



**GIEBEL**  
FilTec GmbH

## **TRANSMISSION IN THE WEIR**

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**GIEBEL Adsorber®**

...setting standards in aeration drying!



Wehr Neckarsulm

Weir systems provide sufficient water depth in rivers and canals to allow shipping.

Furthermore, weirs allow a slower flow speed of the water, which makes riverbeds and bridge piers less flushed or underwashed.



There are two gears in each weir. These regulate the water level depending on the weather. By raising and lowering the single or upper guard, the gears are set in motion every hour.

Using the example of a weir in Neckarsulm, Germany, GIEBEL adsorbers with and without valves were tested and observed under real conditions.

### Data for the plant

- 4x Transmission with an age about 20 years
- Oil volume in the gearbox: approx. 250 liters / 60% filled
- Cycle every 2 hours
- Influence of sun and weather indirectly present
- Long downtimes, less frequent operation





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## Transmission without Adsorber



Due to the strong influence of temperature caused by the environment and the long downtimes, the formation of condensation is strongly favored. The intake air during cooling and the constant contact with the environment ensure that humidity flows into the transmission and liquefies on cooling.

This leads to corrosion with particle abrasion and thus damage to the gearbox. The operation of the weir is thus no longer guaranteed and generates high maintenance costs. gearbox without adsorber.

## Necessity of an Adsorbers



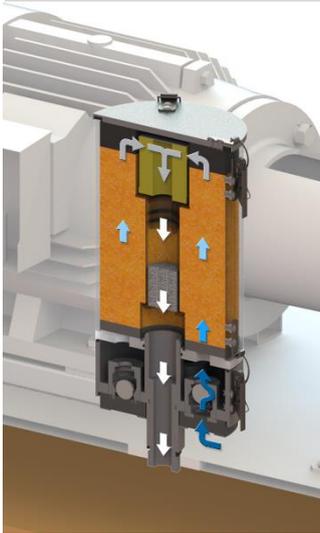
Breathable dryers are indispensable for protecting the gear units on weirs from condensation damage. Through the use of adsorbers, the humidity in the gearbox is reduced and the dew point (temperature at which the air liquefies) is lowered to high minus degrees.

With this measure, the gear oil is permanently protected from water. An oil change can thus be prevented or delayed for a long time.

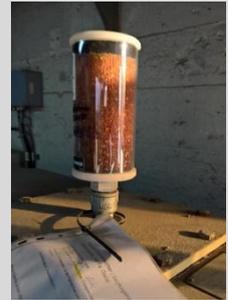
Necessity of an adsorber.



## Function on a Weir



Especially when operating on a weir, the respiratory dryer must be selected correctly. If the gear unit is rarely used, the desiccant contained must be protected from the surrounding air humidity in order to achieve a maintenance interval of several years. At the weir in Neckarsulm, two adsorber types were tested over a period of 9 months. One adsorber WITHOUT valves and the other with valves.



The result speaks for itself. The adsorber without valves was fully loaded after 12 months and had to be replaced. The same size adsorber with valves was only about 15% loaded after the same period. A maintenance interval of 3-4 years can be easily accepted.

## Reference & Use Example





## Selection Adsorber



ADSORBER	VENT PA-D	VENT PA-R	VARIO PA-D	VARIO PA-R
Valves	✓	✓	✓	✓
Refillable	✗	✓	✗	✓
Gear Volume (Oil and Air Volume)				
10 – 50 l	vV 200-PA	vV 210-PA		
50 – 100 l	vV 220-PA	vV 230-PA		
100 – 800 l	vV 300-PA	vV 310-PA	DV 300-PA	DV 310-PA
800 – 2400 l	vV 320-PA	vV 330-PA	DV 320-PA	DV 330-PA

## Suitable Accessories



ACCESSORIES	Oil Mist Separator	Adapter	Protection Adapter	Wall Mount
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<b>Details</b>	Separation of larger oil particles	external and internal thread	Clogging filter	Mounting on wall with tube
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