

IA - CERTIFICATE



SA Explosion Prevention CC

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT INCORPORATED IN THE MINE HEALTH AND SAFETY ACT) AND REGULATION 8(2) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND ACT



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IA CERTIFICATE: SAEX MS/06-425X (R7)
BARRIERTEX RANGE OF BARRIER GLANDS
11 September 2008

(R7: Revised to include dimensional changes for clamping of screened cables and standardisation of external hexagon sizes)

Edition 3

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(This certificate replaces all previous certificates of the same number)

EXPIRY DATE: 30 April 2018

Description:

The main parts of the cable glands type BARRIERTEX-A (armoured glands) or BARRIERTEX-F (compression glands) comprises the following elements:

PART NAME	MATERIALS
INNER	BRASS (Nickel-plated), STAINLESS STEEL, MILD STEEL, BRONZE
PUTTY	BARRIER GLAND PUTTY (CCG – ST574 or FR 308)
OUTER NUT	BRASS (Nickel-plated), STAINLESS STEEL, MILD STEEL, BRONZE
CONE / SLEEVE	BRASS (Nickel-plated), STAINLESS STEEL, MILD STEEL, BRONZE
CONE RING	BRASS (Nickel-plated), STAINLESS STEEL, MILD STEEL, BRONZE
BODY	BRASS (Nickel-plated), STAINLESS STEEL, MILD STEEL, BRONZE
OUTER SEAL	SANTOPRENE / POLYCHLOROPRENE
SKID RING	BRASS (Nickel-plated), STAINLESS STEEL, BRONZE, POLYPROPYLENE
WASHER	POLYPROPYLENE / HDPE
O RING	NEOPRENE / SILICONE / ETHYLENE-PROPYLENE

CABLE GLAND DIMENSIONAL AND SELECTION TABLE FOR TYPE – BARRIERTEX-A

Size ref.	Entry thread size		Cable acceptance details				Min. steel wire armour dia.	Min. Installation torque	Protrusion length
			Inner sheath / cores		Outer sheath				
	METRIC - LENGTH	NPT - LENGTH	Max over cores dia.	Max. no. of cores	Min.	Max.			
00-20ss	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	9	6	8.0	13.5	0.9	23,1	82
0-20s	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	9	6	11.5	16.0	0.9	23,1	85
1-20	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	11	10	12.5	21.0	0.9	23,1	85
2-25	M25 x 1.5 - 15.0	¾ or 1 : 14 / 11.5TPI - 17.0	16	20	18	27.0	1.25	33	100
3-32	M32 x 1.5 - 15.0	1 or 1½ : 11.5TPI - 17.0	22	40	23	34.0	1.25	46,2	107
4-40	M40 x 1.5 - 15.0	1½ or 1½ : 11.5TPI - 22.0	27	60	28	40.5	1.6	57,2	116
5-50	M50 x 1.5 - 20.0	2 : 11.5 TPI - 22.0	37	80	44.5	53.1	2.0	62,7	123
6-63	M63 x 1.5 - 20.0	2½ : 8TPI - 22.0	48	100	54.6	65.9	2.5	72,6	136

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CABLE GLAND DIMENSIONAL AND SELECTION TABLE FOR TYPE – BARRIERTEX-F								
Size ref.	Entry thread size		Cable acceptance details				Min. Installation torque	Protrusion length
			Inner sheath / cores		Outer sheath			
	METRIC - LENGTH	NPT - LENGTH	Max over cores dia.	Max. no. of cores	Min.	Max.		
00-20ss	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	8	6	5.0	8.0	35	72
0-20s	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	9	6	8.0	11.0	35	72
1-20	M20 x 1.5 - 15.0	½ or ¾ : 14TPI - 17.0	11	10	11.0	15.5	35	78
2-25	M25 x 1.5 - 15.0	¾ or 1 : 14 / 11.5TPI - 17.0	16	20	15.0	20.5	50	80
3-32	M32 x 1.5 - 15.0	1 or 1¼ : 11.5TPI - 17.0	22	40	20.0	26.5	70	82
4-40	M40 x 1.5 - 15.0	1¼ or 1½ : 11.5TPI - 22.0	27	60	26.0	34.5	86.8	95
5-50s	M50 x 1.5 - 20.0	2 : 11.5 TPI - 22.0	35	70	32.5	38.0	100	100
5-50	M50 x 1.5 - 20.0	2 : 11.5 TPI - 22.0	37	80	38.0	44.5	110	100
6-63s	M63 x 1.5 - 20.0	2½ : 8TPI - 22.0	45	90	44.5	50.0	120	100
6-63	M63 x 1.5 - 20.0	2½ : 8TPI - 22.0	48	100	50.0	56.0	120	100

Marking: The following minimum information shall be engraved on each gland in an indelible, visible and legible manner.

Manufacturer: CCG
Type: BRTX-A (armoured) or BRTX-F (compression)
Size: (See tables above)
Thread type: (See tables above)
Explosion Rating: Ex d I/IIC
Ex e I/II
Ex tD A21 IP66/IP68 (2m cont.)
IA Number: SAEx MS/06-425 X

Special conditions of use (“X”):

- The cable glands shall only be used where the temperature, at the point of entry, is between -20° to 80°C.
- The interfaces between the male thread of the cable glands and the associated enclosure cannot be defined. Therefore, it is the user’s responsibility to ensure that the appropriate ingress protection level and / or flameproof characteristics are maintained at these interfaces.
- Instructions must be supplied with the gland(s) by the manufacturer. The instructions must include application of the compound, assembly of the gland, inspection, repair / maintenance and minimum flameproof requirements.
- The maximum and minimum requirements for the cables connected to the glands, as indicated in the description of the glands above, must be complied with.
- The washer is only an optional component for Ex d application.

Compliance: The equipment as described above and tested / examined in Test Report No.: **SAEx 06-425** is hereby certified “Explosion Protected” Ex d I/IIC, Ex e I/II and Ex tD A21 IP66/IP68 (2m cont.) and is suitable for use in hazardous locations as stated below, as determined during tests and inspections conducted in accordance with the relevant requirements of SANS Standards:

SANS / IEC 60079 “Electrical apparatus for explosive gas atmospheres”,

Part 0: 2004 “General requirements”,

Part 1: 2003 “Flameproof enclosures ‘d’” and

Part 7: 2001 “Increased safety ‘e’”.

SANS / IEC 61241 “Electrical apparatus for use in the presence of combustible dust,

Part 0: 2004 “General requirements” and

Part 1: 2004 “Protection by enclosures ‘tD’”.

Locations	Zone 1/2 and 21/22	Surface industry including dust areas / Fiery mines including coal dust
Hazardous Frequency		Intermittent (gas and dust) as could occur under normal operations
Environment	Group I/IIC Dust	Methane to Hydrogen Metallic and non-metallic dust
Exposure Temperature	-20°C to 80°C	

The use of the apparatus in hazardous locations is subject to the following provisions, which shall be adhered to:

- i) SANS 10086 requirements;
- ii) Any relevant requirements of the MHS Act or the OHS Act;
- iii) Codes of Practice enforced in terms of Regulations 21.17/2 of the Minerals Act, by the Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines, Principal Inspector (Group I equipment) or Chief Inspector of Factories (Group II equipment); and
- v) Any conditions mentioned in the above test report.



**WA de Beer, Pr Eng
SPECIALIST ENGINEER**

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