



## GS+

### Gas-fired high performance air heater with axial fan

High efficiency air heater with modulating premix burner for  
unrestricted outlet into the room. Output from 13,6 to 142,2 kW.



For more information, downloads  
and videos, visit the GS+ page on  
our website



#### Product features

- Efficiency >106%
- Energy-saving
- Environmentally-friendly
- Modulating premix burner
- Outlet temperature sensor
- Low temperature rise of the exit air
- Low thermal stratification of the heated air
- Stainless steel heat exchanger
- Corrosion-resistant aluzinc housing

#### Environmentally friendly heating with the GS+

Mark manufactures a gas-fired, high-performance air heater with an axial fan. This condensing equipment provides efficiency greater than 106% (lower value). Heat is generated via a modulating premix-burner which results in very low gas consumption.

The GS+ is suitable in many situations due to its extensive capacity range from 13,6 to 142,2 kW. The GS+ is designed to heat garages, warehouses, distribution centres and showrooms.

#### Standard equipment:

- Stainless steel combustion chamber & heat exchanger
- Closed combustion circuit
- Advanced modulating burner technology
- Electronic ignition
- Low NOx
- Powerful axial fan(s)
- Downflow hood with horizontal louvres
- CE-approval
- PIN 0063BP3341
- Carbon trust (UK)

Optional: speed controlled low noise EC-motor. Advantages:

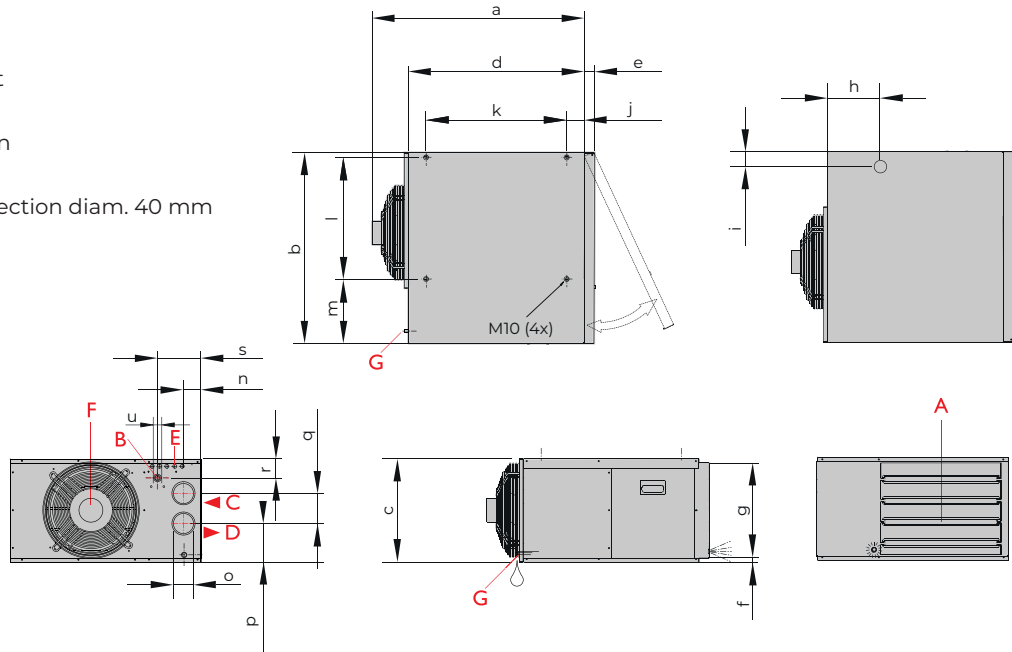
- The highest efficiency in case of speed control
- Up to 50% energy saving in case of partial load
- Almost completely linearly adjustable
- Long lifetime
- Low noise level
- Integrated electronic thermal protection



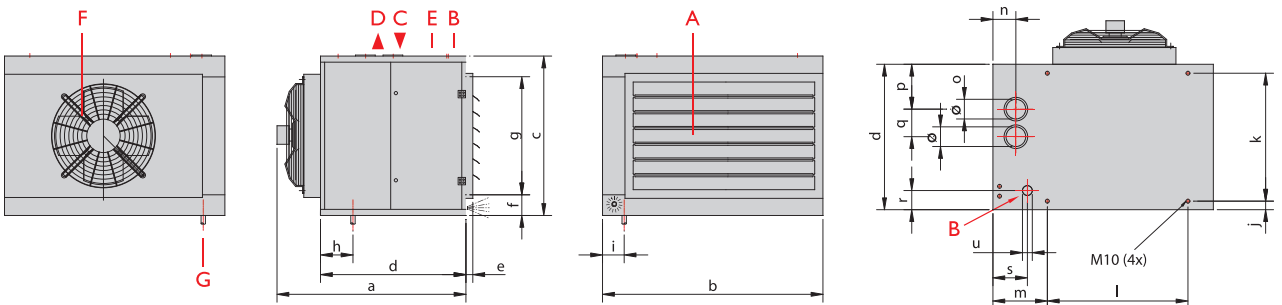
The GS+ is operated using an Optitherm+ clock thermostat or an Interface+ module that allows a connection with the BMS (building management system) via Modbus or a 0-10V contact. The Optitherm+ also makes it possible to control the GS+ units remotely with an app for mobile phone and tablet.

## Dimensions

- A = Horizontal louvres
- B = Gas connection
- C = Combustion air inlet
- D = Flue gas exhaust
- E = Electrical connection
- F = Axial fan
- G = Condensation connection diam. 40 mm



| Type  | a   | b   | c   | d   | e  | f  | g   | h   | i  | j  | k   | l   | m   | n  | o  | p   | q   | r  | s   | u        |
|-------|-----|-----|-----|-----|----|----|-----|-----|----|----|-----|-----|-----|----|----|-----|-----|----|-----|----------|
| 15/25 | 790 | 760 | 410 | 700 | 40 | 15 | 380 | 210 | 60 | 70 | 560 | 485 | 255 | 70 | 80 | 150 | 120 | 80 | 175 | 1/2" (M) |

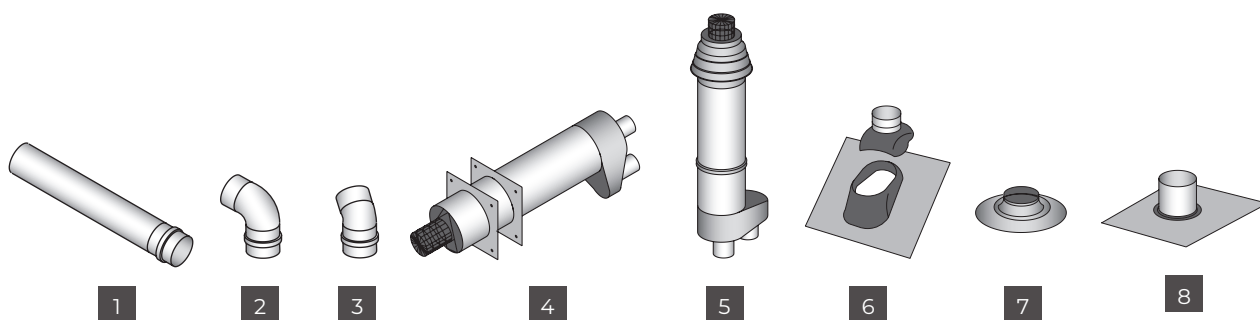


| Type    | a    | b    | c    | d    | e  | f   | g   | h   | i   | j  | k   | l    | m   | n   | o   | p   | q   | r   | s   | u        |
|---------|------|------|------|------|----|-----|-----|-----|-----|----|-----|------|-----|-----|-----|-----|-----|-----|-----|----------|
| 35      | 969  | 875  | 810  | 739  | 35 | 105 | 600 | 165 | 110 | 90 | 560 | 470  | 275 | 120 | 80  | 240 | 120 | 97  | 135 | 3/4" (M) |
| 40      | 969  | 875  | 810  | 739  | 35 | 105 | 600 | 165 | 110 | 90 | 560 | 470  | 275 | 120 | 80  | 240 | 120 | 97  | 135 | 3/4" (M) |
| 60      | 969  | 1120 | 810  | 739  | 35 | 105 | 600 | 165 | 110 | 90 | 560 | 715  | 275 | 120 | 100 | 230 | 140 | 97  | 135 | 3/4" (M) |
| 80      | 969  | 1305 | 810  | 739  | 35 | 105 | 600 | 165 | 110 | 90 | 560 | 890  | 275 | 120 | 100 | 230 | 140 | 97  | 135 | 1" (M)   |
| 100     | 979  | 1595 | 810  | 739  | 35 | 105 | 600 | 165 | 110 | 90 | 560 | 1180 | 275 | 120 | 100 | 230 | 140 | 97  | 135 | 1" (M)   |
| 135/150 | 1180 | 1890 | 1000 | 1000 | 35 | 105 | 790 | 190 | 175 | 75 | 850 | 1455 | 295 | 165 | 130 | 235 | 225 | 140 | 170 | 1" (F)   |

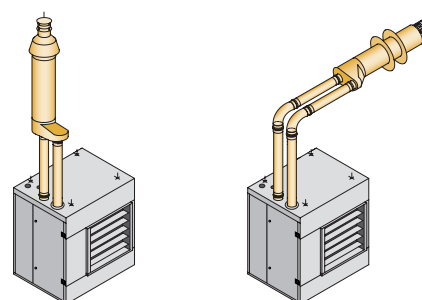
## Technical information

| Type  |                   | 15          | 25          | 35          | 40          | 60          | 80          | 100          | 135          | 150          |
|---|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| Nominal load (upper value)  | kW                | 16,1        | 27,2        | 38,8        | 44,4        | 66,7        | 88,9        | 110,6        | 149,9        | 166,7        |
| Maximal power   | kW                | 13,6        | 23,0        | 33,4        | 38,4        | 56,2        | 75,6        | 93,3         | 128,9        | 141,0        |
| Minimal load (upper value)  | kW                | 4,6         | 6,8         | 9,6         | 9,6         | 13,9        | 24,5        | 10,8         | 21,1         | 36,6         |
| Minimal power   | kW                | 4,3         | 6,6         | 9,2         | 9,2         | 13,5        | 23,8        | 10,6         | 20,6         | 35,3         |
| Flue efficiency at maximum load (lower value) <i>on/off fan</i>     | %                 | 94,1        | 93,9        | 95,1        | 95,1        | 93,6        | 94,0        | 93,8         | 95,5         | 94,0         |
| Flue efficiency at maximum load (lower value) <i>modulating fan</i> | %                 | 93,2        | 94,0        | 94,8        | 94,8        | 94,0        | 94,4        | 93,9         | 95,7         | 94,8         |
| Flue efficiency at minimum load (lower value) <i>on/off fan</i>     | %                 | 106,7       | 107,0       | 106,9       | 106,9       | 107,3       | 107,1       | 107,4        | 107,5        | 107,3        |
| Flue efficiency at minimum load (lower value) <i>modulating fan</i> | %                 | 106,1       | 106,7       | 106,4       | 106,4       | 106,6       | 106,9       | 106,9        | 107,4        | 107,1        |
| Burner turndown ratio   | +/-               | 3:1         | 4:1         | 4:1         | 5:1         | 5:1         | 7:1         | 6:1          | 7:1          | 4:1          |
| Gas consumption G20 (15 °C)   | m <sup>3</sup> /h | 1,50 - 0,41 | 2,54 - 0,57 | 3,62 - 0,89 | 4,15 - 0,90 | 6,22 - 1,07 | 8,29 - 1,27 | 10,30 - 1,68 | 13,99 - 1,76 | 15,57 - 3,68 |
| Gas consumption G25 (15 °C)   | m <sup>3</sup> /h | 1,75 - 0,49 | 2,95 - 0,65 | 4,1 - 1,02  | 4,73 - 1,02 | 7,03 - 1,20 | 9,3 - 1,44  | 11,57 - 1,91 | 15,98 - 2,00 | 17,65 - 4,18 |
| Gas consumption G31 (15 °C)   | kg/h              | 1,13 - 0,32 | 1,91 - 0,48 | 2,68 - 0,64 | 3,17 - 0,64 | 4,72 - 1,04 | 6,22 - 0,89 | 7,76 - 1,34  | 10,51 - 2,23 | 11,69 - 2,57 |
| Gas consumption G30 (15 °C)   | kg/h              | 1,19 - 0,33 | 2,02 - 0,51 | 2,92 - 0,72 | 3,46 - 0,72 | 5,05 - 1,11 | 6,70 - 0,96 | 8,19 - 1,48  | 11,1 - 1,85  | 12,35 - 2,72 |
| Air displacement (20 °C) <i>on/off fan</i>                          | m <sup>3</sup> /h | 1410        | 2190        | 5000        | 5000        | 5300        | 9000        | 9800         | 16300        | 16300        |
| Air displacement (20 °C) <i>modulating fan</i>                      | m <sup>3</sup> /h | 850 - 1730  | 1090 - 2470 | 1350 - 3900 | 1350 - 3900 | 2700 - 5500 | 4500 - 8800 | 5400 - 9400  | 7350 - 14500 | 7350 - 16300 |
| Delta T (ΔT) <i>on/off fan</i>                                      | K                 | 29,0 - 9,2  | 31,5 - 9,0  | 20,0 - 5,5  | 23,1 - 5,5  | 31,8 - 7,7  | 25,2 - 7,9  | 29,6 - 9,2   | 23,7 - 3,8   | 25,9 - 6,5   |
| Delta T (ΔT) <i>modulating fan</i>                                  | K                 | 23,4 - 14,8 | 28,0 - 17,8 | 25,7 - 20,4 | 29,3 - 19,9 | 30,8 - 14,5 | 25,9 - 15,6 | 30,9 - 16,5  | 26,7 - 8,3   | 26,2 - 14,2  |
| Throw   | m                 | 10 - 16     | 14 - 20     | 28 - 36     | 26 - 36     | 26 - 36     | 32 - 46     | 36 - 50      | 48 - 68      | 48 - 68      |
| Weight of GS+   | kg                | 50          | 56          | 95          | 95          | 111         | 136         | 155          | 228          | 230          |
| Noise level (5 m, side) <i>on/off fan</i>                           | dB(A)             | 44          | 48          | 48          | 48          | 51          | 52          | 52           | 58           | 58           |
| Noise level (5 m, side) <i>modulating fan</i>                       | dB(A)             | 44-31       | 48-31       | 47-31       | 47-31       | 51-33       | 49-33       | 52-34        | 55-34        | 55-34        |
| Electrical power at 230V  | W                 | 100         | 175         | 290         | 290         | 340         | 480         | 510          | 1300         | 1300         |
| Consumed current  | A                 | 0,5         | 0,8         | 1,4         | 1,4         | 1,6         | 2,3         | 2,5          | 5,9          | 5,9          |

## Accessories – flue gas exhaust

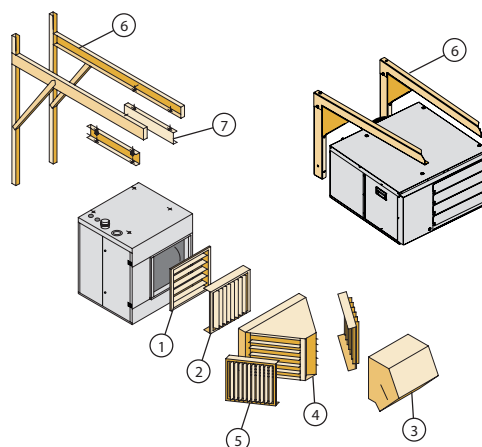


- |                              |   |
|------------------------------|---|
| 1 Extension set              | 5 Single flue set vertical                |
| 2 90° elbow                  | 6 Roof flashing for pitched roof          |
| 3 45° elbow                  | 7 Adhesive plate                          |
| 4 Single flue set horizontal | 8 Flexible roof flashing for cladded roof |

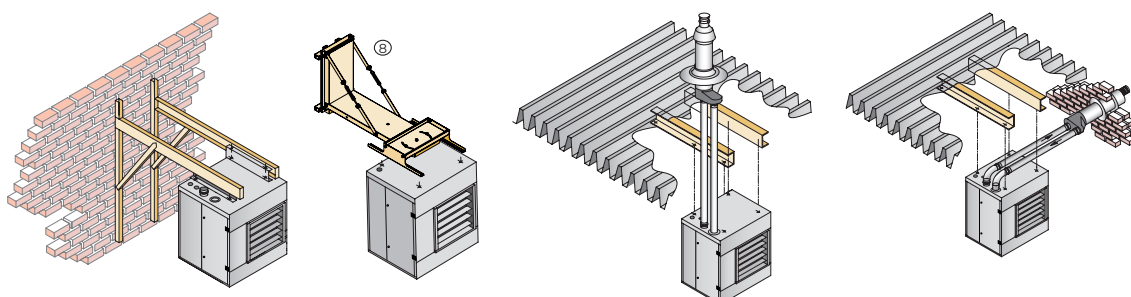


## Accessories – additional sections

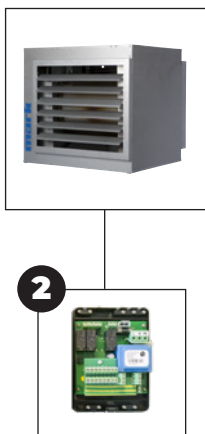
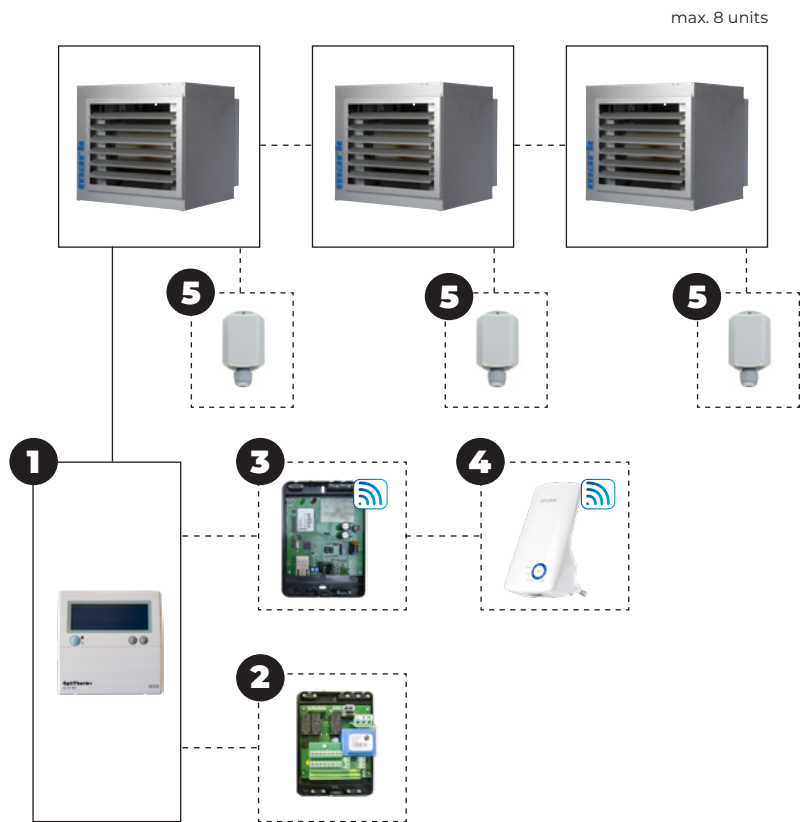
- |   |
|---|
| 1 = Horizontal louvers (standard)             |
| 2 = Vertical louvres                          |
| 3 = Downflow hood 45°                         |
| 4 = Diffuser (2 x 45°) and horizontal louvres |
| 5 = Vertical louvres for diffuser             |
| 6 = Set of wall mounting brackets             |
| 7 = Shock absorbers set                       |
| 8 = Reversible wall bracket (types 15 - 60)   |



## Assembly/location suggestions



## Controls



### Control combination options

#### Room temperature control

GS+ + **1**

GS+ + **1** + **5**

#### Room temperature control in combination with remote control\*

A remote connection with the mobile phone app is only possible when using a Web module. A WiFi bridge can be added to create a wireless connection.

GS+ + **1** + **3**

GS+ + **1** + **3** + **4**

GS+ + **1** + **5** + **3**

GS+ + **1** + **5** + **3** + **4**

#### Room temperature control in combination with Modbus

Allows you to read the status and change the settings of the Optitherm+.

GS+ + **1** + **2** + **5**

GS+ + **1** + **2**

#### Capacity control with external 0-10V signal or Modbus

Heating / Continuous ventilation / reset contacts / Modbus communication

GS+ + **2**

\* You need a separate Optitherm+ and Web module for each unit that you want to read out via the app. When using one Web module, only the fault messages and history of the first unit can be read via the app. It is possible to control multiple unit with one Web module via the app.

**See price list for description and code numbers of the relevant items**