

# Hybrid System Solutions

## 400 - 1,200 kW



Y O U R   P A R T N E R   F O R   T H E   F U T U R E



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## 400 - 1,200 kW

### The Idea - The Solution

Ever increasing environmental restrictions like manoeuvring operations in the harbour or in green areas with reduced or without emissions require an alternative drive solution. REINTJES developed a new, electrically driven hybrid system solution for gearboxes that provides vessels with an alternative of proceeding at reduced speed.

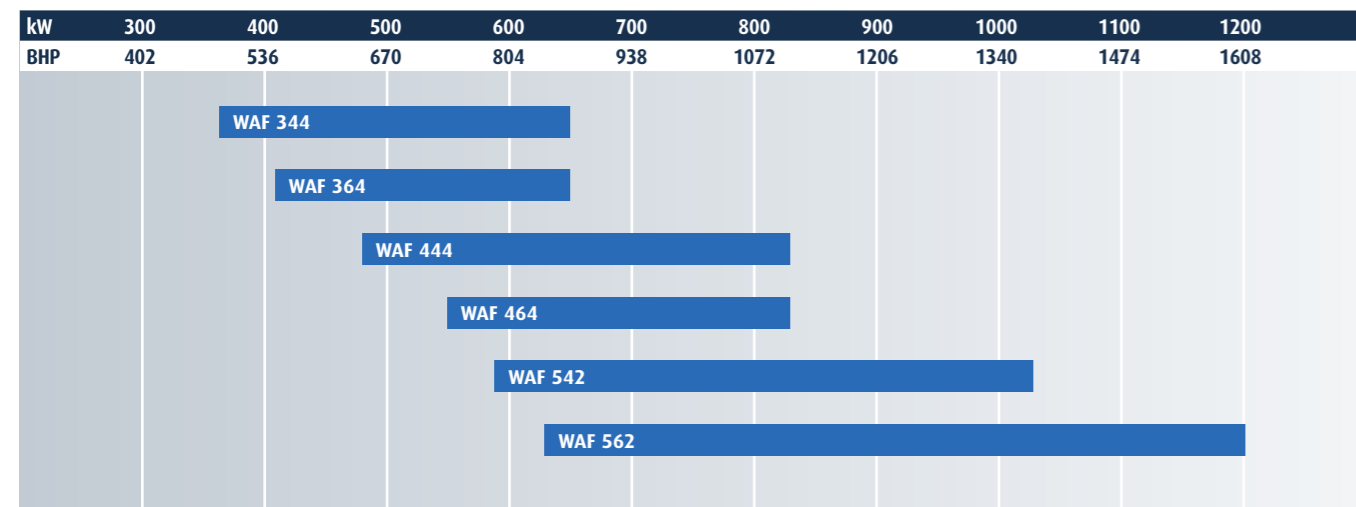
These hybrid systems enable a much more efficient operation, because they allow for riding in a slow speed below the main engine idle speed. The electric drive is aimed at achieving smooth running, less noise and low energy consumption and will gain still more importance. To enable easy installation, the combined electric motor and generator are already flanged to the gearbox and supplied with a frequency converter.

The hybrid systems are suitable for fixed pitch propeller applications and available for electric motors from 60 kW up to 100 kW and for diesel engines up to 1,500 kW. The complete package comprises the gearbox and a combined electric motor and generator as well as a frequency converter in a one hand solution.

### Advantages

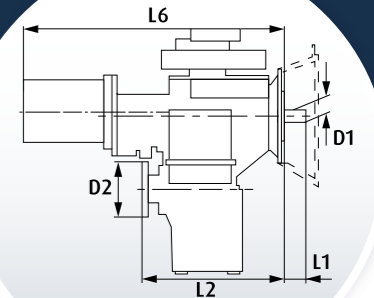
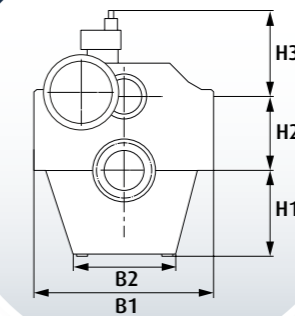
- Quiet and comfortable slow speed ride
- Developed from marine equipment and available with classification
- Efficient continuous operation (gearbox can also be used separately)
- Compatible with various electric networks and configurable for different applications
- Fully demountable
- Compact design, no separate foundation required

### Engine Power



### Hybrid Systems

Reverse-reduction gearbox with hydraulically operated clutches  
Vertically offset



Gearbox WAF	B1	B2	D1	D2	Main Dimensions (mm)			L1	L2	L6	Weight kg <sup>1)</sup>		
					H1	H2	H3				60 kW	100 kW	
<b>344</b>	720	570	60	285	265	250	395	80	645	1339	1590	1100	1235
<b>364</b>	750	580	60	325	380	345	415	80	665	1355	1610	1335	1465
<b>444</b>	740	495	75	300	285	270	505	95	720	1475	1730	1245	1375
<b>464</b>	800	575	75	325	400	375	510	95	725	1455	1710	1575	1700
<b>542</b>	840	530	75	325	380	310	540	95	775	1570	1830	1455	1585
<b>562</b>	920	570	75	350	475	410	550	95	820	1570	1830	1855	1985

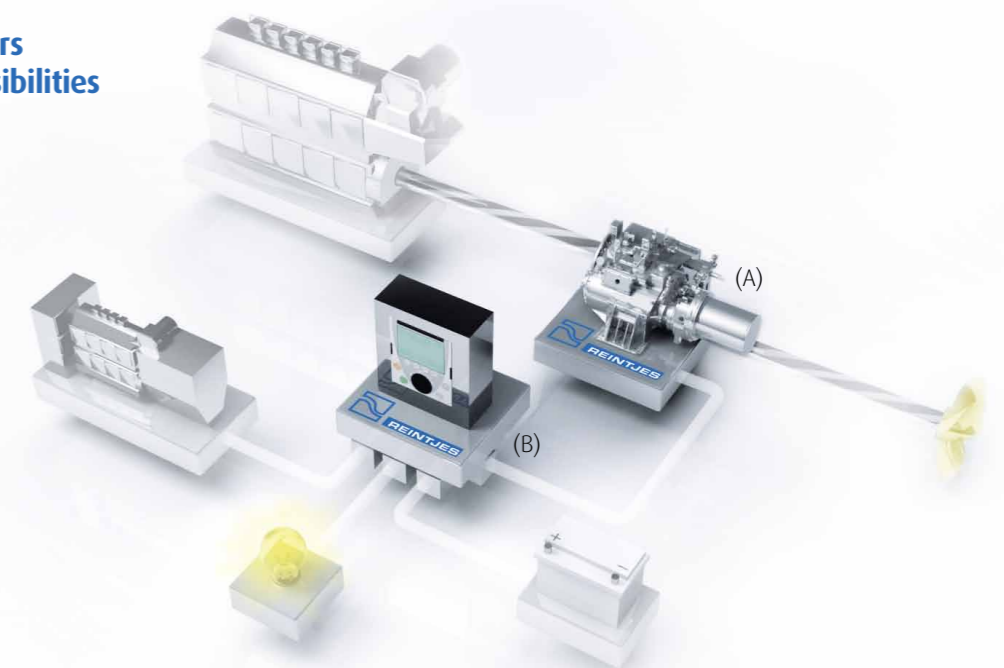
1) Gearbox standard design (dry). Dimensions and weights not strictly binding.

### The hybrid system offers various application possibilities

- Standard operation – diesel engine drives propeller
- Power Take In (PTI) operation – powered by genset and battery (not scope of supply)
- Power Take Off (PTO) operation – diesel engine supplies battery and/or ship grid

### Scope of supply

- REINTJES Gearbox with combined electric motor and generator (A)
- Frequency converter (B)





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