



Compact Orbital Gears



UNDEB EWROPEAIDD
EUROPEAN UNION



Llywodraeth Cymru
Welsh Government

**Cronfa Datblygu
Rhanbarthol Ewrop
European Regional
Development Fund**

Electric Reduction Gearboxes



ERG: Electric Reduction Gearboxes

Compact Orbital Gears (COG) is a specialist gearbox design and manufacturing business based in Rhayader, Mid-Wales.

We are designing and developing a range of robust, low noise single speed gearboxes for conversion of ICE powered vehicles to zero emissions electric vehicles.

The range will cover:

- Private / classic cars
- Light Goods vehicles (LGV)
- Medium Goods Vehicles & Public Service Vehicles (MGV & PSV)
- Heavy Goods Vehicles (HGV)



ERG Features

- Each ERG will have a range of ratios available, to suit the desired performance of the vehicle and electric drive motor specification (speed, torque)
- All ERG's can be fitted with an adaptor plate to flange mount to the electric drive motor, and output flanges / couplings to suit the vehicle installation
- ERG's feature simple self-contained splash oil lubrication systems, with the option of an external oil cooling system if required
- Ground helical gearsets for durability and low noise



ERG 1

ERG 1 is the smallest gearbox in the range, designed for the conversion of 'classic' rear wheel drive private light goods vehicles.

Rated input power: 115 kW

Rated input torque: 235Nm

Max input speed: 8000 rpm

Length: 175 mm

Gearbox mass (dry): 13 Kg

Reduction ratios: 1:1.4 to 1: 3



ERG 2

ERG 2 is the middle of the range gearbox, designed for the conversion of light goods vehicles (LGV) from 3.5 tonne to 7 tonne GVW

Rated input power: 240 kW

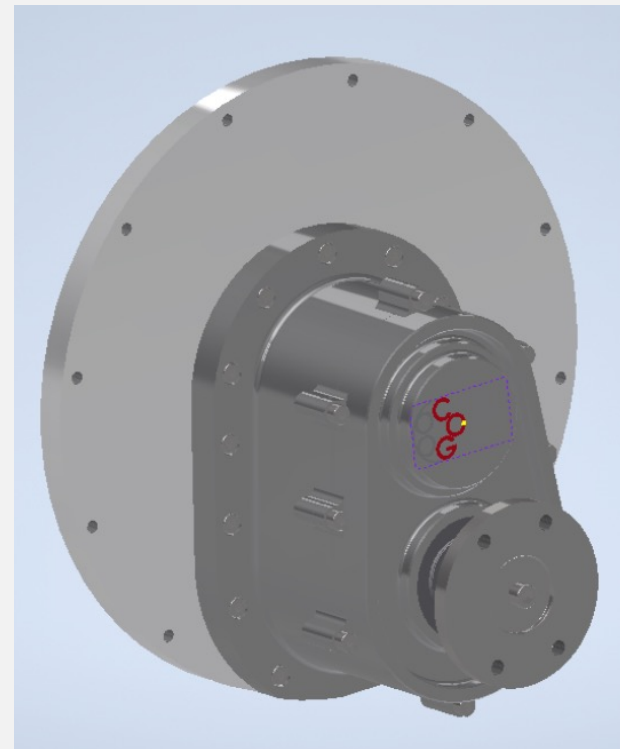
Rated input torque: 430 Nm

Max input speed: 8000 rpm

Length: 225 mm

Gearbox mass (dry): 25 Kg

Reduction ratios: 1:1.4 to 1: 3.1

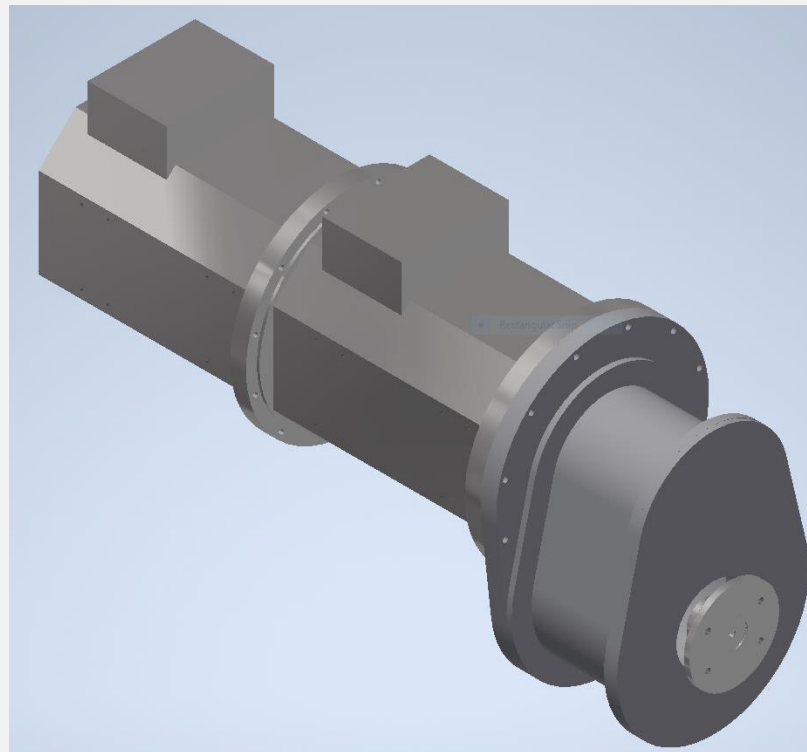


ERG 3

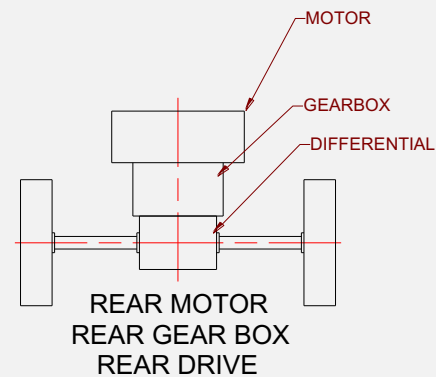
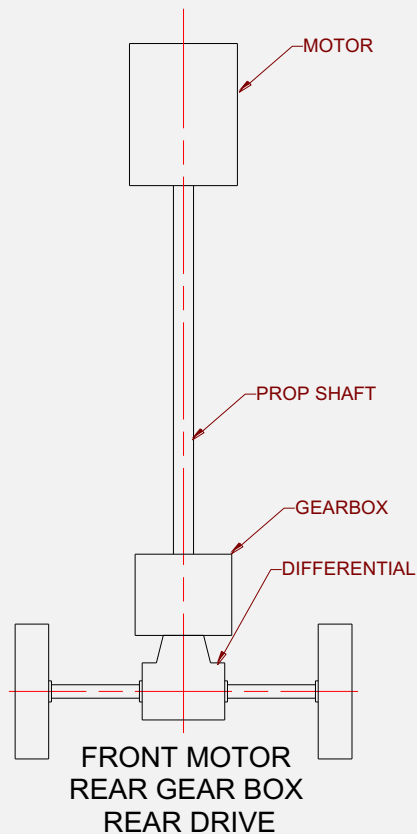
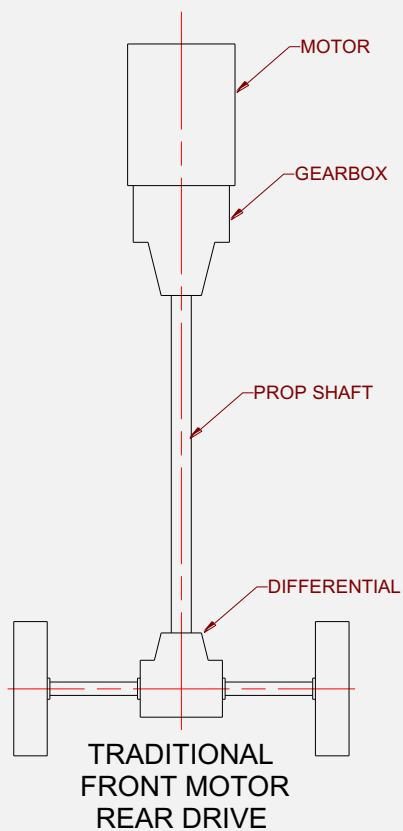
ERG 3 is the largest gearbox in the range, it is designed for the conversion of heavy goods vehicles, buses and coaches up to 18 tonnes GVW

Rated input power: 360 kW
Rated input torque: 860 Nm
Max input speed: 8000 rpm
Length: 280 mm
Gearbox mass (dry): 60 Kg
Reduction ratios: 1:1.4 to 1: 3.1

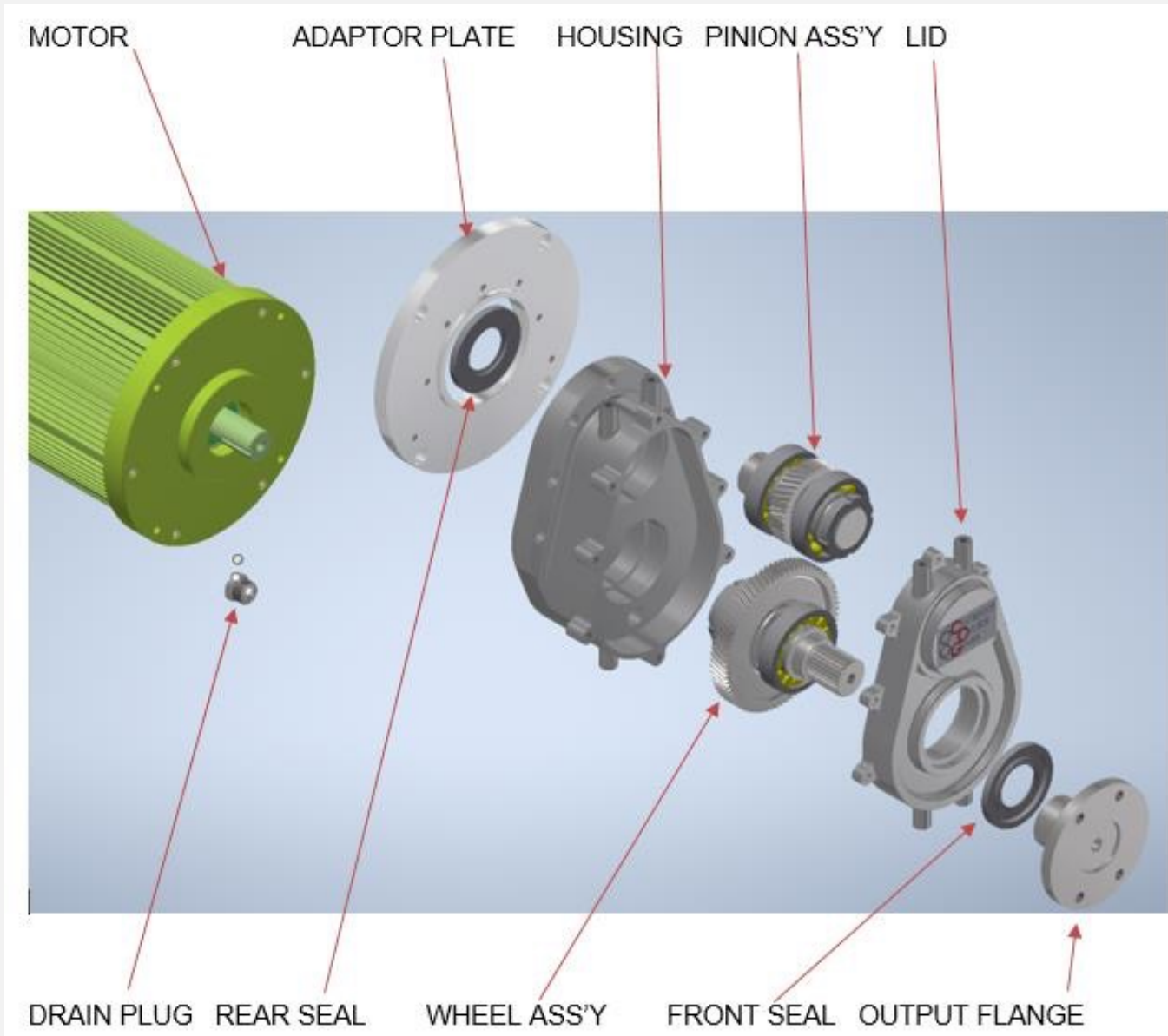
(Twin motors, in series, shown)



Typical Electric Vehicle Driveline Architectures



ERG Key Components



Contact us!

Do the proposed ERG configurations meet your needs for EV conversions or new vehicles?

We're happy to discuss detailed specifications, prices and timescales...

Key contact:

Steve Hunton – Managing Director Compact Orbital Gears Ltd

Email: SteveHunton@compactorbitalgears.com

Tel: Cell +44 (0) 7909 440453; Main office +44 (0)1597 811676

