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Powering Business Worldwide

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INTRODUCTION



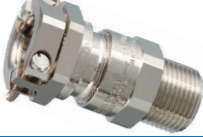








HAZARDOUS AREA CABLE GLANDS

HAZARDOUS AREA ACCESSORIES



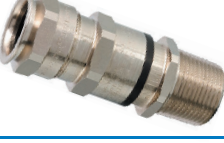

INDUSTRIAL CABLE GLANDS AND ACCESSORIES

TECHNICAL GUIDE

Selection guide for cable glands for hazardous areas




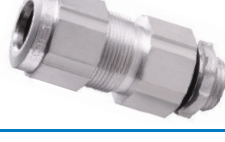
Non-armoured cable glands	Cable type	Material options	Key points	
ADE-1F2 cable gland page 2.6		<ul style="list-style-type: none"> • Non-armoured • Marine shipboard cable • Tray cable • Type P 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> • Ex d / Ex e • UL / cULus • IP66 / IP68 • -60°C to +140°C • Metric / NPT
ADE-1F2 DS cable gland page 2.8		<ul style="list-style-type: none"> • Non-armoured • Marine shipboard cable • Tray cable • Type P 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> • Ex d / Ex e • UL / cULus • IP66 / IP68 • -60°C to +140°C • Metric / NPT
ADE-1F2 A Clamping cable gland page 2.10		<ul style="list-style-type: none"> • Non-armoured • Marine shipboard cable • Tray cable • Type P 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> • Ex d / Ex e • UL / cULus • IP66 / IP68 • -60°C to +140°C • Metric / NPT • Integrated clamp
ADE-1F2 O-Ring cable gland page 2.12		<ul style="list-style-type: none"> • Non-armoured • Marine shipboard cable • Tray cable • Type P 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel 	<ul style="list-style-type: none"> • Ex d / Ex e • UL / cULus • IP66 / IP68 • -60°C to +140°C • Metric • Integrated O-ring
1F2 ADCC conduit gland page 2.14		<ul style="list-style-type: none"> • Non-armoured cable in flexible conduit • Non-armoured cable in rigid conduit 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel 	<ul style="list-style-type: none"> • Ex d / Ex e • IP66 / IP68 • -60°C to +140°C • Metric / NPT / BSPP
1F2 ADCS conduit gland page 2.16		<ul style="list-style-type: none"> • Non-armoured cable in rigid conduit 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel 	<ul style="list-style-type: none"> • Ex d / Ex e • IP66 / IP68 • -60°C to +140°C • Metric / NPT / BSPP • Swivel function
ADE-1FC cable gland page 2.18		<ul style="list-style-type: none"> • Non-armoured • Marine shipboard cable • Tray cable • Type P 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel Bronze 	<ul style="list-style-type: none"> • Ex d / Ex e • UL / cULus • IP66 / IP68 • -60°C to +80°C • Metric / NPT • Deluge seal
NEWCAP MS-e page 2.32		<ul style="list-style-type: none"> • Non-armoured • Braided cable 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel 	<ul style="list-style-type: none"> • Ex e • IP66 / IP68 • -20°C to +80°C
NEWCAP CT-e page 2.33		<ul style="list-style-type: none"> • Non-armoured • Braided cable • For EMC specific cable and application 	<ul style="list-style-type: none"> • Nickel-plated brass • Option: Stainless steel 	<ul style="list-style-type: none"> • Ex e • IP66 / IP68 • -20°C to +80°C
CEAG GHG Ex e Blue / Black page 2.34/2.35		<ul style="list-style-type: none"> • Non-armoured 	<ul style="list-style-type: none"> • Nylon 	<ul style="list-style-type: none"> • Ex e • -20°C to +70°C • Integrated sealing lip
TRUMPET page 2.36		<ul style="list-style-type: none"> • Non-armoured 	<ul style="list-style-type: none"> • Nylon 	<ul style="list-style-type: none"> • Ex e • -40°C to +85°C

Selection guide for cable glands for hazardous areas

Armoured cable glands	Cable type	Material options	Key points	
ADE-4F page 2.20		<ul style="list-style-type: none"> SWA / SWB / STA Braided marine shipboard Lead sheathed (with washer) Type P 	<ul style="list-style-type: none"> Nickel-plated brass Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> Ex d / Ex e UL / cULus IP66 / IP68 -60°C to +140°C Metric / NPT
ADE-5F page 2.22		<ul style="list-style-type: none"> SWA / SWB / STA Braided marine shipboard Lead sheathed (with washer) Type P 	<ul style="list-style-type: none"> Nickel-plated brass Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> Ex d / Ex e UL / cULus IP66 / IP68 -60°C to +140°C Metric / NPT Deluge seal option
ADE-6F page 2.24		<ul style="list-style-type: none"> SWA / SWB / STA Braided marine shipboard Type P 	<ul style="list-style-type: none"> Nickel-plated brass Option: Stainless steel Aluminum Bronze 	<ul style="list-style-type: none"> Ex d / Ex e UL / cULus IP66 / IP68 -60°C to +80°C Metric / NPT Deluge seal
ADE-6FC page 2.26		<ul style="list-style-type: none"> SWA / SWB / STA Braided marine shipboard Type P Tray cable 	<ul style="list-style-type: none"> Nickel-plated brass Option: Stainless steel Bronze 	<ul style="list-style-type: none"> Ex d / Ex e UL / cULus IP66 / IP68 -60°C to +80°C Metric / NPT Deluge seal

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HAZARDOUS AREA CABLE GLANDS

North American cable glands	Cable type	Material options	Key points
TMCX II Armoured barrier gland page 2.38		<ul style="list-style-type: none"> Aluminum Option: Nickel-plated brass Stainless steel 	<ul style="list-style-type: none"> cULus NEMA 6P / 4X -40°C to +60°C NPT / Metric Cold Shrink™ kit available
TMCX Armoured barrier gland page 2.41		<ul style="list-style-type: none"> Aluminum Option: Nickel-plated brass 	<ul style="list-style-type: none"> UL / CSA NEMA 4 / IP56 -25°C to +60°C NPT Cold Shrink™ kit available
TMC armoured gland page 2.42		<ul style="list-style-type: none"> Aluminum 	<ul style="list-style-type: none"> UL / CSA NEMA 4 / IP56 -25°C to +60°C NPT
TECK armoured gland page 2.43		<ul style="list-style-type: none"> Aluminum Option: Steel Stainless steel PVC coated aluminium 	<ul style="list-style-type: none"> CSA IP56 -25°C to +60°C NPT Cold Shrink™ kit available

HAZARDOUS AREA ACCESSORIES

INDUSTRIAL CABLE GLANDS AND ACCESSORIES

TECHNICAL GUIDE

Capri ADE cable glands - specification features

Material specification

Metallic components

The Capri ADE range of cable glands are available in four different material types:

- Nickel-plated brass
- 316L stainless steel
- Aluminum
- Bronze

Nickel-plated brass

Nickel-plated brass is used extensively throughout the oil and gas and petrochemical industries because it provides superior protection against corrosion and contamination under severe conditions and in the most extreme environments over equivalent natural brass products.

All nickel-plated brass components, both external and internal, are designed specifically to allow for a nickel-plated coating between 5 to 7 microns that ensures the critical tolerances can be maintained. The design tolerance of the components and the quality control of the plating process ensure a uniform coating which protects against the possibility of chipping, flaking, and peeling under extreme conditions.

Seal material

The seal material of the ADE range has been carefully formulated to achieve the optimized performance across a wide range of operating temperature conditions.

- Silicone - for extended temperature performance



Operating temperature range

The ADE models are suitable for the following operating temperatures:

Silicone seals -60°C to +140°C

Barrier compound -60°C to +80°C

Refer to individual product data sheets for specifications.



Capri ADE cable glands specification features

Cable clamping technology

Fig. 1 - External cable clamping

All ADE models are designed to accommodate an external clamping module which provides additional mechanical strength for strain relief.

Fig. 2 - Outer sheath cable sealing

All ADE models utilize a gland specific seal design (Fig.8), which, combined with the material formulation, ensures suitable sealing and ingress protection on the outer cable sheath.

Fig. 3 and 4 - Inner sheath cable sealing

The ADE-4F and ADE-5F utilize the same proven seal design as for the outer sheath (Fig.8), while the ADE-6F utilizes a diaphragm design seal to achieve the desired flame-path protection.

Fig. 5 and 6 - Universal clamping - armoured cable

The ADE-4F, ADE-5F and ADE-6F models all offer universal designs for all types of armoured cable. These include:

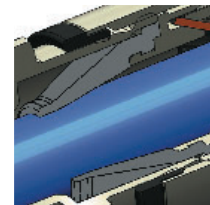
- Steel wire armoured (SWA) cable
- Steel tape armoured (STA) cable
- Steel wire braided (SWB) cable
- Braided marine shipboard cable
- Lead sheath armoured cable
- Type P cable

All designs achieve clamping and earth bonding of the armour for all armour types with no reversible components.

Fig. 7 - Lead sheath armour cable

The ADE-4F and ADE-5F ranges are suitable for lead sheath armoured cable with the addition of a simple washer.

Fig. 8 - Specially formulated elastomer seal



Ingress protection (IP)

- IP64, IP66 without sealing washer and surface finish of Ra 0.4 μm or on threaded hole and surface finish of Ra 1.6 μm max.
- IP64, IP66 with all sealing washers (red fibre, green fibre, on or PTFE) on surface Ra 6.3 μm max.
- IP68 tested 30m/7days with red fibre or green fibre sealing washers

NPT threads: IP64, 66 and IP68 tested 30m/7days; HTL lubricant may be needed. For details, please refer to cable glands installation guide page 5.12.

Deluge protection

All ADE models comply and are compliant with DTS-01 deluge certification.

The ADE-6F incorporates an additional deluge boot seal for enhanced deluge protection in marine / offshore environments.

An optional deluge seal is also available for larger sizes of the ADE-5F.

