats are available from the FC1- range. To hook-up multiple heaters behind a single thermostat or switch 3-phase power supplies via contactors please refer to the ESC- range.



**PROPORTIONAL CONTROL**

Please refer to our brochure "Controls for HVAC" for a range of proportional control components commonly used up to 16A is the Pulser controller or TTC2000 up to 25A. For higher 25A to 80A output the TTC- Series Triac controllers are advisable.



**ENGINEERED CONTROL PANELS**

Sinus Jevi is able deliver your control panel as a professionally built functional assembly. Panels complete with wall mount cabinet, mains switch, temperature control loop, power control loops with MCCB and contactors. Forced panel ventilation if required and many other possibilities such as Prof-bus or other communication protocols.



Please contact our sales department for any specialty control panel needs you may have at [info@sinusjevi.com](mailto:info@sinusjevi.com).

---

# 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