

Title (en)  
VARIABLE MARINE JET PROPULSION

Title (de)  
VARIABLER WASSERSTRAHLANTRIEB

Title (fr)  
SYSTEME DE PROPULSION PAR JET D'EAU VARIABLE

Publication  
**EP 1587732 A2 20051026 (EN)**

Application  
**EP 03796906 A 20031210**

Priority  
• US 0339296 W 20031210  
• US 43228102 P 20021210

Abstract (en)  
[origin: WO2004052721A2] A variable marine jet propulsion system incorporates a motor, a variable-pitch propeller pump in a spherical housing, a variable housing and a variable inlet duct, and a microcontroller. The pump, the nozzle and the inlet are controlled by the microcontroller, which is programmed to control the pump as a continuously variable power transmission for maintaining efficient motor operation, the nozzle for maintaining efficient pump operation, and the inlet for maintaining efficient recovery of the total dynamic head of the incoming water. The spherical pump housing maintains close fits to the propeller vane tips for more efficient operation at all pitches, including zero and reverse pitches. Zero pitch results in no effective pumping action, effectively a true neutral in fluid power transmission. Reverse pitch in combination with the large variable nozzle provides reverse flow and consequently reverse thrust, which eliminates the need for the "backing bucket".

IPC 1-7  
**B63H 11/103**

IPC 8 full level  
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CPC (source: EP)  
**B63H 11/08** (2013.01); **B63H 11/103** (2013.01); **B63H 25/02** (2013.01); **B63H 25/04** (2013.01); **B63H 2011/043** (2013.01); **B63H 2011/046** (2013.01); **B63H 2011/081** (2013.01)

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