

CERTIFICATE

*in accordance with the requirements of the
Pressure Equipment Directive 97/23/EC,
Annex III, Module B, EC Type-Examination.*

This is to certify that the sample is in conformance with the Essential Safety Requirements of Annex I of the Directive with respect to the global conformity of assemblies and representative for the range of approval. Details are contained in the underneath mentioned test report.

*Name / address of
manufacturer / applicant:*

ATLAS COPCO ENERGAS GmbH

Am Ziegelofen 2
D-50 999 Köln

Type of pressure equipment:

Assembly acc. Art. 3 Para. 2.2.

Description of product:

Expansion turbine

Sample:

Expander ETB 150 NS

Range of approval:

ETB, ETG, ETF 100 to 450
optional as 2 stage machine

Test report no.:

SIG 0171571/1


The Certificate is valid on the assumption that the product fulfils the specified requirements and conditions for use. Any modifications to the approved pressure equipment have to be reported to the notified body. The Certificate is valid for ten years and can be renewed upon request.

Certificate-No.: SIG 0171571/2

Date of Type-Examination: 29th January 2002

Certificate Expiry Date: 29th January 2012

LRQA GmbH
Identifikation-No. 0525


On behalf of LRQA GmbH



OELTECHNIK

A	Q A
PAGE	111

- Wärmeaustauscher
- Oelversorgungsanlagen
- Industriefilter
- Behälter

Gesellschaft für OELTECHNIK mbH, Lessingsstraße 32, D-68753 Waghäusel - Kirrlach

Atlas Copco Energas GmbH
Am Ziegelofen 2

50 999 KÖLN

97/23/EC-Druckgeräte Richtlinie/PED KONFORMITÄTSERKLÄRUNG Declaration of Conformity EN 10204/3.1B

Kennwort Kunde Project customer	ASU KOSICE
Bestell-/AuftragsNr. Order-/job No.	45219406, Pos.00010 Auftr.-Nr. 56037373
Fabrik- u. Ersatzteil-No. Serial-Spare-Parts-No.	103/15018-19/05
Mat.-Nr.	6970300824
Baujahr Year built	2005
Kennzeichen Marking	./.

☒ = zutreffend applicable
☐ = nicht zutreffend not applicable (N.A.)

Benannte Stelle:
Notified Body:

Kenn-Nr.
Ident-No. ./.

☐ Behälter
Vessel
Type

☒ Wärmetauscher
Heat Exchanger
OK 17/160

☐ Rohrleitung
Pipe Work

Techn. Regel
Techn. Rules

☒ AD-Merkblatt
☐ TRR

Konformitätsbewertung/Evaluation of Conformity

MEDIUM/FLUID

min/max. Temperatur min/max. allow. temp.

max. Betriebsdruck/max. allow. pressure

Inhalt / content / Volumen

Prüfdruck/Test Pressure

Sicherheitseinrichtung/Safety equipment:

Entwurfsprüfung durch: ☒ OELTECHNIK-Konstruktion / Design department

Design control by ☐ Benannte Stelle: ./.

Notified Body:

Entwurfsprüfbescheinigung: ☐ siehe Anlage:
Report of design examination see attachm.: ./.

QM-System: ☒ nicht anwendbar ☐ Urkunde Nr. ./.
N. A. Certificate No.

durch: ./.
by

Kenn-Nr.: ./.
Ident-Nr.

Die oben beschriebenen Druckgeräte erfüllen in Konstruktion, Fabrikation und Prüfung die Anforderungen.
The above mentioned pressure vessels meet the requirements for design, fabrication and testing.

Qualitätssicherung

Quality assurance

20.06.2005 / H.Heiler

Datum Visum Position

OELTECHNIK

Gesellschaft für Oeltechnik m.b.H.

konferk PED GI

CERTIFICATE

*In accordance with the requirements of the
Pressure Equipment Directive 97/23/EC.*

This is to certify that the Quality Management System of

ATLAS COPCO ENERGAS GmbH

Am Ziegelofen 2
D-50 999 Köln
Federal Republic of Germany

has been assessed by LRQA GmbH against the requirements of Annex III,

Module H1, H, D, D1, E and E1

*of the Pressure Equipment Directive 97/23/EC and conforms to the requirements for
the products shown below:*

**Design and Manufacture of
Turbo Machinery**

*Approval is subject to the continued maintenance of the quality system in accordance with the
requirements of the above mentioned Directive.*

*Authorisation is hereby given to use the LRQA GmbH Notified Body Registration Number in
accordance with the requirements of the specified Directive in relation
to the products as identified above.*

Certificate-No.: 500 31/1

Initial Approval:

15th January 2002

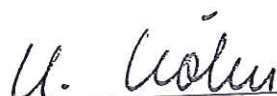
Existing Approval:

09th December 2002

Certificate Expiry Date:

30th November 2005

LRQA GmbH
Registration No.: 0525


on behalf of LRQA GmbH

Atlas Copco

EC Declaration of Conformity
as per EC pressure equipment directive 97/23/EC

We, ATLAS COPCO ENERGAS GMBH, Am Ziegelofen 2 in D-50999 Köln, herewith declare that the product/s described below

Machine description: Expansionturbine

Machine type: ETG 125 MS

Serial No. :15-3509

has/have been manufactured in terms of article 1. (2.1.5) of the PED in compliance with the following conformity assessment procedure(s):

Categorie IV, Module B + D (directive 97/23/EC)

Notified body:

(Or, if required, notified body monitoring the QA system)

Lloyd's Register Quality Assurance GmbH
Benannte Stelle für Druckgeräte
Mönckebergstr. 27
D-20095 Hamburg
0525

Identification No:

No. of EC type examination certificate:

SIG 0171571/2

No. of Quality Management System:

50031/1

Refer to the enclosed classification list for the single pressure equipment items of which the entire functional group consists. Pressure equipment included in the a.m. product(s) as per PED article 2. (2.1 – 2.1.5) which has not been manufactured by Atlas Copco Energas GmbH has been evaluated by the manufacturer of the pressure equipment or functional group in question. The corresponding declarations of conformity as per directive 97/23/EC are available.

This declaration shall become null and void, if products are modified without our express authorisation. Observation of the safety instructions included in the product documentation is imperative.

Other applied directives: machinery directive 98/37/EC

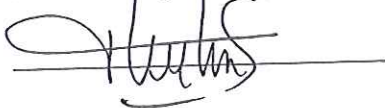
Applied harmonised standards, national/international standards, guidelines and specifications:
(refer also to declaration of conformity on machinery directive)

Conformity of production documents with pressure equipment directive

Name: G. Theeten

Position: Head of Engineering/Development

Signature:

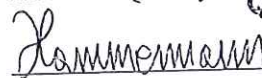


Date: 07 December 2005

Conformity of finished machine with production documents

H. Hammermann

Head of Quality Control



**Atlas Copco
Energas GmbH
Quality Control**

Atlas Copco

EC Declaration of Conformity
as per EC pressure equipment directive 97/23/EC

We, **ATLAS COPCO ENERGAS GMBH**, Am Ziegelofen 2 in D-50999 Köln, herewith declare that the product/s described below

Machine description: Expansionturbine

Machine type: ETG 125 MS

Serial No. :15-3510

has/have been manufactured in terms of article 1. (2.1.5) of the PED in compliance with the following conformity assessment procedure(s):

Categorie IV, Module B + D (directive 97/23/EC)

Notified body:

(Or, if required, notified body monitoring the QA system)

Lloyd's Register Quality Assurance GmbH
Benannte Stelle für Druckgeräte
Mönckebergstr. 27
D-20095 Hamburg
0525

Identification No:

No. of EC type examination certificate:

SIG 0171571/2

No. of Quality Management System:

50031/1

Refer to the enclosed classification list for the single pressure equipment items of which the entire functional group consists. Pressure equipment included in the a.m. product(s) as per PED article 2. (2.1 – 2.1.5) which has not been manufactured by Atlas Copco Energas GmbH has been evaluated by the manufacturer of the pressure equipment or functional group in question. The corresponding declarations of conformity as per directive 97/23/EC are available.

This declaration shall become null and void, if products are modified without our express authorisation. Observation of the safety instructions included in the product documentation is imperative.

Other applied directives: machinery directive 98/37/EC

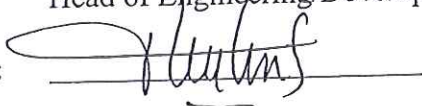
Applied harmonised standards, national/international standards, guidelines and specifications:
(refer also to declaration of conformity on machinery directive)

Conformity of production documents with pressure equipment directive

Name: G. Theeten

Position: Head of Engineering/Development

Signature:

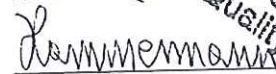


Date: 07 December 2005

Conformity of finished machine with production documents

H. Hammermann

Head of Quality Control



Atlas Copco
Energas GmbH
Quality Control

HERSTELLERZERTIFIKAT M1 56039343

MANUFACTURER'S CERTIFICATE M1

Auftrags-Nr 20016501
works order no

Fertigungs-Nr 20016501/14
serial no

45216536

6370300450

3-Phasen Generator Typ	KH4355M-AB01G-Z	Polzahl	2
3-phase induction generator type		number of poles	
Baujahr year of construction	2005	Baugröße	355M
Betriebsart S1		frame size	
duty type		Bauform	IMB3
Bemessungsleistung	300 kW	type of construction	
rated output		Schutzart	IP55
Bemessungsdrehzahl	3016 /min	degree of protection	
rated speed		Schaltung	D/Y
Bemessungsspannung	400/690 V	connection	
rated voltage		Frequenz	50 Hz
Bemessungsstrom	470/270 A	frequency	
rated current		Wärmeklasse	F/120 °C
Leistungsfaktor	0,92	thermal class	
power factor		Kühlmittel	045 °C
Drehrichtung	links	ambient temperature	
direction of rotation	CCW	Fettsorte/type of grease	
Schmierfrist/Menge	2000h/22g	DIN 51825-K3K	
relubrication period/quantity		Gewicht	1,75 t
Lager A-Seite	6217 C4	weight	
bearing D-end			
Lager G-Seite	6217 C4		
bearing N-end			
Widerstand bei 28,2 °C: Ständer stator	0,0047 Ohm		
resistance at		Isolation insulation	>500 MOhm
Hochspannungsprüfung/ high voltage test		2UN +1000V	
Leerlauf Freq 50Hz U Spannung V voltage			399
no load		I Strom A current	95,8
input		P Aufnahme kW	5,98
Kurzschluß Freq 50Hz U Spannung V voltage			194
locked rotor		I Strom A current	1663,7
input		P Aufnahme kW	110,1
Schwingstärke v eff	2,20 mm/s		
vibration severity			

Vorschrift/standard EN60034 IEC60034
VIK

Wir bescheinigen, daß die aufgeführte(n) Maschine(n) gemäß der (den) angegebenen Vorschrift(en) hergestellt ist (sind) und die vorgeschriebenen Prüfungen und Kontrollen durchlaufen hat (haben).
Die Maschine(n) wurde(n) für in Ordnung befunden und der Versand freigegeben.
Dieses Zertifikat wurde durch die EDV erstellt und ist ohne Unterschrift gültig.

This is to certify that the above machine is manufactured in accordance with the standards mentioned and that it has passed the prescribed tests and inspections. It is released for dispatch.
This certificate was produced by EDP and is valid without signature.

SCHORCH
Elektrische Maschinen und Antriebe GmbH
QUALITÄTSSICHERUNG
Quality Assurance

Mönchengladbach
Ausstellungsdatum 18.07.05
date of issue

HERSTELLERZERTIFIKAT M1

MANUFACTURER'S CERTIFICATE M1

Auftrags-Nr 20016501
works order no

Fertigungs-Nr 20016501/2
serial no

3-Phasen Generator	Typ KH4355M-AB01G-Z	Polzahl	2
3-phase induction generator	type	number of poles	
Baujahr	year of construction 2005		
Betriebsart S1		Baugröße	355M
duty type		frame size	
Bemessungsleistung	300 kW	Bauform	IMB3
rated output		type of construction	
Bemessungsdrehzahl	3016 /min	Schutzart	IP55
rated speed		degree of protection	
Bemessungsspannung	400/690 V	Schaltung	D/Y
rated voltage		connection	
Bemessungsstrom	470/270 A	Frequenz	50 Hz
rated current		frequency	
Leistungsfaktor	0,92	Wärmeklasse	F/120 °C
power factor		thermal class	
Drehrichtung	links	Kühlmittel	045 °C
direction of rotation	CCW	ambient temperature	
Schmierfrist/Menge	2000h/22g	Fettsorte/type of grease	
relubrication period/quantity		DIN 51825-K3K	
Lager A-Seite	6217 C4	Gewicht	1,75 t
bearing D-end		weight	
Lager G-Seite	6217 C4		
bearing N-end			
Widerstand bei 25,2 °C:	Ständer stator	0,0046 Ohm	
resistance at	Isolation insulation	>500 MOhm	
Hochspannungsprüfung/	high voltage test	2UN +1000V	
Leerlauf	Freq 50Hz U Spannung V	voltage	408
no load	I Strom A	current	98,8
input	P Aufnahme kW		6,12
Kurzschluß	Freq 50Hz U Spannung V	voltage	195
locked rotor	I Strom A	current	1662,0
input	P Aufnahme kW		109,5
Schwingstärke	v eff 2,50 mm/s		
vibration severity			

Vorschrift/standard EN60034 IEC60034
VIK

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Die Maschine(n) wurde(n) für in Ordnung befunden und der Versand freigegeben.
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SCHORCH
Elektrische Maschinen und Antriebe GmbH
QUALITÄTSSICHERUNG
Quality Assurance

Mönchengladbach
Ausstellungsdatum 18.07.05
date of issue

Herstellererklärung

im Sinne der EG-Maschinenrichtlinie 89/392/EWG, Anhang II B

An 11.04.01

6

BHS Getriebe 5 1 7 8 1 5 110

Hiermit erklären wir, dass

die Zahnradpumpen R25
R35
R45
R65
R95

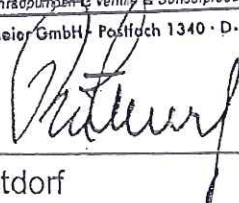
zum Einbau in Maschinen bestimmt sind und dass ihre Inbetriebnahme solange untersagt ist, bis festgestellt wurde, dass die Maschinen, in die diese Zahnradpumpen eingebaut werden sollen, den Bestimmungen der EG-Richtlinie in der Fassung 98/37/EG entsprechen.

Angewendete Normen:

DIN EN 809

DIN 24346

PUMPENTECHNOLOGIE
RICKMEIER
■ Zahnradpumpen ■ Ventile ■ Sonderprodukte ■ Systeme
Rickmeier GmbH · Postfach 1340 · D-58797 Balve


Rietdorf
Geschäftsleitung



Declaration by the manufacturer

as defined by machinery directive 89/392/EEC Annex II B

7

FW/26.01.95

BHS Getriebe 5 1 7 8 1 5 / 10

Herewith we declare that

the gear pumps R25
 R35
 R45
 R65
 R95

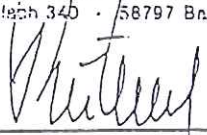
are intended to be incorporated into machinery covered by this directive and must not be put into service until the machinery into which these gear pumps to be incorporated have been declared in conformity with the provisions of the directive.

Applied standards

É DIN EN 809

DIN 24346

WERDOHLER PUMPENFABRIK
RICKMEIER
Rickmeier GmbH · Werdohler Pumpenfabrik
Postfach 340 · 58797 Balve


Rietdorf
general manager

Rickmeier GmbH
Werdohler Pumpenfabrik
Postfach 1340 · D-58797 Balve
Hausadresse:
Garbeck · Langenholthausen Str.
D-58802 Balve

Telefon: (023 75) 84-0
Telefax: (023 75) 84 26

Zahnradpumpen
Ventile · Anlagenbau
Sonderprodukte

WERDOHLER PUMPENFABRIK
RICKMEIER