

8. TECHNICAL SPECIFICATIONS

8.1 TORQUE VALUES

8.1.1 FOR GENERAL APPLICATIONS

The following tables list the recommended torques applied for general applications at assembly of the compressor.

For hexagon screws and nuts with strength grade 8.8

Thread size	M6	M8	M10	M12	M14	M16
Nm	9	23	46	80	125	205

For hexagon screws and nuts with strength grade 12.9

Thread size	M6	M8	M10	M12	M14	M16
Nm	15	39	78	135	210	345

8.1.2 FOR IMPORTANT ASSEMBLIES

Assemblies	Unit	Torque values	
Wheel nuts	Nm	80	+10/-0
Bolts, axle/beams	Nm	80	+/- 10
Bolts, towbar/axle	Nm	80	+/- 10
Bolts, towbar/bottom	Nm	80	+/- 10
Bolts, towing eye/towbar	Nm	80	+/- 10
Bolts, lifting eye/flywheel housing	Nm	205	+ 20
Bolts, engine/drive housing (M12)	Nm	80	+/- 10
Bolts, engine/drive housing (M14)	Nm	125	+/- 10
Bolts, compressor element/drive housing	Nm	80	+/- 5
Safety switches	Nm	35	+/- 5
Joins adjustable towbar (M24)	Nm	275	+/- 25
(M32)	Nm	375	+/- 25

Note:

Secure the tank cap and drain plug of the fuel tank handtight.

8.2 SETTINGS OF SHUTDOWN SWITCHES AND SAFETY VALVES

Designation	Unit	Value
Engine oil pressure	bar(e)	N.A.
Engine oil temperature	°C	N.A.
Compressor temperature	°C	N.A.
Safety valve opening pressure		
CE type	bar(e)	N.A.
ASME type	psi	N.A.

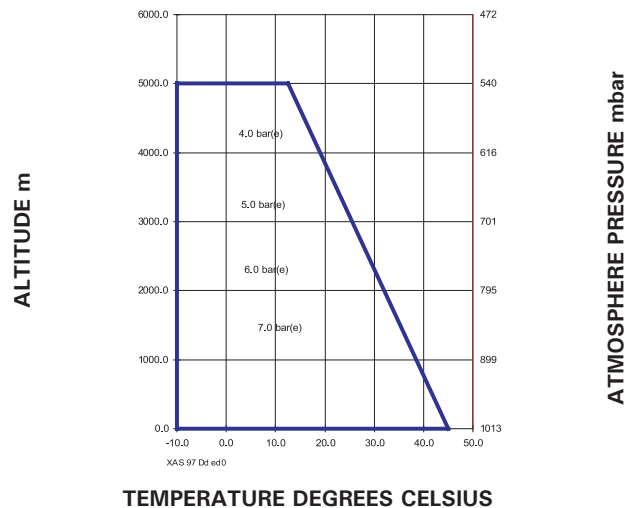
8.3 COMPRESSOR/ENGINE SPECIFICATIONS

Compressor type

Designation	Unit	
Reference conditions		
1. Absolute inlet pressure	bar	1
2. Relative air humidity	%	0
3. Air inlet temperature	°C	20
4. Nominal effective working pressure	bar	7
The inlet conditions are specified at the air inlet grating outside the canopy		
Limitations		
1. Minimum effective receiver pressure	bar	4
2. Maximum effective receiver pressure, compressor unloaded	bar	8.5-9
3. Maximum ambient temperature at sea level ⁵⁾	°C	45
4. Minimum starting temperature	°C	-10
5. Minimum starting temperature, with coldstart equipment	°C	-20
6. Altitude capability (see separate curve below)	m	

Altitude unit performance curve

Max. allowable working pressure as a function altitude and ambient temperature.



ATMOSPHERE PRESSURE mbar

ALTITUDE m

TEMPERATURE DEGREES CELSIUS

Performance data ¹⁾

1. Engine shaft speed, normal and maximum	r/min	2,750
2. Engine shaft speed, compressor unloaded	r/min	1,850
3. Engine shaft speed, generator	r/min	2,700
4. Free air delivery ²⁾	l/s	89
5. Fuel consumption:		
- at full load + generator	kg/h	7.2
- at unload	kg/h	3.6
6. Specific fuel consumption	g/m ³	23.3
7. Typical oil content of compressed air	mg/m ³	<5
	free air	
8. Engine oil consumption (maximum)	g/h	37
9. Compressed air temperature at outlet valves	°C	90
10. Noise level		
- Sound pressure level (Lp), measured according to ISO 2151 under free field conditions at 7 m distance	dB(A)	72
- Sound power level (LW) complies with 2000/14/EC	dB(A)	100

Design data

Compressor

1. Number of compression stages		1
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Engine

1. Make		KHD
2. Type		F3M2011
3. Coolant		Oil
4. Number of cylinders		3
5. Bore	mm	94
6. Stroke	mm	112
7. Swept volume	l	2.332
8. Output according to ISO 9249 G at normal shaft speed	kW	36
- Load factor	%	50
9. Capacity of oil sump:		
- Initial fill	l	8.5
- Refill (max.) ⁴⁾	l	6
10. Capacity of cooling system		-

Generator DdG 110V

Alternator

1. Standard		IEC 34-1
2. Make		MECC ALTE
3. Model		MR-1 -180/2
4. Rated output	kVA	6
5. Degree of protection	IP	23
6. Insulation	- stator class	H
	- rotor class	H
7. Number of phases		1
8. Number of leads		4

Electrical power circuit

1. Rated continuous active power	COP	kW	5.5
2. Rated power factor (lagging)			1
3. Rated continuous apparent power 1 ph	COP	kVA	5.5
4. Rated voltage 1ph	line to line	V	110
5. Rated current 1ph		A	50
6. Frequency droop		%	<5

Circuit breaker

1. Number of poles			2
2. Rated current	In	1ph	A 50
3. Thermal release	It	1ph	A 50
4. Magnetic release	Im		A 3..5 In

Fault current protection

Insulation resistance		kOhm	
Residual current release	Idn	A	0.03

Generator DdG IT 230V - 3 ph - 6kVA

Alternator

1. Standard		IEC 34-1	
2. Make		MECC ALTE	
3. Model		TR-1 -160/2	
4. Rated output	kVA	6	
5. Degree of protection	IP	23	
6. Insulation - stator	class	H	
- rotor	class	H	
7. Number of phases		3	
8. Number of leads		6	

Electrical power circuit

1. Rated continuous active power	COP	kW	4.8
2. Rated power factor (lagging)			0.8
3. Rated continuous apparent power 3 ph	COP	kVA	6
4. Rated voltage 3ph line to line		V	230
5. Rated current 3ph		A	15
6. Rated continuous apparent power 1 ph	COP	kVA	4
7. Rated voltage 1ph line to line		V	230
8. Rated current 1ph		A	16
9. Frequency droop		%	<5

Circuit breaker

1. Number of poles			3
2. Rated current	In	1ph/3ph	A 16/16
3. Thermal release	It	1ph/3ph	A 16/16
4. Magnetic release	Im		A 3..5 In

Fault current protection

Insulation resistance		kOhm	10-80
Residual current release	Idn	A	

Generator DdG IT 230/400V - 3 ph - 6 kVA

Alternator

1. Standard		IEC 34-1	
2. Make		MECC ALTE	
3. Model		TR-1 -160/2	
4. Rated output	kVA	6	
5. Degree of protection	IP	23	
6. Insulation - stator	class	H	
- rotor	class	H	
7. Number of phases		3	
8. Number of leads		6	

Electrical power circuit

1. Rated continuous active power	COP	kW	4.8
2. Rated power factor (lagging)			0.8
3. Rated continuous apparent power 3 ph	COP	kVA	6
4. Rated voltage 3ph line to line		V	400
5. Rated current 3ph		A	8.7
6. Rated continuous apparent power 1 ph	COP	kVA	4
7. Rated voltage 1ph line to line		V	230
8. Rated current 1ph		A	16
9. Frequency droop		%	<5

Circuit breaker

1. Number of poles			4
2. Rated current	In	1ph/3ph	A 16/10
3. Thermal release	It	1ph/3ph	A 16/10
4. Magnetic release	Im		A 3..5 In

Fault current protection

Insulation resistance		kOhm	10-80
Residual current release	Idn	A	

Generator DdG IT 230V - 3 ph - 12.5 kVA

Alternator

1. Standard		IEC 34-1	
2. Make		MECC ALTE	
3. Model		TR-2 -200/2	
4. Rated output	kVA	12.5	
5. Degree of protection	IP	23	
6. Insulation - stator	class	H	
- rotor	class	H	
7. Number of phases		3	
8. Number of leads		6	

Electrical power circuit

1. Rated continuous active power	COP	kW	9.6
2. Rated power factor (lagging)			0.8
3. Rated continuous apparent power 3 ph	COP	kVA	12
4. Rated voltage 3ph line to line		V	230
5. Rated current 3ph		A	30.1
6. Rated continuous apparent power 1 ph	COP	kVA	
7. Rated voltage 1ph line to line		V	230
8. Rated current 1ph		A	16
9. Frequency droop		%	<5

Circuit breaker

1. Number of poles			3
2. Rated current	In	1ph/3ph	A 16/32
3. Thermal release	It	1ph/3ph	A 16/32
4. Magnetic release	Im		A 3..5 In

Fault current protection

Insulation resistance		kOhm	10-80
Residual current release	Idn	A	

Generator DdG IT 230/400V - 3 ph - 12.5 kVA

Alternator

1. Standard		IEC 34-1	
2. Make		MECC ALTE	
3. Model		TR-2 -200/2	
4. Rated output	kVA	12.5	
5. Degree of protection	IP	23	
6. Insulation - stator	class	H	
- rotor	class	H	
7. Number of phases		3	
8. Number of leads		6	

Electrical power circuit

1. Rated continuous active power	COP	kW	9.6
2. Rated power factor (lagging)			0.8
3. Rated continuous apparent power 3 ph	COP	kVA	12
4. Rated voltage 3ph line to line		V	400
5. Rated current 3ph		A	17.4
6. Rated continuous apparent power 1 ph	COP	kVA	
7. Rated voltage 1ph line to line		V	230
8. Rated current 1ph		A	16
9. Frequency droop		%	<5

Circuit breaker

1. Number of poles			4
2. Rated current	In	1ph/3ph	A 16/16
3. Thermal release	It	1ph/3ph	A 16/16
4. Magnetic release	Im		A 3..5 In

Fault current protection

Insulation resistance		kOhm	10-80
Residual current release	Idn	A	

Unit

1. Capacity of compressor oil system	1	8
2. Net capacity of air receiver	1	16.7
3. Capacity of fuel tank	1	80
4. Air volume at inlet grating (approx.) ³⁾	m ³ /s	0.81

Unit dimensions

without brakes

		towbar	
		fixed	adjustable
Length	mm	3,016	N.A.
Width	mm	1,410	N.A.
Height	mm	1,258	N.A.
Weight (ready to operate)	kg	NA	N.A.

with brakes

		towbar	
		fixed	adjustable
Length	mm	3,129	3,496/3,664
Width	mm	1,410	1,410
Height	mm	1,258	1,258
Weight (ready to operate)	kg	N.A.	N.A.

- At reference conditions, if applicable, and at normal shaft speed, unless otherwise stated.
- Data Measured according to Tolerance

Free air delivery	ISO 1217 ed.3 1996 annex D	+/- 5% 25 l/s <FAD<250 l/s +/- 4% 250 l/s <FAD
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The international standard ISO 1217 corresponds to following national standards:

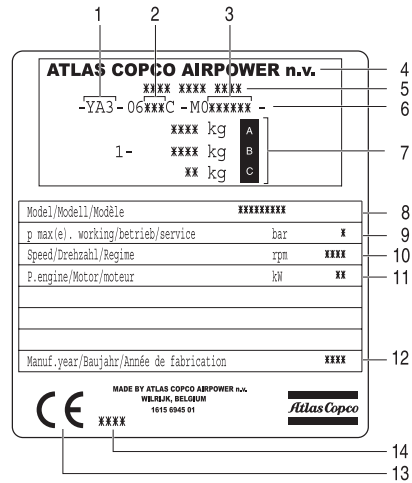
 - British BSI 1571 part 1
 - German DIN 1945 Part 1
 - Swedish SS-ISO 1217
 - American ANSI PTC9
- Air required for engine and compressor cooling, combustion and for compression.
- with filter change
- For Hose Reel application: maximum ambient temperature 30°C

8.4 CONVERSION LIST OF SI UNITS INTO BRITISH UNITS

1 bar	=	14.504 psi
1 g	=	0.035 oz
1 kg	=	2.205 lb
1 km/h	=	0.621 mile/h
1 kW	=	1.341 hp (UK and US)
1 l	=	0.264 US gal
1 l	=	0.220 Imp gal (UK)
1 l	=	0.035 cu.ft
1 m	=	3.281 ft
1 mm	=	0.039 in
1 m ³ /min	=	35.315 cfm
1 mbar	=	0.401 in wc
1 N	=	0.225 lbf
1 Nm	=	0.738 lbf.ft
t °F	=	32 + (1.8 x t °C)
t °C	=	(t °F - 32)/1.8

– A temperature difference of 1 °C = a temperature difference of 1.8 °F

9. DATA PLATE



- Company code
- Product code
- Unit serial number
- Name of manufacturer
- EEC or national type approval number
- Vehicle identification number
- A Maximum permitted laden weight of the vehicle
B Maximum permitted road weight of the vehicle
C Maximum permitted laden weight of the towing eye
- Model
- Working pressure
- Speed
- Engine power
- Manufacturing year
- CE-mark in accordance with Machine Directive 89/392 EEC
- Register number or number of notified body