

# SIGRABOND® 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® graphite or POLYFLURON® (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 materials 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]
DN25	PN6, PN10	1500	16	2.5	axial/lateral	DIABON	CFRC/CFRP	1.2
DN32	PN6, PN10	1500	22	2.5	axial/lateral	DIABON	CFRC/CFRP	1.5
DN40	PN6, PN10	1500	28	3	axial/lateral	DIABON	CFRC/CFRP	1.8
DN50	PN6, PN10	2000	40	3	axial/lateral	DIABON	CFRC/CFRP	2.8
DN65	PN6, PN10	2000	54	3	axial/lateral	DIABON	CFRC/CFRP	3.8
DN80	PN6, PN10	2000	66	3	axial/lateral	DIABON	CFRC/CFRP	4.5
DN100	PN6, PN10	2000	88	3	axial/lateral	DIABON	CFRC/CFRP	6.0
DN125	PN6, PN10	2000	109	3	axial/lateral	DIABON	CFRC/CFRP	7.0
DN150	PN6, PN10	2000	139	3	axial/lateral	DIABON	CFRC/CFRP	8.5
DN200	PN6, PN10	2000	182	4	axial/lateral	DIABON	CFRC/CFRP	13.5
DN250	PN6, PN10	2000	226	4	axial/lateral	DIABON	CFRC/CFRP	16.5

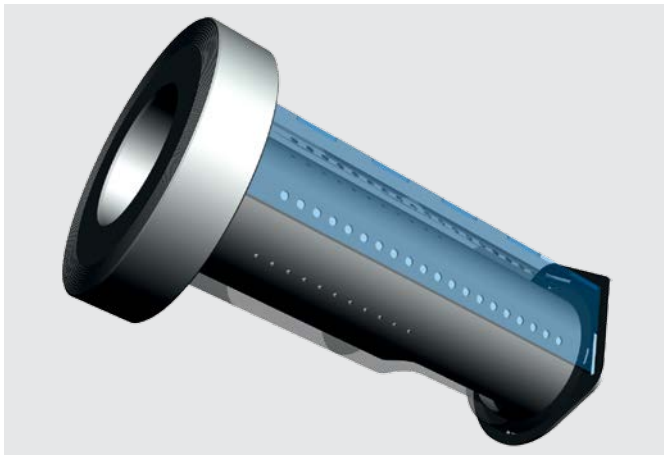
CFRC – Carbon fiber reinforced carbon (max. application temperature 200°C)  
CFRP – Carbon fiber reinforced plastic (max. application temperature 160°C)

## Customized solutions

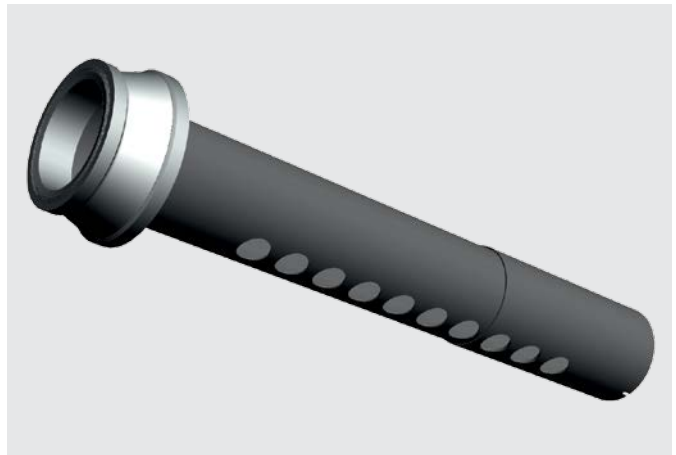
In addition to our standard of SIGRABOND Chemical feed tubes we are able to serve almost all customer requests [e. g. gas inlet tubes, dip pipes, gas/liquid separation] using our outstanding engineering competence within the following limits:

- 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.



↑ 3D-model of feed tube with integrated gas/liquid separation DN150 x 570 mm



↑ 3D-model of gas feed tube DN300 x 3200 mm



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