Water Jacket Cooled Motors

New

Water Jacket Cooled Motor

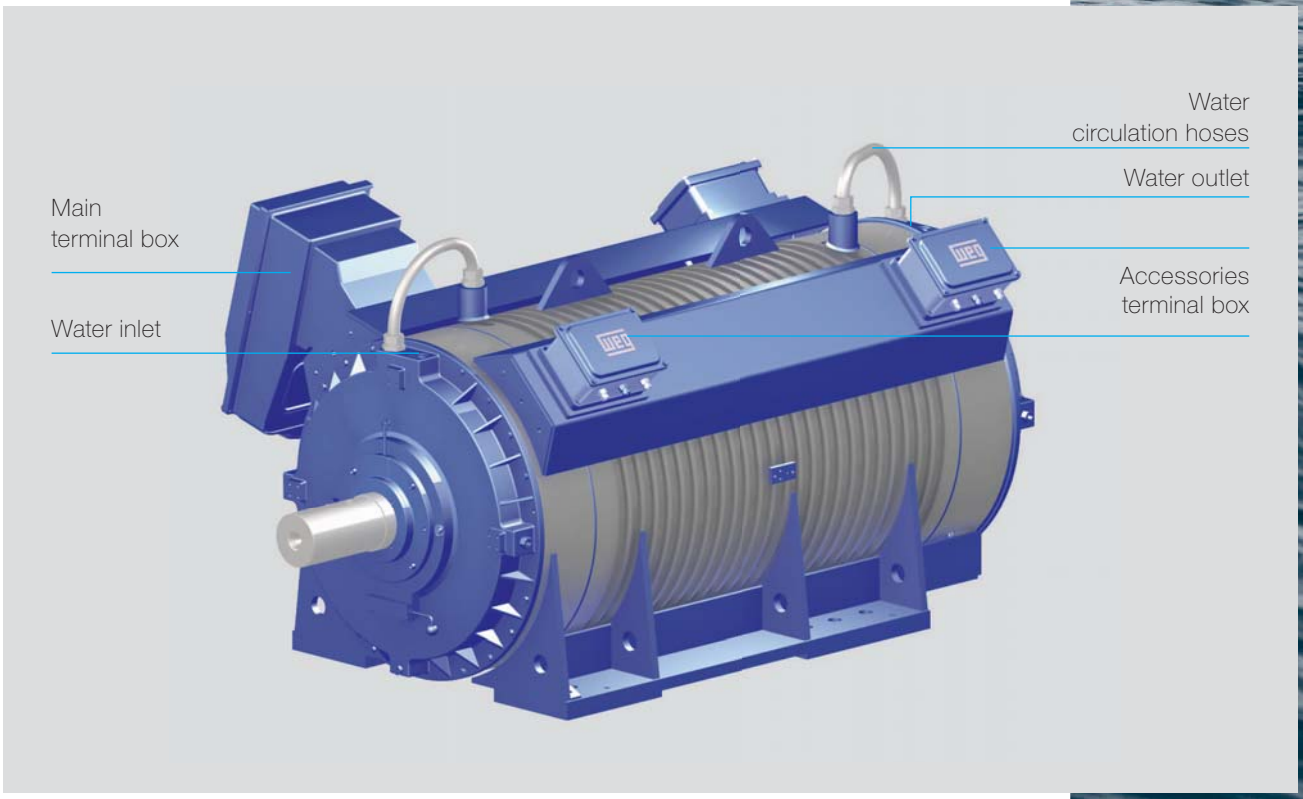
The water jacket cooled WGM motors were designed to meet the increasing demand for compact and reduced noise level machines, where high output power versus frame size ratio is required.

Advantages:

- Low noise level;
- Suitable for variable frequency drive operation;
- Minimum thermal dissipation to the environment;
- Compact construction;
- Suitable for aggressive operating conditions.

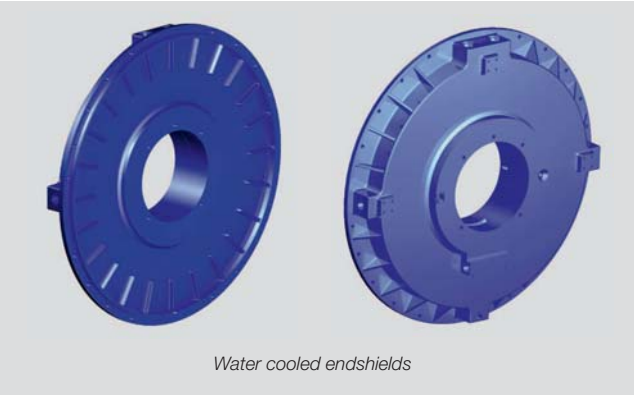
Types of applications:

- Marine duty: main and positioning propeller, pumps, etc.;
- Cement: kilns, mills, conveyor belts, fans, vibrating equipment, etc.;
- Wind energy generation;
- Mining: crushers, mills, conveyor belts, compressors, fans, pumps, etc.;
- Pulp and paper: chippers, mixers, debarkers, refineries, etc.
- Petrochemical: pumps and compressors;
- Water and sanitation: pumps;
- Steel industry: fans, exhausters, laminators, pumps, conveyor belts, cranes, etc.;
- Sugar and alcohol industry: chippers, debarkers, mills, etc.

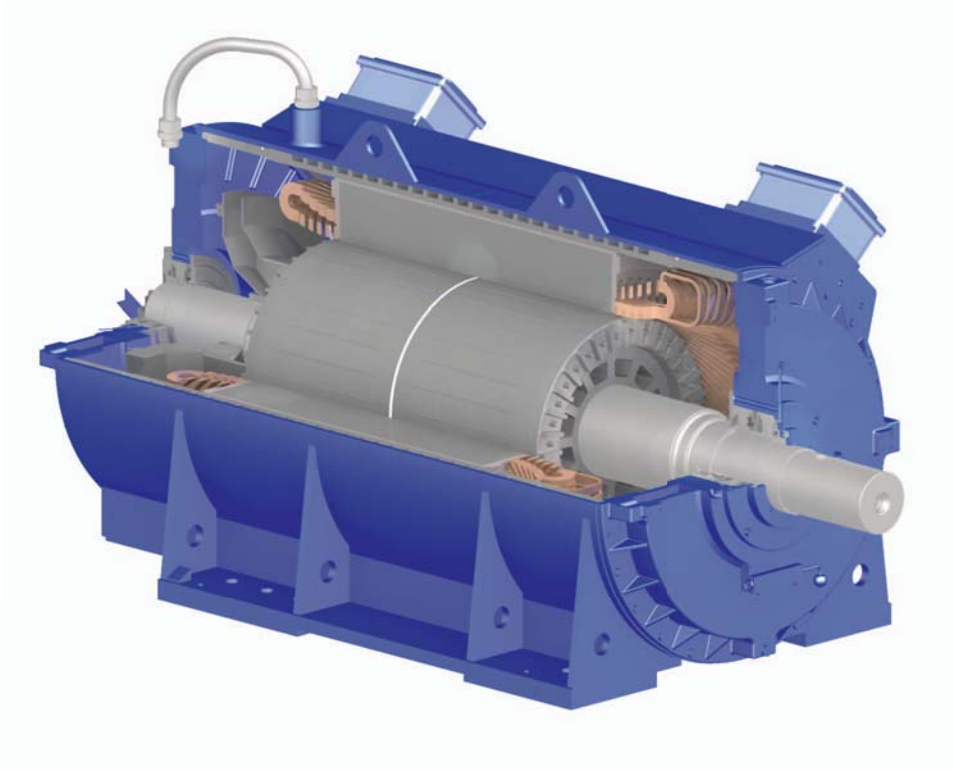


Construction features

The water cooling system for WGM motors is provided by circulation of water over the frame construction and endshields. Besides allowing an effective thermal exchange between motor and the water, this cooling system reduces the temperature of the hoses along the grooves and increases the output power versus frame size ratio.
Additionally, this system maintains the thermal efficiency, even at reduced speeds, which allows the application of this motor with frequency drives at high speed range on severe application that requires constant torque.
The water cooling system also minimizes the heat exchange with the environment, cools down the bearings without requiring independent cooling system along with keeping low noise level.



Water cooled endshields



Technical features

Standard features

- Frame sizes: 315 to 560 (IEC)
- Voltages: 690 V to 6600 V
- Number of poles: 2 to 8
- Frequency: 50 or 60 Hz
- Class of insulation: F or H
- Service factor: 1.0 or 1.15
- Mounting: B3, V1
- Degree of Protection: IP55
- Cooling system: IC71W
- Cast iron frame
- Insulated non-drive end bearing for frame sizes above 450 (inclusive).
- Insulated non-drive end bearing and shaft grounding brushes for VFD application motors, independently of frame size.
- PT100 - 2 per phase and 1 per bearing.
- Space heaters.
- Grounding lugs on frame and on main terminal box.
- Stainless steel nameplate.
- Drain plugs.

Optional features

- PT100 – water inlet and outlet.
- Flowmeter – water inlet and outlet.
- Water leakage detector.
- Insulated non-drive end bearing and shaft grounding brush.

Special features

- Steel welded frame.
- Marine certifications: ABS, Lloyd's Register, DNV and BV.

Note: Other features, on request.

Output power per frame size

Output power values in kW, for f = 60Hz

	Frame 315			Frame 355			Frame 400		
	690V	4160V	6600V	690V	4160V	6600V	690V	4160V	6600V
2 poles	450	450	400	630	630	560	1000	1000	900
4 poles	560	500	450	800	710	630	1250	1120	1000
6 poles	400	355	315	630	630	560	1000	1000	900
8 poles	315	280	-	500	500	450	800	800	710

	Frame 450			Frame 500			Frame 560		
	690V	4160V	6600V	690V	4160V	6600V	690V	4160V	6600V
2 poles	1600	1600	1400	2000	2250	2000	-	3150	2800
4 poles	1600	1800	1600	2250	2500	2250	-	3150	2800
6 poles	1400	1600	1400	2250	2250	2000	-	2800	2500
8 poles	1120	1120	1000	1800	1800	1400	2000	2250	1800

Note: The values shown are subject to change without prior notice.