

**SUCCESS
STORY**

 **MENNEKES®**

HUMMEL
smart & reliable connections

Cable protection despite tight bend radius

HSK-K-Flex connects charging cable to wallbox safely and reliably

Electromobility will revolutionize road traffic. The triumphant advance of electric vehicles will continue unabated in the coming years. However, a prerequisite for this is a nationwide supply of charging stations. One of the leading manufacturers of charging stations in the private, commercial and public sectors is the Mennekes company from Kirchhundem in the Sauerland region. Their wallboxes are used indoors and outdoors throughout Europe. In a comparative test, the ADAC gave the Mennekes wallboxes an overall rating of "very good".

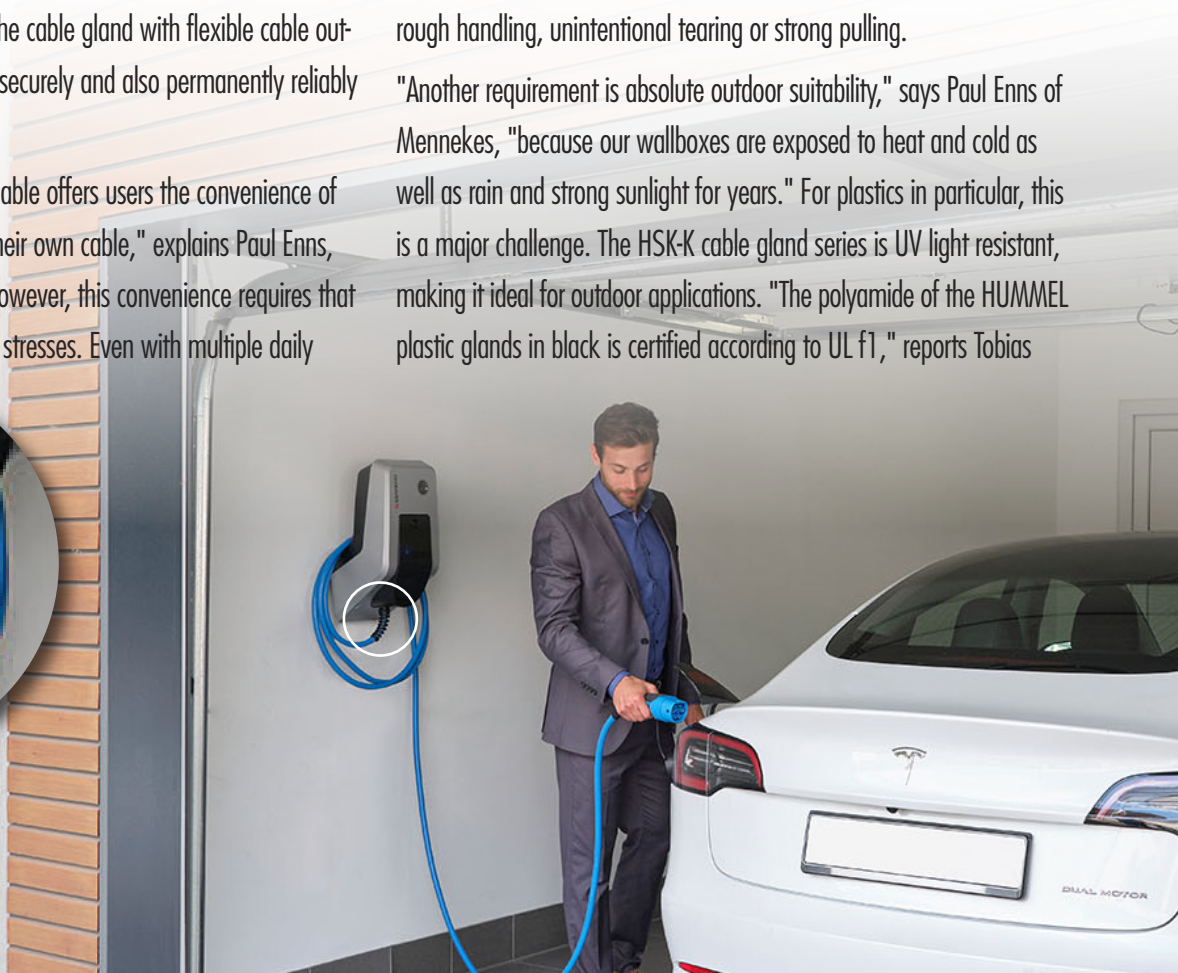
Mennekes relies on cable glands from HUMMEL AG for all wallboxes with connected charging cables. The cable gland with flexible cable outlet HSK-K Flex connects the cable securely and also permanently reliably to the housing.

"The directly connected charging cable offers users the convenience of not having to bring and connect their own cable," explains Paul Enns, product manager at Mennekes. However, this convenience requires that the charging cable withstand high stresses. Even with multiple daily

uses, the cable must be securely and firmly connected to the housing and equally demonstrate a high degree of flexibility.

"The cable gland must allow a tight bending radius without damaging the cable and at the same time ensure high pull-out forces," is how Tobias Merkt, Product Manager at HUMMEL AG, describes the requirements. Therefore, strain relief is of particular importance in this application. Thanks to the HSK-K-Flex, the charging cable at the wallbox withstands a pull-out force of 154 Newtons. This corresponds to 15.4 kilograms. This means that the cable is optimally protected against rough handling, unintentional tearing or strong pulling.

"Another requirement is absolute outdoor suitability," says Paul Enns of Mennekes, "because our wallboxes are exposed to heat and cold as well as rain and strong sunlight for years." For plastics in particular, this is a major challenge. The HSK-K cable gland series is UV light resistant, making it ideal for outdoor applications. "The polyamide of the HUMMEL plastic glands in black is certified according to UL f1," reports Tobias



Merkt from HUMMEL AG. "We use only plastic with special additives for production. They make the gland resistant and thus ideally suited for outdoor use."

Rain and splash water are also constant accompaniments and equally a source of danger. Tightness is therefore an essential prerequisite for trouble-free operation of the systems. Particular attention is paid to attachments, connections, transitions and components. The HSK-K-Flex used here is designed in such a way that it not only prevents the ingress of splash water, but would even protect the electronics in the housing from water during complete submersion and high-pressure cleaning. Cable glands from HUMMEL AG meet the protection classes IP 68 up to 10 bar as well as IP 69K.

The Mennekes wall boxes are equipped with glands of size M25 and long connection thread for even better hold on the housing. The charging cable has a cross-section of 12 millimeters and is held securely and reliably in position inside the cable gland by overlapping clamping lamellas.

MENNEKES GmbH & Co. KG

The name MENNEKES stands for high quality, reliable, safe and innovative solutions in the fields of industrial plugs and sockets, electromobility and automotive. MENNEKES is a symbol for modern plugs, sockets and combinations as well as intelligent eMobility charging solutions. The company with its headquarters in Kirchhundem / Sauerland, has been family-owned for more than 80 years and is present in more than 90 countries.



HSK-K-FLEX

Cable glands with bend protection

- // Extreme strain relief
- // Tight bend radius
- // Optimum tightness
- // UV light resistant



HSK-K-FLEX

Material	Polyamide certified according to UL f1
Seal	NBR
Protection class	IP 68 – 10 bar IP 69 K with additional o-ring
Temperature range	-40 °C – +100 °C
External thread (AG)	M 25 x 1,5
Cable diameter	9 – 16 mm

HUMMEL AG
Lise-Meitner-Straße 2
79211 Denzlingen
Germany
www.hummel.com

Tel. +49 (0) 76 66 / 9 11 10-0
Fax +49 (0) 76 66 / 9 11 10-20
E-Mail info@hummel.com

