SCHWARZ

Apparate · Behälter · Anlagentechnik

THE SPECIALISTS WORLDWIDE FOR

CONTAINER, PLANT AND APPARATUS ENGINEERING

VACUUM CHAMBERS AND PRESSURE VESSELS

SCHWARZ
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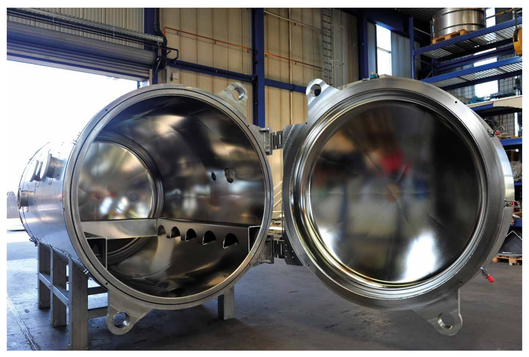


Principle: **Generally we produce clean mechanical constructions from small to large especially vacuum chambers and pressure vessels, including international standards.**

Through our 100 years of experience knowledge we want to introduce our new innovative high-level supported vacuum insulation for vacuum insulated cabinets. This is a breakthrough for sensitive heat installations to fulfil highest process inquiries.

The vacuum effect stops any heat transfer. The nano-sized filled material adds static benefits to the construction. Thermal effects on process operation could be minimised by optimal insulation conditions. This type of insulation gives you the possibility to have a very light construction, optimum insulation conditions and also static requirements and also process benefits related to minimised losses. As the insulation is fully encapsulated, no process gases or moisture can damage the insulation.

Advantages

- The vacuum effect stops any heat transfer.
- The nano-sized filled material adds static benefits to the construction.
- Thermal effects on process operation could be minimised by optimal insulation conditions.
- This type of insulation gives you the possibility to have a very light construction, optimum insulation conditions and also static requirements and also process benefits related to minimised losses.
- As the insulation is fully encapsulated, no process gases or moisture can damage the insulation.

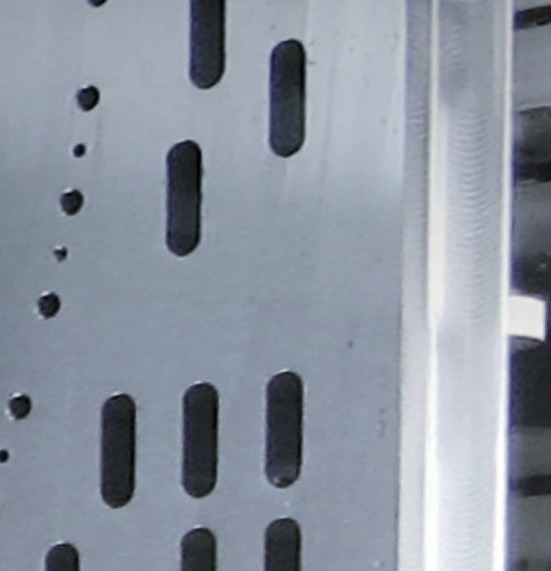
Disadvantages

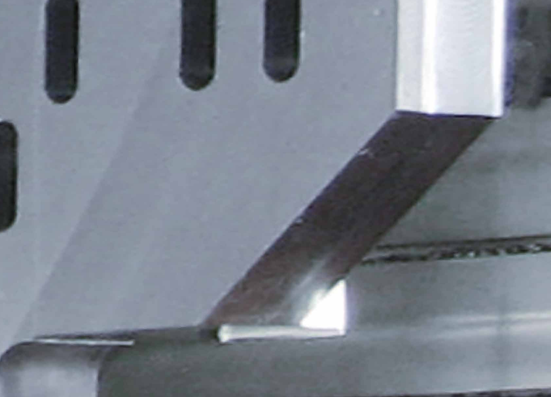
- Construction has to be adjusted and price impact is on a certain level
- This solution is suitable for process with a high impact on temperature and heat control
- A regular maintenance process has to be installed

Production constraints and limits

- There are no production limits in size and quality.
- Long-life construction.
- Vacuum and insulation could be a also a process controlled.
- Through minimum losses the process gets stable and constant.

Examples





Cost

- There is a much higher impact of cost regarding standard insulation, however the benefit is a perfect thermal model with nearly no losses.
- This is a perfect installation, on minimum cost level to control sensitive processes.
- The impact of cost is a win for process control and heat losses.

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