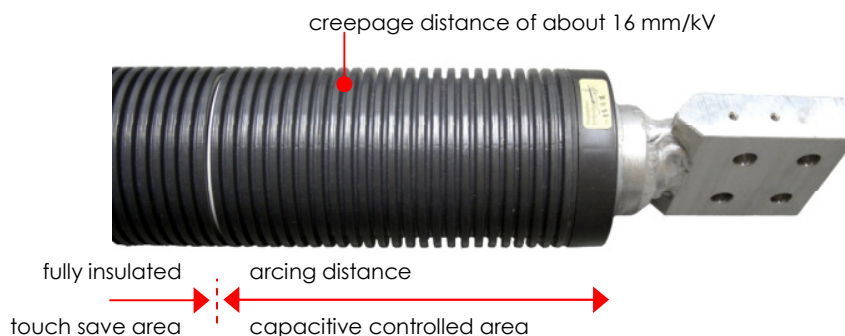
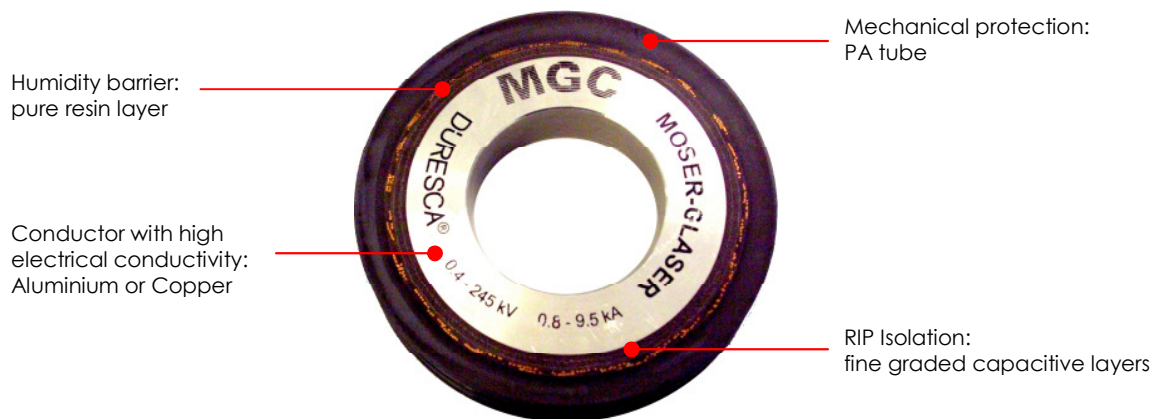


Expertise of MGC Duresca® busbars

Vacuum impregnated and dried creep paper with cycloaliphatic resin (called RIP), has been used more than 50 years in the DURESCA® busbars and bushings in applications all over the world. MGC Moser-Glaser invented this technology in 1958 and has the longest experience in the field with this material.

The successful RIP applications of busbars shows that we have also to compete with other possible designs. The main difference concerns the protection of the RIP body. The other possible ways consist in a heat shrinking hose instead of an effective protection tube as proposed by MGC. In case of outside applications, the shrinking hose has additionally to be protected with a metal tube, that's built an air gap between the surface of the busbar and the metallic enclosure. The air will condensate and will degrade the insulation properties. This is not the case by the Duresca® busbar system where the RIP body is always protected by a tube:

- Type DE with a corrugated polyamide which represents the major part of our deliveries
- Type DG with Cr-Ni steel which is used mainly for the higher diameters and where the polyamide tube is no more available.
- Both types are produced in the same way. There is absolutely no air gap between the RIP body and the protection which is filled at the end with pure resin.
- This tube has 3 main issues:
 - the best possible barrier against humidity and moisture ingress
 - to be an excellent mechanical protection
 - to offer with the Type DE , an additional creepage distance





1 GuD Linz / Austria (Photo 1)

No additional protection is needed for outdoor application.



2 72,5 kV EPCOR / Canada (Photo 2)

Duresca® in a H.V. application and in outdoor installation.



3 110 kV UW Kolin / Czech Republic (Photo 3)

Duresca®, the only fully insulated busbar system which is available in the H.V. level, till to 170 kV.

Type DE with a corrugated PA polyamide tube.

The chemical composition of this polyamide was specially developed for MGC and for more than 25 years ago. It is very important to grant the best possible behaviour against weather in exposed outdoor situation and this for a long time period. This is supported by a testing in 1993, in an independent laboratory, according to ASTM D2565 standard, for more than 5000 hours, with excellent results.

This protection tube offers highly UV stability

The material is also self-extinguishing, free of halogen and phosphor and was tested according to IEC 60332-3 and DIN 50266-2

Relevant are the chemical properties:



- resistance to salt water
- resistance to mineral oil, fat, fuels, weak acids and bases, termites
- none sensitivity to fungus and mould or mildew

Particularly adapted in very corrosive atmosphere like in offshore applications

Earth layer

Particular also for the DURESCA® busbar system is certainly the earth screen in copper, embedded in the insulation and designed for fault current of 8 kA in case of an exceptional insulation failure.

Conclusion

The DURESCA® busbar system, with the highest level of quality allows a safe lifetime of more than 30 years. It is a compact design with reduced bending radius, designed for easy and fast installation, without maintenance.

KW Löbbia / Switzerland

