

## 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
Joints 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

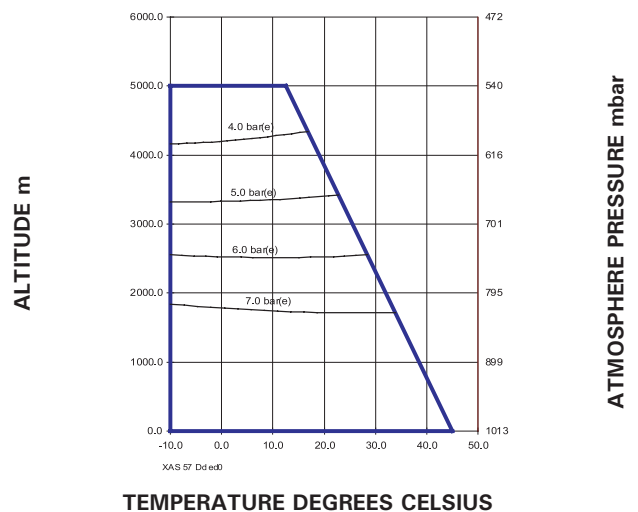
Designation	Unit	
<b>Reference conditions</b>		
1. Absolute inlet pressure	bar	1
2. Relative air humidity	%	0
3. Air inlet temperature	°C	20
4. Nominal effective working pressure	bar	7

The inlet conditions are specified at the air inlet grating outside the canopy

#### Limitations

1. Minimum effective receiver pressure	bar	3.6
2. Maximum effective receiver pressure, compressor unloaded	bar	8.2-8.7
3. Maximum ambient temperature at sea level <sup>6)</sup>	°C	45
4. Minimum starting temperature	°C	-10
5. Minimum starting temperature, with coldstart equipment <sup>5)</sup>	°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.



#### Performance data <sup>1)</sup>

1. Engine shaft speed, normal and maximum	r/min	2,750
2. Engine shaft speed, compressor unloaded	r/min	1,850
3. Free air delivery <sup>2)</sup>	l/s	50
4. Fuel consumption:		
- at full load	kg/h	5.05
- at unload	kg/h	1.93
5. Specific fuel consumption	g/m <sup>3</sup>	28.1
6. Typical oil content of compressed air	mg/m <sup>3</sup>	<5
	free air	
7. Engine oil consumption (maximum)	g/h	15
8. Compressed air temperature at outlet valves	°C	93
9. 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

**Engine**

1. Make KHD  
 2. Type F2M2011  
 3. Coolant Oil  
 4. Number of cylinders 2  
 5. Bore mm 94  
 6. Stroke mm 112  
 7. Swept volume l 1.554  
 8. Output according to ISO 9249 G at normal shaft speed kW 23.3  
 – Load factor % 50  
 9. Capacity of oil sump:  
 – Initial fill l 8  
 – Refill (max.)<sup>4)</sup> l 6.5  
 10. Capacity of cooling system l –

**Unit**

1. Capacity of compressor oil system l 8  
 2. Net capacity of air receiver l 16.7  
 3. Capacity of fuel tank l 40  
 4. Air volume at inlet grating (approx.)<sup>3)</sup> m<sup>3</sup>/s 0.81

**Unit dimensions**

**without brakes**

		towbar	
		fixed	adjustable
Length	mm	2,980	3,257/3,495
Width	mm	1,330	1,330
Height	mm	1,252	1,252
Weight (ready to operate)	kg	720	725

**with brakes**

		towbar	
		fixed	adjustable
Length	mm	3,093	3,460/3,628
Width	mm	1,330	1,330
Height	mm	1,252	1,252
Weight (ready to operate)	kg	755	770

- 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<br>1996 annex D | +/- 5% 25 l/s <FAD<250 l/s<br>+/- 4% 250 l/s <FAD |

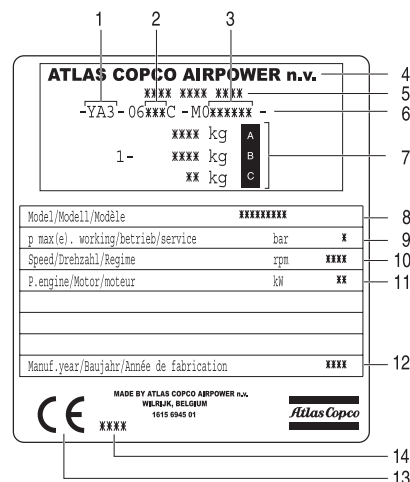
The international standard ISO 1217 corresponds to following national standards:  
 - British BSI 1571 part 1  
 - German DIN 1945 Part 1  
 - Swedish SS-ISO 1217  
 - American ANSI PTC9
- Air required for engine and compressor cooling, combustion and for compression.
- with filter change
- Coldstart: compressor oil DTE22 instead of DTE25
- 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<sup>3</sup>/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