



- Pure carbon
- Outstanding performance
- Minimum pressure drop
- Light weight

MellaCarbon™ – Setting a New Benchmark for Corrosion Resistant Column Internals

Carbon Fiber Composite (CFC) Column Internals made by SGL Group with Sulzer distribution technology

SIGRABOND® Chemical is a state-of-the-art carbon fiber composite material combining lightweight, strength and stiffness with outstanding chemical and temperature resistance. Significant customer benefits in technological as well as economic aspects can be provided and outperform most other conventional materials.

The leading Sulzer Distributor Technology was developed based on decades of experience for the optimum performance of separation columns with random and structured packing.

SGL Group's know-how in carbon fiber production and processing is combined with Sulzer's mass transfer application knowledge to develop a new carbon fiber based internals family with the target to provide innovative and economic solutions for our customers and their demanding applications

- structured packing
- liquid distributors / collectors
- support / retaining grids
- pipe inlets and connections

MELLACARBON COLUMN INTERNALS

FEATURES AND BENEFITS

- **Minimum pressure drop:** free flow cross-section >90% for grids and >50% for distributors
- **High mechanical loads** up to 50t
- Also applicable for column diameters > 3m (manway installation)
- **Reliable performance:** sustainable mechanical stability at high temperatures up to 2,000°C, even in case of fast operational changes, essential e.g. for liquid distributors
- **Easy and safe handling:** carbon fiber based compound material enables designs with up to 10 times lower weight than designs made of traditional materials
- **Customized segmentation** of internals to fit in place
- **Outstanding corrosion resistance** at high temperatures

Typical applications

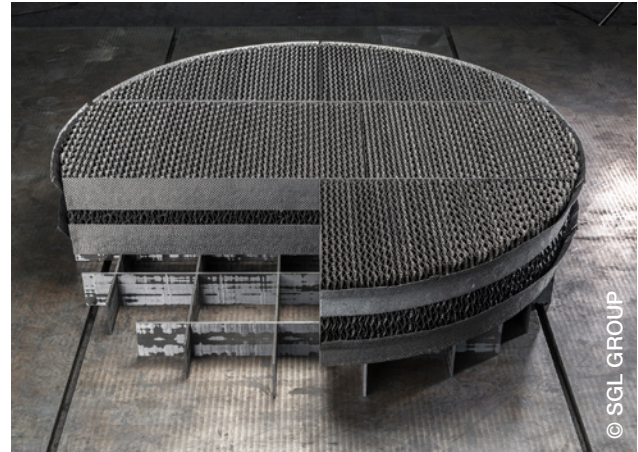
New column installations as well as revamps of existing installations for performance, reliability or lifetime upgrades utilizing traditional corrosion resistant materials like exotic metals, ceramics, plastics, glass linings.

- Hydrochloric Acid
- Mono- / Dichloroacetic Acid
- Phosphoric Acid
- Halogenic Acid
- and many others

MellaCarbon Structured Packing: made by Sulzer with material expertise of SGL Group

MellaCarbon combines all the advantages of a structured gauze packing with the corrosion resistance of carbon fibers. MellaCarbon is ideal for highly corrosive applications because it is 100% carbon based and will not react with most solvents, acids or bases.

For the development of MellaCarbon SGL Group know-how in carbon fiber production and processing is consequently combined with Sulzer mass transfer application knowledge.



MELLACARBON STRUCTURED PACKING

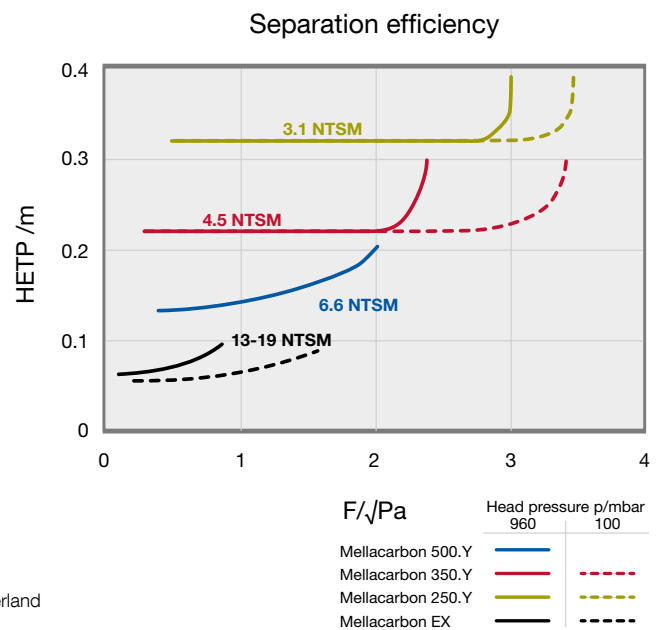
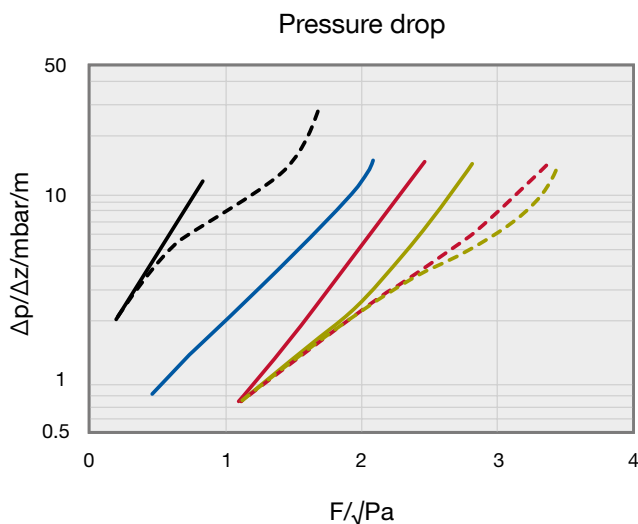
FEATURES AND BENEFITS

- **Outstanding corrosion resistance**
- **No temperature limitations** as for plastics
- **Significant column size reduction** due to high separation efficiency at high hydraulic capacity (see performance data of the MellaCarbon types)
- **Excellent wettability** of the packing surface (also with aqueous systems)
- **Low weight**
- **The combination with MellaCarbon internals** like CFC distributors, collectors and supports is the perfect material fit for most applications
- **Suitable for all types of columns** (metal, glass, glass or plastic lined)
- **Convenient installation**, no scratch risk for lined columns
- **No abrasive fragments** damaging process equipment such as pumps and valves
- **More than 400 columns are successfully in operation** for a wide range of applications up to a diameter of 1.7 m

Typical applications

Replacement of traditional corrosion resistant materials like exotic metals, ceramics, plastics, glass linings in applications like:

- Acids
- Salt solutions
- Ammonia
- Carbon disulphide
- Hydrogen bromide and chloride, gaseous
- Hydrogen sulphide
- Phosgene
- Phosphorus oxychloride
- and many others



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