1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 06ATEX1188X** Issue: **2**

4 Equipment: **Ranges of Cable Glands (See Descriptions)**

5 Applicant: **R. STAHL Schaltgeräte GmbH**

6 Address: Am Bahnhof 30
74638 Waldenburg (Württ)
Germany

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2004	IEC 61241-0:2004	EN 60079-7:2003
EN 60079-1:2004	EN 61241-1:2004	

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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 and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2 GD	or	I M2
Ex d IIC/Ex e II		Ex d I/Ex e I
Ex d IIC		Ex d I
Ex e II		Ex e I
Ex tD A21 IP66		

(Refer to certificate for the markings that are applicable to each gland type)

Note: The manufacturer may choose to include additional compliance marking

Project Number 51M16472
C. Index 07

D R Stubbings BA MIET
Certification Manager

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13 DESCRIPTION OF EQUIPMENT

General

The ranges of cable glands are metallic and intended to terminate circular armoured, unarmoured and braided cables (as defined by their type designations) into a threaded entry point within associated flameproof, increased safety or dust tight enclosures (as defined by their coding). Without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice.

Design options

- The front entry component may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face with the associated enclosure. This option having the gland type designation prefixed with the letter R, e.g. 25RE1FW.
- Alternative materials of manufacture:

  Brass to BS2874: 1986 Grade CuZn39Pb (CW614N)
  Mild steel to BS970 Pt1: 1991 Grade 220M07Pb
  Stainless steel to BS970 Pt1: 1991 Grades 316S11, 316S13, 316S31 or 316S33
  Aluminium alloy to BS1474: 1987 Grade 6082 or BS1490 Grade LM25 TF (Not Group I)

- Alternative entry component thread forms:

  Metric ISO 965-1, ISO965-3 medium fit (6g) for external threads
  ET(Conduit) BS 31:1940 (1979), Table A
  PG DIN 40430:1971
  BSPP BS 2779:1973 class A full form for external threads
  BSPTBS 21:1985 standard threads only as clause 5.4, gauging to clause 5.2 system A
  ISOISO 7/1:1982, gauging to ISO 7/2 clause 6.3 for external threads
  NPTANSI/ASME B1.20.1-1983 gauging to clause 8.1 for external threads
  NPSMANSI/ASME B1.20.1-1983 gauging to clause 9 for external threads

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i) Elastomeric sealed Cable Glands Ranges for braided or unarmed cables

Type designation 8163/2-**-A2F-** Range**

Coded: II 2 GD
Ex d IIC/Ex e II
Ex d IIC
Ex e II
Ex tD A21 IP66

or

I M2
Ex d I/Ex e I
Ex d I
Ex e I

The 8163/2-****-A2F-** range of cable glands are intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component and a seal actuation nut. The front entry component fitted with an Evoprene Super G621 elastomeric displacement sealing ring, and nylon 6 stepped skid washer, is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath.

Additional Specific Design options

- Alternative material of manufacture of the skid washer to be the same as the gland material.

Type designation 8163/2-**-A2FRC-** Range**

Coded: II 2 GD
Ex d IIC/Ex e II
Ex d IIC
Ex e II
Ex tD A21 IP66

The 8163/2-****-A2FRC-** range of cable glands are intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component, a seal actuation nut and either an outer captivated or running coupling. The front entry component, fitted with an Evoprene Super G621 elastomeric displacement sealing ring and a carbon steel `C' clip (sizes 16 to 50), is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath. The outer running coupling is retained in the seal actuation nut using the carbon steel 'C' clip to allow free running thread connection to conduit.

Additional Specific Design options

- Alternative material of manufacture of the skid washer to be the same as the gland material.
- Alternative 'C' clip plate finish: Stainless steel
  Phosphor bronze
  Beryllium copper

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The gland and seal sizes are determined by the entry thread and cable range take sizes:

Gland Size	Entry Thread	Cable Outer Sheath Ø	
		Min. (mm)	Max. (mm)
20s/16	M20 x 1.5	3.2	8.7
20s	M20 x 1.5	6.1	11.7
20	M20 x 1.5	6.5	14.0
25	M25 x 1.5	11.1	20.0
32	M32 x 1.5	17.0	26.3
40	M40 x 1.5	23.5	32.2
50s	M50 x 1.5	31.0	38.2
50	M50 x 1.5	35.6	44.1
63s	M63 x 1.5	41.5	50.0
63	M63 x 1.5	47.2	56.0
75s	M75 x 1.5	54.0	62.0
75	M75 x 1.5	61.1	68.0
90	M90 x 2.0	66.6	80.0
100*	M100 x 2.0	76.0	91.0
115*	M115 x 2.0	86.0	98.0
130*	M130 x 2.0	97.0	115.0

Note * 8163/2-****-A2FRC-** range of cable glands do not consist of these sizes.

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Type designations 8163/2-**-SS2K-** & 8163/2-****-SS2KPB-** ranges of cable glands**

Coded:

II 2 GD Ex d IIC/Ex e II Ex d IIC Ex e II Ex tD A21 IP66	or	I M2 Ex d I/Ex e I Ex d I Ex e I

The 8163/2-*****-SS2K-** & 8163/2-****-SS2KPB-** ranges of cable glands are intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component, a main body component and an outer seal actuation nut. The front entry component, fitted with an Evoprene Super G621 elastomeric sealing ring and a Nylon 6 skid washer, is intended to screw into an entry point of its associated enclosure. The main body component, fitted with a locking ring, threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable inner sheath. The outer seal actuation nut, fitted with an Evoprene Super G621 elastomeric sealing ring and a Nylon 6 skid washer, threads into the main body component thereby effecting environmental sealing onto the cable outer sheath.

Cable clamping is achieved with the outer seal arrangement.

The type 8163/2-****-SS2KPB-** front entry component being additionally fitted with a metallic continuity diaphragm and skid washer for use with lead sheathed cable.

Type designation 8163/2-**-SS2KTA range of cable glands**

Coded:

II 2GD
Ex e II
Ex tD A21 IP66

The 8163/2-****-SS2KTA-** range of cable glands is intended to terminate tape armour cable into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice.

The devices are identical to the 8163/2-****-SS2K-** range of glands but with the addition of a metallic continuity diaphragm and skid washer.

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Additional Specific Design option

- Alternative material of manufacture of the skid washer to be the same as the gland material.

The gland and seal sizes are determined by the entry thread and cable range take sizes:

Gland size	Entry thread	Cable inner seal sheath range Ø		Cable outer seal sheath range Ø	
		Min (mm)	Max (mm)	Min. (mm)	Max. (mm)
20s/16	M20 x 1.5	3.2	8.7	3.1	8.7
20s	M20 x 1.5	6.1	11.7	6.1	11.7
20s/20	M20 x 1.5	6.1	11.7	6.5	14.0
20	M20 x 1.5	6.5	14.0	6.5	14.0
20/25	M20 x 1.5	6.5	14.0	11.1	20.0
25	M25 x 1.5	11.1	20.0	11.1	20.0
25/32	M25 x 1.5	11.1	20.0	17.0	26.3
32	M32 x 1.5	17.0	26.3	17.0	26.3
32/40	M32 x 1.5	17.0	26.3	22.0	32.2
40	M40 x 1.5	23.5	32.2	22.0	32.2
40/50s	M40 x 1.5	23.5	32.2	29.5	38.2
50s	M50 x 1.5	31.0	38.2	29.5	38.2
50s/50	M50 x 1.5	31.0	38.2	35.6	44.1
50	M50 x 1.5	35.6	44.1	35.6	44.1
50/63s	M50 x 1.5	35.6	44.1	40.1	50.1
63s	M63 x 1.5	41.5	50.0	40.1	50.1
63s/63	M63 x 1.5	41.5	50.0	47.2	56.0
63	M63 x 1.5	47.2	56.0	47.2	56.0
63/75s	M63 x 1.5	47.2	56.0	52.8	62.0
75s	M75 x 1.5	54.0	62.0	52.8	62.0
75s/75	M75 x 1.5	54.0	62.0	59.1	68.0
75	M75 x 1.5	61.1	68.0	59.1	68.0
75/90	M75 x1.5	61.1	68.0	66.6	79.4
90	M90 x 2.0	66.6	80.0	66.6	79.4
90/100	M90 x 2.0	66.6	80.0	76.0	91.0
100	M100 x 2.0	76.0	91.0	76.0	91.0
100/115	M100 x 2.0	76.0	91.0	86.0	98.0
115	M115 x 2.0	86.0	98.0	86.0	98.0
115/130	M115 x 2.0	86.0	98.0	97.0	115.0
130	M130 x 2.0	97.0	115.0	97.0	115.0

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ii) 8163/2-**-C***/*-** Type ranges of cable glands**

Coded: II 2GD
Ex e II
Ex tD A21 IP66

The 8163/2-****-C***/*-** series Type ranges of cable glands consist of a male-threaded front entry component, which is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The front entry component to main body mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armoured or braid is effected by a combination of the front entry component, main body and the different optional armour cone and armour sleeve combinations being fastened together. An outer seal nut, containing an Evoprene Super G621 elastomeric sealing ring and a Nylon 6 ferrule, threads onto the main body and effects environmental sealing onto the cable outer sheath

Cable clamping is achieved with the outer seal arrangement.

Additional Specific Design options

- The use of alternative armour clamping components specified by the cable gland type designation. The various arrangements vary the cable gland suitability for differing armour or braided type cables.
- The use of a component having an alternative profile allowing an integral earthing facility. The type designation identifying the cable gland being fitted with this option.
- Alternative material of manufacture of the ferrule to be the same as the gland material.

The gland and seal sizes are determined by the entry thread and cable range take sizes:

Gland size	Entry thread	Cable inner sheath Ø	SWA		STA, strip armour & wire braid		Outer seal sheath range Ø	
		Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
20s/16	M20 x 1.5	8.7	0.9	1.00	0	1.0	6.1	11.5
20s	M20 x 1.5	11.7	0.9	1.25	0	1.0	9.5	15.9
20	M20 x 1.5	14.0	0.9	1.25	0	1.0	12.5	20.9
25s	M25 x 1.5	20.0	1.25	1.6	0	1.0	14.0	22.0
25	M25 x 1.5	20.0	1.25	1.6	0	1.0	18.2	26.2
32	M32 x 1.5	26.3	1.6	2.0	0	1.0	23.7	33.9
40	M40 x 1.5	32.2	1.6	2.0	0	1.0	27.9	40.4
50s	M50 x 1.5	38.2	2.0	2.5	0	1.0	35.2	46.7
50	M50 x 1.5	44.1	2.0	2.5	0	1.0	40.4	53.1
63s	M63 x 1.5	50.0	2.0	2.5	0	1.0	45.6	59.4
63	M63 x 1.5	56.0	2.0	2.5	0	1.0	54.6	65.9
75s	M75 x 1.5	62.0	2.0	2.5	0	1.0	59.0	72.1
75	M75 x 1.5	68.0	2.0	2.5	0	1.0	66.7	78.5
90	M90 x 2.0	80.0	3.15	3.15	0	1.6	76.2	90.4
100	M100 x 2.0	91.0	3.15	4.0	0	1.6	86.1	101.5

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Gland size	Entry thread	Cable inner sheath Ø	SWA		STA, strip armour & wire braid		Outer seal sheath range Ø	
		Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
115	M115 x 2.0	98.0	3.15	4.0	-	-	101.5	110.3
130	M130 x 2.0	115.0	3.15	4.0	-	-	114.2	123.3

Definition of Design

C ___ / ___

C = Fitted with the alternative cast integral earth lug entry component.

We = Fitted with single plain armour cone & reversible armour sleeve to suit SWA cables.

X/Y/Ze = Fitted with single grooved armour cone & reversible armour sleeve to suit STA, strip armoured and braided cables.

2K = Fitted with reversible armour cone & reversible armour sleeve to suit SWA, STA, strip armoured and braided cables.

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iii) 8163/2-****-E*F**/*-** series Type ranges of cable glands

Coded: II 2 GD
Ex d IIC/Ex e II
Ex d IIC
Ex e II
Ex tD A21 IP66

or

I M2
Ex d I/Ex e I
Ex d I
Ex e I

The 8163/2-****-E*F**/*-** series Type ranges of cable glands consist of a male-threaded front entry component containing an Evoprene Super G621 elastomeric sealing ring and a Nylon 6 skid washer which effect flameproof sealing onto the cable inner sheath and is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The flameproof seal is actuated by an adjoining coupling component. The coupling component is attached to a main body. Their mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armoured or braided cable is effected by a combination of the coupling component, main body and the different optional armour cone and armour sleeve combinations being fastened together. An outer seal nut, containing an Evoprene Super G621 elastomeric sealing ring and a Nylon 6 ferrule, threads onto the main body and effects environmental sealing onto the cable outer sheath.

Cable clamping is achieved with the outer seal arrangement.

Additional Specific Design options

- The use of alternative armour clamping components specified by the cable gland type designation. The various arrangements vary the cable gland suitability for differing armour or braided type cables.
- The use of a component having an alternative profile allowing an integral earthing facility. The type designation identifying the cable gland being fitted with this option.
- The use of metallic continuity diaphragm component specified by the cable gland type designation for use when terminating lead sheathed cables.
- Alternative material of manufacture of the ferrule to be the same as the gland material.

The gland and seal sizes are determined by the entry thread and cable range take sizes:

Gland size	Entry thread	Inner seal sheath range Ø		SWA		STA, strip armour, pliable wire armour* & wire braid		Outer seal sheath range Ø	
		Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max(mm)	Min(mm)	Max (mm)
20s/16	M20 x 1.5	3.1	8.6	0.9	1.00	0	1.0	6.1	11.5
20s	M20 x 1.5	6.1	11.6	0.9	1.25	0	1.0	9.5	15.9
20s/20	M20 x 1.5	6.1	11.6	0.9	1.25	0	1.0	12.5	20.9
20	M20 x 1.5	6.5	13.9	0.9	1.25	0	1.0	12.5	20.9
20/25	M20 x 1.5	6.5	13.9	0.9	1.25	0	1.0	18.2	26.2
25s	M25 x 1.5	11.1	19.9	1.25	1.6	0	1.0	14.0	22.0
25	M25 x 1.5	11.1	19.9	1.25	1.6	0	1.0	18.2	26.2
25/32	M25 x 1.5	11.1	19.9	1.25	1.6	0	1.0	23.7	33.9

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Gland size	Entry thread	Inner seal sheath range Ø		SWA		STA, strip armour, pliable wire armour* & wire braid		Outer seal sheath range Ø	
		Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max(mm)	Min(mm)	Max (mm)
32	M32 x 1.5	17.0	26.2	1.6	2.0	0	1.0	23.7	33.9
32/40	M32 x 1.5	17.0	26.2	1.6	2.0	0	1.0	27.9	40.4
40	M40 x 1.5	22.0	32.1	1.6	2.0	0	1.0	27.9	40.4
40/50s	M40 x 1.5	22.0	32.1	1.6	2.0	0	1.0	35.2	46.7
50s	M50 x 1.5	29.5	38.1	2.0	2.5	0	1.0	35.2	46.7
50s/50	M50 x 1.5	29.5	38.1	2.0	2.5	0	1.0	40.4	53.1
50	M50 x 1.5	35.6	44.0	2.0	2.5	0	1.0	40.4	53.1
50/63s	M50 x 1.5	35.6	44.0	2.0	2.5	0	1.0	45.6	59.4
63s	M63 x 1.5	40.1	49.9	2.0	2.5	0	1.0	45.6	59.4
63s/63	M63 x 1.5	40.1	49.9	2.0	2.5	0	1.0	54.6	65.9
63	M63 x 1.5	47.2	55.9	2.0	2.5	0	1.0	54.6	65.9
63/75s	M63 x 1.5	47.2	55.9	2.0	2.5	0	1.0	59.0	72.1
75s	M75 x 1.5	52.8	61.9	2.0	2.5	0	1.0	59.0	72.1
75s/75	M75 x 1.5	52.8	61.9	2.0	2.2	0	1.0	66.7	78.5
75	M75 x 1.5	59.1	67.9	2.0	2.5	0	1.0	66.7	78.5
75/90	M75 x 1.5	59.1	67.9	2.0	2.5	0	1.6	76.2	90.4
90	M90 x 2.0	66.6	79.9	3.15	3.15	0	1.6	76.2	90.4
90/100	M90 x 2.0	66.6	79.9	3.15	3.15	0	1.6	86.1	101.5
100	M100 x 2.0	76.0	90.9	3.15	4.0	0	1.6	86.1	101.5
100/115	M100 x 2.0	76.0	90.9	3.15	4.0	-	-	101.5	110.3
115	M115 x 2.0	86.0	97.9	3.15	4.0	-	-	101.5	110.3
115/130	M115 x 2.0	86.0	97.9	3.15	4.0	-	-	114.2	123.3
130	M130 x 2.0	97.0	114.9	3.15	4.0	-	-	114.2	123.3

Definition of Design

E__ F__ / __

- C = Fitted with the alternative cast integral earth lug entry component.
- W = Fitted with single plain armour cone & reversible armour sleeve to suit SWA cables.
- X/Z/T = Fitted with single grooved armour cone & reversible armour sleeve to suit STA, strip armoured and braided cables.
- U = Fitted with reversible armour cone & reversible armour sleeve to suit SWA, STA, strip armoured and braided cables.
- 1 = Standard circular armoured and braided cables.
- 2 = Inner seal fitted with additional metallic continuity diaphragm for the use with inner lead sheathed SWA, strip armoured and braided cables.

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iv) 8163/2-**-PX****-** series-Type ranges of Compound filled barrier cable glands**

Coded:	II 2 GD Ex d IIC/Ex e II Ex d IIC Ex e II Ex tD A21 IP66	or **for PXSS2K range ONLY**		I M2 Ex d I/Ex e I Ex d I Ex e I

The 8163/2-****-PX****-** series Type ranges of barrier cable glands consist of a male-threaded front entry component, fitted with a compound tube such that a spigot/combination joint is formed, which is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The compound tube contains Cedesa EP2122 setting compound that effects a flameproof seal around the cable cores passing through it and is retained by a spacer. The front entry component to main body mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armour or braid is effected by a combination of the front entry component assembly and the different optional armour cone and reversible sleeve combinations within the main body being fastened together. An outer seal nut, containing an Evoprene Super G621 elastomeric displacement sealing ring and a Nylon 6 ferrule, threads onto the main body and effects environmental sealing onto the cable outer sheath.

Cable clamping is achieved with the outer seal arrangement.

Additional Specific Design options

- The use of alternative armour clamping components specified by the cable gland type designation. The various arrangements vary the cable gland suitability for differing armour or braided type cables.
- Alternative material of manufacture of the ferrule to be the same as the gland material.
- The removal of the ATEX outer seal, nut and ferrule, along with the body component manufactured without the external mating thread. The cable gland being suitable for S.W.A armoured cables and is identified within type designation coding.
- The use of the compound tube and spacer along with the manufacture of the front entry component with a female mating thread, to couple to an alternative main body, skid washer, seal and nut. The latter replacing other component parts. This variant being identified within type designation coding.

The gland and seal sizes are determined by the entry thread and cable range take sizes. In addition note that not all the information detailed in the table is applicable to both gland types. See individual approval drawings.

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EC TYPE-EXAMINATION CERTIFICATE **Sira 06ATEX1188X**
Issue 2

Gland size	Entry thread	Max. no. of cores	Max. Ø over cores	SWA		STA, strip armour, pliable wire armour* & wire braid		PXSS2K outer seal sheath range Ø		PX** outer seal sheath range Ø	
			(mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)	Min (mm)	Max (mm)
20s/16	M20 x 1.5	34	12.6	0.9	1.00	0	1.0	3.1	8.7	6.1	11.5
20s	M20 x 1.5	34	12.6	0.9	1.25	0	1.0	6.1	11.7	9.5	15.9
20	M20 x 1.5	34	12.6	0.9	1.25	0	1.0	6.5	14.0	12.5	20.9
20L	M20 x 1.5	34	12.6	0.9	1.25	0	1.0	10.0	15.9	N/A	N/A
25s	M25 x 1.5	80	17.5	1.25	1.6	0	1.0	11.1	20.0	14.0	22.0
25	M25 x 1.5	80	17.5	1.25	1.6	0	1.0	11.1	20.0	18.2	26.2
32	M32 x 1.5	115	23.6	1.6	2.0	0	1.0	17.0	26.3	23.7	33.9
32L	M32 x 1.5	115	23.6	1.6	2.0	0	1.0	20.0	27.4	N/A	N/A
40	M40 x 1.5	185	30.0	1.6	2.0	0	1.0	22.0	32.1	27.9	40.4
50s	M50 x 1.5	274	36.6	2.0	2.5	0	1.0	29.5	38.2	35.2	46.7
50	M50 x 1.5	343	41.0	2.0	2.5	0	1.0	35.6	44.1	40.4	53.1
63s	M63 x 1.5	466	47.9	2.0	2.5	0	1.0	40.1	50.1	45.6	59.4
63	M63 x 1.5	585	53.7	2.0	2.5	0	1.0	47.2	56.0	54.6	65.9
75s	M75 x 1.5	727	59.9	2.0	2.5	0	1.0	52.8	62.0	59.0	72.1
75	M75 x 1.5	837	64.3	2.0	2.5	0	1.0	59.1	68.0	66.7	78.5
90	M90 x 2.0	1146	75.3	3.15	3.15	0	1.6	66.6	79.4	76.2	90.4

Definition of Design

PX ——┬——▶

- 2KW = Fitted with single plain armour cone & reversible armour sleeve to suit SWA cables.
- 2KX = Fitted with single grooved armour cone & reversible armour sleeve to suit STA, strip armoured and braided cables.
- 2K = Gland kit provided with 2 single armour cones (From the 2KW & 2KX) and reversible armour sleeve to suit SWA, STA, strip armoured and braided cables.
- B2KW = Fitted with single plain armour cone & reversible armour sleeve, but has no outer seal, nut or ferrule. The body is also manufactured without the external mating thread. The cable gland is suitable for SWA cables.
- SS2K = Alternative manufactured front entry component coupled to an alternative main body, skid washer, seal and nut for use with unarmoured cables.
- 2KPB = Alternative two part cone assembly incorporating an additional metallic continuity diaphragm for the use with inner lead sheathed SWA, STA and braided cables.

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Variation 1

This variation introduced the following changes:

1 The recognition of an alternative, outer sealing arrangement for the C**, E** and PX** Ranges of Cable Glands; the compression nut length and consequently body length were reduced, in addition, the internal, tapered ferrule was replaced by a flat ferrule.

Variation 2

This variation introduced the following changes:

1 The brass, mild steel and stainless steel 8163/2-****-SS2K-** & 8163/2-****-SS2KPB-** glands can be used for Group I applications.

2 The introduction of the 8163/2-****-SS2KTA-** range of cable glands for use with tape armour.

3 The recognition of alternative armour cone diameters for the 8163/2-****-C***/*-**, 8163/2-****-E*F**/*-** and 8163/2-****-PX****-** types.

4 The use of the 8163/2-****-E*F**/*-**, 8163/2-****-C***/*-**, and 8163/2-****-PX****-** ranges with pliable wire armour cables.

5 The marking of the ranges for dust applications to EN 61241-1:2004.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	27 September 2006	51E15307	The release of prime certificate.
1	05 October 2007	51M16472	The introduction of Variation 1 and Variation 2 and correction of description for 8163/2-****-E** Range of Cable Glands to include 25/32 size omitted in error.
2	19 December 2007	-	Removal of Category 3 marking

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 All body components of the 8163/2-****-C***/*-** Type and 8163/2-****-E*F**/*-** -Type Ranges shall be fully tightened using all available threads of engagement until against their adjoining component part shoulder to maintain Ingress protection rating IP66.

15.2 The 8163/2-****-E*F**/*-** - Type Ranges of cable glands shall not be used to terminate on braided cables in group I applications.

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15.3 The cable gland ranges shall only be used where the temperature, at the point of entry, is in the following ranges:

Type 8163/2-****-A2F-** ranges of cable glands: -60°C to +130°C
Type 8163/2-****-A2FRC-** ranges of cable glands: -60°C to +130°C
Type 8163/2-*****-SS2K-** ranges of cable glands: -60°C to +130°C
Type 8163/2-****-SS2KPB-** ranges of cable glands: -60°C to +130°C
Type 8163/2-****-C***/*-** range of cable glands: -60°C to +130°C
Type 8163/2-****-E*F**/*-** ranges of cable glands: -60°C to +130°C
Type 8163/2-****-PX****-** ranges of cable glands: -60°C to +100°C

15.4 All ranges of cable glands fitted with flameproof elastomeric seals are certified with one specific size of FLP sealing ring per gland size as supplied.

15.5 The 8163/2-****-C***/*-**-Type and 8163/2-****-E*F**/*-**- Type and 8163/2-****-PX****-**- Type Ranges used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

15.6 The 8163/2-****-A2F-**, 8163/2-****-A2FRC-**, 8163/2-*****-SS2K-** & 8163/2-****-SS2KPB-** size 20s/16 cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

15.7 The entry component threads may need additional sealing to maintain the ingress protection rating as applicable to the associated equipment in which it will be attached.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The cable glands manufactured from aluminium shall not be marked for Group I applications.

17.4 The 8163/2-****-A2F-** size 20s/16 cable glands shall not be marked for Group I applications.

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Certificate Annexe

Certificate Number: **Sira 06ATEX1188X**

Equipment: **Ranges of Cable Glands (See Descriptions)**

Applicant: **R.STAHL Schaltgeräte GmbH**

Issue 0

Number	Sheet	Rev.	Date	Description
8163 0 000 002 0	1 of 1	0	20 Sep 06	Example for marking

Issue 1

None applicable

Issue 2

None applicable

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EG-Konformitätserklärung
EC-Declaration of Conformity
CE-Déclaration de Conformité

Wir *(we; nous)*

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, 74638 Waldenburg, Germany

8163/2-.

erklären in alleiniger Verantwortung, dass das Produkt
hereby declare in our sole responsibility, that the product
déclarons de notre seule responsabilité, que le produit

Kabel- und Leitungseinführung
Cable glands
Entrée de cable

mit der *(under; avec)*
EG-Baumusterprüfbescheinigung:
EC-Type Examination Certificate:
Attestation d'examen CE de type:

Sira 06 ATEX 1188 X

auf das sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten übereinstimmt
which is the subject of this declaration, is in conformity with the following standards or normative documents
auquel cette déclaration se rapporte, est conforme aux normes ou aux documents normatifs suivants

Bestimmungen der Richtlinie *terms of the directive* *prescription de la directive*	**Nummer sowie Ausgabedatum der Norm** *Number and date of issue of the standard* *Numéro ainsi que date d'émission des normes*
94/9/EG: ATEX-Richtlinie *94/9/EC: ATEX Directive* *94/9/CE: Directive ATEX*	EN 60079-0:2004 EN 60079-1:2004 EN 60079-7:2003 IEC 61241-0:2004, EN 61241-0:2006 EN 61241-1:2004
2004/108/EG: EMV-Richtlinie *2004/108/EC: EMC Directive* *2004/108/CE: Directive CEM*	EN 50262 BS 6121

Qualitätssicherung Produktion:
Production Quality Assessment:
Assurance Qualitée Production:

PTB 96 ATEX Q006-4

Kenn-Nr. der benannten Stelle / *Notified Body number / N° de l'organisme de certification:* 0102

Waldenburg, 04.03.2008	i.V.	i.V.
Ort und Datum *Place and date* *lieu et date*	**B. Limbacher** **Leiter Entwicklung** *Head of Development* *Directeur Développement*	**Dr. S. Jung** **Leiter Qualitätsmanagement** *Director Quality Management Dept.* *Directeur Dept. Assurance de Qualité*