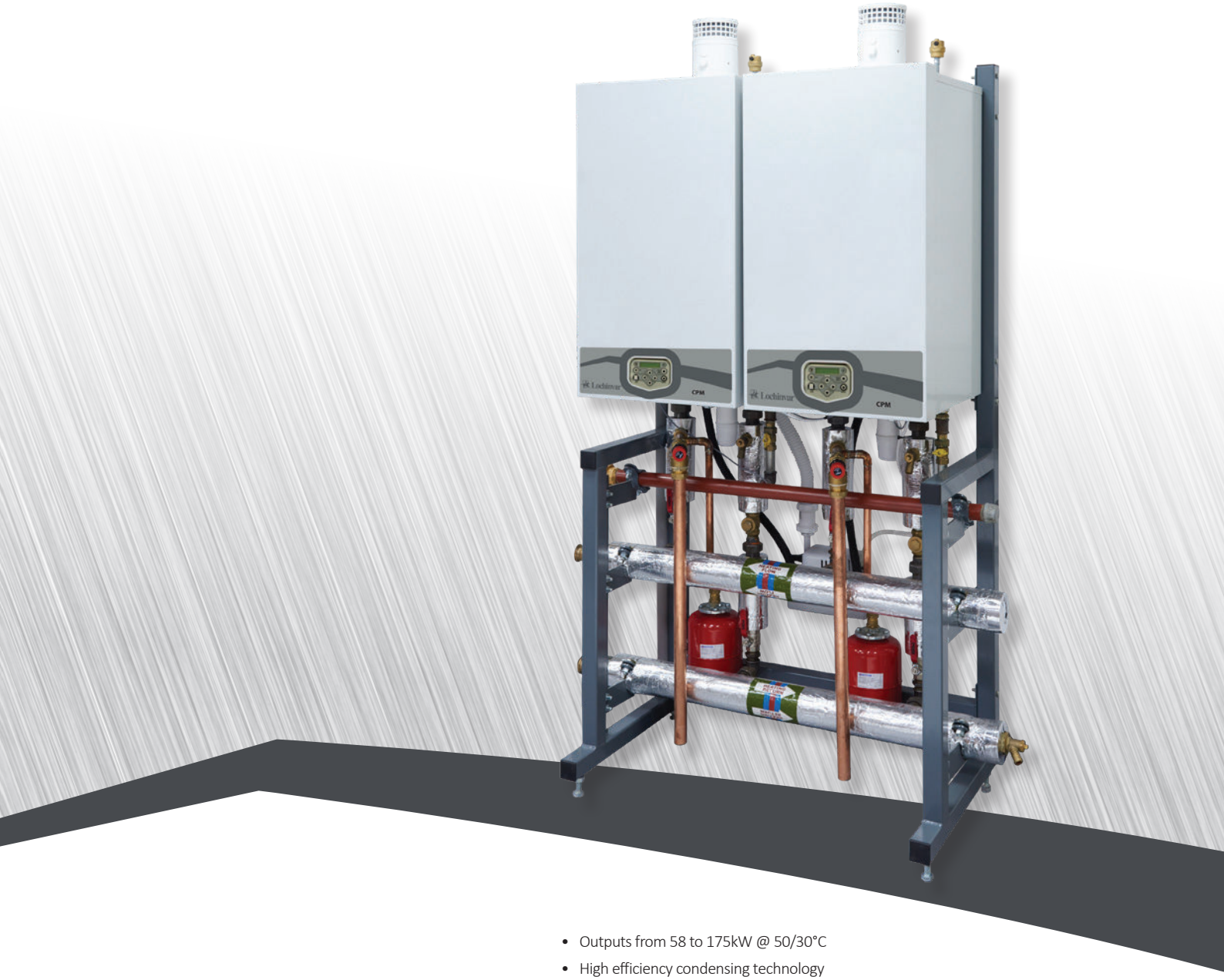
CPM wall hung gas-fired condensing boilers



- Outputs from 58 to 175kW @ 50/30°C
- High efficiency condensing technology
- Stainless steel heat exchanger
- Low NO_X emissions
- Integral A-rated fully modulating pump
- Integral controls

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

CPM wall hung gas-fired condensing boilers

CPM gas-fired wall hung boilers provide condensing, high efficiency operation and are available in 6 models, with heat outputs ranging from 58 to 175kW, based upon a 50/30°C system design. Building regulations gross efficiencies of up to 95.2% are achievable and NO_x emissions range from 38 to 46 mg/kWh.

CPM Boilers are suitable for a wide variety of commercial and industrial heating requirements, with condensing technology and integral controls combining to provide high operating efficiency and lower carbon emissions.

CPM wall hung boiler
6 models available

Integral controls

A key feature of the CPM is the integral controls, which include:

- Burner modulation with 4:1 turndown – this accurately matches output to demand and helps to achieve high operating efficiencies
- Weather compensation – adjusts heating setpoint temperature according to weather conditions. This reduces gas consumption without compromising on the comfort of building occupants.
  (An external sensor is required to enable this function)
- Cascade management – allows up to 12 x CPM boilers to be installed in modular arrangement and accurately matches Boiler output to system demand, providing optimum efficiency. For example, a modular installation with 4 x CPM Boilers could have a burner turndown of 16:1, providing a highly efficient and flexible heating system
- Pasteurisation control – for use with legionellae prevention on hot water systems
- 7-day programmer function

CPM boiler control display

Stainless steel heat exchanger

At the heart of the CPM Boiler is a stainless steel heat exchanger. This material provides greater resistance to corrosion when compared with other heat exchanger materials.

CPM heat exchanger

Integral A-rated pump

A key feature of the CPM boiler is the integral A-rated fully modulating pump; designed to maintain the optimum temperature differential across the heat exchanger.

Models CPM58 to CPM116

Models CPM144 and CPM175

Heating plate separators – Ancillary option

We recommend the use of Heating Plate Separators for applications where it is not possible to guarantee water quality. Brazed or gasketed separators are available as ancillary options.

Flue options

Another feature of the CPM Boiler range is that it can be installed with a wide range of flue types, including room sealed concentric or twin pipe and conventional flue.

Cascade flue systems are also available as ancillary options and are based upon a pressurised design principle

CPM flue diameters

Boiler model	Concentric flue diameter (mm)	Twin pipe flue diameter (Mm)	
CPM 58	80/125	80	80
CPM 77	80/125	80	80
CPM 96	100/150	100	100
CPM 116	100/150	100	100
CPM 144	100/150	130	130
CPM 175	100/150	130	130

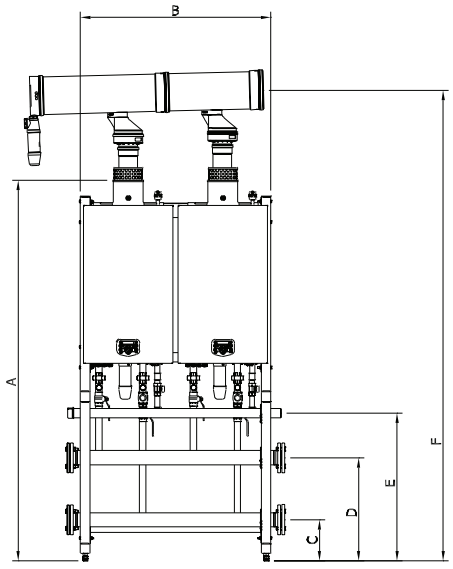
Mounting frames and pipework header assemblies

These are available for all models in 2, 3 and 4 boiler assemblies, which include flow/return and gas manifold pipework, mounting frame, inter-connecting pipework and low velocity header.

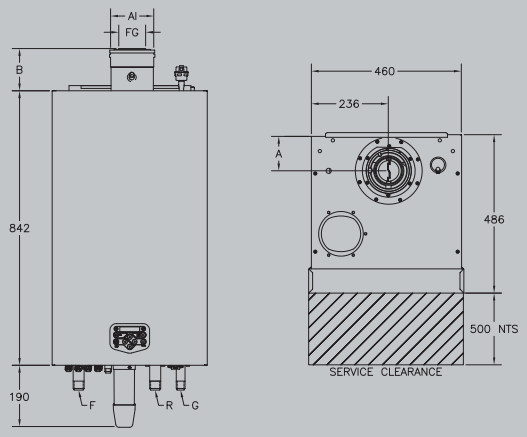
Note – these items are supplied for assembly on site.

Mounting frame dimensions

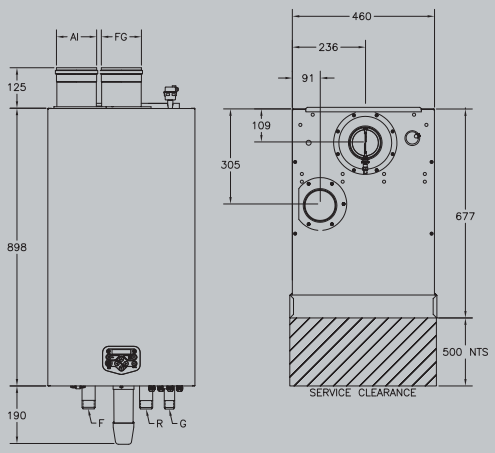
Mounting frame	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
CPM (2X 58 to 116)	2020	1015	218	548	787	2503
CPM (3X 58 to 116)	2020	1520	218	548	787	2523
CPM (4X 58 to 116)	2020	1980	218	548	787	2543
CPM (2X 144 to 175)	2031	1015	218	548	763	2368
CPM (3X 144 to 175)	2031	1520	218	548	763	2388
CPM (4X 144 to 175)	2031	1980	218	548	763	2418



Flue outlet locations and dimensions



		CPM 58	CPM 77	CPM 96	CPM 116
AI	Air Inlet	ø125	ø125	ø150	ø150
FG	Flue Gas	ø80	ø80	ø100	ø100
F	Flow	BSP R 1¼”			
R	Return	BSP R 1¼”			
G	Gas	R ¾” (male)			
Dimension ‘A’		155	112	112	112
Dimension ‘B’		150	135	135	135



		CPM 144	CPM 175
AI	Air inlet	ø130	ø130
FG	Flue gas	ø130	ø130
F	Flow	R 1½” (male)	
R	Return	R 1½” (male)	
G	Gas	R 1” (male)	

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HIGH EFFICIENCY BOILERS & WATER HEATERS

Technical specification

Boiler model		CPM 58	CPM 77	CPM 96	CPM 116	CPM 144	CPM 175
Nominal input (gross) min-max	kW	13.9-61.8	16.2-82.5	19.1-102	28.9-123	37.8-153	50.0-184
Nominal input (nett) min-max	kW	12.5-55.6	14.6-74.3	17.2-92.2	26.0-111	34.0-138	45.0-166
Gas flow rate (G20)	m^3/hr	1.32-5.88	1.54-7.86	1.82-9.76	2.75-11.8	3.6-14.6	4.76-17.6
Output @50/30°c min-max	kW	12.9-57.4	15.2-77.5	18.0-96.2	27.2-116	35.5-144	47.3-175
Output @80/60°c min-max	kW	12.0-53.5	14.0-71.2	16.5-88.4	24.7-106	32.6-132	43.3-160
Efficiency data - Building regulations							
Seasonal efficiency (Gross CV)	%	95.2	95.2	95.2	95.4	95.1	95.1
Efficiency data - ErP and energy label							
Ecodesign energy label rating		A	n/a	n/a	n/a	n/a	n/a
Seasonal space heating energy efficiency	%	91.9	92.3	92.4	92.6	92.3	92.3
NO_x emmissions							
NO_x emission (according to EN15502)@0% O2	mg/kWh	38	46	40	45	41	44
NO_x class according to EN15502		6					
General data							
Dimensions (height to flue)	mm	967	967	967	967	1023	1023
Dimensions (width)	mm	460	460	460	460	460	460
Dimensions (depth)	mm	486	486	486	486	677	677
Water content	litres	3.9	5	6.5	8.3	10.4	12.9
Weight (empty)	kg	46	73	78	83	92	101
Weight (full)	kg	50	78	85	91	102	114
Flow connection (inches)	BSP	R 1¼"	R 1¼"	R 1¼"	R 1¼"	R 1½"	R 1½"
Return connection (inches)	BSP	R 1¼"	R 1¼"	R 1¼"	R 1¼"	R 1½"	R 1½"
Gas connection (inches)	BSP	R ¾"	R ¾"	R ¾"	R ¾"	R 1	R 1
Flue connection (concentric)	mm	80/125	80/125	100/150	100/150	100/150	100/150
Flue connection (twin-pipe)	mm	80-80	80-80	100-100	100-100	130-130	130-130
Electrical requirements		230V /1Ph/ 50hz					
Maximum power consumption	W	240	265	270	280	505	520
Sound power level	LWA(db)	65	67	65	62	66	69
Maximum flue gas temperature	°C	120	120	120	120	120	120
Max flow temperature	°C	90	90	90	90	90	90
Working pressure minimum	bar	1.0	1.0	1.0	1.0	1.0	1.0
Working pressure maximum	bar	4.0*	4.0*	4.0*	4.0*	4.0*	4.0*

* CPM SP models can operate at up to 6 bar working pressure (see ancillary options).
Energy label, product fiche and ErP data table are available at www.lochinvar.ltd.uk

Ancillary options

- Pressurisation units – with single or twin pump
- Manifold pipework assemblies
- Mounting frames
- Heating plate separators
- Indirect water heaters/calorifiers
- Packaged plate heat exchangers
- Factory-fitted 6 bar pressure switch

Ancillary control options

- External temperature sensor
- Cascade flow temperature sensor
- Calorifier temperature sensor
- Indirect water heater/calorifier temperature sensor

For further information on the CPM wall hung boilers, including ICM & user instructions and our full warranty terms and conditions, please visit our website: www.lochinvar.ltd.uk

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Lochinvar Ltd reserves the right to change specifications without prior notice

8 Lombard Way, The MXL Centre, Banbury, Oxon, OX16 4TJ
Tel: +44(0) 1295 269 981, Fax: +44(0) 1295 271 640, Email: info@lochinvar.ltd.uk
www.lochinvar.ltd.uk

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