

600W with BPD[®] electric motor

Electric powertrains



Bonfiglioli's 600W planetary wheel drives can be coupled to a high power density electric motor, instead of conventional hydraulic. This complete solution is designed for a high voltage hybrid powertrain system and was originally conceived for use on self propelled crop sprayers. It can, however, also be applied to other types of new generation off highway machinery for use in industrial and construction sectors.

Using this solution can deliver many advantages and assure interesting benefits both to the machine manufacturer and to the end user. Thanks to the compact dimensions, the technology development phase is faster because it is easier to convert an off-highway equipment from traditional into an innovative hybrid electric one.



Applications

- Hybrid-electric wheeled off highway machinery:
- Construction sector (bucket loaders, road building equipment, etc)
- Agriculture sector (sprayers, trailed or self propelled harvesters, etc)
- Industrial / material handling field (forwarders, aerial lifts, mobile cranes, etc)

Advantages for OEM

- Possibility of downsizing and downspeeding of the combustion engines
- Ease of installation: electric solution dimensions comparable to standard hydrostatics
- Higher system reliability: fewer mechanical parts
- Virtually maintenance-free electric motors
- From wheel bolt to electric wire with only one supplier

Advantages for final user

- Reduction of fuel consumption
- Increase of productivity
- Better machine manoeuvrability
- Electric solution is cleaner: lower danger of oil spills

Type	Max deliverable torque (Nm)
606 W	12000
607 W	17000
609 W	23000
610 W	36000
611 W	42000



Motor data

Technology

BPD® Hairpin Stator Winding

DC bus operating voltage

400 - 700 V_{DC}

Max power output

25 - 85 kW

Max torque output

200 - 400 Nm

Max operating speed

8000 rpm

Max efficiency

95.6 %

Cooling

PGW 50/50 or oil

Functional diagram

