



Conical Cage Cable Gland

A charging station is a power supply device that provides electrical power for recharging plug-in electric vehicles.

As the charge is transferred to the battery, the cables need to be permanently connected to the charger, have IP protection, and able to withstand the excess heat generated by the high power output.

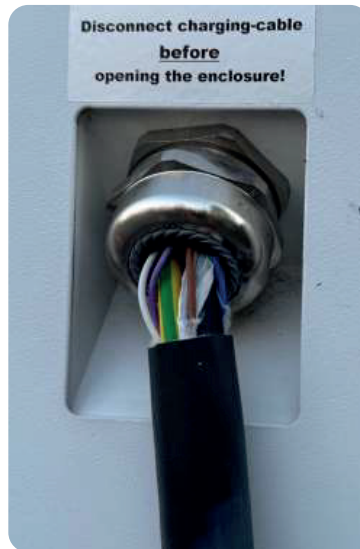
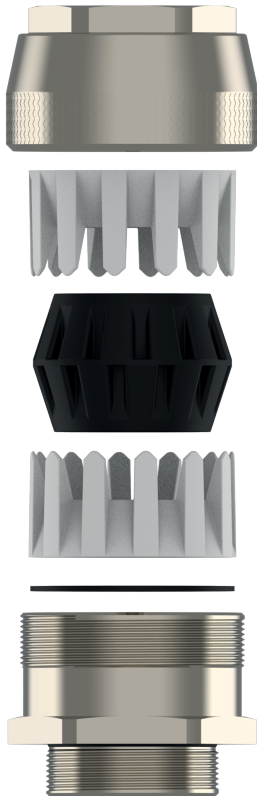
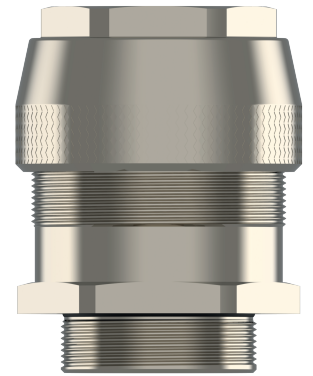
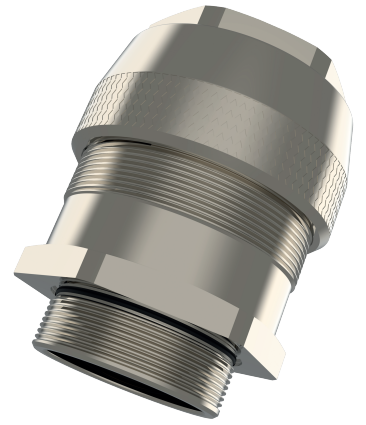
There are many types of EV cables in the market. The heat generated is greater for the cables with higher power output. As a solution, liquid is used to cool the cables with higher power output, to prevent cable damage from excess heat.

In addition, due to the heat generated when in use, the cable outer diameter can expand and contract as a result of these temperature changes. As standard cable gland clamping systems are not designed to tolerate these diameter changes, the EV cables can pull-out from the gland seal, allowing for water ingress and inevitable damage to the EV charger. Also, Cable glands with a compression seal can cause the physical deformation on the cable which exhibits 'Cold Flow' effect. Therefore, this leads to IP problems.

In order to prevent the cable from moving out and the damage to the cable exhibiting 'Cold Flow' characteristics, the Conical Cage Cable Gland has been developed.

The new innovative sealing system in the new cable gland, fully covers the cable outer sheath in a large area when any force is applied to the cable, creating enormous frictional force. By clamping over a large area, the pressure on the cable is much lower than any other system on the market. This eliminates the cold flow effect on the cable. It is also not affected by changes in outer diameter.

In the new clamping system of the Conical Cage Gland, the entire inner surface of the seal compresses the cable after tightening. Compared to other glands, the surface area to which pressure is applied, is very large. If the same force (to achieve the required cable retention force) is applied to all types of cable gland designs, the pressure on the unit area of the cable in the new design is relatively small, so the cold flow effect on the cable does not occur. As a result, without damage to the cable, new design achieve high cable retention force. (Up to 1000N)



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Conical Cage Cable Gland with Thread

General

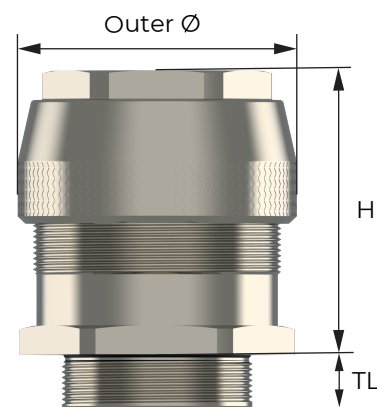
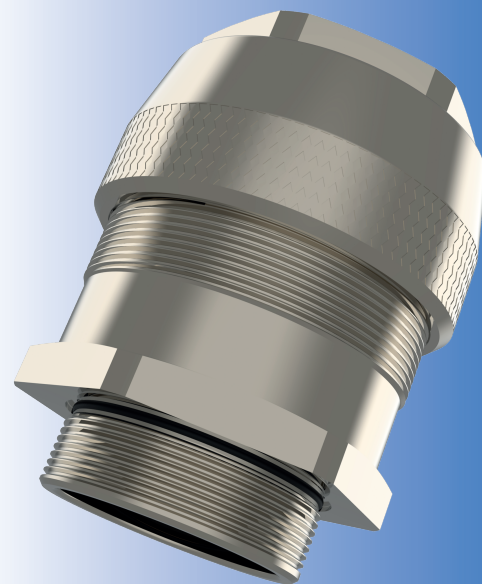
- The Conical Cage Cable Gland utilizes an innovative, friction-based clamping mechanism that distributes force over a wide area of the cable sheath. This prevents cold flow deformation, accommodates changes in cable diameter, and ensures long-lasting IP protection
- Up to 1000 N cable retention without damage
- Suitable for indoor and outdoor installations
- Withstands high temperatures in fast-charging applications
- Prevents water, dust, and moisture ingress, even in extreme conditions
- Large-area friction-based clamping for stable sealing

Technical Details

Material	Body, Cap	Nickel Plated Brass, Stainless Steel, Aluminium	
	Seal	CR (Chloroprene)	
	Insert	Polyamide 6 V2 acc. to UL 94	
	O-Ring	CR	
Ingress Protection Rating	IP 68 - 5 Bar, 30 min IP 66		
UL Environmental Rating	TYPE 4X acc. to UL 50E		
Operating Temperature	Permanent	-40 °C to +100 °C	
	Intermittent	-40 °C to +120 °C	
Thread Type	<ul style="list-style-type: none"> • Metric EN 60423 • NPT ANSI B1.20.1 		
Cable Type	Non armoured		
Accessories	<ul style="list-style-type: none"> • Locknut • Gasket (Washer) 		
Remarks	• Accessories must be ordered separately		

Approvals	Certificate Number	Standards
	In Progress	IEC 62196-3, IEC 62196
	In Progress	UL2251 UL2875 UL817 UL1682

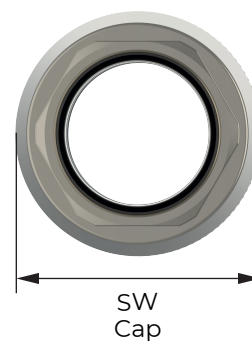
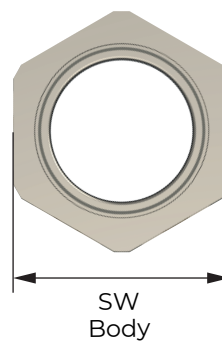
For details of approvals see our webpage.



Thread Type **METRIC acc. to ISO 965-3**

Thread Type **NPT acc. to ANSI ASME B1.20.1**

Outer Thread Size	Clamping Range Ø min-max mm	Outer Thread Length TL mm	Spanner Width		Outer Ø D mm	max. Height H mm	Part Number
			Body SW mm	Cap SW mm			
Metric	NPT						
M50		30-42	15	65	73	74	BCCCG-E5 (TS)
		34-42					BCCCG-E5 (DS)
		38-42					BCCCG-E5



Part Number	Thread Type	Material	Seal	- Gasket (Washer)	Locknut
Mandatory	Mandatory	Mandatory	Mandatory	- Option	Option
See Table	N NPT	BN Nickel Plated Brass	C Chloroprene	- WC Chloroprene	L Locknut
	M Metric	X Stainless Steel			
		A Aluminium			
Example					
BCCCG-E5	M	BN	C	- WC	L