

ecoTEC 80, 100 & 120



Higher output

Vaillant is pushing back the technological boundaries to provide commercial wall hung boiler solutions that are bigger and better than ever before. Incorporating all the same high performance and efficiency features as its smaller domestic counterparts, the ecoTEC offers a superb output of 80kW, 100kW and 120kW with the ability to cascade up to 960kW. A wall-to-wall solution for every commercial specification.

Three models

- ecoTEC 80
 - heat output range (heating 50/30°C) 16.5 - 82.3kW
 - heat output range (heating 80/60°C) 14.9 - 74.7kW
- ecoTEC 100
 - heat output range (heating 50/30°C) 20.7 - 102.8kW
 - heat output range (heating 80/60°C) 18.8 - 93.3kW
- ecoTEC 120
 - heat output range (heating 50/30°C) 24.7 - 123.4kW
 - heat output range (heating 80/60°C) 22.4 - 112kW

High performance

- Exceeds Part L2 seasonal efficiency
- Fully modulating low NOx burner and fan (class 5) <40mg/kWh
- Single boiler heating output up to 120kW
- Stainless steel heat exchanger
- Modulation range of 1:5
- Intelligent fault system

Easy installation

- Case dimensions H960mm x W480mm x D602mm
- Connections:
 - 1 1/4" female BSP flow and return service valves
 - 1" female BSP gas service valve
 - Pressure safety valve outlet - 1" female BSP
 - Condensate - 19mm
 - Combined filling/emptying valve on return pipe
 - All major components built-in:
 - Siphonic condensate discharge
 - Energy saving 2-stage frost protection
- 0 - 10v compatible for BEMS applications (via VR 34 accessory)
- 8m head shunt pump (available as an accessory)
- Pressure sensor to monitor system pressure via diagnostics
- Flow sensor to monitor water flow through boiler

- Auto air vent
- Push-fit flue system
- Full range of intelligent eBUS controls including weather compensators and multiple boiler management controls available.

Flexible siting

- Flue lengths up to 22m concentric horizontal or 24m concentric vertical with 110/160mm flue - for further information, see flues and accessories
- Optional 160mm stainless façade kit available
- 6 bar PRV
- IP X 4D electrical safety rating
- No compartment ventilation needed*

Easy service and repair

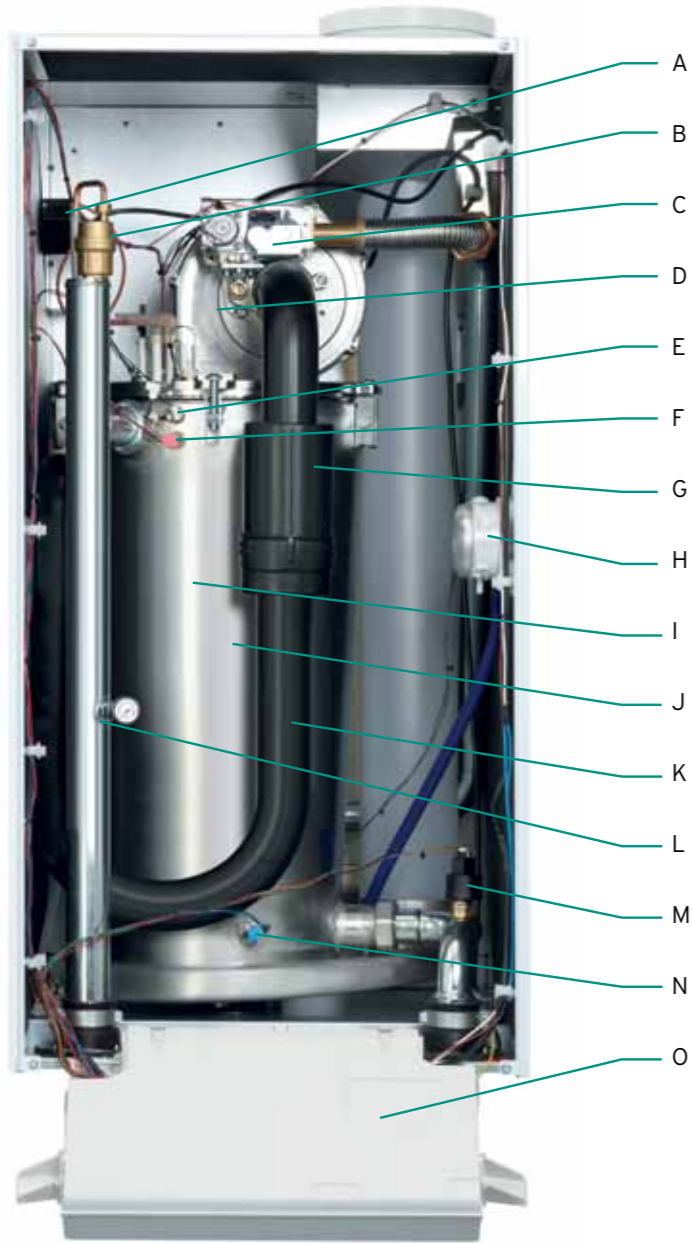
- Built-in plain text comprehensive boiler status/diagnostic display system
- Blue backlit display for easy reading
- Easy access to all components from the front
- Removable side panels for easy installation and servicing
- Single electronic circuit board
- Flue gas analysis point
- Intelligent fault system

Quality and reliability

- Stainless steel heat exchanger
- Production to ISO 9001
- 5-year guarantee on boiler (subject to conditions)
- Commissioning service available

* See BS6644 for more specific advice if appliance installed in boiler room/enclosure

Key components



ecoTEC 80

- Key**
- A Ignition transformer
 - B Automatic air vent
 - C Gas valve
 - D Fan
 - E Flow STL
 - F Flow NTC
 - G Silencer
 - H Flue gas pressure switch
 - I Heat exchanger
 - J Burner (inside heat exchanger)
 - K Air intake
 - L Pressure gauge
 - M Water pressure sensor
 - N Return NTC
 - O Electronics/PCB

Service valves and pump group
Flow and return isolation valve

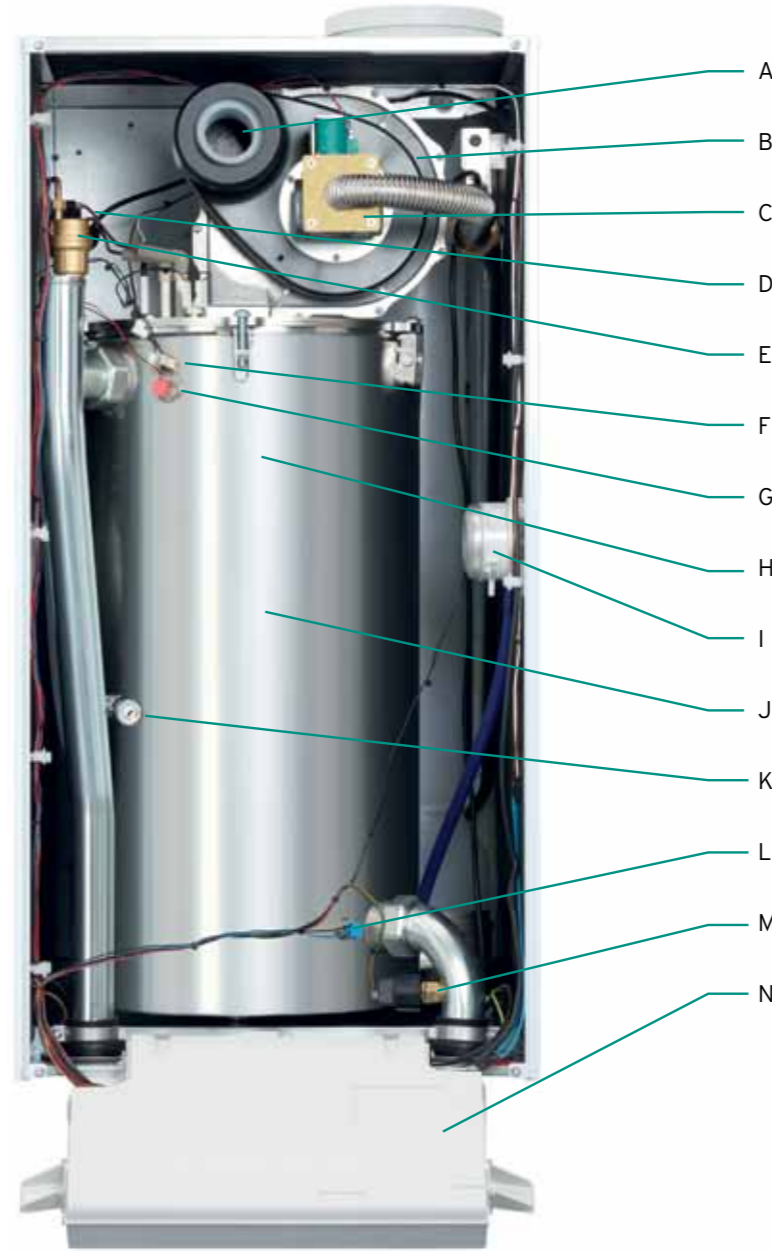


All ecoTEC 80, 100 & 120 boilers are supplied with the above

Pump group
(includes pump and insulation)



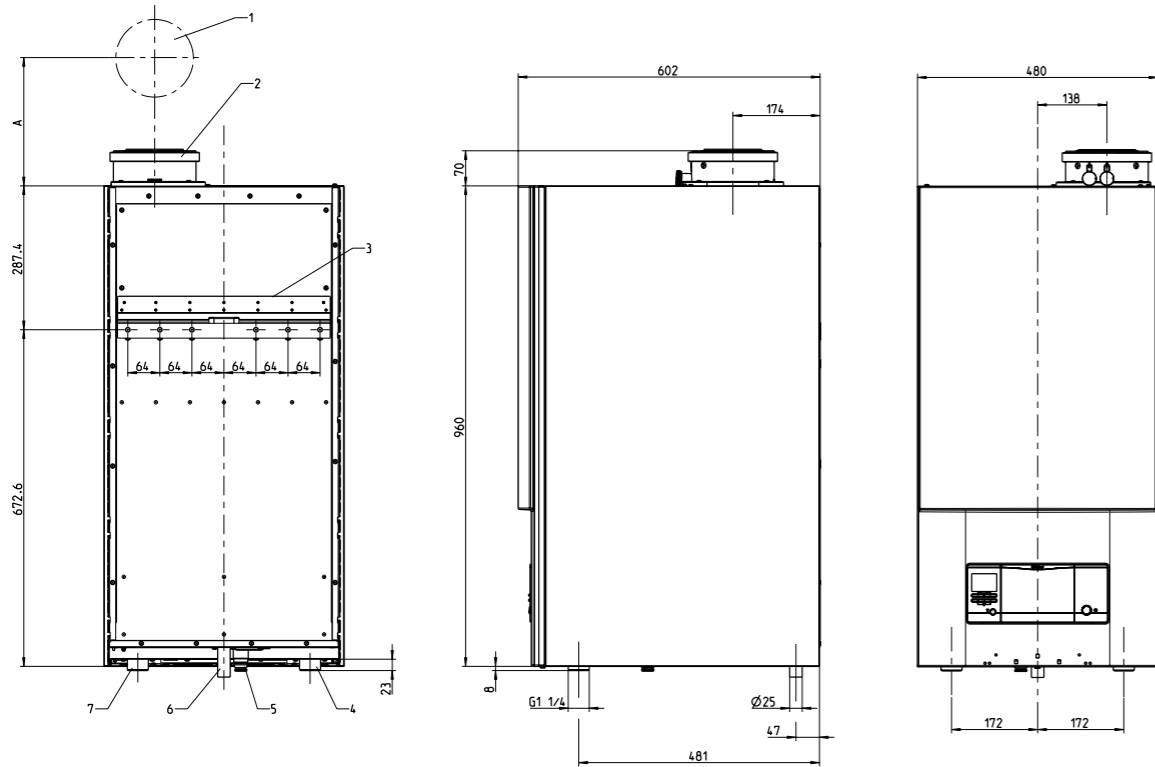
Available as an accessory



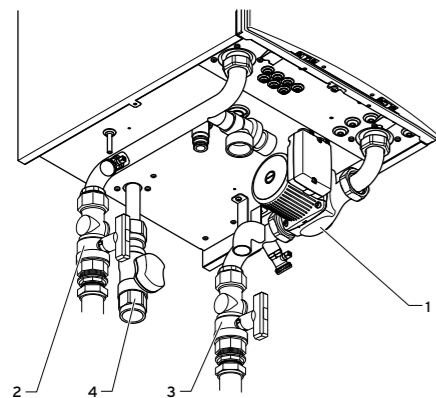
ecoTEC 100 & 120

- Key**
- A Air intake
 - B Fan
 - C Gas valve
 - D Ignition transformer
 - E Automatic air vent
 - F Flow STL
 - G Flow NTC
 - H Burner (inside heat exchanger)
 - I Flue gas pressure switch
 - J Heat exchanger
 - K Pressure gauge
 - L Return NTC
 - M Pressure sensor
 - N Electronics/PCB

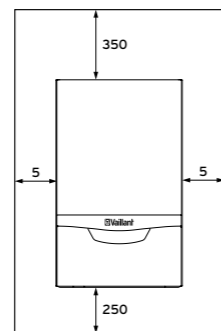
Connections and dimensions



Connection dimensions in mm
A = 476.6mm



- Connections**
- 1 Pump group
 - 2 Heating flow
 - 3 Heating return
 - 4 Gas valve

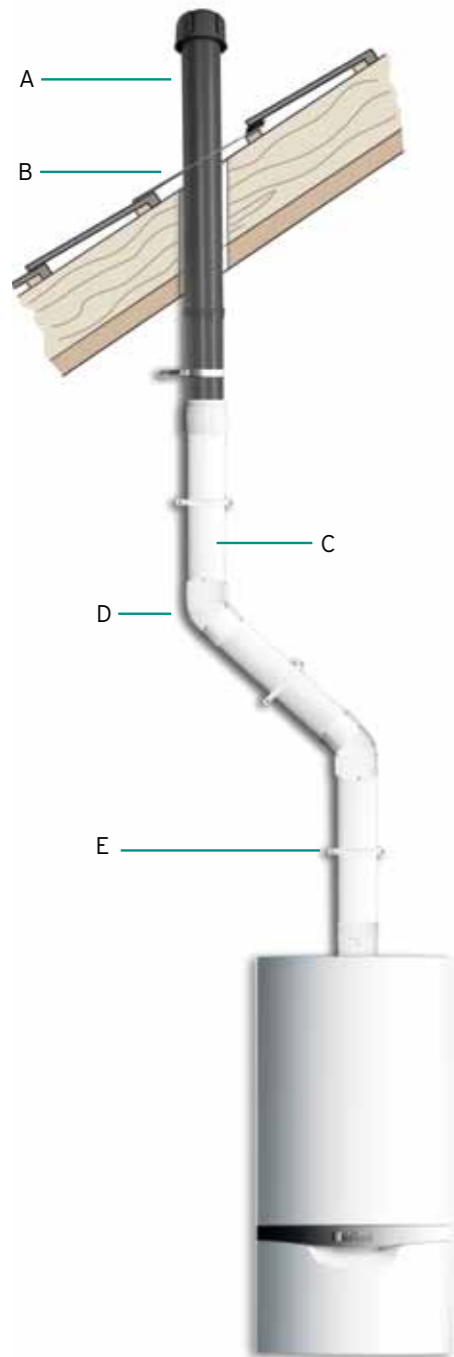


Required minimum gaps/assembly clearances
For the installation/assembly of the boiler as well as for carrying out future maintenance tasks, you need the minimum gaps and assembly clearances given above.

Technical specifications

ecoTEC	80	100	120
Article Number	0010010767	0010010780	0010010791
Heat output range (heating 50/30°C)	kW 20 - 80	25 - 100	30 - 120
Heat output range (heating 80/60°C)	kW 18.5 - 73.9	23.1 - 92.4	27.7 - 110.9
Maximum heat input (net)	kW 76.2	95.2	114.3
Net efficiency @ 100% load	% 98	98	98
Net efficiency @ 30% load	% 109	109	109
Inlet gas working pressure required (natural gas)	mbar 20	20	20
Inlet gas working pressure required (LPG)	mbar 37	37	37
NOx class	5	5	5
NOx levels	mg/kWh 39	36	38
CO ² percentage (after 5 minutes full load +/- 1)	% 8.8	9	9
Maximum CO level	ppm <30	<30	<30
Gas rate (natural gas)	m ³ /h 8	10.1	12.1
Water flow rate (when ΔT = 23K)	l/h 2990	3740	4485
Available pump head (without check valve)	mbar 240	380	360
Available pump head (with check valve)	mbar 150	100	90
Residual fan duty	Pa 220	300	300
Maximum flow temperature	°C 85	85	85
Maximum operating primary pressure bar	6	6	6
Minimum operating primary pressure bar	0.8	0.8	0.8
Condensate volume @ 40/30°C (pH value: 3.0 - 4.0)	l/h 12.16	15.2	18.24
Electrical connection	V/Hz 230 / 50	230 / 50	230 / 50
Electrical power consumption min./max. (with integrated pump)	W 165	181	181
Electrical protection rating	IP X 4D	IP X 4D	IP X 4D
Dimensions			
Height	mm 960	960	960
Width	mm 480	480	480
Depth	mm 610	610	610
Lift weight	kg 68	86	90
Water content	l 17	23.7	22.5
Flue			
Flue gas mass flow min./max.	g/s 6.9 / 34.4	8.9 / 43.6	10.6 / 52.5
Flue gas temperature max.	°C 85	85	85
Maximum length of concentric flue horizontal	m 22	22	22
Maximum length of concentric flue vertical	m 24	24	24
Connections			
Heating flow/return (isolation valve size)	1 1/4"	1 1/4"	1 1/4"
Gas isolation valve size	1"	1"	1"
Pressure safety valve outlet	1"	1"	1"
Condensate drain	mm 19	19	19
Flue connection	mm 110 / 160	110 / 160	110 / 160

Flue accessories



	ecoTEC		
	80	100	120
Max. permissible length of concentric flue	24.0m including 2 x 87° elbows	20.0m including 2 x 87° elbows	11.0m including 2 x 87° elbows
	Maximum length of flue is reduced by 1.5m for each additional 87° elbow		
	Maximum length of flue is reduced by 1.0m for each additional 45° elbow		

- Key**
- A Vertical flue duct and terminal (0020166853)
 - B Pitched roof flashing (0020106409)
 - C Flue extension pieces:
500mm extension (0020106376)
1000mm extension (0020106377)
2000mm extension (0020106378)
 - D 45° elbow (2 of) (0020106379)
 - E Flue support clips -
pack of 5 (0020106381)
Flat roof penetration collar (not shown) (0020106411)
87° elbow (not shown) (0020106380)

Key
A - D Horizontal flue terminal (0020166854)

	ecoTEC		
	80	100	120
Max. permissible length of concentric flue	22.0m including 87° elbow	18.0m including 87° elbow	9.0m including 87° elbow
	Maximum length of flue is reduced by 1.5m for each additional 87° elbow		
	Maximum length of flue is reduced by 1.0m for each additional 45° elbow		

