

A2

AS FITTED - FINAL

COGENCO DATA SHEET							
CGC-1400CS-076-NG-50 STEAM							
Low Temperature		Natural Gas					
TECHNICAL SPECIFICATION							
Cogenco identification	CGC-2000CS-076-NG-50 STEAM			Compression ratio			11.4:1
Engine type	Cummins	QSK 60G		Engine speed	rpm		1500
Generator type	Cummins	P734F		Power factor			1.00
Cylinder configuration		V16		Air fuel ratio			1.76
Exhaust manifold		Water cooled		Barometric pressure	kPa		100
Bore	mm	159		Exhaust gas temperature after H/E	°C		176
Stroke	mm	190		Ambient temperature	°C		25
Swept volume	litres	60.3		Gas heating value (LHV)	kJ/nm3		33410
Mean effective pressure	bar	19.3		Methane index			>72
PERFORMANCE AND EFFICIENCY				100%	75%	50%	
Fuel input (HHV)	kW	3679	100.0%	2860	100.0%	2062	100.0%
Mechanical shaft power	kW	1455	39.5%	1091	38.2%	728	35.3%
Electrical output	kW	1400	38.1%	1050	36.7%	700	34.0%
Heat output from jacket water and oil	kW	763	20.7%	527	18.4%	390	18.9%
Heat output from exhaust gases (220°C)	kW	518	14.1%	438	15.3%	346	16.8%
Total useable heat output	kW	1281	34.8%	965	33.7%	736	35.7%
Total useable energy	kW	2681	72.9%	2015	70.5%	1436	69.7%
Intercooler heat output	kW	110	3.0%	84	2.9%	60	2.9%
Radiated and unaccounted for heat	kW	229	6.2%	180	6.3%	137	6.6%
TEMPERATURES AND FLOWS							
Fuel mass flow	kg/hr	259.1		198.9		143.4	
Fuel volume flow	nm3/hr	360.4		276.6		199.5	
Ventilation air volume flow (incl. comb. air)	nm3/hr	62900		62900		62900	
Combustion air mass flow	kg/hr	7538		5691		4006	
Combustion air volume flow	nm3/hr	5830		4402		3098	
Exhaust gas mass flow (wet)	kg/hr	7798		5890		4149	
Exhaust gas volume flow (wet)	nm3/hr	6243		4791		3455	
Exhaust gas volume flow (wet) @ 220°C	m3/hr	11274		8653		6239	
Steam output (17 barg)	kg/hr	760		638		501	
Jacket water flow	m3/hr	66		66		66	
Intercooler water flow - minimum	m3/hr	23		23		23	
Secondary water flow - minimum	m3/hr	67		67		67	
Maximum return water inlet temperature	°C	76		76		76	
Secondary water outlet temperature	°C	86.1		82.9		81.1	
Maximum intercooler water inlet temperature	°C	40		40		40	
Intercooler water outlet temperature	°C	44.5		43.4		42.5	
Exhaust gas temperature before cooler	°C	434		460		489	
WEIGHTS AND DIMENSIONS							
Weight - dry	kg	15540		Cogenco Limited Parsonage Farm Business Park Parsonage Way HORSHAM West Sussex United Kingdom RH12 4AL Tel: +44(0)1403 272270 Fax: +44(0)1403 272274 www.cogenco.co.uk sales@cogenco.co.uk			
Engine/generator only excluding heat skid							
Length	mm	5756					
Width	mm	2270					
Height	mm	2480					
Tolerance on energy input	+5%			Tolerance on heat output	+/-7%		
Tolerance on power output	+/-3%			Tolerance on exhaust flow and temperature	+/-5%		
Definition of ratings to ISO 3046				(In order to comply with the Cogenco policy of continuous improvement this information is subject to change without prior notice)			