

# DIEHL BLACKLINE



## General properties of the layers:

- Use of carbon fibers only (no plastic fibers)
- Highly heat-resistant phenolic resin bond
- Woven layer structure with high porosity
- Exceptionally high incompressibility
- Minimum setting behavior
- Compatibility with all common transmission oils (MT, AT, DCT, EP oils)
- Maximum performance as well as outstanding overload capacity

## Reliable design of synchronization systems thanks to mechanical stability

The high porosity of the layers enables rapid oil displacement at the start of the synchronization phase, thereby guaranteeing rapid friction coefficient development. Furthermore, the porosity ensures that synchronization under cold gearshift conditions is reliable.

Besides the outstanding friction properties and the excellent wear resistance, the consistency of the friction behavior over lifetime is especially noteworthy.

An important characteristic of the layers is their high thermomechanical stability. Setting behavior is practically non-existent.

This enables hassle-free use of the carbon layers even in multi-cone synchronizations (2-fold/3-fold synchronizations), which are known for the high demands they place on geometrical stability over lifetime.

Mechanical stability in combination with the consistency of the friction behavior enables a reliable design of the synchronization systems, both with respect to geometrical as well as energy aspects.

## Differences between the individual Diehl carbon layer types DCA, DCB, DCM6

Generally a distinction is made between the individual types of layer in terms of their woven structure, the phenolic resin system used and the layer thickness. The aim of having a selection of different layers is to be able to provide the optimum solution for different requirements (oil, geometry, load). The choice of layer is made on a project-specific basis (preselection is based on our experience and then by means of test bench trials using the specific oil used by the customer).

**Diehl Metall Stiftung & Co. KG**  
**Diehl Metall Schmiedetechnik**

Heinrich-Diehl-Straße 9  
90552 Röthenbach a.d. Pegnitz

E-Mail: sales-schmiede@diehl.com

