



Gearbox Cooling Systems

HYDAC gearbox lubrication coolers are compact systems for application-specific oil conditioning:

Filtration

In the main flow:

Combined filter consisting of a fine filter with bypass valve and a coarse filter

- High contamination retention capacity, low differential pressure
- High retention rates with excellent β_{sx} value stability

Offline:

With compact offline flow filter specially designed for removing products of oil ageing, solid particles and water (optional / customisable).

Cooling

Efficient and compact air cooling with optional

- Integrated thermal bypass (IBT)
- Hot climate/cold climate versions
- Fixings as part of the housing

Also available with a plate heat exchanger.

Circulation

For supplying the lubrication points

- Electric and/or mechanical pump
- Clogging indicator on the filter
- Option to have MCS in the main flow to detect metallic particles
- Gearbox inlet block with pressure and temperature monitoring available

Application Field

Large gearboxes between 100 kW and several MW

e.g. in

- Wind power
- Cable winches
- Vertical milling machines

Specification Sheet for Gearbox Cooling Systems

Project: _____
Contact: _____
Telephone: _____
E-mail: _____

Application

Gearbox designation: _____
Gearbox manufacturer: _____
Type/size: _____ MW
Heat load/required dissipation: _____ kW
Oil: _____
Max. permissible oil sump temperature: _____ °C (typically +70°C)
Oil volume in the gearbox: _____ l
Desired flow rate:
 Electric pump _____ l/min
 Mechanical pump _____ l/min _____
Start temperature of the pump: _____ °C (typically 0 .. +5°C)
Cooling method: Oil/air cooler Plate heat exchanger

Ambient conditions

Installation: Onshore Near shore Offshore

Max. humidity: _____ %RH

Air temperature

Cooler intake

Outside air

During operation:	max.	_____ °C	_____ °C	HYDAC standard: +40°C
	min.	_____ °C	_____ °C	HYDAC standard: -10°C Cold Climate: -30°C
At standstill:	max.	_____ °C	_____ °C	HYDAC standard: +50°C
	min.	_____ °C	_____ °C	HYDAC standard: -20°C Cold Climate: -40°C

Location (country): _____

Altitude: _____ m above sea level

Electrical data

Voltage: 50 Hz: _____ V 60 Hz: _____ V

- Sensors:
- Metallic Contamination Sensor (MCS)
 - Temperature sensor (PT100)
 - Pressure sensor (HDA 4345/EDS 3346)
 - Other _____

Documents

Specification available: _____ Version no. _____

Drawing of gearbox: 2D no./version _____ 3D no./version _____

Number of items

Prototype required? Quantity _____ Period of time _____

Expected quantity required per year 1st year _____ 2nd year _____ 3rd year _____

- Items supplied:
- Oil circulator
 - Cooler
 - Hoses
 - Steel frame
 - Sensors

Are additional cooling systems required?

Generator: Air cooler Water cooler

Converter: Air cooler Water cooler

Transformer: Air cooler Water cooler

Others: _____

Comments

Note

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications and corrections.



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