

Heat – CHP units will normally supply heat as either hot water or steam. The metering requirements are:

Steam – For measurement of steam mass flow and energy content, meters with an overall uncertainty of $\pm 2.0\%$ of span (full-scale) are required.

Hot Water – Where stand-alone commercially available heat meters are used these must be manufactured to metrological Class 2 or Class 3 as defined in BS EN 1414–1997 ($\sim \pm 1.5\%$). For fluid temperature measurements, matched pairs of platinum resistance thermometers to BS 1041-3:1989 and BS EN 60751:1996/IEC 60751:1983 are preferred.

Note: The dispensation that allowed CHP units with heat dumps to utilise a ‘fixed flow’ input to represent a flow meter has been discontinued. All new units are required to fit full heat metering as per > 2MWe. Those units with the ‘fixed flow’ heat monitoring may continue using this methodology until further notice.

CHP Schemes < 2MWe WITHOUT Heat Dumps

The measurement of gas and electricity is the same as for units that have heat dumps installed. The difference is with regards to the measurement of heat.

Heat – Schemes below 2 MWe with no heat rejection facility are not required to meter heat outputs, the heat output may be calculated using the design Heat/Power ratio for the unit. If the scheme supplies heat in the form of steam, then this must be metered as for those units > 2MWe.

CHP Schemes – Fuelled By Oil

Oil burned as either a main or a standby fuel will need to be monitored and recorded. Oil products are usually sold by the litre and this will require a volume flow meter with an uncertainty no greater than $\pm 1\%$.

Note: When utilising diesel powered CHP schemes, operators should take into account the ‘Spill-back’ effect created by the engines’ fuel priming pump.

Appendix 1 – Currently CHPQA Approved CHP Units

Model	Engine	Total Power Capacity kWe	Max Heat Output kW	Fuel Input kW (GCV)	Power Efficiency (%)
Nedalo	MAN E2866E	90	136	300	30
CGC0105	MAN E0836 LE202	105	133	314	33
Nedalo	MAN E2866E302	112	177	373	30
CGC0130	MAN E2876 E302	130	201	421	31
CGC0140	MAN E2876 TE302	140	207	444	32
Nedalo	MAN E2842E	168	261	542	31
CGC0198	MAN E2876 LE302	198	233	599	33
Nedalo	MAN E2842E302	211	321	681	31
CGC0237	MAN E2842 E312	237	359	742	32
Nedalo	Perkins 4006TESI LC	306	469	1020	30
CGC0307	Perkins 4006	307	435	990	31
CGC0312	MAN E2842 LE302	312	433	990	32
CGC0380	MAN E2842 LE312	380	500	1142	33
Nedalo	Perkins 4008TESI LC	409	633	1363	30
CGC0490L	CAT G3508 LE	490	679	1491	33