Generators QAS 100 PD
AML: Principal Data

		STD units	STD units	Note
Reference conditions [1) 4)]				
1.Rated frequency	Hz	50	60	
2.Rated speed	rpm	1500	1800	(a)
3.Generator service duty		PRP	PRP	
4.Absolute inlet pressure	kPa	100	100	
5.Relative air humidity	%	30	30	
6.Air inlet temperature	°C	25	25	
Limitations [2)]				
1.Maximum ambient temperature	°C	50	50	
2.Altitude capability	m	4000	4000	
3.Relative air humidity maximum	%	85	85	
4.Minimum starting temperature unaided	°C	-18	-18	
5.Minimum starting temperature aided	°C	-25	-25	(a)
Performance data [2) 3) 5)]				
1.Rated active power (PRP) 3ph	kW	80.0	92.0	
Rated active power (PRP) 1ph	kW	60.0	67.5	(a)
2.Rated power factor (lagging) 3phase	cos f	0.80	0.80	
Rated power factor (lagging) 1phase	cos f	1.00	1.00	(a)
3.Rated PRP power 3ph	kVA	100.0	115.0	
Rated PRP power 1ph	kVA	60.0	67.5	(a)
4.Rated voltage line to line	V	400	480	
Rated voltage line to line lower voltage	V	230	240	
Rated voltage 1ph.	V	230	240	(a)
5.Rated current 3ph.	A	144.3	138.3	
Rated current 3ph lower voltage	A	251.0	276.6	
Rated current 1ph.	A	260.9	281.3	(a)
6. Performance class (acc.ISO 8528-5:1993)		G2	G2	
7. Frequency droop	%	<5 isochronous	<5 isochronous	(a)
8.Fuel consumption at no load (0%)	kg/h	2.2	2.8	
Fuel consumption at 50% load	kg/h	10.2	12.6	
Fuel consumption at 75% load	kg/h	14.2	17.5	
Fuel consumption at full load (100%)	kg/h	18.8	23.1	
9.Specific fuel consumption (at full load, 100%)	kg/kWh	0.236	0.255	
10.Fuel autonomy at full load with standard tank	h	10.5	8.6	
11.Fuel autonomy at full load with optional skid fueltank	h	25.0	20.3	(a)
12.Max. oil consumption at full load	g/h	28.2	34.7	
13.Maximum sound power level (LWA) measured according to 2000/14/EC OND	dB(A)	92	95	
14. Capacity of fuel tank	l	230	230	
15. Capacity of optional skid fuel tank	l	545	545	(a)
16. Single step load acceptance	%	80	90	
Application data				
1.Mode of operation		PRP	PRP	
2.Site		land use	land use	
3.Operation		single	single	
4.Start-up and control mode		manual/automatic	manual/auto.	
5.Start-up time		unspecified	unspecified	
6,Mobility/ Config. acc. to ISO 8528-1:1993		transportable/D mobile/E	transportable/D mobile/E	(a)
7.Mounting		fully resilient	fully resilient	
8.Climatic exposure		open air	open air	
9.Degree of protection (cubicle)		IP 54	IP 54	
10.Status of neutral (TT or TN)		earthed	earthed	
Status of neutral (IT)		insulated	-	(a)

Design data [4)]

Alternator

1.Standard		IEC 34-1 ISO 8528-3	IEC 34-1 ISO 8528-3	
2.Make		STAMFORD	STAMFORD	
3.Model		UCI274-C1	UCI274-C1	
4.Rated output,class H temp. rise	kVA	100.0	125.0	
rating type acc. ISO 8528-3		BR	BR	
5.Degree of protection	IP	23	23	
6. Insulation - stator	class	H	H	
- rotor	class	H	H	
7.Number of wires		12	12	

Engine

1.Standard		ISO 3046 ISO 8528-2	ISO 3046 ISO 8528-2	
2.Make		PERKINS	PERKINS	
3.Model		1104C-44TAG2	1104C-44TAG2	
4.Rated net output	kW	89.0	100.0	
rating type acc. ISO 3046-7		ICXN	ICXN	
production tolerance	%	±5	±5	
5.Coolant		water	water	
6.Combustion system		direct injection	direct injection	
7.Aspiration		Turbo-charged Intercooled	Turbo-charged Intercooled	
8.Number of cylinders		4	4	
9.Swept volume	l	4.410	4.410	
10.Speed governing		electronic	electronic	
11.Capacity of oil sump	l	8.5	8.5	
12.Capacity of cooling system	l	12.6	12.6	
13.Electrical system	Vdc	12	12	

Power circuit

Circuit-breaker, 3ph.

1.Number of poles		4	4	
2.Thermal release..... It.....	A	144	144	(b)
3.Magnetic release..... Im.....	A	3..5xIn	3..5xIn	

Circuit-breaker, 3ph. lower voltage

1.Number of poles		3	4	(a)
2.Thermal release..... It.....	A	252	280	(b)
3.Magnetic release..... Im.....	A	3..5xIn	3..5xIn	

Circuit-breaker, 1ph.

1.Number of poles		3	4	(a)
2.Thermal release..... It.....	A	280	280	(b)
3.Magnetic release..... Im.....	A	3..5xIn	3..5xIn	

Fault current protection

1.Residual current release.. IDn.....	A	0.030-30	0.030-30	
2.Insulation resistance	kOhm	10-100	-	(a)

Outlet sockets

following three socket configuration is possible (a)

1. i + ii + iii + iv
2. i + ii + iii + iv (2x)
3. i + ii + iii + iv + v

i) domestic
2P+PE
16A 230V

ii) CEE form
3P+N+PE
16A 400V

iii) CEE form
3P+N+PE
32A 400V

iv) CEE form
3P+N+PE
63A 400V

v) CEE form
3P+N+PE
125A 400V

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Notes

1) Reference conditions for engine performance to ISO 3046-1
2) See derating diagram or consult the factory for other conditions
3) At reference conditions unless otherwise stated
4) Rating Definition (ISO 8528-1):

LTP — Limited Time Power is the maximum electrical power which a generating set is capable of delivering (at variable load), in the event of a utility power failure (for up to 500 hours per year of which a maximum of 300 hours is continuous running). No overload is permitted on these ratings. The alternator is peak continuous rated (as defined in ISO8528-3) at 25°C.

PRP — Prime Power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals and under the stated ambient conditions. A 10% overload is permitted for 1 hour in 12 hours. The permissible average power output during a 24h period shall not exceed the stated load factor of 80%.

5) Specific mass fuel used: 0.86 kg/l

(a) optional equipment

(b) thermal release is higher at 25°C

DERATING FACTOR QAS100 (%)

Derating Factor %		*temperature (°C)*										
		0	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**
height (m)	**0**	100	100	100	100	100	100	100	98	92	85	75
	500	100	100	100	100	100	100	99	98	97	87	75
	1000	100	100	100	100	100	99	98	97	96	86	75
	1500	97	97	97	97	97	97	97	96	95	85	73
	2000	94	94	94	94	94	94	94	94	93	82	71
	2500	88	88	88	88	88	88	88	88	88	77	66
	3000	88	88	88	88	88	88	88	88	88	77	66
	3500	82	82	82	82	82	82	82	82	82	72	62
	4000	82	82	82	82	82	82	82	82	82	72	62

For use of generator outside these conditions, please contact Atlas Copco

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