

REZNOR®

Trusted Heating Solutions

RHC & RHCLN

Gas Fired Heating Modules





Gas Fired Heating Modules

Condensing & Non Condensing Versions

Reznor gas fired heating modules are designed for inclusion in air handling units to provide a high efficiency gas fired heating section.

They may also be used for replacing steam and hot water coils in existing units and plenum systems to enable changeover from central boiler plant to decentralised gas fired systems.

The units also provide an ideal heating module for installation in ductwork systems and a variety of industrial applications including drying and curing.

Model Range

A total of twenty six models are available with outputs ranging from 24 to 200kW (non-condensing) and six models from 28 to 115kW (condensing). Where higher heat outputs are required, modules can be stacked, mounted in series or even side by side if sufficient space for access is available.

Energy Efficiency

RHCLN gas fired heating sections provide up to 106% (ncv) thermal efficiency directly with 91% for the RHC at the point of use, thereby eliminating the distribution and standby losses normally associated with central boiler plants.

In times of rapidly increasing energy costs, reducing energy consumption makes sense both financially and environmentally, since this also significantly reduces CO₂ emissions.

Although condensing air heaters require a higher initial capital investment, they are very economical and can repay the extra initial cost in fuel savings in 2-4 years depending on usage.

When replacing traditional hot water coil & boiler systems, savings of up to 30% can be achieved.

Optimised energy usage and reduced running costs result from:

- High turn down ratio from the pre-mix modulating burner (RHCLN)
- Instant response to changing conditions
- Reduced pre-heat period
- Elimination of residual thermal mass on plant shut down
- Low NO_x emissions - class 5 (RH-CLN)

CE Certification

All heating modules are fully CE certified and are supplied with fitting instructions. Each unit is fully tested prior to despatch, optional on site commissioning and full after sales service is available through a nationwide network of in-house service engineers.

Features & Benefits

- Application flexibility – units can accommodate both vertical and horizontal airflows.
- Units can easily be modified for opposite air flow directions, even on site.
- Modulating burner fitted as standard.
- Stainless steel combustion chamber & heat exchanger.
- Low cost – simple installation reduces costs
- Low NO_x emissions (class 5)
- Optimum choice - 3 different ranges offer various outputs and sizes to suit air handling unit profile

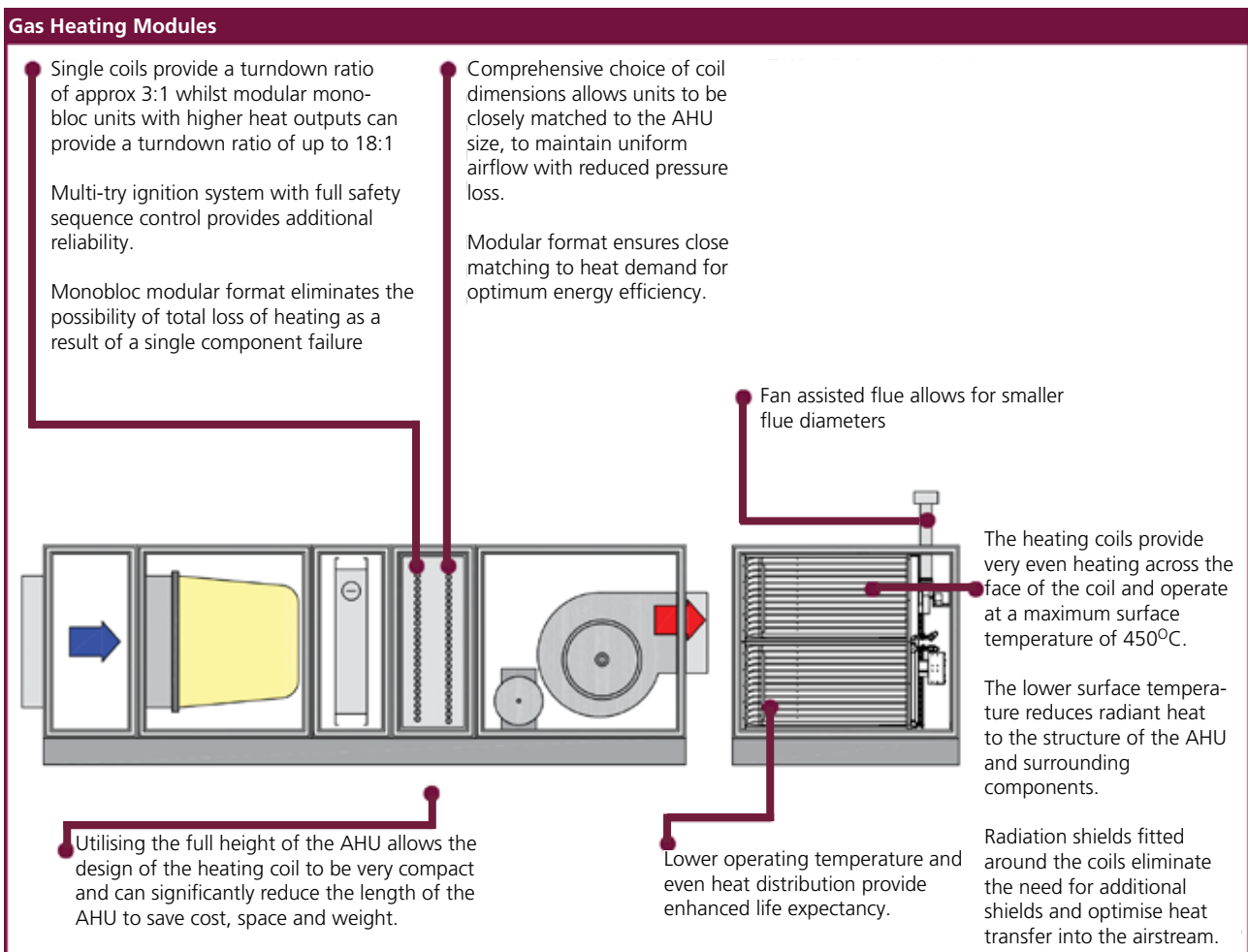
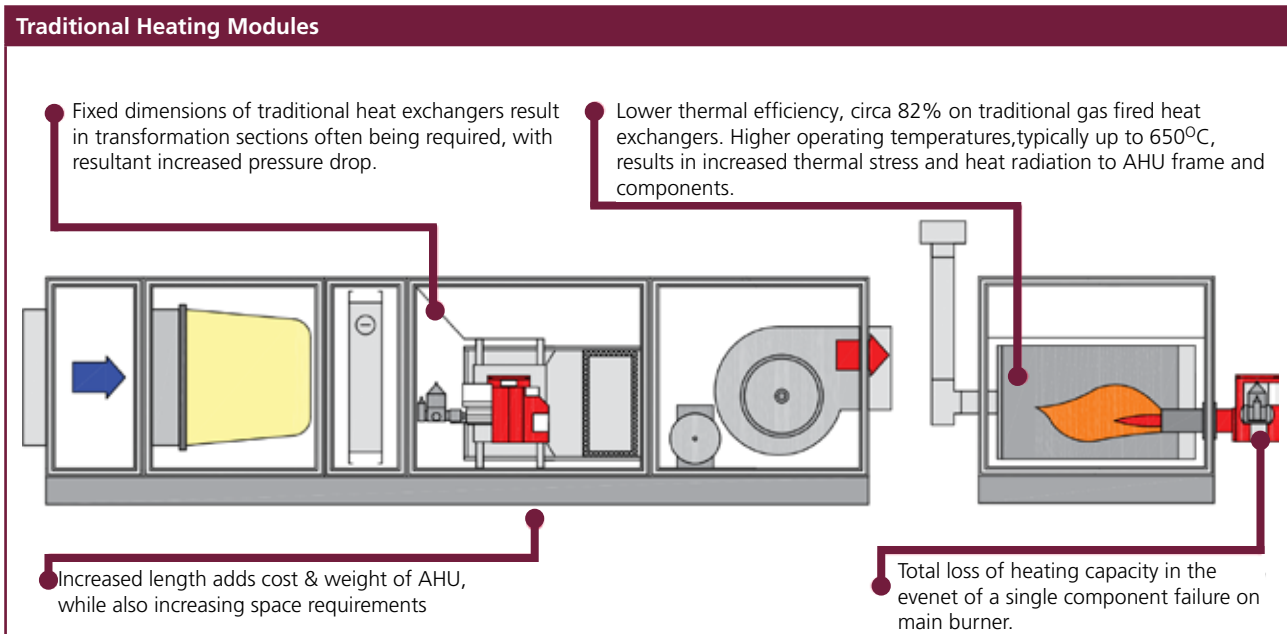
Reduced Installation Costs

The application of gas fired heating modules directly at the point of use, eliminates the need for a central boiler plant with all the associated costs and space requirements for the plant room, boiler, pumps, pipework and insulation.

Gas fired heating modules also remove the risk of freezing and subsequent costs of frost protection for the heating coils and pipework, a factor which is particularly relevant for external or rooftop units.

Simple Installation

The heating modules are designed for fast and simple installation and only require "coil slides" for incorporation within an Air Handling Unit.



Monobloc Units

Up to three RHC modules can be supplied assembled as a single monobloc to provide heat outputs up to 600kW. Monobloc modules may be installed side by side to increase heat outputs up to 1200kW.

The monobloc units combine high thermal efficiency with an excellent turndown ratio of up to 18:1, depending on the output and control system selected, to optimise energy usage. The modular approach provides improved reliability, allowing large heat output units to be utilised without the risk of loss of total heating on failure of a single component.

Where higher airflows are required a top or side bypass can be incorporated to minimise the pressure drop through the heating coil

Optional Control Vestibules

Units are also available with an enclosed control vestibule. The flanged vestibule allows the width of the Air Handling Unit to be minimised with the control vestibule projecting outside.

The vestibules may be specified for either internal or outdoor units. Vestibules have a durable powder coat finish to RAL 7035 other colours are available on request.

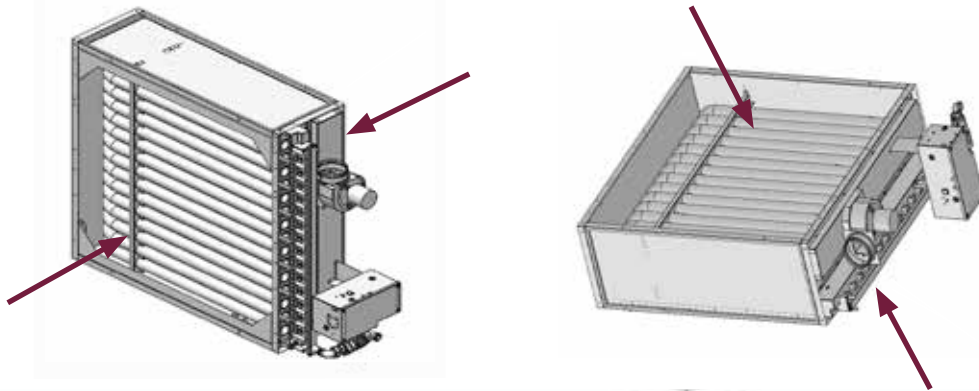
Higher airflow units may be fitted with a side bypass to minimise the pressure drop through the heating coil. Top bypass arrangement is not available for units fitted with a vestibule.

Units supplied complete with controls vestibule are also ideal for applications where the heat module is to be installed into ductwork

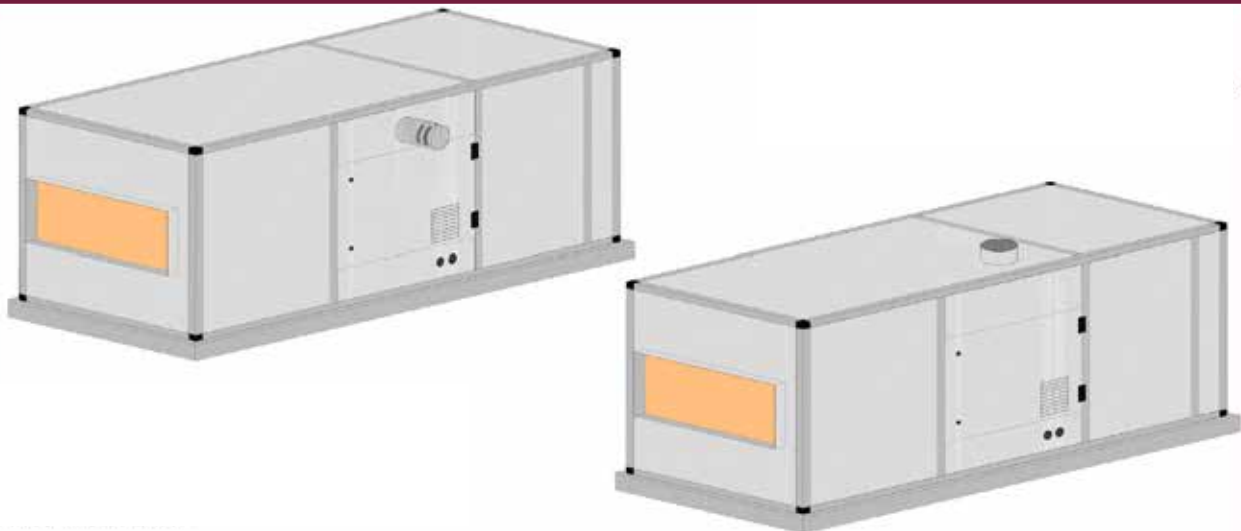


Airflow Directions

The heating coils may be used in either horizontal or vertical configurations and are suitable for various airflow directions



Typical arrangement within AHU showing flue & combustion air





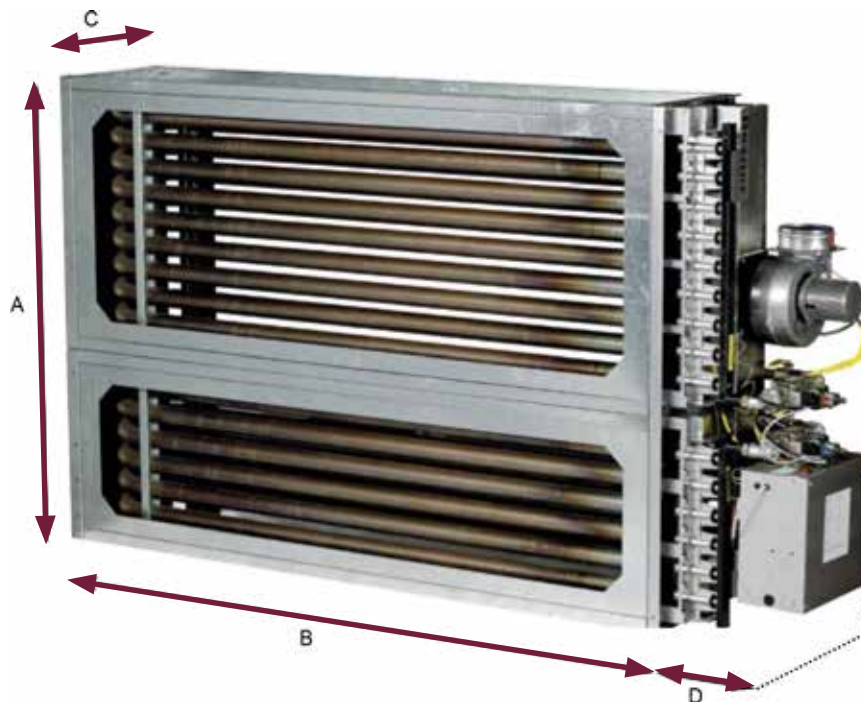
DIMENSIONAL DATA			4024.05	4030.06	4036.08	4050.06	4060.07	4075.09	4100.12	4125.15	4150.18
Model											
Height	A	MM	559	559	837	531	601	741	950	1272	1481
Width	B	MM	677	677	677	1049	1049	1049	1049	1049	1049
Depth	C	MM	648	648	648	800	800	800	800	930	930
Control compartment	D	MM	380	380	380	400	400	400	400	420	420

TECHNICAL DATA			4024.05	4030.06	4036.08	4050.06	4060.07	4075.09	4100.12	4125.15	4150.18
Model											
Nominal heat output	kW		24	30	36	50	60	75	100	125	150
Natural gas consumption ¹	m ³ /h		2.8	3.5	4.2	5.9	7.1	8.7	11.5	14.6	17.5
Gas connection ²	Rc		¾"	¾"	¾"	¾"	¾"	¾"	¾"	1¼"	1¼"
Flue / combustion air diameter	mm		100	100	130	130	130	130	130	130	130
Electrical consumption (230V 1Ph 50 Hz)	kW		0.153	0.153	0.153	0.153	0.153	0.153	0.153	0.282	0.282
Net weight	kg		31	33	52	90	100	120	149	220	250
Minimum airflow	m ³ /h		2880	3290	5281	3900	4700	5700	7500	9600	12300
Pressure drop @ minimum airflow	Pa		15	15	25	40	40	37	40	68	44
Twin Module			4024.05	4030.06	4036.08	4050.06	4060.07	4075.09	4100.12	4125.15	4150.18
Nominal heat output	kW		N/A	N/A	N/A	100	120	150	200	250	300
Min airflow (standard unit)	m ³ /h		N/A	N/A	N/A	5950	7150	8800	11700	15600	17500
Pressure drop @ minimum airflow	Pa		N/A	N/A	N/A	150	150	150	156	359	178

1. Natural gas G20 - calorific value 10.48kW/m³ GC.V.

2. Not supply line size

Table for twin modules shows total heat output and airflow data, for gas consumption please multiply single module data as appropriate



DIMENSIONAL DATA

Model			8045.09	8060.12	8075.15	8075.09	8100.12	8125.15	8150.18	8175.21	8200.24
Height	A	mm	741	950	1160	741	950	1272	1481	1691	1900
Width	B	mm	1244	1244	1244	1844	1844	1844	1844	1844	1844
Depth	C	mm	400	400	400	400	400	400	400	400	530
Control compartment	D	mm	400	400	400	400	400	420	420	420	500

TECHNICAL DATA

Single Module		8045.09	8060.12	8075.15	8075.09	8100.12	8125.15	8150.18	8175.21	8200.24
Nominal heat output	kW	45	60	75	75	100	125	150	175	200
Natural gas consumption ¹	m ³ /h	5.3	7.1	8.7	8.7	11.5	14.6	17.5	20.2	23.3
Gas connection ²	Rc	¾"	¾"	¾"	¾"	¾"	1¼"	1¼"	1¼"	1¼"
Flue / combustion air diameter	mm	130	130	130	130	130	130	130	130	130
Electric consumption (230V 1Ph 50 Hz)	kW	0.153	0.153	0.153	0.153	0.153	0.282	0.282	0.282	0.655
Net weight	kg	87	120	140	110	145	200	230	265	305
Min airflow (standard unit)	m ³ /h	6600	8750	11900	10790	14300	18000	21000	21500	24000
Pressure drop @ minimum airflow	Pa	40	40	50	52	52	50	50	45	40
Min airflow with optional diffuser plate	m ³ /h	5650	7500	9300	9300	12400	15600	18200	20100	23300
Pressure drop with diffuser plate	Pa	90	90	85	112	112	105	105	90	100
Twin Module		8045.09	8060.12	8075.15	8075.09	8100.12	8125.15	8150.18	8175.21	8200.24
Nominal heat output	kW	90	120	150	150	200	250	300	350	400
Min airflow (standard unit)	m ³ /h	6600	8750	11900	10750	14300	18000	21000	21500	24000
Pressure drop @ minimum airflow	Pa	70	70	70	100	100	90	90	70	65
Max airflow with optional diffuser plate	m ³ /h	5650	7500	9300	9300	12400	15600	18200	20100	23300
Pressure drop with diffuser plate	Pa	100	100	100	125	125	125	125	125	150
Triple Module		8045.09	8060.12	8075.15	8075.09	8100.12	8125.15	8150.18	8175.21	8200.24
Nominal heat output	kW	135	180	225	275	300	375	450	525	600
Minimum airflow (standard unit)	m ³ /h	7850	10500	13000	13000	17000	22000	26000	30000	35000
Pressure drop with diffuser plate	Pa	140	145	140	190	190	180	180	180	190

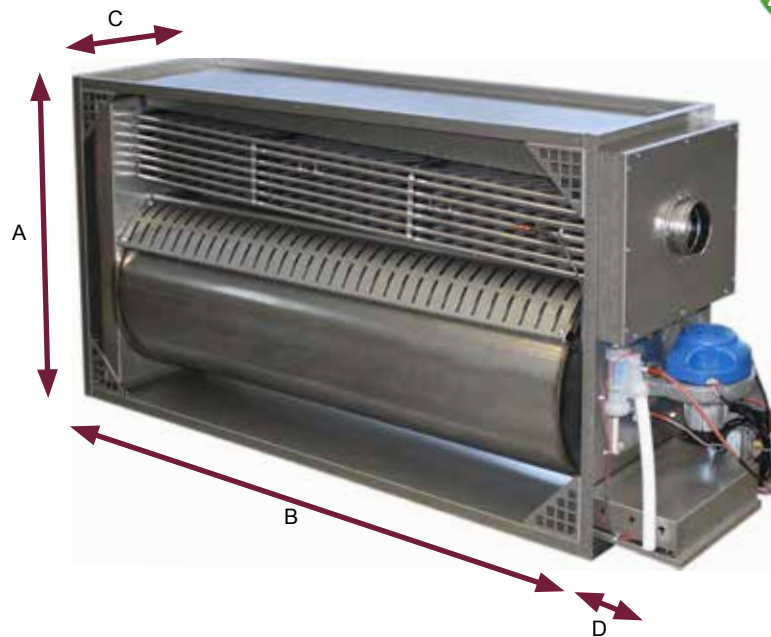
1. Natural gas G20 - calorific value 10.48kW/m³ GCV.

2. Not supply line size.

Table for twin and triple modules shows total heat output and airflow data, for gas consumption please multiply single module data as appropriate



ErP Lot 21
Seasonal Efficiency and
NOx compliant



DIMENSIONAL DATA

Model			30	40	50	60	90	120
Height	A	mm	635	635	685	685	840	840
Width	B	mm	711	711	1054	1054	1575	1575
Depth	C	mm	450	450	450	450	450	450
Control compartment	D	mm	180	180	180	180	180	180

TECHNICAL DATA

RHCLN			30	40	50	60	90	120
Maximum heat output		kW	28	37	48	57	89	115
Minimum heat output			10	14	19	21	35	43
Max thermal eff. at max input (Nat gas)	net	%	96.1	96.1	96.4	96.6	98.0	99.1
Max thermal eff. at min input (Nat gas)	net	%	106.5	105.1	103.2	105.1	105.2	106.0
Gas consumption ¹	Natural gas G20	m ³ /h	3.1	4.1	5,3	6.2	9.6	12.3
	Propane G31	kg/h	2.28	3.02	3.9	4.57	7.07	9.06
Maximum condensate produced		l/h	1.1	1.3	1.5	1.9	3.3	4.3
Maximum airflow		m ³ /h	8,300	11,000	14,000	17,000	26,000	34,000
Minimum airflow		m ³ /h	2,100	2,750	3,500	4,250	6,500	8,500
Maximum pressure drop		pa	600					
Maximum flue run		m	9	9	9	9	9	9
NOx Class ²			5					
Flue connection size		mm	80	80	80	80	100	100
Gas connection size		Rc	¾"					
Condensate connection size		mm	20	20	20	20	20	20
Electrical supply			230V ~ 50Hz 1Ph+N					
Weight		kg	48	51	62	66	122	129

1. Natural gas G20 - calorific value 10.48kW/m³ GCV. Propane G31 calorific value 14.0kW/kg GCV.

2. Based upon EN 1020 standard, operating on natural gas

Other products in the Reznor range:-

- Warm air heaters
- Radiant heating
- Destratification fans
- Heating & ventilation units
- Packaged rooftop units
- Air induction systems
- Air curtains
- Evaporative cooling

GB/REZ/RHC/001/0120



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