



## 1. EC-TYPE EXAMINATION CERTIFICATE

- 2. Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC
- 3. EC-Type Examination Certificate Number: ITS12ATEX17637X
- 4. Equipment or Protective System: CABLE GLANDS TYPE E1FW ATCAB
- 5. Applicant : ATLAS METAL INDUSTRIES
- 6. Address : PLOT NO 3687, GIDC PHASE III NEAR PRAMUKH SWAMI CIRCLE ROAD NO. 6, DARED, JAMNAGAR-361004 INDIA
- 7. This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- 8. Intertek Testing and Certification Limited, notified body number 0359 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report Ref. DL11 11 284-001 and Intertek Leatherhead Project 11056289 dated October 2012.

- 9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2009, EN 60079-1:2007 and EN 60079-31:2009 except in respect of those requirements referred to at item 18 of the Schedule.
- 10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- 11. This EC-Type examination certificate relates only to the design of the specified equipment or protective system. Further requirements of this Directive apply to the manufacture and supply of this equipment or protection system.
- 12. The marking of the equipment or protective system shall include the following:

 $\langle E_{x} \rangle$ 

II 2 GD

Ex d IIC Gb / Ex e IIC Gb -20°C ≤Ta ≤00°C Ex tb IIIC -20°C ≤Ta ≤00°C Db IP67

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A M Smart Certification Officer 9<sup>th</sup> October 2012

## Intertek



- 13. Schedule
- 14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS12ATEX17637X
- 15. DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM

The E1FW ATCAB CABLE GLANDS are intended for armoured cable (SWA) for outdoor use in the appropriate Hazardous areas providing environmental protection IP67 for E1F series with entry thread of Metric, BSP (BS Pipe Threads), NPT (Taper threads) and ET (BS Conduit Threads). They are suitable for normal industrial environments of temperature, humidity and vibration. Construction material includes Steel, Brass and Mild Steel and Inner and Outer Sealing Rings are made of EPDM and the Protection Tube made of PA 66 (Nylon). A thread sealing washer made of Nylon is provided. The cable sealing rubber, protection tube and thread seal are suitable for operating temperatures in the range -20°C to 100°C. Reversal of the internal clamp ring allows use with braided, tape or flat steel wire armoured cable. Details are included in the instructions.

Cable Glands available are of following Types:

## Cable Gland E1F series:

| Code Details : E1FW | #          | @              |
|---------------------|------------|----------------|
|                     | #Threads   | @Material      |
|                     | M = Metric | 1 = Brass      |
|                     | N = NPT    | 2 = Mild Steel |
|                     | B = BSP    | 3 = SS         |
|                     | E = ET     |                |

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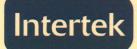
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- 15. continued

| Gland<br>Size         | Standard Entry Threads Other Options/Size (C)  Thread Length (D) |        |        | (D)        | Cable Dimensions(mm) |                      |              | Armour Acceptance Range |       | Hexagon<br>Dimensions |           |                |        |        |
|-----------------------|--|--------|--------|------------|----------------------|----------------------|--------------|-------------------------|-------|-----------------------|-----------|----------------|--------|--------|
|                       | Metric NPT/  |        | ET     | Metric NPT | ET                   | Cable Dia(A) Min Max | Cable Dia(B) | Dia(B)                  |       |                       | Flats     | Corners<br>"F" |        |        |
|                       | (ISO)  | BSP    | EI     | (ISO)      | /BSP                 | 21                   | IVIIN        | iviax                   | IVIIN | IVIAX                 | W         | XYZ            | "E"    |        |
| Ex d<br>E1FW#@<br>20S | M20  | 1/2"   | 3/4"   | 15         | 19                   | 16.5                 | 6.1          | 11.6                    | 9.5   | 15.9                  | 0.90/1.25 | 0.15/0.35      | 25.00  | 28.00  |
| Ex d<br>E1FW#@<br>20  | M20  | 1/2"   | 3/4"   | 15         | 19                   | 16.5                 | 6.5          | 13.9                    | 12.5  | 20.9                  | 0.90/1.25 | 0.15/0.50      | 27.00  | 30.00  |
| Ex d<br>E1FW#@<br>25  | M25  | 3/4"   | 1"     | 15         | 20                   | 16.5                 | 11.1         | 19.9                    | 17    | 26.2                  | 1.25/1.60 | 0.15/0.50      | 36.00  | 40.00  |
| Ex d<br>E1FW#@<br>32  | M32  | 1"     | 1-1/4" | 15         | 22                   | 16.5                 | 17           | 26.2                    | 22.9  | 33.9                  | 1.60/2.00 | 0.15/0.55      | 45.00  | 50.00  |
| Ex d<br>È1FW#@<br>40  | M40  | 1-1/4" | 1-1/2" | 15         | 22                   | 16.5                 | 22           | 32.1                    | 26    | 40.4                  | 1.60/2.00 | 0.20/0.60      | 53.00  | 59.00  |
| Ex d<br>E1FW#@<br>50S | M50  | 1-1/2" | 2"     | 20         | 22 🛪                 | 20                   | 29.5         | 38.1                    | 35    | 46.7                  | 2.00/2.5  | 0.20/0.60      | 60.00  | 66.00  |
| Ex d<br>E1FW#@<br>50  | M50  | 2"     | 2"     | 20         | 22                   | 20                   | 35.6         | 44                      | 38    | 53.1                  | 2.00/2.5  | 0.30/0.80      | 68.00  | 75.00  |
| Ex d<br>E1FW#@<br>63S | M63  | 2"     | 2-1/2" | 20         | 22                   | 20                   | 40.1         | 49.9                    | 45.6  | 59.4                  | 2.50      | 0.30/0.80      | 75.00  | 81.00  |
| Ex d<br>E1FW#@<br>63  | M63  | 2-1/2" | 2-1/2" | 20         | 29                   | 20                   | 47.2         | 55.9                    | 54.6  | 65.9                  | 2.50      | 0.30/0.80      | 81.00  | 89.00  |
| Ex d<br>E1FW#@<br>75S | M75  | 2-1/2" | 3"     | 20         | 29                   | 20                   | 52.8         | 61.9                    | 57    | 72.1                  | 2.50      | 0.30/1.00      | 90.00  | 99.00  |
| Ex d<br>E1FW#@<br>75  | M75  | 3"     | 3"     | 20         | 29                   | 20                   | 59.1         | 67.9                    | 60.4  | 78.5                  | 2.50      | 0.30/1.00      | 96.50  | 107.00 |
| Ex d<br>E1FW#@<br>90  | M90  | 3"     | 3-1/2" | 20         | 29                   | 20                   | 66.6         | 79.3                    | 69.2  | 90.4                  | 3.15      | 0.45/1.00      | 111.00 | 121.00 |

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- 13. Schedule
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- 16. REPORT NUMBER

Intertek Certification Report No. 11056289
Intertek India Report reference No. DL11 11 284-001 dated October 2012

- 17. SPECIAL CONDITIONS FOR SAFE USE
  - 17.1 The cable entries are intended for fixed installations. Cable must be effectively clamped from pulling and twisting.
  - 17.2 Cable glands shall not be used in enclosures where the temperatures at the point of entry/mounting are outside the range -20°C to 100°C.
  - 17.3 The glands should only be used with substantially round cables. Refer to Instruction Manual for details.
- 17.4 Install in accordance with the requirements of EN 60079-14.
- 18. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (ESHR'S)

The relevant EHSR's that have not been addressed by the standards listed in this certificate have been identified and assessed in Intertek Report Ref. DL 11 11 284-001 and Intertek Leatherhead Project No 11056289 dated October 2012.

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- 19. DRAWINGS

| Drawing Number  | Total<br>Sheets | Revision | Date of Issue | Drawing Description            |
|-----------------|-----------------|----------|---------------|--------------------------------|
| Ex d E1 FW      | 1 of 6          | 0        | 24.10.2011    | Ex d E1FW ATCAB CABLE<br>GLAND |
| Ex d E1 FW 20S  | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 20 S                |
| Ex d E1 FW 20   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 20                  |
| Ex d E1 FW 25   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 25                  |
| Ex d E1 FW 32   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 32                  |
| Ex d E1 FW 40   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 40                  |
| Ex d E1 FW 50S  | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 50 S                |
| Ex d E1 FW 50   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 50                  |
| Ex d E1 FW 63S  | 1 of 1          | * 0      | 07.06.2012    | E1FW ATCAB 63 S                |
| Ex d E1 FW 63L  | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 63 L                |
| Ex d E1 FW 75S  | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 75 S                |
| Ex d E1 FW 75 L | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 75 L                |
| Ex d E1 FW 90   | 1 of 1          | 0        | 07.06.2012    | E1FW ATCAB 90                  |

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

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