

Gear ProSelect

Configure your gearbox
easily and accurately

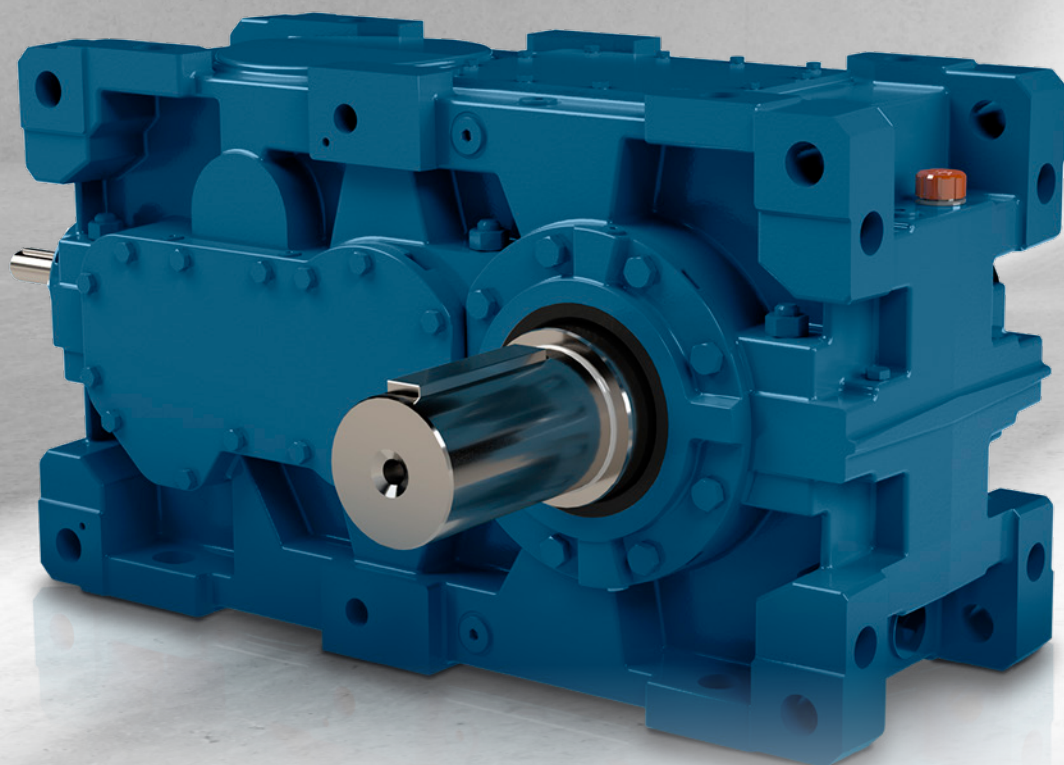
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gearproselect.weg.net

WG50

Reduce costs, increase productivity



Efficiency and modularity in a versatile solution

WG50 gearboxes are versatile and reliable with a modular design, solving a wide range of applications in different industries. The housings were designed to simplify maintenance and offer better thermal dissipation and oil circulation, extending the service life of their parts. The gearing was specially developed to reduce the noise level and increase durability and efficiency.

The scope of WEG Group solutions
is not limited to products and solutions
presented in this catalogue.
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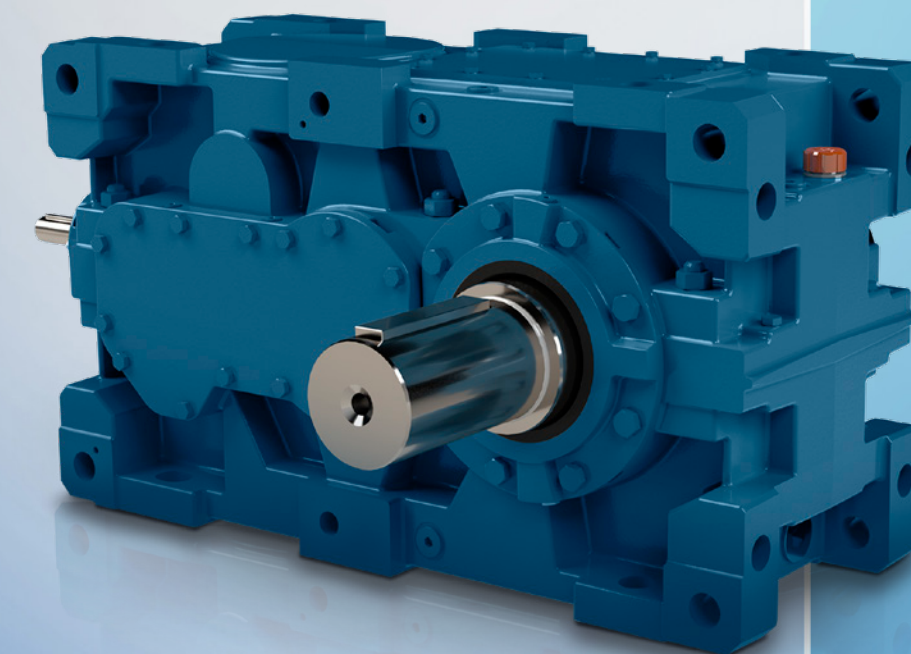
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The values shown are subject to change without prior notice.
The information contained is reference values.

WG50

Industrial Gears NEMA Market



Industrial Motors

Commercial &
Appliance Motors
Automation
Digital &
Systems
Energy
Transmission &
Distribution
Coatings

Driving efficiency and sustainability



CHARACTERISTICS

- Modular housing for mounting in different mounting positions.
- Split housing for easy maintenance.
- Two-stage housing with optimized geometry and fins for better thermal dissipation.
- Gearing with optimized tooth profile for better efficiency, noise and load.
- Wider size range with better torque distribution and fewer components.
- Standard thread for cooling coil and cartridge heater.
- Modular motor flange to allow a variety of motors with a reduced number of components. Additionally, it is suitable for receiving a fan with optional coupling for classified areas.
- Available with parallel (F) and right angle shafts design K and T.
- Available in 2, 3, and 4 stages with ratios from 6.3 to 450 and torques ranging from 7.5 to 520 kNm.
- Available with backstop and mining options.
- With dipstick-type oil level and FKM seals.
- Standardized forced lubrication and cooling skid.
- Solid input shaft with single-end and double-end options.
- Solid output shaft with single-end and double-end options, hollow shaft with keyway or shrink disc.
- Shafts and pinions dimensioned considering bending-torsion deflections for optimization of load distribution on the tooth flanks.

APPLICABILITY

The versatile and modular design of the WG50 allows its application in a great variety of industries.



Mining



Steel



Sugar
& Ethanol



Fertilizers



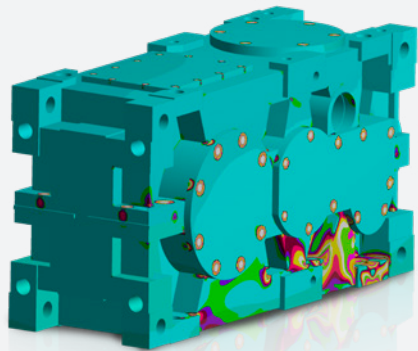
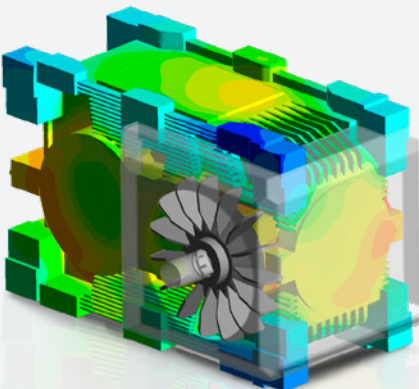
Pulp & Paper

Size	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13
Torque [lb.in] x 1000	66	84	12	146	195	248	319	407	518	593	708	814	1018
Torque [Nm]	7500	9500	1300	16500	22000	28000	36000	46000	58500	67000	80000	92000	115000
Shaft design	Parallel and Right Angle												
Parallel Shafts F and Right Angle Shafts K	Ratio	6,3-80	8-100	6,3-355	8-450	6,3-450	8-400	6,3-450	8-400	7,1-400	8-400	7,1-400	8-400
	Stages	2/3	2/3	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4
Right Angle T shafts	Ratio	16-80	20-100	16-355	20-45	20-450	25-400	20-450	25-400	20-400	22,4-400	20-400	20-400
	Stages	3	3	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

Size	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23
Torque [lb.in] x 1000	1168	1398	1575	1947	2257	2567	2921	3363	3983	4603
Torque [Nm]	132000	158000	178000	220.000	255.000	290.000	330.000	380.000	450.000	520.000
Shaft arrangement	Parallel and Right Angle									
Parallel Shafts F and Right Angle Shafts K	Ratio	8-400	7,1-400	8-400	6,3-355	7,1-400	8-450	6,3-355	7,1-400	6,3-355
	Stages	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4	2/3/4
Right Angle T shafts	Ratio	22,4-400	20-400	22,4-400	16-315	18-355	20-400	16-315	18-355	16-315
	Stages	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

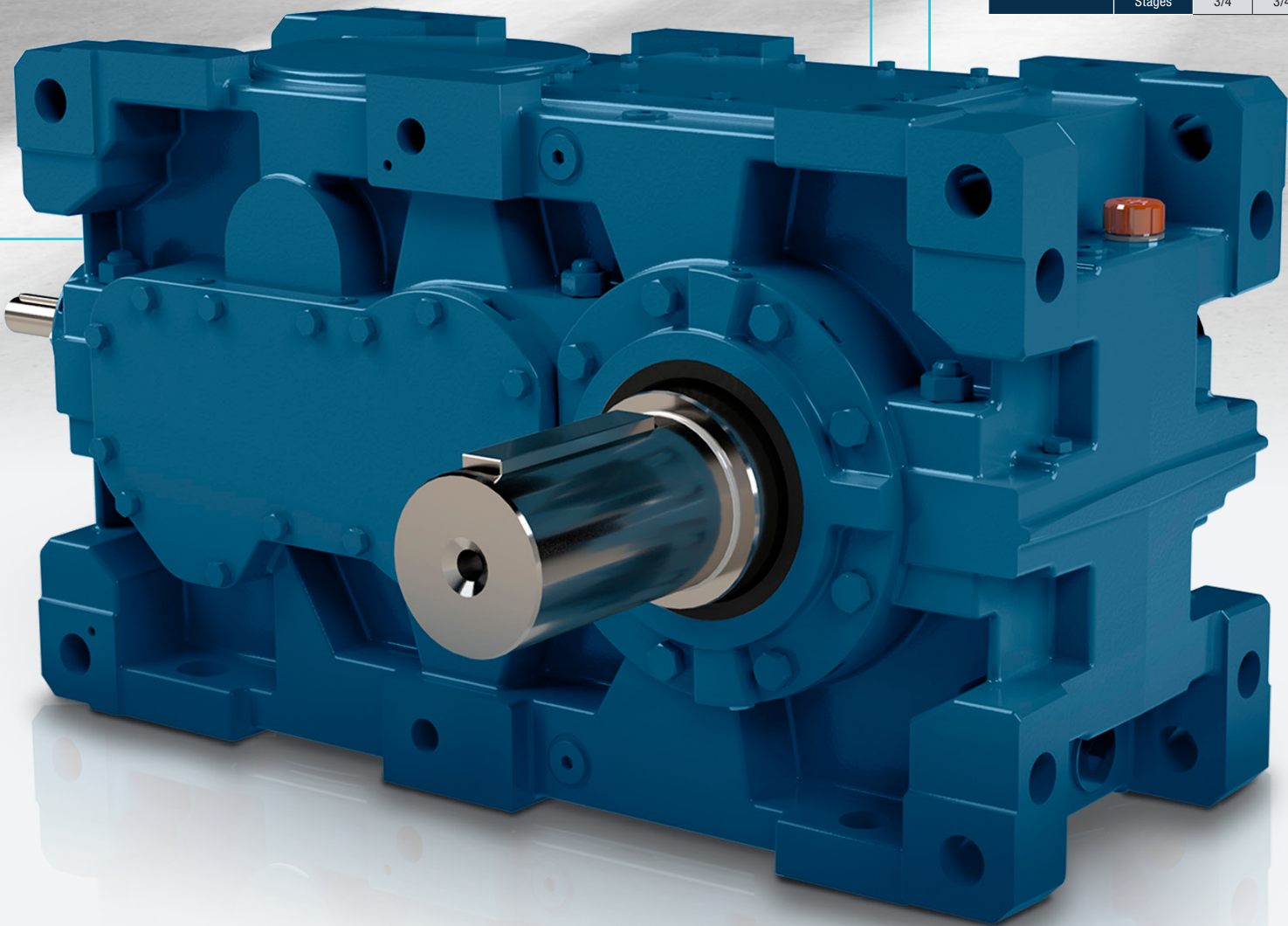
ADVANTAGES

- Finite Element Analysis (FEA) for optimization of the housing material, better torque/mass ratio.
- Topological analysis of the housing, motor flange, torque arm and orthogonal bearing using finite elements.
- Fluid analysis (CFD) for thermal optimization of the housing, fan and fan cover.
- Housing with optimized inner design (CFD) to reduce oil stirring and consequent losses.



BENEFITS

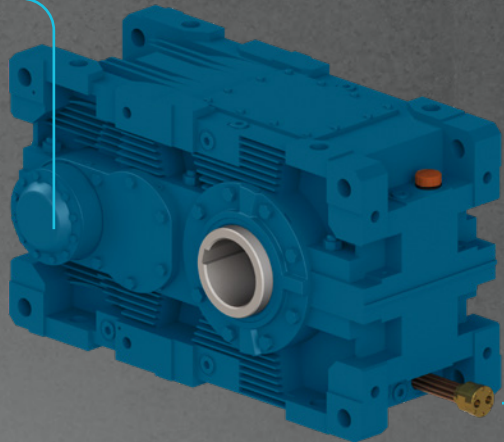
- Greater durability
- Better heat dissipation
- Greater torque distribution
- Optimized gearing
- Modular flange
- Modular and split housing
- Easy assembly and maintenance
- Versatile in all projects
- Efficient in all applications



MAIN ACCESSORIES

BACKSTOP

Prevents the output shaft from rotating in the opposite direction of normal motion. It is essential in situations where, after the motor is turned off or a system failure occurs, the load may force the gearbox to rotate backward — such as in inclined conveyors, elevators, or load transporters. For proper application, it is necessary to specify the direction of rotation of the output shaft that should be blocked. The free rotation direction of the output shaft is marked on the gearbox housing itself.

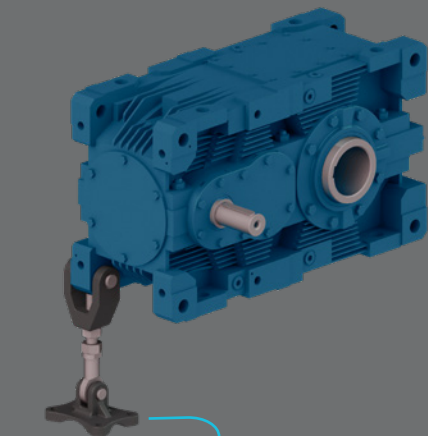
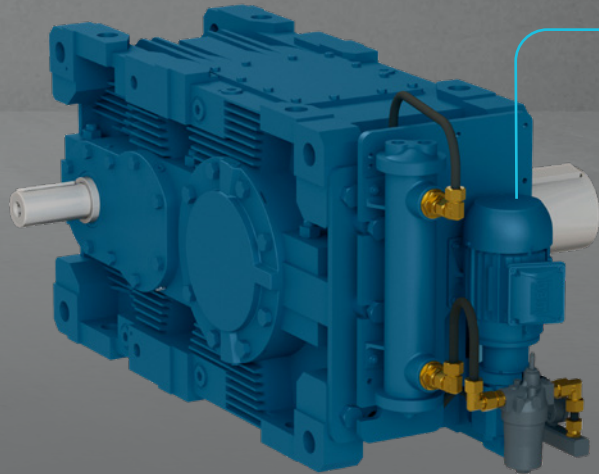


COOLING COIL

Performs the thermal exchange with the lubricant to ensure its original characteristic and the useful life of the internal components, keeping the best cooling of the gearbox. The cartridge-type coil is used with two G 1/2" threads and copper pipes. The maximum operating temperature is 95 °C, and the permissible pressure is 10 bar. The use of clean water, free of chemically aggressive impurities, is recommended.

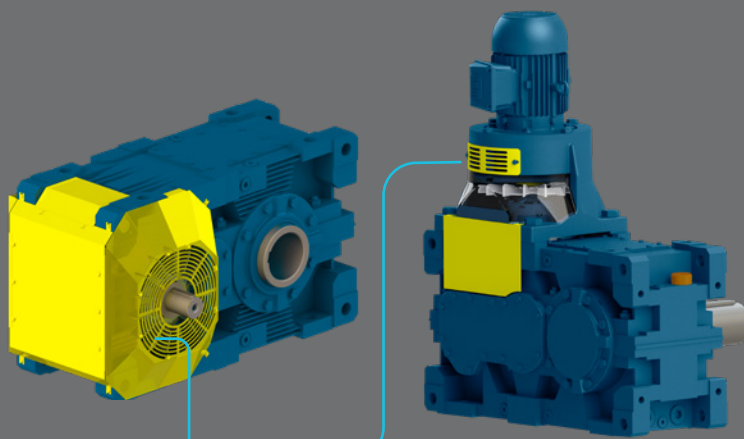
LUBRICATION AND COOLING SYSTEM

Its main function is to lubricate the bearings and gear pairs. It is composed of a helical gear pump, driven by an electric motor, and connected through an elastic coupling, a shell-and-tube water-oil heat exchanger (air-oil radiator, consult WEG-CESTAR) with a single filter, a stainless steel case manometer with glycerin for local reading, and a pressure switch to regulate low pressure (0.8 bar). Eight system capacities are available, which must be selected to meet the required thermal power.



TORQUE ARM

Its purpose is to absorb the vibration derived from the application. The length of the torque arm can be adjusted within a certain range to adapt to the customer's needs. It is recommended to mount the torque arm on the same side as the driven machine, keeping shaft bending to a minimum.



FAN

It can be used in both directions of rotation. It is made of aluminum with a steel hub, a steel deflector according to NR12, and balanced according to ISO 1940 G6.3. It can be installed on the input flange or on the additional end of the gearbox with a deflector.