

# SIGRABOND<sup>®</sup> Chemical

## Carbon fiber reinforced feed tubes

### Unique in handling and performance

SIGRABOND Chemical is a modern high-strength, temperature resistant composite material made of carbon fibers within a plastic or carbon matrix. Significant customer benefits in technological as well as economic aspects can be provided, outperforming most other conventional materials.

Feed tubes made of SIGRABOND Chemical first time combine lightweight design and non-ceramic material properties with an outstanding temperature and corrosion resistance. Based on this unique combination of product properties feed tubes made of SIGRABOND Chemical are setting the benchmark to currently established designs based on glass lining, fluoropolymers, plastics or exotic metals.

Our feed tubes are standardized and perfectly fit into our columns made of DIABON<sup>®</sup> graphite or POLYFLURON<sup>®</sup> (PTFE-lined carbon steel). The ordinary design based on tube section and collar section easily can be installed in nearly all column arrangements without modifications. On request reducing pieces are available for all diameters.

#### Customer benefits

- **Self-supporting design:** no additional supports inside the vessel for most designs
- **Lightweight design:** installation/dismounting without lifting device, center of gravity near collar section
- **No special handling requirements:** use of non-sensitive, non-ceramic materials for the tube section
- **High degree of freedom in design:** flexible in fluid outlet (e. g. axial/lateral outlet, gas/liquid separation)
- **Harmonized with liquid distributor:** on request hydraulic design of tube aligned with installed liquid distributor
- **Extensive corrosion resistance:** use of carbon materials enables extreme corrosion resistance at high temperatures (up to 200°C)



↑ Feed tubes DN150 x 2080 mm and DN50 x 1470 mm

#### Target applications

New column installations as well as upgrades of existing installations utilizing traditional corrosion resistant material like exotic metals, ceramics, plastics, glass linings, etc. in:

- Chemical and fine chemical industry
- Petrochemical industry
- Food and fertilizer industry

## Our standard portfolio

Tube type	Pressure rating	Max. length (mm)	Inner diameter (mm)	Wall thickness tube section (mm)	Media outlet options	Collar material	Tube material	Total weight (kg)
DN10	PN6, PN10	900	10.2	1.9	axial/lateral	DIABON	CFRC/CFRP	0.5
DN15	PN6, PN10	535	15.1	2.3	axial/lateral	DIABON	CFRC/CFRP	0.8
DN20	PN6, PN10	1950	20.2	2.3	axial/lateral	DIABON	CFRC/CFRP	1.0
DN32	PN6, PN10	1950	30.2	2.8	axial/lateral	DIABON	CFRC/CFRP	1.5
DN40	PN6, PN10	2550	40.2	2.8	axial/lateral	DIABON	CFRC/CFRP	1.8
DN50	PN6, PN10	1500	50	2.9	axial/lateral	DIABON	CFRC/CFRP	2.8
DN80	PN6, PN10	1500	76.5	2.9	axial/lateral	DIABON	CFRC/CFRP	4.5
DN100	PN6, PN10	1500	102	3.4	axial/lateral	DIABON	CFRC/CFRP	6.0
DN125	PN6, PN10	2390	124.7	3.2	axial/lateral	DIABON	CFRC/CFRP	7.0
DN150	PN6, PN10	1500	154	3.4	axial/lateral	DIABON	CFRC/CFRP	8.5
DN200	PN6, PN10	1500	204	3.9	axial/lateral	DIABON	CFRC/CFRP	13.5
DN250	PN6, PN10	2050	250.1	3.7	axial/lateral	DIABON	CFRC/CFRP	16.5
DN300	PN6, PN10	1155	297.8	3.7	axial/lateral	DIABON	CFRC/CFRP	21.0

CFRC – Carbon fiber reinforced carbon (max. application temperature 200°C)

CFRP – Carbon fiber reinforced plastic (max. application temperature 160°C)

### Customized solutions

In addition to our standard of SIGRABOND Chemical feed tubes we are able to serve almost all customer request (e.g. gas inlet tubes, dip pipes, gas/liquid separation) using our outstanding engineering competence within the following limits:

- Max. length (one-piece design): 3600 mm
- Max. diameter: 1600 mm

Our patented snap-fit technology as well as our long-term experience in mechanical resistant plug connections, developed for our SIGRABOND Chemical column internals, open many further options to solve our customers specific needs.



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#### TIS CFC\_feed tubes.01

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