



# AG

## Heat Winner For Low Grade Hot Water Heating

The Eureka Heat Winner is a fully-insulated, ready-to-install compact heat exchange unit. It is available as a single exchanger unit or with multiple exchangers located within a single housing.

The Eureka Heat Winner is ideally suited for the production of Low Grade Hot Water (LGHW) for space heating purposes.



The AG Model shown above harnesses the condenser waste heat from five refrigeration units.

### ● Universal Application

The Eureka Heat Winner is suitable for a multitude of applications including food retail, butchers' shops, bakeries, restaurants and catering establishments, supermarkets and factories. It is generally applied where

- Waste heat is produced by commercial and industrial refrigeration plant.
- The amount of waste heat available is greater than that required for hot water services.

### ● Hot Water at 30 - 45 °C

The Heat Winner is coupled with a circulating pump. Water is heated in increments and pumped around the heating system.

Note: The flow temperature is not normally higher than the refrigerant condensing temperature.

### ● Simple Installation

The design of the Eureka Heat Winner is borne out of considerable practical experience. Suitable for either wall or floor mounting, its compact construction occupies minimum space. De-scaling and cleaning is all straight-forward procedure. Where multiple exchangers are specified, these are accommodated within a single insulated housing and parallel-connected to form a single pair of water manifolds. Each exchanger is fitted with a water regulating valve which enables the correct water flow rate and hence capacity to be achieved.

### ● Multiple Connections

The Heat Winner is able to harness the condenser waste heat from several refrigeration units. The selected heat exchangers are located in a housing insulated with CFC-free polyurethane foam. Integration with the LGHW heating circuit requires only one cold water and one hot water connection. By adjusting the regulating valves the flow through each exchanger can be set to achieve full condensation.

### ● Heat Exchanger

Eureka tube-in-tube heat exchanger with refrigerant passing in contra-flow to water. The design ensures excellent heat transfer performance as well as the problem-free return of liquid refrigerant.

### ● Insulation

Each Heat Winner is supplied complete with at CFC-free, wipe-clean, insulated housing. The insulation comprises two half-shells and top and bottom covers. For public buildings a fire-retardent insulation (Class B1) is available as an extra cost option.

### ● Delivery Content

Eureka Heat Winner unit complete with insulation. The refrigerant circuit is evacuated and filled with a dry nitrogen holding charge to refrigeration industry standards.

Where multiple heat exchangers are accommodated within a single housing, the exchangers are factory premanifolded to provide single-point water flow and return connections. Manifolds terminate in compression fittings with sweat connections for the continuation pipework. For special applications the refrigerant stubs may also be parallel connected to provide a single pair of refrigerant inlet/outlet connections. Heat exchangers are fitted with regulating valves which incorporate visual flow indicators. These enable the required capacity of each exchanger to be easily set on-site. The regulating valves are also provided with a shut-off facility as an aid to installation and commissioning.

### ● Two Years Guarantee

The Heat Winner is manufactured to the highest quality standards using only the best materials available. Eureka guarantee the Heat Winner for a period of two years.

### ● Storage Cylinders

To complement their hot water systems Eureka also offer a range of buffer cylinders from 300 litres to 2000 litres storage volume. All cylinders are thermally insulated enabling water to be stored over prolonged period without significant temperature drop.

## Technical Data

## Technical Data - Heat Exchangers

Model	AG 5 kW	AG 10 kW	AG 20 kW	AG 30 kW	AG 40 kW	AG 50 kW	AG 60 kW	AG 80 kW	AG 100 kW	AG 120 kW
Capacity (kW) at flow rate m <sup>3</sup> /H based on Δ p 0.1 to 0.2 bar	5	10	20	30	40	50	60	80	100	120
Refrigerant Connections Ø mm	16	18	22	35	35	35	35	42	42	54
Water Connections Ø mm	16	19	25,5	32	32	32	42	42	54	54
Nett Weight kg approx.	5	9	12	24	24	24	48	48	72	72
Exchanger Height Excluding Insulation mm	135	235	220	225	225	225	450	450	675	675
Housing Size	1	1	1	2	2	2	2	2	2	2
or	2	2	2	2	2	2	2	2	2	2

Two different housing sizes are available. Some exchanger models cannot be fitted into certain housing sizes (see above table). The housing size 2 can accommodate more and larger exchangers than housing size 1. To select the smallest possible housing size add together the individual exchanger heights to derive the total installed height. Housing size 1 can accommodate exchangers with a total installed height=640 mm, housing size 2=1370 mm.

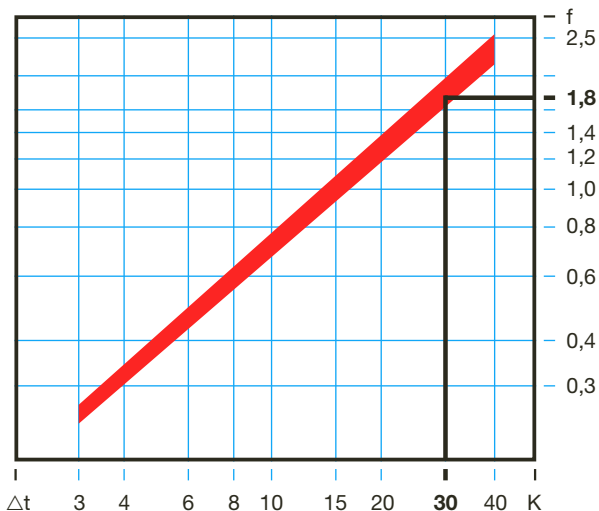
## Dimensions

Housing Size	External Diameter	Max. Installation Height For Heat Exchangers
1	500 mm	640 mm
2	740 mm	1370 mm
The overall unit height = total installed exchanger height + assembly height.		
1	Heat Exchangers + 250 mm Assembly Height.	
2	Heat Exchangers + 300 mm Assembly Height.	

## Capacity Varies With Temperature Difference (Δ t)

The above listed capacity values are nominal capacities (Q<sub>N</sub> using R134a) based on a temperature difference (Δt) of 15K between condensing temperature (t<sub>K</sub>) and the water entering temperature (t<sub>W<sub>E</sub></sub>).

The diagram below shows the relationship between capacity and varying temperature difference.



## Eureka Buffer Cylinders

Volume	300 l	450 l	500 l	1000 l	2000 l
Height	135 cm	180 cm	198 cm	243 cm	252 cm
Ø Incl. Insulation	81 cm	81 cm	81 cm	100 cm	130 cm
Ø Excl. Insulation	60 cm	60 cm	60 cm	80 cm	110 cm
Cold Water In	1 ¼ "	1 ¼ "	1 ¼ "	2 "	2 "
Hot Water Out	1 ¼ "	1 ¼ "	1 ¼ "	2 "	2 "
Max. Operating Temp.	95 °C	95 °C	95 °C	95 °C	95 °C
Max. Operating Pressure	10 bar	10 bar	10 bar	6 bar	6 bar
<b>Equipment</b>					
Thermometer 0 - 120 °C	X	X	X	X	X
Polyurethane Insulation	X	X	X	○	○
Foam Insulation	X	X	X	X	X

**Selection Example**  
To obtain the capacity of the Eureka Heat Winner model AG 10 kW  
Δt 30 K  
From the diagram the capacity variation factor f = 1.8.

$$\begin{aligned} \text{Solution: } Q &= Q_N \times f \\ &= 10 \text{ kW} \times 1.8 \\ &= 18 \text{ kW} \end{aligned}$$



Manufacturer:



seit 1967

Wärmerückgewinnung und Kühltechnik GmbH & Co.KG  
Nickelweg 5 - D-48282 Emsdetten  
Postfach 1564 - D-48273 Emsdetten  
Telefon + 49 (0) 25 72 - 9 55 40 - Telefax + 49 (0) 25 72 - 70 58  
e-mail: eureka@deltacity.net  
Internet: www.eureka-emsdetten.de

Your Approved Dealer

