

# Desulphuriser



## CARTRIDGE FILTER BASED DESULPHURISATION UNIT

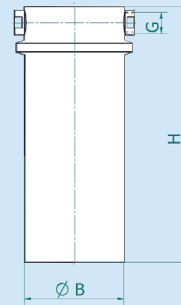
The desulphuriser removes sulphur contents in natural gas or LPG for usage in fuel cells or catalytic systems. Customised solutions for sulphur compounds like H<sub>2</sub>S, COS, SO<sub>2</sub>, THT and TBM are provided. The unit is constructed of two parts: the desulphuriser vessel and the filter cartridge that holds the adsorbent. Minimal pressure losses allow the usage of natural gas straight from a low-pressure grid.

### DESULPHURISER VESSEL

- two-parts vessel with permanent installation inside gas path
- quick opening for adsorbent exchange
- connections (internal thread) from 1/2" to 1"
- material: stainless steel
- design pressure: 2 bar(a)

### ADSORBENT

- adsorbents for wide application range and ambient temperatures up to 60 °C
- dimensioning according customer specification
- removal of THT, mercaptan (thiol), H<sub>2</sub>S, COS, SO<sub>2</sub> to S<sub>tot</sub> < 1 ppm
- lifetime depending on local conditions and sulphur loading



### FILTER CARTRIDGE

- vertical flow direction
- gas-tight vessel screwing (for quick exchange)
- 50 µm outlet filter
- material: stainless steel

types (examples)	cartridge volume (litre)	size Ø B x H (mm)
<b>EBZ-DF-1-CF</b>	1	90 x 400
<b>EBZ-DF-5-CF</b>	5	160 x 420
<b>EBZ-DF-10-CF</b>	10	220 x 510



### FLUIDIC DATA

gas composition [Vol-%]:	
temperature [°C]:	maximal pressure loss [mbar]:
inlet pressure [bar(g)]:	average flow rate [I <sub>N,STP</sub> /min]:

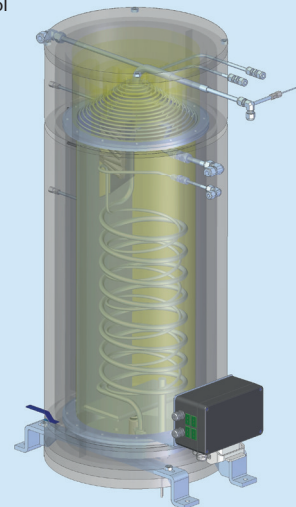
### SULPHUR DATA

THT [mg/m <sup>3</sup> ] / [ppmv]:	H <sub>2</sub> S [mg/m <sup>3</sup> ] / [ppmv]:
TBM [mg/m <sup>3</sup> ] / [ppmv]:	SO <sub>2</sub> [mg/m <sup>3</sup> ] / [ppmv]:
COS [mg/m <sup>3</sup> ] / [ppmv]:	others:

minimal time between service intervals:
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# Special Containers and Reactors

electrical heated mixing reactor (liquid-gaseous) with liquid level monitoring and control



## CONTAINERS AND REACTORS FOR SPECIAL APPLICATIONS

Take your benefit from our extensive skills in special-purpose engineering.

We design, engineer and manufacture reactors and containers for your special applications. We hold extensive knowledge and broad manufacturing abilities to equip devices with a large number features, if necessary.

Our main business is prototype manufacturing and mini series production. On request fabrication in accordance with pressure equipment directive (PED) is possible. Contact us!

### FEATURES / EQUIPMENT

- tube coil and meander, mechanical feed-through
- sensor probes, co-axial tube design
- solid mixing elements
- ventilation surfaces and pipes
- electrical heating and temperature control
- liquid level monitoring and control
- materials: specification matched stainless steel
- on request: manufacturing in accordance with PED

### SERVICES

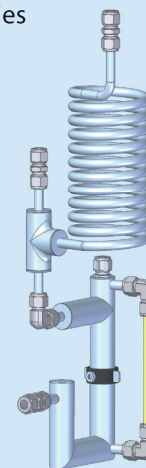
- design and engineering according to specification
- CAD construction
- extensive skills in manufacturing
- manufacturing of components with weight up to 100 kg

### APPLICATION

- mixing technology (liquid-liquid, liquid-gaseous)
- separation techniques in process engineering
- temperature control of chemical processes
- reactors for sorption technology
- special applications in laboratories



sorption reactor with cooling coil



process gas cooling and condensate separation

### CUSTOMER SPECIFICATION

<b>fluid:</b>	<b>fluid temperature [°C]:</b>
<b>vessel pressure [bar(g)]:</b>	<b>ambient temperature [°C]:</b>
<b>application (sketch) / comment:</b>	