

The Innovation AIRFEL – ESH

Fast infra-red (IR) – Carbon Radiant Heater CE

for Energy efficiency room and outdoor heating with safety for you and your family



System Radiant Heater for:

- ✓ household
- ✓ commercial
- ✓ industry



- ✓ good for your eyes, skin + body
- ✓ good for your safety
- ✓ good for your Energy cost
- ✓ good for the environment

AIRFEL – ESH / Energy Saving Heater with IR – Carbon medium wave technology

The first IR – Radiant Heater with Eco – design and Energy efficiency according the new EC – requirements

**EC – Eco – design +
Energy efficiency**



EC – Directive 2009 / 125 / EC + EC – Working plan 2009 – 2011

EC – Requirements: Reduction of Energy consumption > 20 %
and CO² Emission > 30 % by local Heating products

New Performance and Energy consumption tests by AIRFEL + TÜV / Rheinland

AIRFEL – ESH SR + WR – Radiant Heater mounting over 1,8 m CE

Product description:

AIRFEL – ESH SR – Radiant system with Spot Reflector 50°

SR – Spot Radiant Heater for fast and deep Radiant sector heating

Application: mainly outdoor and indoor for spot sector heating

Rating: 220 – 240 VAC, 1 500, 2 000, 2 500 Watt and 230 VAC, 3 000 Watt

Mounting: Universal Wall and Ceiling mounting, alternative with AI-Fix-Profile and Large Easy Rack 2,0 m CE

Connection: Power Cord with Plug on Socket 16 A or fix Cable connection by direct Wall and Ceiling mounting

Professional application: mounting of Pillar System possible with max 3 Radiant Heater 3 x 3 000 Watt

AIRFEL – ESH WR – Radiant system with Wide angle Reflector 80°

WR – Wide angle Radiant Heater for fast, homogeneous and comfortable room heating

Application: mainly indoor and outdoor for room and complex area heating

Rating: 220 – 240 VAC, 1 500, 2 000, 2 500 Watt and 230 VAC, 3 000 Watt

Mounting: universal Wall and Ceiling mounting, alternative with AI-Fix-Profile and Large Easy Rack 2,0 m CE

Connection: Power Cord with Plug on Socket 16 A or fix Cable connection by direct Wall and Ceiling mounting

Professional application: mounting of Pillar System possible with max 3 Radiant Heater 3 x 3 000 Watt

AIRFEL ESH Patent / Turkey:

TR 2009 02747 Y / 08.04.2009:

AIRFEL ESH IR – Carbon Radiant Heater

2 IR – Carbon Radiant Heating Elements with > 92 % Radiant efficiency

Big MIRO SR – Spot Reflector 50 with > 94 % Reflection

Big MIRO WR – Weitwinkel Reflector 80 with > 94 % Reflection

SR and WR Vent Body design with air circulation

Sensitive Temperature regulation 5 – 35 C 1 K for indoor and outdoor

Power selection with 2 pole safety OFF

TR 2009 02750 Y / 08.04.2009:

AIRFEL Universal Mounting system

Universal Support for Wall, Ceiling, AI – Fix – Profile, Large Easy Rack, Pillar System and professional applications

Recommend Power Watt / m²:

Room heating:	Full heating:	100 W / m ²	Additional heating:	50 W / m ²
Industry heating:	Industry building:	150 W / m ²	Industry hall:	200 W / m ²
Outdoor heating:	Outdoor 3 side open:	400 W / m ²	Outdoor 2 side open:	300 W / m ²
Bathroom fast heating:	Bathroom max.:	200 W / m ²	Bathroom min.:	150 W / m ²

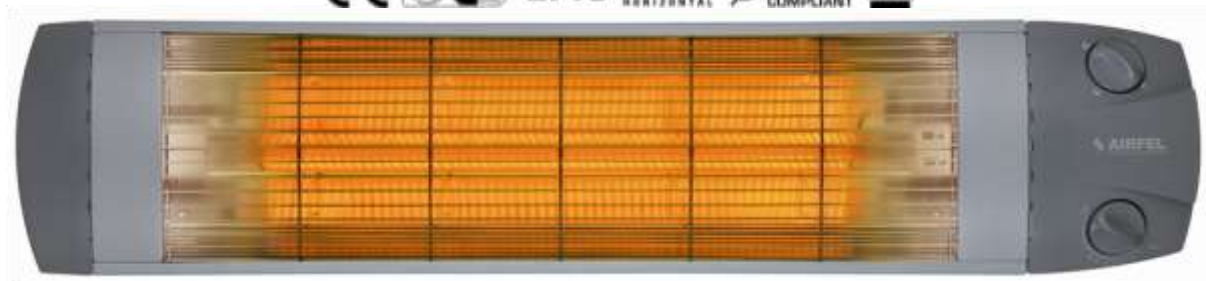
Without pre-heating, according the short reaction time with 2 to 3 second

Innovation AIRFEL – ESH SR + WR mounting over 1,8 m CE

AIRFEL – ESH / Energy Saving Heater with IR – Carbon medium wave technology for household, commercial + industry

AIRFEL – ESH SR – with Spot Reflector 50 °

SR – Spot Radiant system with Spot Reflector mounting over 1,8 m CE



AIRFEL – ESH WR – with Wide angle Reflector 80 °

WR – Wide angle Radiant system with Wide angle Reflector mounting over 1,8 m CE



EC – Eco – design + Energy efficiency



EC – Directive 2009 / 125 / EC + EC – Working plan 2009 – 2011

EC – Requirements: Reduction of Energy consumption > 20 % and > 30 % CO² Emission by local Heating products

EC – Requirements

- Eco – design
- higher Energy efficiency
- reduction for Waste of Energy
- reduction for Energy consumption > 20 %
- reduction of the high CO² Emission
- easy and environment friendly recycling
- long life time min. 10 000 h
- Product and user safety

AIRFEL ESH Innovation

- short Reaction time 2 to 3 Second
- 14 % higher Radiant efficiency
- 45 % less Energy consumption by Room heating
- 30 % less Energy consumption by Outdoor heating
- Power selection and 2 pole safety OFF
- sensitive room and surrounding temperature regulation
- Power stability over long life time
- no dazzling or damaging for Eyes and Skin

New Performance and Energy consumption tests by AIRFEL + TÜV / Rheinland

Innovation AIRFEL – ESH SR / Electronic CE

AIRFEL – ESH SR / Electronic with 2 step Thermostat + Remote control mounting over 1,8 m or in higher distance over 2,25 m CE!

SR – Electronic Radiant Heater with Spot Reflector mounting over 1,8 m CE

Spot Radiant Heater with Electronic for fast and deep Radiant sector heating

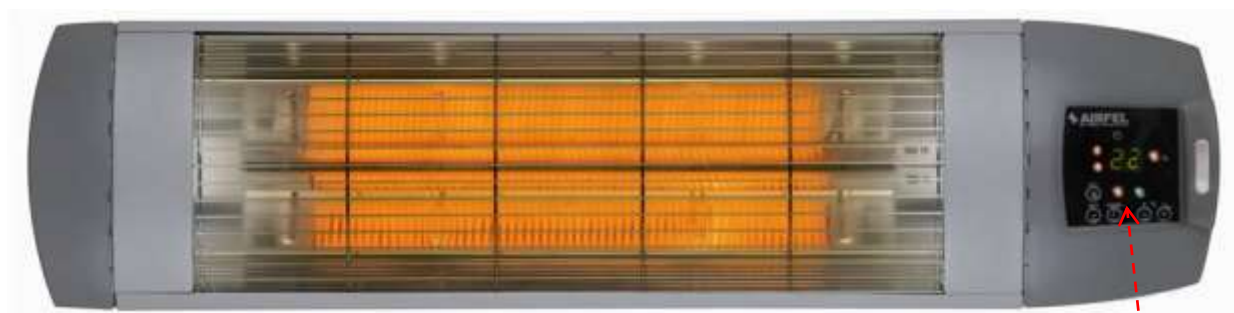
Application: mainly outdoor in very high level over 2,25 m, indoor for Spot sector heating with automatic regulation

Rating: 220 – 240 VAC, 2 000, 2 500 and 230 VAC, 3 000 Watt

Mounting: Universal Wall and Ceiling mounting, alternative AI – Fix – Profile and Large Easy Rack CE

Connection: Power cord with Plug on Socket 16 A or fix Cable connection by direct Wall and Ceiling mounting

Professionell application: mounting of Pillar System possible with max. 3 Radiant Heater 3 x 3 000 Watt



Function

Adjustment on the Display or with Remote control until 10 m:

- ✓ manual or automatic Heating
- ✓ manual Power selection and off position
- ✓ Temperature adjustment 10 to 40 °C
- ✓ Room and surrounding temperature in display 10 to 40 °C
- ✓ Sensitive automatic 2 step electronic Thermostat 10 to 40 °C 1 K
- ✓ Timer 00 to 20 h with automatic switch off after time out



Ideal for professional mounting in very high level over 2,25 m,
with Remote control and Energy efficiency automatic Power step + Temperature regulation.
Mounting up to 3 Radiant Heater 3 x 3 000 W on the Pillar System

Innovation AIRFEL ESH – Universal mounting system CE for household, commercial and industry

Universal Support adjustable:

- ✓ Position inside the AI - Profile
- ✓ horizontal and vertical function
- ✓ Radiant angle $\pm 35^\circ$
- ✓ Canal for Power cord in AI - Profile



direct Wall and Ceiling mounting CE without AI – Fix – Profile



Wall and Ceiling mounting with AI – Fix – Profile 1,5 m CE



Large Easy Rack LER 2,0 m CE



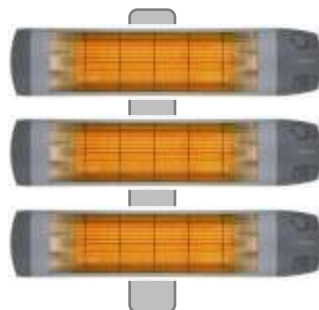
L – Support LS



Universal Wall – Support UWS 0.6 CE mounting
crosswise or alongside



IR – Heating systems for professional application commercial and industry



Industry – Radiant heater set
3 x 1 500 Watt up to 3 x 3 000 Watt
Connection: 3 / Phase 230 / 400 V.

IR - Systems for air, surface, room and object heating or drying

Innovation AIRFEL – ESH SR and WR – Portable CE

AIRFEL – ESH SR und WR – Portable for universal application outdoor and indoor

Portable Radiant Heater with Short Safety Rack, high adjustable from 0,4 until 1,5 m CE



SR – Spot Radiant system with Spot Reflector / **WR – Wide angle Radiant system** with Wide angle Reflector

Application SR: mainly for small terrace and balcony / **WR:** mainly for additional room and people heating

Rating SR: 220 – 240 VAC, 1 500 + 1 750 Watt / **Rating WR:** 220 – 240 VAC, 1 500 + 1 750 Watt

Component's:

- ✓ Power cord with Plug connect in the base of Short Safety Rack with Safety cover IP 44
- ✓ extra long Power cord for Short Safety Rack
- ✓ Cable box and Cable wrap in the base of Short Safety Rack
- ✓ safety Tilt Switch with switch off the Heater if the Short Safety Rack tilt over or fall down

Innovation AIRFEL – ESH WR – Fast Bathroom Radiant Heater CE

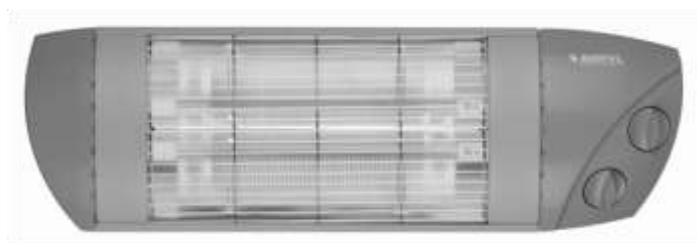
AIRFEL – ESH WR Bathroom Heater with Wide angle Reflector 80° CE

WR – Wide angle Radiant system with Wide angle Reflector for Wall and Ceiling mounting over 0,4 m CE
new Wide angle Bathroom Heater for fast, comfortable and homogeneous Bathroom heating

Application: mainly for Bathrooms, shower rooms and Wet rooms

Rating: 220 – 240 VAC, 800, 1 000 and 1 200 Watt.

Connection: Power Cord with Plug or fix Cable connection by Wall and Ceiling mounting.



Pleasant Radiant heating in short time 2 to 3 second without pre-heating save your Energy more than 30%

AIRFEL ESH Patent claims for ESH IR – Carbon Radiant Heater and universal safety Mounting system CE



SR – MIRO Reflector and
twin Carbon Heating
Element



WR – MIRO Reflector and
doubles Carbon Heating
Element



SR – Vent – Body design
with Circulate system



WR – Vent – Body design
with Circulate system

AIRFEL ESH / Energy Saving Heater

**EC – Eco – design +
Energy efficiency**



Power steps and
2 – pole safety OFF



sensitive Temperature
regulation for room and
outdoor heating



Universal Support for
universal and safety
mounting



safety Power cord
connection and alternative
fix Cable connection

Innovation AIRFEL – Professional application

AIRFEL – ESH Pillar System for commercial and industry

stable AI – System Profile for max. 3 SR – Radiant Heater 3 x 3 000 Watt
comfortable and fast outdoor warming in the spring time, autumn time and winter time



available in March 2012



AIRFEL ESH Pillar System PS 2,5 CE:

- 2 AI – Pillar Profile 1,15 m with connection profile
- 3 Metal legs
- 1 Top cover with holder for 3 AI – Fix – Profile
- 3 AI – Fix – Profile 600 mm
- 1 Set Screws and Cable clips
- 3 Socket 16 A for outdoor
- Terminal 5 pole for Cable connection down side

Connection Single Phase: 3 x 1,5 mm² until 16 A = max 3 600 Watt

Connection 3 / Phase: 5 x 1,5 mm² until 3 x 16 A = max 3 x 3 000 Watt

Cable connection complete in the down Profile

Pillar mounting and electric al connection only by on professional Electrician allow

Application:

Restaurants, big Terrace and Pavilion until 3 Table each 6 - 8 People.



Possible mounting for ESH SR – Radiant Heater: grosswise and alongside universal adjustable

1 to 3 ESH SR 1500, 2000, 2500 + 3000 MG CE manual Switch and Thermostat adjustable until 2,25 m high

1 to 3 ESH SR 2000, 2500 + 3000 MG / E CE Electronic with Remote control for autom. heating in higher level over 2,25 m

IP 44 horizontal for outdoor

For long time protection of Heating Elements and Reflectors under big rain and snow it's possible to use sepearte Heater roof
Pillar System und Heater roof available in August 2011

More professional application for SR – Radiant Heater



Pillar Combi System
2,5 m

Tripot System
1,5 m



Pillar Combi System + Tripot System

with SR – Radiant Heater Portable max 1 750 Watt for efficiency People direct heating

Innovation AIRFEL – Umbrella Heater UH 3500 CE

AIRFEL – ESH Umbrella Heater IR – fast medium wave CE

stable Umbrella Heater 230 VAC, 3 300 Watt for outdoor heating at economic and environment friendly alternative to the Gas Patio Heater



AIRFEL ESH Umbrella Heater UH 2,5 – 3.3 CE 220 – 240 VAC, 3 300 W

- 1 Umbrella Heater Top Part D 700 mm x 220 mm Aluminum Powder paint Ice silver metallic. with 4 new IR – Carbon Radiant Heating Element's, fast medium wave / Filament 1 600 °C, 4 x 825 Watt = 3 300 Watt, 14,35 Amp. and 2 MIRO – Reflector sets with > 94 % Reflektion

- 1 Pipe top side D 45 mm x 1 150 mm Al – eloxal
- 1 Control Panel with Rotary switch 2 – pole Off, 3 Heating steps and sensitive Thermostat 5 – 35 C 1 K max Pos 60 C.
- 1 Table set with MDF Table D 600 mm.
- 1 Pipe down side D 45 mm x 1 150 mm Al - eloxal
- 1 Power Cord 3 x 1,5 mm² x 5 m long with Plug for Socket 220 – 240 VAC, 16 A
- 1 Foot plate D 600 mm Fe – zinl pl + Powder paint Ice silver metallic
- Connection cable inside the Pipe with 4 pole connection Plug and Screw set
- mounting possible by the Customer / available August 2011

Available March 2012



For better stability in professional applications it's possible to use on Standard Sunshade holder in Stone available in all Building material shops




Fast, comfortable and deep Radiant heating around the Umbrella Heater over to on surface of 3,5 x 3,5 m = 12 m².

Economic Power steps for the Spring + Autumn time and the Winter time:

O = 2 pole safety OFF

 = 2 Radiant Heating Elements inside ON = 1 650 Watt / Position for Spring + Autumn time with small around surface

 = 2 Radiant Heating Elements outside ON = 1 650 Watt / Position for Spring + Autumn time with big around surface

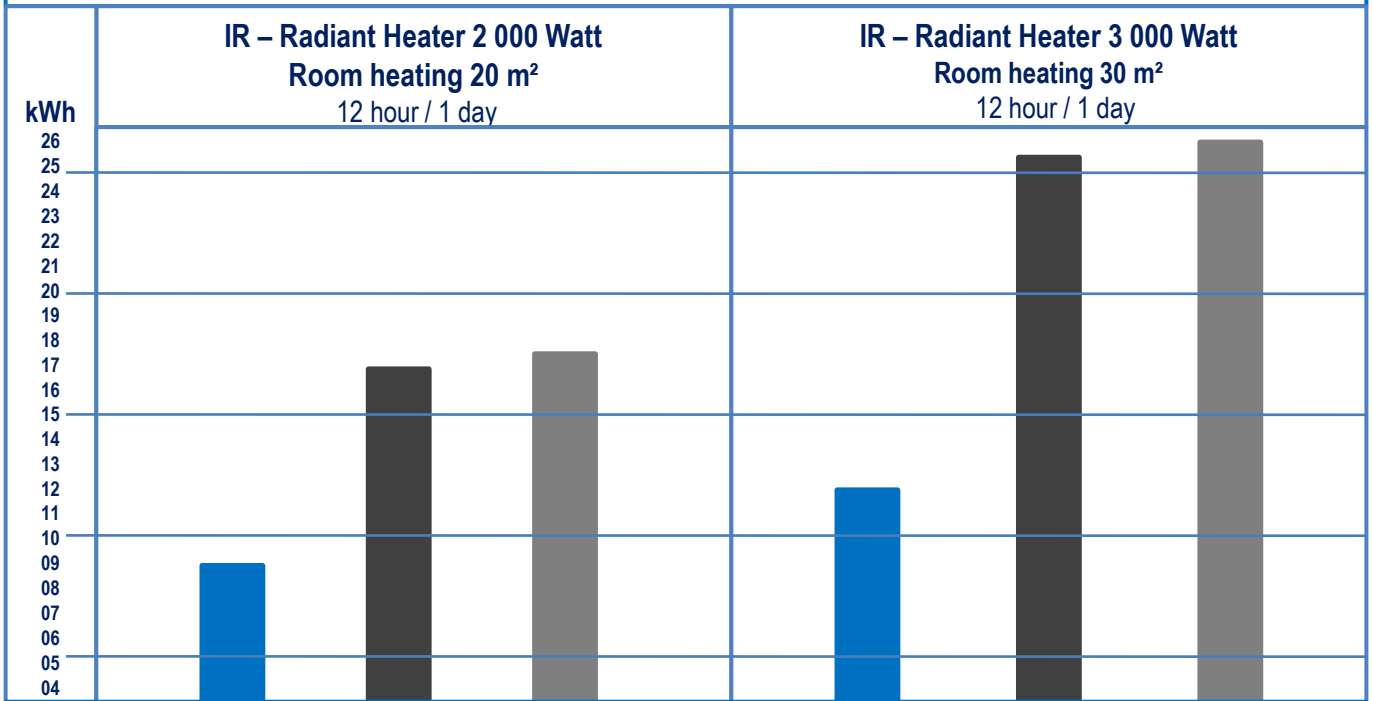
 = 4 Radiant Heating Elements inside + outside ON = 3 300 Watt / Position for Winter time with big around surface

Energy consumption / comparison with and without Eco-design + Energy efficiency

Performance test Room heating:

Room heating from 11 °C to 21 °C and Temperature regulation with Full Power + Power selection

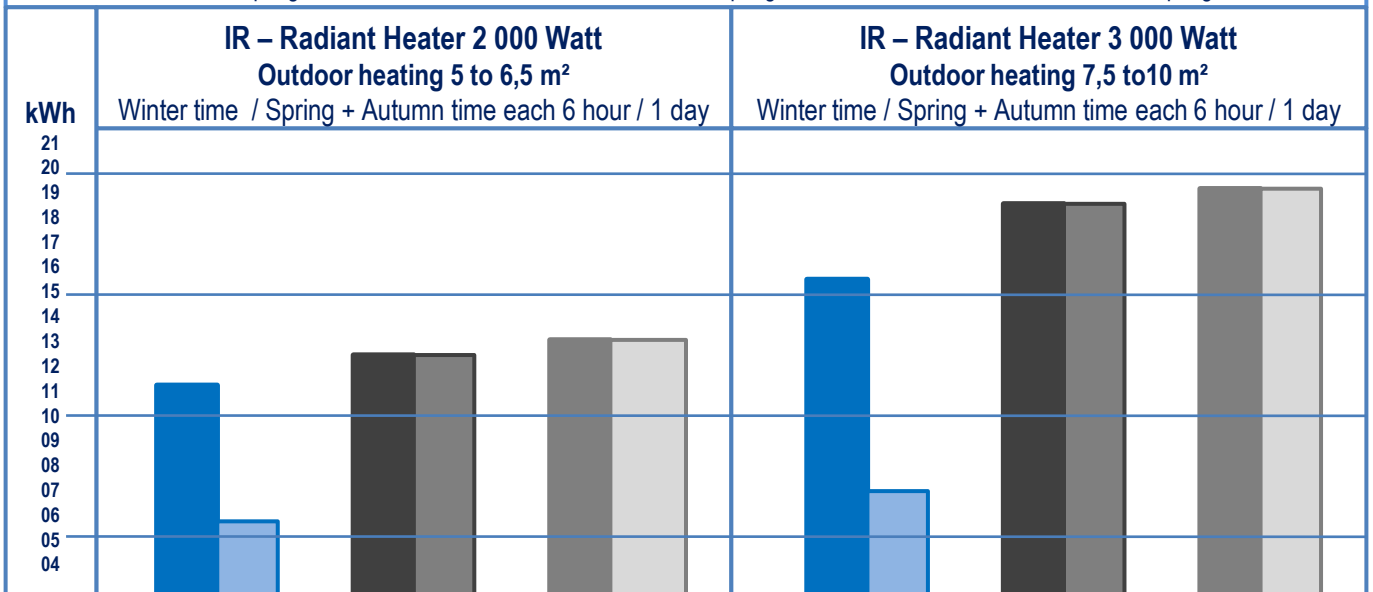
■ AIRFEL ESH WR+SR with Carbon Filament
 ■ Quartz Heater with FeCrAl Filament
 ■ Halogen with Tungsten Filament



Energy consumption / comparison with and without Eco-design + Energy efficiency

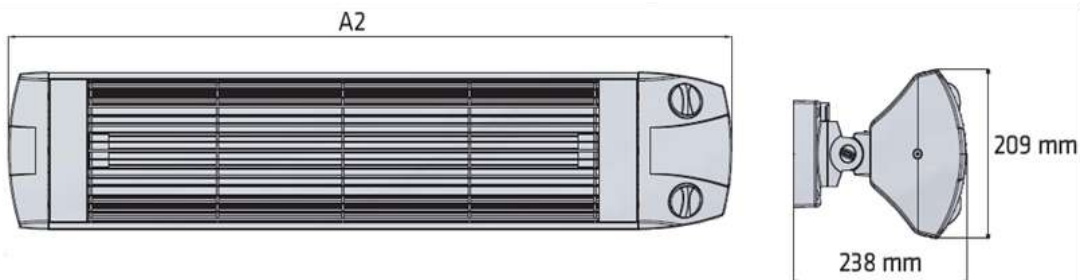
Performance test Outdoor heating: Winter time – 5 °C to + 5 °C / Spring + Autumn time + 10 °C to + 20 °C

■ AIRFEL ESH WR+SR with Carbon Filament
 ■ Quartz Heater with FeCrAl Filament
 ■ Halogen with Tungsten Filament
■ Winter time ■ Spring+Autumn time
 ■ Winter time ■ Spring+Autumn time
 ■ Winter time ■ Spring+Autumn time



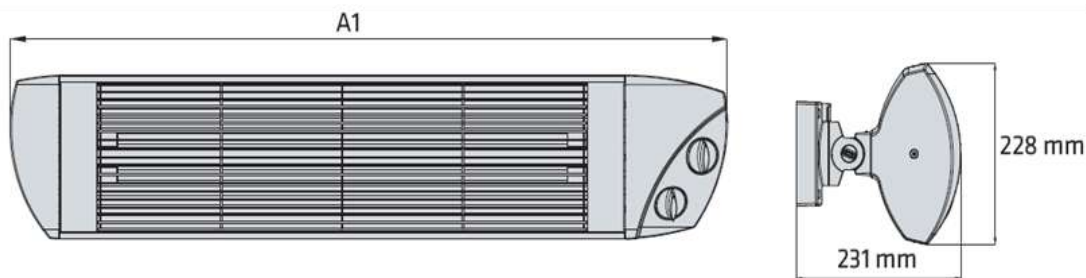
Technical data:

Dimension SR:



	3000 W	2500 W	2 000 W	1750 W	1 500 W	1200 - 800 W
A2	1 070 mm	962 mm	854 mm	800 mm	746 mm	692 mm

Dimension WR:



	3000 W	2 500 W	2 000 W	1750 W	1 500 W	1200 - 800 W
A1	1 107 mm	999 mm	891 mm	837 mm	783 mm	729 mm

Heating Power and recommended Surface for Room heating and Outdoor heating:

	Room heating	Outdoor 3 side open	Outdoor 2 side open
ESH WR 800 BG CE:	4,5 – 5,0 m ²		
ESH WR 1000 BG CE:	5,0 – 6,5 m ²		
ESH WR 1200 BG CE:	6,0 – 8,0 m ²		
ESH SR + WR 1200 MG + PG CE:	12,0 – 16,0 m ²	3,0 m ²	4,0 m ²
ESH SR + WR 1500 MG + PG CE:	15,0 – 20,0 m ²	4,0 m ²	5,0 m ²
ESH SR + WR 1750 MG + PG CE:	17,5 – 23,5 m ²	4,5 m ²	6,0 m ²
ESH SR + WR 2000 MG CE:	20,0 – 27,0 m ²	5,0 m ²	6,5 m ²
ESH SR + WR 2500 MG CE:	25,0 – 33,0 m ²	6,5 m ²	8,0 m ²
ESH SR + WR 3000 MG CE:	30,0 – 40,0 m ²	7,5 m ²	10,0 m ²
UH 2,5 CE 3,3 kW:	35,0 – 45,0 m ²	10,0 m ²	14,0 m ²
ESH SR / Electronic:		see by ESH SR XXXX MG CE	
Pillar System:		look by ESH SR XXXX MG CE x number of Radiant Heater	

Applications of AIRFEL ESH IR – Carbon Radiant Heater:

Household

- ✓ Living-room
- ✓ Bedroom
- ✓ Nursery
- ✓ Hobby room
- ✓ Function room
- ✓ Bathroom and Wet-room
- ✓ Guest room
- ✓ Sport + Fitness room
- ✓ Terrace + Balcony
- ✓ Winter garden
- ✓ Garage + Carport
- ✓ Basement room
- ✓ Hobby workshop
- ✓ Weekend + Holiday home

Commercial

- ✓ Hotel, Restaurant + Café
- ✓ Terrace + Balcony
- ✓ Roof terrace + Roof garden
- ✓ Shops + Kiosk
- ✓ Green garden
- ✓ Smoker place + Smoking cabin
- ✓ Weating room + hall
- ✓ Show room + Exhibition hall
- ✓ Shopping center + Shopping mall
- ✓ Underground + multystore car park
- ✓ Market hall + place
- ✓ Holiday park + Lunapark
- ✓ Airport hall + Service hall
- ✓ Church

Industry

- ✓ Office
- ✓ Entrance hall
- ✓ Meeting room
- ✓ Production hall + area
- ✓ Warehouse + Store
- ✓ Workshop + Studio
- ✓ Building heating + drying
- ✓ Community + Break room
- ✓ Canteen + Kitchen
- ✓ Smoker place + Smoking room
- ✓ Service room + hall
- ✓ Sanitary room + Toilet
- ✓ Production heating process
- ✓ Production drying process

Complex Heating systems for commercial and industry application with Energy efficiency possible

ESH – export sales

Stamp of trade shop



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