



Appendix 6.6 Plant Datasheets



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shentongroup Range of CHP Engines,
The Sole UK Distributor for Tedom

- (C) = This engine is available as a containerised version
- Catalyst type - 3 way
- Technical data based on operating conditions of 100kPa air pressure, 25°C air temperature and at 30% relative humidity
- Gas consumption based on standard conditions of 15°C, 101.325kPa
- Calorific value of gas used in fuel input/consumption figures is 34MJ/m³
- Conversion factor used to calculate from Net to Gross is 1.108



COMBINED HEAT
& POWER

CHP Engine, Indoor Canopy.	Nitrous Oxide (Nox) at 5% O ₂	Carbon Monoxide (CO) at 5% O ₂	Elec Output	Heat Output	Elec Efficiency (Net)	Elec Efficiency (Gross)	Heat Efficiency (Net)	Heat Efficiency (Gross)	Fuel Input (Net)	Fuel Input (Gross)	Gas Consumption
	mg/Nm ³	mg/Nm ³	kW	kW	%	%	%	%	kW	kW	m ³ /hour
Micro T7	250	300	6.5	16	27	24.34	66.3	59.92	24.1	26.70	2.55
Micro T20	50	150	20	42	30.5	27.56	64.1	57.87	65.5	72.57	6.9
Micro T22	50	150	22	45.2	31.2	28.16	64.1	57.86	70.5	78.11	7.5
Micro T25	50	150	25	49.5	32.0	28.89	63.3	57.20	78.1	86.53	8.3
Micro T30	50	150	30	59.4	32.0	29.87	63.3	57.15	93.8	103.93	9.9
Micro T33	50	150	33	63.7	32.5	29.34	62.8	56.64	101.5	112.46	10.8
Micro T50	50	150	50	88.5	34.2	30.91	60.6	54.71	146	161.77	15.5
Centro M70	50	150	70	109	34.3	30.97	53.4	48.22	204	226.03	21.6
Centro T90ST (C)	50	150	85	141	33.7	30.44	56.0	50.50	252	279.22	26.7
Centro T90 (C)	500	650	81	120	35.1	31.65	51.9	46.88	231	255.95	24.4
Centro T100ST (C)	50	150	104	166	34.7	31.29	55.3	49.94	300	332.40	31.7
Centro T100 (C)	500	650	104	142	36.9	33.28	50.4	45.45	282	312.46	29.8
Centro T120ST (C)	50	150	124	182	36.6	33.01	53.7	48.45	339	375.61	35.8
Centro T120 (C)	500	650	125	177	36.4	32.89	51.6	46.57	343	380.04	36.3
Centro M140	95	150	140	202	36.5	32.99	52.7	47.60	383	424.36	40.6
Centro T160LN (C)	250	300	164	223	36.5	32.97	49.7	44.82	449	497.49	47.5
Centro T160 (C)	500	650	164	209	38.7	34.91	49.3	44.49	424	469.79	45.9
Centro T180LN (C)	250	300	182	232	37.8	34.08	48.1	43.44	482	534.06	51
Centro T180 (C)	500	650	184	218	39.2	35.41	46.5	41.95	489	519.65	49.7
Centro T200LN (C)	250	300	200	255	37.7	34.06	48.1	43.42	530	587.24	56.1
Centro T200 (C)	500	650	200	237	39.2	35.39	46.5	41.94	510	565.08	54
Centro L230LN (C)	250	300	235	272	40.1	36.19	46.4	41.89	586	649.29	62
Centro L230 (C)	500	300	235	262	41.4	37.41	46.2	41.70	567	628.24	60
Centro M260ST (C)	50	150	260	372	37.8	34.11	54.0	48.80	688	762.30	72.9
Centro M350 (C)	500	600	355	425	40.0	36.12	47.9	43.24	887	982.80	93.3
Centro L410LN (C)	250	300	410	497	39.8	35.89	48.2	43.51	1031	1142.35	109
Centro L410 (C)	500	300	410	486	40.8	36.86	48.4	43.69	1004	1112.43	106
Centro L500LN (C)	250	300	500	574	40.6	36.60	46.6	42.02	1233	1366.16	130.5
Centro L500 (C)	500	300	500	550	42.0	37.89	46.2	41.68	1191	1319.63	126
Centro M530 (C)	500	650	528	629	39.5	49.90	47.0	42.46	1337	1481.40	142
Quanto D600 (C)	500	300	800	858	41.9	37.79	45.9	41.44	1433	1587.76	152
Quanto D600 (C)	500	300	800	862	42.2	38.10	45.5	41.05	1895	2096.66	201
Quanto D1000 (C)	500	300	999	1041	43.0	38.78	44.8	40.41	2325	2576.10	246
Quanto D1200 (C)	500	300	1200	1189	43.7	39.41	43.3	39.05	2748	3044.78	291
Quanto D1600 (C)	500	300	1560	1576	43.3	39.11	43.6	39.51	3600	3988.80	361
Quanto D2000 (C)	500	300	2000	1977	43.7	39.43	39.0	38.98	4578	5072.42	465

V2.6 21.02.19



Technical Data

Wessex ModuMax mk3 Boilers

Wessex ModuMax mk3 Boiler Model (WM...)		196/ 196H	196/ 392V	196/ 588V	254/ 254H	254/ 508V	254/ 762V
No. of Modules		1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency (%) gross	94.98	94.98	94.98	93.19	93.19	93.19
	Boiler output 80/60°C, NG & LPG	kW 191.6	383.2	574.8	239.8	479.6	719.4
		Btu/hr x 1000 654	1307	1961	815	1631	2446
	Boiler output 50/30°C, NG & LPG	kW 196.3	392.6	588.9	254.4	508.7	763.1
		Btu/hr x 1000 670	1340	2009	868	1736	2604
	Boiler input (gross) - maximum, NG	kW 219.0	428.7	657	275.0	550.0	825.0
		Btu/hr x 1000 747	1463	2242	938	1877	2815
	Boiler input (gross) - maximum, LPG	kW 214.4	394.4	643.1	269.2	538.3	807.5
	Btu/hr x 1000 732	1346	2194	919	1837	2755	
Boiler input (net) - maximum, NG & LPG	kW 197.2	394.4	591.6	247.6	495.3	742.9	
	Btu/hr x 1000 673	1346	2019	845	1690	2535	
Boiler output - minimum 80/60°C, NG & LPG	kW 38.6	38.6	38.6	48.4	48.4	48.4	
	Btu/hr x 1000 132	132	132	165	165	165	
Water	Water content	litres	22	44	66	22	44
	System design flow rate @ 40°C ΔT rise	l/s	1.2	2.4	3.6	1.5	3.0
	Water side pressure loss @ 40°C ΔT rise	mbar	62	62	62	100	100
	System design flow rate @ 30°C ΔT rise	l/s	1.6	3.2	4.8	2.0	4.0
	Water side pressure loss @ 30°C ΔT rise	mbar	120	120	120	180	180
	System design flow rate @ 20°C ΔT rise	l/s	2.4	4.8	7.2	3.0	6.0
	Water side pressure loss @ 20°C ΔT rise	mbar	246	246	246	395	395
	System design flow rate @ 11°C ΔT rise	l/s	4.3	8.6	12.9	5.4	10.8
	Water side pressure loss @ 11°C ΔT rise	mbar	850	850	850	1300	1300
	Minimum water pressure	barg	Dependent on differential temperature – see page 25				
Maximum water pressure	barg	10	10	10	10	10	10
Maximum flow temperature setting	°C	90	90	90	90	90	90
Gas	Gas flow rate, NG (G20) - maximum	m ³ /hr	21.4	42.8	64.2	27.9	55.8
	Gas flow rate, LPG (G31) - maximum	m ³ /hr	8.1	16.2	24.3	10.1	20.2
	Nominal inlet pressure, NG (LPG) - maximum	mbar	20 (37)	20 (37)	20 (37)	20 (37)	20 (37)
	Maximum gas inlet pressure NG (LPG)	mbar	25 (45)	25 (45)	25 (45)	25 (45)	25 (45)
Flue	Approx. flue gas volume @ 15°C, 8.75-9.25% CO ₂ @ N.T.P	m ³ /hr	279	558	837	354	708
	Maximum flue gas temperature @ 80/60°C	°C	83	83	83	82	82
	Pressure at boiler flue spigot @full load	Pa mbar	150 1.5	150 1.5	150 1.5	150 1.5	150 1.5
	Dry NO _x emission (0% excess oxygen, dry air free); NG/LPG	mg/kWh	39.9 (68.6)	39.9 (68.6)	39.9 (68.6)	38.8 (39.9)	38.8 (39.9)
Connection	Water flow/return connections	inches	G2½" male	G2½" male	G2½" male	G2½" male	G2½" male
	Gas inlet connection pipe thread size	inches	R1¼" male	R1¼" male	R1¼" male	R1¼" male	R1¼" male
	Nominal flue diameter (fD)	mm	150	250	250	150	250
	Condensate trap connection(s) (O/D)	mm	32	32	32	32	32
Electrics	Electrical supply		230V 1 Ph 50Hz	230V 1 Ph 50Hz	230V 1 Ph 50Hz	230V 1 Ph 50Hz	230V 1 Ph 50Hz
	Power consumption - maximum boiler modulation	W	240	480	720	240	480
	Start current (per module)	Amp	1.3	1.3	1.3	1.3	1.3
	Run current (per module)	Amp	1.05	1.05	1.05	1.05	1.05
	Approx shipping weight	kg	226	452	678	226	452
	Noise emission @1m: @max. modulation @min. modulation	Max dB (A) Min dB (A)	65 47	65 47	65 47	65 47	65 47