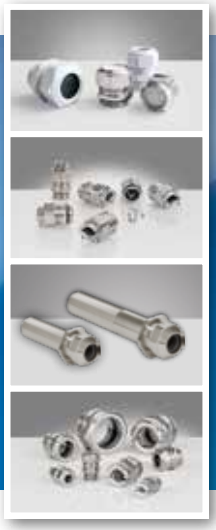
KV

AGRO Cable Glands.

For professional cable entries.

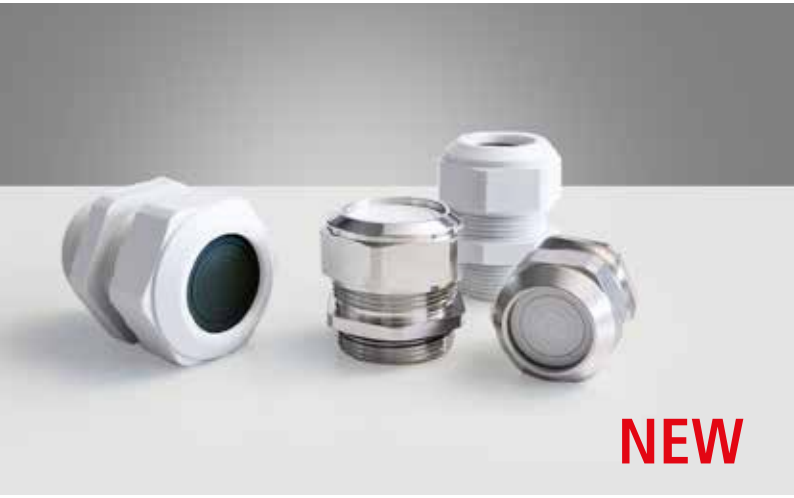


Progress® . Syntec® . EMC . Ex . Accessories

AGRO
... your quality-connection

Progress® multiLAYER.

The flexible sealing insert with large clamping range - always a direct hit.



The production of cable harnesses is increasingly outsourced and external cable assemblers manage the cabling of drive systems and converters. Since different cables are often used, greater flexibility is required in day-to-day work. With the new Progress® multiLAYER, only one type of cable gland needs to be managed per entry thread.

The new **multiLAYER sealing insert** offers an extremely wide clamping range and features integrated dust protection for the cable gland. The slotted version allows quick assembly of pre-assembled cables. It uses Progress® compression technology and clamps cables gently and without causing necking. Furthermore, this new sealing insert can be easily combined with other components of the outstanding modular Progress® product range.

Progress® easyCONNECT Ex e II.

EMC cable gland with clamps for hazardous areas.

The cable glands **Progress® EMC Ex easyCONNECT with clamps for increased safety Ex e II** guarantee full control during installation and compensates for tolerances in shielding thicknesses to make a secure shield contact. The spring system provides for a good and safe shield contact for optimum shield attenuation.

Thanks to the integrated clamps, the new member of the Progress® EMC product family ensures optimum strain relief in the smallest possible space in accordance with standards. The new cable gland Progress® EMC easyCONNECT brass with clamps for Ex e II not only excels with its low overall height, but also with a large clamping range and excellent temperature resistance.

Strain relief in the Ex area

Simple mechanical strain relief in hazardous areas thanks to AGRO cable glands with clamps.

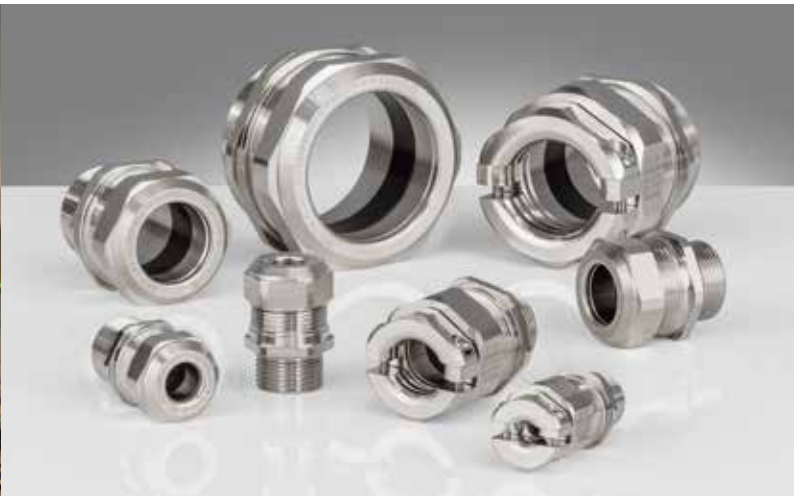
When used in potentially explosive atmospheres, the entry of cables and wires into any type of enclosure must comply with the relevant standards and directives in order to provide complete explosion protection.

In order for the cable installation to comply with the EN 60079-14 standard, cable entries must be installed in such a way that they can only be loosened or removed with the aid of a tool after installation. In order to prevent the transfer of forces to the conductor terminals inside the housing, additional mechanical strain relief is often required, which is indicated by an «X» in the approval. The standard recommends that the mechanical strain relief be installed 300 mm after the device at the latest. This requirement is often difficult to meet in cramped conditions.

AGRO offers a very wide range of cable glands with integrated mechanical strain relief for hazardous areas, ensuring optimum strain relief in accordance with standards in the smallest of spaces.

Progress® Ex Compact Ex d IIC.

The compact cable gland for potentially explosive atmospheres.



One guideline of EN 60079 requires that cables which are used in areas where explosive gas atmospheres are to be expected (Ex db eb IIC) have to be secured against stripping at the latest 300 mm after the device and need therefore to be fixed. It is also stipulated that cable glands must not invalidate the special properties of the type of protection of the electrical device to which they are attached and have to meet the requirements specified in the standard.

These requirements are often difficult to be met in confined spaces.

The new Progress® Ex Compact cable gland with clamps is a flame-proof enclosure and allows standard-compliant strain relief with an extremely compact design.

The cable gland is part of the Ex Compact family and is also available with NPT threads.

Progress® powerCONNECT.

EMC cable glands for high leakage currents.

Progress® EMC powerCONNECT, with its new, advanced compression sleeve, guarantees reliable 360° shield contact in a very compact unit. The direct transfer from the shielding to the cable gland's lower part ensures extremely low transfer resistance.

- As a result of the direct contact between the cable's shielding and the cable gland's cone, transfer resistance is very low
- Lasting high contact pressure, which results from the fixed compression sleeve and the complete tightening of the middle piece, maximises grounding of leakage currents, the extent of which is limited only by the shield's cross-sectional area
- The complete tightening of the middle piece clamps the shield braid properly without mechanically loading the cable's electricity-transmitting wires

The KAISER group

The KAISER Group, a family-run company in its third generation, has always placed emphasis on progress and tradition. As a leading innovator in the area of electrical installation products as well as of cable glands, our goal is to continuously be a step ahead for the benefit of our customers through powerful ideas and solutions in this sector. In this regard, our qualified, experienced employees are the guarantee of the high quality. Our partners can place their trust in our innovative power, which allows us to address the markets of today and tomorrow. The same is also true for our customer-oriented service and fast delivery times, aspects which mark a strong brand of electrical products..

KAISER AGRO HELIA ATTEMA

The KAISER, AGRO, HELIA and ATTEMA brands consistently offer you installation solutions which meet the needs of the market and thereby effectively support you in your daily work. Through their continuous future-oriented product innovations, these four strong brands provide assurance that you are always at the state of the art – today and tomorrow.

Cable Glands.

For more information about our innovative products please see our new catalogue „Cable Glands 28“ or consult our website:
www.agro.ch .

Technical information and advice
Further information about products, solutions and communication media can also be found on our website: **www.agro.ch.**

Always up to date: All our product videos on YouTube/agroag.

Our sales support team will be happy to answer any questions you may have, or provide further information. We look forward to hearing from you.
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Picture source: KAISER / AGRO Archive

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AGRO
... your quality-connection

Progress®.

Progress® standard or multi-duct cable glands ensuring gentle strain relief and high tightness.

Cable glands Progress® nickel-plated brass are tried and tested aids for correct cable entry in industrial equipment. Through the choice of the suitable sealing inserts, these glands can be used anywhere. The outstanding compression technology for use everywhere guarantees an effective seal and excellent cable-protecting strain relief, also by vibrations.

- Certified according to EN 50262
- Protection class IP 68 / IP 69K
- Comprehensive assortment
- High chemical resistance
- Available also with sealing insert according to EN 45545-2/3 HL3
- Short, long or special entry threads
- Entry threads from M6 to M115
- Guaranteed tightness
- High resistance to vibrations
- Large spanner flats

Syntec®.

Syntec® cable glands made of nickel-plated brass or synthetic material for professional quality in everyday installation.

Nickel-plated brass or synthetic **Syntec® cable glands** represent the optimal solution for a wide range of daily tasks. The patented, unique lamellar technology clamps the cable smoothly and guarantees practical cable entry with outstanding strain relief.

- Short or long entry threads
- Sealing section directly injection moulded to the lower part of the cable gland
- Outstanding strain relief and distortion protection
- Tested according to EN 50262
- Protection class IP 68
- Halogen free

Progress® EMC.

Progress® EMC cable glands for interference-free cable installation, available as standard or multi-duct version.

In the industrial sector, **EMC** plays a particular key role because complex machines and systems are extremely susceptible to electromagnetic interference. Such undesired EMC effects, however, can be counteracted with the effective shielding of all components. On the one hand, good shielding reduces the amount of interference emitted by an electrical apparatus while at the same time reducing its susceptibility to impaired performance due to electromagnetic effects.
Not only cables themselves but also all other components that are part of the installation must provide shielding characteristics. With **five different EMC-compatible cable glands**, AGRO offers its customers the appropriate product and the ideal types of contact for each type of application.

- Progress® EMC nickel-plated brass with time-proven contact sleeve
- Progress® EMC Rapid nickel-plated brass with contact disc
- Progress® EMC easyCONNECT nickel-plated brass with contact spring
- Progress® EMC Series 85 nickel-plated brass with collet chuck
- Progress® EMC powerCONNECT with compression sleeve

Progress® Ex.

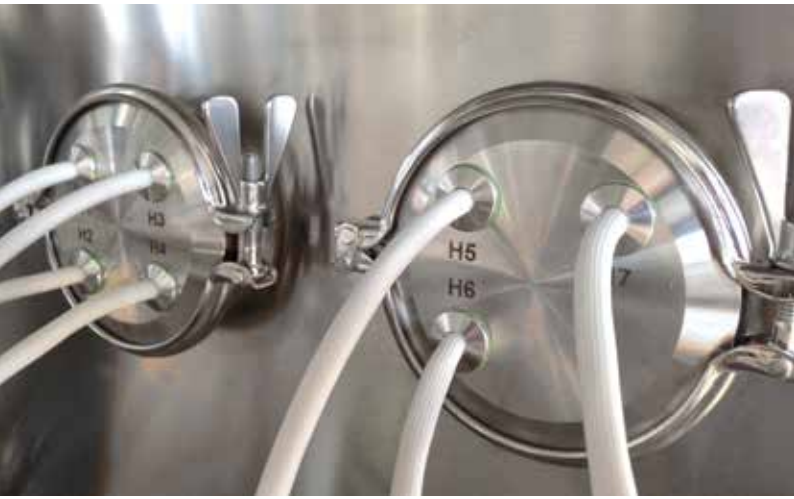
AGRO Ex cable glands for professional cable entry in potentially explosive atmospheres.

In many areas such as the **chemical industry**, the **textile and paper industry**, the **food industry**, **glass and / or ceramics industry**, **wood processing** and **many other industries**, equipment are operated in explosive areas. Due to the high risk to persons and property in case of an explosion, especially strict legal and technical requirements apply to explosive areas in particular. **AGRO Ex cable glands** made of nickel-plated brass or synthetic material comply with the strictest requirements and ensure safe cable entry in explosive areas. All cable glands are tested and certified according to the latest standards and come with an EC type-examination certificate.

- IECEx tested
- ATEX certified
- Flame-proof enclosure Ex d IIC
- Increased safety Ex e II
- Intrinsic safety Ex i II
- Compact design
- Large clamping range
- Guaranteed seal
- Extensive accessories

Progress® ultraFLAT.

Progress® ultraFLAT: One cable gland - four application areas.



The ideal choice for clean-rooms and food industry

- Ultra flat construction of the cable gland - compact design, smooth surfaces
- Efficient cleaning - no deposits of contamination
- Versions in stainless steel and nickel-plated brass, sealing inserts for high temperature applications
- With FDA cleared sealing inserts for food industry
- With outstanding resistance to chemicals

A cable gland with design and anti vandalism qualities

- No contact surface for interference neither by hand or with a tool will be found
- High protection class IP 68 / IP 69K
- A connecting bush may be added for applications with cable protecting conduit

Progress® ultraLONG.

Progress® ultraLONG cable gland with extra long entry thread.

Across the wall

When cables have to be routed through double-walled or insulated cabinet walls, our long-thread cable glands offer a simple, quick and elegant solution.

In the illustration above, the cables are routed through the double-walled housing of a monoblock system. The long-threaded cable gland is screwed directly into a conduit gland. The cable entry is protected against the penetration of moisture by the cable gland on the inside and by the conduit gland on the outside.

A simple and elegant solution!

Pressure balance elements.

AGRO Pressure balance and drainage elements.
Prevent differences in pressure or temperature as well as water condensation.

Many electro-technical housings are sealed against the ingress of water and dust (IP 68), but are not vapour-tight. Air drawn into the housing carries moisture, which condenses when the temperature drops below the dew point. The water which is now trapped in the enclosure can lead to corrosion and equipment failures. To prevent pressure differences, high humidity and condensation of water in the housing, constant balancing of pressure and exchange of air is needed. The use of AGRO pressure balance elements in electrical and electronics housings allows efficient pressure balance and ventilation, and if necessary, drainage. AGRO pressure balance elements are available in nickel-plated brass or synthetic material. A nickel-plated brass version is available and certified for Ex applications.

Pressure balance element with membrane

Pressure balance element with sintered filter

Drainage element with mesh

Synthetic pressure balance element with membrane