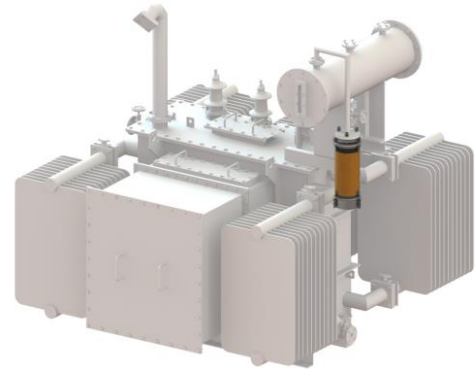




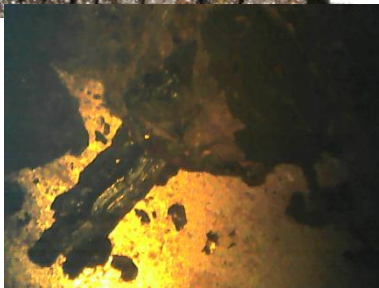
AIR DEHUMIDIFIERS FOR TRANSFORMERS



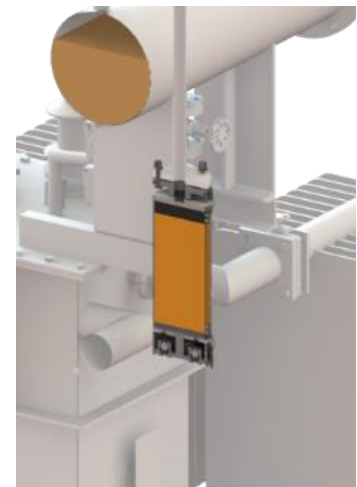
Weather conditions and constant load changes of transformers provide temperature variations and thus the pressure equalization with the environment.



The sucked-in cooling, moist ambient air results in the transformer for the hydrolysis of cellulose paper and thus for lowering of the polymerization. Dehumidifiers from GIEBEL protect the transformers in which the moist air is effectively dried and filtered.

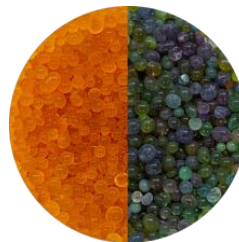


In order to prevent the formation of damage due to condensation, the use of a dehumidifier is an indispensable measure. The incoming air



is strong and a strong reduction of the water content and the dew point is achieved.

In addition to a mechanical valve system and an air filter element this Silica gel dryer use the regenerative capacity of the desiccant. In this way the water in the ambient air will be removed and extends the maintenance intervals significantly.



The color change of the silica gel from orange to green indicates the state of the adsorber. For protection on transformers, GIEBEL FilTec has developed the VARIO TB and VARIO series.





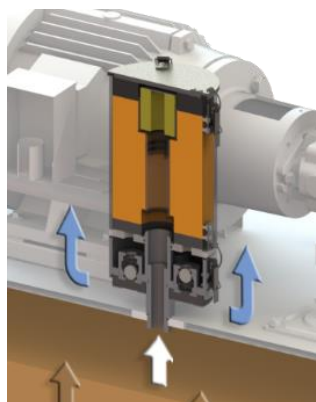
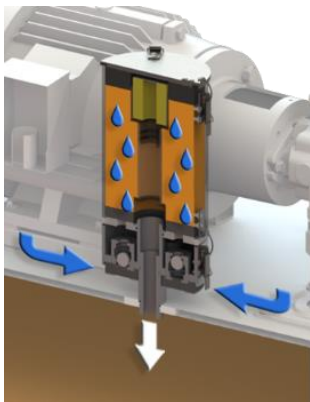
USE OF THE VARIO TB SERIES

Particularity:

Hanging design, sturdy aluminum valve part, activated carbon for oil mist and self-regeneration, large frost-resistant aluminum valves, equipped with all DIN connections.

Applications:

Excellent air drying, no sticking or freezing of the valves, separation of oil aerosols, easy handling without tools, long service intervals due to self-regeneration.



USE OF THE VARIO SERIES

Particularity:

Steady design, sturdy aluminum valve section, large frost-resistant aluminum valves, prefilter disc against dust, oil extractor for escaping air.

Applications:

Excellent air drying, no sticking or freezing of valves, separation of oil aerosols, easy handling without tools, long service intervals due to high amount of desiccant



<u>ADSORBER</u>	VARIO PA-D	VARIO PA-R	VARIO TB PA-D	VARIO TB PA-R	VARIO TB ME
Applications	Standing		Hanging		
Valves	✓	✓	✓	✓	✓
Refillable	✗	✓	✗	✓	✓
According to ATEX 2014	✗	✗	✗	✗	✓
Offshore / Marine suitable	✗	✗	✗	✗	✓
Transformer power / Amount of oil					
0 – 5 MVA to ca. 2500 l Oil	DV 300-PA	DV 310-PA	DV TB 300-PA	DV TB 310-PA	DV TB 310-ME
5 – 10 MVA to ca. 5000 l Oil	DV 320-PA	DV 330-PA	DV TB 320-PA	DV TB 330-PA	DV TB 330-ME
10 – 30 MVA to ca. 15000 l Oil			DV TB 500-PA	DV TB 510-PA	DV TB 510-ME
30 – 60 MVA to ca. 30000 l Oil			DV TB 520-PA	DV TB 530-PA	DV TB 530-ME
50 – 100 MVA to ca. 50000 l Oil			DV TB 550-PA	DV TB 560-PA	DV TB 560-ME



ADSORBER



VARIO PA-D

The GIEBEL disposable adsorbers of the VARIO PA-D series have a sturdy aluminum valve part and a disposable replacement cartridge. The handling is very simple, it will only open the latches and the entire cartridge can be changed.



VARIO PA-R

easily.

The GIEBEL reusable adsorbers of the VARIO PA-R series are high-quality ventilation dryers with an aluminum valve part with frost-proof valves and a refillable cartridge. The desiccant and all wearing parts can be exchanged very



VARIO TB PA-D

The use of disposable GIEBEL adsorbers of the VARIO TB PA-D series is made on transformers worldwide. The structure complies with the standard DIN EN 50216-5 (DIN 42562) and can be equipped with all standardized connection variants.





VARIO TB PA-R

The use of the reusable GIEBEL adsorber of the VARIO TB PA-R series enables low operating costs, since the silica gel can be changed very easily without tools. The structure complies with the standard DIN EN 50216-5 (DIN 42562) and can be equipped with all standardized connection variants.



VARIO TB ME

The premium adsorbers VARIO TB ME are made entirely of A4 stainless steel. The use according to the corrosiveness category C5-M is possible finds mainly use in the area offshore. As a hanging version, these adsorbers are available with all connections according to DIN EN 50216-5 (DIN 42562).



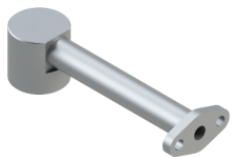


ACCESSORIES



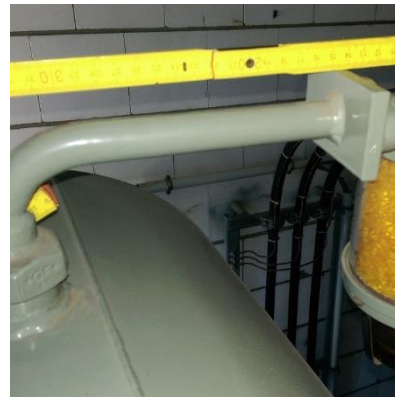
ADAPTER II

For flexible mounting of a standing GIEBEL adsorber all common adapters are offered. Suitable for all common threads, such as BSP G 1-1 / 4 ", M 40x1.5 or G 1-1 / 2", a GIEBEL adsorber of the VARIO PA-D or VARIO PA-R series can be mounted.



ADAPTER TB

An adapter TB can be used for mounting on a ventilation socket of an expansion tank. Suitable for all common threads, such as BSP G 1-1 / 4 ", M 40x1.5 or G 1-1 / 2", a GIEBEL adsorber of the VARIO TB series can be mounted.



REFERENCES





APPLICATIONS

GIEBEL Adsorber® are used ...

- ... Distribution transformers
- ... Power transformers for power generation
- ... Reactors
- ... High current transformers for the industry
- ... arc suppression coils
- ... Power transformers
- ... Machine transformers in tractor works
- ... Transformers for point heaters or train preheating systems
- ... and many more !

