

**CENTRAL LUBRICATION SYSTEMS
WITH TEMPERATURE CONTROL
FOR GENERATOR LUBRICATION
IN WIND POWER PLANTS**

- reliable technology
- cost reduction
- maintenance reliable
- high operational safety also at low outside temperatures



...made by



Advantages BEKAWIND central lubrication system

Reliable technology

- reduces wear of bearings due to regular lubrication during operation
- specific lubricant application of the stressed zones
- low use of lubricant - no pollutions
- temperature dependent, automatic lubrication
- simple installation

Cost reduction

- reduces system stand still for maintenance works
- production downtime costs
- service personal costs
- cleaning costs

Maintenance reliability

- no overlubrication and pollution
- no pressing out of bearing sealings
- compliance of service plan
- proof of lubrication via control

Functional description

BEKAWIND PRO is a progressive central lubrication system that has been developed for the use in wind power plants. The central lubrication system consists of a lubrication pump with installed progressive distributor and two outlets for both generator bearings.

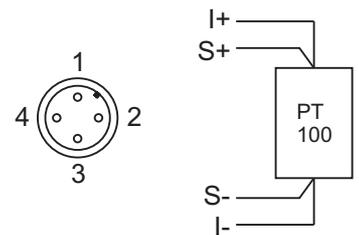
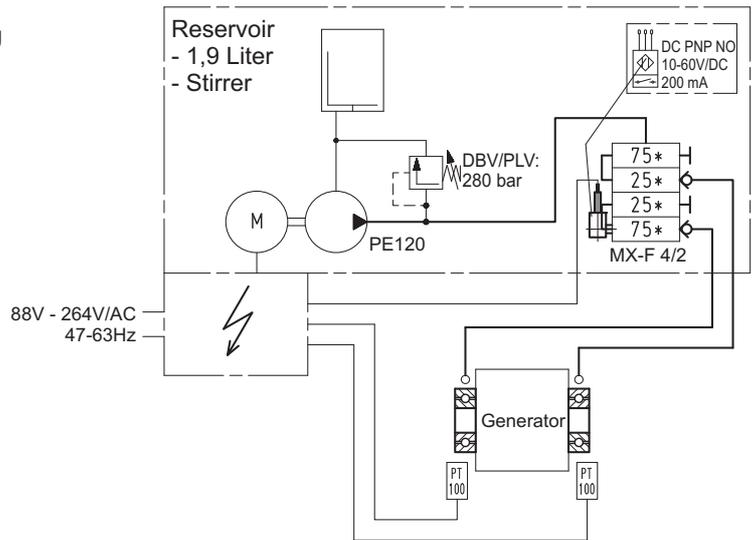
Due to the integrated pump control the lubrication cycles that are preadjusted, can be controlled and monitored automatically. The control unit includes a temperature-dependent adjustment of the lubrication quantity.

Temperature compensated lubrication quantity

The control device is adjusted for a reference temperature of 70 °C (other temperatures on request). In general (with certain limits), the lubricant lifetime in operation (provided all other boundary conditions remain unchanged) is halved every 10 °C with increasing temperature. To a limited extend, this is also applicable for temperatures below the reference value in reverse.

Temperature is checked each second in increments of 1°C and the corrected elapsed cycle time is calculated. The control device thus permanently reacts to changing bearing operating temperatures. If the operating temperature exceeds 110 °C the increased lubrication quantity is maintained. Irregularities in the bearing have to be assumed.

Lubrication plan



M12-Socket	PIN
S+	1
I+	2
S-	3
I-	4

Temperature range	Factor	Example 8 hours
$\leq 70^{\circ}\text{C}$	1	8h
80°C	2	4h
90°C	4	2h
100°C	8	1h
$\geq 110^{\circ}\text{C}$	16	0,5h

* Based on a exemplary lubrication cycle of 8 hours, increasing temperature means a reduction of the lubrication cycle to the indicated intervals