

## LYCY10 Datacentre - thermal schedule

Source ref	Emission point Ref	Emission Source Description	Supplier	Manufacturer	model	max fuel (litre/hr)	Electrical Output (kW)	Electrical Output (KVa)	Calculated Efficiency	NET thermal input capacity (MW)	Operating hours	Comments
S1	EP1	Diesel generator #1	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S2	EP2	Diesel generator #2	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S3	EP3	Diesel generator #3	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S4	EP4	Diesel generator #4	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S5	EP5	Diesel generator #5	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S6	EP6	Diesel generator #6	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S7	EP7	Diesel generator #7	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S8	EP8	Diesel generator #8	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
S9	EP9	Diesel generator #9	AVK	MTU	20V4000G94LF	818	3,200	4,000	38.7%	8.26	9.00	
<b>NET thermal input capacity (MW)</b>										<b>74.34</b>	<b>81.00</b>	

Monthly test – 30 min offload (0% load) 1 gen at a time  
 Annual test – 3 hours onload (75% load) 1 gen at a time

### APPLICATION DATA<sup>Q</sup>

#### // Engine

Manufacturer	MTU
Model	20V4000G94LF
Type	4-cycle
Arrangement	20V
Displacement: l	95.4
Bore: mm	170
Stroke: mm	210
Compression ratio	16.4
Rated speed: rpm	1500
Engine governor	ADEC (ECU 9)
Max power: kWm	3308
Air cleaner	Dry

#### // Fuel System

Maximum fuel lift: m	5
Total fuel flow: l/min	27

#### // Fuel Consumption<sup>2</sup>

	l/hr	g/kwh
At 100% of power rating:	818	205
At 75% of power rating:	598	200
At 50% of power rating:	429	215

#### // Liquid Capacity

Total oil system capacity: l	390
Engine jacket water capacity: l	260
Intercooler coolant capacity: l	50

#### // Combustion Air Requirements

Combustion air volume: m <sup>3</sup> /s	4.7
Max. air intake restriction: mbar	30

#### // Cooling/Radiator System

Coolant flow rate (HT circuit): m <sup>3</sup> /h	80
Coolant flow rate (LT circuit): m <sup>3</sup> /h	44
Heat rejection to coolant: kW	1270
Heat radiated to charge air cooling: kW	930
Heat radiated to ambient: kW	105
Fan power for electr. radiator (40°C): kW	105

#### // Exhaust System

Exhaust gas temp. (after turbocharger): °C	482
Exhaust gas temp. (before turbocharger): °C	693
Exhaust gas volume: m <sup>3</sup> /s	11.9
Maximum allowable back pressure: mbar	50
Minimum allowable back pressure: mbar	-