AUSTART
AIR STARTERS

ATEX ADDENDUM INSTRUCTIONS

ATS53 - Air Powered Starter
ATS54 - Air Powered Starter
ATS63 - Air Powered Starter
ATS64 - Air Powered Starter
ATS71 - Air Powered Starter
ATS73 - Air Powered Starter
ATS74 - Air Powered Starter
ATS83 - Air Powered Starter
ATS84 - Air Powered Starter
ATS93 - Air Powered Starter
ATS94 - Air Powered Starter
ATS103 - Air Powered Starter

KH Equipment
Precision Engineering

K.H. EQUIPMENT PTY LTD

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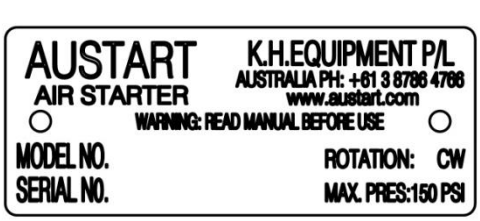
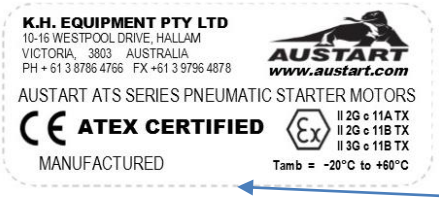
Product Marking Details:





Space for stamped manufactured date

ATEX Certification Coding:

Directive Marking: II 2G c IIATX
II 2G c IIBTX
II 3G c IIBTX

Essential information for safe use: Refer to special conditions for safe use.
Ambient Temperature Range: -20°c to +60°c

Special Conditions for Safe Use:

Where these instructions contradict any other literature relating to the installation and use of the equipment, these conditions for safe use take precedence.

1. The end user shall ensure all exposed metallic parts are adequately bonded to ground with an impedance of not more than 1.0 Ohms.
2. Fluids and lubricants used shall have an auto ignition temperature at least 50°C above the maximum temperature marked on the equipment of associated drive system.
3. When assembled as a complete system, the end user/installer shall perform the required test to determine the maximum temperature and Tclass of the equipment.
4. The Starter shall not be operated whilst the engine is running. The Starter shall not be operated within 15 seconds of a failed attempt or until the engine and starter have come to a complete stop.
5. When assembled as a complete system, the end user/installer shall ensure the starter operates within the maximum stated pressure for each category and gas group according to table 5.1 for category 2G use and 5.2 for category 3G use.
6. The installer/user shall observe the maximum Impact energy during engagement detailed in table 6.1.
7. The bearings shall be inspected and replaced according to the schedule detailed in table 7.1.
8. The exhaust of the starter shall have a suitable spark arrestor fitted, refer to options available, Table 8.1.
9. Pressurised air supplied to this equipment shall be taken from a source known to be non-hazardous and free from ingress of foreign objects or liquids, any lubricant used shall be resistant to carbonisation.
10. Air-hoses connected to this equipment shall be metallic or constructed from anti-static materials.

Table 5.1
Category 2G Equipment

	Non Sparking Materials		Other Materials	
Model	**Maximum Starting Pressure for IIB gases (250 Nm), psi**	**Maximum Starting Pressure for IIA gases (500 Nm), psi**	**Maximum Starting Pressure for IIB gases (20 Nm), psi**	**Maximum Starting Pressure for IIA gases (40 Nm), psi**
ATS53	150	150	70	130
ATS54	150	150	70	130
ATS63	150	150	-	60
ATS64	150	150	-	60
ATS71	150	150	-	-
ATS73	150	150	-	-
ATS74	150	150	-	-
ATS83	150	150	-	-
ATS84	150	150	-	-
ATS93	95	150	-	-
ATS94	95	150	-	-
ATS103	85	150	-	-

Table 5.2
Category 3G Equipment

	Non Sparking Materials		Other Materials	
Model	**Maximum Starting Pressure for IIB gases (500 Nm), psi**	**Maximum Starting Pressure for IIA gases (500 Nm), psi**	**Maximum Starting Pressure for IIB gases (40 Nm), psi**	**Maximum Starting Pressure for IIA gases (80 Nm), psi**
ATS53	150	150	130	150
ATS54	150	150	130	150
ATS63	150	150	60	150
ATS64	150	150	60	150
ATS71	150	150	-	100
ATS73	150	150	-	75
ATS74	150	150	-	75
ATS83	150	150	-	-
ATS84	150	150	-	-
ATS93	150	150	-	-
ATS94	150	150	-	-
ATS103	150	150	-	-

Table 6.1
Engaging Force

	Maximum Engaging Force	
Model	**Maximum Engaging Force @ 100 psi**	**Maximum Engaging Force @ 150 psi**
ATS53	3.327 Nm	4.490 Nm
ATS54	3.327 Nm	4.490 Nm
ATS63	3.327 Nm	4.490 Nm
ATS64	3.327 Nm	4.490 Nm
ATS71	3.489 Nm	5.234 Nm
ATS73	3.489 Nm	5.234 Nm
ATS74	3.489 Nm	5.234 Nm
ATS83	3.808 Nm	5.713 Nm
ATS84	3.808 Nm	5.713 Nm
ATS93	3.808 Nm	5.713 Nm
ATS94	3.808 Nm	5.713 Nm
ATS103	3.947 Nm	5.920 Nm

Table 7.1
Bearing Maintenance

Model	Inspection Interval, Operating Cycles	Replacement Interval, Operating Cycles
ATS53	5000	10000
ATS54	5000	10000
ATS63	4650	9300
ATS64	4650	9300
ATS71	6000	12000
ATS73	3650	7300
ATS74	3650	7300
ATS83	3600	7200
ATS84	3600	7200
ATS93	3600	7200
ATS94	3600	7200
ATS103	3650	7300

Table 8.1
Exhaust Options

Exhaust code Option Table									
Starter Model	**Std (no code)**	**E 1.5" Threaded**	**F 2.0" Threaded**	**G 2.0" Threaded**	**J 2.0" Elbow**	**K Kelly Spinner**	**R Reduced**	**S Screen**	**T 3.0" Threaded**
ATS53	√						√	√	
ATS54	√						√	√	
ATS63	√	√					√	√	
ATS64	√	√					√	√	
ATS71	√						√		
ATS73	√		√	√	√	√			
ATS74	√		√	√	√	√			
ATS83	√		√	√	√	√			
ATS84	√		√	√	√	√			
ATS93	√					√			√
ATS94	√					√			√
ATS103	√					√			√

All Austart turbine starters are supplied with a standard muffler unit with internal screen and baffle plates unless otherwise noted.

E, **F**, **G** and **T** are straight threaded exhausts.

Code **J** is a 90 degree elbow.

Code **K** is a spring sealed exhaust using internal screen and baffle plates with radial vent ports.

Code **R** is a reduced length muffler for restricted space applications utilising a solid baffle plate.

Code **S** is a perforated mesh short screen only for restricted space applications.

The straight open exhausts are the 1.5", 2.0" and 3.0" threaded exhausts when no baffle plates are installed. However the nature of this option is for piping to be added, hence directing the exhaust away to another area which could act as a spark arrestor depending upon routing and distance to atmosphere exit.

EC Declaration of Conformity – Component for Incorporation

We:

The Manufacturer	EU Authorised Representative
K.H. Equipment Pty Ltd 10-16 Westpool Drive Hallam Victoria 3803 Australia	Austart UK Ltd Unit 5, Hollywood Trading Estate 6 Dark Lane, Birmingham West Midlands B47 5BN United Kingdom

As the representative/manufacturer of the items listed below:

Pneumatic Engine Starters, Model Numbers:
ATS53, ATS54, ATS63, ATS64, ATS71, ATS73
ATS74, ATS83, ATS84, ATS93, ATS94, ATS103

Declare, under our sole responsibility, that the equipment to which this document relates is in conformity with the following standards or other normative documents:

EN13463-1:2009, EN13463-5:2011

With reference to specific requirements of
EN1127-1:2007 and EN1834-1:2000

And when installed in a system thereby conform to the protection requirements of Council Directive 94/9/EC relating to protection of equipment for use in potentially explosive atmospheres and Council Directive.

Equipment Marking: CE Ex

II2G c IIATX
II2G c IIBTX
II3G c IIBTX

"A copy of the product technical file has been lodged with the Komag Institute of Mining Technology, notified body number 1456".

Issued on: 20 July 2015

Authorised by:

David Howard
Marketing Director

KOMAG INSTITUTE OF MINING TECHNOLOGY
Division of Attestation Tests Certifying Body
Pszczyńska 37, 44-101 Gliwice, Poland

Notified body No. 1456

CERTIFICATE
No. KOMAG/13/ZAŚW/0161

According to the procedure specified in §51.1 item 2) b) of Decree of Ministry of Economy dated 22nd December 2005 as regards the main requirements for machines and protective systems designed to operate in areas threaten by explosion hazard (Article 8, p item (b) ii) 94/9/WE-ATEX Directive of European Parliament and Council of the European Union dated 23 March 1994), the KOMAG Institute of Mining Technology, Notified Body No. 1456, confirms taking from the following manufacturer:

K H Equipment Pty Ltd
14-16 Westpool Drive, Hallam Victoria 3803, Australia

EU Authorised Representative:
Austart UK Ltd
Unit 5, Hollywood Trading Estate
6 Dark Lane, Birmingham, West Midlands B47 5BN, England

the documentation:

Pneumatic Engine Starters, model numbers:
ATS53, ATS54, ATS63, ATS64, ATS71, ATS73, ATS74, ATS83, ATS84, ATS93, ATS94, ATS103
(1 CD-R)

delivered by:

SJW Compliance Services Ltd
11 Blandford Ave, Worsley, Manchester M28 2JE, England

on: **4.06.2013**

The documentation will not be verified as regards its completeness and properness. The documentation will be lodged in our archives for a period of ten years. If the manufacturer wishes the longer period of technical documentation lodging it should inform about that fact in a written form and in the proper period of time.

INSTYTUT TECHNIKI GÓRNICZEJ KOMAG GLIWICE

Manager
of the Division of Attestation Tests
Certifying Body
w z.
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Józef Kaczmarczyk, M.Sc. Eng.

Gliwice, 4.06.2013