

MARKCLIMATE.COM

Specialist in climate control
since 1945

G+ MODULE

**GAS-FIRED HIGH PERFORMANCE BURNING
MODULE FOR AIR HANDLING UNITS**

mark[®]
CLIMATE TECHNOLOGY
FOR A HEALTHY CLIMATE



Product features

- Efficiency >106%
- Modulation range 4:1/7:1
- Closed design
- Electronic ignition of the main burner
- Control: modulating
- Module suitable for installation in an air handling unit
- Low NOx
- Advanced modulating burner technology
- Stainless steel combustion chamber & heat exchanger

Gas-fired condensing modulating air heater

The Mark G+ MODULE is a gas-fired, high-performance air heating module designed to be inserted in Air Handling Units and in Rooftop Units. This condensing equipment provides an efficiency greater than 106% (lower value).

Heat is generated via a modulating premix-burner which results in very low gas consumption. When a G+ MODULE is used as an after-heating module, the device will be in part-load operation most of the time. This automatically leads to the highest efficiency.

Compared with a hot water coil, the G+ has the advantage that there is no need to provide an additional boiler. No hot water piping from and to the unit and therefore no pipe line losses. In case of an outside version no water pipe insulation is required.

The combustion chamber and the heat exchanger are made of Inox 441. The premix gas burner guarantees the absence of carbon monoxide and an NO_x emission lower than 50 parts per million.

The electronic board that controls the burner, continuously modulates the thermic input between the minimum and the maximum inputs, based on the preset parameters of regulation and measured by the regulation system of the Air Handling Unit.

Control options

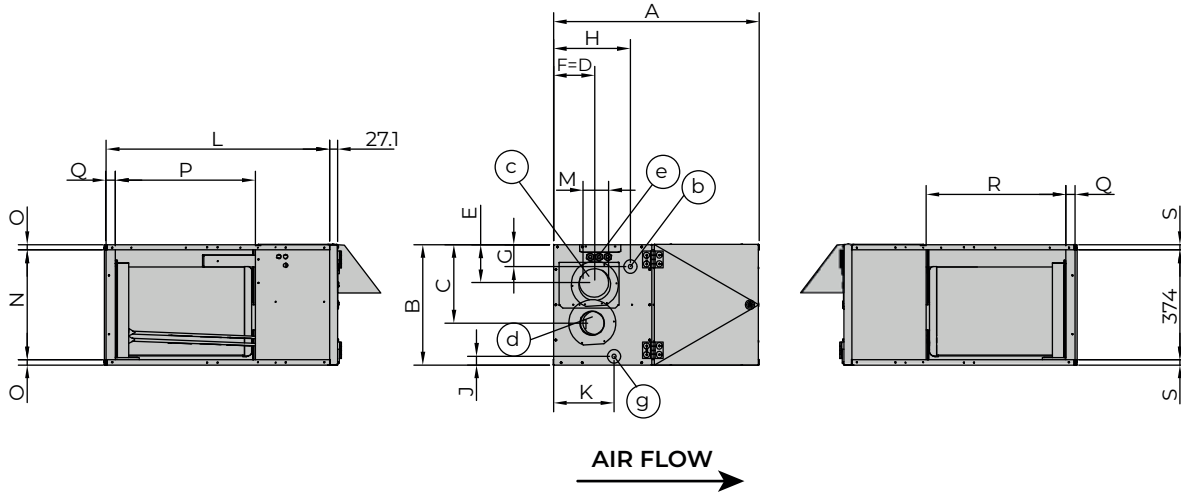
In combination with an INTERFACE+ the electronic board is equipped with a 0-10 vdc input. An INTERFACE+ can be used in two ways.

1. Power control: An externally supplied 0-10VDC signal is converted into a power control of the burner. With an Interface+ module, one G+ can be controlled.

Potential free entry:	Reset
Potential free exits:	Malfunction
	Operation

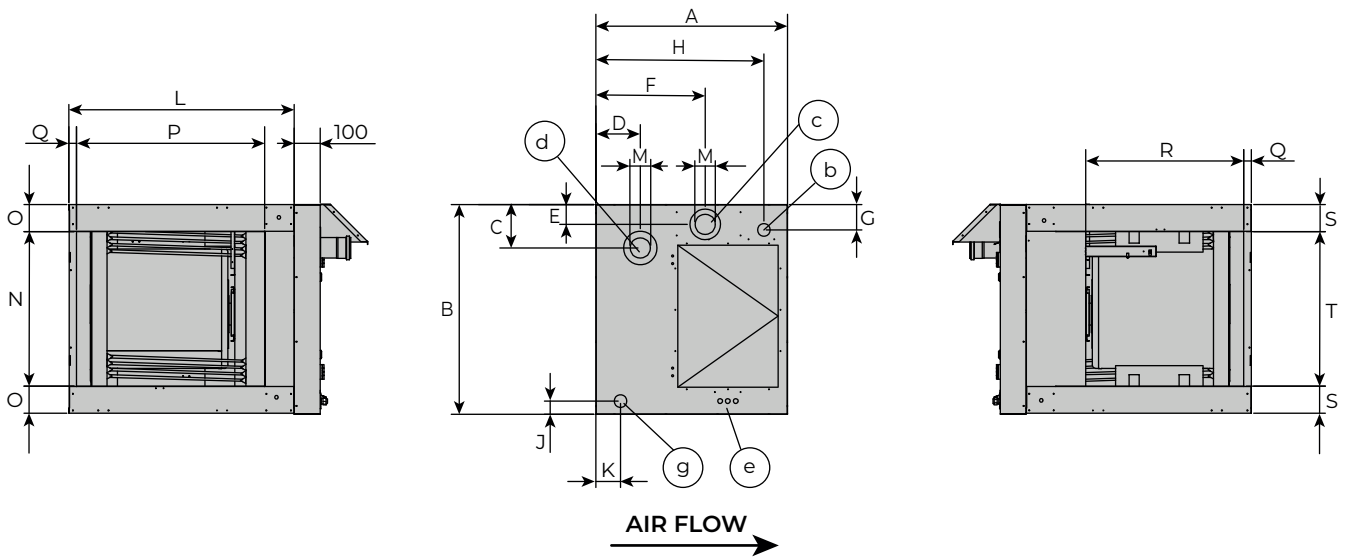
2. Connection BMS (building management system): Settings, actual temperatures and fault codes can be read using Modbus. Settings of the OptiTherm+ can be modified.

Dimensions - right hand unit



Type	A	B	C	D	E	F	G	H	J	K
15/25	700	410	267	140	128	140	74	261	30	206

Type	L	M	N	O	P	Q	R	S	T
15/25	760	80	374	18	476	140	476	18	374

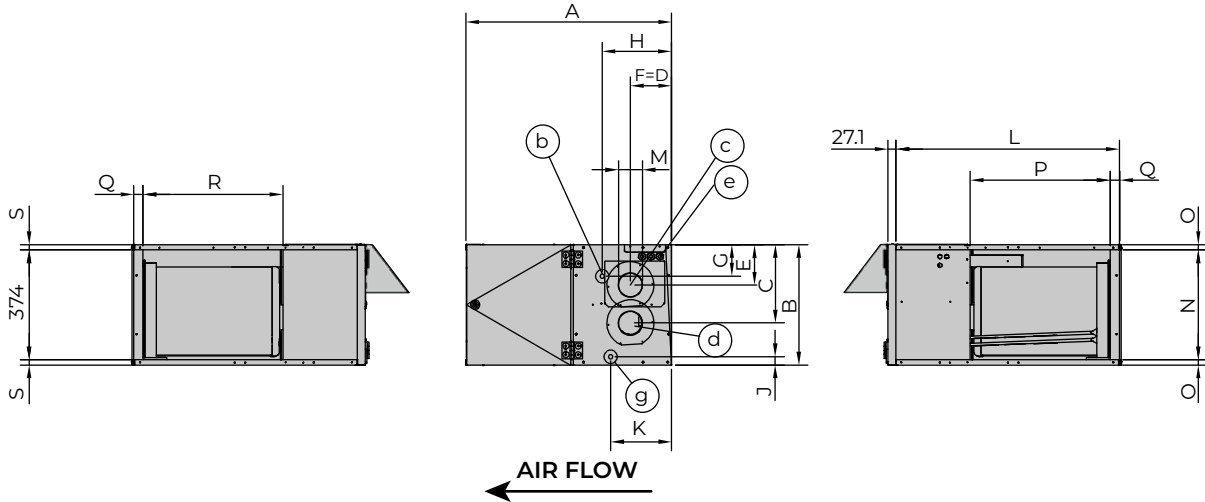


Type	A	B	C	D	E	F	G	H	J	K
35/40	743	814	168	172	76	423	98	652	52	95
60/80/100	743	814	168	172	76	423	98	652	52	95
135/150/200	1003	1004	220	185	105	483	98	695	52	95

Type	L	M	N	O	P	Q	R	S	T
35/40	875	80	600	107	730	29	614	105	600
60	1120	100	600	107	976	29	859	105	600
80	1305	100	600	107	1061	29	1044	105	600
100	1595	100	600	107	1451	29	1334	105	600
135/150/200	1890	130	850	75	1620	39	1577	110	780

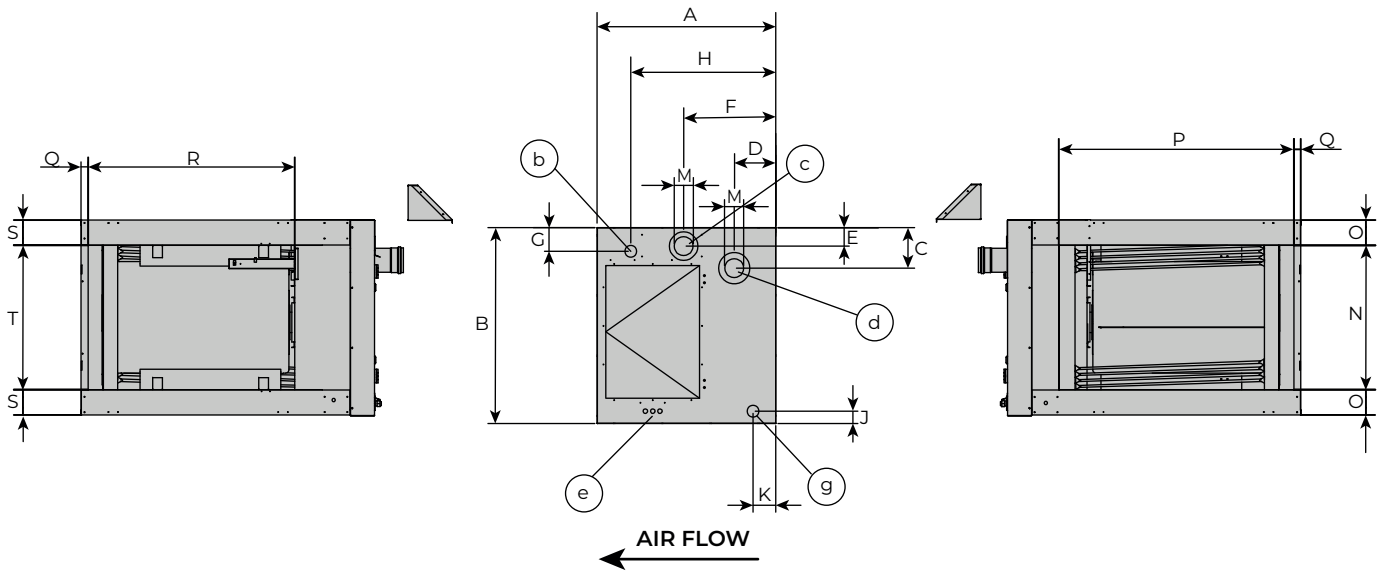
- b = Gas connection
- c = Combustion air inlet
- d = Flue gas exhaust
- e = Electrical connection
- g = Condensation connection
Ø 40 mm

Dimensions - left hand unit



Type	A	B	C	D	E	F	G	H	J	K
15/25	700	410	267	140	128	140	107	236	30	206

Type	L	M	N	O	P	Q	R	S	T
15/25	700	410	267	140	128	140	74	261	30



Type	A	B	C	D	E	F	G	H	J	K
35/40	743	814	168	172	76	382	98	603	52	95
60/80/100	743	814	168	172	76	382	98	603	52	95
135/150/200	1003	1004	220	185	105	483	98	938	52	95

Type	L	M	N	O	P	Q	R	S	T
35/40	875	80	600	107	730	29	614	105	600
60	1120	100	600	107	976	29	859	105	600
80	1305	100	600	107	1061	29	1044	105	600
100	1595	100	600	107	1451	29	1334	105	600
135/150/200	1890	130	850	75	1620	39	1577	110	780

- b = Gas connection
- c = Combustion air inlet
- d = Flue gas exhaust
- e = Electrical connection
- g = Condensation connection
Ø 40 mm

Technical information

Type		15	25	35	40	60	80	100	135	150	200
Nominal load (upper value)	kW	16,1	27,2	38,8	44,4	66,7	88,9	110,6	149,9	166,7	216,7
Maximal power	kW	13,6	23,0	33,4	38,4	56,2	75,6	96,6	128,9	141,0	185,7
Minimal load (upper value)	kW	4,6	6,8	9,6	9,6	13,9	24,5	10,8	21,1	36,6	41,6
Minimal power	kW	4,3	6,6	9,2	9,2	13,5	23,8	10,6	20,6	35,3	40,6
Efficiency at 100% load	%	94,1	93,9	95,7	94,8	94,2	94,3	94,2	95,1	94,8	93,6
Efficiency at min. load	%	104,4	106,1	107,3	107,3	107,4	106,2	106,3	107,9	107,0	107,3
Burner turndown ratio	+/-	3:1	4:1	4:1	5:1	5:1	7:1	6:1	7:1	4:1	5:1
Air volume, min.	m ³ /h	1250	2000	3760	3760	5640	7520	9400	13500	14200	17500
Air volume, max.*	m ³ /h	4100	4100	7200	7200	8640	13680	16200	20880	20880	24500
Weight	kg	46	51	93	93	112	130	131	230	232	256

* Larger air volumes using a bypass.



MARK CLIMATE TECHNOLOGY

Beneden Verlaat 87-89
9645 BM Veendam
The Netherlands

T: +31 (0)598 656623
E: info@markclimate.com
I: www.markclimate.com

MARK EIRE BV

Coolea, Macroom
Co. Cork
P12 W660 (Ireland)

T: +353 (0) 26 45334
E: sales@markeire.com
I: www.markeire.com