CHPQA Unit List

Only CHP units meeting the following criteria can be placed on the list:

- Total Power Capacity (CHP_{TPC}) ≤500 kW_e,
- No in-built facility to dump heat,
- Only include a single Reciprocating Engine
- Use only Natural Gas fuel
- One main heat output system e.g. a single system recovering heat from the engine cooling systems and exhaust gases.

The CHPQA Unit List allows small engine-based CHP schemes (≤500 kWe) to check their performance against the design performance of the relevant unit and under specified conditions, use the efficiency information to estimate the fuel input and/or heat output for their CHPQA submission.

This is not a list of approved or certified CHP units, nor is it a means for gaining any endorsement or type approval.

Suppliers/Manufacturers wishing to add a particular unit to the list should contact the CHPQA Administrator for more information.

MANUFACTURER	MODEL	Engine	Total Power Capacity kW[1]	Total Heat Capacity kW[2]	Fuel Input kW (GCV)[3]	Power Efficiency	Max Heat to Power Ratio	Max Heat Efficiency	Max Overall Efficiency
ABB	Zantec 476	Waukesha	476	734	1377	34.6%	1.54	53.3%	87.9%
AIRCOGEN	Nimbus 63	GM 7400	63	120	223	28.3%	1.91	53.8%	82.1%
	Nimbus 104	MAN E0836 LE202	104	127	310	33.5%	1.22	41.0%	74.5%
	Nimbus 200	MAN E2876 LE302	200	233	592	33.8%	1.17	39.4%	73.1%
	Nimbus 238	MAN E2842 E312	238	359	734	32.4%	1.51	48.9%	81.3%
	Nimbus 309	Perkins 4006TESI 140HC	309	405	946	32.7%	1.31	42.8%	75.5%

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	Nimbus 415	Perkins 4008TESI 140HC	415	549	1273	32.6%	1.32	43.1%	75.7%
BOSCH THERMO-TECHNOLOGY	CE19 N	Volkswagen 2.0	19	31	60	31.7%	1.63	51.7%	83.3%
	CE50 N	MAN E0834 E302	50	80	164	30.5%	1.60	48.8%	79.3%
	CE70 N	MAN E0836 E302	70	109	226	31.0%	1.56	48.2%	79.2%
	CE140 N	MAN E2876 E312	140	212	426	32.9%	1.51	49.8%	82.6%
	CE240 N	MAN E2842 E312	240	374	743	32.3%	1.56	50.3%	82.6%
COGENCO	CGC-0030MA	MAN E0834 E312	30	47	111	27.0%	1.57	42.3%	69.4%
	CGC-0050MA	MAN E0834 E302	50	79	182	27.5%	1.58	43.4%	70.9%
	CGC-0070MA	MAN E0836 E302	70	109	225	31.1%	1.56	48.4%	79.6%
	Nedalo	MAN E2866E	95	143	300	31.7%	1.51	47.7%	79.3%
	CGC-0100MA	MAN E2876E312	100	171	343	29.2%	1.71	49.9%	79.0%
	Nedalo	MAN E2866E302	112	177	373	30.0%	1.58	47.5%	77.5%
	CGC-0112MA	MAN E2866 E302	112	178	379	29.6%	1.59	47.0%	76.6%
	CGC -0120MA	MAN E2876 E312	120	192	397	30.2%	1.60	48.4%	78.6%
	CGC-0121CC-080	CACR6	121	198	401	30.2%	1.64	49.4%	79.6%
	CGC-0167MA	MAN E2842 E	167	260	543	30.8%	1.56	47.9%	78.7%
	Nedalo	MAN E2842E	168	261	542	31.0%	1.55	48.2%	79.2%
	CGC 0198	MAN E2876 LE302	198	233	599	33.1%	1.18	38.9%	72.0%
	CGC-0200MA	MAN E2876 LE302	200	242	601	33.3%	1.21	40.3%	73.5%
	CGC-0210MA	MAN E2842 E302	210	319	684	30.7%	1.52	46.6%	77.3%

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	Nedalo	MAN E2842E302	211	321	681	31.0%	1.52	47.1%	78.1%
	CGC 0238	MAN E2842E312	238	365	740	32.2%	1.53	49.3%	81.5%
	CGC-250MA	MAN E2848 LE322	250	321	762	32.8%	1.28	42.1%	74.9%
	CGC-0300GU-075	Guascor SFGLD 180	300	438	910	33.0%	1.46	48.1%	81.1%
	Nedalo	Perkins 4006TESI LC	306	469	1020	30.0%	1.53	46.0%	76.0%
	CGC 0307	Perkins 4006	307	435	990	31.0%	1.42	43.9%	74.9%
	CGC-0307PE	Perkins 4006-23 TRS1	307	357	912	33.7%	1.16	39.1%	72.8%
	CGC 0312	MAN 2842 LE302	312	433	990	31.5%	1.39	43.7%	75.3%
	CGC-0342MA-080	MAN E2842LE312	342	422	1040	32.9%	1.23	40.6%	73.5%
	CGC-0375PE	Perkins 4006-23 TRS2	375	401	1088	34.5%	1.07	36.9%	71.3%
	CGC 0380	MAN E2842 LE312	380	500	1142	33.3%	1.32	43.8%	77.1%
	CGC-0380MA	MAN E2842 LE312	380	455	1142	33.3%	1.20	39.8%	73.1%
	CGC-0400GU	Guascor SFGLD 240	400	465	1246	32.1%	1.16	37.3%	69.4%
	CGC-0400MA	MAN E2842 LE322	400	513	1163	34.4%	1.28	44.1%	78.5%
	Nedalo	Perkins 4008 TESI LC	409	633	1363	30.0%	1.55	46.4%	76.4%
	CGC-0425PE	Perkins 4008-30 TRS1	425	551	1245	34.1%	1.30	44.3%	78.4%
	CGC 0490 L	CAT G3508 LE	490	679	1491	32.9%	1.39	45.5%	78.4%

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	CGC 500 GU	Guascor HGM240	500	512	1362	36.7%	1.02	37.6%	74.3%
	CGC-0501PE-080	Perkins 4008-30 TRS2	501	518	1444	34.7%	1.03	35.9%	70.6%
ENER-G	YANMAR 25	4GPF98-C1	25.1	38.4	82.4	30.5%	1.53	46.6%	77.1%
	EnerG 35M	E 0834 E 302	33	55	—		1.67		
	EnerG 35	E 0834 E 302	35	61	123	28.5%	1.75	49.9%	78.5%
	CPL 4Fg	Ford BSD444	38	70	152	25.0%	1.84	46.1%	71.1%
	EnerG 50	E 0834 E 302	50	79	164	30.5%	1.58	48.3%	78.8%
	CPL 6NFg	Ford BSD666	54	97	200	27.0%	1.80	48.5%	75.5%
	EnerG 60	Man E0836	60	89	193	31.1%	1.48	46.1%	77.2%
	6MRg	Man E0836	60	90	200	30.0%	1.50	45.0%	75.0%
	EnerG 70	E 0836 E 302	70	109	226	31.0%	1.56	48.3%	79.3%
	CPL 6Fg	Ford BSD678	75	130	259	29.0%	1.73	50.2%	79.2%
	EnerG 75P	EGE-06L	75	143	262	28.6%	1.91	54.6%	83.3%
	EnerG 90	EGE-06L	90	161	308	29.2%	1.79	52.2%	81.4%
	CPL 6Mg	MAN E2866E	95	143	317	30.0%	1.51	45.1%	75.1%
	EnerG 100	EGE-06L	100	172	335	29.9%	1.72	51.5%	81.4%
	CPL 6M+g	MAN E2866E302	110	177	367	30.0%	1.61	48.2%	78.2%
	EnerG 110	MWB G6R183A	110	177	356	30.9%	1.61	49.7%	80.6%
	CPL 6Pg	Perkins 2006	110	180	393	28.0%	1.64	45.8%	73.8%
	EnerG 110	EGE-06L	110	184	362	30.4%	1.67	50.9%	81.3%
	EnerG 120	EGE-06L	120	196	389	30.9%	1.63	50.3%	81.2%

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	EnerG 122	MWB G6V183A	122	196	395	30.9%	1.61	49.6%	80.5%
	EnerG 125	EGE-06L	124	200	399	31.1%	1.61	50.1%	81.1%
	EnerG 135	EGE-08V	135	217	434	31.1%	1.61	50.2%	81.3%
	CPL 8Pg	Perkins 2008	145	265	518	28.0%	1.83	51.2%	79.2%
	EnerG 150	MWB G8V183A	152	231	474	32.1%	1.52	48.7%	80.8%
	EnerG 150	EGE-08V	152	236	478	31.8%	1.55	49.4%	81.2%
	EnerG 165	EGE-12V	165	286	550	30.0%	1.73	52.0%	82.0%
	CPL 12Mg	MAN E2842E	168	261	542	31.0%	1.55	48.2%	79.2%
	EnerG 185	EGE-12V	185	309	603	30.7%	1.67	51.3%	82.0%
	EnerG 200	E 2876 LE 302	201	263	595	33.8%	1.31	44.2%	78.0%
	CPL 12M+g	MAN E2842E302	206	321	665	31.0%	1.56	48.3%	79.2%
	EnerG 210	EGE-12V	210	337	669	31.4%	1.61	50.4%	81.9%
	CPL 12Pg	Perkins 3012	220	385	880	25.0%	1.75	43.8%	68.8%
	EnerG 230	MWB G12V183A	228	347	718	31.8%	1.52	48.3%	80.1%
	EnerG 230	EGE-12V	229	358	718	31.9%	1.56	49.9%	81.8%
	EnerG 300	MAN	300	445	1111	27.0%	1.48	40.1%	67.1%
	EnerG 305	Perkins 4006TESI LC	305	432	976	31.3%	1.42	44.3%	75.5%
	EnerG 310	4006-23 TRS1	310	357	907	34.2%	1.15	39.4%	73.5%
	EnerG 375	4006-23 TRS2	378	401	1082	34.9%	1.06	37.1%	72.0%
	EnerG 380	E 2842 LE 312	384	467	1137	33.8%	1.22	41.1%	74.8%
	EnerG 425	4008-30 TRS1	430	468	1238	34.7%	1.09	37.8%	72.6%

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	EnerG 500	Perkins 4008TRS2	500	516	1436	34.8%	1.03	35.9%	70.8%
FRICHS	Valmet	Mini 420 G	22	55	85	25.9%	2.50	64.7%	90.6%
		Mini 420 G	30	70	118	25.4%	2.33	59.3%	84.7%
		Mini 634 G	60	125	206	29.1%	2.08	60.7%	89.8%
JENBACHER	GE Jenbacher	Type 208	330	361	853	38.7%	1.09	42.3%	81.0%
PERKINS	Perkins (or Dorman)	4006TESI HC 90	309	494	1001	30.9%	1.60	49.4%	80.2%
		4006TESI HC 140	309	439	968	31.9%	1.42	45.4%	77.3%
		4006TESI LC 140	309	466	1036	29.8%	1.51	45.0%	74.8%
		4006TESI LC 200	309	432	989	31.2%	1.40	43.7%	74.9%
		4008TESI HC 90	415	619	1312	31.6%	1.49	47.2%	78.8%
		4008TESI HC 140	415	594	1283	32.3%	1.43	46.3%	78.6%

1. Brake power tested to ISO 3046. All figures are obtained from the manufacturer's technical specification.
2. The maximum usable heat output at full load operation, equal to the sum of the heat output from the jacket water, oil and from the exhaust gases (down to exhaust gas discharge temperature of 120°C) where the heat output is in the form of Low Temperature Hot Water (up to 100°C). All figures are obtained from the manufacturer's technical specification.
3. Based on Gross Calorific Value. All figures are obtained from the manufacturer's technical specification.