Certification of

EXPLOSION PROTECTED ELECTRICAL EQUIPMENT

Administered by: Standards Australia Quality Assurance Services

Certificate of Conformity

Certificate No: AUS 03.4010X **Issue: 0** **Original Issue:** 5 December 2003

Date of Expiry: 31 December 2006

Certificate Holder: HAWKE INTERNATIONAL
Trading Name of HAWKE CABLE GLANDS LIMITED
Oxford Street West, Ashton-u-Lyne,
OL7 0NA,
United Kingdom

Electrical Equipment: CABLE GLAND – Compound filled
Type ICG 623 Cable Gland
Type ICG 653 Universal Cable Gland
Type ICG 653 Dedicated Cable Gland
Type CSB 656 Compound Stopper box
Type ICG 659 Compound Barrier Gland

Type of Protection: Ex d IIC / Ex e II / DIP A21 / IP66

Marking Code: See Schedule

Manufactured By: HAWKE INTERNATIONAL
Trading Name of HAWKE CABLE GLANDS LIMITED

Issued by:

ITACS

International Testing and Certification Services Pty. Ltd.
4 – 6 Second Street, Bowden, South Australia, 5007 Australia
Phone: (08) 8346 8680 *Fax: (08) 8346 7072* *Intl. Fax: +61 8 8346 7072* www.itacslab.com.au

STANDARDS AUSTRALIA

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This certificate is granted subject to the conditions as set out in Standards Australia Miscellaneous Publication MP 69 and the Procedures (Doc Q7134) of the scheme.

The electrical equipment and any acceptable variation to it specified in the schedule to this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0: 2000 Ed 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1: 2001 Ed 4.0	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures "d"
IEC 60079-7: 2001 Ed 3.0	Electrical apparatus for explosive gas atmospheres - Part 7: Increased Safety "e"
IEC 61214-1-1: 1999 Ed 2.0	Electrical apparatus for use in presence of combustible dust - . Part 1-1: Electrical apparatus protected by enclosures and surface temperature limitation- Specification for apparatus

This certificate does not ensure compliance with electrical safety requirements and performance other than those included in the Standards listed above.

The equipment listed has sucessfully met the examination and test requirements as recorded in

Test Report No: ITACS TR 2500-4

File Reference: ITACS 2500

Signed for and on behalf of issuing authority

Manager - ITACS

Position

5 December 2003

Date of issue

Certificate No. AUS 03.4010X *Issue:* 0

This certificate and schedule may not be reproduced except in full.

This certificate is not transferable and remains the property of Standards Australia Quality Assurance Services and must be returned in the event of its being revoked or not renewed.

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Schedule

Certificate No: AUS 03.4010X **Issue:** 0 **Date of Issue:** 5 December 2003

Certified Equipment:

The following products utilise components covered by Certificate AUS 03.4007U.

The type **ICG 623** Cable Gland is designed for use with circular unarmoured cable and is manufactured from brass, aluminium or stainless steel. A coated or plated finish to suit environmental conditions is possible. This gland is produced in size range which is designated Os, O, A, B, C, C2, D, E & F representing an entry thread size of M20(M16), M20(M16), M20, M25, M32, M40, M50, M63 & M75 respectively. Or equivalent sizes in imperial conduit, Pg BSPP, BSPT, NPT or NPSM threadforms.

The type ICG 623 Cable Gland comprises the following components:

1. An entry component
2. An elastomeric ferrule
3. An epoxy barrier compound
4. A compression spigot
5. A middle nut
6. A sealing ring
7. A second compression spigot
8. A back nut.

The type **ICG 653 Universal** Cable Gland is designed for use with circular armoured or braided cable and is manufactured from brass, aluminium or stainless steel. A coated or plated finish to suit environmental conditions is possible. This gland is produced in size range which is designated Os, O, A, B, C, C2, D, E & F representing an entry thread size of M20(M16), M20(M16), M20, M25, M32, M40, M50, M63 & M75 respectively. Or equivalent sizes in imperial conduit, Pg BSPP, BSPT, NPT or NPSM threadforms.

The type ICG 623 Universal Cable Gland comprises the following components:

1. An entry component
2. An elastomeric ferrule
3. An epoxy barrier compound
4. A combined compression spigot and armour clamping cone
5. A reversible armour clamping ring
6. A middle nut
7. An outer seal assembly
8. A back nut.
9. An optional earth continuity device for use with metallic sheathed cables.

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Addendum to Certificate No.....

Certificate No: AUS 03.4010X **Issue:** 0 **Date of Issue:** 5 December 2003

The type **ICG 653 Dedicated** Cable Gland is designed for use with circular armoured or braided cable and is manufactured from brass, aluminium or stainless steel. A coated or plated finish to suit environmental conditions is possible. This gland is produced in size range which is designated Os, O, A, B, C, C2, D, E & F representing an entry thread size of M20(M16), M20(M16), M20, M25, M32, M40, M50, M63 & M75 respectively. Or equivalent sizes in imperial conduit, Pg BSPP, BSPT, NPT or NPSM threadforms.

The type ICG 623 Dedicated Cable Gland comprises the following components:

1. An entry component
2. An elastomeric ferrule
3. An epoxy barrier compound
4. A combined compression spigot and armour clamping cone
5. A dedicated armour, or braid, clamping ring
6. A middle nut
7. An outer seal assembly
8. A back nut.
9. An optional earth continuity device for use with metallic sheathed cables.

The type **CSB 656** Compound Stopper Box is designed for use with a number of conductors enclosed within a conduit or retained by a separate cable gland and is manufactured from brass, aluminium or stainless steel. A coated or plated finish to suit environmental conditions is possible. This stopper box is produced in size range which is designated A, B, C, C2, D, E & F representing an entry thread size of, M20, M25, M32, M40, M50, M63 & M75 respectively. Or equivalent sizes in imperial conduit, Pg BSPP, BSPT, NPT or NPSM threadforms.

The type CSB 656 Compound Stopper Box comprises the following components:

1. An entry component
2. An elastomeric ferrule
3. An epoxy barrier compound
4. A compression assembly comprising a compression spigot with a female thread at the rear
5. A dedicated back nut.

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The type **ICG 659** Compound Barrier Gland is designed for use with a number of conductors enclosed within Kopex Flexible Conduit and is manufactured from brass, aluminium or stainless steel. A coated or plated finish to suit environmental conditions is possible. This Compound Barrier Gland is produced in size range representing a conduit entry thread size of M16, M20, M25, M32, M40, M50 & M63 respectively. Or equivalent sizes in imperial conduit, Pg BSPP, BSPT, NPT or NPSM threadforms.

The type ICG 659 Compound Barrier Gland comprises the following components:

1. An entry component to suit Kopex Flexible Cable
2. An elastomeric ferrule
3. An extension spring
4. A grounding ferrule/compound spigot
5. A ferrule cup.
6. A back nut.

Catalogue Numbers of Cable Glands covered by this ATR.

ICG 623

ICG 653 Universal

ICG 653 Dedicated

CSB 656

ICG 659 Note that alternate brand name KOPEX may apply for this item

Details of Marking Code

Examples of the style of marking for the various gland types is shown below:-

ICG 623 - Drawing AUS ICG 623

HAWKE ICG623 C / M32 / S / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK

ICG 653 UNIV - Drawing AUS ICG 653 UNIV

HAWKE ICG 653UNIV C / M32 / R / S / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK

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ICG 653 Dedicated - Drawing AUS 653 ICG Dedicated

HAWKE 653 ICG / M32 / W / S / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK

CSB 656 - Drawing AUS CSB 656

HAWKE CSB656 C / M32 / S / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK

ICG 659 - Drawing AUS ICG 659

HAWKE ICG 659 / HAM*0606 / M32 / 32-1" / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK 1180

Alternate marking for ICG 659 can be
KOPEX / HAM*0606 / M32 / 32-1" / -60°C +80°C ExdIIC ExeII
DIP A21 IP66 AUS 03.4010X 01 0L70NA UK 1180

Special Conditions for Safe Use

1. These glands are suitable for use within an operating temperature range of -60° to +80°C
2. When the gland is used for as Ex e, increased safety or DIP, dust protection, the entry thread shall be suitably sealed to maintain the ingress protection (IP) rating of the associated enclosure.
3. When used on braided or unarmoured cable the O size glands are only suitable for fixed installations, the cable for which must be effectively clamped to prevent twisting and pulling.

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MANUFACTURER'S DOCUMENTS				
Item	**Subject**	**Drawing No.**	**Rev.**	**Date**
1.	Drawing Title: AUS: General arrangement for ICG 623 Gland	AUS ICG 623	A	16/10/03
2.	Drawing Title: AUS: General arrangement for 653/UNIV (Mining) Gland	AUS ICG 653 UNIV	A	16/10/03
3.	Drawing Title: AUS: General arrangement for 653 Dedicated Gland	AUS 653 ICG Dedicated	A	16/10/03
4.	Drawing Title: AUS: General arrangement for CSB 656 Gland	AUS CSB 656	A	16/10/03
5.	Drawing Title: AUS: Compound Barrier Gland for Kopex Flexible Conduit	AUS ICG 659	A	16/10/03

The detailed drawings for the individual compcnents referred to in the general arrangement drawing is covered by Component Certificate AUS 03.4007U.

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