DNV·GL

Certificate No:
TAE00003JH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Gland

with type designation(s)
SYNTEC MS, PROGRESS MS, MS L, MS FKN, MS FK, MS MULTI, MS T, MS W90, MS Adapter, MS Kombi, MS HT, MS KB, MS T+KB, S2, S2 HT, S4 HT, MS EMV, MS EMV Rapid, MS EMV FKN, MS Adapter EMV, MS Kombi EMV, EMV Serie 85, Serie 51/52, PROGRESS EMV easyConnect, PROGRESS EMV powerConnect

Issued to
AGRO AG
Hunzenschwil, AG, Switzerland

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.
Metallic cable glands for non-hazardous areas.

Type	Material	Suitable for open deck	Suitable for Hazardous areas
SYNTEC MS	**Metallic**	**Yes**	**No**
PROGRESS MS, MS L, MS FKN, MS FK, MS MULTI, MS T, MS W90, MS Adapter, MS Kombi, MS HT, MS KB, MS T+KB, S2, S2 HT, S4 HT, MS EMV, MS EMV Rapid, MS EMV FKN, MS Adapter EMV, MS Kombi EMV, EMV Serie 85	**Metallic**	**Yes**	**No**
Serie 51/52	**Metallic**	**Yes**	**No**
PROGRESS EMV easyConnect	**Metallic**	**Yes**	**No**
PROGRESS EMV powerConnect	**Metallic**	**Yes**	**No**

Issued at **Hamburg** on **2019-09-23**

This Certificate is valid until **2024-09-22**.
DNV GL local station: **Augsburg**

Approval Engineer: **Uwe Supke**

for **DNV GL**

Digitally Signed By: Schaarmann, Arne
Location: DNV GL SE Hamburg, Germany
Signing Date: 2019-09-24

Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Type designation	SYNTEC MS Cable glands SYNTEC nickel-plated brass with lamellar technology Long and short entry thread metric One piece sealing ring, not overall length insulated VDE Approval No.: 40027944 Appendix No.: 200A & 201A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	with cable anchorage type A M12-M63 Impact category 1-4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass. Short entry thread metric One-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	without cable anchorage M6-M8 with cable anchorage type A M8-M75 Impact category 4 up to 8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	

6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M6-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Short entry thread metric Two-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 201A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	with cable anchorage type A M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	6.4 Resistance to external influences
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Short entry thread metric One-piece sealing insert not overall length insulated VDE Approval No.: 40019686 Appendix No.: 202A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M6-M8 with cable anchorage type A: M8-M75

	Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M6-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Short entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 203A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	with cable anchorage type A: M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	N/A
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Long entry thread metric One-piece sealing insert overall length insulated VDE Approval No.: 40019686

	Appendix No.: 204A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M6-M8 with cable anchorage type A: M8-M75 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M6-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Long entry thread metric Two-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 205A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	with cable anchorage type A: M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Long entry thread metric One-piece sealing insert not overall length insulated VDE Approval No.: 40019686 Appendix No.: 206A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage M6-12 With cable anchorage type A: M12-M75 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M6-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS Cable glands PROGRESS nickel-plated brass Long entry thread metric Two-piece sealing insert not overall length insulated VDE Approval No.: 40019686 Appendix No.: 207A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'

6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS L Cable glands PROGRESS nickel-plated brass with special entry thread. Special long entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 208A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS MS FKN Cable glands PROGRESS nickel-plated brass for special applications With antikink spring, short entry thread metric One-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 210A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage M8 With cable anchorage type A: M8-M32

	Impact category 4-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M8-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS FKN Cable glands PROGRESS nickel-plated brass for special applications With antikink spring, short entry thread metric Two-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 211A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M32 Impact category 5-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS FK Cable glands PROGRESS nickel-plated brass for special cables For flat cables, short entry thread metric One-piece sealing, not insert overall length insulated VDE Approval No.: 40019686

	Appendix No.: 212A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS FK Cable glands PROGRESS nickel-plated brass for special cables For flat cables, long entry thread metric One-piece sealing, not insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 213A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS Multi Cable glands PROGRESS nickel-plated brass for installation of multiple cables short entry thread metric One-piece sealing not insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 214A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M32 Impact category 5-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS Multi Cable glands PROGRESS nickel-plated brass for installation of multiple cables long entry thread metric One-piece sealing, not insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 215A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M32 Impact category 5-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to	-40°C up to +100°C

+65C	
Gland sizes [mm]	M16-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS T Cable glands PROGRESS nickel-plated brass for special applications short entry thread metric Two-piece sealing insert, not overall length Insulated VDE Approval No.: 40019686 Appendix No.: 216A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS MS T Cable glands PROGRESS nickel-plated brass for special applications long entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 217A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7

6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° short entry thread metric One-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 218A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12 Impact category 4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12
Seal material	TPE

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° short entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686

	Appendix No.: 219A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° long entry thread metric One-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 220A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12 Impact category 4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12
Seal material	TPE

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° long entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 221A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° with locknut long entry thread metric One-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 222A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12 Impact category 4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to	-40°C up to +100°C

+65C	
Gland sizes [mm]	M12
Seal material	TPE / NBR

Type designation	PROGRESS MS W90 Cable glands PROGRESS nickel-plated brass elbow 90° with locknut long entry thread metric Two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 223A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS MS Adapter Adapter PROGRESS nickel-plated brass with integrated cable gland long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 224A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M10-M12 Impact category 4

6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M10-M12
Seal material	TPE / NBR

Type designation	PROGRESS MS Adapter Adapter PROGRESS nickel-plated brass with integrated cable gland long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686 Appendix No.: 225A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS Kombi Combination conduit glands PROGRESS nickel-plated brass with integrated cable gland short entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019686

	Appendix No.: 226A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS Kombi Combination conduit glands PROGRESS nickel-plated brass with integrated cable gland long entry thread metric two-piece sealing insert overall length insulated VDE Approval No.: 40019686 Appendix No.: 227A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS HT Cable glands PROGRESS nickel-plated brass for high temperature applications short entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019688 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M6-M8 With cable anchorage type A: M8-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M6-M63
Seal material	FPM

Type designation	PROGRESS MS HT Cable glands PROGRESS nickel-plated brass for high temperature applications short entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019688 Appendix No.: 201A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'

6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M16-M63
Seal material	FPM

Type designation	PROGRESS MS HT Cable glands PROGRESS nickel-plated brass for high temperature applications long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019688 Appendix No.: 202A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M6-M8 With cable anchorage type A: M8-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M6-M63
Seal material	FPM

Type designation	PROGRESS MS HT Cable glands PROGRESS nickel-plated brass for high temperature applications long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019688 Appendix No.: 203A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable	With cable anchorage type A: M16-M63

anchorage – type A, B , impact category)	Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M16-M63
Seal material	FPM

Type designation	PROGRESS MS KB Cable glands PROGRESS nickel plated brass for special applications. With clamps short entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019690 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M10-M12 Impact category 4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M10-M12
Seal material	TPE / NBR

Type designation	PROGRESS MS KB Cable glands PROGRESS nickel plated brass for special applications. With clamps short entry thread metric two-piece sealing insert, not overall length insulated

	VDE Approval No.: 40019690 Appendix No.: 201A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS KB Cable glands PROGRESS nickel plated brass for special applications. With clamps long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019690 Appendix No.: 202A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M10-M12 Impact category 4
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M10-M12
Seal material	TPE / NBR

Type designation	PROGRESS MS KB Cable glands PROGRESS nickel plated brass for special applications. With clamps long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019690 Appendix No.: 203A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M16-M75 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M75
Seal material	TPE / NBR

Type designation	PROGRESS MS T+KB Cable glands PROGRESS nickel plated brass for special applications. With trumpet and clamps short entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019690 Appendix No.: 204A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'

6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS MS T+KB Cable glands PROGRESS nickel plated brass for special applications With trumpet and clamps long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019690 Appendix No.: 205A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type B: M16-M40 Impact category 5-7
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M40
Seal material	TPE / NBR

Type designation	PROGRESS S2 Cable glands PROGRESS stainless steel A2 long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019693 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	CrNi Steel A2
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M63

	Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M8-M63
Seal material	TPE / NBR

Type designation	PROGRESS S2 Cable glands PROGRESS stainless steel A2 long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019693 Appendix No.: 201A
6.1 Material (Metallic, Non-metallic, composite)	CrNi Steel A2
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M63
Seal material	TPE / NBR

Type designation	PROGRESS S2 HT Cable glands PROGRESS stainless steel A2, for high temperatures long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019693

	Appendix No.: 202A
6.1 Material (Metallic, Non-metallic, composite)	CrNi Steel A2
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M8-M63
Seal material	FPM

Type designation	PROGRESS S2 HT Cable glands PROGRESS stainless steel A2, for high temperatures long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019693 Appendix No.: 203A
6.1 Material (Metallic, Non-metallic, composite)	CrNi Steel A2
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M16-M63
Seal material	FPM

Type designation	PROGRESS S4 HT Cable glands PROGRESS stainless and acid-resistant steel A4, for high temperatures long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019693 Appendix No.: 204A
6.1 Material (Metallic, Non-metallic, composite)	CrNiMo Steel A4
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M63 Impact category 5-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M8-M63
Seal material	FPM

Type designation	PROGRESS S4 HT Cable glands PROGRESS stainless and acid-resistant steel A4, for high temperatures long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40019693 Appendix No.: 205A
6.1 Material (Metallic, Non-metallic, composite)	CrNiMo Steel A4
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	

6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +200°C
Gland sizes [mm]	M16-M63
Seal material	FPM

Type designation	PROGRESS MS EMV Cable glands PROGRESS EMC nickel plated brass with contact sleeve short entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M8-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS EMV Cable glands PROGRESS EMC nickel plated brass with contact sleeve long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 201A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3

6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M8-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS EMV Rapid Cable glands PROGRESS EMC Rapid nickel plated brass with contact disc long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 203A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12-M32 Impact category 4-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS EMV FKN Cable glands PROGRESS EMC nickel plated brass with

	antikink spring entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 204A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M8-M32 Impact category 4-6
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M8-M32
Seal material	TPE / NBR

Type designation	PROGRESS MS Adapter Adapter PROGRESS nickel plated brass with intefrated EMV cable gland long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 205A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M10-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to	-40°C up to +100°C

+65C	
Gland sizes [mm]	M10-M63
Seal material	TPE / NBR

Type designation	PROGRESS MS Kombi EMV Combination conduit glands with integrated cable gland PROGRESS EMC long entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019694 Appendix No.: 206A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12-M63 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M12-M63
Seal material	TPE / NBR

Type designation	PROGRESS EMV Serie 85 Cable glands PROGRESS EMC Series 85 nickel plated brass with collet chuck entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40024694 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M63 Impact category 5-8

6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30' IP69 K
6.4.2 Temperature range if different from -20C to +65C	-40°C up to +100°C
Gland sizes [mm]	M16-M63
Seal material	TPE / NBR

Type designation	Serie 51/52 Cable glands PROGRESS nickel plated brass for special applications Antikink nozzle in EPDM short entry thread metric one-piece sealing insert, not overall length insulated VDE Approval No.: 40019695 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Nickel plated brass CuZn39Pb3
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	Without cable anchorage: M8 With cable anchorage type A: M10-M25 Impact category 4-8
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to EN 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68 1 bar 30'
6.4.2 Temperature range if different from -20C to +65C	-20°C up to +100°C
Gland sizes [mm]	M8-M25
Seal material	NBR / EPDM

Type designation	PROGRESS EMV easyConnect Cable glands PROGRESS EMC nickel plated brass with contact spring short and long entry thread metric

	two-piece sealing insert, not overall length insulated VDE Approval No.: 40036383 Appendix No.: 200A
6.1 Material (Metallic, Non-metallic, composite)	Body: Nickel plated brass CuZn39Pb3 Contact Spring: steel 1.4310
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M12-M32 Impact category 3
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to IEC 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68, 2 up to 30 bar during 30' IP69K
6.4.2 Temperature range if different from -20C to +65C	-60°C up to +100°C
Gland sizes [mm]	M12-M32
Seal material	TPE / NBR

Type designation	PROGRESS EMV powerConnect Cable glands PROGRESS EMC nickel plated brass with contact spring short and long entry thread metric two-piece sealing insert, not overall length insulated VDE Approval No.: 40036383 Appendix No.: 200B
6.1 Material (Metallic, Non-metallic, composite)	Body: Nickel plated brass CuZn39Pb3 Contact Spring: steel 1.4310
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage type A: M16-M85 Impact category 3
6.3 Electrical properties (with electric continuity or insulating characteristics)	According to IEC 62444
6.4 Resistance to external influences	
6.4.1 IP class	IP68, 2 up to 10 bar IP69

6.4.2 Temperature range if different from -20C to +65C	-60°C up to +100°C
Gland sizes [mm]	M16-M85
Seal material	TPE / NBR

Application/Limitation

For use in non-hazardous areas, only.

Type Approval documentation

Test reports / certificates:
VDE Certificate no. 40027944, appendix 200A, 201A.
VDE Certificate no. 40019686, appendix 200A, 201A, 202A, 203A, 204A, 205A, 206A, 207A, 208A, 210A, 211A, 212A, 213A, 214A, 215A, 216A, 217A, 218A, 219A, 220A, 221A, 222A, 223A, 224A, 227A.
VDE Certificate no. 40019688, appendix 200A, 201A, 202A, 203A.
VDE Certificate no. 40019690, appendix 200A, 201A, 202A, 203A, 204A, 205A.
VDE Certificate no. 40019693, appendix 200A, 201A, 202A, 203A, 204A, 205A.
VDE Certificate no. 40019694, appendix 200A, 201A, 203A, 204A, 205A, 206A, 207A.
VDE Certificate no. 40019695, appendix 200A.
VDE Certificate no. 40036383, appendix 200A, 200B.

Data sheets / drawings:
Relevant pages from Agro's product catalogue.

Tests carried out

Type tests in accordance with EN 62444 carried out by VDE.
Refer to product description for each cable gland type for certificate number.

Marking of product

Agro – type designation.
In addition the thread size on the type Syntec MS.
The Progress S2 type is market with 1 groove for A2-steel and 2 grooves for A4-steel.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection of factory samples, selected at random from the production line (where practicable)
- Results from production sample tests (PST) and routine tests (RT) to be checked (if not available tests according to PST and RT to be carried out)
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE