

Hydro Impulse

Test and Performance Data

Bollard Pull: Hydro Impulse 15

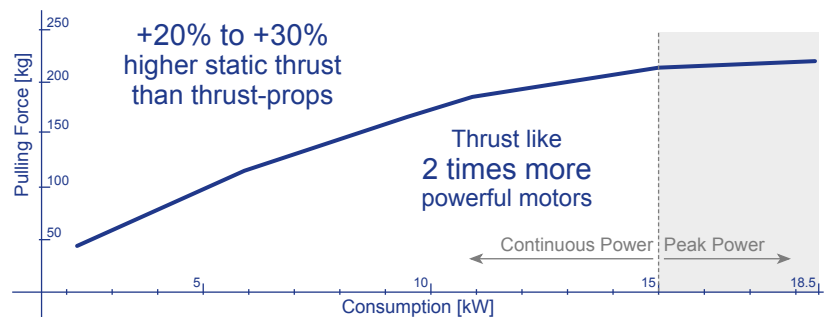
With our test boat HI-01 R&D, we looked at the pulling power of the Hydro Impulse 15 for planing boats in a bollard pull test. The Hydro Impulse 15 is designed for 11 kW to 15 kW (up to 18.5 kW peak). We achieve greater forces than a thrust-oriented propeller and still reach the speeds of standard propellers, as previous comparative tests have shown.



Test Data - HI-01 R&D - Bollard Pull

#	Consumption [kW]	Force [kg]	Force [da N]	kg / kW	
1	6.0	112.0	109.8	18.7	continuous power
2	9.5	164.0	160.8	17.3	
3	11.0	182.0	178.5	16.6	
4	15.0	210.0	205.9	14.0	
5	18.5	216.0	211.8	11.7	peak pwr.

Analysis - Bollard Pull: Data Insights and Benefits



Compared to data from various motor manufacturers, we achieve +20% to +30% higher static thrust than their thrust-oriented props. When compared to standard propellers, our thrust values match those of motors twice as powerful.

These figures impressively demonstrate that with the Hydro Impulse, larger boats can be operated with less power. This reduces both initial and operational costs.

Boat - HI-01 R&D: Specifications

Manufacturer	AQS	Motor manufacturer	e'dyn marine
Type	RIB	Model	e'dyn 2035
Length over all	4.5 m	Power (propeller shaft)	22.5 kW
Beam	2.15 m	Battery capacity	15 kWh
Boat weight	265 kg	Propulsion system weight	210 kg

Tests were carried out under the following conditions:
 Test area: Mur near Graz (Austria); Measurements with boat display (e'dyn; consumption) and crane scale; The boat was secured to the shore using straps. A crane scale was installed between the anchor point and the straps (see picture). The boat was held steady at a defined power level. Once the values stabilized, the force and consumption were recorded. Test load: 1 person; Power: power at propeller shaft; Consumption: motor input; Weather: 16 degrees, sunny, no wind;



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