



# EURO-T 2000 ROOM SEALED GAS-FIRED UNIT HEATERS

**Reznor®**

*THE NAME FOR WARM AIR.*

# EURO-T 2000 ROOM SEALED GAS-FIRED UNIT HEATERS

Euro-T2000 series is a range of fully automatic room sealed gas fired unit heaters, for industrial and commercial applications, particularly suited where draughts, negative pressure, dust or other non corrosive contaminants may be present.

At the heart of the heaters is the perfectly co-ordinated combination of heat exchanger and burner, developed and patented by Reznor, that has set the standard for efficiency, reliability and operational life.

The combustion process is completely separated from the heated space. An integral flue gas fan exhausts the products of combustion and at the same time introduces fresh air from outside the building for combustion.

This separated combustion technology, pioneered by Reznor, offers major advantages:

- Higher thermal efficiencies - up to 82% based on gross calorific values.
- Higher seasonal efficiencies - loss of heated room air via a conventional flue is eliminated.
- Lower installation costs - balanced flue system requires no additional ventilation openings in external walls and may be flued via a simple wall terminal avoiding the need for any roof flashings.
- Improved reliability - hot surface ignition system eliminates pilot problems.
- Optional low NOx units may be specified if required.

Units are available in capacities from 23 to 95 kW. Standard models suitable for natural gas are equipped with aluminised steel heat exchangers, automatic ignition systems, single phase motors and have the flue and combustion air spigots located on the top of the heater.

A comprehensive range of options allows the units to be tailor made to suit extensive application requirements. Options include stainless steel heat exchangers, vertical louvres, 30, 60 and 90 degree downturn nozzles and units suitable for use on LPG. The heaters may also be provided with the flue and combustion air spigots located on the side to allow complete flexibility of flueing.

For closer temperature control and reduced stratification, units may be specified with high/low or fully modulating burner control.

Reznor microprocessor energy management controls are available to complement the energy efficient heaters and optimise fuel economy.

## EURO-T2000S

The standard axial fan versions are designed for freeblowing industrial and commercial applications.

Units are equipped with high quality axial flow fans to provide

good air distribution at low noise levels. Standard models are supplied with aluminised steel heat exchangers, hot surface ignition and horizontal louvres.

Since the units are room sealed, they do not require the installation of air grilles to the external walls.



## EURO-T2000A

The high performance axial fan models are designed for freeblowing industrial and commercial applications where higher mounting heights are required. The units are fitted with an extended fan plenum chamber and a large diameter axial flow fan to provide substantially increased airflows. A high induction discharge head complete with both horizontal and vertical discharge louvres improves the air mixing and increases the air throw to ensure minimal stratification and uniform air distribution and temperatures within the building. The units may be used in place of heaters fitted with lower airflow direct drive centrifugal fans to provide improved air distribution at lower noise levels.

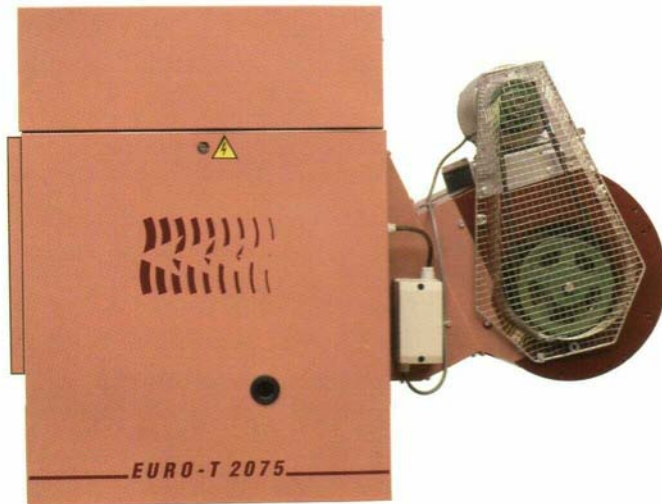
The aesthetically pleasing design and improved air distribution ideally match the criteria for new low energy buildings.



## EURO-T2000B

Type-B models are fitted with belt driven, centrifugal blowers and a duct outlet spigot to allow the units to be connected to air distribution ductwork. The large capacity forward curved centrifugal fans are mounted on an angled plenum chamber to optimise the air distribution across the heat exchanger, and a selection of motor and drive configurations enables the units to match a wide range of airflow and static pressure requirements.

The units are also ideal where freeblowing heaters are required at very high mounting heights. Use of the high capacity belt driven fans allows much higher airflows to be selected to ensure correct air distribution to the working zone. A range of outlets complements the choice of airflows. The high induction louvre, complete with horizontal and vertical louvres, may be selected, or downturn nozzles which can be used in multiples to provide 30,60 or 90 degree discharge.



**Type D Downflow Plenum.** For centrifugal fan units where a vertical downflow discharge is required, units may be fitted with a Type D outlet. This downflow head is fitted with four individual sets of louvres which may be adjusted to give the precise air pattern required in two, three or four directions.

## EURO-T2000E

Designed to meet a wide range of air handling applications, these units are supplied with forward curved centrifugal fans enclosed in an internally insulated fan cabinet. The fan cabinet may be fitted with a variety of filter options and also allows for the connection of recirculation ductwork. Comprehensive drive and motor options allow a range of airflows and duties to be specified to suit duct system design up to 400Pa.

All models are fitted to a base frame which can be floor mounted or from which the units can be simply suspended using the four suspension points provided. Units are supplied as standard with an outlet spigot for connection to ductwork, but may also be used with the optional outlet heads for freeblowing applications.

A range of options, including high/low or modulating burner control, air flow proving or dirty filter pressure switches and



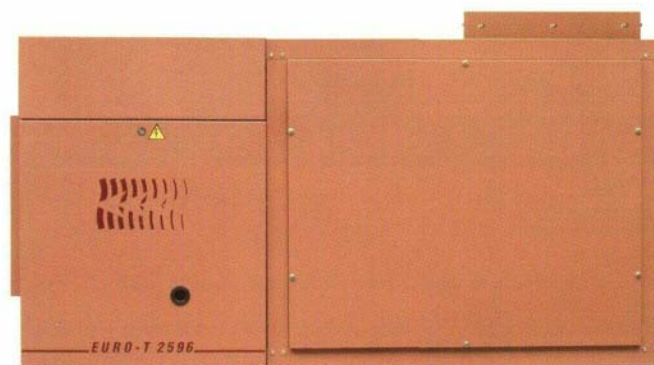
constant fan facility, ensure optimum system design. Since the units are room sealed they do not require the installation of combustion air grilles to the external walls of the plant room.

Units are also available for combined heating and ventilation applications where fresh air is required either in Winter or for Summer ventilation.

Where units are used to provide ventilation, stainless steel heat exchangers (AISI 409) are recommended. Dampers may be fitted to the back, top or bottom of the cabinet. Dampers fitted on the back and top, or back and bottom, may be linked to allow the cabinet to be used as a mixing box for fresh and recirculated air. Fully automatic operation may be achieved using two position, three position or fully modulating damper actuators, or alternatively, the dampers may be manually controlled.

Fully modulating burner control is particularly beneficial when winter ventilation is required. A modulating control allows units to be used as conventional heaters which then provide tempered fresh air input once the space reaches design temperature.

Where make-up or ventilation air is used a fast response ignition system should be specified.



# EURO-T 2000 ROOM SEALED GAS-FIRED UNIT HEATERS

## EURO-T TECHNICAL DATA

MODEL			T2025	T2030	T2035	T2045	T2055	T2075	T2095
Heat output		kW	22.8	27.8	33.7	39.4	49.9	68.3	91.0
Gas consumption (1)	Nat. gas G20	m <sup>3</sup> /h	2.75	3.36	4.07	4.76	6.03	8.25	11.01
	Propane G30	kg/h	2.06	2.51	3.05	3.56	4.51	6.18	8.24
	Butane G31	kg/h	2.10	2.57	3.12	3.64	4.61	6.31	8.42
Gas connection (2)		Rc	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Flue diameter		mm	100	100	100	130	130	130	130
Combustion air inlet		mm	100	100	100	130	130	130	130
Maximum flue length class c appliance (3)	Inlet & Outlet	m	9	9	9	9	9	9	9

## AXIAL FAN FREEBLOWING MODELS T2000S & T2000A

T2000S			T2025S	T2030S	T2035S	T2045S	T2055S	T2075S	T2095S
Airflow @ 15°C		m <sup>3</sup> /h	1700	2400	3700	3700	4200	5600	7900
Temperature rise		K	39	34	27	32	35	36	34
Throw (4)		m	17	20	28	28	28	32	38
Mounting height (5)		m	2.0-2.5		2.25-2.75		2.5-3.0		
Sound pressure level Lp (6)		dB(A)	53	52	55	55	55	56	59
Fan motor rating		kW	0.075	0.120	0.120	0.120	0.120	2 x 0.120	2 x 0.120
Total electrical rating (7)		kW	0.25	0.27	0.30	0.30	0.30	0.54	0.60
Net weight		kg	86	92	108	108	130	150	195
Shipping weight		kg	109	115	137	137	162	190	237
T2000A			T2025A	T2030A	T2035A	T2045A	T2055A	T2075A	T2095A
Airflow @ 15°C		m <sup>3</sup> /h	2500	3100	4000	4000	5600	7300	8700
Temperature rise		K	26	26	25	29	26	27	31
Throw (4)		m	26	26	31	31	32	37	46
Mounting height (5)		m	2.25-3.25		2.5-3.5		2.75-4.0	3.0-4.25	3.0-4.5
Sound pressure level Lp (6)		dB(A)	55	56	55	55	59	59	60
Fan motor rating		kW	0.20	0.23	0.24	0.24	0.40	0.37	0.56
Total electrical rating (7)		kW	0.35	0.38	0.40	0.40	0.55	0.52	0.71
Net weight		kg	101	112	142	142	157	200	232
Shipping weight		kg	125	136	171	172	191	239	277

## CENTRIFUGAL FAN MODELS T2000B & T2000E

T2000B			T2025B	T2030B	T2035B	T2045B	T2055B	T2075B	T2095B
Airflow @ 15°C		m <sup>3</sup> /h	2100	2600	3700	3700	4700	6300	8400
Temperature rise		K	32	31	31	31	26	32	32
Throw (4)		m	24	25	31	31	32	34	47
Mounting height (5)		m	2.25-3.0		2.5-3.25		2.75-3.75	3.0-4.0	3.0-4.25
Sound pressure level Lp (6)		dB(A)	55	52	55	55	59	59	59
Fan motor rating		kW	0.18	0.18	0.25	0.25	0.37	0.55	0.75
Total electrical rating (7)		kW	0.50	0.50	0.55	0.55	0.68	0.87	1.13
Net weight		kg	108	135	155	155	168	193	248
Shipping weight		kg	133	160	195	195	210	240	298
T2000E			T2025E	T2030E	T2035E	T2045E	T2055E	T2075E	T2095E
Airflow @ 15°C	min	m <sup>3</sup> /h	1350	1650	2000	2300	2900	4000	5400
	max	m <sup>3</sup> /h	3000	4000	5000	5000	7200	9000	12000
Fan motor rating	min	kW	0.18	0.18	0.18	0.18	0.25	0.25	0.25
	max	kW	1.1	1.1	1.5	1.5	2.2	3.00	3.00
Total electrical rating (7)		kW	Motor rating plus 0.15kW						
Net weight (8)		kg	138	169	200	200	221	267	319
Shipping weight (8)		kg	158	191	222	222	244	298	353

## APPLIANCES WITH HIGHER EFFICIENCY

MODEL			T2026	T2031	T2036	T2046	T2056	T2076	T2096
Heat output (9)			23.7	28.8	35.0	41.0	51.9	71.0	94.6

### Notes

- Natural gas G20-Calorific value 10.48 kWh/m<sup>3</sup> GCV, 15°C 1013mbar. Propane G31-Calorific value 14.0 kWh/kg GCV. Butane G30, calorific value 13.7 kWh/kg GCV.
- Not supply line size.
- Maximum additional lengths that may be added to terminal section. Deduct 1.5m for each 90° elbow installed.
- Isothermic condition, throw decay to 0.5m/s, discharge louvres zero deflection.
- To underside of heater.
- Typical installation; Q=2, A=160m<sup>2</sup>, distance 5m, discharge louvres zero deflection.
- During start up period (approx 30 seconds) load is increased by an additional 900W.
- Varies depending on motors & options fitted.
- All other data is the same as standard models, temperature rise will depend on airflow selected.

# TECHNICAL SPECIFICATION

## SPECIFICATION

### CABINETS

All components are manufactured from aluminised steel and exterior panels have a durable epoxy powder coat finish.

### HEAT EXCHANGER

Patented Thermocore venturi tube heat exchanger assembly with precision matched burners provide optimum efficiency and enhanced operational life.

Standard units are fitted with heat exchangers manufactured from special grade aluminised steel. For applications where fresh air is supplied through the unit, stainless steel heat exchangers (AISI 409) are recommended. Where chlorinated vapours or certain other contaminants may be present, AISI 316 stainless steel heat exchangers must be used; consult Reznor for such special applications.

### GAS AND SAFETY CONTROLS

All units are tested and approved to current European standards and are CE marked. A multi-functional gas control valve and a fully automatic ignition system provide full safety monitoring of the heater operation. Fan operation is controlled by an integral fan control which delays fan start up until the unit has reached operating temperature and continues to operate the fan after the burners have shut off, until all useful heat has been dissipated into the building.

For additional safety, all Reznor units are fitted with dual safety limit controls.

### AIR HANDLING

Axial fan models are fitted with direct drive axial flow fans and single phase 230V motors. Centrifugal fan models are fitted with double inlet forward curved centrifugal blowers and a belt drive with an adjustable motor pulley, to allow small on-site adjustments to be made. Motors may be single or three phase depending on the duty requirements up to 400Pa resistance.

### INSTALLATION

Installation must be carried out by a CORGI registered installer in accordance with the manufacturer's instructions.

Units may be suspended or base mounted on a non combustible surface.

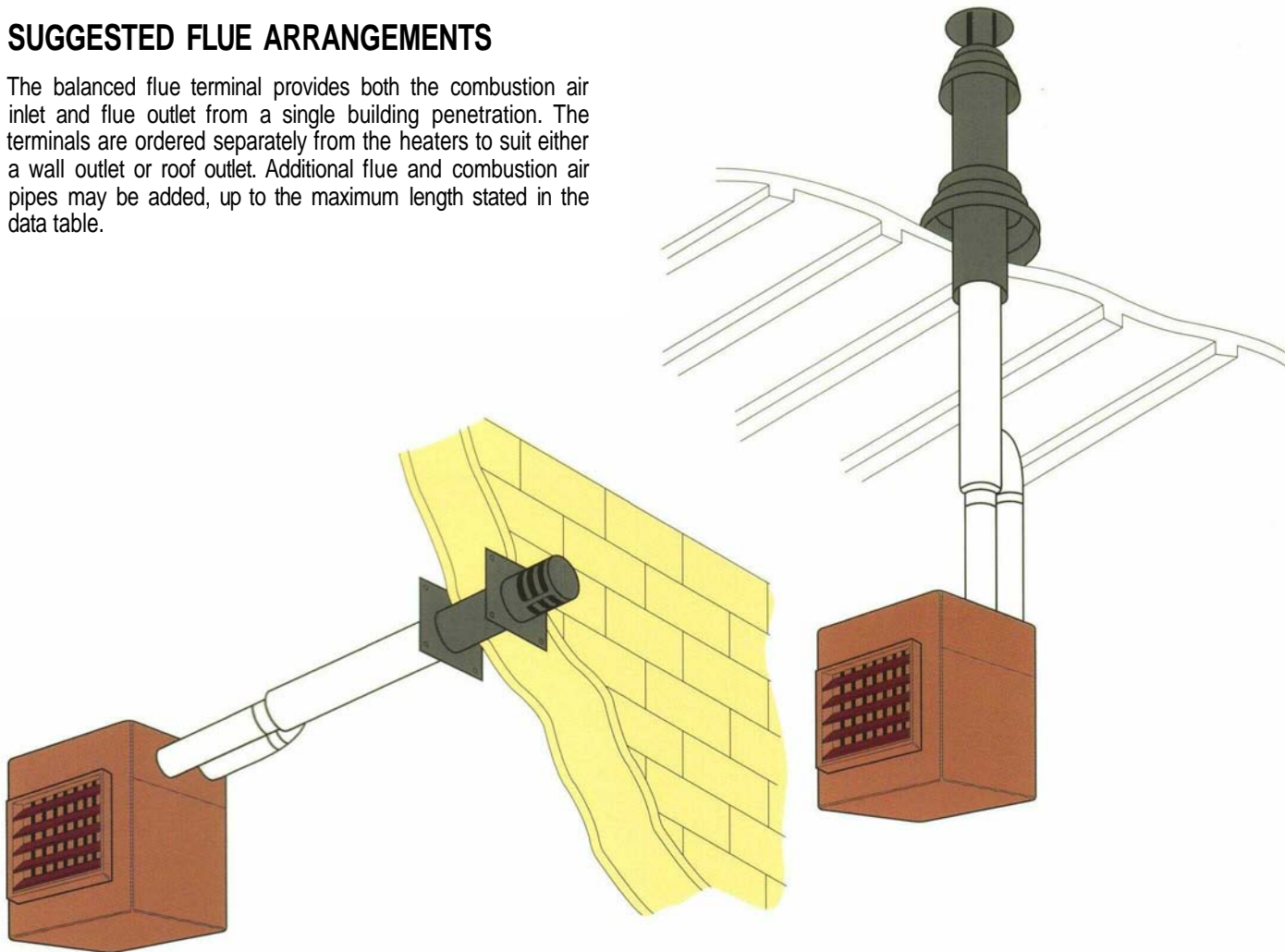
The units are approved as room sealed. In order to comply with the CE certification, the heaters must be used with the manufacturer's sealed flue system. Standard units are supplied with the flue and air inlet spigots on the top of the heater; as an alternative, units may be supplied with the spigots on the side.

Flue systems are available for either wall or roof penetrations. The concentric balanced flue terminal provides both the flue outlet and combustion air inlet from a single opening in the building.

A gas isolation valve must be fitted adjacent to each unit. An electrical isolator is also required, but the electrical supply to the units should not be switched off except for maintenance. Controls must be wired to the appropriate time and temperature terminals and must not switch the main electrical supply otherwise the control sequence of the heater will be affected.

## SUGGESTED FLUE ARRANGEMENTS

The balanced flue terminal provides both the combustion air inlet and flue outlet from a single building penetration. The terminals are ordered separately from the heaters to suit either a wall outlet or roof outlet. Additional flue and combustion air pipes may be added, up to the maximum length stated in the data table.



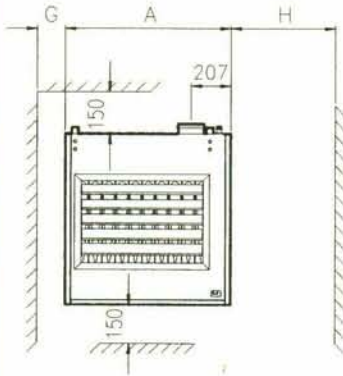
Optional side flue outlet

Standard top flue outlet

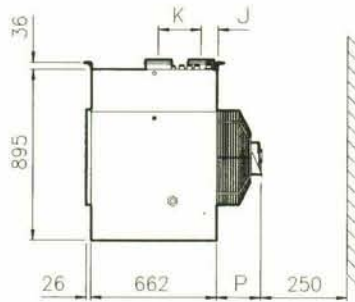
# EURO-T 2000 ROOM SEALED GAS-FIRED UNIT HEATERS

## EURO-T DIMENSION DATA

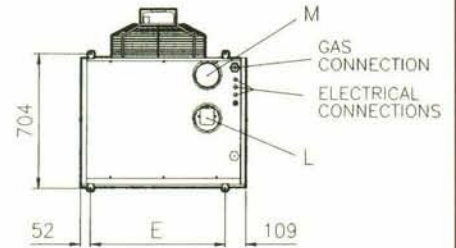
### T2000S



FRONT VIEW

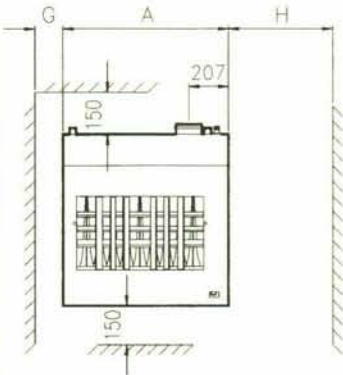


SIDE VIEW

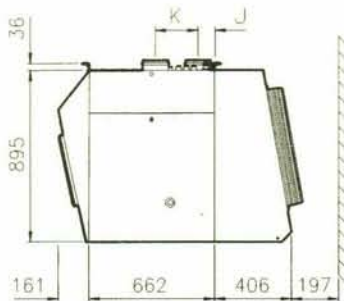


TOP VIEW

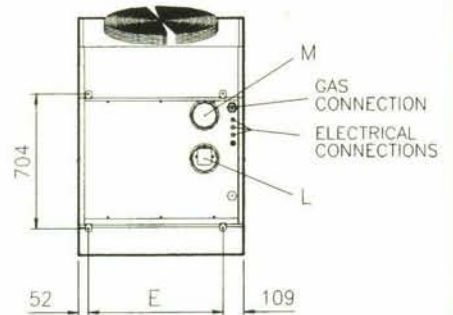
### T2000A



FRONT VIEW

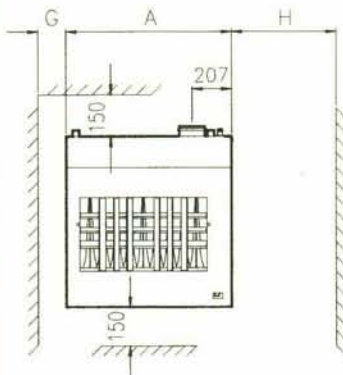


SIDE VIEW

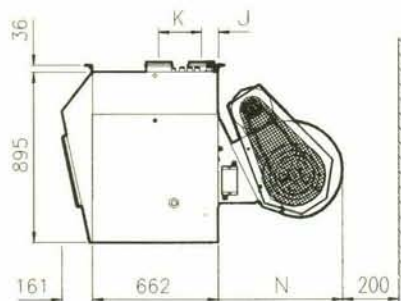


TOP VIEW

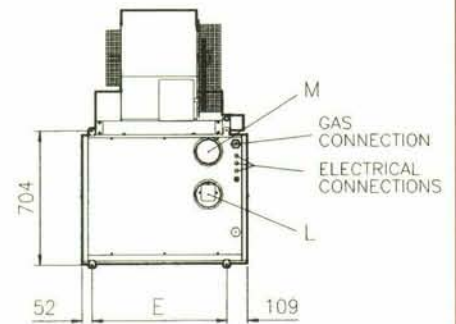
### T2000B



FRONT VIEW



SIDE VIEW



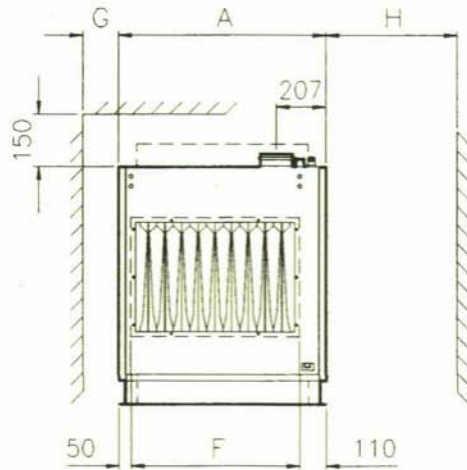
TOP VIEW

**Note:** Clearance distances of 150mm are for combustible materials only.

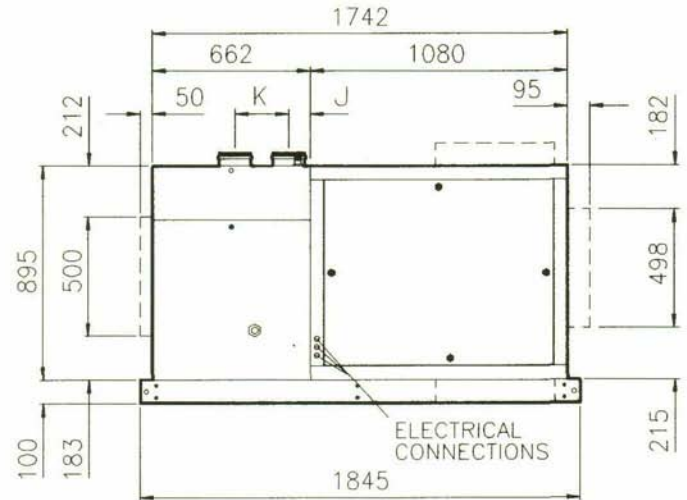
# DIMENSION DATA

## EURO-T DIMENSION DATA

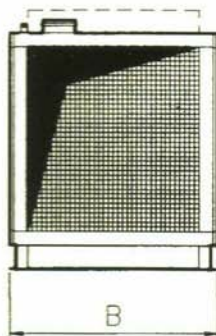
### T2000E



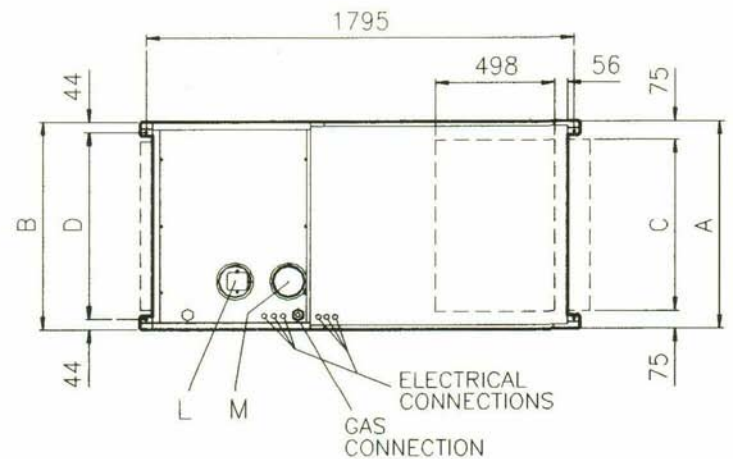
FRONT VIEW



SIDE VIEW



REAR VIEW



TOP VIEW

MODEL		T2025	T2030	T2035	T2045	T2055	T2075	T2095
Cabinet width	A	520	590	730	730	870	1080	1360
Overall width (E model)	B	524	594	734	734	874	1084	1364
Duct inlet width (E model)	C	370	440	580	580	720	930	1213
Suspension centres (E model)	D	436	506	646	646	786	996	1276
Suspension centres (S, A & B models)	E	359	429	569	569	709	919	1199
Duct outlet spigot width	F	360	430	570	570	710	920	1200
Side clearance	G	150	150	150	150	150	300	300
Access side clearance	H	550	620	750	750	900	1100	1400
Heater back to air inlet	J	166	166	166	90	90	90	90
Air inlet/flue outlet centres	K	140	140	140	140	225	225	225
Flue outlet diameter	L	102	102	102	132	132	132	132
Air inlet diameter	M	102	102	102	132	132	132	132
Depth centrifugal fan (B model)	N	518	575	668	668	668	575	668
Depth axial fan (S model)	P	197	235	240	240	240	235	240

All dimensions in mm.

Reznor®

### Company Standards and Services

All Reznor products are tested and approved to CE standards. Reznor UK Ltd. is assessed to BS EN ISO 9002:1994 Quality Assurance.

Reznor offers a design service to its customers; including budget schemes, on site technical support and a comprehensive after-sales service package.



**Reznor®**

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